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JANUARY 5, 1922. Washington's Great Farm Magazine EVERY THURSDAY

THE WASHINGTON FARMER
ESTABLISHED 1894
SPOKANE. SEATTLE.

Passes 91st Milestone on Life's Trail

"When I was born," wrote Ezra Meeker, of old Oregon trail fame, who last week celebrated the 91st anniversary of his birth, "30 miles of railroad comprised the whole mileage of the United States; now, how many thousand miles I do not know."

It was in the spring of 1852 that Ezra Meeker, a young man little past 20, with a young wife and baby and a steel-true partner, drove out of Eddyville, Iowa, in an immigrant wagon drawn by 4-year-old ox steers. Back under the stretched canvas there were eggs, there was butter, packed in flour; there was dried fruit and pumpkin, jerked beef and a demijohn. Evidently, the journey was to be long.

Not every homeseeker westward bound had prepared so wisely. Lack of fruit and of yeast laid low many a sturdy frame along the trail.

Just above the Omaha of today, the Missouri was crossed; not, however, without armed resistance to a sheriff's writ that would have protected the river's monopoly by two "official" scows, on which waited a solid phalanx of several hundred wagons. In that year there was an almost unbroken column of ox teams moving westward from Omaha—a column 500 miles long, with perhaps three loose head of stock for every head under yoke. Justice and law prevailed in that moving army, in the main, though no civil authority protected it.

West of old Fort Hall, on the upper Snake waters, not a wagon wheel had turned before 1843, save those of the Whitman cart. In that year a thousand settlers pushed on past Fort Hall and scattered in the northwest empire. In '45 the Hudson Bay company, jealous watch dog for the British claims, acknowledged the settlers' provisional government by paying taxes. The northwest was to be American, not British. "The ox team had done it," writes Ezra Meeker.

From the day he crossed the Missouri, in '52, to the year 1906—a period of 54 years—Mr. Meeker was never ill in bed, and today he retains much of his native vigor and enthusiasm, an optimistic and constructive citizen.

Civilized peoples build on the foundations of the past, which engender hope and ambition for the future. "As reverence for the past dies out in the breasts of a generation, patriotism wanes," he wrote. "With these thoughts in mind was under-

Continued on page six.







See Page 9 for Last Part of National Grange Master's Address

All Bargain Records Smashed!

It would be simply impossible to duplicate the bargains offered you in this advertisement—at any other mail order house or retail store. We mean every word of this. We **absolutely guarantee** to save you money. All we ask you to do is prove it **at our risk.** Just make your selections from the items listed below and let us send them for your approval. If not delighted with your choice and convinced that you have actually saved money buying from Sharood return the goods and you will not lose a penny. Nowhere else can you hope to make such savings. But we warn you not to delay! Order while our stocks last.

Send No Money With Order

Remember, you do not send us one penny with order, **but at these smashed prices we can not ship any order for less than $1.50.** Pick your bargains quick—for all the family. **Just send letter or postcard giving your name, address and the number of each article you want. Also be sure to state sizes and write plainly to avoid delay.** Pay nothing till goods arrive—then only the amazing bargain price and postage. Then thoroughly examine your selections—show to your family. If not satisfied, for any reason at all, return the goods and we refund your money promptly. Order what you want direct from this advertisement.

SHAROOD CO., Dept. 50 Minneapolis, Minn.

Men's Fine Dress Shoes

Wonderful quality, superb value, in men's blucher shoe of black soft gunmetal finished leather. Leather insole and extension oak outsoles. Perforated tips. Sizes 6 to 11. Wide widths.



$2.49 UP

GIVE SIZE

Order black by No. 50A674. Pay $2.49 and postage on arrival. Order brown by No. 50A675. Send no money. Pay $2.98 and postage on arrival. State size.

Order little boys' gunmetal blucher, similar to above, sizes 9 to 13½, by No. 50A596. Pay $1.79 and postage on arrival. Order same style for big boys, sizes 1 to 5½, by No. 50A589. Pay $2.19 and postage on arrival. Always mention size.

Men's Four-Buckle All-Rubber Arctics



$1.79

Order Quick

Guaranteed best quality all rubber 4-buckle hi-cut arctic for men. Made with double thick soles and seams reinforced. Snow excluding tongue. Furnished in men's sizes, 7 to 12. Wide widths. Sensational value. Send quick. Order No. 50A990. Send no money. Pay $1.79 and postage on arrival. State size.

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A smashing bargain in an all-felt hi-cut that will prove what wonderful values you get from Sharood. Men's 9½-inch high cut with thick felt soles and heels—warm felt lining—high cut felt top. Exceptionally durable and amazingly low priced here. Sizes, 6 to 11. Wide widths



$1.79

GIVE SIZE

SEND NOW

Order by No. 50A880. Send no money. Pay $1.79 and postage on arrival. Money back if not satisfied. Mention size wanted.

Wonder Bargain!

Don't fail to make this big saving on men's pure gum hip boot; friction lined; heavy corrugated sole and heel; guaranteed first quality. Made of the very best rubber. Usually retailed at $5. Sizes 6 to 14. Wide widths. No half sizes.



$2.79

Give Size.

Order by No. 50A949. Send no money. Pay $2.79 and postage on arrival. State size wanted.

Felt Top, Felt Lined Kid Comfort Shoe

Vamps of soft kid leather. Durable felt top and fleecy felt lining. Sturdy oak leather soles. Made over splendid roomy, comfortable last. Wide widths. Sizes 8 to 9.



$1.98

GIVE SIZE

Order by No. 50A407. Send no money. Pay $1.98 and postage on arrival. Money back if not satisfied. State size wanted.

Boys' Brown Storm Boots

Sensational value in heavy brown calf boots, treated to resist dampness and wear. Double oak soles, sewed and nailed, bellows tongue. Roomy last.

Order big boys' sizes, 1 to 6, by No. 50A570. Price $2.98. Order small boys' sizes, 9 to 13½, by No. 50A571. Price per pair, $2.49. State size.

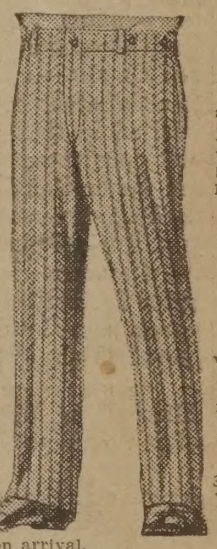


$2.49 Up

Same style, barnyard proof 11-in cowhide hi-cut, for men. Sizes 6 to 12. Wide widths. Order by No. 50A770. Send no money. Pay $3.98 and postage on arrival. State size.

Gray Stripe PANTS

You have paid $4 for no better pants than this neat gray striped pattern. Suspender buttons. Belt loops, plain bottoms. Stoutly sewed waistband. Sizes, waist 30 to 42. Inseam 30 to 35.



$1.59

Order No. 50B1563. Pay only $1.59 and postage on arrival. Give your waist and inseam sizes. Order men's work pants of practical, narrow ribbed cordurov, same sizes as above, by No. 50B1566. Pay $2.98 and postage on arrival. Order men's extra heavy all wool Kersey pants, same measure as above, by No. 50B1559. Pay $3.98 and postage on arrival.

Order Men's Heavy Black and White Moleskin Cloth Work Pants, same sizes as above, by No. 50B1565. Send no money. Pay $2.98 and postage on arrival. Always mention sizes.

Strong Comfort Work Shoe for Men



$1.99

State size

Order your pair quick—while this bargain offer lasts. Wonderful work shoe for men. Has soft, strong uppers that resist barnyard acids. Solid leather insoles. All seams stitched with waxed thread. Strong leather soles. Wide widths. Sizes 6 to 11. Order by No. 50A758. Send no money. Pay $1.99 and postage on arrival.

Genuine Kid Hi-Cut Shoe

$2.29



Wonderful quality genuine kid leather with cushion soles and rubber heels. All the features that make for comfort, yet very dressy in appearance. Sizes 3 to 9. Wide widths. Wonder value

State your shoe size on order. Order by No. 50A263. Send no money. Pay $2.29 and postage on arrival. State size wanted.

You Can't Beat This Bargain in a Warm Winter Coat for Girls

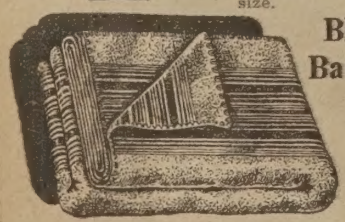


A typical Sharood value at positively the lowest price in America — Guaranteed. Material of this coat is an attractive, fancy mixture. Large collar and deep pockets inlaid with beaverized plush—a very stylish effect.

$3.98

All-around self-material belt enlivened with large button in back. Furnished in sizes 8 to 14. Order by No. 50E1742. Pay only $3.98 and postage on arrival. Order plush trimmed child's coat of heavy, durable material, sizes 2 to 6, by No. 50E1744. Pay $2.98 and postage on arrival. Give size.

Blanket Bargains



Serviceable silver gray, fancy bordered blankets of selected wool-finished cotton, closely woven. 3 popular sizes, 60x76 inch, No. 50B1750, price per pair, $1.79. 64x80 inch, No. 50B1751, price per pair, $2.29. 66x80 in., No. 50B1754. Price, per pair, $2.49. Send no money. Pay bargain price and postage arrival.

$1.79 Up

Medium Weight Cotton Sweaters

$1.09 Up



Practical style knitted from good grade cotton yarn. Shawl collar, 2 pockets. Sizes for men and women, 34 to 44.

Order women's gray style by No. 50C1410. Price $1.09. Order Men's gray style by No. 50C1400. Price $1.09. Order men's dark red by No. 50C1399. Price $1.39.

Same Style for Boys and Girls.

Sizes from 24 to 34 to fit ages 4 to 14. Order boys' gray style by No. 50C1420. Price 95c. Order girls' gray style by No. 50C1425. Price 95c. Order girls' dark red by No. 50C1426. Price, $1.39. Send no money with order. Pay bargain price and postage on arrival. Mention size.



Men's Startling Underwear Bargains

Men's Flat Fleeced Ecru Union Suits

Winter Weight

$1.19 UP

Good grade cotton yarn, soft fleeced inside; elastic rib cuffs and anklets. Sizes 34 to 46. Order by No. 50C1339. Price, each $1.19.

Men's extra heavy gray flat fleeced union suit. Fine quality cotton yarn, soft nap fleeced inside. Elastic ribbed cuffs and anklets. Sizes 34 to 46. Order by No. 50C1340. Price, each $1.49.

Men's elastic rib gray wool process union suit. Soft fleeced inside. Excellent wearing quality. Sizes 34 to 46. Order by No. 50C1341. Price each, $1.49. State size.

Men's heavy winter weight gray union suit. Knit from 50 per cent wool and cotton in wide rib with finish resembling wool. French neckband; good quality pearl buttons. Closed crotch, extra wide flap seat. Gray only. Sizes 34 to 46 chest. Order by No. 50C1344. Send no money. Pay $2.69 per suit and postage on arrival. Money back if not satisfied. State size wanted.

Popular Wing Tip Calf Model Black or Brown

$2.98



Growing girls' and women's black or brown calf English lace style. Fancy perforated wing tip. Goodyear sewed oak soles; rubber heels; smooth leather insoles. Softest pliable calf uppers; dressy and very serviceable. Sizes 2½ to 8, wide widths. State size.

Order black by No. 50A168. Order brown by No. 50A169. Send no money. Pay $2.98 and postage for either color on arrival.

Give Sizes, Colors, Etc., and Send All Orders From This Page Direct to SHAROOD CO., Dept. 50 Minneapolis, Minn.

THE WASHINGTON FARMER

SUCCESSOR TO

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For Good Farming, Attractive Country Homes and Happy Country People

Ask Investigation of Swift

Unfair Manipulation of Seattle Butterfat Price Charged

Alleging that Swift & Co. is attempting by unfair methods to gain control of the butter market of Seattle, a number of creameries and produce companies have forwarded to the federal trade commission at Washington, D. C., a petition asking for a federal investigation of the practices of that company. The petition is the result of inequality of butterfat and butter prices, the difference often varying as much as 10 cents in favor of butterfat. Accompanying the petition was a copy of a letter said to have been written by Swift & Co., offering 51 cents for butterfat when the market quotation was about 48 cents and when butter was selling for a few cents below 51 cents.

It is charged that the company is paying the higher prices in Seattle because of the strong competition of the independent creameries, while in other places where the competition does not exist or has been destroyed the prices are relatively much lower. The eight independent concerns that are asking the investigation express the belief that it is the purpose of the larger company to force them out of business through unfair competition. It is claimed that Seattle is the only town in which Swift & Co. operates where the price of butterfat is maintained above the price of print butter.

When asked by a representative of The Washington Farmer for a statement of his company's side of the case, a Swift & Co. representative declared that the prices paid were governed entirely by the demands of the market.

A letter accompanying the petition and signed by all eight protesting companies quoted figures on six cities to substantiate their claim that the accused company is manipulating the butterfat price in Seattle. The Swift & Co. prices for butter and butterfat in these cities are quoted in this letter as follows, the first figure being butter price and the second butterfat:

Seattle, 47 and 49 cents; Portland, 47 and 45 cents; Spokane, 47 and 46 cents; Salt Lake City, 44 and 37 cents; Boise, 45 and 41 cents; Butte, 44 and 40 cents.

Grain Growers Will Meet Soon

How is flour made? What is the relationship between the variety of wheat and the quality of the bread that can be made from it? All who know raise the right hand.

Those who do not know will have an opportunity to find out during the annual convention of the Washington Grain Growers', Shippers' and Millers' association, which will be held at Spokane January 26 and 27. W. T. Harshman, a milling chemist of Spokane, will give a demonstration of the baking qualities of flours from different wheat varieties and from blended wheats, and later those attending the convention will be taken through one of the flour mills in the city and given an opportunity to see wheat converted into flour.

Dean E. C. Johnson of the college of agriculture of the state college, president of the association, and Professor E. G. Schafer of the farm crops department of the college, secretary, have announced a partial list of the speakers who will appear on the program of the convention. Among the speakers will be President Alfred Atkinson of the Montana State college, who will discuss the subject of agricultural finance. J. K. McCornack, Spokane banker, will discuss the need of a better understanding between the wheat grower and the banker. Others who will discuss phases of farm finance will be George Greenwood of the Old National bank of Spokane and F. C. Forrest of the First National bank of Pullman.

The principal speaker of the evening session of the convention will be Governor D. W. Davis of Idaho, whose subject will be, "The Outlook for the Country Boy."

Dean E. J. Iddings of the college of agriculture of the University of Idaho will lead that portion of the program dealing with the general subject of diversified farming. Dean Johnson of the state college will deal with the underlying principles of agricultural progress. President W. B. Armstrong of the Washington State Farm bureau will present the subject of the farm bureau organization and its relation to the wheat farmer.

An especially interesting feature of the program will be the address by Professor George Severance of the department of farm management at the state college on the cost of producing wheat. He will review the figures on production costs secured by experiment stations and the United States department of agriculture in Washington, Idaho and other states. Walter J. Robinson, general manager of the Washington Wheat Growers' association, will discuss the subject of cooperation. The subject of tillage methods in the Big Bend country will be discussed by B. Gillespie, a prominent wheat grower of the Ritzville section.

Other formal addresses will be on the completed program, and all of the subjects will be thrown open for general discussion by those present.

Races Cannot Intermingle Safely

Commander Miller Freeman of Seattle, who has been active in opposing Japanese aggressiveness in this state, declares in a protesting letter to United States Senator Poindexter that "the people of this state are determined to keep this a white man's country if they have to fight for it. Unless the issue is met with courage immediately and definitely settled, it will certainly bring on war with Japan."

Mr. Miller explains that he is bringing this matter to the attention of Senator Poindexter because for many years the people of the Pacific coast have been told by the Roosevelt, Taft, Wilson and Harding administrations that they should leave the settlement of the Japanese question to the Japanese government.

He specifically charges that the agents of the federal government are remiss in their duty and are party "either directly or by acquiescence, to Japanese aggressions which constitute a formidable assault on our people and our country."

Among the specific instances cited by Mr. Miller are the leasing of lands on the Yakima Indian reservation by federal agents to Japanese; wholesale unlawful traffic in opiates by the Japanese; allowing Japanese to operate producing and marketing combinations with power to dictate prices to be paid white producers and prices to be paid by white consumers. Mr. Miller enumerates a number of other specific instances and says: "All of these are matters which the federal government alone can deal with."

It is thought that Senator Poindexter will bring this matter to the attention of Secretary Hughes and the other members of the American delegation at the armament conference—not in an offensive manner, but as a part of the broad, general relations between Japan and the United States.

These are matters which should be discussed in a candid, friendly way by the representatives of the two nations. If Japan has any counter grievances or accusations, she should be encouraged to present them in a full and frank way.

The fundamental purpose of the armament conference at Washington is to bring about a better understanding and to prevent the recurrence of war if possible, and it will not help matters to ignore the fact that the presence of Japanese in increasing numbers on the Pacific coast is a menace to the friendly relations between the two governments.

Mr. Freeman further charges that since President Roosevelt concluded the so-called "gentlemen's agreement" by which Japan, on her honor, agreed to keep her people out of this country, she has sent here on her passports more than 100,000 of her nationals under the guise of merchants, students, wives and so forth, who have become permanent residents.

If that is true, in whole or in part, it constitutes a grave menace to the maintenance of friendly relations between Japan and the United States. It is the presence of Japanese in the Pacific coast states that creates friction. If there were no Japanese here there would be slight danger of war between Japan and the United States. It follows that the greater the number of Japanese that are allowed to come to the Pacific coast states, the greater will be the friction between the two races.

The FARMER is not antagonistic to the Japanese people. On the contrary, it has high admiration for their virtues. We frankly say that many of our people could profitably go to school to the Japanese in such matters as industry, devotion to country, patience, cheerfulness and good manners. All of that, and more, can be ungrudgingly granted to the Japanese people, and still the fact remains that the two peoples do not assimilate and it is not best that they should be intermingled, whether in the United States or in Japan.

Our diplomatic negotiations at Washington should be conducted on the basis of not objecting to the Japanese as a people, but on the broad and apparent ground that it will be conducive to the peace of the two nations if there is not too much intermingling of the races.

There are about 150,000 Japanese in this country, and unless something definite is done their number will increase from year to year. THE FARMER is frank to say that the presence of 150,000 Americans in Japan would not be a desirable influence. It is simply a matter of keeping the two races well apart while allowing, at the same time, for a proper and reasonable exchange of commerce and opportunity for travel and study.

Mr. Miller has done well to bring this matter to the attention of Senator Poindexter. Our people want to be at peace with Japan, and the best way to maintain peaceful relations is for the statesmen of the two countries to be constantly alert, reasonable and friendly in their efforts to remove sources of friction.

To Make Profit

Cow Should Produce 300 Lbs. Fat

Does the average cow on the farm pay? How much milk must the average cow give to be worth her keep? What other feed must be fed with oat hay to give a balanced ration? Beet pulp seems to be the cheapest thing I can find. Alfalfa hay is expensive and has to be shipped in. Mill feeds are also too expensive. Please send me a balanced ration when using oat or wheat hay and straw. How would peas and oats be for summer pasture?

Colfax, Wash. J. E. A.

If the production of all the cows in the state of Washington were known it is probable that we would find that the average cow would produce about 4250 pounds of milk, testing 4 per cent fat, yielding 170 pounds of fat. If these figures are correct, or even approximate the the truth, it is safe to say that the average cow does not pay.

The writer has long been of the opinion that at the price of feeds and labor that have prevailed during the last 8 to 10 years in this state (excluding the two years of peak prices during the war and after) dairymen could not make the business pay unless their cows produced 300 pounds of fat or more yearly. To be sure, there are exceptions to this rule. Some farmers have cheap feed, others have low priced labor. Still others have both of these advantages. Such dairymen can probably make money with 200-pound cows. The average dairymen, however, paying average prices for labor and feed, must have 300-pound cows to make the business pay.

With good quality oat hay and dried beet pulp I would suggest that you feed all the hay the cow will consume, giving a change to wheat hay occasionally and the freedom of the strawstack at all times. Soak the beet pulp over night, using about three to four pounds of water to each pound of dry pulp. Feed from four to five pounds of the soaked pulp (dry weight) twice a day. Even though alfalfa and mill feeds are high, it will pay you to have some shipped in. Thus far your ration is one-sided. It needs some protein and I suggest that you mix mill run, three parts, and linseed oil meal, one part, or any other high protein feed you can get, and feed this at the rate of one pound of grain for each four pounds of milk produced. A change to alfalfa hay now and then would help keep the cows in better health and increase the milk flow. It pays to feed grain to good cows. Poor cows should be sent to the butcher.

Field peas and oats would make splendid green feed for summer use, but there would be so much wasted by tramping if pasturing were attempted that I do not believe it would be economical.

A. B. N.

Better Farm Life

Chief Problem of the Grange

By EDNA H. NORTON,

Lecturer, Yakima District Pomona No. 19.

"Our civilization rests at bottom on the wholesomeness, the attractiveness, as well as the prosperity of life in the country."—Theodore Roosevelt.

The grange as a national, state and community organization has before it untold possibilities in endeavoring to live up to this statement made by one of our greatest Americans.

The grange farmer is continually meeting and solving problems which make for the prosperity of the country, placing emphasis upon the improvement of crops, greater production, selling and marketing, storage problems and standardization of products, all of which are essential to rural improvement.

After all, a man's work is only a means to an end and that end is "life." The problem yet to be solved is not only better farm business, but better farm life, which, if we fail in obtaining, we truly fail. The intangible spiritual things in the end prove to be the real things in community life and it is these which the women of the grange are giving to the rural life of the nation, thus bringing about a true balance of forces, motives and methods, by laying emphasis not only on the economic, but educational, home-making, social, moral and religious element of each community.

This "farm life" problem—the real human side or true welfare aspect of agriculture—is of sufficient importance to require as much earnest thought and effort as we devote to increasing production and securing better prices.

Community improvement spells national improvement, and, is not the general welfare of 40,000,000 rural people of some consequence in our national life? Desire for these other things—education, recreation, good homes, books and reading, better schools and churches—is a wonderful stimulus to better farming and a sound rural civilization must have these things if it would have a secure foundation. Recognizing this, the characteristic feature of the grange, as compared with like organizations, is its insistence upon education.

For half a century the grange has maintained a lecture hour as a regular part of its proceeding at every meeting and requires reports of committees on education at every state and national meeting, believing that rural education goes beyond the maintenance of a good rural school system, its main task being to keep the entire community thinking, studying, discussing, growing.

In our communities, most of the leaders in such community interests as parent-teachers' association, school work, church work, boys' and girls' club work and farm bureau movement, are members of the grange. The grange is particularly interested in the boys' and girls' club movement and many of the project leaders are also leaders in the grange.

Both old and young need the social life which the grange affords and in this, too, the women of the grange must be leaders.

So we find the grange women filling their places, first in the home, the most important of our social institutions, developing physical efficiency and moral character which enrich community life.

In school, by working for a system of rural education that gives a sound foundation the making of good citizenship and high-minded men and women.

In recreation and social life, by securing a more adequate play life for all.

In moral and religious life, by maintaining highest ideals of character and service to God and fellow men.

Spokane County Bureau Meets

The annual meeting of the Spokane county farm bureau was held at Spokane December 29. A. C. Craig, orchardist of the Spokane valley, was reelected president; C. A. Carlson, Rockford, vice president, and T. S. Brown reelected secretary.

A constitutional revision was adopted that the board of directors shall consist of community leaders and project leaders, a total of 42 members. This board organized following the meeting by selecting the following to constitute the executive committee:

A. G. Craig, president, Otis Orchards.
C. A. Carlson, Rockford.
Mrs. Clayton Smith, Vera.
Mrs. T. L. Moad, Spangle.
R. B. Newell, Freeman.
C. A. Poston, Sunset.
H. W. Greenberg, Pleasant Prairie.

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Who Shall Control Farm Bureau?

In a communication to the Iowa Homestead, County Agent N. G. Malin of Dubuque county reports that in many Iowa counties the farm bureau is having serious difficulty in maintaining its membership. Farmers are dropping the organziation and Mr. Malin says: "The cause must be sought in the organization. There must be something inherently wrong in it which does not meet with the approval of any great mass of people."

He recalls that in that state the farm bureau idea was promoted on the theory that the farmer needed a working organization to represent him and protect his interests in the world of trade. Then the organization was heavily subsidized by the federal government. An appropriation of $1800 per year was made to each county farm bureau by the federal government during the war period. Since that time the amount has been reduced to $600 per year.

Under the federal law the farm bureau became cooperative with the state agricultural colleges and the United States department of agriculture. Mr. Malin fears that federal influence may destroy the organization because of the inherent difficulties of such cooperation.

Complaint is heard that in many places the United States department of agriculture, working through the state agricultural colleges, is getting away from the primary purpose of the organization. As Mr. Malin puts it, "there have been many interpretations placed upon the law as to what cooperation means, and many efforts have been made to narrowly interpret the law to mean that the county agricultural agent could not engage in any activity with or for the farm bureau except extension work or purely educational work."

Under the terms of the law creating this corporation, the object of the farm bureau shall be to "encourage and develop the art and science of agriculture, horticulture, animal husbandry and domestic science."

Without wishing to be critical, but desiring to help constructively in putting the American farm bureau federation upon a still firmer footing, we can understand the viewpoint of the Iowa critic. It springs from a fear that the organization will become more and more weighted with the influence and domination of the department of agriculture and the agricultural colleges. There is a further fear that these powerful agencies will slip back into the old rut of putting too much thought, money and effort upon increased production and upon the mere social and domestic side of farm life, to the neglect of efforts for marketing reforms.

The Iowa county agent, Mr. Malin, urges the farmers of that state not to abandon the farm bureau. "Let us insist," he says, "upon a broad interpretation of its powers, and then let us demand that it shall function as our own organization, unhampered by any other influence." He declares that one thing is obviously necessary—"The hands of the farm bureau and the county agent must be untied. If in doing that it is necessary to dispense with the federal appropriation and rewrite our state law, then that should be done, and if the farm bureau shall be saved it is the belief of many that it must be done very soon."

The Washington Farmer takes note of this discussion because it believes that it is never wise to stifle criticism, but that in the end it will be far more beneficial to bring matters of controversy into the open for full and frank discussion.

Community Project Leaders

King county extension work will be carried on under a different plan from that used last year. Instead of having a project leader for each branch of work being undertaken in the county there is now a project leader in each community who is in touch with each branch of work being carried on in his territory. Once each month he meets at the county agent's office at Seattle and tells what is needed and reports on all work completed.

In this way the county agent is in very close touch with all communities. Plans can be outlined more completely and all branches of work can be covered more thoroughly.

Each community project leader becomes an ex officio member of the extension service advisory committee upon his election. There are more than 25 of these leaders and they have already outlined a heavy program for 1922. A. B. Nystrom, county agent, anticipates good results from this plan.

County Agent Cheers Himself

While making a short trip with one of the Western Washington county agents the subject of the long hours of travel on the country roads came up.

In this particular county there was much traveling to be done between the different towns and the county seat.

The county agent admitted that the hours did sometimes drag, but without another word he reached into his overcoat pocket and brought out a small mouth harp. He began to play a few popular refrains and to keep time with the rattle of the county Ford. The miles actually seemed to speed by faster and the destination was reached before we knew it.

"I have passed many a weary mile with this little harp," the county leader explained as he pocketed the instrument. "A fellow needs a lot of cheerfulness in this kind of work, and I never let a chance go by to give myself encouragement, as well as any one who might be riding with me."

Let Nothing Be Wasted

"What do you do with these?" asked a fruit grower, pointing to a great pile of cherry stems that lay in a cannery at Yakima. "They aren't any good to you, are they?"

"Well, we figure that they're worth about 12 cents a pound," replied the manager. "They're used in making medicine nowadays."

We wonder at times who it was that said there is nothing new under the sun. It looks as if, in the long run, the packing house will find a use for even the pig's squeal, the one part of his composition that is said to be still unutilized.

Encourage Stock Raising

Progressive breeders everywhere recognize the importance of interesting farm boys and girls in live stock, and frequently encourage live stock club work by selling animals for that purpose at a considerable reduction. One breeder of the northwest sold to a club member for $150 a heifer for which he had previously refused $250.

State Farm News

Yakima now has one of the best-known of the few remaining buffalo herds of the nation, the Conrad herd of Kalispell, which has become the Gibson herd of Yakima. The herd bull has been named Chief Yakima.

The one-time Conrad herd, numbering 90 animals and including about 20 yearlings, has been bought by the Yakima Meat company, of which O. D. Gibson is president. The Yakima concern butchered a few of the animals, which had already been contracted for the Christmas markets, but will turn the others out to graze on the Cowiche range. In time the owners expect to build up a herd that will rival the Leonard herd of Fort Pierre, which numbers more than a thousand animals.

* * *

The Cowlitz Produce company during the last few weeks has been foremost in shipments from Winlock to New York city. Following three carloads consigned to New York jobbers for the 10-day period from November 22 to December 1 this firm shipped three cars of eggs to New York. A new record in long-distance was established when the Cowlitz Produce company forwarded a small lot, 100 cases, to Honolulu.

* * *

A spinning wheel more than a hundred years old is on display at one of the shops in Sunnyside. It belongs to Andrew Ross, is a family heirloom and was used by his ancestors in New York. The wheel is made of ash and is in perfect running order.

* * *

Mrs. Mary E. Vassey, one of the pioneer sheep owners of the Yakima valley, recently sold all her sheep and range lands to a company of Spaniards, headed by Albert Sanches. The contract calls for the transfer of 3500 breeding ewes and 15 sections of grazing land.

For 20 years Mrs. Vessey has been in active management of her bands of sheep, visiting the camps and looking after the details of lambing, feeding and marketing.

* * *

Breads baked from flour made of all the leading varieties of wheat will be displayed and discussed as a novel feature of the program now being prepared for the meeting of Washington Grain Growers, Shippers and Millers' association at Spokane January 26 and 27.

* * *

R. P. Bean, superintendent of the Prosser Irrigation Experiment station, was one of the speakers at the growers' convention at the Yakima Potato and Corn show December 21. Mr. Bean says that the major portion of the farm will be devoted to general farming and conducted as an up-to-date farmer would handle it, while about 60 acres will be devoted to detailed experimental work. The farm produced 400 tons of alfalfa hay this year and 125 tons of silage. There are being fed this winter 1700 lambs and 50 steers on rations mostly grown on the experiment farm.

* * *

The branch of the Washington Cooperative Egg & Poultry association will be established at Yakima, according to action taken at a meeting of the board of directors at Seattle on December 20. The handling of the eggs of the members will be undertaken as soon as the local branch can be placed in shape for ousiness. A. S. Brown of Seattle will move to Yakima to take charge of the business.

* * *

Twelve carlots of his own apples were disposed of in West Virginia and Ohio by Homer A. Boggess of Fairview, who recently returned from the east. The cost for freight and other charges laid down in Wheeling, W. Va., was 76 1-2 cents a box and he sold them for a flat price of $2.50 per box. He found Yakima apples selling at $4 to $4.50 per box retail irrespective of grade, no difference being made between extra fancy and C grade by the merchants. Mr. Boggess feels well satisfied with the outcome of his trip. He found the farm bureau of assistance to him in placing his fruit with the farmers in Ohio.

* * *

Project leaders in the Selah community were reelected at a farm bureau membership meeting held recently. E. H. Powell is chairman; F. E. Fairbanks, project leader in horticulture; E. V. Taylor, live stock, and George Slade, poultry. The project of marketing was added with S. M. McKee in charge. John Dollenbacker will be assistant project leader in horticulture in charge of frost observations.

* * *

Karjola Brothers, poultrymen of Grays Harbor county, are erecting new henhouses on their poultry farm that will accommodate 6000 hens. This will make their plant one of the largest in the country. At the present time they have 2400 hens.

* * *

The neat little sum of approximately $8600 has been distributed among Yakima valley farmers and turkey raisers by G. I. Maggard, buyer for Swift & Co. of Seattle. Ten tons of turkey, or 20,000 pounds, were shipped to Seattle. Other live poultry, chiefly chickens, making a total of 7500 pounds, means a distribution of $1100 among the poultrymen of the valley. These purchases made by Mr. Maggard constitute the largest shipment of poultry ever taken out of the valley by him at any one time.

* * *

An estimated statement of productive income from farms in Lewis county, prepared by County Agriculturist C. R. Fowler, for 1921 shows a total of $4,630,302. The three largest items in the report include for the dairy industry, $1,298,600; for poultry, $1,286,000, and for cereals, $1,575,600. Poultry production has made the largest income growth during the year.

* * *

Final payments for 1921 beet crops were mailed December 15 by officials of the Utah-Idaho Sugar company to the beet growers of the Yakima valley. Checks sent out totaled $85,000, representing payments for beets brought to the factory since November 1.

During the present season the company has done a business of slightly more than $500,000 in the valley. Payments for beets amount to $210,000, labor employed has received $150,000 and about $150,000 has been paid for supplies.

W. F. Croft of Toppenish received the largest check going to any one individual, getting $1780. His neighbor, George Gang, came second with $1600. W. E. Curtis of Tieton, one of the few upper valley farmers going in for beet culture, got $1300, as did B. Hansen of Toppenish. William Yahn of Sunnyside drew $1250. As soon as this season's operations are thoroughly cleaned up the company will inaugurate campaign for acreage with a view of operating three plants next season instead of one, as was done this year.

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FARM BUSINESS AND MARKETS OUTLOOK

The selling panic in the cattle markets is passed.

Hog prices have reached the highest point in two months.

Lighter receipts have enabled lamb prices to recover all their recent loss.

Foreign wool markets have recovered most of their losses during November and early December.

Slight improvement in the demand for wheat from mills and exporters.

Bran prices the highest in six months.

The Danish butter market has slumped badly.

GOVERNMENT GIVES GRAIN TO RUSSIA.

Within a few minutes after President Harding affixed his signature to the measure appropriating around $19,000,000 to buy foodstuffs for the relief of the starving Russians, the first purchase of 1,250,000 bushels of corn was consummated. Most of the money will be spent for this cereal and about 1,000,000 bushels a day will be taken until the fund has been exhausted. Some wheat and flour and perhaps other grains will be taken.

This new source of demand will be a factor in the market during the next few weeks and corn prices have already advanced about 3 cents as a result. This action on the part of the federal government is evidence of its desire to help out farmers through increasing the price of grain. This object was quite as prominent as that of relief to the unfortunates abroad.

PRICE CHANGES AT FARMERS' EXPENSE.

Farmers received the short end of the stick in the changes in price levels during November, as compiled by the bureau of labor statistics. Wholesale prices on farm products declined to only 14 per cent higher than in 1913, compared with 19 per cent higher in October. With the exception of last June this is the lowest month of recent years. Declines in wheat, cotton, rye, cattle, hogs, sheep and poultry were responsible for most of the loss.

While farm products were losing ground, two other important groups, fuel and lighting and building materials, which are already far too high measured by the general price level, advanced. Fuel and lighting are now 86 per cent and building materials are 97 per cent higher than in 1913. Cloths and clothing declined to 86 per cent higher than in 1913, but most of the other groups show little or no change.

FREIGHT RATE CUTS ON THE WAY.

Freight rate cuts on farm products are on the way, but to the farmer they seem to be loitering unnecessarily. The reduction, ranging from 13 to 21 per cent on grain and hay in western territory, has been postponed again to give the roads time to make up new schedules. The time limit, originally set for November 20, has been moved forward to January 7.

The voluntary reduction of 10 per cent announced by the roads on many farm products to apply to all sections of the country and to continue in effect until June 30, 1922, is to begin as soon after January 1 as possible. It is estimated that this reduction will save the farmers about $100,000,000 in freight bills in the six months' period.

CATTLE PANIC PASSES.

The selling panic which developed in the cattle market around December 15 to 20 has passed and decrease of around 30 per cent in the supply at 10 markets has made possible the recovery of a good deal of the loss in values. It is possible that many of the short-fed steers which usually do not put in their appearance until January and early February have been dumped upon the market a month ahead of time. Prices at Chicago on the bulk of medium and good steers reached the lowest level in 10 years. Most of the sales came within a range of $6 to $7.25 when the market was at the bottom, but reacted later to $6.50 to $8.

Some feeders took advantage of the slump to purchase fleshy steers for the feed lot. Sales to country buyers did not reflect the full decline noted in the market for fat steers and in some cases thin cattle were sold at prices higher than for those in decent killing condition. The margin for the feeder looks like a narrow one, although by the middle of February the market for fat cattle may move to a little higher basis, but only those with extremely cheap feed will find present feeder cattle prices attractive.

The behavior of the market during the last 10 days again demonstrated that the market for beef is highly sensitive to any oversupply, and also showed that the country has enough cattle in feed lots to furnish serious gluts from time to time when the movement is not well distributed.

The theory that light steers should be the aim of the producer is likely to receive a thorough test in the next three months, when the cattle taken out during the fall will be returned to market. The premium upon yearlings began to fade away after holiday needs had been satisfied, but it will still be a sound conclusion that any losses will be less than they would have been if heavy, fleshy feeders had been purchased instead of light stocks.

HOG MARKET UP AGAIN.

After declining to practically the low point of the season, the hog market turned upward again when receipts at the leading markets declined about 20 per cent and prices reached the highest point in two months. The big packers have opposed the advance, as they wish to bag the crop on a lower level of prices, allowing eastern shippers to take the lion's share of receipts at Chicago.

Nearly half of the winter packing season has passed and the market has shown striking absorbing ability. How the situation is going to work out during the winter and spring months depends largely upon the extent to which producers are holding back hogs to put on weight. Weights at Chicago in the fourth week of December ran nine pounds above the average for that season of the year.

Cold storage holdings of lard in the United States during November decreased about 7,000,000 pounds, compared with a decrease of about 11,000,000 in November, 1920. Exports of lard during the month were about 7,000,000 pounds less than in the same month a year ago. Holdings of frozen pork and cured hog meats, including those in process of cure, decreased about 5,000,000 pounds during November, compared with a decrease of about 46,000,000 pounds during the same month of 1920.

LAMB FEEDERS IN CLOVER.

Lighter receipts at the leading markets enabled lamb prices to recover all of their recent loss. The dressed lamb trade has begun to recover from its slump, due to a period of oversupply, which can not be repeated often, from the crop in feeders' hands and a buoyant wool market also is playing into the hands of lamb feeders.

Feeder lamb prices have advanced to a top of $10.75 at Chicago, a level which looks risky since fat lamb prices can't go much farther out of line with other meats. Good steer carcasses in New York are quoted at only $14 to $15 per 100 pounds, compared with $23 to $24 for good lamb carcasses at the same point.

HORSE MARKET OUTLOOK IMPROVES.

A light supply of horses at distributing markets has been absorbed without difficulty within the last week or two, although at rather low prices except for choice heavy drafters. Chunks selling at $125 to $165 at Chicago are not so hard to move as they were.

WOOL PRICES RISING EVERYWHERE.

Foreign wool markets have recovered most of their losses during November and early December. The last sale at Sidney closed at top levels for the year, while prices at Bradford, England, were about 10 to 15 per cent higher than the recent London auction. German buyers have been less active, but the British woolen goods export trade has improved and buyers from that country have been making extensive purchases of South American wools. Boston prices were fractionally higher last week.

The woolen goods trade in this country has a slightly more hopeful tone and opening prices upon heavyweight goods are not expected to show much, if any, decline. The census bureau reports a decrease of 3 per cent in number of hours of operation of wool textile machinery during November, but a slight decrease is not surprising since consumption during October amounted to 67,200,000 pounds in grease equivalent, compared with only 72,700,000 pounds in the best month of the post-war boom. Mills are buying wool to a limited extent, but much of the recent buying has been by dealers for speculation.

WHEAT ESTIMATE RAISED.

The revised estimates upon the wheat yields in the United States in 1921, 1920 and 1919 issued by the department of agriculture on December 28 showed a decided increase over estimates previously issued for these years. The revisions were based in part upon the census figures for 1919. The yield for 1919 was increased 34,000,000 bushels; for 1920, 46,000,000 bushels, and for 1921, 54,000,000 bushels. The final estimate upon 1921 shows 587,032,000 bushels of winter wheat and 207,861,000 bushels of spring wheat, a total of 794,893,000 bushels.

Superficially these figures may appear to weaken the position of the wheat market, but they show that domestic consumption of wheat, including farm disappearance, in the last two crop years was larger than heretofore calculated. In brief, it is necessary to increase the domestic consumption figures and on this basis the present domestic wheat situation shows up rather strongly. With practically 200,000,000 bushels of wheat exported up to the first of January and indications of about 65,000,000 bushels more wheat ground in the last six months than in the corresponding period of 1920, coupled with only a slight increase in the visible supply of flour, there is reason to believe that we have sent abroad about all the wheat we have to spare.

Revisions upon corn yields were much less drastic than expected. The 1921 crop was reduced 70,000,000 bushels to 3,081,251,000 bushels. The 1920 crop was reduced only 2,000,000 bushels, while the 1919 crop was reduced 42,000,000 bushels. Adding together the crop, the carry-over of old corn on farms and the visible supply on November 1, 1921, there is a total available supply of 3,382,000,000 bushels, or practically the same as on November 1, 1920. This makes a stronger showing for corn, compared with last year, than was expected.

Slight changes were made in the revision of estimates upon the oats yields in the last three years. The final returns for 1921 show 1,060,737,000 bushels.

Barley yields also were revised downward, the 1921 crop being placed at 151,181,000 bushels.

The rye crop was reduced from 64,332,000 bushels in the preliminary report to 57,918,000 bushels in the final returns. The flax crop was likewise reduced to 8,112,000 bushels.

The hay crop for 1921 was revised upward, the total for all hay being placed at 96,802,000 tons.

INCREASED FLOUR DEMAND EXPECTED.

Demand for wheat from mills and exporters improved slightly during the past week. Flour mills report numerous inquiries for flour for shipment after January 1 and after inventories are taken bakers and wholesale grocers are expected to increase purchases, which in turn should increase the wheat requirements of domestic mills. In spite of alleged slow demand, it appears that flour production since July 1 has amounted to 14,574,000 barrels, equal to 65,503,000 bushels, more than in the same period of 1920.

CORN MOVEMENT IS IMMENSE.

After two weeks of corn receipts of record proportions the movement has been almost cut in half. Many producers are waiting apparently for the freight rate reduction to go into effect. Cash demand broadened and the prospect of extensive purchases for Russian relief, together with increased foreign buying through regular channels, have brought about a moderate upturn in values.

The oat crop still labors under an excessive visible supply, but prices are showing more strength.

CASH GRAIN MARKETS.

The range of cash grain prices for the week ending December 28 were:

Chicago: Wheat—No. 2 hard, $1.13 1-4@1.15 1-2; No. 3 hard, $1.11 1-2@1.12 1-2. Corn—No. 2 mixed, 48 3-4@50 1-2c; No. 3, 47 1-2@49c; No. 2 yellow, 49@51c; No. 3, 47 1-2@51c; No. 2 white, 47 1-2@49 1-2c; No. 3 white, 47 3-4@49 1-2c. Oats—No. 2 white, 37@38 3-4c; No. 3, 33 3-4@36c; No. 4, 33 1-4@36c. Rye—90c. Barley—53@60c.

CLOVER SEED ADVANCES SHARPLY.

Light offerings were primarily responsible for a sharp advance in clover seed prices last week. Stocks at principal markets are small and sales made for December delivery have not been easy to fill.

Toledo, per bushel: Prime red clover, $13.60 1-4; prime alsike, $11.30; prime timothy, $3.12 1-2.

BRAN HIGHEST IN SIX MONTHS.

Bran prices at the leading milling centers are now the highest in six months. Stocks of bran for immediate shipment are not large, but increased operation of flour mills is expected in January and offerings of wheat feeds for January and February shipment are liberal. The best demand for tankage ever known at this season is reported.

Chicago—Bran, $24.50@25.50; standard middlings, $24.50@25; flour middlings, $27@28; cottonseed meal, 43 per cent, $45; 36 per cent, $40; hominy feed, $23; gluten feed, $34.65@36.65; old process oil meal, $47; tankage, $47.50@55.

FREIGHT CUTS HELP HAY MOVEMENT.

The reduction of about 15 per cent in freight rates in western territory which goes into effect by January 7 is expected to increase shipments of hay, as producers in some of the surplus sections have been waiting for this relief. Feeders and dealers have been delaying purchases, hoping to share in the benefit of the reduction. Whether buyers or sellers will obtain the greater advantage is still undetermined.

Prices per ton in car lots were as follows:

Chicago—No. 1 timothy, $20@22; standard and No. 1 light clover mixed, $19@20; No. 2 timothy, $18@19; No. 1 clover mixed, $17@20; No. 3 timothy, $17@20; sample hay, $12@16; threshed, $12@16; clover, $16@18; No. 1 to choice alfalfa, $17@25; No. 1 and No. 2 southwestern prairie hay, $15@17; Nebraska and South Dakota prairie, $15@17; rye straw, $15@16; oat straw, $13@14; wheat straw, $12@13.

FRESH EGG SUPPLY INCREASES.

Cold weather and the holiday trade seem to have increased demand for eggs to some extent, but the supply of fresh eggs seems to be increasing, as it usually does in January. Receipts at the four leading cities are running materially larger than at the same season last year. Nevertheless, steady inroads are being made upon cold storage holdings, which now total 803,251 cases at these points, compared with 501,487 cases on the same date last year. The final report on cold storage holdings for the entire United States as of December 1 was practically identical with the preliminary report. Cold storage holdings of frozen poultry in the United States on December 1 amounted to 65,145,000 pounds, compared with 49,045,000 pounds on December 1 last year. Stocks increased 30,268,000 pounds during November, compared with an increase of 18,972,000 pounds in November, 1920.

Chicago—Fresh firsts, 48@49c; seconds, 42@44c. Poultry: Hens, 25c; springs, 25c; roosters, 16c; ducks, 28c; geese, 26c; turkeys, 40c.

DANISH SLUMP AFFECTS BUTTER.

The Danish butter market slumped badly and quotations on butter delivered to this country have been very low. One shipment of about 4000 casks of Danish, another of 2800 boxes of New Zealand butter arrived at New York and large purchases at prices ranging from 40 1-2c down to 36c delivered at New York, duty paid, were reported. This competition depressed eastern markets below Chicago on top scores. In addition, about 32,000 boxes of New Zealand and Argentine butter are expected at San Francisco and Vancouver between now and the

(Continued on page twenty.)

Little Journeys to Market

THE CHICAGO MERCANTILE EXCHANGE.

The Chicago Mercantile Exchange is one of the leading produce exchanges upon which butter, eggs and cheese are bought and sold. It furnishes a meeting place where members gather to transact business under certain prescribed rules as to amounts, grading and delivery.

The trading room is fitted up with blackboards upon which transactions are posted, and with telephone booths by means of which butter and egg concerns are able to keep in touch from their central offices with what is doing on the exchange floor. Bulletin boards carry information as to receipts at Chicago, supplies in storage, comparative prices and similar information for other important butter and egg markets.

For both butter and eggs, two "calls" are held during the morning of each business day. The first consists of offerings for "spot" or immediate delivery and also for delivery in 10 days. The second consists of offerings for future delivery longer than 10 days away. Trading in the latter is usually confined to certain specified months, as butter for January delivery and eggs for February delivery. These transactions are in carlots and in definite grades, such as "refrigerator standards" in eggs, and "fresh standards," "storage standards," "fresh extras" and "storage extras" in butter.

When the call starts the sellers state the number of cars they wish to sell and the asking price. These are posted as they are announced and bids also are placed on the board. When bids and asking prices agree the transaction is closed. Either bids or offers can be withdrawn any time before they are accepted. Scores of cars may change hands in this way in the course of a few minutes' trading. Every transaction is backed by warehouse or inspection certificates.

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Figures on Milk Costs

Result of State College Investigations in Western Washington

SECOND ARTICLE.

The following tables are taken from figures furnished from the results of state college investigations into the cost of producing milk in western Washington. Table 3 summarizes all items of expense and returns other than milk from 449 cows on 35 farms of Pacific county.

TABLE III.

Items.	Per Cwt. Milk.	Per Cow.
Feed—Grain	$ .3369	$ 20.664
Hay	.6562	40.243
Silage	.0764	4.686
Roots and kale	.0425	2.606
Pasture, soiling	.3400	20.852
Bedding	.0286	1.755
Labor—Man	.7898	48.433
Labor—Horse	.0334	2.049
Use of bull	.1323	8.118
Use of buildings	.1819	11.153
Use of equipment	.0502	3.083
Current expenses	.0861	5.285
Interest and taxes (cows)	.1369	8.396
Depreciation (cows)	.0470	2.886
Marketing (paid)	.0886	5.433
Use of car	.0322	1.980
Total operating cost	$3.0590	$187.622
Credits other than milk:		
Manure	$ .1355	$ 8.378
Calves	.0497	3.057
Hides	.0015	.095
Sacks	.0128	.790
Appreciation	.0197	1.211
Total credits other than milk	$ .2192	$ 13.528
Total operating cost	$3.0590	$187.622
Total credits other than milk	.2192	13.528
Net cost of milk	$2.8398	$174.094

The following table summarizes all items of expense and credits, other than milk, from 375 cows on 19 farms of Snohomish county:

TABLE IV.

Items.	Per Cwt. Milk.	Per Cow.
Feed—Grain	$ .4140	$ 27.523
Hay	.3084	20.505
Silage	.3459	22.936
Roots and kale	.0050	.336
Pasture, soiling	.4520	30.982
Bedding	.0297	1.976
Labor—Man	.7612	50.600
Labor—Horse	.0041	.277
Use of bull	.1228	8.163
Use of buildings	.2178	14.483
Use of equipment	.0390	2.614
Current expenses	.1236	8.218
Interest and taxes (cows)	.1523	10.124
Depreciation (cows)	.0847	5.634
Marketing (paid)	.1257	8.357
Use of car	.0419	2.786
Total operating cost	$3.2272	$214.610
Credits other than milk:		
Manure	$ .0959	$ 6.378
Calves	.0521	3.464
Hides	.0016	.105
Sacks	.0120	.800
Appreciation	.0040	.266
Total	$ .1656	$ 11.013
Total operating cost	$3.2272	$214.610
Total credits other than milk	.1656	11.023
Net cost of milk	$3.0616	$203.587

The following is a summary of all items of expense and credits other than milk from 183 cows on nine farms of Wahkiakum county:

TABLE V.

Items.	Per Cwt. Milk.	Per Cow.
Feed—Grain	$ .3213	$ 20.631
Hay	.2793	19.086
Silage	.0473	3.040
Roots and kale	.0230	1.479
Pasture, soiling	.4595	24.491
Bedding	.0008	.054
Labor—Man	.6963	44.694
Labor—Horse	.0442	2.811
Use of bull	.1318	8.463
Use of buildings	.1652	10.608
Use of equipment	.0793	5.094
Current expenses	.0834	5.355
Interest and taxes (cow)	.1648	10.576
Depreciation (cows)	.1454	9.333
Marketing (paid)	.....	.....
Use of car	.0538	3.457
Total operating cost	$2.6954	$169.202
Credits other than milk:		
Manure	$ .0942	$ 6.050
Calves	.0362	2.314
Hides	.....	.....
Sacks	.0132	.852
Appreciation	.0064	.409
Total credits other than milk	$ .1500	$ 9.625
Total operating cost	$2.6954	$169.202
Total credits other than milk	.1500	9.625
Net cost of milk	$2.5454	$159.577

The following table summarizes all items of expense and credits other than milk from 495 cows on 29 farms of Whatcom county:

TABLE VI.

Items.	Per Cwt. Milk.	Per Cow.
Feed—Grain	$ .5205	$ 39.200
Hay	.4701	35.401
Silage	.1505	11.333
Roots and kale	.0230	1.738
Pasture, soiling	.3152	23.736
Bedding	.0512	3.856
Labor—Man	.7043	53.039
Labor—Horse	.0031	.236
Use of bull	.1253	9.439
Use of buildings	.1632	12.229
Use of equipment	.0495	3.734
Current expenses	.1141	8.599
Interest and taxes (cows)	.1479	11.139
Depreciation (cows)	.1373	10.341
Marketing (paid)	.0790	5.949
Use of car	.0031	236
Total operating cost	$3.0573	$230.205
Credits other than milk:		
Manure	$ .1089	$ 8.206
Calves	.0367	2.764
Hides	.0025	.192
Sacks	.0133	1.008
Appreciation	.0036	.272
Total	.1650	$ 12.442
Total operating cost	$3.0573	$230.205
Total credits other than milk	.1650	12.442
Net cost of milk	$2.8923	$217.763

The following table summarizes all items of expense and returns other than milk from all four counties:

TABLE VII.

Items.	Per Cwt. Milk.	Per Cow.
Feed—Grain	$ .4215	$ 28.476
Hay	.4610	31.141
Silage	.1662	11.192
Roots and kale	.0238	1.610
Pasture and soiling	.3725	25.161
Bedding	.0339	2.295
Labor—Man	.7405	50.037
Labor—Horse	.0163	1.106
Use of bull	.1264	8.540
Use of buildings	.1819	12.293
Use of equipment	.0502	3.426
Current expenses	.1053	7.118
Interest and taxes (cows)	.1479	9.993
Depreciation (cows)	.1008	6.814
Marketing (paid)	.0839	5.672
Use of car	.0264	1.789
Total operating cost	$3.0585	$206.663
Credits other than milk:		
Manure	$ .1110	$ 7.520
Calves	.0439	2.790
Hides	.0017	.118
Sacks	.0120	.972
Appreciation	.0084	.569
Total credits other than milk	$ .1779	$ 11.869
Total operating cost	$3.0585	$206.663
Total credits other than milk	.1779	11.869
Net cost of milk	$2.8806	$194.794

It should be borne in mind that the figures given in the above tables are the results of one year's business, and undoubtedly will be changed somewhat when the second year's business is incorporated into the summary.

The attention of the cooperator is called to the following facts regarding the several items of cost given above:

The grain ration consisted mostly of bran or small mill run with a small amount of shorts, peas, patent dairy feeds, corn meal, oil meal, rolled oats and molasses used by a few dairymen. Practically all of the grain was purchased with the exception of small quantities of oats and peas in Whatcom and Snohomish counties. Sixty-five farms produced all of their hay which amounted to 73 per cent of the total hay consumed. Four farms purchased all of their hay, or 6 per cent of the total. The remaining 22 farms bought practically one-third of their hay, which they fed to the cows. Home-grown hay ranged in price from $18 to $28 per ton, while purchased hay varied from $20 to $40 per ton, depending on the quality and distance from market. Fifty-two farms in all counties used silage. In Snohomish county all of the farms except two used silos. Corn, vetch and oats, clover and sunflowers were all used successfully for silage. Silage was valued at from $6 to $9 per ton, depending upon kind and quality. Roots and kale were used by some dairymen and were valued at from $6 to $9 per ton at the barn.

A bedding charge was made when straw was used that had a market value. Waste from the mangers was not considered a bedding charge, as this was taken care of by the feed cost. Straw for bedding was valued at the price it would sell for in the community minus the delivery charges. The farmer's estimate of the number of tons used was accepted.

In determining the amount of man labor required for milk production the farmer's estimate of the number of hours required to do all the work directly connected with the cows was accepted. Direct man labor included such work as feeding the cows, milking, separating, preparing the milk or cream for market, washing dairy utensils, cleaning the barn for the cows and turning the cows in and out. The year was divided into two seasons of six

(Continued on page twenty-two.)

Passes 91st Milestone

(Continued from page one.)

taken the expedition to perpetuate the memory of the old Oregon trail."

That expedition, which, in 1906, moved eastward over the deep-worn ruts of '43 and of '52, is Mr. Meeker's uniquely conceived and picturesque achievement. In that year he again drove an ox team over the old trail—that trail of death and promise—to the old starting point. As a result, reverence and memory have rallied round the lasting achievements of the western pioneer, and all along the trail there rise proud landmarks. Our thanks, Mr. Meeker, to you for the labor of love that shall help us to remember their good citizenship, and yours.

On the cover page is a portrait of the face so well known throughout all the west. Below it is a picture of one of the old Oregon trail landmarks, Tortoise rock, on the western slope of the conquered Rockies. The map shows the pioneer's trail from the summit in Wyoming to the peaceful waters of Puget sound.

What Is Advertising?

A Big Force in the World Today

What is advertising? One expert defines the word as meaning "something to tell about something to sell."

Elbert Hubbard, the writer, said: "Advertising is the education of the public as to who you are, where you are and what you have to offer in the way of skill, talent or commodity. The only man who should not advertise is the one who has nothing to offer in the way of service, or one who can not make good."

But, however we define the word, it is certain that advertising is one of the great forces in the world today.

It is through advertising that tens of thousands of people have learned of the combined harvester, the sewing machine, the cream separator, the telephone, the silo and scores of other important inventions.

The advertisements in each week's issue of this paper are well worth reading. They contain up to date information regarding the output of many of the country's biggest and most progressive manufacturers and dealers.

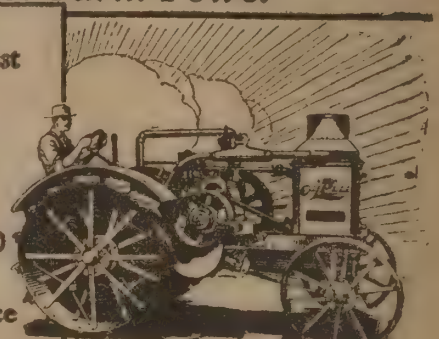
It will surely interest you to read what these manufacturers have to say in their advertisements. And why not send to them for further information? By doing so you can obtain interesting and informative booklets, catalogs and circulars free of charge.

And when you do write, kindly mention the fact that you read the advertisement in THE WASHINGTON FARMER.

OILPULL TRACTOR

"The Cheapest Farm Power"

1. Lowest Fuel Cost
2. Lowest Upkeep Cost
3. Longest Life (10 years and more)
4. Reasonable Price



Why an OilPull Increases Farm Profits

Every farmer knows that there are just four factors he must have in the tractor he buys to get cheapest power. These are (1) Low Fuel Expense. (2) Low Repair Expense. (3) Long Life. (4) Fair Price.

In the Rumely OilPull Tractor these Four Factors have been combined for the first time. An OilPull, for example, has held (1) the World's Official Fuel Economy Records for 10 years past. (2) Government figures show a national average yearly upkeep cost of $40. Among many OilPulls of all ages the average was found to be less than half the Government figures. (3) The average life of an OilPull is more than 10 years. The first OilPull, Old Number One, is still serviceable after 12 years. (4) Rumely prices are very reasonable. They are strictly in line with present economic conditions.

Everything needed to make cheap power is here.

Triple Heat Control

OilPull records are due largely to TRIPLE HEAT CONTROL—a wonderful oil burning system which absolutely solves the problem of maintaining motor temperatures within those exact limits where cheap kerosene becomes the most powerful and cheapest fuel. *Gets the power out of cheap kerosene.* The only system in which oil is used in the cooling system instead of water. No freezing. No overheating. Under light loads temperatures are correct for power and economy. As load increases the motor actually grows cooler.

It is due to **Triple Heat Control** entirely that the OilPull is the only tractor sold with a *bona fide* written guarantee to burn kerosene successfully at all loads and under all conditions up to its full rated brake horse power.

Write for FREE Book

Among the four sizes, there is an OilPull that will make a profit for you. Go see the local Advance-Rumely dealer—he will demonstrate the tractors and point out the features.

In the meantime, write for complete information and our special book on Triple Heat Control.

Advance-Rumely Thresher Company, Inc.

Spokane, Wash. Portland, Ore. Pocatello, Idaho



The Advance-Rumely line includes kerosene tractors, steam engines, grain and rice threshers, alfalfa and clover hullers and farm trucks

(H70)

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Muck and mire that stick like glue

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THAT'S why we invented the U. S. Walrus —an *all-rubber* overshoe that washes clean like a boot. It made its first big hit with the stockmen of Iowa—but today it's making friends with farmers everywhere.

Tough—rugged—comfortable—the U. S. Walrus keeps feet warm and dry in the coldest weather. Cut to slide easily over your regular shoes. Buckles that snap shut or flip open in a hurry. Thick fleecy lining. A smooth rubber surface that manure can't stick to—you wash it off in a flash!

You'll find every type of rubber footwear in the big U. S. line—and every one is *built to last.* Always look for the U. S. trademark —the honor mark that millions of farmers know.

United States Rubber Company

This is the "U. S." Walrus

—the all-rubber overshoe, red or black, with warm fleece lining



Look for this trademark on all "U. S." Rubber Footwear

Prize Pig Contest

Here are more letters in THE FARMER'S pig prize contest. A pure bred gilt, bred to farrow in the spring, is the first prize. Second is $15; third is $10. Contest closed Dec. 31. Judging of letters will begin at once

Always Interested in Hogs

To the Editor of The Washington Farmer: I have been a reader of our excellent farm paper, The Washington Farmer, for nearly five years.

I have always been interested in the subject of hogs. Therefore I take pleasure in participating in the pig prize contest on the subject of hogs as a by-product on the farms of the state.

I am sure that we have all noticed fields of stubble, as well as fields of summer fallow, green with the wheat that was left in the field after harvest. No farmer can save all the wheat to thresh—some of it will shatter out, and the binder will leave some. This is unavoidable. Often, as I have gone through the field, I have picked up whole stalks of wheat. I have also seen many kernels, kernels lying thick, I may say, upon the ground. Of course the cattle can gather up the heads of wheat, but they do not put it to such good advantage as a hog does. The kernels on the ground the cattle do not get at all. So there is all that grain wasted, unless you have hogs to turn into the field to eat it up and turn it into monty. I know a farmer who put his hogs in the stubble field in the fall a while until they were fattened and then sold them directly to the butcher. Droves of hogs are thus fattened on what would otherwise have been waste. Hogs also grow a great deal when they have a large acreage to exercise over.

Hog refuse is one of the richest.

Farmers are now planting more and more corn on their summer fallow. They are also planting more peas. These crops not only add an extra crop of feed, excellent for hogs—they benefit the soil and cause more wheat to be raised per bushel per acre as the next crop. Pumpkins can just as well be planted in the corn fields as not. They yield abundantly and are a good hog feed.

Most farmers have orchards. Most farmers neglect these orchards. Hence the ground is covered with unsalable apples—culls. These would undoubtedly go to waste if it were not for Mr. Hog. He can manufacture them into delicious pork for the dinner table.

No other animal can consume so advantageously to the owner the skim milk, waste vegetables and vegetable peelings, weeds, dishwater and other refuse from the kitchen and garden as the hog. In fact, if it weren't for the hog much of the aforesaid would be a total loss on many farms.

I also know farmers in the wooded-off section who fence off a field of partly burned-over land hog-tight. The hogs eat grass, kill out obnoxious weeds, eat charcoal, drink water and grow. The little pigs and their mother live in this pasture. When the pigs are large enough in frame they are placed in the fattening pen, fattened and sold, the only expense being the few last weeks.

Every farmer should keep one hog at practically no expense, and as many more as is in proportion to his acres, orchard, kind and mode of farming.

Hogs, like anything else, need present and fore-thought to bring in the profit. Hogs do better when their quarters are kept clean and warm. They like to be comfortable as well as anything else does.

Every one appreciates pork and lard he raises better than pork and lard he buys from the market. MRS. T. R. DAILEY.
R. 2, Box 92, Palouse, Wash.

By-Products Essential

To the Editor of The Washington Farmer: Very few industries could survive if the revenue derived from by-products were eliminated. This is especially true of the farming industry at this time when the prices on the main products are frequently below cost of production on farms where a proper system of crop rotation and byproduct utilization is not employed.

The greatest single agricultural loss to the state is the system of summer fallowing land that has enough rainfall to produce a crop each year. Summer fallowing adds nothing in the way of soil fertility, but destroys humus, which causes the land to leach and wash away. On the other hand, a legume crop grazed by hogs builds up the land in both nitrogen and humus. Nitrogen is the most expensive element in commercial fertilizer, but an abundant supply can be secured from the air by a proper legume crop rotation, and humus is absolutely necessary before a soil can absorb and retain water, without which no soil can be productive. I say grazed by hogs, because few, if any, legume crops can be successfully grazed by other farm animals on account of bloat, and grazing is the only system that leaves the maximum of fertility on the land.

Alfalfa and peas are the legume crops most successfully and generally grown in the Inland Empire. At present prices these crops can not be profitably harvested by man labor, but will show a good profit where harvested by hogs.

Experiments show that wheat will make as large yields on pea stubble as on summer fallow and on alfalfa sod the crops are frequently twice as large as they were on the same land before seeding down.

In practically every part of the state hogs are a profitable byproduct when grown on pasture and such surplus milk, fruit, vegetables and shattered or lodged grain as go to waste when not so used.

Another reason hogs are a valuable by-product is that they allow a more intensive system of farming with little, if any, increase in labor during the busy season. They also allow a farmer to conduct a much larger business with the same amount of capital because he has it working all the time. E. L. POWERS.
Palouse, Wash., Route 1.

Hog Is a Food Producer

To the Editor of The Washington Farmer: The hog is a health promoter. As a scavenger he destroys many waste materials that would otherwise fester and decay, forming a breeding place for flies and a source of noxious exhalations, thus proving a menace to health and comfort.

The hog is a food producer. By some mysterious process known only to himself and nature, he converts the vile contents of the most wasteful and necessary food wise prove worse than useless, into some of the most aseful and necessary food products of the world nothing can take the place of the bacon, hams and lard which, all unconsciously, the humble porcine produces. No substitutes can successfully compete with them. And the housewife who has a plentiful supply of these staple products in her storeroom, not to mention the sausage, head cheese and spareribs of butchering time, finds them a tower of strength and need never be at a loss for something to cook as the foundation for a good meal.

The hog is a wealth producer. By a sort of subtle alchemy he can almost be said to possess the power to turn whatever he comes in contact with into gold. By furnishing several of the standard food products of the world he certainly contributes largely to its wealth. The meat packers—ha! ha!—are notable illustrations of this. But the farmer who raises a few hogs as a by-product finds them almost as profitable in proportion.

Now, without reciting in detail my own personal experience with the hog, I can fully corroborate all that has been claimed for him in the articles already published, and am free to assert that of all the various by-products of the farm, such as poultry, bees, garden truck, etc., the hog stands pre-eminent as a health promoter, a food producer and a money maker.
EMIL GRAF.
R. 2, Creston, Wash.

ROOTS FURNISH SUCCULENCE.

Regardless of the food value of root crops and silage, they both have the merit of being succulent feed.

GENERAL ADVERTISING.

New Lamp Burns 94% Air

Beats Electric or Gas

A new oil lamp that gives an amazingly brilliant, soft, white light, even better than gas or electricity, has been tested by the U. S. government and 35 leading universities and found to be superior to 10 ordinary oil lamps. It burns without odor, smoke or noise—no pumping up, is simple, clean, safe. Burns 94% air and 6% common kerosene (coal oil).

The inventor, W. W. Johnson, 31 W. Fifth St., Portland, Ore., is offering to send a lamp on 10 days' FREE trial, or even to give one FREE to the first user in each locality who will help him introduce it. Write him today for full particulars. Also ask him to explain how you can get the agency and without experience or money make $250 or $500 per month.—Adv.

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is the fact that of all the elements that enter into the cost of your garden, seeds are the most important fundamentally and the least important as an item of expense. The cost of seeds is the same whether they are good or bad. Labor and fertilizer together always make up the greater part of the total cost, and they are valuable only in proportion as the seed is reliable and productive.

The difference in cost between reliable seeds and indifferent seeds is infinitesimal; but the difference between results often is the difference between success and failure.

It pays to take no chances with your seeds. Get the best seed insurance you can buy—the long-standing reputation for reliability of the name Lilly's. Lilly's Seeds have got a good name by growing good crops, for 25 years and more.

Get YOUR copy of Lilly's 1922 Seed Annual. It contains the information you want about flower and vegetable seeds, fertilizers, sprays, poultry and bee supplies, etc.

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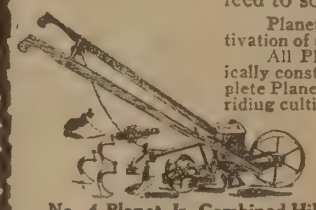
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Seed costs money. Labor costs money. Save both by planting with Planet Jr. seeders. Planet Jrs. sow regularly, rapidly and accurately in hills or drills at proper depths in even, narrow lines. A Planet Jr. leaves no gaps—wastes no seed. Every Planet Jr. has an adjustable index with the names of the principal seeds, enabling the user quickly to change the feed to sow the different varieties.

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National Master's Address

Delivered at Annual Grange Convention at Portland

This is the third and last installment of Master Lowell's address before the recent convention in Portland.

THIRD INSTALLMENT.

As we here deliberate on the big problems so important to our welfare, there is assembled in the capital city of the land the most significant gathering of the nations of the earth that has ever been held. With the burden of modern warfare crushing down the shoulders of all nations and with no relief in sight, except it come through international agreement, the eyes of the whole world are focused upon the Washington conference and the prayers of millions upon millions of human souls are hourly rising to the throne of the Omnipotent that out of this conference shall come some ray of hope for the future peace and security of the world.

Through the constant and consistent advocacy of peace and the adjustment of human differences by arbitration, instead of by resort to the sword, the grange record upon the great issues of armament reduction, world peace and international brotherhood is clear and above question. Very wisely may we affirm again the established attitude of the grange on those questions and devoutly hope that in this great crisis of world affairs the leadership of America shall be toward the light.

Nevertheless, we must not lose sight of the fact that instead of allaying human passions a terrible World war has inflamed and intensified them, and that in all present considerations good, sound common sense and the judgment of sanity must still be retained. As the possessor of the world's greatest wealth and natural resources, the United States must never lose sight of its duty to protect its own citizens and their rights, of both life and property, and I feel very sure that even this peace-loving grange has no desire that its emotional sentiment lose sight of the grave realities of human life, with the jealousies and envyings which nations, like individuals, still retain.

With a generous attitude toward all the world. which our course of the last five years has abundantly proven, with no selfish greed for the possessions of any other peoples, and strictly adhering to the doctrine of not meddling in others' affairs, I am constrained to believe that the slogan, "America for Americans," has not yet lost its force, nor that it has become altogether unworthy of frequent mention. If we are to adhere to this fundamental policy of the fathers, then we must still be mindful of the possible emergencies in human affairs and always provide ourselves as a nation, as individuals would do, with the necessary means for adequate self-protection.

I sincerely trust that on such a grave issue this national grange will make no declaration which it will ever in later years have occasion to regreat.

Agricultural Assistance.

The trying days of the last year have seen attempts made in many directions to "do something for agriculture," with the result that a great deal of misunderstanding has arisen over what is actually being done to help the farmers. From a great deal of alleged "agricultural legislation" the actual farmer gets no benefit whatever, though frequently in his name selfish schemes are put over by promoters and long pay rolls are created for those who aspire to do almost everything else for agriculture except to actually work at it.

It is unfortunate that the farmers have had to bear the name of receiving state and federal aid which never reached them, while in making up its estimates the public has often been led to believe that a great deal of assistance was being rendered to agriculture. We should be very slow, as an organization of real farmers, about lending countenance to schemes of doubtful farmer advantage, first finding out whether the real farmer, at home on his farm, is ever going to see the benefits which are so loudly predicted and which will be paid for out of public funds.

The membership are especially uregd to keep in touch with the reports sent out every month through the National Grange Monthly by our Washington representative, for through no other source can such reliable information about legislative projects be gained. Brother Atkeson never fails to get at the bottom of things, his keen pen punctures many a bubble and alleged farmer-help schemes seldom escape his penetrating vision. Political schemers oftentimes sponsor legislation for a purpose and the farmers are more often used for hoodwink purposes than anybody else. As an organization that asks no special favors from state or national government, but simply demands a square deal for its people, we owe a duty to the public in general to inform them on the actual needs of the farm people; to indicate the practical directions of needed assistance, and to refuse to have the farmers charged up with alleged benefits which they never get.

Reference above to keeping informed on the facts which our Washington representative so thoroughly supplies leads me to drive home this thought for your consideration: Is it not possible that, in our eagerness to be always telling those outside its rank what the grange is doing we overlook the greater need of giving our own members that very information?

If every subordinate grange in the country will get thoroughly enthused over the benefits derived in the order it will never be necessary to hold frequent open meetings, to canvass the community for new members or to employ garden rake tactics to get them into the grange. Making every subordinate so influential for good that by its works it shall be known, is, according to my way of thinking, the most effective means of doing extension work for the order.

Home Love the Basis of American Safety.

One of the crying needs of the hour in America is for a revival of a desire for homes. The present day drift is too much away from the home and toward a form of stimulated and mechanical existence that is foolishly called "living." Read the description of so-called "homes" to rent in any city newspaper, note their size and equipment, and do not overlook the significant clause, almost invariably added, "No children allowed," to realize whither we are drifting. The grange has always stood for the American home and no organization has done more to develop, to enrich and to sweeten our national family life. The grange advocates for its subordinates the ownership of grange homes, in compliance with the fundamental principle upon which our fraternity is builded, and in similar spirit it warns the American people today that they are drifting away from the only moorings that constitute genuine safety.

The right of personal property ownership must likewise ever be a cardinal principle of the American people. While this idea has been savagely attacked and often overthrown temporarily in other countries, these people have always been forced to return to the principle which they deserted. There is nothing more worthy than personal ambition and it is perfectly safe when devoted to the building of homes, the rearing of families within them and binding all to faithful efforts, through the silver cords of love. But once let people get the idea that all men have so-called "equal rights," and then preach the theory that such equal rights entitle them to demand things for which they have never given full measure of pay—if that time ever comes to America we have started a malignant cancer growing in our body politic.

When a man toils faithfully through the day and goes home at night to a family of his own, actuated always by a keen desire to be an honor to that family and to the community in which he lives, that man is headed right and so far as he typifies all men, America is safe, for it is from just such homes that came the boys who went across the water to help make the world everywhere safe for happy homes.

A few less moving pictures and more family gatherings around the cheery hearthstone; a little less baseball playing, and more honest worship of God on the Sabbath day; less disposition to just put in our time, and more purpose to actually earn our wages; a little less desire to have the other fellow bear all the loss in the present hard times, and more willingness to carry our part of the load; less chasing the will-o'-the-wisp of modern excesses and excitements, and more of the homely, home-loving instinct; fewer thrills and more sense—these changes would go a long way toward curing all the ills that we are now beating the air about and seeking hastily-enacted legislation as a universal panacea.

Unless we are ready, all of us, to be honest with ourselves and to apply these searching tests to our own lives and tendencies, instead of to some one else's, we shall not make much headway toward improvement. It is always to be borne in mind that if progress in these directions is to come it will have to begin with the individual life and work up naturally through the family, the community, the state, the nation and the world. Legislation can never transform humanity; individual determination can.

Unity in Action.

In no other direction lies greater grange need for the coming year, if we are to be a compact, effective organization of national dimensions, than that we shall put intense stress upon unity of action, to the end that every part of our vast machinery shall function in team work fashion to carry out a program of largest usefulness. I long to see the time when every policy of the national grange, as enacted each year in annual session, shall be put into effective operation by the concerted and energetic backing of every last one of our more than 30 state granges, while in each state every subordinate and Pomona organization likewise presents a united front toward the achievement of the same ends. We shall never accomplish what we ought to as an organization until the smallest subordinate grange in the weakest grange state catches the same thrill for accomplishment that we feel who constitute the highest legislative assembly in our fraternity. Every grange leader should stress this necessity to the utmost limit the coming year and every loyal patron ought to catch the vision.

Toward this end I very earnestly recommend that every state master be required to make a quarterly report to the national master of the progress of the order in his state; these reports to comprise a summary of similar quarterly reports which state masters shall require from the Pomona and subordinate masters within their jurisdiction. In some states such a reporting system is already in good working shape and has materially increased the efficiency of that state grange.

(Continued on page fourteen.)

LEARN - AUTOS - TRACTORS AND AUTO ELECTRICITY AT ADCOX SCHOOL



LARGEST IN THE WEST

1922 will be a *big* year for *trained* auto and gas engine mechanics

Hundreds of auto mechanics, gas tractor operators, auto electricians, battery experts, etc. needed for spring work ---prepare now for one of these big paying jobs.

Heads of auto factories, automobile financiers—the big men in the auto industry—are spending millions of dollars in new factories and other facilities for increased production. Dodge, Cadillac, Chevrolet, Studebaker and many other big automobile concerns are in the process of building or have just completed new factories.

The Durant company, the new young giant of the auto world, with plants in the east and central west, is building a very large plant at Oakland, Cal. The Continental Motor Corporation has recently added 2000 employees. Right now while business is almost at a standstill these big men in the auto business are spending millions and millions of dollars. Why? Because they know that car prices are going to slide back to pre-war prices in the near future, probably before spring. They know that the automobile business has been retarded only because every one is waiting for car prices to come down—then there will be more cars sold than ever before in the history of automobile industry. They know with almost 10,000,000 autos in the United States that they must manufacture at least one and one-quarter million cars every year to replace the cars that are worn out and discarded. They know that they are hundreds of thousands of cars behind the replacement schedule and that each day brings them nearer to the time that the "old wrecks" will have to be put aside and new cars take their place. They are preparing for a bigger and better automobile business than ever before and while all this is going on hundreds of fellows are sitting idle and complaining of hard times. But the fellow who reads the signs of the times will prepare himself now for one of the wonderful opportunities that will undoubtedly be offered to trained auto and gas engine men this coming spring and summer.

If you come to the Adcox school now you will be prepared to step out and land a big paying job next spring or, better still, get into a fine business of your own.

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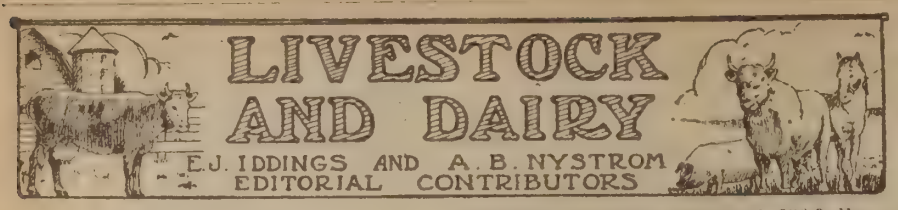
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Hog Rations

By JERRY SOTOLA, Animal Husbandry Department.

In a series of feeding trials with hogs, conducted at the Washington experiment station in Pullman, attention has been given to a study of the comparative value of the two supplements, tankage and fishmeal. The fishmeal is a product prepared from trimmings of fish in the canning process. It varies in protein content from 56 to 70 per cent. The color may vary from yellow to dark brown and generally the darker the color the higher is the protein content. The grade containing 56 per cent protein is most available and for this reason was compared with tankage. All grades possess the charactertisic fishy odor.

Tankage is prepared in packing plants from fresh meat scraps, fat trimmings and scrap bones which are thoroughly cooked by steam, under pressure. The cooking process separates the fat, which is then drawn off. The residue is dried and ground to a fine meal. The digestier tankage contains practically no hair and very little bone, and is so distinguished from grades of tankage used as nitrogen fertilizers. This protein supplement is more or less uniform in composition, containing about 60 per cent crude protein.

Lot 1, receiving tankage in grain mixtures, made an average daily gain of 1.314 lbs. fro 57 days, requiring 441.5 lbs. of concentrates to make 100 lbs. body gain.

Lot 2, receiving fishmeal, made a daily gain of 1.401 lbs. per head for 57 days, requiring 412.3 lbs. of concentrates per 100 lbs. gain.

Lot 3, on pea forage, receiving tankage, made an average daily gain of 1.065 lbs. for 74 days and required 285.2 lbs. of grain besides tea forage to make 100 lbs. body gain.

Lot 4, on pea forage, being fed fishmeal, made a daily gain of 1.079 lbs. for a similar length of time, consuming 286.7 lbs. of grain mixture to make 100 lbs. body gain. These results are almost identical as far as daily gains and feed consumed to make these gains are concerned. On pea forage no difference between the feeding value of tankage and fishmeal were noticeable.

Lots 5 and 6, including seven hogs each, made an average daily gain per head of .802 lbs. and .809 lbs. respectively. Lot 5, receiving tankage, consumed 320.3 lbs. of concentrates to make 100 lbs. gain, while lot 6, fed fishmeal, consumed 320.5 lbs. to make the same gain.

The comparative feeding tests in dry lot, on pea forage and on alfalfa forage involving 28 head fed 57 days, 35 head fed 74 days and 14 head fed 65 days, have failed to demonstrate any marked difference between fishmeal containing 56 per cent protein and tankage containing 60 per cent protein.

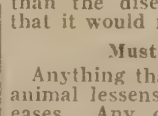
LIFE PRESERVERS FOR LIVE STOCK

By DR. E. E. WEGNER, W. S. C.

RESPIRATORY TRACT, ARTICLE 6.

Pneumonia.

This disease is most feared of all, as it is very likely to result in the death of the patient; certainly there are a great number of fatalities. This condition is one of inflammation of the lungs and its seriousness is due to the fact that animals so affected can not get a sufficient amount of air and the diseased portions are quite solid and in distinct contrast to the normal spongy lung. There are quite a number of causes, some that are preventable and some that are not so easily controlled. There are different kinds also, depending on which portions of the lungs are involved, but for the present discussion that is not of great importance.



The irritation that gives rise to the inflammation may come from various sources. There is unquestionably a contagious pneumonia in certain animals, especially the pig. This is seen also in other animals, though it may be in connection with other diseases, but the bacteria that causes the disease in the first place may transfer itself to the lungs and start serious trouble there. We fear some diseases more because of the danger of an attending pneumonia than because of anything else. Much of the care that is recommended for influenza, for instance, is because we fear the complications more than the disease itself if we were sure that it would run a typical course.

Must Maintain Vitality.

Anything that reduces the vitality of an animal lessens its resistance to other diseases. Any disease of the respiratory tract lessens the resistance of the organs of that tract to other troubles, just as a man once down may be hit by anybody because he is not in position to defend himself.

Another serious danger from pneumonia other than suffocation is that of blood poisoning from the absorption of products from the diseased lungs. The condition of the diseased portions becomes very bad in most instances and has a decided tendency to soften and slough away to quite an extent. The breath of animals so suffering is usually very offensive after the first few days of illness. There is quite an amount of this material being taken into the blood all the time and it creates a general disturbance of the system that resembles blood poison, and is so, in effect.

The breath is particularly bad when the portion of the lung close to the small air tubes is affected, because the diseased portion of the lung is in positio nto throw off this offensive material into the tube through which the air must pass. These cases are the ones that develop from an inflammation of the bronchial tubes in the first place.

Numerous Causes.

Causes of pneumonia are quite numerous and aside from the infectious type that has just been touched upon. Mechanical causes are very common in animals, as when an animal is required to work in irritating dust day after day in a team where there is not the best chance to get fresh air. We see this many times in the combine teams, where 32 horses are driven together in one team. The inside ones do not get the fresh air at times, but they do get a lot of dust that can not be avoided. Then, too, the wheel horses in four and six horse teams working on dusty roads get a great deal of dust from the work. It may be quite as bad for the leaders though, if the teams are close together on the road and keep the dust stirred up all the time. The dust of alkali countries is much worse than ordinary dirt that does not contain alkali. This dust may also cause irritation of the entire respiratory tract.

Misdirected Drenches.

Another source of irritation is from misdirected drenches. The common practice of drenching animals with various kinds of medicine when they are sick has

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There's a settlement in profit or loss, for nearly every indulgence.

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Instead of paying penalties for your meal-time drink, let it pay benefits to you, by giving natural health a full chance—and begin the new arrangement today. Any grocer will sell you, or any good restaurant will serve you Postum.

Postum comes in two forms: Instant Postum (in tins) made instantly in the cup by the addition of boiling water. Postum Cereal (in packages of larger bulk, for those who prefer to make the drink while the meal is being prepared) made by boiling for 20 minutes.

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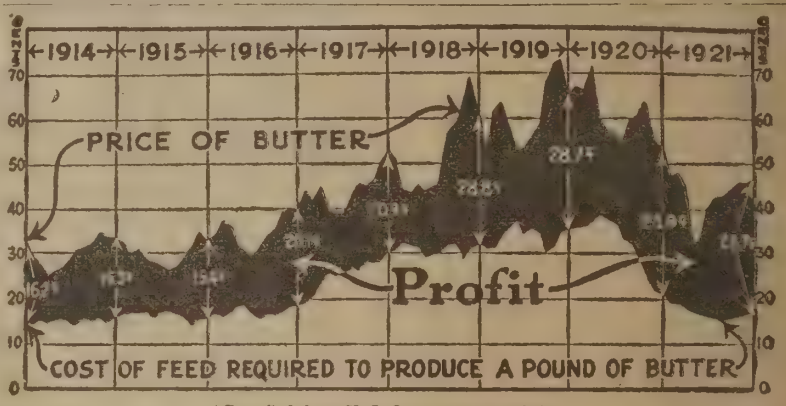
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been the cause of many cases of pneumonia, and frequently the effect of the drench is much worse than the disease from which the animals were suffering. Many of the drugs used in medicines produce severe damage when they get into the lungs, as they can not be readily gotten rid of by the lungs, and they remain there and cause severe inflammation and many times fatal pneumonia. Raw linseed oil is one of the most common offenders, probably because it is an oil very commonely used. When it is poured into the lungs there is very likely to be a funeral in the near future, and many a good horse has been killed by its use when he would have easily survived the ailment for which the oil was given.—Copyright, 1921, by E. E. Wegner.

VETERINARY

By DR. S. B. NELSON.

Heifer Is Free Martin.—In September our cow dropped twin calves, a heifer and a bull. We would like to raise the heifer calf, but have been told that a heifer twin to a bull calf will not be fertile. Is this so?
Vancouver, Wash. J. G.

The heifer is known as a Free Martin and there are many instances on record where Free Martins have grown to maturity and have produced offspring.

Alfalfa Bloat—Will you please tell me what would be the best remedy for alfalfa bloat for cows and, in case it is necessary to stick them, what size knife or instrument should be used? Will you describe as near as possible the place they should be stuck. D. C. H.
Prosser, Wash.

The best instruments to use are the trocar and canula, which you can get from any instrument house. The cow should be stuck on the left side, a hand span below the back bone, midway between the last rib and the hip bone. When you take out the canula press the skin in tightly so as not to allow the skin and the wall of the stomach to separate. This can be followed by one to two pounds of epsom salts in from three to five quarts of water.

Lump on Cow's Side—Can you tell me what causes a lump that came on the side of my cow? She has had it for about two weeks and it is about as large as an ordinary sized water kettle. It seems to get bigger. She eats and drinks and seems all right otherwise. H. B.
Ritzville, Wash.

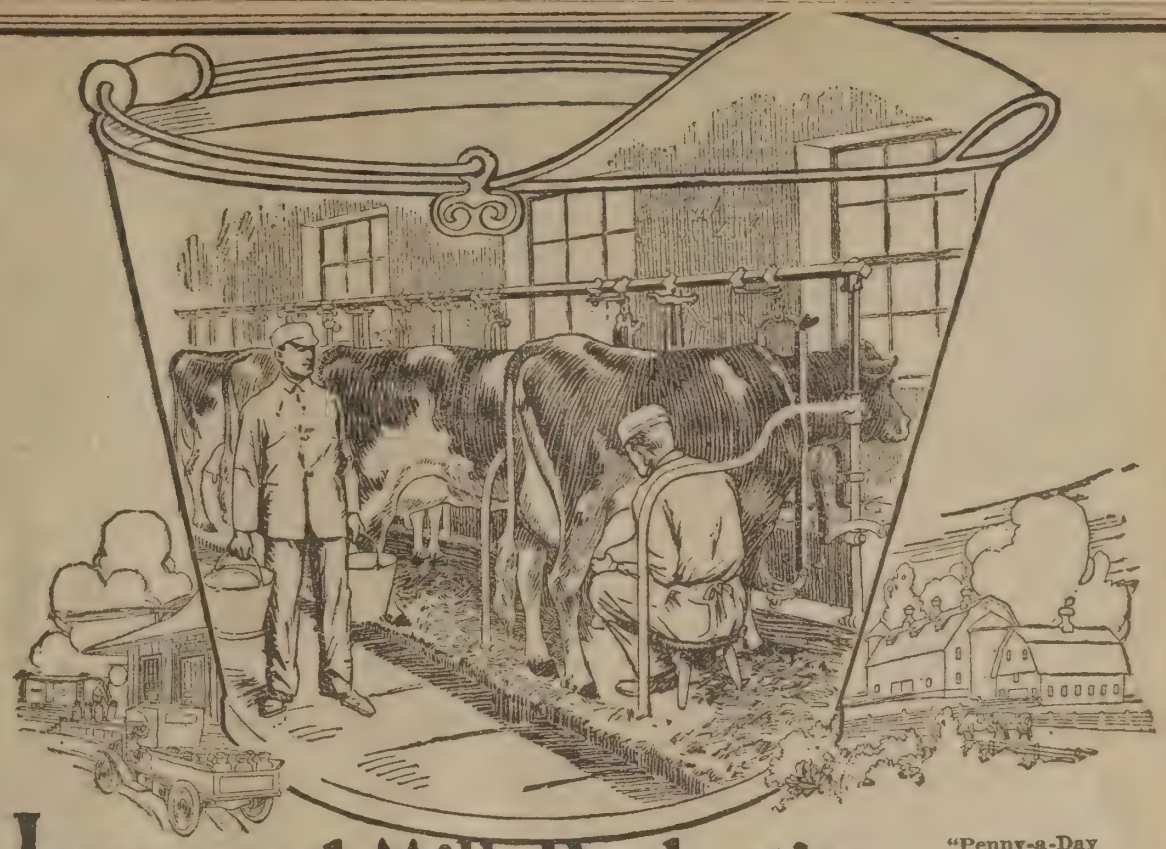
The lump on the side of your cow might be one of two things, depending upon where it is. It might be a rupture of the muscular tissues of the abdomen which has allowed the escape of the intestines from the abdominal cavity. There is no treatment for this except a rather difficult surgical operation. If the lump came on gradually and is hard and feverish, it may be an injury and an abscess forming, but I can not tell, from your description, which it is.

Milk Flow Stopped—We have a Jersey three years old. A week ago she took sick; lost all her milk inside of 12 hours. Her left hind teat became inflamed; she was unable to get up. The veterinarian said she acted like a cow with milk fever; inflated her bag; now she is able to get up. She eats fairly well, but the left side of bag is caked, so I can't get any milk out of the hind teat; right side of bag is all right; get milk from that side, about half what she usually gives. Could you give any information in regard to this disease? She is not to freshen until first of March. Have been feeding her rolled oats and oat hay and what she could find in stubble field. I bathe her udder with hot water and apply corona wool fat mixed with turpentine three times a day. We have only this one cow. Do you think she will come back to her milk on that side? MRS. A. N. S.
Opportunity, Wash.

I think you are using a perfectly correct treatment for this cow and with care she will come back to her milk part way. She may not return to her full milk capacity.

Must Cut Valve.—I have a cow that has freshened and it is simply impossible to get the milk from her udder. There is milk in the teats when you try to milk her, but when the milk is all milked out of the teats it stops coming. The valve in the teat seems to close and you have to wait for the milk to leak out into the teat again, with the same result. Is there anything I can do for her? L. T. P.
Twisp, Wash.

The valve in the upper part of teat, between the teat and the udder, has become contracted. This can be remedied by inserting through the teat up through the udder a little instrument called a teat slitter. It has a little knife that can be buried in the tube until it has been inserted, then the knife is pushed out and the instrument drawn down, making a cut in the valve. The knife should be again buried in the instrument, the instrument pushed up and turned half way around, the knife pushed out and the instrument drawn down, cutting the other side. This procedure should then be repeated, turning the knife a quarter way around and drawing it down, so as to make flaps.



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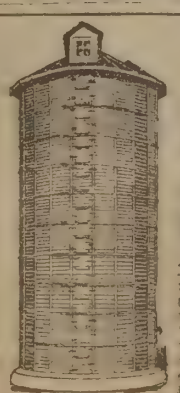
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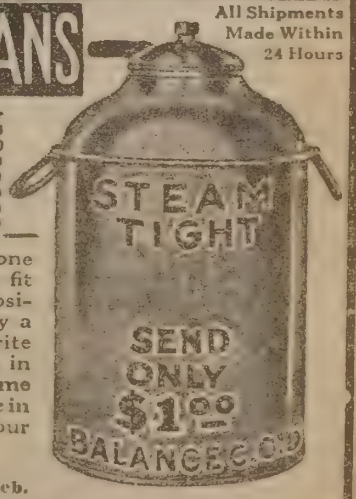
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POULTRY

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In less than 10 months' time the three-acre farm owned by Peter Tait of Kirkland had been transformed from a heavy growth of timber to a neat home and a producing poultry plant. Today the little 150-bird flock is a mecca for many of the neighbors who find occasion to drop in now and then for advise and inspiration.

"We knew practically nothing about the poultry business when we started out," remarked Mrs. Tait, "but we read all of the experiment station bulletins and followed the Shoup plan carefully. Soon after getting settled on the place we built a small double unit laying house and set up a brooder in one section for the shipment of 1000 baby chicks which came in May.

"It was quite an undertaking, but we had no bad luck because we followed the instructions to the letter. When the young birds were old enough to separate we sold off a large part of the cockerels and canned what remained."

It was early in the following September that the pullets began to lay their first eggs and since they were from a good laying strain they kept up the good work until late in the winter, when they were averaging a 75 per cent lay. Mr. Tait admitted that there was danger of the hens overworking and thereby making a curtailed production in the coming spring, but there was as yet no indication of a lowered vitality in any of the flock.

Soon after the flock had begun laying every fowl was given a thorough examination and sized up in accordance to the Hogan system of culling, with the view of picking out any poor layers. The lay from some of the odd individuals did not justify the effort, however, according to Mr. Tait. When asked for an explanation he said it was perhaps because there were really no poor typed birds in the flock, such as there would be in an ordinary flock of mixed hens.

"We find that it is more practical to use the ready mixed feeds since the different parts, such as fish meal, can be better analyzed by the laboratories before they were mixed, while if they were to be purchased separately and mixed at home their purity could not be vouched for. We found that there was very little difference as to cost since we buy in ton or carload lots, anyway.

"As for green feeds, we have to buy most of it since we didn't get any kale planted last summer. There is one point that we have always maintained as beneficial and that is the feeding of sprouted oats. We have always fed it after it has only been slightly sprouted, when it is classed as a grain and not as a green feed. There are some who seem to think that after it has sprouted it should be fed for a green feed."

In explaining the plan of the poultry house Mr. Tait said that he had followed the Shoup plan except for a few details which he considered a slight improvement. The walls back of the roosts were boarded up so as to admit the air from the outside in such a way as to take the foul odor from the dropping boards and let in fresh air. The nests were placed next to the windows instead of under the dropping boards, as is usually the custom. The idea of this change was to keep the birds free from mites and also to have them out of the way when the dropping boards are being cleaned.

The bottom of the nest boxes are fitted with hooks so that they may be removed when cleaning. This allows for the removal of all the nest litter at the same time and the bottom can be swept with a broom and sprayed.

"Come here," Mr. Tait called to one of the little birds as she pecked at his shoe laces. "I want to show the man what a good layer you are. This hen showed all the indications of a poor layer when the flock was culled over and she had been tagged with a red legband. We can tell by the color of her legs and beak that she is laying heavily and then we have often caught her on the nest. It all shows that you must watch for the color if you want to be sure.

"We have been keeping a coop in the feed room for sick hens and whenever one of the flock has indigestion or any other trouble she is doctored up until ready to be returned to the laying house. This may not pay as a general rule, but we feel that it pays to keep them all in the best of condition. The whole flock is given a dose of salts once a week in order to keep their appetites keen.

"Our plans are to buy another thousand day-old chicks and build another laying house. We can take care of 1000 laying hens almost as well as half that amount and then it may be that we could adopt the trapnest plan. This would not be practical until we were ready to sell breeding stock."

Before the Taits took to poultry raising they were very fond of eggs and would keep them on hand and have eggs for breakfast often. Now that they have an abundance of their own they do not seem to care for eggs and put them all up for market except what few they need for cooking. "Perhaps it is just a matter of getting too much of a good thing," remarked Mr. Tait, "and I suppose we will some day get tired of fried chicken, but it seems a long way off now."

Better Results

Obtained From Culling the Flocks

"Our culling demonstrations for the last year throughout the state are constantly showing better results," remarked W. D. Buchanan, poultry specialist of the state college. "It is my opinion that it will result in our establishing a system that we can depend on.

"Our biggest problem has been that of reproduction and in order to overcome it we must have better breeding and better brooding. Both of these subjects will be given much attention in our project work for this year. Other important subjects will include better breeding and management and better selection.

"The 10 highest pens in the Puyallup laying contest last year averaged better than 260 eggs, indicating that we are getting less than half the egg production that we should have since the average lay of Washington flocks is hardly over 85 eggs per hen. There are very few farm flocks that will average 260 eggs per hen a year, but on the other hand most of the commercial flocks are getting that much or more and it is possible for a greater percentage to reach the mark. Some tell me that it will take as long as 15 years to make such an average, but I tell them it will be well worth the while if it does. It will mean an increase of more than 50,000,000 eggs in King county alone.

Wet Litter

The changing of the straw in the pullet pens is the hardest labor connected with poultry handling, according to George R. Shoup, western Washington experiment station poultryman. Pullets under high production have a very soft excretion, due to the large amount of kale, milk and water which they consume. This thin semi-liquid discharge gives off moisture continuously, which on very cold, freezing nights condense on the walls and roof in the form of frost. When this frost melts from the heat of the sun during the day large globules of water collect on the walls and roof and gradually drop onto the straw. When the straw becomes so saturated that it is heavy and does not rattle when moved with the foot it is time to change it, otherwise the grain and sprouted oats fed in the litter are contaminated and cause serious digestive troubles as well as making the grain unpalatable. The most durable straw is that of oats, but the wheat straw is the drier and has the best absorbing qualities. It takes about 100 pounds of straw for each 100 birds each time the litter is changed and, as it has to be changed about 25 times a year, it will require 2500 pounds of straw for each 100 pullets. The litter in the old bird pens needs changing only once a month, even in winter, due to low production, while the pullet pens, under good ventilation conditions, will last 10 days to two weeks.

If the ventilation at night is so arranged that a continuous current of air is driving across the floor from intakes close to the floor line, and is carried out through the roof ventilators, much of the moisture generated in the coop is carried out by the circulation and hence does not condense on the walls. The roof ventilators should be at the highest peak of the roof and so arranged that there is the least possible obstruction to the air currents. The intake for the air should be as close to the floor line as possible, so as to move the air on the floor. If the floor area is not sufficiently ventilated by leaving the front curtain up six or eight inches, open a few of the rear windows under the dropping boards after the birds have gone to roost and close them again in the morning, to prevent draughts on the birds while on the floor.

Legs Weak, Pullets Die

Please give a remedy for weak legs in pullets. My pullets, hatched March 15, did well until about three weeks ago, when they got so weak in the legs that they could not use them, and finally died.

Auburn, Wash. H. S. P.

I know of no treatment for this condition when it develops in birds that are not laying, since when birds show the paralysis they are too far gone to bring about a recovery. The most satisfactory way of controlling this trouble is by way of prevention. Preventive measures should include proper system of yarding, so that the birds are not permitted to run on the same yards year after year, as well as judicious feeding. If the fowls are fed a considerable amount of concentrated food, as is generally supplied in the form of a mash, they will be predisposed to the development of limb paralysis.

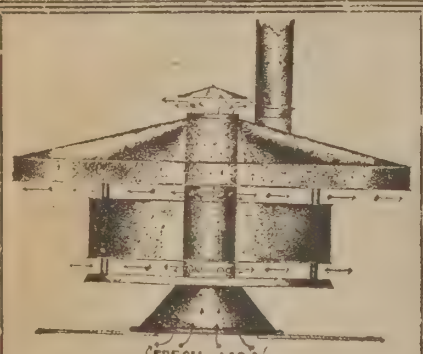
The leg weakness, or limb paralysis, shown by pullets that are laying, is of a different nature than the above described condition. The paralysis in this case seems to be associated with egg production. Birds affected with this type of paralysis generally recover in a day or two without any medication whatsoever. A more satisfactory recovery is brought about if these birds are placed in a warm room until fully recovered.

W. T. JOHNSON,
Western Washington Experiment Station.

MATING THE GUINEA.

Can you give me any information as to the mating time of guinea fowls? M. S.
Tenino, Wash.

Guineas should be allowed to run at large with the males much the same as chickens. The eggs require three weeks for brooding and the nest should be made on moist earth. If the hen is allowed to set on a nest built on dry soil the eggs will require longer to hatch. As a general rule the guinea is unreliable and is often hard to reproduce. The meat is dark and by some people is considered very delicious, resembling that of wild fowl.



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Petaluma, Cal.

GENERAL ADVERTISING

Simple Mixture Makes Hens Lay

Beautiful Silverware offered Free to Introduce Remarkable Discovery of Kansas City Chemist to Two Million Readers.

Any reader whose hens loaf through the moult or winter season can easily, quickly and surely double his profits by doubling his egg yield through the remarkable discovery of a Kansas City chemist.



To introduce this amazing discovery to two million poultry raisers within the next two months a beautiful Rogers nickel-silver teaspoon like that illustrated here will be given absolutely free with every package. Readers who take advantage of the offering at once will also be shown how to get complete sets of silverware free of cost.

This wonderful discovery consists of powdered buttermilk and other valuable ingredients prepared in tablet form, and is called "Combs' Buttermilk Compound." Simply feed in drinking water or mix with feed. Users report increases of two to three times as many eggs.

Within ten days after feeding it to your hens you will notice a marked improvement, and within three or four weeks every loafer should become a layer. Your flock will have healthy red combs and go strutting and cackling about full of life.

So confident are the distributors of this discovery that it will make you money and please you in every way that they offer to send a regular $2.50 package and free Rogers spoon at the special introductory price of $1, with the understanding that it costs you nothing if not entirely satisfactory.

Send no money: Simply your name and address—a card will do—sent to the Milk Products Co., 138 Broadway Bank bldg., Kansas City, Mo., will bring you the regular $2.50 package and the free Rogers teaspoon by return mail. Use the tablets 30 days. If your hens are not laying 2 or 3 times as many eggs and you are not satisfied return the empty package within 30 days and your money will be returned. You will have had the use of the tablets for nothing, and may keep the spoon free of charge. This offer is fully guaranteed. Write today.—Adv.

Chickens Sick? Hens Not Laying

GERMOZONE will rid your chickens of roup, colds, canker, sore head, chicken pox, skin disorders, cholera, indigestion, bowel trouble and such ailments—and keep them healthy. For over 30 years the dependable remedy. Get Germozone, also famous Lee FREE BOOKLETS, at drug or seed stores. If no dealer, order by card. Postman will collect 70c and $1.80 sizes. No extra charge.

Geo. H. Lee Co., Dept. F-46, Omaha, Neb.

SPOKANE SEED CO., SPOKANE, WASH.
PORTLAND SEED CO., PORTLAND, ORE.
Pacific Northwest Distributors

WANT TO SELL YOUR FARM?

Now is a good time to sell or to buy. Our "Want Ads" are wonder workers in getting buyers and sellers together. Try a little ad with us if you wish prompt results.

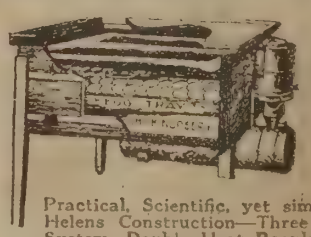


HAND POWER **Stump Puller**

The Fitzpatrick Products Corp. 99 John St., New York
952 Mission St. Box 32 San Francisco, Cal

Works on any land. Operated by hand! No horses; no digging. Made of the finest steel—guaranteed. Adopted and used by U. S. Government officials and many states. Send for FREE illustrated book on Land Clearing and special offer

USE A ST. HELENS INCUBATOR FOR TWO FREE HATCHES!



You want results when you buy an Incubator. Let me send you the St. Helens Incubator in the size best suited to your needs—from the small 60-egg to the Mammoth Sectional—and use it for TWO FREE HATCHES, and I will take all the chances on the results.

St. Helens Incubators Are Built On Merit

Practical, Scientific, yet simple in operation. The sectional view shows St. Helens Construction—Three Walls, Asbestos Insulator, Copper Hot Water System, Double Heat Regulator and Perfect Ventilation.

LARGEST WESTERN CHICK HATCHERY
More than 100,000 Baby Chicks hatched from 200-Egg Strain White Leghorns. Write for prices on day-old chicks, hatching eggs, and high grade stock.

FREE POULTRY HELPS
A service to every St. Helens Incubator user.

St. Helens Incubator Co.
A. P. BADGER, Gen. Mgr. CENTRALIA, WASHINGTON

Send for FREE CATALOG
Gives you complete information, sizes, prices and what users say.



ORCHARD

GRANVILLE LOWTHER
EDITORIAL CONTRIBUTOR

Crown Gall on Red Raspberries

By ARTHUR FRANK,
Western Washington Experiment Station.

Crown gall on red raspberries during the season just past has become increasingly prevalent in western Washington. The trouble has been common on bush blackberries for some years. Many new raspberry fields had been set during the last two years with plants taken from old and neglected fields in which the disease was present. These new fields in many cases were entirely ruined the first year by the growth of the disease. The use of plants from an infected field is the most common way for the disease to be acquired and spread. On raspberry plants the disease tends to spread rapidly because of its being easily dragged from plant to plant in the row through cultivation.

The disease shows as a gall or galls on the roots, on the crown of the plant, or as an outgrowth of galls above ground on the canes. The canes are killed before bearing time. The roots may survive for some seasons.

The disease is caused by a species of bacteria. The bacteria and their products cause the production of the gall on the plant. As the bacteria live entirely within the tissues and are thus protected from outside influences, there is no treatment that can be applied that will reach them. The remedy is to take out all diseased plants and burn them. Do not replant on the same ground for at least three seasons. For setting out fields use only inspected plants that have come from fields in which there is none of the disease.



Crown gall at crowns of red raspberries.



Crown gall at crown and also on canes of red raspberries.

Protect the Birds

Not all birds are friends of the farmer and orchardist in the destruction of insect pests, but most of them are, especially the smaller species. The eagle, the hawk and some others feed on other birds and, therefore, upon chickens, young turkeys and other domestic fowls, but varieties like blue birds, robins, barn swallows, warblers and many others feed largely on insects and seeds gathered from weeds.

It is estimated by the government statisticians that nearly $1,000,000,000 is lost to the agricultural interests of the United States every year on account of insects. Were it not for the birds the loss would be very much greater. Even those birds that we think of as enemies doubtless, upon the whole, do more good than harm.

Take the crow, for instance. When a boy I used to feel that when I had killed a crow I had done something worth while, because he pulled up the young corn, ate the eggs of other birds and also ate hen's eggs, provided a hen was unfortunate enough to hide her nest out and the crow found it. From the hen viewpoint it probably made little difference whether the crow got the eggs or whether we got them, but it made some difference to us, so the crow was our enemy. Later in life I learned that the crow ate insects, grubs, cutworms, mice, gophers and young rodents in general, and that he did much more good than harm. G. L.

GET READY FOR SPRAYING.

If you are not already familiar with the sprays needed and the proper methods of applying them in your orchard at just the right season, spend a few winter evenings studying on this subject.

WITTE LOG SAW

Made By The Man Who Sells It.



My Direct Factory Price Saves You $50.

Latest Model
Lever Control
Works Easier
Cuts Faster
Runs Steadier
Costs Less

Now Only $99.50 F.O.B. K.C.

$35 Tree Saw FREE

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Write for Log and Tree Saw Catalog Today



The Only Practical Tree Saw Built.

Greatest of All Log Saw Offers

Both outfits, complete, for price of Log Saw alone. Saw logs or cut down trees. Make Money. Big demand for wood. Every man can own a WITTE Latest Model Combined Log and Tree Saw on this offer. Newest improvements—Better built. Largest Engine on a Log Saw. Has two fly-wheels for steady running of saw blades at full capacity. Use engine for belt work without removing saw gears or taking apart. Does not require an expert to operate Engine or Saw. Lifetime Guarantee against defect. Quick change from Log to Tree Saw. Set and start Tree Saw in 10 seconds. Users say—"Beats any other"—"Runs fine!" Every WITTE rig complete, ready to operate. Immediate Shipment. Write quick on this offer.—ED. H. WITTE,

WITTE ENGINE WORKS, 1926 Oakland Ave. Kansas City, Mo. 1926 Empire Bldg. Pittsburgh, Pa.

Lyman's Genuine Grimm Alfalfa

Immense yields year after year without replanting. Seed from original stock, scarified to increase germination. Booklet and seed sample FREE. A. B. LYMAN, Introducer of Grimm Alfalfa.
537 Water Street Excelsior, Minnesota

DOES NOT WINTERKILL

FREE WRIST WATCH



Handsome, guaranteed time keeper, given for selling only 40 packs of vegetable seeds at 10c per large pack. Easily sold—EARN BIG MONEY OR PREMIUMS. Get sample lot today. Send no money. WE TRUST YOU till seeds are sold.

AMERICAN SEED CO. Box A105, LANCASTER, PA.

Read the "Want Ad" page this week for good offers of all kinds.

Lower Machine Prices

—a factor in a brighter outlook for 1922

MOST of the readers of this paper know that we have reduced our prices on farm machines for 1922. The lower figures apply on practically our entire line of grain, hay, and corn harvesting machines, plows, tillage implements, seeding machines, etc.

Reductions in prices of farm machines and other articles the farmer buys is one of the many indications pointing to continued improvement in the farmer's situation. The War Finance Corporation is steadily pouring aid from its billion dollar fund into agricultural communities to finance the farmer. Freight rate reductions on stock, grain, hay, etc., now going into effect, will save many millions for the farmers. Land values are now on a sounder basis. For 1922, better labor at lower cost will be available, better marketing conditions are being evolved, and recent tariff legislation also should tend to increase farm product prices.

All these factors indicate that more efficient production by modern methods and improved machines will mean greater profit for the new year. You cannot afford to postpone the purchase of needed machines. Where repairs have been made again and again, beyond the point of serviceability, waste and loss are pretty sure to follow. The present prices will enable you to replace the old with efficient modern machines so that best use may be made of the opportunities that are certain to come to the farming world.

The International Harvester Line of Farm Operating Equipment

Binders	Corn Binders	Spring-Tooth Harrows
Threshers	Corn Pickers	Peg-Tooth Harrows
Harvester-Threshers	Corn Shellers	Tractor Harrows
Headers	Ensilage Cutters	One-Horse Cultivators
Push Binders	Huskers and Shredders	Culti-Packers
Mowers	Huskers and Silo Fillers	Kerosene Engines
Rakes	Beet Seeders	Tractors
Tedders	Beet Cultivators	Motor Trucks
Loaders	Beet Pullers	Cream Separators
Side-Delivery Rakes	Cotton Planters	Manure Spreaders
Sweep Rakes and Stackers	Grain Drills	Stalk Cutters
Combined Side Rake and Tedder	Lime Sowers	Feed Grinders
Baling Presses	Broadcast Seeders	Stone Burr Mills
Corn Planters	Tractor Plows	Cane Mills
Listers	Horse Plows	Potato Diggers
Corn Cultivators	Disk Harrows	Wagons

If you are interested in learning some of the new prices or in looking over any individual machine, the International Dealer in your vicinity is at your service. Or you may address your inquiry direct to us.

INTERNATIONAL HARVESTER COMPANY
CHICAGO OF AMERICA (INCORPORATED) U S A

92 Branches and 15,000 Dealers in the United States

National Master's Address

(Continued from page nine.)

Has not the time come for the national grange to employ equally business-like methods in strengthening the ties of practical fraternity all down the line?

The National Grange Monthly.

Another year's good work has been done by our official magazine, the National Grange Monthly, which comes to us all regularly every month with the earnest story of grange progress and undertakings. In many respects this has been the most trying year in the history of the magazine, because of the general conditions of the country which it has had to encounter, but the detailed report that will later be given by its board of managers will nevertheless be most encouraging and will certainly be heard with keen satisfaction by all our members, who have come to regard the National Grange Monthly as one of the most tangible assets of our organization.

Much earnest planning and the exercise of the most frugal methods has been necessary this year and will continue to constitute the administrative policy of the magazine. We are remembering, however, that a magazine property has been built up, with its high grade mailing list of more than 60,000 names, its excellent equipment and such widespread support as it receives from its readers, which, if owned by a private concern, would be classed as a valuable property. Surely our monthly magazine has stimulated better grange work everywhere and constitutes an unsurpassed vehicle for the dissemination of grange plans and facts among our membership. The national grange can well afford to back its official magazine to whatever extent may be necessary and I bespeak for it the hearty support of the patrons everywhere.

In Memory.

Beyond the veil that hides the future we believe there is a glorious sunshine and that our loved ones live in perfect happiness and trust in each other, with no clouds of distrust, hatred or greed. May a measure of God's infinite wisdom come to us here that our earthly service may entitle us to participate in the glorious sunshine of a bright hereafter. May we always remember the beauty of the lives of those who have finished their work on earth. "Behold I come quickly; and my reward is with me; to give every man according as his work shall be."

From the founders of our order to the present time what a wonderful service has been rendered—what a valuable inheritance is ours. May each of us, when we gather on the golden harvest floor of our eternal home, bear many sheaves of grain.

The grim reaper has been very merciful to us in the last year. Seldom, if ever, have there been so few deaths in our order, for which we can all be devoutly thankful. Last year nine former members of this body were called to lay down their implements on earth, but in the last 12 months there have been but three deaths in our national grange official list.

Sister E. Electa Bowen of Connecticut, past Pomona of the national grange, and Sister Mary J. Belcher, wife of Past Master Andrew M. Belcher of Rhode Island, have passed into the great beyond during the year. Brother W. N. Giles, master of the New York state grange, passed to the grange above shortly after the meeting of the New York state grange, having served but a little more than one year.

Our usual memorial services will be conducted by the worthy chaplain on Sunday afternoon and I trust that each one of us will feel it a sacred duty to pay a last tribute of respect by attending thereon. May our own good fortune make us mindful of others' sorrows.

Obligations of the Order.

Out of the difficulties arising in the Washington state grange has come the necessity for a clearer understanding of our individual obligations as members of this great fraternity and I deem it my duty, as master of the national grange, to speak to you with the utmost frankness concerning it.

When a member of the grange takes the obligation it binds him in no way as to his religious or political affiliations. Each application is specific on this point, with definite assurance always given to the candidate before the obligation is administered. No matter what our members may be—Protestant, Catholic, Jew or Gentile—they come together as members of one great agricultural body. The same holds true in regard to political beliefs, but when a member is installed as a grange officer he takes a very different obligation, pledging himself not to use the office to influence in any way the political or religious beliefs of any one else, and any installed officer who does so invites upon himself the penalty. This in no way prevents a grange officer from exercising the full right of franchise in voting for whomever he or she may choose, but it does prevent such officers from taking active part in any party movement. As an officer of a grange, and especially so far as the state master's position is involved, it is absolutely impossible for such an officer to wholly divorce himself from his position, and whenever any reference to his attitude or his words is made in the newspapers and elsewhere they are al-

(Continued on page twenty-one.)

Farmers' Want Ads

SITUATIONS WANTED—Male 21

POSITION WANTED BY MIDDLE-AGED married man; 12 years' experience running dairy; life experience with cattle; accept position with dairy or stock ranch. Thos. C. Pratt, Catlin, Illinois.

FRESH FOOD PRODUCTS 51-1

WHITE ALFALFA, SWEET CLOVER honey; 1 60-lb. can, $7.50; 2 60-lb. cans, $14.50; six 10-lb. cans, $8.50; three No. 10 pails, prepaid third zone, $5.50. Wells D. Rose, Sunnyside, Wash.

HAPPY HOME HONEY FROM BLOSSOMS of alfalfa and sweet clover, in liquid form; 6 10-lb. pails, $8.50; 1 60-lb. can, $7.50; 2 cans, $14.50, at Mabton. H. N. Paul, Mabton, Wash.

PRUNES, $6.25 PER HUNDRED; SMALL BUT nice, clean, sweet; 25 lbs., express paid, $2.70. Sample, 15c. Kingwood Orchards, Salem, Ore.

SMOKED SALMON, 5-POUND BOX, $1.25; salt salmon bellies, 5 pounds, $1.25, delivered by mail. Coffin Fish Co., Seattle, Wash.

FRESH FOOD PRODUCTS (Continued) 51-1

HONEY—ALFALFA, SWEET CLOVER; FINE quality; 60-lb. can, $7.50; two 60-lb. cans, $14.50; three 10-lb. pails, prepaid second zone, $5. Harry Fisher, Prosser, Wash.

HONEY—LIGHT AMBER HONEY, LIQUID form; one sixty-pound can, $7; two cans, $13.50. A. L. Traner, Touchet, Wash.

FINEST ALSIKE CLOVER HONEY, ONE sixty-pound can, $7.50; two cans, $14.50. Roy Selwyn Wilson, Buhl, Idaho.

MISCELLANEOUS—FOR SALE 60

SASH AND DOORS—O. B. WILLIAMS CO., 1943 First ave., So., Seattle. Chicken house sash, 20" wide by 25" high, 80c; a dozen different sizes in stock for immediate shipment. Skylights for chicken houses, 36"x40" price, glazed, $2. This is the size recommended by the Western Washington experiment station. We carry them in stock for immediate shipment. Sash and doors for all purposes at lowest prices. All orders receive prompt attention. Our large illustrated catalogue No. 35, showing full line of building material and built-in fixtures for the home, free on request. O. B. Williams Co. Established 1889.

TOBACCO, NATURAL LEAF; SWEET AND mellow hand-picked chewing or smoking; 5 lbs., $1.50; 10 lbs., $2.50. Smoking, 20 lbs., $4. Furnish free recipe for preparing. Quality and delivery guaranteed. Farmers' Tobacco Exchange, Sedalia, Ky.

CEDAR CHESTS DIRECT FROM FACTORY to your home; Tennessee cedar, solid copper trimmings. Write for catalogue. J. W. Higgins & Sons, 1912 Gilsan st., Portland, Ore.

HOMESPUN CHEWING AND SMOKING TOBACCO, 5 pounds, $1.25; 10 pounds, $2.25; 20 pounds, $4. Farmers' Union, Mayfield, Ky.

TOBACCO—HOMESPUN MILD SMOKING, 10 lbs., $2; 20 lbs., $3.50; chewing, 10 lbs., $2.75. Farmers' Clun, Mayfield, Ky.

MISCELLANEOUS—FOR SALE (Continued) 60

KENTUCKY LEAF TOBACCO, 3 YEARS OLD, nature cured. Don't send a penny, pay for tobacco and postage on arrival. Extra fine quality chewing or smoking, 10 lbs., $2.50; medium quality smoking, 10 lbs., $1. Farmers' Union, Hawesville, Ky.

KEGS — HARDWOOD, WHITE OAK, SAP clear and fully charred; delivered, C. O. D., parcel post. Two-gallon, $3; three gallon, $3.50; five-gallon, $4. Cutler Manufacturing company, 2015 L. C. Smith bldg., Seattle, Wash.

WALL BOARD—WRITE FOR SAMPLE OF Washington plaster wall board; won't warp, won't burn. Manufactured by Washington Building Products company, 6851 E. Marginal Way, Seattle, Wash.

SOMETHING FINE FOR SMOKERS—OLD Kentucky white Burley smoking tobacco, 5½ lbs., $2.75; 10 lbs., $5, prepaid; satisfaction guaranteed. Jim Fey, Dukedom, Tenn. (Reference, Dukedom bank).

PIPE — NEW AND SECOND-HAND, ANY size; low price; standard grade roofing paper at a big saving; belting, all plies, all sizes, cheap. Write Alaska Junk Co., S120 Adams st., Spokane, Wash.

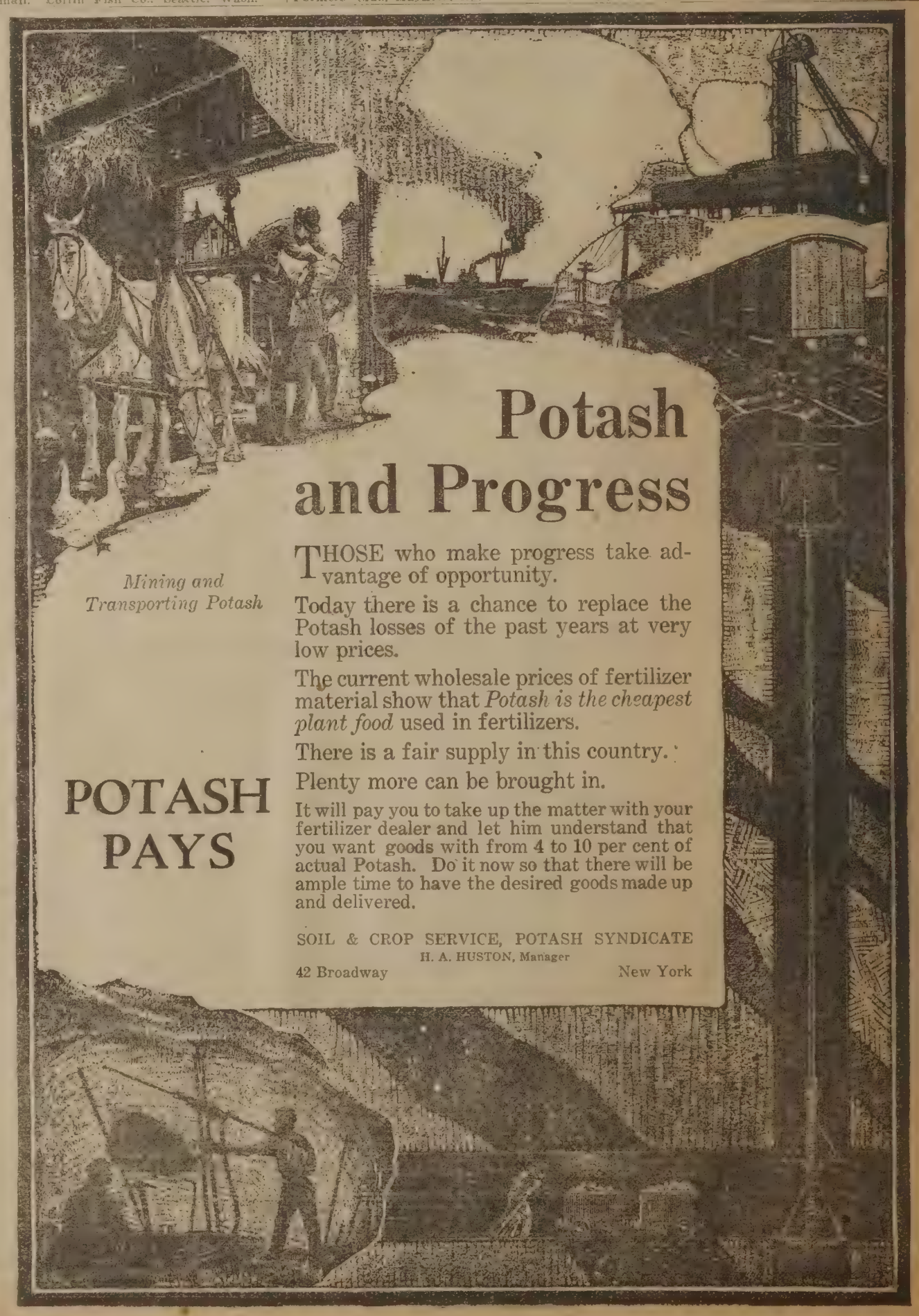
TOBACCO—NATURAL LEAF FOR MILD smoking, 10 lbs., $1.50; 20 lbs., $2.75; will furnish free recipe for preparing. Leaf Tobacco Exchange, Mayfield, Ky., Star Route.

BUY YOUR ALFALFA HAY AND NETTED Gem potatoes direct from grower, save commission. Samuel Shockley, Box 185, Outlook, Wash.

MISCELLANEOUS. 61

WE SCOUR AND CARD WOOL TO ORDER. Pure wool batts, pads and comforters at factory prices. Perfection Batt & Mattress Co., Stayton, Ore.

(Continued on the following page.)



FARMERS' WANT ADS

This is the farmers' "want," "sale" and "exchange" department for small advertisements of farmers, including live stock and poultry.

Advertising rates for ads running 1 to 3 times, 10c per word per insertion, with a special rate to Farmer subscribers, as follows: Ads running 4 to 12 times, 9c per word per insertion; ads running 13 times or more, 8c per word per insertion.

All commercial and land advertising 10 cents per word each insertion. Open also to nonsubscribers.

In using these columns advertisers must observe: (1) No advertisements will be inserted for less than $1.00. (2) Every word, number and initial, including name and address, must be paid for. (3) New advertisements, changes of copy or cancellations must reach general office, Spokane, Wash., 10 days in advance of publication date. (4) Cash must accompany order.

Above rates include insertion in The Washington Farmer, The Idaho Farmer and The Oregon Farmer, which constitute the Pacific Northwest Farm Trio, 46 Review Building, Spokane, Wash.

MACHINERY—For Sale. 93

STUMP PULLER—THE DOW HAND STUMP puller, complete triple power outfit. $118 machine only price, $60. All steel and absolutely guaranteed. Write for catalogue. David Dow & Son., Seattle, Wash.

SEVERAL REBUILT RUSSELL THRESHERS; A1 condition; different sizes. Write for prices. Also bargains in rebuilt steam engines. A. H. Averill Machinery Co., Spokane, Wash.

STOVE REPAIRING. 128

WRITE MYER RUBENS, SPOKANE, ABOUT stove repairs, welding broken parts, nickle plating.

PETS—Dogs, Birds, Etc. 171

CLEARANCE SALE—WE OFFER BLACK Shepherds, Airedales, Newfoundlands, St. Bernards and big game hunting dogs in pups, trained dogs and matrons at quick sale prices until January 23, 1922. State wants. List 6c. Springdale Kennels, Gilman, Mont.

RAISE GUINEA PIGS FOR US—BIG PROFITS. Send 25c for our 44-page booklet, tells you all about cavies and a guaranteed market. Dr. J. A. Roberts Laboratories, 6633 Sunset blvd., Hollywood, Cal.

WHITE COLLIE PUPPIES. URBANDALE Farm, Oakley, Idaho.

RABBITS and HARES 173

WE OFFER A LIMITED NUMBER OF breeding stock pedigreed Flemish Giant rabbits; colors, light gray, steel gray, black, silver black; also utility stock New Zealand bucks and does. Brookside Rabbitry, R. C. Spring, Mgr., Hubbard, Ore.

POULTRY 174

"HENACRES" 8 WEEKS' OLD PULLETS; March or May hatched; big, healthy, vigorous bred to lay. Booking orders now. 6000 to sell, $1.50 each or 500 for $700. Satisfaction guaranteed or money back. Baby chicks for February, March and April all sold to old customers. May chicks, $22 per 100; $200 per 1000. June, $16 per 100; $140 per 1000. Safe delivery guaranteed. Hatching eggs, $2 per 15; $9 per 100; $80 per 1000. "HENACRES" Leghorns are known all over the northwest. Ask your neighbor. Illustrated catalog and booklet on poultry management free. "HENACRES," Box A, Prosser, Wash.

CHICKS OF QUALITY—HOLLYWOOD, TANcred and commercial strains of White Leghorn chicks from pedigreed males, $20 per hundred. R. I. Reds, Barred Rocks, Black Minorcas and Ancona chicks, $25 per hundred. These prices are for February and March delivery. We sell Queen incubators, Queen brooder stoves, Reliable Blue Flame brooders, Petaluma Electric and Charters' incubators and American brooder stoves. A complete line of poultry supplies and remedies, including leg bands, egg scales, trapnest records, etc. Catalogue free. Queen Hatchery, Fourth and Pine. Elliott 2054.

HIGHEST GRADE S. C. WHITE LEGHORNS, Oregon Agricultural college strain: carefully selected and trapnested stock, raised under natural conditions. In Washington laying contest with ninety competitors from eleven states, for November, 1921, our pen was FIRST for production of highest value marketable eggs, also first for individual bird producing highest value of eggs. Orders accepted for eggs, chicks and cockerels. Corvallis Poultry Farm, Box 304B, Corvallis, Ore.

PENN'S QUALITY BARRED PLYMOUTH Rocks and Ferris heavy egg type White Leghorns; a western bred strain that won at the Panama-Pacific International exposition, both in utility and exhibition classes. During 1921, nine out of a possible 14 places at Fresno, Calif.; 4 places at Hanford. They lay. Chix, eggs and stock. Literature. Golden Rule Poultry Farm, Porterville, Calif.

WHITE LEGHORN COCKERELS, $3; CHOICE, $5; baby chicks, 18c; utility stock. My pullets carried first prize Sherwood and first pullet, Portland Stock show. Mammoth Pekin duck eggs, $2 for eleven; ducklings, 40c each. G. H. Lewis, Route 3, Sherwood, Ore.

GRIFFIN'S FAMOUS WHITE WYANDOTTES, the combined market fowl and egg producers. A nice lot of stock for sale. Order that cockerel now. Big, husky, white boys at reasonable prices. Send for catalogue. J. A. Griffin, Box 457, Eugene, Ore.

BUFF ORPINGTONS, PRIZE WINNERS throughout the northwest and middle west. They weigh, lay, pay. Bred by Burton McElroy, 1113 East Washington street, Portland, Oregon. Large, thrifty cockerels, seven to ten pounds. Eggs in season.

SILVER WYANDOTTES AND SILVER SPANGled Hamburgs, Golden Campines, choice birds for sale. No baby chicks or eggs by the 100. Birds, $5 and up. G. G. Wherry, Payette, Idaho.

WHITE LEGHORN COCKERELS FROM PEDIgreed O. A. C. male mated with O. A. C. strain hens; trap nest records, 231 to 297 eggs. Frank H. Shepherd, Corvallis, Ore.

S. C. REDS, RANGE RAISED, EVEN DARK color; good vigorous cockerels, $5 and $3.50 each. Satisfaction guaranteed. C. W. Price, Monmouth, Ore.

MAMMOTH BRONZE TURKEYS FROM THE famous Walker strain. Prices according to ages. Mrs. H. D. Moore, R. 1, Box 21, Hubbard, Ore.

BRONZE TURKEYS, BARRED ROCKS, White Leghorns, Buff Orpingtons, Dark Cornish; prize winners. E. A. Kruse, Roseburg, Ore.

BARRED ROCK COCKERELS — "START right." Strain from very heavy layers, $3 to $5 each. Mrs. A. Wilson, Whitcomb, Wash.

WHITE LEGHORN AND WHITE ROCK cockerels; 300-egg strain; baby chicks. Palouse Falls Ranch, Palouse Falls, Wash.

S. C. BROWN LEGHORN COCKERELS AND pullets; prices reasonable; quality first-class. E. H. Rosenkranz, Colfax, Wash.

S. C. W. L. HATCHING EGGS; HOLLYWOOD strain; pullets, Hollywood or Tancred strain. Mrs. Rominger, Underwood, Wash.

ALLEN'S PRIZE BARRED ROCKS AND White Leghorns are wonderful layers. Write D. W. Allen, LaConner, Wash.

PURE BARRED ROCK COCKERELS; GOOD laying strain, $3 and $4. Mrs. A. A. Nofziger, Route 7, Box 151, Salem, Ore.

BLUE ANDALUSIANS AND WHITE ROCK cockerels; extra good; order now. Mrs. C. W. Armstrong, Freewater, Ore.

SUPERIOR BARRED ROCKS, EXHIBITION size; layers; world's best strians. C. E. Dibble, Payette, Idaho.

COCKERELS, S. C. RHODE ISLAND REDS. Write for information. Mrs. L. W. Alexander, Sunnyside, Wash.

PUREBRED S. C. WHITE MINORCA COCKerels, $3 each, f. o. b. Ronan, Mont. Arthur Schmidt, Route 2.

ANCONA COCKERELS, HATCHING EGGS, chicks. Get our prices. Oscar Dunlap, Junction City, Ore.

PUREBRED WHITE ROCK COCKERELS, world's record; $3. P. L. Schubert, Route 2, Boise.

POULTRY (Continued) 174

WHITE LEGHORN AND ILL-A-HEE BARRED Rock breeding cockerels. If you want to increase the laying standard of your flock get a Butler White Leghorn or a Ill-a-hee Barred Rock cockerel direct from the home farms. Write for circular telling how our methods of selecting breeding cockerels have made our strains celebrated for high average flock production. All stock trap nested and pedigreed. Address Butler Poultry Farms, or Ill-a-hee Poultry Farm, Jennings Lodge, Ore.

FREE INCUBATOR CATALOG — INCUBAtors, brooders, oat sprouters, baby chicks, hatching eggs, trap nests, poultry books and supplies. You can't beat the St. Helens incubator in either price or hatch. From 60 to 4000 egg capacity; electric and lamp heated. St Helens Incubator Co., Centralia, Wash.

AM BOOKING ORDERS NOW FOR HATCHing 1020 eggs of 80 per cent fertility in my well equipped hatchery. Hatching starts February 10. Heavy flocks are Plymouths, Wyandottes, Hamburgs and Rhode Island Reds. Write for further information. Jos. Valasek, Nampa, Idaho, Route 2.

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POULTRY—Baby Chicks (Continued) 174

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TRACK'S END

By HAYDEN CARRUTH

A Stirring Story of Adventure

(Copyright by Harper & Bros.)

CHAPTER IV.

We prepare to fight the Robbers and I make a little Trip out to Bill Mountain's House: after I come back I show what a great Fool I can be.

The next minute I was back in the depot reading this letter to the others. When I had finished they all looked pretty blank. At last Jim Stackhouse said:

"Well I'd like to know what we're going to do about it?"

Tom Carr laughed. "If they come it will be the duty of the street commissioner to remove 'em for obstructing the car lines," he said.

I don't think Andrew understood this joke, though the rest of us laughed, partly, I guess, to keep up our courage.

"Well," went on Carr, "there's one thing sure—we can't send them five thousand dollars even if we wanted to; and we don't want to very much. I don't believe there is a hundred dollars in the whole town outside of Clerkinwell's safe."

"What do you suppose there is in that?" asked Baker.

"There might be a good deal and there might not be so much," said Carr. "I heard that he saved $20,000 out of the failure of his business back east and brought it out here to start new with. He certainly didn't take any of it away with him, nor use much of it here. He might have sent it back some time ago, but it hasn't gone through the express office if he did."

"Nor it hasn't gone through the post-office," said Frank Valentine. "I guess it's in the safe yet, most of it."

"Very likely," answered Carr. "But even if it is I don't believe Pike and those fellows would know enough to get it out unless they had all day to work at it; and what would we be doing all that time?"

"Shooting," said Jim Stackhouse; but I thought he said it as if he would rather be doing anything else. I didn't know so much about men then as I do now, but I could see that Tom Carr was the only man in the lot that could be depended on in case of trouble.

"Well, how are we fixed for things to shoot with?" went on Carr.

"I've got a repeating rifle," answered Valentine. "So have you, and so has Cy. I guess Sours left some shooting-irons behind, too, didn't he, Jud?"

"Yes; a Winchester and a shotgun," I replied.

"There are some other shotguns in town, too," continued Valentine. "But I guess the best show for us is in Taggart's hardware store. When he went away he left the key with me, and there's a lot of stuff boxed up there."

"Go and see about it and let's pull ourselves together and find out what we're doing," said Carr. "I think we can stand off those fellows all right if we keep our eyes open. I suppose they are up at the headquarters of the old Middleton gang on Cattail creek, the other side of the Missouri. The men that went through here with that pony herd last fall were some of them, and the ponies were all stolen, so that Billings sheriff said. I guess Pike has joined them, and I should think they would suit each other pretty well."

In a little while Valentine came back and said he had found a dozen repeating rifles, and that he thought there were more in some of the other boxes. There was also plenty of cartridges and some revolvers and shotguns.

"That fixes us all right for arms," said Carr. "Before night we must organize and get ready to defend the town against an attack if it should come; but I think the next thing is to send a letter out to Mountain's house and put it where they will look for the money, warning them to keep away if they don't want to be shot."

"Yes," answered Valentine, "that will be best. Write 'em a letter and make it good and stiff."

Tom went into the back room and soon came out with a letter which read as follows:

Track's End, December 16.

To D. Pike and Fellow-Thieves—You will never get one cent out of this town. If any of you come within range you will be shot on sight. We are well armed, and can carry out our share of this offer.

COMMITTEE OF SAFETY.

"I guess that will do," said Tom. "There isn't any poetry in it, but I reckon they'll understand it. Now, Jud, what do you say to taking it out and leaving it on Mountain's door?"

"All right," I answered; "I'll do it."

"Probably Jim had better go along with you," said Carr. "I don't think any of them are there, but you can take my field-glass and have a look at the place when you get out to Johnson's."

We all went to dinner, and by the time Jim and I were ready to start the sky had clouded over and threatened snow. I said nothing, but slipped back into the hotel and filled my pockets with bread and cold meat. I thought it might come handy. It was so cold and the snow was so deep that we had decided to go on foot instead of horseback, but we found it slow work getting along. Where the crust held us we made good time, but most of the way we had to founder along through soft drifts.

At Johnson's we took a long look at Mountain's with the glass, but could see no signs of life. It began to snow soon after leaving here, and several times we lost sight of the place we were trying to reach, but we kept on and got there at last. The snow was coming down faster, and it seemed as if it were already growing dark.

"It isn't going to be very safe trying to find our way back tonight," said Jim. "Let's see what the prospect for staying here is."

We pushed open the door. It was a board shanty with only one room, and that half full of snow. But there was a sheet iron hay stove in one end and a stock of hay outside. I told Jim of the food which I had brought.

"Then we'll stay right here," he said.



"They're not going to starve here."

"It's 10 to 1 that we miss the town if we try to go back tonight. Our tracks are filled in before this."

We set to work with an old shovel and a piece of board and cleaned out the snow, and then we built a fire in the stove. We soon had the room fairly comfortable. The stove took twisted hay so fast that the work did more to keep us warm than the fire.

We divided the food for supper, leaving half of it for breakfast. It made a pretty light meal, but we didn't complain. I wondered what we should do if the storm kept up the next day, and I suppose Jim thought of the same thing; but neither of us said anything about that. I sat up the first half of the night and fed the fire, while Jim slept on a big dry goods box behind the stove, and he did as much for me during the last half.

It was still snowing in the morning. We divided the food again, leaving half of it for dinner, which left a breakfast lighter than the supper had been. We were a good deal discouraged. But soon after noon it stopped snowing and began to lighten up. It was still blowing and drifting, but we thought we might as well be lost as to starve; so we left the letter behind the board on the door and started out.

We got along better than we expected. The wind had shifted to the northwest, so it was at our backs. We passed Johnson's deserted house and finally came within sight of the town through the flying snow. We were not 20 rods from the station when suddenly Jim exclaimed:

"Why, there's a train!"

Sure enough, just beyond the station was an engine with a big snowplow on it, with one freight car and a passenger car. A dozen men with shovels stood beside it stamping their feet and swinging their arms to keep from freezing. There were faces at the car windows, and Burrdock and Tom Carr were walking up and down the depot platform. We came up to them looking pretty well astonished, I guess.

"When I got to the Junction yesterday I got orders to take another train and come back here and get you folks," said Burrdock in answer to our looks. "Just got here after shoveling all night, and want to leave as soon as we can, before it gets to drifting any worse. This branch is to be abandoned for the winter and the station closed. Hurry up and get aboard!"

Jim and I were both too astonished to speak.

"Yes," said Tom Carr, "we were just starting after you when we saw you coming. We're going to take Sours' horses and the cow in the box car. I just sent Andrew over after them—and the chickens, too, if he can catch them."

I don't know how it was, but my face flushed up as hot as if it had been on fire. I felt the tears coming into my eyes, I was in that state of passion.

"Tom," I said, "who was left in charge of Sours' things?"

"Why—why, you were," answered Tom, almost as much astonished as I had been a moment before.

"Who gave you authority to meddle with them?" I said.

"Nobody. But I knew you wouldn't want to leave them here to starve, and I did it to save time."

"They're not going to starve here," I said, getting better control of my voice. "Call Andrew back this minute. You've neither of you the right to touch a thing that's there."

"But surely you're going with the rest of us?" said Tom.

"No, I'm not," I answered.

Tom turned and started toward the town.

"Now, don't make a fool of yourself, young man," said Burrdock. "This here town is closed up for the winter. You won't see the train here again before next March."

"The train won't see me, then, before next March," I said. "Jim, are you going with the rest of them?"

"Well, I'm not the fellow to do much staying," he answered.

I turned and started for the hotel; Burrdock muttered something which I didn't catch. I saw Andrew going toward the train, but without any of the animals. Tom came down the street and met me. He held out his hand and said:

"Jud, I admire you. I'd stay with you if I could, but the company has ordered me to come, and I've got to go. But it's a crazy thing for you to do, and you'd better come along with us, after all."

"No," I said, "I'm going to stay." (It was a foolish pride and stubbornness that made me say it; I wanted to go already.)

"Well, good-by, Jud."

"Good-by, Tom," I said.

He walked away, then turned and said: "Now, Jud, for the last time: Will you come?"

"No, I won't!"

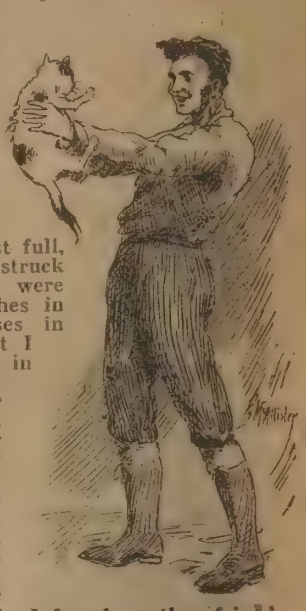
In another minute the train rolled away, with Tom standing on the back platform with his hand on the bell-rope ready to pull it if I signaled him to stop.

But I didn't. I went on over to the headquarters house. It was beginning to get dark; and the snow was falling again. The door was stuck fast, but I set my shoulder against it and pushed it open. The snow had blown in the crack and made a drift half way across the floor. I put my hand on the stove. It was cold, and the fire was out.

CHAPTER V.

Alone in Track's End I repent of my hasty Action: with what I do at the Headquarters House, and the whole Situation in a Nutshell.

When I came to think of it afterward I thought it was odd, but the first thing that popped into my mind when I saw that the fire had gone out was that perhaps there were no matches left in the town. I ran to the match safe so fast that I bumped my head against the wall. The safe was almost full, and then it struck me that there were probably matches in half the houses in town, and that I even had some in my pocket.

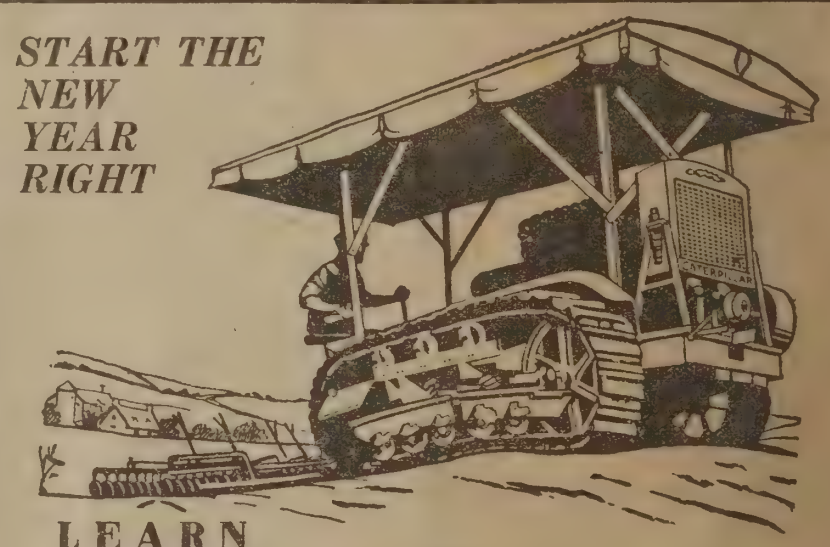


I found another friend.

I went over and peeped out of one corner of a window pane where the wind had come in and kept back the frost. The snow was driving down the street like a whirling cloud of fog. I could hardly see the bank building opposite. An awful feeling like sinking came over me as I realized how matters stood; and the worst of it was that I had brought it upon myself. I rushed into the dining room and looked out of a side window to see if the train might not be coming back; but there was only the whirlwind of snow. I went back in the office and threw myself on a lounge in one corner.

If any one says that I lay there with my face in a corn-husk pillow and cried as if I were a girl, I'm not going to dispute him. If any girl thinks that she can cry harder than I did, I'd like to see her try it. But it, or something, made me feel better, and after a while I could think a little. But I could not get over knowing that it was all my own fault, and that I might be riding away on the train with friends, and with people to see and talk to. I realized that it was all my quick temper and stubbornness which was to blame, and remembered how my mother had told me that it would get me into trouble some day. "If Tom hadn't come at me so suddenly," I said out loud, with my face still in the husk pillow, "I'd have agreed to it. Dear old

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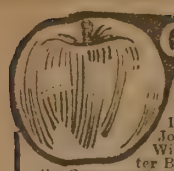
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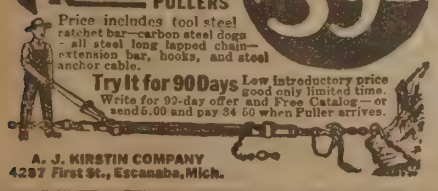
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Tom, he meant all right, and I was a fool!"

When at last I sat up I found it was so dark that I could hardly see. The wind was roaring outside, and I could feel fine snow against my face from some crack. I was stiff and cold, and just remembered that I had not had above a quarter of a meal all day. I thought I heard a scratching at the door, and opened it. Something rushed in and almost upset me; then I knew it was Kaiser, Sours' dog. I was never so glad to see anything before. I dropped down on my knees and put my arms around his neck and hugged him, and for all I know I may have kissed him. I guess I again acted worse than a girl. I remember now that I did kiss the dog.

I got up at last and felt around till I found the match safe, and lit the wall lamp over the desk. I thought it made it so I could actually see the cold. Kaiser seemed warm in his thick coat of black hair, and wagged his tail like a good fellow. I don't know why it was, but I thought I had never wanted to talk so badly before. "We're glad they're gone, aren't we, Kaiser?" I said to him; then I thought that sounded foolish, so I didn't say anything more, but set to work to build the fire.

When I went to the shed at the back door for the kindling wood I found another friend, this time our cat, a big black and white one. I don't think I was quite so foolish about her as I had been about the dog, but I was glad to see her. After the fire was started I got a shovel and cleared the snow out of the office. Outside it was already banked half way up the door, and the storm was still raging.

As I turned from putting some coal on the fire I happened to see the hotel register lying on the desk. Another foolish notion seized me, and I took up the pen and as well as I could with my stiff fingers headed a page "December 17th," and below registered myself, "Judson Pitcher, Track's End, Dakota Territory." I think the excitement must have turned my brain, because I seemed to be doing silly things all the time.

But I managed to stop my foolishness long enough to get myself some supper; which I guess was what I needed, because I acted more sensibly afterward. Everything in the house was frozen, but I thawed out some meat, and ate some bread without its being thawed, and boiled a couple of eggs, and had a meal which tasted as good as any I ever ate, and with enough left for Kaiser and the cat, who was named Pawsy, though I can't imagine where such a name came from.

The office was by this time quite comfortable. I had brought a small table in from the kitchen and eaten my supper close to the stove. Though it was pitch dark outside, it was not yet 6 o'clock, and as I felt calmer than I had before, I sat down in front of the fire to consider how matters stood. I think I realized what I was in for better than before, but I no longer felt like crying. If I remember aright, it was now that I gave the first thought to Pike and his gang.

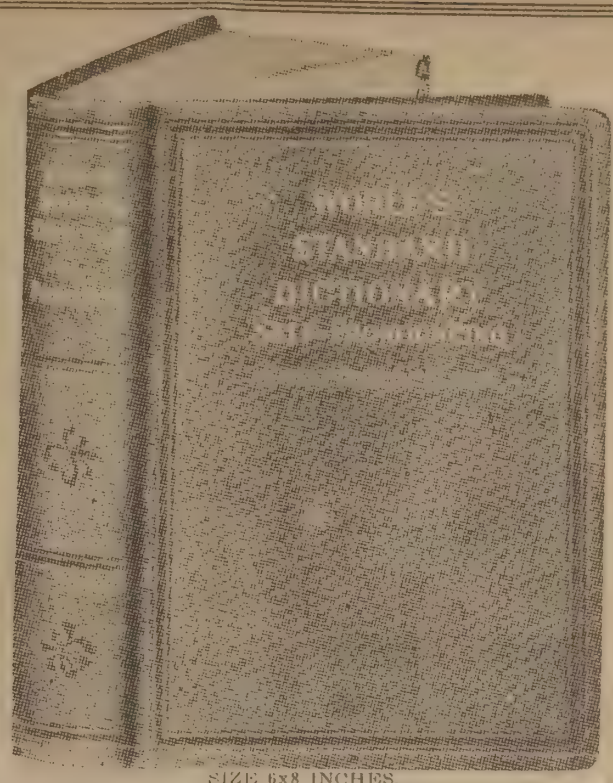
"Well," I said, speaking out loud, just as if there was somebody to hear me besides a cat and a dog, "I guess Pike won't do much as long as this storm lasts. But after that, I don't know. Maybe I can hide if they come." I thought a minute more and then said: "No, I won't do that—I'll fight, if I have a chance. They won't have any way of knowing that I am here alone, and if I can see them first I'll be all right." That is what I said; but I remember that I felt pretty doubtful about it all. I think I must have been trying not to let Kaiser know that I was afraid.

After a while I fell to thinking of home and of my mother. When I thought of how she would worry when she didn't hear from me, it gave me an idea of leaving Track's End and trying to make my way east to civilization. It seemed to me that with a few days of good weather I ought to be able to get through if no more snow came; though I had no idea how far I might have to go, since for all I knew Lac-qui-Parle might also be abandoned; and, even if it were not, I knew that it had no trains and that I would probably have to travel overland to the other side of the Minnesota line before I could reach a settlement with any connection with the outside world. I was before long very gloomy thinking about my troubles; then I happened to remember the horses and cow about which I had tried to quarrel with poor Tom Carr, and I put on my overcoat and went out to look after them.

I thought the wind would carry me away, and I had to shovel 10 minutes by the light of a lantern half blown out before I could get the door open. But when I did get in I found them glad to see me; and I was glad to see them. And while shoveling away the snow I had shoveled away my fit of the blues; and from that day to this I've taken notice that the best way to get rid of trouble and feelings you don't want is to go to work lively; which is a first-class thing to remember, and I throw it in here for good measure.

The cow mooed at me, and even the horses whinnied a little, though they were not what you might call children's pets, being broncos, and more apt to take a kick at you than to try to throw you a

(Continued on page twenty-one.)



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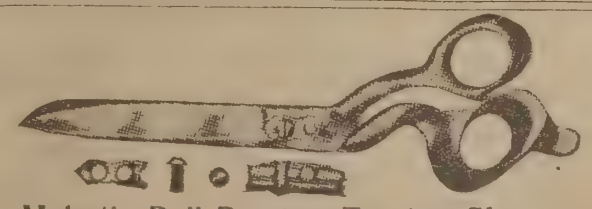
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FAMILY CIRCLE

ALICE BARLAND
EDITORIAL CONTRIBUTOR

Experience Letters

From Our Family Circle Women

Dear Mrs. Barland: To remove ink spots from white goods boil in water to which cream of tartar has been added; they will quickly disappear.

When frying eggs or anything where the grease pops out add a little flour to the grease and the popping will cease.

MRS. P. N. L.

I have never eaten a better pumpkin pie than one made by this recipe: One cup of pumpkin run through a colander, two well-beaten eggs (three make it better), one cup of sugar, a little salt, one teaspoon of cinnamon, just a speck of cloves, one full cup of rich milk. Bake with single crust till it is sure to be done clear to the middle. At least one-half of the pumpkin pies I eat at different places are not sufficiently baked. Have a moderate oven or your crust will burn before the filling is done. ALICE W. BARLAND.

Dear Mrs. Barland: Here are a few things you may publish if they will help some one. I will call it "What I found in the rag box and what I did with it." (This was a box of things which had been discarded by another woman as worthless.)

Out-grown middies which my 6-year-old has worn for one summer and which my 4-year-old will wear next summer. Men's shirts, which wore six months. Old blankets which made good filling for quilts and saved buying cotton. A night-dress with beautiful hand-made yoke, which, after mending, would last a year. Baby clothes, with lace and buttons all on, and one afternoon's work would have mended them all, and there were enough to have lasted a new baby an entire summer. Old sweaters, with pearl buttons, needing only new half sleeves and new pockets, and good aprons needing only a patch in front and a pocket.

I do not wish to criticize others for wasting, for no doubt I waste in some things, too, and I would like to see a department of "waste not, want not." I will give it a little start. Remove the steels from old corsets and use the goods for making brassieres or corset waists. One crocheted corset cover yoke will outwear six cloth bottoms. Do you put new ones on yours?

Good stocking legs will out-wear four feet; flour sacks will make waists, sheets, towels, pillowcases, underwear and aprons. Sugar sacks with rickrack braid will make tablecloths, dresses, underwear and curtains. Salt and meal sacks make nice handkerchiefs. MRS. W. J. W.

Dear Mrs. Barland: I am sending my receipe for soft yeast or "starter," hoping it will be of benefit to the sister from the east who is having trouble with her bread made of the western flour.

Boil four fair-sized potatoes in plenty of water till well done; mash, leaving in part of the water. Into a crock or other dish sift two tablespoons of flour, over this pour enough of the potato water to form a smooth paste, stirring well to keep the lumps out, and mix this with the mashed potato and run through a sieve if there are still any lumps. Add one-half cup of sugar and a small teaspoon of ginger, let stand till luke warm, then add two yeast cakes that have been soaked in a little luke-warm water. When the potato water is cool, but not cold, add the yeast and stir well and set in a warm place to rise over night.

When ready to set your bread sift into a pan the desired amount of flour, add salt and enough tepid water or milk to make the baking the size desired. Beat in a little of the flour to make a soft paste, then add your starter. Remember to keep out enough of this starter to add to the potato mixture the next baking. If your bakings are large, say about 8 or 10 loaves, keep out about one quart or half of the starter. If smaller, one pint is sufficient. After the bread rises the first time it is ready to mix into loaves. The starter should be kept in a cool place, but must not freeze and should be covered loosely. It isn't necessary to add any more yeast or ginger for the next baking, only the potatoes and sugar mixed with the starter you have saved.

If you have hops a cup of hop tea added to the first starter is good. W. G. W.

5 lbs. COFFEE sent postpaid for only $1.50

Send today! If it isn't better than any coffee you ever bought — your money back!

By cutting out expensive cans we can save you from 10c to 15c per pound.

Martin Marks Coffee Co.
252 Third St.
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Your Health

By Royal S. Copeland, M. D., F. A. C. S.

Some morning, after you have finished your bath, wet a spot of the washcloth with alcohol and rub it over your neck. You will be amazed and shocked to see the black streaks of dirt on the cloth.



Dr. Copeland.

The skin is moist and somewhat oily. Dirt, dust and smoke cling to it. Unfortunately, many persons neglect the skin and never get it really clean.

You can not be clean if you merely give yourself a shower, or "a lick and a promise" with a teaspoonful of cold water.

When properly done, bathing is really manual labor. Unless you use lots of hot water, soap and "elbow grease," you can not be clean.

No matter how many shower baths you may take, you aren't clean in the real sense unless you have an occasional scrubbing with soap and washcloth or fiber sponge. On these occasions hot or very warm water, which is more solvent than cold, will assist your purpose.

Your face is entitled to at least two thorough cleanings each day. The more important time is just before retiring. No one should go to bed without taking to the pillow a clean face.

Give your face several washings. Let the first be hot water—lots of it—and soap—lots of it. Rub and scrub and use your washcloth. Empty this dirty fluid and fill the basin again, repeating the soaping and washing. Then rinse your face and neck with clean water, letting it run cold if you enjoy the after-glow of a cold dip.

In the morning there is not the need of such a thorough performance, but soap and water should be vigorously applied to the face, neck and ears. The crack back of the ears should not be neglected. This is a sensitive bit of skin, but it should be gently reached with the washcloth.

You ought to take a general bath at least twice a week. Every day is better, but not always possible. Even if you take a shower bath daily, do not forget that you need regular scrubbing in addition.

The hands should be washed with soap and water before each meal. If you do this before touching food, and if you keep your face and the openings of your nostrils clean you will escape some serious ailments.

We learned during the influenza epidemic that that particular disease is hand-carried.

Cleanliness is one of the greatest factors in making for health, and for the appearance of health.

Just Folks

Two great forces keep the world alive.

The two forces are made up of easy-going people and uneasy-going people, the restful and the restless, the quiet and the loud, the satisfied and the ambitious, the "let well enough alone" and the "let nothing alone."

Between these extremes are the great body of men and women who are carrying on the every-day work of the world.

The harder the job the more keen must be the ambition for accomplishing.

The longer the search, the more concentrated must be the purpose.

The more difficult the undertaking the harder must be the fight.

Hence the need of patience with those who seem to overdo.

Hence the need of whole-hearted support for those with whom you can not wholeheartedly agree.

Hence the need of subduing antagonism with cooperation.

Hence quiet pleasures and sweet content must be regarded as incidents of life.

Hence we are not to think out our own salvation to the extent that we forget to work out our own salvation.

Hence is the need of fear and tremblings in working out that salvation.

Hence many tasks have to be performed without formal plans, and hence is the need of welding thought and work. E&S

"Old friends are best"

HOOD RUBBER FOOTWEAR

-HOOD- footwear is *scientifically* made. There is a most complete and exhaustive series of working tests required before any item can be added to the -HOOD- Line. These tests narrow down to the three -HOOD- major tests, as follows,—

Is it durable

Durability, long wear under hard service, is the first -HOOD- consideration. The Hood Pressure Process was developed to meet this requirement—an exclusive process which welds all parts of the shoe together, *to stay*. Materials are selected to this end. And the first shoes are tried out under actual working conditions, over a long period, to prove their merit and establish standards of manufacture.

Is it comfortable

It is not enough that a shoe or a boot wear well. It must be comfortable, as easy on the feet after a long day as when first put on. A reinforcement here and there to increase wear, may change the "feel" of the shoe. Here again -HOOD- designers are given a thorough checking, under working tests.

Will it do the work required

A shoe may wear well and feel good, and still leave something to be desired in exactly meeting your requirements. No shoe, boot, rubber, or gaiter enters the -HOOD- Line without a special use, and this use, together with the best methods of meeting it, is thoroughly examined and tested by experts in their field before the recommendations are finally accepted.

So that before a -HOOD- shoe leaves the factory, everything that is humanly possible has been done to make that shoe the best shoe that you can buy.

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Ask any dealer



Send for these four booklets—They will tell you what you should know about rubber footwear.

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¶ These farmers knew of the rich tracts of Canadian Pacific agricultural land for sale in Western Canada at low prices—open prairie, partially wooded or park lands—all virgin, fertile and productive. They knew they could not obtain such lands elsewhere at such prices—at an average of $18 per acre.

¶ They knew that Western Canada has carried away, year by year, first international honors for wheat, oats, barley and livestock.

¶ They knew of the success that had been won by farmers from their own state who had preceded them. They knew that Canadian farm values are steadily increasing and that each year they delayed they would have to pay more to purchase desirable farms.

¶ They wanted larger holdings for their growing families. They knew they could secure sufficient land upon terms unobtainable elsewhere —20 YEARS TO PAY.

¶ As a result, 16,000 American farmers took advantage of their knowledge and moved to Western Canada last year.

¶ In Canada the government and the railroads help the farmer in every possible way. It is to their interest to do so. Taxes are moderate; laws are just; transportation facilities and markets are excellent. Language, social customs, religion, money and other conditions are the same as in the United States.

Ask the Canadian Pacific about Canada

Thousands of American farmers have made prosperous homes in Canada. There will be more this year. Can you afford not to follow them?

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Read the "Want Ad" page this week for good offers of all kinds.

Bits of Fun for Everyone

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The roughneck politician burst into the lawyer's office and in an excited manner asked:

"What would you do if a paper should call you a thief and a liar?"

"Well," said the lawyer, "if I were you I'd toss up a nickel to see whether I'd reform or pay no attention to the statement."—Minneapolis Tribune.

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Wife—I ordered a bathing suit by mail today.

Husband—I suppose you enclosed a stamped and addressed envelope.—Boston Transcript.

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Representative Caraway of Arkansas said of a man who had failed:

"He was doomed to fail. His life has been, in fact, nothing but a series of failures. The first chapter of this series began in an insurance office where he obtained his first job, that of office boy. He had only just begun on this job, when his boss looked up from an important letter one morning and said irritably:

"'Don't whistle at your work, boy.'

"'I ain't workin', sir,' he answered; 'I'm only just whistlin'.'"

Very Singular, Indeed.

"How'd you break your arm?"

"Accident."

"What happened?"

"Broke it trying to pat myself on the back."

"What for?"

"Minding my own business."

Old Cat!

Miss Withers—Didn't Mr. Close say to you as I entered the room last night: "Is that the beautiful Miss Withers?"

Miss Sweetley—Yes, dear, with the accent on the word "that."

Not in the Winter.

"Would you marry a girl who wore a roll in her stocking?"

"That would depend on the size of the roll."

Latest High Class Patterns for the Home

Please order the patterns you desire at least two or three weeks before you wish to use them. Desiring to obtain the latest high-class patterns for its readers, THE FARMER has made arrangements to have them sent direct from the east, and under present mailing conditions it takes about that time for them to reach you.



3623. Ladies' apron. Cut in four sizes: Small, 34-36; medium, 38-40; large, 42-44, and extra large, 46-48 inches bust measure. A medium size will require 3 3-8 yards of 36-inch material. Price 10 cents.

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3835. Ladies' blouse. Cut seven sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. A 38-inch size requires 2 3-4 yards of 36-inch material. Price 10 cents.

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3579-3570. Ladies' costume. Waist 3579, cut in seven sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. Skirt 3570, cut in six sizes: 24, 26, 28, 30, 32 and 34 inches waist measure, and requires three yards of 54-inch material for a 28-inch size for the skirt and three yards of 36-inch material for the waist for a medium size. The width of skirt at the foot is 3 1-2 yards. Two separate patterns, 10 cents for each pattern.

3837. Ladies' dress. Cut in seven sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. To make the dress for a size 38 bust measure will require 4 1-4 yards of 40-inch material. Price 10 cents.

3592. Misses' dress. Cut in three sizes: 16, 18 and 20 years. An 18-year size will require five yards of 40-inch material. The width of the skirt at the foot is two yards. Price 10 cents.

3411. Girl's coat. Cut in five sizes: 6, 8, 10, 12 and 14 years. A 10-year size will require 3 1-2 yards of 44-inch material. Price 10 cents.

3816. Child's dress. Cut in four sizes: 2, 3, 4 and 5 years. A 3-year size requires 2 1-2 yards of 36-inch material. Collar, cuffs, belt and pockets of contrasting material require five-eighths yard. Price 10 cents.

3839. Ladies' dress. Cut in six sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. A 38-inch size will require five yards of 40-inch material. Price 10 cents.

3840-3823. Ladies' costume. The blouse 3840, cut in seven sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. It will require 3 3-8 yards of 40-inch material for a medium size. The skirt 3823 is cut in seven sizes: 26, 28, 30, 32, 34, 36 and 38 inches waist measure. It will require 2 3-4 yards of 44-inch material for a medium size. Two separate patterns, 10 cents for each pattern.

Please fill in this order and mail with remittance to:
PATTERN DEPT., PACIFIC NORTHWEST FARM TRIO, Spokane, Wash.

Enclosed find.....cents for which send me the following:

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Pattern No..... Size ..... Pattern No..... Size .....

Name .....

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Be sure to give the pattern number and the correct size.



A Few of the 137

DID you ever stop to think **how much** your Watkins Man, and the service he renders, mean to you?

The Watkins Man, with his store at your door, brings you 137 household and farm necessities. He saves you time. He supplies you with products whose quality you can always bank on. And—because Watkins products are **sold only direct to the user** through authorized Watkins Retailers—he brings you economical prices.

Through more than a generation, Watkins Men have been an intimate part of America's rural life. They have made buying easy—convenient. They have saved money for the farm home. And best of all, they have supplied real Watkins products—of highest quality always. Twenty million satisfied users are served by more than 4,000 Watkins Men today.

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High Points in News of the Week

With a view to formulating measures to meet the farm situation and to work out a permanent policy for the development of a self-sustaining agriculture, Secretary of Agriculture Wallace, at the request of President Harding, will soon call a conference of farmers and representatives of allied interests. This conference probably will be held in Washington, D. C., about the middle of this month. It is probable that the conference will consist of between 100 and 150 persons to be personally selected by Secretary Wallace.

In a recent address Secretary Wallace enumerated 11 points which he considered vital in the rehabilitation of farming. It is probable that these points will constitute the center of consideration in the coming conference. They are briefly as follows:

(1) More thought in the administration of credit machinery; (2) adjustment of credit based upon the seasonal character of farm production; (3) improved marketing through cooperative organization; (4) lower transportation cost for farm products; (5) collection of statistics on production and consumption at home and abroad with a view to better balanced and more stable production of farm crops; (6) limitation or extension of cultivated acreage on the basis of profit in farming or live stock production; (7) far-reaching study of the cost of production and marketing of farm crops; (8) a study of the forces which influence prices; (9) a study of foreign markets with a view to prompt disposition of surplus crops; (10) the maintenance and development of soil fertility, and (11) federal supervision of such institutions as stockyards, market agencies, grain exchanges and the like.

* * *

Prospects for the coming year in general industry as well as agriculture are considered more hopeful than at the beginning of any year since the war.

"Our year of liquidation is over and we can look forward to a year of recuperation," said Secretary of Commerce Hoover in a formal statement New Year's eve. "We have got through the credit strain; we have absorbed the enormous surplus of goods carried over from the post-war boom; we are on much sounder foundation. We have a lot to be cheerful over and we have ahead of us very substantial hopes of improvement both at home and abroad."

Secretary of War Weeks in a similar statement says: "The rapidity with which the American people have been putting their affairs in order during the last few months makes the outlook for complete industrial adjustment and resulting prosperity in the coming year bright."

Secretary of Agriculture Wallace, while declining to make any hard and fast prophecy, mentioned the following as hopeful signs for greater prosperity during the coming year: Credit conditions are already improved; interest rates are somewhat less severe; freight rate reduction is already being made; cost of production will be lower than during the last year; a probable reduction in acreage of some crops may tend toward better prices; the attitude of farmers themselves is one of greater courage and energy; congress is giving much consideration to legislation for farm betterment; farm organizations are doing much to put industry on a sound basis; the general industrial and financial public is learning to recognize the needs of agriculture; those who have held onto their money during the recent depression, seeing more hopeful signs ahead, will begin buying with their savings, thus aiding in restoring better business conditions.

* * *

The last week was a somewhat discouraging one in the disarmament conference at Washington, owing to an apparent determination of the French delegates to retain for their country a higher state of arms than provided for in the plan previously worked out. France has refused flatly to limit her building of submarines. However, the conference apparently will be able to so limit the operation of submarines as to tend to make them less of a menace to the welfare of other nations.

There is no indication as to the exact date of adjournment of the conference, though it is probable that it will adjourn soon. The American delegates are making an effort to provide for future meetings of similar nature either at stated intervals or upon call to take up any questions vitally affecting two or more nations.

* * *

The Irish parliament is reconvening this week. Probably the first important matter to come before it will be the ratification of the peace agreement between England and Ireland. While the controversy is spirited, and in some cases bitter, indications are that the Irish people have impressed upon their representatives the advisability of accepting the terms.

* * *

United States Senator Boies Penrose of Pennsylvania, one of the dominant figures in the senate for many years, died of heart failure after a brief illness last week at the age of 61. Senator Penrose had been chairman of the finance committee of the senate.

* * *

Tariff makers in congress are resuming their work in redrafting the permanent tariff bill with a view to having it ready for debate on the floor of the senate early next month. The bill will specify tariffs on about 100,000 articles.

Farm Business and Markets Outlook

(Continued from page five.)

middle of January. Receipts at the four leading markets increased again so that the reduction in cold storage holdings was not as rapid as the trade hoped for. Fancy grades have been relatively scarce, while medium and undergrades have been plentiful, and the market for them almost demoralized. The final report on cold storage stocks for the entire country on December 1 at 65,138,000 pounds was practically the same as the preliminary report.

Prices for 92 score fresh butter on December 28 were as follows:

Chicago, 41c; New York, 41 1-2c; Boston, 42c; Philadelphia, 42c; San Francisco exchange quotation, 40 1-2c.

Holiday demand developed in the cheese market, bringing more activity than was present during the first half of December.

FRUITS AND VEGETABLES.

Apple shipments have been decreasing and about 80 per cent of them are coming from the boxed apple sections. Over one-third of all apples shipped this season have come from Washington. A 2 1-2 Baldwins are quoted at $6.50 to $7.50 and Greenings at $8.50 to $9.50 in consuming markets, while extra fancy northwestern Jonathans are bringing $2.25 to $3 per box.

Shipments of potatoes have decreased until they are now below the estimated average weekly consumptive requirements, so that supplies accumulated in distributing markets are being reduced. The total movement from the 18 leading potato states up to December 17 was about 20,000 cars ahead of the movement last year to the same date in spite of the fact that the crop is lighter this year. Maine has shipped more than twice as many cars as in the same period of 1920. A year ago growers withheld potatoes in the hope that prices would improve, but this year they have crowded them upon the market as rapidly as possible. Consuming markets are quoted wholesale at $1.75 to $2.20 per 100 pounds sacked wholesale for northern round whites. Idaho growers are receiving 80 cents for sacked Rurals and $1.10 for sacked Russets, wagonloads, cash to growers.

LATEST QUOTATIONS.

The Live Stock Market.

PORTLAND, Dec. 31.—Cattle—Choice steers, $7@7.75; medium to good steers, $6.50@7; fair to medium steers, $6@6.50; common to fair steers, $5@6; choice feeders, $5@5.50; fair to good feeders, $4.50@5; choice cows and heifers, $5.50@6; medium to good cows and heifers, $5@5.50; fair to medium cows and heifers, $4.50@5; common cows, $3.50@4.50; canners, $2.50@3.50; bulls, $3.50@4.25; choice dairy calves, $9@10; prime light calves, $8@9; medium light calves, $6@8; heavy calves, $5@6.

Hogs—Prime light, $9@9.25; smooth heavy, 230 to 300 lbs., $7.50@8.50; smooth heavy, 300 lbs. up, $6.50@7.50; rough heavy, $6@7; fat pigs, $8.50@9; feeder pigs, $8.50@8.75; stags, subject to dockage, $5@6.50.

Sheep—East-of-mountain lambs, $8.50@9; best valley lambs, $8@8.50; fair to good, $6@8; cull lambs, $4@6; eastern Oregon feeders, $6@7; light yearlings, $6@7; heavy yearlings, $5@6; light wethers, $4.50@5.50; heavy wethers, $4@5; ewes, $1@5.

SPOKANE, Dec. 31.—Cattle—Prime steers, $6.50@7.50; good to choice steers, $5.75@6.50; medium to good steers, $5.25@5.75; fair to medium steers, $4.75@5.25; common to fair steers, $4.25@4.75; choice cows and heifers, $5@6; good to choice cows and heifers $4@5; medium to good cows and heifers, $3.50@4.50; fair to medium cows and heifers, $3@3.50; canners, $2@3; bulls, $3@5; light veal calves, $8@9; heavy veal calves, $4@8; stockers and feeders, $3.50@5.

Hogs—Prime mixed, $8@8.50; medium, $7.50@8; heavies, $5.50@7.50; fat pigs, $8@8.25; stockers and feeders, $7@7.50.

Sheep—Prime lambs, $7.50@8.50; fair to medium, $6.50@7.50; yearlings, $5@6.50; wethers, $4@5; mutton ewes, $1@4; feeder lambs, $5@6.50.

The Grain Market.

PORTLAND, Ore., Dec. 31.—Wheat—Hard white, hard winter, $1.07; soft white, white club, northern spring, $1.06; red Walla, $1.02.

Today's car receipts—Wheat, 80; flour, 3.

Grain futures: Wheat—Hard white, hard winter, December, January, February, $1.07; soft white, white club, northern spring, December, January, February, $1.06; red Walla, December, January, February, $1.02.

Oats—No. 2 white feed, December, $26; January, February, $27; No. 2 gray, December, January, February, $25.

WALLA WALLA, Dec. 31.—Club wheat, 89c; Bluestem, 89c; Turkey red, 88c.

ODESSA, Dec. 31.—Marquis, $1; Bluestem and Bart, 97c; Turkey red, 95c; Jones Fife, 87c.

PULLMAN, Dec. 31.—Red wheat, 82c; white wheat, 85c.

LEWISTON, Idaho, Dec. 31.—Fortyfold, Club, hard winter, 88c.

SEATTLE, Dec. 31.—Wheat—Hard white, soft white, white club, hard red winter, soft red winter, northern spring, $1.09; eastern red Walla, $1.06; Big Bend Bluestem, $1.10.

Hay and Feed Grain.

SEATTLE, Dec. 31.—City delivery: Hay—Timothy, $23; D. C., $27; mixed, $21; alfalfa, $17; D. C., $23; straw, $15; barley, whole, $33; ground and rolled, $35; clipped, $40; chick starter, $54; chop, all grain, $35; coconut meal, $28; corn, $33@34; corn, cracked and feed meal, $37; cottonseed meal, $44; linseed meal, $58; mash mixture, egg, $40@46; scratch food, $41@16; soy bean, $60; wheat, $44; Puget sound, $39.

SPOKANE, Dec. 31.—Wheat—Feed wheat, $38 per ton.

Oats—$34 per ton; steam rolled, $36.

Corn—$35 per ton; cracked corn, $37 ton.

Barley—$32; steam rolled, $34 ton.

Bran and shorts—$20 per ton.

Alfalfa—$18 ton. Timothy—$18 ton. Mixed hay—$18 ton.

PORTLAND, Dec. 31.—Millfeed—Price f. o. b. mill: Millrun, ton lots, $21; mixed cars, $20 ton; middlings, $34; rolled barley, $34@36; rolled oats, $36; scratch feed, $43 per ton.

Corn—White, $33; cracked, $35 per ton.

Hay—Buying price, f. o. b. Portland: Alfalfa, $14.50 per ton; cheat, $10.50@11; oat and vetch, $14.50@15; clover, $11@12; valley timothy, $14@15; eastern Oregon timothy, $16@17.

PORTLAND, Ore., Dec. 31.—Butter—Normal 5-cent drop announced for Tuesday, with 6-cent cut in cream bids. Extra cubes, 40@40½c; undergrades, 37@38c; cartons, 45c; prints, 44c.

Butterfat—No. 1 churning cream, 43@44c f. o. b. Portland; undergrades, 40c.

General Produce.

SEATTLE, Dec. 31.—Eggs—Select local ranch, white shells, 48c; select local ranch, mixed colors, 45c; pullets, 40@41c.

Butter—City creamery cubes, 43c; bricks or prints, 44c.

NEW YORK, Dec. 31.—Butter—Steady; creamery, higher than extras, 40@40½c; creamery extras, 39½c; firsts, 35½@39c; packing stock, current make, No. 2, 25c.

Eggs—Weak; fresh gathered extra firsts, 38@49c; fresh gathered firsts, 44@47c.

Cheese—Steady; state whole milk flats, fresh specials, 21½@22c; state whole milk flats, average run, 20½@21c; state whole milk twins, specials, 21½@22c; state whole milk twins, average run, 20½@21c.

SPOKANE, Dec. 31.—Butterfat—43c lb.

Eggs—Fresh ranch eggs, $15.50@16; No. 1 poultry farm eggs, $16.50@17.

Live poultry—Broilers, 22c lb; springers, over 2 lbs., 20c lb; hens, fat, 4 lbs. up, 19c lb; 2 to 4 lbs, 14c; old roosters, 10c lb; ducks, 20c lb; geese, 17c lb; rabbits, 3 to 4 lbs. 10c lb; dry picked turkeys, No. 1, 35c lb., f. o. b. Spokane.

Range of Live Stock Prices for the Week Ending Dec. 28

CATTLE	Chicago	Spokane	Portland	N Salt Lake
Choice, prime heavy steers (1100 lb. up)	8.00@10.00			
Good heavy steers	7.25@ 8.75			
Medium heavy steers	6.00@ 8.00			
Common heavy steers	5.00@ 6.25			
Choice, prime light steers (1100 lb. d'n)	8.50@10.75			
Good light steers	7.50@ 9.25			
Medium light steers	6.00@ 8.00	5.25@ 6.75	6.00@ 7.00	4.75@ 5.50
Common light steers	5.00@ 6.25	4.00@ 5.50	4.00@ 6.00	3.75@ 5.00
Common to choice butcher heifers	3.25@ 8.00	3.00@ 5.50	3.50@ 6.00	3.00@ 4.75
Common to choice butcher cows	3.00@ 6.00	2.75@ 5.00	3.00@ 5.00	2.50@ 4.00
Bologna and beef bulls	3.15@ 5.75	3.00@ 5.00	3.00@ 4.00	2.00@ 3.50
Canners and cutters, cows and heifers	2.00@ 3.25	1.50@ 2.75	1.75@ 3.00	1.50@ 2.50
Canner steers	2.75@ 3.75	2.00@ 3.00	2.50@ 3.50	
Medium to choice light veals	6.00@ 8.50	8.00@10.00	7.00@ 9.50	5.50@ 6.50
Common to choice heavy veals	3.00@ 7.00	4.00@ 8.50	5.00@ 6.00	
Common to choice feeders (1000 lb. up)	5.25@ 6.60			
Common to choice feeders (750-1000 lb.)	5.00@ 6.60	3.00@ 5.00	4.00@ 5.50	
Common to choice stocker steers	4.25@ 6.50			
Common to choice stocker cows, heifers	2.75@ 4.75			
HOGS				
Top of market	8.35			
Bulk of sales	6.75@ 7.90	7.50@ 8.40	8.50@ 9.25	6.50@ 7.35
Heavy (250 lb. up)	6.00@ 7.55	7.00@ 7.50	7.50@ 8.50	
Medium (200-250 lb.)	6.90@ 8.00	7.50@ 8.00	8.50@ 9.00	6.50@ 7.25
Light (150-200 lb.)	6.95@ 8.00	8.00@ 8.50	8.75@ 9.25	6.75@ 7.50
Light lights (130-150 lb.)	6.90@ 8.35	8.00@ 8.40	8.50@ 9.25	
Smooth packing sows (250 lb. up)	5.65@ 7.00	6.00@ 6.50	6.50@ 7.00	
Rough packing sows (200 lb. up)	5.35@ 6.50	5.50@ 6.00	6.00@ 6.50	
Medium to choice ewes	3.00@ 5.75	2.50@ 4.00	2.50@ 4.00	2.25@ 3.00
Stocker pigs		7.00@ 7.50	8.00@ 8.25	6.00@ 7.00
SHEEP AND LAMBS				
Medium to prime lambs (74 lb. down)	9.75@11.75	7.50@ 9.00	7.25@ 9.00	7.00@ 8.25
Culls and common lambs	7.50@10.25	6.00@ 7.50	5.00@ 7.50	6.00@ 7.25
Medium to prime yearling wethers	7.00@10.25	5.00@ 6.50	5.00@ 7.00	3.00@ 4.25
Medium to prime wethers	4.50@ 6.75	4.00@ 5.00	4.00@ 5.50	3.00@ 3.50
Mediu mto choice ewes	3.00@ 5.75	2.50@ 4.00	2.50@ 4.00	2.25@ 3.00
Culls and common ewes	1.50@ 3.00	1.00@ 2.50	1.00@ 2.50	
Feeder lambs	8.75@10.50	5.00@ 6.50		5.00@ 6.00

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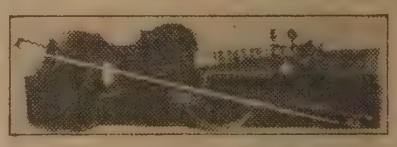
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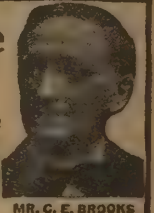
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Glance over the bargains on the "Want Ad" page.



On March 22, 1922, Mildred Ellen Slye will be 9 years old. She would like to hear from her twins. This cousin writes: "There are two cows and two calves at our ranch. There are 20 pigs. They follow us all over the ranch. My sister's name is Marguerite. My brother's name is Harry." Mildred's address is Lancaster, Wash.

"I have fun at school," writes Mamie McCoy. Mamie is going to learn a poem. She is in the fourth grade and her birthday is November 7. Her home is in southeastern Spokane county, Washington.

Ruby Wigley, whose home is in Thurston county, Washington, and her sister Mabel take care of their twin brothers while father and mother do the milking. The twins are 18 months old. Their nomes are Frederick Lee and Robert Lincoln William and Charles are Ruby's other brothers. Charles is 3 years old and William is in high school. Ruby was 11 years old August 30. (Yes, Ruby, tell Mabel that Aunt Nellie will be glad to welcome another cousin to the Corner.

For pets Hannah Wells has a pony named Buck and a dog named Lassie. Hannah says it is fun to ride the pony. She was 9 years old November 9, 1921. Teacher's name is Mrs. Florence Hotes and Hannah likes school. Her home is near the Nisqually Indian reservation, in Pierce county, Washington.

Eleven-year-old Mildred Owens, whose home is near Lake Conconully, in northern Washington, says they have a crocheting and sewing club at school. Ella Meyers is the best writer in school and Mildred draws the best. She drew some pictures for Aunt Nellie. (They are very good. Thank you, Mildred.) Mildred is in the fifth grade and her birthday is in April.



THURSDAY, January 5—Ernest Gallaher, 11 year old Edith Howell, 11; Sigrid Kuja, 10; Hilda Patterson, 11.

FRIDAY, January 6—Lilly Bakum, 11 years old; Bertha Haase, 11; Olga Olansen, 11; Caro Ida Reese, 11; Montie Baker, 11.

SATURDAY, January 7—Isabell Bodin, 11 years old; Ragni Fjerlie, 11; Archie A. Watt Jr., 6.

SUNDAY, January 8—Teddy Austin, 9 years old; Shirley Baker, 10; Bernard Kunz, 11.

MONDAY, January 9—Allie Brunink, 9 years old; Fae Casey, 9; Helen Casey, 9; Pearl Gurnsey, 10; Eunice Otis, 11; Robert Pugh, 9; Laura Stahly, 9; Howard Swift, 11.

TUESDAY, January 10—Freeda Emmert; Elsie Goetz, 10 years old; Ella McHargue, 9; Francis Plotner, 10; Esther Warehime, 11.

WEDNESDAY, January 11—Margaret Erickson, 11 years old; Agnes Maurer, 11; Dorothy Isabell Goodell, 11.

In each issue a list of the cousins' birthdays for the week will be published. At the close of each letter you write be sure to tell how old you are and when your birthday comes.

LETTERS WELCOMED BY AUNT NELLIE.

Among recent letters received by Aunt Nellie are those from cousins whose names follow. A few of these will be published each week in the regular edition of THE FARMER, and others will appear from time to time in The Junior Farmer:

Ralph Bowers, Helen Kissler, Alvin Cline, Pearl Long, Bernard Boone, Theron McGraw, Walter Tuisku, Roger Stone, Marie Strahm, Ruth Otterstedt, Lester Requa, Sylvia Johnson, Leona Tuisku, Charlie Divers, Frank Blackburn, Harold Hardesty, Marguerite Johnson, Ella Ray, Anna Steiner, Ellen Murison, Ledia Salmela, Ula Easterling, Margaret V. Scoles, Emma Hochstatter, Irene Tuisku, Lewis Schreck, Hazel Hendry, George Blackburn, Martha Kissler, Bessie McDonald, Beatrice Blackburn, Margaretha Dewey, Essie May McDow, Eva Larimer.

Lottie McNeil, Marion Thompson, Edna Requa, Lucile Dixon, Hardis Greystad, Elvira Lefler, Inez Nelson, Julia Gradishnik, Myrtle Barnes, Frieda Portmann, Constance Washburn, Frances Montague, Marion Batchelder, Katherine Martinson, Walter Lenhart, Clarinda Fagan, Fanny Pakkala, Virginia Justice, Florence Wamsley, Jessie Rupp, Martha Stockton, Viola Erickson, Dorothy Provo, Ruth Hay, Marian Mulkey.

Kristine Hansen, Virginia Carviere, Tinka Oksendahl, Marguerite Wilson, Bertha Osborn, Donald Ritzsohke, Anna Pearl Steiner, Ethel Osborne, Edna Jacot, Arthur Cartwrite, Lucile Thuring, Katherine Buckley, Emma Pflug, Edith Norman, Ruth Warner, Ira Kostingader, Lucille Scoles, Linnea Forsberg, Waino Lary, Thelma Forsberg, William Anderson, Lavina Calle, Bertha Lary, Elsie Laury, Edrie Bradbury, Bennie Greenwaldt, Anna Rennick, Catherine Link, Kenneth Greenman, Hazel Schafer, Mary Cush, Thelma June Bulard, Alma Matson, Emma Rott, Mary Jane Liscum, Viola Johnson, Constance Fouts, Dannie Abel, Reuben Scheller.

HAPPY NEW YEAR TO ALL.

A Happy New Year! Juanita Porter wishes that for all. We are glad to have this letter from Juanita, which says: "Ila, my sister, also sends many happy greetings. Ila has black hair and brown eyes and is always in mischief. She will be 10 years old January 23, 1922. She goes to school and is in the third grade. She has many playmates and has a wonderful time. I have gray eyes and brown hair. I am five feet five and three-fourths inches tall, and what do you think I weigh? One hundred and twelve pounds. I am in the ninth grade and like it very much. I am inclined to be mischievous also, but I enjoy myself, anyway. I read many books and play the Hawaiian guitar, which I enjoy very much." Juanita is one of our Washington girls.

BEDTIME STORIES

By THORTON W. BURGESS.

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HAPPY DAYS IN GREEN FOREST.

These were happy days in the Green Forest. At least they were happy for Lightfoot the Deer. They were the happiest days he had ever known. You see, he had won beautiful, slender, young Miss Daintyfoot, and now she was no longer Miss Daintyfoot, but Mrs. Lightfoot. Lightfoot was sure that there was no one anywhere so beautiful as she, and Mrs. Lightfoot knew that there was no one so handsome and brave as he.

Wherever Lightfoot went Mrs. Lightfoot went. He showed her all his favorite eating places. She did not tell him she was already acquainted with every one of them, that she knew the Green Forest quite as well as he did. If he had stopped to think how day after day she had managed to keep out of his sight while he hunted for her, he would have known that there was little he could show her which she did not already know. But he didn't stop to think, and proudly led her from place to place. And Mrs. Lightfoot wisely expressed delight with all she saw quite as if it were all new.

Of course, all the little people of the Green Forest hurried to pay their respects to Mrs. Lightfoot and to tell Lightfoot how glad they felt for him. And they really did feel glad. You see, they all loved Lightfoot and they knew that now he would be happier than ever and that there would be no danger of his leaving the Green Forest because of loneliness. The Green Forest would not be the same at all without Lightfoot the Deer.



Of course, all the little people of the Green Forest hurried to pay their respects to Mrs. Lightfoot.

Lightfoot told Mrs. Lightfoot all about the terrible days of the hunting season and how glad he was that she had not been in the Green Forest then. He told her how the hunters with terrible guns had given him no rest and how he had to swim the Big River to get away from the hounds.

"I know," replied Mrs. Lightfoot, softly. "I know all about it. You see, there were hunters on the Great Mountain. In fact, that is how I happened to come down to the Green Forest. They hunted me so up there that I did not dare stay, and I came down here, thinking that there might be fewer hunters here. I would not have believed that I could ever be thankful to hunters for anything, but I am; truly I am."

There was a puzzled look on Lightfoot's face. "What for?" re demanded. "I can't imagine anybody being thankful to hunters for anything."

"Oh, you stupid!" cried Mrs. Lightfoot. "Don't you see that if I hadn't been driven down from the Great Mountain I never would have found you?"

"You mean I never would have found you," retorted Lightfoot. "I guess I owe those hunters more than you do. I owe them the greatest happiness I have ever known, but I never would have thought of it myself. Isn't it queer how things which seem the very worst possible sometimes turn out to be the very best possible?"

Track's End

(Continued from page seventeen.)

kiss. The chickens had gone to roost and didn't have much to say. They refused to come down for their supper, but the horses and the cow were very glad to get theirs. Then I milked the cow, told them all good night, made everything about the barn as snug as I could, and shouldered my way through the storm to the house. I found both Kaiser and Pawsy wide awake and waiting for me. I don't think they liked the house being so deserted and lonelsome. I gave them both some of the warm milk, and took a share of it myself.

I was beginning to realize that I was tired by this time, and sat down in a big chair before the fire. The stove was a round cast iron one, shaped a good deal like a decanter. It burned soft coal, and, as it was going well, and was warm enough in the room, I threw the door open, making it seem very like a fireplace. I was over the excitement of the day, and fell to looking at the situation again. This is the way I made it out, to-wit:

First, that I was alone, except for the animals, and in charge of a whole town; that it was very improbable (as the blizzard still held) that any train would or could get through very soon—perhaps not before spring.

Second, that the animals consisted of one large, shaggy, black dog (breed uncertain) named Kaiser; one large black and white cat named Pawsy; one cow named Blossom; two bronco horses, one named Dick, the other Ned; 22 hens and one rooster, without any particular names except that I called one of the hens Crazy Jane.

Third, that there was enough hay in the barn for the horses and cow, though other feed would be short unless I could find more about town somewhere; that I ought to be able to scare up enough food for myself by going through the stores, though some kinds might be short; that there was plenty of coal.

Fourth, that there were guns of all kinds, and probably a good supply of ammunition.

Fifth, that there might be $20,000 in a safe across the street.

Sixth, that there was a gang of cutthroats somewhere about who wanted the money, and would come after it the minute they knew I was alone; and might come sooner.

By this time I was sleepy; so I covered up Kaiser on one end of the lounge, the cat on the other, put out the lamp, and went upstairs and popped into bed.

(To be continued.)

National Master's Address

(Continued from page fourteen.)

ways reported by his grange title as master.

It is to the credit of our order that so far as we can learn never but one man while holding the office of master of his state grange, has entered into an effort to establish a political party, and we sincerely hope it will never occur again. With the warning of the circumstances that have resulted, this specific lesson should not pass unheeded. Our order was founded to promote friendly relations of all religious and political ideas and to extend the great principles of American tolerance. We need to feel that above all else, here is the supreme necessity for uniting in one grand universal grange task—the ennobling of our calling and increasing the belief that "I am my brother's keeper," in that I should always strive to be worthy of his friendship by never knowingly doing him injury and by increasing his faith in me as an example of service to humanity. We must not seek to elevate ourselves by tearing others down. Such a line of action is never compatible with true grange principles. That "the tears of the compassionate are sweeter than dewdrops falling from roses upon the bosom of the earth" should be remembered by us all.

Our Task.

No outside forces disrupt an order—that always comes from within. Remembering this, may we shun danger and prove more conclusively than ever before that farmers can work together and can get results. As we turn our attention to the pressing business of this 55th annual session let us make our deliberations so frank and free, so characterized by genuine good will, that each member shall do his utmost to make this assembly render sincere service to the farmers of America in their hour of dire necessity. Let us here so harmonize our diversified interests, be so considerate of each other's problems and so united in our determination to serve the great whole, that when our work here is called into review it shall be found to meet the test. Fraternally,

SHERMAN J. LOWELL,
Master of the National Grange.



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OVER 400 DESIGNS

In addition to the 400 designs the outfit also contains:

1 round hoop, 1 ivory punch, 10 embroidery needles, 1 bodkin and an instruction sheet.

The article described above will be awarded to you in return for your services in securing two 3-year subscription orders to your State Farm Magazine at the regular rate of 50 cents each or $1.00 for the two subscriptions. Address The Pacific Northwest Farm Trio, Spokane, Wash.

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Two subscriptions and $1.00 must accompany this order.

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Figures on Milk Costs

(Continued from page six.)

months each, winter and summer, and the farmer's labor estimate per day for each season was accepted. Hired labor was computed at cost, while family or other unpaid labor was computed at the normal rate for such labor. The normal rate of labor for the period covered was approximately $100 per month, or 33 cents per hour, including the value of board. Horse labor chargeable to the dairy consisted of hauling the milk or cream out to the stand on the route or to the market, hauling soiling crops from the field to the barn and in any other way in which the horse directly participated in producing or marketing milk. Horse labor used in production of crops consumed by the cows was covered by the price charged against the dairy for the crops. Horse labor was computed at 20 cents per hour, including board.

The cost for the sire includes interest on a fair inventory value, depreciation, feed, labor, shelter, equipment, taxes, veterinary service and registration fees minus service fees and the value of manure produced. In this study, however, very little revenue was obtained by service fees, as most of the farmers kept their own bulls. The feed and labor charge was the farmer's estimate of the feed and labor cost of the bull as compared with a cow in his herd. If the bull occupied a stall in the building with other animals it was charged for the use of the building in proportion to the number of animal units in the barn. The depreciation charge was based on the total decrease in inventory value of all the bulls included in the study. Interest was figured at 7 per cent on the inventory value. Veterinary and other fees were charged at cost.

The charge for use of buildings is largely an approximation, due to the variation in their type and cost and to the extent to which they are used for other purposes. In this study all buildings which contributed to the operation of the dairy, including barns, silos, milkhouse and manure shed, were considered as a legitimate charge against the cost of milk production. Each building was considered a unit and the cow charges were determined by the number of animal units which were served. One horse or one cow or two head of young stock were considered an animal unit. Building costs include depreciation, interest, taxes, insurance and repairs. The depreciation was determined by dividing the present value of the building by the estimated number of years the building would last.

The charge for use of equipment includes interest, depreciation and repairs on all equipment that contributed directly to the production and preparation of milk and butterfat for market, including milk pans, pails, strainers, cooler, separator, milking machine, engine for separator or milking machine, wagon or special conveyance for hauling milk, scales, feed grinder, barn tools and veterinary instruments. Depreciation was determined by dividing the present value by the estimated number of years that each item would continue to be useful.

Current expenses included such items as veterinary fees and medicines, breeding fees, cow testing fees, board of cow tester, disinfectants, electric lights and power, feed grinding, gasoline and whitewashing.

In this study only the mature cows that had been introduced into the herd were considered. The production of young stock was considered as a separate enterprise and when a heifer freshened she was charged against the dairy at a normal value, as though purchased. Interest was charged at 7 per cent on the inventory value of all cows. The average value of all heifers as introduced into the herds was $98, while the average inventory value of all cows was $118. Taxes varied somewhat with the locality and were computed at the current rates from data and information furnished by the county assessors of the four counties.

Depreciation was determined by computing the net decrease in inventory of all cows included in the study. The decrease in inventory would include losses due to death, decrease in actual value of cows still retained, and sale of cows at beef value that were inventoried at a higher value at the beginning of the year. These losses would be partially offset by the increased value of young cows in the herd. Of the 1502 cows involved in this study 23 died and 264 were sold. A study of the tables show that Wahkiakum county had the highest depreciation, $13.23 per cow, and Pacific county the lowest, $4.40 per cow.

The marketing charge was the cash paid for delivery of milk and cream on milk routes. The common charge for this service was 10 cents per 100 pounds of milk and 1 cent per pound for butterfat. Where a car was used to deliver the milk, haul feed or in any other way served the dairy, an estimate was made as to the extent to which the car was used strictly for the dairy. This charge was based entirely upon the farmer's estimate.

The sum of all the foregoing expense items constitutes the total operating cost. The net cost of production was determined by subtracting from the total operating cost the sum of all credits other than milk, which includes the following: The manure recovered at the barn as estimated by the farmer, which was credited at $1.50 per ton at the barn; calves which were credited to the dairy at what the farmer would receive for them at 4 days of age, the price ranging from $1 to $5 apiece; all money received for hides and sacks purchased with feed, which were credited to the cows at their sale value.

Lay the foregoing article away for reference when reading the next instalment of this study of dairy farms, which will appear soon.

RAMBO & OTTO WILL HOLD SALE JANUARY 12

Through a typographical error in an advertisement appearing in the Farmer on December 29, the Duroc Jersey sale of W. H. Rambo and L. S. Otto was announced to be held at Buhl, Idaho, January 12 to 22. It should have read January 12, 1922. 35 sows and gilts, bred to Orion Joe 363705 and Orion Joe Jr. 408411, will be offered, insuring production type and quality of a standard unequalled in the past in the northwest. Catalogues of the sale are now ready.—Adv.

GUERNSEYS

not only give large quantities of rich milk of unequaled color and flavor when new milch, but they continue this production throughout the year. It is a common thing for Guernseys on official yearly test to produce more butterfat in the 12th month of lactation than in the first.

Send for the free booklet, "The Story of the Guernsey."

The American Guernsey Cattle Club

Box NW-26, Peterboro, N. H.

In writing advertisers, be sure to say you saw their advertisement in The Washington Farmer.



We have to plow the back forty each year. Each morning and evening we have to go out to fill the milk pail anew. Same way with our Cooperative Subscription Plan; it yielded our readers a big harvest of savings last year; but to do the same this year it must continue to have your attention and help.

We say to our readers: "Send your subscription orders direct. Get your neighbors to do the same. We will give you and your neighbor the benefit of every penny which would ordinarly go to the agent handling the subscription."

We have every confidence that you will once more put your shoulder to the wheel and repeat our request that you take thought as to your subscription renewal. Instead of waiting for a notification, mail in your order at least 60 days in advance of the address label of your paper. Tell your friends and neighbors about our cooperative plan and include their orders with your own. By all pulling together we can and will make 1922 a big year for cooperation. Let's do it!

Subscription Rates of The Washington Farmer:

$1.00 for Five Years

25 Cents for 1 Year.
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Jan. 5, 1922.
THE WASHINGTON FARMER,
Review Building, Spokane, Wash.

I desire to take advantage of your Cooperative Plan in securing new and renewal subscriptions.

I enclose herewith $ for a year subscription to THE WASHINGTON FARMER.

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If your subscription is already paid in advance, it will be extended from the date to which it is paid.

FREE BOOK on CONTAGIOUS ABORTION

Describes cause, effects and treatment; tells how farmers in all parts of U. S. are stopping the ravages of this costly malady.

Write for free copy today.

ABORNO LABORATORY
16 Jeff Street, Lancaster, Wis.



Will Sell Shorthorns

Three purebred Shorthorn sales for eastern Washington have been announced by the Pacific Northwest Shorthorn Breeders' association, under whose auspices the first of the three will be held t Spokane, February 22. This first sale will be a consignment sale, with Carl A. Greif of Uniontown, Wash., as sales manager. "The cattle going through the sale this year will be of high-class order, as they will all be passed on by a culling committee, with only cattle of merit being accepted," says A. E. Lawson, field representative of the American Shorthorn Breeders' association. About 30 bulls and 30 cows and heifers will be offered in this sale.

On the following day, February 23, Day & Rothrock will sell about 40 head at Hercules farm, near Sprague. Nearly all of these cattle have been bred and raised on Hercules farms, according to Jack Napier, farm superintendent.

The third day, February 24, A. D. Dunn will hold a draft sale of his herd on his ranch near Wapato, in the Yakima valley. He will sell about 40 head.

LIVE STOCK SHOW AT SALT LAKE.

Preliminary arrangements for the fifth annual Intermountain Live Stock show, to be given in Salt Lake City April 3-6, are well under way. Dr. R. M. Mead, the director, reports assurances that at least 68 carloads of purebred cattle, sheep and swine will be sent in from all states of the intermountain and Pacific group, and that in addition to this there will be numerous dairy products and educational displays.

Special prizes are to be awarded as an inducement to increase the educational features of the show. Calves, lambs and pigs raised by the boys and girls' clubs of the different states are to be given special attention this year.

LEARN FOR NEXT YEAR.

The shortage of various kinds of feed this winter may well indicate what kinds, and in what quantities, should be grown next season for a year from now.

We Buy and Sell
Grade and Pure Bred Dairy Cattle.
We can save you money whether you wish to buy or sell. One or a carload.
Graham Livestock Co.
E2605 Broadway, Spokane, Wash.
NEAR CARSTENS' PACKING PLANT.

Breeders' Dept.

Register of Merit Jerseys
Write for price of a ready for service bull we are offering for sale. A fine individual and sired by Anoka's Poppy St. Mawes. Address
R. B. SEELY, Sherwood, Ore.
RAILWAY STATION, WILSONVILLE, ON OREGON ELECTRIC.

Jersey--Gold and Silver Medal Sire
Ashnook Farm offers a few heifers and young bulls, sired by the gold and silver medal sire, Silver Chimes, of S. B., sire of ex-world champion heifer, Silver Chimes Gwendola, and 20 register of merit daughters, and more qualifying.
DEL PERKINS, Carlton, Ore.

Register of Merit Jerseys
Young bulls out of dams with good official records and sired by Foxhall's Chief Engineer, combining the blood of the great Foxhall's Fern Lad and Golden Glow's Chief strains.
FOX BROS., Silverton, Ore.

Sunny Bank Jersey Farm
31 years of successful breeding and importing. A carload of producing females and some choice males for sale.
H. WEST, Prop. L. G. SMITH, Mgr.
SCAPPOOSE, ORE.

Haynes Farm Jerseys
For sale—Bull, 83 per cent St. Mawes. Dam is a prospective silver medal cow; four nearest dams average 580 lbs.
G. W. HAYNES, Owner. D. L. FOURT, Mgr.
EAGLE, IDAHO

ASHBURN FARM Premier breeders of medal winning cows for 1920. Write for our illustrated folder and further information.
J. M. DICKSON & SON, Box T, Shedd, Ore.

Wild Cherry Farm Jerseys
All tested 2 and 3 year olds, average over 400 lbs. fat. Young bulls close to 5 gold medal sires.
D. G. LILLY, Forest Grove, Ore.

Jerseys--Maple Ridge Farm
offers some young cows and heifers just fresh, some springers. Also St. Mawes bull ready for service this fall.
J. C. BROWN & SONS, Shedd, Ore.

Locust Lane Jerseys
We offer a granddaughter and a grandson (ready for service) of Sybil's Gamboge from register of merit dams.
L. S. DILLE & SON, Caldwell, Idaho.

Better Jerseys are your requirements. We are in position to furnish a sire that is bred on those lines, at a reasonable price.
LA CREOLE FARM.
W. O. MORROW, Prop., Independence, Ore.

Meadow View Jersey Farms
W--O--N
At the State fair, Salem, Ore., Sept. 27, 1921: 1, 2, 3, aged cow; 2, 3, three-year-old. 1st, senior yearling; 2d, senior heifer calf. 1st, senior bull calf. 2d, junior bull calf. 1st, dairy herd. 1st and 2d, get of sire. 1st, produce of cow. We entered 12 head. Grand champion cow. 128 Jerseys competing. Nuf said.
Mr. and Mrs. J. B. Neal
TURNER, ORE.

Laurchester Place Jerseys
Young bulls out of register of merit dams and sired by Daisy's Golden Poppy, that will soon be silver medal bull, besides having two gold medal daughters. He is sire of many prize winners at Pacific International. Good individuals, priced for quick sale.
CHESTER MULKEY, McMinnville, Ore.

Four Baby Golden Glow
Jersey heifers carrying 50 per cent blood of Golden Glow's Chief, with a fine bred bull calf for sale to any one who will test the heifers when milking age. Unequaled for herd foundation.
IRON MINE FARM.
W. M. LADD, Owner, Oswego, Ore.
D. BROOKS HOGAN, Mgr.

Choice Jersey Heifers
And richly bred young bulls, out of register of merit cows with records of over 600 lbs. fat, with common herd care, or that are now on test. Sired by Kallonders Eminent or Oxford Raleigh Lad, both register of merit bulls.
B. C. CRABTREE. Lynden, Wash.

Fourth Gold Medal Jersey Bull
now in use in my herd. No other herd ever had so many. Young stock for sale.
ED CARY, Carlton, Ore.

Jersey Bulls at Bargain Prices
Send today for our special sale list of registered Jersey bulls from R. of M. dams. Easy terms, liberal credit.
WARREN GRAY, Box T, Jefferson, Ore.

Weatherford Bros. Herefords
We have for sale a few choice herd bulls and bulls for the farm and range, at prices in keeping with the times. Herd headed by the great breeding bull, Bean Blanchard 59th, whose calves show great bone, size and quality.
WEATHERFORD BROS., Dayton, Wash.

Milk Beef
Oakleigh Stock Farm Shorthorns
204 S. First St., Medford, Ore.
Milking Shorthorns. Several record cows—50 head in herd.

Northwood Herd Milking Shorthorns
Improve your herd with a Shorthorn bull of the milking strain. Getting milk as well as beef. We have some choice bull calves for sale at farmer's prices from high record cows.
NORTHWOOD FARMS, Redmond, Wash.

Shorthorns
Both milking and beef strains. Address DesChutes Valley Shorthorn association.
A. J. HARTER, Pres., Tumalo, Ore.

Guernseys
Special prices on a few reg. bull calves with from 16 to 24 tested dams, averaging as high as 663 lbs. fat. Act now. Do not wait.
FOSHAY FARM.
O. & M. L. VOGET. HUBBARD, ORE.

Orchard Hill Farm Guernseys
"Home of high class Guernseys."
DR. PARK WEED WILLIS, Owner.
REDMOND, WASH.

River Banks Guernseys
won 58 prizes
at the leading coast fairs this fall.
RIVER BANKS FARMS, Grants Pass, Ore.

A.R.O. Holsteins Accredited herd headed by proven grandson of King of Pontiacs; 4 daughters ave. 421.2 lbs. butter, 20,016 lbs. milk, official 7-day tests at 2 yrs. 3. mos. MAPLEROSE LANE HOMESTEAD
A. BENSON, PROP. LYNDEN, WASH

Holstein Bulls Sired by son and brother to world record cows, from dams sired by brother to Segis Pietertje Prospect. Prices low.
H. R. BOOMER, Payette, Idaho.

Brown Swiss Stock Farm
Breeders of Brown Swiss cattle, the farmers' dairy cow. Young stock for sale.
THEO BRUGGER, Route 3, Gresham, Ore.

Two Days Registered Live Stock Sale
Wednesday and Thursday, Jan. 18th and 19th, 1922
AT TWIN FALLS, IDAHO

The Twin Falls North and South Side Shorthorn Breders' association will hold their midwinter annual Shorthorn sale January 18.

On Thursday, January 19, C. A. McMaster & Son will sell 40 head of Duroc Jersey bred sows and gilts, breeding of Cherry King Orion—Sensations—and Pathfinder.

The Shorthorn association will offer at private sale 30 head of Shorthorn bulls, serviceable age, mostly Scotch breeding, that should interest any stock association in need of bulls for the range.

For catalogs or other information write:

Auctioneers:
E. O. Walter, Filer, Idaho.
A. J. Miller, Caldwell, Idaho.
Wm. Kerr, Swine Specialist, and
C. Bruce Requa, Sec. Kimberly, Idaho.
H. H. Schildman, Sales Mgr.
J. E. Nessly, Idaho Farmer, Field Men.

Special Attention—The Duroc Jersey Bred sow sale at Buhl, Idaho, January 12, by Wm. Rambo and L. S. Otto.

DUROC BRED SOW SALE
To Be Held at Boise High School Farm
Tuesday, Jan. 17, 1922, 1 o'Clock
25--HEAD--25

These sows are mostly sired by the grand champion High Orion 2d, and bred to the junior champion Royal Marker and King Royal, the first prize under six months old boar at Boise, the Idaho state fair, and a money winner at the Western Royal Live Stock show, Spokane, Wash., also at the Pacific International Live Stock show, Portland, Ore., three of the strongest shows of the northwest. These are mostly growthy spring gilts, not more than one or two tried sows, no old worn out sows go in this sale. We are not expecting long prices for these sows. Come and buy a good Duroc sow and she will put you in the hog business. Come and spend the day with us and we will try to make it pleasant as well as profitable. Send for catalogue.

COL. A. J. MILLER, Auctioneer.
ROY SHUTWELL, R. 3, Boise, Idaho.
J. A. WAGNER & SON, Meridian, Idaho
Owners.

Parties unable to attend this sale may send bids by mail to either of the following field men: E. F. Rinehart, extension service; William Kerr, swine specialist; Ray Felton, Idaho Statesman; or J. E. Nessly, Idaho Farmer, all of Boise.

GRADE CALVES
From dams producing 300 to 700 lbs. butterfat in Tillamook County Cow Testing Association.
Price $15, with guarantee of breeding and production of dams.
Jersey, Guernsey and Holstein Breeds.
Write County Agricultural Agent, Tillamook, Ore.

Duroc-Jerseys Prices Reduced 20%
We must raise a sum of money, so are reducing prices on all our breeding stock 20 per cent.
OUR NEED IS YOUR OPPORTUNITY.
Boars, 3 mo. old, $15. Service boars, $25 and $30.
Gilts, 3 mo. old, $25. Bred gilts, $40 to $100.
Fancy sows, $100 to $150.
This is all choice stock. Get your order in early.
We also have two fine registered Holstein bull calves for sale.
MARELLA FARMS. Hagerman, Idaho.

GRANDLY BRED AYRSHIRE BULLS AT LOW PRICES
All sired by Oregon Peter Pan; he by a son of Beuchan Peter Pan, undefeated show bull in Scotland and America. His dam, Willowmoor Etta 3d, is world champion junior two-year-old, with 16,621 lbs. milk, and 666.06 lbs. fat.
Two are yearlings ready for active service and two only a little younger. Most of the dams have good official records, with big production records in their pedigrees
These bulls are priced low enough to be in reach of every dairyman wishing to increase production and good enough to head high class pure bred herds. Write at once for pedigree, and full particulars, to
Corvallis. DAIRY DEPT. OREGON AGRICULTURAL COLLEGE. Oregon.

Ayrshires
Outstanding bull calves, ready for light service; sired by grand champion Willowmoor Peter Pan 25th, and from high producing cows with show records.
E. W. VAN TASSELL. Wenatchee, Wash.

Duroc Jersey Gilts
Included are the line bred Pathfinder first prize senior futurity litter and fourth prize junior futurity litter at 1921 Oregon state fair. All bred to Red King Giant, first prize senior futurity boar, 1921 Oregon state fair.
H. C. COMPTON, Boring, Ore.

River Banks Better Berkshires
won 96 prizes
at the leading coast fairs this fall.
RIVER BANKS FARMS, Grants Pass, Ore.

Riverby Orchard Berkshires
Oldest established Berkshire herd in the northwest. Young pigs and bred sows for sale. Address
D. C. BUNN, Prosser, Wash.

Jumbo Herd Chester Whites
Herd headed by big type boar, Oregon's Buster. Choice spring pigs of both sexes. A few bred gilts.
CASS A. NICHOLS. Salem, Ore.

BIG TYPE POLANDS
Bred gilts, Feb., March farrow; bred to K's Big Bob, Designer's Model and Smooth Giant. $30 and $45, papers.
B. F. KAMMERZELL & SONS,
R. 5, COLFAX, WASH.

Poland China Boars and Gilts
Spring gilts and boars, both big and medium type; good individual, good breeding. Priced for quick sale.
GRANT GLEASON, Chehalis, Wash.

Big Type Polands
We are booking orders for Sept. pigs. A few extra good gilts left by or bred to Big Buster, priced right. Write us first.
FRED D. ENTERMILLE, Baker, Ore.

Polands--The Big Wonder Herd
of genuine big type Poland China hogs. Home of the grand champion sow of the northwest. Satisfaction guaranteed on all orders.
E. O. LOE, Silverton, Ore.

Spotted Poland China Hogs
For sale—Old-fashioned, either sex, papers furnished with all pigs.
J. T. DAVIS, R. F. D. No. 75A, Joseph, Ore.

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"Some Suggestions to Live Stock Advertisers," outlining the practices of successful men of long experience. Helps in determining how much to spend, the mediums to select, preparing advertisements, handling inquiries, the use of photographs, etc.
Write today.
THE PACIFIC NORTHWEST FARM TRIO
Dept. L. Spokane, Wash.

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Belgium Imported Melotte

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And right now *at this particular time* exchange rates are extremely favorable. Take advantage of this condition while it lasts. Get the most for your American dollar. Buy now and save money.

Before buying any separator find out how the Melotte has won 264 Grand and International Prizes and how, for efficiency of skimming, ease of turning, convenience of operation and durability—the Great Belgium Melotte has won every important European contest. Find out why 500,000 Melotte Separators are in continuous use today.

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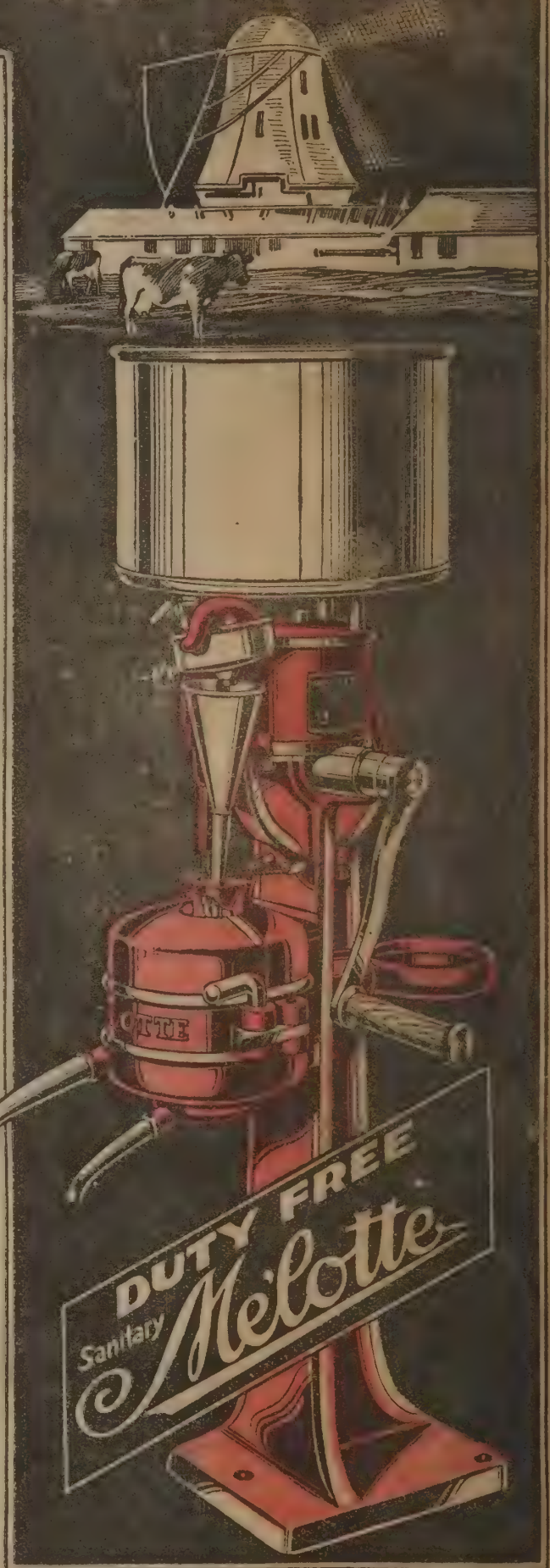
Every Belgium imported Melotte Cream Separator is sold under an absolute, ironbound, 15-year guarantee. No Melotte is ever sold except under this guarantee. A guarantee written in plain English so that you can understand it. A guarantee that is 100% stronger than any other separator guarantee ever made. A guarantee that really guarantees something—upon which you can absolutely rely—an absolute protection to the purchaser, and which binds us to our bargain.

What U. S. Government Says:

Vibration of a cream separator's bowl will soon cost you more money in cream waste than the price of your separator. U. S. Government Bulletin No. 201 says that a perfectly true motion of the bowl is *absolutely necessary*. the bowl is the vital part of any separator—the part where the cream separation takes place.

Self-Balancing Bowl

The Belgium Melotte is the only self-balancing-bowl separator made. This patented bowl hangs from one frictionless ball bearing and spins like a top. It is *self-balancing*. It skims as perfectly after 15 years' use as when new. Positively can not ever get out of balance—can not vibrate and thus cause cross currents which waste cream by remixing with the milk. The 600 lb. Melotte turns as easily as the 300 lb. machine of other makes. Spins for 25 minutes unless brake is applied. No other separator has or needs a brake. The Melotte bowl has solved the problem of perfect skimming.



$7.50 after 30 Days Free Trial

—NO MONEY DOWN—FREE TRIAL—SMALL MONTHLY PAYMENTS—DUTY FREE

We will send an Imported Melotte Cream Separator direct to your farm on a 30 days' absolutely Free Trial—no deposits—no papers to sign—use it as if it were your own separator. Satisfy yourself that the porcelain bowl is as easy to clean as a china plate. Compare it—test it in every way.

When you are convinced the Melotte skims cleaner, turns easier, washes quicker, has one-half less tinware to clean, lasts longer than all others, then pay $7.50 as first payment and the balance in small monthly payments until the separator is paid for.

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Compare the Melotte separator with any other—test them side by side. Then send your milk to the creamery. Let *them* prove which separator skims the cleanest.

The Melotte Separator, *H. B. Babson, U.S. Mgr.*
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Mail coupon for catalog giving full description of this wonderful cream separator. Read about the porcelain-lined bowl. Easy to clean as a china plate. One-half less tinware to clean. An exclusive Melotte feature. Other exclusive Melotte features described in full.

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THE WASHINGTON FARMER
ESTABLISHED 1894
SPOKANE. SEATTLE.

Farmer's Purchasing Power Drops

Prosperity of General Industry Is Indissolubly Bound Up in Prosperity of Agriculture

Statements issued by the United States department of agriculture at the close of the year estimated the value of important farm crops at $5,675,877,000. This is based on prices at the farm on December 1. The total is almost $3,400,000,000 less than last year's crops were worth, and $8,000,000,000 less than the crops of 1919.

That means that the purchasing power of the American farmers is $8,000,000,000 less than it was two years ago and nearly $4,000,000,000 less than it was last year.

In two years, according to this estimate, the value of the corn crop fell from $3,768,516,000 to $1,305,625,000. Yet the 1921 corn crop was nearly 500,000,000 bushels greater than the crop of 1919.

The department's figures further show that while the wheat crop of two years ago was worth $2,080,686,000 on the basis of farm prices on December 1, the 1921 wheat crop was worth only $737,068,000.

In the same way, the value of the oat crop slumped from $833,922,000 two years ago to $31,540,000 this year.

When the Farmer Can't Buy.

In a recent talk before the Portland Chamber of Commerce, Robert E. Smith, president of the Lumbermen's Trust bank, declared after a two-months' tour of the United States for the study of general conditions that "**the commerce and industry of the country can not proceed at a normal basis until the purchasing power of the farmer has been rehabilitated.**"

Mr. Smith's conclusions are in close accord with those repeatedly advanced by THE FARMER. He pointed out that at the present time agricultural products are normal in price and amount, while manufactured products are 60 per cent higher in price and are only at 70 per cent of normal production. He quoted government statistic to show that this wide spread between the prices of agricultural products and manufactured products is unnatural and can not be long maintained. His figures are interesting and we give them herewith:

	Value of Manufactured Products.	Value of Agricultural Products.
1899	$ 4,831,000,000	$ 4,717,000,000
1904	6,293,000,000	6,122,000,000
1909	8,529,000,000	8,558,000,000
1914	9,878,000,000	9,895,000,000
1919	25,500,000,000	24,982,000,000

These figures show that for more than 20 years, from 1899 to 1919 inclusive, there was constantly a pretty close balance between the total value of manufactured products and the total value of agricultural products.

Mr. Smith said that the farmer, directly and indirectly, buys 60 per cent of the manufactured products of the nation, an estimate that probably is approximately accurate.

At all events, the farmer is a controlling buyer of manufactured products, and his impaired ability to buy such manufactured goods at this time accounts for the widespread and persistent unemployment throughout the United States.

A Great Difference.

Many people wonder why the prices of manufactured commodities do not come down more rapidly to the low level of agricultural products. The chief reason is the difference of conditions in the two lines of industry. The farmer has one turnover a year and must go on producing crops. The manufacturer has several turnovers a year, and when markets fall off he closes down his plant or greatly reduces his payroll. In that way he contrives to keep down the readjustment of prices over an extended period, while the farmer has to take his price readjustment at one fell blow. To make the avalanche of farm prices still more terrific, the banks of the United States, very largely under the whip and spur of the federal reserve board, suddenly withdrew the support of credit from the agricultural industry.

P. S. Goodman, in a leading article in the Price Current Grain Reporter, of Chicago, for December 28, censures the country's banking system for at least a large part of the distress that has been thrust upon the farmers of the country. He says:

"The banks have exacted too high a rate of interest, not justified by the necessity. High rates to force liquidation of the weak concerns ought not to have been applied to solvent and careful borrowers. **The average profits of our banks as a whole last year were nearly 25 per cent on their capital; the average dividends half that amount.** The leader in the debt recession was the reserve banks, which maintained exorbitant rates—practically usury; they earned a hundred per cent on their capital. The dividend rate was fixed at 6 per cent for the very purpose of avoiding high rates. The great reserve institution conceived for the public benefit is running perilously near to the fate that overtook the United States bank 90 years ago. The good that it does may be neutralized, in public opinion, by the avarice and insensibility of its directors."

Should Investigate This.

That accusation, made so often and believed by so many people, should have the most searching investigation at the forthcoming conference on agricultural problems, which President Harding has directed Secretary Wallace to call. We expect that when the conference opens and the searchlight is turned on the proceedings of the past year, the country will see a lot of squirming and almost frantic effort to shift the responsibility from one shoulder to another.

Are You Reading the Story of Jud Pitcher at Track's End?—Page 14

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Three standard coals—Black Diamond, Newcastle and South Prairie—combine to make Diamond Briquets. We could mix these in the bunkers and sell the mixture by the ton—but you would get NO unified, blended, balanced fuel. Only by combining the three in each lump can you get the best of each.

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No coking coal should be poked. It breaks the lump down so it ceases to coke. Diamond Briquets coke if you leave them alone. So to have them coke, don't give 'em a poke.

Diamond Briquets are NOT poured into molds—a huge machine exerts 2000 pounds pressure on each briquet, making it as dense and solid as lump coal. NOT the little 7% binder—but THIS TREMENDOUS PRESSURE makes the three coals stay together as one unit.

For practically every household fire, in the kitchen range, heater, fireplace and furnace use Diamond Briquets. They are uniform in size, easy to handle—and they release more heat than you ever thought could be packed into a chunk of coal.

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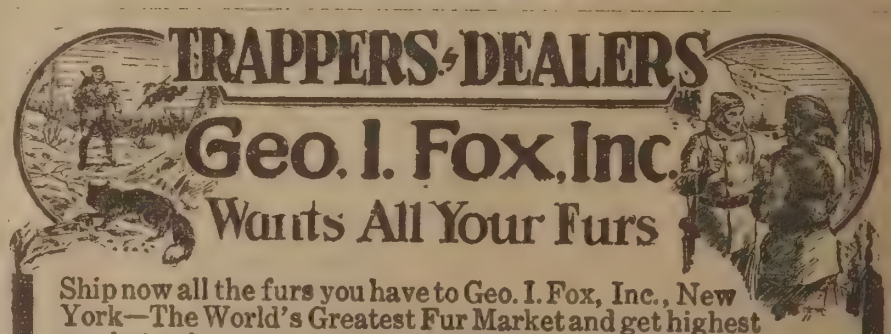
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THE WASHINGTON FARMER

SUCCESSOR TO

Vol. 46. No. 2 THE RANCH PACIFIC DAIRYMAN HORN AND HOOF January 12, 1922

For Good Farming, Attractive Country Homes and Happy Country People

Go Gunning for Scrub Sires

Concerted Effort Starts January 24 to Eliminate Mortgage Makers

Tuesday, January 24, 1922, will go down in the live stock history of the state of Washington as a red letter day if the plans for a scrub sire drive are carried out as they are now being drawn up.

On that date there will be held in every county in the state—at least in every one that has a county agent—a countywide meeting of farmers, live stock men and breeders for the purpose of laying definite plans for the survey of the county as a preliminary step to the "roundup." At that meeting in each county community leaders will probably be selected to hold similar meetings in each community of the entire county. At each community meeting definite and detailed facts will be secured as to the live stock in that community. Such facts will be secured as these:

How many scrub sires there are in the community and who owns them; how many females there are in the community and how many and what kind of purebred sires could be used to best advantage; what particular breeds are most popular in the community and what are most suitable for standardization of the live stock industry of the community; what the opportunities are for the establishment of purebred sire clubs, with several farmers going in together in the cooperative ownership; how many farmers and stockmen would be glad to exchange scrub sires for purebreds, and what financial aid they would need in bringing about such exchange.

This movement got its official start in a little room on the seventh floor of one of Spokane's hotels last week, when Director S. B. Nelson of the state college extension department and C. M. Hubbard, live stock extension specialist of the college, met with about a score of farmers and stockmen to consider the proposition. Similar meetings are being held in other central localities throughout the state prior to the main county meetings January 24.

The warfare is to be carried on against all kinds of scrub stock—beef cattle, dairy cattle, sheep, hogs and horses.

The problem of financing the farmer who desires to get rid of his scrub and obtain a purebred, or who, having no sire at all, desires to build up his herd or flock by use of one, is recognized as one of the big issues. A part of the present anti-scrub drive, therefore, will be the working out of a systematic plan of finance. A campaign to convince the local banker in every community of the value of the purebred sires to the farmers of such community may be put on as a part of this phase of the movement. Breeders themselves in many instances may work out methods of personally financing the proposed exchange. Some method of accepting the scrub sire as part payment for the purebred may be formulated. This and other details of the movement will be worked out as the campaign progresses.

Announcement of the places of meeting for January 24 will be made from the county agents' offices and from the state college extension division. As wide publicity as possible is to be given in order to secure the maximum amount of interest in the campaign to rush it to a successful conclusion in time for the various breeding seasons of 1922.

"Better Sires--Better Stock"

By W. L. DAVIS.

The scrub sire's death warrant has been signed by 159 farmers in Kittitas county as a result of a campaign finished December 31 by the live stock project committee of the county farm bureau and the state college extension service for enrollments in the "better sires—better stock" crusade. The campaign is resulting in heading numbers of scrub and grade sires toward the shambles, in the purchase of good purebreds to replace them and in a movement for the organization of sire clubs and associations for the small farmer who is not able to own a good purebred sire individually.

In a contest between community farm bureaus conducted in connection with the campaign, Thorp farm bureau won first and the $50 cash prize by enrolling 65 per cent of its farmers in the crusade. Edgemont-Thrall was second, with 58 per cent; Denmark, third, with 48 per cent; Broadview, fourth, with 32 per cent; Woldale, fifth, with 20 per cent; Peoh Point, sixth, with 19 per cent; Fairview, seventh, with 8 1-3 per cent; Cove-Damman, eighth, with 8 per cent, and Swauk-Teanaway, ninth, with 3 per cent.

Each farmer who enrolled in the crusade signed the following pledge:

"I have listed in the foregoing statement the number of cattle, horses, asses, sheep, swine, goats and poultry kept for breeding and in the future will keep and use only purebred sires of good quality in those classes of live stock. I will follow to the best of my ability breeding methods leading to live stock improvement."

The live stock project committee has already secured $65 in cash prizes and a $15 silk banner to be awarded January 1, 1923. The community enrolling the greatest percentage of its stock owners in the "better sires—better stock" crusade will receive $40 and the silk banner and the community enrolling the second highest percentage will receive $25.

The members of the live stock project committee who desirve most of the credit for the success of this campaign are as follows: L. J. Richards, county chairman; F. P. Newman, Thorp; Cooper Mills, Broadview; P. H. Adams, Fairview; Jake Frederick, Cove-Damman; S. L. Woodhouse, Edgemont-Thrall; E. W. Wilson, Denmark; H. Warner Roseburg, Peoh Point; P. A. Dunford, Swauk-Teanaway; Fred Wippel, Woldale.

Hold Poultry Show in Seattle

All Common Breeds Vie for Top Honors With Each Other

One thousand or more poultry aristocrats graced the Washington State Poultry association's midwinter poultry show at Seattle last week. There were also a large number of rabbits and pigeons. The association now has the support of breeders from all the important poultry districts of Washington, and the show is being staged on a larger basis, including entries from British Columbia, New Jersey and many states of the northwest.

William Coats, who has judged poultry since the beginning of the industry in the northwest, helped judge the classes and was heard to express his opinion of the show to one of the officials as follows: "You have one of the biggest collections and some of the classiest stock that I have ever seen at any show on the Pacific coast."

R. C. Simpson, secretary of the show, who, by the way, is responsible for a large part of its success, was enthusiastic as to the outcome of the event.

"We are determined to make it the poultry show of the northwest," said Mr. Simpson. "We are not caring so much where it is to be held, but it will undoubtedly be in some town on Puget sound. Perhaps Seattle will be its permanent home. There has long been a need for a show in midwinter because the birds are in the best of shape and there is a lull in the show business at this time of year. The poultrymen have more time to spend with their show birds and there is a better chance for visitors to turn out than if the show was to be held either earlier or later in the season.

Opening of Season.

"Another advantage of holding the show early in the winter is to make it the beginning of a series of shows throughout the northwest. We are going to select some of the representative birds and send them to the other shows at Waterville, Wenatchee and Spokane, and some of them will go to shows as far as Helena, Mont. Plans are being laid to make the Seattle show one of the northwest midwinter poultry show circuit."

"The show is really better than we had ever hoped to have for the first year," said A. Hollings, president of the Washing Poultry association. "It is our purpose to please the utility men as well as the fanciers and for that reason we arranged for an egg-laying contest to be held during the show. It gives an opportunity for rivalry between breeders and is an interesting part of the show. Next year we will enlarge the contest."

As to numbers, the Buff Orpingtons and the Light Brahmas were best represented, while the quality of the Rhode Island Reds, the Barred Plymouth Rocks, White Wyandottes, White Leghorns and Black Minorcas was equally outstanding. All the birds were arranged in double rows in modern wire coops, which were set in the center of the room.

The judges were William H. Coats and Harry H. Collier, both of whom are well known to poultrymen of the northwest and have judged at poultry shows for several years past. Ralph B. Randall of Seattle also helped with the judging.

After the judging was completed the exhibitors were allowed to display their show cards or banners which told to whom the birds belonged and showed which individuals won prizes. A number of feed companies displayed their products along one entire side of the large show room. On the opposite side several incubator companies had their machines in operation with chicks hatching daily and chirping merrily from under their warm brooders.

One booth was covered with evergreens and on one side there was a card which invited the visitor to peep within at a miniature peace conference—a pen of white fan tail pigeons.

The Rabbit Show.

Although a part of the main show, the rabbits were entered as a separate unit and judged by R. J. Needham of Seattle. The entries came largely from members of the Washington state branch of the rabbit breeders and fanciers' association, of which branch H. W. Powell of Seattle is president. The show was put into shape by E. J. Etherton of Seattle as manager and J. W. Petitt of Everett as secretary.

"The breed represented by the largest numbers was the New Zealand Red," said Mr. Etherton, "and they represent some of the finest stock in the northwest. The Flemish Giants had a fine turnout, all of which were excellent animals. Some of them came from as far as Vancouver and Victoria, B. C. The classes were all well filled and there were many in the other breeds, such as the Siberian Blacks, the Rufus Reds and others. There are over 200 entries in all.

"The rabbit breeders are just as determined as are the poultrymen to make this show a real one and we are all working with them for a bigger show next year. We can easily get 600 or 700 rabbits next year if we have enough room and sufficient time to advertise the show."

There was a fine display of pigeons, which included both the utility breeds and the fancy type. Dr. F. S. Bourns of Seattle entered four utility breeds, including the following: White King, Red Carneaux, Black Hungarian and the Maltese. The fancy breeds were shown by Dr. L. S. Norbom of Seattle and his son, R. H. Norbom, the latter having brought several pairs of long distance carriers from France, where he was a member of the A. E. F. during the World war. Some of these birds were captured from the German army. Mr. Norbom Sr. has been raising pigeons for the last 10 years and the whole exhibit included 12 different breeds.

The Washington Cooperative Egg and Poultry association arranged a booth where they demonstrated the value of grading eggs for the market. A show card explained the different grades with the following footnote: "The housewife should know the different grades and demand that they conform to the proper weights. Standard eggs should weigh 24 ounces to the dozen, pullet eggs an average of 20 ounces, while peewees are a small egg, weighing less than 19 ounces to the dozen. When buying eggs you should see that these grades are not mixed and sold as standards."

Complete awards will be given in an early issue.

The Prize Pig Contest

THE FARMER'S letter contest on the subject of hogs as a byproduct of the state has served the purpose for which it was originated—the arousing of interest in the possibility of profit from a few hogs on nearly every farm. Scores of letters were received, and the judging is now being done preparatory to awarding the prizes as early as possible. Watch next week's issue of THE FARMER for something interesting on the contest. The three prizes offered were: First, a purebred gilt, bred to farrow the coming spring; second, $15 in cash; third, $10 in cash. The contest is now closed, and, while letters discussing the subject of hogs on the farm will gladly be received, they can not be considered in awarding the prizes.

Wool Growers

State Association at Yakima

The 20th annual convention of The Washington Wool Growers' association will be held in Yakima January 13 and 14, when, in addition to the transaction of association business, the wool growers will file applications for grazing permits with the forest supervisors who will attend. This alone is an important matter, for it is understood that no action will be taken regarding applications except at this meeting.

One of the outstanding features of the convention will be the formation of a wool growers' finance corporation for the purpose of taking advantage of government funds now available to live stock growers and for handling wool clips of members.

"There is no reason why the wool clip of our state should not be handled on a business basis," says J. F. Sears of Prosser, secretary-treasurer of the association. "By our present haphazard methods sheepmen are losing $50,000 to $100,000 per year, and this loss must be stopped."

Mr. Sears urges every member to be in Yakima in time for the morning session on Friday, as the two-day program is full of subjects of vital interest.

"Open House" at Poultry Plant

The department of poultry husbandry of the Washington State college, in cooperation with the student poultry association, will hold an "open house" day at the new poultry plant, January 14.

There will be student work and an exhibit of the birds fitted by students; an egg exhibit with commercial candling featured, a dressed poultry exhibit, feed exhibit and a dry picking demonstration. Guides will be available through the day for all visitors.

The following buildings have been erected: An incubator house, 38x60, with incubator rooms in the basement and one full floor above.

An experimental breeding house, 16x180 feet (18 separate pens), with work room on the end 16x20 feet. A student practice brooder house, 100 feet, with a center work room, 20x20 feet. A feed house, 30x40, with root storage, oat sprouter and killing room in the basement and two floors above for feed mixing, grinding and storage. Two unit brooder house, each 12x24 and a unit laying house, 24x30.

Is Milk Contract Binding?

The hearing for a permanent injunction against a Lewis county dairyman to compel him to deliver his milk to the Lewis-Pacific County Dairymen's association, under his cooperative contract with that association, comes up Thursday of this week. A temporary injunction was previously issued. The case is an important one not only to dairymen, but to others interested in cooperation, because of the principle of cooperation involved.

RECOMMENDS RED CLOVER.

"Sweet clover is not recommended for western Washington conditions because it is a hard crop to seed and then the red clover is much superior for hay or pasture," is the advise of M. E. McCollam, agronomist of the western Washington experiment station. "Red clover has more leaf surface than any sweet clover and the stock like it better. It seems to be better adapted to our climatic conditions and is easier to seed. Sweet clover is more of a hot weather plant and does not do so well in our cooler climate as it does in some of the irrigated districts east of the Cascade mountains."

WOMEN FARMERS IN WASHINGTON.

According to a 1920 census report, there were 1879 women farmers and 607 women farm laborers in the state.

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Its Merits Are Sufficient

In addressing a community meeting of farm folks in Washington some time ago, Chester Gray, representing the American farm bureau federation, said:

"Our solicitors are trained and instructed not to oversell, mis-sell or undersell the farm bureau idea."

In other words, the farm bureau is willing to stand on its own merits exactly as they are, without any overenthusiastic promotion. Those who are organizing it believe in it to the extent of being willing to present the truth, the whole truth and nothing but the truth, to the farmers of the country.

Farmers, in common with most other classes of people, have been buncoed by so many Utopian pictures of institutions and organizations that are reputed to solve all their problems for them that they are naturally skeptical of the new things that come along. It is refreshing and encouraging to see the organization movement of the farm bureau, which is a movement of the farmers themselves, taking the wholesome attitude expressed so strongly by Mr. Gray.

Rundown or "Sick" Pasture

When a pasture becomes run down or "sick" it is usually because the desirable grasses have either been crowded out by less desirable grasses or weeds. After this process once begins it continues very rapidly and soon renders a pasture almost worthless as far as feed is concerned.

In extreme cases of this kind it will probably be best to break up the sod and seed over again, which, of course, is a costly process. There are some cases where it is felt that no great expenditure can be made on grass lands and some cheaper method is sought.

Reseeding can often be accomplished very economically and the best grasses allowed to grow while the weeds are checked, according to M. E. McCollam, agronomist of the Western Washington Experiment station. It is assured that the pasture is in fairly good condition and that it contains an appreciable percentage of good grasses and clover. If this is not the case, the pasture being mostly "mesquite" and other weeds, it will be best to plow it up and reseed to a good pasture mixture. However, starting with a pasture in reasonably fair condition, it can be stimulated and maintained very cheaply by a light seeding each year with the most desirable grasses, and by following this with a vigorous harrowing. This may be done early in October, when the stock should be off the pasture, or in February, several months before the stock are put on the pasture.

The amount of seed used for this yearly reseeding need not exceed six pound per acre. The pasture should not have too much aftermath and it may have to be mowed over before sowing the seed. Four pounds of grass to two pounds of clover may be used, or if the clover is badly run out the six pounds of seed may be composed of half clover. Highly desirable grasses to use under general conditions are Italian rye grass, meadow, fescue and tall oat grass. Most of these grasses are inclined to die out easily and should be reseeded frequently in order to keep the pasture in the best condition. Ketucky blue grass is one of our best grasses for western Washington, but the seed should be examined to ascertain if it is adulterated with Canadian blue grass, which is much inferior in quality.

White clover will hold out longer than any of the other clovers and should be mixed in with the seed in order ot produce a different time for growing so there will be more continuous forage during the growing season. Common red clover or alsike clover should be mixed with any grasses such as named above. For wet lands red top and alsike clover are especially adapted.

War Debts Must Be Paid.

About one-third of the gigantic sums that the United States government raised during the war through heavy taxes and sales of Liberty bonds was loaned to the European allies. These loans totaled more than $10,000,000,000. No part of them has been paid and no part of the interest that is due, so the obligations now amounts to more than $11,000,000,000. When President Wilson was in Paris Premier Lloyd George and the French statesmen asked him what he thought about a plan of canceling all of these debts. Mr. Wilson made no commitment, but on returning to the United States sounded out public opinion and found it decidedly hostile to any such lavish generosity.

Great Britain could afford to cancel the war debts, because what it loaned to France, Italy, Belgium and other countries it more than got back in what it barrowed from us. But a general plan of the remission of these debts would leave Uncle Sam holding the sack to the tune of more than $11,000,000,000.

It was long thought that the plan had been dismissed from serious consideration, but with the holding of the international conference at Washington the question has been raised again and again and is receiving considerable discussion in the eastern press. The proposal has not been brought up openly at the international conference, but well-informed Washington correspondents say it is a repressed issue.

Some surprisingly weak arguments are being put forward in support of the suggestion. For instance, Professor Edwin R. A. Seligman of Columbia university, in an address before the American Economic association, made the ridiculous assertion that unless we cancel these debts we will "put ourselves on the level of the Hessian rulers who supplied Great Britain with mercenaries during our Revolution."

The truth is that the allies were all but defeated when the United States sprang to their assistance. We took more than 4,000,000 of our young men out of industry and business and put them into training camps. We spent directly about $25,000,000,000 and then loaned the allies $10,000,000,000 more. That $10,000,000,000 came from the pocketbooks of the American people, and no group of men in congress or anywhere else would have a moral right to give away $11,000,000,000 of the hard-earned savings of the American people.

We can afford to be easy in the collection of that debt, but Europe should be made to understand definitely and emphatically that we expect the repayment of every obligation.

Farm and Forest

It is declared that the farmers use a third of all the lumber turned out in the mills of this country. If for no other reason than this, the farmers should be vitally interested in the conservation of the nation's timber resources.

State Farm News

Wire worms have been a source of great loss to the potato growers on the reservation this year and they are casting about for some means of control, says a Yakima report. A method whereby the worms are electrocuted has been worked out, but this means of killing them is under suspicion, since it is not known but what the soil bacteria are killed at the same time and possibly other undesirable effects upon the soil might result.

Another means which consists of the use of a chemical drilled into the ground which, it is claimed, kills the worms but leaves the plants and soil unaffected, is considered by Reuben Benz of Toppenish as being a safer method to use. He is planning to apply the chemical on some potato ground the coming season. He will drill it into the ground very shallow or half an inch or an inch deep. It is claimed that this kills the worms and the chemical used is not injurious to plant growth.

* * *

A yield of 130 bushels of certified oats to the acre is the record of Louis Larson of Brady this year. The certification of the oats was made by C. M. McCody of Montesano, who purchased them. In addition to one six-acre field Mr. Larson had several smaller fields, all planted to "Victory" oats.

* * *

The King County Fair association, with headquarters at Tolt, has filed articles of incorporation and received a license from the state. The board of trustees met in Snoqualmie recently and elected the following officers: Otto Rening, president, Snoqualmie; Jessie Simmons, secretary, Tolt; Otto Wide, vice president, Preston; Ernest R. Meir Jr. treasurer, Bothell. A site of 40 acres will be purchased and it will have a half mile race track.

* * *

Cowlitz county berry growers have completed their organization with the selection of the following local directors to work under the county director, S. M. Vogel, and county officers: Kelso, M. V. Edmonds; Castle Rock, G. E. McCoy; Ostrander, I. C. Chuinard; Kalama, E. H. Stewart; Woodland, J. W. Cheevers.

* * *

A polished granite cornerstone has been presented to the Toppenish school board by Architect George Gove of Tacoma for use in the new high school building now under construction. The stone is about 22x36 inches. It contains a brass box, in which records and photographs are to be sealed. The inscription, "For they can conquer who believe they can," from Dryden, is to be engraved upon the face of the stone.

* * *

Figures to prove that 50 apple trees per acre will produce more fruit than 85 to 100 trees per acre will be available in a year or two if the expectations of Professor O. M. Morris of the Washington State college are realized. He is convinced that there is much overcrowding of trees in orchards resulting in small size and low yields. He contends that profits depend upon the size of the fruit produced. Last year in the returns of one of the large associations extra fancy Winesaps of 125 size and larger brought $2.15 per box; sizes 138 and 163 brought $1.85 per box and sizes 175 and smaller brought $1.20 per box.

* * *

Clark county leads the state of Washington in the production of certified seed potatoes, having grown 8180 bushels, mostly Burbanks, to Spokane county's 7360 bushels this year. The crop is absorbed in supplying the seed market of Yakima and California, and a large proportion of it is handled by the potato department of the Washington Growers' Packing corporation.

* * *

The growth of the poultry industry in Lewis county is shown in a report issued by A. G. Fowler, county agent, in which the total farm production of the county was estimated at $4,630,302. Of this sum, poultry and poultry products represented $1,286,000. Other items in the report are listed as follows: Dairy industry, $1,298,600; other live stock, $90,802; cereals, $1,575,600; root crops, $206,000; fruits, $159,300, and honey, $14,000.

* * *

Irrigation of 15,000 acres of fertile land around Pateros and Brewster by construction of a dam across the Methow river, a ditch that will take the whole flow of the river, and turbines that will pump water 315 feet to Tupper and Brewster flats, is a plan being considered by the directors of the Pateros-Brewster reclamation district.

* * *

Only 20 per cent of the school children of McCleary are five pounds or more underweight now, as compared with 50 per cent in that condition last spring. This improvement was revealed when the county nurse recently made a careful survey of the school. Much credit for the improved condition is given to Mrs. B. E. Fleming and Mrs. E. C. Teagle, who have helped in the organization of nutrition classes. Milk and hot lunches have been a big factor in bringing about the results.

* * *

The Puyallup valley realized a net return of $4,000,000 from fresh fruits and canned products for the year 1921, according to figures compiled at one of the local banks. The sum includes 2545 tons of fresh fruit which went to eastern points, while 636 tons were sold to local markets.

* * *

Whatcom county eggs have found their way into a new market, Montreal, Canada. One carload was shipped to that city recently and other shipments there are expected to follow. Egg shipments from Bellingham have increased to three cars weekly. New York has long been a regular customer and recently Detroit began ordering car lots. California also is an occasional buyer and some business is done in British Columbia.

Coming Events of Interest

Jan. 13-14—Wash. Wool Growers' Ass'n meet, Yakima.
Jan. 17—Ore. Dairymen's league meeting, Portland, Ore.
Jan. 20—Charles G. Sprong Holstein sale, Grandview.
Jan. 23-28—Poultry show, Spokane.
Jan. 26-27—Grain grow'rs, ship'rs, mill'rs' meet, Spokane.
Jan. 30-Feb. 3—West. extension conference, Portland, Or.
Feb. 2-3—North Pacific Fair association meet, Spokane.
Feb. 6-7—Davis and Butchart Bros. Holstein sale, Granger.
Feb. 15-17—W. Walsh. Horticult. Ass'n meet, Mt. Vernon.
Feb. 20-21—West. Royal breeders' swine sale, Spokane.
Feb. 22—Shorthorn breeders' spring sale, Spokane.
Feb. 23—Day & Rothrock Shorthorn sale, Sprague.
Feb. 24—A. D. Dunn Shorthorn sale, Wapato.

FARM BUSINESS AND MARKETS OUTLOOK

The seven leading live stock markets received approximately over a million head of cattle less in 1921 than in 1920.

Possibly 10 per cent of the cattle sent to market in 1921 came from the sale of breeding rather than the annual beef product.

The great majority of the cattle are warmed up and short fed steers of medium and light weight.

Prime and choice steers have practically disappeared from the market platter.

Trainloads of hogs are required to satisfy the demands from the Pacific coast.

Another light supply of lambs restored all the December loss in values.

The holiday season, usually a dull period in wool trade, is marked by further advances in the staple this year.

Sharp break in grain values followed disturbing financial news of the week.

The official estimate upon the condition of new winter wheat as of December 1 was 76 per cent, which is the lowest on record.

The holiday period has dulled the demand for by-product feeds.

Receipts of hay at distributing markets, as well as country loadings, are light.

Egg prices broke sharply on both fresh and storage goods.

During the week about 2300 casks of Danish butter and 3800 boxes of New Zealand butter arrived at New York, while about 20,000 boxes of Australian butter arrived at San Francisco.

CATTLE SUPPLY DECLINED IN 1921

During 1921 the seven leading live stock markets received approximately 9,123,000 head of cattle compared with 10,418,000 in 1920, 12,375,000 in 1919 and 13,200,000 in 1918. If consumption during 1921 had been as heavy as in 1918, supply during the last year would have spelled shortage.

Exports of beef and purchases for army use have dwindled to small dimensions and per capita consumption of beef by our civilian population in 1921 averaged about 20 per cent less than in 1920.

The exact extent of curtailment in beef production in the last three years can not be determined. Possibly 10 per cent of the cattle sent to market in 1921 came from the sale of breeding stock rather than the annual beef product.

This increment in market supply will be absent in 1922, it is generally believed, and if restocking is carried on through 1922, further drafts will be made upon the supply of cattle which might otherwise be available for slaughter. The process is said to have been started already through the funds provided by the War Finance

from Texas, now the leading producer, into the middle west where they may be marketed during the coming winter instead of during the spring months when they usually arrive. Shipments of feeder lambs from the 12 leading markets in the last eight weeks have been nearly as large as in the same period of 1920. Furthermore, dressed lamb prices are nearly out of line with prices on other meats. Some feeders have been taken from the Chicago market up to $10.75, but in view of the elements in the situation just enumerated, purchases on this basis do not look attractive.

Seven leading markets received about 11,756,000 sheep and lambs during 1921, compared with 11,117,000 in 1920, 14,340,000 in 1919 and 12,150,000 in 1918. The gain in 1921 was undoubtedly due to liquidation in the first half of the year, which suggests a reduction in 1922. Undoubtedly sheep and lamb production has been decreased more drastically in the last three years than cattle or hog production. The decrease shown by the census of 1920 when compared with that of 1910 also is to be remembered. Receipts at seven leading markets during December amounted to about 780,000 head compared with a six-year average for the month of 840,000 head.

WOOL MARKET IS RISING.

The holiday season, usually a dull period in wool trade, was marked by further advances in the staple this year. Mills apparently have been obliged to buy to complete their orders and some speculative buying continues.

The woolen goods trade is still in an unsatisfactory state and clothing manufacturers are said to be cutting prices to move heavy stocks.

The Boston market is quoted as follows—scoured basis: Oregon—Eastern No. 1 staple, 88@90c; fine and fine medium combing, 80@85c; eastern clothing, 65@70c; valley No. 1, 75@78c.

Territory—Fine staple, 90@92c; one-half blood combing, 78@81c; three-eights blood combing, 55@60c; one-fourth blood combing, 50@53c; fine and fine medium clothing, 68@72c; fine and fine medium French combing, 78@84c.

FINANCIAL NEWS UNSETTLES GRAIN

Financial news governed the action of the grain market during the past week. The failure of a leading grain exchange firm, the taking over of two Chicago banks to prevent their failure, the collapse of a huge Italian bank and other events of less importance but of like character, together with circulation of numerous rumors, shook confidence and resulted in a sharp break in values. These seem to have largely spent their force and partial recovery has already been made.

Foreign grain markets have been quiet because of the holidays and domestic mills are still waiting for the expected increase in flour demand to materialize. Receipts at primary markets for last week were the lightest since April, 1920. Some seed wheat and seed rye will be purchased in the United States for Russian relief and the soviet government is expected to buy about 5,000,000 bushels of seed wheat, much of which may be purchased at Winnipeg. The United States still has about 15,000,000 bushels or more of durum wheat which must be sold abroad. Outside of these elements in the situation, it is quite possible that Argentine and Australian wheat will soon take the center of the stage in the export trade.

WINTER WHEAT LOWEST ON RECORD.

The official estimate upon the condition of new winter wheat as of December 1 was 76 per cent, which is the lowest on record. It compares with 87.9 on December 1, 1920, and a 10-year average of 89. The acreage estimate was 44,293,000 or about 550,000 acres less than the revised estimate for last year. Based on an average plow-up and an average season, these estimates point to a yield of about 520,000,000 bushels compared with 587,000,000 bushels which is the revised estimate for 1921. The low condition may mean more than the average abandonment next spring. During the next six or eight weeks, weather conditions in the southwest will not be much of an influence in speculative markets, but unless a decided change comes to pass, crop damage reports will be numerous by March.

RUSSIAN RELIEF PURCHASES HELP CORN.

About 3,100,000 bushels of corn have been bought for Russian relief and more purchases are expected shortly. It is reported that around 18,000,000 bushels will be bought for that purpose before the funds are exhausted.

CASH GRAIN MARKETS.

	Omaha.	Chicago	Kansas City.
WHEAT—			
No. 2 red			$1.11@1.15
No. 3 red			1.05@1.09
No. 2 hard	$0.95@1.07	$1.06½@1.16½	1.01@1.20
No. 3 hard	.94@1.06	1.05½@1.15	1.02@1.20
No. 4 hard		1.03½@1.10¾	
CORN—			
No. 2 mixed	38½@40½c	46½@49¼c	40½@42½c
No. 3 mixed	37½@40c	45½@48¾c	
No. 4 mixed		44¾@47¼c	
No. 2 yellow	38@40c½	46½@49½c	41½@43c
No. 3 yellow		45¾@48¾c	
No. 2 white	39@40½c	47@49¼c	40½@42½c
No. 3 white		45¾@48¾c	
No. 4 white		44¾@47¼c	
OATS—			
No. 2 white		35@39¼c	32@34c
No. 3 white	30@30¾c	32½@35¾c	
No. 4 white	29½@30¼c	32@34¾c	
Barley		49½@62c	43@44c

CLOVER SEED ESTIMATE RAISED.

The final estimate on the 1921 clover seed crop was 1,411,000 bushels. This is larger than the preliminary estimate, but the 1920 crop figures were also revised upward and the 1920 yield remains only about 72 per cent of the crop during the preceding year.

Toledo, per bushel—Prime clover, $14; prime alsike, $11.40; prime timothy, $3.12½.

HOLIDAYS CURTAIL FEED DEMAND.

The holiday period has dulled the demand for by-product feeds. Wheat feeds continue to be offered for future delivery at prices below the spot market, apparently anticipating increased flour mill operations after the first of the year.

Chicago—Bran, $25.50; standard middlings, $25; flour middlings, $28; cottonseed meal, 43 per cent, $44; 36 per cent, $40; hominy feed, $22.50; gluten feed, $36.65; linseed oil meal, $47; tankage, $50@55.

HAY RECEIPTS ARE LIGHT.

Receipts of hay at distributing markets as well as country loadings are light. Postponement of the freight rate reduction has been a factor. Demand is limited.

The final estimate upon the crop was 96,802,000 tons compared with 105,315,000 tons last year and 104,760,000 tons in 1919.

Chicago—No 1 timothy, $22@24 No. 1 light clover mixed, $21@23; No. 2 timothy, $19@21; No. 3, $17@18; No. 1 clover, mixed, $18@20; sample and threshed hay, $12@16; No. 1 clover, $17@19; No. 1 to choice alfalfa, $17@23; Nebraska and South Dakota prairie, $15@17; rye straw, $15@16; oats, $13@14; wheat straw, $12@13.

SHARP BREAK IN EGG MARKETS

Egg prices broke sharply last week on both fresh and storage goods. Dealers report that fresh eggs were never more abundant at this season of the year. The four leading cities, Chicago, New York, Boston and Philadelphia, received about 45 per cent more eggs during December than in the same month of 1920. In spite of this increase in supply, cold storage holdings at these points during the month decreased about 7 per cent more than in December last year, showing the breadth of consumptive demand. Receipts for the entire year at these markets totaled about 14,250,000 cases compared with about 12,400,000 cases during 1920.

The poultry market seems to be working into a stronger position since receipts at the four leading cities during December were only slightly larger than in December, 1920, and cold storage holdings also gained only a trifle more than in the corresponding month last year. During November large gains over the same month of 1920 were noted in both receipts and cold storage holdings.

FOREIGN BUTTER DEPRESSING PRICES.

During the past week about 2300 casks of Danish butter and 3800 boxes of New Zealand butter arrived at New York while about 20,000 boxes of Australian butter arrived at San Francisco. Some of the latter is said to be moving east. Danish butter is still offered at 30 to 31 cents c. i. f. and New Zealand at 29 to 29½ cents c. i. f. New York. The duty is 6 cents. With an abundance of foreign butter and rather heavy supplies of domestic butter at the principal distributing markets, buyers have not been anticipating their needs ahead and prices declined further during the past week, especially at Chicago, which was above its usual parity with the east.

Receipts of butter at the four leading markets, Chicago, New York, Boston and Philadelphia, during December totaled about 43 per cent more than in the same month of 1920. Cold storage holdings decreased during the month about 12 per cent less than in December, 1920.

GOOD HOLIDAY CHEESE TRADE.

Demand for cheese is never large at this season of the year, but was maintained last week much better than generally expected. Prices remained steady most of the time, but declined toward the close in line with lower country markets.

Receipts of cheese at the four leading cities during December were about 400,000 pounds less than in the same month of 1920. Cold storage holdings at these markets decreased about 600,000 pounds more than in December

(Continued on page sixteen.)

Little Journeys to Market

THE CHICAGO HORSE MARKET.

The horse market at Chicago is an adjunct of the Union stock yards. It is located in a separate part of the yards, the horses being housed in the buildings in which the live stock exhibited at the International Live Stock show is stabled.

Some of the horses are sold privately. The buyers make the rounds of the stalls and any individuals they wish to see are taken out and put through their paces.

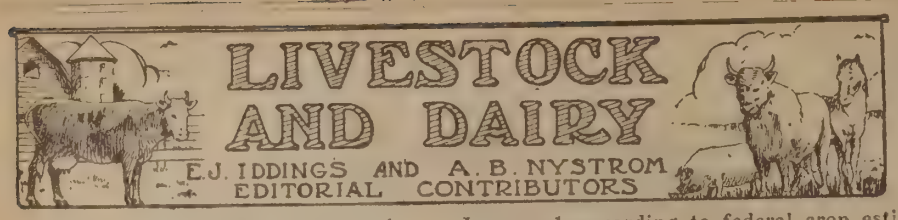
Most of the horses are sold in the auction ring. Just before they enter the ring, commonly known as the "bull pen," the horses are examined by a public inspector employed by the stock yards company, not by the horse commission firms. He determines the age, the soundness of eye and limb, blemishes and such defects of conformation as "buck knees." This information is given to an attendant seated inside the "bull pen" who shouts it through a megaphone when the horse enters the ring. The buyers at the ringside are supposed to make their bids with these facts as to age and soundness in mind. Another clerk records the information on a tag which is tied to the horse's halter when it is sold. The buyer immediately examines the horse for other unsoundnesses; if he finds them he can reject the animal.

While the auctioneer is crying the sale, a group of ring attendants is busy cracking whips and keeping the horse, usually badly frightened, on the jump up and down the ring, and talking up the sale with such eulogies as "There's a doll," "cheaper'n a broom" and "there's a good chunk." A mantle of charity is thrown over all defects so that a bad eye merely has a "nickel's worth of feather" in it; a spavin becomes a "coarse hock" and a horse with broken wind has only about "a cent's worth of heaves."

After a horse is sold, it is taken outside and hitched to a wagon or dray and the wheels locked. It is moved at a walk and at a trot, the buyer watching for signs of lameness, bad wind or string halt. If he finds such unsoundnesses, he is at liberty to reject the animal or to insist on a reduction in the purchase price.

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Feed Not at Fault

I have a 4-year-old cow that will be fresh next February. She is in good health. I raise the cream in pans and the third and fourth milkings taste slightly bitter, and there is a stronger bitter taste in the butter. I feed oat hay straight (carrots or mangels), mill run and alfalfa meal twice a day and a wood lot for pasture during the day. Other neighbors with the same pasture do not complain. Is there anything I can do in feeding or otherwise to prevent flavor?
Olympia, Wash. SUBSCRIBER.

I don't believe the trouble is caused by the feed nor from lack of exercise, but rather by the presence of certain bacteria which cause the cream to become bitter. These may come from the water in which the utensils are rinsed or they may come from the contamination of the milk during milking.

Scald all utensils and strainer cloths thoroughly after using. Use boiling hot water, or better still, sterilize them by boiling for 10 minutes after each washing until the trouble is over. Do not attempt to dry the tinware or crocks with a cloth after the sterilization, but shake off all free water, then put them where they will dry from the heat in them. A. B. N.

Keep After Hog Cholera

Some persons think that the use of anti-hog cholera serum has become so general that we are far on the way toward the elimination of the disease, but a cleanup of cholera can not be expected through the use of this method. Besides, only a small percentage of the hogs in the country are treated each year and there is also almost a complete turnover of the swine population each year. Every 12 months we start with a new lot of pigs and the fight against disease must start at the beginning again.

Only about 10,000,000 hogs are treated annually. In recent years there have been around 70,000,000 hogs in the country on January 1, according to federal crop estimators, which means many more hogs in the spring and summer. If all these hogs were treated cholera would not be eliminated. It would simply be made impotent to kill many hogs for one season and would begin to kill again the next season if serum were not used. Serum treatment, like insurance, can not be allowed to lapse, and the government bureau of animal industry urges increased vaccination year in and year out, together with sanitary precautions to make the disease less likely.

Oats and Wheat for Cows

I would like to know how to mix some oats and wheat for my cows. I intend to have the oats and wheat ground. H. R.
Roy, Wash.

Ground oats and wheat may be mixed in the proportion of two pounds of oats to one pound of wheat, and used as a grain ration to supplement alfalfa or clover hay and corn silage. A handful of linseed oil meal at each feed in addition would be beneficial. If grain hay or mixed grass hay is used the grain should be three parts oats to one part of wheat. Rolled wheat is better than ground. If no silage or other succulence is available feed heavier in oil meal. A. B. N.

IS RUNNING BIG CHANCE.

It is almost never advisable for an inexperienced man to begin in any branch of the live stock business on a large scale. He is sure to make a mistake at first, which, with a large beginning, may result in heavy losses.

LIFE PRESERVERS FOR LIVE STOCK

By DR. E. E. WEGNER, W. S. C.

RESPIRATORY TRACT—ARTICLE 7.

Pneumonia (Continued).



The first change that takes place in the lung as a result of a disturbance that is to result in pneumonia is that of a congestion of that organ, or a condition where the blood is overfilling the vessels and the organ itself is seen to be red and heavy and solider than normal, resembling liver. Though not as solid as that organ, it has lost its characteristic spongy appearance and light weight. At this stage of the disease the temperature is elevated and the animals are likely to be chilling and trembling at frequent intervals, refusing food and showing little interest in the things that are going on about them. They do not lie down for any length of time during this period, but seem to be more comfortable when standing up. If they lie down they are likely to rise again after a very brief period and remain standing for quite a while.

At this stage the proper home treatment is to try to get the animal warm as quickly as possible. They should be heavily blanketed with woolen blankets if possible and the legs with woolen bandages as high as the knees and hocks. They should be put into a warm stall free from drafts, but having free access to the fresh air. Hot salt packs or other forms of external heat may well be applied under the blankets. Hot stimulants are also in order, but as it is difficult to get the old standard for that purpose, hot coffee is probably as good as anything that can be obtained. Your veterinarian may be called at this time to good advantage, as the treatment of the case properly in the very early stages may be the means of cutting the attack short and preventing a long and serious illness. Many of these taken early can be corrected so that the animals are quite well again in a few days, while if they are neglected in this early stage many losses result. It is well to treat any disease early in its course, but this is particularly true in pneumonia, and careful nursing is probably of more value than drugs in pneumonia, for certainly any amount of drugs without proper nursing, keeping warm and away from drafts, etc., will be of little value.

In Advanced Cases.

Many cases, however, do go beyond this first stage, either because the owner does not realize what is occurring or because the animal is not where the owner can see it at frequent intervals, as when animals are out at pasture in the winter. In these more advanced cases the animals have continued fever, refuse their food to quite an extent, do not care to move about at all unless urged considerably and stand practically all the time; if they lie down it is for only a few minutes, as they become so uncomfortable that they rise again very soon. A discharge appears at the nose, first rather thin and rust colored,



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Cuts, Chaps, Scratches, any congestion or inflammation can be quickly cleared up by using Bag Balm, the great healing ointment for cows. Caked Bag is promptly reduced by this softening remedy. A great aid in treating Bunches and Cow Pox.

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without odor, but changes in a few days to one of a whitish-yellow color with an offensive odor, which persists until the animal is quite well again, but in any case the breath carries this odor for a considerable time.

The course of this disease varies from 10 days to several weeks, depending upon the amount of lung tissue that is diseased. If the amount is very large and the animal has not the best of care the result is likely to be death. In any case the animal loses flesh very rapidly during the course of the trouble and should be given any foods that it will eat. Grain and any concentrated foods are to be given to keep strength up as much as possible.

Even if the animals make a recovery the period of convalescence is likely to be rather long and the animals can not be put to work for several weeks or even months in severe cases, largely because of the fact that anything that affects the breathing apparatus causes the animal a weakness that makes heavy work impossible. The shortness of the breath must be overcome before the animal can be put to its accustomed work. In many cases it is well to turn the animals out to let them rusticate for a number of weeks before again putting them in the harness.—Copyright, 1922, by E. E. Wegner.

VETERINARY

By DR. S. B. NELSON.

Gives Bloody Milk.—My 2-year-old heifer gives bloody milk from one of her front teats. Sometimes the milk is just blood and sometimes it comes in big blood clots. She was fresh last June. She is fed oat hay, bran and shorts and carrots.
Waukon, Wash. A. J. M.

Try giving your heifer a teaspoonful of hypo-sulphite of soda in a pint of water once daily.

Udder Is Leathery.—I have a cow that her udder seems to be getting like leather in front of her right front teat and runs up to her body and it seems to be spreading. I also have a heifer that was fresh for the first time in October and she has little specks of blood in her milk. It seems to be all from one teat.
Everett, Wash. SUBSCRIBER.

The leathery appearance of the skin in front of the udder is probably a bacillus necrosis infection. One of the best remedies for this is a mixture of one part of nitric acid with six parts of water. Then apply to the affected part with a glass rod once daily. Regarding the heifer with small specks of blood in her milk, try giving her a teaspoonful of hypo-sulphite of soda in a pint of water once daily.

Cow Has Poor Appetite.—I have a Jersey cow 7 years old that has been milking since she was 17 months old. Last August she had a severe sick spell and her milk dried up and she became thin. I do not know whether it was caused by arsenate of lead poisoning or that grass parasite, which was prevalent at the time. She seemed to recover and her milk came back nearly to normal, but she was never hungry. For the last month she has been going down in flesh, milk and appetite. I feed alfalfa hay, bran or shorts, beets, squash and she is on green alfalfa pasture, but eats only a mouthful or so of anything. A. O. B.
Grandview, Wash.

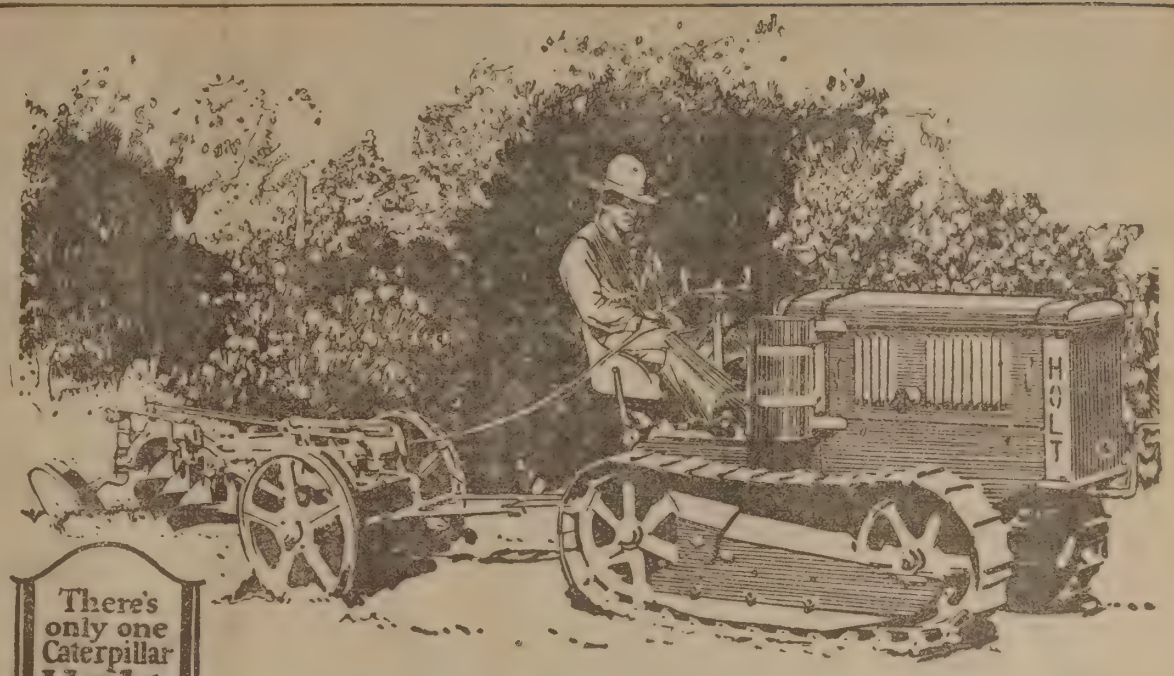
Give your cow a tablespoonful of compound tincture of gentian in a pint of water morning and evening.

Trim Horse's Foot.—How can I cure thrush in a horse's foot? It does not bother very much in a walk, but does when trotting and is worse in winter than it is in summer. N. E.
Ush, Wash.

Trim your horse's foot out until it is perfectly clean. Trim a little bit of the sole and a little bit of the frog off everywhere until you come to good, healthy tissue. Then pour into the foot tincture of iodine sufficient to wet it quite thoroughly all over the sole and frog of the foot. While damp apply a quantity of calomel and put on an absorbent or jute pack. Inclose in a bag or sack, so as to retain the same in place. Give this treatment every one, two or three days, as might be necessary after the first treatment.

Give Epsom Salts.—Please tell me how to take care of my cow. She is to be fresh some time in January. She seems to be constipated. I am drying her up. She is 6 years old. I have not had any experience with cows, so do not know what to feed her or how much. C. VAN S.
Manette, Wash.

Give your cow a handful of epsom salts in her drinking water or in a drench. If she is not too heavy a milker, feed her carrots or roots. If she has been dried up do not feed her the roots while you are trying to dry her up. If she is a heavy milker keep her on dry food and give her the epsom salts as indicated. Give her plenty of water. Outside of these general precautions, take care of her as you would at any other time.



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POULTRY

Hens Feed the Pigs

"My chickens have been paying for the feed for the pigs. They bring in as big a check per month as the cows, and I know they do not cost as much to feed, so I know there is good money in a farm flock," said Mrs. Grant Gleason of Chehalis, Wash.

Mrs. Gleason has White Leghorns. She keeps them in a good, modern poultry house and does not let them go haphazard, as too many farm flocks are allowed to do. She feeds a commercial egg mash, gives them sprouted oats every morning, and mixed wheat and oats for a scratch feed. This latter is just as it was threshed and a cheap feed.

Meat for Chickens

How to Prepare for Following Year

I have a poultry ration that calls for mill run, which I can not get. Will you tell what proportions of the different mill feeds there is in mill run? How could I cure and prepare meat in winter, to be used as meat scraps or meat meal for chickens the following year?

Eltopia, Wash. SUBSCRIBER.

Mill run is an offal from wheat in the process of making flour. It contains both the bran and middlings. Sometimes it may contain ground wheat screenings and other byproducts. Poultrymen prefer clean, sweet bran to mill run. The bran should not be too coarse; that is, should not be in too large flakes. You should be able to obtain bran of good quality in your district.

If you have any means of drying meat to contain not more than 10 per cent moisture and if you have equipment to grind it up, it could be prepared in this way for poultry. However, the average poultryman who wishes to preserve meat for feeding chickens will find it easier to cure it like corn beef and before using it soak the salt out of it and cook it for the chickens.

The following is a standard recipe for corning meat:

"The pieces commonly used for corning are the plate, rump, crossribs and brisket, or in other words, the cheaper cuts of meat. The pieces for corning should be cut into convenient-sized joints, say, five or six inches square. It should be the aim to cut them all about the same thickness, so that they will make an even layer in the barrel. When the meat is thoroughly cooled it should be corned as soon as possible, as any decay in the meat is likely to spoil the brine during the corning process. Under no circumstances should the meat be brined while it is frozen. Weigh out the meat and allow eight pounds of salt to each 100 pounds; sprinkle a layer of salt one-quarter of an inch in depth over the bottom of the barrel; pack in as closely as possible the cuts of meat, making a layer five or six inches in thickness then put on a layer of meat; repeat until the meat and salt have all been packed in the barrel, care being used to reserve salt enough for a good layer over the top. After the package has stood over night add, for every 100 pounds of meat, four pounds of sugar, two ounces of baking soda and four ounces of saltpeter dissolved in a gallon of tepid water. Three gallons more of water should be sufficient to cover this quantity. In case more or less than 100 pounds of meat is to be corned, make the brine in the proportion given. A loose board cover, weighted down with a heavy stone or piece of iron, should be put on the meat to keep all of it under the brine. In case any should project, rust would start and the brine would spoil in a short time.

"It is not necessary to boil the brine except in warm weather. If the meat has been corned during the winter and must be kept into the summer season it would be well to watch the brine closely during the spring, as it is apparently more likely to spoil than at any other season. If the brine appears to be ropy or does not drip freely from the finger when immersed and lifted it should be turned off and new brine added, after carefully washing the meat. The sugar or molasses in the brine has a tendency to ferment and, unless the brine is kept in a cool place, there is sometimes trouble from this source. The meat should be kept in the brine 28 to 40 days to secure thorough corning."

W. A. LINKLATER,
Western Washington Experiment Station.

Mixing Dry Mash

Not every poultryman who mixes dry mash for his flock, realizes the importance of thoroughly mixing the ingredients, says Mrs. George R. Shoup, poultry specialist at the western Washington experiment station. Good, wholesome mash material, poorly mixed gives the birds a poor mash, dangerous alike to production of eggs and the health of the birds.

To thoroughly mix dry mash, select a clean floor space in the feed room and spread (not pile) the ingredients layer upon layer, until all are used. Shovel from this pile into another until the volume is all moved. Shovel back again in the place just emptied and then the third time, shovel into the final position against the wall or in a corner. By thus mixing, three times over, a uniform mixture is made and the fowls are safeguarded against the danger of overeating on unmixed highly concentrated protein feeds in the mash.

The improperly mixed mash is indeed "a feast or a famine." A few days the birds find one or two products in the mash and then a new set of feeds, so that the mixture is neither good tasting, nor satisfying to them.

Buy good ingedients, mix thoroughly and feed moderately. It pays in health of birds, as well as in maintenance of egg production.

Lack of Ventilation Causes Loss

The different percentages in the egg hatches about the state are due to two distinct sources, according to W. D. Buchanan, poultry specialist of the state college.

The first in the prevalence of disease in the parent stock, while the second is a lack of vigor.

There is, however, a factor which seems to cause a greater loss than either of the above, and which is often the limiting factor in the reproduction of stock. That is the lack of ventilation in the brooders. It is rather surprising to find the loss from this source to be so high. Much of it, however, is due to overheating and improper attention and it should be a simple matter to bring the percentage down to a lower level.

Can Anybody Beat This?

Eggs containing two yolks are common. Occasionally one large egg, complete in every detail, will contain another complete egg, shell and all. How common, however, is a three-yolked egg?

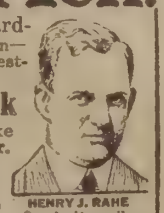
E. W. Corner of Spokane reports that one of his White Wyandotte hens, a yearling, recently produced an egg with three normal yolks in it. The egg was extra large, but did not contain sufficient white for three normal yolks.

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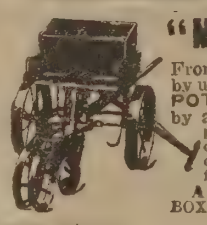
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ORCHARD

GRANVILLE LOWTHER
EDITORIAL CONTRIBUTOR

Mice in Orchards

Ernest M. Curry of Amboy, Wash., writes saying: "I see by the paper that the field mice are doing considerable damage to orchards in Yakima. I came from Ontario, Canada, and the mice there do a great deal of damage to orchards. One man told me he never lost a tree from this trouble. When I asked him what he did he said, "Rub the bark of your trees with old-fashioned castor oil. Apply it in the fall and the mice will never touch them."

I can not vouch for the remedy, for I have never tried it.

Professor H. F. Wilson estimated that one field mouse, fully grown, would consume 25 to 36 pounds of food per year. At that rate, if they feed largely, or even in a considerable degree upon the bark of young trees or the roots of old ones, they would in a short time do considerable damage.

The orchards that are most infested with them are those that furnish grass, weeds and other materials for food and nesting. The growing of alfalfa in the orchards is an incalculable benefit, but it furnishes at the same time nesting places for mice. It is a little like the keeping of cats to kill the mice, at the same time the cats kill the birds that feed on insect pests that damage the trees and fruit. Clean cultivation will destroy many of the nests and young mice, but perpetual clean cultivation will impoverish the soil.

Poisons have generally been considered the most effective remedy, and among the poisons strychnine or arsenate of lead are most common. Strychnine is usually preferred and is prepared by soaking wheat, oatmeal or corn over night in a sirup prepared as follows:

Dissolve an ounce of strychnia sulphate in a pint of boiling water, adding a pint of thick sirup. This will make a quart of thick, poisoned sirup, which is enough to poison a half bushel of grain. Smaller proportions may be used as needed. If the solution is not sufficient to wet the grain thoroughly add a little water.

There is danger of destroying useful birds and, therefore, the poison should be placed under boards, the ends of which rest on cross pieces, or in some way to prevent the birds from getting it. In case of moles and gophers, the poison can be placed in their burrows or runways.

Gophers feed mostly on roots, and the tender roots of trees are greatly damaged by them. Poisoned raisins are very frequently used for their destruction.

G. L.

White Pine Blister Rust

The white pine blister rust, which has been found in three different localities in Washington, is destructive to white pines of the entire northwest, according to plant pathologists and botantists who have been on the lookout for the disease. While this disease does its greatest damage to the pine forests, which are completely destroyed in from 3 to 10 years after becoming infected, the currant and gooseberry industry is also affected, since both plants are necessary to complete the life cycle of the disease.

"If this disease is not checked in the northwest it will cause the destruction of all black currants and gooseberries wherever affected," said J. H. Hotson, botanist of the University of Washington. "It is true that there are not many of these berries grown as a commercial crop except in a few sections, but the disease will spread through the woods by means of the wild black currant. The greatest damage will be when the white pine forests are affected in eastern Washington and in Idaho.

"Whenever any one finds yellowish spots on the under side of the leaves of black currants or gooseberries they should send a few specimens to the state college experiment station or take them to some plant pathologist in order that they ascertain for a certainty where the disease is spreading."

Mr. Hotson has just returned from a meeting of representatives from the three Pacific coast states and Idaho, who drew up suggestions to offer congress to be passed which would provide means for combating the disease. Those who attended the meeting were assured that such a measure would undoubtedly pass congress, since there are many thousand acres of government timber that will be affected by the disease. Approximately $150,000 is needed to combat the trouble.

When to Prune

Would you please inform me when it is the best time to prune fruit trees?
Olympia, Wash. MRS. W. Z.

Fruit trees can be pruned any time from now until the buds start in the spring. In western Washington it is wise to delay pruning as long as possible in winter, so that the wounds will not be exposed long to the winter rains.

Summer pruning: Trees making excessive wood growth at the expense of fruit can sometimes be induced to form fruit buds by pruning during the latter part of July or in early August. J. L. STAHL, Western Washington Experiment Station.

CUT BACK FILBERT TREES.

In England filbert trees three feet in diameter are allowed to grow only five and one-half or six feet tall. They have a spread of 20 to 30 feet. The new wood which forms as the result of constant pruning is the wood which bears the crop.

GET READY FOR SPRAYING.

If you are not already familiar with the sprays needed and the proper methods of applying them in your orchard at just the right season, spend a few winter evenings studying on this subject.

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Do not get in a hurry. You can not expect large quantities of fruit from your apple trees until they are from five to eight years old.

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ASK YOUR DEALER for the genuine Wright's Smokeor Ham Pickle. Both guaranteed satisfactory or your money back.
FREE Simply send name for valuable, illustrated book on expert methods of curing meat and learn how to get a highest-grade butchering set at lowest factory cost. Write today.
E. H. WRIGHT COMPANY, Ltd.
850 E. Broadway, Kansas City, Mo.

GOODYEARS, THROUGH AND THROUGH
Alongside the famous 30 x 3½ inch Goodyear All-Weather Tread Clincher shown here, is its companion, the 30 x 3½ inch Goodyear non-skid.
More than 5,000,000 of these Goodyear non-skid tires have been sold in the last five years.
Built of the same high grade Egyptian cotton fabric that goes into the All-Weather Tread Goodyear, with a long-wearing but differently designed tread, they have given remarkable service.
Their splendid performance has proved to thousands of car owners the folly of buying unknown and unguaranteed tires of lower price.
Ask your Goodyear Service Station Dealer about them.
30 x 3½ Non-Skid Fabric $10.95
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30 x 3½ Heavy Tourist Tube . 2.80
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MANUFACTURER'S TAX EXTRA.
GOODYEAR

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EXPERIENCED poultry men all over the world depend upon Buckeye "Colony" Brooders for success. These brooders literally make three chicks grow where one grew before, cut the expense to half and reduce labor to a fourth.
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Hundreds of thousands use Buckeye "Colony" Brooders because they have learned their reliability, their economy and their convenience. Experience has proven beyond question that Buckeye "Colony" Brooders raise every raisable chick. With such equipment the gamble goes out of chick raising and you have the assurance of success.
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TAKE ADVANTAGE OF GUARANTEE mentioning THE WASHINGTON FARMER when writing to advertisers; you are doubly protected. See the guarantee on the editorial page.—Adv.

Announcing the Advent of the New Force in the Fight against

Insect Pests *and* Fungus Diseases

This will announce the opening of the Dosch Chemical Company, with general office and plant at Louisville, Kentucky, an organization devoted to the preparation and distribution of fungicides and insecticides which the research of Experiment Stations and the field work of County Demonstration Agents have shown to be scientifically correct and commercially practicable.

With the firm conviction that the dusting method of insect and plant disease control offers the brightest hope of profit to the fruit and vegetable grower, the Dosch Chemical Company will concentrate upon the production of the finest dust and the best dusting machines.

This belief represents the combined experience of the plant pathologists, entomologists, practical fruit men, and field workers whose names are listed in this announcement.

Nevertheless, it is not the intention of the Dosch Chemical Company to offer the dusting method of control as a cure-all or a miracle worker. This organization proposes to conduct its operations upon a plane that will win the approbation of scientific research workers in this field, and the priceless confidence of the grower.

There are some territories for which we would consider desirable representation. We would be glad to hear from dealers where we have not already made connection.

Listed below are the products upon which the manufacturing ability of the Dosch Chemical Company will be centered in the endeavor to produce a better quality of dusting material and dusting machinery than have ever been made before.

PRODUCTS

Nicotine Contact Dust. Will control the various forms of aphis (plant lice), pear psylla, leaf hopper and apple red bug.

Nicotine Sulphate. Added to liquid sprays will control the pests which are controlled by nicotine contact dust.

Lead Arsenate. For all chewing insects. Mixed with dusting sulphur in the control of fungus diseases as well.

Calcium Arsenate. A powerful poison which is designed for the control of boll weevil in cotton, tobacco worm, alfalfa weevil and potato beetle.

Dusting Sulphur. To prevent apple scab, brown rot of stone fruits, cherry leaf spot and other diseases.

Copper Lime Dust. Used as a summer dust in combination with arsenate for the control of fungus diseases and chewing insects of apple, pear, plum, grape, potato and other vegetable crops. Used alone for celery and potato blights.

Dehydrated Copper Sulphate Dust. For combination with lime in copper lime dust.

DOSCH



Soluble Lime Sulphur Compound. Used in the control of San Jose and other scale insects and peach leaf curl.

Improved Dusting Machinery. Power, traction and hand dusters for fruit trees, vegetables, truck crops, cotton, tobacco, flowers and shrubs.

The Dosch Chemical Company was organized by Theodore Dosch and is amply financed to conduct its research and experimental work, being capitalized at $2,500,000. Mr. Dosch has previously organized and operated for thirteen years one of the largest companies in the United States, engaged in the manufacture of dust materials and dusting machinery.

OFFICERS

Theodore Dosch, president and general manager. Mr. Dosch has for thirteen years been a leader in the development of fungicides and insecticides and has conducted his work in every part of the United States and Canada.

Thomas T. Feeley, vice president and treasurer. Mr. Feeley was formerly a publisher, and county clerk of Niagara County, New York, and now lives at Louisville, Kentucky.

Harold J. March, secretary. Formerly Mr. March was a member of the firm of A. Bennett & Company, commission merchants, New York City, and now resides at Louisville, Kentucky.

John J. Raskob, director, Wilmington, Delaware. Mr. Raskob is also vice president of the General Motors Corporation, and vice president of the E. I. duPont deNemours Co.

Howard V. Pearsall, director, Williamson, New York. Mr. Pearsall is president of the State Bank, Williamson, New York. He is also president of the Williamson Cold Storage Company, and an extensive grower and dealer in fruits and vegetables.

The Dosch Chemical Co., Louisville, Ky.
Incorporated.

In the departments of plant pathology and entomology, and research work with fungicides and insecticides, the Dosch Chemical Company has obtained the services of some of the nationally known authorities in the field. The advice of these authorities will be freely given to any grower who is disturbed by plant diseases or insects.

RESEARCH STAFF

Dr. H. W. Dye, Pathologist. For the past five years Dr. Dye has been associated with the Plant Disease Investigational Work at Cornell University and the New York State College of Agriculture, and is well known to the New York State Growers and elsewhere through his work there. He has been employed also by the Bureau of Plant Industry of the United States Department of Agriculture in Investigational Work. Dr. Dye resigned as Assistant Professor of Plant Pathology at Cornell University and the New York State College of Agriculture to join the Research Department of the Dosch Chemical Company as Chief Pathologist.

Dr. G. E. Sanders, Entomologist. For several years Dr. Sanders has been associated with the Entomological work of the Canadian Department of Agriculture. He has been largely responsible for the general adoption of the dusting practice by Canadian growers and has developed the copper lime dust, which is coming into general use. Dr. Sanders is the foremost investigator today in the development of insecticides. He is resigning his work in Canada as Chief of Insecticide Investigations to join the Dosch Chemical Co., Inc.

Pacific Coast Distributor
F. A. Frazier, 283 Minna Street, San Francisco.

DUSTS

Burning Out Stumps

I would like to know how to burn out some large fir stumps close to some buildings by the use of salt peter. A. N. Coupeville, Wash.

In my opinion it would be more practical to burn out stumps by the char pit method than to use salt peter. I am writing to the extension service, state college, Pullman, to have them send you a copy of a circular on the char pit method of burning out stumps.

If you decide to try salt peter, bore a 1½-inch hole at least a foot deep into the stump above each main root. This hole should be bored sloping. It should begin about one foot to 18 inches above the ground level and should be directed slightly downward. This hole should be packed during the winter or early spring season with salt peter, some water added and the hole plugged up. The stump will be ready to burn in the late summer. But the prospects are that a more complete job can be obtained by char pitting and with less danger to surrounding buildings.

W. A. LINKLATER,
Western Washington Experiment Station.

BUYS BOAR FROM TURNER.

Some time ago H. W. Turner of Sunnyside, Wash., sold to Robert Nelson of Cambridge, Idaho, the first prize Duroc Jersey junior boar pig, Pathfinder King, of the Western Royal Live Stock show. The pig was junior champion at the Washington State fair and is a fine individual of correct big type, good bone and strong back. Mr. Nelson is going to exhibit Durocs at the Denver stock show.

A "balanced diet" may sound confusing to many people

The facts, as explained here, are simple.

The secret of a "balanced diet" is to have food containing all the elements needed for proper nutrition. These elements are protein, to nourish the tissues; starch and sugar to furnish energy; fat to supply heat; and mineral salts to provide the material necessary for building nerves, brain, and tooth and bone structure.

Grape-Nuts, the nourishing cereal made of whole wheat flour and malted barley, served with cream or milk, is a complete food for young and old alike.

Go to your grocer today and get a package of Grape-Nuts. Eat it with milk or cream for breakfast; or with stewed fruit, jelly or jam, as a delicious dessert for lunch or dinner.

Every member of the family will relish this palatable and nourishing food—

Grape-Nuts—the Body Builder
"There's a Reason"

Made by Postum Cereal Co., Inc., Battle Creek, Mich.

Will This Go Up or Down

That depends on FOOD and CARE. Food is most important. Don't experiment. If your baby isn't thriving try Dennos. The Milk Modifier.

A Seattle father writes:
"We cannot express our undying gratitude. Dennos saved our baby's life."

Dennos has saved many others. Send for free sample and booklet to-day. It may mean much to your baby's future health and happiness.

All Druggists Sell Dennos



Please send Free sample and booklet



Dennos Food Co. :: Portland, Ore.

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Clear your Stump Land without cost.
Increase your income and the value of your farm. Your richest land lies under those tax-eating stumps. Pull them—make this valuable land work for you. Get a Stump Puller free by being a

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Many of our advertisers offer free booklets and information which is very much worth your while to send for. A postal will bring them. Why not place a dime or so in your rural mail box with a note requesting the carrier to leave you some cards? Then use the cards in writing advertisers. When you do so be sure to mention THE WASHINGTON FARMER.

FARMERS' WANT ADS

SITUATIONS WANTED—Male 21

GOOD, EXPERIENCED FARMER, SINGLE, middle-aged; wants permanent job on ranch in spring, as working foreman; understands irrigation, all kinds of farming and stock raising; best of references. Write C 10, Pacific Northwest Farm Trio, Spokane, Wash.

FRESH FOOD PRODUCTS 51-1

HONEY BRAND HONEY—PURE, LIGHT, thick, and good flavored; from alfalfa and sweet clover; one 60-lb. can, $7.50; two 60-lb. cans, $14.50. Write for circular and complete price list in pails. Oliver Sires, Wapato, Wash.

WHITE ALFALFA, SWEET CLOVER honey; 1 60-lb. can, $7.50; 2 60-lb. cans, $14.50; six 10-lb. cans, $8.50; three No. 10 pails, prepaid third zone, $5.50. Wells D. Rose, Sunnyside, Wash.

HAPPY HOME HONEY FROM BLOSSOMS of alfalfa and sweet clover, in liquid form; 6 10-lb. pails, $8.50; 1 60-lb. can, $7.50; 2 cans, $14.50, at Mabton. H. N. Paul, Mabton, Wash.

HONEY—ALFALFA, SWEET CLOVER; FINE quality; 60-lb. can, $7.50; two 60-lb. cans, $14.50; three 10-lb. pails, prepaid second zone, $5. Harry Fisher, Prosser, Wash.

DELICIOUS NEW CLOVER HONEY, 60 LBS., $6.85; prepaid third zone, $8.75; two 60s, $13.25; pound can, 25c. Browne, Box 499, Twin Falls, Idaho.

PRUNES, $6.25 PER HUNDRED; SMALL BUT nice, clean, sweet; 25 lbs., express paid, $2.70. Sample, 15c. Kingwood Orchards, Salem, Ore.

SMOKED SALMON, 5-POUND BOX, $1.25; salt salmon bellies, 5 pounds, $1.25, delivered by mail. Coffin Fish Co., Seattle, Wash.

HONEY—LIGHT AMBER HONEY, LIQUID form; one sixty-pound can, $7; two cans, $13.50. A. L. Traner, Touchet, Wash.

FINEST ALSIKE CLOVER HONEY, ONE sixty-pound can, $7.50; two cans, $14.50. Roy Selwyn Wilson, Buhl, Idaho.

COMB HONEY, $4.80 PER 24-LB CASE; NOT prepaid. Miss Grace I. Folsom, Prosser, Wash.

MISCELLANEOUS—FOR SALE 60

SASH AND DOORS—O. B. WILLIAMS CO., 1943 First ave., So. Seattle. Chicken house sash, 20" wide by 25" high, 80c; a dozen different sizes in stock for immediate shipment. Skylights for chicken houses, 36"x40" price, glazed, $2. This is the size recommended by the Western Washington experiment station. We carry them in stock for immediate shipment. Sash and doors for all purposes at lowest prices. All orders receive prompt attention. Our large illustrated catalogue No. 35, showing full line of building material and built-in fixtures for the home, free on request. O. B. Williams Co. Established 1899.

KENTUCKY LEAF TOBACCO, 3 YEARS OLD, nature cured. Don't send a penny, pay for tobacco and postage on arrival. Extra fine quality chewing or smoking, 10 lbs., $2.50; medium quality smoking, 10 lbs., $1. Farmers' Union, Hawesville, Ky.

WALL BOARD—WRITE FOR SAMPLE OF Washington plaster wall board; won't warp, won't burn. Manufactured by Washington Building Products company, 6851 E. Marginal Way, Seattle, Wash.

SOMETHING FINE FOR SMOKERS—OLD Kentucky white Burley smoking tobacco, 5½ lbs., $2.75; 10 lbs., $5, prepaid; satisfaction guaranteed. Jim Foy, Dukedom, Tenn. (Reference, Dukedom bank).

PIPE — NEW AND SECOND-HAND, ANY size; low price; standard grade roofing paper at a big saving; belting, all plies, all sizes, cheap. Write Alaska Junk Co., S120 Adams st., Spokane, Wash.

BUY YOUR ALFALFA HAY AND NETTED Gem potatoes direct from grower, save commission. Samuel Shockley, Box 185, Outlook, Wash.

TOBACCO—HOMESPUN MILD SMOKING, 10 lbs., $2; 20 lbs., $3.50; chewing, 10 lbs., $2.75. Farmers' Club, Mayfield, Ky.

MISCELLANEOUS—FOR SALE (Continued) 60

CEDAR CHESTS DIRECT FROM FACTORY to your home; Tennessee cedar, solid copper trimmings. Write for catalogue. J. W. Higgins & Sons, 1912 Gilsan st., Portland, Ore.

TOBACCO—NATURAL LEAF FOR MILD smoking, 10 lbs., $1.50; 20 lbs., $2.75; will furnish free recipe for preparing. Leaf Tobacco Exchange, Mayfield, Ky., Star Route.

TOBACCO, NATURAL LEAF; SWEET AND mellow hand-picked chewing or smoking; 5 lbs., $1.50; 10 lbs., $2.50. Smoking, 20 lbs., $4. Furnish free recipe for preparing. Quality and delivery guaranteed. Farmers' Tobacco Exchange, Sedalia, Ky.

MISCELLANEOUS. 61

WE SCOUR AND CARD WOOL TO ORDER. Pure wool batts, pads and comforters at factory prices. Perfection Batt & Mattress Co., Stayton, Ore.

MACHINERY—For Sale. 93

MELOTTE SEPARATORS REDUCED 22 PER cent. Write today for free book which tells all about this famous cream separator and Jules Melotte, the inventor, also full details of 30-day free trial and easy payment plan and 1922 price reductions. The Melotte Separator, H. B. Babson, U. S. manager, dept. 9221, 2843 W. 19th st., Chicago, Ill.

SEVERAL REBUILT RUSSELL THRESHERS. A1 condition; different sizes. Write for prices. Also bargains in rebuilt steam engines. A. H. Averill Machinery Co., Spokane, Wash.

STOVE REPAIRING. 128

WRITE MYER RUBENS, SPOKANE, ABOUT stove repairs, welding broken parts, nickle plating.

PETS—Dogs, Birds, Etc. 171

CLEARANCE SALE—WE OFFER BLACK Shepherds, Airedales, Newfoundlands, St. Bernards and big game hunting dogs in pups, trained dogs and matrons at quick sale prices until January 23, 1922. State wants. List 6c. Springdale Kennels, Gilman, Mont.

RAISE GUINEA PIGS FOR US—BIG PROFITS. Send 25c for our 44-page booklet, tells you all about cavies and a guaranteed market. Dr. J. A. Roberts Laboratories, 6633 Sunset blvd., Hollywood, Cal.

WHITE COLLIE PUPPIES. URBANDALE Farm, Oakley, Idaho.

POULTRY 174

THOROUGHBRED BARRED ROCKS, RUNNER ducks, males and females, $2, $2.50, $3; duck lings, hundred, $33. E. A. Muths, Route 1, Box 49, Salem, Ore.

RHODE ISLAND WHITE COCKERELS, $5, $7.50, and $10; eggs, $2.50 and $5 per fifteen, $12.50 per hundred. Van K. Lawson, McMinnville, Ore.

PURCHASED DR. E. W. FINZER'S S. C. BLACK Minorcas. Some fine cockerels for sale. Eggs in season. Mrs. Arthur Kaylor, Clackamas, Ore.

S. C. WHITE LEGHORN BABY CHIX FROM trap nested, Hoganized hens; also cocks and cockerels. J. Panck, Sherwood, Ore., R. 1.

S. C. DARK BROWN LEGHORN COCKERELS; high class birds; $5 and $10 each. Harvey Bean, New Plymouth, Idaho.

WHITE WYANDOTTE COCKERELS, $3 AND $4; eggs, $1.50 for fifteen; $8 per hundred. A. Krueger, Colfax, Wash.

PUREBRED WHITE ROCK COCKERELS, world's record; $3. P. L. Schubert, Route 2, Boise.

HUNT'S FINE BARRED ROCKS. WRITE for circular on eggs. W. A. Hunt, Lebanon, Ore.

RANCH RAISED REDS; SECOND PEN BOISE show; cockerels for sale. W. J. Schulze, Boise, Idaho, Route 1.

PURE BRED GOLDEN CAMPINE COCKerels, D. W. Martin, Glenns Ferry, Idaho.

(Continued on the following page.)

POULTRY (Continued) 174

"HENACRES" 8 WEEKS' OLD PULLETS; March or May hatched; big, healthy, vigorous bred to lay. Booking orders now. 6000 to sell, $1.50 each or 500 for $700. Satisfaction guaranteed or money back. Baby chicks for February, March and April all sold to old customers. May chicks, $22 per 100; $200 per 1000. June, $16 per 100; $140 per 1000. Safe delivery guaranteed. Hatching eggs, $2 per 15; $9 per 100; $80 per 1000. "HENACRES" Leghorns are known all over the northwest. Ask your neighbor. Illustrated catalog and booklet on poultry management free. "HENACRES," Box A, Prosser, Wash.

CHICKS OF QUALITY—HOLLYWOOD, TANcred and commercial strains of White Leghorn chicks from pedigreed males, $20 per hundred. R. I. Reds, Barred Rocks, Black Minorcas and Ancona chicks, $25 per hundred. These prices are for February and March delivery. We sell Queen incubators, Queen brooder stoves, Reliable Blue Flame brooders, Petaluma Electric and Charters' incubators and American brooder stoves. A complete line of poultry supplies and remedies, including leg bands, egg scales, trapnest records, etc. Catalogue free. Queen Hatchery, Fourth and Pine. Elliott 2054.

WHITE LEGHORN AND ILL-A-HEE BARRED Rock breeding cockerels. If you want to increase the laying standard of your flock get a Butler White Leghorn or a Ill-a-hee Barred Rock cockerel direct from the home farms. Write for circular telling how our methods of selecting breeding cockerels have made our strains celebrated for high average flock production. All stock trap nested and pedigreed. Address Butler Poultry Farms, or Ill-a-hee Poultry Farm, Jennings Lodge, Ore.

HIGHEST GRADE S. C. WHITE LEGHORNS. Oregon Agricultural college strain; carefully selected and trapnested stock, raised under natural conditions. In Washington laying contest with ninety competitors from eleven states, for November, 1921, our pen was FIRST for production of highest value marketable eggs, also first for individual bird producing highest value of eggs. Orders accepted for eggs, chicks and cockerels. Corvallis Poultry Farm, Box 304B, Corvallis, Ore.

BUFF ORPINGTONS, PRIZE WINNERS throughout the northwest and middle west. They weigh, lay, pay. Bred by Burton McElroy, 1113 East Washington street, Portland, Oregon. Large, thrifty cockerels, seven to ten pounds. Eggs in season.

SEND 25C FOR FOUR MONTHS' TRIAL SUBscription to the quality poultry paper of the west. Alive with value and interest. Has helped thousands raise better poultry. Year's subscription 75 cents. The Pacific Poultryman, Seattle, Wash.

S. C. RHODE ISLAND REDS, THE POPULAR and profitable farm fowls. We specialize in good color and high producing strains. Cockerels, hatching eggs and baby chicks in season. G. B. Dimick, Oregon City, Ore.

IN OUR SPECIAL PEN ARE THE CREAM of our flock of 500 hens; cockerels are from hens producing not less than 280 to over 300 eggs per year. Write for catalogue. Mrs. Arp, St. John, Wash.

COCKERELS—ROSE AND SINGLE COMB Brown and Buff Leghorns, Anconas, Black Minorcas, Rhode Island Reds, Blue Andalusians. Boone Avenue Poultry Yards, E1601 Boone ave., Spokane.

BARGAIN—EIGHT RELIABLE BLUE FLAME brooders (52-inch canopy); used one season only, and in A1 condition. Price $150 f. o. b. your nearest station. Fred Starkey, Prosser, Wash.

SILVER WYANDOTTES AND SILVER SPANgled Hamburgs, Golden Campines, choice birds for sale. No baby chicks or eggs by the 100. Birds, $5 and up. G. G. Wherry, Payette, Idaho.

SINGLE COMB ANCONA COCKERELS. SHEPpard strain; two and five dollars; hatching eggs, $2 for fifteen; $9 per hundred. Mrs. Frank Hopkins, Weiser, Idaho. Phone 233J.

REGAL WHITE WYANDOTTES: BEST QUALity, prize winning stock. Cockerels, hens, pullets. Prices right. Absolute satisfaction guaranteed. Eugene Boyk, Rocklyn, Wash.

WHITE LEGHORN COCKERELS FROM PEDIgreed O. A. C. male mated with O. A. C. strain hens; trap nest records, 231 to 297 eggs. Frank H. Shepherd, Corvallis, Ore.

SAY!—EGGS MEAN DOLLARS TO YOU. ALSO your poultry, veal and dressed hogs, when shipped to us. Top prices. Prompt remittances. Hotchkiss Produce Co., Spokane.

S. C. REDS. RANGE RAISED, EVEN DARK color; good vigorous corkerels, $5 and $3.50 each. Satisfaction guaranteed. C. W. Price, Monmouth, Ore.

POULTRY RAISERS, SEND FOR FREE BOOKlet on poultry advertising. The Pacific Northwest Farm Trio, Dept. P, Review bldg., Spokane, Wash.

MAMMOTH BRONZE TURKEYS FROM THE famous Walker strain. Prices according to ages. Mrs. H. D. Moore, R. 1, Box 21, Hubbard, Ore.

BRONZE TURKEYS, BARRED ROCKS, White Leghorns, Buff Orpingtons, Dark Cornish; prize winners. E. A. Kruse, Roseburg, Ore.

BARRED ROCK COCKERELS — "START right." Strain from very heavy layers, $3 to $5 each. Mrs. A. Wilson, Whitcomb, Wash.

WHITE LEGHORN AND WHITE ROCK cockerels; 300-egg strain; baby chicks. Palouse Falls Ranch, Palouse Falls, Wash.

S. C. BROWN LEGHORN COCKERELS AND pullets; prices reasonable; quality first-class. D. H. Rosenkranz, Colfax, Wash.

S. C. W. L. HATCHING EGGS; HOLLYWOOD strain; pullets. Hollywood or Tancred strain. Mrs. Rominger, Underwood, Wash.

ALLEN'S PRIZE BARRED ROCKS AND White Leghorns are wonderful layers. Write D. W. Allen, LaConner, Wash.

PURE BARRED ROCK COCKERELS; GOOD laying strain, $3 and $4. Mrs. A. A. Nofziger, Route 7, Box 151, Salem, Ore.

BLUE ANDALUSIANS AND WHITE ROCK cockerels; extra good; order now. Mrs. C. W. Armstrong, Freewater, Ore.

SUPERIOR BARRED ROCKS, EXHIBITION size; layers; world's best strains. C. E. Dibble, Payette, Idaho.

COCKERELS, EGGS, CHICKS, TRAP NESTED White Leghorn and Barred Rocks. Mrs. W. M. Roberts, Elmira, Ore.

COCKERELS, S. C. RHODE ISLAND REDS. Write for information. Mrs. L. W. Alexander, Sunnyside, Wash.

PUREBRED S. C. WHITE MINORCA COCKerels, $3 each, f. o. b. Ronan, Mont. Arthur Schmidt, Route 2.

SILVER LACED WYANDOTTE COCKERELS, $3; two for five dollars. Mrs. Annie Baggs, Bancroft, Idaho.

THOROUGHBRED S. C. BUFF ORPINGTON cockerels, $3 each. Mrs. Floyd Angstrom, Creston, Wash.

ANCONA COCKERELS, HATCHING EGGS, chicks. Get our prices. Oscar Dunlap, Junction City, Ore.

FARMERS' WANT ADS

This is the farmers' "want," "sale" and "exchange" department for small advertisements of farmers, including live stock and poultry.

Advertising rates for ads running 1 to 3 times, 10c per word per insertion, with a special rate to Farmer subscribers, as follows: Ads running 4 to 12 times, 9c per word per insertion, ads running 13 times or more, 8c per word per insertion.

All commercial and land advertising 10 cents per word each insertion. Open also to nonsubscribers.

In using these columns advertisers must observe: (1) No advertisements will be inserted for less than $1.00. (2) Every word, number and initial, including name and address, must be paid for. (3) New advertisements, changes of copy or cancellations must reach general office, Spokane, Wash., 10 days in advance of publication date. (4) Cash must accompany order.

Above rates include insertion in The Washington Farmer, The Idaho Farmer and The Oregon Farmer, which constitute the Pacific Northwest Farm Trio, 49 Review Building, Spokane, Wash.

POULTRY (Continued) 174

FREE INCUBATOR CATALOG — INCUBAtors, brooders, oat sprouters, baby chicks, hatching eggs, trap nests, poultry books and supplies. You can't beat the St. Helens incubator in either price or hatch. From 60 to 4000 egg capacity; electric and lamp heated. St Helens Incubator Co., Centralia, Wash.

QUALITY BARRED PLYMOUTH ROCKS and Black Langshans, cockerels and cock birds; also a few females; prize winners. B. D. Reser, Walla Walla, Wash.

WHITE LEGHORN EGGS FOR HATCHING— Oregon Agricultural college stock; $2 per setting, or $8 per 100 prepaid. Russell Poultry Farm, Route 3, Corvallis, Ore.

DOLLARS FOR YOUR EGGS—WE PAY THE top market prices for your eggs and poultry. Daily cash remittances. Western Produce Co., Spokane.

1949 COCKERELS, HATCHING EGGS, 49 VArieties; free book. Aye Bros., Box 14, Blair, Nebr.

BIG SALE PURE BRED BLACK MINORCA cockerels. Mrs. Frank Winnard, Heppner, Ore.

Baby Chicks.

YESTERLAID EGG RANCH, KENT, WASH. Dear Sirs:—It may interest you to know that only last week I was offered $2.50 each for my flock of 459 Yesterlaid pullets. I turned this attractive offer down, as I know from the way they are laying that I could not afford to let them go. I raised these birds out of the 1000 chix got from you last spring, and am so well pleased with their performance that I want you to be sure to reserve me another 1000 chix for delivery about March 31st, next. Please let me have your early confirmation of this order for which check is enclosed. Yours truly, Walter Smith, Kent Wash. The above is one of the many testimonials we receive. 12,000 of these kind of chicks hatched every five days from our own eggs. Over 40,000 already sold. Order day-old chicks and hatching eggs now. Yesterlaid Egg Ranch, Kent, Wash.

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"FRESHLAID" WHITE LEGHORN CHICKS have the qualities you want; vigor and scientific breeding for heaviest egg production; every "Freshlaid" male is from a high record hen. Freshlaid farm is one of the largest and oldest chick plants in the Inland Empire. Our new catalog, "Success With Chicks," is free but is worth $ to you. Write for it. A complete guide from start to finish. Farmers read my plan, "$500 extra on every farm." You can't fail my way. Freshlaid Farm, Colfax, Wash.

CHICKS, PULLETS—OUR PURE BRED BABY chicks not to be excelled; all breeds at prices conforming to quality. Spring pullets in demand. We have 10,000 famous Tom Barron pullets. Booking orders now. Get yours in to secure delivery. All makes incubators, brooders, and stoves. Everything for the poultryman. Send for our 1922 general catalogue. C. E. Hill Co., 418 11th st., Oakland, Cal.

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WHITE LEGHORN BABY CHICKS FROM heaviest laying stock. Booking orders now for spring, 1922, delivery. Safe arrival live, vigorous chicks guaranteed. Prices on request. Reliable since 1898. Must Hatch Incubator Co., 445 Seventh st., Petaluma, Cal.

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BABY CHICKS WELL HATCHED ARE HALF raised. Petaluma incubators produce that kind. They have lots of "pep." We supply chicks. Catalog free. Petaluma Electric Incubator Co., Petaluma, Cal.

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POULTRY—Baby Chicks (Continued) 174

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GIANT BRONZE TURKEYS, UNDEFEATED flock in west. Toms, $15; late 17-pound, $12; pullets, $8 and $10; will ship C. O. D. Herbert Stoneberg, Route B, Eugene, Ore.

MAMMOTH BRONZE TURKEY TOMS FROM hen laying 127 eggs last season; prize winning stock; eight and ten dollars. Order now. John Bollinger, Post Falls, Idaho.

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GIANT STRAIN PURE BRED MAMMOTH Bronze turkeys, from prize-winning stock. Mrs. C. R. Lowery, Route 4, Boise, Idaho.

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FOR SALE — MAMMOTH BRONZE, PART wild turkeys. Eleanor Moore, Route 1, Ashland, Ore.

MAMMOTH BRONZE TURKEYS FOR BREEDers. Mary Homes Tucker, Ashland, Ore.

LIVE STOCK 177

SEND FOR FREE BOOKLET, "SOME SUGgestions to Live Stock Advertisers," outlining the practices of successful men of long experience. Helps in determining how much to spend, the mediums to select, preparing advertisements, handling inquiries, the use of photographs, etc. Write today. The Pacific Northwest Farm Trio, Dept. W, Spokane, Wash.

WE BUY YOUR LIVE STOCK AT THE BEST market prices. Prompt remittances. Light veal, fat, fancy, 15c; heavy veal, 9c to 11c; dressed No. 1 block hogs, 11½c; hens, alive, heavy, 20c; light, 17c; young springers, 20c; old roosters, 10c; staggy springers, 15c. John Lewis & Co., Spokane, Wash.

LARGE, HEAVY PRODUCING HOLSTEINS for sale at all times in car lots; tuberculin tested; 150 to 200 head always on hand; well marked heifer calves from registered sires and heavy producing dams; crated for shipment anywhere, $25 f. o. b. Levinson & Balmelli, Yakima, Wash.

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TWENTY GRADE HOLSTEINS; FRESH IN soon, $15. Box 35, Hadlock, Wash.

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TOGGENBURG MILCH GOATS. FANNIE Branson, Falls City, Ore.

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SEND FOR FREE HARNESS AND SADDLE catalog today; cut out the middleman, buy direct from the manufacturer. Lowest prices in the west; satisfaction guaranteed. Established 1881. Write Pierce Harness Co., dept. T, Spokane, Wash.

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ALFALFA HAY—BUY DIRECT, SAVE MONey; quality guaranteed. Write or wire for prices. Ernest T. Freepons, Walla Walla, Wash.

HOTELS 306

GLOBE HOTEL ANNEX, NEWLY FURnished rooms, 75c and $1; with bath, $1 and up. Spokane.

JOB PRINTING 372

GUARANTEED BETTER BUTTER WRAPpers; 100, 60c; 250, $1.50; 500, $2.50; 1000, $4.25; printed to order. Home Specialty Co., Middleton, Idaho.

TANNING 425

LET US TAN YOUR HIDE—COW AND HORSE hides for fur coats and robes. Cow and steer hides into harness or sole leather. Catalog on request. The Crosby-Frisian Fur Co., Rochester, N. Y.

MONUMENTS 510

COMPLETE STOCK, RIGHT PRICES. CORrespondence solicited. J. W. Harding, Inland Monument Co., N1001 Monroe, Spokane.

PERSONAL 537

WANTED—LADY PARTNER FOR MERCANtile, sheep and cattle business; object, matrimony. Address W. J. Simmons, Camps, Pass, via Miles City, Mont.

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NO WASTE, LESS LABOR. BUILD WITH ready cut houses and barns and save money. Attractive new plan book sent free on postage. Prices quoted on material in Write today. Price advance certain to come soon. Local Keystone Lbr. Co., 3000 Sprague, Tacoma, Wash.

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RED CLOVER, ALSIKE, RYE GRASS, TIMothy and vetch seed for sale, good quality, lower prices, by freight or parcel post. Idaho Farms, Salem, Ore.

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PLANT WINDBREAKS OR A WOOD LOT FOR shelter and profit; black locust in Idaho produced in eight seasons posts worth $1000 per acre. Free book tells how. Our special trees get quick results and cost little. Washington Nursery Co., Toppenish, Wash.

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LAND INVESTORS, VEGETABLE AND GRAIN growers: I have ready for cultivation, large tract, level, rich reclaimed land, no waste, free from stones or other obstacles; four to seven feet deep; thoroughly drained; government water right; 25c per year for 10 years then paid up. Produces unheard of grain and vegetable crops. At station on railroad; am selling at $120; $40 cash, then divide in four yearly payments, beginning in 2 years, 6 per cent interest; a splendid speculative investment. For nonresidents we will provide renter for term of years, paying 1-3 of crop at market and use rentals to pay up on land. A chance to have $300 land for $40 outlay, as this land will certainly more than double in three years. I can show you. Write for particulars. E. T. Staples, Box 203, Ashland, Ore.

AS CLEARING HOUSE FOR AN EASTERN loan company we offer 100 pieces of foreclosed property, mostly in eastern Washington, for the mortgaged indebtedness. Dry farms, irrigated lands, business buildings and orchard tracts; some good land under proposed irrigation projects as low as $10 per acre; no trades; no lists. Will make easy terms to real farmers. Write us your wants if you can not call. Hartford Land Co., 601 Paulsen bldg., Spokane, Wn.

LOGGED-OFF LAND IN STEVENS COUNTY, Washington, at greatly reduced prices. Most of land sells at from $5 to $20 per acre; thickly settled community; good schools; hard surfaced and paved roads to Spokane; best county in state for dairy and stock raising; most places water can be found at shallow depths. Write for folder. Phoenix Lumber Company, Dept. T, Spokane, Wash.

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DAIRY FARMERS INVESTIGATE THIS UNusual opportunity. Fine paying irrigated dairy and alfalfa ranch; famous Deschutes valley, central Oregon. $16,000. Small initial payment, new easy payment plan; ideal climate. Full particulars on request. Redmond Land & Loan Co., Inc., Redmond, Ore.

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120 ACRES NEAR CAMAS HOT SPRINGS; 100 acres irrigated from artesian well, bal. pasture; 3 springs, creek flows through place; fair buildings; $60 per acre, including machinery and horses. Neil Bratton, Camas, Mont.

640, 840 AND 1080 ACRES—THREE GOOD stock ranches. Will sell any one or all together. These divide up good; have free water right for 170 acres; some wheat land. If interested write 545, Heppner, Ore.

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SELL YOUR PROPERTY QUICKLY FOR cash; no matter where located. Particulars free. Real Estate Salesman' company, 501 Brownell, Lincoln, Neb.

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DAIRY FOR SALE—INCOME $500 PER month. C. W. Henkel, owner, Aumsville, Ore.

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WANT TO HEAR FROM OWNER HAVING farm for sale; give particulars and lowest price. John J. Black, 80th street, Chippewa Falls, Wis.

TRACK'S END

By HAYDEN CARRUTH

A Stirring Story of Adventure

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SYNOPSIS.

Track's End is a prairie village in Dakota in the early days at the end of the western railroad. Jud Pitcher, a lad of 18, is one of the "pioneers" who has left home to make his fortune in the west. Very soon after reaching Track's End he earns the enmity of a dangerous man, Pike. A terrible blizzard comes and one by one the settlers return to their old homes for the winter until Jud, the boy, is left entirely alone to spend the winter, with no more train service until spring. He has charge of the entire village with its store, bank, hotel, barn and the horses and the cows. Kaiser, the hotelkeeper's dog, and Pawsy, the hotel cat, are his only "human" companions. About him are dangers, including Pike and his roving gang, that promise to keep him busily occupied until the spring thawup, when the train resumes its weekly runs and the settlers come back.

CHAPTER VI.

Some account of what I do and think the first day alone: with a discovery by Kaiser at the end.

I woke up with a start in the morning, thinking that it was all a bad dream; then I knew it wasn't, and wished it were; and next I was very glad to hear the blizzard still roaring as hard as ever, which may seem odd to you. But the fact is that I had thought a long time after I went to bed and had decided on two things—first, that I was safe from the robbers as long as the storm lasted, and, second and more important, that I had a plan which might serve to keep them away for a while at least after the storm stopped. I got up and looked out of the window, but I might as well have looked into a haystack for all I saw. I could not even see the houses on the other side of the street.

I went down, said good morning to the cat and dog, and started the fire. It was colder; I peeped at the thermometer through the window and saw it was a dozen degrees below zero. I found the stock at the barn all right and cheerful; the chickens were down making breakfast of what I had given them for supper, all except Crazy Jane, who had finished eating and was trying to get out of the barn, maybe thinking that she could make a nest in a snowbank, or could scratch for angleworms.

After I had finished the barn work I went in and got breakfast. I started a fire in the kitchen and got a better meal than I had the night before. I went down cellar after some potatoes and noticed that there were a plenty of them, with squashes, pumpkins and other vegetables, all of which I knew before, but I observed that such things looked different to me now. I couldn't count much on the pumpkins because I didn't know how to make pumpkin pie, but I knew that the cow would be very glad to get them without their being made into pie. "It would be funny," I said out loud, as if there were somebody to hear, "if cows should find out some day that pumpkins are better in pies and farmers should have to fix them that way before they would eat them."

I found that I felt much better about the situation than I had the night before, though, of course, I still wished with all my heart that I was out of it all, and thought every minute what a fool I was to have acted the way I did. But there were so many things to do that I did not have time to worry much, which I believe was all that kept me from going crazy.

After breakfast I decided that the first thing I had best do was to look up the gun question. I found Sour's rifle in a closet. It was not loaded, but there was a box of cartridges on a shelf, and I wiped out the barrel and filled the magazine. It was 15-shot and .45 caliber and seemed a good gun. I stood it under the counter in the office and out of sight behind an old coat. In the drawer of the desk was a revolver. It was a .38 caliber and pretty big to carry, but I thought it might be handy to have, so I stuffed it in my pocket.

Taggart's hardware store was two doors toward the railroad from the hotel, but the sidewalk was so covered with snow and the wind swept down the street with such fury that it seemed next to impossible to get there. But I was anxious to see about the weapons, so I went out the back door and crept along close to the rear of the buildings till I reached it.

The door was locked, but I could see through a window that a box had been recently broken open, but, as there were no guns in sight, I concluded that the men had probably carried them over to the depot. I tried to see this through the driving snow, but could not, so I did not dare to start out to find it, knowing how easy it is to become confused and lost in such a storm.

As I stood back of the store I thought once that I heard the whistle of a locomotive; then I knew, of course, it was only the wind. "It'll be a long time before you hear any such music as that," I said to myself. There was nothing which would have sounded quite so good to me.

I was glad to get back to the house, where I could draw a breath of air not full of powdered snow. I spent some time calking up cracks around the windows, where the snow blew in. While I was doing this it suddenly flashed into my mind what if I should lose track of the days of the month and week? I thought I would write down every day, and got a piece of paper to begin on, when I noticed a calendar behind the desk. I took the pen and scratched off "December 17," which was gone, and which was the beginning of my life alone in Track's End, and the first thing every morning after that while I stayed I marked off the day before, and so I never lost my reckoning. Though, indeed, I was soon to wake up in another and worse place than Track's End, but of this I will tell later. I had very foolishly forgotten to wind the clock the night before, and it had stopped, and I had no watch by which to set it, but I started it, and trusted to find the clock at the depot still going, as it was an eight-day one.

I found myself hungry, and took it for granted that it was dinner time. The meal seemed pretty lonesome, because I had been used to having a great deal of fun with Tom Carr and the others at such times, much of it about my poor cooking. Kaiser and Pawsy appeared willing to do what they could to make it pleasant, and this time I put a chair at one end of the little table, and the cat jumped up in it and began to purr like a young tiger, while the dog sat on the floor at the other end and pounded the floor with his tail like any drummer might beat his drum. I also began to get them into the bad practice of eating at the same time I did, but I had to have some company.

It must have been two hours after dinner, and I was moving my bed down into a little room between the office and kitchen, when I first saw that the fury of the wind was beginning to lessen. The sky began to lighten up and from the front door I could soon catch glimpses of the railroad windmill. I saw that I must start the plan I had thought of the night before for keeping off the Pike gang without any delay. My idea was that I must not let them know that I was alone, and if possible make them think that there were still a good many people in town. I doubted if they had known the morning they left the letter that we were then reduced to six. I could not see how they should know it, and I felt sure that if they had known it they would have made an attack upon the bank.

My plan, then, was to build and keep up fires in several other houses, so that if they came in sight they would see the smoke and think that there was still a good-sized population. I went first across the street to the bank building. The lower part of it was locked, but I went up the outside stairs and found everything in Mr. Clerkinwell's rooms as we had left it. There were also inside stairs, and I went down and soon had a good fire going in the lower room, and as I came out I was pleased to see that it made a large smoke.

I next went to the north end of the street, where stood a building which had been a harness shop. It was locked, but I could see a stove inside, so I broke a back window, reached in with a stick and shot back the bolt of the rear door and soon had a good, smoky fire here, too. I decided that one more would do for that day, and thought the best place for that would be in the depot. The wind had now pretty well abated, and the snow was only streaming along close to the ground.

The depot was locked, but again I got in by breaking a window. There were the guns, as I expected—five new Winchesters like Sour's. There were also a lot of cartridges and three large six-shooters with belts and holsters. It was 3:30 by the clock, which was still going. I clicked at the telegraph instrument, but it was silent. I remembered that Tom had told me that the line had gone down beyond Siding No. 15, which was the first one east from Track's End. Everything made me think of Tom and I looked away along the line of telegraph poles where I knew the track was, down under the snow, but I could see no train coming to take me out of the horrible place.

I soon had another fire going. After that I hid two of the rifles in the back room and carried the others over to the hotel. I climbed to the top of the windmill tower and took a look at Mountain's house with the fieldglass, but could see nothing. I walked around town and looked in each of the houses with an odd sort of feeling, as if I half owned them. Kaiser went with me, and was very glad to get out.

It was just after sundown when I got back to the door of the hotel. Up the street in front of the harness shop I saw a jackrabbit sitting up and looking at me. Kaiser saw him, too, and started after him, though the dog ought to have known that it was like chasing a streak of lightning. I stood with my hand on the doorknob watching the rabbit leave the dog behind, when suddenly I saw Kaiser stop as another dog came around Frenchman's Butte. They met, there was a little tussle, which made the snow fly, then I saw Kaiser coming back on a faster run than



I slammed the door shut against the other dog's nose.

he had gone out on, with the other dog close behind.

"That's a brave dog I've got!" I exclaimed. I saw some other dogs come around the Butte, but I didn't look at them much, I was so disgusted at seeing Kaiser making such a cowardly run. On he came like a whirlwind. I opened the door and stepped in. He bolted in between my legs and half knocked me over. I slammed the door shut against the other dog's nose. The other dog, I saw, was a wolf.

CHAPTER VII.

I have a fight and a fright, after which I make some plans for the future and take up my bed and move.

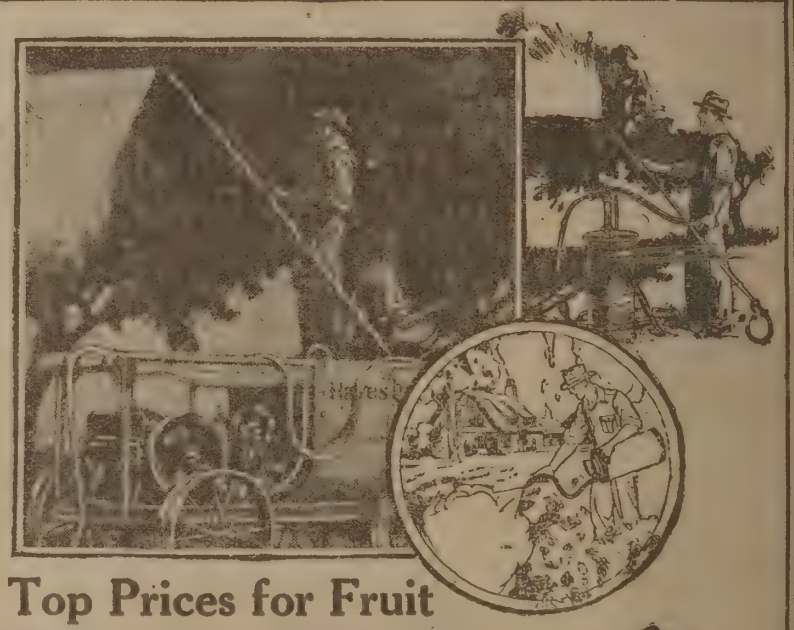
I don't know if the door really struck the wolf's nose or not when I slammed it shut, but it could not have lacked much of it. Poor Kaiser rushed around the stove, faced the window, and began to bark so excitedly that his voice trembled and sounded differently than I had ever heard it before. I must have been a little excited myself as I stooped to bolt the door, just as if the wolf could turn the knob and walk in. When I stepped back I met the wolf face to face gazing in the window, with his eyes flaming and mouth a little open. He was gaunt and hungry-looking. The rest of the pack were just coming up, howling as loud as they could.

I ran to the desk and got the rifle; then I dropped on one knee and fired across the room, straight at the wolf's throat. He fell back in the snow dead, and, of course, there was only a little round hole in the window pane. Everything would have been all right if it had not been for a mean spirit of revenge in Kaiser, for no sooner did he see his enemy fall back lifeless than with one jump he smashed through the window and fell upon him savagely. He had not seen the rest of the pack, but the next second half a dozen of them pounced on him. I dared not fire again for fear of hitting him, so I dropped my gun, seized an ax which I had used to split kindling-wood and ran forward. There was a cloud of snow outside, and then the dog tumbled back through the window with one of the wolves, and they rolled over and over together on the floor.

I got to the window just as a second wolf started to come through the broken pane. I struck him full on the head with the ax and he sank down dead, half outside and half inside. The others that pressed behind stopped as they saw his fate and stood watching the struggle on the floor through the window.

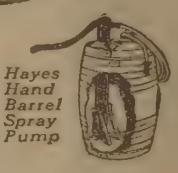
Kaiser was making a good fight, but the wolf was too much for him, and soon the dog was on his back with the wolf's jaws at his throat. This was more than I could stand, and I turned and struck at the animal with my ax. I missed him, but he let

(Continued on page seventeen.)



Top Prices for Fruit If You Use Fruit Fog

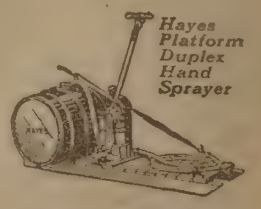
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HAYES *Fruit-Fog Sprayers*

FAMILY CIRCLE

ALICE BARLAND
EDITORIAL CONTRIBUTOR

Experience Letters

From Our Family Circle Women

Dear Mrs. Barland: This is the time when we need lots of bedding. I take the best parts of worn-out garments and wash and color them and make quilts, either piece them into blocks or crazy work, backs of overalls, anything and everything; the parts not good enough for the outside I use for the filling by sewing them on to strips of cloth until I get the size of the quilt. You will be surprised to see how soon you will get enough old garments or old blankets to put in place of cotton. I knot it the same as I would if the filling was cotton batting and I have quilts that can be washed and they are clean and warm. I don't make them very thick, as they are easier to wash. I have made 10 quilts and only one has cotton filling. All are pieced and knotted I never burn rags, no matter how small.

I make my pillowslips open at both ends, then they can be turned every way and they wear out alike on all sides and last more than as long again. They can be trimmed at each end or left with a plain hem.

I have quite a number of sock and stocking legs I am going to sew onto flour sacks and work feather stitching along the seams and use for the back of a quilt. There are several different colors, but they will work in, and some pieces of knit underwear, colored, will go with them.

When I read of the sisters being lonesome I wonder how it can be. It seems there is so much to do for Tom and the children that I never have time to be lonesome. I wonder if some do not forget to keep busy. MRS. L. H.

Dear Mrs. Barland: I enjoy the Family Circle and though I haven't much to contribute I want to peek in for a minute.

I live up in the mountains and I love it up here. We raise beef cattle. I have a flock of Barred Rocks and I do enjoy taking care of them. They never fail to pay their way and more. I see a good deal in THE FARMER about bald-headed hens and I want to say that it is not a disease, but lice that make them bald-headed every time.

I am sure some of you will say your henhouse isn't lousy, but if you will get a good disinfectant and use it, some good lice killer, you will find your hens will get over being bald-headed. Take good care of the hens and they will pay you every time. MRS. A. FLAHR.
Colville, Wash.

Dear Family Circle: In reply to the request for a remedy for making whooping cough easier on children I have received many recipes and I am sure among all the readers of THE FARMER there will be children with whooping cough. These home-made remedies will no doubt be good to have on hand, as children have colds, which bring on cough. Many a night I have had my sleep spoiled by trying to give relief to suffering children with a bad cough. A. W. B.

Dear Mrs. Barland: I am sending a remedy which my mother used for her 11 children and if taken in time it will prevent the "whoop." I know from experience.

Cough medicine: Slice two lemons with one-half pint of flaxseed, one-half pint of strained honey, one and one-half quarts of water; simmer, not boil, for four hours, strain, and if there is less than one and one-half pint add enough hot water to make up that amount. Keep in a cool place.

Dose: One tablespoon four times a day and one also after each severe fit of coughing.

Try oil of peppermint for chilblains. It is very effective and a very small quantity will do the work.

We use pineapple for sore throat, the raw is best, but when it can't be had the canned will do or the canned juice. Give a tablespoon every few minutes or every one-half hour till relief is received.

For a persistent cough bake lemons until soft, scrape out the pulp and sweeten with honey; take a teaspoonful after every severe fit of coughing.

We like THE FARMER in all departments and consider it worth many times the price. MRS. ELOISE D. ENGLESON.
Porter, Wash.

Dear Mrs. Barland: Can some one tell me how to clean a large rug?
MRS. N. K. H.

You do not say if your rug is soiled with grease or what. If only dusty you should take it out on the grass and have a strong man pound the dust out, or better still put it on a large rope and pound it. If you are near a cleaner it would pay to have a vacuum cleaner used on it. If your rug is soiled with grease better get some ammonia and good laundry soap and make a good suds and scrub it with a brush and dry with old cloth, then place where the air will make it thoroughly dry, but get out the dust first. ALICE W. BARLAND.

Your Health

By Royal S. Copeland, M. D., F. A. C. S.

GOOD MILK IS BEST FOOD.

There was an exposition in Cincinnati, Ohio, a few weeks ago. So well planned was it that on one evening thousands upon thousands were turned away from its doors. There was a mob in the crowded streets clamoring for admission.



Dr. Copeland.

What do you suppose it was all about? Politics? Religion? Music? Automobiles? No! It was a health exposition!

I had the pleasure of speaking there one afternoon to about 4000 persons.

It augurs well for a community when such multitudes will turn out to study health projects and to listen to discourses on right living.

There were many interesting features. Among those was a milk exhibit. Charts were displayed showing what milk does for the human family.

At a country fair or in an amusement park you have tested your strength by driving a heavy mallet down upon a wooden peg, haven't you? Your blow caused a weight to run up a registering rod. The heavier your blow the higher the weight went.

In the health exhibition there was a turntable on which stood manikins, each armed with a mallet. These were labeled: "Meat," "vegetables," "cereals," "pastry" and "milk." As the table revolved each manikin in turn struck a forceful blow and shot up the weight. Some came near the top, but every time "milk" brought down his mallet the weight flew to the very top and rang the bell.

This interesting little performance was intended to demonstrate the measure of food values. Indeed, it did show in a telling way how much milk means to us as an article of food.

In another part of the show was a great bottle supposed to hold 100 gallons of milk. It stood on a table among a lot of dinner plates, each heaped up with as much of one of the ingredients of milk as is found in 100 gallons. On each dish was a label showing the quality of the ingredients and what it does for the human body.

There were phosphorus for the bones, teeth and brain—lime for the bones and teeth—iron for the red blood—albumin for the blood and muscles—potash and soda to prevent acidity—sulphur for the blood—Magnesia for the body fluids—sugar to provide energy.

Milk is the most perfect and complete of all the foods. If we could have but one food the wise man would take milk. When it is fresh and pure, milk supplies most of our needs and will do more for us than all the rest of the foods.

It is the aim of all health officials to increase the consumption of milk. It is rare indeed to find a person who can not drink milk. At any price, good, fresh milk is the best and cheapest food.

Household Hints

By ELIZABETH QUAKER.

If the metal buttons on your coat are troublesome about cutting the threads and coming off, try threading them on a piece of fine wire. By means of a small plier make a ring of the wire and fasten the button to the garment by sewing around the wire ring.

A little strong coffee added to the starch for tan ginghams will keep them from having that "washed out" look.

Ripe tomato juice is quite efficient in removing ink stains. Simply soak the ink spot in the juice for one-half hour, then wash the garment in the usual manner. It is seldom necessary to repeat the process.

Try greasing the kettle you cook your fruit butters or jam in. This is an aid to prevent it sticking to the bottom of the kettle and scorching. Lard or some unsalted grease is best for this purpose.

If the apples you stored for winter use are not keeping well, they may be made into butter or even plain boiled and filled into what empty jars you have on hand and will be very acceptable before the fresh apple sauce season is with us again.



Be More Careful

of your teeth—combat the film

If you are brushing your teeth in a wrong way, learn what this new way means.

Authorities now advise it. Leading dentists everywhere are urging its daily use. Millions of people employ it.

Make this ten-day test and let the results show you what really clean teeth mean.

That dingy film

Film is what clouds the teeth's beauty. It causes most tooth troubles. Countless teeth discolor and decay because the old ways of brushing do not effectively fight film.

Film is that viscous coat you feel. It clings to teeth, enters crevices and stays. That is what discolors — not the teeth.

Film is the basis of tartar. It holds food substance which ferments and forms acid. It holds the acid in contact with the teeth to cause decay.

Germs breed by millions in it. They, with tartar, are the chief cause of pyorrhea.

Ways to end it

Dental science has in late years found two ways to fight film. It has proved them by careful tests. Now they are embodied in a new-day tooth-paste—called Pepsodent—for daily application.

Dentists here and abroad now advise it. It is now bringing a new dental era to some 40 races of people.

Other new effects

Pepsodent brings three other effects, natural and very important.

It multiplies the salivary flow—Nature's great tooth-protecting agent. It multiplies the starch digestant in the saliva, to digest starch deposits. They may otherwise cling and form acids.

It multiplies the alkalinity of the saliva, to neutralize the acids which cause tooth decay.

Thus every use does five things which dental authorities now regard as essential.

You'll quickly see

A 10-Day tube of Pepsodent is sent to all who ask. That shows the delightful effects. In a week you will realize that this method means much to you and yours.

Send the coupon for it. Note how clean the teeth feel after using. Mark the absence of the viscous film. See how teeth whiten as the film-coats disappear.

Watch all the effects, then read the reasons in our book. That test may lead to life-long benefits. Cut out the coupon now.

Pepsodent PAT OFF REG. U.S.

The New-Day Dentifrice

A scientific film combatant, whose every application brings five desired effects. Approved by highest authorities, and now advised by leading dentists everywhere. All druggists supply the large tubes.

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High Points in News of the Week

Though there is still in Ireland a strong element opposed to the "Irish Free State" as provided in the peace treaty recently agreed upon at the British-Irish conference, that treaty was officially ratified by the dail Eireann by a vote of 64 to 57. Immediately after the vote was taken President De Valera, who has strongly opposed the treaty, announced his resignation from the presidency of the Irish republic as now existing. Indications are that the public sentiment in favor of the treaty throughout Ireland is much greater in proportion to the opposition than indicated by the 64 to 57 vote.

Under the terms of the treaty Ireland shall be officially known as the Irish Free State. It shall have the same constitutional status in the British empire as the Dominion of Canada, Australia, New Zealand and the Union of South Africa. It shall have a parliament of its own, with an executive responsible to that parliament. A provisional government is to be set up to function until the free state is officially set up, which shall be within a year. A representative of the British crown shall be appointed for Ireland in the same manner as the governor general of Canada. Ireland shall have control over all her own governmental affairs and is allowed to maintain an army as large in proportion to her population as the British army is to the population of Great Britain. The treaty gives Ulster one month in which to accept the terms of the treaty or to declare herself in favor of remaining under the British government as at the present time.

* * *

A report from Europe indicates that Britain and France are negotiating an agreement whereby England will guarantee the security of France against an unprovoked attack by Germany. It is thought probable that this guarantee, if given, will be on condition that France withdraw her opposition to the international limitation of submarines.

The allied council has been meeting in France for two weeks, debating many problems, important among which is that of demanding immediate payment of reparation installments by Germany or granting extension of time to that country, owing to her financial difficulties. It is reported that German representatives will be asked to meet with the council to discuss these questions.

* * *

The disarmament conference in Washington has reached the point of discussing limitations of aircraft for military purposes. Last week agreement was reached between the five leading powers to forbid the use of poisoned gases in future warfare. It has also been agreed that submarines shall not be used in attacks against merchant ships.

* * *

President Howard of the American Farm Bureau federation last week in a public interview vigorously defended the present agricultural bloc in congress.

"It was organized," said President Howard, "as a cross-party group to secure for agriculture some of the legislation necessary to agriculture's very life. It succeeded. The last congress passed more legislation of interest to agriculture than any congress in our history.

"Frantic appeals have been made to members of blocs in both branches of congress to 'stand by the party'; in other words, they say if your party does not give what your constituents want, abandon your constituents.

"It is the constant fear in some political quarters that the majority party will be split asunder by the agricultural 'bloc.' This fear is ungrounded, for a close analysis of the 'bloc's' action will show that the members are interested in economics of the present situation and are not playing politics, but are true to a farm bureau gospel."

* * *

A new plan for raising money to pay the proposed federal bonus to ex-service men is that the United States shall take $4,000,000,000 in British bonds as a portion of the British debt, and resell these bonds to the American public, using the money thus secured with which to pay the bonus. This is a feature of a bill now being worked out in congress which proposes that this government shall take over the bonds of the allied debtors for the $11,000,000,000 of their indebtedness. The interest rate would be 5 per cent. It is understood that this plan, including the plan for the bonus payment, has the approval of President Harding.

* * *

Indications are that there will be a vigorous fight made in congress against the acceptance of various agreements of the disarmament conference. Chief among these agreements is the so-called four-power pact between England, France, the United States and Japan for the control of the Pacific and the Far East.

* * *

There were sown last fall about 500,000 acres less of fall wheat than in the fall of 1920, according to the estimate of the department of agriculture. The total acreage of the United States is about 44,220,000.

* * *

Secretary of Agriculture Wallace has set January 23 as the date for the conference called by President Harding to take up important problems affecting agriculture. Representatives from all parts of the country, numbering some 150, are invited to attend.

Farm Business and Markets Outlook

(Continued from page five.)

a year ago. Total receipts of cheese at the four points during 1921 amounted to 172,500,000 pounds compared with about 159,500,000 pounds during 1920.

Prices for fresh No. 1 American cheese on January 4 were as follows:

Chicago—Twins, 20½@21c; S. Daisies, 21@21½c; D. Daisies, 20@21c; Longhorns, 20½@21c; Square Prints, 21½@22½c.

FRUITS AND VEGETABLES.

The final estimate upon the potato crop was 346,823,000 bushels, or about 10,000,000 bushels less than the preliminary returns. However, the estimates for 1919 and 1920 also were revised downward even more drastically which makes the 1921 crop compare more favorably with that of 1920 than was the case in the November return.

Prices for white potatoes strengthened as a result of light shipments from producing sections, but weakened again in the last few days. Northern sacked round whites are quoted at $1.75 to $1.95 f. o. b. shipping points and $1.70 to $2 per 100 pounds in principal consuming markets. Sacked rurals are bringing $1.25 to growers' wagonloads, Colorado warehouse points and $1.10 at Idaho points.

The final apple crop estimate was 96,881,000 bushels, compared with 224,000,000 bushels last year. The commercial crop was placed at 20,098,000 barrels, compared with 33,905,000 barrels last year.

The onion crop was estimated at 12,652,000 bushels, or about half the size of the 1920 crop. Production of cabbage was placed at 606,000 tons, compared with 1,029,000 tons in 1920.

THE LATEST QUOTATIONS.

Live Stock Market.

PORTLAND, Jan. 7.—Cattle—Choice steers, $6.75@7.50; medium to good steers, $6.25@6.75; fair to medium steers, $5.75@6.25; common to fair steers, $4.75@5.75; choice feeders, $5@5.50; fair to good feeders, $4.50@5; choice cows and heifers, $5.25@5.75; medium to good cows and heifers, $4.75@5.25; fair to medium cows and heifers, $4.25@4.75; common cows, $3.25@4.25; canners, $2.25@3.25; bulls, $3@4; choice dairy calves, $9@10; prime light calves, $8@9; medium light calves, $6@8; heavy calves, $5@6.

Hogs—Prime light, $8.50@8.75; smooth heavy, 230 to 300 lbs., $7.50@8.25; smooth heavy, 300 lbs. and up, $6.50@7.50; rough heavy, $5.50@5.75; fat pigs, $8.50@8.75; feeder pigs, $8.50@8.75; stags, subject to dockage, $6@6.50.

Sheep—East-of-mountain lambs, $8@8.50; best valley lambs, $7.50@8; fair to good, $5.50@7; cull lambs, $3.50@5; eastern Oregon feeders, $6@7; light yearlings, $6@7; heavy yearlings, $5@6; light wethers, $4.50@5.50; heavy wethers, $4@5.

SPOKANE, Jan. 7.—Cattle—Prime steers, $6.50@7; good to choice steers, $5.75@6.50; medium to good steers, $5.25@5.75; fair to medium steers, $4.75@5.25; common to fair steers, $4.25@4.75; choice cows and heifers, $5@6; good to choice cows and heifers, $4@5; medium to good cows and heifers, $3.50@4.50; fair to medium cows and heifers, $3@4; canners, $2@3; bulls, $3@5; light veal calves, $8@9.50; heavy veal calves, $4@8; stockers and feeders, $3.50@5.

Hogs—Prime mixed, $8.25@8.75; medium, $7.75@8.25; heavies, $5.75@7.75; fat pigs, $3.25@8.50; stockers and feeders, $7.25@7.75.

Sheep—Prime lambs, $7.50@8.50; fair to medium, $6.50@7.50; yearlings, $6@6.50; wethers, $4@5; mutton ewes, $1@5; feeder lambs, $5@6.50.

Grain Market.

PORTLAND, Ore., Jan. 7.—Wheat—Hard white, hard winter, $1.07; soft white, white club, $1.06½; northern spring, $1.05; red Walla, $1.01.

Grain futures: Wheat—Hard white, hard winter, January, February, $1.07; soft white, white club, January, February, $1.06½; northern spring, January, February, $1.05; red Walla, January, February, $1.01.

Oats—No. 2 white feed, January, February, $26.50; No. 2 gray, January, February, $26.

Barley—Brewing, January, February, $26.50.

Corn—No. 2 eastern yellow, shipment January, $23.25; February, $23; No. 2 eastern yellow, shipment January, February, $23.

SEATTLE, Wash., Jan. 7.—Wheat—Hard white, soft white, white club, hard red winter, soft red winter and northern spring, $1.08; eastern red Walla, $1.05; Big Bend bluestem, $1.11.

LEWISTON, Idaho, Jan. 7.—Fortyfold, club, hard winter, 84c.

DAVENPORT, Jan. 7.—Marquis, 93c; bluestem, 90c; Gold Coin, 82c.

PULLMAN, Jan. 7.—Red wheat, 83c; white wheat, 88c.

WALLA WALLA, Jan. 7.—Hard white, 89c; white club, 88c; red Walla, 82c.

Hay and Grain Feed.

PORTLAND, Jan. 7.—Millfeed—Price f. o. b. mill: Millrun, ton lots, $21; mixed cars, $20 per ton; middlings, $34; rolled barley, $34@36; rolled oats, $36; scratch feed, $43 per ton.

Corn—White, $33; cracked, $35 per ton.

Hay—Buying price, f. o. b. Portland: Alfalfa, $14.50 per ton; cheat, $10.50@11; oat and vetch, $14.50@15; clover, $11@12; valley timothy, $14@15; eastern Oregon timothy, $16@17.

SEATTLE, Jan. 7.—City delivery: Hay—Timothy, $23; D. C., $27; mixed, $21; alfalfa, $17; D. C., $23; straw, $15; barley, whole, $33; ground and rolled, $35; clipped, $40; chick starter, $54; chop, all grain, $35; coconut meal, $28; corn, $33@34; corn, cracked, and feed meal, $37; cottonseed meal, $44; linseed meal, $58; mash mixture, egg, $40@46; scratch feed, $41@46; soy bean, $60; wheat, $44; Puget sound, $39.

SPOKANE, Jan. 7.—Wheat—Feed wheat, $38 per ton.

Oats—$34 per ton; steam rolled, $36.

Corn—$35 per ton; cracked corn, $37 ton.

Barley—$32; steam rolled, $34 ton.

Bran and shorts—$22 per ton.

Alfalfa, $18 ton; timothy, $18 ton; mixed hay, $18 ton.

General Produce.

PORTLAND, Ore., Jan. 7.—Butter—Steady; extra cubes, 35@36c; undergrades, $30@32c; cartons, 40c; prints, 39c. Butterfat—No. 1 churning cream, 36c f. o. b. Portland; undergrades, 34c.

CHICAGO, Jan. 7.—Butter—Higher; creamery extras, 35c; firsts, 30@34c; seconds, 27@29c; standards, 33½c.

Eggs—Lower; receipts, 4108 cases; firsts, 37@37½c; ordinary firsts, 32@34c; miscellaneous, 35@36c; refrigerator firsts, 30@32c.

SEATTLE, Wash., Jan. 7.—Eggs—Select local ranch, white shells, 36@38c; do, mixed colors, 34@35c; pullets, 33@34c.

Butter—City creamery cubes, 39c; bricks or prints, 40c.

SPOKANE, Jan. 7.—Butterfat—37c lb.

Eggs—Fresh ranch eggs, $11.50; No. 1 poultry farm eggs, $12.50.

Live poultry—Broilers, 23c lb; springers, 17c lb; hens, fat, 4 lbs up, 19c lb; 2 to 4 lbs, 14c; old roosters, 10c lb; ducks, 15c lb; geese, 15c lb; rabbits, 3 to 4 lbs, 10c lb; dry picked turkeys, No. 1, 35c lb, f. o. b. Spokane.

Producers Open Business

The first producer-owned live stock commission company under the plans worked out by the farm bureau committee of 15 opened for business at Chicago this week. The board of directors of the National Stock Producers' association, under which the cooperative producers will operate, held its first official meeting at Chicago last week and elected the following officers: John G. Brown, Monon, Ind., president; C. E. Collins, Kitcarson, Colo., vice president; E. H. Cunningham, Des Moines, secretary-treasurer. The officers constitute the executive committee.

Range of Live Stock Prices for the Week Ending Jan. 4

CATTLE.	Chicago.	Spokane.	Portland.	N Salt Lake
Choice, prime heavy steers (1100 lb up)	8.65@10.00			
Good heavy steers	7.75@ 9.00			
Medium heavy steers	6.25@ 8.25			
Common heavy steers	5.75@ 6.60			
Choice, prime light steers (1100 lb do'n)	9.00@10.25			
Good light steers	8.00@ 9.15			
Medium light steers	6.25@ 8.25	5.75@ 7.50	6.00@ 7.75	4.50@ 5.25
Common light steers	5.50@ 6.50	4.25@ 6.00	5.00@ 6.25	3.75@ 4.75
Common to choice butcher heifers	3.50@ 8.00	3.50@ 6.00	4.50@ 6.00	3.00@ 4.50
Common to choice butcher cows	3.25@ 6.25	3.00@ 5.25	3.50@ 5.25	2.75@ 4.00
Bologna and beef bulls	3.60@ 6.00	3.00@ 5.00	3.50@ 4.25	2.00@ 3.50
Canners and cutters, cows and heifers	2.25@ 3.35	2.00@ 3.00	2.50@ 3.50	1.50@ 3.00
Common steers	3.00@ 4.00	2.50@ 4.00	2.50@ 4.00	2.00@ 3.50
Medium to choice light veals	6.25@ 9.50	8.00@ 9.00	8.00@10.00	5.50@ 6.50
Common to choice heavy veals	3.50@ 7.00	4.00@ 8.00	5.00@ 7.00	
Common to choice feeders (1000 lb up)	5.25@ 6.50			
Common to choice feeders (750-1000 lb)	5.00@ 6.50	3.50@ 5.00	4.50@ 5.50	
Common to choice stocker steers	4.25@ 6.10			
Com. to choice stocker cows & heifers	3.00@ 4.75			
HOGS.				
Top of market	8.25	8.50	9.35	7.60
Bulk of sales	6.40@ 7.80	7.50@ 8.50	8.00@ 9.00	6.75@ 7.50
Heavy (250 lb up)	6.50@ 7.30	7.00@ 7.50	7.00@ 8.50	
Medium (200-250 lb)	6.75@ 7.50	7.50@ 8.00	8.50@ 9.35	
Light (150-200 lb)	7.10@ 7.90	8.00@ 8.50	9.00@ 9.35	7.25@ 7.60
Light lights (130-150 lb)	7.50@ 8.15	7.75@ 8.25	8.75@ 9.25	7.25@ 7.50
Smooth packing sows (250 lb up)	5.75@ 6.75	6.25@ 7.00	6.50@ 7.25	
Rough packing sows (200 lb up)	5.25@ 6.25	5.50@ 6.50	6.00@ 6.75	
Medium to choice pigs (130 lb down)	7.00@ 8.25	8.00@ 8.25	8.50@ 9.00	
Stocker pigs		7.00@ 7.50	8.50@ 8.75	6.00@ 7.00
SHEEP AND LAMBS.				
Medium to prime lambs (84 lb down)	10.50@11.75	7.50@ 8.50	7.50@ 9.00	7.50@ 8.00
Culls and common lambs	8.00@10.50	6.50@ 7.50	4.00@ 8.00	4.50@ 7.50
Medium to prime yearling wethers	8.00@10.50	5.00@ 6.50	5.00@ 7.00	5.00@ 7.75
Medium to prime wethers	4.75@ 7.50	4.00@ 5.00	4.00@ 5.50	2.50@ 3.50
Medium to choice ewes	3.50@ 6.25	2.50@ 4.00	2.75@ 5.00	2.00@ 3.00
Culls and common ewes	2.00@ 3.50	1.00@ 2.50	1.00@ 2.75	1.00@ 2.00
Feeder lambs	9.00@10.75	5.00@ 6.50	6.00@ 7.00	5.00@ 6.00

GENERAL ADVERTISING.

Oil Light Beats Electric or Gas

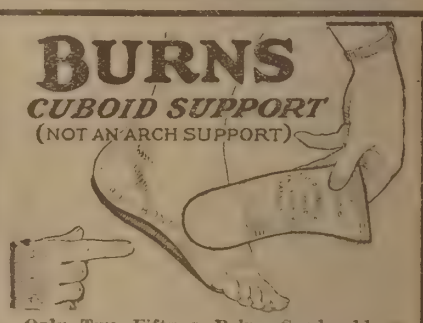
Burns 94% Air

A new oil lamp that gives an amazingly brilliant, soft, white light, even better than gas or electricity, has been tested by the U. S. government and 35 leading universities and found to be superior to 10 ordinary oil lamps. It burns without odor, smoke or noise—no pumping up, is simple, clean, safe. Burns 94% air and 6% common kerosene (coal oil).

The inventor, W. W. Johnson, 31 N. Fifth St., Portland, Ore., is offering to send a lamp on 10 days' FREE trial, or even to give one FREE to the first user in each locality who will help him introduce it. Write him today for full particulars. Also ask him to explain how you can get the agency, and without experience or money make $250 to $500 per month.—Adv.

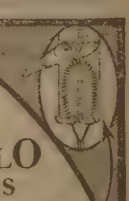
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You Cut 15 to 35 Cords a Day!
You get this one-man outfit direct from factory at lowest factory price. Also special sale prices on 4 H-P Log Saws. 30 Days' Trial—10 Year Guarantee. Cash or Easy Terms. Send your name and address on a post card before sale closes. WRITE NOW.


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—The Healthy—
Shaving Soap
Cuticura Soap shaves without mug. Everywhere 25c.

Track's End

(Continued from page fourteen.)

go his hold, snapped at the ax, and when I started to strike again he turned and jumped through the window over his dead companion and joined the howling pack on the snowdrift in front of the house.

I seized the gun again and rested it across the dead wolf, firing full at the impudent rascal who had come in and made Kaiser so much trouble. It was a good shot, and the wolf went down in the snow. I pumped up another cartridge, but the wolves saw that they were beaten and the whole pack turned tail and ran off as fast as their legs could carry them. I took two more shots, but missed both. The wolves went around Frenchman's Butte, never once stopping their howling.

As soon as they were out of sight I had a look at Kaiser. I found him all blood from a wound in his neck, and one of his fore legs was so badly crippled that the poor beast could not bear his weight on it. I got some warm water and washed him off and bound up his throat. When I was done I heard a strange yowl, and, looking about, spied Pawsy clinging on top of the casing of the door which led into the dining room, with her tail as big as a bed bolster. I suppose she had gone up early in the wolf fight, not liking such proceedings. She was still in the greatest state of fright, and spat and scratched at me as I took her down.

I next swept up the dog and wolf fur and cleaned the floor, and after I had got the place set to rights nailed a board over the broken window and carried the three dead wolves into the kitchen, where, after supper, I skinned them, hoping that some day their hides would go into the making of a fur overcoat for me, something which I needed.

I don't know if it was the excitement of the fight, or the awful stillness of the night, or what it was, but after I had finished my work and sat down in the office to rest I fell into the utmost terror. The awful lonesomeness pressed down upon me like a weight. I started at the least sound; dangers I had never thought of before, such as sickness and the like, popped into my mind clear as day, and, in short, I was half dead from sheer fright. There was not a breath of wind outside, or a sound, except once in a while a sharp crack of some building as the frost warped a clapboard or sprung out a nail, and at each crack I started as if I had been struck. The moon was shining brightly, but it was much colder; the thermometer already marked 20 degrees below zero.

Suddenly there came, clear and sharp, the savage howling of a pack of wolves; it seemed at the very door. I jumped out of my chair, I was so startled, and stood, I think, a most disgraceful picture of a coward. Kaiser rose up on his three sound legs and began to growl. At last I got courage to go to the window and peep out, with my teeth fairly chattering. I could see them up the street, all in a bunch, and offering a fine shot, but I was too frightened to shoot. After a while they went off, and it was still again. I wondered which was worse, their savage wailing or the awful stillness which made the ticking of the clock seem like the blows of a hammer. I wished that there might come another blizzard.

But at last I got so I could walk the floor, and as I went back and forth I managed to look at things a little more calmly. The first thing I decided on was that I must no longer, in good weather at least, sleep in the hotel. It was easy to see, if the robbers came in the night and found nobody in the other houses, that they would come straight to the hotel. I made up my mind to take my bed to some empty house where they would be little likely to look for any one, or where they would not be apt to look until after I had had warning of their coming.

Another thing which I decided on was that I must keep up two or three more fires and get up early every morning to start them. I saw, too, that I ought to distribute the Winchesters more, and board up the windows of the bank, and perhaps some of the other buildings, leaving loopholes out of which to shoot. Still another point I thought of was this: Suppose the whole town should be burned? I wondered if I could not find or make some place where I would be safe and would not have to expose myself to the robbers if they stayed while the fire burned, as they probably would. I thought of the cellars, but it did not seem that I could make one of them do in any way.

My fright was, after all, a good thing, because it made me think of all possible dangers, and consequently, as it seemed, ways to meet them. It was at this time that the idea of a tunnel under the snow across the street from the hotel to the bank occurred to me, but I was not sure about this. Still, some way to cross the street without being seen kept running in my mind. In short, I walked and thought myself into a much better state of mind, and, though I still started at every sound, I was no longer too frightened to control myself.

When it came bedtime I decided to follow out my plan for sleeping away from the hotel without delay. There was an empty store building to the north of the hotel. It was new and had never been occupied. I had often noticed that one of the second-story windows on the side was directly opposite one in the hotel, and not over four feet away. I carried up the ironing board from the kitchen, opened the hotel window, put the board over for a bridge, stepped across and entered the vacant building.

I thought I had never seen a place quite so cold before, but I carried over the mattress from my bed, together with several blankets, and placed them in a small back room in the second story. The doors and windows of the first story were all nailed and boarded up, and it seemed about the last place that you would expect to find any one sleeping. I left the dog and cat in the hotel, took one of the rifles with me, and pulled in my drawbridge. I almost dropped it as I did so, for at that instant the wolves set up another unearthly howling. I got into bed as quick as I could. They went the length of the street with their horrible noise, and then I heard them scratching at the doors and windows of the barn. I could have shot them easily in the bright moonlight, but I remember that I didn't do so.

(To be continued.)

Bits of Fun for Everyone

A Rude Comparison.

A fashionable woman who, to save expenses collected her own rents, found one of her tenants in bad humor. She thought it wise to forestall his complaints by making one or two herself.

"And the kitchen, Mr. Holt," she said, "is in a terrible condition."

"Yes, ma'am, it is," agreed Mr. Holt, "an' you'd look the same way if you hadn't had any paint on you for six years."—Boston Transcript.

Proper Thing.

"I am nearly broke and want some collars."

"Ah! Then you want the kind with just a slight roll."—Public Ledger.

According to the Custom.

First Guest—I wonder if the bride's outfit is all right. You know, she should have "something old and something new; something borrowed, something blue."

Lady Guest—She has 'em. The gown is new, but the style's old. It's bought with borrowed money, and her father's the bluest thing present.—Judge.

Latest High Class Patterns for the Home

Please order the patterns you desire at least two or three weeks before you wish to use them. Desiring to obtain the latest high-class patterns for its readers, THE FARMER has made arrangements to have them sent direct from the east, and under present mailing conditions it takes about that time for them to reach you.



3832. Girl's dress. Cut in four sizes: 8, 10, 12 and 14 years. A 12-year size will require 2 7-8 yards of material 36 inches wide. Price 10 cents.

3822-3795-3838. A good utility costume. The "knickers and blouse" 3822, cut in seven sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. Skirt 3795, cut in seven sizes: 24, 26, 28, 30, 32, 34 and 36 inches waist measure. The jacket 3838, cut in seven sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. To make this suit for a medium size will require five yards of 44-inch material for the skirt and jacket. The blouse will require 2 1-4 yards and the knickers 2 5-8 yards of 36-inch material. Three separate patterns, 10 cents for each pattern.

3455. Girl's coat. Cut in five sizes: 6, 8, 10, 12 and 14 years. A 10-year size will require 3 3-8 yards of 44-inch material. Price 10 cents.

3603. A charming negligee. Cut in four sizes: Small, 34-36; medium, 38-40; large, 42-44; extra large, 46-48 inches bust measure. A medium size will require 5 3-4 yards of 44-inch material. Price 10 cents.

3560. Ladies' house dress. Cut in seven sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. A 38-inch size requires 5 5-8 yards of 36-inch material. The width of the skirt at the foot is two yards. Price 10 cents.

3812. Misses' dress. Cut in three sizes: 16, 18 and 20 years. An 18-year size requires 4 3-4 yards of 27-inch material. Price 10 cents.

3538-3543. Ladies' costume. Waist 3538, cut in seven sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. Skirt 3543, cut in seven sizes: 24, 26, 28, 30, 32, 34 and 36 inches waist measure. To make this dress for a medium size will require 7 1-2 yards of 36-inch material. The width of the skirt at the foot with plaits extended is 2 1-4 yards. Two separate patterns, 10 cents for each pattern.

3821. Ladies' apron dress. Cut in four sizes: Small, 34-36; medium, 38-40; large, 42-44; extra large, 46-48 inches bust measure. A medium size will require five yards of 36-inch material. Price 10 cents.

3601. Boy's suit. Cut in four sizes: 2, 3, 4 and 5 years. A 4-year size will require 1 5-8 yards of 24-inch material for the blouse and three yards for the trousers. Price 10 cents.

3824. Ladies' negligee. Cut in six sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. A 38-inch size requires 3 1-2 yards of 36-inch material. Price 10 cents.

3825. Ladies' skirt. Cut in six sizes: 24, 26, 28, 30, 32 and 34 inches waist measure. A 28-inch size will require 2 3-4 yards of 40-inch material. Price 10 cents.

3818. Child's dress. Cut in four sizes: 1, 2, 3 and 4 years. A 2-year size requires two yards of 36-inch material. Price 10 cents.

Please fill in this order and mail with remittance to:
PATTERN DEPT., PACIFIC NORTHWEST FARM TRIO, Spokane, Wash.

Enclosed find.....cents for which send me the following:

Pattern No. ..... Size ..... Pattern No. ..... Size .....

Pattern No. ..... Size ..... Pattern No. ..... Size .....

Name .....

Postoffice..... State.....

R. F. D..... Box No. ..... St. No. .....

Be sure to give the pattern number and the correct size.

SALE OF
WOOL Embroidered SERGE DRESSES
$3.88
On Arrival



Don't miss this amazing bargain! Only a few of these stunning style, fine quality Serge Dresses to go at this sensationally low price. Fashioned from extra quality Serge; always looks nice and gives excellent wear. Beautifully designed stitched wool embroidery in two harmonizing colors—will not pull out or run. 2 novelty pockets; self material sash belt; full length sleeves.

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So sure are we that you will say this is the most wonderful bargain you ever saw, we send it without one penny in advance. Just your request brings this charming dress. But don't delay—they will go fast—get yours today. Specify size desired. Color: Navy blue only. Sizes: Women's sizes, 32 to 46 bust; Misses' sizes, 14 to 18. STATE SIZE.

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Please send me quick Bargain Serge Dress. Will pay postman $3.88 and postage on arrival. If not delighted you will refund my money.
Name..... Size.....
Address.....
City..... State.....

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SCOTT'S EMULSION

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Scott & Bowne Bloomfield, N.J. 20-52

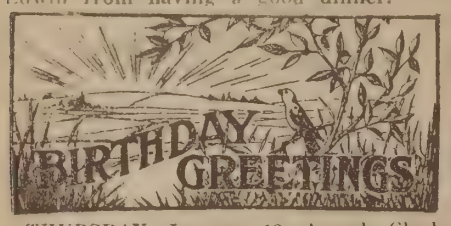
In writing advertisers, be sure to say you saw their advertisement in The Washington Farmer.



Esther Burke waited a long time before she wrote to us this time. She goes to the Summer Vale school and is in the sixth grade. She likes it. Esther is 11 years old. Her birthday is February 26. She lives in eastern Washington, near the Idaho boundary line. Esther is always glad to get The Junior Farmer.

May Brown hopes the cousins and Aunt Nellie had a Merry Christmas. She has four sisters and four brothers and they live near the Spokane river, in northeastern Washington. May is in the third grade at school and has a fine teacher. For pets she has a cat, four dogs and a pig.

"I had a Merry Christmas and a Happy New Year," says Edwin H. Foster of south central Washington. While Edwin was on his way to town in an automobile to eat his New Year's dinner a car bumped into his car and tore one of the rear fenders off and bent the hub, but that didn't keep Edwin from having a good dinner.



THURSDAY, January 12—Joseph Clark, 11 years old; Selma Schulberg, 11

FRIDAY, January 13—Rena Heathers, 8 years old; Clyde Seelen, 11.

SATURDAY, January 14—Harriet Moore; Alma West, 10 years.

MONDAY, January 16—Ethel Boie, 11 years old; Byron Henry, 7; Louise Litt, 11.

TUESDAY, January 17—Edithmay Lindsley, 10 years old; Mary Towne, 11; Bernice Williams, 10.

WEDNESDAY, January 18—Leona Goodno, 9 years old.

In each issue a list of the cousins' birthdays for the week will be published. At the close of each letter you write be sure to tell how old you are and when your birthday comes.

LETTERS WELCOMED BY AUNT NELLIE.

Among recent letters received by Aunt Nellie are those from cousins whose names follow. A few of these letters will be published each week in the regular edition of The Farmer, and others will appear from time to time in The Junior Farmer:

Hulda and Zeita Wood, Geraldean Ward, Juanita Porter, Melvin Hendrickson, Madoline Hays, Maria K. Runolfson, Viola Triplett, Ruth Hansen, Hazel Toulon, Irene Wilson, Robert Afton Stevens, Freda Steiner, Carl Schmick, Thelma Melger, Harold A. Stevens, Dorothy Tiff, Jennie Gibbs, Dorothy Loomis, Vernice Maurer, Lola Hollenshead, Bernice Reynolds, Agnes Maurer, Joyce McDonald, Mayme Kruse.

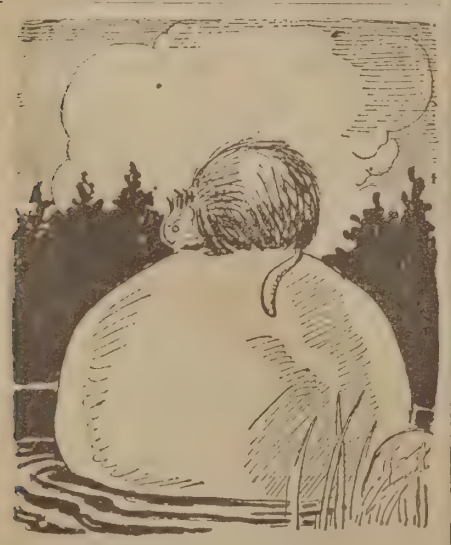
BEDTIME STORIES

By THORTON W. BURGESS.

Copyright, 1919. T. W. B.

LAUGH AT JERRY MUSKRAT.

Jerry Muskrat sat on the Big Rock in the Smiling Pool. Jerry Muskrat was very thoughtful. He paid no attention to Little Joe Otter, who was having a beautiful time on his slippery slide. He paid no attention to Billy Mink, who was fishing in the Laughing Brook just where it joins



Jerry Muskrat was very thoughtful.

the Smiling Pool. He paid no attention to Grandfather Frog, who was sitting on his big green lilypad watching for foolish green flies. Jerry Muskrat paid no attention to any one; he just sat and thought and thought and thought.

Little Joe Otter swam over. "Wake up, Jerry Muskrat!" shouted Little Joe Otter, splashing the water up in Jerry Muskrat's face.

Jerry shook the water off and made a face at Little Joe Otter. Then he climbed a little farther up on the Big Rock and once more began to think and think and think. By and by he hopped to his feet, smoothed out his brown coat and walked over the edbe of the Big Rock.

"I believe I'll begin right away," said Jerry Muskrat aloud, as he prepared to dive into the Smiling Pool.

"Begin what?" asked Billy Mink, who happened to be near enough to hear.

"My new house for the winter," replied Jerry Muskrat.

Billy Mink stared at him. "Winter is a long, long way off," said Billy Mink. "What do you want to begin your house now for? You're foolish, Jerry Muskrat; you're foolish. Come on, have some fun!"

Jerry Muskrat shook his head. "It's going to be a long, hard, cold, cold winter, and I want to be ready for it early. Then I'll come and play."

Billy Mink looked hard at Jerry Muskrat to see if he really meant what he said. Jerry looked so sober and earnest that Billy Mink just had to believe Jerry meant every word. Then Billy began to laugh. He called Little Joe Otter over and told him what Jerry Muskrat had said. Then Little Joe Otter began to laugh, too. Here is was beautiful warm weather and winter a long, long way off, yet Jerry Muskrat pretended to know what kind of a winter it would be and to talk of getting ready for it now. What could Jerry know about it? Jerry must be crazy. So they laughed at him and made fun of him. They told the Merry Little Breezes, who told Spotty the Turtle and Mrs. Turtle and Mrs. Redwing and Sammy Jay and Blacky the Crow and Grandfather Frog.

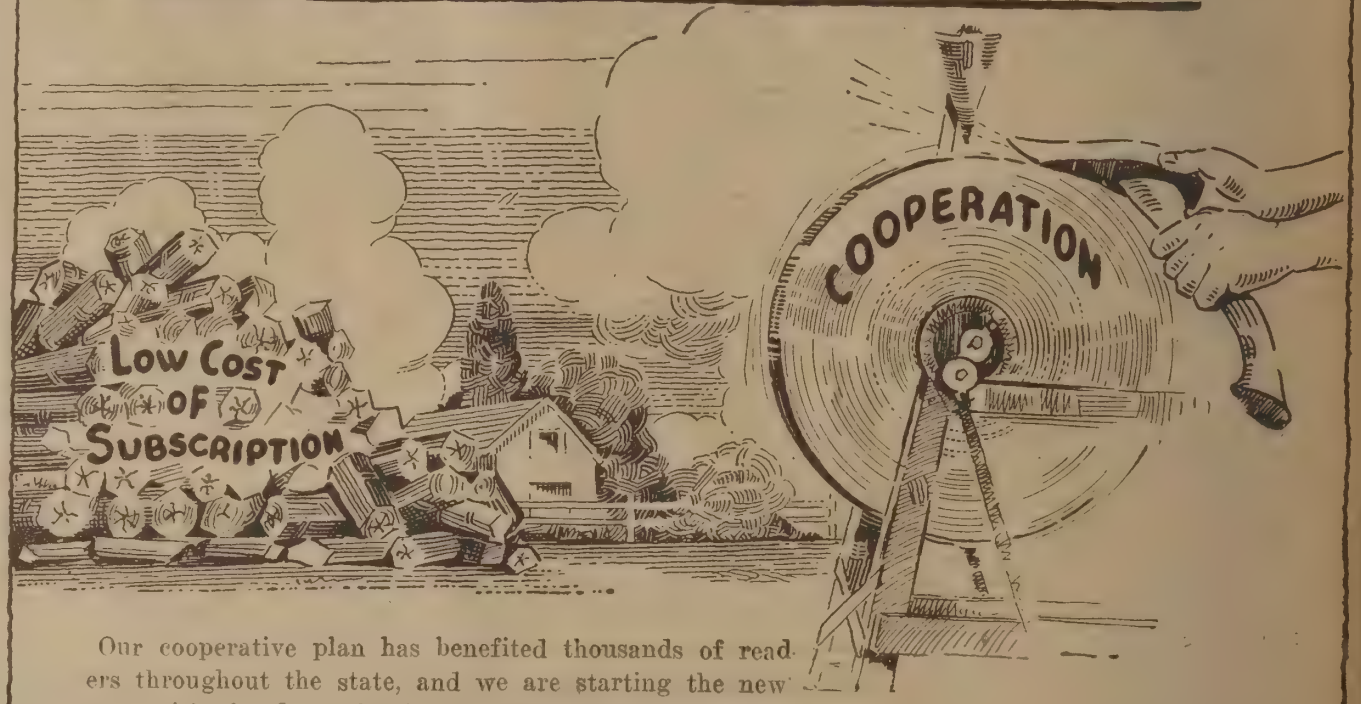
Jerry's crazy as a loon!
Pretty soon he'll want the moon,
when the sun is shining bright
Jerry thinks it's almost night.
See him shiver in the sun,
Thinks that winter has begun.
Jerry's crazy as a loon!
Pretty soon he'll want the moon.

So sang Billy Mink, and then everybody laughed at Jerry Muskrat, everybody but Grandfather Frog.

"Chugarum!" exclaimed Grandfather Frog. "If Jerry Muskrat says we are to have a cold winter we surely will have a cold winter. Jerry Muskrat knows."

Jerry Muskrat looked over at Grandfather Frog and smiled.

LEND A HAND TO COOPERATION



Our cooperative plan has benefited thousands of readers throughout the state, and we are starting the new year with the determination to make 1922 the biggest year yet for this plan. In order to do this we ask each and every one of you to lend a hand. The tools won't stay sharp unless we all take a turn at the grindstone. What we did last year doesn't help if the axe is dull this year. We have to pour a little more water on the wheel and go to it again.

So we repeat, send your subscription orders direct. Get your neighbors to do the same. We will give you and your neighbors the benefit of every penny which would ordinarily go to the agent handling the subscription.

We have every confidence that you will continue to cooperate and repeat our request that you take thought as to your subscription renewal. Instead of waiting for a notification, mail in your order at least 60 days in advance of the address label of your paper. Tell your friends and neighbors about our cooperative plan and include their orders with your own. By all pulling together we can and will make 1922 a record year for cooperation. Let's do it!

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Jan. 12, 1922.
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I enclose herewith $.....for a.....year subscription to
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If your subscription is already paid in advance, it will be extended from the date to which it is paid.

Scrub Bull Stands Convicted Again

By H. E. M'NATT,
Western Washington Experiment Station.

During the summer of 1920 the animal husbandry department of the University of British Columbia conducted a dairy farm in three milk producing districts of the province.

The purpose of the survey was to determine the factors governing profit and loss on dairy farms as they are operated in British Columbia. The findings of the British Columbia men apply very pertinently to western Washington dairy farms.

The investigation shows quite conclusively that the labor income of each farm, aside from seasonal effects, is almost entirely dependent upon the good judgment and modern methods employed. The labor income is the difference between the total receipts and total expenses of the farm. This is what the farmer receives in return for the time and labor invested. The following table is selected from the report of the British Columbia survey.

The following table speaks very plainly about the value of using only purebred sires. As soon as the dairyman begins using purebred sires, instead of grades, that soon does his labor income begin to climb rapidly. And the longer he continues to use purebred sires the higher his labor income grows.

The Labor Income as Affected by the Purebred Sire.

Kind of sire and number of years in use on the farm.	Number of farms.	Average number of years of purebred sire was in use.	Labor income.
Grade sire	11	...	Loss $ 41.95
Purebred sire, 1 to 5 years	20	3.2	Profit 216.04
Purebred sire, 6 to 10 years	11	7.6	Profit 495.85
Purebred sire, 11 years and over 6	6	16.5	Profit 550.36

TO GRADE UP DAIRY ANIMALS.

Although not strictly a dairy community, the farmers of Harstine island, Mason county, have decided to keep purebred sires in order to grade up the dairy animals of the island. At a meeting of the community members recently they voted to buy a purebred Jersey bull to replace ay grade sires in the neighborhood.

With the asistance of H. E. Drew, the county agent, the committee was able to secure a registered bull calf from a nearby breeder, the money having been raised by popular subscription. The animal is sired by Prosser Pogis, a full brother to Sophia's Agnes and out of Sultana's Pogis Blossom. The bull will be kept at a central farm and used as a herd sire for all herds on the island.

The majority of the farmers on the island are not dairymen, but raise poultry and berries as a main crop, while each man keeps from one to three cows for family use and sells what butterfat he can spare.

NEW BERKSHIRE HERD SIRE.

F. M. Curtiss of Fruitland, Wash., recently purchased from Dean C. F. Curtiss of the Iowa State college the yearling Berkshire boar, Ames Laurel 2d. This young boar is a very fine individual, with broad head, stretch, good bone, high arched back and approved big type. He is sired by Ames Rival 139th, son of Rival's Champion's Best, the sire of Laurel Champion, the most famous Berkshire boar ever in the northwest. The dam of Mr. Curtiss' boar is Winona Laurel, a granddaughter of Laurel Champion. Most of Mr. Curtiss' sows are of Matchless Lee blood. Mr. Curtiss, it will be remembered, is the breeder of Lord Bacon 9th, the boar that brought fame to the state of Washington and the northwest by winning grand championships at the Chicago International in 1920, an honor never before captured by a northwest bred hog of any breed. He was shown by Dean Curtiss, who purchased him from F. W. Curtiss, and is bred considerably along the same lines as the young boar.

ORGANIZE GUERNSEY CLUB.

The dairymen of the East Sound community are organizing a Guernsey club for the purpose of securing the purebred Guernsey bull owned by Mr. Donehue. The Oreas Island Guernsey club at Olga and Alfred Nelson of West Sound each have one good bull. They expect to exchange the three animals among the three communities on an even basis, since they are estimated to be of approximately the same value and owned in the county for three years. By this arrangement the three communities will get at least six years' service from purebred bulls, while they will only pay out the price of one bull. It will prevent any bull having to go to the block before his value is known. If any offspring prove to be of exceptional value the bulls will still be in the county.

MAKES GOOD AVERAGE.

John P. Martin of Satsop, Wash., has 12 official records completed by his Jersey cows during the last year. Two of the best, age considered, were made by senior yearlings. Amy's Lass, one of them, has to her credit 412.3 pounds of fat for the year, and Amateur's Lass, 412.6 pounds. Buff Lassie, as a 2-year-old, produced 461.59 pounds of fat. The average age of the 12 head is 2 years and 130 days at beginning of test, and the average production is a little over 408 pounds of fat. Mr. Martin's herd is mostly line bred Gertie of Glynllyn, with an Island cross. Both Mr. Martin and John H. Taylor of Montesano, Wash., have recently received letters telling of the good production being made by heifers sold to parties in the Colville valley a year ago last April.

MUST HAVE PLENTY OF LIGHT.

The barn that does not provide plenty of light is just to that extent an inferior one.

BEEF ON WEST SIDE.

It is the belief of G. R. Kinney, manager of the Northwood Farms at Redmond, Wash., that the cut-over lands in the lumber regions near the coast could be used to excellent advantage for ranging beef cattle. Mr. Kinney was in charge of the Bratnober company's herd of Milking Shorthorns on the fall and winter show circuit. The herd was brought to Washington on the first of October, 1920. Mr. Kinney says that cattle they do not care to sell for breeders are turned on the hills and make beef at a very small cost. The Bratnober company has a big lumber business and many acres of this cut-over land.

YOUR MARKET
Ship your cattle, hogs, sheep, fat or feeders, to the
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Market reports mailed on request.

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Write today.
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won 96 prizes
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Improve your stock. You get the breeding hog now; pay when you get the pork. Write for plan.
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Bred gilts, Feb., March farrow; bred to K's Big Bob, Designer's Model and Smooth Giant. $30 and $45, papers.
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Spring gilts and boars, both big and medium type, good individual, good breeding. Priced for quick sale.
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The sensational Grand Champion Boar of Idaho and the sire of the Grand Champion Boar at the Southeastern Idaho fair, 1921.
Wonder Timm
Grand Champion Boar of Idaho, 1919, a real giantess-bred boar and sire of the first senior yearling sow of the 1921 Pacific International.
These boars have been mated to, or are sires of, 40 sows and gilts that will be sold
Tuesday, January 31, 1922
at the farm, near Nampa, Idaho.
Every sow or gilt in the offering will be out of Paramount or bred to him—the boar whose get won every blue ribbon but two that they showed for in four shows in Idaho, in 1921, winning 42 blue ribbons, 8 champions and 1 grand champion; and our herd won every blue ribbon but four in four shows and every champion but two.
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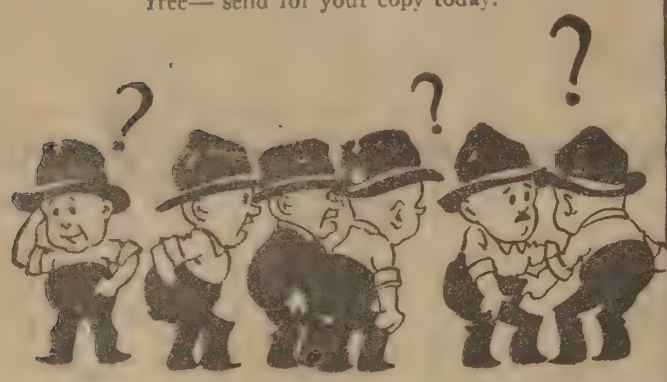
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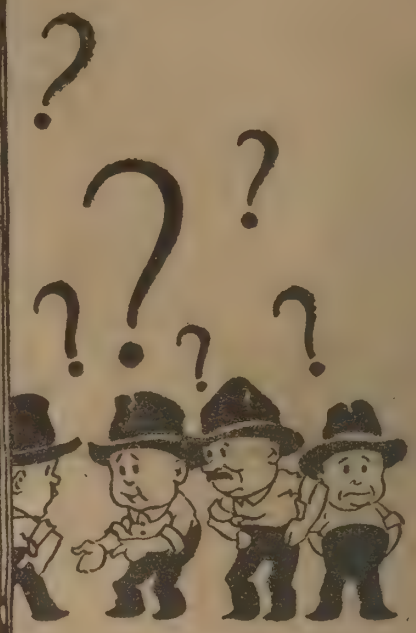
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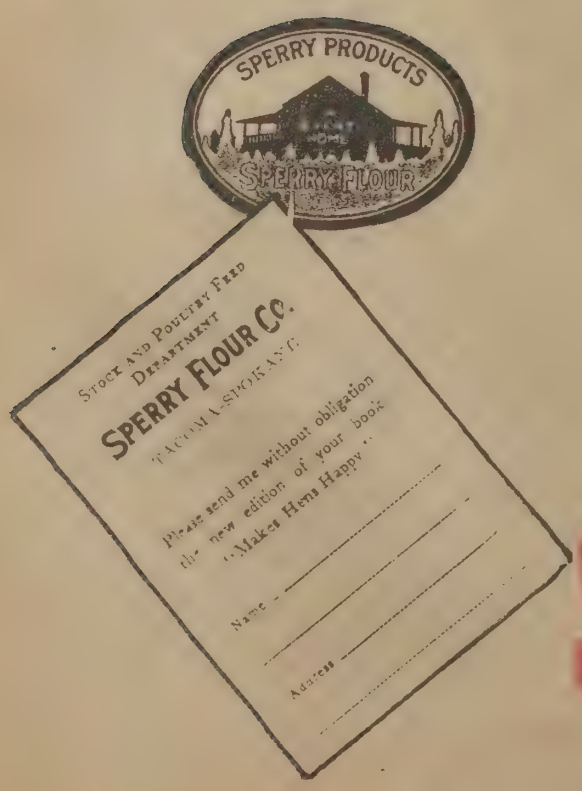
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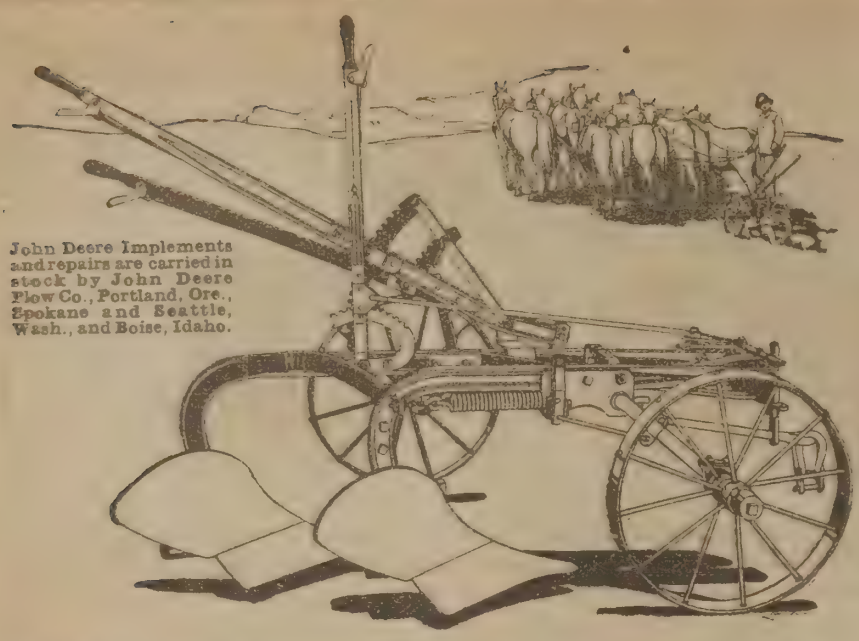
AS stated in last week's issue of The Washington Farmer, a concerted movement is now under way looking toward the elimination of the scrub sire from the farms of this state. The movement is not a new one, though it is just now being promoted with a vigor and system that should make the scrub an applicant for a pedestal in the public museum of has beens in the near future. The picture on this page illustrates the way the battle against "the most expensive sire in the world" has been gaining momentum. C. M. Hubbard, live stock extension specialist of the state college, saw to it that there was a pair of scrub steers from scrub sires on exhibition at the Western Royal last November alongside a pair of good steers, the offspring of grade cows and purebred sires. In the picture the scrubs occupy the place of prominence in the foreground, while the good steers are shown at the back. Two of the four small cards on the wall before the animals are reproduced herewith, showing what the purebred sire means compared to the scrub.

On January 6 Dr. S. B. Nelson, director of the college extension service, and Mr. Hubbard met with a group of stockmen in Spokane to lay groundwork for a renewed attack on the ranks

(Continued on page six.)



Seattle Banks Offer to Finance Bonded Wool Warehouse—Page 3



John Deere Implements and repairs are carried in stock by John Deere Plow Co., Portland, Ore., Spokane and Seattle, Wash., and Boise, Idaho.

Consider Its Long Life

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Army uniform coats, pure wool, serge lined (a wonderful work coat). Sale price 98c

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Pure wool O. D. U. S. army shirts, all sizes. Sale price $3.95

O. S. U. S. army mackinaw coats, all sizes. Sale price $8.95

O. D. cotton shirts, all sizes Sale price $1.25

Pure wool U. S. army socks, gray or khaki. Extra quality. Sale price 39c

U. S. army canvas leggings, best quality. Sale price 59c

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Reference: National Bank of Tacoma

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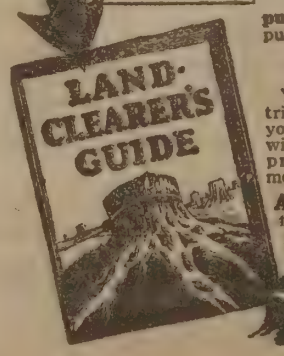
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THE WASHINGTON FARMER

SUCCESSOR TO

Vol. 46. No. 3 THE RANCH PACIFIC DAIRYMAN HORN AND HOOF January 19, 1922

For Good Farming, Attractive Country Homes and Happy Country People

Bonded Warehouse for Wool at Seattle

Seattle Bankers Offer East Washington Wool Growers $2,500,000 to Finance the Project

By HORACE ADDIS.

Opening with a large attendance, which continued through all its sessions, the Washington Wool Growers' association, at its annual convention at Yakima January 13 and 14 held one of the most successful meetings in its history. It went on record for an increased tariff on wool and made clear cut declarations on other important matters of legislation.

After listening to the offer of Seattle business interests to provide a bonded warehouse which would furnish facilities for handling and storing 5,000,000 pounds of wool and provide for an advance on the wool after it is in the warehouse, with the provision, first that a $100,000 corporation be organized by the wool men themselves to secure loans from the war finance corporation, it appointed a committee to organize the corporation and to negotiate with the Seattle men.

Wages of herders and prices for shearing were worked almost harmoniously with the forest service in the matter of grazing permits. It listened to a number of able addresses, including one by Assistant District Forester E. N. Kavanagh; Fred Faulkner, representing the Western Wool Warehouse at Portland, Ore.; R. A. Ward, manager of the Oregon wool and mohair pool, and A. J. Knollin of the wool growers' cooperative commission company. And its sessions were closed with a most enjoyable banquet at the Commercial hotel of Yakima.

BONDED WAREHOUSE PROPOSITION.

With President T. J. Drumheller and Secretary R. D. Sears in their places, after the reading of the minutes and the appointing of committees, the president announced the presence of a number of business men from Seattle, with the bonded warehouse proposition. While waiting for the report of the committee appointed to confer with them Secretary Sears explained the working of the war finance corporation, for the loaning of money to stockmen, and how a $100,000 corporation could be organized and secure loans up to $800,000. His remarks provoked many questions and discussion was participated in by a number of the members present. It was brought out that partial payments can be made on loans at any interest paying period; that they must all be paid in full within three years from next June, when the war finance corporation automatically goes out of existence, but that if the stockmen use the corporation in the securing of many loans and its discontinuance seems necessary, some provision for continuing the granting of loans is almost sure to be made.

The committee of Seattle business men making the bonded warehouse offer and to finance the project to the extent of $2,500,000 were Joseph A. Swalwell, president of the Union National bank, and F. H. Luce, vice president of the National Bank of Commerce of Seattle. The Seattle committee also included Major Muirhead of the Port of Seattle; Mr. Gooderham, traffic manager for Frye & Co.; Messrs. Watson and Springer of the Admiral line of steamers; Mr. Collins of the Elder Steamship company and Thomas Hill, formerly editor of the Yakima Herald and now director of the state development bureau, under the auspices of the Seattle Chamber of Commerce. The committee appointed to confer with them consisted of H. Stanley Coffin, Archie Pryor, Everett Butler, T. H. Smith and Ellis Reagan, Yakima; John Smithson and Edward Mudd, Ellensburg; A. D. Dunn, Wapato; F. M. Rothrock and Peter McGreggor, Spokane; E. F. Benson, Tacoma; Charles Fales, Pasco; A. C. Fleming, Sunnyside, and A. R. Bohosky, Portland, Ore.

One big textile industry employing thousands of men is already considering plans for building a factory on Elliott bay, in view of the proposal to assemble the clip of all eastern Washington wool in Seattle, Mr. Luce said.

WAR FINANCE CORPORATION.

The resolution, as finally presented to the convention by the committee of wool men, reads: "We recommend the formation of a corporation with a capital of $100,000, to obtain funds from the war finance corporation for the purpose of financing the sheep industry; and we further recommend that the board of directors of this corporation be instructed to enter into negotiations with Seattle representatives for the establishment of a plant for the marketing of our wool."

Stanley Coffin, chairman of the committee, said the finance corporation is the first object to be accomplished, then a central marketing point, preferably Seattle. Wool should be sent to a point where it can be graded by government graders and a standard value be given it. This is a Washington industry, we are Washington men and he thought Seattle the proper place for a wool warehouse.

Mr. Swallwell, head of the Seattle delegation, said Seattle has the money; it is ready to make all necessary advances on wool; it is the best port, and he believed it to the interest of the wool men to see that a warehouse is established.

Major Muirhead told how Seattle had bonded itself for ten millions and eight and a half millions invested in terminals; that 48 steamship lines operate out of the port and that it is able and willing to help the wool men.

Mr. Hill said Seattle will grow as it serves the surrounding country; that it can serve the wool men to their advantage, as well as to the advantage of Seattle.

CLAIMS OF PORTLAND.

F. M. Rothrock said Portland had already a well-established bonded wool warehouse. There is but one great wool port in the east; that is Boston. He believed there would be but one in the west and that will be Portland. Mr. Olney of the Citizen's Bank of Wapato indorsed Mr. Rothrock's views. He gave Portland credit for what it had already done.

A number of others spoke in favor of the resolution, including Mr. Benson and Archie Pryor. It was finally passed, with no opposition.

The committee on predatory animals and sheep diseases reported that regulations are satisfactory, but recommended that no sheep be loaded without disinfecting the car, and this should be done without extra charge. Some special effort should be made to overcome the menace of rabies in coyotes.

The president said jackrabbits are a worse menace than coyotes. Dr. Glen R. Bach said the government is working on the jackrabbit problem and that thousands are being poisoned. He said 990 predatory animals had been killed in his district and 544 in another district within the last season.

Dr. Nelson, head of the extension service of the W. S. C., told of the ravages of jackrabbits. He said the college wants to help farmers and stockmen in the fight on the pests and told of some things that have been done. Appropriations are needed for this work.

Some discussion was had regarding Senator Jones' bill creating Yakima national park on Mount Adams, and of the truth in fabric bill. It showed sentiment unanimous against the first and for the latter bill.

FOREST RESERVE CONDITIONS.

At the evening session E. N. Kavanagh, assistant district forester, of Portland, Ore., addressed the convention. He said the financial situation has strengthened to a degree that warrants being optomistic. There is a shortage of sheep in Australia, Argentina and New Zealand. There is now a surplus of wool, but as European markets revive, that surplus will rapidly melt. The situation in congress is favorable.

Mr. Kavanagh referred to the law which had granted extension of time for the payment of grazing fees, which extension expired December 31. He said that in Oregon and Washington probably not over 10 per cent is unpaid. He said only in those cases where bad faith was shown would the law be invoked, which provides for cancellation and trespass charges. He wants the men to stay on the forest who have been using them year after year. Through cooperation he expects less friction between sheep herders and those who use spots in the forest for recreation. They are planning for a driveway down the west side, on the Snoqualmie, as there are ranges which will accommodate 20,000 to 25,000 sheep, though now inaccessible. He is expecting to arrange for some cut-over lands in western Washington and Oregon. Inside of a year he will have some interesting information. He explained the feeling in the corn belt which had led up to the bill for range appraisements—a plan which really headed off increased fees. He expects the results to be fair and representative. It will set up new conditions. Ranges close to railroads and water will be worth more than those far away, which take a hard drive to reach. It will get away from the blanket price for ranges.

President Drumheller said the good fellowship which had grown up between the government and the sheepmen was largely due to Mr. Kavanagh's reasonable, friendly spirit. He thanked him for this and for his address, a sentiment which was received with cheers. Several of the forest supervisors were called on and spoke briefly.

LAMB FEEDING EXPERIMENTS.

M. Bean, in charge of the W. S. C., experiment farm at Prosser, Wash., told of the work done there, where 1700 lambs are being fed. The lambs are divided into bands of 50 each. Different cuttings of alfalfa and of sweet clover are fed. Different qualities of grain are fed, with hay; also corn, hay and silage, and the results carefully checked. There is a temporary and permanent investment of about $7500.

Professor Hackedorn, head of the animal husbandry department of the college, invited the wool growers to attend, at a date in February, to be announced.

Saturday forenoon was devoted to meeting with the different forest supervisors and arranging for permits for grazing.

At the Saturday afternoon session the president announced as the committee on the wool growers' $100,000 corporation H. Stanley Coffin and Archie Pryor, Yakima; Charles Anderson, Ellensburg; A. D. Dunn, Wapato, and A. C. Fleming, Sunnyside. They reported considerable of the amount subscribed before night.

The committee on wages recommended $50 as the maximum and that each flockmaster use his own judgment as to wages of foreman and inexperienced help, which recommendation was adopted.

The shearing committee reported and, after some discussion, a motion to make 10 cents the maximum and 8 cents the minimum for both hand and machine shearing was carried.

YAKIMA BANKERS FAVORABLE.

At this time expressions were given by the bankers of Yakima as to their feeling toward the idea of forming the $100,000 wool growers' corporation for securing the money from the war finance corporation. Every one of them spoke favorable.

The resolutions committee then made its report. Every resolution offered received unanimous indorsement except the one asking for the restoration of games of chance at the state and other fairs, under the plea that blankets manufactured in Washington could thus be disposed of. With such men as Frank Rothrock, E. F. Benson, E. C. Burlingame and others opposing it, it was voted down almost unanimously.

L. D. H. Weld, representing Swift & Co. of Chicago, told how the great packing plants steady and stablize the live stock markets. He urged publicity for the slogan, "Eat more lamb," and said Swift & Co. are giving it wide publicity.

WOOL MARKETING COMPLICATED.

Fred Faulkner of Pendleton, Ore., representing the wool warehouse at Portland, Ore., spoke. He said the marketing of wool is more complicated than the marketing of the lamb crop. He said wool pools are an improvement over the old marketing system. Speaking of the Portland warehouse, he said, being bonded it gives absolute protection to the wool stored. The receipt can be used as collateral and borrowed on. Either the warehouse or bank will loan money on them. A pool, to be successful, he said, must have facilities for storing and grading. He told of the storage facilities and of the fine dock at St. Johns, close to the business district of Portland, and declared the Portland

(Continued on page six.)

Resolutions adopted at the Washington Wool Growers' association:

Demand the early enactment of a permanent tariff law, with a tariff on wool of 33 cents a pound, clean content, American valuation, with a compensatory tariff for American manufacturers;

Urge such reduction in wages and change in rules and hours of railroad labor as will allow lower freight rates;

Urge on the federal and state government a policy of license and regulation of trucks and passenger busses, which will put them on a par with the railroads in the carrying of passengers and freight;

Protest the restitution of higher railroad rates on live stock which prevailed before the present reduction went into effect, which expires in June, and ask special rates to grazing grounds, and a further reduction in general live stock rates if possible;

Request congress to amend and enlarge the federal reserve banking law to give farmers and stockmen renewal of their yearly notes;

Pledge support to the Capper "truth in fabric" bill and urge its enactment by congress;

Commend A. J. Knollin in his management of the Wool Growers' Commission company and recommend members of this association and wool growers generally to patronize and make it our strongest marketing agency;

Urge the discontinuance of shipping to live stock exchanges at all markets until they rescind their rule of not dealing with outsiders

Oppose the establishment of the so-called Yakima national park, or the creation of any new national parks, for the reasons that tourists can be served as well in the playgrounds established by the forest service and these parks are inimical to the best interests of the wool growers;

Because the forest service is fundamentally agricultural and comes directly in contact with agriculture, protests the transfer of the forest service from the agricultural to the interior department;

Oppose the transfer of the bureau of markets from the agricultural to the interior department, for the same reasons and the further reason that it has worked in harmony and has done good work where it is;

Ask congress to refrain from creating new national parks where they will interfere with grazing and ask that grazing be allowed in those parks already established;

Petition the legislature to pass a law which will tax sheep only for the portion of the year in which they are in the state and ask the states of Montana and Idaho to pass similar laws;

Commend the work of Assistant District Forester E. N. Kavanagh and his assistants, assure him of their appreciation and assert that he has done more than any other one agency to bring about good feeling and perfect understanding between the government and the sheep men;

Because it helps the mutton market and reduces excessive freight rates, commend Swift & Co. for killing lambs at Portland for shipment east, and express regret at the unwillingness of Armour & Co. to adopt the same policy at their Spokane plant;

As the United States biological survey has done splendid work in the destruction of predatory animals, they commend and indorse the work of the survey and ask larger appropriations for the work; appropriations for jack rabbit extermination, in which the extension service of the Washington State college should assist, were asked also;

Urges reduction instead of increase in the fees for grazing on Indian reservations, and insists that no bonds be required;

Urges on congress the enactment of a duty of five cents a pound on all mutton;

Favors such legislation as will allow the packers to own and manage retail markets, or check the present profiteering of the retailers;

Instruct the secretary to send a copy of these resolutions to our senators and members of congress.

A resolution favoring games of chance at the state and other fairs, with the excuse that blankets manufactured in Washington could thus be disposed of, was voted down almost unanimously.

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We guarantee every subscriber against loss through dishonesty or swindle by any advertiser in this publication; we do not attempt, however, to adjust trifling differences between subscribers and honest, responsible bankrupts. Complaints must be sent to us within 30 days from the date of the transaction and the subscriber must have mentioned The Washington Farmer when writing the advertiser. This guarantee applies to live stock, except that we will not be responsible for claims for damages on account of diseases in stock sold through these columns.

Ask and Ye Shall Receive

Write to the state college for information on any subject concerning the management of your farm. The college people have the information or will gladly get it for you.

See That Brooders Are Ventilated

The wide margin of difference in the percentage of eggs hatched about the state is due to two distinct causes, according to W. D. Buchanan, poultry specialist at the State College.

The first cause is the prevalence of disease in the parent stock, the second cause is a lack of vigor.

There is, however, a factor which seems to cause a greater loss than either of these causes, which is the lack of ventilation in the brooder. Much of this is due to overheating and improper attention. It should be a simple matter to bring down the percentage of loss from this cause.

The Pursuit of Peace

The State College of Washington is using some old war machinery, originally built for the manufacture of ammunition and engines of destruction, for making tractor, gas engine and automobile parts. A large number of pieces of heavy machinery, secured from the war department, are being converted into machines for regular use in the engineering classes and the short courses. A machine that once made small shells is now operated to make bolts and screws for auto repairs. A lathe, once used in the manufacture of 10-inch shells, will henceforth be used in truing up and overhauling general engine parts. It all reminds one of the scriptural prophecy that "they shall beat their swords into plowshares and their spears into pruning hooks."

A Board of Trade Inconsistency

The movement for the cooperative marketing of grain is down and out. We know, because the president of the Chicago Board of Trade says so. Funeral arrangements have not been announced, however, and pending the burial the organized opposition to the cooperative movement is reported to be continuing the collection of its $250,000 fund with which to combat cooperation.

We never could see the necessity of wasting good ammunition on a corpse. If the enemies of grain growers really believed that the cooperative movement had collapsed, as they declare, they would stack arms and return home to celebrate with a little orgy of speculation.

The truth is that farmers' cooperation is about the livest thing in this country today, and this is as true of the grain growers' organizations as of any other branch of the movement. No one knows better than does the Chicago Board of Trade that cooperation is out to eliminate the evils that have existed in the old system of grain marketing. No one will be hit harder by the reformation coming in the form of cooperation. If, therefore, that board can get comfort out of the premature declaration that cooperation is dead, let us be charitable and allow it that bit of relief.

Growing Up in the Dairy Business

An unsual interest in dairy cows is reported in different parts of the state. Farmers of the Yakima valley and elsewhere are finding it possible to get money from the banks to finance them in dairying. The bankers, however, will insist that good productive cows be purchased, and steps are being taken to protect these new farmers in dairying from having inferior animals thrust upon them.

It is even being stated that cows are being taken from the ranges and sold at quite a good figure as dairy cows. The buyer passes it off to another with an added price and before the transactions are closed this range animal gets to commanding the price of a good dairy cow.

There will be an earnest endeavor to prevent this species of profiteering in boarder cows.

John L. Smith of Spokane county, a man who has had large experience with dairy cattle, declared the other day that not only must the farmers be protected from the purchase of these poor cows, but that it is inadvisable for a new beginner to commence his dairy work with registered pure-bred stock. He should begin with good grade cows and build up his herd as his experience grows.

In fact, it is the general opinion of those whose counsels are worth considering that as a new business no one should enter dairying with a large number of cows—two, three, four or possibly eight or ten should be the limit.

Similar to Bond Investment

The dairy herd which is being constructively built up by a conscientious breeder is much similar to a bond investment. It is not only important to be assured of the quality of the capital stock, but if the buyer expects to maintain a steady income from them he must not expect to keep clipping the coupons, but allow them to accumulate. If he clips them they will remain steady or perhaps depreciate in value.

It is the same with a good herd. If the owner sells the young stock to swell his purse the value of the entire herd will depreciate in value and he will be unable to breed along constructive lines. The breeder will be money ahead if he allows the calves to grow up and become new milch cows, just as coupons will accumulate if not clipped.

The Farm Bureau and Politics

The Spokane county farm bureau in its recent annual meeting went on record as opposed to partisan politics in its organization. It even went to the extent of declaring that an officer or a local leader must not, while holding such position, become a candidate for any public office or take an active public part in behalf of any political organization.

The idea is an excellent one. It has been a foundation stone of the national grange against which the storms of time have beaten without avail. The farm bureau is primarily an economic organization, with social features of value to general rural life, but it is not and must never become a political organization in the partisan sense.

Future Possibilities

The Pacific northwest is the best apple-prowing district in the world. This district includes Idaho, Oregon, Washington and a small part of Canada. It is not so much superiority of soil that makes superior fruit possible, although our soil is among the very best. It is the bright sunshine that gives color to the fruits. Besides, there is the general tendency for industries to concentrate into those sections where they are best adapted.

State Farm News

Detailed audit of the accounts of the 1921 state fair shows that the receipts from all sources amounted to $52,056.56, while the direct expenditures were $45,934.32. The total cost of holding the fair was $71,246.27. The legislative appropriation for the biennium was $40,000 and the unexpended balance when all the bills are paid will $21,990.29, which will be the sum available for putting on the 1922 state fair.

More money was paid in for general admissions this year than ever before. The attendance was the largest ever known by over 3000, and the general admissions paid at the gates exceeded those of 1920 by nearly $5000, while the expenditures of the 1921 fair fell below those of 1920 by nearly $26,000, or over $15,000, excluding expenditures for permanent improvements made in the former year. Premiums paid in 1921 exceed those in 1920 by over $3000.

* * *

Washington state shipped 23,087 cars of apples between July and December 2, according to figures announced by the federal bureau of markets. The Wenatchee district shipped 10,776 cars, Yakima district 8065, Spokane district 2374, Walla Walla district 1324 and White Salmon 548 cars.

* * *

The organization of the Kittitas County Hercules Shorthorn Baby Beef club was completed recently with 10 members, according to an announcement by County Agent W. L. Davis. Each member of the club will purchase two high-grade Shorthorn steer calves from Frank M. Rothrock of Sprague. These calves will be developed and shown as prime steers at the county fair next fall and at the Western Royal Live Stock show in Spokane next November, where substantial prizes are offered for beef club work. The following boys and girls have enrolled in the club: Jessie Woodhouse, Nora Waite, Meta Bennett, Val Bradshal, Erling Hanson, Raymond Barnhart, Walter White, William Waldron, Jr.; Eugene Wilson and Robert Kresge.

* * *

Elvin G. Wood, state extension horticulturist, conducted 22 pruning demonstrations in 24 communities in Yakima county between January 3 and 14.

* * *

Thirty-five farm project leaders will soon start work in nine different Pacific county communities, according to County Agent J. R. Beck. In conjunction with the county agent, they are lining up things for practical demonstrations of scientific farming this year. The work last year proved so popular with the farmers that the number of project lessons has swelled to 35.

Following are the communities which will carry on the work: Frances, Menlo, Willapa, Brooklyn, South Fork, South Bend, Naselle, Wallicutt and Long Beach. The program includes dairying, crops and soils, berrying, poultry, agricultural engineering and home demonstration work.

* * *

Newly elected officers of Lewis county Pomona grange are as follows:

Frank O. Miller, master; T. K. Belcher, overseer; C. W. Frase, lecturer; Mrs. C. Null, chaplain; O. C. Wisner, steward; L. Griel, assistant steward; Mrs. Groskong, secretary; W. Foster, gatekeeper. The Pomona meeting will be held next time at Silver Creek February 4.

* * *

Lewis county dairymen figuratively tightened their suspenders January 1 and made a new resolution—to resume the work of weeding out the scrub cows and star boarders by the cow-testing association route. County Agent R. G. Fowler and F. W. Kehali, assistant dairy specialist at the state college, are backing them up in the matter, and a Lewis county association will be added shortly to the list of six already active in Washington. The cost will be $2.50, plus 8 cents for each cow treated. There has been no work of this kind in Lewis county since 1917.

* * *

An old-fashioned stock sale, with which will be combined a school in stock raising, conducted by instructors from Washington State and Oregon Agricultural colleges, is being planned for some time in February by the Walla Walla County Pure Breeders' association. Both cattle and sheep will be sold, and students in agriculture from Walla Walla, Columbia and Garfield county high schools will participate in the stock judging contest.

* * *

Sheepmen who have just trailed their bands to the ranges along the Columbia river say that there has never been a better prospect for feed. Owing to the heavy rain and snow during the last two months grass has started growing and is several inches high in protected canyons. As a result they expect the sheep to come through the winter in good shape and to produce a good wool clip next spring. The estimate on sheep wintering in the Yakima valley and along the Columbia is 250,000 head.

* * *

The Washington Growers' association, composed of growers of prunes in Clarke county, and which handles the crop on a cooperative basis, recently sent out checks totaling more than $165,000 for part of the 1921 crop. The balance will be paid when the crop has been disposed of and the money collected. All expenses to date have been taken out of money already collected.

* * *

Lieser Brothers, prune and potato growers, four miles east of Vancouver, had 54 acres of potatoes in the ground this fall and had them dug just a few days before the cold weather came on. Not expecting a cold winter so early, they had not provided shelter for the potatoes.

The Washington Growers' association, which handled the prune crop of the members, has a big packing plant in the railroad yards. This was obtained and the entire crop of more than 5000 bushels was taken to the packing plant, which was kept above the freezing point.

Coming Events of Interest

Jan. 20—Charles G. Sprong Holstein sale, Grandview.
Jan. 23-28—Poultry show, Spokane.
Jan. 26-27—Grain grow'rs, ship'rs, mill'rs' meet, Spokane.
Jan. 30-Feb. 3—West. extension conference, Portland, Or.
Feb. 2-3—North Pacific Fair association meet, Spokane.
Feb. 6-7—Davis and Butchart Bros. Holstein sale, Granger.
Feb. 15-17—W. Walsh. Horticult. Ass'n meet, Mt. Vernon.
Feb. 20-21—West. Royal breeders' swine sale, Spokane.
Feb. 22—Shorthorn breeders' spring sale, Spokane.
Feb. 23—Day & Rothrock Shorthorn sale, Sprague.
Feb. 24—A. D. Dunn Shorthorn sale, Wapato.

FARM BUSINESS AND MARKETS OUTLOOK

A moderate increase in cattle receipts at the 10 leading markets has been absorbed without further reductions in price.

Around 50 per cent of the hog arrivals at Chicago during December were taken by outside buyers, the best showing since 1894.

The lamb market passed the $12 line in the middle west with the Chicago top at $12.90.

Greater activity in the horse market.

Unsettled state in the wheat market.

Egg prices crashed downward under the impetus of large receipts.

Butter markets continued weak.

FARM BUSINESS OUTLOOK

January is always the month of most numerous bankruptcies because of the year end settlements. Events of this sort which have come to the surface in the last 10 days are characteristic of the season, especially in hard times. Probably the end is not yet, as the wreckage from the financial storm must be cleared away sooner or later. Business failures in 1921 numbered 19,652, the largest since 1915, and, with this exception, the largest in 24 years. The total in 1920 was 8801.

Of all the business factors, money conditions have improved most in the last year. The rediscount rate has dropped from 7¼ to 8 per cent a year ago to a 4½ to 5½ per cent basis, the federal reserve ratio has advanced during the year from 45.4 to over 71, gold holdings of the system have increased over $800,000,000 and note circulation has decreased about $825,000,000 or around 30 per cent. Call money in the east is as low as 3 per cent and time money has been placed at 4¾ per cent in New York and 5½ per cent in Chicago.

In spite of the improvement, however, money is still tight in many country districts because of overdue loans and crop prices too low to provide the wherewithal with which to pay them. Some of these obligations will be lifted during the winter by the snout of the hog or by the productive endeavors of the dairy cow or the little brown hen, but others must wait until another crop is harvested and sold.

Gains in other directions should not be overlooked. Foreign exchange rates are higher with the exception of the German mark. The English pound is around $4.20 compared with $3.50 a year ago. Freight rates are lower.

Although farm prices have declined, most of the things farmers buy are lower in about the same proportion. Deflation is no more unbalanced than it was at the beginning of 1921.

In 1922 we can look confidently for great progress toward equalization of commodity costs. Good yields in 1922 upon the acreage planted, and prices for crops and live stock that will pay costs of production and perhaps a little more on the average would do more than any one thing to restore both industry and agriculture.

The weather will have most to do with the yield per acre. The outlook for price improvement is not especially rosy, but the probability of a lower level for farm products, barring minor fluctuations, also looks improbable.

The conclusion is that betterment will come about in most farm commodities through producing in such a way that the operation will be profitable even though prices do not advance materially.

PRIME STEERS SHOW PROFIT.

Although the premium upon steers of prime and choice grade has declined perceptibly in the last month, producers of cattle of this character which are going on the market at the present time have obtained larger profits than those who are cashing in warmed up and short fed steers which now constitute the bulk of receipts. Heavy steers which were a drug on the market two months ago are now scarce and are selling close to the top.

A moderate increase in receipts at the 10 leading markets has been absorbed without further reductions in price. In fact, slight advances are noticeable in various parts of the price list.

Unless the number of partly finished steers forced upon the market decreases, no marked improvement can be expected in values within the next six weeks. Cattle markets are nearly always inundated during January and early February with cattle of the sort which are now abundant. It is possible that the supply will run out earlier than usual this year, but there is little reason to expect a departure from the normal trend. Butcher cows and heifers gradually become more scarce as the winter advances, but as long as cheap steers are to be had, prices will fail to respond to the lighter supply in the female division.

COMMON FEEDERS NOT CHEAP.

Common and medium feeder steers at Chicago are quoted at a range of $5 to $6, while common and medium stock steers are quoted at $4.25 to $5.50. Only a few loads of thin steers are being taken to the country at prices above $6, although good and choice feeders are quoted at $6 to $6.50 and good and choice stockers at $5.50 to $6.40, while selected feeder steers are available at $6.50 to $6.75.

The spread in prices from the top to the bottom of the stocker and feeder list is abnormally narrow at most of the important markets. Frequently during the fall and winter months feeders pay too high a premium for choice cattle to put in feedlots, but this year the reverse has been true and the discount upon common feeders has been entirely too small to make them an attractive purchase.

In spite of the narrow margin between thin and fat cattle, prices for feeders show but little change.

SHIPPERS CONTROL HOG MARKET.

Eastern shippers retain control of the hog market on the demand side. Around 50 per cent of the arrivals at Chicago during December were taken by outside buyers, the best showing since 1894. Last week the percentage of receipts taken by outside buyers amounted to about 60 per cent. With this competition, prices were boosted to the highest level since October, but an increased run appeared in the last few days and part of the bloom was lost.

Although the heavy winter packing season is more than half gone, immediate consumptive demand has absorbed most of the hogs sent to market. Big packers who accumulate most of the lard and cured hog products placed in storage during the packing season refuse to store product at prevailing level of hog prices.

Exports of lard during 1921 were the largest on record and were about 75 per cent larger than the average of the five years preceding the war. Exports of hog meats during 1921 were the smallest since 1917, but the total compares as favorably with the prewar average as does lard.

Until hog market receipts become materially larger than can be absorbed by immediate domestic consumption and export demand at the prevailing level of prices, the market will be well sustained.

ANOTHER SPURT IN LAMB PRICES.

A resilient lamb market went far past the $12 line in the middle west last week with the Chicago top at $12.90. Receipts at the leading markets during the past week show a small increase over the preceding week, but not enough to stay the advance in values. No severe handicaps for the market are in sight, but it is doubtful if sensational gains can be made from this level although present values may be fully maintained. Only a few native lambs are arriving, fed westerns constituting the bulk.

Prospect of a fairly strong tone for fat lambs and advancing prices for wool have encouraged shearers to enter the market and purchase partly finished lambs at Chicago as high as $11.25.

HORSE MARKET SUPPLY EXPANDS.

The supply of horses at the leading markets has increased during the last 10 days. Chicago reports the most marked activity in months with New England and New York the principal buyers. No advances in price occurred, but the increase in the absorbing power of the market is encouraging.

Chicago—Good and choice heavy drafters, $200-300; common and medium drafters, $140-200; chunks, 1450 to 1550 pounds, $150-200; 1300 to 1450 pounds, $125-160; farm chunks, $75-150; wagon horses, $125-200.

WOOL AUCTION SHOWS PRICE GAIN.

At the government auction held in Boston at which about 8,000,000 pounds, mostly of low grade wool, were sold, prices ranged from 20 to 25 per cent higher than at the December auction. Dealers were the chief buyers, although moderate quantities went to manufacturers.

It is estimated that Boston holds only about 40,000,000 pounds of wool compared with about 139,000,000 pounds exclusive of government owned wools at this time last year. The large surplus of wools in sight 20 months ago has disappeared much more rapidly than was expected. Government holdings at this time last year were about 100,000,000 pounds, but have now been reduced to about 11,000,000 pounds. Prices generally are 25 to 50 per cent higher than last spring.

WHEAT PRICES UNSETTLED

The unsettled state in the wheat market which arrived with the new year still persists. Financial conditions have been discouraging, Europe can buy wheat in Argentina cheaper than our own, flour demand has not increased as much as expected, and rains have brought some relief for drought in the southwestern winter wheat belt.

Milling demand for wheat broadened after the first of January as it was expected to do, but with the wheat market fluctuating in a rather erratic manner, flour buyers were discouraged from taking hold as fully as they might have done and the help to the market from this source was not as great as expected.

Some parts of the southwest have received heavy rains in the last day or two. How serious the damage from dry weather has been can not be determined until spring weather arrives and much depends, of course, on whether th drought has been permanently broken.

Nebraska, Kansas, Oklahoma and Texas combined have nearly 50 per cent of the entire winter wheat acreage and the average condition of the four states, according to the official report, is 61. Records of the past show that very rarely does the crop improve beyond the December condition. This year may prove to be one of those exceptional cases.

ARGENTINE WHEAT IN LIME LIGHT.

Argentine wheat for January and February shipment is being offered to Europe at prices 8 to 10 cents cheaper than American hard winter via the gulf. Germany is reported to have bought 7,250,000 bushels of this wheat in the last two weeks. In spite of reported large crops of wheat and rye, world shipments to Germany thus far in the crop year have been about double those of the corresponding period in the previous year.

In general, Europe is buying only on a hand to mouth basis at the present time. Large imports thus far have not resulted in building up reserves, hence it is still necessary to draw upon North American wheat to some extent, notwithstanding lower quotations on Argentine grain as the latter requires much longer for transport.

Argentine growers are noted speculators and much depends upon whether they sell freely at the prevailing level or not. Financial conditions in the Argentine are said to be about as unfavorable as among producers in the United States, hence there may be a fairly rapid movement of the crop which is practically all harvested. If not, European demand should be sufficient to absorb the Argentine surplus without lowering prices.

CORN PRICES SHOW RESISTANCE.

The corn market shows a good deal of stability at the prevailing level of prices. Producers are unwilling to sell on declines so that periods of weakness are short-lived as a rule. The rate at which corn is passing into distributive channels is highly satisfactory. Purchases for Russian relief aggregate nearly 5,000,000 bushels already. It is reported that about 750,000 tons of grain will be taken for this purpose, most of which will be corn which suggests a total of over 25,000,000 bushels.

OATS DEMAND PICKS UP.

The first of the year has brought an increase in the eastern and southern demand for oats so that the largest sales in a long while have been consummated. Exporters have made inquiries also. The visible supply is decreasing rather slowly and values are unlikely to enhance a great deal as long as the demand can be easily satisfied from arrivals at primaries and small withdrawals from the supply at terminals. On the other hand, declines in price are likely to be temporary.

The range of cash grain prices for the week ending January 11 was as follows:

Chicago—Wheat: No. 3 hard, $1.04½@1.11¼. Corn: No. 2 mixed, 47¼@48½c; No. 3, 46@48c; No. 4, 44½@46½c; No. 2 yellow, 47¼@49c; No. 3, 46¼@47¾c; No. 4, 44½@47c; No. 2 white, 47¼@48½c; No. 3, 46¼@48c; No. 4, 44½@47c. Oats: No. 2 white, 35¾@37¾c; No. 3, 33@36c; No. 4, 32¼@35c. Rye: 78¾@80½c. Barley: 52@60c.

CLOVER SEED MARKET REACTS.

The Australian market is quiet as non-European countries are still buying wheat. Japan has been a recent buyer in our own northwest.

A natural reaction following a long period of strength manifested itself in clover seed markets in the last few days. Prices usually advance during the early spring months when seeding starts, but the price of red clover is slightly out of line with farm grains and other seeds, particularly alsike and alfalfa, so that further gains may be small although the recent break may be fully repaired.

Toledo, per bushel: Prime red clover, $13.60; prime alsike, $11.55@11.80; prime timothy, $3.20.

FEED MARKETS WEAKEN.

Increased offerings of wheat feeds especially from the southwest have weakened the market slightly, while hominy, gluten feed, cottonseed meal and linseed meal also are quoted lower than a week ago. Demnad for tankage remains exceptional and demand for other feeds is about all that can be expected under prevailing conditions.

Chicago—Bran, $24.50; standard middlings, $24.75; flour middlings, $28; hominy feed, $22.50; gluten feed, $35.65; cottonseed meal, 43 per cent, $44; 36 per cent, $40; oil meal, $46; tankage, $52.50@55.

HAY MARKETS STILL LIFELESS

Inactivity describes the hay markets as receipts are light and demand is limited to immediate needs. Country loadings in some surplus sections are said to be increasing. Southern buying has improved slightly during the last week.

Chicago—No. 1 timothy, $22@24; No. 2, $19@21; No. 3, $15@17; No. 1 light clover, mixed, $21@23; No. 1 clover, $17@19; No. 1 clover, mixed, $19@20; sample and threshed hay, $12@16; No. 1 to choice alfalfa, $17@23; Nebraska and South Dakota prairie, $15@17; straw, rye, $15@16; oats, $13@14; wheat, $12@13.

HEAVY YIELD CRUSHES EGG MARKET.

Egg prices crashed downward last week under the impetus of large receipts at the principal markets which reflected heavy production in the country and gave buyers confidence that the supply would be ample throughout the winter.

Prices are down 20 to 25 cents at Chicago from the high point of the season a few weeks ago.

Cold storage holdings in the United States on January 1, according to the preliminary report of the Bureau of Markets, were 904,000 cases compared with 408,000 cases a

(Continued on page sixteen.)

Little Journeys to Market

COTTON EXCHANGES.

The two chief cotton markets in the United States are the New York Cotton Exchange and the New Orleans Cotton Exchange. Other points at which a great deal of cotton is handled are Galveston, Houston, Memphis, Savannah, Augusta, Norfolk, Charleston, Little Rock, Wilmington, Boston, St. Louis, Mobile, Dallas and Philadelphia. The location of the cotton growing areas and the manufacturing centers determine which markets will lead. Abroad, the principal markets are Liverpool in England, Bremen in Germany, Havre in France, Alexandria in Egypt and Bombay in India.

The New Orleans cotton market as well as the others in the United States, with the exception of New York, are largely spot markets. The transactions involve the actual exchange of ownership of cotton which is already on hand or contracted for although at New Orleans "futures" are dealt in to some extent.

Formerly a good deal of actual cotton was handled on the New York Cotton Exchange, but the business has gradually changed until the bulk of the transactions are in contracts for future delivery. The chief excuse given for these, as in the grain trade, is that they afford cotton merchants and manufacturers an opportunity to insure themselves against the risk of loss due to fluctuations in prices. This process, known as "hedging," we have previously described. Many of the purchases and sales made in matching hedging transactions are purely speculative in character. Delivery of cotton upon these contracts is seldom called for.

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Bouck Men Ousted

Followers of William Bouck, deposed master of the Washington state grange, were finally ousted from the Fort Colville grange at a meeting held Saturday. The action followed a ruling by State Master Fred Nelson and is regarded as significant, since the Fort Colville grange had been made a test case by the members of the Washington Progressive grange, the Bouck organization. It also voids the transfer of the grange hall by Bouck men to one of their number.

The decision of the state master was brought to the meeting by Frank Graham of Okanogan, a member of the state executive committee and representative of the state master. The ruling was:

"A member of the grange who has voted to secede from the national or state grange can not participate in a regular grange meeting. He has by reason of voting to secede separated himself from the order. This very definitely means 'to get out,' therefore, he could not remain within. If such a person wishes to return and the members are willing to allow him that privilege, the same as in a demit, then he should apologize and again take the obligations."

Mr. Graham ruled that the Bouck men had by their own act lost their status as members and accordingly their transfer of the grange property was not legal.

The meeting was attended by 25 of the old grange members and five of the Bouck organization, and upon refusal of the five to renew their obligation to the old grange they were asked to retire from the meeting.

State Wool Growers

(Continued from page three.)

scouring plant the best in the United States. Portland, he said, has railroad competition to the interior and low ocean rates. It is centrally located on the Pacific coast, where he believes most of the western wool will be marketed. He closed by calling attention to the fact that 20,000,000 pounds of wool per annum are already manufactured on the Coast.

R. A. Ward, manager of the Oregon wool and mohair pool, answering an invitation to speak, said a great deal is to be learned about wool marketing. The wool growers of Oregon, after painful experience, decided to sell for themselves. To widen the scope of the pool, the name had been changed to "Pacific Cooperative Wool Marketing organization." We have, he said, averaged from 2 to 8 cents a pound higher than any other organization or individual in the northwest. We sell direct to the manufacturer, but have no objection to selling to dealers. We use the warehouse Mr. Faulkner told you about. Twenty million pounds of low grade wool, he said, are now consumed on the Coast. These bring 1 to 2 cents more than the Boston price. With the fine wools it is different. We successfully sell by sample, as the letter read proves. To market wool successfully we must know what kind it is and how much it will shrink. Mr. Ward then told of the contract, which is definitely to market all the members' wool for a five-year period, which, he said, is simply five years' orderly marketing, selling throughout the months when it will bring the best price. We have, he said, facilities for handling and for knowing the market. If there is a better place, we are ready to go with you, but we do not want a lot of little organizations, which the buyers will play against each other.

COOPERATIVE MARKETING.

A. J. Knollin was next introduced. He is manager of the Wool Growers' Cooperative Commission company, with branches in Chicago, Kansas City, St. Joseph, Omaha and St. Paul. He said he had been 40 years marketing sheep. This organization was taken up when the commission charges seemed too high and the commission men would not grant any reduction. He took it up because it seemed a worthy cause. He knew a work could be done in organizing for marketing, rather than the mere difference of $10 a car. With 85 commission houses at one sheep market there is no concerted action for orderly marketing on that market, but each commission firm handles his consignment as seems best to him. He told of the heavy runs on Sunday, so the Monday and Tuesday markets are often glutted. The system of cooperative marketing enables him to market where the demand is best. The splitting up of and increase in the number of firms had made necessary the increased charges, so it was up to the producer to reduce the number of commission houses. Early lambing now practiced in some places makes it easier to string out the shipments. He declared prospects for next year excellent. He got the largest percent of Washington lambs of any state and they are the best lambs. He closed by urging the value of organization. "All for one and one for all."

The place of the next meeting was left to the executive committee. It is hoped to secure the next meeting of the national association at Spokane, in which case the state meeting will be held there at the same time.

The banquet, which closed the sessions, was held at the Commercial hotel.

THE OFFICERS.

All old officers were reelected by acclamation, as follows:

President, T. J. Drumheller, Walla Walla.
Vice president, William McGuffey, Yakima.
Secretary, R. D. Sears, Prosser.

Live Stock Producers

At the first meeting of the board of directors of the National Live Stock Producers' association, in Chicago, the following officers were elected: President, John G. Brown of Indiana; vice president, C. E. Collins of Colorado; secretary-treasurer, E. H. Cunningham, Des Moines, Iowa. These officers constitute the executive committee.

Urgent requests were received to establish terminal commission associations and allied stocker and feeder companies at Chicago, Indianapolis, Pittsburgh, Cleveland, Buffalo and Detroit.

The national board of directors decided to make a thorough investigation of the conditions surrounding each of these markets and no cooperative company will be established at any terminal before the trade prospects warrant it as a sound business basis.

A Purebred or a Scrub Sire?

(Continued from page one.)

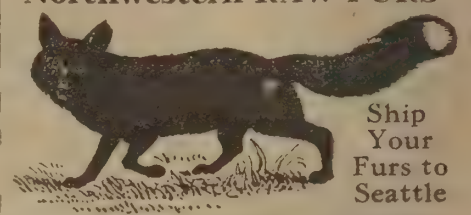
of scrub cattle, hogs, sheep and horses. The meeting was enthusiastic and voted January 24 as a date on which everybody interested in the fight should meet in each of the 26 counties of the state that have county agents, and in other counties where willing leaders were found, to lay plans for a survey into every locality to find out just how many scrub sires there were and start the work of replacing them by purebreds. Following the Spokane meeting five other district meetings were held in rapid succession at Walla Walla, Chehalis, Everett, Wenatchee and Yakima. These meetings agreed unanimously upon the day (January 24) for the county meetings.

At these county meetings leaders will be selected to carry the movement into each community. It is hoped that within a short time there will be, as a result, a reliable census and classification of the scrub sires now in use throughout the state, and corresponding information as to the number and kinds of purebreds that might well be substituted for them. With this data at hand, the extension service, farmers who see the benefit to be gained, breeders and stockmen will unite in a definite program of making the exchanges and financing the installation of good sires to continue with increased energy the process of improving the general live stock of the state.

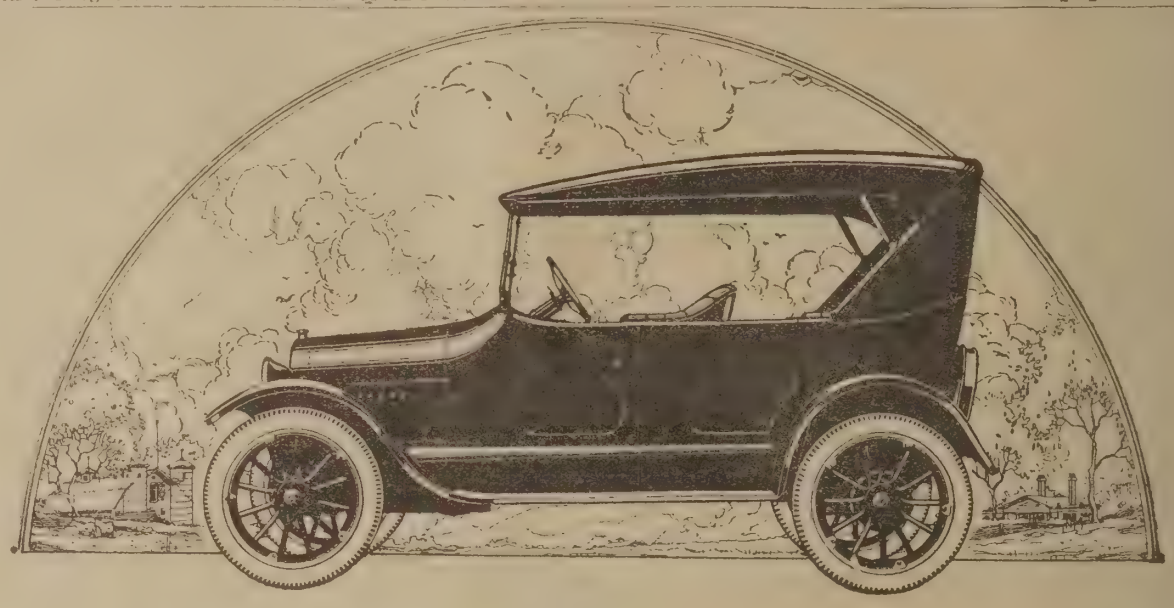
TAKE UP CLUB WORK.

The Orcas Island community has the distinction of being the district in the county to take up boys' and girls' club work as one of the projects in the farm bureau for the coming year. W. H. Meyer of the East Sound Agricultural school has been appointed to take charge of this work.

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What Soil Needs

Is a Debatable Orchard Problem

Orchardists, horticultural scientists, soil chemists and others who delve into fertility problems, often disagree. It is well to begin the discussion of the subject of orchard fertility, therefore, with one proposition on which they are all agreed, namely, that there is no ironclad rule to be applied to all localities. A second point of agreement, a sort of companion to the former, is that local fertility work should be based upon knowledge of local soil conditions as determined by reliable experimentation.

Now to some of the things on which there is not universal agreement:

"In the experiments of the Pennsylvania station, carried on for a period of 35 years, the greatest yields of crops were due to fertilizing with a well-balanced fertilizer, containing not nitrogen alone, but also soluble acid phosphate and potash," says E. P. Newsom of Tacoma, lecturer and chemist.

"In our experiments in the Wenatchee valley of Washington we obtained practically no results from phosphorus, potash, sulphur or lime. Nitrogen gave good results on the vigor of the trees and the fruit produced." This in substance is the statement of Roy Larsen, soil investigator in that district.

Results of Experiments.

At the recent fruit conference in Spokane Mr. Larsen presented some interesting figures from his experiments in the Wenatchee district.

Apple trees of the Delicious variety in the Fred Olds orchards produced an average of 13.55 boxes per tree where fertilized with nitrogen alone, combinations of nitrogen and phosphorus, nitrogen, phosphorus and potash, and nitrogen and potash. Those fertilized with the nitrogen alone yielded as heavily as did those with the combined fertilizers and in most instances more heavily. Trees fertilized with phosphorus, potash and phosphorus and potash combined, but in all cases without nitrogen, averaged 7.76 boxes per tree.

In the orchard of Henry Smith Delicious trees on an unfertilized plot averaged 9.4 boxes per tree, while with phosphorus and potash they averaged 9.3 boxes, with phosphorus alone 9.8 boxes and with nitrogen 11.4 boxes.

Winesap trees in the O. B. Shay orchard averaged with phosphorus fertilizer 8.35 boxes, with potash 9.15, with potash and phosphorus together 8.9, with nitrogen alone 10.3 and with no fertilizer at all 10 boxes. This orchard had grown alfalfa for six years.

In the L. T. Wilson orchard of Jonathans, where clean cultivation had been practiced, trees on a plot where Clark's special orchard dressing, a complete commercial fertilizer, was applied averaged 8.7 boxes per tree, according to Mr. Larsen, while with nitrogen alone similar adjoining trees averaged 10.3 and with sulphate of ammonia 10.1.

In the Lillis-Or orchard of Winesaps, where clean cultivation was practiced, an application of sheep manure resulted in an average of 7.6 boxes per tree, as against 16.6 boxes where nitrogen of soda was used.

Availability Is Essential.

Mr. Larsen says that the average soils of the Pacific northwest are rich in potash and phosphorus, but not so rich in nitrogen.

While not disagreeing with this statement, Mr. Larsen emphasizes the point that it is not only the presence of these fertility elements in the soil that is necessary, but their availability in a form to be used as foods by the plants and trees.

"The theory that we should analyze the soil and supply the particular plant food lacking has not worked out successfully in its application to our orchards and farm crops," says Mr. Newsom, "because an analysis of the soil may reveal the existence of an abundance of plant food; for instance, phosphate and potash, but in an unavailable form." Referring to the experiments at the Pennsylvania station, he said: "It was found that, although the analysis revealed the soil to be unusually rich in phosphate and potash, whenever either the potash or phosphate, in soluble form, was omitted from the fertilizer, the yield of crops was greatly lessened."

A point upon which there seems to be universal agreement is that orchard soils should be built up to a state of fertility that will reduce the necessity of the constant application of fertilizers of any kind. While Mr. Larsen is a devout believer in the value of nitrogen as a fertilizing element, applied in the form of nitrate of soda, he does not recommend its continuous use year after year, but, on the other hand, urges orchardists to build up fertility of their soil by means of cover crops. Where barnyard manures are available they are strongly recommended by nearly all authorities. In one instance where Mr. Larsen reported no apparent results from the use of other fertilizing elements than nitrogen, Mr. Newsom declared

(Continued on page eleven.)

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Community Bull

Associations Help Solve Problem

Modification of the bull association plan advocated by the dairy division of the United States department of agriculture are tried frequently. Most of these plans consist of loose agreements between two or more breeders. In some cases a bull is purchased by a group of men. Sometimes two or more breeders exchange their bulls. The idea in this case is to do close line breeding and yet avoid inbreeding.

A specialist of the department who has had extensive opportunity to observe the working of most of these methods, when asked about their success, replied that some of them would give excellent results it carried out, but it was generally impossible to get them to function, for lack of the driving power and balancing influences that are found in the regular bull association.

"These ideas," he said, "are all right, but they have no working agreements nor plans of procedure to properly regulate their operation. The experience of the department is that such attempts are useless for general adoption, unless organized in a practical, definite, business-like way by a person of experience who can break down the prejudices of individuals. When such a person undertakes the organization of a cooperative breeding enterprise in a given locality, he generally finds it easier and more beneficial to form a regular cooperative bull association than a partnership of the type indicated.

"When attempts are made to organize a bull association it is nearly always the case that most farmers agree readily, on general principles, that the plan is excellent for the other fellow, but not so good for himself. It is necessary to have a community thoroughly interested in the plan and familiar with its method of operation. Some leader must bring these things about, and it is most unusual if any one other than an extension specialist will do this work. Even a partnership of two men is frequently found to meet with the same difficulty.

"After a properly organized association has been perfected it has in it the necessary conditions for permanence. Yet a directing supervision is necessary to its fullest success, and this can best be given by the regular extension organization of the department cooperating with the state agricultural colleges, and the amount of help that can be rendered will depend on how well the form of organization fits in with the other work of the extension forces.

"The plan of action embodied in the regular form of cooperative bull association is a plan approved by experience. It does better than any other plan in use. It has been tried, and it works. Some sort of cooperation for the maintenance of better sires is essential to the fullest development of the dairy industry, and I should advise any who are interested to stay with the regular association plan and carry it through without compromise."

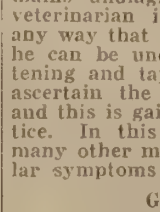
LIFE PRESERVERS FOR LIVE STOCK

By DR. E. E. WEGNER, W. S. C.

RESPIRATORY TRACT, ARTICLE 8.

Pleurisy.

This trouble is one that the average owner knows very little about and gives very little thought to. It is often complicated with pneumonia, but again it may appear alone, as it frequently does. It is nearly always caused by exposure though it may appear at any time of the year. We sometimes get the wrong idea of exposure as a cause of disease and think that exposure means simply getting cold and therefore that winter time would be the time of greatest danger. This may be true but more disease is caused by sudden change of temperature than anything else and this is more likely to occur in the spring time or fall than in the winter. Animals are at work in the spring when the wind is chilly and get well warmed up when they are stopped and allowed to stand for a time in that heated condition. They cool off very quickly and therein lies the danger. Or, in the summer, when the nights get quite cold, the animals are brought in from the field warm and tired and if there is not sufficient barn room some must stay outside all night tied to a feed rack. This is especially true in the harvest time. It is this quick chilling that is dangerous. Many animals stay out all winter in severe weather and do not suffer from exposure to the same extent that others suffer in the spring and fall. The animal wintering out may get cold, but the change is not abrupt. A man may go get thoroughly cold in winter and not suffer any ill effects, but if he gets sweaty and hot and then must suddenly cool off the danger is great.



Development the Case.

Pleurisy in animals may develop slowly, or so it appears to the owner. His animal suffers from pain in the chest but does not complain until the trouble gets unbearable and this may take several days. Many times I have been told that an animal worked many days gradually getting worse, but little was thought of it until it became apparent that something serious was wrong, when an examination revealed a well developed case of pleurisy, with probably fluid in the chest.

If these cases could be identified early the losses would be very slight, but when the disease has become well developed before it is recognized the danger is great. The diagnosis of pleurisy is impossible unless the person is familiar with special methods of examination. I have never seen a case diagnosed at home, as the owner does not know the method of examining a chest. The symptoms are more or less obscure and the disease remains undiagnosed until an experienced veterinarian is employed. Nor is there any way that one can tell another so that he can be understood, as it requires listening and tapping on the chest wall to ascertain the character of the contents, and this is gained by experience and practice. In this respect pleurisy is unlike many other maladies. It has no spectacular symptoms that are easily recognized.

Get at It Early.

In the early stages mustard plasters on the chest wall are in order, as also blanketing the animals and treating them much like the cases of pneumonia recently referred to, and particularly the treatment of pneumonia in the early stages. In the



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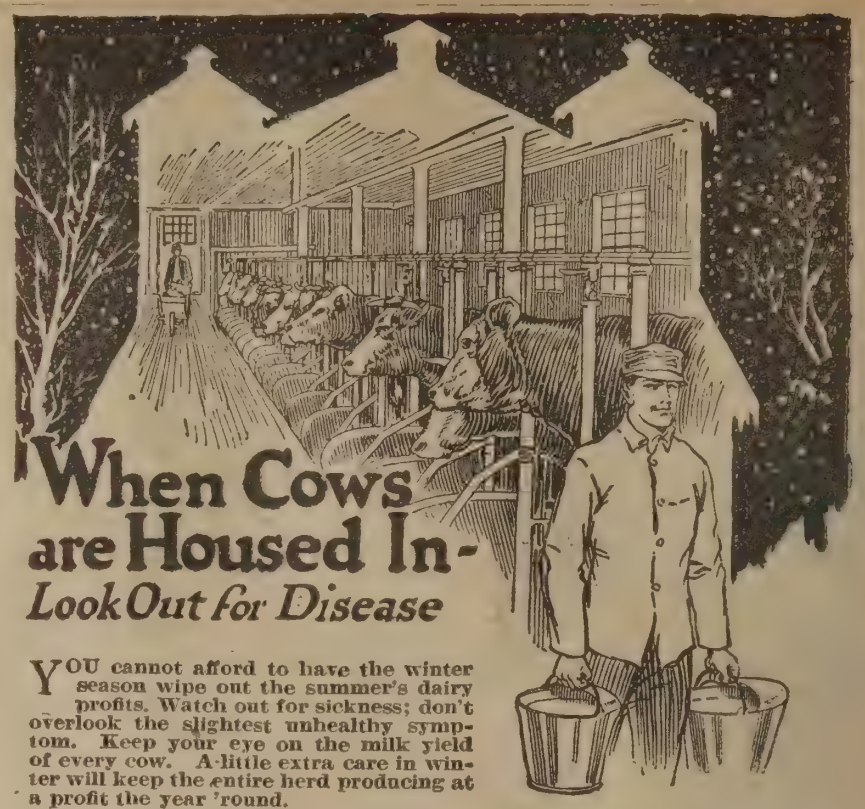
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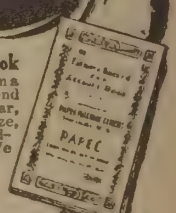
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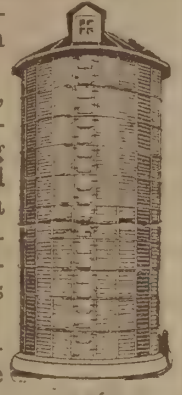


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That's what farmers tell me, and I believe it. The silo seems to be right in every way. I invented it, and I'm no long-haired inventor, but just a plain business man.



3632 H-L-F Silos in use

I invented it in 1914, when Hewitt - Lea - Funck Co. was having a hard time to sell stave silos. I got up a silo that was a building, rather than a barrel, and farmers jumped at it.

I figured, and farmers everywhere agree with this, that a wooden silo actually does keep silage better than anything on the masonry order. But the common stave silos shrink apart like any other barrel, and farmers feel, as William Cox of Kendrick, Idaho, wrote us a short time ago: "I have chores enough without climbing all over a silo with a monkey wrench every once in a while.

This H-L-F Silo, then, is a building with double walls, practically round, very strong. The outer wall protects the inner from weather, and the dead air space between walls prevents practically all trouble from frozen silage.

H-L-F Silo

Direct to You at Factory Price

That's the way we sell the silo—direct to farmers at factory price. We're taking our loss this year and prices show a big cut over 1921. We have no quarrel with agents—in fact we are willing to pay a farmer a small commission for interesting his neighbors—but we refuse to sweeten the selling price to pay for glad-hand men to travel around the country in automobiles.

Single Silos Anywhere at Carload Price

We make our silos, all the way from the tree, in a modern silo plant in the big tree country. The popularity of the silo makes it possible to form carloads by shipping in one car orders for several nearby points, so as to give every farmer a rock-bottom freight paid price—the carload price for a single silo.

Free Roof Saves $35.00

If I could afford to take a page to it, I'd tell you a lot more about this silo. For one thing, we give roofs free with early orders—that saves you $35.00. If you're interested in a silo, I wish you'd write—or just use the coupon—for my book, entitled "All About Silos." Lots of information in it, and with it goes a price list and owner list. Send the coupon right away, please. Then, if you decide to buy, you'll be in time for the free roof. And, as I said at the start, this H-L-F Silo has got anything skinned in the way of a Silo.

759



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latter stages of pleurisy the sacs fill with fluid and emerse the lungs, or the lungs float upon the fluid until the lower parts get filled with fluid and become useless for breathing purposes. The animals then are very short winded and may be almost suffocated. The portion of the lung in the fluid becomes so diseased that it is permanently useless and even if some of these animals live they are frequently short winded and quite valueless for working purposes.

We frequently draw off this collected fluid and this gives relief for a short time, but the chest cavity usually fills again within a short time. I have removed as much as eight to ten gallons of fluid at the first tapping, this, of course, gave temporary relief but not permanent.

To be successfully treated pleurisy must be diagnosed early, as after it has once well established itself the chance of getting a recovery that leaves the animal workable is rather remote. And it is a fact that an animal that has lived only to slow down a team for the rest of its life because of its short windedness, is not worth any more than a dead animal, unless it has valuable breeding qualities.

—Copyright, 1922, by E. E. Wegner.

Motor Freezing

A CORRECTION.

By L. J. Smith, W. S. C.

The article which appeared in a recent issue of this paper, under the above heading, requires further explanation. The impression was wrongly given that calcium chloride to be used in an anti-freezing solution was common salt.

It is a chemical salt, but not the salt used on our tables, which is chemically known as sodium chloride, not calcium chloride.

From a letter just received in regard to this matter, the writer apparently had the impression that calcium chloride was the same as chloride of lime, the commonly used bleaching powder and disinfectant, which is highly corrosive. Pure calcium chloride is mentioned in the standard automobile books as one of the commonly used anti-freezing solutions; but with the caution that it must be free from acid, which if present in any anti-freezing solution, would cause electrolytic action, and therefore radiator leaks.

The article above referred to gave the per cents of the sale by volume. Page gives the following, which is simpler:

Calcium chloride.	Freezing point.
2 lbs. to 1 gal. of water	18 degrees F.
3 lbs. to 1 gal. of water	1½ degrees F.
4 lbs. to 1 gal. of water	17 degr's below zero.

From the above, 3½ pounds per gallon of water would freeze at 8 or 9 degrees below zero.

If the solution has acid in it, it will turn blue litmus paper red; and the acidity should be neutralized by adding ammonia or soda ash in small quantities and stirring well, until the blue litmus paper no longer turns red. Litmus paper may be bought at any drug store.

Glycerine or any of the patent solutions should be tested for acidity before using. One should not buy a patent solution, unless it has the stamp of a widely and favorably known firm.

Wheat and Taxes

Are taxes a menace to the wheat farmer? If so, what are we going to do about it?

State Senator F. J. Wilmer of Rosalia, a recognized authority on taxation problems, is going to answer these questions before the annual meeting of the Grain Growers, Shippers and Millers' association in Spokane, January 25-27.

Other speakers on the program include D. W. Whitlock of the United States department of agriculture; J. C. Cunningham of the state department of agriculture; E. C. Johnson, director of the state college experiment station; W. J. Robinson of the Washington Wheat Growers' association; Professor George Severance of the state college; President Alfred Atkinson of the Montana State college; J. K. McCornack, Spokane banker; F. C. Forrest, banker of Pullman; W. B. Armstrong, president of the state farm bureau; Governor D. W. Davis of Idaho; W. T. Harshman, milling chemist of Spokane; M. P. Miller of Moscow, Idaho; R. L. Cox Jr. of the United States department of agriculture; E. J. Iddings, dean of the college of agriculture of the University of Idaho; B. Gillespie, farmer of Ritzville, and many others who will deliver formal addresses or participate in the discussions of vital problems.

The program includes such subjects as federal and state grain grades, general agricultural problems, the farmer's financial problem, cost of production studies, farming and banking, the war finance corporation, the milling of wheat, the farm bureau, the effect of variety of wheat on the flour produced, diversified farming, taxes, tillage methods and so on.

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POULTRY

Enter Poultry Game

"We only have 300 hens which we are raising while we are learning the business," explained E. M. Cook of Alderwood Manor, who owns one of the many small poultry farms which dominate this district. Most of the farms are five acres in size and in all cases the land was purchased in the rough, the new owner either clearing out the stumps himself or contracting the work.

A large per cent of these residents have come to the neighborhood with the intention of working into the poultry game as they learned it by actual experience and very often we find a flock that is managed entirely by the housewife while the husband looks after the heavy work, such as feeding grain and cleaning the dropping boards in the morning before going to work.

In this particular case Mr. Cook attends to the work himself, having moved his family from Minnesota for their health less than a year ago. Since he got rather a late start with his new laying house, he decided to equip the building for mature birds, and therefore began to look around the neighborhood to find some pullets which would soon begin laying. He found some one who was overstocked with pullets and offered the birds at $1.50 each at the age of three and four months. At this price, Mr. Cook figures one can be more certain of getting a good start and he avoids the expense of a brooder and does not have to market the male birds.

"We had good luck in getting the birds to laying and by the first of December they were producing a 70 per cent lay," said Mr. Cook. "Of course we are using plenty of egg mash and sprouted oats as well as about 14 quarts of buttermilk daily. The lights are turned on at 6 a. m. and then again in the evening until 7.

"There are many improvements that we intend to add as we get at them, such as an oat sprouter and litter carrier. An old wheelbarrow does the work for cleaning the dropping boards at present and I have one that will just fit under the boards. It is important to get this job done early in the day so as to avoid foul air. The litter should also be kept clean and it will prevent the eggs from being dirty."

The poultry house is the open front type with glass windows that can be adjusted and the lower frame for ventilation can be set at any angle desired to break the force of the draft and direct it upward. The roosts are also protected from draft by boards which lead the incoming air behind and above, thus giving an abundance of fresh air. The roof is peaked and shingled, which is considered better than the ordinary tarred paper and it lasts longer. The arrangement is so that another section can be added later on and still be handy to the feed room, which will then be in the center of the entire building.

"We keep one cow for family use and find that the birds are more fond of the clabbered milk than they are of the buttermilk," continued Mr. Cook. "There is one trouble with it, however, and that is the fact that the milk will not clabber in cold weather. It either has to be kept warm or else allowed to stand for several days before it is ready for use. When we first began to feed the flock we tried mixing the grains at home, but we found there was a heavier egg production when we used the ready mixed feeds."

An Errant Thermometer

By MRS. L. GOOS, Washtucna, Wash.

Several years ago I had the misfortune of breaking my thermometer while cleaning the incubator. I secured a new one at once and started the incubator again. I noticed that it seemed to warm up unusually easy, also that, although I kept the thermometer near the 103 degree mark, the embryo chicks were not developing as fast as I thought they should. On the 21st day not an egg pipped. I kept the temperature up until the 23d day, but did not get a single chick. As the new thermometer was a standard make I could not understand the trouble, so I tried it once more, with the same results. One evening I brought the thermometer into the house and laid it on the dining table. My husband, who sat nearby, saw it and picked it up. Suddenly he exclaimed: "Why, I have a fever."

I looked at the thermometer, which he was still holding in his hand, and it registered 102 degrees. As I knew that my husband was in good health, the riddle was solved. We returned the thermometer to the dealer and he gave us a new one, which was correct. But I had wasted about 250 purebred eggs.

Sell Them at Auction

The idea of purebred sire sales has been successfully extended to poultry in Sonoma county, Cal. The county agent reports that there were received, preparatory to a White Leghorn cockerel sale held at Petaluma on October 15, consignments from 14 breeders on the Pacific coast.

Most of the 52 cockerels consigned represented unusually high breeding for poultry. Many of them had pedigrees extending back eight or nine generations, with trap-nest records of their maternal ancestors. Most of them had inheritance records of over 275 eggs, and some over 300 eggs, annually. A significant fact is that 1000 copies of the catalogue of this sale were printed, indicating the widespread interest in guaranteed purebred poultry stock.

Poultry Demonstrations

W. D. Buchanan, poultry specialist from the state college, Pullman, has arranged to devote 10 days to Lewis county during the next few months to assemble poultrymen at various convenient centers and instruct them in the business. Demonstrations of culling of birds and other information that poultrymen can use to advantage will be features of the meeting. Egg production in Lewis county is taking first rank as one of the biggest industries of the county, and more persons are making plans to engage in the business extensively next spring.

FEEDING GREEN CUT BONE.

In a recent item concerning the feeding of green cut bone as a partial remedy for the habit of feather-pulling in chickens, a typographical error was made, in which the word "pound" appeared where the word "ounce" should have been used. The statement should have read: "Green bone, fed at the rate of about one-half ounce per bird three times a week, will also help to cure this condition."

COOPERATIVE EGG MARKETING.

Through operation of cooperative buying as well as cooperative selling organizations, poultrymen of Denmark who sell their eggs in England are said to get back 98 per cent of the price the consumer pays for them.



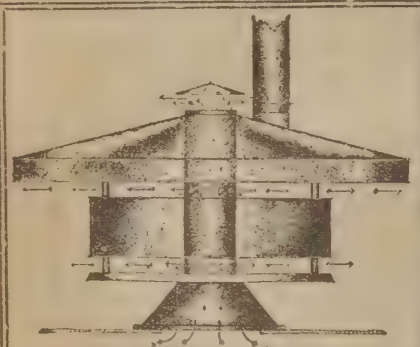
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Nerves whipped by tea or coffee won't keep on running, and they won't stand constant whipping.

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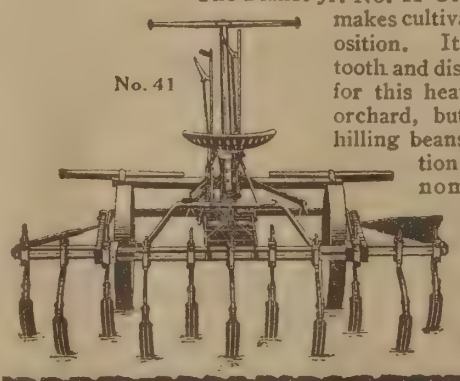
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ORCHARD

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Costs to Consumers

I was in Philadelphia over Christmas and concluded to visit at Wayne, a suburb of Philadelphia, where I spent a few days. Where I stopped they had apples on the table in a large dish and every one had fruit according to taste and for every meal. The variety was Rhode Island Greening, fairly good to the taste, but scabby, scaly and such as in the northwest would be "C" grade or thrown into the cull pile, still they were ripe and of rather good flavor.

"How much do you pay for apples?" I inquired.

"Thirty-five cents for quarter peck," said my hostess.

"You mean 35 cents per peck?" I rejoined.

"No, I mean 35 cents per quarter peck and potatoes the same price," was the reply.

"Let me see," I said, "35 cents x 4 equals $1.40 per peck. One dollar forty multiplied by four equals $5.60 per bushel for either potatoes or apples."

"Now, how much did the farmer receive?"

"I do not know," was the reply.

Neither do I, but from other investigations I have made I am guessing the grower received less than one-fourth of that amount, yet here they are right near the great markets.

Recently I talked with a large apple grower on the Hudson river, near the city of New York, and this grower allowed his apples to rot in the orchard in the year 1920 because the price would not justify picking them, at the same time apples in New York city retailed for $5 per bushel.

G. L.

What Orchard Soil Needs

(Continued from page seven.)

that the orchard had received a heavy coating of barnyard manure three years previous, which he thought served to remove the necessity in that case of the fertilizers other than nitrogen.

Bacteria Essential.

"The chief agency in rendering plant food in the soil available is carbon dioxide," says Mr. Newsom. "This is generated through bacterial action in the process of the decay of vegetable or animal matter in the soil. It is also derived from the atmosphere and finds its way into the soil by means of the rain, which carries it in solution. But the bacterial action is slow and does not supply, even with the aid of alfalfa or other cover crop, the needed carbon dioxide fast enough to prevent the 'skip' crop every other year in our orchards, especially with the older trees.

"The value of rotation of crops depends upon the slowness of bacterial action. A root crop, for instance, feeding heavily upon potash, if followed by a root crop exhausts the potash faster than the supply of carbon dioxide can render it available, and hence should be succeeded in the second year by wheat or corn, that, while feeding heavily on the phosphate, uses or assimilates the potash sparingly.

"But trees in an orchard can not be rotated. Hence they should be supplied with available plant food, not nitrogen alone, but potash and superphosphate as well, to supplement the action of the bacteria and give the orchardist a maximum crop every year.

"The enthusiastic horticulturist may think he has discovered a mare's nest, or something very wonderful, when he tells you he put potash or superphosphate on an orchard and got no results. With an inadequate knowledge of the chemistry of fertilizing he may jump to the conclusion that there is enough potash and phosphate in the soil to last a thousand years, and, therefore, they are not needed. He should remember that a man with dyspepsia can not eat a regular meal, however palatable and delicious it may be. The leaf is the stomach of the tree. With a given leafage the tree can only assimilate a certain amount of available potash and phosphate. Bacterial action may supply enough available potash and phosphate to feed the tree with the given leafage, but with only a fair or poor crop of apples.

"But suppose we increase the leafage by supplying nitrogen alone without at the same time supplying additional soluble potash and phosphate. The case is the same as that of the man who, though cured of the dyspepsia, is not allowed to have anything more than his malted milk. One, therefore, might just as well put brick dust on the ground of his or her orchard as to put there superphosphate or potash and expect results, without at the same time applying to the the additional nitrogen to increase the stomach capacity, so to speak, of the tree so that it will be able to assimilate it.

"The horticulturist makes another discovery. He feeds his trees on nitrogen alone and the first year, perhaps, he gets an increased yield, and he concludes that nitrogen is the only thing needed in a fertilizer. This conclusion is equally as erroneous as the first one. In increasing the leafage the first year there is the chance that there was a slight overplus of availability of the other plant food, due to bacterial action. But when he continues the process over any measurable period of time he will find that he has laid too heavy a burden on the backs of the bacteria.

"It must be patent, therefore, that an orchardist takes little or no risk when he uses a complete, well-balanced fertilizer on his orchard."

VALUE OF SHEEP MANURE.

The moisture content makes a great difference in the fertilizing value of sheep manure and other manures. The fertilizing elements in common sheep manure are largely nitrogen, phosphorus and potash. It will test approximately 1.8 per cent nitrogen, 1 per cent phosphorus and 1.8 per cent potash. The average manure contains these elements in approximately one-third the amounts found in the sheep fertilizer.

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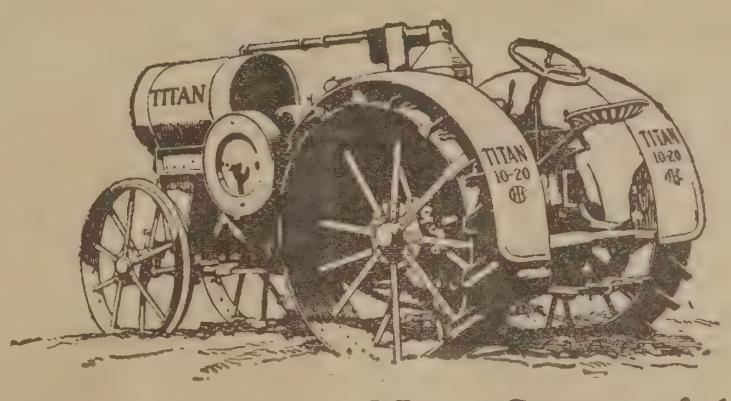
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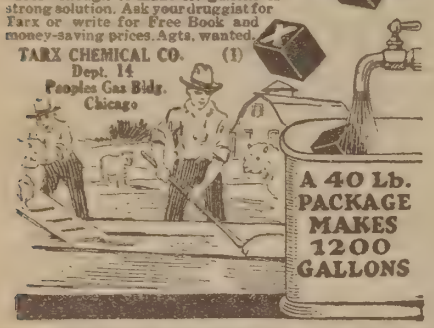
Tarx is a money saver for every user of dips and disinfectants. Just drop one small cube in a gallon of water and you have one gallon of the best dipping and disinfecting solution. You pay nothing for bottles, barrels or cans, nothing for waste or breakage or leakage. No freight on factory water which you can just as well add at home.

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by Parcel Post. Takes up small space. Will not freeze. Keeps indefinitely. Won't lose its strength. Makes any strength solution you need. Tarx positively destroys lice, ticks and other vermin.

Comes in 5 lb. package divided into 150 cubes—enough to make 150 gallons of strong solution. Ask your druggist for Tarx or write for Free Book and money-saving prices. Agts. wanted.

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Dept. 14
Peoples Gas Bldg.
Chicago



A 40 Lb. PACKAGE MAKES 1200 GALLONS

Belgium Imported **Melotte**

Reduced 22%

Melotte, manufacturer of the greatest cream separator the world has ever known, announces a sweeping reduction in prices. Take advantage of this condition while it lasts. Buy now and save money.

Self Balancing Bowl

The Melotte bowl is *self-balancing*. Positively cannot get out of balance, therefore cannot vibrate. Can't remix cream with milk. Runs so easily, bowl spins *25 minutes* after you stop cranking unless you apply brake. No other separator needs a brake. Bowl chamber is *porcelain lined*.

Catalog FREE!

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30 days' free trial—then, if satisfied, only $7.50 and a few easy payments—AND—the wonderful Belgium Melotte Separator is *YOURS*. Don't buy *any* separator until you have found out all you can about the Melotte and details of our 15-year guarantee which is infinitely stronger than any separator guarantee. Write TODAY.

The Melotte Separator, H. B. Babson, U. S. Mgr.
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Dept. 8231—2843 W. 19th st., Chicago, Ill.

GUERNSEYS

produce persistently and continue their high production year after year. Murne Cowan, former world's record Guernsey, on official year's test at 6 years, produced 845 lbs. of butter fat. Again at 8 years she made 1093 lbs., and at eleven, 791 lbs. Her milk for the three records averaged 19,373 lbs. per year.

Send for the free booklet, "The Story of the Guernsey."

The American Guernsey Cattle Club

Box NW-28, Peterboro, N. H.

PERFECTION MILKERS

EITHER PIPE LINE OR ELECTRIC.



Ask us why they are the best. Anker Holth cream separators, the wonderful self-balancing bowl, White Lily and Daylight washing machines, Renfrew Truck scales. Write for catalog.

THE J. C. ROBINSON CO.
48 First St., Portland, Ore.

Will Keep Agent

Assurance that the Snohomish county agent and home demonstration agent will be kept for the coming year is given by a report of the solicitors who have been calling on the farmers and business men in all communities in the county and have raised approximately the $5000 needed in two weeks' time. The drive was started a few days before Thanksgiving and was hampered greatly by snow and floods, but every one concerned felt the need of raising the money in order to meet the demands of the extension service, which furnishes an equal amount of state and federal money. R. M. Turner, assistant county agent leader, has been assisting with the campaign. The county commissioners had failed to provide for this work in their 1922 budget.

The money was raised both from the business men and the farmers of the county by means of a special committee which was organized for the purpose, called the Snohomish County Agricultural Extension association. Members of the committee are as follows: A. G. Ziebell, chairman and master of Snohomish county Pomona grange; W. H. Illman of Sultan; W. G. Grimm, manager of Snohomish Dairymen's association; A. Haroldson of East Stanwood; T. H. Bowden of Everett; Mrs. N. S. McCredie of Snohomish, who represented the Woman's Federated Clubs, and Mrs. J. Mueller of Granite Falls.

In addition to the above there was a $2000 donation from one of the Everett banks for the employment of a deputy horticultural inspector. Business men of Everett subscribed a total of $2187, while the district outside of town gave a total donations with the understanding that a similar campaign will not be necessary next year.

Members of the committee felt that the drive was necessary because of the value of the work of the county agent and those who are associated with him.

Many Want the Pig

The Washington Farmer's letter contest on the subject of "Hogs as a Byproduct on Washington Farms" closed December 31. Judging of the scores of letters received is now in progress and the winner will be selected and announced in the near future. The following is a list of those writing letters in the contest:

D. M. Adams, Spokane.

Ira W. Adams, Ferndale; Mrs. A. E. Agnew, Kingston; F. L. Albright, Republic; R. L. Allen, Grandview; R. F. Allison, Prosser; Mrs. A. K. Anderson, Graham; J. C. Anderson, Graham; J. A. Anderson, Graham; Louis Anderson, Kapawsin; Mrs. S. W. Arrington, Synaren.

Mrs. C. M. Bagley, Sunnyside; Ora J. Baird, Sunnyside; Burnett Baker, Arlington; D. E. Baker, Tekoa; Joe Bakum, Enumclaw; Mrs. G. S. Barnhart, Sunnyside; Ruth Bennett, Prosser; Mrs. G. T. Beauchamp, Winlock; Mrs. W. L. Bockhouse, Gerome; W. D. Boyde, Olalla; Mrs. George W. Bradshaw, Sumner; Mrs. Nellie M. Brattain, Leese; Keith E. Brooks, Hanford; Mrs. Marion F. Byram, Kennewick.

Katherine Cady, Olalla; Sam P. Cary, Port Angeles; Mrs. Will Cheel, Ritzville; Mrs. W. H. Clubb, Omak; Ethel Cosner, Addy; A. J. Coulter, Boyds; Edward Christensen, Lakewood.

Mrs. R. G. Daggett, Port Landlow; Mrs. T. R. Dailey, Palouse; Mrs. G. S. D., Port Landlow; A. C. Daniel, Wenatchee; I. H. Davis, Olga; Mattie Deaton, Ellensburg; Frank S. Demko, South Prairie; Mrs. Ellen Dixon, Winona; Alfred Dugger, Ritzville; M. M. Dugger, Ritzville; Mrs. John E. Dunn, Washougal; M. Dworshak, Auburn; Mary Dworshak, Auburn.

Wilbur Easton, Cheney; C. N. Eaton, Waitsburg; A. D. Estabrook, Pateros; Inez Eck, Riverside; L. Mary Eck, Riverside; Mrs. M. A. Elbert, Sedro Woolley; Mrs. M. F. Emerson, Prosser.

Edgar A. Falk, St. John; Mrs. Earl Farrar, Spokane Bridge; Ruth Fife, Naches; Mrs. David Fisher, St. Andrews; Mrs. E. A. Fisher, Ridgefield.

Mrs. J. R. Gaddis, LaCenter; Mrs. Mary L. Garrett, Sumner; Clarence Garrison, Wapato; James Gibson, Eastsound; William Gibson, Vancouver; Mrs. William Gibson, Vancouver; Otto Gilbertson, East Stanwood; Oliver Gildea, Spangle; Floyd Gochnour, Montesano; Milo Gould, White Swan; Emil Graf, Creston; Mrs. G. S. Greene (no address); Philip Griesinger, Wilson Creek; Amon L. Groves, Spokane.

C. J. Hageman, Chewelah; M. A. Hall, Rochester; C. E. Hamby, Connell; Mrs. J. S. Harris, Ridgefield; Patricia Harris (no address); L. E. Hay, Spokane; Tom Heathman, Bow; L. N. Hein, Tonasket; George W. Heise, Sedro Woolley; Mattie A. Helme, Washtucna; Mrs. Charles Helms, Van Zandt; Andie (or Ardie or Audie) Hembree, Kennewick; Mrs. Fred Hemkin, Rockford; Mrs. D. O. Henderson, Bothell; Mrs. R. J. Hess, Okanogan; Kenneth Hinshaw, Goldendale; Mrs. E. Holstiene, Yelm; Daniel I. Hopkins, St. John; G. W. Hutton, Arlington; H. O. Hutton, Arlington; Jacob F. Hottell, Everson; Jacob Hottell, Everson; C. M. Hamby, Connell; F. A. Hjelte, Lakebay.

C. M. Imrie, Goodnoe; Frank A. Ipe, Centralia.

W. M. Jackson, Aberdeen; Roy L. Jeremiah, Hooper; Evelyn Jesmer, Auburn; Frank A. Jhe, Centralia; Mrs. J. A. Johnson, Castle Rock; W. E. Johnson, Garfield; A. B. Jones, Garfield; Walter Jones, Penewawa; Mrs. Thos. W. Jordan, Portage.

J. P. Keaton, Snohomish; Mrs. C. W. Kephart, Spokane; G. S. King, Mabton; Edith Kobe, Elgin; Leonard Kowalsky, Pe Ell; Jimmie Kowalsky, Pe Ell.

H. F. Lecoeu, Yakima; Chester R. Land (or Laird), Tekoa; Mrs. Albert Larson, Chambers Prairie; Mrs. A. J. Latimer, Kahlotus; Mrs. A. L. Lewis, Usk; Edward Louis, Okanogan; Joe Louis, Okanogan; Mrs. F. A. Longstreth, Camas; L. C. Love, Garfield; L. F. Lowe & Son, Enumclaw.

Mrs. Ella N. Margott, Lynden; Lester McCrery, Dayton; J. D. McCurdy, Zillah; L. M. McDonald, Graham; A. Miller, Govan; Pete Miller, Kelso; David Miller, Colfax; J. W. Morris, Ferndale; Mrs. James Murray, Graham; John A. Myers, Sumas.

Mrs. E. Nelson, Chehalis; Fred H. Nichols, Fox Island; William Niskan, Woodland; Harvey Norris, Goldendale; Allen Northrup, Nelson.

O. A. Olson, Forest; J. W. Osborn, Ashford.

Henry Pagel, Growmore; Daniel Parks, Renton; Mrs. F. E. Pease, Usk; Eric Peura, Camas; Edna Pierce, Spokane Bridge; Mrs. Joseph Place, Kirkland; Mrs. Jack Plaster, Ferndale; E. L. Powers, Palouse; L. P. Powers, Palouse; J. S. Price, Clinton.

William Quiskan (or Iriskan), Woodland.

Mrs. A. W. Radamaker, Tacoma; R. S. Rawls, Bellingham; M. G. Reber, Bossburg; Hazel Reeves, Cloverland; Harry Reilly, Spangle; John Rensink, Everson; Mary Riebe, Yakima; Gilbert A. Riegel, Sunnyside; B. B. Robinson, Spangle; Mrs. Hartvig Roseburg, Cle Elum; Mrs. Wayne G. Rouse, Almira; Austin Rull, Deep River; George M. Rumohr, Leavenworth; J. M. Runyon, Skamania; J. Fred Russell, Naches.

Arthur Sanderson, Deming; J. J. Schauble, Kalama; Mrs. Will Scheel, Ritzville; Emily Schellenberger, Everett; Nora Schellenberger, Everett; Mattie A. Selme, Washtucna; Mrs. G. W. Shattuck, Garfield; L. Sheets, Lynden; George F. Siegel, Twisp; Mrs. V. E. Silva, Machias; Charles Smith, Arlington; C. P. Smith, Ephrata; Mrs. K. M. Smith, Centralia; Walter D. Smith, Chewelah; Mrs. W. J. Smith, Curtis; Mrs. N. W. Spahr, Bellingham; Mrs. Thomas Spence, Plain; Edward Stack, Tonasket; B. E. Stilts, LaCenter; Arthur Stott, Yakima; J. E. Stout, Malott; John G. Sullivan, Othello.

Dick Tapper, Carlton; Roy L. Taylor, Olympia; John P. Thomsen, Sequim; William Thurlow, Twisp; Mrs. William Thurlow, Twisp; Mrs R. A. Tillman, Bellingham; A. Turley, Monroe; Mrs. T. C. Turner, Kent.

Ernest B. Uhlmann, Sumner.

Mrs. F. L. VanHoy, Goldendale; C. G. Vick, Mohler; Mrs. Anthony Vogel, Sedro Woolley.

Jacob Waino, Kelso; Mrs. Elmer Walker, Olympia; Harry Warmke Jr., Monse; Harry Warmke, Monse; C. A. Warren, Vancouver; C. E. Weatherstone, Omak; Mrs. R. H. Whan, Edwall; Mrs. H. H. Whitman, Arlington; Jean Wiegand, Winlock; Mrs. Severi Wiitala, Naselle; Mrs. John Wiley, Wiley; J. C. Willey, Union; William A. Wilson, Almira; Mrs. Allie Wilson, Opportunity; S. Woodhouse, Ellensburg; N. J. Wright, Kalama.

Mrs. Joe Zimmerman, Rochester.

The following contest letters have been received without any state address: Albert Murphy, Mrs. G. S. Greene, Everett L. Reese, W. R. Eastburg, Patricia H. Harris, Fannie J. Wilson.

FARMERS' WANT ADS

SITUATIONS WANTED—Female 18

WANTED—EMPLOYMENT AS HOUSEKEEPER on a ranch. W. C. A., Box 163, Shaniko, Ore.

FRESH FOOD PRODUCTS 51-1

HONEY BRAND HONEY—PURE, LIGHT, thick, and good flavored; from alfalfa and sweet clover; one 60-lb. can, $7.50; two 60-lb. cans, $14.50. Write for circular and complete price list in pails. Oliver Sires, Wapato, Wash. Salesmen wanted.

HAVE CUT THE PRICE ON MY COMB HONEY. One 24-section case, $3.75; two or more cases, $3.50 each; should go express; can't go P. P. unless knocked out and packed in cans; nice honey. Geo. O. Gould, Buhl, Idaho.

WHITE ALFALFA, SWEET CLOVER honey; 1 60-lb. can, $7.50; 2 60-lb. cans, $14.50; six 10-lb. cans, $8.50; three No. 10 pails, prepaid third zone, $5.50. Wells D. Rose, Sunnyside, Wash.

HAPPY HOME HONEY FROM BLOSSOMS of alfalfa and sweet clover, in liquid form; 6 10-lb. pails, $8.50; 1 60-lb. can, $7.50; 2 cans, $14.50, at Mabton. H. N. Paul, Mabton, Wash.

HONEY—ALFALFA, SWEET CLOVER; FINE quality; 60-lb. can, $7.50; two 60-lb. cans, $14.50; three 10-lb. pails, prepaid second zone, $5. Harry Fisher, Prosser, Wash.

DELICIOUS NEW CLOVER HONEY, 60 LBS., $6.85; prepaid third zone, $8.75; two 60s, $13.25; pound can, 25c. Browne, Box 499, Twin Falls, Idaho.

PRUNES, $6.25 PER HUNDRED; SMALL BUT nice, clean, sweet; 25 lbs., express paid, $2.70. Sample, 15c. Kingwood Orchards, Salem, Ore.

SMOKED SALMON, 5-POUND BOX, $1.25; salt salmon bellies, 5 pounds, $1.25, delivered by mail. Coffin Fish Co., Seattle, Wash.

HONEY—LIGHT AMBER HONEY, LIQUID form; one sixty-pound can, $7; two cans, $13.50. A. L. Traner, Touchet, Wash.

FINEST ALSIKE CLOVER HONEY, ONE sixty-pound can, $7.50; two cans, $14.50. Roy Selwyn Wilson, Buhl, Idaho.

MISCELLANEOUS—FOR SALE 60

SASH AND DOORS—O. B. WILLIAMS CO., 1943 First ave., So. Seattle. Chicken house sash, 20" wide by 25" high, 80c; a dozen different sizes in stock for immediate shipment. Skylights for chicken houses, 36"x40" price, glazed, $2. This is the size recommended by the Western Washington experiment station. We carry them in stock for immediate shipment. Sash and doors for all purposes at lowest prices. All orders receive prompt attention. Our large illustrated catalogue No. 35, showing full line of building material and built-in fixtures for the home, free on request. O. B. Williams Co. Established 1899.

TOBACCO—BEST KENTUCKY NATURAL leaf; grown and put up by grower of twenty years' experience, for those who want the best; selected and graded for Pacific coast and western trade. State whether for chewing or smoking; best grade, 50c; second grade, 35c pound, postpaid. Don't be disappointed with cheap tobacco. R. E. Acree, Obion Valley Tobacco farm, Pryorsburg, Ky. Get my prices on cheap tobacco for your orchard, vineyard and berry fields. Circular valuable information.

TOBACCO, NATURAL LEAF; SWEET AND mellow hand-picked chewing or smoking; 5 lbs., $1.50; 10 lbs., $2.50. Smoking, 20 lbs., $4. Furnish free recipe for preparing. Quality and delivery guaranteed. Farmers' Tobacco Exchange, Sedalia, Ky.

KENTUCKY LEAF TOBACCO, 3 YEARS OLD, nature cured. Don't send a penny, pay for tobacco and postage on arrival. Extra fine quality chewing or smoking, 10 lbs., $2.50; medium quality smoking, 10 lbs., $1. Farmers' Union, Hawesville, Ky.

WALL BOARD—WRITE FOR SAMPLE OF Washington plaster wall board; won't warp, won't burn. Manufactured by Washington Building Products company, 6851 E. Marginal Way, Seattle, Wash.

PIPE — NEW AND SECOND-HAND, ANY size; low price; standard grade roofing paper at a big saving; belting, all plies, all sizes, cheap. Write Alaska Junk Co., S120 Adams st., Spokane, Wash.

CEDAR CHESTS DIRECT FROM FACTORY to your home; Tennessee cedar, solid copper trimmings. Write for catalogue. J. W. Higgins & Sons, 1912 Gilsan st., Portland, Ore.

OUR FREE CATALOG OF GROCERIES AND general merchandise will save you big money; a postal card brings it. Write today. Jordan-Lawler company, Box 615T, Spokane, Wash.

TOBACCO—NATURAL LEAF FOR MILD smoking. 10 lbs., $1.50; 20 lbs., $2.75; will furnish free recipe for preparing. Leaf Tobacco Exchange, Mayfield, Ky., Star Route.

ALLEN'S STROP DRESSING SHARPENS dullest of razors without honing or grinding. Sample free. The Home Barber, P. O. Box 1315, Richmond, Calif.

FOR SALE—ONE MAMMOTH CANDEE INcubator; 1200 eggs; two 52-in. Candee brooders; used 2 seasons; LeRoy Massey, Wallace, Idaho.

HOMESPUN CHEWING AND SMOKING TObacco, 5 pounds, $1.25; 10 pounds, $2.25; 20 pounds, $4. Farmers' Union, Mayfield, Ky.

TOBACCO—HOMESPUN MILD SMOKING, 10 lbs., $2; 20 lbs., $3.50; chewing, 10 lbs., $2.75. Farmers' Club, Mayfield, Ky.

MACHINERY—For Sale. 93

SEVERAL REBUILT RUSSELL THRESHERS; A1 condition; different sizes. Write for prices. Also bargains in rebuilt steam engines. A. H. Averill Machinery Co., Spokane, Wash.

STOVE REPAIRING. 128

WRITE MYER RUBENS, SPOKANE, ABOUT stove repairs, welding broken parts, nickle plating.

PETS—Dogs, Birds, Etc. 171

RAISE GUINEA PIGS FOR US—BIG PROFITS. Send 25c for our 44-page booklet, tells you all about cavies and a guaranteed market. Dr. J. A. Roberts Laboratories, 6633 Sunset blvd., Hollywood, Cal.

BEAUTIFUL WHITE SCOTCH COLLIE PUPS, pedigreed. Ideal for farm and home. Write for description. Mrs. E. A. Bennett, Salem, Oregon.

WHITE COLLIE PUPPIES. URBANDALE Farm, Oakley, Idaho.

POULTRY 174

"HENACRES" 8 WEEKS' OLD PULLETS; March or May hatched; big, healthy, vigorous bred to lay. Booking orders now. 6000 to sell, $1.50 each or 500 for $700. Satisfaction guaranteed or money back. Baby chicks for February, March and April all sold to old customers. May chicks, $22 per 100; $200 per 1000. June, $16 per 100; $140 per 1000. Safe delivery guaranteed. Hatching eggs, $2 per 15; $9 per 100; $80 per 1000. "HENACRES" Leghorns are known all over the northwest. Ask your neighbor. Illustrated catalog and booklet on poultry management free. "HENACRES," Box A, Prosser, Wash.

CHICKS OF QUALITY—HOLLYWOOD, TANcred and commercial strains of White Leghorn chicks from pedigreed males, $20 per hundred. R. I. Reds, Barred Rocks, Black Minorcas and Ancona chicks, $25 per hundred. These prices are for February and March delivery. We sell Queen incubators, Queen brooder stoves, Reliable Blue Flame brooders, Petaluma Electric and Charters' incubators and American brooder stoves. A complete line of poultry supplies and remedies, including leg bands, egg scales, trapnest records, etc. Catalogue free. Queen Hatchery, Fourth and Pine. Elliott 2054.

SINGLE COMB WHITE LEGHORNS (TANcred strain); selected heavy laying second and third year hens mated to cockerels from 250 to 275 egg trap nested dams; hatching eggs, $1.50 per 15; $7.50 per hundred; chicks, $18 per hundred, safe delivery guaranteed. Oaklawn Poultry Farm, Hillsboro, Ore.

PRIZE-WINNING S. C. BROWN LEGHORN (light strain), single comb White Leghorn (Tancred strain); baby chicks, $15 per 100; order now. Satisfaction and delivery guaranteed. G. R. Lumberg, Springdale, Wash.

THOROUGHBRED BARRED ROCKS, RUNNER ducks, males and females, $2, $2.50, $3; ducklings, hundred, $33. E. A. Muths, Route 1, Box 49, Salem, Ore.

RHODE ISLAND WHITE COCKERELS, $5, $7.50, and $10; eggs, $2.50 and $5 per fifteen; $12.50 per hundred. Van K. Lawson, McMinnville, Ore.

DOLLARS FOR YOUR EGGS—WE PAY THE top market prices for your eggs and poultry. Daily cash remittances. Western Produce Co., Spokane.

STANDARD BRED BRONZE TURKEYS, Barred Rocks, White Leghorns, Dark Cornish, Toulouse geese. E. A. Kruse, Roseburg, Ore.

PURCHASED DR. E. W. FINZER'S S. C. BLACK Minorcas. Some fine cockerels for sale. Eggs in season. Mrs. Arthur Kaylor, Clackamas, Ore.

BARRED ROCKS (PARKS') COCKERELS, pullets, from 200-egg hens, $5 (with pedigree). 15 eggs, $2.50. Hy Messerli, Kennewick, Wash.

S. C. WHITE LEGHORN BABY CHIX FROM trap nested, Hoganized hens; also cocks and cockerels. J. Panck, Sherwood, Ore. R. 1.

MAMMOTH TOULOUSE GEESE; LAID 40 eggs last year, at 30c each; fine birds, $6 each. Thos. Oswalt, Benton City, Wash.

WHITE WYANDOTTE COCKERELS, $3 AND $4; eggs, $1.50 for fifteen; $8 per hundred. A. Krueger, Colfax, Wash.

THOROUGHBRED ANCONA COCKS, SONS OF Sheppard's famous winter layers. Georgiana Kee, Greenacres, Wash.

WILL CONTRACT 4500 MARCH 1ST HATCH cockerels, ¾ to 1¼ lb. (milk fed W. L.). Pulletpens, Prosser, Wash.

SILVER WYANDOTTE COCKERELS; FINE ones, at $3 and $5 each. Melvin Bergeson, Adrian, Wash.

RANCH RAISED REDS; SECOND PEN BOISE show; cockerels for sale. W. J. Schulze, Boise, Idaho, Route 1.

CHOICE MAMMOTH BRONZE TURKEY gobblers, eight dollars. Mrs. Amelia Reimers, Eagle, Idaho.

ANCONA AND WHITE WYANDOTTE COCKerels, $4 each. Quincy Stanfield, Meridian, Idaho.

HUNT'S FINE BARRED ROCKS. WRITE for circular on eggs. W. A. Hunt, Lebanon, Ore.

PURE BRED GOLDEN CAMPINE COCKerels. D. W. Martin, Glenns Ferry, Idaho.

O. A. C. BARRED ROCK COCKERELS, $3 50, $5. Mrs. Faulconer, Skamania, Wash.

WHITE WYANDOTTE COCKERELS, $ Mrs. F. Raglin, Castle Rock, Wash.

FOR SALE—YOUNG PEAFOWLS. ADDRESS Clair Donker, Aumsville, Ore.

(Continued on the following page.)

FARMERS' WANT ADS

This is the farmers' "want," "sale" and "exchange" department for small advertisements of farmers, including live stock and poultry.

Advertising rates for ads running 1 to 3 times, 10c per word per insertion, with a special rate to Farmer subscribers, as follows: Ads running 4 to 12 times, 9c per word per insertion; ads running 13 times or more, 8c per word per insertion.

All commercial and land advertising 10 cents per word each insertion. Open also to nonsubscribers.

In using these columns advertisers must observe: (1) No advertisements will be inserted for less than $1.00. (2) Every word, number and initial, including name and address, must be paid for. (3) New advertisements, changes of copy or cancellations must reach general office, Spokane, Wash., 10 days in advance of publication date. (4) Cash must accompany order.

Above rates include insertion in The Washington Farmer, The Idaho Farmer and The Oregon Farmer, which constitute the Pacific Northwest Farm Trio, 46 Review Building, Spokane, Wash.

POULTRY (Continued) 174

WHITE LEGHORN AND ILL-A-HEE BARRED Rock breeding cockerels. If you want to increase the laying standard of your flock get a Butler White Leghorn or a Ill-a-hee Barred Rock cockerel direct from the home farms. Write for circular telling how our methods of selecting breeding cockerels have made our strains celebrated for high average flock production. All stock trap nested and pedigreed. Address Butler Poultry Farms, or Ill-a-hee Poultry Farm, Jennings Lodge, Ore.

HIGHEST GRADE S. C. WHITE LEGHORNS. Oregon Agricultural college strain; carefully selected and trapnested stock, raised under natural conditions. In Washington laying contest with ninety competitors from eleven states, for November, 1921, our pen was FIRST for production of highest value marketable eggs, also first for individual bird producing highest value of eggs. Orders accepted for eggs, chicks and cockerels. Corvallis Poultry Farm, Box 304B, Corvallis, Ore.

FREE INCUBATOR CATALOG — INCUBators, brooders, oat sprouters, baby chicks, hatching eggs, trap nests, poultry books and supplies. You can't beat the St. Helens incubator in either price or hatch. From 60 to 4000 egg capacity; electric and lamp heated. St Helens Incubator Co., Centralia, Wash.

GRIFFIN'S FAMOUS WHITE WYANDOTTES, the combined market fowl and egg producer. A nice lot of stock for sale. Order that cockerel now. Big, husky, white boys at reasonable prices. Send for catalogue. J. A. Griffin, Box 457, Eugene, Oregon.

SEND 25C FOR FOUR MONTHS' TRIAL SUBscription to the quality poultry paper of the west. Alive with value and interest. Has helped thousands raise better poultry. Year's subscription 75 cents. The Pacific Poultryman, Seattle, Wash.

S. C. RHODE ISLAND REDS, THE POPULAR and profitable farm fowls. We specialize in good color and high producing strains. Cockerels, hatching eggs and baby chicks in season. G. B. Dimick, Oregon City, Ore.

IN OUR SPECIAL PEN ARE THE CREAM of our flock of 500 hens; cockerels are from hens producing not less than 280 to over 300 eggs per year. Write for catalogue. Mrs. Arp, St. John, Wash.

COCKERELS—ROSE AND SINGLE COMB Brown and Buff Leghorns, Anconas, Black Minorcas, Rhode Island Reds, Blue Andalusians. Boone Avenue Poultry Yards, E1601 Boone ave., Spokane.

SILVER WYANDOTTES AND SILVER SPANGled Hamburgs, Golden Campines, choice birds for sale. No baby chicks or eggs by the 100. Birds, $5 and up. G. G. Wherry, Payette, Idaho.

SINGLE COMB ANCONA COCKERELS, SHEPpard strain; two and five dollars; hatching eggs, $2 for fifteen; $9 per hundred. Mrs. Frank Hopkins, Weiser, Idaho. Phone 233J.

REGAL WHITE WYANDOTTES; BEST QUALity, prize winning stock. Cockerels, hens, pullets. Prices right. Absolute satisfaction guaranteed. Eugene Boyk, Rocklyn, Wash.

SAY!—EGGS MEAN DOLLARS TO YOU. ALSO your poultry, veal and dressed hogs, when shipped to us. Top prices. Prompt remittances. Hotchkiss Produce Co., Spokane.

GIANT BRONZE TURKEYS. UNDEFEATED flock in west. Toms, $15; late 17-pound, $12; pullets, $8 and $10; will ship C. O. D. Herbert Stoneberg, Route B, Eugene, Ore.

QUALITY BARRED PLYMOUTH ROCKS and Black Langshans, cockerels and cock birds; also a few females; prize winners. B. D. Beser, Walla Walla, Wash.

WHITE LEGHORN EGGS FOR HATCHING—Oregon Agricultural college stock; $2 per setting, or $5 per 100 prepaid. Russell Poultry Farm, Route 3, Corvallis, Ore.

POULTRY RAISERS, SEND FOR FREE BOOKlet on poultry advertising. The Pacific Northwest Farm Trio, Dept. P, Review bldg., Spokane, Wash.

MAMMOTH BRONZE TURKEY TOMS FROM hen laying 127 eggs last season; prize winning stock; eight and ten dollars. Order now. John Bollinger, Post Falls, Idaho.

WHITE LEGHORN AND WHITE ROCK cockerels; 300-egg strain; baby chicks. Palouse Falls Ranch, Palouse Falls, Wash.

MRS. FRANK BROWNING, 20 YEARS SPEcialty breeder of Mammoth Bronze turkeys, prize-winning stock. Nampa, Idaho. R. 1.

S. C. BROWN LEGHORN COCKERELS AND pullets; prices reasonable; quality first-class. E. H. Rosenkranz, Colfax, Wash.

GIANT STRAIN PURE BRED MAMMOTH Bronze turkeys, from prize-winning stock. Mrs. C. R. Lowery, Route 4, Boise, Idaho.

S. C. W. L. HATCHING EGGS; HOLLYWOOD strain; pullets, Hollywood or Tancred strain. Mrs. Rominger, Underwood, Wash.

MAMMOTH PEKIN EGGS FROM DUCKS that take the prizes. Booking advance orders. Mrs. E. A. Bennett, Salem, Ore.

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BLUE ANDALUSIANS AND WHITE ROCK cockerels; extra good; order now. Mrs. C. W. Armstrong, Freewater, Ore.

PURE MAMMOTH BRONZE TURKEYS. Flock of four hundred. Harry Smith, Coupeville, Wash.

SUPERIOR BARRED ROCKS, EXHIBITION size; layers; world's best strains. C. E. Dibble, Payette, Idaho.

COCKERELS, EGGS, CHICKS, TRAP NESTED White Leghorn and Barred Rocks. Mrs. W. M. Roberts, Elmira, Ore.

COCKERELS, S. C. RHODE ISLAND REDS. Write for information. Mrs. L. W. Alexander, Sunnyside, Wash.

FOR SALE — MAMMOTH BRONZE, PART wild turkeys. Eleanor Moore, Route 1, Ashland, Ore.

PUREBRED S. C. WHITE MINORCA COCKerels, $3 each, f. o. b. Ronan, Mont. Arthur Schmidt, Route 2.

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MAMMOTH BRONZE TURKEYS FOR BREEDers. Mary Homes Tucker, Ashland, Ore.

Baby Chicks.

HOGANIZED WHITE LEGHORN CHIX AND hatching eggs for sale. Write for catalog. Mrs. Arp, St. John, Wash.

BABY CHICKS; BEST WHITE LEGHORNS; free circular. Acme Poultry Farm, Dirston route, Cottage Grove, Ore.

POULTRY—Baby Chicks (Continued) 174

YESTERLAID EGG RANCH, KENT, WASH. Dear Sirs:—It may interest you to know that only last week I was offered $2.50 each for my flock of 459 Yesterlaid pullets. I turned this attractive offer down, as I know from the way they are laying that I could not afford to let them go. I raised these birds out of the 1000 chix got from you last spring, and am so well pleased with their performance that I want you to be sure to reserve me another 1000 chix for delivery about March 31st, next. Please let me have your early confirmation of this order for which check is enclosed. Yours truly, Walter Smith, Kent Wash. The above is one of the many testimonials we receive. 12,000 of these kind of chicks hatched every five days from our own eggs. Over 40,000 already sold. Order day-old chicks and hatching eggs now. Yesterlaid Egg Ranch, Kent, Wash.

WHITE LEGHORN AND ILL-A-HEE BARRED Rock chicks—Buy chicks this year that live and grow and are bred to lay. Butler White Leghorns and Ill-a-hee Barred Rocks are known for high average flock production. Before ordering elsewhere, write for circular telling how our breeding methods produce 200 flocks for our customers. All stock trap nested and pedigreed. Also get our prices on breeding cockerels and hatching eggs for each breed. Address Butler Poultry Farms, or Ill-a-hee Poultry Farm, Jennings Lodge, Ore.

"FRESHLAID" WHITE LEGHORN CHICKS have the qualities you want; vigor and scientific breeding for heaviest egg production; every "Freshlaid" male is from a high record hen. Freshlaid farm is one of the largest and oldest chick plants in the Inland Empire. Our new catalog, "Success With Chicks," is free but is worth $ to you. Write for it. A complete guide from start to finish. Farmers read my plan, "$500 extra on every farm." You can't fail my way. Freshlaid Farm, Colfax, Wash.

THE PROGRESSIVE HATCHERY — BABY chicks from vigorous range bred stock; trapnested S. C. White Leghorns, $20 per 100; selected S. C. White Leghorns, $18 per 100; S. C. R. I. Reds and Barred Rocks, $25 per 100; safe delivery of live, vigorous chicks, full number ordered; absolutely guaranteed. Send for circular of special matings and hatching eggs. 1534 East 12th North, Portland, Ore.

CHICKS, PULLETS—OUR PURE BRED BABY chicks not to be excelled; all breeds at prices conforming to quality. Spring pullets in demand. We have 10,000 famous Tom Barron pullets. Booking orders now. Get yours in to secure delivery. All makes incubators, brooders, and stoves. Everything for the poultryman. Send for our 1922 general catalogue. C. E. Hill Co., 418 11th st., Oakland, Cal.

CRYSTAL WHITE POULTRY FARM—BREEDers of S. C. White Leghorns; baby chicks a specialty; hatched from eggs laid by our great egg producers. Price, $17 per 100; $160 per 1000. Order early to get the best dates. Send for circulars. Mr. and Mrs. Jno. Eborall, McMinnville, Ore. Box 33.

BABY CHICKS FROM O. A. C. WHITE LEGhorn hens, carefully culled, mated to cockerels from Tancred's royal mating hens; 250 to 286 egg record and Tancred imperial mating cockerels. Hatching dates Feb. 26 to May 30. Price, $17.50 per 100. Wm. Palmer, The Dalles, Ore., Route 4.

BABY CHICKS HATCHED IN PETALUMA INcubators are a superior class; strong, vigorous, sturdy, grow rapidly, lay early. Buy chicks from hatcheries using Petaluma incubators. You will find one near you. If not, write us. Catalog free. Petaluma Electric Incubator Co., Petaluma, Cal.

WHITE LEGHORN BABY CHICKS FROM heaviest laying stock. Booking orders now for spring, 1922, delivery. Safe arrival live, vigorous chicks guaranteed. Prices on request. Reliable since 1898. Must Hatch Incubator Co., 445 Seventh st., Petaluma, Cal.

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WHITE ROCK BABY CHICKS, "DANIEL'S IDEALS," from our own trapnested stock entirely. Write for prices and dates, also eggs for hatching. Free catalog. Ideal Poultry Yards, Hoquiam, Wash. Star Route No. 25.

BABY CHICKS CAREFULLY HOGANIZED, Tancred and O. A. C. White Leghorns; price 15c; 25 per cent with order, for last week of February, (March full), April and May. T. J. Robinson Hatchery, Dallas, Ore.

BABY CHICKS — REDUCED PRICES ON White Leghorns, Reds, Barred Rocks, White Rocks, Minorcas, and Anconas; booking orders now; postal secures free catalog. Write today. C. N. Needham, Salem, Ore.

FEBRUARY AND MARCH CHICKS LAY THE high priced fall eggs; order now; Tancred Leghorns, O. A. C. Barred Rocks at prices that will please you. D. C. Yoder, Hubbard, Ore.

BABY CHICKS FROM TRAP NESTED STOCK. Write for dates and prices. Don't expect cheap prices as we handle only the best. Swayne's Fancy Egg Farm, Centralia, Wash.

BABY CHICKS FROM TRAPNESTED WHITE Leghorns of superior quality; 14 years breeding for egg production. $18 per hundred. Chas. L. Perkins, 1337 Burrage, Portland, Ore.

BABY CHICKS — WE GUARANTEE OUR chicks to be from the highest producing hens in Petaluma. Write for further information. The White Hatchery, Petaluma, Cal.

DAY OLD CHICKS PREPAID, OREGON AGRIcultural college White Leghorns, $20 per 100; February, March and April. Russell Poultry Farm, Route 3, Corvallis, Ore.

BABY CHICKS, RHODE ISLAND REDS, Barred Rock, White Orpington and White Leghorns; cockerels, $5 each. Hansen's Poultry Yards, Olympia, Wash.

TANCRED STRAIN WHITE LEGHORN BABY chicks, $18 per 100; eleventh season; incubator capacity, 18,000 eggs. D. A. Gillette, R. 4, Yakima, Wash.

WANTED—600 BABY CHICKS, PLYMOUTH Rocks or Rhode Island Reds. Who will give me a price? W. P. Hill, Box 154, Heppner, Ore.

POULTRY—Baby Chicks (Continued) 174

BABY CHICKS, HATCHING EGGS—FROM Hoganized hens, well mated. White and Brown Leghorns, R. I. Reds, Barred Rocks. Safe arrival guaranteed. Order early. Write for circular. Stubbe Poultry Ranch & Hatchery, Box 67J, Palo Alto, Cal.

LIVE STOCK 177

SEND FOR FREE BOOKLET, "SOME SUGgestions to Live Stock Advertisers," outlining the practices of successful men of long experience. Helps in determining how much to spend, the mediums to select, preparing advertisements, handling inquiries, the use of photographs, etc. Write today. The Pacific Northwest Farm Trio, Dept. W, Spokane, Wash.

SHIP US YOUR POULTRY AND LIVE STOCK. Light veal, fat, fancy, 15c; heavy veal, 9c to 11c; dressed, number one block hogs, 11½c; hens, alive, heavy, 20c; light, 16c; young springers, 19c; staggy springers, 15c. See our display ad for wholesale prices on hams, bacon, lard, compounds and fresh meats. John Lewis & Co., Spokane, Wash.

LARGE, HEAVY PRODUCING HOLSTEINS for sale at all times in car lots; tuberculin tested; 150 to 200 head always on hand; well marked heifer calves from registered sires and heavy producing dams; crated for shipment anywhere, $25 f. o. b. Levinson & Balmelli, Yakima, Wash.

EPOCHAL BERKSHIRES—WEANED PIGS by the grand champion Porkmakers Sincerity, the grand champion barrow over all breeds and the grand champion carcass at the International were of Epochal blood. Boars for heavy or light service. E. V. Orford, Boise, Idaho.

LEWISTON HEREFORD FARM BULL IN service, Prince Rupert 80th, No. 544903, undefeated grand champion, 1916-17. Have for sale few cows and heifers bred to this bull. Herman Nordby, Box 416, Lewiston, Idaho.

WE PAY TOP PRICES FOR YOUR LIVE OR dressed veal, hogs and poultry. Your check by return mail. Shipping tags on request. M. & J. Packing Co., Spokane.

FOR SALE—OR WILL CONSIDER WORK horses in exchange for registered Clydesdale stallion and mare. For particulars write Otto Trice, Grandview, Wash.

FOR SALE—SOME VERY FINE POLAND China gilts; bred to first prize futurity boar at state fair, to farrow in March. Buck & McDonald, Yamhill, Ore.

FOR SALE—25 HEAD HOLSTEIN DAIRY cows, all coming fresh this spring. S. Carlisle, 756 South 9th street, Pocatello, Idaho.

TILLAMOOK CALVES—SEASON NOW OPEN. Price lists ready; strictly dairy stock. Smith, the Calf Man, Tillamook, Ore.

ONE FINE TEN-MONTHS-OLD GRADE TOGgenberg billy goat. Price $45. M. P. Paulson, Route 5, Mt. Vernon, Wash.

ONE GOOD DISPOSITIONED, FULL BLOOD Holstein bull, 3 years old, $75. Write S. R. Nothiger, Sweethome, Ore.

REGISTERED O. I. C. SWINE FOR SALE; shipped C. O. D.; guarantee satisfaction. Tony Johnson, Polson, Mont.

FOR SALE—PUREBRED, THREE-YEAR-old Percheron stallion. Robert McKillip, Centerville, Wash.

HAMPSHIRE BARGAINS—BOARS, BRED sows; Partridge Wyandottes. Merryvale, Barlow, Ore.

TOGGENBURG MILCH GOATS. FANNIE Branson, Falls City, Ore.

HARNESS and SADDLERY 189

SEND FOR FREE HARNESS AND SADDLE catalog today; cut out the middleman, buy direct from the manufacturer. Lowest prices in the west; satisfaction guaranteed. Established 1881. Write Pierce Harness Co., dept. T, Spokane, Wash.

HAY FOR SALE. 200

ALFALFA HAY—BUY DIRECT, SAVE MONey; quality guaranteed. Write or wire for prices. Ernest T. Freepons, Walla Walla, Wash.

HOTELS 306

GLOBE HOTEL ANNEX, NEWLY FURnished rooms, 75c and $1; with bath, $1 and up. Spokane.

JOB PRINTING 372

GUARANTEED BETTER BUTTER WRAPpers; 100, 60c; 250, $1.50; 500, $2.50; 1000, $4.25; printed to order. Home Specialty Co., Middleton, Idaho.

TWO HUNDRED BUTTER WRAPPERS, $1.75. Enterprise Press, Garfield, Wash.

RUBBER STAMPS and Seals 384

LET US MAKE YOU A RUBBER STAMP for marking eggs, butter wrappers, letter heads, etc. Prices very reasonable. Portland Stamp Co., Box 3111, Portland, Ore.

TANNING 425

FUR SKINS, DRESSED; HEAVY SKINS tanned for robes; cash for skunk. Seattle Fur Dyeing, Tanning Co., 3508 Phinney, Seattle, Wash.

MONUMENTS 510

COMPLETE STOCK, RIGHT PRICES. CORrespondence solicited. J. W. Harding, Inland Monument Co., N1001 Monroe, Spokane.

BUILDING MATERIAL 588

NO WASTE, LESS LABOR. BUILD WITH ready cut houses and barns and save money. Attractive new plan book sent free. 4c postage. Prices quoted on material list. Write today. Price advance certain to come soon. Local Keystone Lbr. Co., 3000 Sprague, Tacoma, Wash.

SEEDS 620

NO. 1 ALFALFA SEED, 17C LB.; NO. 2 ALfalfa, 14c; red clover, 19c; alsike, 20c; white clover, 50c; samples free. William Veazie, seedman, Jerome, Idaho.

RED CLOVER, ALSIKE, RYE GRASS, TIMothy and vetch seed for sale; good quality, lower prices; by freight or parcel post. Rhoten Farms, Salem, Ore.

RECLEANED TIMOTHY AND ALSIKE SEEDS 10 cents per pound; germination guaranteed. Send samples. M. Hill, McCall, Idaho.

SEEDS (Continued.) 620

HUBAM CLOVER, CERTIFIED SEED OF THE earliest strain; Idaho grown. DeKalb County Agricultural association, DeKalb, Ill.

LONG VALLEY GROWN, MIXED TIMOTHY, alsike clover, 98.02 pure; 9c pound. Norwood, Idaho. M. Meador.

COSSACK ALFALFA SEED—SEND FOR samples. S. H. Hillman, Thompson Falls, Montana.

FOR SALE—CLEAN, YELLOW BLOSSOM sweet clover seed. S. A. Kent, Kalispell, Mont.

NURSERY STOCK 621

PLANT WINDBREAKS OR A WOOD LOT FOR shelter and profit; black locust in Idaho produced in eight seasons posts worth $1000 per acre. Free book tells how. Our special trees get quick results and cost little. Washington Nursery Co., Toppenish, Wash.

RELIABLE NURSERY STOCK—ITALIAN AND Petite, 4-6 ft., and 3-4 ft.; Concord, Worden and Moore's Early grapes; grafted Franquette walnut, all sizes. Send for catalog and price list. Villa Nurseries, Route 1, Portland, Ore.

TREES—ALL KINDS FRUIT AND ORNAmental trees, vines, etc. Growers of general nursery stock. Lowest quotations on application. Send your want list. Can use few good salesmen. Albany Nurseries, Albany, Ore.

CLARK SEEDLING, THE STRAWBERRY that made Hood River famous. Write for list of other varieties and prices. Plant nurseries at Hood River and Prosser, Wash. W. R. Gibson & Son, Hood River, Ore.

SUPERB EVERBEARING STRAWBERRY, blackcap and red raspberry, Giant Harvest Dew blackberries. Dr. Burrell and new Oregon strawberry plants. Write for price list. Quincy Stanfield, Meridian, Idaho.

APPLE TREES AND A FULL LINE OF NURSery stock at reasonable prices; save agents' commission by ordering direct from nursery. Write for price list. Lawson Nursery, Gates, Ore.

CORY THORNLESS BLACKBERRY—DELIcious, very large and early. You get strong, well rooted plants, true to name, from pioneer grower. Wm. Mortenson, Route 1, Lodi, Calif.

NURSERY STOCK, ITALIAN PRUNE TREES and trees of all kinds. Berries and small fruits of all varieties. Buy direct and save 50 per cent. Brooks Nursery, Lafayette, Ore.

SEND FOR OUR NEW PRICE LIST ON FRUIT trees, berry bushes, shade trees and roses on their own roots. Krause Nursery, Spokane, Wash.

TREES—PEAR, APPLE, PLUM, PRUNE, NUTS and berries at cost. Homer Brixey, McMinnville, Ore.

STRAWBERRY PLANTS, $5 PER 1000. Briggs Plant Nursery, Olympia, Wash.

FARM LANDS FOR SALE. 651

AS CLEARING HOUSE FOR AN EASTERN loan company we offer 100 pieces of foreclosed property, mostly in eastern Washington, for the mortgaged indebtedness. Dry farms, irrigated lands, business buildings and orchard tracts; some good land under proposed irrigation projects as low as $10 per acre; no trades; no lists. Will make easy terms to real farmers. Write us your wants if you can not call. Hartford Land Co., 601 Paulsen bldg., Spokane, Wn.

PARADISE—WHERE YOU CAN GROW APples, peaches, pears, walnuts and berries of superb quality; in a climate with lots of sunshine; pressure irrigation; at railroad siding; live American community. 25 acres, new $2000 bungalow; ten cleared; three acres new planting pears, family fruits, berries, balance pine and oak. $5000; terms; 40 acres, timbered, $50 per acre. Neighboring lands full bearing, sell $1000 per acre. C. H. Eckles, Paradise, Cal.

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DAIRY FARMERS INVESTIGATE THIS UNusual opportunity. Fine paying irrigated dairy and alfalfa ranch; famous Deschutes valley, central Oregon. $16,000. Small initial payment, new easy payment plan; ideal climate. Full particulars on request. Redmond Land & Loan Co., Inc., Redmond, Ore.

CALIFORNIA LAND UNDER THE ONLY U. S. government project in the state, producing oranges, olives, almonds, raisins and all kinds of deciduous fruits; splendid dairy and poultry section; progressive town; no killing frosts. For free literature, write Chamber of Commerce, Orland, Cal.

IRRIGATED STOCK RANCH FOR SALE, ON terms to suit; 160-acre irrigated ranch; mile from Salmon, Idaho. Forest range mile from ranch; ranch will produce all crops; well improved. $800 will handle; must sell. Write owner, W. C. McCormick, McCall, Idaho.

YOUR OPPORTUNITY—WE OWN SEVERAL cultivated, irrigated farms close to Boise, largest city in Idaho; will sell on 20 years' time, 6 per cent interest. See us at once. A. H. Eagleson & Sons, Ltd., Boise, Idaho.

120 ACRES NEAR CAMAS HOT SPRINGS; 100 acres irrigated from artesian well, bal. pasture; 3 springs, creek flows through place; fair buildings; $60 per acre, including machinery and horses. Neil Bratton, Camas, Mont.

640, 840 AND 1080 ACRES—THREE GOOD stock ranches. Will sell any one or all together. These divide up good; have free water right for 170 acres; some wheat land. If interested write 545, Heppner, Ore.

SHEEP RANCH FOR SALE—1120 ACRES; 150 acres hay land; Deer Lodge valley, Montana; 5 miles to summer range; fully stocked and equipped. Address owner, Box 56, Garrison, Montana.

SELL YOUR PROPERTY QUICKLY FOR cash; no matter where located. Particulars free. Real Estate Salesman company, 501 Brownell, Lincoln, Neb.

DAIRY FOR SALE—INCOME $500 PER month. C. W. Henkel, owner, Aumsville, Ore.

FOR SALE—34 ACRES, GEO. SCHURR, OWNer, Oak Harbor, Wash.

FARM LANDS—Wanted 654

WANTED — TO HEAR FROM OWNER OF land for sale. O. K. Hawley, Baldwin, Wis.

FOR SALE OR EXCHANGE 702

158 ACRES; 40 CLEARED, BALANCE EASILY cleared; 9 miles from Castle Rock, Wash.; good 8-room house, modern barn and chicken house; equipped or not. Geo. Bain, Castle Rock, Wash.

SELL OR EXCHANGE—500-ACRE RANCH, improved with 75 head of stock, running water, for smaller farm near high school. Thomas Owens R. 1, Suffield, Alberta, Canada.

80 ACRES, IMPROVED, OCONTO COUNTY, Wisconsin; to sell or exchange for small ranch on the coast. Box 121, Mountain, Wis.

120-ACRES BLACK LOAM, DIVERSIFIED farm; $10,000; want dairy. Write Leroy Moore, Rice, Wash.

TRACK'S END

By HAYDEN CARRUTH

A Stirring Story of Adventure

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SYNOPSIS.

Track's End is a prairie village in Dakota in the early days at the end of the western railroad. Jud Pitcher, a lad of 18, is one of the "pioneers" who has left home to make his fortune in the west. Very soon after reaching Track's End he earns the enmity of a dangerous man, Pike. A terrible blizzard comes and one by one the settlers return to their old home for the winter until Jud, the boy, is left entirely alone to spend the winter, with no train service until spring. He has charge of the entire village, with its store, bank, hotel, and the horses and cows. Kaiser, the hotelkeeper's dog, and Pawsy, the hotel cat, are his only "human" companions. About him are enemies, including Pike, and his roving gang, that promise to keep him busily occupied until the spring thawup, when the train resumes its weekly runs and the settlers come back. Wolves are the first enemy to offer trouble, but Jud succeeds in overcoming their first onslaught. He devises ways and means of making marauding parties of men and Indians believe the town is still filled with people. He hunts up food and ammunition and settles down for a long vigil of several cold months.

CHAPTER VIII.

I begin my letters to my mother and start my fortifications; then I very foolishly go away, meet with an accident, and see something which throws me into the utmost terror.

The next day, the 19th of December, was Sunday. I had been left alone (or, rather, let me say the truth, I had, like a fool, refused to go) on Friday, which seems in this case to have been unlucky for me, however it may ordinarily be. I woke up early, half cramped with the weight of the bedclothes. I had piled on so many, but I was none too warm, either. I put out my drawbridge and got back to the hotel and started the fire. Outside the thermometer stood close to 35 degrees below zero, but the sun was rising bright and dazzling into a clear, blue sky.

Kaiser's leg was no better and Pawsy was still nervous and kept looking at the windows as if she expected wolves to bolt in head-first, and I did not blame her much. It seemed to me that the wolves had howled most of the night. I only wished that the timber beyond Frenchman's Butte and the coteaux and the Chain of Lakes were a hundred miles away, for without them there would have been no wolves, or nothing but little prairie wolves or coyotes, which, of course, don't amount to much.

As soon as my own fire was started I went about town and got the others going; this I called "bringing the town to life." As I stood at the depot and watched the long columns of smoke from the chimneys it scarcely seemed that I was the only inhabitant of the town. After I had had breakfast and done up the work at the barn I sat down in the office and was glad enough that it was Sunday. I suddenly thought of a way to spend the day, and in 10 minutes I was at something which I did every Sunday while I stayed at Track's End.

This was to write a letter to my mother, stamp and direct it and drop it in the slot of the postoffice door. Of course it would not go very soon, but if nothing happened it would go some time, and, I thought, if I am killed or die in this dreadful place, the letters may be the only record she will ever have of my life here.

I accordingly set to work and wrote her a long letter, telling her fully everything that had happened so far, but without much of my fears for the future. I told her I was sorry that I had got myself into such a scrape, but that, now being in, I meant to go through it the best I could.

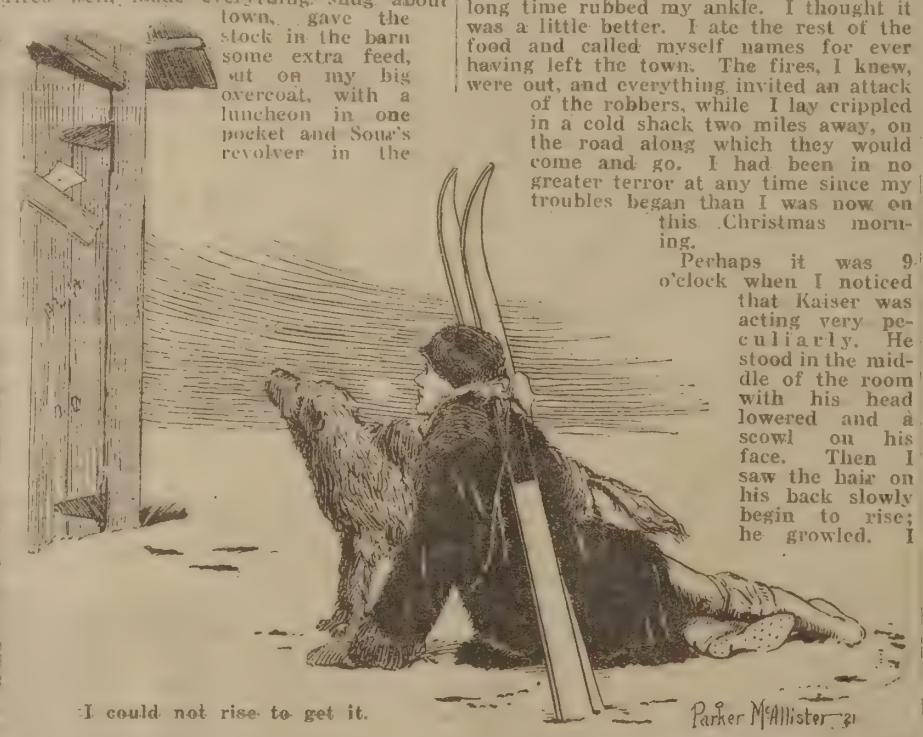
The next morning, Monday, I began work on my fortifications, by which name I included everything that would help to keep off invaders. I started two more fires, one in Townsend's store, at the south end of the street, and the other in Joyce's store, at the north end of town and nearly opposite the harness shop. I made another visit to Taggart's and found some barrels of kerosene, which I needed, and more ammunition. Still another thing was a number of door keys, so that I made up a string of them with which I could unlock almost every door in town. In Joyce's, besides groceries and such things, I found a buffalo overcoat, which I took the liberty of borrowing for the winter. It was so large for me that it almost touched the ground, but it was precisely what I needed, and, I think, once saved my life, and that before long.

I kept at the fortification work for four days pretty steadily, though I did not use the best judgment in picking out what to do first. I was fascinated, boylike, with the tunnel idea, when, I think, with the knowledge I then had, it would have been wiser to have paid more attention to some other things, but, as luck would have it, it all came out right in the end. I boarded up a few of the windows, but not many, and did nothing whatever at providing a secret retreat in case of fire, though I had a plan in mind which I thought was good. Worst of all, I left the Winchesters about here and there without any particular attempt at hiding them. But I kept at the tunnel hammer and tongs.

There were two front windows in the hotel office. At one of these the snow came only a little above the sill, which was the one where the wolf had come in, but the other was piled nearly to the top. It was even higher against the bank front opposite, and at no place in the street between was it less than four feet deep. Both buildings stood almost flat on the ground. I took out the lower sash of the window in the hotel and began work. I made the tunnel something over two feet wide and about four high, except where the drift was no more than this, where I did not think it safe to have the tunnel over three feet high. The snow was packed remarkably hard, and, as it all had to be carried out through the office in a basket and emptied in the street, it was slow work. But at last, on Thursday evening, it was done, and Kaiser and I passed through it, but nothing could induce the cat to come nearer than the window. I was very proud of my work, and went through the tunnel 20 times with no object whatever.

The next morning I ought to have gone at other fortification work, but instead I thought up the foolish notion that I ought to go out to Bill Mountain's to see if Pike had got our letter and had left any in reply. It was Friday, the day before Christmas, and I thought that the holiday would be more satisfactory if I knew about this, though, to tell the truth, I had not worried much about the gang's coming since I had been so taken up with the tunnel, I had been so careless that I might have been surprised 20 times a day.

It was a pleasant morning, and not very cold. Andrew had left behind a pair of skis, or Norwegian snowshoes—light, thin strips of wood, four inches wide and eight or ten feet long—and, though I had never been on them but once or twice, I determined to use them in going. I fixed the fires well, made everything snug about town, gave the stock in the barn some extra feed, put on my big overcoat, with a luncheon in one pocket and Sour's revolver in the other, and started. Kaiser's leg was still a little stiff, but I let him go along.



I could not rise to get it.

Parker McAllister—21

I think I fell down three times before I got out of town; it was as many as this at least, and outside of town, there being more room, I fell oftener. But I soon began to improve and get along better. I decided to follow the railroad grade west, as it was most of the way higher than the prairie, and the snow on it was smoother.

When I got opposite Mountain's I found the grade some 10 or 12 feet above the prairie, but it looked a very easy matter to slide down on the skis. I had seen Andrew go down the steep side of Frenchman's Butte. I accordingly slid, went wrong, fell, turned my ankle, and found myself on the hard snow at the bottom unable to stand on my feet.

I lay still some time, thinking that perhaps my ankle might get better, but it got worse. It was still almost half a mile to Mountain's, but it was over two miles back to town. I felt that I might be able to crawl the half mile, so I started, with the skis on my back. I hope I may never again have to do anything so slow and painful. Kaiser was prodigiously excited and jumped around me and barked and said as plainly as words that he would like to help if he could. But, though I thought a hundred times that I should never reach there, I kept burrowing and floundering along and did accomplish it at last. It was far past noon. The sky had clouded over. I saw a new letter behind the board, but could not rise up to get it. I pushed open the door, crawled to the heap of hay by the stove, and lay on it, more miserable, it seemed, than ever before.

I scarcely stirred till I noticed that it was beginning to get dark. Then I crept to the door and looked out; the snow was falling fast and in big flakes. I shut the door and crawled back to the hay. There seemed to be nothing to do. I knew I could not keep up a hay fire, even if I could start one. Besides, I had a sudden fear that some of the Pike gang might visit the shanty to look for an answer to their letter, and I thought if I simply lay still I might escape, even if they did come. I ate part of my luncheon and gave Kaiser part. Then I drew my big overcoat around me as best I could, made the dog lie close up to me on the hay, and tried to sleep.

My ankle pained me a good deal, and the bed was not comfortable. I thought as I lay there that my mother and father and all the folks at home must then be at the church for the Christmas tree, and I could see the lights and the bright toys on the tree, and all the boys and girls I knew getting their presents and laughing and talking, and the singing and the music of the organ came to me almost as if I had been there. Then I thought of how, if I were home, later I should hang up my stocking and find other gifts in it in the morning, and of what a pleasant time Christmas was at home.

Every few minutes a sharp twinge of pain in my ankle would bring me back to my deplorable condition there in that deserted shack sunk in the frozen snow, and I would be half ready to cry, but, with all my thinking of both good and bad, I did at last get to sleep. Once, some time in the night, I woke up with a jump at a strange, unearthly, whooping noise which seemed to be in the room itself, but at last I made it out to be an owl to-whooing on the roof. Again I heard wolves, very distant, and 20 times in imagination there sounded in my ears the tramp of Pike's horses.

When morning came I crawled to the door again. There were six inches of soft, new snow, but the sun was rising clear, and there were no signs of a blizzard. I got back to the hay and for a long time rubbed my ankle. I thought it was a little better. I ate the rest of the food and called myself names for ever having left the town. The fires, I knew, were out, and everything invited an attack of the robbers, while I lay crippled in a cold shack two miles away, on the road along which they would come and go. I had been in no greater terror at any time since my troubles began than I was now on this Christmas morning.

Perhaps it was 9 o'clock when I noticed that Kaiser was acting very peculiarly. He stood in the middle of the room with his head lowered and a scowl on his face. Then I saw the hair on his back slowly begin to rise; he growled. I told him to hush, and waited. I could hear nothing, but I knew there must be good cause for his actions.

At last I could stand it no longer. I dared not open the door, but I seized one corner of the dry goods box, drew myself up and hobbled to the window, regardless of the pain. Going straight for the town, a quarter of a mile away, were a dozen men on horseback. I could see by their trail that they had passed within 50 yards of where I was.

CHAPTER IX.

More of a strange Christmas: I make Kaiser useful in an odd way, together with what I see from under the depot platform.

I think Kaiser was the best dog that ever lived. When I looked out of the window, what with seeing the men and with the pain which shot through my leg from my ankle, I sank down on the floor in a kind of faint. How long I lay there I know not, but when I came to Kaiser was standing over me licking my face. When he saw me open my eyes and move he uttered a sort of a whine, half like a cry and half like a light laugh, and began wagging his tail. I put my arms around his neck and drew myself up so that I was sitting on the floor. At this he began to bound about and bark as if he would say: "Cheer up, Jud; this is bad luck, but we will get through yet!"

The pain in my ankle was half killing me, and suddenly it drove me desperate. I seized my foot in my hands, drew it up into my lap, and gave it a wrench that was like to break it off. I felt something crack inside, and half the pain stopped. "I've fixed it!" I cried to Kaiser, and tried to get up, thinking I could walk, but I went down in a heap, and saw that, though it was better, I was still far from walking. The ankle was swelled to twice its right size, but I felt sure that it must now improve.

I made Kaiser stop his fuss and pulled open the door. I could just make out the horsemen going along the grade almost to the town. I crawled to the hay, and thought a long time. In the first place, I knew the fires were all out and that the new snow had covered all traces of my life about the town. The robbers would find the place deserted and would go to work upon the safe. How long it would take them to open it I did not know, but one of the many things I now regretted was that, while fooling around with my tunnel, I had neglected to take out and hide the tools that were in Beckwith's blacksmith shop, as I had intended to do, for with these I did not think it would take the men long to break into the safe.

After they had got the money two things might happen: They might take it and return west, in which case they would be almost sure to stop at Mountain's and discover me; in fact, the only thing I could not understand was why they had not stopped as they went in. I knew how much mercy I could expect from Pike and the kind of men that were with him.

The other course that they might take after getting the safe open was to stay in town for several days or even weeks, and in this case I should simply starve and freeze to death where I was. The reason that made it seem likely that they would stay a while were that there was no danger, plenty of food and fuel and comfortable places to live and sleep. At first thought I saw one reason against it, and that was that there was no liquor in the town, and I knew they were the kind of men who would prize liquor higher than food. Then I remembered that, though the contents of the saloons had been shipped away when they were closed, I had heard there was a barrel of whisky in the cellar of Fitzsimmon's grocery store, and I knew, of course, that they would find it. I thought again of my detestable tunnel, for if I had not had my mind on it so much the barrel might have occurred to me and I could have disposed of it somehow.

I thought a long time, and this was the amount of it: That in any case I had best get back to town if I could. If I reached there while they were at work on the safe I might be able to slip in unseen and hide somewhere till they were gone, and even if they did not go for some days I might manage to keep out of sight and live after a fashion. Anything seemed better than staying where I was.

I was half dead from thirst, and it seemed that no harm could now come from a little fire, so I had one started and some snow melting in an old tin can. The drink and the warmth revived me a good deal, and I decided to start immediately to crawl to the town. I thought with good luck I might make it in four hours. It was now probably 11 o'clock. I left my skis and started out. Kaiser bounded around me in the greatest delight, barking and throwing up a cloud of snow. But before I had gone 20 rods I sank, half fainting with the pain of dragging my ankle. Poor Kaiser whined and licked my face. When I revived a little I crept back and threw myself on the hay again, ready to die with despair.

I lay there half an hour in the greatest mental and physical pain; then an idea that drove it all away struck me like a flash. I sat up and drew the skis to me on the floor and placed them parallel and about 10 inches apart. Then I took one of the legs of the stove and pounded a board off of the dry goods box. It was four feet long and a foot or more wide. I beat some nails out of the box and then placed the board lengthways on top of the skis and nailed it firmly. This made me a sled, low but long and light.

I had on under my coat a jacket of coarse, strong cloth. This I took off and cut and tore up into strips, knotted them together. I fastened one end of each of these to the front of the skis. Then I let out Kaiser's collar two or three holes, tied the other ends of my ropes to each side of it, making them precisely like harness traces, and pushed out of the door and sat down on my new sled. I had like to have forgotten the letter on the door, but drew myself up and got it

(Continued on the following page.)

FAMILY CIRCLE

ALICE BARLAND
EDITORIAL CONTRIBUTOR

Experience Letters

From Our Family Circle Women

Dear Family Circle: When I gave out a few questions asking you to tell us some of your experiences on child training I expected a good many of you to write and I have received only a few letters on this most important subject. I hope to hear from more of you. I wonder if you will agree on these methods. A. W. B.

Dear Mrs. Barland: Children are my hobby and I will attempt some helpful answers to your questions.

The pleasures and comforts of my husband and children come first before dusting and darning. A healthy and optimistic wife and mother comes before canning, pickling and baking.

I had to spat my little girl's mouth for talking back to me and after this punishment a couple of times she felt very badly, for punishments are scarce in our home. So I made a bargain with her that she would do her best to think twice before answering back and I wouldn't spat her again unless I was sure she was deliberately being saucy. This habit was soon broken. Please notice I didn't ask her to "break the habit."

I should allow the child who leaves his wraps scattered around to miss a few good times because he couldn't find them. I should let him understand that I wouldn't hustle around and help locate them.

I believe that personal cleanliness and table manners must be taught by example and care from the hour the child is born. Mother and father can not eat with their knives and wipe their noses on their sleeves and expect the children to be particular. Dirty habits and bad habits of any kind are much easier to keep "shed of" than to get "shed of" after they are formed.

Always talk to a child as if you expected him to stand up to his own punishments or the consequences of his own acts. A child comes very near being what we expect of him.

As to tattling it is very hard to draw the line between it and telling what should be told, but I believe when a child learns how every one dislikes a telltale he will strive to avoid being one.

I have not found the proper method to stop "poking" except for slow dressing in the mornings. I notice that a cool room is more "hurryful" than a warm one. But rather than be continually hurrying my children I often let them poke, for I am afraid too much hurrying tends to make a nervous family.

Now for just a word to all mothers, but especially to young mothers: Strive to make your home a constructive one and not a negative one. Instead of saying, "No, no," and "stop" and "don't" so many times a day, try saying, "Come and do this or that," and get the mischievous child interested in some good work or play. Think of something to take the place of the undesirable thing or habit, then ask them to do it. You will find that children respond more readily to such discipline than to much scolding and whipping.

Never frighten a child or put him in a dark room. Find out the cause of his misbehavior and then suggest something to take its place. If you really try to form this habit you will notice that you are growing less nervous, are more cheerful and that you are becoming a better mother.

I hope I have made myself plain and that we shall hear from many mothers.

MRS. B. M. L.

Track's End

(Continued from the preceding page.)

and put it in my pocket. There was a monstrous red skull and cross-bones on the outside of it.

If you think I did not have a time teaching that dog to draw me, then you are mistaken. The poor animal had not the least notion what I wanted of him, and kept mixing up his legs in the traces, coming back and bounding around me, and doing everything else that he shouldn't. I coaxed, and tried to explain, and worked with him, and at last boxed his ears. At this he sat down in the snow and looked at me as much as to say, "Go ahead, if you will, and abuse the only friend you have got!" At last I got him square in front and, clapping my hands suddenly, he jumped forward, jerked the sled out from under me and went off on the run with the thing flying behind.

I lay in the snow with my five wits half scared out of me, expecting no less than that he would be so terrified that he would run to Track's End without once stopping. But I made out to do what I could, and called "Kaiser! Kaiser!" with all the voice I had. Luckily he heard me, got his senses again, and stopped. He stood looking at me a long time; then he slipped the collar over his head and came trotting back, innocent as a lamb, without the sled.

There seemed to be nothing to do but to crawl to the sled, so I started, with Kaiser tagging behind and not saying a word. I think he felt he had done wrong, but did not know exactly how. The crawling pained my ankle somewhat, but not so much as before, and I got to the sled at last. I saw that it was near the trail which the men on horseback had made, and this gave me an idea: Perhaps Kaiser would follow that. I pushed on over and as soon as he saw the trail he pricked up his ears, began to sniff at the snow and look toward the town. I hitched him up again, headed him the right way, took a good hold, and shouted, "Sic 'em, Kaiser!" He started off like a shot and ran till he was quite out of breath.

After he had rested and I had petted and praised him, we went on. He understood now what was wanted, and made no further trouble. We soon got up on the grade, and found it much smoother. Indeed, the horses had left a very good road, and by sitting well back on my odd sled, so that the board would not plow up the snow, it was not at all hard for Kaiser to draw me. We were soon near enough to the town so that I began to tremble for fear of being seen. My eyes were troubling me a good deal; it was snow-blindness, but, as I had never heard of it, I was frightened, not knowing what to think.

I could see the horses standing in a bunch in the open square between the depot and town, but the men were nowhere in sight, and I doubted not they were hard at work on the safe. After a good deal of labor I managed to get Kaiser to turn off to the south until the railroad buildings were between us and the town. Then I struck out straight for the water-tank, and in a few minues was up to it.

The space below the tank was enclosed, making a round, dark room filled with big timbers. One of my keys fitted the door, and I opened it, put Kaiser and the sled inside, and shut the door. The poor dog thought this was poor payment for his work, but I could could not trust him loose. I picked up a narrow piece of board and broke it to the right length for a crutch, and so managed to hobble along upright to the end of the station platform. This was three or four feet from the ground and beneath it were a lot of ties, old boxes and other rubbish. I crawled under and around to the side next to the town and peeped over a log of wood.

The horses were standing in a huddle with their heads together, and I did not pay much attention to them. A little to one side I saw a big pile of blankets, bedclothing and other things taken from the hotel and stores, and on top of it all my guns and other weapons. I expected that they would take the guns, but was surprised at their bothering with the other stuff. I could hear no sounds of their working on the safe. All at once the door of Taggart's store opened and they came out, carrying a lot of rope and other things. Then I saw that they were not the men I had thought, after all, but a band of Sioux Indians.

(To be continued.)



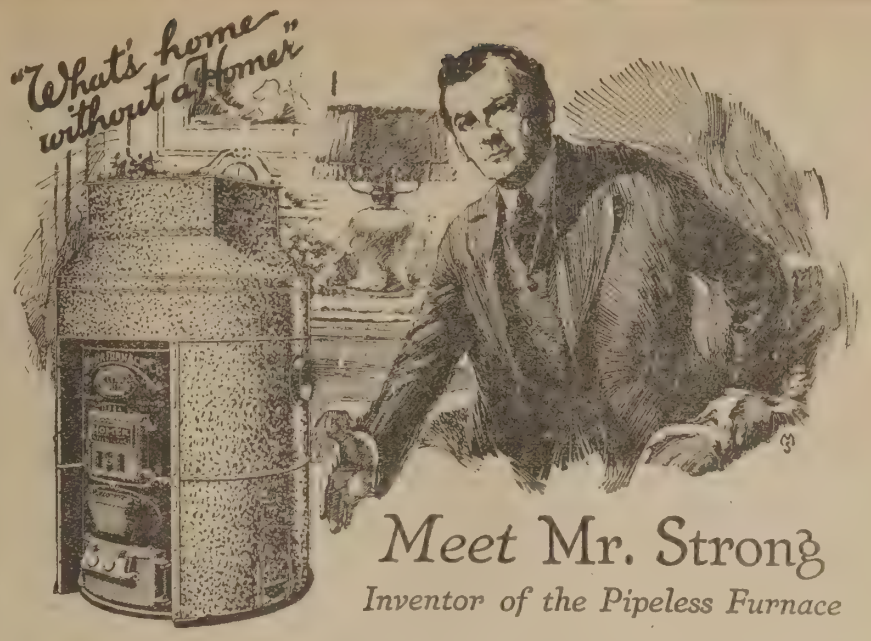
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High Points in News of the Week

The provisional government of the Irish Free State is now a functioning body.

Final formalities of approving the treaty with England were carried out late Saturday afternoon, when, after a historic meeting in the Mansion house of representatives of the southern Irish constituencies who formally ratified the treaty, Eamonn J. Duggan took to Dublin castle a copy of the treaty signed by the members of the new government.

Sixty-five members elected to sit in the house of commons in southern Ireland attended the morning meeting. No women representatives nor any other adherents to Eamonn De Valera, former republican president, were present.

First on the list of eight men appointed as constituting the provisional government is Michael Collins, and it is assumed he will be made the nominal head. As a matter of fact, however, the Associated Press correspondent is authoritatively informed that Arthur Griffith, as president of the dail and chairman of the delegation that negotiated the treaty, will be looked to as its supreme authority.

* * *

Aristide Briand has resigned from the premiership of France. M. Briand's resignation came with dramatic suddenness in the chamber of deputies, for the premier, returning from his conferences with the British prime minister at Cannes, had brought the opposing members of his cabinet into accord with his policies and, by a powerful speech in the chamber, had apparently won over the great majority to his side. His blunt eloquence evoked a tremendous ovation and when he abruptly declared his intention of withdrawing from the government the members of the chamber seemed overwhelmed.

M. Poincare, former president, who accepted the premiership to succeed M. Briand, after a conference with M. Barthou and other supporters, has announced his cabinet.

* * *

Passing on its last question of policy, the armament committee of the Washington conference decided against any present attempt to limit or regulate aerial warfare and voted to refer the problem to a continuing committee for future study. Only details of technical phraseology remain to be worked out before the treaty for limitation of armament is ready for signature by the plenipotentiaries of the five great powers.

* * *

E. A. Spady, a cobbler of Emporia, Kan., expects a pair of shoes by mail from President Harding, sent for repair. Homer Hoch, Kansas representative, told the president of Spady's ability as a cobbler and the president decided to try him out. Hoch and Spady were boyhood friends.

* * *

The machine guns of peace, pneumatic riveters, are rattling day and night in the former war harbor of Kiel, where a score of large commercial ships are under construction, the majority of them for use in the campaign Germany is waging for control of the maritime commerce of the world.

* * *

General George Goethals, army engineer, who constructed the Panama canal, the greatest engineering feat of this generation, is to survey and report on the Columbia basin project. Within the next few weeks he is expected to arrive in Spokane to consult with Dan A. Scott, state director of conservation, Chief Engineer Van E. Goodner of the Columbia basin project and the other engineers.

* * *

Opposition to the proposed legislation directing the president to appoint a farmer to the federal reserve board was declared in a memorial presented to Mr. Harding by the advisory council of the board.

* * *

Truman H. Newberry of Michigan has finally won his long fight for a seat in the United States senate by a vote of 46 to 41. All who voted for him were republicans, while 9 republicans and 32 democrats voted against him.

* * *

Henry Ford's offer for purchase and lease of the government's nitrate and water power projects at Muscle Shoals, Ala., will be referred to congress for final decision.

* * *

Before the war the national wealth of Europe was mortgaged to the extent of 6 per cent. Now it is mortgaged fully 65 per cent, according to Charles A. Schact of the federal reserve bank of St. Louis, who recently discussed before a departmental meeting of the American Institute of Banking the bond issues of Europe.

* * *

Facts and figures, together with "an even dozen unquestionable points in proof that the 18th amendment is being enforced" were made public by Prohibition Commissioner Haynes in a statement on the eve of the second anniversary of the national prohibition act, which became effective January 16, 1920.

The 12 points are: The disappearance of the open sale; open drinking public dining rooms; passing of the treating evil; closing of whisky cure institutions; increased savings accounts; record breaking Christmas business; decreased drunkenness; prohibitive prices of "bonded" liquor; dangerous character of illicit whisky; surrepticiousness of present day drinking; wail of the howling minority; changed attitude of former hostile statesmen.

* * *

Intention of Postmaster General Hays to retire from the cabinet in the near future to become directing head of an association of motion picture producers and distributors, at a reported salary of $150,000 a year, was announced Saturday at the White House after a conference between President Harding and the postmaster general.

WOODWARD TO LEAVE W. S. C.

Professor E. G. Woodward, head of the dairy department of the state college of Washington, has resigned to go into practical dairy work in Connecticut, where he is leasing a farm from the president of the American Guernsey club.

Farm Business and Markets Outlook

(Continued from page five.)

year ago and a five-year average of 982,000 cases.

The decline has gone far enough to stimulate consumption still further and some confidence was restored at the close of the week.

BUTTER WEAKNESS PERSISTS.

Butter markets continued weak after the holidays as receipts increased and stocks already on hand were large, while demand failed to expand. Top scores were more plentiful and lost ground as rapidly as the undergrades. Production is undoubtedly heavy. The report of the American Creamery Butter Manufacturers' association for the week ending December 31 shows an increase of 48.4 per cent over the same week of 1920. Consumption is above the level of last year, but has not increased as much as market supply. Foreign butter arrivals have been less burdensome, consisting of 1100 casks from Denmark and 3145 boxes from London. Some Canadian butter also arrived.

Prices for 92 score fresh butter on January 11 were: Chicago, 31c; New York, 34½c; Boston, 35c; Philadelphia, 35c; San Francisco Exchange quotation, 29½c.

CHEESE TRADE SATISFACTORY.

Cheese demand is fairly active, but is confined largely to immediate consumptive demand as it is impossible to move large blocks at any one time.

Prices on fresh No. 1 American cheese on January 11 were:

Chicago—Twins, 20@21c; Single Daisies, 20½@21½c; Double Daisies, 20@21c; Square Prints, 22@22½c; Young Americans, 20@20½c; Longhorns, 19¾@20½c.

FRUITS AND VEGETABLES.

Potato markets turned upward last week and at most points are higher than a week ago. Northern sacked round whites are bringing $1.75 to $1.90 per 100 pounds at shipping points and $1.85 to $2.10 in consuming markets. Colorado growers are receiving $1.40 to $1.50 per 100 pounds for sacked rurals in wagonloads. Total shipments for the season up to the end of December exceeded those of the same period in 1920 by over 15,000 cars.

The movement of apples for the season up to the end of December amounts to 45,705 cars of boxed apples and 22,979 cars of barreled apples compared with 28,318 and 57,850 cars, respectively, for the same period of 1920. Prices show little change with Baldwins quoted at $6.50 to $8 per barrel wholesale in consuming markets.

LATEST QUOTATIONS.

The Live Stock Market.

PORTLAND, Ore., Jan. 14.—Cattle—Steady; no receipts.
Hogs—Steady; receipts, 1656.
Sheep—Steady; no receipts.
SPOKANE, Jan. 14.—Cattle—Prime steers, $6.50@7.25; good to choice steers, $5.75@6.50; medium to good steers, $5.25@5.75; fair to medium steers, $4.75@5.25; common to fair steers, $4.25@4.75; choice cows and heifers, $5@6; good to choice cows and heifers, $4@5; medium to good cows, heifers, $3.50@4; fair to medium cows, heifers, $3@3.50; canners, $2@3; bulls, $3@5; light veal calves, $8@9.50; heavy veal calves, $4@8; stockers and feeders, $3.50@5.

Hogs—Prime mixed, $8.25@8.75; medium, $7.75@8.25; heavies, $5.75@7.75; fat pigs, $8.25@8.50; stockers and feeders, $7.25@7.75.

Sheep—Prime lambs, $7.50@9; fair to medium, $6.50@7.50; yearlings, $5@6.50; wethers, $4@5; mutton ewes, $1@5; feeder lambs, $5@6.50.

The Grain Market.

PORTLAND, Ore., Jan. 14.—Wheat—Hard white, hard winter, $1.09; soft white, white club, northern spring, $1.08; red Walla, $1.04.

Receipts, wheat, 68.

Grain futures: Wheat—Hard white, hard winter, January, February, $1.09; soft white, white club, northern spring, January, February, $1.08; red Walla, $1.04.

Oats—No. 2 white feed, January, $26.50; February, $27; No. 2 gray, January, February, $26.

Barley—Brewing, January, February, $26; Standard feed, January, February $24.

Corn—No. 2 eastern yellow shipment January, February, $24; No. 3 eastern yellow shipment January, $24; February, $23.50.

SEATTLE, Jan. 14.—Wheat—Hard white, soft white, white club, soft red winter, $1.09; hard red winter, northern spring, $1.10; eastern red Walla, $1.06; Big Bend bluestem, $1.12.

Yesterday's car receipts—Wheat, 12; corn, 4; hay, 6; flour, 11.

City delivery: Hay—Timothy, $25; DC, $27; mixed, $21; alfalfa, $17; DC, $23; straw, $15; barley, whole, $33; ground and oiled, $35; clipped, $40; chick starter, $54; chop, all grain, $35; coconut meal, $28; corn, $33@34; corn, cracked and feed meal, $27; cottonseed meal, $44; linseed meal, $58; mashed mixture egg, $46@48; scratch food, $41@46; soy bean, $60; wheat, $42; Puget sound, $40.

ODESSA, Jan. 14.—Marquis, $1.05; Bluestem and Bart, $1.02; Turkey red, $1; Jones' fife, 92c.

DAYTON, Jan. 14.—Club wheat, 90c; red 87c.

POMEROY, Jan. 14.—Turkey, 95c; hybrid, 92c.

DAVENPORT, Jan. 14.—Marquis, 95c; Bluestem, 92c; Gold Coin, 85c.

PULLMAN, Jan. 14.—Red wheat, 86c; white wheat, 89c.

WALLA WALLA, Jan. 14.—Club wheat, 93c; Bluestem, 93c; Turkey red, 92c.

LEWISTON, Idaho, Jan. 14.—Club, Forty-fold, 89c; hard winter, 90c.

General Produce.

SEATTLE, Jan. 14.—Eggs—Select local ranch, white shells, 30@32c; do. mixed, colors, 30c; pullets, 25@28c.

Butter—City creamery, cubes, 33c; bricks or prints, 34c.

PORTLAND, Jan. 14.—Butter—Slow; extra cubes, 29@30c; under grades, 25c; cartons, 36c; prints, 35c.

Butterfat—No. 1 churning cream, 31c f. o. b. Portland; under grades, 29c.

NEW YORK, Jan. 14.—Butter—Firm. Creamery, higher than extas, 38@38½c; creamery extras, 37@37½c; firsts, 32@36c.

Eggs—Steady.

Cheese—Firm.

CHICAGO, Jan. 14.—Butter—Higher; creamery extras, 34c; firsts, 28@33c; seconds, 25@27c; standards, 32c.

Eggs—Higher. Receipts 2199 cases. Firsts, 38c; ordinary firsts, 32@34c; miscellaneous, 35@37c; refrigerator firsts, 22@25c.

Range of Live Stock Prices for the Week Ending Jan. 11

CATTLE.	Chicago.	Spokane.	Portland.	N Salt Lake
Choice, prime heavy steers (1100 lb up)	8.80@10.00	.....	.....	.....
Good heavy steers	8.00@ 9.10	.....	.....	.....
Medium heavy steers	6.60@ 8.35	.....	.....	.....
Common heavy steers	5.85@ 7.15	.....	.....	.....
Choice, prime light steers (1100 lb do'n)	9.15@10.25	.....	.....	.....
Good light steers	8.15@ 9.25	.....	.....	.....
Medium light steers	6.50@ 8.40	5.75@ 7.25	5.75@ 7.50	5.75@ 6.50
Common light steers	5.60@ 7.00	4.25@ 6.00	4.75@ 6.25	4.00@ 6.00
Common to choice butcher heifers	3.60@ 8.25	3.00@ 6.25	3.50@ 6.25	3.50@ 5.50
Common to choice butcher cows	3.35@ 6.50	2.75@ 5.50	3.25@ 5.50	3.00@ 5.00
Bologna and beef bulls	3.75@ 6.25	3.00@ 5.00	3.00@ 4.00	2.00@ 3.50
Canners and cutters, cows and heifers	2.25@ 3.50	2.00@ 3.00	2.25@ 3.25	1.50@ 3.25
Canner steers	3.00@ 4.25	2.50@ 3.50	2.75@ 3.75	2.25@ 3.50
Medium to choice light veals	6.25@ 9.25	8.00@ 9.00	6.00@10.00	6.00@ 7.00
Common to choice heavy veals	3.50@ 7.75	4.00@ 8.00	5.00@ 6.00	.....
Common to choice feeders (1000 lb up)	5.25@ 6.50	.....	.....	.....
Common to choice feeders (750-1000 lb)	5.00@ 6.50	3.50@ 5.00	4.50@ 5.50	.....
Common to stocker steers	4.25@ 6.50	.....	.....	.....
Com. to choice stocker cows & heifers	3.00@ 4.75	.....	.....	.....
HOGS.				
Top of market	8.55	8.75	8.75	7.40
Bulk of sales	7.15@ 8.00	7.75@ 8.50	7.75@ 8.75	7.00@ 7.25
Heavy (250 lb up)	7.10@ 7.75	7.00@ 7.75	7.25@ 8.00	6.75@ 7.00
Medium (200-250 lb)	7.30@ 8.10	7.75@ 8.25	7.75@ 8.25	7.00@ 7.25
Light (150-200 lb)	7.65@ 8.40	8.25@ 8.75	8.25@ 8.75	7.25@ 7.40
Light lights (130-150 lb)	7.80@ 8.50	8.00@ 8.50	8.25@ 8.75	.....
Smooth packing sows (250 lb up)	6.00@ 7.00	6.50@ 7.25	6.25@ 7.00	.....
Rough packing sows (200 lb. up)	5.75@ 6.40	5.75@ 6.75	5.50@ 6.50	.....
Medium to choice pigs (130 lb. down)	7.65@ 8.50	8.25@ 8.50	8.50@ 8.75	.....
Stocker pigs	.....	7.25@ 7.75	8.50@ 8.75	6.00@ 7.00
SHEEP AND LAMBS.				
Medium to prime lambs (84 lb down)	10.75@12.90	7.25@ 9.00	7.00@ 9.00	7.00@ 8.75
Culls and common lambs	8.25@11.25	6.00@ 7.50	5.00@ 7.25	5.50@ 7.25
Medium to prime yearling wethers	8.00@11.25	5.00@ 7.00	5.00@ 7.00	4.00@ 6.00
Medium to prime wethers	5.00@ 8.25	4.00@ 5.50	4.00@ 5.50	3.50@ 5.00
Medium to choice ewes	3.75@ 7.00	3.00@ 4.50	.....	2.50@ 3.50
Culls and common ewes	2.00@ 4.25	1.00@ 3.00	.....	1.00@ 2.50
Feeder lambs	9.00@11.50	.....	6.00@ 7.00	.....

GENERAL ADVERTISING.

New Lamp Burns 94% Air

Beats Electric or Gas

A new oil lamp that gives an amazingly brilliant, soft, white light, even better than gas or electricity, has been tested by the U. S. government and 35 leading universities and found to be superior to 10 ordinary oil lamps. It burns without odor, smoke or noise—no pumping up, is simple, clean, safe. Burns 94% air and 6% common kerosene (coal oil).

The inventor, W. W. Johnson, 31 N. Fifth St., Portland, Ore., is offering to send a lamp on 10 days' FREE trial, or even to give one FREE to the first user in each locality who will help him introduce it. Write him today for full particulars. Also ask him to explain how you can get the agency and without experience or money make $250 or $500 per month.—Adv.

Why rent when you can own a farm?

Tenant Farmers—Fathers starting sons—Young men looking for a future—Farmers who have decided to seek Virgin Soil—Get this Free Book



Any Man Can Own His Own Farm in Western Canada

In Western Canada, rich, fertile land is within the reach of any man. It is not uncommon for tenant farmers to pay for their new farms with the profits of a few crops. Fathers starting up their sons are able to buy acreage they can't obtain in ordinary overcrowded farming districts.

Men who were never able to make money out of their poor soil or expensive farms, have come to Canada and achieved independence within just a few years.

Canada welcomes such men—for here they can succeed.

Independence! Success! Here, in Western Canada, independence awaits you with every advantage at hand—schools, churches, social life, markets—everything you are now accustomed to. It is the land of unrestricted opportunity. Western Canada wants you if you will come prepared to gather the great harvest of a bountiful nature. Here you can share in bumper crops. Wheat averages are high. Rich, black loam, only awaits your hand to yield abundantly. Dairy farming is highly profitable in Western Canada. Warm, sunny summers provide unexcelled grazing—excellent hay. Dry, healthy winters make natural shelter suffice, as a rule.

This free book tells you why you will succeed in Western Canada. It tells what other men have done. It will put you in touch with your opportunity. Send for it now. It is free—your enquiry will not obligate you in any way. For a real future—investigate. You will find this book interesting as well as descriptive. Send for it now.

Canadian National Railways

Help You Select Your Farm

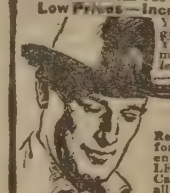
This department of the Canadian National Railways will help you select the farm that meets with your needs. Buy in the "cream" of the richest, most fertile wheat and cattle country of America. Own a farm that will actually pay for itself in a very few years. Taxes on land are low—buildings, improvements, animals, machinery and personal property *Are Not Taxed at All.*

Next Spring—Own Your Farm

Be your own man. Rear a future in the rich spaces of Canada. Give your children the advantages they should have. Feel "at home" with the knowledge that all your work is to *your own profit*—that it is bringing to you a reward that can't be taken away.

Low Prices—Increasing Values—Easy Terms

You can still buy land in this last great West for as low as $20 per acre. Yet, since 1915 values have increased materially. Buy now. Terms on "Selected" farms: about 10 per cent cash down, balance in equal payments over a term of years, interest usually 6 per cent.



Reduced Rates and Special Excursions

Reduced railway rates will be made for landseekers and their effects to encourage inspection of the "SELECTED" farms along the lines of the Canadian National Railways. Personally conducted excursions for this purpose also will be arranged. Full information will be sent free on request.

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Again, prices will make it worth your while to trap. Last year, you remember, this old, reliable house did not ask for your shipments—prices wouldn't pay for your time. There's a real demand now. We want your furs and will pay you MORE, we believe, than any other will. Let us send our price list and keep you posted on the market. No obligation on your part. We'll also give you valuable information about animals, grading skins, etc., all FREE. Write us at once.

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Your Health

By Royal S. Copeland, M. D., F. A. C. S.

HOW TO "CATCH A COLD."

Lowered vitality lies at the foundation of all colds. If you have what the doctors call "lessened resistance" you are on your way to trouble.



Dr. Copeland.

You go to a party, dance half the night, and end the affair by filling your stomach with food you do not need and may not even want. The next day you have the "sniffles," and in another day are sick with a cold. You tell your friends you sat near an open window and "caught cold." That is absurd.

A cold is the outward sign of some sort of excess on your part. The time will come when persons who have colds will feel disgraced. Their friends will smile that queer little knowing smile and ask:

"What was it this time?"

In the old days before prohibition no one had to ask why the town "drunk" had delirium tremens. Everybody knew. As popular knowledge of simple medical truths spreads, every one will know why people have colds.

When it is understood that colds result from wrong living--lack of exercise, neglect of the stomach and intestines, bad air and particularly loss of sleep—then society will be ashamed of them. And every one not only will take pains to hide the symptoms, but will so live that he will not catch a cold and thereby disclose the flaws in his methods of living.

If you neglect your body, failing to supply its proper needs with the right food, and to give it the rest and recreation it must have, you will be given a cold as a warning against your bad action.

It is your own fault if you get a cold. Knowing how and why they come you can easily avoid them.

EVER TRY ARTICHOKES?

Some farmers report great success with tuber artichokes for hogs.

Latest High Class Patterns for the Home

Please order the patterns you desire at least two or three weeks before you wish to use them. Desiring to obtain the latest high-class patterns for its readers, THE FARMER has made arrangements to have them sent direct from the east, and under present mailing conditions it takes about that time for them to reach you.



3852. Ladies' dress. Cut in six sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. A 38-inch size requires 4 1-2 yards of 44-inch material. Price 10 cents.

3855. Girl's coat. Cut in five sizes: 6, 8, 10, 12 and 14 years. A 12-year size requires 3 7-8 yards of 44-inch material. Price 10 cents.

3440. Junior's dress. Cut in three sizes: 12, 14 and 16 years. A 14-year size requires 4 1-4 yards of 44-inch material. Price 10 cents.

3849. Ladies' dress. Cut in seven sizes: 36, 38, 40, 42, 44, 46 and 48 inches bust measure. A 38-inch size requires 4 7-8 yards of 42-inch material. The width at the foot is a little more than two yards. Price 10 cents.

3866. Misses' dress. Cut in three sizes: 16, 18 and 20 years. An 18-year size requires 4 5-8 yards of 38-inch material. The width at the foot is two yards. Price 10 cents.

3706. Ladies' apron. Cut in four sizes: Small, medium, large and extra large. A medium size will require 2 5-8 yards of 36-inch material. Price 10 cents.

3469. Dress for breakfast or service. Cut in four sizes: Small, 32-34; medium, 36-38; large, 40-42, and extra large, 44-46 inches bust measure. The width of the skirt at the foot is two yards. It will require 7 3-8 yards of 27-inch material for a medium size. Price 10 cents.

3845-3539. Ladies' costume. The waist, 3845, is cut in six sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. The skirt, 3539, is cut in six sizes: 24, 26, 28, 30, 32 and 34 inches waist measure. The width at the foot is 1 7-8 yards. To make the dress of one material will require 6 1-2 yards 44 inches wide for a medium size. To make as illustrated will require 3 1-4 yards of figured and 3 3-4 yards of plain material, 44 inches wide. Two separate patterns, 10 cents for each pattern.

3702. Girl's dress. Cut in four sizes: 8, 10, 12 and 14 years. A 10-year size will require 3 1-4 yards of 40-inch material. Price 10 cents.

3854. Girl's dress. Cut in five sizes: 6, 8, 10, 12 and 14 years. A 10-year size requires 2 1-2 yards of 44-inch material. Price 10 cents.

3100. Set of infant's clothes. Cut in one size. It will require 2 3-8 yards of 36-inch material for the dress, 2 1-4 yards of 27-inch material for the petticoat and two yards of embroidery for the ruffle. The slippers require three-eighths yard of 18-inch material and the Barrie coat three-eighths yard of 27-inch material for band, and one yard 40 inches wide for skirt. Price 10 cents.

3864. Girl's night drawers. Cut in six sizes: 2, 4, 6, 8, 10 and 12 years. An 8-year size requires 3 1-8 yards of 36-inch material. Price 10 cents.

Please fill in this order and mail with remittance to:
PATTERN DEPT., PACIFIC NORTHWEST FARM TRIO, Spokane, Wash.

Enclosed find..... cents for which send me the following:

Pattern No..... Size..... Pattern No..... Size.....

Pattern No..... Size..... Pattern No..... Size.....

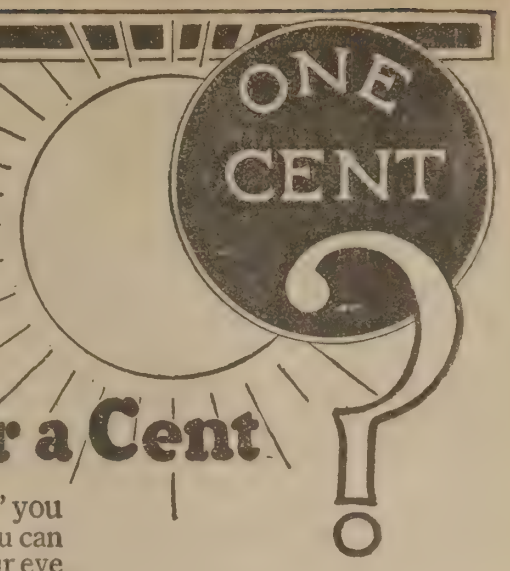
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Be sure to give the pattern number and the correct size.

Which is Larger the Sun or a Cent



"Why—the sun of course" you will say. But remember—you can hold the cent so close to your eye that you lose sight of the sun.

Some baking powders can be bought for a few pennies less than Calumet — but don't hold these cents too close to your eyes—you will not be able to see the quality —the purity—the dependability of

CALUMET
BAKING POWDER

In other words, don't be deceived by a few pennies — the cheapest baking powder in price is often the most expensive.

When you buy Calumet you know that it will produce pure, sweet and wholesome bakings. You know that you use less because it contains more than the ordinary leavening strength.

Buy it—try it—be convinced.

A pound can of Calumet contains full 16 ounces. Some baking powders come in 12 ounce instead of 16 ounce cans. Be sure you get a pound when you want it.



Make The Laundress Happy



by making it possible for her to turn out beautiful, snowy white, clothes like new.

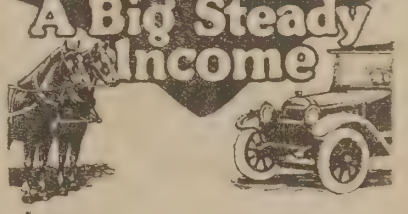
Red Cross Ball Blue

will enable the laundress to produce fine, fresh-looking pure white clothes instead of the greenish yellow usually obtained. RED CROSS BALE BLUE always pleases.

5 cents.

At all up-to-date grocers.

Let Your Auto or Team Earn You A Big Steady Income



ACTIVE, energetic men who can furnish team and wagon or automobile can make big, steady incomes, selling McConnon products direct to farm homes.

The McConnon merchant is an independent business man, selling a well-known, high-quality line of farm and home necessities—extracts, spices, toilet articles, household remedies, cooking aids, veterinary specialties, etc.

Big variety—attractive prices—easy sales. No investment in merchandise or previous experience required. We furnish goods on credit—give thorough instructions in selling and co-operation of a strong, long established company *free*. Good territory now open—write for full information and records of McConnon merchants.

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Sure Rupture Comfort



Brooks' Appliance, the modern scientific invention, the wonderful new discovery that relieves rupture, will be sent on trial. No obnoxious springs or pads.

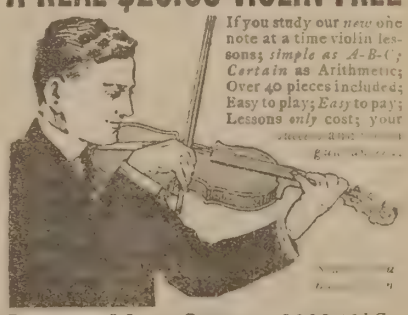
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Has automatic Air Cushions. Binds and draws the broken parts together as you would a broken limb. No salves. No lies. Durable, cheap. Sent on trial to prove it. Protected by U. S. patents. Catalog and measure blanks mailed free. Send name and address today.

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A REAL $20.00 VIOLIN FREE



If you study our *new* one note at a time violin lessons; *simple as A-B-C; Certain* as Arithmetic; Over 40 pieces included; Easy to play; *Easy* to pay; Lessons *only* cost; your

IMPERIAL MUSIC SCHOOL-3009 16th St.
Dept. A SAN FRANCISCO-CALIFORNIA



Curtis Rose, Lincoln county, Wash., writes: "It has been a long time since I wrote to you. I am going to school. My teacher's name is Mrs. Franklin. She is a good teacher. I have four miles and a half to go to school. I am in the sixth grade."

Ten-year-old Orven Ware of central Douglas county rides to school three miles with his sister. He says they like their teacher. He has a little pet colt named Dan and a pet calf named Specks. August 11 is Orven's birthday. He is a new cousin.

Birthday Greetings

THURSDAY, January 19—Mildred Gallagher, 8 years old; Carol Smith, 10; Esther Svinth.

FRIDAY, January 20—George Libbey, 10 years old; Bessie Padleford, 10.

SATURDAY, January 21—Jacqueline C. Gifford, 11 years old; Inez Hubbard, 9; Mildred Reynolds, 10; Nina Stringfield, 10; La Rine Kirmamon, 7; Eva Thaden, 9.

SUNDAY, January 22—Genevieve Evans, 11 years old; Pearl Fletcher, 10; Louisa Katzenberger, 9; Floyd Quick, 8; Rex Steiner, 8.

MONDAY, January 23—Theresa Komen, 10 years old; Dolly Matson, 10; John Blake, 11; Ruth Johnson, 9.

TUESDAY, January 24—Doris Gwinn, 11 years old; Laura Mill, 10.

WEDNESDAY, January 25 — Othelia Franz, 11 years old; Alice Larison, 10; Vivilore McDowell, 10; Elsie Reifenberger, 10.

In each issue a list of the cousins' birthdays of the week will be published. At the close of each letter you write be sure to tell how old you are and when your birthday comes.

Bedtime Stories

By THORTON W. BURGESS.
Copyright, 1919. T. W. B.

JERRY MUSKRAT WINS RESPECT.

When Jerry Muskrat had said that the winter would be hard and cold, and that he was going to build a new house and make ready for it, all the little people of the Smiling Pool and the Green Meadows had laughed at him, for it was still summer. So they had laughed at and made fun of Jerry Muskrat, all but Grandfather Frog.

Now Grandfather Frog is very old and is accounted very wise. So when Grandfather Frog refused to laugh, but instead said that Jerry Muskrat knew, everybody else stopped laughing and began to look at Jerry Muskrat with something very like respect. If Grandfather Frog said it was so, it must be so.

One of the Merry Little Breezes blew a foolish green fly almost into the mouth of Grandfather Frog. "Chugarum!" said Grandfather Frog as he smacked his lips and smoothed down his white and yellow waistcoat.

"If you please, Grandfather Frog, how can Jerry Muskrat know anything about the winter when it is such a long, long way off?" asked the Merry Little Breeze.



If Grandfather Frog said it was so, it must be so.

"Why don't you ask Jerry?" replied Grandfather Frog, who had his big goggly eyes fixed on another foolish green fly headed his way.

The Merry Little Breeze danced over to Jerry Muskrat. "Tell us, Jerry, please tell us how it is that you know it is going to be a hard winter," begged the Merry Little Breeze.

Jerry shook his head mournfully. "I don't know how I know, but I do know," said he. "It's down inside. Yesterday I didn't know it. I didn't think anything about winter, and if I had I wouldn't have known any more about it than you do. But this morning, as soon as I was awake, something down inside told me that we are going to have a hard, long, long winter and that I must build a new house. I'm not guessing; I know. Now I guess I'll go look for the best place to build my new house."

Grandfather Frog had been listening all the time, although not once had he taken his eyes off the foolish green fly that was coming his way. Now he made a funny little hop up in the air, the foolish green fly disappeared and Grandfather Frog sat down again with the most satisfied air.

"Chugarum!" said Grandfather Frog, patting his white and yellow waistcoat. "Jerry Muskrat knows because he knows."

"Pooh! Grandfather Frog, that's no reason at all!" cried Little Joe Otter.

Grandfather Frog grinned good naturedly. "I guess you are right," said he. "That isn't much of a reason. But if you really want to know the reason Jerry Muskrat knows, it is because Old Mother Nature whispered it in his ear while he was asleep last night. Yes, sir, Old Mother Nature has whispered the news of what the winters would be in the ears of the muskrats ever since the days when the world was young. Some time, perhaps, I'll tell you how it happens that Mother Nature tells this secret to the muskrats."

"Tell us now!" begged the Merry Little Breezes. But Grandfather Frog shook his head.

And from that time everybody had the greatest respect for Jerry Muskrat.

HAND POWER
K Stump Puller
The Fitzpatrick Products Corp. 99 John St., New York
952 Mission St. Box 32 San Francisco, Cal
Land clearing an easy, one-man job—big stumps pulled clean with this wonderful machine.
Works on any land. Operated by hand! No horses; no digging. Made of the finest steel—guaranteed. Adopted and used by U.S. Government officials and many states. Send for FREE illustrated book on Land Clearing and special offer
ACTUAL PHOTOGRAPH



The Washington Farmer is welcomed just as much by the wives and daughters on the farm as it is by those who hold the plow handles or who drive the big reaper. It devotes articles, pages and departments in every issue to the special field of women. It aims to lighten the work of those who must perform the endless tasks in the farm home, and to carry a word of inspiration and cheer to those who keep the wheels in the farm household turning smoothly.

The "Family Circle," with its constant interchange of experiences, ideas, opinions and methods, becomes more and more popular as the weeks pass.

The friendly interest of our women readers makes them warm adherents of our cooperative plan for securing and renewing subscriptions. Here is the idea. Many publications charge a high subscription price because it costs so much to gather the subscription orders. We eliminate the expensive system of having a force of agents go from town to town and from farm to farm to secure and renew subscriptions. Instead, we ask our friends to send in their own orders at least sixty days in advance of the expiration date stamped on the wrapper of your paper, and to include the orders of friends and neighbors with your own.

You get the benefit of the money saved by this economical plan. You receive this big, entertaining farm and family magazine for five years for only $1.

Continued cooperation is necessary. We hope to make 1922 even more successful for cooperation than the past years have been. Please do your part.

Subscription Rates to The Washington Farmer:

$1.00 for Five Years

25 Cents for 1 Year.
50 Cents for 3 Years.

In Canada add 1 cent a copy for extra postage.

Jan. 19, 1922.
THE WASHINGTON FARMER, ...1921.
Review Building, Spokane, Wash.
I desire to take advantage of your Cooperative Plan in securing new and renewal subscriptions.

I enclose herewith $.....for a.....year subscription to

THE WASHINGTON FARMER.

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If your subscription is already paid in advance, it will be extended from the date to which it is paid.

News for Breeders

HAMMOND BUYS BULL CALF.

Dr. P. W. Willis of Seattle reports the sale of a Guernsey bull calf to J. C. Hammond, who owns a Guernsey herd at Deer Harbor, San Juan county. The animal is a few days more than a year old and comes from the Skylark strain. Mr. Hammond intends to use him as a herd sire for his eight head of grades. Dr. Willis is the owner of Sammamish Topsy, an aged cow who produced 16,526.3 pounds of milk and 831.58 pounds of fat, which is the highest for the breed on the Pacific coast.

GUERNSEY FOLK MEET.

Members of the Orcas Island Guernsey Cattle club met at Doe Bay in the latter part of December. Mrs. S. P. Davis, director of the Washington State Guernsey Cattle club, told of the benefits of the state and national Guernsey associations and of the proposed work in the county for the coming year. W. W. Henry, the county agent, urged the value of testing records in the upbuilding of a dairy herd.

MULHALL & SON WILL SELL.

Forty head of registered Shorthorn cattle, a number of Percheron horses and some farm machinery will be sold at auction by William Mulhall & Son at their headquarters on the California ranches, near Buena, Wash., on February 14.

VETERINARY

By DR. S. B. NELSON.

For Caked Udder—What is good for a cow's udder that has been caked on one side for four weeks. Nothing I put on seems to soften it. J. M.
Wauconda, Wash.

Apply the following liniment to the affected quarter of the udder after each milking: Tincture of iodine, three ounces; soap liniment, five ounces. In addition, bathe the quarter before milking and give it a gentle massage for about five minutes.

Gives Stringy Milk.—I have a cow that gives lumpy and stringy milk. The milk tastes bitter. I just bought her, so do not know when she will be fresh. She gives two gallons of milk a day. She runs on clover and alfalfa pasture and I feed alfalfa hay mixed with wheat hay and it has some weeds in it. I feed a little bran and shorts twice a day. W. J. G.
Opportunity, Wash.

Give your cow one and one-half pounds of epsom salts in three quarts of water. Two days later begin giving a tablespoonful of phytolacca in a pint of water for some 10 days to two weeks.

Side Bones.—I have a 3-year-old pony that has a swelling on both of his front feet around the hoof where the hoof touches the flesh. On his left hind leg he has a lump above his hoof where it touches the flesh. What is the matter?
Weber, Wash. J. W.

It is quite possible that your pony is affected with side bones. You might apply a blister to them and later on paint around the hair line with the following preparation: Lard, one part; pine tar, one part. Melt the lard and mix in the tar. This application should be made night and morning.

Intermittent Fever—I have a pair of 3-year-old mares that weigh 1600 each that have been sick for two months. They first take with a high fever, 104 to 107. I was told to give aconite and belladona alternately, so that took the fever down, but it comes back in a week or 10 days as bad as ever. It has done that four times. They breathe hard, but eat heartily and keep in good flesh. Who is the state veterinarian?
Naches, Wash. A. H. W.

Your horses may be affected with intermittent fever. I would suggest that you have your local veterinarian examine the horses and advise you. There may be something in these cases which you have not observed that a trained man would see. The state veterinarian is L. C. Pelton, Olympia, Wash.

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Grade and Pure Bred Dairy Cattle.
We can save you money whether you wish to buy or sell. One or a carload.
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Duroc Jersey Gilts
Included are the line bred Pathfinder first prize senior futurity litter and fourth prize junior futurity litter at 1921 Oregon state fair. All bred to Red King Giant, first prize senior futurity boar, 1921 Oregon state fair.
H. C. COMPTON, Boring, Ore.

The Last Call
Kin-Son Stock Farm Big Attraction Sale of Bred Sows
Nampa, Idaho, Tues., Jan. 31, 1922
Forty head of tried sows, yearling and spring gilts. An offering of rare individuality and breeding, including some of the most valuable breeding matrons.
This offering is bred to PARAMOUNT, a son of the $60,000 "The Picket" and grand champion of Idaho, in 1921; and "WONDER TIMM," by Severe's Big Timm, by the Champion Big Timm.
The wonderful sow, Miss Melbourne, the dam of our 1918 sow litter, sells: Three great full yearlings by Paramount, two of them junior champions of two shows and their dam, Miss Chief, by Bob's Chief, by Big Chief, sell.
One great fall yearling by Paramount and out of Miss Melbourne, a real 900-pound sow at maturity, sells.
Three super-attractions by Paramount, of March; three farrows out of the Great Big Lady, by Great Big Buster; these won first and second in Idaho futurity and are good for next year's junior yearling futurity.
One real spring gilt by Paramount and dam by Lee Buster, by Great Buster; a real gilt by The Peril, by The Pilot, bred to Paramount, and one by Murphy Liberator, bred to Paramount.
Paramount Sells
We are going to offer Paramount, the greatest Poland China boar in the west, grand champion of Idaho, at this sale. If you want the best, come and buy him to head your herd.
SEND FOR CATALOGUE.
The Kin-Son Stock Farm
A. L. WILSON & SONS.
R. F. D. No. 5, Nampa, Idaho.

Big Type Polands
We are booking orders for Sept. pigs. A few extra good gilts left by or bred to Big Buster, priced right. Write us first.
FRED D. ENTERMILLE, Baker, Ore.

Poland China Boars and Gilts
Spring gilts and boars, both big and medium type; good individual, good breeding. Priced for quick sale.
GRANT GLEASON, Chehalis, Wash.

Polands--The Big Wonder Herd
of genuine big type Poland China hogs. Home of the grand champion sow of the northwest. Satisfaction guaranteed on all orders.
E. O. LOE, Silverton, Ore.

Jumbo Herd Chester Whites
Herd headed by big type boar, Oregon's Buster. Choice spring pigs of both sexes. A few bred gilts.
CASS A. NICHOLS, Salem, Ore.

River Banks Better Berkshires
Order now. Bred gilts for spring farrow.
RIVER BANKS FARMS,
GRANTS PASS, ORE.

Riverby Orchard Berkshires
Oldest established Berkshire herd in the northwest. Young pigs and bred sows for sale. Address
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Oakleigh Stock Farm Shorthorns
204 S. First St., Medford, Ore.
Milking Shorthorns. Several record cows—50 head in herd.

Weatherford Bros. Herefords
We have for sale a few choice herd bulls and bulls for the farm and range, at prices in keeping with the times. Herd headed by the great breeding bull, Beau Blanchard 59th, whose calves show great bone, size and quality.
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We will sell, or will trade for Percheron stallion.
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"Some Suggestions to Live Stock Advertisers," outlining the practices of successful men of long experience. Helps in determining how much to spend, the mediums to select, preparing advertisements, handling inquiries, the use of photographs, etc.
Write today.
THE PACIFIC NORTHWEST FARM TRIO
Dept. L. Spokane, Wash.

PUBLIC AUCTION DUROC-JERSEYS
AT MARELLA FARM, HAGERMAN, IDAHO.
JANUARY 27, 2 P. M. (MOUNTAIN TIME.)
I WILL SELL
4 Bred Sows.
7 Bred Gilts.
1 Herd Boar.
9 Fall Gilts.
3 Fall Boars.
3 Young Boars, old enough for service.
Write now for sale list. Time is short.
All bids by mail taken care of same as if you were here.
Terms, cash on date of sale.
C. E. MARINER, Agent, Marella Farm
HAGERMAN, IDAHO.

C. K. LOE AND L. C. ABLE & SON SELL AT AUCTION
At the State Fairgrounds, Salem, Oregon, Wednesday, February 15, 1922.
45 High Class Registered Poland China Sows and Gilts 45
Bred for March and April farrow. The cream of these two great herds will be offered in this sale. Catalog giving full particulars now ready for mailing. Write for it today.
GEORGE SATTERLEE, Auctioneer. CHAS. M. TALMADGE, Sale Manager,
RAY J. FOX, Clerk. Box T, Salem, Oregon.

GRADE CALVES
From dams producing 300 to 700 lbs. butterfat in Tillamook County Cow Testing Association.
Price $15, with guarantee of breeding and production of dams.
Jersey, Guernsey and Holstein Breeds.
Write County Agricultural Agent, Tillamook, Ore.

GRANDLY BRED AYRSHIRE BULLS AT LOW PRICES
All sired by Oregon Peter Pan; he by a son of Beuchan Peter Pan, undefeated show bull in Scotland and America. His dam, Willowmoor Etta 3d, is world champion junior two-year-old, with 16,621 lbs. milk, and 666.06 lbs. fat.
Two are yearlings ready for active service and two only a little younger. Most of the dams have good official records, with big production records in their pedigrees.
These bulls are priced low enough to be in reach of every dairyman wishing to increase production and good enough to head high class pure bred herds. Write at once for pedigree, and full particulars, to
Corvallis. DAIRY DEPT. OREGON AGRICULTURAL COLLEGE. Oregon.

Ayrshires For Sale
or trade. Meadowbrook Ayrshires, sired by Willowmoor Sentinel 23d, 16846, whose dam was the widely known world's record cow, Carston Eveline 23864 Imp., and whose sire was Willowmoor Sentinel 11779 Imp. Ten bulls from 2 weeks to 2 years old.
HARRY WILSON, Route A, Montesano, Wash.
BOX 25.

Ayrshires
Outstanding bull calves, ready for light service; sired by grand champion Willowmoor Peter Pan 25th, and from high producing cows with show records.
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Jersey Cows and Heifers Grade Cows, Registered Bulls, Baby Calves
Every cow offered has a Cow Testing association record and is a good producer. To make room for pure bred heifers, I am making good offers on good cows.
Two young bulls by a strongly bred St. Mawes sire, out of Register of Merit dams.
Baby calves by a richly bred sire out of high producing cows.
Come and see my herd, one of the largest in Tillamook county, established in 1867, or write for full information of records, breeding and prices.
Don Meadows Farm
JOE DONALDSON, Prop., Tillamook, Ore.

Jersey Bull Priced to Sell
Big Production on Both Sides
Good individual, dropped Dec. 11, 1920. Sire, Dufrano's Poppy, whose first six daughters are milking from 32 to 45 lbs. He, a son of St. Mawes Golden Poppy, sire of the world record junior three-year-old, Poppy's Dortha, 994 lbs. fat. Young bull's dam, Landseer's Gertie, finished official test Dec. 13, with about 615 lbs. fat, two milkings a day, herd care. Priced to sell. Two other richly bred younger bulls.
G. W. LAWSON
McMinnville, Ore.

Golden Glow Jerseys
Eleven cows on test, December: seven were 2-year-olds, three 3-year-olds; one 4-year-old; all average of 8 months in lactation made average 50.35 lbs. fat for month.
IRON MINE FARM, Oswego, Ore.
W. M. LADD, Owner.
D. BROOKS HOGAN, Mgr.

Fourth Gold Medal Jersey Bull
now in use in my herd. No other herd ever had so many. Young stock for sale.
ED CARY, Carlton, Ore.

Jersey Bulls at Bargain Prices
Send today for our special sale list of registered Jersey bulls from R. of M. dams. Easy terms, liberal credit.
WARREN GRAY, Box T, Jefferson, Ore.

Register of Merit Jerseys
Write for price of a ready for service bull we are offering for sale. A fine individual and sired by Anoka's Poppy St. Mawes. Address
R. B. SEELY, Sherwood, Ore.
RAILWAY STATION, WILSONVILLE, ON OREGON ELECTRIC.

Jersey--Gold and Silver Medal Sire
Ashnook Farm offers a few heifers and young bulls, sired by the gold and silver medal sire, Silver Chimes, of S. B., sire of ex-world champion heifer, Silver Chimes Gwendola, and 20 register of merit daughters, and more qualifying.
DEL PERKINS, Carlton, Ore.

Register of Merit Jerseys
Young bulls out of dams with good official records and sired by Foxhall's Chief Engineer, combining the blood of the great Foxhall's Fern Lad and Golden Glow's Chief strains.
FOX BROS., Silverton, Ore.

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31 years of successful breeding and importing. A carload of producing females and some choice males for sale.
H. WEST, Prop. L. G. SMITH, Mgr.
SCAPPOOSE, ORE.

Haynes Farm Jerseys
For sale—Bull, 83 per cent St. Mawes. Dam is a prospective silver medal cow; four nearest dams average 580 lbs.
G. W. HAYNES, Owner. D. L. FOURT, Mgr.
EAGLE, IDAHO

Jerseys--Maple Ridge Farm
offers some young cows and heifers just fresh, some springers. Also St. Mawes bull ready for service this fall.
J. C. BROWN & SONS, Shedd, Ore.

Locust Lane Jerseys
We offer a granddaughter and a granddam (ready for service) of Syb. s Gambero, a register of merit dams.
L. S. DILLE & SON, Caldwell, Idaho

Better Jerseys are your requirements. We are in position to furnish a sire that is bred on those lines, at a reasonable price.
LA CREOLE FARM.
W. O. MORROW, Prop., Independence, Ore.

Orchard Hill Farm Guernseys
"Home of high class Guernseys."
DR. PARK WEED WILLIS, Owner.
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Breeders of Brown Swiss cattle, the farmers' dairy cow. Young stock for sale.
THEO BRUGGER, Route 3, Gresham, Ore.

Holstein Bulls Sired by son and brother to world record cows, from dams sired by brother to Segis Pietertje Prospect. Prices low.
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you should also keep a careful record of your stock, milk records, breeding records, labor and feeding records, live stock accounts, general farm accounts and expense accounts for household and personal expenses. We will send you a record book covering all these matters, free. The supply is limited. Address
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Fashion's Very Latest TUXEDO SWEATER BLOUSE



$1.98

Very popular novelty—latest fancy stitch all-wool yarn sweater blouse. Tuxedo style collar of rich silk slings. Daintiest Val lace vestee. Bright Jockey Red body with white collar. Sizes 36 to 44. **Order by No. 51C1449. Send no money. Pay $1.98 and postage on arrival. Money back if not satisfied.**

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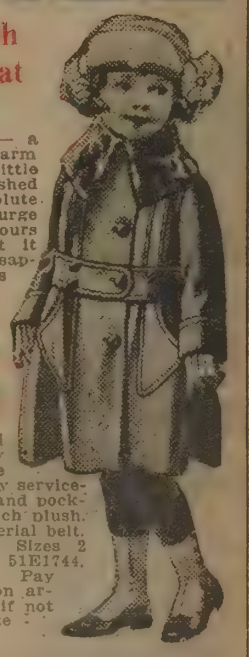
No, not one cent now! All we ask you to do is to let us prove **at our own risk** that these stupendous clean-up sale bargains are the biggest values in America today. Right now we are sacrificing everything—pricing all winter stocks regardless of cost because we must make room in our warehouses for fresh spring stocks. This is your opportunity—your one big chance to save money—and **you will. We absolutely guarantee it.** Just make your selections and let us send them on approval. If not satisfied, return the goods and you will not lose a penny.

PAY ONLY WHEN GOODS ARRIVE

Remember, you do not send one penny with your order. Pick your bargains quick for all the family. **Just send letter or postcard giving your name, address and the number of each article you want. Also be sure to state sizes and write plainly to avoid delay.** Pay nothing till goods arrive—then only the amazing bargain price and postage. Then thoroughly examine your selections—show to your family. If not satisfied, for any reason at all, return the goods and we refund your money promptly. Act today—order what you want direct from this advertisement.

SHAROOD CO., Dept. 51 Minneapolis, Minn.

Child's Plush Trimmed Coat Bargain

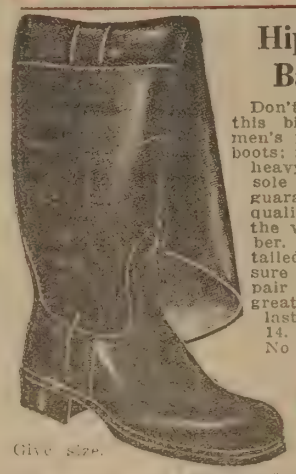


Yes, a bargain — a startling value in warm winter coat for little girls. We have smashed the price to absolute rock bottom and urge you to send for yours quickly. Don't put it off—don't risk disappointment. Stocks limited.

$2.98

Beautiful belted model of a heavy material in attractive green mixture. Very serviceably lined. Collar and pockets trimmed with rich plush. All around self material belt. Convertible collar. Sizes 2 to 6. Order by No. 51E1744. Send no money. Pay $2.98 and postage on arrival. Money back if not satisfied. State size wanted.

Hip Boots Bargain



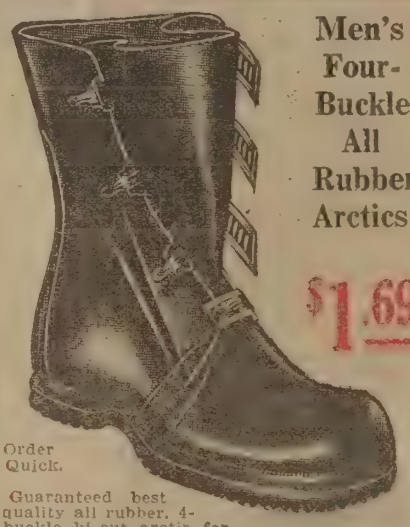
Don't fail to make this big saving on men's pure gum hip boots; friction lined; heavy corrugated sole and heel; guaranteed first quality. Made of the very best rubber. Usually retailed at $5. Be sure to order your pair while this great saving offer lasts. Sizes 6 to 14. Wide widths. No half sizes.

$2.79

Give size.

Order by No 51A949. Send no money. Pay $2.79 and postage on arrival. State size wanted. Order similar style in knee boot, sizes 7 to 12 by No. 51A950. Send no money. Pay $2.79 and postage on arrival.

Men's Four-Buckle All Rubber Arctics



$1.69

Order Quick.

Guaranteed best quality all rubber, 4-buckle hi-cut arctic for men. Made with double thick soles and seams reinforced. Snow-excluding tongue. Furnished in men's sizes 7 to 12. Wide widths. Sensational value. Send quick. Order by No. 51A990. Send no money. Pay $1.69 and postage on arrival. State size.

MEN—Don't Miss This!

A smashing bargain in an all-felt hi-cut that will prove what wonderful values you get from Sharood. Men's 9½-in. hi-cut with thick felt soles and heels, warm felt lining and high felt tops. Exceptionally durable and amazingly low priced here. Sizes 6 to 11. Wide widths.



$1.49

Send Now

Order by No. 51A880. Send no money. Pay $1.49 and postage on arrival. Money back if not satisfied. Mention size wanted.

Boys' Brown Storm Boots

Sensational value in heavy brown calf leather treated to resist dampness and wear. Double oak soles sewed and nailed, bellows tongue. Roomy last. Order big boys' sizes 1 to 6, by No. 51A570. Price, $2.98. Other boys' sizes, 9 to 13½, by No. 51A571. Price $2.49. State size.



$2.49 Up

Same style barnyard proof, 11-in. cow hide, hicut, for men. Sizes 6 to 12. Wide widths. Order by No. 51A770. Send no money. Pay $3.98 and postage on arrival. State size.

Strong Comfort Work Shoe for Men



$1.99

State size.

Order your pair quick—while this bargain offer lasts. Wonderful work shoe for men. Has soft, strong uppers that resist barnyard acids. Solid leather insoles. All seams stitched with waxed thread. Strong leather soles. Wide widths. Sizes 6 to 11. Order by No. 51A758. Send no money. Pay $1.98 and postage on arrival.

Men's Fine Dress Shoes

Wonderful quality, superb value in men's blucher shoe of black soft gunmetal finished leather. Leather insole and extension oak outsoles. Perforated tips. Sizes 6 to 11. Wide widths



$2.49 UP

Give sizes.

Order black by No. 51A674. Pay $2.49 and postage on arrival. Order brown by No. 51A675. Send no money. Pay $2.98 and postage on arrival. State size.

Felt Top, Felt Lined Kid Comfort Shoe

Vamps of soft kid leather. Durable felt top and fleecy felt lining. Oak leather soles. Wide widths. Sizes 5 to 9.



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2 Novel Tie-Back Percale Aprons



$1.58

Actually a complete covering. A house dress of serviceable percale which launders splendidly. Short sleeves and neat turnover cuffs. Neck, front and sleeves bound with contrasting white braid. Slips over head. One apron of indigo blue, the other in light figured pattern. Sizes 34 to 44. Order by No. 51E1814. Pay $1.58 for 2 aprons and postage on arrival. State size.

Brogue Dress Shoe — Goodyear Welt, Brown Russian Calf

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Give Size



Most popular color men's dress shoes for spring. Dark mahogany brown Russian calf—new brogue style with full vamp (not cut off), and fancy perforations on tip and vamp, as pictured. Extension Goodyear sewed soles; pure gum rubber heels; leather insoles. Sizes 6 to 11. Wide widths. Order by No. 51A635. Pay $3.98 and postage on arrival.

Wing Tip Style Made in Black or Brown Calf

$2.98



Give Size

Growing girls' and women's black or brown calf English lace style. Fancy perforated wing tip; Goodyear sewed oak soles; rubber heels; smooth leather insoles. Softest pliable calf uppers; dressy and very serviceable. Sizes 2½ to 8. Wide widths.

Order black by No. 51A168. Order brown by No. 51A169. Send no money. Pay $2.98 and postage for either color on arrival.

Gray Stripe PANTS

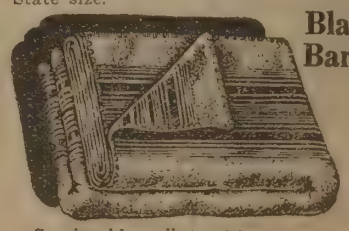
You have paid $4.00 for no better pants than this neat gray striped pattern. Suspender buttons. Belt loops, plain bottoms. Stoutly sewed waistband. Sizes, waist 30 to 42. Inseam 30 to 35.



$1.59

Order by No. 51B1563. Pay only $1.59 and postage on arrival. Give your waist and inseam sizes. Order men's work pants of practical, narrow ribbed corduroy, same size as above, by No. 51B1566. Pay $2.48 and postage on arrival. Order men's heavy weight black and white moleskin cloth trousers, same sizes as above in No. 51B1565. Pay $2.98 and postage on arrival. Order men's extra heavy all wool kersey pants, same measure as above, by No. 51B1559. Pay $3.98 and postage on arrival.

Blanket Bargains



Serviceable silver gray fancy bordered blankets of selected wool-finished cotton, closely woven; 3 popular sizes. 60x76 inch, No. 51B1750, price per pair, $1.69. 64x80 inch, No. 51B1751, price per pair, $1.99. 66x80-inch, No. 51B1754, price per pair, $2.29. Send no money. Pay bargain price and postage on arrival.

$1.69 UP

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JANUARY 26, 1922. Washington's Great Farm Magazine EVERY THURSDAY

THE WASHINGTON FARMER

ESTABLISHED 1894 SPOKANE. SEATTLE.



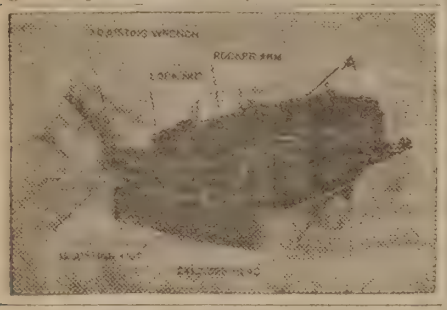
Agricultural Bloc Was Formed To Meet a Serious Menace—Page Six

Overhauling Motor

HOW TO GRIND THE VALVES.

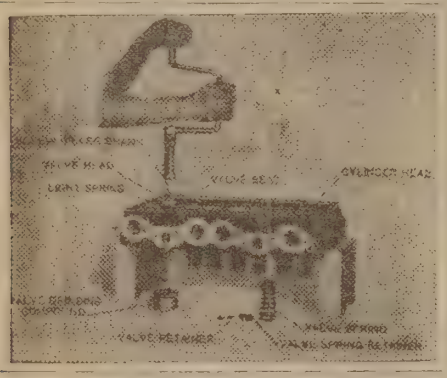
By PROFESSOR L. J. SMITH, W. S. C.

Ordinarily the valves should be ground twice a year. They may not require much grinding, but it is only a three or four hours' job and the increased power and fuel economy certainly justify the time spent on this overhaul. Crank over your motor slowly by hand after it is warmed up, testing the compression in each cylinder. Bring each piston up on compression, then ease off on the starting crank, and the piston should come back smartly against your reduced pressure on the



crank handle. If either the intake or exhaust valve is not seating properly there will be little or no compression.

The first step is to take out the valves and thoroughly clean both the head and the stem. Sometimes there are caps above each valve, which are unscrewed to take out the valves and get at their seats. More often it is necessary to remove the cylinder head. Often the valves are in the head itself. Remove any wire edge from the head with a file; polish the valve stem with a bit of emery cloth or fine, oily sandpaper; put valve back in place and see that it moves up and down readily. If it is not already done, mark each valve with a center punch, beginning with the front valve and marking one punch for one, two punch marks for two, etc. Next examine the valve seat; it may be necessary to use a round file to remove a wire edge there. If the valve seats fairly well on the beveled surface use only the fine grinding compound. Put a very little of the compound on the face of the valve and replace it, first putting a light spring over the stem, so as to raise the valve off the seat when the downward pressure is removed. Then, with a brace and



shank (see illustration) oscillate the valve, at the same time pressing it lightly against the seat, and every few seconds raising the valve from the seat and turning it slightly to a new position. Next rotate the valve continuously, as it would cut grooves in the seat. Continue the grinding, renewing the paste sparingly until there is a bright, even polish the entire circumference of the leveled valve and the seat. The whole width of the leveled surface, however, need not fit against the seat.

When the grinding is completed the valve, seat and guide must be carefully cleaned, using gasoline and wiping dry. Put cylinder oil on the valve stems and slide them into their respective guides, then replace the valve springs. Then you are ready to replace the cylinder head.

After grinding the valves the push rods, which are actuated by the cam shaft, thus opening and closing the valves, are usually a little too long and will not allow the valve to seat properly. Each make of motor requires a definite clearance, which is specifically stated in their instruction book. If the motor has overhead valves the clearance is measured at "A" (see illustration) between the end of the rocker arm and the top of the valve stem. It is better to have a little too much clearance than not enough. In the Ford motor the proper clearance is gotten by grinding off the end of the valve stem. The thickness of a piece of writing paper (about 3-1000) is ample for many motors The clearance is usually measured after the motor has been warmed up.

The Dirty Spark Plug.

This trouble is very annoying. A spark plug becomes foul and the motor runs on three of the four cylinders, for the electricity is no longer jumping the gap between the points of the plug; but is getting across through the carbon down in the plug. The result is that the motor only develops three-quarters its usual power, the gasoline consumption is excessive, and one has to go into "intermediate" when he should be climbing the grades on "high."

This trouble is caused by several things: oil too high in the crank case, poor oil, going up or down a long, steep grade with a little too much oil, or loose fitting pistons and weak, poor fitting or broken rings.

A motor that has a good compression usually runs with clean spark plugs. Many cars will run months at a time without touching a spark plug.

Unscrew the plug and fill it with gasoline then scrape out the carbon with an end of a small cotter pin. Blow or take out any loose pieces of carbon. Be sure that the points are clean and that they are the proper distance apart—about the thickness of a worn dime. Don't screw the plug into the cylinder very tight. It is not necessary and only brings an extra strain on the plug.

1922 SPECIAL OFFER **FREE SEED** Bulb and Plant **CATALOG**

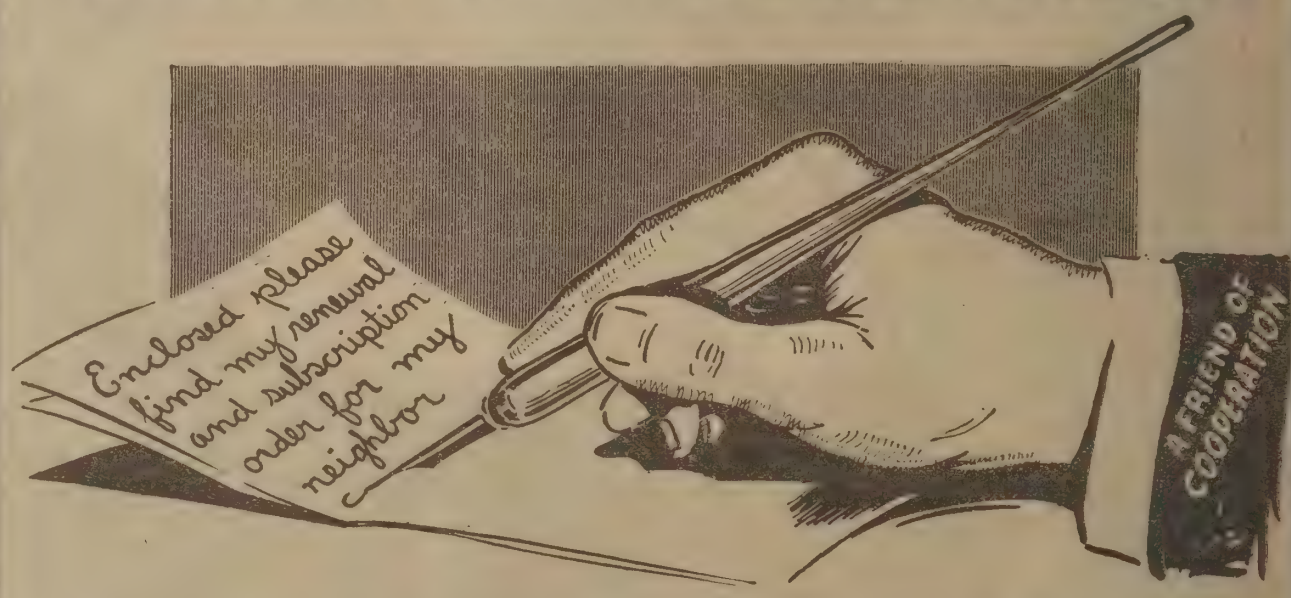
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Farmers' Cooperative Plan Big Winner in 1921

Let's Make 1922 even More Successful



It will be a source of pride and gratification to every friend of cooperation, that The Washington Farmer's cooperative subscription plan has been a big winner in 1921, just as it was in previous years.

We said to our readers: "Send your subscription orders direct. Get your neighbors to do the same. We will give you and your neighbor the benefit of every penny which would ordinarily go to the agent handling the subscription." The idea met with instant and widespread response. Readers in every nook and corner of the state did their share. The cooperative plan in subscription getting was demonstrated to be WINNER.

However, in looking forward to the great amount of subscription business which must be attended to in 1922, we are reminded that "to stand still is to go backward." "A field has to be persistently cultivated or it will grow up to weeds. We must keep the pump handle going up and down or water will cease flowing from the well."

The same with our cooperative subscription plan. Its success could not continue if our friends and the friends of cooperation should cease their efforts. Every one has a part to play, and should do his share.

We have every confidence that you will continue to cooperate and repeat our request that you take thought as to your subscription renewal. Instead of waiting for a notification, mail in your order at least 60 days in advance of the address label of your paper. Tell your friends and neighbors about our cooperative plan and include their orders with your own. By all pulling together we can and will make 1922 a big year for cooperation. Let's do it!

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Jan. 26, 1922.

THE WASHINGTON FARMER,
Review Building, Spokane, Wash.

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TO give the house a colonial effect use these Sash or FrenchWindows. It makes no difference how small your order is, we shall give itour best attention, whether you order single sash, or a whole house bill. Write for our catalog, keep it for reference—you may need a sash or a door at some future date. Rovig, 2201 First Avenue South, Seattle. "Better Millwork."

THE WASHINGTON FARMER

SUCCESSOR TO

Vol. 46. No. 4 THE RANCH PACIFIC DAIRYMAN HORN AND HOOF January 26, 1922

For Good Farming, Attractive Country Homes and Happy Country People

Letter to the President

Price Leveling Is Now the Most Outstanding Need of American Agriculture

The Washington Farmer has written a letter to President Harding on the present critical conditions in agriculture, pointing out what it feels to be the most urgent needs of the farmer today. The same needs are emphasized in personal letters to the delegates to this week's agricultural conference in Washington and to all members of both houses in congress. The letter to the president follows:

Jan. 17, 1922.

The President,
The Executive Mansion,
Washington, D. C.
Sir:

In behalf of the producers, not only of our own Pacific northwest, but of the entire country, we wish to commend you for calling the agricultural conference, through the secretary of agriculture.

This conference will mean much to the farmers and to the country at large if it gets down to basic problems and acts upon them vigorously, and if congress and other governmental agencies and departments follow its findings with judicious and equally vigorous action.

As long as present agricultural conditions remain, increased production can only bring increased burdens to the producers.

With these thoughts in mind, the Pacific Northwest Farm Trio, consisting of The Washington Farmer, The Oregon Farmer and The Idaho Farmer, has taken the liberty of urging upon the delegates to this conference and upon others in high positions the following points which it deems to be fundamental and vital:

(1) The most outstanding need of the hour is price leveling—the bringing up of the farmer's price or the bringing down of the other fellow's. The farmer's need of credit is due to the present inequality of prices, and credit will be supplied when the price inequality is removed. Price equalization is imperative if the world is to continue to eat and be clothed.

(2) Present freight rates are ruinous to agriculture and are detrimental to industry at large. They should be promptly reduced.

(3) The farmer is entitled to protective tariffs commensurate with those enjoyed by the manufacturing industries.

(4) With large exports of American breadstuffs during the past calendar year, the price to the farmer here has been, in many cases, below the cost of production and seldom equal to this cost plus a living profit. This situation deserves searching investigation. The entire export field needs far-reaching and scientific development for all farm products.

(5) Any and all doubts as to the legal right of farmers to market their products through cooperative associations of their own formation and under their own control should be swept away by clear-cut national legislation.

Wishing to assure you of our desire to be of the greatest possible service with you to our country's agriculture, I have the honor to be,

Yours most respectfully,

(Signed) EDWIN A. SMITH,
Managing Editor.

Causes of Unemployment

Disturbance of Equilibrium Between Agriculture and Industry Is a Serious Matter

By the call of the president there was lately held an unemployment conference. The great Hoover was the moving spirit and doubtless remedial measures will follow. But the remedies are mere expedients: Artificial improvements for the sake of giving temporary employment; public works and highway construction undertaken out of season or ahead of the demand, so as to create work. Expedients to maintain the self-respect of the needy and yet do a charity.

The deeper causes of the unemployment receive little attention.

The disturbance of the proper equilibrium as between agriculture and industry in such a country as ours is a serious matter and hard to remedy when the balance has been disturbed. It has been greatly disturbed through a long series of years and by artificial means.

The industries were made profitable beyond the mark by preferential legislation. Wages far above the competitive power of agriculture were established.

The instantaneous and high return to the laborer for his share in production and the quick gratification he could receive by spending his wages to supply his wants tipped the balance so that too many moved over to the class of wage earners.

Then the penalty follows through days of unemployment and want. Then the insistent demand that the government must in some way supply the deficiency follows.

The agricultural worker, who knows that days and weeks must elapse before his product is ready for use, has the constant admonition of care against over-spending, lest weather and markets may yield a less reward than he hopes. But when the depression does come he is in better shape than his wage-earning brother. His surplus has not slipped away so easily for picture shows and frolics and geegaws for the weaker sex. "Take no thought of the morrow" has been the dictum of the wage earner, but not of the farmer. Then when the hard day has come, there is for the latter no insistent landlord, saying, "Pay up or get out."

There is a store of potatoes in the pit and apples in the cellar, and cabbages and turnips and parsnips. There are chickens which may bring a little cash as well as meat. There are some pigs and a calf or a cow for meat, and the months when little cash circulates are not, after all, months of sharp want and dread of the future. And then there is always much labor, profitable labor, which may be done on the farm, where reward will surely come later. The farmer is a happier and a safer man, in a position where he can withstand a siege, if necessary.

The sharp driving force of necessity for the wage earner in the city when he is out of work and, of course, out of money, is a fierce thing to endure.

Nature is severe in her remedies. But she will teach America that she has gone too far in her preferential treatment of certain forms of industry and that she must restore the equilibrium by moving in the other direction.

E. A. Bryan

Whose Judgment

Shall Help Out American Farmer?

In one of his preliminary announcements of the national agricultural conference at Washington, D. C., Secretary Henry C. Wallace of the department of agriculture says: "It has been the aim to get people who know farming and also those who have judgment in helping the farmer get out of his difficulty."

The farmer is in difficulties. Everybody acknowledges that.

The difficulties of farmers are far reaching—almost everybody is finding that out.

When the farmer prospers the rest of the country prospers. This has come to be almost an axiom.

But when we come to those who have "judgment" in "helping" the farmer, we get into the region of a debate.

There is no debate over the fact that the farmer needs help and plenty of it to get out of his present difficulty, but on whose "judgment" should he rely in getting out of those difficulties?

For the past two or three years the financiers have been exercising their "judgment" in "helping" the farmers. The railroad people have been doing likewise. The wool dealers and the woolen manufacturers also have been exercising their "judgment" in "helping" the farmers out. It is high time that the judgment of the farmers themselves should be consulted in this matter. There are farm leaders today whose judgment is worth considering. Take such men as James R. Howard, president of the American Farm Bureau federation, or S. J. Lowell, master of the national grange, or Charles Barrett, president of the National Farmers' union. There are farm folks of judgment and ability in every part of the country who are capable of rendering good counsel. By birth and environment Secretary Wallace himself is in a position to render helpful aid to the farmers and his farm paper has been doing this, lo, these many years.

What is needed is a righteous compromise between the "judgments" of the great conflicting interests of the country, in which compromise the farmer shall have a square deal.

No, the farmer does not stand today in great need of the judgment of bankers, of railroad men, of manufacturers or of city people generally. He is in need of their help just as they are in need of his help in carrying ut their own best judgment about their own various interests.

It is to be hoped that when the final results of the national agricultural conference are made known that there will not be too much "judgment" and too much "help" injected into its conclusions by other than that of the farming industry itself.

Cattle and Barn Burn

Fire caused the loss of the large cattle barn and 23 head of Guernsey cattle owned by Carl F. Kunzman, who lives six miles northeast of Bellingham. The fire occurred during a heavy gale and it was impossible to fight the flames. Forty tons of hay and all the farm machinery, as well as a few tons of feed, were destroyed and the loss is estimated at approximately $10,000. The barn was built this year and was insured for $1400 and part of the live stock was covered by insurance.

Contracts Bind

Dairy Association Sustained

That a true cooperative association is built upon a firm foundation and the binding contract for the delivery of products to that association has power to hold its signer to his bargain was proven by a decision which has recently been handed down by Judge Hewin of Chehalis. The case was brought up December 15 by the Lewis-Pacific Dairymen's association against Price Frame, a Lewis county farmer, who was temporarily restrained from selling milk to other buyers. Mr. Frame appealed the case and it was brought before Judge Hewin after the defendant had filed an affidavit of prejudice against Judge W. A. Reynolds, who was to have tried the case.

After the hearing on January 12, which was attended by an unusually large audience, Judge Hewin took the case under advisement until the following Monday, when he gave his decision in favor of the association, thus enjoining Frame from selling his milk to other than the Lewis-Pacific Dairy association.

The decision is considered a great victory for the cooperative association whether it be organized among dairymen or other producers so long as they include a binding contract. Since the case was the first of its kind to be brought by the dairymen's associations of the state to enforce their milk contract with the stockholders and members, it is accepted as a test case.

The attorneys for the association were H. E. Donohoe of Chehalis and W. H. Abel of Montesano, while Gus L. Thacker of Chehalis represented Mr. Frame. It is interesting to note that Judge Hewin was the jame judge who tried the "cranberry case" more than a year ago, when the cranberry association was granted an injunction against one of its members for a similar breach of contract. The judge's decision was later confirmed by the state supreme court to which the defense had appealed.

The history of the case shows that Frame began shipping to the Chehalis plant of the Lewis-Pacific Dairymen's association in April, 1921, but soon became dissatisfied and refused to deliver any more milk under his contract, but thereafter sold his product to other buyers.

With regard to this binding contract with dairymen's associations, Oscar G. Eaton, a member of the Pierce County Dairy association, writes:

"We have had the same difficulty to contend with in the Pierce County Dairymen's association, as some members are so short-sighted they can not see anything but immediate results.

"They forget the old days when we used to pay our own freight, after hauling to the depot, and accept sour cream prices and the weight the other fellow was minded to give us.

"We have entreated, cajoled and done everything to bring some of these members into line, yet without apparent result.

"The good of the many should not suffer because of the fault of the few. The time has now come for more drastic action."

The Cover Page This Week

The Barred Plymouth Rock shown on the cover page of this week's Washington Farmer is one of the good birds of the flock of R. H. Sanderson of Seattle, a prize winner at the recent Seattle show.

Fair Price at Farm

Authorized by the agricultural bureau of the Spokane Chamber of Commerce, a committee consisting of W. T. Day, chairman; E. A. Smith, editor of The Washington Farmer, and F. A. Garrecht, counsel for Northwest Wheat Growers' Associated, has sent the following telegram to Henry C. Wallace, secretary of agriculture, Washington, D. C.:

We commend the president and yourself for bringing about the agricultural conference to consider the pressing problems of the farmers.

We submit that there can be no remedy for the difficulties of the producers of farm products until a fair price of such products is received at the farm, and means must be devised to stabilize such prices.

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We guarantee every subscriber against loss through dishonesty or swindle by any advertiser in this publication; we do not attempt, however, to adjust trifling differences between subscribers and honest, responsible bankrupts. Complaints must be sent to us within 30 days from the date of the transaction and the subscriber must have mentioned The Washington Farmer when writing the advertiser. This guarantee applies to live stock, except that we will not be responsible for claims for damages on account of diseasee in stock sold through these columns.

A Farmer on Reserve Board.

The passage of the Kellogg-Smith bill in the senate by the overwhelming vote of 63 to 9 marks another sweeping victory for the agricultural bloc. This bill provides that the agricultural interest shall have a spokesman on the federal reserve board.

THE FARMER, however, has no fear that the agricultural bloc of 20-odd senators will become a permanent party in congress. The American farmers needed a champion, and the senators who constitute this bloc came to their call in an hour of dire need. When that need has passed, the agricultural bloc will dissolve and we shall see a return to the old party alignments.

It is one thing to oppose the permanent formation of parties along class lines. A good deal can be said in opposition to that departure from the traditions and practices of government in this country. We can readily understand that the national welfare would suffer if congress were made up of "blocs" of conflicting interests—one group fighting always for organized labor, another for the organized farmer, another for the organized railroad interests, another for the bankers and yet another for the commercial interests. But the coming together of a considerable number of senators and representatives, drawn into united action spontaneously by an overwhelming menace to the agricultural interests of the nation is another proposition.

We think we know the heart and purpose of the farmers of this country. We know it is not their desire that they should have special or preferential treatment by the government. They want only such regard for and consideration of agriculture as will be of benefit to the entire nation. The fact that the purchasing power of the American farmers has been cut down $8,000,000,000 in two years, as reported by Secretary Wallace, is conclusive proof that the slump in prices of farm products was an injury not only to the American farmer, but a deep injury to the nation.

Offers Remedy for the "Pest"

In a recent issue there appeared on this page an editorial entitled "A Pest Hard to Combat." This pest was described as "the fellow in a fruit-growing district that fails, either through negligence or intent, to combat the enemies that infest his orchards." He is the fellow who does not spray for codling moth, who allows blight to run riot in his own orchard to infest those of his neighbors, who neither traps nor poisons the gophers and the mice that are destroying his own trees and making his business a failure, and who refuses to become a part of the community organization for the united stand against all manner of ills that affect the fruit-growing industry.

Comes now a reader who admits that he qualifies under the above description. But he gives a remedy to control himself and his fellows who have neglected orchards. Here it is in his own words:

Let your live orchardist go to that man and say: "See here, let us take care of your trees, under contract, for three or four years. We will spray, prune, cultivate, gather and pack the fruit for a share or a price per box to be agreed upon." How many men would refuse, if rightly approached? Why, a man who came to me with an offer like that would not have to speak twice to get (150 per cent?) of the first year's crop. Really, I have often wondered why some skillful horticulturist does not engage to take care of all the run-down orchards that he can handle. It looks to me like an opening for the right kind of man, and it would be much more successful than our present law of compelling spraying or destruction of the orchard.

A run-down orchard is much like a run-down machine. It is hard to repair. A tree must be carefully pruned from its very first year until maturity, and thereafter, if it is to be a producer of first-class fruit. Trees that have been subjected to the ravages of all manner of pests for several years are in many cases almost, if not quite, beyond redemption. The orchard that is permitted to become the seat of serious fruit diseases can in only exceptional cases be redeemed. The development and care of an orchard is the process of a lifetime, not of one season.

Our original editorial was not meant in a personal way toward any one. Nor is this restatement of the case so meant. Nevertheless, we are of the same opinion still: That the man who allows his orchard to go to rack and ruin, the victim of pests and diseases, is a serious menace to the orchard industry, and one harder to combat than blight and codling moth.

"Give Me the Water"

The agricultural engineering specialist of the Missouri extension service recently installed in a Missouri farm home a sink, tank, water front and piping, bathtub and piping in a room adjoining the kitchen at a cost of $95.

When the demonstration was finished the farm housewife, with tears in her eyes, put her arms around the home demonstration agent and said: "Jimmy and I owe this all to you because we never would have believed we could afford it if we had not seen the demonstration given at the church last summer. I have waited 30 years for this."

The editor of The Washington Farmer recollects visiting a farm home in the highlands of the Big Bend section some years ago. It was one of the best diversified farms in that part of the state. Eleven children had been raised in the family and all the water used on the place for stock as well as for family use had been hauled for quite a distance. The house, though comfortable, was lacking in modern conveniences. Finally the time came when by the most careful prudence a sum of money had been saved. The question was put up to the good housewife whether that money should be expended in remodeling the house or in getting water, pumped by a windmill and forced through a long line of pipe into the house. The one would be about as expensive as the other.

"Give me water," said the housewife and at the time of the visit there was certainly a look of contentment on that good woman's face.

Patronize Reliable Dealers

One could fill up the columns of THE FARMER with gold brick stories of all kinds. The crop of schemers and the folks who are enticed into getting something for nothing or getting a good deal for a little seems never to fail.

A story now comes from California that a poultry-keeping concern has imported a Chinaman who is said to have the gift of being able to determine the sex of a day-old chick and is selling the pullets at a good price, while it turns over the culled out chicks to another firm, who in turn sells them as ordinary day-old chicks, which are found to contain only 10 per cent pullets.

The old advice is never out of date, to take extra pains to find out reliable dealers and to patronize them.

State Farm News

Open house was held by the poultry department at Washington State college, Pullman, January 14, when the new plant, which replaces the one destroyed by the windstorm last year, was opened for public inspection.

A new candling room is part of the plant. In one room was an exhibit of fresh eggs. Piled on a table was exhibited the amount of food a chicken consumes in a year.

Thirty birds dressed for exhibition by students were displayed, together with two chicken "curiosities," one a cross between a bantam and a Chinese pheasant and the other a cross between a Barred Plymouth Rock and a Chinese pheasant.

* * *

Miss Ruth Cresswell of Kennewick, graduated from the department of home economics at Washington State college last year, has resigned as assistant state leader in charge of girls' club work to accept a similar position in Michigan. She has left for Marquette, Mich., where she will make her headquarters.

* * *

Development of a 10,000-acre irrigation project in Okanogan county, near Riverside, is being pushed by Okanogan residents. According to present plans, it is proposed to tap the Okanogan river at a falls about six miles above Riverside to obtain the water supply. A preliminary survey indicates that the dam at this point would produce 2000 horsepower to be utilized for lifting water 50 feet into a main canal which would supply the area which it is proposed to reclaim.

* * *

A cow-testing association is soon to be organized in Lewis county.

* * *

Twenty-seven thousand two hundred acres cropped on the Tieton project this year brought gross returns of $3,166,411, an average of $116.40 an acre, according to the annual report of J. L. Lytel, head of the United States reclamation service at Yakima. Apples, the most valuable crop, realized $2,059,830 from 7160 acres. Alfalfa on 13,350 acres was worth $368,964, at $9 per ton. Other large crops were peaches, pears and potatoes.

* * *

The Bushnell farm, consisting of 432 acres on Lake St. Clair, on the Yelm road, about 10 miles southeast of Olympia, has been sold to James B. Howe of Seattle. It is one of the finest places in Thurston county and is a part of the William Habard, William White and Eaton donation claims.

* * *

The combined shipments of fruit, grain, stock and mixed agricultural products from the Pateros district in 1921 were the largest ever made. The principal shipments were of apples, of which 600 cars have gone out, with some stored quantities yet to be forwarded. The stock, wheat and other products have exceeded 400 cars and are not yet finished.

Pateros is the confluence of rail transportation for the Methow valley, which lies to the west, and the upper Columbia river region to the east.

* * *

The Western Washington Horticultural association will hold its 12th annual convention at Mount Vernon, commencing Wednesday, February - and lasting four days. The following committee was appointed to arrange a program: Chairman, C. W. Orton, Sumner; J. L. Stahl, Puyallup; E. A. Bartell, Puyallup, and L. M. Hatch, Alderton.

* * *

Approximately 7,000,000 feet of timber was blown down and otherwise uprooted during the storm period on the upper Skagit, Sauk and Suiattle rivers, according to word received at the office of the forestry service at Bellingham.

* * *

Kansas may lose its sunflower prestige when the results of C. B. Sherwood's experiment with this flower become beter known. As an experiment he planted a quarter acre on gravelly soil on his Satsop farm to this crop last summer. The big flowers grew amazingly and he harvested 9300 pounds, or at the rate of 18 tons to the acre. His cows seem to thrive on the diet. Other farmers will plant sunflowers this year.

* * *

Vegetable growers of Kelso and vicinity met recently at Lee & Grim hall and after hearing talks by M. J. Newhouse of Vancouver and County Agent T. Y. Blanton appointed the following committee to make plans for organization: Andrew Olson, chairoan; Sherman Vogel, Floyd Carroll, W. B. Ramsay and R. L. Wilkins.

* * *

Increased interest in poultry is being reported from the Montesano district. A Montesano breeder sold 4000 day-old chicks in this section last year. Already he has received orders for 14,000 chicks for spring delivery. John E. Hill is building a chicken house 20 by 110 feet on property he has purchased just east of Montesano. E. C. Roberts, a Satson rancher, will build a similar house soon on adjoining land.

* * *

The annual value of farm products in Pacific county has been increased from $500,000 to $750,000 in the last few years, and County Agricultural Agent Beck will try to get it nearer the $1,000,000 mark in 1922. Lumbering has so eclipsed farming that, although there are large areas of good farm land in the county, agriculture has suffered. The principal work planned for this year is drainage and farm sewage, dairying, crops, soils, horticulture, poultry, clothing and home management and boys' and girls' clubs in dairying and poultry. Nine communities will participate in the work: Brooklyn, Frances, Willapa, Menlo, South Fork, South Bend, Naselle, Wallicutt and Long Beach.

Coming Events of Interest

Jan. 25-27—Grain growers, shippers, millers, Spokane.
Jan. 30-Feb. 3—West. extension conference, Portland, Or.
Feb. 2-3—North Pacific Fair association meet, Spokane.
Feb. 6—Holstein sale, Granger.
Feb. 6-7—Davis and Butchart Bros. Holstein sale, Granger.
Feb. 7—Berry growers' meeting, Puyallup.
Feb. 10-11—Pierce county Pomona grange, Puyallup.
Feb. 14—Yakima Guernsey Cattle club, Yakima.
Feb. 15-17—W. Walsh. Horticult. Ass'n meet, Mt. Vernon.
Feb. 16-18—Farmers' short course, Parma.
Feb. 20-21—West. Royal breeders' swine sale, Spokane.
Feb. 22—Shorthorn breeders' spring sale, Spokane.
Feb. 23—Day & Rothrock Shorthorn sale, Sprague.
Feb. 24—A. D. Dunn Shorthorn sale, Wapato.
March 7—Holstein-Friesian annual meeting, Seattle.

FARM BUSINESS AND MARKETS OUTLOOK

A surfeit of steers in little better than feeder condition is universal complaint.

An increase of nearly 25 per cent in hog supply at leading markets was absorbed on an ascending scale of prices which reached the highest level in over four months.

Top lambs at Chicago reached across the $13 line.

The mule market is showing more life.

The advance in the wool market is still unchecked.

An increased quantity of wheat has been absorbed by the mills.

Argentine wheat is being forced upon the export trade at prices below a parity with North American wheat.

Slight rise in the price of hay.

Consumption of eggs has been heavy throughout the winter..

Downward course in butter prices.

CATTLE MARKET EASILY OVERLOADED

Cattle prices trended slowly upward last week only to sag again later. A fortnight of light runs has cleared eastern dressed beef channels of their pre-holiday accumulation but the saturation point is soon reached and there is no prospect of supply contraction in the next six weeks sufficient to lift prices to a much higher level. Bare spots may begin to show up by the middle of February which will result in price appreciation as beef consumption is at low ebb and changes on that side of the market are altogether likely to be in the direction of increase.

A surfeit of steers in little better than feeder condition is universal complaint, which suggests that holding such cattle until later in the season may work out advantageously.

Butcher cows and heifers and bulls are less numerous than a month ago, but as long as warmed up steers are plentiful, independence in price trends is out of the question. The veal calf market is erratic as usual with eastern points holding on a relatively high basis.

IS STOCKER SCRAMBLE COMING?

Advance reminders of the usual spring scramble for thin cattle to go on grass are furnished by orders at Chicago from Wisconsin graziers and a few transactions closed in the southwest at a date much earlier than usual. These may have involved drouth stricken cattle. The supply of aged steers which can be moved to Kansas pastures from Texas is said to be only 70 per cent of the number purchased last year. If the season is favorable, restocking in the northwest is anticipated, but the losses of the last few years, the narrow margin between feeders and fat cattle and the fact that money is none too easy will temper enthusiasm and may restrain stock cattle prices from an extreme advance during the spring months. Those who want to anticipate any such rise in values can scarcely hope to make purchases in the next two months much below prevailing levels.

HOGS HIGHEST IN FOUR MONTHS.

An increase of nearly 25 per cent in hog supply at leading markets during the last 10 days was absorbed on an ascending scale of prices, which reached the highest level in over four months on the best day, the Chicago average rising to $8.15. Shipping trade is as insatiable as at any time in the last six weeks while packing houses, crippled during the strike, are now on a nearly normal basis at most points.

Good sized runs respond to the bait of high prices so that not all of such advances is held. A liberal supply until early March and even longer is a reasonable certainty, but if hog meats continue to disappear into distributive channels as they have in the last 10 weeks there need be no further fear of $6 hogs at Chicago this winter. The farther the season advances, the more legitimate the appearance of such bulges as that of last week.

With prices of lard and salted meats below a parity with hogs and with fresh pork trade booming, packers have had no incentive to store product. The season is now far enough along that efforts to accumulate reserves for sale during the late summer period of light runs will help to sustain the hog market. That no new high record stocks like those of the two preceding years will be piled up is a foregone conclusion.

COLORADO LAMBS ON HORIZON.

With top lambs at Chicago across the $13 line, the market seems to have discounted most of the bullish factors, although the market remains in a bullish position and further advances are not impossible. A few Colorado lambs are coming to Chicago and Kansas City and the real movement from that quarter is due soon. Colorado feedlots are not nearly so well-filled as a year ago, but there should be enough lambs to prevent much further price aviation. Eastern shipping demand at Chicago last week was the broadest in months. With the dressed lamb market higher, prices mounted to the highest point since December, 1920, in spite of an increased supply.

A year ago last fall feeder lambs were purchased at prices so high that huge losses were inevitable owing to the subsequent course of the fat lamb market. Feeder lambs for a time brought as much as fat ones, increasing the returns of producers of thin western handsomely. This year the tables have been reversed. Lambs bought as feeders a few months ago at $5.25 returned last week and brought $13.

HORSE MARKETS MIXED.

Most of the recent improvement in demand for horses at Chicago disappeared last week and prices in some cases are $10 to $20 per head lower at that point, while St. Louis reports an active trade. Runs are liberal with eastern buyers the principal support, although the south is buying a small quota of cheap horses. The mule market is showing more life and a large run was cleared at St. Louis last week, while at Kansas City prices advanced about $10 in two weeks, although all the gain was not maintained.

WOOL PRICES AGAIN HIGHER.

The advance in the wool market is still unchecked. Prices are up about 10 cents a pound above the low point of the season reached in mid-summer. Sales in London, Antwerp and various points in Australia and New Zealand were at higher prices than the preceding auctions so that the loss early in December has been recovered. South American wool markets are in an excited state with prices higher and Americans buying. Some American buying has been in evidence at London. In this country manufacturers have been obliged to buy at the advance in order to fill out their requirements and talk of scarcity is becoming more prevalent. Unsold stocks of wool at Boston on December 31 were reported to be 63,542,000 pounds compared with 139,602,000 pounds on the same date last year. Latest reports point to a permanent tariff of 30 cents per clean pound. Woolen goods trade sentiment is not optimistic, but lower prices upon cloth are not anticipated.

The Boston market is quoted as follows:

Wisconsin, Missouri and average New England—1-2 blood, 36@37c; 3-8 blood, 34c; 1-4 blood, 31@32c.

Scoured basis: Oregon—Eastern No. 1 staple, 93@97c; fine and fine medium cloth combing, 85@90c; eastern clothing, 73@75c; valley No. 1, 80@82c.

Territory—Fine staple choice, 95c@$1; 1-2 blood combing, 80@85c; 3-8 blood combing, 60@65c; 1-4 blood combing, 53@55c; fine and fine medium clothing, 75@79c; fine and fine medium French combing, 62@65c.

FLOUR MILLS NEED WHEAT.

Although demand for wheat from mills failed to show the urgency expected after the first of the year, there has been an increase in the quantity absorbed by them. Their stocks of wheat are reported to be very light for this season of the year. A strong domestic statistical position in the wheat market is largely offset at the present time by the large supply in commercial channels and by the pressure of Argentine wheat upon the European market. Wheat prices have been holding within a narrow range so that flour buyers see no cause for anxiety and are purchasing but little more than needed for immediate requirements. Concerted efforts to reduce the retail price of bread have tended to confirm this attitude. If the price of wheat should show a tendency to advance, it is not impossible that flour buyers would begin to anticipate their wants for several months ahead.

It is estimated that the Pacific coast states have around 37,000,000 bushels of wheat for export and for carryover. In the northwest about 15,000,000 bushels of durum, which must largely be exported, are still on hand. Deducting these amounts it is believed that milling grades have been heavily over exported from east of the Rocky mountains. If a deficit is actually being created, imports from Canada are expected instead of shipments eastward out of a surplus along the first of March.

ARGENTINE WHEAT DOMINATES EXPORTS

Argentine wheat is being forced upon the export trade at prices below a parity with North American wheat. Germany and Portugal have been the principal buyers. Most of the sales have been for deferred shipment. Although port receipts from the Argentine interior have been smaller than expected, growers have been selling more freely in the last week or two. This may be only a temporary spurt, as the temper of the Argentine growers is not yet fully known.

Sales from the Australian surplus have not been reported recently, but official estimates upon the crop yield indicate a smaller outturn than last year.

Although Argentine wheat is receiving most attention abroad, about 5,000,000 bushels of Canadian wheat have been sold in the last few days for Russian relief and to Greece. About 1,300,000 bushels of durum were sold to be sent to Russia for seed and the Pacific northwest reported export sales of 300,000 bushels. The market has made little or no response to this demand, showing the extreme apathy of speculative buyers.

An eastern statistician has calculated that world's imports of wheat in the last six and one-half months have aggregated 40,000,000 bushels, or over 8 per cent, more than in the same period a year ago. Large takings by non-European countries have been a prominent factor in this increase, as they amount to about 25 per cent of the total. Several European countries, however, including United Kingdom, Italy, Germany, Holland, Portugal and Greece, have taken more wheat thus far than they did a year ago. It is noteworthy also that the world's available stocks of wheat and flour in commercial channels on January 1 were only 233,000,000 bushels, the smallest with one exception in the last 10 years.

HUGE VISIBLE SUPPLY OF WHEAT.

As an offset to the foregoing analysis, which shows a rather strong ultimate situation for wheat, there is in the United States and Canada a combined visible supply and bonded stock of wheat totaling 100,000,000 bushels. Mill and elevator holdings are estimated at about 25,000,000 bushels more. No anxiety to possess this wheat is in evidence. The situation may not change until the stock has been whittled down or until the possibility of a crop scare which looms on the horizon is nearer at hand.

IS OATS SCARCITY COMING?

The supply of oats including the new crop and the carryover on August 1, 1921, was only about equal to the average farm consumption during the last five years. Nevertheless, sales from the farm have been about as large as usual. With an abundant corn yield it is possible that that grain is being substituted for oats on the farm, otherwise scarcity is likely before the next crop is harvested. Primary receipts are now running about 1,000,000 bushels per week less than the average rate at which oats have disappeared into consumptive channels since the crop year started. This rate is not sufficient to make a rapid reduction in the huge visible supply. Pronounced price changes are improbable until the latter shows stronger signs of dwindling to small proportions by spring.

CASH GRAIN MARKETS.

The range of cash grain prices for the week ending January 18 was:

Chicago—Wheat—No. 2 hard, $1.09@1.11.

Corn—No. 2 mixed, 48 1-4@49 1-2c; No. 3, 47@48 1-2c; No. 4, 45 3-4@47 1-4c; No. 2 yellow, 48@49 3-4c; No. 3, 47@49c; No. 4, 45 1-2@47 1-4c; No. 2 white, 48@49 1-2c; No. 3, 47@48 3-4c; No. 4, 45 1-2@47 1-4c.

Oats—No. 2 white, 36 1-2@38 1-4c; No. 3, 33 3-4@36c; No. 4, 32 1-2@34 1-2c.

Rye—78 1-2@ 79c.

Barley—53@61c.

CLOVERSEED OUTLOOK A TOSSUP.

No pronounced change in red cloverseed values is in prospect in the immediate future, as the small size of the crop is counterbalanced by the fact that prices are now high compared with the purchasing power of farmers, and Europe is sending seed this way in spite of a small crop over there. The discount on alsike is decreasing. Timothy seed prices are slowly creeping upward.

Toledo, per bushel—Prime red clover, $13.85; prime alsike, $11.60; prime timothy, $3.25.

FEED MARKETS.

Slight weakness has been present in feed markets, although prices are only slightly lower. The movement of flour has increased to some extent, which determines the position of millfeeds. Larger cotton oil mill operations and inactivity of exporters have weakened the cotton seed meal market. No radical changes in values are expected.

Chicago—Bran, $24; standard middlings, $24.50; flour middlings, $26; hominy feed, $22; gluten feed, $34.65; cottonseed meal, 43 per cent, $43; 36 per cent, $39; oil meal, $46; tankage, $52.50@55.

HAY PRICES MOST ATTRACTIVE.

Hay loadings for Chicago and Kansas City have increased in the last week. Prices rose slightly during the first half of January and this advance, in addition to freight rate reductions, has made values more attractive to producers. Demand has increased slightly.

Chicago—No. 1 timothy, $22@23; No. 2, $19@20; No. 3, $15@17; No. 1 light clover mixed, $20@21; No. 1 clover, $17@19; No. clover mixed, $18@19; sample and threshed hay, $12@16; No. 1 to choice alfalfa, $17@23; Nebraska and South Dakota prairie, $15@17; straw, rye, $15@16; oat, $13@14; wheat, $12@13.

EGG PRICES ERRATIC

After declining to around 30 cents per dozen at Chicago, the egg market advanced nearly 10 cents only to lose half of this gain once more. The future course of the market is uncertain, as production has undoubtedly been stimulated by cheap feeds and favorable weather and it is possible that it is being overdone. Consumption of eggs has been heavy throughout the winter and the drop in prices may already have gone far enough to offset the increased supply available. Cold storage holdings of frozen poultry in the United States on January 1 were 103,355,000 pounds. The increase in stock during December was slightly less than in the same month a year ago.

BUTTER PRICES TREND DOWNWARD.

Although the slump in butter prices was arrested in the first half of last week, prices soon resumed their downward course. Arrivals of fresh butter were liberal, dealers again began to force their holdings upon the market and a shipment of over 3000 casks of Danish arrived at New York. Fancy butter was less abundant and moved freely most of the time. Receipts of butter at the four markets continue heavy, although reports from creameries indicate a slight decrease in production. The break in prices should have discounted most of the bearish factors.

Some of the Australian butter which arrived on the Pacific coast has been shipped to eastern market, where it is held above the prevailing level. C. i. f. quotations were 35 cents for Danish, 26 cents for Australian and 23 1-2 cents for New Zealand. About 10,000 boxes of the latter to arrive on March 1 were bought.

Prices of fresh 92 score butter at the four markets on January 18 were: Chicago, 33c; New York, 37c; Boston,

(Continued on page sixteen.)

Little Journeys to Market

WOOL MARKETS.

The main wool markets in the United States are Boston, Philadelphia, Chicago, New York, St. Louis, Portland, Ore., and San Francisco. Boston is the acknowledged leader because of its nearness to the woolen and worsted mills, which are concentrated in New England, and stocks held there are usually larger than at any other point. The woolen goods industry also is quite important in New York, Philadelphia and St. Louis. Chicago is less important as a wool manufacturing center than as a concentration point for wool grown in the middlewest and on the range. The large packing plants make Chicago prominent also as a source of pulled wools.

With the exception of a limited amount of fall shearing in the southern part of the United States, most of the wool clip comes off the sheep's back during the spring months while the consumption of wool by most mills in ordinary times is rather uniform from month to month. Most of the wool in the past has been concentrated in the hands of large dealers at the points named soon after shearing, who graded and stored it until manufacturers were ready to absorb it at fairly uniform prices which usually were high enough above the farm price to reward the dealer generously for his trouble.

At these big markets, most sales are made privately from samples or upon inspection of stocks in warehouses. There is no open market similar to the auctions held in Great Britain or in some of the countries in the southern hemisphere, although the United States government is using that method to dispose of the wool held since war time.

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A Grave Menace

Was Cause of the Agricultural Bloc

David Lawrence, the correspondent whose interpretation of political currents at the national capital have a nationwide audience, discussed the agricultural bloc sympathetically in a special dispatch to The Spokane Spokesman-Review.

The underlying purpose of the senators who constitute that bloc, as Mr. Lawrence points out, is not to usurp the domain of the president. This bloc was called into existence by the widespread distress suffered by agriculture when farm prices came tumbling down with a crash and the farmers found themselves under the necessity of buying manufactured goods and other merchandise at a continuing high price level.

"The farmers feel," says Mr. Lawrence, "and their attitude is completely reflected in the aggressive position taken by senators from agricultural states, that the federal reserve board was unduly severe on the farmer during the deflation period, which began nearly two years ago. The banks of the nation were advised not to loan money on declining markets. The farmer was caught in the matelstrom of rulings and advice by the federal reserve system."

Mr. Lawrence's interpretation is not new, but it will impress a great many readers in all parts of the Union who follow his utterances with confidence.

Repeatedly THE FARMER pointed out at the time that the federal reserve board was bearing down so hard on the agricultural industry that its policy was short-sighted and unwise. The federal reserve board was criticized at that time, not for curtailing credit, but for delaying so long that restraining action and then clamping the compressor down so tightly on the farmer. National extravagance and inflation of credit were allowed to gain too much momentum before the federal reserve board took any action at all. When action was taken the members of the board should have known that the farmer has only one turn-over a year; that his crop was produced at high cost, and that a sharp curtailment of agricultural credit would send farm prices down like an avalanche and the whole country would suffer.

That is evidently the view that President Harding takes of the matter, as during the time the senate was moving slowly toward a vote on a measure to provide for a farmer representative on the reserve board, word was received from the president that he would observe the intent of the legislation and would name a farmer member.

Mr. Lawrence further reminds the opponents of the agricultural bloc that the farmers are pointing to the war finance corporation as the best evidence of their ill treatment at the hands of the federal reserve board. He puts the matter concisely and effectively when he says:

"Why should the war finance corporation have been necessary, ask the agricultural groups, if the federal reserve board had comprehended the needs of farmer finance? The fact is, the war finance corporation has done some wonderful things, for which the farmers in those sections of the country which have been helped will be everlastingly grateful, and the praises of Eugene Meyer Jr., head of the finance corporation, are loudly sung in the north, east, south and west, wherever timely financial aid has been extended through the finance corporation."

Dairymen Win

Dealers Buy From the Association

An agreement has been signed in Spokane between the Inland Empire Dairy Producers' association and all of the principal milk distributing companies of that city except one, the Broadview, under which the distributors agree to purchase practically all of their milk supply for a period of three years from the cooperative association. The price to be paid at the present time is $2.85 per 100 pounds net to the producers' association for 3.7 per cent milk. All the milk will pass through the byproducts plant of the association, where it will be weighed and tested, but each private distributing company will process its own milk in its own plant. The producers' distributing company, which is composed of former milk drivers, will continue to receive its supply of processed milk direct from the producers' byproducts plant.

The agreement also provides that the retail price of milk in the city of Spokane shall be 13 cents per quart, instead of 10 cents, which it has been for several months as a result of the milk war between the producers' association and the private distributors. The new price is already in effect.

Manager A. A. Newbery declares that the consummation of the agreement is the greatest victory for cooperative dairy marketing ever won in the Pacific northwest.

Manager Newbery and others associated with him in the conduct of the affairs of the producers' association had believed that it would be possible to maintain a price of 10 cents per quart for bottled milk delivered in the city of Spokane, but declare that this is not possible, owing to the fact that the people of the city did not support the association with the loyalty which it merited. Notwithstanding the fact that the association reduced the price of milk to 10 cents per quart from the 13 cents per quart that it was when the producers' byproducts plant was started, about 75 per cent of the consumers continued to purchase their requirements from the private distributors, according to Manager Newbery, who declared that the association could not maintain the low price with the small volume of business it was, therefore, compelled to do.

City officials of Spokane have threatened an investigation to see if the agreement between the distributors and the producers for a 13-cent price in the retail milk trade does not constitute a violation of federal law as an illegal combination.

Hay Growers Will Continue

J. F. Schreiner, who was recently appointed receiver for the Washington Hay Growers' association following financial difficulties of the organization, has secured authority from the courts to continue the business of the association under existing regulations and contracts. It is held by the court and Mr. Schreiner that the continuation of business by the association will be of benefit not only to its 400 members, but to its creditors as well.

The association still has under contract between 10,000 and 15,000 tons of the 1921 crop, according to the report from Yakima. The association plans to continue to operate during the 1922 season under its present contracts, with an estimated production of some 35,000 tons of hay.

It is understood that the liabilities of the association total about $35,000, with assets estimated at from about half of this amount to $25,000.

The financial difficulties are understood to have resulted from over-enthusiasm during the early part of the 1920 crop season, when growers were advanced $21 per ton on their hay. When the market went down the average price could not be maintained as high at $21, but refunds from members who received this amount have not yet been secured.

Poultry at Spokane

Following the show in Seattle early in the month, and a considerable number of lesser shows throughout the state, the annual Spokane show is being held this week. Many parts of the state, as well as British Columbia and the neighboring state, are represented by exhibits. Many birds that took premiums in the Seattle show have reached Spokane, after participating in other shows en route. While the affair is being held under the auspices of the Spokane Poultry Breeders' association, it is the official American Poultry Breeders' association's gold medal show for this state, according to B. F. Mitchell of the management. Judging is being done by James A. Tucker of Michigan.

The state poultry breeders' association holds its annual convention during the show. A report of both the show and the convention will be given in THE FARMER in an early issue.

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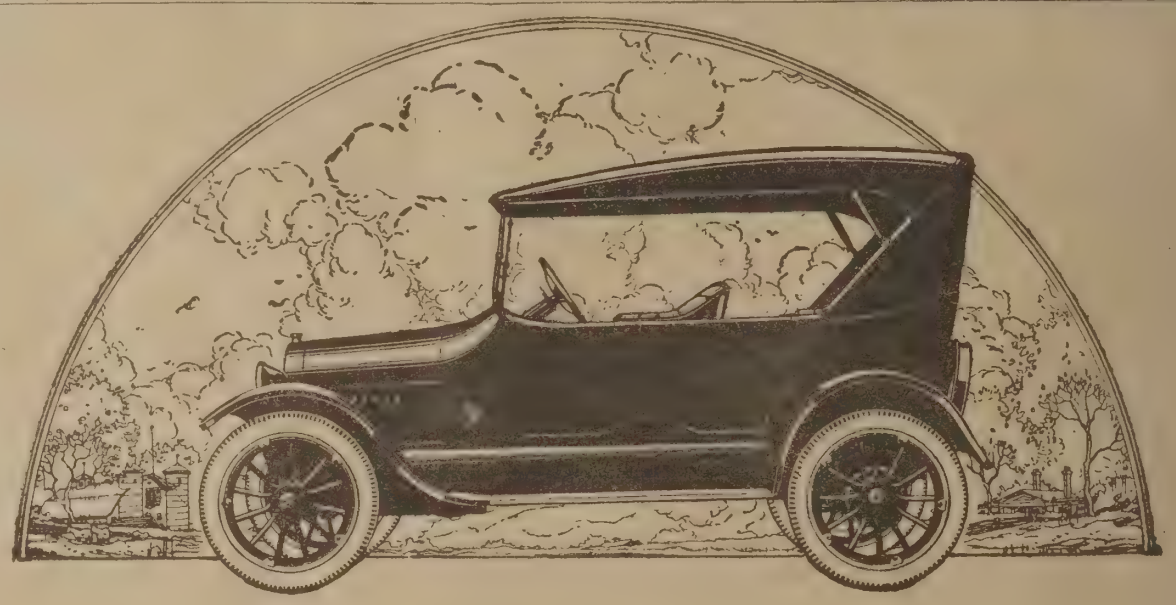
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The Seattle Show

One of the leading poultry shows of the Pacific northwest this season was that held in Seattle the early part of this month. A general report of this show was given in a previous issue of The Washington Farmer, the awards being omitted because of lack of space in that issue. The awards were as follows:

Dark Barred Plymouth Rocks—Randall Poultry Yard, Seattle, 2d young hen; 4th cockerel. Roselure Farm, Yarrow, 1st cock, 3d and 5th hen. Guy E. Knowles, Kent, 3d cock, 4th hen. Ray Leftwich, Tacoma, 2d and 5th cockerel, 3d young pen. Ellis S. Jennings, Tacoma, 2d cockerel, 2d pullet. Jacobson Poultry Yards, Tacoma, 1st and 2d cock, 1st and 2d hen, 1st and 3d pullet, 1st old pen, 3d cockerel. R. H. Sanderson, Seattle, 1st young pen; 1st cockerel. H. B. Densmore, Seattle, 4th cock, 5th pullet.

Light Barred Plymouth Rocks—Randall's Poultry Yard, 1st cockerel, Truetype Poultry Farm, Tacoma, 4th pullet, 4th cockerel. Ray Leftwich, 2d pullet. Jacobson Poultry Yards, 1st hen, 3d pullet.

Buff Plymouth Rocks—Harry H. Collier, South Tacoma, 1st cock; 1st, 2d and 3d hens; 1st, 2d, 3d and 4th pullets. Fred Kuhns, Seattle, 2d cock.

Silver Spangled Hamburgs—Fred A. Johnson, Tacoma, 1st cock; 1st cockerel; 1st hen, 1st pullet.

S. C. Rhode Island Reds—P. H. Babcock, Seattle, 1st, 2d cock; 1st, 4th hen; 1st, 5th cockerel; 2d pullet; 4th young pen. P. S. Murphy, Seattle, 3d cock. J. T. Randall, Seattle, 1st pullet. E. D. Tirana, Seattle, 2d pullet. Mrs. F. H. Herman, Seattle, 3d, 4th and 5th pullets. Thomas Svaleson, Suquamish, 5th young pen. Mrs. H. A. McCall, Seattle, 5th cockerel. Colin W. Robertson, Seattle, 1st cockerel; 3d young pen; 1st old pen; 3d and 4th cockerel. Mrs. O. L. Williams, Sunnyside, 2d cockerel; 2d and 3d hen; 5th pullet. Fred Kuhner, Seattle, 4th cock.

Rhode Island White—Fred Hoyt, Seattle Heights, 1st and 2d pullets. J. F. Randall, 1st hen; 1st cockerel. Cowherds Duckery, Ferndale, 1st cockerel; 1st pullet. Mrs. C. M. Sylvester, 1st young pen.

White Wyandottes—George E. Plummer, Seattle, 3d and 4th cockerel; 4th and 5th pullet. James H. Nichols, South Tacoma, 1st and 2d hen; 1st cockerel. Raynard H. Moul, Seattle, 4th hen. James H. Nichols, South Tacoma, 1st and 2d pullet. Charles Bickert, Yakima, 1st old pen; 3d pullet; 2d and 5th cockerel; 3d hen. V. J. Hemmert, Seattle, 2d pullet. J. W. Thatcher, 1st cock.

Blue Wyandottes—Methow Valley Live Stock company, Seattle, 1st young pen; 2d cock.

Buff Wyandottes—Fred A. Johnson, 1st pen; 1st cockerel.

Silver Wyandottes—Fred A. Johnson, 1st old pen.

Partridge Wyandottes—Mrs. O. Bogstedt, Seattle, 1st young pen.

Silver Laced Wyandottes—Mrs. E. N. William, Seattle, 2d old pen; 1st hen; 1st young pen; 1st pullet.

White Rocks—Jack Bertram, Lents, Ore., 2d cock; 5th cockerel; 1st hen, Axel Wold, Seattle, 1st pen; 1st cockerel; 4th and 5th pullets. Mrs. S. Y. Bennett, Olympia, 3d cock; 4th cockerel; 2d and 4th hen. Ideal Poultry Yards, Hoquiam, 1st old pen. A. A. Giersch, Seattle, 1st cock; 3d cockerel; 3d hen; 1st and 2d pullets. James Wright, Richmond Heights, 2d old pen; 5th hen. George Haakons, Seattle, 2d young pen; 3d pullet.

S. C. White Leghorns—David Trouts, Lents Station, Ore., 1st pullet. James J. Scanlon, Lakeview, 1st cockerel; 5th pullet. L. A. Babcock, Seattle, 3d pullet. Theodore M. Thorsen, Bellingham, 4th pullet. R. R. Upper, Orilla, 1st hen; 1st and 2d cock. E. D. Hosmer, Sherwood, Ore., 4th cock. Fred A. Johnson, 3d cock; 3d hen; 1st, 2d, 3d and 4th cockerel. Fish Bros. White Leghorn Farm, Seattle, 5th cock. W. F. Sheets, Alderwood Manor, 3d, 4th and 5th hen.

Light Brahmas—Jud Maguire, Seattle, 2d old pen. Charles Bylsma, Seattle, 1st and 2d cock; 1st old pen; 1st young pen; 1st and 2d cockerel; 1st and 2d pullets; 1st and 3d hen. O. T. Seymore, Seattle, 2d young pen; 2d and 4th hen; 1st capon.

Black Langshans—A. E. Indriedson, Seattle, 2d cock; 1st and 2d hen; 3d pullet. Mrs. L. B. Carroll, Seattle, 1st cock. J. K. Klein, Seattle, 2d hen; 1st and 2d cockerel; 1st and 4th pullet; 1st young pen.

White Orpingtons—C. H. Harrop, Seattle, 1st young pen; 1st cockerel; 3d pullet. Frank H. Torrey, Edmonds, 1st and 2d hen; 2d and 3d cockerel; 1st and 2d pullet.

Buff Orpingtons—C. H. Harrop, 2d pullet; 1st and 2d young pen; 2d cockerel and 2d pullet. Mrs. James Wright, Richmond Highlands, 4th and 5th pullet; 2d and 4th hen; 1st cock; 5th cockerel. J. C. McGinnitie, Mt. Vernon, 1st and 3d cockerel; 1st pullet. R. C. Simpson, Seattle, 1st hen; 1st old hen; 4th cockerel. Elliott Higgins, Three Tree Point, 3d young pen; 3d old pen. Mrs. B. Hildebrandt, Edmonds, 2d old pen; 3d pullet.

Blue Orpingtons—Hjalmer T. Johnson, South Tacoma, all awards.

Black Minorcas—A. Hollings, Seattle, all awards.

Mammoth Bronze Turkeys—Mrs. F. R. Hawley, Kirkland, 1st young tom. Mrs. Charles E. Stevens, Seattle, 2d old tom; 3d old hen. Mrs. B. Hildebrandt, 1st yearling tom; 1st young hen. Mrs. James Wright, 3d old tom; 1st and 2d old hen; 3d and 4th young tom. Mammoth Bronze Turkey Farm, Walla Walla, 1st old tom; 4th and 5th old hen; 2d young tom; 2d and 3d young hen. Mrs. J. W. Denny, Seattle, 2d yearling tom.

White Holland Turkeys—Mrs. F. R. Hawley, Kirkland, 1st young tom.

Jersey Giants—Cowherd's Duckery, 1st pullet. M. S. Meengs, Seattle, 1st cock. Fred Hoyt, Seattle, 1st and 2d hen.

Anconas—The Ancona Grove, Walla Walla, 1st and 2d cock; 2d cockerel; 2d pullet. U. R. Edinger, Seattle, 1st cockerel; 1st young pen. Ray Leftwich, 1st pen; 1st pullet.

R. C. Anconas—The Ancona Grove, 1st cock; 1st cockerel; 1st and 2d pullet.

Buff Leghorns—Mrs. O. Schmanke, Seattle, 1st cock; 2d and 3d young pen. Bush Farm, Portland, Ore., 1st young pen.

Andalusians—J. N. Scott, Tacoma, 2d cock; 2d cockerel; Mrs. J. W. Denny, Seattle, 1st cock; 1st hen; 1st cockerel; 1st pullet.

White Faced Black Spanish—Fircrest Poultry Farm, Puyallup, 1st and 2d cockerel; 1st pullet.

Light Brahmas—Charles Bylsma, 1st and 2d cock.

Red Cornish—Cowherd Duckery, 1st pullet; 1st cockerel.

Dark Cornish—Methow Valley Live Stock Co., 1st cock; 1st young pen.

White Silkies—L. P. Smith, Bellevue, 1st cockerel; 1st pullet.

Golden Sebright Bantams—Mrs. Lilly Hollings, Seattle, 1st cockerel.

Black Cochin Bantams—Wilbur Hosmer, 1st cock; 1st hen. Thomas O. Anders, Seattle, 1st young pen.

Partridge Cochins—V. J. Hemmert, Seattle, 1st young pen.

S. C. Light Brown Leghorns—Fircrest Poultry Farm, 1st cockerel; 2d pullet. Fred A. Johnson, 1st cock; 1st hen, 2d cockerel; 1st pullet. D. C. Kessler, Seattle, 2d cockerel. Mary E. Nichols, Portage, 1st young pen; 2d cock. Hjalmer Johnson, 1st cock; 1st cockerel; 1st pullet.

Houdans—Leland M. Bridgman, Seattle, 1st old pen.

Silver Crested Black Polish—H. K. Carter, Tacoma, 1st cockerel, 1st pullet.

Toulouse Geese—H. H. Collier, Tacoma, 1st young gander; 1st young goose.

Guinea Fowl—Mrs. L. T. Michel, Seattle, 1st cock; 1st pullet.

Mallard Ducks—Z. B. Rauson, Seattle, 2d cockerel; 2d pullet. Edward Rauson, Seattle, 1st cockerel; 1st pullet.

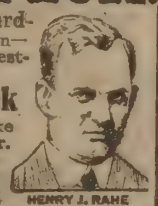
Rouen Ducks—Cowherd's Duckery, 1st cockerel; 1st pullet.

White Muscovy Ducks—L. P. Smith, Bellevue, 1st cock; 1st, 2d, 3d and 4th hen.

IS NOT LAYING WELL.

The hen with the frozen comb probably is producing very few eggs.

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Aged Ewes

Parcelled Out to Small Farmers

Cooperative distribution of aged ewes among small farmers would appeal to range sheepmen, in the opinion of R. A. Ward, general manager of the Pacific Wool Growers, but it should be undertaken at the time of the annual culling of the ewe band, or shortly after, in order to make it practical, he believes.

Soon after publication of Dr. E. A. Bryan's article on "The Menace of the Aged Ewe Shortage," some weeks ago, inquiries as to where such ewes could be purchased began coming into the office of THE FARMER. In a search for this information, Mr. Ward was consulted and his idea of how the cooperative buying idea could best be carried out was asked.

"On the whole the plan is sound," he replied, "but there are a few practical details which make its application difficult in certain cases. It is customary among sheepmen at lambing time or in the fall, when the lambs are taken off and shipped to market, to go over the old ewe band and take out all of the old 'gummers,' 'broken mouths' and 'spread mouths.' They are usually cashed at this time or placed in what we call the 'hospital band,' which is made up of cripples and these old ewes. In the fall, as soon as the ewe band is given this culling, in most instances it is sent out on the winter range, but in case of very severe weather it goes into the feed lot. In either case, it is not practical to cull them again until shearing or lambing time the following spring.

"This would make it necessary for cooperative distribution to be undertaken at the time of the annual culling or shortly after.

"Range sheepmen will be glad to sell these old ewes at a very reasonable figure, but they would not care to job them out in small lots to a number of ranchers," Mr. Ward continued. "They would, however, be glad to turn them over to a county agent or to a representative of a group of cooperative buyers, so that the entire transaction would be closed as far as they were concerned at the time of the transfer. This is because they would not have facilities for caring for the ewes on their own ranches until they were all distributed. We had an example of this this year. A number of growers desired to stock up with a few aged fine-wool ewes apiece, which were suitable for one or two lamb crops on farms. We arranged with a large sheepman to secure these ewes at a very reasonable figure. He went to considerable trouble and separated all of the ewes which were 5 years old for the purpose of supplying the wants of the flock man. When he had the aged ewes segregated the farmers delayed in securing their purchases so long that he was finally forced to throw the old ewes back into the band, as he had no place to hold them on good feed. This is just what will occur in the majority of cases where range men are concerned and this could only be solved by having a representative of the farmers take over all of the ewes at culling time, even though they would have to be disposed of in small lots over quite a period.

"On a recent trip through eastern Oregon and Idaho I found that a majority of the range men were forced to cash their entire lamb crop, including the ewe lambs, in order to meet interest on maturing loans and to provide expense money for the coming year. This is to be regretted, because most of these bands are beginning to show the effects of the aged ewe. I know of one conservative and constructive banker, who in spite of present financial conditions served warning on his customers that no ewe lambs in his county should be marketed, and I understand that the majority of his people were able to hold their ewe lambs and sold only the wethers and the old ewes. This is as it should be. We hope that next season the financial situation will be easier and that this can be done in every range section."

Content and Comfort

By C. W. Hickman, University of Idaho.

Fattening steers should be handled as quietly as possible, avoiding any excitement which would make them leave their feed.

Cattle should be fed regularly, never varying more than 15 minutes.

the even-tempered, regular man, who is quiet in manner and movement, invariably proves more satisfactory than the tratic, irregular one.

Steers should have plenty of fresh water before them at all times.

The feed yards should be provided with plenty of bedding.

The whole aim is to keep the steer contented and comfortable if we are to expect the most gain for the feed consumed.

Milk Tastes Tainted

Please tell me what can be done for my cow. Her milk and cream tastes tainted. I feed her wheat, hay and mill feed, potatoes and carrots. W. J. C.
Nespelem, Wash.

You do not state whether the milk is tainted as it comes from the udder, or whether it develops the taint upon standing. If it appears in fresh milk it is possible that the potatoes are responsible for it, especially if they are fed raw. Cooked potatoes are not so likely to cause bad flavors. If the bad flavor appears after the milk is 12 or 24 hours old, it is caused by organisms that get into the milk some way. To guard against these wash the udder well and dry it before milking. Milk with dry hands. Then sterilize carefully all the buckets, strainers and pans or the separator if you use one. I have known of cases where it took a careful sterilization of all utensils every day for a week before the trouble was controlled.
A. B. N.

World's Dairy Congress

The meeting of the world's dairy congress in the United States, which was originally scheduled for this year, has been postponed until 1923 in order to give more time for the preliminary arrangements. The joint resolution providing for the delay was introduced into congress by Senator George W. Norris of Nebraska and Representative Edward E. Browne of Wisconsin. The present plan is to hold the world's dairy congress in October, 1923, just in advance of the national dairy show and in the same city.



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Many ambitious men and women live only half a life—and don't know it

No person whose nerves are continually irritated, whose appetite and digestion are disturbed, or who doesn't sleep well has more than half his normal chance for success in life. For weakness, debility, anemia and general lack of tone are a serious handicap to anybody.

Those who drink tea or coffee are often sufferers from these conditions. Tea and coffee contain caffeine, a substance which has a decided stimulant action on the nerves and brain cells.

Each cup of strong coffee contains about as large a dose of caffeine as your doctor would ordinarily give to a very sick person.

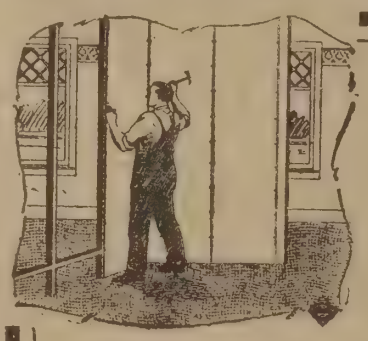
You can readily see that the effect of giving this stimulant regularly to a well person might finally have a tendency to make him sick.

If you want to avoid a very common cause of irritation and enjoy restful sleep, good digestion, and all the feeling of vigor and robust endurance that comes to healthy, normal people, quit tea and coffee, and drink Postum, instead. It is a rich, coffee-like cereal beverage—perfectly delicious!

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Maintenance Ration

It has been shown by careful experiment that the chief difference between a good dairy cow and a poor dairy cow lies in their relative abilities to consume feed in excess of that required to maintain the bodily activities, says H. E. McNatt, dairyman at the western Washington experiment station. In other words, a poor dairy cow can be induced to consume little feed above a maintenance ration, unless she has a marked disposition to lay on fat. This latter is an opposite tendency to milk production, and is always an indication of a poor milker. On the other hand, a good dairy cow readily consumes large quantities of feed over and above that needed for maintenance. This extra feed is used for milk production instead of for beef production.

It is more accurate to say that the good dairy cow is compelled to consume a large amount of feed because the inborn milking tendency drains her body of large amounts of milk material, which must be replaced if the animal is to remain at constant weight. The milking function of the poor cow is poorly developed and hence does not tend to drain her body of nutrients to a large extent. This results in a limited appetite after maintenance needs are met.

Since the dairyman's profit comes only from that feed consumed above maintenance needs, it becomes readily apparent that the maintenance ration should be as small as possible in proportion to the total ration.

Some of the things causing increase in the maintenance needs are:

(1) Exposure to cold fall rains. The cold water on the animal's body must be heated to about 100 degrees F. This takes feed.

(2) A developing foetus within the cow's uterus.

(3) Cold drinking water, which must be warmed by the feed consumed.

(4) A too thin condition of flesh, which results in rapid loss of body heat.

Does it not seem apparent, then, that only an unusually good cow will return a profit, if her maintenance requirements are enlarged by a developing foetus, being kept in a thin condition, offered only cold drinking water and being compelled to stand out in the cold fall and winter rains? A mediocre or poor cow will return a loss under such conditions.

The best policy is to keep only good cows, then give them a chance. Keep them in good condition, well stabled and abundantly fed.

VETERINARY

By DR. S. B. NELSON.

Cow Has Lumpy Jaw.—I have a cow that has a big lump on the side of her jaw. It breaks open and runs a bloody matter. The swelling started some time in May and has been growing since that time. Recently she has had three of these lumps on the swelling. Is there anything I can do for her, as there is no veterinarian close? She is dry now. This cow's mother had a lump on her jaw, but did not have any trouble with it. Is such a thing inherited? F. L.
Springdale, Wash.

Your cow without doubt has lumpy jaw, an infectious disease, and I would be of the opinion that in her condition it would not pay to treat her. The chances are she would not recover and it is quite probable that she would be a source of infection to the rest of your cattle. It is quite likely that this animal did not inherit it from her dam, but became infected later on in life. The disease is transmissible to man.

White Discharge.—My 3-year-old cow calved nine weeks ago and was bred about three weeks ago. She discharges a slight white mucous fluid occasionally. What does it indicate? J. L.
Olympia, Wash.

If the cow retains the foetus, the slight white discharge does not indicate anything. If not, it may indicate contagion, abortion, infection.

Red Water.—I have a milch cow that will calve in about two weeks. She is showing bloody urine. Has been in that condition about a mont. Is it probable that she will recover after calving or will the trouble grow worse? Does this trouble affect a cow's milk or render her unfit for beef? E. E. G.
Auburn, Wash.

It is possible that your cow will recover after she has calved. At the present time there is no reliable remedy known for the disease of red water, from which your cow is probably suffering. In this disease they frequently recover and then it reappears and each time that it comes the animal suffers more severely from it.

Horses Have Goiter.—I have two mares about 15 years old and both have a goiter on the neck. Is there anything that will take them off without an operation?
Tolt, Wash. E. G. M.

There is no satisfactory remedy for the removal of the goiter in old horses, as you mentioned. Most horses are affected this way late in life.

Apply Iodine Daily—I have a cow that was taken silk about two weeks ago with sore throat and I bathed it with turpentine and lard and gave her a little strong alum water twice a day. Her appetite is good now and she eats and drinks well and chews her cud. There is a hard ridge on the left side of her neck. What should I do for it? J. R. L.
Reardan, Wash.

Apply tincture of iodine to it daily.

Udder Swells—I have a cow 7 years old and at periods varying from two days to three weeks or more I notice, usually at the evening milking, that the right quarter of her udder is as hard as a bullet and I do not get the usual flow of milk from it. The next morning this quarter seems to be perfectly normal again. There is no apparent soreness. This cow has had milk fever twice at calving. She also tries to hold back her milk. A. H. H.
Ellensburg, Wash.

Try giving the cow a tablespoonful of fluid extract of phytolacea in a little water once daily. Apply the following liniment to the affected quarter of the udder after each milking: Tincture of iodine, three ounces; soap liniment, five ounces.

To Cure Ring Bone—I have a mare that is pretty lame in her front foot. It seems to be a ring bone, as it is just above the hoof and it seems to be hot. She began to get lame about a year ago and now I can not work her. I can not get her to a

(Continued on page twelve.)

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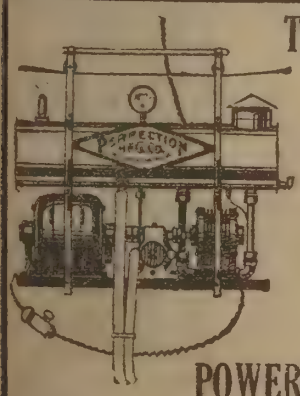
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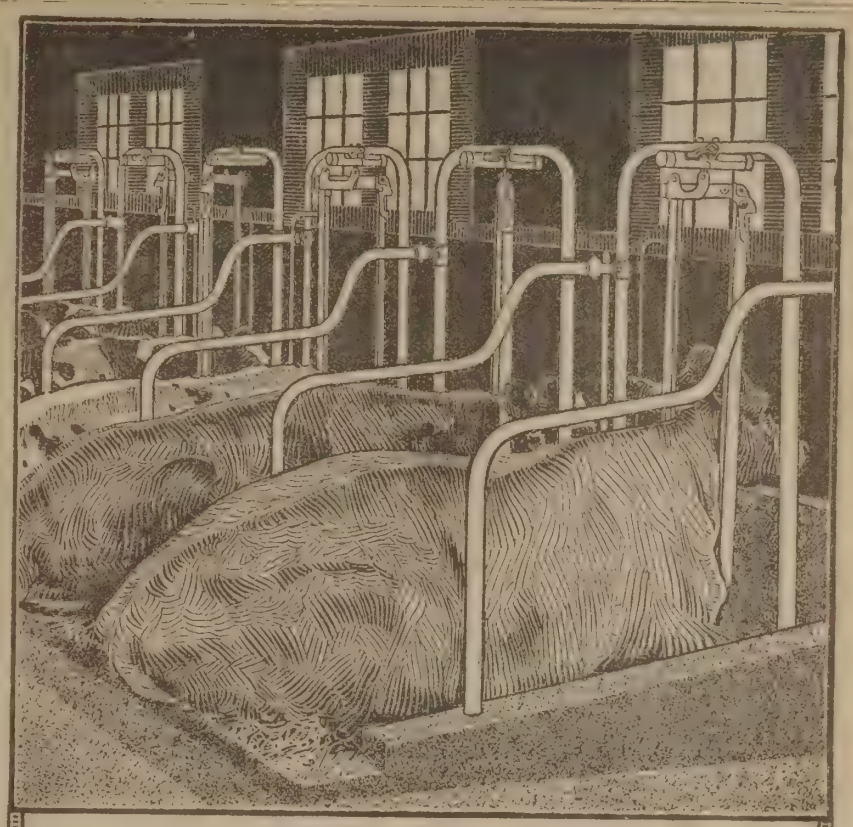
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POULTRY

An Early Start

By MRS. GEORGE BURTON.

Success in any business depends a good deal on getting a good start, but especially so in raising early chicks.

The first thing is to see that the incubator and brooder are in good order. Don't wait until it is time to use it, but any warm day during the winter get it out and examine carefully in every part. Sometimes the lamp or water pipes have a leak. The first year I used my big one I had to take off the entire top to solder a leak in the pipe, because the people I bought it from had carelessly left some water to freeze in the pipe. Examine your thermostat and regulator pin and put with the thermometer to prevent rust. If rusted, scour off all rust and oil. Test your thermometer with a neighbor's or a doctor's thermometer, or in case you have several, with each other.

Test in a cup of milk or warm water. If too hot it may break them. Sun and disinfect the machine and the trays. Lay trays out in the sun all day.

The little round ones often need new felt or paper in the egg chamber if badly soiled. I like to have everything to set as early as I can get eggs. I want to begin hatching by the first of February or sooner.

Pea Fowls

"The Black Shoulder pea fowl is the best breed for the Pacific coast," according to G. Poncin of Seattle, who has had a number of years' experience with the birds, and who believes them to be the hardiest and more prolific, than any of the others.

The Mammoth is a more common breed and is much less expensive. The white breeds are very rare.

Pea fowls need plenty of room under a dry shed where they can keep out of the rain. They will not do well if they get wet. The young birds are brooded by the pea hen and they will get along in fine shape if kept out of the wet. They are more delicate than turkeys and should be protected until they have feathered out well.

Cleaned Eggs

A cleaned egg will not keep. This has been well established by observation of cleaned eggs under cold storage conditions, and it apparently makes little difference whether they are "spotted" or washed, either with vinegar, sal soda solution or water, or whether they are cleaned dry with steel wool or sandpaper. Deterioration starts quickly and proceeds rapidly, hence cleaned eggs can not be shipped east or put into cold storage, and if detected never will be graded as "selects." They go into a class known as "firsts," the same class they would grade into if not too dirty. The time and labor required for washing them, therefore, might he spent more wisely in preventive work—cleaning dropping boards more frequently, renewing nest straw, keeping floor litter deep. The failure to keep is accounted for by the fact that cleaning removes a protective covering which keeps out air. An expert candler will detect a cleaned egg almost invariably, under the lamp, and often it is possible to do so merely by the touch.

Bronchitis in the Flock

My full blooded Rhode Island Reds wheeze and have a noise in their throats similar to a child when it has croup. They also turn white around their eyes and mouths. They eat well, have a good, dry house and are getting mash, scratch feed and lots of green feed.

Chehalis, Wash. MRS. E. S.

The disease present in your Rhode Island Reds, which causes them to "wheeze" is bronchitis or pneumonia. Very often this condition is produced by the fowl being exposed to a draft, dampness or general improper ventilation.

I would suggest that you isolate any birds found to be affected with this condition and put a drop of spirits of camphor in the mouth, once daily, for several days. In case considerable improvement is not shown in a week's time I would suggest that you dispose of affected birds. Sometimes this condition will persist for months and the birds finally die of the trouble. In the meantime, egg production is entirely suspended, or considerably diminished. W. T. JOHNSON.

Western Washington Experiment Station.

Barred Plymouth Rocks

"I have always tried to breed for egg production as well as type," said G. E. Knowles of King county, Washington, who is a breeder of Barred Plymouth Rocks. "I would not be satisfied with any hen unless she was a good layer."

Mr. Knowles told how some of the best strains of Barred Plymouth Rock were running very close to the lighter breeds in egg production at the egg laying contest. The average for four pens at the Puyallup contest for 1921 was 290 eggs per bird, which is very good when one considers that the Barred Plymouth Rock is a remarkably good table bird.

"Like other good laying strains, the hens in our flock will not show any inclination to set until late in April. In fact, we had to buy a few mongrel hens to hatch our settings. We have a 300-egg incubator, from which we make two hatches, the first early in March and the second in April. We find that there is a good demand for young stock in this breed."

Agglutination Test

Will you please tell me what the agglutination test for eradication of vacillary white diarrhea is? How is it used? MRS. E. R.

Newport, Wash.

The agglutination test for eradicating vacillary white diarrhea is a laboratory test, applied for the purpose of detecting affected individuals, which are to be used as breeders and eliminating them from the flock.

In carrying out this test, a sample of blood is obtained from each individual bird in the flock. These samples are then tested in the laboratory, in order to determine which of the fowls are carrying the germ of vacillary white diarrhea.

W. T. JOHNSON.

Western Washington Experiment Station.

LIME WILL HELP.

A little well-slaked lime, sprinkled on the dropping boards and in crevices about the poultry house, will help to keep it sanitary.

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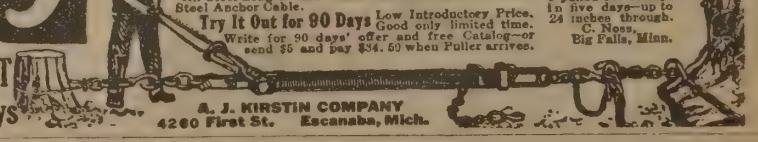
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Organic and Inorganic Fertilizers

In a previous article discussing the comparative values of nitrogen, phosphorus, potash and other fertility elements, Mr. Newsom urged the need of a complete orchard fertilizer in preference to one consisting in whole or largely of nitrogen. The same article gave experiments conducted by Roy Larson, soil investigator in the Wenatchee district of Washington, tending to show that potash, phosphorus, sulphur and lime are not needed in the average orchard soils of the Pacific northwest. In the following extracts from an address delivered by Mr. Newsom before the Northwest Fruit exposition at Seattle last fall he takes up the question of the comparative value of organic and inorganic fertilizers.

By E. P. NEWSOM, Chemist and Lecturer, Tacoma, Wash.

The Encyclopedia Britannica states that at Rothamsted station, England, organic fertilizers were used for a period of 51 years, resulting in the average yield of wheat of 37 bushels per acre, as compared with an average yield for the same period of only 13 bushels on the same kind of soil unfertilized. The same results were obtained at Woburn, England, for a period of 31 years. A further fact is stated that the good effects of organic fertilizers on the soil could be seen for 15 years after their use was discontinued.

On the other hand, in Pennsylvania, where the strictly chemical, or organic, fertilizers were used for several years, it was seen that when their use was discontinued, the soil was found to be dead. In other words, that it would not respond with a yield of crops without the fertilizer.

Dead soil is simply soil where the bacterial life has been destroyed.

Chemical, or inorganic, fertilizers, while at times useful as a tonic for "sick" trees, tend to destroy the bacterial life of the soil by their residual effects. Their use is advocated on the ground of cheapness and the "quick kick" they have. So also morphine and cocaine have a "quick kick" and for a few minutes the victim imagines that he is a millionaire and that in comparison to himself John D. Rockefeller is a humpbacked mendicant, but the drug soon kicks the victim into inefficiency and degradation and makes him a parasite and an unproductive citizen of the commonwealth. So also some of your orchardists who are continually experimenting with soil drugs will find your orchards "kicked" to where the Valencia orange groves of Riverside, Cal., were "kicked" by the continued use of nitrate of soda, namely to 27 per cent of their normal productivity.

Now organic, or animal products, may cost a little more initially, but are more economical in the end, because, not being water soluble, but breaking down under moisture conditions, gradually, through bacterial action, are more lasting, while not leaving in the soil hurtful residual effects. They not only furnish available plant food to the tree, but immensely stimulate and invigorate the bacterial life of the soil and thus very much increase the production of carbon dioxide. The latter in turn is the potent and necessary agent by which other plant food in the soil is rendered available. The organic fertilizers render a double benefit.

If any further proof were needed to substantiate the foregoing statements I would invite your attention to the very remarkable discoveries made in Germany during the last few years relative to the great importance of artificially fertilizing with carbon dioxide.

Briefly speaking, in 1917, German scientists undertook experiments in fertiliizng artifically with carbon dioxide. The results were most encouraging. But it remained for Friedrich Riedel, a German engineer, to carry out the experiments on a large scale under the most favorable conditions. At the great smelting works of Stinnes, in Luxemburg, he laid perforated concrete pipes, 50 centimeters in diameter, into fields through which filtered and purified carbon dioxide was forced by electric fans, the fields being planted to various crops. Near by he erected glass-covered enclosures, through which carbon dioxide was sent through perforated tubes above groud furnishing 5 per cent of carbon dioxide. The results, of course, were greatest in the glass-covered enclosures, since in the open fields much of the carbon dioxide was blown away by the winds.

The first and most important result from the artificial use of the carbon dioxide was the greatly increased leaf growth. In some of the cases the leaf area was increased by 70 per cent. This discovery refutes the idea that nitrogen alone is responsible for the increase of the leaf growth.

The second great result from Riedel's experiments was that even by gassing for only a fw weeks, the crop yields of all kinds were immensely increased in quantity, size and quality. The increases ranged from 36 per cent to 200 per cent. Whereupon, Riedel declares that carbon fertilization without other fertilizer promotes plant growth more effectively than all ordinary fertilizers, when these are used without artificially supplied carbon dioxide. By ordinary fertilizers, he evidently has reference to the purely chemical, or inorganic, since animal fertilizers do immensely stimulate the production of carbon dioxide.

The conclusions arrived at by Riedel seem to point to the use of organic fertilizers and aerated soil as the most practical methods now available to the farmer for increasing the amount of carbon dioxide for his crops, since it is not as yet commercially practicable for every farmer to obtain carbon dioxide on a large scale for artificially fertilizing his crops.

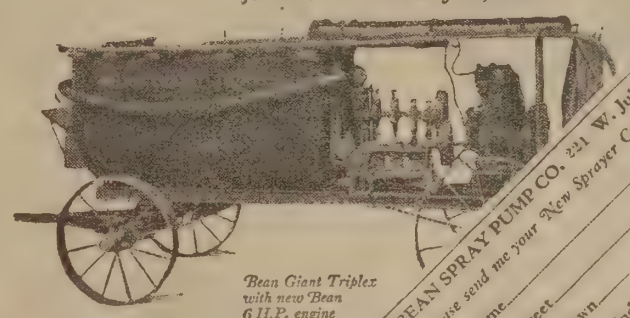
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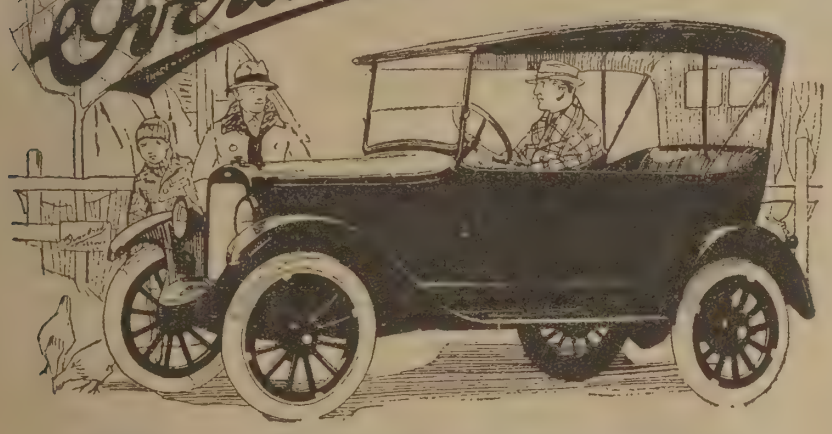
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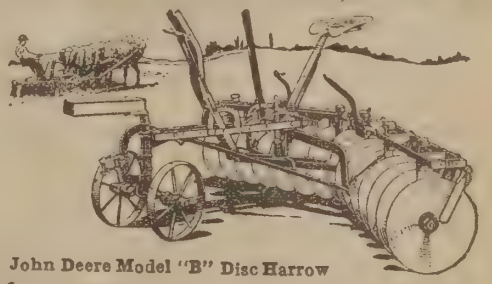
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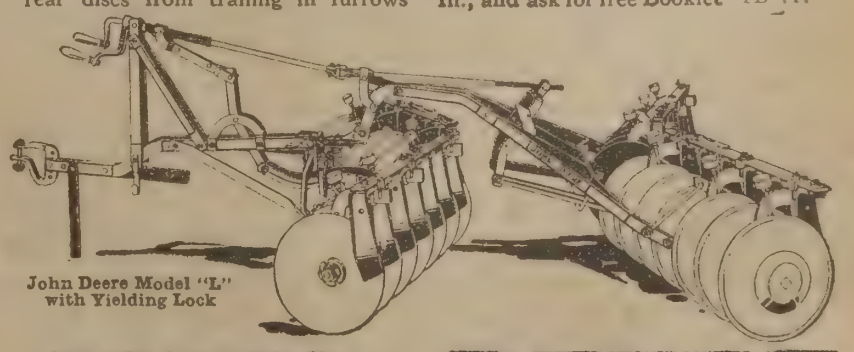
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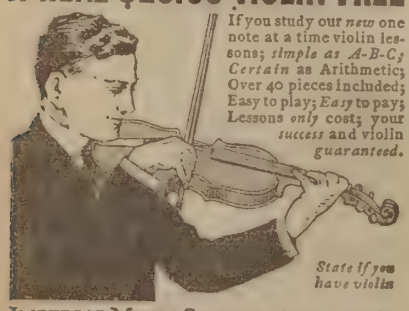
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VETERINARY

(Continued from page nine.)

veterinarian without incurring a lot of expenses for transportation. MRS. C. F. Waldron, Wash.

Considering the fact that it is nearly impossible because of the financial aspect to either bring in a veterinarian or take the horse away to a veterinarian for treatment, I would suggest blistering the ring bone once a month or every six weeks with the following blisters: Red iodide of mercury, one part; powdered cantharides, one part; lard, four parts and beeswax, one part. Have it well mixed and apply after the hair is clipped to the part with considerable friction. The animal's head should be tied up so it can not get its nose to the part and remove the blister, so that it will not blister the foot, but will blister the nose.

Apples for Cows—1. Are apples and mill run a good feed for cows or will the apples tend to decrease the milk flow? 2. Shoulld a fresh cow be milked dry the first milking? 3. Will dehorning a cow that is due to freshen in two months be likely to cause abortion? A. G. A. Pomona, Wash.

1. Apples make a good adjunct to grain and hay feeds for cows. Care must be taken to watch the results from the apples so that they do not purge the animal. They should be fed in limited amounts. They should be sliced or quartered so that they will not choke the animal. 2. Many good dairymen believe that the cow should not be milked dry at the first milking, especially if the cow is a high producer. 3. Dehorning a cow two months before she is expected to freshen may or may not cause her to lose the calf. This will depend entirely upon how she is handled, or how she handles herself during the operation. It would certainly be much more preferable and safer to wait two months before operating on her.

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DELICIOUS NEW CLOVER HONEY, 60 LBS., $6.85; prepaid third zone, $8.75; two 60s, $13.25; pound can, 25c. Browne, Box 499, Twin Falls, Idaho.

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RABBITS and HARES 173

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POULTRY 174

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POULTRY (Continued) 174

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FOR SALE—EIGHT SINGLE COMB BLACK Minorca cockerels, fine birds; May hatch, $3 each. Joseph Mercier, Paradise, Mont.

MAMMOTH TOULOUSE GEESE; LAID 40 eggs last year, at 30c each; fine birds, $6 each. Thos. Oswalt, Benton City, Wash.

WHITE WYANDOTTE COCKERELS, $3 AND $4; eggs, $1.50 for fifteen; $8 per hundred. A. Krueger, Colfax, Wash.

S. C. BLACK MINORCA AND WHITE LEGhorn cockerels from Hogan tested hens. Theron Bernard, Bovill, Idaho.

BLACK MINORCAS AND WHITE WYANdotte cockerels; high class stock. C. McClelland, R. 1, Boise

THOROUGHBRED ANCONA COCKS, SONS OF Sheppard's famous winter layers. Georgiana Kee, Greenacres, Wash.

WILL CONTRACT 4500 MARCH 1ST HATCH cockerels, ¾ to 1¼ lb. (milk fed W. L.). Pulletpens, Prosser, Wash.

BUTTERCUPS, ANCONAS, WHITE WYANdottes, cockerels, cocks. Mrs. William McReynolds, Salem, Ore.

SINGLE COMB RED COCKERELS ALSO DAY old chicks and hatching eggs. A. E. Bosworth, Omak, Wash.

CHOICE SILVER LACED WYANDOTTE cockerels, $2.50 each; eggs, $1.50. Arthur Shields, Hope, Idaho.

SILVER WYANDOTTE COCKERELS; FINE ones, at $3 and $5 each. Melvin Bergeson, Adrian, Wash.

RANCH RAISED REDS; SECOND PEN BOISE show; cockerels for sale. W. J. Schulze, Boise, Idaho, Route 1.

CHOICE MAMMOTH BRONZE TURKEY gobblers, eight dollars. Mrs. Amelia Reimers, Eagle, Idaho.

PURE BOURBON RED TURKEYS. PRICES according to age. J. S. Courtney, White Salmon, Wash.

WHITE ROCK COCKERELS, SNOWDRIFT strain, also hens, $2 each. J. N. Wood, Lignite, N. D.

ANCONA AND WHITE WYANDOTTE COCKerels, $4 each. Quincy Stanfield, Meridian, Idaho.

HUNT'S FINE BARRED ROCKS. WRITE for circular on eggs. W. A. Hunt, Lebanon, Ore.

ANCONA COCKERELS, $3 IF TAKEN WITHin a month. Mrs. Ezra Odell, Yoncalla, Ore.

O. A. C. BARRED ROCK COCKERELS, $3.50, $5. Mrs. Faulconer, Skamania, Wash.

BLUE ANDALUSIAN HATCHING EGGS FOR sale. Mrs. McPhail, Ione, Wash.

FOR SALE—YOUNG PEAFOWLS. ADDRESS Clair Donker, Aumsville, Ore.

(Continued on the following page.)

POULTRY (Continued) 174

COCKERELS—ROSE AND SINGLE COMB Brown and Buff Leghorns, Anconas, Black Minorcas, Rhode Island Reds, Blue Andalusians. Boone Avenue Poultry Yards, E1601 Boone ave., Spokane.

SILVER WYANDOTTES AND SILVER SPANGled Hamburgs, Golden Campines, choice birds for sale. No baby chicks or eggs by the 100. Birds, $5 and up. G. G. Wherry, Payette, Idaho.

REGAL WHITE WYANDOTTES; BEST QUALity, prize winning stock. Cockerels, hens, pullets. Prices right. Absolute satisfaction guaranteed. Eugene Boyk, Rocklyn, Wash.

SAY!—EGGS MEAN DOLLARS TO YOU. ALSO your poultry, veal and dressed hogs, when shipped to us. Top prices. Prompt remittances. Hotchkiss Produce Co., Spokane.

GIANT BRONZE TURKEYS, UNDEFEATED flock in west. Toms, $15; late 17-pound, $12; pullets, $8 and $10; will ship C. O. D. Herbert Stoneberg, Route B, Eugene, Ore.

QUALITY BARRED PLYMOUTH ROCKS and Black Langshans, cockerels and cock birds; also a few females; prize winners. B. D. Reser, Walla Walla, Wash.

WHITE LEGHORN EGGS FOR HATCHING—Oregon Agricultural college stock; $2 per setting, or $8 per 100 prepaid. Russell Poultry Farm, Route 3, Corvallis, Ore.

MAMMOTH BRONZE TURKEY TOMS FROM hen laying 127 eggs last season; prize winning stock; eight and ten dollars. Order now. John Bollinger, Post Falls, Idaho.

POULTRY RAISERS, SEND FOR FREE BOOKlet on poultry advertising. The Pacific Northwest Farm Trio, Dept. P, Review bldg., Spokane, Wash.

GET L. E. DELINE'S "HILLCREST" WHITE Rock breeding cockerels, $5, and hatching eggs, $2.50 per setting. Wenatchee, Wash., Route 5.

WHITE LEGHORN AND WHITE ROCK cockerels; 300-egg strain; baby chicks. Palouse Falls Ranch, Palouse Falls, Wash.

MRS. FRANK BROWNING, 20 YEARS SPECialty breeder of Mammoth Bronze turkeys, prize-winning stock. Nampa, Idaho. R. 1.

S. C. BROWN LEGHORN COCKERELS AND pullets; prices reasonable; quality first-class. E. H. Rosenkranz, Colfax, Wash.

GIANT STRAIN PURE BRED MAMMOTH Bronze turkeys, from prize-winning stock. Mrs. C. R. Lowery, Route 4, Boise, Idaho.

ROSE COMB BLACK MINORCA COCKERELS, beauties, and from excellent egg producers, each $2.50. H. E. Scholz, Menlo, Wash.

S. C. W. L. HATCHING EGGS: HOLLYWOOD strain; pullets, Hollywood or Tancred strain. Mrs. Rominger, Underwood, Wash.

MAMMOTH PEKIN EGGS FROM DUCKS that take the prizes. Booking advance orders. Mrs. E. A. Bennett, Salem, Ore.

ALLEN'S PRIZE BARRED ROCKS AND White Leghorns are wonderful layers. Write D. W. Allen, LaConner, Wash.

BLUE ANDALUSIANS AND WHITE ROCK cockerels; extra good; order now. Mrs. C. W. Armstrong, Freewater, Ore.

PURE MAMMOTH BRONZE TURKEYS. Flock of four hundred. Harry Smith, Coupeville, Wash.

SUPERIOR BARRED ROCKS. EXHIBITION size; layers; world's best strains. C. E. Dibble, Payette, Idaho.

COCKERELS, EGGS, CHICKS. TRAP NESTED White Leghorn and Barred Rocks. Mrs. W. M. Roberts, Elmira, Ore.

COCKERELS, S. C. RHODE ISLAND REDS. Write for information. Mrs. L. W. Alexander, Sunnyside, Wash.

TEN WHITE ROCK COCKERELS, WOULD exchange two for same breed. L. L. Tackett, Ferndale, Wash.

SILVER LACED WYANDOTTE COCKERELS, $3; two for five dollars. Mrs. Annie Baggs, Bancroft, Idaho.

ANCONA COCKERELS, HATCHING EGGS, chicks. Get our prices. Oscar Dunlap, Junction City, Ore.

FOR SALE — MAMMOTH BRONZE, PART wild turkeys. Eleanor Moore, Route 1, Ashland, Ore.

1949 COCKERELS, HATCHING EGGS, 49 VArieties; free book. Aye Bros., Box 14, Blair, Nebr.

MAMMOTH BRONZE TURKEYS FOR BREEDers. Mary Homes Tucker, Ashland, Ore.

Baby Chicks.

"WHAT THEY SAY."—"YESTERLAID EGG Ranch, Kent, Wash. Dear Sir:—Is there any chance for 1200 chicks the 1st of April? Well pleased with your pullets last year. They laid between 50 per cent and 60 per cent since last October." Jack Sheridan. Greenacres, Wash. "Dear Sir: I bought 400 chicks of you last spring and will say they were the best layers I have. I would like to buy between 400 and 500 more next month. What time in February could I get them?" Mrs. Leonard Fossett, Dungeness, Wash. "Jan. 6th, 1922. Dear Sir: Enclosed find $7.50 as 15 per cent payment on 250 chicks. Our neighbor, Mr. Wood, got some from you last year and they certainly are good layers." William Stark, Coeur d'Alene, Idaho. We hatch 12,000 chicks every 5 days from our own wonderful trap nested White Leghorns. All of our 8000 laying hens are trap nested and bred to lay. We have 40 acres devoted exclusively to White Leghorns, all with wonderful egg records. More than 50,000 chicks already sold, but we still have good dates left if you book your orders at once. Send for price list and dates you would like chicks shipped. Yesterlaid Egg Ranch, Kent, Wash.

WHITE LEGHORN AND ILL-A-HEE BARRED Rock chicks—Buy chicks this year that live and grow and are bred to lay. Butler White Leghorns and Ill-a-hee Barred Rocks are known for high average flock production. Before ordering elsewhere, write for circular telling how our breeding methods produce 200 flocks for our customers. All stock trap nested and pedigreed. Also get our prices on breeding cockerels and hatching eggs for each breed. Address Butler Poultry Farms, or Ill-a-hee Poultry Farm, Jennigs Lodge, Ore.

THE PROGRESSIVE HATCHERY — BABY chicks from vigorous range bred stock; trapnested S. C. White Leghorns, $20 per 100; selected S. C. White Leghorns, $18 per 100; S. C. R. I. Reds and Barred Rocks, $25 per 100; safe delivery of live, vigorous chicks, full number ordered; absolutely guaranteed. Send for circular of special matings and hatching eggs. 1534 East 12th North, Portland, Ore.

BABY CHICKS FROM PETALUMA ELECtric incubator have "pep" that surprises customers. Electricity is life. Modern poultrymen are rapidly adopting our system with splendid results. Safe, efficient, economically better chicks. Hatch for yourself or get chicks from hatcheries using Petaluma incubators. Write for our free catalog. Petaluma Electric Incubator Co., Petaluma, Cal.

BABY CHICKS; BEST WHITE LEGHORNS; free circular. Acme Poultry Farm, Dirston route, Cottage Grove, Ore.

FARMERS' WANT ADS

This is the farmers' "want," "sale" and "exchange" department for small advertisements of farmers, including live stock and poultry.

Advertising rates for ads running 1 to 3 times, 10c per word per insertion, with a special rate to Farmer subscribers, as follows: Ads running 4 to 12 times, 9c per word per insertion; ads running 13 times or more, 8c per word per insertion.

All commercial and land advertising 10 cents per word each insertion. Open also to nonsubscribers.

In using these columns advertisers must observe: (1) No advertisements will be inserted for less than $1.00. (2) Every word, number and initial, including name and address, must be paid for. (3) New advertisements, changes of copy or cancellations must reach general office, Spokane, Wash., 10 days in advance of publication date. (4) Cash must accompany order.

Above rates include insertion in The Washington Farmer, The Idaho Farmer and The Oregon Farmer, which constitute the Pacific Northwest Farm Trio, 46 Review Building, Spokane, Wash.

POULTRY—Baby Chicks (Continued) 174

"FRESHLAID" WHITE LEGHORN CHICKS have the qualities you want; vigor and scientific breeding for heaviest egg production; every "Freshlaid" male is from a high record hen. Freshlaid farm is one of the largest and oldest chick plants in the Inland Empire. Our new catalog, "Success With Chicks," is free but is worth $ to you. Write for it. A complete guide from start to finish. Farmers read my plan, "$500 extra on every farm." You can't fail my way. Freshlaid Farm, Colfax, Wash.

CRYSTAL WHITE POULTRY FARM—BREEDers of S. C. White Leghorns; baby chicks a specialty; hatched from eggs laid by our great egg producers. Price, $17 per 100; $160 per 1000. Order early to get the best dates. Send for circulars. Mr. and Mrs. Jno. Eborall, McMinnville, Ore. Box 33.

WHITE LEGHORN BABY CHICKS FROM heaviest laying stock. Booking orders now for spring, 1922, delivery. Safe arrival live, vigorous chicks guaranteed. Prices on request. Reliable since 1898. Must Hatch Incubator Co., 445 Seventh st., Petaluma, Cal.

BABY CHICKS, HATCHING EGGS—FROM Hoganized hens, well mated. White and Brown Leghorns, R. I. Reds, Barred Rocks. Safe arrival guaranteed. Order early. Write for circular. Stubbe Poultry Ranch & Hatchery, Box 67J, Palo Alto, Cal.

BABY CHICKS FROM TANCRED AND HOLlywood strain; heavy laying White Leghorns, mated to cockerels from W. W. experiment station. Hens, 265-314 egg record. For further information write August Wax, Kent, Wash.

WHITE ROCK BABY CHICKS, "DANIEL'S IDEALS," from our own trapnested stock entirely. Write for prices and dates, also eggs for hatching. Free catalog. Ideal Poultry Yards, Hoquiam, Wash. Star Route No. 25.

BABY CHICKS — REDUCED PRICES ON White Leghorns, Reds, Barred Rocks, White Rocks, Minorcas, and Anconas; booking orders now; postal secures free catalog. Write today. C. N. Needham, Salem, Ore.

FEBRUARY AND MARCH CHICKS LAY THE high priced fall eggs; order now; Tancred Leghorns, O. A. C. Barred Rocks at prices that will please you. D. C. Yoder, Hubbard, Ore.

BABY CHICKS FROM TRAP NESTED STOCK. Write for dates and prices. Don't expect cheap prices as we handle only the best. Swayne's Fancy Egg Farm, Centralia, Wash.

BABY CHICKS FROM TRAPNESTED WHITE Leghorns of superior quality; 14 years breeding for egg production. $18 per hundred. Chas. L. Perkins, 1337 Burrage, Portland, Ore.

BABY CHICKS, S. C. RHODE ISLAND REDS, $22.50 per 100; S. C. White Leghorns, $18 per 100; March chicks all sold. Maple Brook Poultry Farm, Southworth, Wash. Box. 2.

BABY CHICKS — WE GUARANTEE OUR chicks to be from the highest producing hens in Petaluma. Write for further information. The White Hatchery, Petaluma, Cal.

BABY CHICKS, RHODE ISLAND REDS, Barred Rock, White Orpington and White Leghorns; cockerels, $5 each. Hansen's Poultry Yards, Olympia, Wash.

TANCRED STRAIN WHITE LEGHORN BABY chicks, $18 per 100; eleventh season; incubator capacity, 18,000 eggs. D. A. Gillette, R. 4, Yakima, Wash.

WHITE LEGHORN BABY CHICKS: OREGON Agricultural college stock exclusively. Write for circular. Russell Poultry Farm, Route 3, Corvallis, Ore.

BABY CHICKS, COCKERELS, SINGLE COMB White Leghorn; heavy laying strain. Grape Lane Poultry Farm, Turner, Oregon.

LIVE STOCK 177

SEND FOR FREE BOOKLET, "SOME SUGgestions to Live Stock Advertisers," outlining the practices of successful men of long experience. Helps in determining how much to spend, the mediums to select, preparing advertisements, handling inquiries, the use of photographs, etc. Write today. The Pacific Northwest Farm Trio, Dept. W, Spokane, Wash.

SHIP US YOUR POULTRY AND LIVE STOCK —Light veal, fat, fancy, 16c; heavy veal, 8c to 11c; dressed number one block hogs, 11½c; hens, alive, heavy, 20c; light, 16c; young springers, 20c; staggy springers 15c. See our display ad for wholesale prices on hams, bacon, lard, compounds and fresh meats. John Lewis & Co., Spokane, Wash.

EPOCHAL BERKSHIRES—WEANED PIGS by the grand champion Porkmakers Sincerity, the grand champion barrow over all breeds and the grand champion carcass at the international were of Epochal blood. Boars for heavy or light service. E. V. Orford, Boise, Idaho.

LEWISTON HEREFORD FARM BULL IN service, Prince Rupert 80th, No. 544903, undefeated grand champion, 1916-17. Have for sale few cows and heifers bred to this bull. Herman Nordby, Box 416, Lewiston, Idaho.

WE PAY TOP PRICES FOR YOUR LIVE OR dressed veal, hogs and poultry. Your check by return mail. Shipping tags on request. M. & J. Packing Co., Spokane.

FOR SALE—OR WILL CONSIDER WORK horses in exchange for registered Clydesdale stallion and mare. For particulars write Otto Trice, Grandview, Wash.

FOR SALE—SOME VERY FINE POLAND China gilts; bred to first prize futurity boar at state fair, to farrow in March. Buck & McDonald, Yamhill, Ore.

FOR SALE—25 HEAD HOLSTEIN DAIRY cows, all coming fresh this spring. S. Carlisle, 756 South 9th street, Pocatello, Idaho.

REGISTERED BERKSHIRE BOAR, 2¼ YRS. old; well built, tested breeder; will sell right. Henry P. Carstensen, Almira, Wash.

TILLAMOOK CALVES—SEASON NOW OPEN. Price lists ready; strictly dairy stock. Smith, the Calf Man, Tillamook, Ore.

FOR SALE—CHOICE REGISTERED HEREford bull calves. Henry Lotte & Sons, Davenport, Wash.

FOR SALE—MAMMOTH JACK, WEIGHT, 1120. Address Cloverleaf Ranch, Lamona, Wash.

SWISS TOGGENBURG MILCH GOATS AT ALL times. Goatery, Caldwell, Idaho.

LIVE STOCK (Continued) 177

ONE FINE TEN-MONTHS-OLD GRADE TOGgenberg billy goat. Price $45. M. P. Paulson, Route 5, Mt. Vernon, Wash.

REGISTERED O. I. C. SWINE FOR SALE; shipped C. O. D.; guarantee satisfaction. Tony Johnson, Polson, Mont.

FOR SALE—PUREBRED, THREE-YEARold Percheron stallion. Robert McKillip, Centerville, Wash.

TOGGENBURG MILCH GOATS. FANNIE Branson, Falls City, Ore.

HARNESS and SADDLERY 189

SEND FOR FREE HARNESS AND SADDLE catalog today; cut out the middleman, buy direct from the manufacturer. Lowest prices in the west; satisfaction guaranteed. Established 1881. Write Pierce Harness Co., dept. T, Spokane, Wash.

HAY FOR SALE. 200

ALFALFA HAY—BUY DIRECT, SAVE MONey; quality guaranteed. Write or wire for prices. Ernest T. Freepons, Walla Walla, Wash.

HOTELS 306

GLOBE HOTEL ANNEX, NEWLY FURnished rooms, 75c and $1; with bath, $1 and up. Spokane.

JOB PRINTING 372

GUARANTEED BETTER BUTTER WRAPpers; 100, 60c; 250, $1.50; 500, $2.50; 1000, $4.25; printed to order. Home Specialty Co., Middleton, Idaho.

TWO HUNDRED BUTTER WRAPPERS, $1.75. Enterprise Press, Garfield, Wash.

TANNING 425

LET US TAN YOUR HIDE—COW AND HORSE hides for fur coats and robes. Cow and steer hides into harness or sole leather. Catalog on request. The Crosby-Frisian Fur Co., Rochester, N. Y.

FUR SKINS, DRESSED: HEAVY SKINS tanned for robes; cash for skunk. Seattle Fur Dyeing, Tanning Co., 3508 Phinney, Seattle, Wash.

MONUMENTS 510

COMPLETE STOCK, RIGHT PRICES. CORrespondence solicited.. J. W. Harding, Inland Monument Co., N1001 Monroe, Spokane.

PERSONAL 537

WOULD LIKE TO HEAR FROM SOME YOUNG lady from 18 to 25, by an Oregon farmer; object, matrimony. Write D 1, Oregon Farmer, Spokane, Wash.

BUILDING MATERIAL 588

NO WASTE, LESS LABOR. BUILD WITH ready cut houses and barns and save money. Attractive new plan book sent free. 4c postage. Prices quoted on material list. Write today. Price advance certain to come soon. Local Keystone Lbr. Co., 3000 Sprague, Tacoma, Wash.

SEEDS 620

NO. 1 ALFALFA SEED, 17C LB.; NO. 2 ALfalfa, 14c; red clover, 19c; alsike, 20c; white clover, 50c; samples free. William Veazie, seedman, Jerome, Idaho.

RED CLOVER, ALSIKE, RYE GRASS, TIMothy and vetch seed for sale; good quality, lower prices; by freight or parcel post. Rhoten Farms, Salem, Ore.

RECLEANED TIMOTHY AND ALSIKE SEEDS 10 cents per pound; germination guaranteed. Send samples. M. Hill, McCall, Idaho.

HUBAM CLOVER, CERTIFIED SEED OF THE earliest strain; Idaho grown. DeKalb County Agricultural association, DeKalb, Ill.

COSSACK ALFALFA SEED—SEND FOR samples. S. H. Hillman, Thompson Falls, Montana.

FOR SALE—CLEAN, YELLOW BLOSSOM sweet clover seed. S. A. Kent, Kalispell, Mont.

NURSERY STOCK 621

ONLY SIXTY DAYS UNTIL SPRING, AND Kimberly Nurseries will be very busy filling orders for trees, shrubs, roses, perennials and small fruits. And the man that waits to place his order may be disappointed. Write now for descriptive, illustrated catalogue. Idaho's largest nurseries for high quality, low prices, perfect service. Kimberly Nurseries, Kimberly (Twin Falls county), Idaho.

RELIABLE NURSERY STOCK—ITALIAN AND Petite, 4-6 ft., and 3-4 ft.; Concord, Worden and Moore's Early grapes; grafted Franquette walnut, all sizes. Send for catalog and price list. Villa Nurseries, Route 1, Portland, Ore.

TREES—ALL KINDS FRUIT AND ORNAmental trees, vines, etc. Growers of general nursery stock. Lowest quotations on application. Send your want list. Can use few good salesmen. Albany Nurseries, Albany, Ore.

GROW GRAPES FOR PROFIT—SPECIAL LOW prices; grape vines, berries, asparagus, for commercial planting; peaches, cherries, apricots, apples; satisfaction guaranteed. Write today. Home Nursery Co., Richland, Wash.

CLARK SEEDLING, THE STRAWBERRY that made Hood River famous. Write for list of other varieties and prices. Plant nurseries at Hood River and Prosser, Wash. W. R. Gibson & Son, Hood River, Ore.

SUPERB EVERBEARING STRAWBERRY, blackcap and red raspberry, Giant Harvest Dew blackberries. Dr. Burrell and new Oregon strawberry plants. Write for price list. Quincy Stanfield, Meridian, Idaho.

APPLE TREES AND A FULL LINE OF NURSery stock at reasonable prices; save agents' commission by ordering direct from nursery. Write for price list. Lawson Nursery, Gates, Ore.

STRAWBERRY PLANTS—HEAVILY ROOTED and free from disease. Wilson, Gold Dollar, Trebla, Marshalls, $4 per 1000. O. H. Shaw, Cottage Grove, Ore.

CHOICE STRAWBERRY, LOGANBERRY plants; lowest prices. Ward K. Richardson, 2393 Front, Salem, Ore.

STRAWBERRY PLANTS—ETTERBURG, OREgon, Wilson, $3.50 per 1000. C. E. Turnidge, Jefferson, Ore.

LOGANBERRY PLANTS FURNISHED BY the grower. Grape Lane Farm, Turner, Ore.

NURSERY STOCK. (Continued.) 621

PLANT WINDBREAKS OR A WOOD LOT FOR shelter and profit; black locust in Idaho produced in eight seasons posts worth $1000 per acre. Free book tells how. Our special trees get quick results and cost little. Washington Nursery Co., Toppenish, Wash.

CORY THORNLESS BLACKBERRY—DELIcious, very large and early. You get strong, well rooted plants, true to name, from pioneer grower. Wm. Mortenson, Route 1, Lodi, Calif.

NURSERY STOCK, ITALIAN PRUNE TREES and trees of all kinds. Berries and small fruits of all varieties. Buy direct and save 50 per cent. Brooks Nursery, Lafayette, Ore.

SEND FOR OUR NEW PRICE LIST ON FRUIT trees, berry bushes, shade trees and roses on their own roots. Krause Nursery, Spokane, Wash.

TREES—PEAR, APPLE, PLUM, PRUNE, NUTS and berries at cost. Homer Brixey, McMinnville, Ore.

STRAWBERRY PLANTS, $5 PER 1000. Briggs Plant Nursery, Olympia, Wash.

FARM LANDS FOR SALE. 651

AS CLEARING HOUSE FOR AN EASTERN loan company we offer 100 pieces of foreclosed property, mostly in eastern Washington, for the mortgaged indebtedness. Dry farms, irrigated lands, business buildings and orchard tracts; some good land under proposed irrigation projects as low as $10 per acre; no trades; no lists. Will make easy terms to real farmers. Write us your wants if you can not call. Hartford Land Co., 601 Paulsen bldg., Spokane, Wn.

256 ACRES IN FAMOUS ROGUE RIVER VALley, southern Oregon; 22 miles southwest of Grants Pass, on state auto road to Crescent City, California; bungalow, barns, fenced; 15 acres orchard; 100 miners' inches irrigation water; 20 rods to store, school, church; title perfect, no encumbrance; will take part pay in eastern Oregon or Washington wheat land. P. E. Gerould, owner, 619 Paulsen bldg., Spokane, Wash.

LOGGED-OFF LAND IN STEVENS COUNTY, Washington, at greatly reduced prices. Most of land sells at from $5 to $20 per acre; thickly settled community; good schools; hard surfaced and paved roads to Spokane; best county in state for dairy and stock raising; most places water can be found at shallow depths. Write for folder. Phoenix Lumber company, Dept. T, Spokane, Wash.

SNOHOMISH COUNTY, WASH.—6000 ACRES of the finest dairy, berry or general high-grade farm lands in the northwest, rapidly improving section; no drouths; bumper crops; tracts 1 to 80 acres; 10 yearly payments. This is your opportunity. Send for literature. Brownell Land Co., Birmingham, Wash.

DAIRY FARMERS INVESTIGATE THIS UNusual opportunity. Fine paying irrigated dairy and alfalfa ranch; famous Deschutes valley, central Oregon. $16,000. Small initial payment, new easy payment plan; ideal climate. Full particulars on request. Redmond Land & Loan Co., Inc., Redmond, Ore.

160 ACRES GOOD LAND; IN FINE DAIRY section; on paved highway, ½ mile from station; ½ level and cleared, balance hillside and timber; house, dairy barn, orchard and fenced; small brook through place. Scholz, Menlo, Wash.

88 ACRES, ON PAVED PACIFIC HIGHWAY; close to Catholic church and school and public school; stock, grain, hay, chickens, all farm machinery included. $17,500; $8500 cash; might take some trade. Lock Box 261. Winlock, Wash.

YOUR OPPORTUNITY—WE OWN SEVERAL cultivated, irrigated farms close to Boise, largest city in Idaho; will sell on 20 years' time, 6 per cent interest. See us at once. A. H. Eagleson & Sons, Ltd., Boise, Idaho.

120 ACRES NEAR CAMAS HOT SPRINGS; 100 acres irrigated from artesian well, bal. pasture; 3 springs, creek flows through place; fair buildings; $60 per acre, including machinery and horses. Neil Bratton, Camas, Mont.

SHEEP RANCH FOR SALE—1120 ACRES; 150 acres hay land; Deer Lodge valley, Montana; 5 miles to summer range; fully stocked and equipped. Address owner, Box 56, Garrison, Montana.

FOR SALE—EQUITY IN 15-ACRE RANCH; team, farm implements, 5 pure bred Poland China sows, reg., bred March farrow; 2 cows, chickens, 2 miles out. Ben Rose, Ontario, Ore.

MY 80-ACRE RANCH, 3 MILES NORTH Maple Falls, thirty cleared; with stock and tools, $4500; without, $3600. Correspondence solicited. Albert Blood, Maple Falls, Wash.

SELL YOUR PROPERTY QUICKLY FOR cash; no matter where located. Particulars free. Real Estate Salesman company, 501 Brownell, Lincoln, Neb.

200 ACRES; 30 IN GRAIN; BUILDINGS, IRRIgation right; mixed farming, timber; two horses, cow, harness, implements, $4500. John Robinson, Leland, Ore.

OREGON, WILLAMETTE VALLEY LAND FOR sale in large and small tracts; all land offered has been personally inspected. A. A. Aaby, Eugene, Ore.

200 ACRES WHEAT LAND, $6000, OR WILL lease; 160 acres timber land, $2500. Terms on either, or will consider part trade. Box 615, Spokane.

80 ACRES GOOD LAND, WITH TIMBER; ON creek; partly improved; 2 miles from Menlo. Scholz, Menlo, Wash.

DAIRY FOR SALE—INCOME $500 PER month. C. W. Henkel, owner, Aumsville, Ore.

80 ACRES, CLOSE TO FLOURISHING MILL town. Mrs. W. Wellan, Bucoda, Wash.

FARM LANDS—Wanted to Rent 660

EXPERIENCED DAIRYMAN WANTS TO lease equipped dairy ranch; plenty of help; good references. Box 103, Lyle, Wash.

BUSINESS PROPERTY FOR SALE 691

BARBER SHOP AND POOL HALL; TOBACCO sales $10 per day in addition to other business. Price $3000, cash, some terms. Peter J. Johnson, Moreland, Idaho.

FOR SALE OR EXCHANGE 702

156.6 ACRES; 800 M. TAMARACK AND FIR; ½ mile from Ruby, on C., M. & St. P. railroad and state road. $1200; one-half cash, 5% milch cows (Shorthorn or Holstein); S. E. quarter sec. 13, twp. 35, R. 43 E. W. M.—I. A. Rouse, Blue Slide, Wash.

CANADIAN WHEAT AND STOCK RANCHES for sale or exchange. Write Arthur Lundy, Edmonton, Alberta.

120-ACRES BLACK LOAM, DIVERSIFIED farm; $10,000; want dairy. Write Leroy Moore, Rice, Wash.

TO EXCHANGE—Real Estate 705

TO EXCHANGE—WELL STOCKED GOING alfalfa dairy ranch, $30,000, for California or coast property; no commissions. Moody, Gooding, Idaho.

FOR EXCHANGE — OKANOGAN COUNTY stock and grain ranch; trade for smaller place, well improved. Address Box 55, Riverside, Wash.

TRACK'S END

By HAYDEN CARRUTH

A Stirring Story of Adventure

(Copyright by Harper & Bros.)

CHAPTER X.

A Townful of Indians: with how I hide the Cow, and think of Something which I don't believe the Indians will like.

When I saw what my visitors were I do not know if I was relieved or more frightened. I saw that I need no longer worry about the safe being robbed, but that seemed to be almost the only thing in their favor over the Pike gang. I knew, of course, that they had no ill feeling against me, and probably had no intention of harming any one; but, on the other hand, I well understood that if I should appear and try to stop their plundering the town they would not hesitate to kill me. By their dress I recognized them as Sioux from the Bois Cache reservation, 50 or 75 miles north, because I had seen some of them during the fall while they were on their way to visit some of their relatives a hundred or more miles south at the Brule agency. I supposed they were going for another such visit, and had blundered on the town. These Bois Cache Indians I knew were a bad lot; many of them had been with Little Crow in the great Sioux massacre in Minnesota in 1862, when hundreds of settlers were killed.

They came directly to the pile of things near their horses, and put down the rope; and then they started off in all directions looking for more plunder. Two of them came to the depot and walked about on the platform over my head. I flattened out on the ground and scarcely breaathed, expecting every minute that they would look under. I heard them talking and trying the windows. I thought they were going away; then there was a sound of breaking glass, and I heard them tramping about inside. Then they came out and went over to the pile again. I peeped out and saw that they had the two Winchesters which I had hidden in the depot. Another came from the town with a shotgun which he had found somewhere. I had no doubt that they would find and carry off every weapon there was, and leave me with nothing except the small revolver which I had in my pocket.

For an hour I lay there under the platform watching the Indians plunder the town. They already had much more in their pile than they could possibly carry away with the horses they had. Suddenly I saw that their plan most likely was to get everything they wanted together in the open square and then to burn the town, carry off what they could, and come back after the rest later on. Of course this put me in a great fright, but, though I racked my brain as never before, I could think of no way to prevent it.

Soon I heard a great pounding, and suspected that they were breaking into the headquarters barn, which I always kept locked, just out of force of habit. In another minute I knew I was right, as I heard a loud squawking of the chickens. Up from the direction of the barn and high over the roofs of the town I suddenly saw a bird soar, which I took to be a prairie chicken, or some sort of game bird, though where it came from I could not guess. Then, as it lit on the chimney of the blacksmith shop, and began a great cackling, I saw that it was only Crazy Jane. I could not help laughing, in spite of my troubles, and said out loud, "Ah, it takes somebody smarter than an Indian to catch her!"

The sight of Crazy Jane and the sharp way she outwitted the savages did me good and made me wonder if I could not do as well; still I could think of nothing. Just then the Indians came out with the other chickens in grain-sacks, and leading Dick and Ned and Blossom. The horses they stood with their own, but I was horrified to see that they acted as if they were going to butcher the cow. One of them pointed a gun at her head and another began to flourish a knife. It looked as if they had got it into their savage heads that they wanted fresh beef and were going to slaughter the poor animal on the spot.

To watch these preparations was, I think, the hardest thing I had to bear that day. She was a patient, gentle heifer, and I could not bear to think of seeing her butchered by a lot of villainous savages with less intelligence than she had herself. If I had had a gun or any fit weapon, I verily believe that I should have rushed out and defended her. But just before they began, one of their number came out of Fitzsimmons' store and called to them, and they all trotted over. The store was on the east side of the street.

At the instant that the last of them disappeared in the door I rolled out from under the platform and began to hobble across the square. My intention was to get behind the stores on the west side of the street; and I had a wild notion of saving the cow in some way, I did not know how. It was a foolhardy thing to do, but I got behind the first store without being seen. But I was no nearer the cow, who was a little ways from the side of Fitzsimmons', and I dared not go there. She saw me, however, and I held out my hand and said, "Come, bossy!" and she came over. I took her by the horn and led her along behind the buildings, knowing no more than a fool what I should do with her. Just then I came to the sloping outside cellar door behind a store. The Indians had cleaned the snow off of it, but had not succeeded in getting in, as it was fastened with a padlock. I tried my keys. One of them opened it. The stairs were not steep, and I led the cow down and closed the door above us. The Indians had walked and ridden everywhere in the square and back of the stores, so I thought it would be hard for them to follow the cow's tracks. Nevertheless, the



The Indians were standing where the cow had been.

next moment I hurried back and with an old broom brushed lightly our trail behind the buildings; then returned to the cellar.

I rested a few minutes till my ankle felt better, then I crept up the inside stairs to the store and peeped out the front window. Four or five of the Indians were standing where the cow had been, looking in all directions. After a while they all went back into Fitzsimmons' store and I slipped down and out the door by which I had got in, locked it, and made my way behind the buildings to the bank and went in. Here the Indians had not disturbed anything, there being nothing to their taste; but when I loked out a crack in the boards over the window I saw the whole 11 of them at the end of the street holding a powwow over the disappearance of their fresh beef. I thought it would be a good time to test my great pet, the tunnel, so I hobbled boldly through and entered the hotel.

The first thing I saw was Pawsy in her old place over the dining room door. She did not seem to like Indians any better than she did wolves. Everything which had not been carried off was in the greatest confusion. The Winchester which had been under the counter was gone. I stood with my crutch looking at the wreck, when, without hearing a sound, I saw the knob of the front door turn and the door push open. With one bound like a cat I went through the open door of the closet under the stairs.

I had no time to close the door, and stood there pressed against the wall and trying not to tremble. It was dark in the closet, and that was my only hope. Three of the Indians filed by. They all wore moccasins, and their step was noiseless. They were talking, and passed on through into the kitchen and outdoors. I think they were looking for the cow, and took this as the best way to get to the barn. I pressed back farther in the closet and waited. Soon they came back, and again passed me, and went on out of the front door. I got out and crawled upstairs, thinking to find a better hiding place and wishing heartily that I was back under the platform. I looked out of an upper window and saw them all at the farther end of the street again. By-and-by they went into Fitzsimmons' store.

Though I did not take my eyes off the store for two hours I saw no more of the Indians, and by this time it was so dark that I could no longer see them if they did come out. I began to hear a strange noise, and opened the window slightly and listened. It was the Indians shouting and singing. Then it dawned upon me that they had found the whisky and that they were all getting drunk in Fitzsimmons' cellar.

This, of course, gave me a new cause of dread, for, if a sober Indian is bad, a drunken one is a thousand times worse. I felt sure that they would now set the town on fire through accident even if they did not intend to do so. The fiendish howling constantly grew worse and was soon almost as bad as that of the wolves ever was. I still could think of nothing to remedy matters. By this time it was pitch dark. I determined to have a look at them, anyhow. It occurred to me that probably they had begun at the whisky before the cow disappeared, and that this had helped to make their search unsuccessful.

I went down and out the back door of the hotel and crept along the rear of the buildings till I came to Fitzsimmons'. The yelling and whooping of those savages was something blood-curdling to hear. There was a window for lighting the cellar close to the ground in the rear foundation wall. A wide board stood in front of it, but I dug the snow away, pushed this board a little to one side, and looked in. They seemed to be having a free fight, and many of them were covered with blood. A smoking kerosene lamp stood on a box, and around this they surged and fought and howled. As I looked the lamp was knocked to the floor and blazed up. One of the Indians fell on it and smothered the flames, and the struggling and diabolical yelling went on in the dark.

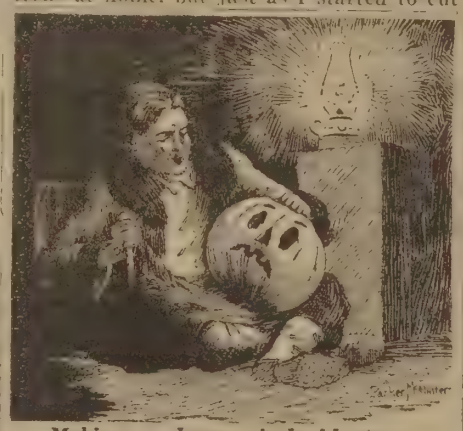
As suddenly as the plan of making the skee sled had flashed upon me came another plan for driving every Indian out of town. I jumped up and ran away as fast as a poor crutch and a leg and a half could carry me.

CHAPTER XI.

I give the savage Indians a great Scare, and then gather up my scattered Family at the end of a queer Christmas Day.

How I ever got along through the darkness and snow on my crutch I scarce know, but in less time than it takes to say I tumbled in at the back door of the hotel. I went directly into the kitchen and felt about till I found a knife, which I put in my pocket. Then I stumped on into the office, leaned against the counter, and lit the wall lamp, took it out of its bracket, and made my way somehow to the cellar door. I left my crutch and fairly slid down the stairs, holding the lamp in both hands above my head. Once down I set it on a small box, dropped on the cellar bottom, and drew over to me the largest pumpkin in the pile against the wall. What I thought to do was to make the most diabolical jack-lantern that ever was, and scare the drunken savages out of what little wit they had left.

I took the pumpkin in my lap, and with the knife cut out the top like a cover. Then with my hands I dug out the seeds and festoons of stuff that held them. Then I turned up one side and plugged out two eyes and a long nose. I was going to make the corners of the mouth turn up, as I had always done when making jack-lanterns at home, but just as I started to cut



Making a demon jack-o'-lantern.

it came to me that it would look worse if they turned down; so thus I made it, adding most hideous teeth, and cutting half of my fingers in my haste. Then I gave the face straight eyebrows and a slash in each cheek just as an experiment, and looked around for a candle.

I could see nothing of the kind, nor could I remember ever having noticed one about the house. For a moment I knew not what to do; then my eyes rested on the lamp, and I asked myself why that would not do as well as a candle, or even better, since it gave more light. The hole in the top was not big enough to take in the lamp, but I cut it out more, and with half a dozen trials, and after burning all the fingers I had not already cut, I got the lamp in. The cover was now too small for the opening, but I grabbed another pumpkin and slashed out a larger one and clapped it into place. If I had had time I believe I should have been frightened at the thing myself, it was that hideous and unearthly-looking; but I did not have, so I took it under one arm, though it seemed half as big as a barrel, and pulled myself upstairs.

In another minute I was outdoors and hobbling along as fast as I could. The howling of the red beasts in the cellar still came as loud as ever. I got to the window, dropped on my knees, and took away the board. They did not yet have a light, and were struggling and caterwauling in the dark like, it seemed, a thousand demons. But I say I had the worst demon with me.

The lamp was burning well. I set the thing on the ground, square in front of the window, with the horrible face turned in and looking down into the darkness. Then I rolled out of the way.

I had truly thought that those savages had been making a great noise before, but it had been nothing to the sound which now came from the cellar. Such another shrieking and screaming I never heard before nor since. I would not have believed that any lot of human being could make such an uproar. Then I heard them fighting their way up the stairs and go squawking and bellowing out the front door of the store.

When I heard the last one go I seized up the pumpkin, took it on one shoulder, and with my stick went hippety-hopping out through the alley and along the sidewalk after them. They were going away in the darkness for their ponies like the wind. I went to the end of the walk and, holding the lantern in both hands, raised and lowered and waved it at them. Not once did they stop their howls of terror, and I could hear and partly see them tumbling onto their ponies in all ways and plunging off through the drifts to the west like madmen. I longed to be on Dick's back with my lantern to chase them, but I knew not where Dick was, and my ankle had already borne too much, as it told me plainly. I got back to the hotel as best I could, put up the lamp in its place and sat down to rest.

But though I needed rest, I needed food more; so I started the fire and looked about for something to eat. I soon found that the Indians had left nothing except a few crusts of bread and some frozen eggs. But I boiled the eggs and made out a sort of a meal. As I finished I heard a yowl which I thought I knew, and, sure enough, when I looked up, there was the cat still on the door.

This set me to laughing, and I said: "I wonder was ever a family so scattered before on a Christmas night as is mine? There is Kaiser shut in under a water tank; Blossom locked in the cellar of a grocery store; Crazy Jane, the hen, on top of the smoke-stack of a blacksmith shop;

(Continued on page eighteen.)

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FAMILY CIRCLE

ALICE BARLAND
EDITORIAL CONTRIBUTOR

Dear Mrs. Barland: I send a recipe for frozen feet and chilblains: Grind pumpkin seeds and mix into a poultice with warm milk and apply, leaving on for 12 hours or longer. This remedy works best when applied after the frozen parts are thawed. MRS. W. M. H.

Dear Mrs. Barland: I have a baby boy 2 1-2 years old and know something of a mother's work. I will add a few helpful hints for the Circle.

I make very good pajamas out of flour sacks for my little boy, using a pair of old overalls ripped up for a pattern. I also make his underwaists and underwear from them. I make shirts and drawers from worn underwear and little suits from men's suits which are worn past use. I made him a very nice winter coat last fall out of a wool skirt and it looked so well that every one thought I bought it and if I had done so I would have had to pay $12 for one as good.

Gunnysacks make good lining for rugs made of old coats and pants and are good for bedroom rugs. MRS. C. L. C.

Dear Mrs. Barland: I think Mrs. M. B. K.'s idea of exchanging ideas on child training is a grand one. I have a girl of 2 1-2 years and a baby boy of 10 months. I think a soft slap across the mouth of a child when he talks back in a saucy manner is a good way to break the habit. One need not slap hard; one should begin to break the habit at once when the child starts to talk back.

My little girl is always ready to "help" me to do what she can and also what she can't. She dries the knives, forks and spoons and she can put them on the table in proper order. I believe it best to allow a child to begin early to help with little things that he can do, whenever he wants to and then he knows how when he grows older.

I will give you a simple soup which makes a good supper dish for any age, but especially for children. It is called rubble soup. To make: Put on the fire three quarts of new fresh milk, let heat to a boiling point and have ready two cups of flour in a dish and break in two eggs and work up until it is all in small pieces, it may require more flour. Stir this into your hot milk and let cook till thick. Season with salt. (The juice of a grated onion makes this better.—A. W. B.)

MRS. GEORGE JENKINS.
Boring, Ore.

Dear Mrs. Barland: I always read with much interest the letters in the Circle. I used to live on a farm, but we are in a small town now.

The letters about the training of children are very good. I think too few mothers take time to reason and explain things to children as to why they should do certain things. Many times the poor children get a sound slap and don't know what it is for. I don't believe in spanking and slapping all the time. I think it much better to deprive the child of some treat if he has done wrong. Keep him at home from a show or a visit as a punishment.

I wonder why all parents do not teach their children to be kind to animals? It is easy to teach them to care for and to protect birds and all animals. Many parents allow children to have pets and permit them to torture the poor things. One friend of mine allowed her boy of 5 to abuse his kittens in a terrible way and when I spoke to her about it she said it was always easy to get more cats if he should kill one; it didn't matter.

My boy of 7 is a lovely companion for me. He can do dishes all by himself and dust and do other helpful things.

I would like to know why my cakes when baked are sometimes coarse and seem to dry out so quickly. I follow recipes closely and cream the sugar and shortening and beat the eggs well, but still they are coarse. E. K.

Your Health

By Royal S. Copeland, M. D., F. A. C. S.

HOW TO BATHE A SICK PERSON.

Cleanliness is the secret of health and long life. Spare the water and you spoil the child. Neglect the body and sickness is sure to come.



Dr. Copeland.

The patient's bath is one of the most important features of his treatment. Do you know how to bathe a sick person?

You should close the windows and let the room become warm. In the meantime gather all the needed things together. A small table or a chair should be placed near the bed. Spread over this a clean towel. Place on it a basin, a washbowl or a milk-pan. Also have a pitcher of hot water, a cake of soap on a dish, two towels and a wash-cloth.

Protect the bed from getting wet by stretching beneath the patient a clean blanket or a bath towel. This is easily done by rolling the patient to one side, placing the blanket and rolling the patient back into his original position.

Remove unnecessary overbedding, leaving just enough to keep the patient comfortable. Bathe and dry one leg at a time, leaving the rest of the body covered. Wash the patient's back last.

If the doctor should order a foot-bath this does not mean that the patient is to get out of bed to have it. The bed clothes may be loosened from the foot of the bed, the mattress and the linen or cotton sheet protected by a rubber sheet, or by a towel wrapped over a few layers of newspaper. Then place the foot-tub or pan in the bed and fill it one-third full with water, warm or hot, as the doctor directs.

After 20 minutes or half an hour the pan may be removed. In the meantime the water has been kept at uniform temperature by frequent additions of a little hot water; taking great care not to burn the patient. Dry the feet and rub briskly with a rough towel.

There should be frequent sponging of the hands and face. This adds amazingly to the comfort of a sick person. If he has fever, cold sponging lowers the temperature and relieves the aching head.

Perfect cleanliness will shorten the illness and promote the comfort of the sick person.

Just Folks

There is no easy harmony.

Sentiment is the final ruler.

Figures do not tell the whole story.

Tops of thoughts are most easily seen.

To be afraid is to lose three-fourths.

Ability without good will is perilous.

Geography tells a lot about the lives of people.

Opening the eyes is better than cramming the brain.

Something to tie to is better than all the freedom in the world.

Labored conclusions are necessary, but some one else has to do the work.

Promotion remains the biggest factor in our civilization, notwithstanding its gigantic abuse.

You can afford to be more or less associated with almost anybody in any worthwhile work. You can hardly afford to be associated even with the best of people, if the work is not worth while. E. A. S.

MOTHER!
Is baby vomiting, underweight? Try Dennos. The Dennos Modification supplies the needed food elements in an easily digested form. Sample Free. At druggists. Endorsed by Physicians.
Dennos Food Co.,
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Comfort Baby's Skin With Cuticura Soap And Fragrant Talcum
For sample Cuticura Talcum, a fascinating fragrance, address Cuticura Laboratories, Dept. U, Malden, Mass.



Not Arch Supports
Carry your weight under this part of the foot relieving all foot trouble with
"Burns' Cuboid Supports"
They are so light that you can't notice them in your shoes.
Ask your shoe dealer or send $2.50 to
215 Jefferson St., Albany, Oregon

You wouldn't put on hobbles to run a foot race

Then why load up on handicaps for the day's work?

A good deal of food, unwisely chosen, does weigh the body down and clog the digestion, and dull the brain.

Why put on the hobbles?

Grape-Nuts is a breakfast or lunch-time dish for those who want food efficiency, and mind and body efficiency.

Grape-Nuts satisfies and nourishes. It delights the taste. It is ready to serve whenever you are ready to eat. And it digests easily, quickly and completely—leaving no handicap of heaviness and drowsiness.

Grape-Nuts is the food for health and action.

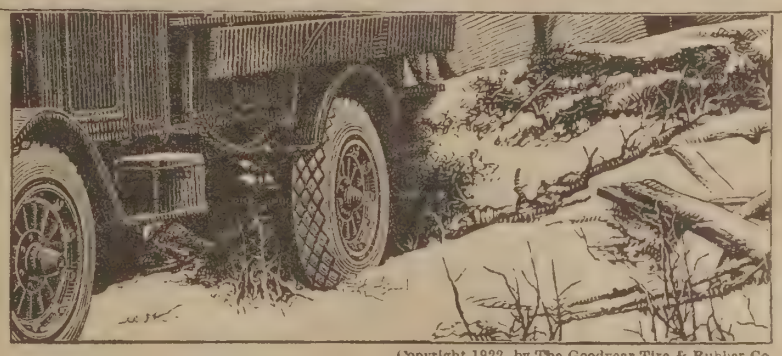
"There's a Reason"

Made by Postum Cereal Company, Inc., Battle Creek, Mich.

Sold by good grocers everywhere!



ON THE ROAD EVERY DAY THIS WINTER



Copyright 1922, by The Goodyear Tire & Rubber Co.

"We get snow a-plenty in this section every winter, but our truck on Goodyear Cord Tires averages two capacity trips a day regardless of road and weather, cutting our wagon-haul time to South St. Paul Stockyards with livestock from more than three hours down to forty-five minutes."
—E. L. YETZER, Yetzer Bros., Farmers, Richfield, Minn.

Their sure-footed traction on snow-filled roads, maintaining regular deliveries throughout the months that once were closed to all farm hauling, is one of the most valuable advantages of Goodyear Cord Truck Tires.

Their All-Weather Tread, with its wide surface of sharp, gripping edges, gives them a firm hold on slippery surfaces and in thick, slushy going.

Their buoyant resilience favors the truck mechanism, cushions the driver and the load, and protects improved roads.

The durable qualities incorporated in these tires by their exclusive Goodyear design and construction prolong their all-season, all-weather usefulness through thousands on thousands of miles.

Actual experiences of farmers hauling on Goodyear Cord Truck Tires are reported to those interested by The Goodyear Tire & Rubber Company, Akron, Ohio, or Los Angeles, California.

GOODYEAR

High Points in News of the Week

Pope Benedict, head of the Roman Catholic church, died Sunday morning, January 22, at the church headquarters in Rome. Death resulted from pneumonia, following a comparatively brief illness. Pope Benedict was the 259th successor of St. Peter as supreme head of the Roman Catholic church. He became pope September 6, 1914, soon after Europe entered upon its four years of war. His conduct of the affairs of the church was a task of great difficulty because of the complications arising from the war. Upon several occasions he initiated steps by means of which he hoped to be able to bring the warring nations to a peace agreement.

No successor has yet been named by the church authorities. Cardinal Gasparri, papal secretary of state, has been mentioned as a possible successor.

* * *

The joint commission of agricultural inquiry in congress has filed a report in which it urges the necessity of more liberal credit to the farming industry, especially through the federal land bank in the form of short-term loans on farm products in addition to its present long-time loans on farm land. It is suggested that loans of this character be made to members of farmers' cooperative organizations, when organized under state laws, such loans to be secured by warehouse receipts on farm products. Notes given to cover such loans would be used as security for bonds to be offered to the general public for sale in the same manner that farm land bank bonds guaranteed by mortgages are now sold to the public as a means of raising additional funds to be loaned.

* * *

A meeting between Michael Collins, head of the Irish provisional government, and Sir James Craig, premier of Ulster, is understood to have laid the groundwork for a peaceable settlement between north and south Ireland. It is not to be understood, however, that this agreement requires Ulster to become a part of the new Irish Free State.

* * *

A movement has been launched by the shipping industry of the Pacific coast for the formation of an organization to take over all merchant ships now owned by the United States government on the Pacific and operate them under private management. The proposed organiation would include representation and financial support of all the leading Pacific coast and Puget sound ports.

* * *

Europe this year will require huge imports of American foodstuffs, the department of agriculture annnounces in making public a summary of the report of G. F. Warren and W. F. Callander, who have made a study of European agricultural and market conditions. Germany alone, it was said, will need 2,000,000 tons of imported foods and the United kingdom, France, the Scandinavian countries, Czecho-Slovakia, Austria, Italy and Switzerland are looking to America for great quantities.

Excellent yields of wheat and rye were obtained before the severe drought of last spring developed, the investigators reported, but barley, oats, corn, potatoes, sugar beets and fodder crops were extensively damaged.

* * *

The intense cold weather that visited the northwest last week moved south the latter part of the week and did heavy damage to the orange and lemon groves of California. For the first time in 40 years snow fell in the vicinity of Los Angeles.

* * *

For the first time since he was stricken with illness, over two years ago, Woodrow Wilson, former president, appeared in public in attendance at a recital given in Washington last week for the benefit of the disabled veterans.

* * *

A conference of the southern group of the American Farm bureau federation at Florence, Ala., last week, went on record in favor of the government granting to Henry Ford the lease that he is now seeking on Muscle Shoals for the development of water power and nitrate fertilizers.

* * *

Will Hays, postmaster general in President Harding's cabinet, has announced his resignation, to take effect March 4. Mr. Hays resigns to accept the position of director of the National Association of Motion Picture Producers and Distributors. No definite information is available as to the probable successor of Mr. Hays in the president's cabinet.

* * *

The nation-wide strike of coal miners have been threatened, to take place about April 1, when the present national agreement covering wages and working conditions expires.

Farm Business and Markets Outlook

(Continued from page five.)

36c; Philadelphia, 36c; San Francisco exchange quotation, 41c.

CHEESE PRICE OUTLOOK IS STEADY.

Although cheese prices have declined slightly cheese dealers do not anticipate pronounced changes in price levels either way.

A clearance has been made of supplies of cheese in dealers' hands and further withdrawals made from cold storage, although slight concessions were necessary in some cases. Demand for held twins and daisies remains a conspicuous feature.

Prices for fresh No. 1 American cheese on January 18 were:

Chicago—Twins, 20@21c; flats, 21@21 1-2c; S. Daisies, 21@21 1-2c; D. Daisies, 20 1-2@21c; square prints, 23@24c.

FRUITS AND VEGETABLES.

Shipments from the potato producing sections have increased since the first of the year. Prices held up and even advanced for a time, but finally weakened. Northern round whites sacked red quoted at $1.70 to $1.90 per 100 pounds f. o. b. Growers are receiving $1.15 for sacked Rurals in wagonloads at Idaho points. Consuming markets are quoted at a range of $1.95 to $2.35 for sacked round whites, eastern cities being about 25 cents higher than Chicago. Seed potatoes are quoted at $3 per 100 lbs. for Bliss Triumphs, f. o. b. Minnesota shipping points.

Apple markets have held nearly steady with Baldwins at $6.50 to $8 per barrel wholesale in city markets. Northwestern extra fancy Jonathans are quoted at $2.25 to $3 per box in New York and Chicago. Shipments from producing sections have increased.

Cold storage holdings of barreled apples in the United States on January 1 amounted to 1,727,000 barrels compared with 3,966,000 barrels last year and a five-year average on January 1 of 2,935,000 barrels. Holdings of boxed apples were 10,990,000 boxes compared with 7,259,000 boxes last year and a five-year average of 6,159,000 boxes. Total holdings are about the same as the five-year average.

LATEST QUOTATIONS.

The Live Stock Market.

PORTLAND, Jan. 21.—Cattle—Choice steers [illegible] to good steers, $6.25@7; fair to [illegible] steers, $5.75@6.25; common to fair [illegible] $4.75@5.75; choice heifers, $5@5.50; fair to good heifers $4.50@5; choice cows and heifers [illegible] $4.75@5.75; medium to good cows and [illegible] $4@4.25; fair to medium cows and [illegible] $3.50@4.75; common cows, $3.25@4.25; canners, $2.25@3.25; bulls, $3@4; choice dairy calves, $9.50@10.50; prime light calves, $8.50@9.50; medium light calves, $6.50@8.50; heavy calves, $5.50@6.50.

Hogs—Prime light, $8.75@9; smooth heavy, 200 to 300 lbs., $8@8.50; smooth heavy, 300 lbs. up, $7@8; rough heavy, $6@7; fat pigs, $8.75@9; feeder pigs, $8.75@9; stags, subject to dockage, $5@6.50.

Sheep—East-of-mountain lambs, $9@9.75; best valley lambs, $8@9; fair to good, $6.50@8; cull lambs, $4.50@6; eastern Oregon feeders, $7@8; light yearlings, $7@7.50; heavy yearlings, $6@7; light wethers, $6@6.50; heavy wethers, $4@5.50; ewes, $3@6.

SPOKANE, Jan. 21.—Cattle.—Prime steers, $6.50@7.25; good to choice steers, $5.75@6.50; medium to good steers, $5.25@5.75; fair to medium steers, $4.75@5.25; common to fair steers, $4.25@4.75; choice cows and heifers, $5@6; good to choice cows and heifers, $4@5; medium to good cows and heifers, $3.50@4; fair to medium cows and heifers, $3@3.50; canners, $2@3; bulls, $3@5; light veal calves, $8@9.50; heavy veal calves, $4@8; stockers and feeders, $3.50@5.

Hogs—Prime mixed, $8.25@8.35; medium, $7.75@8.25; heavies, $5.75@7.75; fat pigs, $8.25@8.50; stockers and feeders, $7.25@7.75.

Sheep—Prime lambs, $7.50@9; fair to medium, $6.50@7.50; yearlings, $5@6.50; wethers, $4@5; mutton ewes, $1@5; feeder lambs, $5@6.50.

The Grain Market.

PORTLAND, Ore., Jan. 21.—Wheat—Hard white, hard winter, $1.13; soft white, white club, $1.11; northern spring, $1.10; red Walla, $1.07.

Grain futures: Wheat—Hard white, hard winter, January, February, March, $1.13; soft white, white club, January, February, March, $1.11; northern spring January, February, March, $1.10; red Walla, January, February, March, $1.07.

Oats—No. 2 white feed, January, February, March, $27.50; No. 2 gray, January, February, March, $26.50.

Barley—Brewing, January, February, and March, $26; standard feed, January, February, March, $24.

Corn—No. 2 eastern yellow shipment, January, February, March, $24; No. 3 eastern yellow shipment, January, February, March, $23.75.

SEATTLE, Jan. 21.—Wheat—Hard white, soft white, white club, soft red winter, northern spring, $1.10; hard red winter, $1.11; eastern red Walla, $1.07; Big Bend bluestem, $1.14.

RITZVILLE, Jan. 21.—Bart, $1.04; red, $1.02; Fife, 92c.

LEWISTON, Idaho, Jan. 21.—Club, Fortyfold, 88c; hard winter, 90c.

WALLA WALLA, Jan. 21.—Club wheat, 95c; Bluestem, 95c; Turkey red, 94c.

Hay and Grain Feed.

SPOKANE, Jan. 21.—Wheat—Feed wheat, $36 per ton.

Oats—$34 per ton; steam rolled, $36.

Corn—$32 per ton; cracked corn, $34 ton.

Barley—$30; steam rolled, $32 per ton.

Bran and shorts—$22 per ton.

Alfalfa—Unsettled, $17 to $18; timothy, $18 ton; mixed hay, $18 ton.

PORTLAND, Jan. 21.—Millfeed—Price f. o. b. mill: Millrun, ton lots, $22; mixed cars, $21; straight cars, $20 per ton; middlings, $34; rolled barley, $34@36; rolled oats, $36; scratch feed, $44 per ton.

Corn—White, $32; cracked, $35 per ton.

Hay—Buying price, f. o. b. Portland: Alfalfa, $14.50 per ton; cheat, $10.50@11; oat and vetch, $14.50@15; clover, $11@12; valley timothy, $14@15; eastern Oregon timothy, $16@17.

General Produce.

SEATTLE, Jan. 21.—Eggs—Select local ranch, white shells, 36c; select local ranch, mixed colors, 34c; pullets, 32c.

Butter—City creamery cubes, 36c; bricks or prints, 37c.

CHICAGO, Jan. 21.—Butter—Higher; creamery extras, 33½c; firsts, 27@32c; seconds, 25@26c; standards, 30c.

Eggs—Lower; receipts, 8649 cases; firsts, 34¾c; ordinary fists, 29@31c; miscellaneous, 32@34c.

PORTLAND, Jan. 21.—Butter—Steady. Extra cubes, 36c; under-grades, 25@27c; cartons, 36c; prints, 35c.

Butterfat—No. 1 churning cream, 33c f. o. b. Portland; undergrades, 29c.

SPOKANE, Jan. 21.—Butterfat, 33c lb.

Eggs—Fresh ranch eggs, $10.50; fresh pullet eggs, $9.

Live poultry—Broilers, 22c lb; springers, 17c lb; springers, staggy, 14c lb; hens, fat, 4 lbs up, 19c lb; 2 to 4 lbs, 14c; old roosters, 10c lb; ducks, 15c lb; geese, 15c lb; rabbits, 3 to 4 lbs, 10c lb; dry picked turkeys, No. 1, 35@40c lb; f. o. b. Spokane.

WINTER WHEAT CONDITIONS.

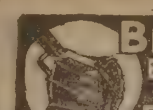
Covering the crop conditions for the last half of December the United States bureau of markets and crop estimates finds that the condition of the winter wheat crop is generally good throughout the eastern and north central states. The condition of the crop is poor in Nebraska and Kansas and late seedings are poor in Oklahoma and New Mexico, where many fields have failed to germinate. The condition in the eastern part of Oregon is much improved by recent rains, but excessive soil moisture is causing some damage in the western districts.

MARKETING HORSES.

The North Dakota Farm Bureau federation is marketing horses in New York state through the cooperation of the New York Farm Bureau federation. According to Secretary H. B. Fuller, North Dakota has a surplus of 48,000 horses, half of them suitable for eastern markets.

Range of Live Stock Prices for the Week Ending Jan. 18

CATTLE.	Chicago.	Spokane.	Portland.	N Salt Lake
Choice, prime heavy steers (1100 lb. up)	8.85@10.00			
Good heavy steers	7.85@ 9.10			
Medium heavy, steers	6.85@ 8.35			
Common heavy steers	6.15@ 7.15			
Choice and prime light steers (1100 lb. down)	9.25@10.25			
Good light steers	8.00@ 9.25			
Medium light steers	6.75@ 8.40	5.75@ 7.25	6.00@ 7.75	5.25@ 6.25
Common light steers	5.85@ 7.00	4.25@ 6.00	4.75@ 6.25	4.00@ 5.50
Common to choice butcher heifers	4.00@ 8.25	3.75@ 6.50	3.50@ 6.40	3.25@ 5.35
Common to choice butcher cows	3.50@ 6.35	3.00@ 5.50	3.25@ 5.25	3.00@ 4.50
Bologna and beef bulls	3.75@ 6.00	3.00@ 5.00	3.00@ 4.00	2.00@ 3.50
Canners, cutters, cows and heifers	2.35@ 3.60	2.00@ 3.00	2.25@ 3.25	1.50@ 3.25
Canner steers	3.25@ 4.25	2.50@ 3.50	2.75@ 4.00	2.25@ 3.25
Medium to choice light veals	6.50@ 9.50	8.00@ 9.50	6.50@10.50	6.00@ 7.00
Common to choice heavy veals	3.75@ 7.75	4.00@ 8.00	5.50@ 6.50	
Common to choice feeders (1000 lb. up)	5.40@ 7.00			
Common to choice feeders (750-1000 lb.)	5.25@ 7.00	3.50@ 5.00		
Common to choice stocker steers	4.50@ 6.85			
Common, choice stocker cows, heifers	3.00@ 5.25			
HOGS.				
Top of market	8.75	8.75	9.00	8.00
Bulk of sales	7.30@ 8.40	7.75@ 8.50	8.25@ 8.75	7.25@ 7.75
Heavy (250 lb. up)	7.30@ 8.00	7.25@ 7.75	7.40@ 8.40	
Medium (200-250 lb.)	7.45@ 8.35	7.75@ 8.25	8.00@ 8.50	
Light (150-200 lb.)	7.65@ 8.65	8.25@ 8.75	8.50@ 9.00	
Light lights (130-150 lb.)	7.65@ 8.75	8.00@ 8.60	8.40@ 9.00	7.50@ 8.00
Smooth packing sows (250 lb. up)	6.15@ 7.35	6.25@ 6.75	6.00@ 7.00	
Rough packing sows (200 lb. up)	5.85@ 6.75	5.75@ 6.50	5.00@ 6.00	
Medium to choice pigs (130 lb. down)	7.50@ 8.75	8.25@ 8.50	8.75@ 9.00	
Stock pigs		7.25@ 7.75	8.75@ 9.00	6.50@ 7.50
SHEEP AND LAMBS.				
Medium to prime lambs (84 lb. down)	11.50@13.00	7.25@ 9.00	7.00@ 8.50	7.00@ 9.00
Culls and common lambs	9.00@11.50	6.00@ 7.25	5.50@ 7.00	5.00@ 7.00
Medium to prime yearling wethers	9.25@11.75	5.00@ 6.50	5.00@ 7.00	5.00@ 6.00
Medium to prime wethers	6.50@ 9.50	4.00@ 5.00	4.00@ 6.00	4.50@ 5.50
Medium to choice ewes	4.75@ 7.50	3.00@ 5.00		3.00@ 4.00
Culls and common ewes	2.50@ 4.75	1.00@ 3.00		
Feeder lambs	9.75@12.50	5.00@ 6.50	6.00@ 7.00	


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You will find it profitable to become an habitual reader of the advertisements, especally so if you write the advertisers to send you copies of the catalogues, booklets and other free literature which they gladly supply. When you do write for such information, please mention the fact that you saw the manufacturer's advertisement in THE WASHINGTON FARMER.

Just What You Want
may be offered in this week's want ads at a bargain. It's a good idea to look them over every week

Bits of Fun for Everyone

Farming a la Movie.

Visitor—You must have been visited by a bad hurricane from the appearance of your buildings.

Farmer—No; I rented my farm last month to a movie concern to make a five-reel comedy.—Film Fun.

Where Do You Get the Holes?

Old Salt—"Well, sonny, do you know how we make fish nets?"

Jimmy—"Yes; you just take a lot of holes and sew them together."

The New Week.

Teacher—"Tell me, Freddie, how many days are there in a week."

Freddie—"Six and a half, Ma'am."

Teacher—"What do you mean, Freddie?"

Freddie—"Because Saturday always passes twice as quick as the other days."

Another Fish Story.

Sir: Speaking of O. F. letters, I claim to have unearthed one that should win the steam-heated cuff links. It ends: "In the everlasting mud-puddle of your affections let one little tadpole wiggle for me."—Nashville Tennesseean.

Let's Blow Ourselves.

The government has on hand 12,000,000 pounds of picric acid that will be distributed to farmers. Picric acid, we had understood, is a high explosive. What farm product is going up now?—Cleveland Plain Dealer.

Much Taken With It.

Mrs. Swellman—I want you to make my bathing suit this summer. I was much taken with the one you made me last season.

Dressmaker—Indeed!

Mrs. Swellman—Yes, the camera fiends simply camped on my trail.—Boston Transcript.

Beyond Him.

Kenneth—Father, what are ancestors?

Father—Well, my son, I'm one of yours. Your grandmother is another.

Son—Then why do people brag about them so much?—Edinburgh Scotsman.

Latest High Class Patterns for the Home

Please order the patterns you desire at least two or three weeks before you wish to use them. Desiring to obtain the latest high-class patterns for its readers, THE FARMER has made arrangements to have them sent direct from the east, and under present mailing conditions it takes about that time for them to reach you.



3658. A practical seamless apron. Cut in four sizes: Small, 34-36; medium, 38-40; large, 42-44; extra large, 46-48 inches bust measure. A medium size will require 2 5-8 yards of 36-inch material. Price 10 cents.

3848. Ladies' house dress. Cut in seven sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. A 38-inch size requires five yards of 36-inch material. The width of the skirt at the foot is about two yards. Price 10 cents.

3851. Ladies' dress. Cut in seven sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. A 38-inch size requires 4 3-4 yards of 40-inch material. The width at the foot is 2 1-8 yards. Price 10 cents.

3847-3696. Ladies' coat suit. Coat 3847, cut in seven sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. It will require 2 1-2 yards of 54-inch material for a medium size. Skirt 3696, cut in seven sizes: 24, 26, 28, 30, 32, 34 and 36 inches waist measure. It will require 2 5-8 yards of 44-inch material for a 28-inch size. The width of the skirt at the foot is about two yards. Two separate patterns, 10 cents for each pattern.

3130. Girl's apron. Cut in four sizes: 6, 8, 10 and 12 years. For an 8-year size 1 3-4 yards of 27-inch material will be required. Price 10 cents.

3685. Misses' dress. Cut in three sizes: 16, 18 and 20 years. An 18-year size requires 4 7-8 yards of 38-inch material. The width of the skirt is 2 3-4 yards. Price 10 cents.

3865. Girl's "jumper" dress. Cut in five sizes: 4, 6, 8, 10 and 12 years. A 10-year size requires 2 1-2 yards of 27-inch material for the guimpe and three yards for the dress. Price 10 cents.

3409. Girl's dress. Cut in four sizes: 8, 10, 12 and 14 years. A 10-year size will require 4 3-4 yards of 36-inch material. Price 10 cents.

3834. Ladies' undergarment. Cut in four sizes: Small, 34-36; medium, 38-40; large, 42-44; extra large, 46-48 inches bust measure. A medium size requires 2 1-4 yards of 36-inch material. Price 10 cents.

3479. Ladies' undergarment. Cut in four sizes: Small, 32-34; medium, 36-38; large, 40-42, and extra large, 44-46 inches bust measure. A medium size will require 3 3-4 yards of 36-inch material, or 3 1-8 yards without the yoke. Price 10 cents.

3034. A popular style. Cut in four sizes: 2, 3, 4 and 6 years. Size 4 requires 2 5-8 yards of 44-inch material. Price, 10 cents.

3859. Girl's dress with bloomers. Cut in four sizes: 4, 6, 8 and 10 years. An 8-year size requires 1 1-4 yards of 27-inch material for the bloomers and three yards for the dress. Price 10 cents.

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Melvin Mathias' uncle gave him two sheep for which to care. Their names are Jenny and Susie. Melvin's grandpa has about 50 chickens, two pigs, three calves and three cows. He has some bees and good honey. Melvin's home is on the Cowlitz river, in Washington.

Brown-eyed Ruth Wagner has never written to us before. She lives in eastern Washington and is 11 years and 8 months old. Ruth has no brothers and sisters. She has light brown hair. Tommy is her pet cat. He is gray.



THURSDAY, January 26—Dorothy Kidwell, 10 years old; Lucile Lemmon, 7.

FRIDAY, January 27—Winifred Angle, 11 years old; Lawrence Blessing, 11; Lila Lackey, 11.

SATURDAY, January 28—Jane Frazier, 10 years old; Clara Nelson, 11; Ora Shaver, 11; Bernard Boone, 10.

SUNDAY, January 29—Gertrude Dagefoerde; Gladys Haines, 10 years old.

MONDAY, January 30—Evelyn Anderson, 10 years old; Hilma Hoikka, 9.

TUESDAY, January 31 — May Mary Brown, 11 years old; Inez M. DeGooyer, 9; Bertha Stevens, 10; Metha McDanile, 8.

WEDNESDAY, February 1—Russell Higginbotham, 11 years old; Eva Howell, 10.

In each issue a list of the cousins' birthdays for the week will be published. At the close of each letter you write be sure to tell how old you are and when your birthday comes.

BEDTIME STORIES

By THORTON W. BURGESS.

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JERRY BEGINS TO BUILD.

Jerry Muskrat had been round and round the Smiling Pool and up and down the Laughing Brook looking for a place to build his new house. He was very particular, was Jerry Muskrat, about the place where he was to build. It had got to be just so. Billy Mink and Little Joe Otter had shown him a dozen places which they thought would be splendid for Jerry's new house. Each time Jerry had shaken his head and kept right on looking. Finally Billy Mink and Little Joe Otter had gone off in disgust.

"He doesn't know what he wants himself!" said Little Joe Otter. "Let's go fishing."

"Bet I can catch more than you can!" cried Billy Mink, and off the two little brown-coated scamps started, leaving Jerry Muskrat to keep on looking for a place to build.

Now, Jerry Muskrat did know what he wanted; he knew just what he wanted. It must be a place where the water would be still, for you see if there was a current it would carry away the things of which the house was to be built. It must be a place where the water was deep enough for Jerry to have one nice snug room wholly under water, with a door at the bottom. And the water must be so deep that Jack Frost would not be able to freeze it into ice clear to the bottom and so close up that little door down there for that door must be open all the time. And yet the water must not be so deep that Jerry's new house could not have its room and a nice snug, dry bedroom quite above the little waves which the wind made.

Finally over among the bulrushes Jerry found just the place.

Finally, over among the bulrushes Jerry Muskrat found just the place for which he was looking. He put on his old clothes, took a long breath, and down he went to the bottom and began to cut away the rushes that were growing where he wanted his house to be. It was hard work, and every few minutes Jerry had to come up for a breath of fresh air and to rest. He could hear Billy Mink and Little Joe Otter having a beautiful time down the Laughing Brook, and he did so want to join them. But down inside something would keep telling him that he must build his house first. So Jerry would take a long breath and down he would go.

Pretty soon all the bulrushes that had been in the way were cut and nicely piled at one side. Then Jerry began to dig out his cellar. My, my, my! It certainly did make the water dreadfully muddy! By and by all the Smiling Pool was muddy, and then the muddy water got down to where Billy Mink and Little Joe Otter were fishing. At first they couldn't think where it came from. Of course it spoiled their fishing, for they could no longer see the fish. In disgust they went back to the Smiling Pool. It was even muddier than the Laughing Brook. Then way over among the bulrushes Billy Mink saw the water boiling up as if there was a terrible disturbance down underneath. A minute after up popped the head of Jerry Muskrat.

"Hi, Jerry Muskrat! You're spoiling our swimming water!" shouted Billy Mink, angrily.

"It don't belong to you," shouted Jerry Muskrat, and once more disappeared.

Track's End

(Continued from page fourteen.)

the rest of the chickens sacked up and scattered on the ground; Dick and Ned, the horses, I don't know where; Pawsy, the cat, on top of the door; and Jud himself, the head of the family, here eating what the Indians have left, with a hurt ankle and a smell of roasted pumpkin all through his clothes."

I had a good laugh over things, and then decided that I must do what I could for my scattered family, though my ankle seemed about ready to go by the board. So I first got down the cat and then lit the lantern and started out after Kaiser. Poor dog, he was beside himself to see me, and liked to have knocked me down in showing how glad he was.

As we started back Kaiser stopped and began to growl at something out on the prairie, and I looked, and after a time made out Dick and Ned. They were very nervous, and would not let me come up to them, but I toiled around them at last and started them toward their barn. I next looked after Blossom. I found her lying down, as comfortable as you please, chewing her cud and right at home in the cellar. She had made a meal out of the coarse hay which came out of a crockery bale, and I thought I would leave her for the night. So I took a big pitcher out of the bale and milked her then and there, and took it home, and Kaiser and Pawsy and I disposed of it without more to-do.

I was beginning to feel better about my family, and still more so when I found that Dick and Ned had gone into their stalls and had stopped their snorting and only breathed hard when they saw me. Next I went after Crazy Jane, but though I coaxed and shooed and threw chunks of frozen snow at her, while Kaiser barked his teeth loose, almost, it did no sort of good; she only looked at me and made a funny noise, as a hen does when she sees a hawk. I could not climb up with my hurt ankle, so I had to leave her; much against my will. The chimney, I thought, was a good deal exposed for a sleeping place in winter, but there was no wind and I didn't have much fear but that she would come out all right.

I had like to have forgotten the other chickens; they never popped into my mind till I was back in the hotel, but I dragged myself out after them. I found the poor things stuffed in three sacks, as if they had been turnips, lying on the snow. I knew I could not carry them, and felt that I could scarce drag them even, so I hit upon the plan of taking a bit of rope from the pile of plunder and hitching Kaiser to the sacks, and so in that way we got them, one by one, to the barn at last and let them out, all cramped and ruffled. Kaiser was so proud of his work that he set up a bark which started the broncos into another fit of snorting.

I think if there had been one more member of my family lost that I could have done nothing for it that night, my ankle was in such a state. I tried bathing it in hot water, and before I went to bed I had it fairly parboiled, which seemed greatly to relieve it. I was too tired to go across the drawbridge to my room, so I stretched out on the lounge in the office, not much caring if all the robbers in Christendom came. But I could not help wondering at my strange Christmas, and half the night I heard the wolves howling around the blacksmith shop and looking up (I knew) at Crazy Jane, but I thought they might as well howl around the gilt chicken on a weathervane for all the good it would do them.

(To be continued.)

SURPLUS WAR SUPPLIES

Ordered Sold by the War Department

Thousands and thousands of dollars' worth of surplus army and navy supplies have just been received direct from the quartermaster's department at Camp Lewis, Washington; Camp Kearny, California; Fort Mason, California. These goods are being sold direct to the readers of this magazine at prices that almost stagger belief. Order at once from the few prices listed or send for big new price list.

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Reclaimed O. D. cotton breeches, sizes 30 to 38 only. Sale price 95c

Pure wool army riding breeches No. 1, all sizes, Sale price $1.98

U. S. army chocolate marching shoes, all sizes. Sale price $5.45

U. W. army trench shoes, with or without hobnails, all sizes. Sale price $5.45

Army pure wool sleeveless sweaters. Sale price $1.55

U. S. O. D. army blankets No. 1, extra large. Sale price $4.45

Pure wool O. D. U. S. army shirts, all sizes. Sale price $3.95

O. S. U. S. army mackinaw coats, all sizes. Sale price $8.95

O. D. cotton shirts, all sizes Sale price $1.25

Pure wool U. S. army socks, gray or khaki. Extra quality. Sale price 39c

U. S. army canvas leggings, best quality. Sale price 59c

HOW TO ORDER—Make money orders payable to J. B. Robinson. Be sure you give correct sizes desired. Write plainly. All prices listed above are prepaid to your own town.

U. S. Army Supply Store

1318 Pacific Ave. Tacoma, Wash.

Reference: National Bank of Tacoma

SEND FOR PRICE LIST

WESTERN CANADA Land of Prosperity



offers to home seekers opportunities that cannot be secured elsewhere. The thousands of farmers from the United States who have accepted Canada's generous offer to settle on FREE homesteads or buy farm land in her provinces have been well repaid by bountiful crops. There is still available on easy terms

Fertile Land at $15 to $30 an Acre

—land similar to that which through many years **has yielded from 20 to 45 bushels of wheat to the acre**—oats, barley and flax also in great abundance, while **raising horses, cattle, sheep and hogs** is equally profitable. Hundreds of farmers in western Canada have raised crops in a single season worth more than the whole cost of their land. With such success comes prosperity, independence, good homes and all the comforts and conveniences which make life worth living.

Farm Gardens, Poultry, Dairying

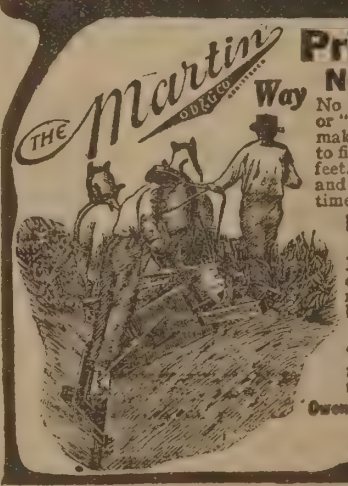
are sources of income second only to grain growing and stock raising. Attractive climate, good neighbors, churches, schools, good markets, railroad facilities, rural telephone, etc.

For illustrated literature, maps, description of farm opportunities in Manitoba, Saskatchewan, Alberta and British Columbia, reduced railway rates, etc., write

J. I. PORTE.
Cor. 1st and Post Sts.
Spokane, Wash.
Authorized Agent, Dept. of Immigration and Colonization, Dominion of Canada

160 ACRE FARMS IN WESTERN CANADA FREE

CUT DITCHING COST



Prices Slashed

No More Shoveling!

No more plows, slips, fresnos, or "go-devils." The MARTIN makes the ditch from start to finish, any depth, up to 4 feet. It cleans old weed-grown and silt-filled ditches in jig time.



For Irrigation or Drainage

For small laterals or big ditches; for terracing, rice levees, alfalfa checks and borders and for road building. The MARTIN does the job.

For Horse or Tractor Use

This all-steel, adjustable and reversible implement is made in four sizes. It is sold in every state. Write today for big free catalog.

Owensboro Ditcher & Grader Co., Mfrs., Box 811 Owensboro, Ky.
Stock Carried at Denver, Colo.
Distributors in All Western States

Important Sales Coming

One of the largest Holstein sales in the history of the Pacific northwest, and one notable because of the prominence of the two herds that will be offered, will be held at Granger, in the Yakima valley February 6 and 7. The herds are those of H. C. Davis of Granger and Butchart Bros. of Sunnyside. The sale includes some of the most notable animals of the northwest, both as to show and production records. At the head of the Davis herd stands Sir Bessie Fobes Tritomia, one of the leading herd sires of the west. At the head of the Butchart herd is the younger and promising bull, Chief of the Ormsbys. Colonels George Gue of Yakima, George Gouchnour of Sunnyside and W. C. Payne of Centralia will cry the sale, which will be managed by Mr. Davis,

The Yakima Valley Duroc Jersey association, which was organized a little over a year ago, will hold a sale on February 9 at Sunnyside, Wash. About 30 head, mostly bred gilts, with a few sows, will be sold. Pathfinder, Great Wonder and Sensation breeding predominate. H. W. Turner, F. D. Gano and H. and H. Bagley of Sunnyside; S. D. Cornell, Grandview; C. T. Myers, Prosser, and J. M. Price of Yakima are the consignors. Mail bids may be sent to W. R. White, fieldman of the association at Sunnyside.

On account of having to move, W. A. Mays of Toppenish, Wash., will disperse his entire herd of big type Poland Chinas. The sale will occur at Mr. Mays' farm, four miles east of Toppenish, on Wednesday, February 9. About 46 head will be sold. Of these 32 are young bred sows. Five are boars and this includes Mr. Mays' two great sires, Western Designer and Buster Clansman. Nine fall gilts will be sold.

Breeders' Dept.

ABERDEEN-ANGUS

bulls will mature your steers earlier, give them a heavy, thick and low set conformation, dehorn them and add to their quality so that they will top the market every time. We have a wonderful lot to select from, both range and herd bulls, at prices which will move them.

CONGDON & BATTLES.
P. O. BOX 275. YAKIMA, WASH.
Write for prices and literature.

Richly Bred Jersey Bull Calf

His dam has junior two-year-old record of 556 lbs. fat, and his sire, St. Mawes Majesty Beau, is a son of St. Mawes Lad, sire of the world record senior yearling, St. Mawes Lad's Lady, 824 lbs. fat, and out of Edith Oxford Belle, gold medal cow, record 741 lbs. fat.

S. A. RICHES, Turner, Ore.

High Production Jersey Bulls

Sired by a son of the silver medal bull, St. Mawes of Ashburn, sire of Lulu Alnbea of Ashburn, ex-world record senior yearling, 994 lbs fat. Dams all have good register of merit records. Priced for quick sale.

J. H. TAYLOR & SON, Montesano, Wash.

St. Mawes Strain Jerseys

One yearling bull and three bull calves from high producing R. of M. dams. Unusual quality at low prices. Herd sire is backed by four gold medal ancestors.

P. O. POWELL & SON, Monmouth, Ore.

824 Pounds of Fat

is the record of dam of a really great young Jersey bull we are offering at a bargain price. Write for full particulars.

J. J. VANKLEEK & SONS.
RT. 1, BEAVERTON, ORE.

Gold Medal Jersey Bull

Poppy's St. Mawes, heads our herd. Young bulls by him out of high record dams for sale.

GEO. BIERSDORF, Cornelius, Ore.

Jersey Bull Dam,

750 lbs. fat, ½ sister to Poppy's Dorothy, world's champion 3-yr.-old, 994 lbs. fat. Price $300—$150 cash, $150 when record is completed.

BEHRMANN FARM. Forest Grove, Ore.

HOLSTEIN-FRIESIANS

Well bred heifers, bull calves. Herd sire brother to Queen De Kolb Bonheur Pontiac (1270 lbs. butter, 31,000 lbs. milk). 7th highest cow in world for milk production. All our cows are bred to him. All dams on official test. Herd on accredited list. Also have few bred Poland China gilts of good breeding.

ALOYS SCHULER, New Plymouth, Idaho.

Mt. Vernon Holsteins

If you want good pure bred Holsteins let me hear from you. I will sell my herd of 22 head or my young cattle, including a son and daughter of Judge Segia and six other heifers.

R. E. WAUGH, Bow, Wash.
Between Burlington and Sedro-Woolley.

Milk Beef

Oakleigh Stock Farm Shorthorns

204 S. First St., Medford, Ore.
Milking Shorthorns. Several record cows—30 head in herd.

Arrorok Shorthorns

Herd headed by True Baron. 1st premium Idaho state fair, 1918-1920. A superb collection of Scotch breeding matrons. Write your wants in range and herd bulls.

ARROROK HERD FARM. Boise, Idaho.

IDABOIS FARMS SHORTHORNS.

King Lavender, the bull that topped the Portland sale in 1920, heads a herd of superior Scotch breeding matrons. Write us for range and herd bulls. A great collection to choose from. O. O. HAGA. Boise, Idaho.

AYRSHIRE BULL CALF

From advanced registry dam with record for last December 1830 lbs. milk, 71.18 lbs. butterfat. Priced very reasonable.

EARLCREST STOCK FARM.
EAGLE CREEK, ORE.

Richards Champion Durocs

Last year we exhibited our Durocs at Oregon, Washington, Idaho, Utah and Montana fairs and stock shows, winning 326 prizes, of which 137 were champion and first prizes. A record never before equaled. We have 200 spring pigs, the best we ever raised. Write us your wants, we guarantee satisfaction. Meet us at the fairs.

Richards Live Stock Company, Virginia, Idaho.
"THE HOME OF CHAMPION DUROCS."

Great I Am 1st.

Duroc-Jersey junior boar, Western Royal and Pacific International, 1921, at head of herd. Bred gilts and weaned pigs for sale.

CRESCENT STOCK FARM, Johnson, Wash.

300 Bred Sows

Duroc gilts, guaranteed in farrow, immune, delivered safe. Priced right; pedigrees recorded; freight prepaid on carloads.

Box W. F. C. CROCKER. Tilley, Neb.

Big Type Poland Chinas

My herd boar won the past two years at state fair. 50 bred gilts, young boars, weaned pigs. Live and let-live prices. Satisfaction guaranteed.

H. J. STILLINGS, Hermiston, Ore.

River Banks Better Berkshires

Order now. Bred gilts for spring farrow.

RIVER BANKS FARMS.
GRANTS PASS, ORE.

Pay for Berkshires in Pork

Improve your stock. You get the breeding hog now; pay when you get the pork. Write for plan.

F. M. CURTISS. Fruitland, Wash.

Berkshires

1st prize reg. 2-year-old bred sow, $50. Had 3 litters, 8, 10, 10. March boar and sow, $25 each. boar 1st, sow 4th, club classes, Pacific International. Order direct from this ad.

HARVEY NORRIS, Goldendale, Wash.

Mammoth Missouri Jack

We will sell, or will trade for Percheron stallion.

RIVER BANKS FARMS.
GRANTS PASS, ORE.

Read the "Want Ad" page this week for good offers of all kinds.

150 - HOLSTEINS - 150



"BESSIE"

To Be Sold at

PUBLIC AUCTION

Complete dispersal of the H. C. Davis and Butchart Bros. registered herds on the Davis farm, one mile east of Granger. **A two-day sale, starting 10 a. m., Monday, February 6, 1922.**

70 head bred to Sir Bessie Fobes Tritomia. A large number bred to Chief of the Ormsbys. Fifty per cent of the entire lot is of "Bessie" breeding. A 20-pound 2-year-old daughter of a 35-pound cow. A daughter of "Bessie" and a 26-pound 3-year-old. A 27-pound daughter of Mutual Fobes Longfield DeKol.

Much of the stock offered in this sale is of the blood of Sir Ormsby Burke Segis—a lot of fine individuals of the type Davis and Butchart Bros. have always had.

Tuberculin tested and sold subject to retest. This large number enables you to buy in carload lots.

Will sell on terms to responsible parties who furnish desirable bank references.

The DAVIS-BUTCHART Dispersal SALE

H. C. DAVIS, Mgr. Granger, Wash.

Write today for Catalogue.

ANNOUNCING THE BIG

Combination Auction Sale

BILLED FOR

THE CALIFORNIA RANCHES

AT

BUENA, WASHINGTON.

ON

Tuesday, February 14th

BY

WILLIAM MULHALL & SON.

COMPRISING

30 Registered Shorthorn Cattle **30** — Catalogue on Request. — **12** Registered Percheron Horses **12**

Everything in first-class working condition.

All Buena and Toppenish trains will be met.

First Annual Sale
Yakima Valley Duroc Jersey Assn.

Sunnyside, Wash., February 9, 1922.

Thirty head, mostly bred gilts, few sows, principally Great Wonder, Pathfinder and Sensation breeding. All consignments selected by Professor C. M. Hubbard, extension service, Washington State college. Mail bids may be sent to W. R. White, fieldman, Sunnyside, Wash. Catalogues on request.

G. R. GOCHNOUR, Auctioneer, J. L. THOMPSON, Secretary, Sunnyside, Wash.

SPECIAL OFFER—JERSEYS

Small herd of select jerseys, popular western blood lines, headed by a sire whose daughters are making him a silver medal bull. No culls. Priced for quick sale. A real opportunity. Communicate with—

K. HANNEMAN, Corbett, Ore.

GRADE CALVES

From dams producing 300 to 700 lbs. butterfat in Tillamook County Cow Testing Association.

Price $10, with guarantee of breeding and production of dams.

Jersey, Guernsey and Holstein Breeds. Write County Agricultural Agent, Tillamook, Ore.

Dispersal Sale

Big Type Poland Chinas

TOPPENISH, WASH., WEDNESDAY, February 8, 1922.

46 head, including 32 bred sows of most popular blood lines; five boars, including my two great herd boars, Western Designer and Buster Clansman; also nine fall gilts.

Western Designer was first prize and junior champion, Washington State fair and Western Royal Stock show, 1921. **Buster Clansman** was first junior yearling, senior and grand champion, Lewiston Live Stock show, 1921. A number of the sows have show-ring records and every animal offered is of most approved big type, the kind that fills the pork barrel at the lowest cost.

GEO. A. GUE, Auctioneer, Yakima, Wash. W. A. MAY, Owner. Toppenish, Wash.

Bred Sow Sale — Big Type Poland Chinas

COTTONWOOD, IDAHO, THURSDAY, FEBRUARY 2, 1922.

When 25 head of good, stretchy fall and spring gilts, including several of our herd, and sired by our prize-winning boars, including the Washington 1922 Grand Champion, will be sold.

Satisfaction guaranteed to purchasers on all mail bids.

Send for our catalog. Harry C. Cranke, auctioneer.

Sale held at Bide-a-Wee Hog Farm, 4 miles east of Cottonwood. JOHN FUNKE, HOWARD McKINLEY, Owners.

TAKE ADVANTAGE OF GUARANTEE mentioning THE WASHINGTON FARMER when writing to advertisers; you are doubly protected. See the guarantee on the editorial page.—Adv.

Overstocked! We Must Liquidate!

Startling Clearance Prices to Reduce Our Stock at Once

Don't Send A Single Penny

Don't judge the high quality by the startling low prices quoted. We have a large stock on hand which we must reduce at once. But rush your order in, the shoes won't last long at these bargain prices. Order now while our stocks are complete! Don't send a penny with your order. Pay postman when the goods arrive. You don't risk one penny. If you are not pleased in every way, we will gladly refund your money at once.

MEN'S WORK SHOE



DARK BROWN COLOR

Sizes 6 to 11
Order No. 186

$1.98 plus postage on arrival

A sturdy work shoe with heavy, long wearing upper stock, double leather insoles and guaranteed counters. Made especially for the modern farmer, with uppers tanned to resist acids. Guaranteed to please or your money back. Don't send one cent. Pay postman when you get the shoes.

OFFICERS' $7 SHOE

$3.98 plus postage on arrival



These army officers' shoes are now being sold by others at $6.00 and $7.00. They are all Goodyear stitched soles and are one of the very best made shoes for dress and everyday wear.

Sizes 6 to 11 Order No. 191

MEN'S FINE DRESS SHOES

English or Blucher Style



Brown or Black

$2.98 Plus Postage on arrival

Sizes 6 to 11. Order No. 107

A fine lot of men's dress shoes, values up to $5 and $6, sacrificed at $2.98. In Brown or Black and in Blucher or English styles. Be sure to mention color and style as well as size. Remember you can examine these shoes and if not pleased you can return them for refund. You risk nothing. Be sure to include these in your order.

Knit Felt Shoe

Sizes 6 to 12



$1.88 Plus Postage on arrival

ORDER NO. 688

Knit felt shoes are the warmest and longest-wearing of all felt shoes. Dealers charge you $3 to $5 a pair. Stock up now at a big saving. You will need these in cold weather. A pair of real wool socks free with every pair.

LADIES' 1-STRAP



$1.49 Plus Postage on arrival

Order No. 210
Sizes 3 to 8

Ladies' easy, comfortable kid finished one-strap slippers. One of the best bargains ever offered.

HIP BOOTS



$2.69

plus postage on arrival

Sizes 6 to 12
Order No. 173

Absolute first quality hip boots at less than cost to manufacture. Order at once while we still have them in stock.

10-INCH HI-CUTS



Men's Sizes, 6 to 12
$3.95 plus postage
Order No. 117

Boys' Sizes, 1 to 5½
$2.98 plus postage
Order No. 307

Boys' Sizes, 9 to 13½
$2.69 plus postage
Order No. 308

Fine quality barnyard proof hi-cuts, solid leather soles and insoles. Wonderfully made throughout. Remarkable bargains at our prices.

Girls' School Shoe

No. 462
Sizes 8½ to 11



$1.75 Plus postage on arrival

No. 464 Sizes 11½ to 2 ..... $1.98
No. 264 Sizes 2½ to 8 ..... $2.49

Shoes for healthy, active girls, made to stand the hardest wear. We guarantee them to wear. They are constructed of neat, gunmetal leather on a very stylish last. Don't send a penny! Pay when the shoes arrive.

Boys' School Shoe



No. 301
Sizes 9 to 13½ $1.98
Plus postage on arrival

No. 302
Sizes 1 to 5½ $2.49

Splendid, sturdy school shoes for husky growing boys. Buy these shoes for your boys and get your full money's worth in wear. Neat appearing, gunmetal leather, as good for Sunday as everyday. Money refunded if not satisfactory.

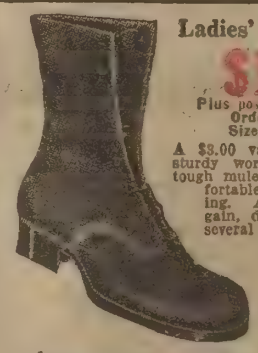
FOR THE KIDDIES



Sizes 3 to 8
No. 460
$1.25 Plus postage on arrival

These shoes would be a bargain at $2. They are soft kid leather and have a flexible, durable sole. Will give the children a surprising amount of wear.

Ladies' Work Shoe



$1.75

Plus postage on arrival
Order No. 250
Sizes 2½ to 8

A $3.00 value in a ladies' sturdy work shoe made of tough mule skin stock, comfortable and long wearing. A wonderful bargain, don't fail to order several pairs.

Ladies' Black English



$2.39

Plus postage on arrival
Order No. 923
Sizes, 2½ to 8

Others would sell these fine ladies' black English shoes for $4.00. Our clearance price of $2.39 is a rock bottom figure.

4-Buckle Cloth Arctic



No. 621 Sizes 6 to 12

$2.98 Plus postage on arrival

A first quality four-buckle arctic. Just the same quality as others charge you $5 and $6 for. This great bargain should be taken advantage of at once. It means a saving of dollars to you. Remember, they are new, perfect goods, made of first quality rubber, with warm fleece-lined tops. Your money will be promptly refunded if you are not well pleased after inspecting them.

LEATHER TOP RUBBERS



No. 622 Men's size 6 to 12 ..... $2.75
No. 632 Boys' sizes 1 to 5 ..... $2.25
No. 633 Boys' sizes 9 to 13 ..... $1.98
Plus postage on arrival

Another big Bates bargain! Think of it! First quality leather tops at $2.75 for men and as low as $1.98 for boys. Regular prices are at least twice what we ask. Can you afford to pass up bargains like this? Remember, you need not send a penny with your order. Pay postman when they arrive.

Ladies' Comfort Shoe

Sizes 3 to 8
Order No. 233



$2.19 Plus postage on arrival

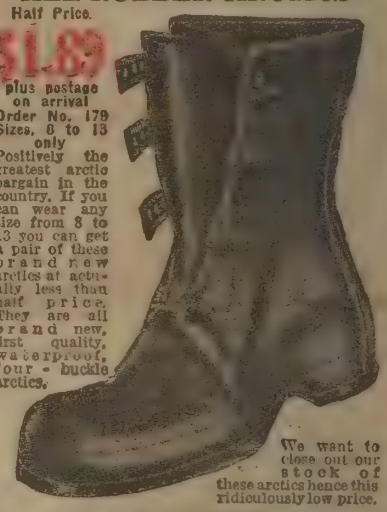
Made of fine, soft kid-finished leather with rubber heel and flexible soles. Many women with foot trouble have found instant relief in these shoes. Don't send one penny. Just pay when the shoes arrive. Your money back at once if not satisfied.

ALL-RUBBER ARCTICS

Half Price.

$1.89 plus postage on arrival

Order No. 179
Sizes, 8 to 13 only



Positively the greatest arctic bargain in the country. If you can wear any size from 8 to 13 you can get a pair of these brand new arctics at actually less than half price. They are all brand new, first quality, waterproof, four-buckle arctics.

We want to close out our stock of these arctics hence this ridiculously low price.

Ladies' Ball Strap Model



Dark Brown Color

$2.98 Plus postage on arrival

Sizes 2½ to 8
Order No. 277

The very latest style, ladies' ball-strap with medallion tip in a rich dark brown shade. Very popular in the cities where these styles sell for from $6 to $8. Made of durable upper stock and has natural finish sole which insures the greatest wear.

Order a pair at our risk. We will gladly refund your money if you are not more than pleased with this graceful and stylish model.

BALL STRAP OXFORD



$2.98 plus postage on arrival

Order No. 1208
Sizes 2½ to 8

The very latest and most attractive style in lowcuts offered this year. A beautiful Havana brown color in ball strap design, medallion tip and rubber heel. A startling value at $2.98.

Ladies' Plain Toe Comfort Shoe



$1.98 Plus Postage on arrival

NO. 263 SIZES 4 TO 8

A real old time comfort shoe at a real old time price. Comfortable long wearing upper stock and flexible soles made to stand heavy wear. Worth $4.00. Don't hesitate to buy several pairs at $1.98.

LADIES' JULIET

SIZES 3 TO 8 Order No. 239



$1.98 Plus Postage on arrival

Ladies' fine kid-finished house shoes with rubber heels and flexible soles. Don't fail to get in on this big bargain at only $1.98. Your money back if not satisfied.

SATISFACTION GUARANTEED! We don't want our customers to risk one cent. Send us your order without a penny in advance. Pay postman when the shoes arrive. Then if not satisfied after examination you may return them and get back every cent including postage. Order at once! Bargains like these won't last long.

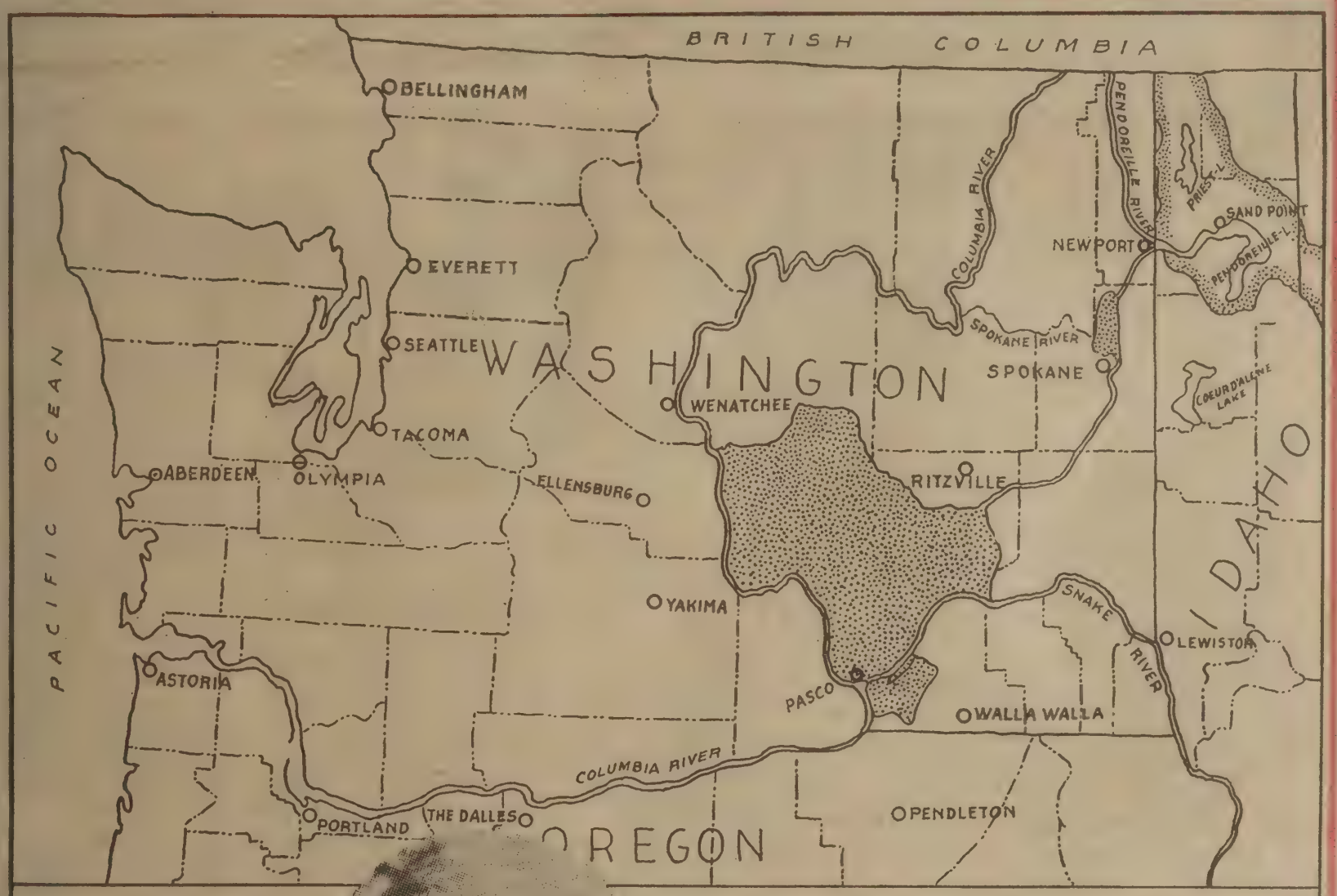
GORDON BATES SHOE CO.

DEPARTMENT NT, MINNEAPOLIS, MINN.

THE WASHINGTON FARMER

ESTABLISHED 1894

SPOKANE. SEATTLE.





Gen. George W. Goethals

GENERAL GOETHALS built the Panama canal. He is an engineer of international reputation. He arrives in Washington this week to make a personal survey of the proposed Columbia basin irrigation project and report upon its feasibility.

The shaded portion of the Big Bend section in the above map indicates the area to be irrigated. The Pend Oreille river is the proposed source of water supply. The line of the canal as suggested is shown from near Newport to the now arid area.

(See page 4x)

Pacific Northwest Sees Prosperous Times Returning—Page 3

Nowhere Else Such Bargains

Prove It At Our Risk



TIRES

Going at **Smashed Prices**
30x3 size,
Now Only
$5.99

Heavy nonskid tires of live rubber, generously oversize, 6000 miles guaranteed, but often give 8000 to 10,000. We will apply credit on purchase of a new tire for mileage less than 6000 that you get from any tire selected. The world's greatest bargains in tires—30x3 size in ribbed tread. Others are nonskid. Pay only the bargain list price and postage on arrival.

Bargain Price List

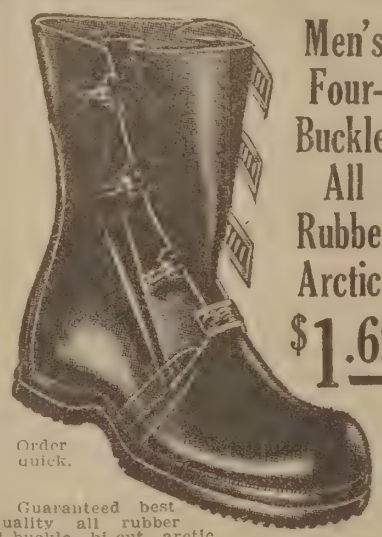
No. 52D40—30x3 ..... $5.99
No. 52D41—30x3½ $7.49

Guaranteed Inner Tubes

Now is your chance to buy extra thick, live rubber inner tubes at a big saving. Don't wait for tube prices to go up. How many shall we send? Give size wanted. No money now. Pay only bargain price and postage on arrival.

Bargain Price List

No. 52D20—30x3 ..... $1.29
No. 52D21—30x3½ $1.39



Men's Four-Buckle All Rubber Arctics

$1.69

Order quick.

Guaranteed best quality all rubber 4-buckle hi-cut arctic for men. Made with double thick soles and seams reinforced. Snow-excluding tongue. Furnished in men's sizes, 7 to 12. Wide widths. Sensational value. Send quick. Order by No. 52A990. Send no money. Pay $1.69 and postage on arrival. State size.

Men's Storm Boots

$3.98



Wonderful 11-in. hi-cut storm boots of soft brown cowhide leather, absolutely barnyard proof. Solid leather, double chrome outsoles, sewed and nailed, solid leather insoles; durable counters; dirt-excluding bellows tongues. Sewed throughout with heavy waxed linen thread. Sizes 6 to 12. Wide widths. Order by No. 52A770. Send no money. Pay $3.98 and postage on arrival. State size.

Similar style boys' brown calf boots, double oak soles, sewed and nailed; bellows tongue. Order big boys' sizes, 1 to 6, by No. 52A570. Price $2.79. Order small boys' sizes, 9 to 13½, by No. 52A571. Price $2.39. State size.

Send No Money With Order

These shattered prices on stylish, up-to-the minute merchandise will convince you once and for all that Sharood's is the place to shop if you want to save money. We will guarantee to save you big money on anything you select from this advertisement. Let us prove it **at our sole risk.** Select anything—everything you need and we will send the goods for your inspection and approval. You can be the judge right in your own home, and if not satisfied for any reason at all, return them and you will not lose a penny.

Pay When Goods Arrive

Remember, you do not send one penny with order. Pick your bargains quick. **Just send letter or postcard giving name, address and number of each article you want. Also be sure to state sizes and write plainly to avoid delay.** Pay nothing till goods arrive—then only the amazing bargain price and postage. Then thoroughly examine your selections. If not satisfied, return the goods and we refund your money promptly. Order what you want direct from this advertisement.

SHAROOD CO., Dept. 52 Minneapolis, Minn.

Strong Comfort Work Shoe *for* Men

$1.99



State Size

Order your pair while this barg'n offer lasts

Wonderful work shoe for men. Has soft, strong uppers that resist barnyard acids. Solid leather insoles. All seams stitched with waxed thread. Strong leather soles. Wide widths. Sizes 6 to 11. Order by No. 52A758. Send no money. Pay $1.99 and postage on arrival. Order boys' sizes, 1 to 5½ by No. 52A554. Price $1.98. Order little gents' sizes 9 to 13½ by No. 52A555. Price $1.79 and postage on arrival. Mention size.

Children's Plush Trimmed Coat Bargain



Yes, a bargain—a startling value in warm winter coat for little girls. We have smashed the price to absolute rock bottom and urge you to send for yours quickly. Don't put it off—don't risk disappointment. Stocks limited.

$2.98

Beautiful belted model of a heavy material in attractive green mixture. Very serviceably lined. Collar and pockets trimmed with rich plush. All around self material belt. Convertible collar. Sizes 2 to 6. Order by No. 52E1744. Send no money. Pay $2.98 and postage on arrival. Money back if not satisfied. State size wanted.



Serviceable silver gray fancy bordered blankets of selected wool-finished cotton, closely woven. 3 popular sizes. 60x76-inch, No. 52B1750, price per pair, $1.59. 64x80-inch, No. 52B1751, price per pair, $1.69. 66x80-inch, No. 52B1754. Price, per pair, $1.79. Send no money. Pay bargain price and postage on arrival.

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100 per cent All Wool Plaid Blanket. Beautiful blue and white pattern. Size 66x80 inches. Weight 4½ lbs. per pair. Order by No. 52B1757. Pay $5.98 and postage on arrival. Money back if not satisfied.

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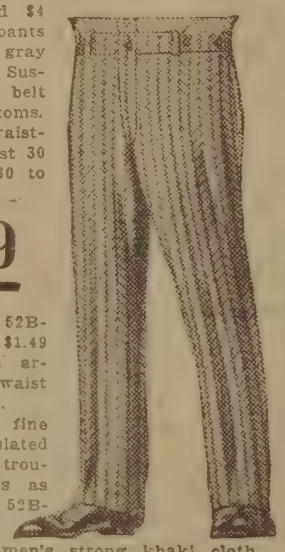
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$2.49

Give Size.

Order by No. 52A949. Send no money. Pay $2.49 and postage on arrival. State size wanted. Order similar style in knee boot, sizes 7 to 12, by No. 52A950. Send no money. Pay $2.49 and postage on arrival.

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$2.39 Up

Give size.

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Give Size

Most popular color men's dress shoe for spring. Dark mahogany brown Russian calf—new brogue style, with full vamp (not cut off) and fancy perforations on tip and vamp, as pictured. Extension Goodyear sewed soles, pure gum rubber heels; leather insoles. Sizes 6 to 11. Wide widths. Order by No. 52A635. Pay $3.98 and postage on arrival.

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THE WASHINGTON FARMER

SUCCESSOR TO

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For Good Farming, Attractive Country Homes and Happy Country People

Pacific Northwest Is Favored

Farmers Wipe Slate and Are Looking Forward With Increased Courage

Charles Hebberd of Spokane, who was food administrator for the state of Washington under Hoover during the war, spoke hopefully of the future of agriculture in the Pacific northwest in a recent address. Mr. Hebberd directed attention to the cheering fact that unusual rainfall and snowfall throughout the Inland Empire give promise of large crops in 1922. Production costs on the farm, he pointed out, have been brought back approximately to the pre-war basis, so that with abundant crops the farmer in the fall of 1922 will face a very different situation from that which he faced in the autumn of 1921.

Mr. Hebberd said that normally the Inland Empire of the Pacific northwest, which takes in parts of Washington, Oregon, Idaho and Montana, produces one-twelfth of the wheat crop of the United States. Last year it produced one-ninth.

Ordinarily the state of Washington produces one-seventh of the commercial apple crop of the United States. In 1921 it produced one-third of the crop.

In this region of the Inland Empire the average grain yield is 36 per cent higher than the national average. The average hay yield is 52 per cent higher, and the average potato yield is 49 per cent above the national average.

Mr. Hebberd also touched upon the diversity of resources of this region, which increases the home market for farm products. He said that in this Inland Empire are 200 producing mines and 800 sawmills. The Pacific northwest has one-half of the nation's remaining timber and one-fifth of its potential water power.

THE FARMER is glad to present this optimistic picture of the coming year and of the future of agriculture in the Pacific northwest. The farmer who owns a piece of good land in this favored region is fortunate, we believe, above his fellow-farmers in other parts of the country.

In fact, the farmers of the Pacific northwest have come through the severe trial of readjustment of prices in more fortunate circumstances than the farmers of any other region in the United States. The wheat growers have been much more fortunate than the corn growers of the middle west or the cotton growers of the south.

Here in the Pacific northwest we had a fine fruit yield in 1921, when the fruit crop of the rest of the country was cut down by frost and other adverse conditions. Another cheering fact is the surprisingly quick recovery of the wool market and the sheep industry. All things considered, the outlook for the farmers of the Pacific northwest is bright for 1922.

From the foregoing it is seen that large yields are now indicated for the Pacific northwest in 1922. At the same time the indications are favorable for a continuing heavy foreign demand for the surplus food products of the United States.

The need for our foodstuffs in European countries reaches many millions of tons, report G. F. Warren and W. F. Callander of the United States department of agriculture, recently returned from the study of agricultural and market conditions in Europe. Germany alone will require 2,000,000 tons of imported foods before the next harvest. Czechoslovakia, Austria, Italy and France are also looking to America for huge quantities to supplement their own supplies.

The severe drought that occurred in Europe last spring damaged pastures and fodder crops to such an extent that in some countries live stock was sold off as a result. Such sales tended further to depress the meat markets. The drought also delayed the planting of winter wheat until the late rains came. The area seeded was reduced and in much of Europe the sowing was done after the best date for seeding, so that the crop next year will be injured unless the winter is very favorable.

Although the production of wheat and rye in Europe in 1921 was much above 1920, a large amount of grain must be imported before the next harvest. The consumption of the new crop began about a month earlier than usual; the fodder, root and potato crops are smaller than usual; the condition of the fall-sown crop of wheat and rye is not satisfactory, so that the farmers are inclined to hold over some of this year's crop.

The wheat crop in the British Isles this year was large, but reports state that most of it has been consumed. Probably imports will continue at nearly the usual rate.

The German needs for the remainder of the year were given on November 1 as approximately 2,000,000 tons. Very little has since been imported.

On December 1 the needs of Czechoslovakia were stated by officials to be 250,000 tons.

Austria is importing and will need to import 50,000 tons of grain a month for the balance of the year.

The needs of France will be dependent on the amount held by farmers, but probably an importation of 500,000 tons will be required.

It is stated that Italy will need about 1,000,000 tons in addition to her own crop in order to furnish a normal supply to her people.

The United kingdom and Holland have been heavy importers of corn during the year and will probably continue to import.

If the results of the national farm conference in Washington, D. C., makes headway in promoting price leveling and price stabilization for farm products, then the outlook for large yields and the forecast of European needs, will give the basis for regarding the future with even a larger degree of optimism.

Wheat Growers Look Forward

Confidence and Determination Are Expressed at Convention

"If we can imagine ourselves 20 years from today looking back at the difficulties now encountered by the farmers we would realize, I believe, that these very difficult times are a powerful incentive to progress, and that as a result of them, agriculture became more efficient, acquired universal recognition and became more firmly established and more attractive than at any other period in the history of our country."

The foregoing is a statement typical of the spirit that prevailed at the recent annual convention of the Washington Grain Growers, Millers and Shippers' association at Spokane. It is from the address of Dean Edward C. Johnson of the college of agriculture of the state college. Kindred sentiments were expressed by President Alfred Atkinson of the Montana Agricultural college, by Governor D. W. Davis of Idaho, by Professor George Severance of the State College of Washington and by others on the varied program.

The convention was held in Spokane for the first time this year, the previous 14 annual sessions having been held in Pullman, the home of the college. Many expressions of regret that the college was not again host were heard, but the convention was declared to be one of the most successful yet held. The next session will be held in Spokane.

Officers chosen for the coming year are as follows:

Robert McCroskey Jr., Garfield, president.

Harvey Burns, Reardan, vice president.

Professor E. G. Schafer, Pullman, secretary-treasurer.

Executive committee: W. J. Jordon, Lewiston; Dan Fisher, Spokane; Walter J. Robinson, Pomeroy and Spokane; B. B. Gillispie, Ritzville.

Dean Johnson, outgoing president, in his address reviewed the history of the agricultural industry with special discussion of present conditions. His conclusion was a statement of confidence and a challenge to those who farm:

"There has been great progress in the agriculture of this country," he said, "a progress which, though handicapped by an occasional setback, is still going on. Many problems are yet unsolved, but there are many workers. The attention of the nation in a large measure is directed to them. Out of it all should come a more efficient agriculture, better conditions for the agricultural industry as a whole, greater opportunities for those engaged in working on the land and the highest type of citizenship in the homes of the open country, a citizenship which is, after all, the backbone of our civilization."

Must Face the Condition.

President Atkinson's message to the farmers and to the people as a whole was to face the conditions that exist and take hold of the task before them with a determination to restore normal industrial and civil life. "Agriculture," he said, "has always suffered following war. Europe, after her many wars, can better understand that than we. The war has diminished the world's wealth by $300,000,000,000, or an amount equal to all created wealth of the United States. We are not going to have the former conditions back in all their aspects until we can build up again that destroyed wealth."

He reminded his audience that with our boys in the trenches we did not do so much thinking about the cost of what they need as about getting the things delivered. For the extravagances of those days some one must pay.

He emphasized Secretary Wallace's analysis of the present agricultural difficulties, as due to four causes. They were: (1) Conditions prevailing in foreign trade; (2) high freight rates and the present long and short haul adjustments; (3) surplus production and carry-over from large crops, the results of agricultural momentum attained under war conditions, and (4) unemployment, decreased consumption.

J. K. McCornack, president of the Union Securities company of Spokane, declared that the producer's need is better prices rather than more credit. "No one can borrow himself out of debt," he said. "The wheat grower has now so far taxed his credit that the banks are with difficulty seeing him through, but if the farmers go to the wall the banker goes with them." Bankers should fearlessly advise against assuming too heavy obligations, even for land purchase, and should refuse to handle notes given in purchase of worthless stocks or questionable investments. The wheat growers' obligations run in high figures today, said Mr. McCornack, and what one expects or hopes to raise next year and the next is not first-class collateral. Banks must select the best risks. When farmers avoid debt they are the most independent class of men, but they are not safe until they set up a cash reserve or carefully conserve their credit for emergency. We realize, he said, that recent cost of production has been above the ruling prices for the farm's commodities, and the banker should do all he safely can to take care of prodcuers' needs and the producers all they can to get back to a safe basis of operation.

F. C. Forrest of the First National Bank of Pullman discussed the services of the war finance corporation to the producer.

W. B. Armstrong of Yakima, president of the state farm bureau, expressed the opinion that we are on the threshold of an entirely new agricultural era. Never, he said, had such numbers and powers been organized in the same way as through the farm bureau.

Speaking of the agricultural bloc in congress, he said: "The agricultural bloc is not functioning merely in the selfish interests of the farmer. It was not even an organized bloc until organized opposition was met. But we have, in the farm bureau and the agrarian bloc a system entirely different from any we have had before. The farm bureau had its trained departmental heads at Washington. Senator Smoot, the principal proponent of the sales tax, was haled before it, and admitted upon cross-examination that there was no possibility of the farmer's passing on the sales tax. Farm bureau research found that the farmer is the buyer of some 70 per cent of the nation's domestically consumed goods; that the farming population comprised 30 per cent of the nation. And the farm bureau said, "30 per cent of the people are not going to pay 70 per cent of this sales tax."

William T. Harshman, a milling chemist of Spokane, presented some of the aspects of different varieties of wheat

(Continued on page twenty-six.)

Conference at Washington

The five-day agricultural conference held in Washington, D. C., last week, accepted as a basis upon which solution of the agricultural problem must be found the fact that there must be a leveling as between the prices the farmer gets for his products and the prices he must pay for the things he uses.

The conference adopted a number of recommendations which will go before President Harding, Secretary Wallace, the war finance corporation, the federal reserve board, congress and other governmental agencies for action.

The conference went on record as favoring any necessary amendment to the federal reserve act and to the farm land bank act to provide for agriculture short-time credit of from six months to three years, secured by warehouse receipts and other commodity guarantees.

It is also recommended that the war finance corporation be continued, with authority to advance money for agricultural purposes until such time as more adequate means of finance is brought about. Other recommendations of the conference are as follows:

The repeal of the 6 per cent earning guarantee clause of the transportation act.

Acceptance by the government of Henry Ford's offer to lease and to develop the Muscle Shoals power and the nitrate plants.

Reduction in railroad wages and freight rates.

The development of the so-called St.

(Continued on page twenty-four.)

Beef Cattle Business Looks Up

About four or five months ago, when the live stock business was at about its lowest ebb, Frank M. Rothrock of Spokane, who has buffeted the storms and sailed the smooth seas of the live stock business in the Pacific northwest for 25 or 30 years, looked into the future and saw promise of better times. In a published article last September he said: "It seems to me we are around the corner and that the future holds out promise to us. We are engaged in a business the fundamental and essential character of which can not be challenged. It is one worthy of our best efforts, one which has been remunerative in the past and will be sufficiently remunerative in the future."

The behavior of the live stock markets during the last few weeks further convinces Mr. Rothrock that he was right at that time.

"Since that article was written," he said last week, "the price of hay has descended to almost the lowest levels ever known, as there was inadequate live stock in the country through which to market it. Coincident with this drop in the price of hay and other feed, the price of cattle has steadily increased. At the time I wrote the article referred to prime steers were worth from 4 1-2 to 5 1-2 cents on the Spokane market. Today the same steers would bring 7 1-2 cents. Six cents is now frequently paid for good beef cows. The scarcity of stocker cattle makes it difficult to purchase them. The great, unoccupied grass ranges must and will be restocked, and as that process is in course of completion cattle prices are bound to improve. The cattle business is now in a situation diametrically opposed to that of the fall of 1919. Then, cattle were high, feed was high and money was plentiful. The temptation to plunge could not be resisted by many; then men bought cattle and fed them to find that by the time they were ready for market the money situation had tightened, factories had shut down, the bottom had dropped out of the beef market and the operation had cost them a tremendous lot of money.

"Now we have passed through the financial crisis. Money is again getting easy and obtainable for use by people whose credit is good. Cattle prices have gone down below prewar levels and feeds are cheaper than at almost any time within my memory. Therefore, one may start in the cattle business now with the absolute assurance that things can not get worse and that any change of condition must be for the better and will make for the man in the business a profit."

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A Frank Admission

Following the recent raise in the price of retail milk in Spokane from 10 to 13 cents, which resulted from a compromise between the Inland Empire Dairy Producers' association and the leading distributors of Spokane, the head of one of the distributing companies was quoted as making the following striking utterance:

"The price of milk to the consumer does not affect the distributor one way or the other, but does vitally affect the producer. If the consumer pays less, the farmer receives less and is the one who suffers."

In a general way this is a fact well recognized by the milk producers of the country. It is seldom, however, that a representative of the distributing companies makes openly such admission of the one-sidedness of the milk marketing business. It is a frank declaration that the producers under existing conditions, or under conditions as they have existed during the past, have no voice whatever in the making of the price on their product. They have taken what the distributors offered and in turn the consumers have paid what the distributors asked.

It is only since the milk producers have begun to organize that they have had the slightest influence in the fixing of the prices paid them.

It is interesting to note one inaccuracy, however, in the statement of the distributor quoted. In this particular instance the Inland Empire Dairy Producers' association has succeeded in securing a price of 30 cents per hundred pounds, or thereabout, higher than the price that was being paid at the time the association equipped and started its by-products plant in Spokane. At that time the price of milk to the consumer was the same as it is today.

The time is not far distant when there will be a more equitable relation between the price of milk to the consumer and that paid to the producer. Producers' associations based on sound principles and wisely managed will be the agency through which this betterment will come about.

When the Blood Thickens

The tendency of civilized man is toward taking less exercise in winter than in summer. With the improvident savage it is just the other way. He must go farther in winter for his food, look for it more indefatigably and exert himself more to obtain fuel; and of both he consumes far greater quantities in the winter season. So, he keeps himself in hardihood at the time when the blood's thickness would otherwise render circulation sluggish, and at the time when it is most essential to physical welfare that circulation be vigorous.

Civilized man stores his fuel and food. His activities are far-sighted and periodical, economy of effort distributing them seasonally. By far the greater portion of the energies devoted to food production and to the creation of raw materials for fabric is expended in summer. Thus, when he is consuming, in winter, quantities of food to keep up the body's warmth, he is using the body's energies least of all. It is especially true among agricultural people, with whom the strenuousness of sowing and harvesting and food-preserving tends to be followed by a prolonged season when activity is to some extent optional.

Thus civilized man lays the foundations of so many of his blood troubles, stomach troubles and, in inevitable consequence, troubles with his disposition.

One means of offsetting this unbalance of activity is the performing of the utmost possible share of home improvement in the winter months, so far as weather will not interfere with them. So, we show ourselves yet more foresighted, more regardful of economized effort—an evidence of a still higher civilization. There is a room upstairs to be papered, perhaps, a cabinet to build, stationary tubs to install, fuel to split for the months far ahead, even if the temperature does interfere with such work as plastering or piping. There are supplies that can be estimated in quantity and purchased now at less cost of money and delay than in the season when all clamor for them. There are little handy devices and little adorning touches that will never occur to us during the outdoor season, and which, did they occur to us, there would not be time to effect.

Winter is not, in fact, the dull season in the farm home, but the time for renewing, brightening, beautifying it and improving its value. The little changes will have a marked, refreshing effect upon our inward life at this season.

"Get-Together" Meetings on Farm

Large business firms are obtaining excellent results from their "get-together" meetings, where employers and employees talk business matters over, and become better acquainted. Sometimes these meetings are in the form of banquets, after which speeches are made concerning plans and methods followed by other firms, and new ideas that would possibly help in the efficiency of the plant. Many of the larger manufacturing companies have gone to considerable trouble and expense to erect community halls for a meeting place, and the employees are encouraged to gather from time to time and discuss plans which they want to bring before their employers.

We once knew a farmer, who, by the way, has proved eminently successful in the live stock world, who followed much the same plan with the group of young men whom he employed on his farm. Frequently he would take long walks about the premises after supper. Before starting he would invite some of the "boys" to accompany him, and always his invitation met with a ready response from two or three of them, even though a hard day's work had gone before. The trip was always a valuable one, since the crops, pastures and live stock which they passed were freely discussed and criticized by both the owner and the younger men.

"Now, what would you do with a stand of clover like that?" the proprietor might question, and such good spirit existed between himself and the boys that they did not hesitate to give their opinion freely. Although the suggestions were not always applied the discussion was invaluable to all the parties, and resulted in splendid cooperation about the farm. One of these same "boys" now in business for himself was heard to remark recently that he believed these walks were of more value to him than were some of his classes in college.

Teaches Farm Repairing

One of the things that every young man who attends the state college can learn is to repair farm machinery and other farm equipment. A regular farm repair course is offered. Valuable help along this line can also be received during the winter short courses.

State Farm News

Lewis county's productive income for farms in 1921 totaled $4,630,302, according to an estimate compiled by A. G. Fowler, county agent. The estimate shows the rapid growth of the poultry industry in the county, receipts for which this year total $1,286,000. The receipts of the dairy industry are estimated at $1,298,600, and of cereals, $1,575,600.

Beef cattle, 400 head, $20,000; sheep, 800 head, $4800; wool, 18,200 pounds, $2002; swine, 4000 head, $64,000. Total, $90,802.

Poultry—Eggs produced, 3,500,000 dozen, $1,260,000; poultry sold, 40,000 birds, $26,000. Total, $1,286,000.

Cereals—Oats, 840,000 bushels, $52,000; wheat, 168,000 bushels, $142,800; hay, 72,000 tons, $1,080,000. Total, $1,575,600.

Root crops—Potatoes, 220,000 bushels, $176,000; other root crops and vegetables, $30,000. Total, $206,000.

Fruits—Strawberries, 10,000 crates, $17,500; other berries, 1,200,000 pounds, $60,000; apples, 115,000 bushels, $69,000; prunes, plums and cherries, $12,800. Total, $159,300.

Honey, $14,000.

* * *

Long Beach, the little Pacific county town which won the silver cup for the best community fair in the county during 1921, is going out after the 1922 cup.

* * *

Pomona grange met at Willapa recently and elected the following Pacific county residents to office: Noel Campbell, master; E. W. Lilly, overseer; May Lilly, lecturer; Wendell Holm, steward; W. W. Moffit, assistant steward; Walter Jennings, chaplain; W. C. Habersetzer, treasurer; Mrs. M. F. Glenn, secretary; J. R. Beck, county agent, gatekeeper; Mrs. Gus Bues, Ceres; Mrs. W. W. Campbell, Flora; Mrs. J. W. Timmen, Pomona; Mrs. Charles Gehrman, lady assistant steward; A. Lundquist, E. S. Heckard and Oscar Oman, executive committee.

* * *

A special week of training in live stock and other educational lines next June at the Washington State college is planned for the boys and girls of Washington by Dr. S. B. Nelson, extension work director.

* * *

An agricultural council for Grays Harbor county, representing nine farm districts and the commercial organizations of Aberdeen, Hoquiam, Montesano, Elma and Westport, was organized January 12. W. C. Mumaw of Aberdeen was elected president of the council and W. J. Wharton of Satsop vice president. One committee was appointed to outline a county agricultural program for presentation at the next meeting of the council and another was named to confer with commercial organizations of the harbor on formation of a county development council of larger crops.

* * *

A petition for a permit to graze 67 head of buffalo on the Rainier national forest was asked of G. F. Allen, forest supervisor, by Gibson brothers recently. This is the first application of its kind and will establish a precedent. Since there is nothing in the regulations covering fees for buffalo, Mr. Allen has decided to refer the application to Chief Forester W. B. Greeley.

* * *

First steps in the formation of a $30,000 Holstein stock club were taken at a massmeeting in Montesano January 12, when business men of Montesano met with dairymen from all parts of the county.

The plan under consideration is one that was originated in Pettis county, Missouri. Shares of small denominations are to be sold to make it possible for the company to bear two-thirds of the cost of the purchase of a pure-bred Holstein cow.

* * *

Federal farm loans in Benton county during the last year have totaled $103,000, according to W. S. Jenkins of the Benton County Abstract and Title company. Mr. Jenkins also states that approximately $60,000 more in loans have been approved and are on the way. The majority of these loans have been in the west end of the county.

* * *

Mrs. Charles Davis of Parker found turkey raising profitable this season, selling 24 birds for $104.45. All the birds were raised from a single hen. Out of 38 eggs laid by the original hen, 33 turkeys were matured during the season, 24 being sold, eight held over for breeding stock and one furnishing a Thanksgiving dinner. The birds averaged more than 11 pounds dressed.

* * *

John C. Lawrence has assumed the management of the Winlock branch of the Washington Cooperative Egg and Poultry association, succeeding H. R. Duffy, resigned. During the last year Mr. Lawrence has been manager of the feed department of the Puyallup and Sumner cannery.

* * *

An enlarged plant, capable of taking care of the strawberries and other soft fruits and tomatoes grown near Oroville next summer is the plan of the Oroville Canning company. Officers elected at a recent meeting are F. V. Covert, president; J. L. Masters, vice president; C. M. Zediker, secretary.

* * *

Hollanders will eat 250,000 pounds of Clarke county prunes, which were sold early in January in that country by the Washington Prune Growers' association of Vancouver, according to M. J. Newhouse, local manager. This is the first foreign shipment of prunes made from Vancouver since before the war. More than 50 per cent of the Clarke county crop for 1921 has now been sold.

* * *

Land will be cleared and buildings erected next spring on the 5000-acre tract recently purchased by Miller Brothers of Oklahoma on Axford prairie. One of the Miller brothers was here recently arranging for improvement of the land so that cattle might be put on it next year. The cattle will be brought from Oklahoma and Texas, where the Millers own ranches.

* * *

Newly elected officers of Lewis county Pomona grange are as follows: Frank O. Miller, master; T. K. Belcher, overseer; C. W. Frase, lecturer; Mrs. C. Null, chaplain; O. C. Wisner, steward; L. Griel, assistant steward; Mrs. Groshong, secretary; W. Foster, gatekeeper. The next Pomona meeting will be held at Silver Creek February 4.

FARM BUSINESS AND MARKETS OUTLOOK

Since the first of the year cattle receipts at the seven leading markets have fallen 17 per cent below the seven-year average for the season; however, the market has shown only brief periods of strength.

Available supply of stockers and feeders has been absorbed with little change in price levels from week to week.

With two-thirds of the winter hog packing season from November 1 to March 1 behind it, the hog market has averaged about $1 higher than was generally expected.

Lamb prices are at the highest level since November, 1920.

Receipts of horses, as well as mules, at the leading markets have shown a decided increase since the first of the year.

Prices upon medium and low grades of wool have advanced 35 to 50 per cent and upon fine wool, 20 to 25 per cent since September.

During the last 30 days export demand for wheat has been confined almost entirely to Canadian and Argentine grain.

Corn prices are holding within narrow limits.

The oats market has been dull, but prices have gained slightly upon corn.

While declines in the egg market are in prospect wide margins will prevail between country buying prices and prices in central markets.

PRICES STILL OUT OF JOINT

Farmers are still carrying their share of the load with an extremely short end of the stick. Wholesale prices upon farm products during December were only 13 per cent higher than in 1913, according to the index numbers compiled by the bureau of labor statistics. This equals the former low point of recent months reached last June. The general average of all commodities is 49 per cent higher than the pre-war level. The following table shows how much more severe the process of deflation has been in farm products than in most other commodities.

	Per cent by which December, 1921, prices exceed 1913 level.	Percentage lost of maximum advance over 1913 level
Farm products	13	91
Food, etc.	39	79
Cloths and clothing	85	67
Fuel and lighting	87	53
Metals and metal products	19	80
Building materials	103	57
Chemicals and drugs	61	50
Housefurnishing goods	118	56
Miscellaneous	48	67
All commodities	49	72

When prices upon farm products were at the peak in the spring of 1920, they were 146 per cent higher than in 1913, so that 91 per cent of the maximum advance during the war inflation has been lost. On the other hand, fuel and lighting were 184 per cent higher than in 1913, when they were at the maximum. Only 53 per cent of this inflation has been lost. Chemicals and drugs have lost only 50 per cent of their inflation, house furnishings 56 per cent and building materials 57 per cent.

Based on the record above, farm products when used to purchase cloths and clothing or fuel and lighting at wholesale would buy in December only 61 per cent as much as in 1913; 95 per cent as much of metals and metal products; 59 per cent as much lumber and building materials; 74 per cent as much chemicals and drugs, and 55 per cent as much housefurnishing goods. Since retail prices have declined less than wholesale, and since the farmer sells at wholesale and buys at retail, his actual disadvantage is worse than these figures show. Eventually these prices must be readjusted.

BETTER DAYS COMING.

There is a silver lining in the cloud, however. Although only a part of the decline in wholesale prices of farm products has been passed on to the ultimate consumer, enough of it has reached him to stimulate consumption in spite of a large amount of unemployment. This is particularly true of pork, eggs, butter and flour. In a lesser degree, it is true of other products of the farm.

Big stocks of cotton and woolen goods with which commercial channels were choked 18 months ago, have passed into consumption. Present and future needs must be supplied by current production so that mills will be kept busy giving employment to their workers and making steady drafts upon stocks of raw materials.

Low prices of food and raw material eventually attract the attention of consumers and manufacturers all over the world. Huge purchases of foodstuffs in the United States in the last year by European countries show how bargains bring the crowds. Exports of wheat and flour for the 1921 calendar year amounted to 356,000,000 bushels, a new record. Lard exports also were the largest ever known. Corn exports increased more than 500 per cent over 1920 and were the largest in many years. Exports of hog meats, cotton, rice and barley were above the average. Notwithstanding heavy buying by Europe of agricultural products, her purchases of manufactured goods were decreasing.

It appears more and more evident that reports of liberal bread crops in Europe in 1921, which helped to depress our wheat and rye prices last fall, were exaggerated and that it will be necessary to keep the food ships moving in that direction from the surplus countries right along. All of which means that the farmer's market is broadening and that presently the world will begin to pay for his products what it costs to produce them.

FEWER CATTLE NEEDED

Either a lighter supply from week to week or restoration of normal beef consumption as a result of lower retail margins and increased employment is the prime need of the cattle market. Since the first of the year receipts at the seven leading markets have fallen 17 per cent below the seven-year average for the season, but with the appetite for beef curtailed possibly 20 per cent, the market has shown only brief periods of strength.

Although beef may become more popular with the public by spring, there is little hope of a pronounced change in that way. But a lighter supply of cattle is "normalcy" for the spring months and relief from the present state of near-congestion depends upon this seasonal occurrence.

No fears are anticipated of an increase in supply, barring an occasioal day or two, and beef consumption should hold its own so that prices are not expected to trend downward from this level.

Shortfed steers are in the majority. Heavy steers have gone to a premium owing to extreme scarcity. Prime yearlings are not available. Good yearlings are not commanding special attention as they can be counterfeited with light shortfed steers.

FLESHY FEEDERS LOOK LIKE BARGAINS.

Notwithstanding the uneven, faltering behavior of the fat cattle market, the available supply of stockers and feeders has been absorbed with little change in price levels from week to week. The relative cheapness of shortfeds is drawing attention in that direction so that some of them are returning to the country for further feeding, but the majority of outbound shipments are light steers showing good breeding.

In the grazing sections pasture men are nursing their wounds of the last two years. No Kansas pasture contracts have been made so far as known, but the supply of suitable steers is believed to be light, so that no bargains in thin cattle are in sight. Much depends upon the weather in the southwest, where the drought is not yet broken. Efforts to increase dairy production instead of restoring beef herds are conspicuous in many sections west of the Missouri, as butter making has been profitable, but the momentum in that direction may spend itself soon, as the butter market already has a big load.

HOG MARKET A PROSPEROUS AFFAIR.

With two-thirds of the winter hog packing season, from November 1 to March 1, behind it, the hog market has averaged about $1 higher than was generally expected. Shipping demand, which sprang up much earlier than usual, has been a stout prop right along, big packers have had their share of fresh pork orders to fill, export clearances have held up and are running ahead of those of last year and this far no accumulation of hog product and lard of consequence has taken place.

Cold storage holdings of lard for the entire country increased only 4,700,000 pounds in December, against an increase of nearly 23,000,000 pounds in that month a year ago. The increase in frozen and cured hog meats, including those in process of cure, was only half as large as in December, 1920.

LAMB SPURT NOT EXHAUSTED.

Although the lamb market has had a top-heavy appearance for some time, prices have continued to advance during most of January, with only slight interruptions. Thus far receipts for the month of January at seven markets have fallen 12 per cent below the average for the corresponding period. Consumers have not yet balked at paying the fancy price which dressed lamb is demanding, as compared with other meats. Most of the Coloradoes went into feedlots late in the season and were of light weight when purchased, so that the movement from Colorado will be light for several weeks yet. Prices are at the highest level since November, 1920.

BETTER HORSE MARKET IN PROSPECT.

Receipts of horses as well as of mules at the leading markets have shown a decided increase since the first of the year. The eastern farm chunk demand is gaining breadth and most of the supply has been cleared without difficulty, although the Chicago market has been weak for 10 days. Most of the 1300 to 1600 pound chunks are moving at a range of $125 to $200. City users of heavy drafters are taking few, so that this division of the trade shows less activity.

Mule markets, which have been sluggish for months, have returned to life. A large number of mules are moving toward the south via the St. Louis and Kansas City gateways, although prices are not comparable with those of two years ago.

With the farm chunk season and the period when southern trade usually is brisk both at hand, both horse and mule markets should improve and an advance of 10 per cent in values would not be surprising.

WOOL SCARCITY LIFTS PRICES.

Wool stocks throughout the country, as shown by the Commercial Bulletin of Boston, were 113,000,000 pounds, compared wih 276,000,000 pounds a year ago. Prices reached low point early last fall, when business pessimism was rife, wool stocks were apparently large and there was prospect of an early enactment of the permanent tariff with a low duty upon wool. Prices upon medium and low grades have advanced 35 to 50 per cent and upon fine wools 20 to 25 per cent since September. Most of the foreign wools are obliged to pay a duty of 30 cents per pound in the grease and passage of the permanent tariff is still some distance away. Further advances in values occurred last week, both in this country and abroad. Americans have been buying at London and in South America. Some western growers have contracted wool at 21 to 23 cents on the sheep's back, but most of them are holding for 25 to 30 cents, with a prospect that prices may rise to 40 cents for some of the best clips.

SMALL WHEAT RESERVES REPORTED

Since no official report upon farm reserves on January 1 is to be issued, a private report showing only 140,000,000 bushels on January 15 has attracted great attention. Subtracting spring wheat seed and farm consumption during the rest of the year, the farm surplus, if the report is correct, is not more than 110,000,000 bushels. Last year the government estimate showed 208,000,000 bushels on farms on March 1 or six weeks later. Domestic consumption of wheat averages about 40,000,000 bushels per month, which would mean 220,000,000 bushels before July 1. On this basis, if the farm reserve report is correct, an extreme scarcity of wheat will develop before harvest unless heavy inports are made from Canada.

Although made by a reliable statistician, this unofficial report shows about 70,000,000 bushels less wheat than would be expected based on official estimates upon the size of the crop and apparent flour production and consumption thus far in the crop year, but with wheat and flour still being exported, a rather tight domestic situation is developing, as the usual carryover is aronud 80,000,000 bushels. The government's March 1 estimate should determine how close the adjustment of supply to demand is going to be.

SOUTHERN HEMISPHERE WHEAT TO EUROPE.

During the last 30 days export demand for wheat has been confined almost entirely to Canadian and Argentine grain. Large sales to Russia and Greece have been made in Canadian markets during the last week. Argentine pressure, especially for February-March shipment, is increasing abroad. Clearances from Argentina mounted to 2,500,000 bushels last week, while Australia shipped 6,000,000 bushels. The department of agriculture has estimated that Germany will be obliged to import 2,000,000 tons of food before the next harvest, while Italy requires probably 1,000,000 tons and France 500,000 tons of wheat. Most of these requirements will probably be filled in Canada and the Argentine.

Prices advanced during the last week, reaching the highest point in nearly a month. Light receipts and firm cash markets as a result of buying by mills, together with bullish reports on farm reserves and the condition of the winter wheat crop, were factors. An excessive visible supply curbs advances and may continue to do so for a while, although a big decrease was made in it last week.

Winter wheat in the southwest undoubtedly is in bad shape. A crop scare of first magnitude is probable with the opening of spring unless drenching rains are received where needed.

CORN PRICES TRAVEL NARROW RANGE.

Corn prices are holding within narrow limits. Receipts at primary markets have been heavy, last week's run being the largest in more than 10 years, but the same broad demand from industries, domestic consumers and exporters is in evidence that has been noted in the last few weeks. Growers are developing more confidence in the market and it is said that farmers in Illinois have been canceling orders to sell at 40 cents net at loading stations.

CASH GRAIN MARKETS.

The range of cash grain prices for the week ended January 25 was as follows: Chicago—Corn—No. 2 mixed, 49@50c; No. 3, 48@49c; No. 4, 46 1-2@47 3-4c; No. 2 yellow, 49 1-4@50c; No. 3, 48@49c; No. 4, 46 1-4@47 3-4c; No. 2 white, 49 1-4@50c; No. 3, 48 1-4@49c; No. 4, 46 1-2 @48c. Oats—No. 2 white, 37@38 1-2c; No. 3, 34@36c; No. 4, 33@34 3-4. Rye—82@84c. Barley—54@65c.

CLOVER SEED STATISTICS BULLISH.

Based on the size and quality of the crop in this country and in Europe, clover seed statistics are decidedly bullish. The question is whether they have been fully discounted at current prices, which are high compared with other farm products. Farmers are believed to have sold most of their surplus, so that the bulk of the supply is in distributive channels. The supply of alfalfa seed is below normal in Kansas and adjacent sections and moderately higher prices are anticipated. Timothy seed prices are still creeping slowly upward.

TOLEDO—Per bushel: Prime red clover, $13.85; prime alsike, $11.70; prime timothy, $3.22 1-2.

CHICAGO—Per 100 pounds: Clover, $12.22; timothy, $5@7.

FEED PRICE DECLINE STAYS.

Although the feed market has been quiet, prices have not recovered from recent declines. The supply of all feeds appears to be ample and demand is indifferent. Drastic price changes are not generally expected.

CHICAGO—Bran, $23.75; standard middlings, $20; flour middlings, $25.50; gluten feed, $32.65; hominy feed, $21;

(Continued on page twenty-four.)

Little Journeys to Market

TOLEDO PRODUCE EXCHANGE.

Red clover seed and timothy seed prices in all sections of the country take their cue mostly from what happens on the Toledo Produce exchange. Toledo is an important seed distributing center as it is located conveniently with reference to the red clover seed producing area which extends from Ohio and Michigan to Iowa and Missouri and for the timothy growing area, which, with the exception of the state of Missouri, lies north of the Ohio river and east of the Missouri.

It is the only market upon which trading in these seeds for future delivery is carried on, so that all hedging operations by producers, dealers or consumers is concentrated there and with such transactions there goes on the usual complement of speculative trading.

At the present time February clover is quoted at around $14 a bushel, March clover around $13.90 and April clover at $13, which indicates that the trade expects clover seed prices to decline before the end of April. Since most farmers must buy their seed before the middle of April, it is easy to see how the market might break before that month is out.

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Panama Canal Builder Is Here

General Goethals Will Make Personal Survey of Columbia Basin Project

Major General George W. Goethals, the man who, as chief engineer, built the Panama canal from 1907 to 1914, has been engaged by the state of Washington to render an engineering report upon its Columbia basin irrigation project. General Goethals telegraphed Director D. A. Scott of the state department of conservation and reclamation that he would arrive in Spokane on February 2, bringing assistants with him, and was prepared to go immediately in person over the great project, leaving his assistants in the office of the state commission to check up the data already compiled by the state's engineers.

Director Scott believes that, as the Columbia basin plan is the greatest project in the west, it should be passed upon by the greatest engineer in America. That view is shared by United States Senators Jones and Poindexter, who conferred with Director Scott before General Goethals was engaged.

This action of Director Scott will meet with general approval. The state has already appropriated $150,000, and through an able commission and able engineers has made extensive preliminary surveys and investigations. It is now desired that the federal government shall take up the vast undertaking, and a favorable report by General Goethals would go far toward enlisting the approval of congress and the nation.

The suggestion that General Goethals be employed came first from Major General Leonard Wood. On his way to the Philippines General Wood telegraphed to Colonel W. S. Abercrombie, an old army associate, asking him to join him at Spokane and go across the state to Seattle. Colonel Abercrombie told General Wood about the state's great project and enlisted his interest. "It is a vast undertaking," said General Wood, "and should be passed upon by an engineer of international standing. If a man like General Goethals should report that the project was feasible his recommendations would go far with congress and the nation." General Wood's recommendation was submitted to the two United States senators and Director Scott and was adopted.

Must Learn Feasibility.

It is of the highest importance that the state should know now, definitely, whether it has a feasible project. According to the last official report of State Hydraulic Engineer Marvin Chase, there is a total area of irrigable lands in this state for which water can be obtained of 2,526,600 acres. Of that area 1,844,000 acres are embraced in the Columbia basin project. More than two-thirds of the state's total irrigable area are, therefore, in this single project, and it is highely desirable that the state and the people of Washington should know whether these lands can be irrigated.

Must Safeguard the Water.

It is vital to this great project that the water that will be needed for it shall be preserved and not be allowed to be seized by water power interests. These vast interests are now astir all over the west where there is undeveloped water power. They were held back for about 15 years by the refusal of congress to pass a water power bill that was to their liking. President Roosevelt, Gifford Pinchot and other friends of conservation opposed the water power bill, and it was defeated in session after session of congress. Recently, however, a bill that was fairly acceptable to the friends of conservation was passed by congress. It gives priority of the use of water to irrigation over water power.

Power Interests Fight It.

It is known that certain water power interests are fighting the Columbia basin project, knowing that if they can kill it they will then come in for the exclusive and undivided use of the water power of the Columbia river and its tributaries. They have two purposes in mind in their attempt to seize the water power sites of this vast region: First, to prevent their development by competing companies and thus continue their monopoly of water power in the Pacific northwest; and second, at their leisure, perhaps in the distant future, to develop these projects themselves.

If General Goethals shall say that the Columbia basin project is feasible, a determined stand should be made by the state and its people for the preservation of the water supply for the lands in the project. It would be a monstrous pity and tragedy to let nearly 2,000,000 acres of rich soil lie forever in the desert for want of water. We need to reclaim these valuable acres for the benefit of the sons and daughters of the farmers of the Pacific northwest, who will want opportunities to make homes for themselves after they leave their parents' sheltering care.

Who Wins the Pig?

The Washington Farmer will announce in its next week's issue the names of the winners in its recent prize letter contest, in which several scores of people throughout the state discussed, from almost as many angles as there were writers, the subject, "Hogs as a Farm Byproduct in Washington."

The first prize in the contest is a purebred gilt of a breed selected by the winner, bred to bring a litter of purebred pigs this spring. The second prize is $15 and the third $10. The three winning letters will be published.

Spokane Fruitgrowers' Association

J. A. McMillan of Greenacres has been appointed receiver for the Spokane Fruitgrowers' association and the complaint is made that the concern is insolvent and that the company must have a receiver to protect creditors.

The decision to ask for a receivership was reached at a meeting of the board of trustees.

It was later announced that 13 warehouses, title to which rests with the Spokane Fruitgrowers' company, will be sold if possible to the growers in the districts in which the warehouses are situated. To acquire these warehouses growers will have to form local organizations.

The assets are unofficially estimated at $250,000. Exclusive of the warehouses, their equipment is valued at $25,000 and supplies on hand, consisting of boxes, paper, labels, nails and such are also put at $25,000. Other assets represent railroad spurs, a motor truck, office furniture and growers' overadvances payable to the company.

P. R. Parks, general manager, stated yesterday that the company's paid-up stock is $170,000, held by 1600 growers. Most of the creditors are growers and the company's indebtedness to them is in the form of remittances due growers on fruit sold for them during 1921 and, in a few instances, in 1920.

King County Farm Bureau

Summarizing the year's activities in King county, County Agent A. B. Nystrom speaks of 501 farm visits made, 160 farmers' meetings held, with a total attendance of 8550 persons; 1196 person letters written and 14,964 circular letters distributed.

During the year four silo-building demonstrations were held; surveys made for 383 acres of grain, organized one drainage district and organized two cow-testing associations. Seed corn improvement was started on some farms.

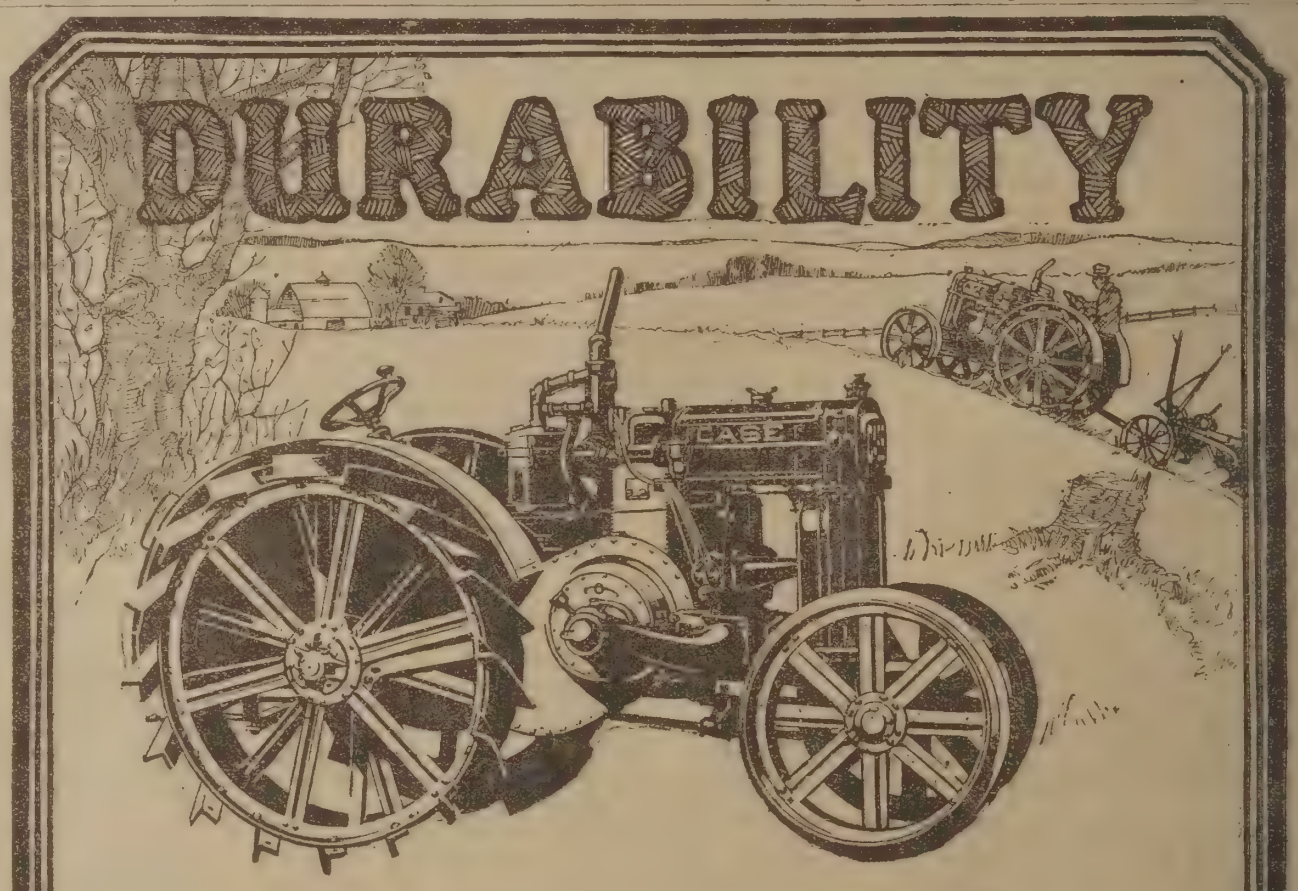
A total of 2101 persons called at the office to get information. How to combat the Canadian thistle was demonstrated on four farms. A live stock survey showed 350 scrub bulls in the county.

On hundred and twelve poultry flocks, representing 54,494 birds, were culled under the direction of the county agent's office. Seventeen per cent, or 6381 birds, were found to be culls.

These are among the 30 points under which the activities of the county agent's work are scheduled.

THE GARDEN SOIL.

Do not put your garden into unprepared soil. Prepare it just right. Fertilize it. Get a good garden instead of a fair one or a poor one.



A CASE TRACTOR QUALITY

Case Kerosene Tractors have demonstrated remarkable efficiency and economy in every test in which they have been entered. The following are a few of many exceptional records, made in the world's most important tractor tests:

Lincoln Tractor Trials, Lincoln, England—10-18 Case Tractor won Gold Medal and 20 pounds in Class I.

Zarazoga, Spain—15-27 Case Tractor and Grand Detour Plow won First Prize in Economy.

Benha, Egypt—15-27 Case Tractor and Grand Detour Plow won All First Honors.

France—In six different tests held under the auspices of French Agricultural Committees 10-18 and 15-27 Case Tractors with Grand Detour Plows won Highest Awards, Gold Medals and First Prizes.

Operating economy is important but rugged durability is even more important. Ruggedness, the ability to stand up under the severest conditions and perform the most strenuous work is an essential quality of every Case Tractor. This quality is the result of a highly developed design and superior construction and is the reason why every Case Tractor may be relied upon to give dependable and efficient service year after year.

The Motor. All Case motors are of the heavy duty, four cylinder, valve-in-head type, built to use kerosene successfully. Developing power well above their rating, they are never overtaxed on their rated loads—another reason for durability.

The Drive. The motor is mounted crosswise on a rigid frame, permitting the use of a few simple spur gears—the most efficient and durable type of drive. All gears and shafts are made of special alloy or carbon steel. The gears are all machine cut, heat treated and run in oil. Anti-friction bearings, held in permanent alignment by the rigid frame, carry all shafts and axles.

Protection. All working parts are enclosed in dust and dirt-proof housings. Gears, bearings and motor parts are all completely enclosed and thoroughly lubricated. A Case patented air washer prolongs the life of the motor and adds to its efficiency.

These dependable, durable Case Tractors are made in three sizes—10-18, 15-27 and 22-40, so as to meet the requirements of any farm.

We also manufacture Grand Detour mouldboard plows, disk plows and tandem disk harrows in various sizes for use with Case Tractors.



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DEPT. P-56 RACINE WIS.

NOTE — We want the public to know that our plows and harrows are NOT the Case plows and harrows made by the J. I. Case Plow Works Co.

GRAND DETOUR

Boys' and Girls' Club Work

E. N. Hopkins of Des Moines, Iowa, a member of the recently organized national committee on boys' and girls' club work, and editor of the Farm Boys' and Girls' Leader, whites to THE FARMER that the national committee proposes to get behind the boys' and girls' congress, which will be a feature of the Oregon 1925 exposition, adding: "We have asked Mr. O. M. Plummer of Portland to send us a statement covering this matter as soon as possible for publication. You will hear from Mr. Noble, regarding the committee's plans for your territory, and we will work together in putting over the congress and club program in general."

Mr. Hopkins adds that E. T. Meredith, the chairman of the national committee, is giving this matter much of his personal time and attention.

G. L. Noble, secretary of the national committee on boys' and girls' club work, sends a special message to the readers of THE FARMER on this most important work among the boys and girls on the farms. Mr. Noble quotes Theodore Roosevelt's words:

"If you are going to do anything permanent for the average man, you must begin before he is a man. The chance of success lies in working with the boys and not with the man."

Mr. Noble adds that this truth may have been in the minds of our agricultural leaders when they officially started agricultural extension work among farm boys and girls, known as boys' and girls' club work, carried on by the agricultural colleges, the U. S. department of agriculture, cooperating. This work has received enthusiastic support of the people generally and has had great growth in the past three years. Membership of 1914 was 23,000 and in 1920, it was 331,000.

This work has also had its appeal among the large business men of the country. In order to increase the scope of the work, enlarge the membership and aid in every way possible in cooperation with the agricultural colleges and the United States department of agriculture, a national committee on boys' and girls' club work was formally launched at the 1921 international live stock exposition. E. T. Meredith, former secretary of agriculture, Des Moines, Iowa, heads the committee as chairman; B. H. Heide, manager of the international live stock exposition, Chicago, Ill., is treasurer, and G. L. Noble, Chicago, Ill., is secretary. The other members, representing various business interests the country over, are as follows:

Carl J. Baer, manager production department, St. Louis Chamber of Commerce.
Newton T. Baker, ex-secretary of war.
E. J. Bodman, chairman, Arkansas State Bankers' association.
Nathaniel I. Bowditch.
Arthur Capper, U. S. senator from Kansas.
W. J. Carmichael, secretary, National Swine Growers' association.
J. W. Coverdale, secretary, American Farm Bureau federation.
F. L. Eaton, president, Interstate Fair association.
Joseph Hirsch, chairman agricultural commission, American Bankers' association.
E. N. Hopkins, "Successful Farming."
Harold F. McCormick, president, International Harvester Co.
J. M. Parer, governor of Louisana.
O. M. Plummer, secretary, International Live Stock association.
John Simpson, secretary, Eastern States exposition.
R. M. Striplin, secretary, Southeastern States fair.
Thomas E. Wilson, director, U. S. chamber of commerce, and president Institute of American Meat Packers.

The committee hopes to coordinate the efforts of all business and organization agencies in furthering club work. It would call to the attention and solicit the cooperation of every farmer, breeder, banker and business man because of the value of this work to their own business, the developing of the community and the welfare of every American interest.



ALL ABOUT Silos

I invented the H-L-F silo, which everybody seems to like. I have written a book, entitled "All About Silos," which I will be glad to send free and without obligation to anybody who is considering purchase of a silo. Lots of good facts in it. Write your name and address below and mail.

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MICHIGAN FARM BUREAU BRAND SEEDS

Lansing, Michigan

What Grange Offers

To Farmer, His Home and Family

Putting forth plea that every farmer should belong to the grange, the national headquarters declares:

Every man is a factor of society, and as such he is accountable for the manner in which he performs the duties which devolve upon him.

The first is to his home and family. The second to his government that permits him to enjoy the blessings and happiness of his home and family. The third is to better the conditions and advance the interests of his chosen occupation.

The farmer was created a social being and needs the wholesome influence of organization to keep him so. His business is comparatively one of isolation, varying in degree according to his environment. The farmer who lives within the boundaries of 160 acres becomes very narrow and is of little use to his community. His family is correspondingly dwarfed as they are shut out of society, and are improved as their opportunity for association increases. The individual excluded from society will, in time, lose his mental powers and become oblivious to his own needs as well as to the needs of others. Here again he needs a farm organization where he, with his family, can meet with freedom and ease, and while cultivating sociability, can secure mental culture and pleasing manners.

The grange may be called the liberator of the American farmer's wife, as it was the first organization that gave to woman the same privileges and rights as are enjoyed by man. In doing this it has not only turned on the radiant light of hope for her, but it has strengthened the union of both, has created deeper love for home and given inspiration for better thoughts, nobler deeds, and higher aims for the future. Men need more of the refining influence of women. There is nothing that so refines a man as a good woman, and no audience, association, or organization with woman eliminated can be so modest, so refined, or so complete as with woman in it.

THE SHEEP'S AGE.

If you look in the mouth of a sheep and find two broad teeth in the center of the jaw, with small ones at the side, the sheep is probably a yearling. If there are four broad teeth it is probably a 2-year-old, and if there are six the age is probably three.

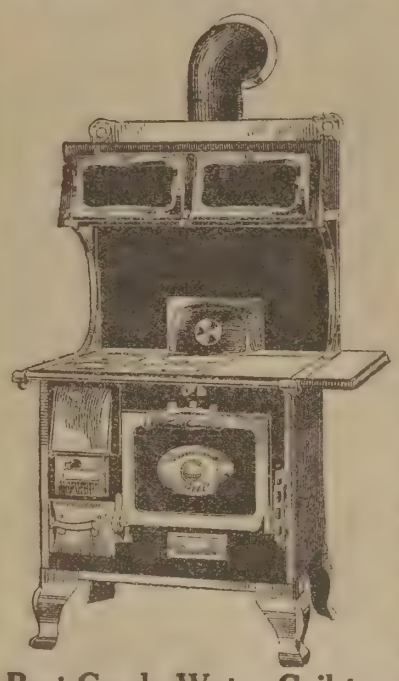
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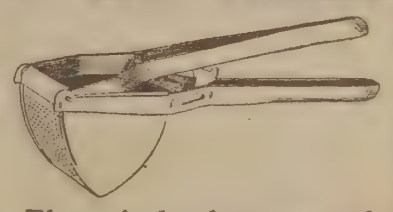
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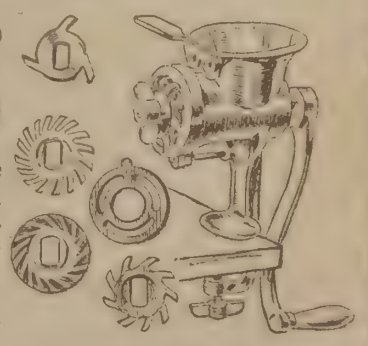
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The Poultry Show at Spokane

The marked interest that has been manifest in the poultry industry during the last year found expression at Spokane last week in one of the best poultry shows ever held in the Pacific northwest. Between 1000 and 1500 birds were on display, an increase of several hundred over the number at last year's show. The White Wyandottes led in numbers, with the Rhode Island Reds a close second, followed by the Barred Rocks.

One of the interesting features of the show was the auction sale, at which about 40 birds were sold on the last day of the show. A Barred Rock pullet shown by Martin M. Lower of Gaston, Ore., topped the sale when it brought $40 from H. C Blair of Spokane. W. B. Reinwald of Spokane paid $35 for a White Leghorn cockerel shown by Fred A. Johnson.

The grand champion bird of the show was a Barred Rock cockerel shown by Mr. Lower of Oregon. He was awarded the gold medal offered by the American Poultry association for the best bird of the show. The state association's prize of $15 for the best female bird in the show was won by A. Hollings of Seattle on a Black Minorca pullet. The association's $10 prize for the best male bird of the show owned by a Washington breeder was won by E. G. Lucas of Spokane on a White Wyandotte cockerel.

All judging was done by J. A. Tucker of Royal Oaks, Mich. He expressed himself as greatly pleased with the quality of the birds shown and the general success of the affair, as did also Superintendent Mitchell and other officials of the show and of the state association.

A banquet of breeders was held Friday night, at which a number of poultry authorities spoke, including Professor R. V. Mitchell of the state college and H. H. Collier, poultry fancier and judge, of Tacoma.

The awards of the show were as follows:

Single Comb Rhode Island Reds—Mrs. P. Cooley, Spokane, first cock, third cockerel, fifth pullet, second young pen. Nick Sabadan, Spokane, second cock, fourth young pen. Earl Nogle, Post Falls, Idaho, third cock; first, second and fourth pullet. Fite & Hershberg, Lewiston, Idaho, fourth cock, third hen, second old pen, third young pen. Davis & Son, Spokane, fifth cock, first cockerel, third old pen, first young pen. S. W. Berry, Post Falls, Idaho, first and fourth hen. John Stanley, second hen. Carson Rote, Spokane, fifth hen. C. E. Buttles, Wenatchee, second cockerel. P. H. Redmond, Priest River, Idaho, fourth cockerel, third pullet. Will Purdy, Spokane, first old pen, third young pen. B. L. Young, Spokane, fifth cockerel.

Rose Comb Rhode Island Reds—Davis & Son, first and second cock, first and second hen, first pullet, second old pen, first young pen. Ruby H. Poultry Yards, Hillyard, third cock, fifth cockerel. F. E. Mohr, Spokane, fourth cock. E. J. Allen, Elma, third hen. A. Melrose, Spokane, first and fourth cockerel, second pullet, first old pen. Rolla Reynolds, Spokane, second cockerel.

Buff Plymouth Rocks—Harry H. Collier, South Tacoma, first cock, third cockerel, first, second and third hen, first, second and third pullet. G. R. Wilson, Wenatchee, first and second cockerel.

Rhode Island Whites—H. W. Colburn, all awards.

Partridge Plymouth Rocks—Hales Poultry and Pet Stock yards, first cock, first and third cockerel, first pullet, second third and fourth hen, first old pen. Mrs. Iva Engstrom, Spokane, second cockerel.

Light Barred Plymouth Rocks—H. C. Blair, Spokane, first cock, third hen. L. E. Biggs, second cock, fourth hen. Horace Beardsley, Eugene, Ore., first and second hen, third cockerel, third pullet. T. J. Culbert, Spokane, fifth hen, fourth pullet. Martin M. Lower, Gaston, Ore., first and second cockerel, first pullet. H. H. Essig, Spokane, fourth and fifth cockerel, second pullet. J. E. Horton & A. G. Gray, Spokane, fifth pullet.

Dark Barred Plymouth Rocks—Martin M. Lower, Gaston, Ore., first hen, first cockerel, second pullet. L. E. Biggs, second hen. T. J. Culbert, Spokane, third hen, fourth cockerel, third pullet. C. C. Baronett, Rockford, first cock, fourth hen. H. H. Essig, fifth hen, fifth cockerel, fifth pullet. J. E. Horton & A. G. Gray, first pullet. Ben F. Keeney, Eugene, Ore., third cock, third cockerel. Boone Ave. Poultry Yards, Spokane, fourth pullet. E. A. Hamilton, Route 3, Tacoma, second cock. A. Greener, Spokane, fourth cock. S. A. Nixon, second cockerel.

Barred Plymouth Rocks—H. H. Essig, first old pen and second young pen. J. E. Horton and A. G. Gray, first young pen. Martin M. Lower, third young pen.

White Plymouth Rocks—C. Noonan, Spokane, first and fourth cock. W. H. Martin, Opportunity, first cockerel. W. J. Scofield, Missoula, Mont., first pullet. J. Smith, Spokane, second hen. James Wright, Richmond Highlands, first and third hen. A. Hoyle, Wenatchee, third and fifth cock.

White Wyandottes—E. G. Lucas, Spokane, first and second cock, first and second hen, first, third and fourth cockerel, second and fourth pullet, first old pen, second young pen. Frank Thompson, Spokane, fourth cock, fifth hen, third and fifth pullet, third and fourth old pen, third and fifth young pen. V. L. Garner, Wenatchee, third cock, fourth hen. Hugh F. Jones, Spokane, third hen, first pullet, second cockerel, first young pen, second old pen. E. J. Boyk, Rocklyn, fifth cock. Nick Sabadan, Spokane, fifth cock, fourth young pen.

Partridge Wyandottes—Eugene Boyk, first cock, first cockerel. John Fleming, Spokane, first old pen.

Silver Wyandottes—Peter Finch, Fruitvale, B. C., first cock, first hen, fourth pullet. W. H. Russell, Spokane, third and fifth pullet. Donald Smith, Spokane, first cock, second pullet, first young pen.

Golden Wyandottes—Sam Shirley, Spokane, first and second pullet. H. A. Raper, first cockerel, third pullet.

Columbian Wyandottes—Jenny Smith, Spokane, all awards.

Light Brahmas—Mrs. Benjamin Hildebrandt, Edmonds, first and second hen, first young hen.

Black Langshans—M. E. Taylor, Winona, all awards.

Buff Orpingtons—Mrs. B. Hildebrandt, first cock. Mrs. J. J. Critzer, Spokane, second cock, second and third hen, first and fourth cockerel, first and second old pen, first and third young pen. Mrs. James Wright, Richmond Highlands, third cock. L. M. Varney, Spokane, first hen, second and third cockerel, third old pen, second young pen, third and fourth pullet. R. C. Simpson, Seattle, fourth and fifth hen, fifth pullet, fourth old pen.

Rose Comb Buff Orpingtons—Hans Hansen, all awards.

Black Orpingtons—W. L. Reid, all awards.

White Orpingtons—John Sim, Deer Lodge, Mont., all awards.

Speckled Sussex—F. W. Hoffman, all awards.

Dark Cornish—A. Emskamp, Spokane, first cock, first, second and third hen. M. L. Lowe, third cock. Emmet F. Dix, Garfield, third and fourth cock, fifth pullet. Kennewick Cornish Club, Kennewick, fourth and fifth hen, first, second, third, fourth and fifth cockerel, first, second, third and fourth pullet, first young pen, first old pen.

Dark Single Comb Brown Leghorns—E. H. Rosenkranz, Colfax, first and second cock, first and second hen, first and second pullet, first and third cockerel. Adam Schaffer, Hillyard, third cock. Fred A. Johnson, Tacoma, second cockerel. Boone Avenue Poultry Yards, fourth cockerel. Boone B. Burke, third and fourth pullet.

Light Single Comb Brown Leghorns—Mrs. L. M. Starr, Rockford, first cock, second and third hen, first cockerel. Boone Avenue Poultry Yards, first hen, first pullet. E. H. Rosenkranz, third cockerel.

Rose Comb Brown Leghorns—Boone Ave. Poultry Yards, all awards.

Single Comb White Leghorns—Peter Finch, Fruitdale, B. C., first pullet, second hen. Fred A. Johnson, Tacoma, first, third and fourth cockerel. R. R. Upper, Seattle, first cock, first hen. A. Greener, second cock. Mrs. Fred Boyd, Garfield, fifth cock, fourth hen. Harold Cadwell, fourth cock. All Poultry Farm, Pasco, second pullet, first old pen. H. W. Hulbert, Moscow, Idaho, third pullet. Mrs. Nick Sabadan, fourth pullet.

Single Comb Black Minorcas—A. Hollings, Seattle, first cock, first and second hen, first and second cockerel, first, second and third pullet.

Rose Comb Black Minorcas—Boone Avenue Poultry Yards, all awards.

Buff Leghorns—Boone Avenue Poultry Yards, first cock, first and third hen, third cockerel. Harold Cadwell, second cock, second hen, fourth pullet. W. H. Worster, Opportunity, first cockerel. John Fleming, second cockerel, first, second and third pullet.

Buff Minorcas—O. R. Hopewell, Waterville, all awards.

Black Leghorns—F. E. Keith, Helena, Mont., first cock, first and second cockerel. Harold Cadwell, second cock, first hen. Mrs. H. W. Dickereson, Helena, Mont., first cockerel, first, second, third and fourth pullet. Boone Avenue Poultry Yards, second cock, first and second, hen, first cockerel.

Anconas—Boone Avenue Poultry Yards, first and second hen. John Coching, Rossland, B. C., first cockerel, first, second and third pullet, first young pen. Mrs. L. A. Thima, second cockerel. R. M. Owen, third cockerel, first old pen, second young pen.

Houdans—W. H. Russell, Spokane, first and second cock, first, second and third hen, first and second cockerel, first pullet. Ed McCoy, third cock.

White Crested Black Polish—H. K. Carter, Tacoma, all awards.

Silver Spangled Hamburgs—E. E. Enos, all awards.

White Cochin Bantams—J. D. Barrett, first cock, first hen, first cockerel, first pullet. Wesley Engstrom, second cockerel, second pullet.

Golden Seabright Bantams—J. D. Barrett, first cock, first hen, first and third cockerel, first pullet. J. E. Nowlin, Spokane, second cock, second, third and fourth hen, second and fourth cockerel, second, third and fourth pullet.

Silver Seabright Bantams—J. D. Barrett, all awards.

Barred Rock Bantams—Harold Craig, Spokane, all awards.

Black Cochin Bantams—J. D. Barrett, first cock, first hen, first cockerel, first pullet. H. C. Grimes, Spokane, second cock.

Partridge Cochin Bantams—J. E. Nowlin, all awards.

Light Brahma Bantams—H. C. Grimes, all awards.

Black Tailed Japanese Bantams—H. C. Grimes, all awards.

Silver Hamburg Bantams—H. C. Grimes, all awards.

White Rose Comb Bantams—H. C. Grimes, all awards.

Toulouse Geese—Mrs. O. O. Mills, Spokane, all awards.

Pit Game—Glen Hopkins, Spokane, all awards.

White Silkies—Harold Cadwell, Spokane, all awards.

Silver Campines—F. W. Hoffman, Spokane, all awards.

Golden Campines—Harold Cadwell, all awards.

Baby Beef Club

Ten boys and girls of Kittitas county have organized a baby beef club through the effort of W. L. Davis, the county agent. Arrangements have been completed for the purchase of 20 high grade Shorthorn steers from the Day & Rothrock farm at Sprague. C. M. Hubbard, live stock extension specialist of the state college, and A. F. Lawson, field representative of the American Shorthorn association, helped to select these animals for the club.

The members will feed and care for their animals during the spring and summer months and have them in prime shape for the Kittitas county fair and for the Western Royal Live Stock show at Spokane, where special prizes are offered for beef club work.

The following boys and girls have enrolled in the club: Jessie Woodhouse, Nora Waite, Meta Bennett, Val Bradshaw, Erling Hanson, Raymond Barnhart, Walter White, William Waldron Jr., Eugene Wilson, Robert Kresge.

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Straw Shed Replaces Straw Pile

By H. J. LECHNER

Past experience on the farm of Lechner Brothers at Washougal, Wash., has shown the old straw pile to be a problem, even with a conscientious effort on the part of the owner to use this byproduct to enrich the soil. As these words were penned the writer could see the remains of one of the old straw piles piled up against a fence, where it had been occupying several square rods of ground during two crop seasons at a dead loss to the owners. Most, but not all, of the straw had been hauled away.

Up to the time of the coming of the straw shed, getting rid of the straw entailed too much work. It meant not only hauling onto the fields and spreading as well as possible from an ordinary rack, but hauling the necessary requirements for live stock bedding. Furthermore, it meant several additional haulings before it finally reached its destination—the manure pile.

Now the old field straw pile is gone forever on this farm, and so also is the problem of getting rid of the straw. Indeed it now has become a matter of making the straw reach. The writer asked the owners (his brothers) if much of the straw had been fed to the stock. They said that more could have been used, especially with the young stock and horses, but the supply wasn't sufficient.

The straw shed was built over a year ago, is 30x50 feet and 16 feet high to the eaves, and will accommodate 15 to 18 head of cattle and straw of from 20 to 25 acres of grain. Racks are provided on one side of the shed. The straw is worked down into the racks. The cattle pick it over before it goes onto the shed floor as bedding. The shed is provided with a water trough and is built so that the open front made to give light can be covered with canvas in coldest weather.

Last year the cattle were left out in this shed all winter. This gave them a freedom not known with the stanchion, and access to water at all times except for two hours each morning and evening when they were taken into the stable to be fed and milked. That the cows kept cleaner than in the stable goes without saying. The only difficulty in this regard, which was not so great, was during the early grass season.

This practice reduced the labor of keeping the stable clean and also made possible the best conservation of the liquid manure. Loss due to leaching was reduced to a minimum on this farm. The soil on this farm is naturally low in fertility and humus. The straw shed has greatly increased the efficiency in the use of crop residues and of the manure. It is not surprising at all that the owners declare this shed to be the best investment ever made on the farm.

Let Pigs Wean Themselves

To the Editor of The Washington Farmer: As I started to raise purebred hogs about three years ago, I wish to state my experience for the benefit of the beginner.

I bought a sow pig, a Berkshire. I bred her to a good boar, but her pigs did not seem to thrive, as I weaned them at five weeks. This year I am letting them wean themselves. The largest pig at birth weighed six pounds and on the 20th of July she was two months old and weighed 70 pounds. I am feeding the sow and pigs, 10 of them, five pounds of powdered milk, three pounds of corn, three pounds ground oats. The powdered milk is mixed at the ratio 1 to 6 of water.

My present herd boar was purchased from A. G. Franklin at Mt. Vernon. He is of the Gentry type. At present I have seven sows and next year will probably reach out and show at the fair outside of Whatcom county. I had good luck last year—three firsts and one second out of five head shown. To the beginner I would say not to wean the pigs—let the sow take care of that.

J. W. MORRIS.

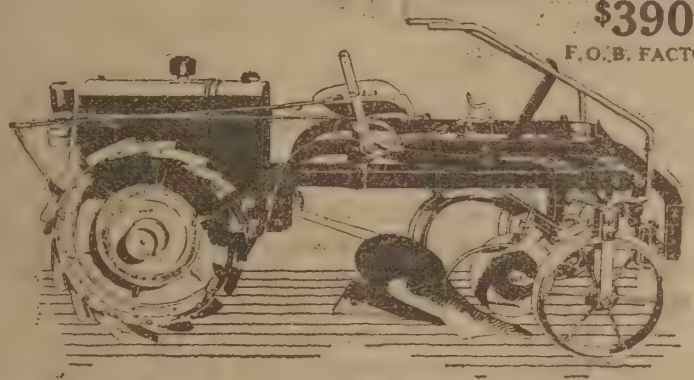
Ferndale, Wash.

TELLS ABOUT PAPER DRESS FORMS.

A dress form circular has been prepared by Miss Maud Wilson, state home demonstration leader of the state college. This bulletin gives the details for making the paper dress form. Diagrams show how the paper strips should be pasted and how the form is taken from the model and put together again. Get a copy of this circular from your county agent or send direct to the extension service, Washington State college, Pullman, Wash.

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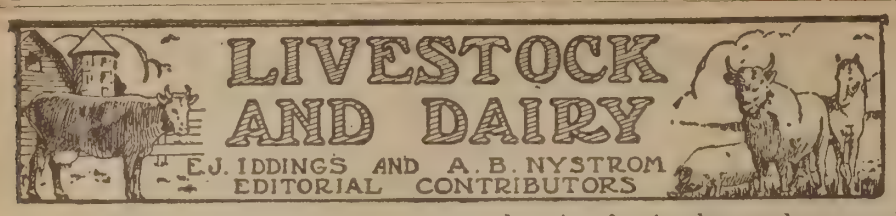
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Best Cows

Are Found in the United States

Fifteen of the 16 greatest butterfat producing cows in the world—every one of them a supercow—are to be found in the United States, reports Professor W. W. Yapp of the University of Illinois (January 5) in an inquiry he conducted for the Associated Press. The leader of the list, however, hails from Canada.

Great as these cows are, the future will produce even greater, Professor Yapp predicts.

The Illinois dairy husbandry expert says:

"The only common ground upon which it seems advisable to attempt to compare dairy cows is butterfat production. It is not possible nor practicable to compare cows on the basis of milk yields, inasmuch as the breeds differ so markedly in both quantity and quality of the milk which they produce. They are very similar, however, in their total butterfat production.

"It is a long jump from 100 pounds to 1250 pounds of butterfat. Yet this amount just about represents the difference in production between the primitive cow and our present-day marvels. What would those original cows think and, more particularly, what would their owners think if they could see our newest supercow?

"It is extremely interesting to observe that Bella Pontiac, the highest butterfat producing cow in the world, would supply butter sufficient to feed 24 average families of four members each for the entire year, and that any one of the cows would feed 20 families, allowing 16 1-2 pounds of butter per person per year, which is the approximate average consumption, according to the United States circular No. 65 for 1918."

For Balanced Ration

I am milking six cows. I have plenty of oats alone, peas and oats mixed, about one-third peas. My hay is mostly clover with some "meskete" and a very little timothy. I also have about 15 tons of mangels. Do I need anything else for a balanced ration? How shall I mix it to make a balanced ration? How would you balance the following: Corn, clover, oats and peas mixed (one-third peas), oats, linseed oil meal, soy bean meal, middlings and mangels? Will cottonseed oil meal take the place of linseed oil meal when feeding mangels for a laxative? Would it be a good idea to grind up wheat myself and mix it instead of mill run and middlings? T. L.

Blaine, Wash.

Your first ration can be made very satisfactory by feeding from 30 to 40 pounds of mangels a day and of the clover hay all the cow will eat. As a grain mixture to go with this I would suggest you mix equal parts of oats alone and peas and oats mixed. I would suggest also that you feed a handful of linseed oil meal at each feed to each cow. If you find this too laxative, get soy bean meal, or cotton seed meal in place of the linseed meal.

I can not tell whether your corn is silage or grain. If it is silage you can substitute a corn silage for mangels in the above ration and get excellent results. If you expect to feed ground corn in your grain ration with mangels and clover hay, you will need to feed a little heavier with the peas and linseed oil meal.

In your third ration, presumably you have clover hay, mangels and also soy bean meal and middlings. In that case you would have to feed heavier on the oats and less of the linseed oil meal. A good ration with these feeds would be all the hay the cow will eat up clean and from 30 to 50 pounds mangels. The grain should consist of 400 pounds of ground oats and 50 pounds of linseed oil meal, or cotton seed oil meal and 100 pounds of middlings. If the ration is too laxative with the linseed meal, it will be well to use cotton seed meal only. I would not advise you to grind up wheat for feeding. Wheat does not make a good feed for dairy cows. It would be much better to sell it and buy millrun and middlings.

A. B. N.

VETERINARY

By DR. S. B. NELSON.

May Be Lung Worms.—Can you tell me what ails my hogs? They get sick all of a sudden and do not come to eat. They act as a small pig does with the thumps. This lasts from one to three days, then they have as good an appetite as ever, only they have a severe cough. H. W. H.

Thornton, Wash.

The description that you give of the trouble affecting your swine would make me suspect lung worms, but your description is not sufficient nor definite enough for me to say so positively. It might, of course, also be a bronchitis, during the early stages of which they do not come to eat and later, when the active symptoms disappear, the chronic cough remains. From 10 to 15 grams of potassium nitrate in three or four days may clear up the trouble.

Rattle in Throat.—I have a 3-year-old Jersey cow that is milking good, but she has a rattle in her throat and it affects her breathing. R. R.

Oriel, Wash.

The rattle that you hear in the animal's throat would indicate some disturbance either in the bronchial tubes or down in some of the fine ramifications of the lung tissues. Try giving your cow one-half dram of quinine once daily for three or four days—then stop and repeat the treatment in three or four days.

Cow Needs a Rest.—I have a cow that will freshen March 22 and I have milked her for 21 months. Would it be good judgment to dry her up or try to keep her giving milk longer? O. T. H.

Monitor, Wash.

I would be of the opinion that a cow that has given milk straight for 21 months might well need at least two months' rest prior to her next period of freshening, and I would suggest that it be given her.

Have Mule Examined.—I have a big mule about 16 years old and her right nostril is running a thick yellow mucus that has a very bad odor. At times she gets a lump between the eyes more on the right nostril that seems to open through the nose. She has been this way for about two years. Is it dangerous to keep her with other animals? E. G.

Wilbur, Wash.

Your animal may be affected with one of three diseases: Glanders, an infectious disease; pus infection of the sinus or cavities of the face, or it may be a diseased root tooth causing the trouble. The latter may cause the second, or may not. I would doubt that it was glanders. You should have a veterinarian examine the animal to see just what is the trouble, because if it is glanders the mule should be destroyed. If it is either of the other two the animal should be operated and restored to usefulness.

Fern in Alfalfa Hay—My alfalfa has quite a lot of fern in it. I am afraid to feed it to my horses. Is there any danger or is there any way to prevent danger if there is any? G. E.

Garfield, Wash.

It is questionable whether a limited amount of fern will cause any damage to your horses when fed with the alfalfa. It has been reported that when hay contains a very large percentage of fern it will cause digestive disturbances.

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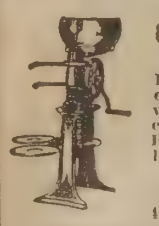
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Poisonous Wild Parsnips

Other Popular Names by Which They Are Known

Will you please describe and illustrate the poisonous wild parsnip? I have seen cattle eat the Giant European parsnip greedily with no bad effects.

G. W. D.

Our correspondent evidently refers to cicuta. This poisonous plant has a number of popular names, of which the most



Wyoming Water Hemlock (Cicuta Occidentalis); young plant.

common is "cowbane" or "water hemlock." In the northern region of the west it is frequently called "parsnip" or "wild parsnip." Other names less common are "snake root," "snake weed," "beaver poison," "muskrat weed," " spotted hemlock,"



Wyoming Water Hemlock (Cicuta Occidentalis): matured plant.

and "spotted parsley." Scientists of the U. S bureau of animal industry review the fact that many deaths both of human beings and domestic animals are caused every year by cicuta or water hemlock, and declare that it is the most violently poisonous of temperate region plants and yet it is not generally recognized. This plant grows in wet places and is especially common in some parts of the west along irrigation ditches. It has the thickened root stock with roots which sometimes take the form of a group of tubers.

The bureau of animal industry also declares that only the root of cicuta is poisonous. Cases of poisoning are more frequent in the spring, partly because roots are more likely to be noticed at that time and partly because they appear to be more poisonous then than later in the season, farmers in their plowing sometimes bringing to the surface a considerable number of roots, and these are eaten by cattle with resultant sickness and death. When green feed is scarce the bright green pulp and stock become quite attractive to grazing stock and they eat them freely. They even eat into the crown of the root of the plant.

When the root of the plant is cut open drops of an aromatic oil are seen. These give the root a peculiar odor and are popularly thought to be the source of the poison. The poison is indeed in the root, but is secreted in the form of a resin which is distinct from the oil although the poison is most deadly. The fact that it is confined to the roots rather than extending to the top and seed, accounts for the fact that it causes comparatively few deaths.

Lambs on the Farms

Lambs were raised in 1919 on 374,771 farms, or 5.8 per cent of all farms in the country, according to the fourteenth census. The total number of lambs raised was 13,691,115, and the average per farm reporting was 36.5.

Six states reported over 700,000 lambs raised on farms in 1919, as follows: Montana, 977,827; California, 897,136; Ohio, 884,414; Idaho, 786,780; Wyoming, 773,286, and Oregon, 763,890. The following states reported an average of more than 200 lambs raised per farm; Nevada, 719.7; Wyoming, 437.6; Arizona, 409.5; Montana, 297.7; New Mexico, 232.9, and California, 223.4.

In 1919 there were 977,827 lambs on the farms of Montana, 786,780 lambs on farms of Idaho, 763,890 on the farms of Oregon and 238,018 on the farms of Washington.

Organize Cannery

Berry growers in the vicinity of Kirkland, King county, with the assistance of business men, have organized a small cannery which will use their fruit for the manufacture of jams and jellies. A manager was secured, machinery installed and the plant was operating early in September, 1921, under the name of the Case Conserve company.

Officers of the association are: J. P. Farrer, president; P. J. Case, vice president and factory manager; S. T. Hills, secretary-treasurer; R. G. Allen, assistant secretary-treasurer, and Mrs. F. W. Case, director.



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This is where Kow-Kare comes in. In a great majority of the best dairies this cow medicine is used regularly, at intervals during the housed-in winter season. When the cow's producing organs are put to severe strain by the loss of pasturage and the use of heavy concentrated foods and roughage, Kow-Kare will avoid a break-down by keeping the digestive and genital organs in a healthy, normal condition. Regularly at milking time you get big premiums on every penny invested in Kow-Kare.



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POULTRY

"Get the Eggs"

"Don't waste your time wondering why a White Wyandotte lays a brown egg. Get the egg."

This is the suggestion which Bayard H. Moul, western Washington poultryman, gives to the poultry breeder who questions the brown egg for market purposes. Mr. Moul said further that there is a premium on brown eggs for the local market on account of their larger size, and some customers even prefer them because they believe they have a richer flavor.

"We run our flock entirely on the trap-nest method," explained Mr. Moul, "and we don't want a hen in the flock if she will not come up to the 300-egg mark. One need not sacrifice type in order to get egg production. They should go hand in hand. We are thus able to secure dependable setting eggs, and are better able to mate fowls for the improvement of the flock.

"The White Wyandottes have many good points, such as being good layers and fine table birds. They are also very docile. We never use a high fence to keep them in, but a three-foot fence is sufficient if they have the proper feed.

Undoubtedly part of Mr. Moul's success in the poultry business is due to his use of modern business methods. He explained his plan of sending out a price list every spring to a regular mailing list, in order to keep his customers in touch with his marketable stock. Additional names are obtained each year from answers to advertisements in the local papers. After the recipt of this mailing list the buyer is ready to send his order, as the list answers all questions as to quality, number for sale and price. Further correspondence is unnecessary, and the prospective buyer either sends in his order or looks elsewhere.

Poultry as Side Line

"Poultry raising is merely a side line with me, since I am an electrician by trade," said R. C. Simpson of Seattle, who was secretary of the midwinter poultry show put on by the Washington State Poultry association in January. "I started out with a small pen of Buff Orpingtons and have accomplished very satisfactory results for the amount of time it takes. I have laid particular emphasis on the sale of hatching eggs.

"I prefer the Buff Orpingtons because they are a utility breed, are good meat birds and they lay a large egg. I had one hen that laid 280 eggs, but she does not score as high as some of the others when it comes to conformation. I am mating the birds so as to build up a type of high producers.

"Whenever I get an exceptional bird I keep her eggs and hatch them for my own use in order to maintain a high quality of the flock. Such method is necessary if you intend to increase the quality of your flock." Mr. Simpson told how the promoters of this breed had worked to Americanize the bird, which was originally an English breed. Our standard, he said, calls for a heavier bird, with more length of body and a longer saddle—both types were represented at the poultry show this winter.

Any one going into the poultry business in the Puget sound district should follow the Shoup methods," concluded Mr. Simpson. "They have made a study of all conditions and it is certain that no one can go wrong by following their suggestions. If a beginner will but study the bulletins from the state experiment station and put their ideas into practice they should have no trouble getting started in the poultry game."

Lime Is Essential

"If your hens are not getting sufficient lime in their food you are either losing money or not making as much as you might," says a writer on poultry subjects, following a series of experiments conducted to determine the value of lime in the poultry ration. He declared that if lime were systematically provided for the hens the increase in egg output would be sufficient to pay the taxation bill of the entire state.

"What does lime, or calcium do, that is so important?" he inquires, and answers the question himself by telling what he found out in the experiments that he conducted:

"First, the egg is made in three principal parts: the wolk, the white and the shell (the soft shell or shell membrane belongs to the white), and nature has given a law to the hen that if she can't make a complete egg she should not make a piece of an egg. Freak eggs are made by accident.

"In testing this out we found further that if we fed a hen on a ration that would make 100 yolks, 40 whites and 100 shells, she could make only 40 eggs since the white part of the ration was the limiting factor. Or, if we fed a ration which would make 100 yolks, 100 whites, and only 25 shells, the hen could make only 25 eggs, for the shell material was the limiting factor.

"Actual tests where the hens were kept in a floored pen where they could get no shell building material showed that a hen can get shell building material out of the feed and water to make only about one egg for every ten eggs the feed would make and that shell building material must come from some other source than ordinary feed.

"Until we conducted these tests we thought that a lack of shell building material would cause soft shelled eggs. But we found this view incorrect, and also that a lack of shell building material would cause defective shells to a certain extent after which it would prevent production altogether.

"To make a rough estimate of the cost of the different parts used in 200 eggs, we figure the 200 yolks would cost about 65 cents; the 200 whites about $1.33, and the 200 shells would cost about 2 cents. This is a comparative cost of the three parts of the egg where we buy the feed; but from the hen's viewpoint they are all worth exactly the same.

(Editor's note: The above figures if valuable must be considered as comparative only, since feed cost varies so widely from place to place and time to time.)

"On many farms we find flocks of from 100 to 200 hens with not enough available lime to make a dozen eggs. Such flocks lay only the number of eggs for which they can get shell building material from the feed and water given them. In such cases the flocks are a loss and the owners are disappointed and sell them off, usually to start with another breed or variety to have the same story repeated—and all the time when the sole trouble was a lack of lime.

Not Only the Shell.

"We have discussed the use of lime thus far only from the shell producing standpoint, since we believe the illustration is clearer in this case than where lime enters into other consideration. However, calcium or lime is used in other ways. It is used in the blood, muscles and bones. In fact, almost every tissue depends on

(Continued on page seventeen.)

LEE'S LICE KILLER

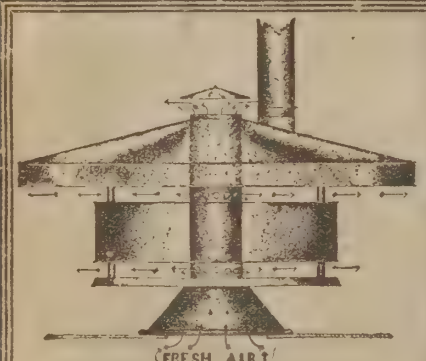
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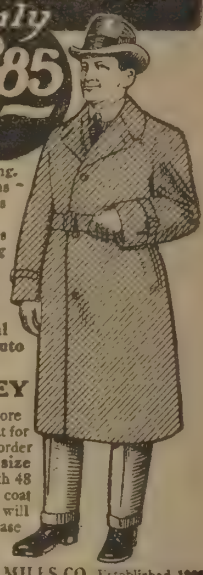
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LOOK AT THE GOOD FARM BARGAINS THAT ARE OFFERED ON THE FARMERS' "WANT AD" PAGE THIS WEEK.

ORCHARD

GRANVILLE LOWTHER
EDITORIAL CONTRIBUTOR

The Filler Tree

It may be all right to include filler trees of various kinds when starting a young orchard, but when maturity is reached they should be taken out. This is the opinion of Professor Marris of the Washington State college horticultural division.

Professor Morris is a strang believer in giving trees plenty of room, not only because of their draft upon soil fertility when in heavy bearing, but because of the better light they will secure and the better color they will consequently give to their fruit. He believes that in the average orchard of the Pacific northwest there should be no more than 48 mature apple trees to the acre. Too many orchardists, he says, cut off the lower, spreading limbs when they begin to interlap, thus tending to produce tall, slender trees instead of lower, spreading, more vigorous ones.

He declares that where the tops are interlocked it is certain that the root systems are also interlocked and competing with each other for plant food.

Cherry Trees Die

I have some Bing cherry trees that are dying. It looks like an insect must be eating the leaves, as one layer of the leaf disappears first, then it gradually dies and drops off. I would like to know what to do for them, as they are quite young trees. M. M. S.

Moscow, Idaho.

From your question and description of the leaves of your cherry trees I should think that the cherry slug was eating the leaves. This insect appears usually about the time of or immediately following the ripening of the cherries and if the insects are numerous the leaves are greatly injured and often nearly destroyed.

If you will spray your trees with arsenate of lead, spraying at the rate of four pounds of powder to 200 gallons of water, you should control this insect. If you have only a few trees and they are small you can control the insect by sprinkling dust of some sort on the trees, such as air slaked line or even ashes or road dust. If you have many trees and they are of any great size it will pay to spray with the lead spray.

L. E. LONGLEY, U. of I.

Packing Grapes in Sawdust

The remarkable development of the drum Emperor grape industry, with red wood sawdust as a feature of the packing, has been the source of a great deal of comment. To compete with Almeria grapes grown in Spain and packed in cork dust in small barrels California has adopted the drum and now supplies the late fall and holiday markets with Emperor grapes and to some extent California grown Almeria fruit. Experiments in packing and shipping began in 1910. By 1916 356 cars were shipped and in 1920 515 cars were handled.

During the earlier years of the sawdust packed drum grape shipments redwood sawdust entirely was used, this being rather plentiful in California. It was treated and dried out and run through a drum machine to wear off all sharp points and rough edges on the particles so that the tender skin of the grapes would not be cut by the packing. Redwood sawdust prepared in this way was found to be entirely satisfactory and absorbed the moisture and tended to keep the berries apart so that they carried and stored satisfactorily. During the last couple of seasons, however, owing to the inability of some of the packers to get redwood sawdust, experimentation with spruce sawdust for the purpose was carried on, and it has been developed that the spruce sawdust is just as good as the redwood for the purpose. It has even been found that there is some preference for the spruce sawdust, because of the contrast which the light sawdust gives against the dark grapes, when the packages are opened, in the appearance of the package. This makes packing in spruce sawdust preferred by some buyers.

Inspection at Loading Station

The department of agriculture recently agreed to consider the suggestion of the fruit growers of Oregon, Washington, Idaho and Montana that federal inspection be made at the loading station instead of at the destination of shipments.

Northwest fruit growers have sustained heavy losses in the last few years by reason of large consignments of apples and pears being held up or condemned in several large cities on the charge that the fruit contained an excessive amount of poison spray residue. In some cases the fruit was a complete loss, while in others the authorities were induced to release it after promises to have the growers reduce the use of the spray or to wipe the fruit before shipment. The growers contend that all loss would be obviated by having the inspection made at the loading stations in the northwest.

The Intercropping System

Cultivated crops may be grown successfully between the trees in a young orchard, but it is not recommended by experienced orchardists that such cropping be practiced after the trees reach a condition of mature bearing. If the best success is to be obtained from the orchard crops must not be grown between the trees after they reach a stage of development where they will require moisture and plant food that are being taken by the cultivated crops.

It has been recommended that cultivated crops be not grown in apple orchards after the trees are more than 5 or 6 years old. The practice should be discontinued even earlier in peach and pear orchards. The cover crop in the latter should be eliminated after the second or third year.

Pears for Commercial Crop

J. H. Stephen of Peshastin tells of his experience with an apple orchard in which he planted Anjou pear trees as fillers. At the time of purchase part of the apples looked as though they would have to come out and the pears were planted in between, so they would be producing while the apples could be grafted and worked into shape for a better orchard. That was two years ago and the pears have done so well that Mr. Stephen has decided to leave them and cut down a large part of the apple trees.

T. M. MURPHY, Kingston, Wash.—"I read everything in THE FARMER every week, then put it away for a while and later get it out and read it again, for fear I have missed something. I wish we could have twice as much matter as you are giving us."

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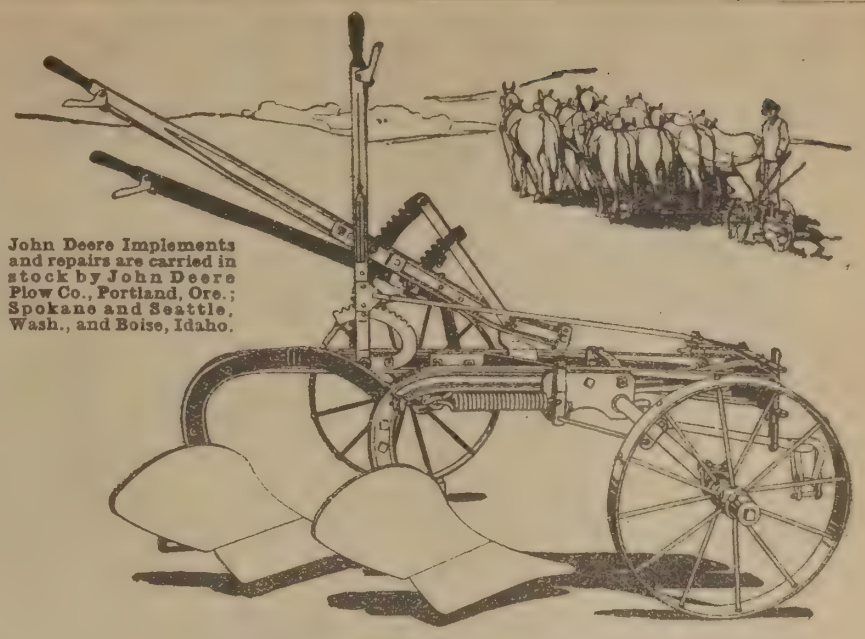
New Lamp Burns 94% Air

Beats Electric or Gas

A new oil lamp that gives an amazingly brilliant, soft, white light, even better than gas or electricity, has been tested by the U. S. government and 35 leading universities and found to be superior to 10 ordinary oil lamps. It burns without odor, smoke or noise—no pumping up, is simple, clean, safe. Burns 94% air and 6% common kerosene (coal oil).

The inventor, W. W. Johnson, 31 N. Fifth St., Portland, Ore., is offering to send a lamp on 10 days' FREE trial, or even to give one FREE to the first user in each locality who will help him introduce it. Write him today for full particulars. Also ask him to explain how you can get the agency and without experience or money make $250 or $500 per month.—Adv.





John Deere Implements and repairs are carried in stock by John Deere Plow Co., Portland, Ore.; Spokane and Seattle, Wash., and Boise, Idaho.

BETTER PLOWING AT LOWER COST

There are more acres of good plowing in it—it costs less per year and per acre—that's why there is real economy in buying the **John Deere Steel Gang.**

Farm implements are your cheapest investment. The University of Missouri found the implement cost of producing a crop of corn last year to be only one-ninth the total production cost per acre. Based on this year's prices, the cost will be only one-thirteenth.

Great strength without unnecessary weight — this plow is built especially for difficult plowing conditions of Pacific Coast states.

All-steel construction —no castings to break. No pipes to bend.

Beams are guaranteed not to bend or break. Unusually strong bracing.

Turns square corners without raising bottoms from the ground. Even width of cut can be maintained on hillsides or around curves by means of landing lever.

Powerful lifting springs make it easy to raise or lower bottoms.

Bottoms to suit your soil — John Deere steel or chilled; they scour, wear long and make good seed beds. Quick detachable shares.

See the John Deere Steel Gang at your John Deere dealer's.

Write today for a free booklet illustrating and describing this plow. Address John Deere, Moline, Illinois, and ask for free booklet SL-847

JOHN DEERE
JOHN DEERE MOLINE, ILL.
THE TRADE MARK OF QUALITY MADE FAMOUS BY GOOD IMPLEMENTS

HUBAM



BECAUSE it gives in one year all the benefits the common clovers do in two, Hubam has become "The World's Greatest New Plant." This is the new annual white sweet clover. In conjunction with The DeGraff Food Company of DeGraff, Ohio, we have grown a large acreage. Unusual opportunity for profit in 1922 by growing Hubam. Seed limited and demand great. Write for booklet and prices on this guaranteed North Dakota grown seed.

AMENIA FARMS, Amenia, North Dakota

GOOD SEEDS



Grown From Select Stock —None Better—52 years selling good seeds to satisfied customers. Prices below all others. Extra lot free in all orders I fill. **Big free catalogue** has over 700 pictures of vegetables and flowers. Send your and neighbors' addresses.

R. H. SHUMWAY, Rockford, Ill.

SPECIAL!



January Class 400 Enrolled Students.

Complete Course--Board and Room $125

We now make this astonishing offer, until Feb. 18: We will give you six weeks absolutely practical training, known as our standard automobile and tractor course. Including all types of gas engines, ignition, starting and lighting, storage batteries and automotive electricity and furnish you first-class board and room for the remarkably low cost of $125. Lesson sheet book furnished free. No other expense. We will handle a limited number of students under this offer. Write today for application, free 100-page catalogue, the "key to success." Special arrangement for those who cannot start at once. Get busy now and prepare for the big spring work and [illegible]

Modern Automobile and Tractor Schools

DEPT. BR. W1803 THIRD AVE. SPOKANE, WASH.

Wheat "Dockage" Is Costly

The United States produces about 800,000,000 bushels of wheat each year, and about one-third of this, or over 250,000,0000 bushels, is spring grown.

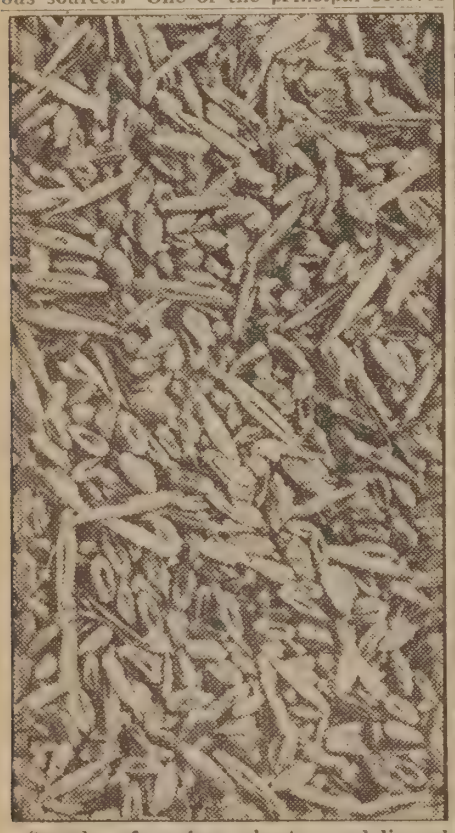
The official grain standards of the United States for wheat designate such weed seeds as can be removed readily from the wheat by the use of appropriate sieves, cleaning devices, or other practical means, as "dockage." When wheat is sold on the market the weight represented by the dockage is deducted from the total gross weight before payment is made for the wheat.

The Minnesota grin inspection records for the last 18 years show that the percentage of dockage in wheat arriving at terminal markets in Minnesota has been increasing.

Some of the material removed as dockage has a certain feed value, while other constitutent parts of the dockage not only have no feeding value, but are actually harmful as a feed, says Robert H. Black, in charge of the Minneapolis office of the grain cleaning investigations of the United States department of agriculture.

The weed seeds that are in the threshed wheat must be removed before the wheat is ground into flour. Removing those seeds at the flour mills is not only expensive, hut is also economically wasteful for many reasons, one of which is that the repeated handling of wheat through the elevators and during shipments breaks up many of the wheat kernels.

Dockage gets into the wheat from various sources. One of the principal sources

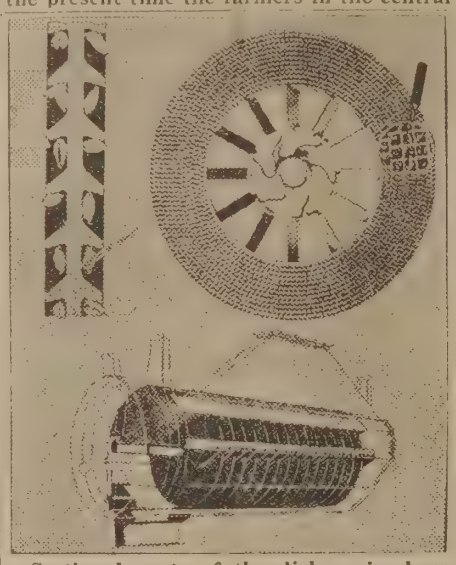


Sample of spring wheat, as delivered from a threshing machine containing a heavy admixture of dockage, mostly wild oats, which illustrates the desirability of recleaning wheat at time of threshing.

is the sowing of foul wheat just as it comes from the threshing machine without any further cleaning.

These small pieces of cracked wheat, which would make good flour if they could be saved, are removed with the weed seeds when the wheat is cleaned in the flour mill, because the small pieces of cracked wheat are approximately the same size as the weed seeds and are removed in the cleaning operation.

A greater economic waste is due to the expense of handling the dockage itself. At the present time the farmers in the central



Sectional parts of the disk grain-cleaning machine. Top, showing arrangement of the disks in the frame; lower left, side view of one disk; lower right, cross section of disk illustrating how oats are separated from wheat.

northwest haul this dockage in the wheat to the elevators and sell the wheat without receiving anything for dockage. Much valuable space is occupied in every wagonload of wheat, in every country elevator, in every carload of wheat, and in every terminal elevator and flour mill by the dockage in the wheat.

If this dockage could have been removed at the time of the threshing, the farmer would have been able to feed that part of the dockage having feed value, and he would also have saved the expense of hauling the dockage to the elevator.

Tariff Demanded by the Farmers

The revision upward of all of the rates proposed in the agricultural schedule of the Fordney tariff bill is practically demanded in a schedule prepared by the agricultural bloc of the senate and presented to the senate finance committee by Senator Gooding of Idaho on behalf of 25 republican senators from the agricultural states.

These rates, Senator Gooding told the committee, are the minimum offering protection to the agricultural industry. Many of them are double the rates proposed in the pending tariff bill. The farmers demand a tariff of 15 cents a pound on long staple cotton and 5 cents a pound on short staple cotton; duties on hides and material increases in the rates on wool.

The senators who participated in the preparation of the new schedule were Senators Johnson and Shortridge (California), McNary and Stanfield (Oregon), Capper (Kansas), Nicholson and Phipps (Colorado), Gooding (Idaho), Norbeck (North Dakota), Sterling (South Dakota), Jones and Poindexter (Washington), Oddie (Nevada), Ladd (North Dakota), Bursom (New Mexico), Cameron (Arizona), Kenyon (Iowa), Warren (Wyoming), Spencer (Missouri), Willis (Ohio), Harreld (Oklahoma), Weller (Maryland), New (Indiana), Keyes (New Hampshire) and Townsend (Michigan).

Maintain Earth Roads

By the end of 1921 Nebraska will have expended over $11,000,000 in the improvement of its roads, which is the largest business the state and county officials have had to handle.

The greatest problem Nebraska has to contend with in its road improvement is the maintenance of its earth roads, due to the many and varied types of soil to be dealt with. It was decided to standardize the earth roads in the state so that they would conform to a uniform cross section and grade. In order to do this a number of crews were organized, equipped with large tractors and heavy 12-foot graders. Skilled operators were put in charge of such outfits and provided with the necessary camp equipment and sent into various localities.

Thirty of these outfits were assigned and from them excellent results obtained. After the roads had been standardized in shape by three heavy maintenance crews, patrol work was at once started, and the surface was kept in a race track condition throughout the season.

Nearly 4000 miles of such roads were graded and maintained at an approximate cost of less than $200 per mile. The roads are patrolled systematically by tractors, trucks and teams. Six hundred miles of highway are patrolled with teams, while 790 miles are being worked with tractors as motive power.

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Get This Free Book

Garden information of greatest value to both amateur and professional is ready for you in our

BIG SEED ANNUAL

just out. Practical and complete. Contains just what you want. Seeds, fertilizers, poultry and bee supplies, etc.

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SEEDS

Army Clothing

Officers' O. D. wool regulation army short overcoats, $3.75; same in officers' long, full lined, $4.75. Navy wool underwear, double breast and back, with heavy drawers, new, per suit, $2. Canteen covers, Boy Scout special, 6 cents each. All Class B, in excellent condition. Send your check or money order. Immediate shipment by parcel post, f. o. b. San Antonio.

The U. S. Mercantile Co.
SAN ANTONIO, TEXAS.

Farm Lands for Sale

Read our "Want Ad" Page for good offers this week.



EVERBEARING STRAWBERRY PLANTS

produce fresh fruit 100 days from planting. Our handsome, free catalog that tells about the sure crop method of growing tomatoes, peppers, cabbage and all vegetable plants is yours for the asking. Send for it. Flowering plants, also early and late seed potatoes.

KELLY GARDENS

Spokane, Washington.

McQUAY-NORRIS
PISTON RINGS



For Every Purpose and Price

It pays to replace worn and leaky piston rings with McQuay-Norris Piston Rings. They will increase power, save gas and oil, and decrease oil and carbon troubles in any make or model of passenger car, truck, tractor or stationary engine. The McQuay-Norris line is complete for every need. Through the addition of McQuay-Norris WAINWRIGHT Pistons and Piston Pins to the McQuay-Norris Piston Ring line, you can now secure for your gas engines complete McQuay-Norris-made Piston, Piston Pin and Piston Ring equipment.

McQUAY-NORRIS WAINWRIGHT PISTONS & PINS



Send for Free Booklet — a valuable explanation of the relationship of piston rings to gas engine operation. Address Dept. BD.

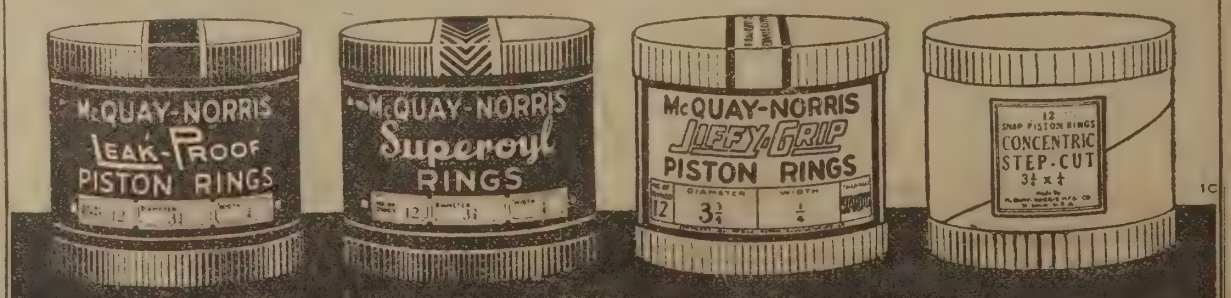
McQuay-Norris Mfg. Co., St. Louis, U. S. A.
Canadian Factory: McQuay-Norris Mfg. Co. of Canada, Ltd., Toronto, Canada.

$1.25 In Canada $1.50 LEAK-PROOF—for greatest power. Prevents loss of gas by means of its exclusive two-piece design, which creates even outward expansion all around the ring, thus maintaining equal pressure against the cylinder wall. Always install with one Supercyl Ring in the top groove.

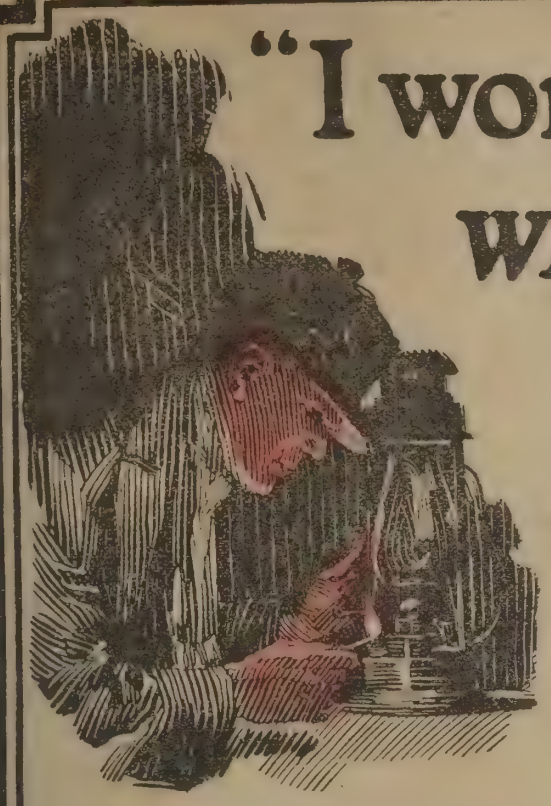
$1.00 In Canada $1.25 Supercyl—to control oil. Its special reservoir collects excess oil from the cylinder wall on each down stroke, emptying on each up stroke, which ordinary grooved rings cannot do. Install one in top groove, regardless of which compression rings are used in lower grooves.

50c In Canada 50c *JIFFY-GRIP*—a lower-priced, one-piece ring that has proved its efficiency within the limits of one-piece design. Has an improved non-butting joint — and velvet finish that "seats in a jiffy." Always install in combination with one Supercyl Ring in top groove of each piston.

Snap Rings — of the highest grade. Raised above the ordinary level of "bulk" rings by the care and uniform accuracy of McQuay-Norris manufacturing methods. Packed twelve rings to the carton—and rolled in waxed paper which preserves them from rust and breakage.



Made of Electric Iron



"I won't be another year *without* Delco-Light"

"LAST YEAR I was going to equip my farm with electric light and power. I was going to have the house wired---give my wife an electric iron, put lights in the barn and farm yard, and get a power stand to do the chores. But I put it off. I thought I could get along well enough without.

Now I realize how much happiness, how much comfort and how much profit I lost as a result of that decision.

In the evenings after a hard day's work I would sit with the family crowded around the table, and try to read by the dim, eyestraining light of a smelly coal oil lamp. There wasn't much happiness in that. There didn't seem to be time enough for anything. Before daylight there were chores to do; feeding, milking, stock to water. Work, work, work---every member of the family---every minute of the day. I saw my wife carrying water and doing a dozen jobs that no woman ought to do, and I couldn't help but wonder how long she could stand it.

* * * * *

TODAY, our home is equipped with Delco-Light and what a difference it has made! It is a cheerfully lighted home, where all of us can enjoy the evening hours---where the children read and study and play, and where we delight in entertaining our friends and neighbors.

Delco-Light has banished the coal oil lamps and lanterns with all the work of cleaning chimneys and trimming wicks.

Delco-Light has provided power to milk the cows and separate the cream, power to run the washer and wringer, sweep the floor and pump the water---power that has given me time to sell my crops as well as raise them.

Delco-Light has brought relief from the daily irksome duties, contentment to all of us and, yes, it has saved us more than its cost."

If you are interested in better farm life, and bigger profits, write for the Delco-Light catalog and information on new reduced prices.

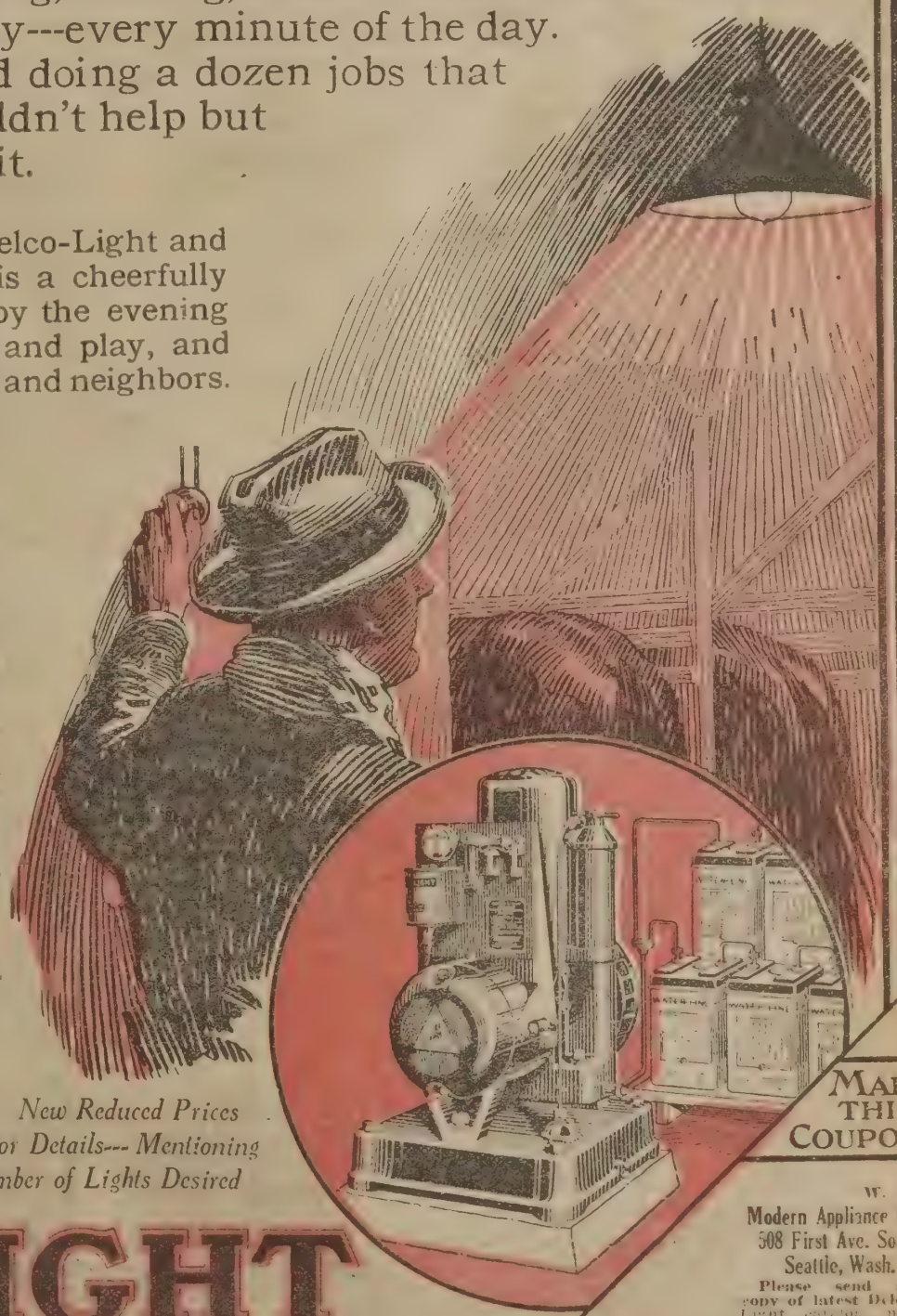
Dealers Wanted

Some Good Territory Available for LIVE DEALERS WITH SMALL CAPITAL. Write Dept. D

Modern Appliance Company

E. H. Epperson, President

508 First Ave. South, Seattle, Wash.



New Reduced Prices
Ask for Details--- Mentioning
Number of Lights Desired

MAIL THIS COUPON

W. F.
Modern Appliance Co.
508 First Ave. South
Seattle, Wash.

Please send me copy of latest Delco-Light catalog, new prices, and details of the time-payment plan.

Name .....
Town ..... R. F. D. .....
County ..... State .....

DEPENDABLE

DELCO-LIGHT

More than 150,000 Satisfied Users

Sale of Holsteins

With zero weather, which had prevailed for several days, the dispersal sale of Holsteins of Charles G. Sprong at Grandview, Wash., was more of a success than could hardly have been expected. Bad weather did not keep a large and interested crowd from attending and, in spite of a little discomfort, bidding was generally brisk and spirited. The few head consigned by neighbors sold as well as Mr. Sprong's, and the 42 females brought a total of $10,590, or an average of $252.20. Bulls, as is usual at most sales, did not go well, one well-bred calf selling at $25. Most of the offerings went to neighbors in the Yakima valley.

R. N. Burnett of Sunnyside, Wash., bought the two top cows, paying $550 for one and $500 for the other. The second one, Lady Ormsby Kakenstein, is 10 years old, but a grand old cow. The other, Model Duchess Girl, is a show animal as well as richly bred, going back on both sides to King Segis. F. L. Shannon of Walla Walla, Wash., paid $450 for Lady Longfield Segis Fobes, and took home six for a total of $1505. Robert Robinson of Yakima got a good one in Duchess Model Segis Annie for $450. Some of the animals went below their worth, but, with conditions considered, consignors did not complain. Colonel George Gue was effective on the block, as always, and he had good ring help by Colonel Hobson. The following is a complete list of the females sold:

Females consigned by Charles G. Sprong, Grandview, Wash.:

Model Duchess Girl, born January 6, 1916—R. N. Burnett, Sunnyside, Wash. $550
Leda Ormsby Kakenstein, born July 25, 1912—R. N. Burnett 500
Lady Longfield Segis Fobes, born January 13, 1916—F. L. Shannon, Walla Walla, Wash. 450
Duchess Model Segis Annie, born September 3, 1919—Robert Robinson, Yakima, Wash. 450
Maldeta Fobes Segis, born January 20, 1920—E. V. Taylor, Selah, Wash. ... 375
Rose Jettine Cornucopia 2d, born September 20, 1917—R. L. Rice, Grandview, Wash. 325
Uneeda Abbie Douglass Korndyke 6th, born August 3, 1919—W. C. Nye, Sunnyside, Wash. 325
Snoqualmie Muriel Pietertje Klaver, born September 26, 1919—R. N. Burnett.. 300
Montana Fobes DeKol, born July 6, 1919—N. B. Shafer, Sunnyside, Wash. 300
Gnorps Lawrence Pietertje Ormsby, born May 18, 1921—H. C. Davis, Granger, Wash. 300
Gnorps Iola Burke Segis, born November 4, 1918—E. C. Puterbaugh, Grandview, Wash. 295
Gnorps Jessie Johanna Coeln, born November 26, 1920—H. C. Davis, Granger, Wash. 275
Gnorps Selma Mutual Pietertje, born March 14, 1916—F. L. Shannon..... 265
Beatrice DeKol Artis Beets, born January 16, 1918—C. N. Dow, Sunnyside, Wash. 250
Ruby Burke Segis, born October 13, 1916—R. B. Fisher, Grandview, Wash. 250
Uneeda Douglas Graham 2d, born September 20, 1919—S. E. Chaffee, Sunnyside, Wash. 235
Jettine Fobes Segis Maldeta, born October 9, 1919—George M. Chase, Grandview, Wash. 235
Gnorps Selma Pietertje Newman, born September 12, 1920—C. E. Jones, Grandview, Wash. 210
Model Annie Vandetta (twin)—A. E. Clark, Grandview, Wash. 220
Model Annie Echo (twin)—A. E. Clark 200
Gnorps Lady Laura Mutual Fobes, born February 16, 1919—F. L. Shannon 205
Gnorps Lady Bonnie Jenne, born September 25, 1918—S. E. Chaffee..... 200
Gnorps Mistic Mischief Mollie, born October 18, 1921—H. C. Davis..... 200
Gnorps Eleanor Springbrook Ormsby, born November 29, 1921—S. C. Chaffee 200
Gnorps Lorna DeKol Cornucopia, born September 25, 1920—S. E. Chaffee.. 195
Fairy Hartog Pietertje—C. E. Jones.. 190
Gnorps Leda Blossom Ormsby, born October 21, 1921—S. D. Cornell, Grandview, Wash. 190
Uncatalogued heifer—F. L. Shannon. 185
Gnorps Lady Louise Pietertje Fobes, born September 23, 1920—George M. Chase 175
Gnorps Clairence Clothilde Newman, born October 3, 1920—C. G. VanBelle, Sunnyside, Wash. 170
Gnorps Ormsby Marjorie Fobes, born October 5, 1921—S. D. Cornell..... 150
Gnorps Wild Rose Blossom, born November 27, 1921—S. D. Cornell..... 135

Females consigned by S. E. Chaffee, Sunnyside, Wash.:

Catus Model Pontiac, born December 8, 1918—C. G. VanBelle 245
Ruby Fobes Segis, born September 29, 1918—Thomas R. Robinson, Grandview, Wash. 235
Dinah Segis Fobes, born November 5, 1918—Frank K. Lempke, Grandview, Wash. 235
Uncatalogued C. Kwak, Grandview, Wash. 230
Uncatalogued—C. G. VanBelle 120

Females consigned by S. D. Cornell, Grandview, Wash.:

Rose Beauty Astrea DeKol, born October 2, 1917—E. D. Billings, Grandview 230
Alma Gluck, born December 29, 1916—F. L. Shannon 200
Nora Irene Mercedes DeKol, born April 17, 1918—F. L. Shannon 200

Females consigned by F. D. Gano, Grandview, Wash.:

Lady Johanna Pietertje Beets—C. G. VanBelle 245
Ormsby Segis Star—C. D. Cornell, Grandview, Wash. 115

George M. Chase bought a bull from the Sprong consignment for $175; D. J. Lenehan of Prosser, one for $15 and Robert Wall of Prosser one for $125. Two bull calves were sold below $100 by Mr. Sprong and one by Mr. Gano.

Method of Tanning Horse Hides

To the Editor of The Washington Farmer: I saw in your paper several inquiries for a good tanning solution for tanning hides with the hair on or off, so am sending you one that I have tried and found to be all right I will tell how to tan a horse hide so as to use it on the farm for straps of all sorts.

First remove the hair, mix, for an average sized hide, four quarts of air-slaked lime in a half barrel of water and stir briskly, then immerse the hide and let it remain there three to five days, stirring two or three times daily. Try from time to time to remove the hair with any blunt tool, such as the back of a case knife, removing all the hair, then rinse in clean water. Now cut the hide in two by cutting up and down the back and cut off legs close to body. The legs make fine belts and shoe laces. Then make a solution of three pounds of alum crushed, half pound of saltpeter and two pounds of salt, with enough water to fully cover the hide. Let it remain two weeks, stirring once or twice daily, when the hide will be tanned. Take out of solution and hang up to dry in a warm place, but not hot, away from the sun. Then when not quite dry soften by rubbing well or by pulling around a post until dry. The softness of the leather will depend on the amount of work put upon it after taking it out of the solution.

For convenience in handling, the hide may be cut in six strips.

If waterproof leather is wanted, rub in neatsfoot oil when about dry.

Sunnyside, Wash. S. A. WELLS.

Won From 12 States

The live stock judging team representing the animal husbandry department of the Washington State college defeated 12 out of the 21 college and university teams that competed at the recent International Live Stock show at Chicago. Among those over whom the Washington team placed was the team from the far-famed Iowa State college at Ames. The team from Ohio won first place, with a score of 4178. Washington ranked ninth out of the total of 21 teams competing, with a score of 3883. Three classes each of hogs, horses, cattle and sheep were judged.

In preparation for the Chicago contest two preliminary contests were held at the western shows. At the Western Royal the state college won over Idaho and Oregon with a total of 6253 points out of a possible 7500. At the Pacific International the state college team took second place with 7785 points, Oregon Agricultural college winning with 8089 points out of a possible 10,000.

The Washington team was the only far western one to make the trip to Chicago. It consisted of Ellison E. Mundy and Martin A. Alexander, both from Ellensburg; Walter E. Haun of Elberton, Clifford C. Gay of Tacoma, Orland H. Tonnemaker of Yakima, Daryl B. Leonard of Chehalis and J. Howard Dobbin of Enterprise, Ore. Professor Howard Hackadorn, head of the animal husbandry department, coached the team, and no little credit is due him for the team's standing.

Darn Stockings; Make Dresses

The Uncas Sewing club of Jefferson county report as their year's work the making of 53 garments at a total saving of $77. Mrs. Harriet M. Andrews is their local leader and has helped the girls to keep their club together and gave them many new ideas about sewing. The girls have learned to darn stockings as well as to make dresses. One of the members, Alice Knight, was the only girl who was able to break the long list of winnings made by the clubs of Pierce county at the Western Washington fair at Puyallup last fall.

The membership of the club is as follows: Francella Taylor, Dorothy Reid, Florence Purviance, Magdaline Peterson, Alice Knight, Mariance Andrews and Madeleine Andrews.

One third of your life is allotted to sleep. Do you get your share?

The most important period in the process of applying nutrition to the repair of the body is while you are asleep. For the most favorable transformation of digested food into nerve and cell tissue, so doctors tell us, sleep is absolutely essential.

Is it any wonder that those who suffer from lack of proper sleep are weak, pale and lacking in energy or ambition?

One of the causes of insomnia is nerve-irritation from tea and coffee drinking. Tea and coffee both contain caffeine, which has a tendency to cause undue stimulation. The irritating effect of caffeine often results in insomnia, depression, and a weakened nervous system.

You can easily overcome these troubles by drinking Postum instead of tea or coffee. Postum is a delicious cereal beverage and it is absolutely free from caffeine, or any other harmful substance.

Ask your grocer for Postum. Drink this refreshing beverage for ten days. Then see if you will not feel better and more clear headed, and if you do not sleep better at night—as so many other people have proved for themselves.

Postum comes in two forms: Instant Postum (in tins) made instantly in the cup by the addition of boiling water. Postum Cereal (in packages of larger bulk, for those who prefer to make the drink while the meal is being prepared) made by boiling for 20 minutes.

Postum *for* Health
"There's a Reason"

Made by Postum Cereal Co., Inc., Battle Creek, Mich.



—but they found success in Western Canada

You can share success with them

This is a message to the man who knows the value of a second chance, who realizes that natural opportunities are as necessary as hard work.

In the success of others there is a lesson for you. Western Canada has thousands of successful men, who a few years ago were no better off than you may be today. But they did not stop at wishing. They investigated and found their second chance.

What other men have done in Western Canada

From Iowa a few years ago came a man with a few thousand dollars and a large family. Today he owns 1,280 acres, and is worth at least $50,000.00. Wisconsin sent another settler who located 160 acres. Today he owns 960 acres, stock, buildings, machinery, etc.—and has never had a crop failure. A gentleman from North Dakota started with a few hundred dollars—today he owns 480 rich acres. A settler from Minnesota started with little cash, and now owns 2,200 acres. Another of Canada's present-day successful men took up a homestead—and now owns 960 acres, all under cultivation. These are only a few cases. Others appear in the booklet. Investigation will reveal many more.

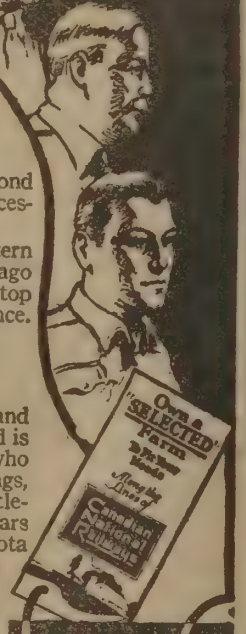
Canadian National Railways

This Railway will help you

This Department of the Canadian National Railways will help you select the kind of farm best suited to your needs. This service is absolutely free. Crop conditions are splendid. Wheat yields average high. Dairying and stock raising pay big. Taxes are low. The people speak your language, and the customs are the same. The finest land can be bought at $20 to $50 an acre. Terms are easy. A small first payment with equal payments at low interest on the balance over a term of years. This is only a very small part of the whole story. Learn why Canada wants you, and how you, too, will be helped. Send coupon for complete illustrated folder. Here is your chance to succeed. Take it up. Send now for the facts.



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Superintendent of Resources
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Follow others to Success

DEWITT FOSTER
Superintendent of Resources
Canadian National Railways
Dept. 2072 Marquette Bldg., Chicago

Please send free and without obligation, complete information on the items concerning Western Canada checked below.
(1) Opportunities for Big Profits
(2) Reduced Railway Rates for Landseekers
(3) Business and Industrial Opportunities
(4) Personally Conducted Excursions

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Address.....R.F.D.....
Town.....State.....



Blue Lace Flower

Clusters of delicate light blue blossoms, in size and color like the Forget-me-not, borne on long slender stems. Texture resembles Queen Anne Lace. Exquisite with cut flowers.

Chinese Wool Flower, flower clusters, massive feathery balls of brilliant crimson, blooming till frost.

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Wells & Richardson Co., Burlington, Vt.

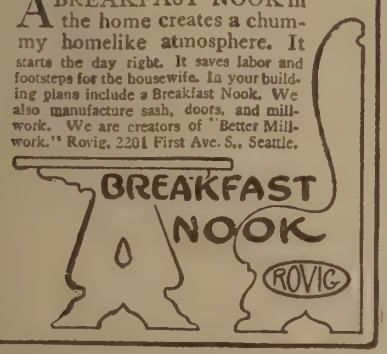
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Please mention **THE WASHINGTON FARMER** when writing advertisers.—Adv.

Pacific Trade

Two-Thirds of World on Rim of That Ocean

To the Editor of The Washington Farmer: I have your letter requesting opinion as to whether or not the agricultural development of the northwestern belt of states will be stimulated by the coming trade of the Pacific.

In reply I desire to state that I count myself very fortunate in having recently attended a conference of foreign trade development held in Tacoma. At that meeting I heard the veteran and pioneer of Pacific shipping. Captain Robert Dollar of San Francisco, make the statement that within the next 25 years the commerce of the world would be on the Pacific and he gave his reason for the statement that two-thirds of the population of the world lived on the rim of that ocean

There is every indication that the orient is waking up, in fact, has both eyes open and one foot out of bed. My prediction is, just as soon as she gets both feet out, then soap will be wanted, clothing needed and something to eat in order to sustain the body for the activities of the new day so near at hand.

We of the Pacific northwest are particularly fortunate in being the nearest at hand in point of transportation and ready to supply the thousand needs of the orient. Those demands coming to our shores can not help but radiate through every branch of industry. It is just as impossible to deny this fact as to stand near a red-hot stove and deny we receive any of its radiation. The closer we are in point of contact the greater will be the heat and correspondingly less as we withdraw from the center of radiation.

There is no line of product in the northwest that will not respond to the growing demands from the foreign trade of the Pacific. J. GRANT HINKLE,
Olympia, Wash. Secretary of State.

Wins Apple Medal

Apples from the state of Washington, exhibited at the December annual meeting of the American Pomological society at Toledo, Ohio, won the Wilder medal of that association for their superior excellence in competition with apples from the best fruit-growing districts of America. The exhibit consisted of 35 plates of one variety each, selected from the exhibits at the Pacific northwest fruit exposition at Seattle last fall. R. T. Reid of Bellevue and J. L. Dumas of Dayton, both members of the pomological society, made the selection. The counties from which the apples were selected included Benton, Chelan, Okanogan, Spokane, Walla Walla, Skamania and Yakima.

Professor O. M. Morris of the horticultural department of the state college, who, with Mr. Dumas and M. L. Dean of Wenatchee, is a life member of the pomological society, emphasizes the significance of the award of this medal in view of the fact that the society is the highest authority in the naming of varieties and their classifications as to quality.

Lime Is Essential

(Continued from page twelve.)

calcium in some way. An egg contains all of the 12 elements necessary to support animal life, so the egg must contain enough calcium, other than that found in the shell, to harden the bones of the chick which is to come out of the egg.

"Many farm folks think that because there is much gravel, sand and small stones in the chicken yards that is not necessary to supply lime in any form. But gravel and sand usually are flint, which contains no lime, and a hen could not make an eggshell if she were to eat a carload of flint. When she does eat flint it is for grinding her food.

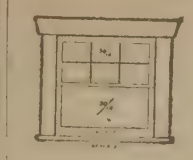
"Lime or calcium (we use these terms together because it is the calcium contained in lime we have reference to) may be obtained in different ways and in different forms. The order in which we find these sources of calcium so far as availability is concerned is as follows: First, oyster shell; second, clam shell; third, slaked lime made into mortar with sand, allowed to dry and then beaten up fine, and fourth, lime rock.

"Our recommendations, then, as to lime would be to keep a supply of it in some form available at all times, and to consider this essential part of the ration as carefully as you look after the kind and quantities of other food."

To Try Out Artichokes

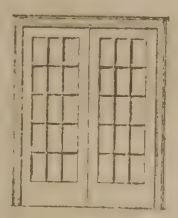
An abundance of clover pasture and a good patch of rape, for later feeding, are about the best supplements for a small grain ration for growing pigs, according to J. W. Morris, a breeder of Berkshires at Ferndale, Whatcom county.

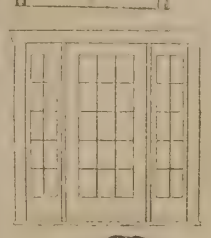
"In fact, young pigs can secure almost all of their living from such a pasture," he said, "for the first three or four months of their lives, after which time they should have a heavier grain ration.











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(Issued January 2)

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In the advertising columns of this paper you will find many articles described which are noteworthy for their low price, high quality, and improved design. It is greatly to your interest to write the advertisers for additional information. When you do so, please mention the fact that you saw their advertising in The Washington Farmer.



From

Pacific Homestead
October 27, 1921

Fertilizer Pays

Fertilizer applied to two test plots in Cowlitz county resulted in a gain to the farmer of over $20 per acre. Potash was placed on the land in one case, at the rate of 150 pounds per acre, which gave an increased yield over land having no potash, of 1.3 tons per acre. The fertilizer cost $10.35, while the potatoes are worth $30 per ton. Acid phosphate applied at the rate of 300 pounds per acre, costing $6, increased the yield 1.9 tons per acre, or gave a cash return over cost of $50 per acre. These demonstration plots were conducted by the county agent to determine the advisability of applying fertilizer to potatoes.

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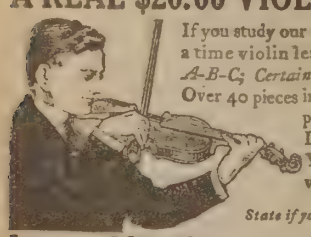


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The Value of Farm Manures

By LEONARD HEGNAUER.

The following table from Hopkins' "Soil Fertility and Permanent Agriculture" gives the composition of ordinary fresh manure, as well as that of some of the common crops and crop residues, which might be returned to the soil for the purpose of increasing the organic matter.

Pounds of Each Element in a Ton.

	Nitrogen.	Phosphorus.	Potassium.
Ordinary fresh manure (average)	10	2	8
Oat straw	12	2	21
Wheat straw	10	2	14
Clover hay	40	5	30
Alfalfa hay	50	4	24

If a ton of any of the above mentioned materials were returned to the soil, the number of pounds of fertilizer elements mentioned would be added to the plant food supply, together with the organic matter. The differences in value between the different substances would be largely determined by the difference in their chemical composition.

From the same source the following table shows the amount of plant food removed by some of the more common crops, during a season, assuming a definite yield per acre.

Crops.	Yield per Acre.	Nitrogen, Pounds.	Phosphorus, Pounds.	Potassium, Pounds.
Grain	50 bushels	71	12	13
Oats straw	2½ tons	31	5	52
Wheat straw	2½ tons	25	4	45
Potatoes	12 tons	84	17	120
Alfalfa	8 tons	400	36	192

The plant food here mentioned all must come from the supply in the soil, except in the case of alfalfa. The nitrogen will come from the air provided the plants were inoculated. The table further shows that no crop can be grown without a definite amount of raw material of a very definite kind being on hand and readily available. If sufficient amounts are not available the yield will be proportionately lowered.

If, for example, a 50-bushel wheat crop were taken from an acre of ground, the grain alone would remove 71 pounds of nitrogen, 12 pounds of phosphorus and 13 pounds of potassium. It is assumed here that all of the straw is returned and none of its fertility lost. To return the plant food removed by the wheat crop would require seven tons of ordinary manure to produce sufficient nitrogen to reimburse hte soil and make good the losses in that element. In the case of phosphorus and potassium a somewhat lighter application would supply the needs. This case is used merely to show how rapidly plant food is consumed and how necessary it is to return to the land all of the fertilizing materials which the farm produces. It further shows that on the average farm the amount of manure applied is not sufficient to make good the ferility withdrawn by crops and the farmer is drawing heavily on the reserve stock in the soil. Sooner or later these reserve stocks must be replenished.

BUTTERFAT PRICES DROP.

Butterfat prices dropped to 25 cents in the Twin Falls and Boise valley districts during the second week in January. This is the lowest price paid for butterfat in Idaho in January since before the World war began.

WHAT CHEMISTS CAN'T FIND.

A chemical analysis of roots, such as turnips and mangels, shows them to be comparatively low in food nutrients, but there is a food or tonic value in many things that chemists are unable to discover.

FARMERS' WANT ADS

HELP WANTED—Male 3

RAILWAY MAIL, GOV'T CLERKS-CARRIERS; $125-$200; experience unnecessary. Particulars free. Write Mokane Institute, Dept. A28, Denver, Colo.

FRESH FOOD PRODUCTS 51-1

HONEY BRAND HONEY—PURE, LIGHT, thick, and good flavored; from alfalfa and sweet clover; one 60-lb. can, $7.50; two 60-lb. cans, $14.50. Write for circular and complete price list in pails; salesmen wanted. Oliver Sires, Wapato, Wash.

WHITE ALFALFA, SWEET CLOVER honey; 1 60-lb. can, $7.50; 2 60-lb. cans, $14.50; six 10-lb. cans, $8.50; three No. 10 pails, prepaid third zone, $5.50. Wells D. Rose, Sunnyside, Wash.

HAPPY HOME HONEY FROM BLOSSOMS of alfalfa and sweet clover, in liquid form; 6 10-lb. pails, $8.50; 1 60-lb. can, $7.50; 2 cans, $14.50, at Mabton. H. N. Paul, Mabton, Wash.

HONEY—ALFALFA, SWEET CLOVER: FINE quality; 60-lb. can, $7.50; two 60-lb. cans, $14.50; three 10-lb. pails, prepaid second zone, $5. Harry Fisher, Prosser, Wash.

DELICIOUS NEW CLOVER HONEY, 60 LBS., $6.85; prepaid third zone, $8.75; two 60s, $13.25; pound can, 25c. Browne, Box 499, Twin Falls, Idaho.

PRUNES, $6.25 PER HUNDRED; SMALL BUT nice, clean, sweet; 25 lbs., express paid, $2.70. Sample, 15c. Kingwood Orchards, Salem, Ore.

HONEY—LIGHT AMBER HONEY, LIQUID form; one sixty-pound can, $7; two cans, $13.50. A. L. Traner, Touchet, Wash.

SMOKED SALMON, 5-POUND BOX, $1.25; salt salmon bellies, 5 pounds, $1.25, delivered by mail. Coffin Fish Co., Seattle, Wash.

GUARANTEED FINEST FLAVORED HONEY, 60-lb. can, $6.25, delivered for $7.75. J. Walsh, Box 38, Hagerman, Idaho.

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COMB HONEY, CHOICE, $5 PER CASE, YOU pay postage. Farmers' Service, Twin Falls, Idaho, Box 472.

MISCELLANEOUS—FOR SALE 60

SASH AND DOORS—O. B. WILLIAMS CO., 1943 First ave., So. Seattle. Chicken house sash, 20" wide by 25" high, 80c; a dozen different sizes in stock for immediate shipment. Skylights for chicken houses, 36"x40" price, glazed, $2. This is the size recommended by the Western Washington experiment station. We carry them in stock for immediate shipment. Sash and doors for all purposes at lowest prices. All orders receive prompt attention. Our large illustrated catalogue No. 35, showing full line of building material and built-in fixtures for the home, free on request. O. B. Williams Co. Established 1899.

PIPE — NEW AND SECOND-HAND, ANY size; low price; standard grade roofing paper at a big saving; belting, all plies, all sizes, cheap. Write Alaska Junk Co., 8120 Adams st., Spokane, Wash.

TOBACCO—1919 LEAF, SELECT CHEWING, 3 pounds, $1; ten, $3. Best smoking and chewing, ten, $2.50; regular smoking, ten, $1.50. Satisfaction guaranteed. Producers' Distributors, Murray, Ky.

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TOBACCO—HOMESPUN MILD SMOKING, 10 lbs., $2; 20 lbs., $3.50; chewing, 10 lbs., $2.75. Farmers' Club, Mayfield, Ky.

MISCELLANEOUS—FOR SALE (Continued) 60

TOBACCO, NATURAL LEAF—SWEET AND mellow hand-picked chewing or smoking, 5 lbs., $1.50; 10 lbs., $2.50; smoking, 10 lbs., $2. Furnish free recipe for preparing. Quality and delivery guaranteed. Farmers' Tobacco Exchange, Sedalia, Ky.

WALL BOARD—WRITE FOR SAMPLE OF Washington plaster wall board; won't warp, won't burn. Manufactured by Washington Building Products company, 6351 E. Marginal Way, Seattle, Wash.

TOBACCO—NATURAL LEAF FOR MILD smoking, 10 lbs., $1.50; 20 lbs., $2.75; will furnish free recipe for preparing. Leaf Tobacco Exchange, Mayfield, Ky., Star Route.

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HOMESPUN CHEWING AND SMOKING TObacco, 5 pounds, $1.25; 10 pounds, $2.25; 20 pounds, $4. Farmers' Union, Mayfield, Ky.

CEDAR POSTS, POLES, PILING AND STUBS; lengths and sizes to order. Marsden Red Cedar company, Calder, Idaho.

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I BUY ELK TEETH, OLD WATCHES, GOLD and silver. Estimate sent by return mail. Return postage paid if bid is not satisfactory. Kugler, reliable jeweler, Soda Springs, Idaho.

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WEAVING—HAVE YOUR RAGS WOVEN INTO beautiful rugs. Get our prices. Carl Haaland, Evans, Oregon.

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WRITE MYER RUBENS, SPOKANE, ABOUT stove repairs, welding broken parts, nickle plating.

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BEAUTIFUL WHITE SCOTCH COLLIE PUPS, pedigreed. Ideal for farm and home. Write for description. Mrs. E. A. Bennett, Salem, Oregon.

PEDIGREED WHITE COLLIE PUPS; VERY choice; six months old. Lida E. Richards, 3906 35th st., Tacoma, Wash.

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RABBITS and HARES 173

PEDIGREED FLEMISH AND CHECKERED Giants. Prices not fancy. Brookside Rabbitry, Hubbard, Ore.

POULTRY (Baby Chicks) 174

THE PROGRESSIVE HATCHERY — BABY chicks from vigorous range bred stock; trapnested S. C. White Leghorns, $20 per 100; selected S. C. White Leghorns, $18 per 100; S. C. R. I. Reds and Barred Rocks, $25 per 100; safe delivery of live, vigorous chicks, full number ordered; absolutely guaranteed. Send for circular of special matings and hatching eggs. 1534 East 12th North, Portland, Ore.

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POULTRY—Baby Chicks (Continued) 174

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WHITE LEGHORN AND ILL-A-HEE BARRED Rock chicks—Buy chicks this year that live and grow and are bred to lay. Butler White Leghorns and Ill-a-hee Barred Rocks are known for high average flock production. Before ordering elsewhere, write for circular telling how our breeding methods produce 200 flocks for our customers. All stock trap nested and pedigreed. Also get our prices on breeding cockerels and hatching eggs for each breed. Address Butler Poultry Farms, or Ill-a-hee Poultry Farm, Jennigs Lodge, Ore.

CRYSTAL WHITE POULTRY FARM—BREEDers of S. C. White Leghorns; baby chicks a specialty; hatched from eggs laid by our great egg producers. Price, $17 per 100; $160 per 1000. Order early to get the best dates. Send for circulars. Mr. and Mrs. Jno. Eborall, McMinnville, Ore. Box 33.

FRESHLAID WHITE LEGHORN CHICKS have the qualities you want; vigor and scientific breeding for heaviest egg production; every Freshlaid male is from a high record hen. Our new catalog, "Success with Chicks," is free. Sold out until May 1st. Freshlaid Farm, Colfax, Wash.

WHITE LEGHORN COCKERELS, $3; CHOICE, $5; baby chicks, 18c; utility stock. My pullets carried first prize Sherwood and first pullet, Portland stock show. Mammoth Pekin duck eggs, $2 for eleven; ducklings, 40c each. G. H. Lewis, Route 3, Sherwood, Ore.

WHITE LEGHORN BABY CHICKS FROM heaviest laying stock. Booking orders now for spring, 1922, delivery. Safe arrival live, vigorous chicks guaranteed. Prices on request. Reliable since 1898. Must Hatch Incubator Co., 445 Seventh st., Petaluma, Cal.

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BABY CHICKS, S. C. RHODE ISLAND REDS, $22.50 per 100; S. C. White Leghorns, $18 per 100; March chicks all sold. Maple Brook Poultry Farm, Southworth, Wash. Box. 2.

BABY CHICKS — WE GUARANTEE OUR chicks to be from the highest producing hens in Petaluma. Write for further information. The White Hatchery, Petaluma, Cal.

BABY CHICKS, RHODE ISLAND REDS, Barred Rock, White Orpington and White Leghorns; cockerels, $5 each. Hansen's Poultry Yards, Olympia, Wash.

CHIX—BIG, HEALTHY, HEAVY LAYING kind, from our own record hens. Feb. and March hatch, $15 per 100. Chandler's Poultry Farm, Lebanon, Ore.

TANCRED STRAIN WHITE LEGHORN BABY chicks, $18 per 100; eleventh season; incubator capacity, 18,000 eggs. D. A. Gillette, R. 4, Yakima, Wash.

WHITE LEGHORN BABY CHICKS; OREGON Agricultural college stock exclusively. Write for circular. Russell Poultry Farm, Route 3, Corvallis, Ore.

BABY CHICKS, COCKERELS, SINGLE COMB White Leghorn; heavy laying strain. Grape Lane Poultry Farm, Turner, Oregon.

ANCONA COCKERELS, HATCHING EGGS, chicks. Get our prices. Oscar Dunlap, Junction City, Ore.

BABY CHICKS; BEST WHITE LEGHORNS; free circular. Acme Poultry Farm, Dirston route, Cottage Grove, Ore.

Leghorns

PRIZE-WINNING S. C. BROWN LEGHORN (light strain), single comb White Leghorn (Tancred strain); baby chicks, $15 per 100; order now. Satisfaction and delivery guaranteed. G. R. Lumberg, Springdale, Wash.

WHITE LEGHORN EGGS FOR HATCHING—Oregon Agricultural college stock; $2 per setting, or $8 per 100 prepaid. Russell Poultry Farm, Route 3, Corvallis, Ore.

(Continued on the following page.)

FARMERS' WANT ADS

This is the farmers' "want," "sale" and "exchange" department for small advertisements of farmers, including live stock and poultry.

Advertising rates for ads running 1 to 3 times, 10c per word per insertion, with a special rate to Farmer subscribers, as follows: Ads running 4 to 12 times, 9c per word per insertion; ads running 13 times or more, 8c per word per insertion.

All commercial and land advertising 10 cents per word each insertion. Open also to nonsubscribers.

In using these columns advertisers must observe: (1) No advertisements will be inserted for less than $1.00. (2) Every word, number and initial, including name and address, must be paid for. (3) New advertisements, changes of copy or cancellations must reach general office, Spokane, Wash., 10 days in advance of publication date. (4) Cash must accompany order.

Above rates include insertion in The Washington Farmer, The Idaho Farmer and The Oregon Farmer, which constitute the Pacific Northwest Farm Trio, 46 Review Building, Spokane, Wash.

POULTRY—Leghorns (Continued) 174

SINGLE COMB WHITE LEGHORNS (TANcred strain); selected heavy laying second and third year hens mated to cockerels from 250 to 275 egg trap nested dams; hatching eggs, $1.50 per 15; $7.50 per hundred; chicks, $18 per hundred, safe delivery guaranteed. Oakdawn Poultry Farm, Hillsboro, Ore.

O. A. C. WHITE LEGHORNS—WORLD-FAmous egg producers; vigorous, free range stock; baby chicks, eggs, cockerels for sale. Our entry is leading pen for value of eggs produced in November and December, Western Washington egg laying contest. Write for free circular. Corvallis Poultry Farm, Corvallis, Ore.

TRAPNESTED WHITE LEGHORN BREEDING stock and setting eggs; famous Carnation high record stock; pedigreed breeding for heavy winter layers. Improve your flock by adding Carnation stock. Ernest W. Raush, Carnation Poultry Farm, Kent, Wash.

WE ARE NOW OFFERING A REDUCED price of $8 per 100 on hatching eggs from our Hoganized White Leghorns. Chicks, 20 and 30 cents each. Mrs. Arp, St. John, Wash.

HATCHING EGGS, 90 PER CENT FERTILITY guaranteed; 100, $4.75; from White Leghorns; chicks, 13½c. Order now. Singing Hen Poultry Plant, Walker, Ore.

WILL CONTRACT 4500 MARCH 1ST HATCH cockerels, ¾ to 1¼ lb. (milk fed W. L.). Pulletpens, Prosser, Wash.

S. C. WHITE LEGHORN BABY CHIX FROM trap nested, Hoganized hens; also cocks and cockerels. J. Panck, Sherwood, Ore. R. 1.

PRIZE WINNING STOCK, ROSE COMB Brown Leghorn cockerels, $3 each; April hatch. Chas. Lightte, Chewelah, Wash.

WHITE LEGHORNS, TRAP NESTED STRAIN, hatching eggs, baby chicks. Write us. Washington Poultry Farm, Hartford, Wash.

S. C. W. L. HATCHING EGGS. HOLLYWOOD strain. Mrs. Rominger, Underwood, Wash.

Turkeys, Ducks, Geese

ROUEN DUCKS, WINNERS AT WALLA WALla, $4 each; eggs, eleven, $2. White Wyandottes, heavy layers; show winners; eggs, fifteen, $2. P. H. Tomlinson, College Place, Wash.

GIANT BRONZE TURKEYS, UNDEFEATED flock in west. Toms, $15; late 17-pound, $12; pullets, $8 and $10; will ship C. O. D. Herbert Stoneberg, Route B, Eugene, Ore.

YOUNG MAMMOTH BRONZE TOMS, VIGORous, pure northern strain; 24 to 28 pounds, $10 each. Mrs. Richard Morris, Sterrenberg, Mont.

MAMMOTH TOULOUSE GEESE; LAID 40 eggs last year, at 30c each; fine birds, $6 each. Thos. Oswalt, Benton City, Wash.

MAMMOTH PEKIN EGGS FROM DUCKS that take the prizes. Booking advance orders. Mrs. E. A. Bennett, Salem, Ore.

PURE BLOOD MAMMOTH BRONZE TURkeys, prize winning stock. Mrs. Frank Browning, Route 1, Nampa, Idaho.

SPENCER TURKENS, TURKEY-CHICKEN fowl; booklet, photographs free. Spencer, 9 Case, Santa Cruz, Calif.

FOR SALE—THOROUGHBRED MAMMOTH bronze turkeys; toms, $8; hens, $5. D. A. Roby, Creston, Wash.

CHOICE MAMMOTH BRONZE TURKEY gobblers, eight dollars. Mrs. Amelia Reimers, Eagle, Idaho.

PURE MAMMOTH BRONZE TURKEYS, ALSO pure Toulouse geese. Mrs. F. Crane, Hagerman, Idaho.

PURE MAMMOTH BRONZE TURKEYS. Flock of four hundred. Harry Smith, Coupeville, Wash.

PURE BLOOD TOULOUSE GEESE. $6. DR. Nichol, Mosier, Ore.

Miscellaneous Poultry.

"HENACRES" 8 WEEKS' OLD PULLETS; March or May hatched; big, healthy, vigorous bred to lay. Booking orders now. 6000 to sell, $1.50 each or 500 for $700. Satisfaction guaranteed or money back. Baby chicks for February, March and April all sold to old customers. May chicks, $22 per 100; $200 per 1000. June, $16 per 100; $140 per 1000. Safe delivery guaranteed. Hatching eggs, $2 per 15; $9 per 100; $80 per 1000. "HENACRES" Leghorns are known all over the northwest. Ask your neighbor. Illustrated catalog and booklet on poultry management free. "HENACRES," Box A, Prosser, Wash.

CHICKS OF QUALITY—HOLLYWOOD, TANcred and commercial strains of White Leghorn chicks from pedigreed males, $20 per hundred. R. I. Reds, Barred Rocks, Black Minorcas and Ancona chicks, $25 per hundred. These prices are for February and March delivery. We sell Queen incubators, Queen brooder stoves, Reliable Blue Flame brooders, Petaluma Electric and Charters' incubators and American brooder stoves. A complete line of poultry supplies and remedies, including leg bands, egg scales, trapnest records, etc. Catalogue free. Queen Hatchery, Fourth and Pine. Elliott 2054.

FREE INCUBATOR CATALOG — INCUBAtors, brooders, oat sprouters, baby chicks, hatching eggs, trap nests, poultry books and supplies. You can't beat the St. Helens Incubator in either price or hatch. From 60 to 4000 egg capacity; electric and lamp heated. St. Helens Incubator Co., Centralia, Wash.

WINTER EGGS PROFITABLE — "SNOWflake" White Orpingtons establish highest American Orpington pen record, Western Washington contest; average 204 eggs; utility cockerels, $5; pedigreed males, $7.50, $10. Booking egg orders, $3, $5, $10. W. T. Thompson, Bozeman, Mont.

SEND 25C FOR FOUR MONTHS' TRIAL SUBscription to the quality poultry paper of the west. Alive with value and interest. Has helped thousands raise better poultry. Year's subscription 75 cents. The Pacific Poultryman, Seattle, Wash.

S. C. ANCONA PRIZE WINNING STOCK. ORders booked for eggs at $2 setting; $11 hundred lots; baby chix, 20c each. Deposit with order. Toulouse geese eggs, 50c each. Faun Runner duck eggs, $2 setting of 11 eggs. Karl Broeder, Sherwood, Ore.

FREE MATING LIST, DESCRIBING OUR ideal Barred Rocks; 37 1sts, 10 specials for 1921. High egg record; 303 eggs; average egg record 229 eggs. Jacobson's Poultry Yards, 3596 Tacoma ave., Tacoma, Wash.

COCKERELS—ROSE AND SINGLE COMB Brown and Buff Leghorns, Anconas, Black Minorcas, Rhode Island Reds, Blue Andalusians. Boone Avenue Poultry Yards, E1601 Boone ave., Spokane.

S. C. RHODE ISLAND REDS. THE POPULAR and profitable farm fowls. We specialize in good color and high producing strains. Cockerels, hatching eggs and baby chicks in season. G. B. Dimick, Oregon City, Ore.

ALLEN'S PRIZE BARRED ROCKS AND White Leghorns are wonderful layers. Write D. W. Allen, LaConner, Wash.

BLUE ANDALUSIANS AND WHITE ROCK cockerels; extra good; order now. Mrs. C. W. Armstrong, Freewater, Ore.

MISC. POULTRY (Continued) 174

SILVER WYANDOTTES AND SILVER SPANGled Hamburgs, Golden Campines, choice birds for sale. No baby chicks or eggs by the 100. Birds, $5 and up. G. G. Wherry, Payette, Idaho.

REGAL WHITE WYANDOTTES; BEST QUALity, prize winning stock. Cockerels, hens, pullets. Prices right. Absolute satisfaction guaranteed. Eugene Boyk, Rocklyn, Wash.

SINGLE COMB RHODE ISLAND REDS, standard size, rich red color; cockerels, $3, $5; cocks, $5. Satisfaction or money back. B. F. Kammerzell & Sons, Route 5, Colfax, Wash.

WHITE WYANDOTTE COCKS AND COCKERels for sale; quality and satisfaction guaranteed. Write me. I will save you money. Rudolph Pazer, LaCrosse, Wash.

THOROUGHBRED BARRED ROCKS, RUNNER ducks, males and females, $2, $2.50, $3; ducklings, hundred, $33. E. A. Muths, Route 1, Box 49, Salem, Ore.

DOLLARS FOR YOUR EGGS—WE PAY THE top market prices for your eggs and poultry. Daily cash remittances. Western Produce Co., Spokane.

SAY!—EGGS MEAN DOLLARS TO YOU. ALSO your poultry, veal and dressed hogs, when shipped to us. Top prices. Prompt remittances. Hotchkiss Produce Co., Spokane.

QUALITY BARRED PLYMOUTH ROCKS and Black Langshans, cockerels and cock birds; also a few females; prize winners. B. D. Reser, Walla Walla, Wash.

POULTRY RAISERS, SEND FOR FREE BOOKlet on poultry advertising. The Pacific Northwest Farm Trio, Dept. P, Review bldg., Spokane, Wash.

ROSE COMB RHODE ISLAND REDS, WHITE Leghorns from trap nested Hoganized stock; cockerels for sale, $5 to $10. L. A. Hoge, Prosser, Wash.

GET L. E. DELINE'S "HILLCREST" WHITE Rock breeding cockerels, $5, and hatching eggs, $2.50 per setting. Wenatchee, Wash., Route 5.

STANDARD BRED BRONZE TURKEYS, Barred Rocks, White Leghorns, Dark Cornish, Toulouse geese. E. A. Kruse, Roseburg, Ore.

WHITE LEGHORN AND WHITE ROCK COCKerels; 300-egg strain; baby chicks, hatching eggs. Palouse Falls Ranch, Palouse Falls, Wash.

BARRED ROCKS (PARKS') COCKERELS, pullets, from 200-egg hens, $5 (with pedigree). 15 eggs, $2.50. Hy Messerli, Kennewick, Wash.

BARRED PLYMOUTH ROCKS FROM BEST exhibition and laying strain; cockerels, $3 and up. Wm. Heimsoth, Pomona, Wash.

SHIP YOUR LIVE POULTRY AND EGGS TO us. Highest prices paid; daily remittance. Inland Poultry House, Spokane, Wash.

PARTRIDGE WYANDOTTES, PROFITABLE, beautiful, reasonable; eggs, stock. Hampshire swine. Merryvale, Barlow, Ore.

WHITE WYANDOTTE COCKERELS, $3 AND $4; eggs, $1.50 for fifteen; $8 per hundred. A. Krueger, Colfax, Wash.

BLACK MINORCAS AND WHITE WYANdotte cockerels; high class stock. C. McClelland, R. 1, Boise.

THOROUGHBRED ANCONA COCKS, SONS OF Sheppard's famous winter layers. Georgiana Kee, Greenacres, Wash.

SINGLE COMB RED COCKERELS ALSO DAY old chicks and hatching eggs. A. E. Bosworth, Omak, Wash.

SILVER WYANDOTTE COCKERELS; FINE ones, at $3 and $5 each. Melvin Bergeson, Adrian, Wash.

RANCH RAISED REDS; SECOND PEN BOISE show; cockerels for sale. W. J. Schulze, Boise, Idaho, Route 1.

WHITE ROCK COCKERELS, SNOWDRIFT strain, also hens, $2 each. J. N. Wood, Lignite, N. D.

ANCONA AND WHITE WYANDOTTE COCKerels, $4 each. Quincy Stanfield, Meridian, Idaho.

HUNT'S FINE BARRED ROCKS. WRITE for circular on eggs. W. A. Hunt, Lebanon, Ore.

DANDY PARKS LAYING STRAIN BARRED Rock cockerels, $5; booking orders for hatching eggs. W. J. Scofield, Missoula, Mont.

ROSE COMB BLACK MINORCA COCKERELS, beauties, and from excellent egg producers, each $2.50. H. E. Scholz, Menlo, Wash.

DARK BARRED ROCK COCKERELS, THOMPson's ringlets. Ray Leftwick, R. 4, Box 855A, Tacoma, Wash.

COCKERELS, EGGS, CHICKS, TRAP NESTED White Leghorn and Barred Rocks. Mrs. W. M. Roberts, Elmira, Ore.

COCKERELS, S. C. RHODE ISLAND REDS. Write for information. Mrs. L. W. Alexander, Sunnyside, Wash.

SILVER LACED WYANDOTTE COCKERELS, $3; two for five dollars. Mrs. Annie Baggs, Bancroft, Idaho.

1949 COCKERELS, HATCHING EGGS, 49 VArieties; free book. Aye Bros., Box 14, Blair, Nebr.

PURCHASED DR. E. W. FINZER'S S. C. BLACK Minorcas. Some fine cockerels for sale. Eggs in season. Mrs. Arthur Kaylor, Clackamas, Ore.

O. A. C. BARRED ROCK COCKERELS, $3.50, $5. Mrs. Faulconer, Skamania, Wash.

FANCY BARRED ROCK COCKERELS $5 UP. J. E. Horton, 2408 Altamont, Spokane.

LIVE STOCK 177

WE PAY TOP PRICES FOR YOUR LIVE OR dressed veal, hogs and poultry. Your check by return mail. Shipping tags on request. M. & J. Packing Co., Spokane.

FOR SALE—OR WILL CONSIDER WORK horses in exchange for registered Clydesdale stallion and mare. For particulars write Otto Trice, Grandview, Wash.

FOR SALE—25 HEAD HOLSTEIN DAIRY cows, all coming fresh this spring. S. Carlisle, 756 South 9th street, Pocatello, Idaho.

TILLAMOOK CALVES—SEASON NOW OPEN. Price lists ready; strictly dairy stock. Smith, the Calf Man, Tillamook, Ore.

LIVE STOCK (Continued.) 177

SEND FOR FREE BOOKLET, "SOME SUGgestions to Live Stock Advertisers," outlining the practices of successful men of long experience. Helps in determining how much to spend, the mediums to select, preparing advertisements, handling inquiries, the use of photographs, etc. Write today. The Pacific Northwest Farm Trio, Dept. W, Spokane, Wash.

MILCH GOATS—REGISTERED TOGGENBURG grade does, freshen Feb. and March; three quarts and better, $35 to $75. Foundation does bred to pure bred bucks; fresh in February and March, $20 each. Pure bred Toggenburg buck kid, $75. M. P. Eggers, Woodinville, Wash.

EPOCHAL BERKSHIRES — WEANED PIGS by the Grand Champion Porkmakers Sincerity. The Grand Champion Barrow over all breeds and the Grand Champion Carcass at the International were of Epochal blood. Boars for heavy or light service. E. V. Orford, Boise, Idaho.

SHIP US YOUR POULTRY AND LIVE STOCK. We pay the top market price for your live or dressed veal, beef, hogs and poultry. See our display ad for wholesale prices on hams, bacon, lard, compounds and fresh meats. John Lewis & Co., Spokane, Wash.

LEWISTON HEREFORD FARM BULL IN service, Prince Rupert 80th, No. 544903, undefeated grand champion, 1916-17. Have for sale few cows and heifers bred to this bull. Herman Nordby, Box 416, Lewiston, Idaho.

FOR SALE—SOME VERY FINE POLAND China gilts; bred to first prize futurity boar at state fair, to farrow in March. Buck & McDonald, Yamhill, Ore.

ONE FINE TEN-MONTHS-OLD GRADE TOGgenberg billy goat. Price $45. M. P. Paulson, Route 5, Mt. Vernon, Wash.

REGISTERED O. I. C. SWINE FOR SALE; shipped C. O. D.; guarantee satisfaction. Tony Johnson, Polson, Mont.

FOR SALE—TWO REGISTERED ABERDEEN Angus bulls. J. M. Schaefer & Son, Forest Grove, Ore.

FOR SALE—MAMMOTH JACK, WEIGHT, 1120. Address Cloverleaf Ranch, Lamona, Wash.

FOR SALE—A ROAN SHORTHORN BULL. Albert Larson, St. Maries, Idaho.

TOGGENBURG MILCH GOATS. FANNIE Branson, Falls City, Ore.

HARNESS and SADDLERY 189

SEND FOR FREE HARNESS AND SADDLE catalog today; cut out the middleman, buy direct from the manufacturer. Lowest prices in the west; satisfaction guaranteed. Established 1881. Write Pierce Harness Co., dept. T, Spokane, Wash.

HAY FOR SALE. 200

ALFALFA HAY—BUY DIRECT, SAVE MONey; quality guaranteed. Write or wire for prices. Ernest T. Freepons, Walla Walla, Wash.

HOTELS 306

GLOBE HOTEL ANNEX, NEWLY FURnished rooms, 75c and $1; with bath, $1 and up. Spokane.

JOB PRINTING 372

GUARANTEED BETTER BUTTER WRAPpers; 100, 60c; 250, $1.50; 500, $2.50; 1000, $4.25; printed to order. Home Specialty Co., Middleton, Idaho.

MONUMENTS 510

COMPLETE STOCK, RIGHT PRICES. CORrespondence solicited.. J. W. Harding, Inland Monument Co., N1001 Monroe, Spokane.

PERSONAL 537

BACHELOR DESIRES HEAR FROM YOUNG woman who can plan home, supervise girls; country; object, matrimony. D 2, Washington Farmer, Spokane.

BUILDING MATERIAL 588

NO WASTE, LESS LABOR. BUILD WITH ready cut houses and barns and save money. Attractive new plan book sent free. 4c postage. Prices quoted on material list. Write today. Price advance certain to come soon. Local Keystone Lbr. Co., 3000 Sprague, Tacoma, Wash.

SEEDS 620

HUBAM CLOVER, CERTIFIED SEED OF THE annual white blossom sweet clover. This new legume is a wonderful producer of both seed and forage. Seed for sale by the grower, O. E. Lambert, Route C, Box 226, Modesto, Cal.

RED CLOVER, ALSIKE, RYE GRASS, TIMothy and vetch seed for sale; good quality, lower prices; by freight or parcel post. Rhoten Farms, Salem, Ore.

RECLEANED TIMOTHY AND ALSIKE SEEDS 10 cents per pound; germination guaranteed. Send samples. M. Hill, McCall, Idaho.

HUBAM CLOVER, CERTIFIED SEED OF THE earliest strain; Idaho grown. DeKalb County Agricultural association, DeKalb, Ill.

HAND-PICKED LITTLE MARVEL GARDEN peas, $7 100 pounds; small lots 10c pound, all net. W. A. Bower, Avon, Idaho.

COSSACK ALFALFA SEED—SEND FOR samples. S. H. Hillman, Box 5, Thompson Falls, Mont.

FOR SALE—CLEAN, YELLOW BLOSSOM sweet clover seed. S. A. Kent, Kalispell, Mont.

NURSERY STOCK 621

SUPERB EVERBEARING STRAWBERRY, blackcap and red raspberry, Giant Harvest Dew blackberries. Dr. Burrell and new Oregon strawberry plants. Write for price list. Quincy Stanfield, Meridian, Idaho.

APPLE TREES AND A FULL LINE OF NURSery stock at reasonable prices; save agents' commission by ordering direct from nursery. Write for price list. Lawson Nursery, Gates, Ore.

STRAWBERRY PLANTS—HEAVILY ROOTED and free from disease. Wilson, Gold Dollar, Trebla, Marshalls, $4 per 1000. O. H. Shaw, Cottage Grove, Ore.

CHOICE STRAWBERRY, LOGANBERRY plants; lowest prices. Ward K. Richardson, 2393 Front, Salem, Ore.

LOGANBERRY PLANTS FURNISHED BY the grower, Grape Lane Farm, Turner, Ore.

NURSERY STOCK. (Continued.) 621

PLANT WINDBREAKS OR A WOOD LOT FOR shelter and profit; black locust in Idaho produced in eight seasons posts worth $1000 per acre. Free book tells how. Our special trees get quick results and cost little. Washington Nursery Co., Toppenish, Wash.

RELIABLE NURSERY STOCK—ITALIAN AND Petite, 4-6 ft., and 3-4 ft.; Concord, Worden and Moore's Early grapes; grafted Franquette walnut, all sizes. Send for catalog and price list. Villa Nurseries, Route 1, Portland, Ore.

GROW GRAPES FOR PROFIT—SPECIAL LOW prices; grape vines, berries, asparagus, for commercial planting; peaches, cherries, apricots, apples; satisfaction guaranteed. Write today. Home Nursery Co., Richland, Wash.

CLARK SEEDLING, THE STRAWBERRY that made Hood River famous. Write for list of other varieties and prices. Plant nurseries at Hood River and Prosser, Wash. W. R. Gibson & Son, Hood River, Ore.

STRAWBERRY PLANTS, EVERBEARING and others; inspected plants, strong and healthy, well packed. Send for prices and book on care of strawberries. F. I. Moffett, Ellensburg, Wash.

CORY THORNLESS BLACKBERRY—DELIcious, very large and early. You get strong, well rooted plants, true to name, from pioneer grower. Wm. Mortenson, Route 1, Lodi, Calif.

NURSERY STOCK, ITALIAN PRUNE TREES and trees of all kinds. Berries and small fruits of all varieties. Buy direct and save 50 per cent. Brooks Nursery, Lafayette, Ore.

SEND FOR OUR NEW PRICE LIST ON FRUIT trees, berry bushes, shade trees and roses on their own roots. Krause Nursery, Spokane, Wash.

MARSHALL STRAWBERRY—FIRST YEAR'S plants, $4 per 1000. Loganberry, transplant, $5 per 100. J. G. Anderson, Route 1, Rochester, Wash.

LOGANBERRY PLANTS — 50,000 CHOICE plants; unusual low price. Harry Lanum, Salem, Ore.

TREES—PEAR, APPLE, PLUM, PRUNE, NUTS and berries at cost. Homer Brixey, McMinnville, Ore.

STRAWBERRY PLANTS, $5 PER 1000. Briggs Plant Nursery, Olympia, Wash.

FARM LANDS FOR SALE. 651

AS CLEARING HOUSE FOR AN EASTERN loan company we offer 100 pieces of foreclosed property, mostly in eastern Washington, for the mortgaged indebtedness. Dry farms, irrigated lands, business buildings and orchard tracts; some good land under proposed irrigation projects as low as $10 per acre; no trades; no lists. Will make easy terms to real farmers. Write us your wants if you can not call. Hartford Land Co., 601 Paulsen bldg., Spokane, Wn.

SNOHOMISH COUNTY, WASH.—6000 ACRES of the finest dairy, berry or general high-grade farm lands in the northwest, rapidly improving section; no drouths; bumper crops; tracts 1 to 80 acres; 10 yearly payments. This is your opportunity. Send for literature. Brownell Land Co., Birmingham, Wash.

DAIRY FARMERS INVESTIGATE THIS UNusual opportunity. Fine paying irrigated dairy and alfalfa ranch; famous Deschutes valley, central Oregon. $16,000. Small initial payment, new easy payment plan; ideal climate. Full particulars on request. Redmond Land & Loan Co., Inc., Redmond, Ore.

FOR SALE CHEAP—IRRIGATED COMMERcial apple orchard, on Lake Chelan; 17 acres; eleven acres in bearing orchard, four acres alfalfa; beautiful location. Price $4700. Terms, $2000 cash, balance reasonable annual payments to suit purchaser. C. G. Rideout & Co., Chelan, Wash.

I AM OFFERING FOR SALE TWO FARMS. One 205 acres; 60 acres in crop, $6000, half cash. One 1520 acres; 80 in crop; a sheep or cattle ranch, some cattle and horses go with this place; winter range. Write for particulars. Chas. A. Laufer, Asotin, Wash.

160 ACRES GOOD LAND; IN FINE DAIRY section; on paved highway, ¼ mile from station; ½ level and cleared, balance hillside and timber; house, dairy barn, orchard and fenced; small brook through place. Scholz, Menlo, Wash.

FOR SALE—MAY EXCHANGE IF SATISFACtory. 360 acres rich land; on Milwaukee railway, near Olympic highway; near town; excellent sea view, salubrious climate. Price, per acre, $60. Address Lewis Levy, Port Angeles, Wash.

88 ACRES, ON PAVED PACIFIC HIGHWAY; close to Catholic church and school and public school; stock, grain, hay, chickens, all farm machinery included. $17,500; $8500 cash or might take some trade. Lock Box 261, Winlock, Wash.

SHEEP RANCH FOR SALE—1120 ACRES; 150 acres hay land; Deer Lodge valley, Montana; 5 miles to summer range; fully stocked and equipped. Address owner, Box 56, Garrison, Montana.

MY 80-ACRE RANCH, 3 MILES NORTH Maple Falls, thirty cleared; with stock and tools, $4500; without, $3600. Correspondence solicited. Albert Blood, Maple Falls, Wash.

72 ACRES, DAIRY AND ORCHARD; GOOD roads and schools, store, postoffice on place, included, $12,000; description, terms, apply Claude Johnston, Pleasant Hill, Ore.

SELL YOUR PROPERTY QUICKLY FOR cash; no matter where located. Particulars free. Real Estate Salesman company, 501 Brownell, Lincoln, Neb.

200 ACRES; 30 IN GRAIN; BUILDINGS, IRRIgation right; mixed farming, timber; two horses, cow, harness, implements, $4500. John Robinson, Leland, Ore.

200 ACRES WHEAT LAND, $6000, OR WILL lease; 160 acres timber land, $2500. Terms on either, or will consider part trade. Box 615, Spokane.

40-ACRE ORCHARD, NEAR SPOKANE; $5000, or exchange Yakima property. W. W. Hill, Route 1, Zillah, Wash.

80 ACRES GOOD LAND, WITH TIMBER; ON creek; partly improved; 2 miles from Menlo. Scholz, Menlo, Wash.

FARM LANDS—Wanted 654

WANT TO HEAR FROM OWNER HAVING farm for sale; give particulars and lowest price. John J. Black, 80th st., Chippewa Falls, Wis.

FOR SALE OR EXCHANGE 702

FOR SALE OR EXCHANGE—12½ ACRES bearing prunes; near town and railroad; good buildings. For particulars write owner, John Martin, Yoncalla, Ore.

120-ACRES BLACK LOAM, DIVERSIFIED farm; $10,000; want dairy. Write Leroy Moore, Rice, Wash.

TO EXCHANGE—Real Estate 705

TO EXCHANGE—WELL STOCKED GOING alfalfa dairy ranch, $30,000, for California or coast property; no commissions. Moody, Gooding, Idaho.

TRACK'S END

By HAYDEN CARRUTH

A Stirring Story of Adventure

(Copyright by Harper & Bros.)

CHAPTER XII.

One of my Letters to my Mother, in which I tell of many Things and especially of a Mystery which greatly puzzles and alarms me.

Here I am going to put in the letter which I wrote to my mother a week from the next day after my strange Christmas, to show that I did write her long letters every Sunday, as I have said; though of course it was many weeks before she got this or the others:

Track's End, Sunday, January 2d.

My Dear Father and Mother—I have written you so much bad news since I have been in this dreadful place that I am very glad to send you some good news at last, and that is that my ankle, of which I wrote you last Sunday, is all well. I kept up the hot water applications and by the next morning it was so much better that I could walk on it. I hope I may not turn it again.

I don't know as there is much other good news to write, except that it is good news, and may be quite strange news, that I am still alive at all in such a place. I am getting along better with the cooking, though I am beginning to long for some fresh meat. The cow still gives a good mess of milk, and I now get three or four fresh eggs a day; thanks to the warm food which I give the hens, I guess. I do not believe that Crazy Jane has laid an egg since her night on the chimney, and I'm almost afraid she caught cold, as she has not had a genuine fight with another hen since. Kaiser and the cat and Dick and Ned are all well and in good appetite. I have heard rather less of the wolves of late, and I still think it would be easier to get the man in the moon to come to this town than any of those Indians. But the outlaws I still fear very much. Oh, something I ought to have written you last week! I mean this: I got a letter from them that day out at Mountain's, but I had no time to read it Christmas and the next day I forgot I had it till after I had put your letter in the postoffice. This is what was in it:

CITISENS TRACK'S END,—We will Rob your bank and burn your town if we don't get the small some we ask for. If adoing it we kill anyboddy it wun't be our fawlt. Leave the Munny as we told you to and save Bludd Shedd.

PIKE AND FRENDS.

I look for them any time. My only hope is that the weather will be too bad for them to travel; but of course there must be some good weather. The snow is already so deep that it will be very hard for them to do much on horseback. The street is full, and it is very deep north, east and south. The ground is almost bare for half a mile to the west, however; and they could come in on the grade. Of course, they can come on snow shoes at any time and go everywhere. I can not even hope to keep out of having trouble with them. I have made no answer to this letter, and can't make up my mind whether it would be best to do so or not.

I kept up work all the week on the fortifications, when the weather would permit; for there has been another great blizzard, the worst of the winter so far. I even worked all day yesterday, though it was New Year's. Monday morning I again started all of my fires, but I found that in three of the buildings there was not enough coal to last long. So I hitched up Ned and Dick on an old sleigh of Sours's and took a good lot to each place from the sheds at the railroad. It was a lucky thing I did so, too, because it snowed more Tuesday night and began to blizzard Wednesday and kept it up till Friday without once stopping; and it would now be impossible to drive anywhere near the coalsheds.

I have got up a plan to do what I want to do without using much coal; I smother the fires, all except the one in the hotel, with stove griddles laid on them, and it makes a great smoke without much fire. The guns and ammunition I have disposed of here and there, in good places for me in case of attack, but hard to find for other folks. One I keep standing by my bed's head, but nobody would be apt to look there for either gun or bed, I hope. I take in my drawbridge always the minute I cross.

The last blizzard has helped me a good deal. The street is now so full that the first-story doors and windows of the hotel and bank and most of the other buildings are covered. Not a bit of daylight gets into the hotel office, and I am writing this by lamplight, though the sun is bright outdoors. The hotel can now only be entered by the back door, which I have strengthened with boards and braces. I have also boarded up the second-story windows, as they are now not much above the level of the drifts.

My tunnel might now be much higher and I am going to make it so that I can stand up straight all the way through. This is the only way there is to get into the bank now, unless you were to pound off the planks I have nailed over the upper windows or shovel the snow away below. I drew over lumber from the yard the day I had the team hitched up for the coal. There are plenty of nails at Taggart's. The blacksmith tools which would be good to break open a safe with I have buried in the snow. I have not yet carried out the plan I told you about which might save me in case the town is burned. It is a big job, but I am going at it as soon as I can. There is much other work which I want to do. There is a large tin keg of blasting powder at Taggart's which it seems as if I ought to use somehow. Sometimes I wish I had a cannon, but I don't know as it would be much use to me.

I had a vast deal of work Monday and Tuesday carrying back the things those savage Indians lugged out in the square. I fastened up all of the buildings which they had torn open and straightened up things in the store as best I could. Fitzsimmons' was in the worst confusion, and I could not do much with it. The cellar was such a wreck of barrels and boxes and crates and everything you can think of, all broken open and the things thrown everywhere, that I only looked down and gave it up then and there.

As soon as I can get around to it I mean to build some more tunnels to some of the other houses. I think I ought to draw up a list of regular hours for getting up, fixing the fires, climbing the windmill tower to look with the fieldglass, and such-like things, as I used to hear Uncle Ben tell was the way they did when he was in the army. I mean to go out every good day and take some target practice with my rifle.

I wish I could close this letter here, and I would do so if it were going to you so that you would get it before you get others, or before you know that you are never to get others from me, if that is to be, as I fear it may. Oh, if I only had it to do over again, how quick I would take the chance to go away from this horrid place! If I live to get away I will never come here again. So I must tell you what little I can of this other matter.

I am not here in Track's End alone. What it is that is here I do not know. How long it has been here I do not know. Where it stays, what it does, where it goes, I do not know. I have looked over my shoulder 20 times from nervousness since I began this letter.

Last Monday night I hung a piece of bacon on a rafter in the shed back of the kitchen, after cutting off a slice for breakfast the next morning. I kept it there because it is a cool place and handy to the kitchen. Tuesday morning it was gone. I had left the outside door shut, and it was still shut in the morning. The door between the kitchen and shed was locked. I could see no tracks or marks of any kind.

Wednesday morning the thumb-piece of the latch on the depot door was pressed down. I don't think I left it that way. A pail by the back door in which I had thrown some scraps which I was saving for the chickens was tipped over. I think some of the meat rinds were gone. The blizzard began that morning.

Thursday morning the blizzard was still going on. I noticed nothing unusual.

Friday morning a quilt and a blanket had been stolen from a bed in the hotel. Another quilt was drawn from the bed and lay on the floor. I think the window (it had not yet been boarded up) at the foot of the bed had been raised. The snowbank outside is high. The blizzard was still blowing.

Yesterday morning I saw nothing wrong, but I thought about it a good deal during the day. I remembered of hearing strange sounds at night from the first of my being here alone. I had thought it wolves, owls, jackrabbits, or something like that.

Last night I decided to watch. The storm had stopped and the night was very still, but it was cloudy and dark and a flake of snow fell once in a while. I put on the big fur coat and sat on a box just outside the woodshed door, which was open on a crack. At about 11 o'clock I heard a faint noise at the barn as if something were in the yard at the side trying to get in at one of the windows. I swung my door open a little more, it creaked and I saw something dark go across the yard and over the fence. There was no sound that I could hear. I could not see that it touched the ground. It went behind a haystack by the fence. There was instantly another glimpse of it as it passed beyond the stack, going either behind or through the shed under which the men stood that night when Pike shot Allenham. I was not sure if I saw it the other side of there or not, but I could not see so well beyond the shed. The motion was gliding; I heard no footstep, nor sound of wings, nor anything. It snowed some more in the night. This morning I could find nothing wrong exept that a clothesline beyond the shed was broken. It had hung across the way which what I saw must have gone. Its ends were tied to posts at least seven feet from the ground, and if I remember aright, it has all the time been drawn up so that it did not sag at all. It was snapped off as if something had run against it.

I must close now and do up my work for the night. I only ask that I may live to see you all again. If I do not, then may this reach you somehow.

Your dutiful son,

JUDSON PITCHER.

CHAPTER XIII.

Some talk at breakfast, and various other family affairs: with notes on the weather, and a sight of something to the northwest.

It was on the morning of Tuesday, January 25, as I sat at breakfast with Pawsy in her chair at one end and with Kaiser at the other, drumming on the floor for another bit of bacon, that I said to myself:

"It is just one month today since I clapped eyes on a human being, and the ones I saw then were not very good humans, being thieving and drunken Indians." And when I said this I had not forgotten (when had it been once out of my mind, waking or sleeping?) what I saw on New Year's night, but I knew not if I were to count that as human or what.

I remember that Sunday night after I finished the letter to my mother which I put in the last chapter, how I found it darker than I expected when I went out, and how I ran along the snowbanks with my heart thumping like to split, and threw the letter in the top of the postoffice door (the rightful opening was long before buried under the snow) and then shot back to the hotel, not daring to look behind me or even stop to breathe. I was well ashamed of myself, at the time, but I could not help it.

On that night it was even 9 o'clock before I could get up courage to go to the barn and feed the stock. I think I was in a greater state of horror than on the night after the battle with the wolves. I walked the floor, back and forth, on tiptoe and listened, and the less there was to hear, the more I heard. At last I, after a fashion, put down my fright, and ventured out to the barn, but even then I could not whistle; I tried, but my lips would not stay puckered.

I went to bed as soon as I could, and though I thought I should never get to sleep, I did at last. What my dreams were, or how many times I sat up in bed



I saw that they were Indians.

with a start, are things I do not like to think about. But notwithstanding this, I felt better in the morning and went at the work as hard as I could.

But though, as I say, up to the 25th of January (and even beyond) I had no further glimpse of the mysterious visitor, I saw evidence of its presence often enough.

Night after night the scrap pail by the back door was rummaged and something taken from it, and once a chicken was missing from the barn. The only way that anything could get in was through a window into the hayloft, seven or eight feet above the drift. After I missed the chicken I nailed this up and lost no more. I thought there were a few stretches on the side of the barn below the window, but I could tell nothing from them. Almost every night it either snowed or drifted, or both, so there was almost no hope of ever finding tracks of any kind on the ground. One morning I found the windmill at the station thrown into gear and running full tilt, but the lever which controlled it may have slipped. Two or three times I thought I heard the windlass of the well near the barn creak, but I tried to make myself believe that it was only the wind.

You may be sure that my sleep was very light, and I often heard Kaiser growling and barking late at night in the hotel. I never had the courage to sit up and watch again. I may have been more cowardly than I should have been; I leave that to the reader to say. One night I lay awake listening to the wolves howling up at the north end of the town. Suddenly their cry changed and they swept the whole length of the street like the wind, and much faster than they usually went when simply ranging for prey. They may have been chasing a jackrabbit.

Another night they howled so long right in front of the building I was in that I put down my foolish fears and got up and fired at them, hoping to scare them away and maybe get another skin for my coat. One fell, and the others made off at a great rate. I watched the one on the snow till I was sure he was dead, and I heard nothing more of the others that night. In the morning there was neither hide nor hair of the dead wolf.

But the work I had to do kept my mind off of my terror a good deal, and saved me, I really believe, from going stark mad. I will tell about my great system of tunnels presently, but before I began it I did much else. One of the first things was to make a long, light sled for Kaiser to draw, and also a harness for him. The materials and tools for the one I got from the wagon repair shop attached to Beckwith's blacksmith shop, and the same for the other from the harness shop, where I kept up one of my fires. I was always handy with all kinds of tools, inheriting a love for them from my father; besides, I had worked with him in the shop at home a good deal, and had thus become a fairly good mechanic for my age. I could handle a plane or a drawshave or a riveting hammer, or even an awl, for the matter of that, with any of them.

I used this dog rig chiefly for taking over ground feed from the depot to the barn for the horses and cow, but Kaiser learned to enjoy the work of dragging the sled so much that I soon came to use him nearly always in good weather in making my rounds to look after the fires or patrol the town. He would whisk me along on top of the frozen drifts at such a rate that it would nearly take my breath away sometimes. I practiced with the skis till there was no danger of turning my ankle again, and would sometimes run races with him on them, but he could beat me all hollow unless there was a good, stiff load on the sled.

Another thing that I made was a pair of leather spectacles, something which my mother had used often to tell me I needed when I was small and could not see something that was plain as a pikestaff. My spectacles were made out of a strip of black leather two inches wide, which went over my eyes and around my head, with two slits through which I could look. These I wore on the dazzling bright days and was troubled no more by snow-blindness, which had made my eyes so painful the day I came back from Mountain's.

It was about New Year's that I began to spend my evenings in noting down in the hotel register what had happened during the day. I did this chiefly so that when I came to write to my mother Sunday I would forget nothing, and I am very glad now that I did so, for without the register and the letters (both of which I now have) about some things, especially dates, I might go wrong in writing this account. Besides, in the past, it has been much satisfaction when I have related any of the incidents of my winter at Track's End and some person, to show how smart he was, has tried to cast doubt on my word—it has been much comfort to me, I say, in such cases to have the register and letters to show him, with it all set down in black and white.

Thus it comes I know that Pawsy caught a mouse in the barn on Wednesday, January 12, at about 7:30 in the morning, while I was milking the cow. I think it was the only mouse at Track's End that winter, for I never saw or heard any other. There were no rats in the territory then anywhere, unless it may have been at Yankton, or at some of the old Red River settlements about Pembina.

Pawsy was a good hunter, and several times caught a snowbird, though I boxed her ears for this, and on Friday, the 21st, I found her near Joyce's store trying to drag home a jackrabbit. She must have caught it by lying in wait, but I marveled how she killed the monstrous creature. But she was, indeed, one of the largest and strongest cats I ever knew. I would have trusted her to whip a coyote in a fair fight. I got three jacks in January myself with the rifle, and found them very good to eat, but the first one, after skinning it, I left overnight in the shed, and in the morning it was gone. That day I went to Taggart's and got two good bolts and put them on the shed door.

Getting my meals I found very hard

work, but I made out better than you might think, since my mother had taught me something about cooking. At first I neglected regular meals, snatching a bite of anything that I could lay my hands on, but I soon saw that this would not do if I were to keep in good health and strength. My boarders, too, were great hands to complain if they did not get their meals regularly. You might have thought that cat and dog were paying good money for their board, the way they would mew and whine if a meal were late. I took very good care of the chickens, giving them plenty of warm food, so from about Christmas I got a dozen or more eggs each week. The cow, too, I fed well on ground feed and hay, with pumpkins and sometimes a few potatoes, and she gave me a fair quantity of milk all winter, and on the eggs and milk, together with potatoes, bacon and salt codfish, I and my boarders managed to live tolerably well.

Pie I missed very much, and cookies and apple dumplings and such things, all of which my mother used to make very freely at home, and never keeping them hid. I looked longingly at the pumpkins, and once fetched a quantity of ginger from Joyce's, vowing I would attempt a pumpkin pie, but I never got up my courage. Bread, also, I never attempted, though I got a package of yeast from the store and looked at it many times. The place of this was taken by pancakes, which I made almost every day, big and thick, which with molasses went very well; though a good cook, as like as not, would have said they were somewhat leathery.

There was not an apple in town, nor any kind of fresh fruit, but there were dried apples and prunes, and canned fruit and vegetables, especially tomatoes. Of the canned things I liked the strawberries best, and ate many, though they tasted somewhat of the tin. There were plenty of crackers in the stores, and some dry round things, dark-colored, which called themselves gingersnaps; I took home a large package in great glee, thinking I had made a find; I ate one of them by main strength and gave the rest to the cow. Butter I made several times, with fair success, though it was not like mother's, being more greasy.

Fresh meat I missed very much, though the few jackrabbits I got helped out, and were good eating, as I have said, and smelled as good as anything could while cooking. Some other fresh meat I had also, as you shall see directly. Once I made up my mind to have some chicken. There was one hen who was very fat and never, I was sure, laid an egg. I took the hatchet, which was sharp enough, and went to the barn, intending to behead her, having it all planned how I should cook her for my Sunday dinner. When I got to the barn the hen seemed to know what I intended, and she looked at me with one eye, very reproachful, and I went back to the house with my hatchet and never made any more plans for chicken dinners.

There was much bad weather in January. Often I noticed that this was the way of it: It would snow for one day, blizzard for three, and then for two be still, steady, bitter cold. On these latter the thermometer would often go over 40 degrees below zero, with the sun shining bright and the sky blue, but with a frightful big yellow-and-orange sun-dog each side of the sun, morning and evening, like two great columns, and sometimes there would be a big orange circle around the sun all day, with much frost in the air.

Some of the nights were light, almost, as day, with the northern lights flaming up from behind Frenchman's Butte all over the whole sky, and all colors and shapes. On these nights the horses (they had been wild ponies once) would stamp about in the barn, and Kaiser would growl in his sleep. When I rubbed the cat's back it would crack and sparkle. The wolves seemed to howl more and differently on these nights, and once I went to the station, thinking the fire there needed fixing, and I heard the telegraph instrument clicking fit to tear itself to pieces. Often the next day after the northern lights would come the storm.

It was on the very day that I had said to Kaiser and Pawsy at breakfast (that is, January 25) that it was a month since I had seen any human being, that I was at the depot after a load of ground feed, and in looking to the northwest thought I saw something moving. It did not take me long to go up the windmill tower. It was not past 10 o'clock in the forenoon, so the light for looking toward the northwest was good, though, of course, as the sun was shining, the snow was pretty dazzling. But I could still only make out that something was moving south or southwest. It was impossible to tell if it were men or horses or cattle. So I went down as fast as I could, jumped onto the sled, and the next minute Kaiser had me at the hotel, where I got the fieldglass and went back.

Up the tower I scrambled for another look. The snow was so dazzling that the glass did less good than you might suppose, but with it I could soon tell that it was a party of men on horseback following either another party or a drove of cattle or horses. The band ahead swung gradually about and came toward Track's End. The ones behind seemed to be trying to cut them off, but they failed to do it. On they came, and in 10 minutes I could see that it was either cattle or horses that were being chased by 20 or 25 men on horseback. The cattle were following a low, broad ridge where the snow was less deep, and which spread out west of the town, making less snow there also, as I have mentioned before. I thought there was something peculiar about the ridig of the men; I watched closely, and then I saw they were Indians.

My first thought was that it was daylight and no jacklantern would scare them away. I saw I must depend on harsher measures. In almost no time I had got over town, locked the barn, shut Kaiser in the hotel, run through my tunnel to the bank, so as to be on the west side of town, and stood peeping out a loophole with two fully loaded Winchesters on a table beside me.

(To be continued.)

Works Out Her Own Problems

Helen Brown, a Spokane county girl, is working out a poultry project all of her own, according to W. D. Buchanan, poultry extension specialist, who tells of her plan.

"Helen is not only attending to a large part of the details of the work herself, but she is drawing up her house plans in such a way that they will allow for expansion as more room is needed. When I looked over her papers I asked her why she didn't spread the buildings over more ground and not have them so crowded. She studied for a minute and then told me she had been given an acre of ground on which to build her henhouses and if she built any of them on the land adjoining she would have to pay interest on two acres. It appears to me that she was carrying her estimates on a true business basis."

Worth-While Work

To the Editor of The Washington Farmer: Our Worthy Sister Ceres Mrs. Lena Strong, during the war organized a boys and girls' club, and the grange contributed prizes. This included, besides the Washougal school, the surrounding districts, and entailed a great deal of hard work on the leader.

Our grange women are living in the country surrounding Washougal from different sides, consequently work along social and neighborly lines is more restricted than could be the case in an outside community. Our grange took the lead of all the fraternities in buying Liberty bonds, stamps and doing all kinds of hard work in those strenuous times.

MRS. ISABEL ERNI,
Secretary Washougal Grange.
Washougal, Wash.



We have to plow the back forty each year. Each morning and evening we have to go out to fill the milk pail anew. Same way with our Cooperative Subscription Plan; it yielded our readers a big harvest of savings last year; but to do the same this year it must continue to have your attention and help.

We say to our readers: "Send your subscription orders direct. Get your neighbors to do the same. We will give you and your neighbor the benefit of every penny which would ordinarily go to the agent handling the subscription."

We have every confidence that you will once more put your shoulder to the wheel and repeat our request that you take thought as to your subscription renewal. Instead of waiting for a notification, mail in your order at least 60 days in advance of the address label of your paper. Tell your friends and neighbors about our cooperative plan and include their orders with your own. By all pulling together we can and will make 1922 a big year for cooperation. Let's do it!

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Feb. 2, 1922.

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FAMILY CIRCLE

ALICE BARLAND
EDITORIAL CONTRIBUTOR

OUT IN THE FIELDS WITH GOD.

The little cares that fretted me,
I lost them yesterday,
Among the fields, above the sea,
Among the winds at play;
Among the lowing of the herds,
The rustling of the trees,
Among the singing of the birds,
The humming of the bees.

The foolish fears of what may hap,
I cast them all away
Among the clover-scented grass,
Among the new-mown hay;
Among the rustling of the corn,
Where drowsy poppies nod,
Where ill thoughts die and good are born,
Out in the fields with God.

—Elizabeth Barrett Browning.

Dear Mrs. Barland: We have been farming for several years and I have enjoyed the weekly visits of THE FARMER and, though we have taken other papers, we find this one the most complete.

We left off ranching this fall because we couldn't get the price of production for our produce. It is nice of the government to arrange loans for the farmers, but credit only prolongs the misery. What the farmers need is the full price of production plus living expenses, then they won't need to borrow. Farmers are independent and will not submit to dictation from people who know it all according to theory, but who have no knowledge whatever of farming from experience. So we are taking a vacation until such time as we shall be convinced that the producer is no longer the "goat."

We are not alone, either; many are quitting their farms because conditions are becoming unbearable financially. We love farm life and hope to go back to it when prospects become brighter.

I noticed a request for a recipe for cream puffs and I am sending one I can recommend:

Put into a sauce pan one-half cup of butter and one-half cup of hot water; when it begins to boil stir in one cup of flour, stirring constantly till smooth, remove from the fire and when almost cold add three eggs, a little at a time, and beat thoroughly; add one teaspoon of salt and one-half teaspoon of soda. Drop on a buttered pan about one inch apart; pull out into shape and bake about 25 minutes in a quick oven with the most heat on the bottom. When quite cold cut and fill with whipped cream or mock cream.

Recipe for mock cream: Beat the whites of two eggs to a stiff froth; into this stir three-fourths cup of fine pulverized sugar, melt one-half cup of butter and add to the above, whip thoroughly and flavor to taste. Excellent for cream cake.

Spokane, Wash. MRS. W. H. YEO.

To remove mildew: Mix a small quantity of soft soap with same proportion of powdered starch and salt and the juice of a lemon. Apply the mixture to both sides of the stain with a small brush and if possible let the article lie on the grass all day and night or until the stain quite disappears, then wash in the usual way.

MRS. F. L. K.

Dear Mrs. Barland: Will some one please send directions for curing bacon the commercial way, without having to use the liquid smoke? We have been curing it in the common way, with salt, then smoking it, but it doesn't taste like the commercial kind.

If it is not asking too much, will some one send in recipe for carrot salad?

It seems as if most everything about children's lunches has been suggested, but most all children like sauce for lunch and it prevents the juicy kind from spilling if thickened slightly with gelatin.

Ribbon cake is quickly made and often when I am making a plain white cake I keep out about one-half the batter and after putting the other half in the pan I drop a very small drop of red coloring here and there on the batter and then pour on the rest of the batter. When the cake is done the children say the spots look like strawberries. MRS. F. H.

Garibaldi, Ore.

Dear Mrs. Barland: May I join in your homey chats? I turn first to the Circle when the paper comes and find many helpful suggestions.

I never did much housework up to a year ago; my mother was hurt at that time and I had to take it all over, and I had my hands full for a while, but I have learned a good deal in the time I have been at it. I will offer a few of my labor-saving devices.

I cover box ends with oilcloth and use them under the dishpan and for pads for kettles; they are easier to clean than the oilcloth on the table and shelves and save wear on it, too.

I covered a board three inches wide and six inches long with glue and scattered sand over it and tacked it under the match box and it saves the wall where men are bound to scratch matches. (Why not buy a sheet of sand paper for 5 cents and use it instead, and save your time?—Editor.)

Will some one send me a good recipe for an old-fashioned pumpkin pie? Here is mine for carrot pie and it is good.

Carrot pie: Boil four or five good-sized carrots till tender, then run them through a colander, add two well-beaten eggs, one cup of milk, a cup of sugar, vanilla to taste and a pinch of salt. Line the pan with a crust made as follows: Two cups of flour and one cup of lard, a little salt, one-half teaspoon of baking powder, put together with a fork and moisten with cold water. ISABELLE FRISBIE.

Dear Mrs. Barland: I would like to answer a few of the questions on child training. I have three fine lively boys and am convinced the time to begin to train children is when you begin to feed them; in other words, at once.

I have a baby boy 10 months old. He uses his nursery chair, understands perfectly "no, no," "don't touch," etc. My bookcases are open and everything usually about the house within his reach, but he never molests anything.

My children never "talk back"; some one else answer that.

I put up hooks for each child and within reach and by gentle suggestion that coats, caps and sweaters be hung up and by setting the example myself they very readily hang up their things. I have placed a mirror low enough for them near the wash-bowl, where they can see themselves; each child has his own comb, brush and toothbrush and they keep them in order and think it great sport to keep clean and shiny.

As for table manners, they must be trained from their first meal in their high chairs. Adults must be careful, as children are great imitators.

I have had no experience with tattling, but have taught that it isn't honorable.

Make their work interesting; do not nag, encourage them. Don't be afraid to praise their little efforts to help. Very often my two older boys come in from their play and ask: "Is there something I can do for you, mother?"

I have a set of very helpful child-training books, which are very general and cover about every point, and I have worked out many good ideas from them. If any one cares to write to me I shall be glad to answer.

I do not mean to convey the idea that my children are perfect, but they are well-mannered, clean and polite.

Bickleton, Wash. MRS. DELVIN COX.

Your Health

By Royal S. Copeland, M. D., F. A. C. S.

HOW TO WOO SLEEP.

Why don't you sleep better? Aren't you tired of staying awake half the night, getting up more exhausted than when you went to bed?



Dr. Copeland.

The poet speaks about "morning faces," but half the world gets up with gloom of countenance and brittleness of temper.

This is all wrong. Each of us should begin the day with a heart full of song.

There is something wrong if morning doesn't find you eager for the day's work.

By the way, I don't like the word "work," used to describe our ordinary regular daily activity. Why should the duty we have chosen be called "work"?

The hours a child is in school are spoken of as "work hours," and the recess period is called "playtime."

With persons who are keenly interested in business, it requires more downright effort and work to play than it does to do the things usually described as "work." When our daily activities are properly divided and rightly balanced, it will make no difference what word is used to describe any given part of the day's program—no part of our day will be given to work, but all we do will be play.

When your work is really work—when it becomes a hardship to do the thing it is your duty to do—when you fret and fume over your tasks, you will find your sleep disturbed. When life becomes a daily grind—when you hate your work and rail about it—then your nerves get on edge, your appetite suffers, your digestion is impaired, and your downy pillow turns to stone.

When I hear about sleepless nights I inquire at once about the days. If you are happy, busy, usefully engaged, and reasonably attentive to the rules of hygiene, you should sleep the sleep of the just, and get up from your bed refreshed and cheerful.

I have emphasized the mental and nervous aspects of sleeplessness. It goes without saying that there are physical reasons for this unhappy condition.

Aches and pains of every description are responsible for restless nights. A headache, burning and smarting of the eyes, toothache, sore throat, persistent cough, pain in the chest or side, stomachache, lumbago, sciatica, neuralgia of any description, indigestion, aching limbs or joints, rheumatism and a multitude of other ailments may keep you awake.

If you are sleepless, instead of courting sleep by saying the multiplication table or counting innumerable sheep over imaginary fences, spend those wakeful moments figuring out why you can not sleep. Review your manner of living, your habits and the way in which your life is ordered.

You don't need a doctor. You need the exercise of common sense.

Self-study will determine the cause of your sleeplessness.

Self-interest should give you strength to remove the cause.

Milk Drinks

"Milk Drinks for Everybody" should be our slogan, says a recent bulletin issued by the Wisconsin College of Agriculture. Make them at home or order them at the fountain. Milk drinks can be made in a minute out of fresh whole milk, powdered whole milk or condensed milk. Many children refuse to drink plain milk, but will thoroughly enjoy the sweetened, flavored milk drink.

Flavors of many varieties are used. Ordinary household flavoring extracts, soda fountain syrups, juices from fresh or canned fruit or home-made syrups may be used.

Put a few drops of any good flavoring extract in a glass. (A few trials will show exactly how much to use.) Add two teaspoonfuls of sugar. Fill the glass with cold milk. Add a little ice if you have it. The colder the drink, the better you will like it.

A little nutmeg or cinnamon sprinkled over the top of any of these drinks makes them even more appetizing. A dash of whipped cream with a cherry or a few nuts on top is a delicious addition.

Housewife Needs Tool Kit

By JEANNETTE CRAMER, Corvallis, Ore.

The housewife's tool kit, one of the best time and disposition savers, should have its place in every home and be kept in its place, believes Miss Emma S. Weld, instructor in household administration at Oregon Agricultural college.

A tool box containing the ordinary tools, kept in the kitchen and used when the need arises to replace a hook, cut a wire or put in a nail, saves more time in the course of the week than almost any other housesold convenience," says Miss Weld.

"Other members of the family must be given to understand that this box belongs to the homemaker and that the tools it contains must be used with her permission and returned promptly or not borrowed at all.

"The exact contents of the tool kit will be determined by the home where they are used. The principal requirement is that they should always be there when needed."

A list suggested by Miss Weld includes: Hammer, pliers, scissors, jacknife, mending tape, tape line, screws, tacks, wrench, putty, string, glue, paste, oil can, hooks, screw eyes, labels, thumb tacks, wire.

Just Folks

Ease deadens.

Just so far as you make life easy in that proportion you make life worthless.

If money making comes easy to you, then money making is bad for you.

If you can quiet restlessness by reading books and more books, then you might just as well, first as last, bury yourself under a library.

If you can quiet your conscience by becoming a professional reformer, then you have already taken the high road to a reformatory yourself.

If buying land and more land gives you security of case, then you no longer live in the house by the road.

Human life is one great continuing procession. He who would escape the foreordained march by going into some blind alley of ease will sooner or later have to be carried along by the rest as so much dead weight.

It is better to take your medicine, do your part, and believe as best you may, that life is not merely a program.

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Bits of Fun for Everyone

Dentist Kept the Evidence.

The other day Theodore, 5 years old, had to visit the dentist, and when he came back his father said:

"Well, old chap; how's the toothache now?"

"Dunno," was the reply.

"But you must know whether the ache's gone."

"Dunno," was the matter of fact answer. "The dentist kept the tooth."

Very Good Singer.

He—"What is that loud noise?"

She—"Oh, that's my sister Mary cultivating her voice."

He—"Cultivating? That isn't cultivating! That's harrowing."

Accurate Measurement.

A two-foot rule was given to a laborer in a Clyde boatyard to measure an iron plate. The laborer not being well up in the use of the rule, after spending considerable time returned.

"Now, Mick," said the plater, "what size is the plate?"

"Well," replied Mick, with a grin of satisfaction; "it's the length of your rule and two thumbs over, with this piece of brick and the breadth of my hand and my arm from here to there, bar a finger."

Rather Fight It Out.

Magistrate—Can't this case be settled out of court?

Mulligan—Sure, sure; that's what we were trying to do, your honor, when the police interfered.—United Presbyterian.

And Win, Too.

Credit man—"I don't doubt that you have a thrifty, helpful wife, but it's money that talks."

Delinquent patron—"Money talks, huh? I'll back my wife against a million dollars."

Latest High Class Patterns for the Home

Please order the patterns you desire at least two or three weeks before you wish to use them. Desiring to obtain the latest high-class patterns for its readers, THE FARMER has made arrangements to have them sent direct from the east, and under present mailing conditions it takes about that time for them to reach you.



3322-3569. Ladies' costume. The waist, 3322, is cut in six sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. The skirt, 3569, is cut in six sizes: 24, 26, 28, 30, 32 and 34 inches waist measure. The width of the skirt at the foot is 2 1-4 yards. To make the dress for a 38-inch size will require 7 1-2 yards of 27-inch material. Two separate patterns, 10 cents for each pattern.

3856. Girl's dress. Cut in four sizes: 6, 8, 10 and 12 years. A 10-year size requires 3 1-2 yards of 32-inch material. Price 10 cents.

3498. An attractive gown. Cut in seven sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. A 38-inch size will require 3 7-8 yards of 40-inch material for the dress, and 2 1-4 yards of 27-inch material for the guimpe. The width of the skirt at the foot is about two yards. Price 10 cents.

3482. A smart dress. Cut in three sizes: 16, 18 and 20 years. A 16-year size will require 3 7-8 yards of 44-inch material. The width of skirt at lower edge is about two yards. Price 10 cents.

3857. Boy's suit. Cut in four sizes: 3, 4, 5 and 6 years. A 4-year size will require two yards of 44-inch material. Price 10 cents.

3853. Girl's dress. Cut in four sizes: 8, 10, 12 and 14 years. A 10-year size will require 3 1-8 yards of 44-inch material. Price 10 cents.

3026. Girls' gymnasium suit. Cut in five sizes: 8, 10, 12, 14 and 16 years. It requires 3 3-4 yards of 27-inch material for the blouse and 3 3-8 yards for the bloomers for a 12-year size. Price 10 cents.

3656. Ladies' house dress. Cut in seven sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. A 38-inch size will require five yards of 36-inch material. The width of the skirt at the foot is two yards. Price 10 cents.

3869. Ladies' apron. Cut in four sizes: Small, 34-36; medium; 38-40; large, 42-44; extra large, 46-48 inches bust measure. A medium size requires 3 7-8 yards of 36-inch material. Price 10 cents.

3861. Girl's dress. Cut in four sizes: 2, 4, 6 and 8 years. A 4-year size requires 2 1-4 yards of 36-inch material. Price 10 cents.

3715. A popular undergarment. Cut in four sizes: Small, 34-36; medium, 38-40; large, 42-44; extra large, 46-48 inches bust measure. A medium size will require 2 1-8 yards of 36-inch material. Price 10 cents.

3634. Ladies' night dress. Cut in four sizes: Small, 34-36; medium, 38-40; large, 42-44; extra large, 46-48 inches bust measure. A medium size will require 4 1-2 yards of 36-inch material. Price 10 cents.

CATALOGUE NOTICE.

Send 12 cents in silver or stamps for our up to date spring and summer 1922 catalogue, containing 500 designs of ladies,' misses' and children's patterns, showing colored plates, a concise and comprehensive article on dressmaking, also some points for the needle (illustrating 30 various, simple stitches), all valauble hints to the home dressmaker.

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Pattern No..... Size..... Pattern No..... Size.....

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Be sure to give the pattern number and the correct size.



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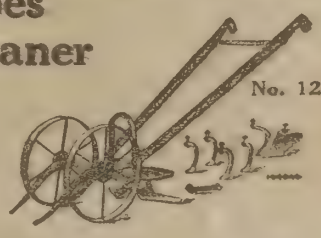
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A pound can of Calumet contains full 16 oz. Some baking powders come in 12 ounce instead of 16 ounce cans. Be sure you get a lb. when you want it.

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A Planet Jr. wheel hoe makes light work of the kitchen garden. There's no vicious chopping and stabbing at tender, growing plants when you use this **No. 12 Planet Jr. Double and Single Wheel Hoe Combined.** Not only does it hoe closer to the row than you can safely work with the old hand hoe, but it does much more—and better—work than you can do in the old way. No. 12 straddles and hoes both sides of a row at once, sliding easily along as you walk. The sharp hoes clip weeds clean off below the surface, and leave a fine protective mulch. So easy to handle, a woman or boy can easily do the garden work, saving man labor for other more pressing farm work.

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High Points in News of the Week

(Continued from page three.)

Lawrence-Great Lakes waterway project to give the Great Lakes water transportion.

Development of the Mississippi and other leading rivers for the transportation of commerce.

Maintenance of the present system of toll charges on the Panama canal.

Development throughout the country of waterpower electric projects with a view to making electricity available for small consumers on the farm and in the villages.

Closer cooperation of railway, waterway and highway transportation.

The appointment of a commission to work out a national land policy, including reclamation, irrigation, grazing and colonization.

Delay in opening any more public land for farming purposes until the present agricultural crisis is over.

The defeat of any measure proposing any consumption tax, sales tax or manufacturers' tax, on the ground that such tax would be passed on to the producers and the consumers.

The conference endorsed the agricultural bloc in congress.

President J. R. Howard of the American Farm Bureau federation, who was a delegate to the conference, declared that it would go down into history as the most far-reaching farm conference ever held. Secretary Wallace, who called the meeting at the request of President Harding, expressed himself at its conclusion as highly pleased with the results obtained.

At the opening of the conference President Harding appeared in person and laid before it his ideas of the need of agriculture. He laid great stress upon the necessity of practical cooperative marketing and urged more liberal credit to the farming industry. He expressed sympathy with a scientific limitation of production along certain lines as a means of stabilizing the industry. Indirectly he expressed disapproval of the farm bloc in congress, though it was not mentioned specifically.

* * *

Chairman Lasker of the United States shipping board has set February 8 as the date on which he will meet Herbert Fleishacker to discuss the proposed $30,000,000 shipping pool on the Pacific coast. The shipping board has announced its determination to do everything in its power to build up the American merchant marine, routing every cargo possible on vessels flying the United States flag.

* * *

Agricultural college extension workers of 11 western states are meeting in Portland this week to coordinate agricultural extension service.

* * *

While considerable opposition has been expressed in congress over the treaty between the United States, England, Japan and France for the control of affairs on the Pacific ocean, the admiuistration at Washington expresses confidence that the recommendations of the disarmament conference in this regard will be accepted and the treaty put into effect.

* * *

The California Fruit exchange makes the statement that approximately half of the orange crop and a third of the lemon crop of that state has been lost as a result of the cold weather that visited that district two weeks ago. The loss is roughly estimated to run between $15,000,00 and $20,000,000.

* * *

Unofficial report comes that Secretary Fall of the department of the interior in President Harding's cabinet will soon announce his resignation, to take effect March 4. It is understood that he will return to his home state of New Mexico and become a candidate for the United States senate, from which he resigned a year ago to accept appointment in the cabinet.

* * *

The Pacific northwest and the Pacific coast in general are not alone in suffering from severe weather at this time. The Atlantic coast, especially that section in the vicinity of Washington, D. C., suffered a severe snow and wind storm last week. Street traffic in the national capital was completely tied up Saturday and Sunday by two feet of snow. Heavy storms were reported on the Atlantic coast. New York also was snowed in.

Farm Business and Markets Outlook

(Continued from page five.)

cottonseed meal, 43 per cent, $43.50; 36 per cent, $39.50; oil meal, $46; tankage, $52.50@55.

MINNEAPOLIS—Bran, $20@21.50; standard middlings, $27@30; flour middlings, $23@24; red dog, $27@30; oil meal, $48.

HAY MARKET WEAKENS.

Higher prices in distributing markets and lower freight rates eventually brought increased receipts, while demand failed to increase proportionately, and most markets have been weak in the last few days, especially upon low grades. Inquiries from the south have been more numerous and the movement in that direction as well as toward the eastern consuming sections is expected to increase enough to prevent any decline of consequence.

CHICAGO—No. 1 timothy, $21@22; No. 2, $18@19; No. 3, $14@15; No. 1 light clover mixed, $19@20; No. 1 clover, $16@17; No. 1 clover mixed, $17@18; sample and threshed hay, $10@15; No. 1 to choice alfalfa, $14@22; Nebraska and South Dakota prairie, $14@17. Straw: Rye, $15@16; oat, $13@14; wheat, $12@13.

EGG PRICES ERRATIC.

Following the phenomenal decline in egg prices early in January the market has been unsettled, fluctuating over a wide range within a few days' time. Strength predominated over weakness during the last seven-day period, although receipts have held up to the level of preceding weeks. Prices upon fresh eggs will undoubtedly work lower in the next 60 days, but the immediate course of the market is uncertain, with weather conditions an important influence. While declines are in prospect wide margins will prevail between country buying prices and prices in central markets.

BUTTER MARKET FLURRY PASSES.

Following the decline in the butter market in the last six weeks prices became highly unsettled for a time, but the flurry seems to have passed with the development of a more steady tone during the last week. Confidence is lacking, as lower prices are undoubtedly ahead, although they may not arrive for another month. Top scores have been well cleared, but there is a moderate accumulation of the lower grades, especially on eastern markets, where foreign butter is available. Prices on cold storage butter, most of which is of poor quality, have been irregular, but holders are disposed to let go as rapidly as possible, even at concession in price, so that the net reduction in cold storage stocks at the four leading cities has been rather rapid. The Danish butter market has been more firm and is quoted at 35 to 36 cents c. i. f, compared with 23 cents for New Zealand. A shipment of 4427 casks of Danish butter and five cars of New Zealand sent via Vancouver arrived at New York during the week.

The sharp break in the butter market recently has left cheese on a relatively high basis. Cheese dealers expect readjustment through a decline in the cheese market, although light cold storage stocks of cheese may sustain prices.

FRUITS AND VEGETABLES.

The carlot movement of apples for the season up to the middle of January is about 18,000 cars less than for the previous season. This is a decrease of about 20 per cent. Prices still hold a faily even keel, with Baldwins quoted at $7 to $7.50 per barrel wholesale in consuming markets.

LATEST QUOTATIONS.

The Live Stock Market.

PORTLAND, Ore., Jan. 28.—Cattle—Choice steers, $7@7.50; medium to good steers, $6.25@7; fair to medium steers, $5.75@6.25; common to fair steers, $4.75@5.75; choice feeders, $5@5.50; fair to good feeders, $4.50@5; choice cows and heifers, $5.50@6.10; medium to good cows and heifers, $5@5.50; fair to medium cows and heifers, $4.25@5; common cows, $3.25@4.25; canners, $2.25@3.25; bulls, $3.50@5; choice dairy calves, $11@12; prime light calves, $10@11; medium light calves, $7.70@10; heavy calves, $5.50@7.50.

Hogs—Prime light, $9.50@9.75; smooth heavy, 200 to 300 lbs., $8.75@9.25; smooth heavy, 300 lbs. up, $8@8.25; rough heavy, $6@7.75; fat pigs, $9.50@9.75; feeder pigs, $9@9.50; stags, subject to dockage, $5@6.50.

Sheep—East of mountain lambs, $9.25@10; best valley lambs, $8.25@9.25; cull lambs, $4.75@6.25; fair to good, $6.75@8.25; eastern Oregon feeders, $7@8; light yearlings, $7.50@8; heavy yearlings, $6.50@7.50; light wethers, $6.50@7; heavy wethers, $4.50@6; ewes, $3@6.

SPOKANE, Jan. 28.—Cattle—Prime steers, $6.50@7.25; good to choice steers, $5.75@6.50; medium to good steers, $5.25@5.75; fair to medium steers, $4.75@5.25; common to fair steers, $4.25@4.75; choice cows and heifers, $5@6; good to choice cows and heifers, $4@5; medium to good cows and heifers, $3.50@4; fair to medium cows and heifers, $3@3.50; canners, $2@3; bulls, $3@5; light veal calves, $8@9.50; heavy veal calves, $4@8; stockers and feeders, $4.50@5.

Hogs—Prime mixed, $9.25@9.85; medium, $8.75@9.25; heavies, $6.75@8.75; fat pigs, $9.25@9.75; stockers and feeders, $8@9.

Sheep—Prime lambs, $8@9.25; fair to medium, $7@8; yearlings, $5.50@7; wethers, $4@5.50; mutton ewes, $2@5.50; feeder lambs, $6@8.

The Grain Market.

PORTLAND, Ore., Jan. 28.—Wheat—Hard white, $1.13; hard winter, $1.12; soft white, white club, $1.10; northwestern spring, $1.09; red Walla, $1.05.

Grain futures: Wheat—Hard white, January, February, March, $1.13; soft white, white club, January, February, March, $1.10; hard winter, January, February, March, $1.12; northern spring, January, February, March, $1.09; red Walla, January, February, March, $1.06.

Oats—No. 2 white feed, January, February, March, $27.50; No. 2 gray, January, February, March, $26.50.

Barley—Brewing, January, February, March, $27; standard feed, January, February, March, $25.

Corn—No. 2 and No. 3 eastern yellow shipment, January, February, March, $24.

SEATTLE, Jan. 27.—Wheat—Hard white, northern spring, $1.11; soft white, white club, soft red winter, $1.10; hard red winter, $1.12; eastern red Walla, $1.08; Big Bend bluestem, $1.14.

LEWISTON, Idaho, Jan. 28.—Fortyfold, Club, 87c; hard winter, 90c.

RITZVILLE, Wash., Jan. 28.—Bart, $1.06; red, $1.04; Fife, $93c.

WALLA WALLA, Jan. 28.—Club wheat, 95c; Bluestem, 95c; Turkey red, 94c.

ODESSA, Jan. 28.—Marquis, $1.09; Bluestem and Bart, $1.06; Turkey red, $1.04; Jones Fife, 93c.

Hay and Grain Feed.

PORTLAND, Ore., Jan. 28.—Millfeed—Price f. o. b. mill: Millrun, ton lots, $22; mixed cars, $21; straight cars, $20 per ton; middlings, $34; rolled barley, $34@36; rolled oats, $36; scratch feed, $44 per ton.

Corn—White, $32; cracked, $35 per ton.

Hay—Buying price f. o. b. Portland: Alfalfa, $13.50 per ton; cheat, $10.50@11; oat and vetch, $14.50; clover, $11; valley timothy, $14@15; eastern Oregon timothy, $16@17.

SPOKANE, Jan. 28.—Wheat—Feed wheat, $36 per ton.

Oats—$34 per ton; steam rolled, $36.

Corn—$32 per ton; cracked corn, $34 ton.

Barley—$30; steam rolled, $32 per ton.

Bran and shorts—$22 per ton.

Alfalfa, unsettled, $17 to $18; timothy, $18 ton; mixed hay, $18 ton.

SEATTLE, Jan. 28.—City delivery: Hay—Timothy, $24; D. C., $26; mixed, $21; alfalfa, $18; D. C., $23; straw, $15@17; barley, whole, $33; ground and rolled, $35; clipped, $39; chick starter, $53; chop, all grain, $38; coconut meal, $28; corn, $32; corn, cracked and feed meal, $34; cottonseed meal, $5; linseed meal, $62; scratch feed, $40@44; soy bean, $62; wheat, $43; Puget sound, $41.

General Produce.

CHICAGO, Jan. 28.—Butter—Higher; creamery extras, 36½c; firsts, 30@35c; seconds, 27@29c; standard, 33½c.

Eggs—Lower; receipts, 12,085 cases; firsts, 34c; ordinary firsts, 30@31c; miscellaneous, 32@33c; refrigerator firsts, 24@25c.

PORTLAND, Ore., Jan. 28.—Butter—Barely steady. Extra cubes, 34c; undergrades, 32c; cartons, 42c; prints, 41c.

Butterfat—No. 1 churning cream, 34@38c f. o. b. Portland; undergrades, 35c.

SEATTLE, Jan. 28.—Eggs—Select local ranch, white shells, 33@34c; mixed colors, 32c; pullets, 29@30c.

Butter—Unchanged.

SPOKANE, Jan. 28.—Butterfat—36c lb.

Eggs—Fresh ranch eggs, $11; fresh pullet eggs, $9.

Live poultry—Broilers, 22c lb; springers, 17c lb; springers, staggy, 14c lb; hens, fat, 4 lbs. up 20c lb; 2 to 4 lbs, 17c lb; old roosters, 14c lb; rabbits, 10c lb.

Range of Live Stock Prices for the Week Ending Jan. 25

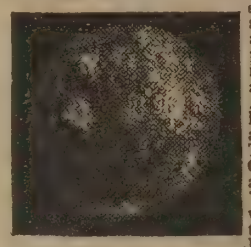
CATTLE.	Chicago.	Spokane.	Portland.	N Salt Lake
Choice, prime heavy steers (1100 lb up)	8.75@10.00			
Good heavy steers	7.75@ 9.10			
Medium heavy steers	6.85@ 8.00			
Common heavy steers	6.00@ 7.00			
Choice, prime light steers (1100 lb do'n)	8.85@10.25			
Good light steers	7.75@ 9.25			
Medium light steers	6.65@ 8.00	6.50@ 7.75	6.50@ 8.00	6.00@ 7.00
Common light steers	5.75@ 6.75	4.25@ 6.00	4.75@ 6.50	4.50@ 6.00
Common to choice butcher heifers	3.85@ 8.00	3.50@ 6.00	3.50@ 6.50	3.50@ 6.00
Common to choice butcher cows	3.40@ 6.00	3.00@ 5.50	3.25@ 5.50	3.00@ 5.50
Bologna and beef bulls	4.00@ 6.00	3.00@ 5.00	3.00@ 4.00	2.50@ 4.00
Canners and cutters, cows and heifers	2.50@ 3.65	2.00@ 3.00	2.25@ 3.25	2.00@ 3.50
Canner steers	3.00@ 4.25	2.50@ 3.50	3.00@ 4.00	2.50@ 3.75
Medium to choice light veals	6.75@11.25	8.00@ 9.50	7.00@10.50	6.00@ 7.50
Common to choice heavy veals	3.75@ 8.75	4.00@ 8.00	5.50@ 7.50	
Common to choice feeders (1000 lb up)	5.25@ 7.00			
Common to choice feeders (750-1000 lb)	5.15@ 7.00	3.50@ 5.00	4.50@ 5.50	
Common to choice stocker steers	4.50@ 6.85			
Com. to choice stocker cows & heifers	3.00@ 5.25			
HOGS.				
Top of market	9.30			
Bulk of sales	7.75@ 8.85	7.75@ 9.00	8.75@ 9.00	7.50@ 8.25
Heavy (250 lb up)	7.75@ 8.50	7.50@ 8.25	7.00@ 8.25	7.00@ 7.50
Medium (200-250 lb)	7.90@ 8.85	8.25@ 8.75	8.25@ 8.75	7.50@ 7.75
Light (150-200 lb)	8.25@ 9.00	8.25@ 9.25	8.75@ 9.25	7.50@ 8.25
Light lights (130-150 lb)	8.25@ 9.00	8.00@ 9.00	8.75@ 9.25	
Smooth packing sows (250 lb up)	6.60@ 7.85	6.50@ 7.75	7.00@ 8.00	
Rough packing sows (200 lb up)	6.25@ 7.25	6.00@ 7.00	5.00@ 7.00	
Medium to choice pigs (130 lb down)	8.00@ 9.25	8.25@ 9.00	8.50@ 9.00	
Stocker pigs		7.50@ 8.25	8.50@ 9.00	6.00@ 7.50
SHEEP AND LAMBS.				
Medium to prime lambs (84 lb down)	11.50@14.00	7.50@ 9.50	8.00@ 9.75	7.50@ 9.00
Culls and common lambs	9.00@12.00	6.00@ 8.00	4.50@ 8.00	5.50@ 7.50
Medium to prime yearling wethers	9.25@12.75	5.00@ 7.00	6.00@ 7.50	4.00@ 6.00
Medium to prime wethers	6.75@ 9.75	4.00@ 6.00	4.00@ 6.50	3.50@ 5.50
Medium to choice ewes	5.00@ 8.00	3.00@ 5.00	4.00@ 6.00	2.50@ 4.00
Culls and common ewes	2.75@ 5.00	1.00@ 3.00	2.00@ 4.00	1.00@ 2.50
Feeder lambs	10.25@12.75		7.00@ 8.00	

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Prevent

the "blotch" or "burn" of the spray on fruit

Observe this study in contrasts. The apple at the left was sprayed with Arsenate of Lead—a wonderfully good spray. But the user neglected to mix "Spray Spread" with it. Below is a similar apple—sprayed with the same kind of spray—but Albatross Spray Spread was mixed with the spray. Note the difference—the "lead" dried on the FIRST apple in spots or blotches. The second apple received an equal amount of protective spray—but it spread over the apple in a thin film. Appearance and marketing appeal of the apple is thus retained. The pictures tell why Government experts are so enthused over "Spray Spread"—why experienced horticulturists say it has NO equal for spreading an "arsenate of lead" spray.



Note the "blotch" or "burn" of the lead on this apple

ALBATROSS "SPRAY SPREAD"

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Quality Features:

1. Very finely ground—always uniform.
2. Quickly Soluble.
3. No lost time.
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5. Does not injure foliage.
6. Recommended by experts.
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Directions sent with each order



Note the uniform, adhering film on this apple

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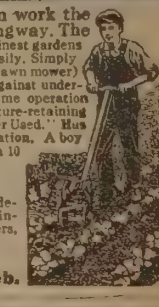
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A little girl who lives in eastern Washington hopes all the cousins are happy. She says she is. Her name is May Brown. This is May's third letter to the Corner.

Esther Wahl, 10 years old September 21, 1921, has never written to the Corner before. Mabel and Alma are her sisters. Esther has a dog and three cats for pets. Snowball is the dog's name and one cat is black, one white and one gray. Esther lives in the Yakima valley of Washington.

LETTERS WELCOMED BY AUNT NELLIE.

Among recent letters received by Aunt Nellie are those from cousins whose names follow. A few of these will be published each week in the regular edition of THE FARMER, and others will appear from time to time in The Junior Farmer.

Laila Larsen, Arve Knoppi, Maxine Ommat, Helena Bafus, Ruth Werner, Artie James, Jeanette Kragt, Catheryn Becker, Helen Wirta, Laurene Van Leuven, Arvo Ahonen, Jennie Evelyn Holmes, Maude Yates, Mildred Ellen Slye, Nina Bean, Orla and Marie Kirchner, Laura Brand, Oscar Thomson, Maxine Miller, Beatrice Bowman, Erma Sills, Guy John Conine, Theodore Kores, Johnnie Jackson, Frankie Miller, La Vira Rothrock, Ruth Wagner, Ralph Stratton, Dorothy Lock, Ruth Hedges, Ferne and Muriel Daugherty, Helen Thurber, Catheryn Becker, Mae Beardsley, Lena Rayburn, Victoria Wedam, Melba Webber, Annie Thomson, Guedveig Borhild Hammervold, Lorraine Dawson, Helen Owen.

Agnes Burton, Myrtle Kirkman, Idell Wolverton, Myrtle McCadden, Edna Hepler, Edwin Crone, Dorathy Barry, Flossie Slemp, Eva Paavola, Marguerite Brow, Paul Fox, Della Anderson, Merha Van Leuven, Sylvia Yeackel, Viola M. Robbins, Alvin Healy, Elmi Jackson, Ines Brown, Wilma H. Woodruff, Esta Rivers, Elva Dyer, Vilno Hanki, Averil Boyes, Melvina Williams, Vera Carlson, Marie Hansch, Elna Marck.

Chester Schieck, Ruth Carlson, Eunice Loch, Irene Kleweno, Russell Carpenter, Agnes Burton, Gertrude Finster, Ellen Secrest, Ruth Otterstedt, Dorothy Graham, Herbert W. Walters, Inez Dee Georges, Inez McDonald, Paul Dagefoerde, Otto Strom, Hope Raymond, Hubert Sparger, Carl Selveke, Dorothy McDonald, Orville Sparber, Thordis Fjerlie, Orven Ware, Esther Miller, Vinnie Dee Michie, Lois Jones, Stella Ableman, Helen Kelly, Wilbur Stiles, Audrey Cook, Estella Felmley, Pauline and Juanita Arrington, Helen Sanders, Bertha Eccles, Elizabeth Anderson, Curtis Rose, Lily Bakun, Selma Westerback, Lillian Kunz, Emma Miller, Vera Maxine McPherson, Helen Grube, Margaret Cook, Helen Flork, Jeanette Smith, Ward Sorrels, Sarah Moses, Lulu Evans, Hilma Johnson, Astrid Larsen, Thurston Friberg, Ruth Bailey, Lucille Hutton, Violet Smith, Carolyn Brewer, Eula Marie Goodyear, Zulene Bogart, Thelma Lefever.

David Cole, Hazel Liebl, Ray Liebl, Sevea Petersen, Robert and Othelia Franz, Juanita Anderson, Kathleen M. Stuhr, Margaret Erickson, Ruth Carlin, Margaret Zaharana, Gladys Main, Laura Haskins, Pauline Manson, Ruth Brown, Asta Jensen, Dilla Fisher, Lillian Watson, Violet Rees, Helen Pate, Glen Pate, Jenny Johnson, Inez Watson, Ellen Crank, Kenneth Farnsworth, Bertha Brown, Ora Schafer, Alice Croskett, Eunice Knight, Hazel Schafer, Ellen Ludwig, Verna Hill, Helen Larsson, Alice Lovos, Helen Dorothy Top, Harry Long, Stella and Eva Cade, Julia Bruce, Arthur Jerstad, Artie James, Marjorie Baker, Olivia Taylor, Lucy Larson, Leo T. Harding, Virginia James, Nina Stringfield, Murray Dean Snell, Keith Weston, Naomi Fleager, Olive Martin, Harold Milton Dunnagon, Billy Kemp, Louise Evans, Herbert E. Peters, Awne Palola, Cecilia E. Stuhr, Edith Aylurd, Amy Katherine Turner, Verna Rowell, Alta Eaton, Annie Hanhi, Shirley Baker, Russell Higginbotham, Thelma Harvy, Edwin H. Foster, Bessie Harvey, May Brown, Sarah Houghton, Esther Burke, Hjordis Fjerlie, Stuart Duncan, Inez Locke, Nora Raqua, Mary Cain, Levira Bertholf, Hazel Bovey, Doris Woinowsky, Harry Warmke Jr., Herbert Boesch, Fern Brooks, Erma Sparber, Leonard Carroll.

Ruth Earle, Myrtle Kingwell, Margaret Prince, Zelma Johnson, Madeline Moller, Flossie Packwood, Christian Hochstatter, Inez Erickson, Helen L. Mackison, Arvid Lee Hallstrom, E. Ruth Schmidt, Ida May McAuley, Elbert Hunt, Kathleen O'Meara, Elizabeth Parrish, Donna Farmer, Hulda Poutta, Clifford L. Dean, Charlie Bennett, Anna Flork, Jennie Mickey, Adele Matson, Esther Wick, Carolyn M. Cyphert, Earl McGuire, Oscar W. Saulsberry, Edward Leppaner, Edith Saunders, Margaretha Hochstatter, Doris Irene Jones, Ella McHargue, Marie Thornton, Alvena Matson, Carol Bamford.

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BEDTIME STORIES

By THORTON W. BURGESS.

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LENDING JERRY A HAND.

Just who started it nobody seems to know, possibly it was the Merry Little Breezes, who are forever trying to do something for somebody else. Anyway, they did a lot of whispering and giggling as they watched Jerry Muskrat making ready to build his new house. Afterward they danced away across the Green Meadows. In a surprisingly short time all the little people who live in the Green Meadows and in the Green Forest seemed to know all about what was going on at the Smiling Pool. And they all seemed to have the same idea, which was—what do you think? Why, to help Jerry Muskrat to build his new house.

Jerry didn't ask for any help. Oh my, no! Such a thought never entered the head of Jerry Muskrat. You see, there isn't a lazy bone in Jerry's plump little body.

Jerry Muskrat likes to work.
And though he likes to play,
He'll never, never, never shirk
The duties of each day.

So when Old Mother Nature whispered in his ear that he ought to build a new house and make ready for a long, cold winter, Jerry started in to work right away. He didn't even mind when Billy Mink and Little Joe Otter made fun of him, but dug away down in the mud at the place where his new house was to be.

"What are you going to make it of?" asked Billy Mink as he sat kicking his heel on the Big Rock.

"Mud and sticks and bulrushes and grass," replied Jerry Muskrat as he started to swim to where the alders grow beside the Laughing Brook. There he found Peter Rabbit sitting on the bank.

"Hello, Peter Rabbit!" said Jerry Muskrat, as he began cutting young alder



Pretty soon Jerry was back in the alder thicket for another load.

shoots. When he had all he could carry, he started to carry them over to where he was building his new house.

thicket for another load and there he tihcket for another load and there he found the nicest, the very nicest kind of a surprise. Can you guess what it was? It was a great bundle of alder shoots all ready for him to push across the Smiling Pool. Yes, sir, there they were, and there was Peter Rabbit grinning and cutting more. Jerry Muskrat was so surprised he could hardly believe his own eyes, and he actually stuttered as he asked:

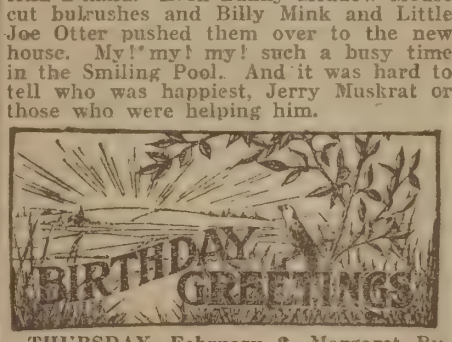
"Wha—wha—what does this mean, Peter Rabbit?" Peter grinned more broadly than ever as he replied:

"It means that I want to help build that new house, Jerry Muskrat, and I am going to cut all the alder shoots you need."

Jerry Muskrat thanked Peter Rabbit and swam off with the alder shoots. Pretty soon he needed some willow shoots. When he reached the place where the willows grew he found another surprise—the nicest bundle of willow shoots, all cut, and Johnny Chuck cutting more.

"You can't have all the fun to yourself building your own house!" cried Johnny Chuck, his eyes sparkling.

And so it was that everybody tried to lend a hand. Even Danny Meadow Mouse cut bulrushes and Billy Mink and Little Joe Otter pushed them over to the new house. My! my! such a busy time in the Smiling Pool. And it was hard to tell who was happiest, Jerry Muskrat or those who were helping him.



THURSDAY, February 2—Margaret Byers, 10 years old; Audrey Deysung, 10.

FRIDAY, February 3—Claude Baskett, 9 years old; Dorothea Shafer, 9; Idell Woolverton, 11; Frankie Miller, 8.

SATURDAY, February 4—Alador Bowles, 8 years old; Leona Brandes, 11; Celia Cyphert, 10; Thelma Gleich, 11; Alice Vostral, 10.

SUNDAY, February 5—Lora Ditmore, 10 years old; Opal Ellis, 10; David B. Robinson, 9.

MONDAY, February 6—Ethel Lindula, 11 years old; Doris Jones, 11; Albert Weber, 11.

TUESDAY, February 7—Lois Disney, 10 years old; Marion Hayden, 11; Hildred Kettle, 9; Mildred Kettle, 9; Thelma Cruce, 8.

WEDNESDAY, February 8—Julia Bruce, 9 years old; Myrle James, 9; Pauline Menkal, 11; Dilla Fisher, 10; Clifford L. Dean, 10; Alice Croskett, 8.



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THAT BREAK THE HEART

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Her Face Beams



with the "Wash day *smile*," instead of the Wash Day Grouch, in sheer joy and delight at the dazzling, snowy white purity of her white goods.

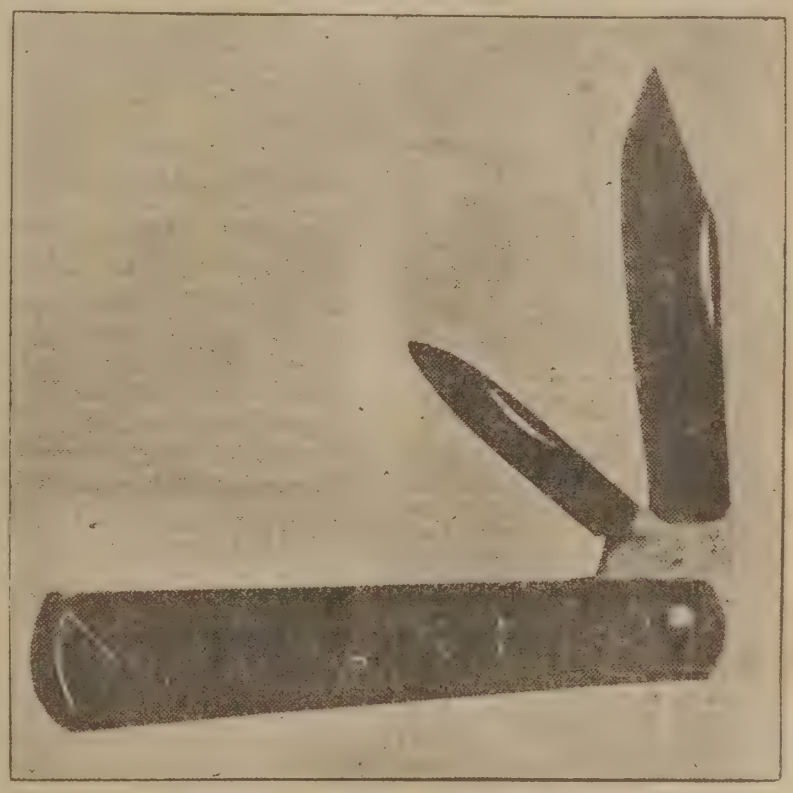
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Read the "Want Ad" page this week for good offers of all kinds.

News for Breeders

Among the important live stock sales scheduled for the near future are the following:

Davis-Butchart Holstein sale, Granger, Wash., February 6-7.

W. A. May Poland China sale, Toppenish, Wash., February 8.

Mulhall & Sons sale of Shorthorns and Percherons, Buena, Wash., February 14.

Hugh Walter sale of Poland Chinas, Yakima, Wash., February 18.

Swine Breeders' association sale of several breeds, Spokane, February 21.

Shorthorn breeders' consignment sale, Spokane, February 22.

Day & Rothrock Co., Shorthorn sale, Sprague, Wash., February 23.

A. D. Dunn Shorthorn sale, Wapato, Wash., February 24.

A new Holstein record for the Yakima valley has been made by a cow owned by Butchart Brothers of Sunnyside, Wash. Princess Pietertje Artis, a 7-year-old registered Holstein, has just produced in seven days, on official test, 24,896 pounds of fat, or 31.12 pounds of butter. She is a showy individual and is sired by Pietertje Sir Posch, her dam being Princess Yetive Artis 2d. The former Yakima valley record for a number of years has been held by a Holstein owned by William Todd & Son of Yakima, and is slightly under 31 pounds.

C. T. Myers of Prosser, Wash., believes the horse is here to stay and that good big drafters will always be in demand. Mr. Myers has three registered Belgian mares. Two of them were shown at the Washington State fair, winning first and third, and senior and grand championship. At the Pacific international, at N. Portland, in a great class, the two mares stood second and third.

The Duroc Jersey swine sold at the Charles Sprong Holstein sale at Grandview, Wash., January 20, went low. S. C. Chaffee of Sunnyside, Wash., topped the sale when he bought Stadicona A 1, the sow that has several grand championships to her credit, for only $71. Chester Murphy, a pig club boy, secured a fine daughter of King Orion Gano for only $51.

An Aberdeen Angus yearling bull and yearling heifer were recently shipped to Honolulu, Hawaii, by the well-known Aberdeen Angus breeders, Congdon & Battles of Yakima, Wash. A Mr. Robinson, who is starting an Angus herd, was the buyer. Mr. Battles reports that this is the third shipment they have made to the Hawaiian islands.

Wheat Growers Look Forward

(Continued from page three.)

popular in the northwest as milling grains. A comparison was made of four varieties, Bluestem, Early Bart, Hybrid No. 128 and Turkey red, as they grow in the Big Bend and the Palouse regions, respectively. In all cases, he said, the Big Bend wheat was harder, more easily milled and higher in gluten content than the Palouse wheat. Loaves baked from each were exhibited in striking confirmation of the statement. For pastry, however, Mr. Harshman pointed out, high gluten content is not desirable, and the low-strength flours are used. In crackers, macaroni, etc., the two types of flour are usually blended.

One of the interesting features of the convention was a trip through the Sperry flour mill, in the outskirts of the city.

Professor Severance of the state college discussed investigations carried on by the state college and the department to learn as nearly as might be the cost of grain production. Wide differences of cost were found, resulting from different conditions and differing degrees of efficiency on the part of growers. He emphasized the necessity of a reasonable volume of business by the producer, a good yield, the production of some live stock and the efficient use of labor.

Another of the most interesting discussions of the convention was that of diversified farming by Dean E. J. Iddings of the Idaho college of agriculture. He declared that the soils of the grain growing sections were becoming depleted by the one-crop system, and that diversity of production was necessary.

Other important subjects were discussed by qualified speakers, among them the following: "Application of Federal and State Grain Grades," by D. W. Whitlock of Portland and J. C. Cunningham of Seattle; "Problems of the Farmer as Seen From His Own Viewpoint," by W. J. Robinson, manager of the Washington Wheat Growers' association; "Application of the United States Warehouse Act," by R. L. Cox of Spokane; "Tillage Methods in the Big Bend," by B. B. Gillispie of Ritzville; "Taxation," by F. J. Wilmer of Rosalia, and "Grain Varieties and Smut Control," by E. G. Schafer of the state college farm crops department.

Extracts from and references to addresses and discussions during the convention will be made in later issues

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Smoked Picnics, a lb.... 18c



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Sugar-cured bacon, lb. 27c
Lard, 8-lb. pail.....$1.30
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See our classified ad in this paper for prices on poultry and live stock. Dry salt pork, lb. 15c to 20c

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CAN YOU USE THIS HOLSTEIN BULL?

Sire: Sir Johanna Fayne Bonheur De Kol No. 188160, whose dam made at 2 years, milk, 22.449 pounds; butter, 859; at 3 years, 7 days, milk 649 pounds; butter, 32.89 pounds; 30 days, milk, 2727.9 pounds; butter, 130.37 pounds.

Dam: Lucy Freela Pontiac No. 256613

6 years, 365 days—milk, 26,661.6 pounds; butter, 1056.5 pounds.

A handsome, straight, long-bodied fellow; half black, half white; 13 months old; weight, 1100 pounds.

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ALOYS SCHULER, New Plymouth, Idaho.

Holstein Bulls sired by son of world record cow, from dams sired by brother to Segis Pietertje Prospect. Prices low.

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L. S. DILLE & SON, R. 4, Caldwell, Idaho.

Jersey Cows and Heifers Grade Cows, Registered Bulls, Baby Calves

Every cow offered has a Cow Testing association record and is a good producer. To make room for pure bred heifers, I am making good offers on good cows.

Two young bulls by a strongly bred St. Mawes sire, out of Register of Merit dams.

Baby calves by a richly bred sire out of high producing cows.

Come and see my herd, one of the largest in Tillamook county, established in 1867, or write for full information of records, breeding and prices.

Don Meadows Farm
JOE DONALDSON, Prop., Tillamook, Ore.

Meadow View Jersey Farms
W--O--N

At the State fair, Salem, Ore., Sept. 27, 1921: 1, 2, 3, aged cow; 2, 3, three-year-old. 1st, senior yearling; 2d, senior heifer calf. 1st, senior bull calf, 2d, junior bull calf. 1st, dairy herd, 1st and 2d, get of sire, 1st, produce of cow. We entered 13 head. Grand champion cow. 129 Jerseys competing. Nuff said.

Mr. and Mrs. J. B. Neal
TURNER, ORE.

Golden Glow Jerseys

The 2 Golden Glow cows Vive La France and Lady Silken Glow, only living Jerseys that have made over 1000 lbs. fat. Their records average 1039 lbs. fat.

IRON MINE FARM, Oswego, Ore.
W. M. LADD, Owner.
D. BROOKS HOGAN, Mgr.

Laurchester Place Jerseys

Young bulls out of register of merit dams and sired by Daisy's Golden Poppy, that will soon be silver medal bull, besides having two gold medal daughters. He is sire of many prize winners at Pacific International. Good individuals, priced for quick sale.

CHESTER MULKEY, McMinnville, Ore.

Richly Bred Jersey Bull Calf

His dam has junior two-year-old record of 556 lbs. fat, and his sire, St. Mawes Majesty Beau, is a son of St. Mawes Lad, sire of the world record senior yearling, St. Mawes Lad's Lady, 824 lbs. fat, and out of Edith Oxford Belle, gold medal cow, record 741 lbs. fat.

S. A. RICHES, Turner, Ore.

Choice Jersey Heifers

And richly bred young bulls, out of register of merit cows with records of over 600 lbs. fat, with common herd care, or that are now on test. Sired by Kallonders Eminent or Oxford Raleigh Lad, both register of merit bulls.

B. C. CRABTREE, Lynden, Wash.

Anoka Farm Jerseys

We have your wants in a bull calf dropped July 1. He is a beauty and his dam has a record of 504 lbs. fat. Priced to suit the most conservative buyer. Address
R. B. SEELY, Sherwood, Ore.
RY. STATION, WILSONVILLE, ORE. ELEC.

Jersey--Gold and Silver Medal Sire

Ashnook Farm offers a few heifers and young bulls, sired by the gold and silver medal sire, Silver Chimes, of S. B., sire of ex-world champion heifer, Silver Chimes Gwendola, and 20 register of merit daughters, and more qualifying.

DEL PERKINS, Carlton, Ore.

Register of Merit Jerseys

Young bulls out of dams with good official records and sired by Foxhall's Chief Engineer, combining the blood of the great Foxhall's Fern Lad and Golden Glow's Chief strains.

FOX BROS., Silverton, Ore.

We Are Entirely Sold Out

of bulls ready for service. We can furnish a splendid St. Mawes bull calf at a reasonable price. Write for particulars.
J. C. BROWN & SONS, Shedd, Ore.

Wild Cherry Farm Jerseys

All tested 2 and 3 year olds, average over 400 lbs. fat. Young bulls close to 5 gold medal sires.
D. G. LILLY. Forest Grove, Ore.

ASHBURN FARM Premier breeders of medal winning cows for 1920. Write for our illustrated folder and further information.
J. M. DICKSON & SON, Box T, Shedd, Ore.

Fourth Gold Medal Jersey Bull

now in use in my herd. No other herd ever had so many. Young stock for sale.
ED CARY, Carlton, Ore.

Jersey Bulls at Bargain Prices

Send today for our special sale list of registered Jersey bulls from R. of M. dams. Easy terms, liberal credit.
WARREN GRAY, Box T, Jefferson, Ore.

Invest in farm land or improved farms NOW. Our "Want Ads" offer some A1 opportunities. Read them.

150 - HOLSTEINS - 150



"BESSIE"

To Be Sold at

PUBLIC AUCTION

Complete Dispersal of the H. C. Davis and Butchart Bros. Herds.

On the Davis farm, one mile east of Granger. A two-day sale starting 10 a. m., Monday, February 6th, 1922. 70 head bred to Sir Bessie Fobes Tritomia. Fifty per cent is "Bessie" breeding, much of the blood of Sir Ormsby Burke Segis. All stock offered is of the highest type and individuality.

Tuberculin tested, sold subject to retest. Excellent opportunity to buy in carload lots. Terms to responsible buyers, furnishing desirable bank references.

The DAVIS-BUTCHART Dispersal SALE

H. C. DAVIS, Mgr. Granger, Wash.

Write today for Catalogue.

SEE LAST WEEK'S PAPER FOR ANNOUNCEMENT AD.

Our First Sale Was a Success
Will Hold Another
Bred Sow Sale
February 16, 1922

The last opportunity of the season to buy this class of stock at auction. Tried sows, fall and spring gilts, the get of **Orion Joe** bred to the New Sensation boar purchased from Robert Leisy, Wisner, Neb. Nothing else like him in the west. If you want to keep in line, step in line at sale.

Another pair of gilts given to the high bidders. Mail bids will be cared for by E. J. Fjelsted, Buhl, Idaho, care of Chamber of Commerce.

RAMBO & OTTO, Buhl and Filer. **COL. E. O. WALTER, Auctioneer.**

DUROC JERSEY BRED SOW SALE

FEBRUARY 8, 1922, AT PARMA, IDAHO.

50 fall and spring gilts; most popular blood lines represented. Sensation's Pathfinder's Orion, Chief King's and Cols.

Mail bids may be sent to J. E. Nessly of Idaho Farmer, or Manos J. Miller, auctioneer.

S. S. MORRISON, **C. H. KIRKPATRICK,**
Parma, Idaho.

EXCEPTIONAL VALUES
in
GUERNSEY BULL CALVES
FROM
HIGH-PRODUCING COWS

CHICONA FARM, Chinook, Wash. A. L. Gile

SPECIAL OFFER—JERSEYS

Small herd of select jerseys, popular western blood lines, headed by a sire whose daughters are making him a silver medal bull. No culls. Priced for quick sale. A real opportunity. Communicate with—

K. HANNEMAN, Corbett, Ore.

ABERDEEN-ANGUS

bulls will mature your steers earlier, give them a heavy, thick and low set conformation, dehorn them and add to their quality so that they will top the market every time. We have a wonderful lot to select from, both range and herd bulls, at prices which will move them.

CONGDON & BATTLES.
P. O. BOX 275. YAKIMA, WASH.
Write for prices and literature.

Weatherford Bros. Herefords

We have for sale a few choice herd bulls and bulls for the farm and range, at prices in keeping with the times. Herd headed by the great breeding bull, Beau Blanchard 59th, whose calves show great bone, size and quality.

WEATHERFORD BROS. Dayton, Wash.

If You Keep Live Stock

you should also keep a careful record of your stock, milk records, breeding records, labor and feeding records, live stock accounts, general farm accounts and expense accounts for household and personal expenses. We will send you a record book covering all these matters, free. The supply is limited. Address

THE PACIFIC NORTHWEST FARM TRIO.
Dept. B., Review Bldg., Spokane, Wash.

LAST CALL
First Annual Yakima Valley
Duroc Bred Sow Sale

SUNNYSIDE, WASH., FEB. 9, 1922.

Great Wonder, Pathfinder and Sensation breeding.

Send mail or wire bids to

J. L. THOMPSON, Secretary.
G. R. GOCHNOUR, Auctioneer.
or W. R. WHITE, Fieldman.

Sunnyside, Wash.

Big Type Duroc Jersey Hogs

One spring boar, gilts bred to Model Giant. Fall boars and gilts. Reasonable prices. Orion and Gano stock. Pedigrees furnished.

S. S. MORRISON, R. F. D. 2, Parma, Idaho.

Duroc-Jersey Hogs

Buy your boar now. Choice "Sensation" and "Pathfinder" breeding; also big type gilts and fall pigs. Satisfaction guaranteed.

V. R. FISHER, Oxford, Idaho.

Please mention THE WASHINGTON FARMER when writing

Inland Empire Breeders' Annual Sale of SHORTHORN CATTLE

Spokane, Wash., Feb. 22, 1922
(Washington's Birthday)

60 Head (30 Bulls and 30 Females) 60 Head

SELECTED CATTLE—A culling committee has passed on every animal that is listed in this sale which guarantees that only cattle of good quality and breeding will be offered.

30 Bulls—In this lot will be a number of herd bulls, bulls that should be used in registered herds. There will also be a large selection of strong range bulls and we would advise buying now, as restocking, which is now taking place, will demand every available bull in the spring.

30 Females—There is no better investment at the present time than a good Shorthorn cow. With the low price on feeds, the carrying charge is small and you will have a salable calf which will pay good interest on your investment. The females listed in this sale are good herd material and we hope they will be purchased by new breeders.

Sale will be held at Spokane Union Stockyards on Washington's birthday.

D. C. KEITH, Auctioneer.

For catalogue address Carl A. Greif, Sales Manager, Uniontown, Wash.

Sale Circuit—Combination Sale, Spokane, Wash., Feb. 22; Day & Rothrock Sale, Sprague, Wash., Feb. 23; A. D. Dunn Sale, Wapato, Wash., Feb. 24.

Dispersal Sale
Big Type Poland Chinas

TOPPENISH, WASH., WEDNESDAY, February 8, 1922.

46 head, including 32 bred sows of most popular blood lines; five boars, including my two great herd boars, Western Designer and Buster Clansman; also nine fall gilts.

Western Designer was first prize and junior champion, Washington State fair and Western Royal Stock show, 1921. **Buster Clansman** was first junior yearling, senior and grand champion, Lewiston Live Stock show, 1921. A number of the sows have show-ring records and every animal offered is of most approved big type, the kind that fills the pork barrel at the lowest cost.

GEO. A. GUE, Auctioneer, **W. A. MAY, Owner.**
Yakima, Wash. **Toppenish, Wash.**

The Poland China Event of the Year
The Loe & Ables Sale to Be Held at Salem, Oregon, on
WEDNESDAY, FEBRUARY 15, 1922

45 selected bred sows and gilts of the highest quality, bred to the greatest boars in the west. Write today for catalog giving full particulars.

Geo. Satterlee, Auctioneer. Chas. M. Talmadge, Sale Manager.
RAY J. FOX, Clerk. **Box T, Salem, Oregon.**

GRANDLY BRED AYRSHIRE BULLS AT LOW PRICES

All sired by Oregon Peter Pan; he by a son of Beuchan Peter Pan, undefeated show bull in Scotland and America. His dam, Willowmoor Etta 3d, is world champion junior two-year-old, with 16,621 lbs. milk, and 666.06 lbs. fat.

Two are yearlings ready for active service and two only a little younger. Most of the dams have good official records, with big production records in their pedigrees.

These bulls are priced low enough to be in reach of every dairyman wishing to increase production and good enough to head high class pure bred herds. Write at once for pedigree, and full particulars, to

Corvallis. **DAIRY DEPT. OREGON AGRICULTURAL COLLEGE.** Oregon.

Duroc Jersey Gilts

Included are the line bred Pathfinder first prize senior futurity litter and fourth prize junior futurity litter at 1921 Oregon state fair. All bred to Red King Giant, first prize senior futurity boar, 1921 Oregon state fair.

H. C. COMPTON, Boring, Ore.

300 Bred Sows

Duroc gilts, guaranteed in farrow. Immune, delivered safe. Priced right; pedigrees recorded; freight prepaid on carloads.

Box W. F. C. CROCKER, Filley, Neb.

Auction Sale of Hampshire Hogs

at Yards of
CALDWELL SALES COMPANY
CALDWELL, IDAHO
THURSDAY, FEBRUARY 9, 1922

23 head of bred sows and gilts.
3 sows with litters.
20 fall boars and gilts.
All of exceptionally high quality.

E. M. WILLEMAN, Wilder, Idaho.

Hampshires for Sale

Tried sows, last April gilts, Sept. pigs, both sexes, unrelated.

J. M. FRUITTS, Cambridge, Idaho.

In writing advertisers, be sure to say you saw their advertisement in The Washington Farmer.

Big Type Polands

Special prices on choice Sept. boar pigs. A few extra good gilts bred to Biggest Buster. One 300 lb. March boar, a good buy at $50.

FRED D. ENTERMILLE, Baker, Ore.

Real Poland Chinas

Headed by Victory Boy, son of Black Price, grand champion at Omaha. Spring pigs, bred gilts, proven sows. Write for prices.

BOX 897. **A. C. PETERSON,** Port Angeles, Wash.

Polands--The Big Wonder Herd

of genuine big type Poland China hogs. Home of the grand champion sow of the northwest. Satisfaction guaranteed on all orders.

E. O. LOE, Silverton, Ore.

River Banks Better Berkshires

Order now. Bred gilts for spring farrow.

RIVER BANKS FARMS,
GRANTS PASS, ORE.

Riverby Orchard Berkshires

Oldest established Berkshire herd in the northwest. Young pigs and bred sows for sale. Address

D. C. BUNN, Prosser, Wash.

Jumbo Herd Chester Whites

Herd headed by big type boar, Oregon's Buster. Choice spring pigs of both sexes. A few bred gilts.

CASS A. NICHOLS, Salem, Ore.

Mammoth Missouri Jack

We will sell, or will trade for Percheron stallion.

RIVER BANKS FARMS,
GRANTS PASS, ORE.

Read the "Want Ad" page this week for good offers of all kinds.

U.S.D.A.
EXPERIMENT STATION
URBANA ILL



Seventy-five years—

a stiff test for any boot

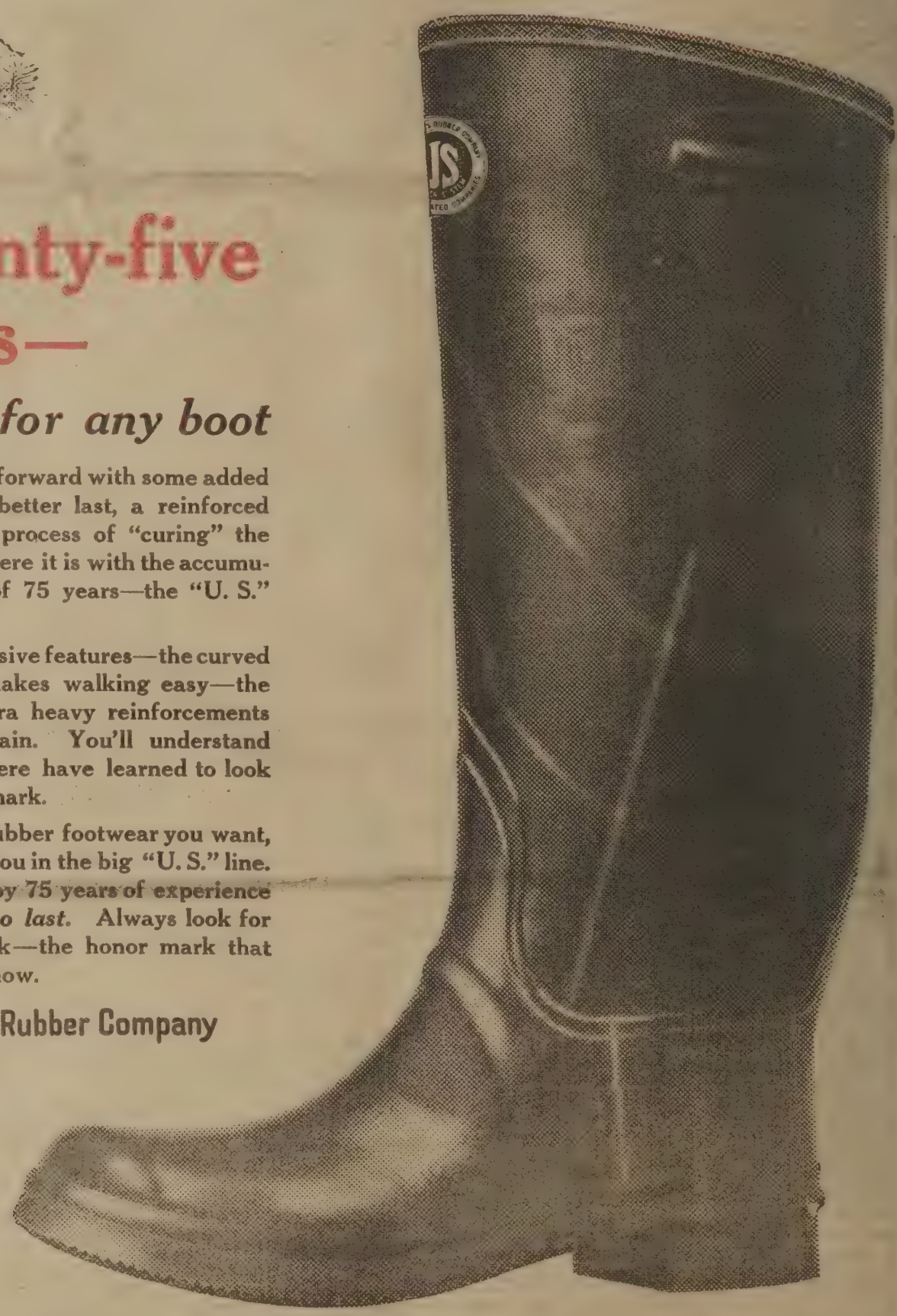
EVERY year a step forward with some added improvement—a better last, a reinforced heel, or an improved process of "curing" the rubber—until today here it is with the accumulated improvements of 75 years—the "U. S." Boot. Look it over!

Note the many exclusive features—the curved "Rocker" last that makes walking easy—the flanged sole—the extra heavy reinforcements at every point of strain. You'll understand why farmers everywhere have learned to look for the "U. S." trademark.

Whatever kind of rubber footwear you want, there's a type to suit you in the big "U. S." line. Every one is backed by 75 years of experience—every one is *built to last.* Always look for that "U. S." trademark—the honor mark that millions of farmers know.

United States Rubber Company

The "U. S." Boot

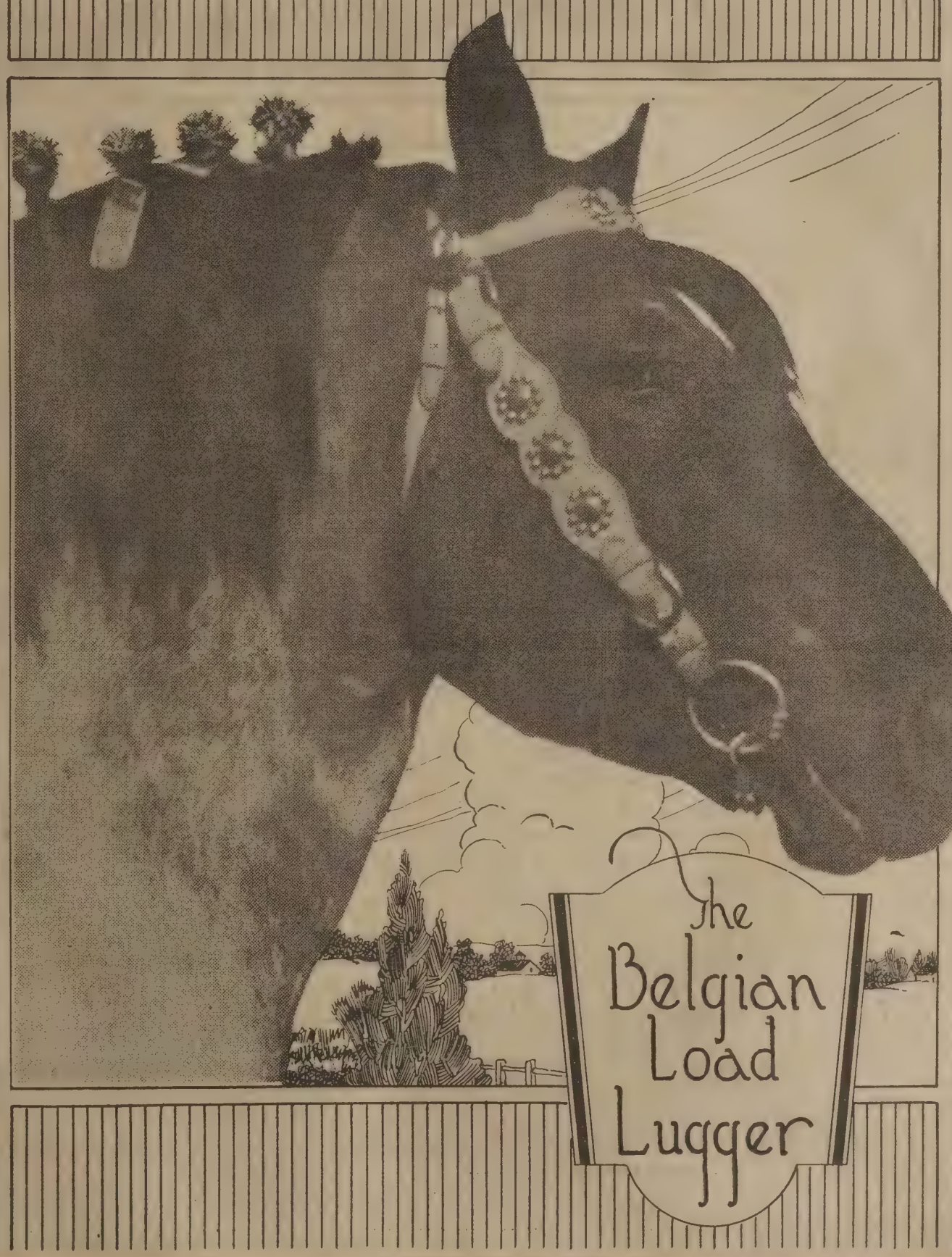


Look for this trademark on all "U. S." Rubber Footwear

THE WASHINGTON FARMER

ESTABLISHED 1894

SPOKANE. SEATTLE.



Who Gets The Washington Farmer Prize Pig? -See Page 6

Martin Neuman

Tries Out Raising Sunflowers

Wishing to learn something of his farm conditions, of his plans and his hopes, the editor of The Washington Farmer, October 6, 1920, sent a letter to Martin Neuman, whose postoffice address is at Goldendale, Wash. Mr. Neuman is one of our large army of subscribers. It is with much pleasure that after considerable delay we have received the following letter from Mr. Neuman under date of January 10, 1922. Mr. Neuman writes:

"I am accepting your invitation of more than a year ago to let you know about the condition of my farm, etc. I came here in the spring of 1919 and settled on a 40-acre farm. Bought the adjoining 40 acres last spring. Have about 30 acres under cultivation with 11 acres of 7-year-old apple orchard on it—the rest is in timber and pasture. A small irrigation ditch runs through my farm from which I can irigate part of my land. I also have 450 bearing loganberry plants. Am sending



Martin Neuman in his field of sunflowers.

you a picture of sunflowers raised on my land last year. I read in our magazine some time ago that the sunflower is a good forage plant producing a heavy crop of good stock feed. I agree to this as I think that it is good for that and I also have lived in a country where the oil from its seed is used extensively for cooking and table use. I have seen the 'yellows' grow 14 feet high with a stem three inches in diameter and head 24 inches in diameter—on the Asiatic side of the Black sea.

"I tried to raise potatoes here—Netted Gems and Burbanks—with and without irrigation, but did not have much success. Would like to know what kind of potato, if any, would do well here, preferably without irrigation. The soil is volcanic ash and has a tendency to 'pack,' but it holds moisture fairly good.

"I had a fairly good crop of yellow field corn last year, some of the stalks being seven feet high, but I have seen better in other places. I also had a rather light crop of sugar cane.

"Most of the land in this country is devoted to raising wheat, but as I have not sufficient acreage for that to make it profitable I would be much obliged to find out what other crop would do well in this soil and climate."

TRANSFER DAIRY HERD TO BOYS.

Governor Louis F. Hart has made a change in the operation of two of the state institution dairy herds, supplying other work for the girls at Grand Mound training school and transferring their milch cows to the boys' training school at Chehalis. The latter institution will supply the Grand Mound school with milk and cream by daily shipments.

A few boarders were found in the herd at Grand Mound, which were disposed of, giving only the better producers to the larger barn at Chehalis. The governor plans to add other registered Holsteins to the number which are already being managed by the boys and give them an opportunity to operate on a larger scale.

Cow Testing Contest

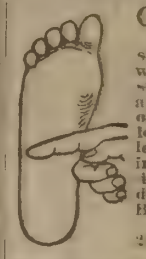
"It is rather early to predict results for the association year, which ends March 31, but I do not think the Jerseys will have any walkover. In fact, they must show some real form to finish in first place," writes Elmer L. Walker of Mohler, a Holstein enthusiast in the Nehalem Valley Cow Testing association. His signature, "Yours for association testing," indicates that he is also a "Babcock" enthusiast.

The W. P. Walker and the Elmer L. Walker Holstein herds have led the Nehalem association for three months past. In October the W. P. Walker herd of seven purebreds averaged 39.7 pounds of butterfat each, in November 34.5 pounds and in December 37.9 pounds, thus ranking as high purebred herd.

The Elmer Walker herd of 13 grades averaged 38.5 pounds each in October, 34.5 pounds for November and 31.9 for December, thus ranking as high grade herd. The Jersey herd of Gus Peterson was third each month.

VISIT COLLEGE IN JULY.

The regular summer meeting of the Grain Growers, Shippers and Millers' association is held at Pullman between July 4 and July 10. Attention was called at the midwinter session at Spokane this year to the fact that Pullman is but a three hours' drive from that city, and from many other points it is as accessible. It is hoped that the summer session will be attended in large numbers.

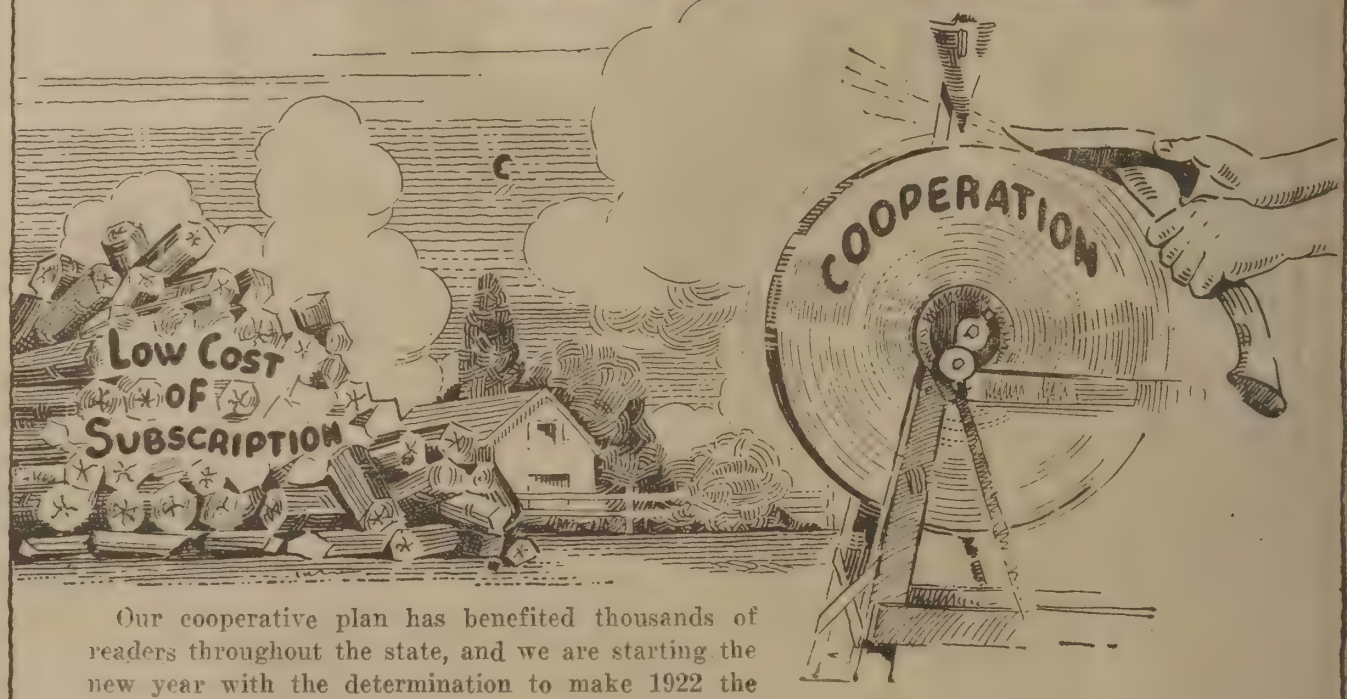


ONLY $2.50 A PAIR

Big improvement over arch supports. They carry the weight under these muscles, strengthening arches and ankles, taking pressure off of bunions, corns and callouses. Holding the foot level on the insole, increasing the wear of your shoes fifty per cent. Send your shoe dealer's address, for booklet.

BURNS CUBOID SUPPORT MFG. CO.
215 Jefferson Street, Albany, Ore.

LEND A HAND TO COOPERATION



Our cooperative plan has benefited thousands of readers throughout the state, and we are starting the new year with the determination to make 1922 the biggest year yet for this plan. In order to do this we ask each and every one of you to lend a hand. The tools won't stay sharp unless we all take a turn at the grindstone. What we did last year doesn't help if the axe is dull this year. We have to pour a little more water on the wheel and go to it again.

So we repeat, send your subscription orders direct. Get your neighbors to do the same. We will give you and your neighbors the benefit of every penny which would ordinarily go to the agent handling the subscription.

We have every confidence that you will continue to cooperate and repeat our request that you take thought as to your subscription renewal. Instead of waiting for a notification, mail in your order at least 60 days in advance of the address label of your paper. Tell your friends and neighbors about our cooperative plan and include their orders with your own. By all pulling together we can and will make 1922 a record year for cooperation. Let's do it!

Subscription Rates of The Washington Farmer:

$1.00 for Five Years 25 Cents for 1 Year. 50 Cents for 3 Years.

In Canada add 1 cent a copy for extra postage.

Feb. 9, 1922.

THE WASHINGTON FARMER,
Review Building, Spokane, Wash.

I desire to take advantage of your Cooperative Plan in securing new and renewal subscriptions.

I enclose herewith $..... for a.....year subscription to

THE WASHINGTON FARMER,

Name .....

Postoffice .....

R. F. D. ..... Box..... State .....

If your subscription is already paid in advance, it will be extended from the date to which it is paid.

STRAWBERRY PLANTS
From Whitten always grow
Make $500 to $1500 Per Acre
Because 32 years' experience gives us the "know how," Whitten plants always grow and produce large, luscious berries all season. Exceptionally heavy-rooted, healthy plants guaranteed. Learn about "Eaton—The Strawberry Supreme" and "Collins—The King of the Canners." Our catalog illustrated in colors, gives full details. Also, we offer the best in Raspberries, Blackberries, Dewberries, Grape Vines, etc. Send for free 1922 catalog TODAY.
C. E. WHITTEN & SON, Box 18 Bridgman, Mich.

THE WASHINGTON FARMER

SUCCESSOR TO

Vol. 46. No. 6 THE RANCH PACIFIC DAIRYMAN HORN AND HOOF February 9, 1922

For Good Farming, Attractive Country Homes and Happy Country People

Congressmen Favor Price Leveling

The Washington Farmer's Letter to the President on Fundamental Needs Is Vigorously Endorsed

Congressman John Kissel, representing the Third district of New York, writes to The Washington Farmer: "Your letter will be submitted as a petition to congress, noted in the congressional record and reported to the committee charged with the subject and listed under my name."

Congressman Kissel refers to the open letter to President Harding by THE FARMER respecting the five points which seem to be uppermost in bettering the present conditions of the farmers of the country. These points were as follows:

(1) The most outstanding need of the hour is price leveling—the bringing up of the farmer's price or the bringing down of the other fellow's. The farmer's need of credit is due to the present inequality of prices, and credit will be supplied when the price inequality is removed. Price equalization is imperative if the world is to continue to eat and be clothed.

(2) Present freight rates are ruinous to agriculture and are detrimental to industry at large. They should be promptly reduced.

(3) The farmer is entitled to protective tariffs commensurate with those enjoyed by the manufacturing industries.

(4) With large exports of American breadstuffs during the past calendar year, the price to the farmer here has been, in many cases, below the cost of production and seldom equal to this cost plus a living profit. This situation deserves searching investigation. The entire export field needs far-reaching and scientific development for all farm products.

(5) Any and all doubts as to the legal rights of farmers to market their products through cooperative associations of their own formation and under their own control should be swept away by clear-cut national legislation.

With regard to the above open letter to the president Congressman Theodore E. Burton writes to THE FARMER: "The suggestions you make are receiving very careful attention here. I do not, however, quite see how freight rates can be reduced unless there is a decrease in the cost of operation or a very much larger traffic obtained. Possibly a decrease in rates would increase shipments so that a partial reduction could be made. One of our sources of great prosperity before the war was the low freight rates by water transportation, as on the Great Lakes. Rail rates also, especially for long hauls, were lower than anywhere else in the world."

It will be remembered that Congressman Burton has a large congressional experience and has been one of the most prominent of the national legislators. He was chairman of the inland waterways commission appointed by President Roosevelt. As a member of the executive committee of the interparliamentary union he participated in meetings at St. Louis, London, Geneva, Paris and The Hague.

United States Senator Miles Poindexter of the state of Washington takes a deep interest in the agricultural situation. He writes to THE FARMER: "I agree with you in the program you lay down. I think the matter of price adjustment or relative leveling of prices so as to bring farm products up and some other things down will probably be the result in part of some of the other measures you propose, with all of which I heartily agree. I have very great confidence in the ability of the farmer not only to bring about the results indicated, but to generally protect his interest by comprehensive and businesslike organizing with capable agents and representatives. This can be done under existing laws as demonstrated in California. But I will be very glad to support a measure removing any doubts about it, if desired."

Senator W. L. Jones of the state of Washington writes: "I am glad to have your suggestions and I think I am in favor of every proposition that you present and will do all that I can to bring these things about."

Congressman E. O. Leatherwood, representing the Second district of Utah, says: "I think each of the points mentioned is vital and prompt steps should be taken by the government to care for our basic industry of agriculture."

Congressman Don B. Colton of the First district of Utah writes: "We are all agreed on the evils that exist. We know that conditions are not what they ought to be, but to date no one has pointed out specific remedies, particularly as they affect the freight rates. The railroads insist that they are making no money and an examination of their books seems to corroborate their statements, and there certainly is no existing law by which their rates can be reduced except upon order of the interstate commerce commission, and no one seems thus far to have convinced the commission that the rates should be reduced. A practical solution of the railroad situation is the crying need of the hour."

Along this same line Congressman J. D. Beck of the Seventh district of Wisconsin writes: "I think you might add No. 6 to the five you have, namely: Prohibition of fraudulent imitations of farm products."

Congressman A. M. Free, representing the Eighth district of California, writes: "There is one point that I would suggest you add to the letter and that is an improved distributive system for the farmer. At the present time middlemen have a stranglehold upon the farmer and bleed him tremendously for the small service rendered. We need better and cheaper distribution for farm products. I represent one of the largest farming districts in the United States and I know a great deal of the farm problems."

Congressman John C. Ketcham, representing the Fourth district of Michigan, has this to say: "In view of the conference now being held here at Washington I am pleased to say that the suggestions you offer as particularly applicable to the northwest are likewise very much in point so far as the agriculture of the whole country is concerned, and from the opening statements made at the conference yesterday I believe that most of these matters are to be carefully considered at the meeting and constructive reports made on them."

Lincoln

By JULIA M. MARTIN.

Fair in the city whence the nation's life
Flows in its fifty arteries, there stands
A classic pile that shrines a mighty name.
St. Gaudens, too, has wrought, and in the West,
Behold, a form familiar, tall, uncouth.
Many a lake and forest, hill and stream
Bears the beloved Lincoln name today,
And universities, and stately ships,
And noble avenues, the word resound.
A Bible, yellowed, worn, some rough-hewn rails
And bits of carpentry we treasure still.
A Mecca, now, the humble home becomes,
So mightily the fallen hero's spell
Is on us yet! But, in a larger sense,
We can not consecrate, we can not hallow
His noble name. The deathless words he spoke
Have consecrated, far beyond our power,
That name, and for immortal Lincoln's sake
A grateful wreath shall twine forever green.
The world will little note, nor long remember.
Our tribute all too poor. His deathless words
It never can forget. It is for us,
The living, to be dedicated, rather,
To the unfinished work that fell untimely
From those great hands.—What words but his suffice?—
It is for us to take increased devotion,
Here, to the cause for which our selfless Lincoln
Rendered, indeed, devotion's last full measure.
Here, to resolve that he, our honored dead,
Shall not have died in vain; that we will finish
With honor that which falls to us. This nation
Under God shall have a new birth of freedom.
Government of the people, by the people,
And for the people, Lincoln, shall endure!

State Farm Bureau Opposes Discriminatory Freight Rates

The Washington State Farm Bureau federation at its recent annual meeting at Yakima took a wise and far-seeing stand in support of the fight that the Intermediate Rate association is making for an absolute long and short haul law; that is, a law by congress to prohibit the railroads charging more for the short haul than for a longer haul to a more distant distribution.

The Intermediate Rate association, of about 200 chambers of commerce, commercial clubs, farm organizations, live stock associations and other community bodies, is combating the efforts of the transcontinental railroads to get permission from the interstate commerce commission to engage in a rate war with the ships at the Pacific coast terminals.

The railroads have driven the ships out of this business before, and the apparent purpose now is to do it again. Having achieved that purpose, they would, of course, then advance freight rates again to the Coast terminals. But, meanwhile, they are wanting to make the interior communities pay for the cost of the proposed rate war with the ships at the terminals.

The American people have put nearly $4,000,000,000 into a government built and owned merchant marine. The country, therefore, now has two arms of a transportation service—the railroads and the ships. The ships find it profitable to bring merchandise around from the Atlantic coast through the Panama canal to the Pacific coast, and on the return voyage to carry products of the Pacific coast region. It is highly desirable for the farmers and other producers of raw materials in the Pacific coast states to have a continuance of this ship service.

Moreover, it is to the national welfare that the double line of transportation service be maintained. If the railroads were permitted to drive the ships out of the Pacific coast harbors and scatter and demolish the government merchant marine the railroads would soon be unable to take care of the heavy traffic across the continent. We would be right back in the trouble that we suffered during the war and immediately following the war—lack of cars, slow service, interminable delays and a haughty attitude by the railroads toward the shippers.

Then a demand would be made upon the country for hundreds of millions of dollars of new capital to increase the facilities of the railroads—to double-track their lines, to bore larger tunnels through the mountains and to increase their terminal facilities at the Coast cities.

But why perpetrate that folly? Why should the interstate commerce commission permit the railroads to impair or to destroy an important transportation agency (the ships) that the country and its industries will need increasingly in the next few years? With the return of prosperity and the growth of western industries we shall need both the railroads and the ships. If we have the double and competitive service it will mean a great deal for the development of our industries and the prosperity of our people.

If the railroads were given a free hand they would impose a double economic burden upon the western country. They would go back to their old, wasteful method of hauling merchandise clear through to the terminals and then hauling a large part of it back to the consumers in the interior. But that is a sheer economic waste, as the interstate commerce commission told the railroads long ago.

The truth is that the transcontinental roads are not suffering unduly from the competition of the ships. With the exception of the Chicago, Milwaukee & St. Paul, all of the transcontinental roads, from the Canadian Pacific on the north to the Santa Fe on the south, are making good net earnings and are in a position to pay good dividends.

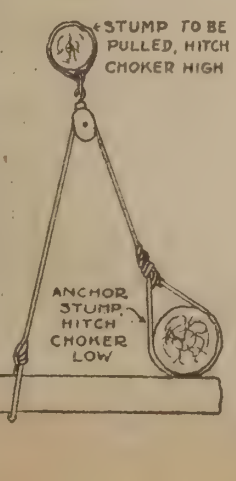
The Washington Farm Bureau federation is to be commended for adding its influence to that of other farm organizations that had already gone on record in this matter.

One-Horse Device for Stump Pulling

Charles Meyer of Alderwood Manor has a home-made stump puller that he works with one horse. The main power is with the pole, which is a small log a few inches in diameter and 20 feet long. One end of this is set against a stump with a cable attached a few feet from the stump, while the horse is hitched to the farther end.

If the stump to be pulled is not too large it can be pulled without any tackle, but for larger ones the cable should be run over two or three blocks to increase the power. In this way Mr. Meyer is able to secure as much as 10 horsepower with the use of only one horse. The operation, of course, requires some rehitching and the changing of the blocks to take advantage of the different positions.

The problem of stump pulling is a big one in parts of this state. First class stump pulling machinery is manufactured for operation on either a small or a big scale, and in many instances neighboring farmers can go in together to purchase a suitable implement if the needs of one are insufficient to warrant its purchase by one farmer alone.



WIRELESS MARKET REPORTS.

The wireless is now being used by state and federal agencies to broadcast national and local agricultural market reports throughout virtually the entire country. Reports on the national markets are dispatched daily by the United States department of agriculture from wireless stations of the postoffice department at Cincinnati, Omaha, Washington, North Platte, Neb., Rock Springs, Wyo., Elko, Nev., and Reno, Nev. These reports are received by hundreds of amateur wireless operators. National market reports are also received by state bureaus of markets and agricultural colleges, supplemented with local market reports, and relayed by wireless telegraphy and telephone to farmers, shipping associations, newspapers, banks, and other agricultural interests.

A most complete program in the dissemination of market reports by wireless is being planned by the state bureau of markets in Ohio, a specially constructed radiophone transmitter of the most improved type being installed in the radio station of the University of Ohio for that purpose.

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We guarantee every subscriber against loss through dishonesty or swindle by any advertiser in this publication; we do not attempt, however, to adjust trifling differences between subscribers and honest, responsible bankrupts. Complaints must be sent to us within 30 days from the date of the transaction and the subscriber must have mentioned The Washington Farmer when writing the advertiser. This guarantee applies to live stock, except that we will not be responsible for claims for damages on account of diseases in stock sold through these columns.

"College Bred" Wheat

One of the valuable things that is done at the state college is the testing of a large number of varieties of wheat. This is not with the object of producing a large number of wheats adapted to our northwestern wheat belts, but to eliminate the less profitable and improve and retain the most profitable. A variety is first given a test in a row of a rod's length, and the results compared with those from similar rows of other varieties, each planted from seed of the best condition and utmost purity possible, and under uniform excellent tillage conditions. A variety that justifies further tests is then given a fortieth of an acre in which to show what it can do, again in competition under uniform conditions with many other varieties. The threshing of these small quantities of wheat is achieved through the use of a small machine from which all wheat is readily cleaned, so that the check upon the yield is very exact and varieties are not mixed.

Valuable results have already been obtained. Many of our best wheats are "college bred."

The Right Kind of Research

Raymond A. Pearson, president of the Iowa State College of Agriculture, told the national farm conference at Washington that agricultural research, if properly developed, will put agriculture on a permanent and profitable basis in the face of ever-increasing obstacles. President Pearson said that well-trained men and ample funds are the essentials of research, and there should be a national policy to train and encourage the right kind of men and women and to supply funds to meet their reasonable needs in research work in the interests of agriculture. Young men and women should be encouraged to prepare themselves for research work. The work should be supported by liberal federal and state appropriations and the knowledge derived should be made available to every farmer throughout the country.

Existing conditions in American agriculture are not conducive to an immediate enthusiastic reception of President Pearson's recommendations. The average farmer feels that it is a condition, and not a theory, that is confronting him, and that he does not at this moment need a great deal of advice about the production of larger crops still further to hammer down the low prices of agricultural products.

Nevertheless it would be a mistake to abandon scientific research in the field pointed out by President Pearson. It can be only a question of time until the world's markets will come back to normal and we shall see an increasing demand for the products of American farms. Our own steady growth of population would insure that, even though there should be no increased demand from foreign countries.

A great deal will depend, however, upon the character of the research that is to be made. To a considerable extent, American agriculture will always have to be in competition with the agricultural production of the rest of the world. Agricultural research of the future should, therefore, be directed in large measure to pointing out ways for the elimination of wastes in production and the reduction of the cost to the individual farmer.

Moreover, research in future should be directed more extensively into cooperative marketing and the cutting down of the tolls that are taken between the producer and the consumer.

Another beneficial line of research that should be persistently followed is betterment of sanitary conditions on the farm, the elimination of unnecessary drudgery, both for the farmer and for farm women, and the development of interests that will keep more of our country boys and girls on the farm.

Many roads open up before the research worker, and at this time the devising of ways to increase production is the least appreciated part of such study.

Cost of Milk Production

Referring to the price of $2.75 per hundred pounds that is being paid to shippers of milk who are members of the Seattle Milk Shippers' association, The Monthly News Letter of the Washington state department of agriculture says:

Whether or not milk can be produced at the price at which it is selling on the Seattle market is absolutely an individual matter. Some dairy farmers are doing well selling milk at that price. Others are going further into debt. The only possible opening for the man who can not produce at the present price and make a profit is to improve his methods by taking lessons from the more successful man, who is finding a profit at the present prices.

The News Letter states the case with striking frankness. A survey of a considerable number of dairy farms in western Washington some time ago indicated that the average cost of milk production was somewhat higher than this price of $2.75. However, there is no question that, as the state department says, there are dairymen who are making a profit at this price.

There are a great many ways in which the dairy farm may be made more efficient and the cost of production thereby reduced. One of the outstanding essentials in production at a minimum cost is the use of high-producing cows. It makes no difference how efficient may be all other phases of a man's dairy farm if the cows on it are low producers. If they are high producers a great many other possible points of efficiency may be passed by and a profit still made. That dairyman, however, who has the high producers and at the same time practices genuine efficiency in all the phases of his business is the fellow referred to in the foregoing statement as making a profit at the prices now being paid.

The Wormy Apple

Although the following took place at one of the county fairs last fall, it carries a suggestion that may well be borne in mind by any one showing produce in a community or a state fair.

A very attractive plate of apples was turned down by the judge who looked at only one apple. The man who selected the fruit stood by and noted that the plate which was given first place was not as true to type as were his own that had received no placing. When the class was finished the judge paused for a few moments and the apple grower approached him, asking why his exhibit did not place. The expert asked which one he referred to, and when it was pointed out he picked up one apple and showed him a worm hole in the calex end.

The grower admitted that it was an oversight on his part and that he should have been more careful in looking for blemishes. It was his first attempt at showing fruit and he had paid too much attention to type and color. The judge agreed and told him that his exhibits would undoubtedly have placed well along among the high winners had he picked out the wormy apple, which, of course, disqualified the whole plate.

State Farm News

The community farm bureau "better sires—better stock" campaign conducted in Kittitas county ended the first of this year, with 159 farmers enrolled. Thorp community won first prize by enrolling 65 per cent of its farmers; Edgemont-Thrall second, with 58 per cent; Denmark third, with 48 per cent; Broadview, 32 per cent; Woldale, 20 per cent; Peih Point, 19 per cent; Fairview, 8 1-2 per cent; Cove-Danman, 8 per cent, and Swauk-Teanaway, 3 per cent. Each farmer enrolled signed a pledge to use only purebred sires and to follow breeding methods leading to live stock improvement. Another contest will be conducted this year, with $65 in cash and a $15 silk banner as prizes.

* * *

Three banks in Adams county have signified their intention each to finance a boys and girls' pig club. The banks are the First National and the American State banks of Ritzville and the First National bank of Lind.

* * *

The La Center Farm Loan association, composed of residents of La Center and vicinity chiefly, the only organization of its kind in that part of Clarke county, held its initial annual stockholders' meeting and election of officers and directors recently with the following results:

President, Mrs. Adella Vail, reelected; vice president, Mrs. Wells Green; secretary-treasurer, Joseph W. Brothers. The directors comprise J. E. Coons, Mrs. Wells Green and William Davis, elected; William Reichow, Reuben Mead, Charles Wright, Mrs. A. J. Shellhart and Mrs. Adella Vail, holding over for another year.

* * *

Two registered bred gilts have been selected for pig club members of Benton county by C. M. Hubbard, live stock extension specialist. The American Security bank loaned the money for the purchases.

* * *

Arrangements have been completed by Professor O. M. Morris of the State College of Washington for three experimental orchards for work on bearing Winesap trees on the land of Donald C. Bunn of Prosser.

An experiment station orchard to be planted in the Yakima valley this spring is to consist of a little over six acres of Red Rome Beauty, Delicious, Winesap and Jonathan trees. Professor Morris hand-selected the young trees.

* * *

A new cannery equipped to pack clams, salmon and other sea foods and also berries will be opened March 1 in East Aberdeen by the Washington Packing company, whose articles of incorporation were filed recently at Montesano. The new company is composed of Hans Nyman, president; J. A. Moller, vice president, and H. H. Schwark, secretary.

* * *

Ranchers in Dodge valley near LaConner have begun operations for the drainage of that district by building a dam across a slough on the T. N. Haller place, near the north fork of the Skagit river. This will act as an impounding basin for dainage water and eliminate the cost of pumping water from the flats. About 1000 acres of the lowland will be benefited and several hundred acres of the highland in the district.

* * *

Three hundred members of the Lewis Pacific Dairymen's association held an enthusiastic meeting at Chehalis January 23, listened to the annual reports of President Scollard and other officers of the concern and elected two trustees. V. M. Bullard of Menlo, Pacific county, was reelected. John O. Connor of Skookumchuck district was chosen to succeed A. N. Bennett, who declined renomination. The affairs of the organization were reported in splendid shape.

* * *

Plans are being considered by the farmers of Douglas county to ship 300 head of high grade milking Shorthorns into the county. This is a part of a campaign to increase live stock on the wheat farms. The work is being conducted by county agent F. H. Zentner in cooperation with the farmers, bankers and business men of the county. It is their desire to place these animals in every community, form bull clubs and use only purebred sires for all the future live stock work.

* * *

A slump of $263,000 in the value of live stock on the Sunnyside project during the last year and the fact that there was a decrease also in the number of automobiles feature the annual report of Project Manager J. L. Lytel upon that feature of the reclamation service activities, says a Yakima report. There was a decrease of about 1000 in the number of cattle, but the cattle valuation at the end of 1921 was greater than a year before because of the higher grade of animals owned.

* * *

Total sales during 1921 of $121,423 on a capital stock of but $7000 is the record of the Grange Warehouse company of Pullman, a cooperative store, during the last year, according to the annual report of the company. The cost of operation was $7322, or 6 per cent of the sales, and an average of five employees were on the payroll throughout the year. The store is operated on a nonprofit basis. During the last two months of the year the sales totaled $26,632. The store is conducted on a cash basis.

The company includes approximately 300 shareholders, including 27 fraternities, sororities and other groups. Each shareholder pays $25 toward the capital stock.

At the annual meeting the officers were all reelected, as follows: President, E. C. Colpitts; manager, C. A. Cassidy; vice president, Fred Hodges; secretary, A. L. Melander; treasurer, Scott Getchell; trustees, E. C. Colpitts and Rolla E. Powers.

Coming Events of Interest

Feb. 9—Yakima Val. Duroc Jersey Ass'n sale, Sunnyside.
Feb. 10—Cowlitz county grange com'nity meet, Kalama.
Feb. 13—Washington berry growers' meeting, Sumner.
Feb. 14—Yakima Guernsey Cattle club, Yakima.
Feb. 15-17—W. Wash. Horticult. Ass'n meet, Mt. Vernon.
Feb. 17—Shorthorn, Poland China sale, Walla Walla.
Feb. 20-21—West. Royal breeders' swine sale, Spokane.
Feb. 22—Shorthorn breeders' spring sale, Spokane.
Feb. 23—Day & Rothrock Shorthorn sale, Sprague.
Feb. 24—A. D. Dunn Shorthorn sale, Wapato.
March 7—Holstein-Friesian Ass'n meet, Seattle.
March 9—Stevens county live stock sale, Chewelah

FARM BUSINESS AND MARKETS OUTLOOK

WHAT THE FORECASTERS SAY:

The professional forecasters who specialize in the prediction of business trends from economic cycles have had some hopeful things to say about the outlook for prices during 1922. Here are their comments:

Babson—"For the first time in two years we do not expect to see lower prices for farm products."

Brookmire—"The first half of 1922 may with considerable confidence be expected to witness a considerable rise in commodity prices. Because such favorable fundamental conditions as exist at the beginning of the year have never in the past been known to exhaust themselves within so short a time as would be measured by a movement up to the middle of 1922, we feel justified in stating further that the second half of the year will witness a further continuation of rising prices."

The committee of economic research of Harvard university has this to say—"It appears probable that 1922 will be a year of easier money, better business, more stable prices and higher profits than was 1921, and there is evidence also that the general movement of business and wholesale prices will be upward. There is no reason, however, to anticipate a boom in 1922."

These conclusions may prove to be erroneous, but they are based on thorough, impartial investigation of the factors which control price movements. Since farm prices were more thoroughly deflated than other groups, it is to be expected that they will rally more than these other groups under influences that tend to raise the general price level.

CATTLE STILL ON SOFT FOOTING.

Reduction in the supply or an increase in the demand for beef, one or both of which will put the steer market on firmer footing, was sought for in vain last week. Ten markets showed a few thousand less cattle and dressed beef prices held up, but values on the hoof made little headway. Lighter receipts will be necessary to restore the jaded market. Since the number of cattle slaughtered during March, April and May over a series of years shows a decline of 15 to 40 per cent below the slaughter during December, January and February, there is a prospect ahead of relief from the present overcrowded state of the market.

The excess of supply at present is not large, so that even if the decrease during the spring months is less than usual, a turn for the better is assured. The local supply in the east and on the Pacific coast already is dwindling, enlarging the outlet from the central states and high prices for hogs and lambs should help the beef trade.

Six weeks hence a deluge of light calves will flood the markets and depress prices to the lowest levels of the year, but meanwhile there is a mild scarcity of veal which has been heightened by the high price of dressed lamb and reduced supply of poultry.

BUY STOCKERS ON BREAKS.

The mean behavior of the fat cattle market and high prices for stocker and feeder steers, compared with those ready for slaughter, checked the outbound movement of thin steers. Evidence is steadily coming forward that competition in this division will increase in a few weeks and that there is little chance of stock cattle trending to a materially lower level so that purchases upon breaks appear to be in order.

Last fall the premium upon fat yearlings was one cause for the preference for light steers on the part of feeders. Steers with weight are now selling at the top and in consequence fleshy feeders are attracting more attention, buyers playing for a better spring and summer market.

1,200,000 HOGS SHORT.

Since November 1, the number of hogs packed in the west, so called, as compiled by the trade has fallen 1,200,000 head behind the same period of last year. The total up to January 21 is 7,798,000 head. Hogs are being held back to some extent for longer feeding, gilts are being retained for breeding purposes as production has been stimulated, and there was a slight decrease in the hog population of the country last fall as compared with the prevous year. On the other hand, there is no letup in domestic consumption. Exports of lard and hog meats during the first four weeks of January were 35 per cent larger than in the corresponding period of 1920, the total being 129,000,000 pounds.

Prices advanced to the highest average at Chicago since last August on a smart upturn early last week when the top reached $9.60. A reaction followed, as the advance may be a little premature, and a liberal run is expected through February, but it will be a reversal of nearly all previous market history if the high point of the first half of the year is uncovered in Jaunary.

DRESSED LAMB MARKET STRAINED.

The advance in the lamb market constantly predicted in these columns last fall has exceeded all expectations and now bears a top-heavy appearance. The dressed lamb market has shown signs of crumbling under the strain, as prices are out of line with other meats. Reports of a cargo of frozen Argentine lamb due to arrive soon in the east was a factor, but the British market is high enough to prevent much of this stuff from coming to the United States. If British prices should decline, some New Zealand frozen lamb might find its way to this country, but such an event is not anticipated. A year ago at this time, cold storage holdings of frozen lamb were at their height. Present stocks are small.

The advance in the lamb market has aroused a big demand for pregnant ewes, but few of them are available, as the sheep industry is definitely past the stage of liquidation.

HORSE DEMAND INCREASING.

The spring increase in the demand for horses is showing up slowly, but thus far receipts at distributing markets have increased in like proportion so that prices have not improved materially and at Chicago some declines have occurred as compared with early January. Purchases of farm chunks are expected to reach large volume in the next two or three months and some improvement in values during this period is altogether probable. The southern states are increasing purchases at St. Louis, but quotations upon southern chunks are not flattering.

TARIFF CONTROLS WOOL SITUATION.

Although wool prices have advanced all over the world, the high duty in the emergency tariff is given credit for a good deal of the advance in the United States. The future courses of values depends to no small extent, therefore, upon what is done in the permanent tariff.

Some wool has been contracted in the west at 27 cents for fine medium clips. The Boston market is quoted as follows: Wisconsin, Missouri and average New England, ½ blood, 36@37c; 3-8 blood, 32c. Scoured basis—Oregon—Eastern No. 1 staple, 95@98c; fine and fine medium combing, 90@92c; eastern clothing, 75@78c; valley No. 1, 82.1@82.5c. Territory—Fine staple, choice, $1@1.02; ½ blood combing, 88@90c; 3-8 blood combing, 63@66c; 1-4 blood combing, 53@56c; fine and fine medium clothing, 80@85c; fine and fine medium French, 90@95c.

WORLD'S WHEAT SITUATION.

The final official estimate upon the Canadian wheat crop reduced the yield to 301,000,000 bushels, which suggests 200,000,000 bushels for export. Based on the official returns which are contradicted by recent reports on farm holdings, the exportable surplus from the United States may run as high as 250,000,000 bushels. North America has already exported 311,000,000 bushels and the bulk of the remaining surplus is in Canada aand the Pacific coast states.

The Australian surplus is generally estimated by the grain trade at 80,000,000 bushels, although observers predict that it will fall below that amount. The last official estimate on the Argentine surplus, both old and new, is about 165,000,000 bushels. It is extremely doubtful, however, whether the carryover of old wheat in that country was as large as indicated, and most of the trade estimates upon the surplus range from 125,000,000 to 150,000,000 bushels. These four countries have a combined surplus based on the foregoing of about 650,000,000 to 680,000,000 bushels. World's import requirements are estimated at around 600,000,000 to 625,000,000 bushels. The adjustment of supply to demand looks much closer than it did three months ago when reports of large yields in Europe and larger surpluses in exporting countries than those shown above were first coming forward.

The world's surplus has been cut down enough by these revisions to make the prospective crop for 1922 a matter of great concern. The drought in the southwest is still unbroken and is most severe in some of the heaviest yielding counties of Kansas. With the approach of spring, weather conditions will be a paramount influence in determining the trend of prices.

In spite of heavy shipments to Europe, thus far in the crop year, the available supply in European markets is not large and small quantities are being taken from North America for prompt shipment, even though southern hemisphere wheat is lower in price.

The flour market has stagnated again as cuts in the price of bread have made bakers uneasy and they are unwilling to buy ahead.

The average decrease in the United States visible supply from February 1 to July 1 has been about 44,000,000 bushels. This is more than the total visible supply at the present time.

CORN MOVEMENT AT FLOOD TIDE.

Arrivals of corn at primary markets during the last two weeks totaled over 29,000,000 bushels and set a new record in trade annals and the present week promises to be still larger. Purchases for export have been less prominent, due in part to difficulty in obtaining ocean freight room, but American corn in Europe is still quoted considerably cheaper than Argentine, while the new Argentine crop, now near the roasting ear stage, is imperiled by dry weather and locusts.

OATS SITUATION GROWING STRONGER.

The strength of the oats market has been impaired somewhat by the existence of a large exportable surplus in Canada. In the final estimate, however, the Canadian yield was placed at 426,000,000 bushels, a decrease of 84,000,000 bushels. The total supply in United States and Canada at the beginning of the crop year was 400,000,000 bushels less than in 1920. Domestic demand for oats is improving and export bids have been in the market, although only a small quantity has been sold abroad.

Rye is selling at a discount of around 30 cents below wheat. This is a larger spread than usual, due to several factors.

CASH GRAIN MARKETS.

The range of cash grain prices for the week ending February 1 was as follows:

Chicago—Wheat—No. 2 red, $1.22@1.26; No. 3, $1.19@1.23; No. 2 hard, $1.15@1.18 1-2. Corn—No. 2 mixed, 49@50 1-4c; No. 3, 48@48 1-2c; No. 4, 46 3-4@47 1-2c; No. 2 yellow, 49@50c; No. 3, 48@49c; No. 2 white, 49 1-4@50c; No. 3, 48@48 3-4c; No. 4, 46 1-4@47 3-4c. Oats—No. 2 white, 36 1-2@38 1-2c; No. 3, 33 3-4@36 1-2c; No. 4, 32 1-2@34 1-2c. Rye—86c. Barley—52@63c.

FRESH ADVANCE IN CLOVER SEED.

Red clover seed prices advanced into new high ground for the season last week as a result of increased demand.

Toledo, per bushel—Prime red clover, $13.80@14; prime alsike, $11.95@12; prime timothy, $3.25@3.30.

GOOD BREAK IN FEEDS.

Both corn feeds and wheat feeds declined further last week, so that they are now $3 to $6 per ton cheaper than at the high point of the season in late December.

Chicago—Bran, $21.75; standard middlings, $21.25; flour middlings, $25; cottonseed meal, 43 per cent, $43.50; 36 per cent, $39.50; gluten feed, $30.65; hominy feed, $21; oil meal, $46; tankage, $52.50@55.

HAY MARKETS IRREGULAR.

Hay markets in the east have been dull with prices tending downward, but demand in the west has increased slightly and markets in that section are fairly firm. High freight rates tend to restrict the intermarket movement and thus to localize market conditions.

Chicago, No. 1 timothy, $21@22; No. 2, $18@19; No. 3, $14@15; No. 1 light clover mixed, $19@20; No. 1 clover, $16@17; No. 1 clover mixed, $17@18; sample and threshed hay, $10@15; No. 1 to choice alfalfa, $15@23; Nebraska and South Dakota prairie, $13@16; straw, rye, $14@15; oat, $12@13; wheat, $11@12.

EGG MARKETS FLUCTUATE WITH WEATHER.

Egg dealers everywhere expect an enormous output of eggs during the spring months and a further decline in prices. At present it is still necessary to draw on cold storage holdings, but within a few weeks the supply of fresh eggs will more than satisfy consumptive demand so that it will be necessary to put eggs into storage. When that time arrives, prices will be governed largely by the views of the trade as to prospective prices for storage eggs during the following fall and winter.

BUTTER MARKET IMPROVES.

Both the supply and the demand factors worked in the direction of high prices for butter during the last week. Cold weather has curtailed production and receipts at the principal markets already show the effects of the decrease in the make at country points. Pressure from foreign butter also has been less severe, although a little New Zealand butter arrived in the east.

CHEESE BUYING RESUMED.

Cheese buyers who remained out of the market expecting that a decline would occur were obliged to resume purchases toward the close of the week so that no loss in values of consequence occurred in distributing markets.

Prices for No. 1 American cheese on February 1 were: Chicago—Twins, 20@20 1-2c; S. daisies, 20 1-2@21 1-4c; D. daisies, 20@20 3-4c; longhorns, 20 1-2@21c; Young Americas, 20@20 1-2c.

FRUITS AND VEGETABLES.

The total movement of potatoes for the entire country up to the end of January was 162,341 cars. Ths is about 18,000 cars more than to the same date last year and about 31,000 cars less than for the entire season a year ago. The movement at the present time is running about 3000 cars per week. Prices remain fairly steady and northern sacked round whites are quoted in most wholesale markets at $2.25 to $2.40 per 100 pounds, although the Chicago carlot market is quoted at $1.80 to $1.95. Prices a year ago in distributing markets ranged from $1.15 to $1.65. Growers are receiving $1.10 for sacked Rurals in wagonloads at Colorado shipping points and $1 at Idaho shipping points.

Total shipments of apples for the entire country for the season up to January 21 were 73,087 carloads compared with 91,972 cars a year ago. About two-thirds of the movement has come from the boxed apple states. Prices upon barreled apples have averaged about 50 per cent higher than a year ago, while boxed apple prices have been running about the same as last year. Quotations on Baldwins A 2 1-2 range from $7 to $8 per barrel in wholesale markets while northwestern extra fancy Winesaps are quoted at $2.75 to $3.25.

(Continued on page twenty.)

Little Journeys to Market

Seven or eight years ago a branch of the U. S. department of agriculture was established to work on the problems of marketing farm products. This bureau has now grown to be one of the most prominent in the entire department. Within the last year it has been consolidated with the bureau of crop estimates and given its present name.

Besides the headquarters at Washington, the marketing work of the bureau requires branch offices or representatives at about 50 places over the United States. Its staff is engaged in the study of general questions such as the supply of and demand for specific farm products both in this country and abroad, methods of grading, standardizing, packing and shipping, transportation and storage, the nature of commercial transactions by which goods are moved from producer to consumer, methods of accounting, cooperative associations of farmers and every other aspect of our complex marketing machinery.

Besides its work as an investigator of market practice and problems, the bureau is engaged to some extent in the performance of specific services such as the distribution of market news, inspection of food products and regulation of market agencies.

Daily and weekly letters, sent free to any one who asks for them, which give unbiased information upon market conditions and quotations upon live stock, meats, dairy products, fruits and vegetables, peanuts and cotton, are issued from various offices. To a limited extent farmers can obtain information from the bureau by telegraph and radiogram. At one time during the war, the bureau had 17,000 miles of leased wires to carry on its market news work. The mileage has been cut down now, however, to less than 5000 miles.

Inspection work is confined to fruits and vegetables and dairy products. Shippers can call upon these inspectors for help aand thus be sure of the condition of their shipments upon arrival and can protect themselves against unjustifiable rejections.

The regulatory work consists in enforcing the United States grain standards act, the cotton futures act, the United States warehouse act and the standard container act.

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Rochester Man Wins Pig

M. A. Hall's Letter First in Washington Farmer Contest

First prize—M. A. Hall, Rochester, Thurston county.

Second prize—Daniel I. Hopkins, St. John, Whitman county.

Third prize—L. P. Powers, Palouse, Whitman county.

The foregoing are winners in The Washington Farmer's prize letter contest on the subject of hogs as a farm byproduct in Washington.

Mr. Hall, who lives on a 40-acre logged-off farm near the little town of Rochester, in the southwestern portion of Thurston county, selected the Chester White as his choice breed. Consequently, The Washington Farmer has secured for him a purebred Chester White gilt from the herd of O. O. Phelps of Dryad, Lewis county. This gilt is bred to a purebred sire and will farrow this spring. She has already been expressed to her new owner to be delivered free of all charge to him.

Mr. Hall's letter is given below. The second and third prize letters will be printed in early issues. Mr. Hopkins receives $15 as a second prize, while Mr. Powers receives the third prize of $10.

THE FIRST PRIZE LETTER.

"It has been my experience that the hog as a farm byproduct is almost a necessity to the farmer if he doesn't wish any waste on his farm. And nowadays, when farming is a business, waste is out of the question. So I am giving you some of the reasons why I think every farm should have pigs as a farm byproduct.

"(1) Dairying pays better where there are pigs to consume the skimmed milk.

"(2) Keeping brood sows means quick returns, as there is always good sale for young pigs; for purebreds, higher prices.

"(3) There is much waste on every farm, such as garden truck, fallen fruits, grain left in the field after being cut, weeds, roots and a number of other things.

"(4) Then, often there is no market for some product that is raised, and you have the pigs to consume it. Sometimes it is more profitable to feed the hogs your grain, corn or potatoes than to sell. Without hogs you would have to let it go for what you could get.

"(5) The fertilizer is also valuable for gardens. One of the best gardens we ever raised was on a place where the hogs had run. We have never had one like it since, though using other fertilizer.

"(6) Hogs do not require so much attention as some other farm animals. Put on good pasture or a field where grain has grown, running water and not much else is needed. Neither do they need expensive buildings, as compared with the dairy barns and chicken houses, for winter quarters.

"(7) A farmer can always sell his pork and home-rendered lard to town people, thus having an income in the winter when not much else is coming in.

"(8) Then again, you know what kind of hams and bacon you get on your table when you raise them. The number of farmers that buy their meat is really surprising, some not raising enough, others none at all. See what prices they pay!

"(9) And pigs can be raised anywhere, whereas in some other kinds of farming certain things do better in different climates.

"(10) And, last, but not least, has not the pig given to the boy or girl been the means of many a one's becoming interested in and staying on the farm? Nothing appeals to a child but something of its very own. So, by all means, give your boy or girl a pig and let him or her see that as a farm byproduct they can not be beaten.

"So long as a farmer is raising hogs, let them be purebred. They require no more feed, grow bigger and, if sold for other purpose than home meat, bring better prices. M. A. HALL.

"Rochester, Wash., Route 2."

Lewis Farm Bureau Elects

When A. T. Flagg of Chehalis, formerly Lewis county agent and more recently Jersey breeder and president of the Lewis county farm bureau, refused at the third annual meeting of the bureau to serve another term O. O. Phelps of Dryad, formerly treasurer of the bureau, was elected to the post. T. H. Gray of Cowlitz was named vice president and Guy Alvord of Centralia secretary-treasurer. The executive committee for 1922 consists of H. W. Minkler, Winlock, dairying; J. T. Alexander, soils and crops; H. M. Prechel, Winlock, poultry; J. A. Scollard, Chehalis, marketing; Theo Albert, Chehalis, horticulture, and G. H. Tucker, Klaber, boys' and girls' clubs. Among those who addressed the meeting were President W. B. Armstrong of the state association, Mr. Prechel and C. L. Woodrum, the new field secretary.

Eighty Grange Stores

There are 80 grange cooperative stores in the state of Washington, according to Albert S. Goss, manager of the associated grange warehouse company of Seattle. All of them are regular retail stores and some of them have been successfully managed many years. As a rule they sell to all who may wish to buy, but the members get dividends. Mr. Goss is deeply interested in cooperative buying and selling in general. He would like to see the national grange a cooperative clearing house, and, while he realizes the immensity of the proposition, he believes it a possibility.

DAIRYMEN ELECT OFFICERS.

At the annual meeting of the Snohomish county unit of the Washington United Dairy Associations at Everett, Wash., on January 26, a large number of the members attended and much enthusiasm was displayed. W. G. Grimm was reelected director from the Arlington district and will again be president and manager of the association. Mr. Beridon of the Security National bank; Mr. Baas, proprietor of the Frye hotel, Seattle, and the county agriculturist were the speakers. The financial statement showed that over 28,000,000 pounds of milk were handled during the year and that finances are in a satisfactory condition.

WALLA WALLA COUNTY SECRETARY.

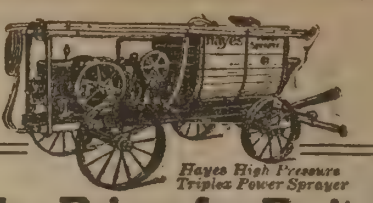
The Walla Walla county farm bureau has elected Milo McIvor as its permanent paid secretary. He will have offices with County Agent Talley, where he began his work February 1. He is a graduate of the state college at Pullman.

TEST SAN JUAN COWS.

Dairymen of San Juan county are organizing a cow testing association for the purpose of raising the average production of all herds in the county. W. W. Henry, the newly appointed county agent, is helping start the new organization.

The Cover Page

The photograph on this week's issue of The Washington Farmer shows the head of Jupiter's Model, one of the well-known Belgian stallions of this state and of the Pacific northwest. This animal is now owned by the West Side Breeding company of Ellensburg, an organization made up of a number of farmers in that section. He was brought to the state by George R. Gouchnour of Sunnyside, who purchased him from C. R. Irvine of Ankeny, Iowa. He has been prominent on the show circuit in the Pacific northwest and has several grand champion ribbons to his credit. At 3 years of age he weighed 2300 pounds.



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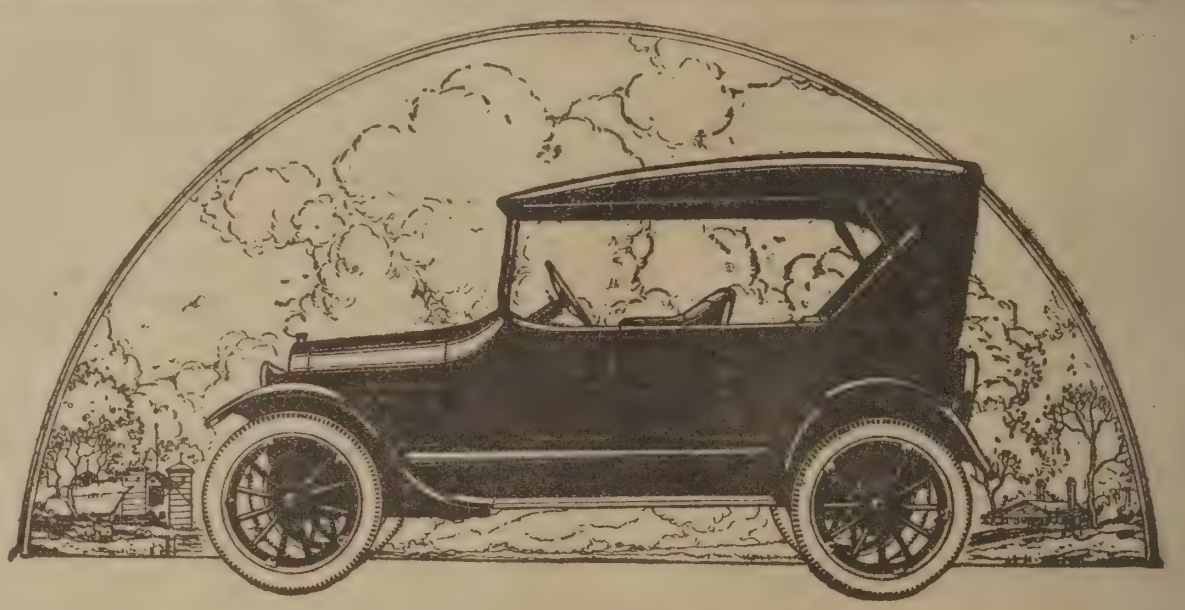
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LOOK AT THE GOOD FARM BARGAINS THAT ARE OFFERED ON THE FARMERS' "WANT AD" PAGE THIS WEEK.

From Ferns to Fertility

Honor Is Due Those Who Had the Nerve to Hew the Way

By H. J. LECHNER.

It was more than 30 years ago when the writer received his first distinct childhood impressions of the old homestead on the hills three miles from Washougal, Wash. It was truly a land of ferns (bracken) stumps, knolls and poor crops. It could hardly be otherwise than that father must work part of the time at his trade in order to supply the bare needs of the family. Here the soil was raw and red. It wasn't only a matter of removing the many, many stumps and subduing the ferns, but the fertility must be made, for the soil was poor; yes, poorer than the family.

Comparative nearness to market and a good lay of land were the two outstanding virtues of the place. Even then for years the trip to town meant at least a mile of mud for about half of each year.

Eight miles or more beyond lay another stretch of country, with the soil black and deep, apparently rich and perhaps a little easier to clear. The soil must have been better, because the ferns grew much taller. These settlers dubbed our community as "Greenhorn Mountain."

The tall ferns and the darker soil were the only causes for the dubbing on part of the then distant neighbors. Their long, muddy and steep way to market was decidedly against them.

My first impression of land under plow was 17 acres; now there are 65, which includes all available. Then there were still a larger number of stumps in the fields; now there are none in sight or within reach of the plow. Some of this land had 40 to 60 stumps per acre, many burned out, of course, but most of them taken out by the strong-arm-and-strong-back method, in the main by one who received little compensation for his effort. His ideal was a farm clear of stumps, of rocks, knolls and wet patches. To that end he worked as best he knew how, but had to leave when he was about three-fourths through. Live stock was not only inferior for the most part, but far from adequate to supply the much needed manure on the place.

Now the fern is gone; so are the poor dairy cows. Crops are far better, except the clover. Lack of lime and low humus content undoubtedly are the limiting factors. In the early days oats at 25 to 30 bushels per acre were common; now 45 to 55 bushels per acre are more common. There is still room for improvement in the dairy herd; the coming crop of young females points unmistakably toward improvement. But the greatest need is more fertility. The yield per acre of grain, cultivated crops and forage is too low. Clover and other legumes are not yet an assured success.

The Cost Too Great.

Looking back 30 or 40 years to the days of beginning here the advance doesn't fall short of being remarkable. The foundation built by our parents has been built well, though at too great a cost of human effort. As we see it now, much of that hard labor might have been avoided, but even then their pioneer efforts like those of all who chose such spots on which to make a home have gone largely uncompensated. The boys who now run the old home farm have done pretty well, beginning where their parents quit. Even if they had wanted to, they could not have used the exploitive method of farming. There was and is yet too little fertility to exploit. Five to seven years of consistent effort of fertility building will bring the yields per acre up to a point consistent with effort put forth. It might be done in less time with expenditure for commercial fertilizer to supplant the manure.

In times past the causes for discouragement have been many; they are not all gone yet. The labor income is yet too low.

In the early days it was conducive to peace of mind that farmers on such farms as these never figured in terms of labor income and interest on investment.

Nature needs much supplanting and modification on the hill farms of western Washington. We should honor and respect those with nerve to new the way. If they who are with us no more could speak again we undoubtedly would hear words of satisfaction when they learned that the good work started by them has gone on.

Isn't is tragic sometimes to find farms such as this one, so well started by those sturdy pioneers, not now in the hands of their sons and daughters, to carry on the good work started by their poorly-paid efforts?

Increase in Farm Values

To the Editor of The Washington Farmer: I saw the article by Mr. Nessly some time ago. Will say his figures were about right, but he forgot to state what made the farmers rich. The increase in farm values did the most of it. If a man bought land enough when it was cheap he was bound to make money. Of course, we made money most of the time, but we had several lean years, too, and I remember when a lean year came along we would remark, "Well, the price of land is still on the rise. We can stand it."

It seems that we are up against it and need to do something. The men that do the farming now did not make anything in the rise of the price of the land, and it seems a pity to break the pioneer in his old age; let somebody tell us what to do.

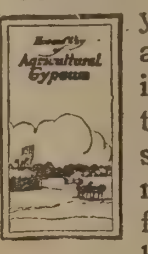
Los Angeles, Cal. L. C. MILLER.

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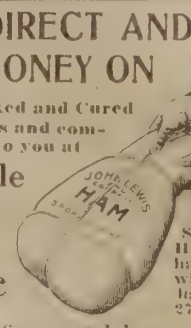
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The new Model F Cletrac is a real all-round tractor. It plows, discs, harrows, seeds, cultivates, harvests and does all kinds of belt work. And consider that it is only 31 inches wide, 50 inches high, 83 inches long and weighs only 1820 pounds.

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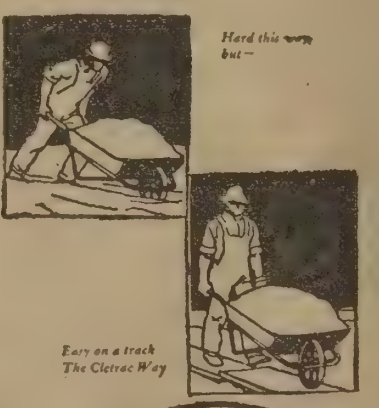
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Milk Problems Are Mutual

"We are doing all we can to make the state department of agriculture function with efficiency in the interests of the farmer," remarked E. L. French, director of the department, who addressed the joint get-together meeting of the Seattle Milk Shippers' association and the Seattle Milk Dealers' association recently.

"We believe that the farmer is in reality the city's biggest asset and any help that can be given him will benefit the consumers of food in the city.

"When the farmer is getting a fair price for his product there is more of a certainty that the city man will be prosperous," continued Mr. French. "When the farmer is forced to struggle along for a bare existence and take less than the cost of production for food products, there is always more or less reaction in the cities."

Charles E. Fisher of Thomas, president of the milk shippers' association, responded to the address and spoke a word in the interests of the producers. He told of the old impression the dairymen have held of the milk distributor in the past. They seemed to think, he said, that the dealers intentionally stirred up trouble for the farmers. The producers have become better acquainted with the distributors and they realize that the latter as well as the farmers have their troubles.

"A careful investigation of the farmer's costs and expenditures will show that those who are shipping milk to the Seattle market are not getting the cost of production for their product," said Mr. Fisher. "There are so many expenditures that are required by the city milk inspection department, such as the upkeep of sanitary equipment, a separate milkhouse and other requirements, all of which eat into the returns for the milk. The city dealer also has his problems, and it has been the aim of the association to work in harmony with the distributors in the hope of finding some means of bettering the conditions of both parties. When more perfect harmony can be maintained between the two groups there will be better conditions for the consumers as well as for the producers and the distributors."

Benefits Both Sides.

Upon hearing of the rumor that certain forces are making an effort to cause trouble for the milk shippers' association on the grounds of alleged violation of the Sherman anti-trust law, Mr. French wrote to one of the directors of the organization, saying that, in his opinion, all actions have been within the law.

"The association has been working for the betterment of both the consumer and the producer," he said. "I sincerely hope to see the association continue to prosper and stabilize the price of milk to the consumer and thereby give the producer a price that is nearer the cost of production."

C. B. Scollard, business manager of the association, told how he had made a survey of the milk prices in five different cities of the Pacific coast, which showed retail prices ranging from 12 to 15 cents per quart, the average being 13 1-2 cents. The price now being paid for bottled milk delivered in Seattle is 13 cents.

"This does not do justice to the situation," said Mr. Scollard, "because much of the milk sold in Seattle is handled by the retail stores. The price paid by consumers at these stores is 11 cents, which shows that Seattle consumers are not overcharged for retail milk."

Handles Much Milk.

In this connection the following excerpts from an article in the last issue of the state department of agriculture's monthly news letter are interesting:

"Among the more successful of the farmers' cooperative associations in this state the King County Milk Shippers' association takes high rank. It now furnishes 90 per cent of all of the milk distributed to consumers in the city of Seattle.

"The association was fortunate in its preliminary organization in securing on its directorate a number of good business men, approaching the problems presented with sound business sense. The first step taken was to get into close touch with the milk distributors of the city, with past prejudices laid asid and with a willingness to see the other man's side of the problems. The dealers accepted the overtures in the spirit that they were made. Both sides consulted amicably and laid their cards face up on the table. There was but slight difficulty in reaching harmony.

"The conferences reached an agreement on the price to be paid for milk, which was $2.75 per hundred weight, and the price to be charged the consumer, which was 12 cents a quart for milk delivered; no change at the time in the price to the consumer, but an advance of 25 cents a hundred in the price paid the producer. The dealers thought they would be able to absorb the advance by further economies and by gradually working out a scheme of zoning the city, through which they would avoid duplicating routes and in this manner reduce the delivery cost. This zoning system has worked out but partially, but a start has been made in that direction.

"With the commencement of the new year the dealers had another conference with the directors of the milk shippers and showed by their books that they were not making a fair profit at the price paid for milk. They put it up to the shippers whether they should advance the price of milk 1 cent to the consumers or reduce the price paid for milk to the farmers. There was no question on the book showing that the distributors were entitled to a larger return, for they are still paying the highest wages to all of their employees and those employees, as members of a strong union, would not stand for a cut in wages. The milk shippers hesitated about increasing the retail price, for fear that it might limit consumption and thus increase the amount of surplus milk, the disposal of which is always a problem, but finally gave their consent to the increase The dealers now charge 13 cents a quart and find that the public, understanding the situation, accepts the new price and does not decrease consumption."

HE SMOKES MEAT WITHOUT A FIRE

Washington Farmer Simply Applies Liquid Smoke—Flavor Is Improved and All Shrinkage Prevented.

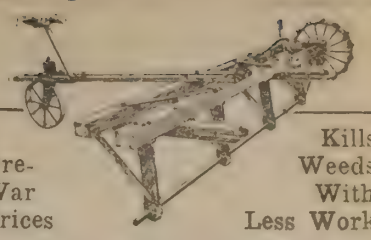
Victor Hillhouse of Conconully, Wash., smokes meat by simply painting it with Wright's Smoke.

"I am convinced that it is the only system of smoking meat," says Mr. Hillhouse. "No more of the smoke house way for me. I wouldn't be without Wright's Smoke if it cost $10."

Thousands have found that the Wright method improves the flavor, keeps meat sweet and free from insects and prevents all shrinkage. Wright's Ham Pickle, mixed with salt, sugar-cures meat to perfection.

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Simply send your name to E. H. Wright Co., 850-C Broadway, Kansas City, Mo., for valuable illustrated book on expert methods of curing meat. Also learn how you can get a complete, highest-grade butchering set at lowest factory cost.—Adv.



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And right now *at this particular time* exchange rates are extremely favorable. Take advantage of this condition while it lasts. Get the most for your American dollar. Buy now and save money!

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The increasing demand for Melotte Separators on the Pacific Coast has prompted us to open a Pacific Coast Office to receive direct shipments by water from Belgium. Because of this farmers and dairymen all over the West now have a wonderful opportunity to save money in the purchase of a Melotte Separator. A Melotte can now be ordered direct from our Pacific Coast Office, which means a saving in time to you of one to two weeks. You are losing money every day you are without it, so send the coupon to day to the Pacific Coast Office.

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The Belgium Melotte is the only single-bearing-bowl separator made. This patented bowl hangs from one frictionless ball bearing and spins like a top. It is *self-balancing*. It skims as perfectly after 15 years' use as when new. Positively can not ever get out of balance—cannot vibrate and thus cause cross currents which waste cream by remixing with the milk. The 600 lb. Melotte turns as easily as the 300 lb. machine of other makes. Spins for 25 minutes unless brake is applied. No other separator has or needs a brake. The Melotte bowl has solved the problem of perfect skimming.

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We will send an Imported Melotte Cream Separator direct to your farm on a 30 days' absolutely Free Trial—no deposits—no papers to sign—use it as if it were your own separator. Satisfy yourself that the porcelain bowl is as easy to clean as a china plate. Compare it—test it in every way.

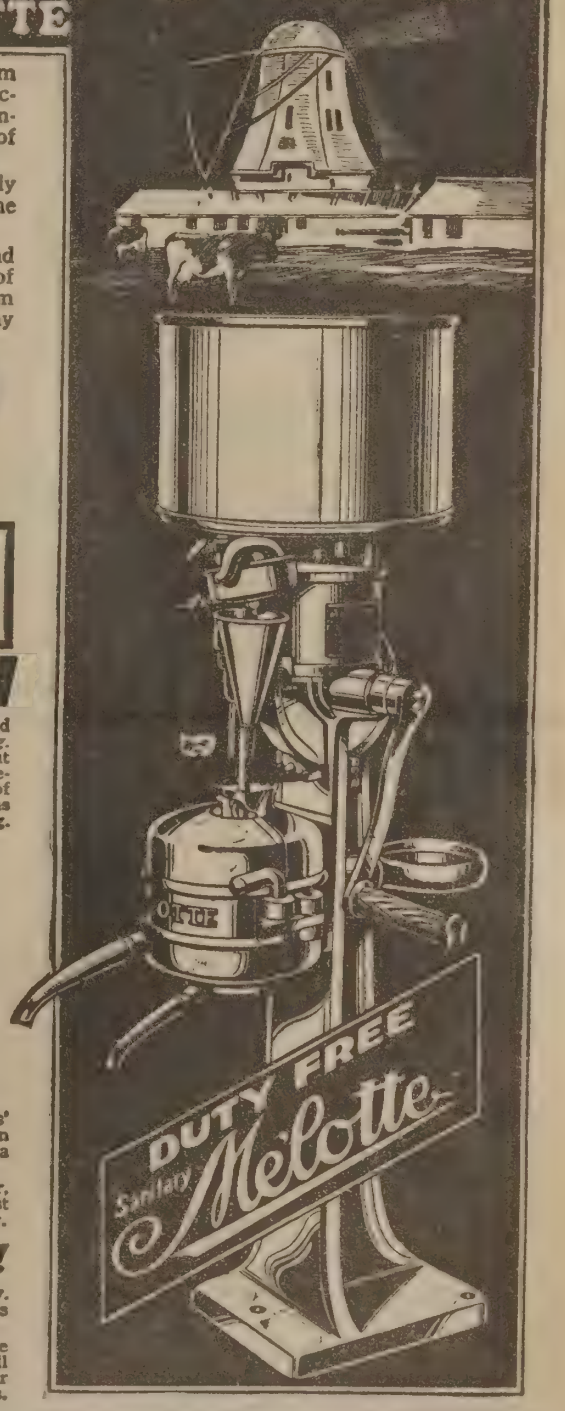
When you are convinced the Melotte skims cleaner, turns easier, washes quicker, has one-half less tinware to clean, lasts longer than all others, then pay $7.50 as first payment and balance in small monthly payments until the separator is paid for.

Send No Money! — Easy Payments!

You're not to send one cent until you've used this great Belgium Melotte and have made up your mind it is the machine you want. Keep it for 30 days and use it just as if it were your own machine.

Compare the Melotte separator with any other—test them side by side. Then send your milk to the creamery. Let *them* prove which separator skims the cleanest.

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Mail coupon for catalog giving full description of this wonderful cream separator. Read about the porcelain lined bowl. Easy to clean as a china plate. One half less tinware to clean. An exclusive Melotte feature. Other exclusive Melotte features described in full.

Don't buy any separator until you have investigated the Melotte. Take advantage of the 30 day free trial which Mr. Melotte has now authorized us to offer. Test the Melotte against all other separators and satisfy yourself as hundreds of American farmers have done that it is the world's greatest separator. The only separator that requires a brake. It is so easy to turn that it spins twenty-five minutes after you stop cranking. And remember it is guaranteed for 15 years. Don't wait—be sure to mail coupon TODAY!

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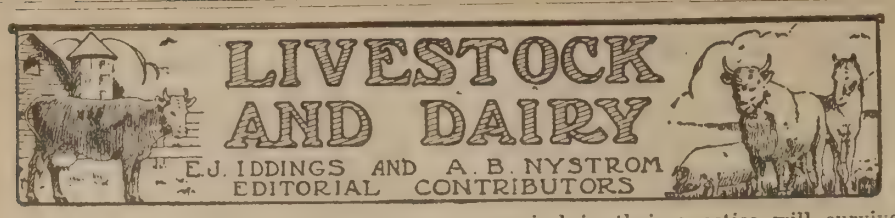
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The Cream Separator

By A. L. Haecker.

A good separator properly cared for will last many years and give excellent service.

The bulk of our creamery butter is produced from hand separator cream, and the care and operation of the hand separator on the farm is a vital factor in our national dairy industry. The hand separator is a machine which runs at a high rate of speed, which means that it is liable to get out of order and to cause some trouble if attention is neglected at the proper time. The hand separator is not a complicated machine, and with a little care can be kept in excellent running order.

During the winter months when the weather is cold, milk if allowed to stand will soon become chilled and is then more difficult to separate. Warm milk separates much better than cold. For this reason care should be taken to separate the milk as quickly as possible after it is drawn. Butter fat loss is much greater in the winter than in the summer. When the machine is not in good order and when the milk is cold the loss will often run as high as half a pound of butter fat in a hundred pounds of skim milk.

The bowl should run steady and at the proper speed. If the separator turns hard, a little kerosene in the running parts will soon cut out the thick gum or grease, and then by using a light oil the separator can be put in good shape. It is well to test the skim milk occasionally in order to determine whether or not fat is being lost.

Owing to severe foreign competition we can not expect such high prices this coming year for our butter fat, but we need not fear such competition if we use wise and approved methods in production and carefully watch the losses which are liable to occur in just such matters as are mentioned above. We are approaching a period of world competition in all lines of industry, and those who are careful and economical in their practice will survive and make a profit in their business.

The American cow keeper has many advantages over his foreign competitor. First of all he has a much cheaper and better ration which is the biggest expense connected with the dairy business. He has an excellent market and the best class of dairy cattle in the world. With good cows, good feeding methods and machinery in good running order, he will have no trouble in competing with foreign trade and finding a profit in his business.

Farmer-Owned Plants

The Dairymen's Cooperative association, Inc., has purchased 12 of the New York state plants of the Nestle's Food company, including a large condensery at Cooperstown, N. Y.

During the month of December the Cooperative association operated in the neighborhood of 80 plants.

The Dairymen's league, Inc., which began to function in the fall of 1916, will cease on March 31, 1922, to act as sales agent of the milk produced by its members, and the great bulk of actual milk producers not already members of the cooperative association will contract to deliver their milk to the farmer-owned plants operated by the association. It was reported at the recent annual meeting of the Dairymen's league that 60,555 members had signed the cooperative contract on December 1, 1921. It is said at the cooperative association's Utica, N. Y., headquarters that contracts are coming in rapidly.

Cow Testing

Cow testing associations in Missouri are finding similar facts to those in the Pacific northwest. For instance, in half of the counties of that state it has been ascertained that the average cow produces 150 pounds of butterfat a year and that cows averaging that amount cleared only $48.94 above feed costs in the entire 12 months of 1921. The feed costs in their case was 36 cents per pound of butterfat and $1.64 per 100 pounds of milk. It has also been demonstrated that the feed costs decrease as production increases, so that the cows which average 350 pounds of butterfat per cow produce at a feed cost of only 19 cents a pound and milk at only $1 per hundred pounds. Their profit above feed costs was $132 per cow for the year. It was also found that the good cows returned $2.96 worth of products every $1 in feed consumed while the "state average" cows returned only $1.91 worth of products for the same amount of feed.

Sediment Method of Testing

Dairymen of Washington are familiar with the method of testing the purity of milk, which is now in use throughout the state, known as the sediment method. When the inspector makes a visit to a dairy he takes samples of the last quart out of several cans as they come from the barn. The sample is drawn through a small disc of cotton which collects all the sediment. The disc can then be dried and kept as a record.

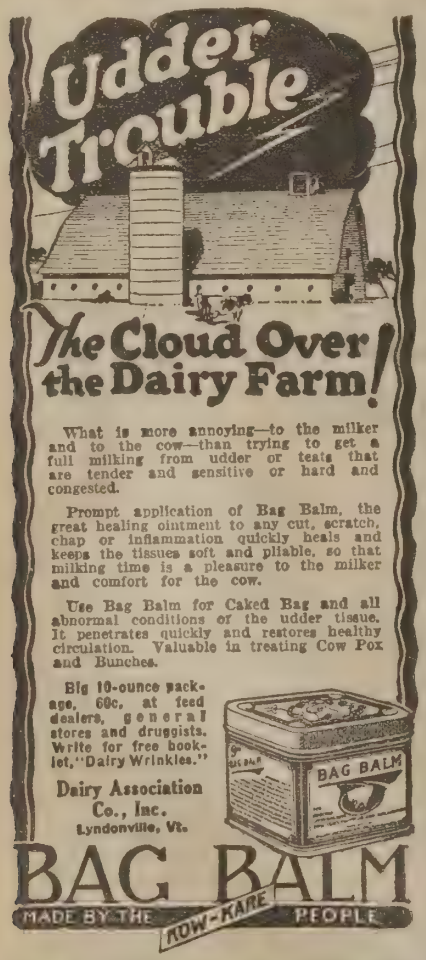
"The advantage of such a method is that it gives the producer a test that he can see," said L. W. Hanson, state dairy inspector, who is located at the Seattle office. "It means more to almost any dairyman than to have a lot of figures which show the number of bacteria to the cubic inch of milk. That is a test that requires a laboratory and is much more complicated and is, therefore, not as far-reaching as the one now in use."

The sediment test was started two years ago and is now in use by all factories that buy whole milk. The disc which shows an unusual amount of dirt is a very convincing argument. In almost every instance where the samples have shown much sediment the producer will make every possible effort to obtain a cleaner milk.

"This inspection is being carried on at the farms once each month for the purpose of giving the owner a check on his own barn methods," said Mr. Hanson. "We hope to get the work more systematized and establish the different grades of milk, so that the public will be willing to pay a higher price for a clean product than for one that contains dirt. If the dairyman can afford to keep pure-bred animals and rent high-priced land he can afford to practice more careful methods of producing his milk and receive a better price for it than the man who is less careful."

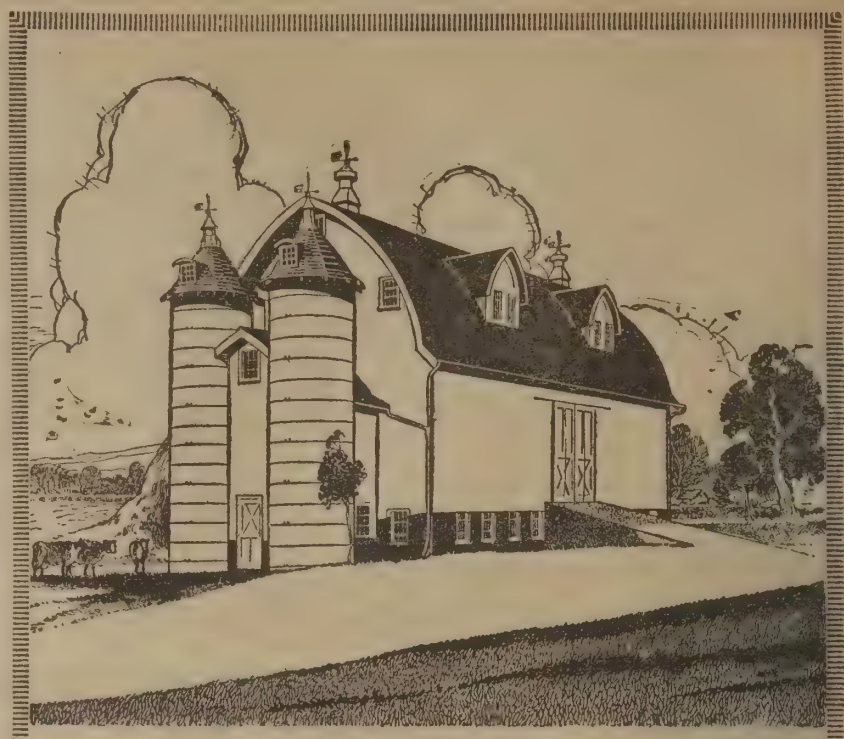
AN UNDESIRABLE FLAVOR.

Garlic, turnips, onions, cabbage and the like, if fed to the cows before milking, are likely to give the milk an undesirable flavor.





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First of all, we'll give you, free of cost or obligation, complete blue prints (floor plan, elevations and outside drawings) and full detail of the barn you should have to fit your needs.

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Dr. DAVID ROBERTS' ANTI-ABORTION TREATMENT has been successfully used for over thirty years—it is long past the experimental stage. Its effectiveness in preventing and overcoming Abortion in cows is being satisfactorily demonstrated in hundreds of herds every year. Whether you own five head or five hundred, you can

Stamp Abortion Out and Keep It Out

Stop losing calves. Send for **FREE** copy of "The CATTLE SPECIALIST." Answers every question pertaining to ABORTION IN COWS. Tells how to treat your own herd at small expense. Write **Dr. DAVID ROBERTS VETERINARY CO., Inc. 122 Wisconsin St., Waukesha, Wis.**

VETERINARY

By DR. S. B. NELSON.

Tuberculosis Test.—I would like to have my cow tested for tuberculosis. Who should I write to? J. R. L.
Reardan, Wash.

Write to the department of agriculture at Olympia, Wash., that you desire to have your cow tested for tuberculosis and they will do so at their very earliest convenience or opportunity.

Solution of Iodine—Please tell me what to do for a cow that acts as if she wanted to urinate whenever milked. She arches her back and starts straining as soon as one starts milking. She repeatedly takes the bull without getting with calf. C. W.
Colville, Wash.

Trying giving your cow a teaspoonful of Lugol's solution of iodine in her drinking water once daily. Regarding her second trouble in not getting with calf, that may be due to a cystic ovary, and probably is. I would suggest that you have your local veterinarian examine her and see if this is the case and offer you treatment accordingly.

Mountain Fever—I had a 4-year-old horse die lately. He seemed to be sick for about three months. His head started swelling and his eyes stuck out and after that he was poor. He had no discharge from the nose that I ever noticed. I have a sick mare that is poor and thin. Whenever she is worked blood comes from her mouth and nostrils. There has been quite a lot of sickness among horses here and several range horses have died. What is wrong? W. R.
La Fleur, Wash.

This animal is suffering, possibly, from what is known as mountain or swamp fever. This disease does not yield readily to treatment, but the following treatment has been recommended by some and is reported to give fairly good results. Give the mare from five to 10 grains of arsenic well mixed with her grain once daily for some time.

Wants Some Advice—I wouldlike a few words of advice concerning a valuable cow. She had her first calf at 2 years old and at 3 years old she had twins. Both calves died and I almost lost the cow. The veterinarian said she would never have another calf. She gave so much milk that I milked her for two years, then decided to sell her for beef and tried for six weeks to dry her up but failed, so started milking her again. She gave good milk for a year and a half longer. Last month I succeeded in drying her up with difficulty. She will be fresh in January. Should I doctor her before that time? She is in fine condition and is running on bunch grass pasture. MRS. O. T.
Anatone, Wash.

You certainly have a wonderful cow and she ought to be saved. If there is no anatomical malformations to the genative organs and birth passages, then there should be very little danger in losing either the calf or the cow. If, however, there is, naturally there may be some danger. See that the cow is not too fat and that the functions of the body are normal. There is no medicine you can give which will help her.

Give Raw Linseed Oil—I have a cow that seemed in good health until the other day, when she came in walking very slowly. She would not eat and stands humped up and grunts when she breathes. She is bloated a little on the left side. She also stopped giving milk. I gave her a pound of salts, but it did not do any good. I also have a cow that has been fresh two weeks. She has blisters on her teats that look like water blisters. I have been applying boric acid in water. READER.
Corfu, Wash.

In addition to the treatment that you have given your cow, I would suggest that you give her one pint of raw linseed oil in the morning and one pound of epsom salts in three quarts of water at night, for two days if necessary. Your second cow is suffering from cow pox. I think it would be well in addition to the treatment that you are using that you bathe the entire udder in a 2 per cent solution of creolin before and after milking and then you can apply the boracic acid dry, or still better, apply a little benzoated zinc oxide ointment to the scabs and blisters.

Passes Blood—I have a young heifer that for the last week has been passing blood after having been to stool. She is fed well and is kept in a warm place at night. J. T.
Winlock, Wash.

Give your heifer one teaspoonful of turpentine, well mixed in a pint of raw linseed oil, once daily.

Bathe the Udder.—I have a cow that freshened a week ago and she does not come to her milk or else she holds it up. She has a big udder, but gives only three quarts of milk. Her udder is pliable and soft. I tried tubing the milk, but did not get any more. I feed carrots, bran and shorts and alfalfa. J. A. M.
Ione, Wash.

Wash the udder with fairly hot water before you milk her, then dry her very gently and massage the udder and teats until they get the full, slightly red appearance. I think this will give you better results than tubing her.

Contagious Abortion.—Can you give me a remedy for cows that have become barren, caused by contagious abortion?
Winthrop, Wash. R. M.

Use a small quantity of potassium permanganate in water as a douche.

Hog Won't Eat—I have a pig that has been sick for two weeks. He does not eat or drink anything and seems to be blind, and it seems hard for him to breathe. He goes with his head down to the ground and does not pay any attention to anything. W. McC.
Miles, Wash.

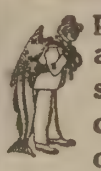
Keep your pig in a fairly comfortable place if he is not already. Coax him to eat. Use a little warm bran slop or mash. Give him three grains of quinine in a capsule twice daily. To give this to him, slip a noose around his nose and tie him up to a post so that he is in a sitting position and the rope goes up. He will pull back on the rope and open his mouth, at which time slip in the capsule and drench it down with a little water.

MANY TAKE

cold easily and develop troublesome coughs that often hang on.

Scott's Emulsion

is a food replete with tonic-qualities that improves the appetite and builds up resistance to overcome the cause of the weakness.



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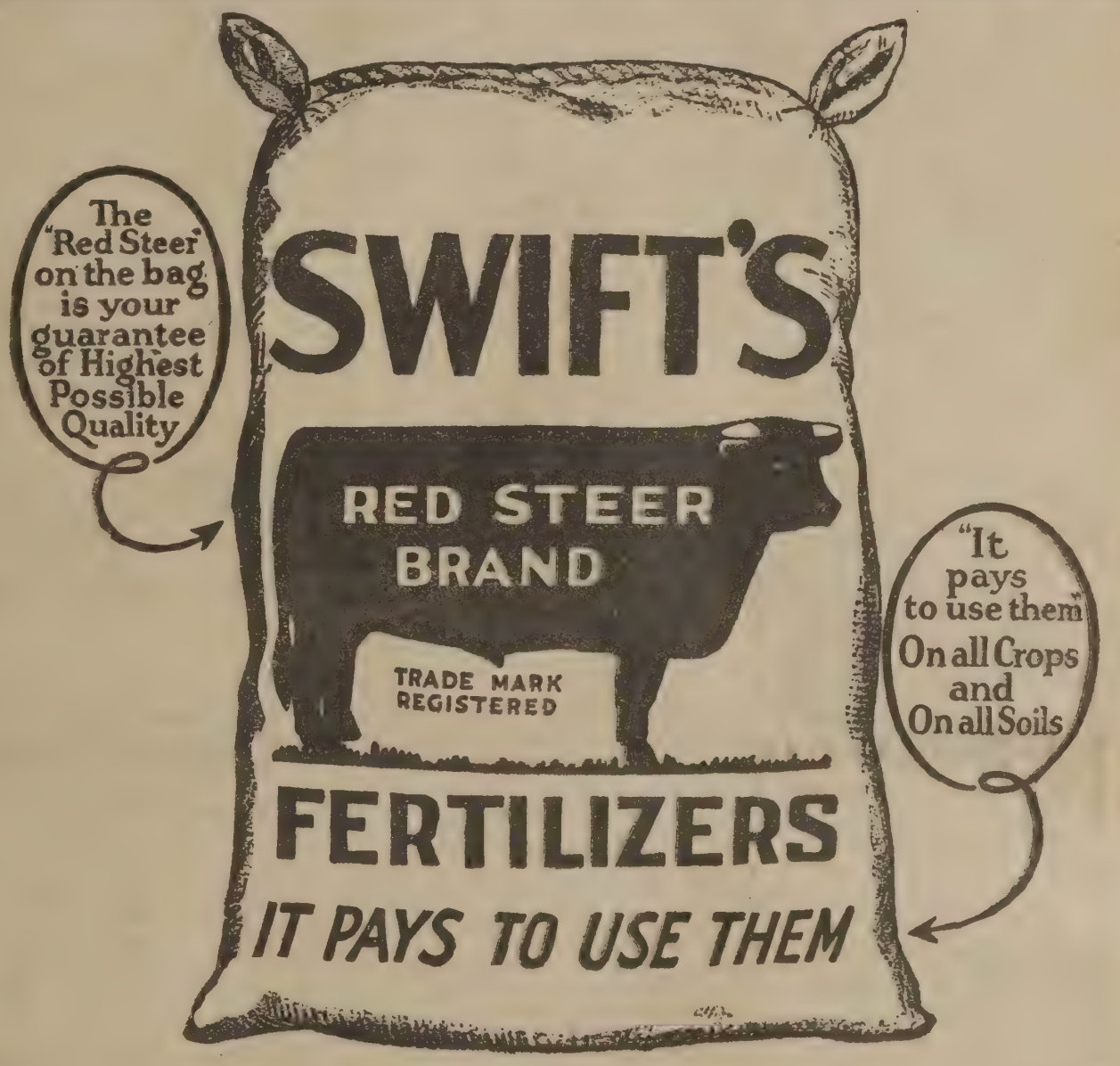
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For over fifty years Swift & Company has steadily maintained a reputation of making each Swift product the best of its kind. This reputation stands back of each and every bag of Swift's Red Steer Fertilizer.

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Swift's Red Steer Orchard Dressing is especially recommended for orchards and small fruits. Swift's Red Steer Fertilizer analyzing 6% ammonia, 7% phosphoric acid and 8% potash is particularly suited for strawberries.

There is a brand of Swift's Red Steer Fertilizers made especially for each crop—truck, potatoes, hops, corn and other crops.

We can also supply nitrate of soda, sulphate of ammonia, acid phosphate, tankage, bone meal, etc.

See our local dealer for your requirements or write us.

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Fertilizer Department: No. Portland, Ore.

Dealers who are now selling or could sell fertilizers should write for our proposition. Your territory may be open.

"IT PAYS TO USE THEM"

POULTRY

The following hints regarding the incubator, taken from Mrs. George Shoup's classes at the west Washington experiment station, will be read with much interest:

Three days is the limit for shipping baby chicks.

Turn the eggs at regular intervals; this will prevent crippled chicks.

If the incubator gets too hot the yolks of the eggs will harden and the growing chick can not absorb it as it should.

Study the instructions for your particular incubator and be sure to give the eggs the proper amount of moisure and ventilation.

Be sure your thermometer is dependable. It is much cheaper to test it out before the incubator is started than after a setting is ruined.

Select clean eggs for the incubator. Never wash eggs that are to be set. An egg that is slightly dirty is better than one that has been washed.

Egg Price Prospects

The marked drop in the price of eggs with little if any difference in the price paid by consumer has puzzled the producers. A representative of THE FARMER asked H. E. Wills, sales manager of the Seattle warehouse of the Washington Cooperative Egg and Poultry association about this. Mr. Wills was inclined to believe that the retailer will usually reduce prices to consumers as soon as he disposes of what case eggs he has on hand. "I never knew a retailer to oversell his eggs for any length of time," said Mr. Wills. "No one will begrudge him his regular five cents on each dozen he sells. The price fell so rapidly they could not dispose of the surplus they had on hand, for which they had paid a higher price."

As to the Washington Cooperative Egg and Poultry association Mr. Wills says: "We depend largely on shipping our Washington extras to the New York market. There is no reason to think that eggs will be cheap this spring, even though we do expect to put several thousand dozen into storage. There is a lot of trading being done with April storage eggs on the Chicago market and they are selling at 24 1-2 cents on a future basis, which shows that eggs are not going to be very cheap."

Mr. Wills adds that the association is planning to use a new storage process by warming the eggs and spraying with a specially heavy oil which is drawn into the pores of the eggs and, according to the promoters of this method, prevents any foul odor or bacteria from entering. This, it is claimed, will make a higher grade of storage eggs.

The association follows the New York market grade. The Washington extras are white eggs of an even size and those which have not been washed. The second grade includes a few washed eggs and is known as Washington firsts. Then there are seconds, thirds, fourths, pullets and undersized pullets.

Poultry Business Grows

"In seven years the value of the poultry production of Lewis county has increased from $4000 per annum to $1,300,000 in cash, paid by one firm," said H. G. Fowler, county agriculturist of Lewis county, with headquarters at Chehalis, Wash. "Around Winlock," Mr. Fowler continued, "100,000 hens are at work and contributing to the business of the town." The next largest poultry community in the county, Mr. Fowler said, is on Ford's prairie, adjacent to Centralia. The bulk of the shipments of the county are handled by the Washington Poultry and Egg association. At Winlock, during some seasons of the year, it is said, the output reaches a car a day, most of it going to eastern points. The poultry industry is second only to the dairy industry in Lewis county. At Winlock the Oregon Egg association has a unit and many eggs are handled through that agency. Poultry raisers there have purchased a warehouse with the expectation of increasing their business and to handle feed for their members, as well as poultry products. Some culling demonstrations were held during 1921 and Mr. Fowler plans for a great many during 1922. Interest in the demonstrations, he says, is keen and they are increasing the egg production and decreasing its cost.

Mash for Growing Rabbits

A mash consisting of two parts bran, two parts rolled barley, two parts ground oats and one part soy bean meal was used for feeding growing rabbits at the western Washington experiment station at Puyallup, Wash. The mash was fed twice each week alternating with the regular feed of rolled barley and alfalfa hay. The combination produced a gain of 15.6 pounds for the pen in 30 days. Salt was added at the rate of one ounce of salt to every five pounds of mash.

The second best pen was fed a combination of mash and rolled barley which was before them at all times. The gains were much smaller and cost more per pound of gain when the mash and salt were omitted. All pens had alfalfa hay before them at all times, and plenty of fresh water. The cost per pound of gain was found to vary from 6 1-2 to 7 3-4 cents.

The experiment was conducted by A. D. Norris, who is in charge of the rabbitry.

Day-Old Chicks for Beginners

H. H. Guth of Ronald, King county, Washington, advises the purchase of day-old chicks for a beginner in the poultry business. This method he considers preferable to buying pulletts as it gives the novice a broader experience. There is the need of more equipment, such as brooder houses, brooders and lamps, but any loss is much less than is the case with older birds. One also has the advantage of knowing what kind of growth the young birds have made during the brooding period. There is always a possibility of the pullets being stunted in growth, and this condition is harder to detect after the birds have attained the age of 3 or 4 months.

Mr. Guth has a flock composed of both Hollywood and Tancred strains and expects to hatch 50,000 chicks this spring and plans on keeping 8000 pullets for his own flock.

PLANS FOR POULTRY HOUSES! All style 150 Illustrations; secret of getting winter eggs, and copy of "The Full Egg Basket." Send 25 cents. INLAND POULTRY JOURNAL Dept. 37 Indianapolis, Ind.



64 BREEDS Most Profitable chickens, ducks, turkeys and geese. Choice, pure-bred, northern raised. Fowls, eggs, incubators at reduced prices. *America's great poultry farm.* 29th year. Valuable new 100-page book & catalog free. R. F. NEUBERT Co., Box 821 Mankato, Minn.

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LILLY'S Swiss Chard made a tremendous hit at the Fall fairs last Autumn. Its nature and cultivation are described in our new seed book. Read about this fine vegetable and scores of other carefully-selected vegetables and flowers in

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Ask Your Dealer or Write

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STEADY SAWING—AND GOODYEAR BELTS



"In my twenty years of farming, twelve years of it with different kinds of belting, the only belt I have ever had that would drive a saw resistlessly through two-foot box elder and ash is the Goodyear Klingtite Belt. The one I have, has been performing faultlessly for four years now."—J. W. CURTIS, Farmer, Little Sauk, Minnesota

"Say nothing, but saw wood" is the motto of the farmer who has a Goodyear Klingtite Belt. His belt troubles, from slippage and shrinkage and breakage, are over. He has a powerful, close clinging, long wearing belt.

The Goodyear Klingtite Belt is efficient and economical because it is specially designed and constructed for farm power service. It is built sturdily to stand the sudden stresses to which farm belts are subjected. It is built to endure changing weather conditions.

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GOODYEAR

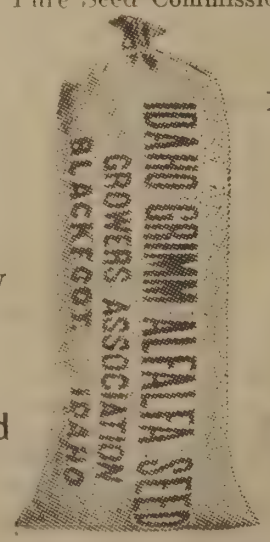
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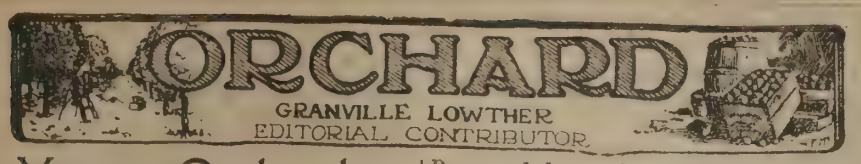
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Young Orchards

Made to Pay Before They Bear

The question so often asked by amateur orchardists is: "How to make an orchard pay before it comes into bearing?" The answer to that question is all the more difficult because it depends upon several factors, chief of which are the man and the environment.

Generally vegetables are depended upon to utilize the land while the young trees are growing and while there is so much unoccupied space between the trees. Vegetable crops grown by persons who knew how to grow them and under favorable conditions have proven to be profitable, often yielding more in returns than the orchard yielded later. We give here an estimate, based not on guesses, but on actual yields from various crops grown by Alexander Miller, Yakima, Wash.:

Cucumbers, the ground heavily manured, returned per acre per annum	$1000
Tomatoes	1000
Asparagus	1500
Rhubarb	1500
Celery	1500
Horseradish	1500
Early potatoes	1500
Peas	500
Turnips	300

Of course, these estimates were made by one who knew how to grow vegetables and under conditions where the markets were better than they are now. However, if half that amount can be realized it is better than failing to utilize the spaces between the trees and having so much waste land. Then, too, early crops like peas and beans could be grown and late crops like turnips and cabbages could be grown on the same land the same year. Peas and beans being leguminous crops improve the soil by adding nitrogen, and if this is an object the later crops need not be grown and still the land be made to pay.

Alfalfa is often used as an intercrop, and, while it makes irrigation a little difficult, it yields profitable returns and improves the land by nitrogenizing the soil, aerating it, forming a large root system that lets the water down to greater depth than that of the tree roots. Nothing we have ever tried so improves a volcanic ash soil for apples and pears as alfalfa. After the trees are about 6 years old they are supposed to have reached the age of profitable bearing. The alfalfa may then be plowed up, the land cultivated for two or three years and the roots allowed to decay, to fertilize the soil. Then another crop could be sown, and if the hay is allowed to remain the land will be improved with every succeeding year.

There are many other crops that can be used for intercropping. Among them are onions, melons, cantaloups, squashes, pumpkins, potatoes, etc.

It is common practice to plant peaches as fillers for apples. The theory is that the peaches can be cut out when the apples need the space. This in practice has not proven as satisfactory as certain well chosen vegetables. However, unless a man knows how to care for vegetables he would better not attempt that plan, for he will fail unless he knows how to grow and to market them. G. L.

Fruit Shipments

Heavy tonnage of fruits and vegetables was shipped out of Walla Walla valley in 1921, according to annual report of J. B. Wiley, district horticulturist. The report shows 967 cars of apples, 375 cars of prunes and 10 cars of watermelons out of this county alone. Most of the other products are listed in terms of standard sized packages, making it impossible to make carload comparisons.

The report shows 19 carloads of apples were made into byproducts.

The Snake river district of Asotin, Garfield and Whitman counties produced 724 carloads of prunes and plums, 55 carloads of peaches, 12 cars of pears, 72 of cherries and 42 of apples. Heretofore the Walla Walla valley has been regarded as the principal prune center, but Wiley's report shows that the district along the Snake river produces more than twice as much prunes.

These figures represent only freight shipments, not express.

How to Start Rhubarb

How is the best way to start rhubarb? What varitty is the best? Is there a dependable market for it at the canneries?
Ceres, Wash. MRS. B. B.

Rhubarb is propagated by dividing the plants and planting the pieces. Each piece (set) should have one or two buds from which the new leaves develop. A plant a foot in diameter should produce 10 or 12 good sets. The "Victoria" is the most commonly grown variety in western Washington. Canneries usually pay about $20 or $25 a ton for rhubarb. There is a limited demand at from 4 cents to 6 cents a pound, for fresh rhubarb, before most fruits are on the market, and a special select trade for winter forced rhubarb. A good field of rhubarb should produce from 10 to 15 tons per acre annually.
J. L. STAHL,
Western Washington Experiment Station.

Trees Need Spraying

The apple trees in my orchard are covered with moss, oyster shell scale and red spider. How can I get rid of them?
Silverdale, Wash. F. W.

To rid your trees of the above pests spray them at any time now with the lime sulphur solution, one gallon of the concentrated liquid to 8 or 10 gallons of water. This must be put on before the buds come out. Where trees are sprayed with the above so-called dormant spray, or with the applications of lime sulphur in the summer for the control of scab, the above pests are also checked by those applications. ARTHUR FRANK,
Western Washington Experiment Station.

CROPS UNDER GLASS.

Garden crops are seldom considered hothouse crops, but there are times when certain vegetables can be raised to advantage under glass, in the Puget Sound district, even during the late spring and summer months. The reason is because of the excessively cool nights and heavy fog that occur in this section.

At the Haas greenhouses, which are located near Bellevue, there are 20,000 square feet under glass, all of which is used for the raising of garden crops. Up until the present time the proprietors have specialized in the growing of cucumbers and tomatoes, getting both crops onto the market long before the outside gardens are planted.



Save the bird in hand—
Others may be hard to catch

With enough money, enough time and enough luck, a man may get back the health he has lost—or part of it.

It takes patience, too. And then there may be no success, or only a little.

It's better to save what you have than hunt for what you've lost—as the most successful health-restorers will tell you.

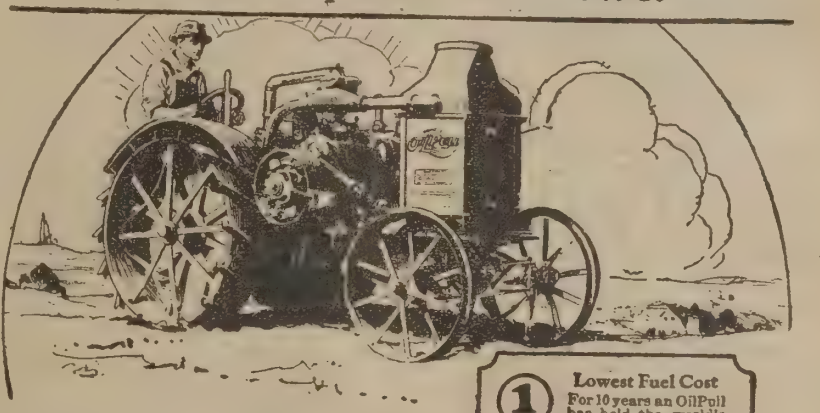
Much of the loss of health is due to faulty, careless diet. Wrong meals at all times and right meals at wrong times load the long-suffering digestive organs with elements of destruction, or starve the tissues and glands of needed elements.

Grape-Nuts is a delicious cereal food which has the qualities of scientific nutrition. It supplies the full richness of those splendid food grains, wheat and malted barley, together with the vital mineral elements, so often lacking from foods. Served with cream or good milk, Grape-Nuts gives complete nourishment without over-loading the stomach.

A splendid thought for breakfast or lunch, for those who would keep health—

Grape-Nuts—the Body Builder
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OILPULL
"The Cheapest Farm Power"



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You Buy a Tractor

The four vitally important items shown here are absolutely essential to cheap farm power. Farmers have been demanding them for years. OilPull is "the cheapest farm power," because it has all four.

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2. **Lowest Upkeep Cost** — Investigation of many OilPulls shows average yearly repair expense of only half the national average found by the Government experts.
3. **Longest Average Life** — Hundreds of the first OilPulls have passed the 10-year mark and are still giving good service.
4. **Reasonable Price** — OilPull Tractors are always fairly priced.

Read the remarkable statements given above carefully. They are the points you want to demand in your tractor to assure profitable service.

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The outstanding reason for the great success of OilPull Tractors is TRIPLE HEAT CONTROL—the only system that keeps the temperatures of the motor at the exact right point for greatest efficiency on the least fuel—at all times. The only system by means of which the MOTOR GROWS COOLER AS THE LOAD GROWS HEAVIER. Overheating is unknown. Freezing is impossible. Positively solves the problem of getting the power out of cheap kerosene. Makes possible an unqualified written guarantee to burn kerosene successfully at all loads and under all conditions, up to its rated brake horse power.



The local Advance-Rumely dealer will gladly demonstrate the OilPull. In the meantime, we invite you to write for a copy of the catalog and our special booklet on Triple Heat Control.

Advance-Rumely Thresher Co., Inc.
Spokane, Wash. Portland, Ore. Pocatello, Idaho

"The Advance-Rumely line includes kerosene tractors, steam engines, grain and rice threshers, alfalfa and clover hullers, and farm trucks"

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Nation-wide Service Through 29 Branch Offices and Warehouses

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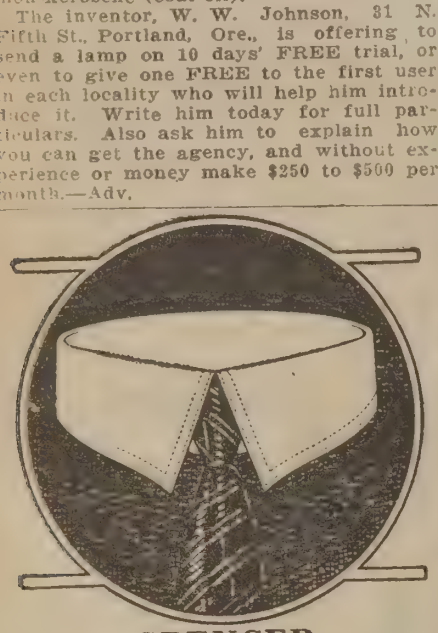
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The inventor, W. W. Johnson, 31 N. Fifth St., Portland, Ore., is offering to send a lamp on 10 days' FREE trial, or even to give one FREE to the first user in each locality who will help him introduce it. Write him today for full particulars. Also ask him to explain how you can get the agency, and without experience or money make $250 to $500 per month.—Adv.



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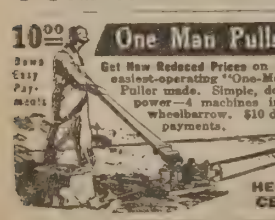
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Read our "Want Ad" Page for good offers this week.

FARMERS' WANT ADS

This is the farmers' "want," "sale" and "exchange" department for small advertisements of farmers, including live stock and poultry.

Advertising rates for ads running 1 to 3 times, 10c per word per insertion, with a special rate to Farmer subscribers, as follows: Ads running 4 to 12 times, 9c per word per insertion; ads running 13 times or more, 8c per word per insertion.

All commercial and land advertising 10 cents per word each insertion. Open also to nonsubscribers.

In using these columns advertisers must observe: (1) No advertisements will be inserted for less than $1.00. (2) Every word, number and initial, including name and address, must be paid for. (3) New advertisements, changes of copy or cancellations must reach general office, Spokane, Wash., 10 days in advance of publication date. (4) Cash must accompany order.

Above rates include insertion in The Washington Farmer, The Idaho Farmer and The Oregon Farmer, which constitute the Pacific Northwest Farm Trio, 45 Review Building, Spokane, Wash.

HELP WANTED—Male 3

RAILWAY MAIL, GOV'T CLERKS-CARRIERS; $125-$200; experience unnecessary. Particulars free. Write Mokane Institute, Dept. A28, Denver, Colo.

AGENTS WANTED

MERRITT SOLD 34 SPRAYERS AND AUTO washers in one day. Profits, $2.50 each. Many practical uses; experience unnecessary; free sample proposition. Autowasher Co., Johnstown, Ohio.

AGENTS—MASON SOLD 18 SPRAYERS AND auto washers one Saturday, profits $2.50 each. Square deal. Particulars free. Rusler company, Johnstown, Ohio.

SITUATIONS WANTED—Male 21

EXPERIENCED FARMER, SINGLE, MIDDLE-aged, wants permanent job on ranch in spring as working foreman; understands irrigation, all kinds of farming and stock raising; best of references. C 10, Washington Farmer, Spokane, Wash.

HOLLANDERS, HEALTHY, WANT JOB, MODern dairy; state kind of farm, wages and other conditions. R. Van Twisk, Ontario, Ore. R. D.

WANTED — TO MANAGE ON SHARES, stocked dairy. Alfred O'Hara, Denison, Wash.

FRESH FOOD PRODUCTS 51-1

HONEY BRAND HONEY—PURE, LIGHT, thick, and good flavored: from alfalfa and sweet clover; one 60-lb. can, $7.50; two 60-lb. cans, $14.50. Write for circular and complete price list in pails; salesmen wanted. Oliver Sires, Wapato, Wash.

WHITE ALFALFA, SWEET CLOVER honey; 1 60-lb. can, $7.50; 2 60-lb. cans, $14.50; six 10-lb. cans, $8.50; three No. 10 pails, prepaid third zone, $5.50. Wells D. Rose, Sunnyside, Wash.

YAKIMA VALLEY HONEY. BEST PRODuced; from alfalfa and sweet clover. 60-lb. can, $7.20; two for $14; satisfaction guaranteed. Theodore Sires, Congdon Orchards, Yakima, Wash.

HAPPY HOME HONEY FROM BLOSSOMS of alfalfa and sweet clover, in liquid form; 6 10-lb. pails, $8.50; 1 60-lb. can, $7.50; 2 cans, $14.50, at Mabton. H. N. Paul, Mabton, Wash.

HONEY—ALFALFA, SWEET CLOVER: FINE quality; 60-lb. can, $7.50; two 60-lb. cans, $14.50; three 10-lb. pails, prepaid second zone, $5. Harry Fisher, Prosser, Wash.

PRUNES, $6.25 PER HUNDRED; SMALL BUT nice, clean, sweet; 25 lbs., express paid, $2.70. Sample, 15c. Kingwood Orchards, Salem, Ore.

3-POUND BOX ABSOLUTELY BONELESS codfish, fine white, new catch fish, delivered by mail at Coffin Fish Co., Seattle, Wash.

HONEY—LIGHT AMBER HONEY, LIQUID form; one sixty-pound can, $7; two cans, $13.50. A. L. Traner, Touchet, Wash.

GUARANTEED FINEST FLAVORED HONEY, 60-lb. can, $6.25, delivered for $7.75. J. Walsh, Box 38, Hagerman, Idaho.

FINEST ALSIKE CLOVER HONEY, ONE sixty-pound can, $7.50; two cans, $14.50. Roy Selwyn Wilson, Buhl, Idaho.

COMB HONEY, CHOICE, $5 PER CASE. YOU pay postage. Farmers' Service, Twin Falls, Idaho, Box 472.

MISCELLANEOUS—FOR SALE 60

SASH AND DOORS—O. B. WILLIAMS CO., 1943 First ave., So, Seattle. Chicken house sash, 20" wide by 25" high, 80c; a dozen different sizes in stock for immediate shipment. Skylights for chicken houses, 36"x40" price, glazed, $2. This is the size recommended by the Western Washington experiment station. We carry them in stock for immediate shipment. Sash and doors for all purposes at lowest prices. All orders receive prompt attention. Our large illustrated catalogue No. 35, showing full line of building material and built-in fixtures for the home, free on request. O. B. Williams Co. Established 1899.

KENTUCKY LEAF TOBACCO, 3 YEARS OLD; nature cured. Don't send a penny, pay for tobacco and postage on arrival; extra fine quality chewing or smoking, 10 lbs., $3; medium quality smoking, 10 lbs., $1.25. Farmers' Union, D 44, Hawesville, Ky.

TOBACCO, NATURAL LEAF—SWEET AND mellow hand-picked chewing or smoking, 5 lbs., $1.50; 10 lbs., $2.50; smoking, 10 lbs., $2. Furnish free recipe for preparing. Quality and delivery guaranteed. Farmers' Tobacco Exchange, Sedalia, Ky.

WALL BOARD—WRITE FOR SAMPLE OF Washington plaster wall board; won't warp, won't burn. Manufactured by Washington Building Products company, 6851 E. Marginal Way, Seattle, Wash.

PIPE — NEW AND SECOND-HAND, ANY size; low price; standard grade roofing paper at a big saving; belting, all plies, all sizes, cheap. Write Alaska Junk Co., S120 Adams st., Spokane, Wash.

E. Z. BUILT SILO, ERECTED IN SECTIONS; has double walls with 6-inch air space; freeze proof; built of fir lumber; strong, durable and low priced. J. F. Jacobson Lumber Co., Tacoma, Wash.

WE ABSOLUTELY SAVE YOU MONEY ON groceries and general merchandise; prompt and careful service. Write today for our free catalog. Jordan-Lawler Co., Box 615T, Spokane.

CEDAR CHESTS DIRECT FROM FACTORY to your home; Tennessee cedar, solid copper trimmings. Write for catalogue. J. W. Higgins & Sons, 1912 Gilsan st., Portland, Ore.

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GLASS CLOTH—A TRANSPARENT, WATERproof fabric as efficient as glass for hotbeds. Catalog free. Turner Bros., Bladen, Nebraska.

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CEDAR POSTS, POLES, PILING AND STUBS; lengths and sizes to order. Marsden Red Cedar company, Calder, Idaho.

TOBACCO—HOMESPUN MILD SMOKING, 10 lbs., $2; 20 lbs., $3.50; chewing, 10 lbs., $2.75. Farmers' Club, Mayfield, Ky.

MISCELLANEOUS. 61

USED CORRESPONDENCE COURSES BOUGHT and sold. Write for prices. Spokane Sales Agency, Golden Gate bldg., Spokane, Wash.

1920 SPECIAL STUDEBAKER FOR SALE OR exchange for hogs. Box 292, Colfax, Wash.

MISCELLANEOUS—Wanted 63

WILL BUY USED PORTABLE SAWMILL AND hay press; give full particulars in reply. Frank Bond, 1213 Bannock, Boise, Idaho.

WANTED—ONE TO TWENTY SACKS EARLY seed potatoes. Write kind and price. Paul Dodele, Wells, Ore.

RUG and CARPET WEAVING. 68

WEAVING—HAVE YOUR RAGS WOVEN INTO beautiful rugs. Get our prices. Carl Haaland, Evans, Oregon.

MACHINERY—For Sale 93

STUMP PULLER—THE DOW HAND STUMP puller, complete, triple power outfit, $118 machine only priced $60. All steel and absolutely guaranteed. Write for catalogue. David Dow & Son, Seattle, Wash.

STOVE REPAIRING. 128

WRITE MYER RUBENS, SPOKANE, ABOUT stove repairs, welding broken parts, nickle plating.

PETS—Dogs, Birds, Etc. 171

FOR SALE—THOROUGHBRED AIREDALE terrier pups. M. Woodcock, Yakima, Wash.

WHITE COLLIE PUPPIES, URBANDALE Farm, Oakley, Idaho.

POULTRY (Baby Chicks) 174

"WHAT THEY SAY."—"YESTERLAID EGG Ranch, Kent, Wash. Dear Sir:—Is there any chance for 1200 chicks the 1st of April? Well pleased with your pullets last year. They laid between 50 per cent and 60 per cent since last October." Jack Sheridan, Greenacres, Wash. "Dear Sir: I bought 400 chicks of you last spring and will say they were the best layers I have. I would like to buy between 400 and 500 more next month. What time in February could I get them?" Mrs. Leonard Fossett, Dungeness, Wash. "Jan. 6th, 1922, Dear Sir: Enclosed find $7.50 as 15 per cent payment on 250 chicks. Our neighbor, Mr. Wood, got some from you last year and they certainly are good layers." William Stark, Coeur d'Alene, Idaho. We hatch 12,000 chicks every 5 days from our own wonderful trap nested White Leghorns. All of our 8000 laying hens are trap nested and bred to lay. We have 40 acres devoted exclusively to White Leghorns, all with wonderful egg records. More than 50,000 chicks already sold, but we still have good dates left if you book your orders at once. Send for price list and dates you would like chicks shipped. Yesterlaid Egg Ranch, Kent, Wash.

WHITE LEGHORN AND ILL-A-HEE BARRED Rock chicks—Buy chicks this year that live and grow and are bred to lay. Butler White Leghorns and Ill-a-hee Barred Rocks are known for high average flock production. Before ordering elsewhere, write for circular telling how our breeding methods produce 200 flocks for our customers. All stock trap nested and pedigreed. Also get our prices on breeding cockerels and hatching eggs for each breed. Address Butler Poultry Farms, or Ill-a-hee Poultry Farm, Jennigs Lodge, Ore.

"FRESHLAID" WHITE LEGHORN CHICKS have the qualities you want; vigor and scientific breeding for the heaviest egg production; every "Freshlaid" male is from a high record hen. Freshlaid Farm is one of the largest and oldest chick plants in the Inland Empire. There is a real demand for "Freshlaid" chicks, especially from our old customers. We are sold out until May 1. Write at once if you wish May chicks. May chicks make ideal winter layers. Catalog. Freshlaid Farm, Colfax, Wash.

THE PROGRESSIVE HATCHERY — BABY chicks from vigorous range bred stock; trapnested S. C. White Leghorns, $20 per 100; selected S. C. White Leghorns, $18 per 100; S. C. R. I. Reds and Barred Rocks, $25 per 100; safe delivery of live, vigorous chicks, full number ordered; absolutely guaranteed. Send for circular of special matings and hatching eggs. 1534 East 12th North, Portland, Ore.

CRYSTAL WHITE POULTRY FARM—BREEDers of S. C. White Leghorns; baby chicks a specialty; hatched from eggs laid by our great egg producers. Price, $17 per 100; $160 per 1000. Order early to get the best dates. Send for circulars. Mr. and Mrs. Jno. Eborall, McMinnville, Ore. Box 33.

BABY CHICKS HATCHED IN PETALUMA INcubators are a superior class; strong, vigorous, sturdy, grow rapidly, lay early. Buy chicks from hatcheries using Petaluma incubators. You will find one near you. If not, write us. Catalog free. Petaluma Electric Incubator Co., Petaluma, Cal.

WHITE LEGHORN BABY CHICKS FROM heaviest laying stock. Booking orders now for spring, 1922, delivery. Safe arrival live, vigorous chicks guaranteed. Prices on request. Reliable since 1898. Must Hatch Incubator Co., 445 Seventh st., Petaluma, Cal.

BABY CHICKS, HATCHING EGGS—FROM Hoganized hens, well mated. White and Brown Leghorns, R. I. Reds, Barred Rocks. Safe arrival guaranteed. Order early. Write for circular. Stubbe Poultry Ranch & Hatchery, Box 67J, Palo Alto, Cal.

BABY CHICKS FROM TANCRED AND HOLlywood strain; heavy laying White Leghorns, mated to cockerels from W. W. experiment station. Hens, 265-314 egg record. For further information write August Wax, Kent, Wash.

WHITE LEGHORN BABY CHICKS FROM egg machines bred at Corvallis, the place that produces world record makers; vigorous, heavy laying, free range stock. Correspondence invited. Oregon Corvallis Hatchery, Corvallis, Ore.

WHITE ROCK BABY CHICKS, "DANIEL'S IDEALS," from our own trapnested stock entirely. Write for prices and dates, also eggs for hatching. Free catalog. Ideal Poultry Yards, Hoquiam, Wash. Star Route No. 25.

BABY CHICKS — REDUCED PRICES ON White Leghorns, Reds, Barred Rocks, White Rocks, Minorcas, and Anconas; booking orders now; postal secures free catalog. Write today. C. N. Needham, Salem, Ore.

POULTRY—Baby Chicks (Continued) 174

BABY CHICKS FROM TRAP NESTED STOCK. Write for dates and prices. Don't expect cheap prices as we handle only the best. Swayne's Fancy Egg Farm, Centralia, Wash.

BABY CHICKS FROM TRAPNESTED WHITE Leghorns of superior quality; 14 years breeding for egg production. $18 per hundred. Chas. L. Perkins, 1337 Burrage, Portland, Ore.

WHITE LEGHORN BABY CHICKS FROM two and three year old selected hens, mated to cockerels from high producing stock; $14 per 100. O. H. Shaw, Cottage Grove, Ore.

BABY CHICKS, S. C. RHODE ISLAND REDS, $22.50 per 100; S. C. White Leghorns, $18 per 100; March chicks all sold. Maple Brook Poultry Farm, Southworth, Wash. Box. 2.

BABY CHICKS — WE GUARANTEE OUR chicks to be from the highest producing hens in Petaluma. Write for further information. The White Hatchery, Petaluma, Cal.

CHIX—BIG, HEALTHY, HEAVY LAYING kind, from our own record hens. Feb. and March hatch, $15 per 100. Chandler's Poultry Farm, Lebanon, Ore.

TANCRED STRAIN WHITE LEGHORN BABY chicks, $18 per 100; eleventh season; incubator capacity, 18,000 eggs. D. A. Gillette, R. 4, Yakima, Wash.

WHITE LEGHORN BABY CHICKS; OREGON Agricultural college stock exclusively. Write for circular. Russell Poultry Farm, Route 3, Corvallis, Ore.

BABY CHICKS, COCKERELS, SINGLE COMB White Leghorn; heavy laying strain, Grape Lane Poultry Farm, Turner, Oregon.

ANCONA COCKERELS, HATCHING EGGS, chicks. Get our prices. Oscar Dunlap, Junction City, Ore.

BABY CHICKS; BEST WHITE LEGHORNS; free circular. Acme Poultry Farm, Dirston route, Cottage Grove, Ore.

Leghorns.

"HENACRES" 8 WEEKS' OLD PULLETS: March or May hatched; big, healthy, vigorous bred to lay. Booking orders now. 6000 to sell, $1.50 each or 500 for $700. Satisfaction guaranteed or money back. Baby chicks for February, March and April all sold to old customers. May chicks, $22 per 100; $200 per 1000. June, $16 per 100; $140 per 1000. Safe delivery guaranteed. Hatching eggs, $2 per 15; $9 per 100; $80 per 1000. "HENACRES" Leghorns are known all over the northwest. Ask your neighbor. Illustrated catalog and booklet on poultry management free. "HENACRES," Box A, Prosser, Wash.

PURE BRED S. C. WHITE LEGHORNS—ALL breeding hens and pullets of trap nested strain; carefully selected for vitality and standard requirements; eggs, $1.50 for 15; $8 100; baby chicks, $18 per 100; safe delivery guaranteed. A few cockerels from 280 to 304 egg hens, $3 to $5 each. Frank Volland, Rt. 1, Kennewick, Wash.

O. A. C. WHITE LEGHORNS—WORLD-FAmous egg producers; vigorous, free range stock; baby chicks, eggs, cockerels for sale. Our entry is leading pen for value of eggs produced in November and December, Western Washington egg laying contest. Write for free circular. Corvallis Poultry Farm, Corvallis, Ore.

SINGLE COMB WHITE LEGHORNS (TANcred strain); selected heavy laying second and third year hens mated to cockerels from 250 to 275 egg trap nested dams; hatching eggs, $1.50 per 15; $7.50 per hundred; chicks, $18 per hundred, safe delivery guaranteed. Oaklawn Poultry Farm, Hillsboro, Ore.

TRAPNESTED WHITE LEGHORN BREEDING stock and setting eggs; famous Carnation high record stock; pedigreed breeding for heavy winter layers. Improve your flock by adding Carnation stock. Ernest W. Raush, Carnation Poultry Farm, Kent, Wash.

PRIZE-WINNING S. C. BROWN LEGHORN (light strain), single comb White Leghorn (Tancred strain); baby chicks, $15 per 100; order now. Satisfaction and delivery guaranteed. G. R. Lumberg, Springdale, Wash.

BUFF LEGHORNS EXCLUSIVELY: EGGS, chicks, cockerels; proven and acknowledged leaders of their kind for laying and exhibition. Mating list free. R. Stromquist, Tigard, Ore.

WE ARE NOW OFFERING A REDUCED price of $8 per 100 on hatching eggs from our Hoganized White Leghorns. Chicks, 20 and 30 cents each. Mrs. Arp, St. John, Wash.

WHITE LEGHORN EGGS FOR HATCHING—Oregon Agricultural college stock; $2 per setting, or $8 per 100 prepaid. Russell Poultry Farm, Route 3, Corvallis, Ore.

HATCHING EGGS, 90 PER CENT FERTILITY guaranteed; 100, $4.75; from White Leghorns; chicks, 13½c. Order now. Singing Hen Poultry Plant, Walker, Ore.

FORD'S BRED-TO-LAY S. C. WHITE LEGhorns. Hatching eggs, $2 per setting; $8 per 100; special matings on request. W. A. Ford, Umatilla, Oregon.

THOROUGHBRED O. A. C. WHITE LEGhorns; beautiful flock; eggs 15 for $2; 100 for $8. Alice Day Pratt, care of Murphy Camp, Banks, Ore.

S. C. WHITE LEGHORN BABY CHIX FROM trap nested, Hoganized hens; also cocks and cockerels. J. Panck, Sherwood, Ore. R. 1.

S. C. BUFF LEGHORNS; EGGS FOR HATCHing; good layers; guaranteed all eggs fertile stock. M. H. Mann, Woods Cross, Utah.

WHITE LEGHORNS, TRAP NESTED STRAIN, hatching eggs, baby chicks. Write us. Washington Poultry Farm, Hartford, Wash.

S. C. W. L. HATCHING EGGS, HOLLYWOOD strain. Mrs. Rominger, Underwood, Wash.

Barred Rocks.

FREE MATING LIST, DESCRIBING OUR ideal Barred Rocks; 37 1sts, 10 specials for 1921. High egg record; 303 eggs; average egg record 229 eggs. Jacobson's Poultry Yards, 3596 Tacoma, ave., Tacoma, Wash.

OREGON AGRICULTURAL COLLEGE Barred Rock hatching eggs; 200-egg strain, $1.50 per 15; $2.50 per 30; $7 hundred. Miles Tetherow, Central Point, Ore.

RINGLET BARRED ROCK COCKERELS; THE finest lot I ever raised, for sale cheap; all birds sent on approval. J. O. Watts, Eugene, Oregon.

DANDY PARKS LAYING STRAIN BARRED Rock cockerels, $5; booking orders for hatching eggs. W. J. Scofield, Missoula, Mont.

MY SUPERIOR BARRED ROCKS WON 38 prizes, three shows. If you want good ones write C. E. Dibble, Payette, Idaho.

O. A. C. STRAIN BARRED ROCKS; EGGS, $5 hundred; chicks, $25 hundred. The Idle Hour Poultry Farm, McCoy, Ore.

DARK BARRED ROCK COCKERELS, THOMPson's ringlets. Ray Leftwick, R. 4, Box 355A, Tacoma, Wash.

HUNT'S FINE BARRED ROCKS. WRITE for circular on eggs. W. A. Hunt, Lebanon, Ore.

O. A. C. BARRED ROCK COCKERELS, $3.50, $5. Mrs. Faulconer, Skamania, Wash.

(Continued on the following page.)

FARMERS' WANT ADS

This is the farmers' "want," "sale" and "exchange" department for small advertisements of farmers, including live stock and poultry.

Advertising rates for ads running 1 to 3 times, 10c per word per insertion, with a special rate to Farmer subscribers, as follows: Ads running 4 to 12 times, 9c per word per insertion; ads running 13 times or more, 8c per word per insertion.

All commercial and land advertising 10 cents per word each insertion. Open also to nonsubscribers.

In using these columns advertisers must observe: (1) No advertisements will be inserted for less than $1.00. (2) Every word, number and initial, including name and address, must be paid for. (3) New advertisements, changes of copy or cancellations must reach general office, Spokane, Wash., 10 days in advance of publication date. (4) Cash must accompany order.

Above rates include insertion in The Washington Farmer, The Idaho Farmer and The Oregon Farmer, which constitute the Pacific Northwest Farm Trio, 46 Review Building, Spokane, Wash.

POULTRY—Barred Rocks (Continued) 174

BARRED ROCKS (PARKS'): PULLETS from 200-egg parents, $3.50 each (with pedigree) 15 eggs, $2.50. Hy Messerill, Kennewick, Wash.

FANCY BARRED ROCK COCKERELS $5 UP. J. E. Horton, 2408 Altamont, Spokane.

Turkeys, Ducks, Geese

ROUEN DUCKS, WINNERS AT WALLA WALla, $4 each; eggs, eleven, $2. White Wyandottes, heavy layers; show winners; eggs, fifteen, $2. P. H. Tomlinson, College Place, Wash.

GIANT BRONZE TURKEYS, UNDEFEATED flock in west. Toms, $15; late 17-pound, $12; pullets, $8 and $10; will ship C. O. D. Herbert Stoneberg, Route B, Eugene, Ore.

YOUNG MAMMOTH BRONZE TOMS, VIGOROUS, pure northern strain; 24 to 28 pounds, $10 each. Mrs. Richard Morris, Sterrenberg, Mont.

GIANT STRAIN PURE BRED MAMMOTH Bronze turkeys, from prize-winning stock. Mrs. C. R. Lowery, Route 4, Boise, Idaho.

MAMMOTH TOULOUSE GEESE: LAID 40 eggs last year, at 30c each; fine birds, $6 each. Thos. Oswalt, Benton City, Wash.

MAMMOTH PEKIN EGGS FROM DUCKS that take the prizes. Booking advance orders. Mrs. E. A. Bennett, Salem, Ore.

PURE BLOOD MAMMOTH BRONZE TURkeys, prize winning stock. Mrs. Frank Browning, Route 1, Nampa, Idaho.

SPENCER TURKENS, TURKEY-CHICKEN fowl; booklet, photographs free. Spencer, 9 Case, Santa Cruz, Calif.

MAMMOTH BRONZE TURKEYS—OUR BIRDS won sweepstakes, special and all firsts at National and state shows. Priced to sell. Mulick Ranch, Willows, Calif.

TOULOUSE GEESE EGGS—PROPERLY MAted, good color, immense size; fifty cents per egg; lots of six or more; none better. T. J. Dannen, Shedd, Ore.

THOROUGHBRED BARRED ROCKS, RUNNER ducks, males and females, $2, $2.50, $3; ducklings, hundred, $33. C. A. Muths, Route 1, Box 49, Salem, Ore.

CHOICE MAMMOTH BRONZE TURKEY gobblers, eight dollars. Mrs. Amelia Reimers, Eagle, Idaho.

PURE MAMMOTH BRONZE TURKEYS. ALSO pure Toulouse geese. Mrs. F. Crane, Hagerman, Idaho.

FOR SALE — MAMMOTH BRONZE, PART wild turkeys. Eleanor Moore, Route 1, Ashland, Ore.

PURE MAMMOTH BRONZE TURKEYS. Flock of four hundred. Harry Smith, Coupeville, Wash.

PURE BLOOD TOULOUSE GEESE, $6. DR. Nichol, Mosier, Ore.

Miscellaneous Poultry.

CHICKS OF QUALITY—HOLLYWOOD, TANcred and commercial strains of White Leghorn chicks from pedigreed males, $20 per hundred. R. I. Reds, Barred Rocks, Black Minorcas and Ancona chicks, $25 per hundred. These prices are for February and March delivery. We sell Queen incubators, Queen brooder stoves, Reliable Blue Flame brooders, Petaluma Electric and Charters' incubators and American brooder stoves. A complete line of poultry supplies and remedies, including leg bands, egg scales, trapnest records, etc. Catalogue free. Queen Hatchery, Fourth and Pine. Elliott 2054, Seattle, Wash.

FREE INCUBATOR CATALOG — INCUBAtors, brooders, oat sprouters, baby chicks, hatching eggs, trap nests, poultry books and supplies. You can't beat the St. Helens incubator in either price or hatch. From 60 to 4000 egg capacity; electric and lamp heated. St Helens Incubator Co., Centralia, Wash.

WINTER EGGS PROFITABLE — "SNOWflake" White Orpingtons establish highest American Orpington pen record, Western Washington contest; average 204 eggs; utility cockerels, $5; pedigreed males, $7.50, $10. Booking egg orders, $3, $5, $10. W. T. Thompson, Bozeman, Mont.

SEND 25C FOR FOUR MONTHS' TRIAL SUBscription to the quality poultry paper of the west. Alive with value and interest. Has helped thousands raise better poultry. Year's subscription 75 cents. The Pacific Poultryman, Seattle, Wash.

S. C. ANCONA PRIZE WINNING STOCK. ORders booked for eggs at $2 setting; $11 hundred lots; baby chix, 20c each. Deposit with order. Toulouse geese eggs, 50c each, Faun Runner duck eggs, $2 setting of 11 eggs. Karl Broeder, Sherwood, Ore.

S. C. RHODE ISLAND REDS, THE POPULAR and profitable farm fowls. We specialize in good color and high producing strains. Cockerels, hatching eggs and baby chicks in season. G. B. Dimick, Oregon City, Ore.

COCKERELS—ROSE AND SINGLE COMB Brown and Buff Leghorns, Anconas, Black Minorcas, Rhode Island Reds, Blue Andalusians. Boone Avenue Poultry Yards, E1601 Boone ave., Spokane.

FOR SALE—WHITE AND SILVER WYANdottes; breeder's records from 200 to 300 eggs; choice cockerels, $5 and up; hatching eggs. Gleneden, Star Route, Gig Harbor, Wash.

SILVER WYANDOTTES AND SILVER SPANGled Hamburgs, Golden Campines, choice birds for sale. No baby chicks or eggs by the 100. Birds, $5 and up. G. G. Wherry, Payette, Idaho.

SINGLE COMB RHODE ISLAND REDS, standard size, rich red color; cockerels, $3, $5; cocks, $5. Satisfaction or money back. B. F. Kammerzell & Sons, Route 5, Colfax, Wash.

STOP, LOOK, LISTEN—CHIX AND EGGS from Cecil Sheppard's high grade laying strain of Anconas. Inquiries promptly and courteously answered. Cona Villa, R. R. 8, Salem, Ore.

VIGOROUS, HEAVY-LAYING WHITE ROCK breeding stock; pure Fishel strain; hens, pullets, $2, $3; cockerels, $3, $5, $10; prices on quantities. J. B. Axtelle, Hood River, Ore.

REGAL WHITE WYANDOTTES; BEST QUALity, prize winning stock. Cockerels, hens, pullets. Prices right. Absolute satisfaction guaranteed. Eugene Boyk, Rocklyn, Wash.

POULTRY RAISERS, SEND FOR FREE BOOKlet on poultry advertising. The Pacific Northwest Farm Trio, Dept. P, Review bldg., Spokane, Wash.

DOLLARS FOR YOUR EGGS—WE PAY THE top market prices for your eggs and poultry. Daily cash remittances. Western Produce Co., Spokane.

SAY!—EGGS MEAN DOLLARS TO YOU. ALSO your poultry, veal and dressed hogs, when shipped to us. Top prices. Prompt remittances. Hotchkiss Produce Co., Spokane.

QUALITY BARRED PLYMOUTH ROCKS and Black Langshans, cockerels and cock birds; also a few females; prize winners. B. D. Reser, Walla Walla, Wash.

ALLEN'S PRIZE BARRED ROCKS AND White Leghorns are wonderful layers. Write D. W. Allen, LaConner, Wash.

BLUE ANDALUSIANS AND WHITE ROCK cockerels; extra good; order now. Mrs. C. W. Armstrong, Freewater, Ore.

POULTRY—Miscellaneous (Continued) 174

GET L. E. DELINE'S "HILLCREST" WHITE Rock breeding cockerels, $5, and hatching eggs, $2.50 per setting. Wenatchee, Wash., Route 5.

STANDARD BRED BRONZE TURKEYS, Barred Rocks, White Leghorns, Dark Cornish, Toulouse geese. E. A. Kruse, Roseburg, Ore.

WHITE LEGHORN AND WHITE ROCK COCKerels; 300-egg strain; baby chicks, hatching eggs. Palouse Falls Ranch, Palouse Falls, Wash.

STERLING STRAIN SILVER WYANDOTTES—Eggs $2.50 and $5 per setting; $7 per 100. Chicks, 45c. Henry Domes, McCoy, Ore.

SHIP YOUR LIVE POULTRY AND EGGS TO us. Highest prices paid; daily remittance. Inland Poultry House, Spokane, Wash.

HOGANIZED WHITE WYANDOTTE COCKerels; Ringhouse Griffith breeding; $5 and $10, prepaid. Adams, Warren, Ore.

RHODE ISLAND WHITES, COCKERELS from heavy producers; $5 and $7.50 each. Van K. Lawson, McMinnville, Ore.

WHITE WYANDOTTE COCKERELS, $3 AND $4; eggs, $1.50 for fifteen; $8 per hundred. A. Krueger, Colfax, Wash.

BLACK MINORCAS AND WHITE WYANdotte cockerels; high class stock. C. McClelland, R. 1, Boise

THOROUGHBRED ANCONA COCKS, SONS OF Sheppard's famous winter layers. Georgiana Kee, Greenacres, Wash.

SINGLE COMB RED COCKERELS ALSO DAY old chicks and hatching eggs. A. E. Bosworth, Omak, Wash.

SILVER WYANDOTTE COCKERELS; FINE ones, at $3 and $5 each. Melvin Bergeson, Adrian, Wash.

ANCONAS, SHEPPARD STOCK COCKERELS, $3; pullets, $2; eggs, $2 setting. R. P. Irwin, Tonasket, Wash.

BRED TO LAY ANCONAS; HATCHING EGGS. Price list free. Yew Lane Farm, Sherwood, Oregon.

ANCONA AND WHITE WYANDOTTE COCKerels, $4 each. Quincy Stanfield, Meridian, Idaho.

COCKERELS, S. C. RHODE ISLAND REDS. Write for information. Mrs. L. W. Alexander, Sunnyside, Wash.

SILVER LACED WYANDOTTE COCKERELS, $3; two for five dollars. Mrs. Annie Baggs, Bancroft, Idaho.

1949 COCKERELS, HATCHING EGGS, 49 VARieties; free book. Aye Bros., Box 14, Blair, Nebr.

LIVE STOCK 177

SEND FOR FREE BOOKLET, "SOME SUGgestions to Live Stock Advertisers," outlining the practices of successful men of long experience. Helps in determining how much to spend, the mediums to select, preparing advertisements, handling inquiries, the use of photographs, etc. Write today. The Pacific Northwest Farm Trio, Dept. W, Spokane, Wash.

LARGE, HEAVY PRODUCING HOLSTEINS for sale at all times in car lots; tuberculin tested; 150 to 200 head always on hand; well marked heifer calves from registered sires and heavy producing dams; crated for shipment anywhere, $25 f. o. b. Levinson & Balmelli, Yakima, Wash.

EPOCHAL BERKSHIRES — WEANED PIGS by the Grand Champion Porkmakers Sincerity. The Grand Champion Barrow over all breeds and the Grand Champion Carcass at the International were of Epochal blood. Boars for heavy or light service. E. V. Orford, Boise, Idaho.

MILCH GOATS—REGISTERED TOGGENBURG grade does, freshen Feb. and March; three quarts and better, $35 to $75. Foundation does bred to pure bred bucks; fresh in February and March, $20 each. Pure bred Toggenburg buck kid, $75. M. P. Eggers, Woodinville, Wash.

FOR SALE—THREE BIG TYPE POLAND China gilts, bred for March fallow, to a grandson of The Pilot. Gilts have size and quality and a combination of Bob Wonder-Ike Knox breeding; guaranteed to please. $50 each. C. R. Evans, Halsey, Ore.

SHIP US YOUR POULTRY AND LIVE STOCK. We pay the top market price for your live or dressed veal, beef, hogs and poultry. See our display ad for wholesale prices on hams, bacon, lard, compounds and fresh meats. John Lewis & Co., Spokane, Wash.

LEWISTON HEREFORD FARM BULL IN service, Prince Rupert 80th, No. 544903, undefeated grand champion, 1916-17. Have for sale few cows and heifers bred to this bull. Herman Nordby, Box 416, Lewiston, Idaho.

WE PAY TOP PRICES FOR YOUR LIVE OR dressed veal, hogs and poultry. Your check by return mail. Shipping tags on request. M. & J. Packing Co., Spokane.

FOR SALE—OR WILL CONSIDER WORK horses in exchange for registered Clydesdale stallion and mare. For particulars write Otto Trice, Grandview, Wash.

FOR SALE—SOME VERY FINE POLAND China gilts; bred to first prize futurity boar at state fair, to farrow in March. Buck & McDonald, Yamhill, Ore.

TILLAMOOK CALVES—SEASON NOW OPEN. Price lists ready; strictly dairy stock. Smith, the Calf Man, Tillamook, Ore.

FOR SALE—CHOICE DUROC JERSEY SOWS and gilts; bred to farrow in March. Geo. DeBok, Oregon City, Ore.

REGISTERED O. I. C. SWINE FOR SALE; shipped C. O. D.; guarantee satisfaction. Tony Johnson, Polson, Mont.

FOR SALE—MAMMOTH JACK, WEIGHT, 1120. Address Cloverleaf Ranch, Lamona, Wash.

DUROC BOAR, 2 SOWS, 2 GILTS, REGISTered; $50 each. R. Gralapp, Route 5, Spokane.

REGISTERED SHORTHORN CATTLE FOR sale. Elton Webb, New Plymouth, Idaho.

SWISS TOGGENBURG MILCH GOATS AT ALL times. Goatery, Caldwell, Idaho.

TOGGENBURG MILCH GOATS, FANNIE Branson, Falls City, Ore.

HARNESS and SADDLERY 189

SEND FOR FREE HARNESS AND SADDLE catalog today; cut out the middleman, buy direct from the manufacturer. Lowest prices in the west; satisfaction guaranteed. Established 1881. Write Pierce Harness Co., dept. T, Spokane, Wash.

HAY FOR SALE. 200

ALFALFA HAY—BUY DIRECT, SAVE MONey; quality guaranteed. Write or wire for prices. Ernest T. Freepons, Walla Walla, Wash.

JOB PRINTING 372

GUARANTEED BETTER BUTTER WRAPpers; 100, 60c; 250, $1.50; 500, $2.50; 1000, $4.25; printed to order. Home Specialty Co., Middleton, Idaho.

TANNING 425

LET US TAN YOUR HIDE—COW AND HORSE hides for fur coats and robes. Cow and steer hides into harness or sole leather. Catalog on request. The Crosby-Frisian Fur Co., Rochester, N. Y.

FUR SKINS, DRESSED, HEAVY SKINS, tanned for robes; cash for skunk. Seattle Fur Dyenig, Tanning Co., 3508 Phinney, Seattle, Wash.

MONUMENTS 510

COMPLETE STOCK, RIGHT PRICES. CORrespondence solicited., J. W. Harding, Inland Monument Co., N1001 Monroe, Spokane.

BUILDING MATERIAL 588

NO WASTE, LESS LABOR. BUILD WITH ready cut houses and barns and save money. Attractive new plan book sent free. 4c postage. Prices quoted on material list. Write today. Price advance certain to come soon. Local Keystone Lbr. Co., 3000 Sprague, Tacoma, Wash.

SEEDS 620

ALFALFA SEED, CLOVER SEED, SEED corn—We are located in the heart of the largest and best alfalfa and clover seed district in the west and can give you both quality and price. Get our samples and quotations before buying. Our seed corn is of the finest acclimated strains. Garden and flower seeds of all kinds. Send for our catalog. Darrow Bros. Seed & Supply Co., Twin Falls, Idaho.

HANCHEN SPRING BARLEY, $2.50 PER cwt.; common vetch seed, $4 per cwt.; red clover, $20 per cwt. Oregon standard purity seeds, all f. o. b. Corvallis, Ore. J. J. Denson.

RED CLOVER, ALSIKE, RYE GRASS, TIMothy and vetch seed for sale; good quality, lower prices; by freight or parcel post. Rhoten Farms, Salem, Ore.

RECLEANED TIMOTHY AND ALSIKE SEEDS 10 cents per pound; germination guaranteed. Send samples. M. Hill, McCall, Idaho.

HUBAM CLOVER, CERTIFIED SEED OF THE earliest strain; Idaho grown. DeKalb County Agricultural association, DeKalb, Ill.

HAND-PICKED LITTLE MARVEL GARDEN peas, $7 100 pounds; small lots 10c pound, all net. W. A. Bower, Avon, Idaho.

TIMOTHY, ALSIKE, CLOVER, MIXED, 9C; purity, 98.72; germination, 94; Timothy, 6c. M. Meador, Norwood, Idaho.

COSSACK ALFALFA SEED—SEND FOR samples. S. H. Hillman, Box 5, Thompson Falls, Mont.

WRITE FOR SEED CATALOGUE FOR 1922. Union Seed & Fuel Co., Boise, Idaho.

NURSERY STOCK 621

15 TO 20 SQUARE FEET OF GOOD SOIL, planted to everbearing strawberries, will supply an average family same year as planted; keep cultivated; keep runners off; fertilize, not too heavy, and keep moist (avoid alkali). My Progressive and Superb are true to name; are known and tried standard varieties and come to you inspected and prepaid by insured parcel post at $1.40 per 100; $6 per 500; $11 per 1000; 2 dewberry plants free as long as they last, with orders; dewberry plants 75c dozen; rooted Concord grapes, $1.50 per doz; all prepaid insured parcel post. Plant early. Model Fruit Farm, N. Matthiessen, proprietor, Route 1, Emmett, Idaho.

PLANT WINDBREAKS OR A WOOD LOT FOR shelter and profit; black locust in Idaho produced in eight seasons posts worth $1000 per acre. Free book tells how. Our special trees get quick results and cost little. Washington Nursery Co., Toppenish, Wash.

RELIABLE NURSERY STOCK—ITALIAN AND Petite, 4-6 ft., and 3-4 ft.; Concord, Worden and Moore's Early grapes; grafted Franquette walnut, all sizes. Send for catalog and price list. Villa Nurseries, Route 1, Portland, Ore.

GROW GRAPES FOR PROFIT—SPECIAL LOW prices; grape vines, berries, asparagus, for commercial planting; peaches, cherries, apricots, apples; satisfaction guaranteed. Write today. Home Nursery Co., Richland, Wash.

CLARK SEEDLING, THE STRAWBERRY that made Hood River famous. Write for list of other varieties and prices. Plant nurseries at Hood River and Prosser, Wash. W. R. Gibson & Son, Hood River, Ore.

SUPERB EVERBEARING STRAWBERRY, blackcap and red raspberry, Giant Harvest Dew blackberries. Dr. Burrell and new Oregon strawberry plants. Write for price list. Quincy Stanfield, Meridian, Idaho.

APPLE TREES AND A FULL LINE OF NURSery stock at reasonable prices; save agents' commission by ordering direct from nursery. Write for price list. Lawson Nursery, Gates, Ore.

STRAWBERRY PLANTS—HEAVILY ROOTED and free from disease. Wilson, Gold Dollar, Trebla, Marshalls, $4 per 1000. O. H. Shaw, Cottage Grove, Ore.

FILBERT TREES OF APPROVED VARIEties; true to name; state when writing, the number of trees wanted. Dr. J. H. Wilkens, McMinnville, Ore.

CHOICE STRAWBERRY, LOGANBERRY plants; lowest prices. Ward K. Richardson, 2393 Front, Salem, Ore.

LOGANBERRY PLANTS — 50,000 CHOICE plants; unusual low price. Harry Lanum, Salem, Ore.

LOGANBERRY PLANTS FURNISHED BY the grower. Grape Lane Farm, Turner, Ore.

NURSERY STOCK. (Continued.) 621

STRAWBERRY PLANTS, EVERBEARING and others; inspected plants, strong and healthy, well packed. Send for prices and book on care of strawberries. F. I. Moffett, Elleresburg, Wash.

CORY THORNLESS BLACKBERRY—DELIcious, very large and early. You get strong, well rooted plants, true to name, from pioneer grower. Wm. Mortenson, Route 1, Lodi, Calif.

NURSERY STOCK, ITALIAN PRUNE TREES and trees of all kinds. Berries and small fruits of all varieties. Buy direct and save 50 per cent. Brooks Nursery, Lafayette, Ore.

SEND FOR OUR NEW PRICE LIST ON FRUIT trees, berry bushes, shade trees and roses on their own roots. Krause Nursery, Spokane, Wash.

MARSHALL STRAWBERRY—FIRST YEAR'S plants, $4 per 1000. Loganberry, transplant, $5 per 100. J. G. Anderson, Route 1, Rochester, Wash.

TREES—PEAR, APPLE, PLUM, PRUNE, NUTS and berries at cost. Homer Brixey, McMinnville, Ore.

FARM LANDS FOR SALE. 651

AS CLEARING HOUSE FOR AN EASTERN loan company we offer 100 pieces of foreclosed property, mostly in eastern Washington, for the mortgaged indebtedness. Dry farms, irrigated lands, business buildings and orchard tracts; some good land under proposed irrigation projects as low as $10 per acre; no trades; no lists. Will make easy terms to real farmers. Write us your wants if you can not call. Hartford Land Co., 601 Paulsen bldg., Spokane, Wn.

STOCK RANCH NEAR CORVALLIS, OREgon; 484½ acres, of which 50 acres bottom land and 25 acres hill land in cultivation; of remainder, about 200 acres can be plowed, rest in pasture; good house of 8 rooms, fair outbuildings; 5 acres in orchard; Little Elk river runs through place; 2½ miles from Eddyville, on railroad from Corvallis to Newport; value $10,000; good terms. J. Humfeld, 311 U. S. Bank bldg., Portland, Ore.

LOGGED-OFF LAND IN STEVENS COUNTY, Washington, at greatly reduced prices. Most of land sells at from $5 to $20 per acre; thickly settled community; good schools; hard surfaced and paved roads to Spokane; best county in state for dairy and stock raising; most places water can be found at shallow depths. Write for folder. Phoenix Lumber company, Dept. T, Spokane, Wash.

SNOHOMISH COUNTY, WASH.—6000 ACRES of the finest dairy, berry or general high-grade farm lands in the northwest, rapidly improving section; no drouths; bumper crops; tracts 1 to 80 acres; 10 yearly payments. This is your opportunity. Send for literature. Brownell Land Co., Birmingham, Wash.

DAIRY FARMERS INVESTIGATE THIS UNusual opportunity. Fine paying irrigated dairy and alfalfa ranch; famous Deschutes valley, central Oregon. $16,000. Small initial payment, new easy payment plan; ideal climate. Full particulars on request. Redmond Land & Loan Co., Inc., Redmond, Ore.

RARE MINERAL SPECIMEN, EDUCATIONAL and entertaining; quartz showing free gold, rich silver ore, galena (lead) ore, cinnabar (quicksilver), placer gold dust, antimony, (stibnite), chromite; all these specimens sent for one dollar. Western Specimen Agency, Ashland, Ore.

WENATCHEE DISTRICT—18-ACRE, 10-YEAR-old orchard; Winesap, Delicious, Jonathan; soft fruits, alfalfa cover; good buildings; farm equipment; near high school; $18,000, part cash, some trade, balance crop payment. Baker Realty Co., Box 464, Bellingham, Wash.

I AM OFFERING FOR SALE TWO FARMS. One 205 acres; 60 acres in crop, $6000, half cash. One 1520 acres; 80 in crop; a sheep or cattle ranch, some cattle and horses go with this place; winter range. Write for particulars. Chas. A. Laufer, Asotin, Wash.

80-ACRE IMPROVED ALFALFA RANCH: IRrigated; beautiful valley; finest fruit land in Wash.; good house, completely furnished; silo, farm implements, stock and all, $12,000, clear; will exchange. What have you? Owner, F. J. George, Everett, Wash.

IRRIGATED LAND, RICH, LEVEL, NO waste; ready for plow; large tract to select from; small cash payment, bal. crop payments. A wonderful opportunity; will send particulars. E. T. Staples, Box 203, Ashland, Ore.

80 ACRES FINEST SOIL; 40 CLEARED; good buildings; gravity water system; 8 cows, 20 hogs, team, all kinds farm machinery; 2 miles to town; price $7500; terms. Chas. D. Edwards Co., Centralia, Wash.

GOOD DAIRY RANCH, 800 ACRES, WITH several thousand dollars' worth personal property; will sell $55,000; $20,000 down, balance at 5 per cent. Joshua Beeman, Usk, Wash.

72 ACRES, DAIRY AND ORCHARD; GOOD roads and schools, store, postoffice on place, included, $12,000; description, terms, apply Claude Johnston, Pleasant Hill, Ore.

SMALL ACREAGE TRACTS, ORCHARD AND dairy homes in sunny southern Oregon; improved and unimproved; particulars. Staples Realty Agency, Ashland, Ore.

SELL YOUR PROPERTY QUICKLY FOR cash; no matter where located. Particulars free. Real Estate Salesman company, 501 Brownell, Lincoln, Neb.

40 ACRES FINE SOIL; FIFTEEN CLEARED; fenced, cross-fenced; buildings; near school. Snap at $2000; $600 cash. Chas. D. Edwards Co., Centralia, Wash.

400-ACRE DAIRY OR STOCK RANCH; LOW price; easy terms. Theo. Johnson, Tenino, Wn.

BUSINESS PROPERTY FOR SALE 691

12-ROOM HOTEL, ON ACRE OF GROUND; some fruit trees; close to dock; Long Branch, Wash. Address Capt. G. W. Johnson, 3108 E. Jefferson, Seattle, Wash.

CITY PROPERTY FOR SALE 694

HOUSES, UNFURNISHED; HOUSES, FURnished; ranches, any size, in or near Ashland. Write fully to Ashland Realty company, Ashland, Ore.

FOR SALE OR EXCHANGE 702

200 ACRES, IMPROVED STOCK AND DAIRY ranch; fourth mile from Plummer; 320 acres improved wheat ranch, Franklin county, Washington; under irrigation project; separate or together for coast property. W. D. Pearce, Plummer, Idaho.

SELL OR EXCHANGE—80 ACRES, IN CACHE valley, Utah, with water right; milk and mail route; good dairy and poultry country. John Merchen, Logan, Utah.

WE HAVE FOR SALE AND EXCHANGE, ranches, city and business property, in the western states. Geo. R. Whitford Land Co., 503 Hyde, Spokane, Wash.

TO EXCHANGE—Real Estate 705

SOME CHOICE ACREAGE; NEAR HIGH school; suitable for chickens, early berries and gardening; good markets; some improvements; want $2000 equipped; farm lease. Box 284, Pasco, Wash.

TRACK'S END

By HAYDEN CARRUTH

A Stirring Story of Adventure

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CHAPTER XIV.

I have an exciting hunt and get some game, which I bring home with a vast deal of labor, only to lose part of it in a startling manner: together with a dream and an awakening.

I had not had my eyes to the loophole 10 seconds when I found out something more about the coming invaders; what I had taken for cattle were buffaloes, a thing which surprised me very much, for they were even then extremely scarce. There were about a dozen of them, and they were coming on all in a bunch and thowing up the snow like a locomotive.

I saw that the buffaloes would follow the swell of ground and that it would bring them in close to town, and perhaps right across the square between the stores and the depot. But I did not believe that they could ever flounder through the drifts to the south and east, so it seemed as if the hunters would overtake them so near that they would probably stay and again take possession of the town. I think I should rather have seen the outlaws coming. I decided to fire at them and see if I could not drive them off. But it was not necessary. I think some of them must have been the same Indians that called on me Christmas day, and went away so suddenly, without stopping to say goodby.

I am sure of this, because when still a good half mile from town they stopped and began circling around, and waving their guns in the air, and making all sorts of strange motions. I suppose they were trying to drive away the evil spirit which they thought was in the place, and which I had had in the pumpkin lantern, and which had also been in Fitzsimmons' barrel. Then one of them who had been sitting on his horse rode a little forward and got off, and I could see a thin ribbon of blue smoke arising. I suppose he was the medicine man of the tribe making medicine to frighten the evil spirit; or rather, perhaps, to get up their own courage to face it. This kept up for half an hour. The buffaloes in the meantime had walked slowly along till they were not much more than a hundred yards away, and stood looking at the houses in the greatest wonder; the first they had ever seen, it is safe to say.

But it appeared that the Indian's medicine did not work any better than white men's medicine sometimes does, for they began very slowly to go back the way they had come. I could see them stop often and circle around and, I suppose, hold long talks, but they could not get up their courage to venture closer to the place where the awful spirit with the flaming eyes and the fiery teeth had looked down upon them and chased them with his terrible limping gait. At last they passed entirely out of sight.

My next thought was, of course, to try getting a buffalo myself, since I needed fresh meat as badly as the Indians, or worse. But by this time they had drawn back some distance and were out of range for any but a very good marksman, a thing which I was not. I should have to follow them, which I decided to do quick as a flash. Through the tunnel I rushed and out to the barn. In another minute I brought out Dick saddled and bridled. He had not been beyond a small yard for a month. He began to jump like a whirlwind. How I ever got on with my gun I don't know, but I think I must have seized the horn of the saddle and hung to it like a dog to a root and some of his jumps must have thrown me up so high that I came down in the saddle. Anyhow, I found myself riding away straight south as if I were on a streak of chain lightning.

This would not do, so I pulled with all my strength and tried to turn him. I might as well have tried to turn a steamboat by saying "haw!" and "gee!" to it. But the pulling on the big curb-bit made him mad and he stopped and began to buck. I hung on with all hands and legs, and at last he bucked his head around in the right direction, and then I yelled at him, making the most outlandish noise I could, and he started across the square and straight for the buffaloes as if he had been shot out of a gun.

When Dick saw the buffaloes I think he knew what was up, because he began to act more reasonable. They saw me coming and stopped and looked back surprised. I thought they were going to wait, but they soon galloped on. I saw I must go to one side if I wished to get within range, and turned to the right. In a few minutes I came up abreast of them and within easy range, but I soon found that though I could guide my horse I could not stop him, pull as hard as I might. I could not even make him stop and buck again. He was going straight toward the north pole, and I thought it would not take him long to get there. One way to stop him came to me. It was a rash plan, but I saw no other.

Ahead and a little more to the right was a mighty bank of snow in the lee of a little knoll. It sloped up gradually and did not look dangerous. I turned him full into it. At the third jump he was down to his chin, and I had gone on over his head. When at last I struck I went down a good ways beyond my chin; in fact, my chin went down first, and if any part of me was in sight it must have been my heels. All I knew was that I was hanging to my gun as if it were as necessary as my head.

Why the breath of life was not knocked out of me I don't know, but it wasn't, and I kicked and thrashed about till I got my head and shoulders to the surface, with a peck of snow down the back of my neck. I looked for the buffaloes, and there they stood in blank astonishment, wondering, I guess, if I always got off of a horse that way. I ran my sleeve along the barrel of my rifle, rested it over a lump of frozen snow and fired at the nearest one, which was standing quartering to me. I saw the ball plow up the snow beyond and to the left. They all started on. As mine turned his side square to me I fired again. He went down with a mighty flounder. The others rushed away. I waded nearer and finished him with one more shot.

Dick was still aground in the snow, snorting like a steam engine, but by the time I had tramped the drift down and got him out he was over his nonsense and carried me back to the barn quite decently. I was all for skinning and dressing my buffalo. To Taggart's I went and got some good sharp knives and, taking Kaiser and the sled, started back. I don't think I ever worked so hard in my life as I did at that job. It was not very cold, which was one good thing. Every minute I expected the wolves, and I did not have long to wait, either. Before 3 o'clock they came howling along the trail the buffaloes had made, and I had to stop and fire at them every few minutes to keep them off. I am sure they were not so hungry as usual or I never could have kept them back at all. Twice I killed one when I shot, but I dared not go up and get them, and they were soon devoured by the others. The pack kept growing larger as others came over from the timber north of the butte.

At last I got off the hide and loaded it on the sled. I wanted to take all of the meat, but it made too big a load, and I had to be satisfied with two quarters. I even had to give up taking the head, which was a fine large specimen. A little after 4 o'clock, as the sun began to sink low, the wolves became bolder, and I knew it was not safe to stay longer. The load was more than Kaiser could pull, so I saw I must take hold and help him. I fired five or six shots at the wolves as fast as I could pump them up, seized the rope and off we went. We were not 10 rods away when the whole pack was upon the carcass fighting and tearing at it. They kept up the hideous battle all night and howled so much that it seemed as if their throats must be worn raw.

Once back home I set at my regular work, tired enough. But the fires were all low and I expected a day or two more of good weather, and the ease with which the Indians and buffaloes had got down from the north made me fear more than ever the coming of the outlaws from the west. I still had little hope of ever getting out of the place alive, but I could only work on and do all I could for my safety.

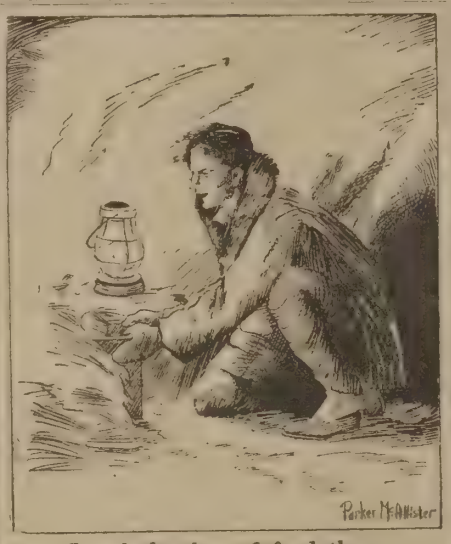
I laid the quarters of meat on some boxes in the shed and bolted the door. I was so tired I think I must have slept sounder that night than for a long time. In the morning I found that the shed door had been forced open, one of the bolts being torn off and the other one broken. Even the hinges were bent. A big piece of the best part of each quarter was gone. I could not tell if it had been torn off or haggled off with a dull knife. It might even have been gnawed off; I could not tell.

I looked for tracks of the robber with, as the saying is, my heart in my mouth, but to no purpose. Although it had neither snowed nor blown during the night, a deep layer of frost, like feathers, made out of the thinnest ice, had settled everywhere toward morning and I could find nothing.

That this new reminder of my unknown enemy brought on another attack of terror I need hardly say, but it was daylight and I conquered it better. The worst feeling I had to fight with was that whatever the thing was, it might be looking at me as I moved about town. I thought I saw eyes peering at me, sometimes of one kind, sometimes of another, out of every window, through every crack, over every roof, around every corner, from behind every chimney; even the tops of the freshly made snowbanks, blown over like hoods, were not free from them, and when I looked out on the prairie I expected to see something coming to catch me. I could scarce tell if I were more afraid on top of the drifts or under them in my tunnels, for here I constantly expected to meet something, or look back and see eyes. I think the loneliness and the strain of the expected robbers must have half turned my mind. If I had known what to look for and dread I think I should not have cared so much, but, not knowing, I imagined everything and became more terrifed about I knew not what than were the Indians at my pumpkin lantern. Sometimes I was sorry that I had driven the Indians away, and there were times when I thought I should be glad to have the Pike gang come, just for company.

Three days after the buffalo hunt, in the night, I thought the gang had come indeed. I was not more frightened at any time while I was at Track's End than I was that night. I had gone to bed as usual in the empty building, taking in my drawbridge and closing both windows behind me. The northwest wind had died away at sundown, and the night was still and the sky becoming cloudy. I looked for an east wind the next day and probably snow later.

What hour I woke up I knew not, but it must have been about midnight. I know I awoke gradually, because I had a long dream before doing so. I thought a giant was shouting at me from a grove of green trees on a hillside; it kept up for a long time, deep, hoarse shouts which fairly shook the earth; I could not see him, but seemed to know what he was. I was not frightened, but stood in a meadow listen-



I cached a box of food there.

ing. Then there was a crash of a tree falling on the hillside, and the giant's shouts came twice as loud, and I awoke and fought the bedclothes off my head and knew it was Kaiser barking.

At first this did not startle me, since he often barked in the hotel at night, sometimes at the wolves and other times, I had reason to think, at the thing which prowled in the night. The next instant I realized that his barks were much louder and that he was nearer. I started up and saw that a dull, flickering light was coming through the cracks in the boards over the window and moving on the wall. I thought of northern lights, then saw that it was on the north wall and not on the south. I leaped to the window and peeped out a crack and saw that there was a great fire somewhere; the snow was lit up like day almost, and I could see black cinders floating above the barn.

I got into such of my clothes as I had taken off and rushed to the side window. Here the light did not come much, but I could see Kaiser standing with his feet on the hotel windowsill and his head and shoulders out the window. He had smashed through the glass, as he had that day when the wolves came. Not once did he stop his terrific barking.

I pushed up my window and seized the drawbridge. I started to put it across, as I had done so many times before, but I was so excited and in such a foolish fright it slipped out of my hands and fell between the buildings. I stood a full minute unable to move. The lower part of the hotel window was divided into two panes, and Kaiser had broken one of them. I could see that he had cut himself, and I was afraid of doing likewise. But there was no other way to get out. I put on my mittens and got out of my window, clinging to the upper sash and standing on the outside sill. Then, with a prodigious step, I landed on the other sill, seized the opening regardless of the jagged glass, crouched down and plunged into the room head first. Kaiser had drawn back as he saw me coming, but as I shot into the room he bounded in front of me, and we rolled over together there on the floor in the darkness. I was half dazed, but knew I smelled smoke and heard the crackling of a great fire.

CHAPTER XV.

The mysterious fire, and something further about my wretched state of terror: with an account of my great system of tunnels and famous fire stronghold.

Once I said, when I told of how I found myself helpless at Bill Mountain's, that I thought Kaiser the best dog that ever lived. here I may say I know it. Though he got in my way and made me turn a few somersets in the dark, he may have saved Track's End from destruction.

When I got to my feet I felt my way across the room and through the hall to a room in the southeast corner of the hotel, where there was a loophole in the boards over the windows. Through this I saw that the livery stable was a pillar of fire.

How long I stood there at the loophole staring I know not; I think I did not move or scarcely breathe. It was a large building, the second story packed with hay, and below there were stored many wagons, some farm machinery and a quantity of lumber and building material, all things that would burn well. Everything was ablaze, the roof fell in as I looked, and the flames and sparks and smoke reached up like a vast column, it seemed to the very clouds.

At last I saw it was no time for idleness, so I turned away and went downstairs. As I started to pull open the back door it came to me suddenly that Pike and his men must have come. I reached behind the desk and got Sour's Winchester. Then I went out, leaving Kaiser behind, much to his disappointment. The heat struck my face like a blast from a furnace, and the light dazzled my eyes. I crept very cautiously over the snowbank behind Hawkey's and Taggert's till I came to Fitzsimmons'. Here the heat almost scorched my face, and I saw that the paint on the building was beginning to blister. I peered everywhere for signs of the men, but saw nothing. I crept around the corner of the building and looked across the square, but there was no sign of human life. I expected nothing less than that the whole town would be burned up, but I was helpless.

Finally I ran across the square and, leaving my rifle on the ground, scrambled up the windmill tower. It was truly a beautiful sight, as I knew, despite my fears. The sky was covered with thick, low-hanging clouds and, save for the fire, the night was pitch-dark. The whole town lay below me, half lit up like day, half inky shadows. Even at this distance I could feel the heat, and the sullen roar and crackling of the flames never stopped. But though I shaded my eyes and peered everywhere among the houses and across the prairie, I could make out no living thing.

Cinders were falling all over town, but there seemed to be little fire left in them when they alighted. The roofs were mostly flat and covered with tin, though the depot, the Headquarters barn and a few others were of shingles. Suddenly a cinder unusually large fell on the depot roof and lay there blazing. I hurried down the tower, and hauled a ladder which I had noticed the day the Indians came from beneath the platform, thinking I might climb up and put out the fire with snow. There was no water to be had anywhere except from the well back of the hotel. But the flame died out, and I dragged the ladder across the square. It occurred to me that it would be no great loss to me should the depot burn. I could not know the good thing that was later to come out of it.

It was so hot that I could not go behind Fitzsimmons', so I dragged my ladder across the drifts of the street and through between the hotel and Hawkey's. When I came out in the rear of these I was startled to find a small blaze on the barn roof. I hurried to the barn with my ladder, got it in place, and then with pails of water from the well I managed to put it out. Once more it caught, and once the roof of the shed where Pike shot Allenham blazed up, but I dashed water on the fires and saved both buildings.

At last the stable fire began to die down. The current of air from the northeast had become stronger, and the column of smoke was swaying more and more to the southwest. Just as daylight began to appear in the east the last remaining timber of the stable fell, and, though there was a great cloud of sparks and still much heat, I saw that unless a strong east wind should spring up there was no longer danger that the town would be consumed. By this time I was cold and stiff, my face scorched by the fire, and my clothes frozen with the water from the pailfuls I had carried, I went to the hotel.

Kaiser was so glad to see me that he reared up and put his forepaws on my shoulders. I was patting and praising him, when suddenly the question, What caused the fire? flashed into my mind. There had been no trace of Pike. From the windmill tower I had been unable to see any trail leading from the way he would come. There was no explanation except that it must have been caused by the same thing that had made me so much other trouble. Till it was broad daylight I paced up and down the office floor, unable to stop. For two days I thought of

little else, and brooded on it till I was half sick.

It seems to me as I look back at it that every time I got fairly desperate through lonesomeness or pure fright I went and dug a snow tunnel. I was as bad as a mole for tunnels, and I meant to tell about my system before this, but so many things keep popping into mind, what with my memory and with the old hotel register and the letters to my mother lying spread out before me, that I have not once got around to mention any of them except the first, which connected the hotel and the bank, directly across the street. I was so taken up with this that soon after New Year's I decided to build some others.

I was keeping up at that time five fires (or smokes) besides the one in the hotel, towit: One in the harness shop and one in Joyce's, both at the north end of the street and opposite each other; one in the bank; one in Townsend's store at the south end of the street on the west side, and one in the depot out across the square in front of the south end of the street. There was a chance for a good tunnel to all of these except to the depot; here the northwest wind had swept across the square and the ground in some places was almost bare.

But the street between the houses was filled up pretty much like a bread tin with a loaf, and starting from the north side of my first tunnel I began another and ran it straight up the street to between the harness shop and Joyce's, and here I ran side tunnels to each of these. The snow was rather low in front of Joyce's at first, and was not enough above the sidewalk to give me room, but the sidewalk here was high, being made of plank, as were all the walks in town, so I went under it by getting down on my hands and knees, and, as the building had no underpinning, I went on under and up through a trapdoor in the floor. I got a good many things to eat from Joyce's, such as canned fruit and the like, but I always wrote down on a piece of paper nailed on the wall everything I got from any store, so that in the spring, if I were still alive, I could pay for it, or, if it were food, Sours could, since I was, of course, still working for him and it was his place to pay for my keep.

South from the first tunnel I next ran another and curved it into Townsend's store. This was a fine, high tunnel, and it would have done your heart good to have seen Kaiser whisk about through all of them, just like a great feather duster, and oftentimes barking at the top of his voice. "be still, sir," I would say to him; "you will disturb the neighbors," at the which he would bark the louder. I often wondered what a stranger, on top of the drifts would have thought to have heard the dog's noise beneath his feet.

It always seemed warm and comfortable in the tunnels, if they were made of snow; this you noticed particularly on a blizzardy day, since, of course, no wind whatever got into them. Indeed, on a windy day I doubt not a snow tunnel would be warmer than a house without a fire. But though Kaiser delighted in the tunnels, Pawsy would have nothing to do with any of them at all except the one which led from the woodshed to the barn.

This I made last. I got into it from a shed window, which I cut down and fitted with a rough door. It ran into the barn through a small door in the corner, which was in halves, like a gristmill door. I opened only the lower half, and this tunnel I used mainly in bad weather. I had only just finished it the day before the fire. It was the day after the fire, when I was feverish for some way to get rid of my scare, that I decided to go to work on my place of retreat in case the town was burned.

I had thought about building something of the kind for a long while, but could not seem to get it planned out in my mind just to suit me. The burning of the livery stable, of course, set me thinking harder than ever. The place had to be, of course, something that would not burn and some place that could not be found. The only thing that wouldn't burn was the snow, but in case of fire I knew that it would melt for some distance from the buildings. I had just had an example of this. Besides, there had to be a way to get into it which could not be seen either before or after the fire, and this entrance must be from a building, so that I would not have to expose myself in going to it. The place must also be where I could stay a few days if I had to. A dozen times I thought I had got the whole thing planned out, and once I wrote about it to my mother, but I always found that something was weak about the plan somewhere. But I now concluded that I had struck on the right thing at last.

A hundred feet back of the next building to the north of the one in which I had my bedroom was a small barn, where the man who owned the place had kept a cow. It was so small that I always thought he must have measured his cow, like a tailor, and built the barn to it. Fifty feet back (east) of this barn was a haystack. Before the snow came the top of it had been taken off so it was left about four or five feet high and the shape of a bowl turned wrong side up. It was in the lee of the barn, and the snow had piled up over it in a great drift so that you would never once have guessed that there was such a thing as a haystack within half a mile. It was, maybe, a hundred feet from the Headquarters barn to this stack, with four or five or more feet of snow all the way. My idea was to tunnel from the barn to the stack, dig out some hay on the south side and have a snug room half made of hay and half of snow.

There was no underpinning beneath the Headquarters barn (most of the buildings in town simply stood on big stones a few feet apart) and the space where it should have been was filled in with a wide board and banked outside with hay. Under Ned's manger I sawed out a piece of this board big enough to crawl through, and hung it on leather hinges at the top, concealed by the manger. I then dug through the hay and had a clear field for my tunnel straight to the stack.

I ran my tunnel, or rather burrow, as it was small and low, a little too much east, and missed the haystack by about three feet, but I probed for it with a long, stiff wire and soon found it. I carried in a hay knife and cut me out a little room like an Eskimo's house, high enough to sit in and wide and long enough so that I could stretch out comfortably in it. The hay had been wet and was frozen, so there was no danger of its caving down on me. As the stack was all covered with snow no wind could get in, and I knew it would always be warm enough to be comfortable with plenty of clothes and blankets. I took in a buffalo robe and some things of that sort and left them there. I also cached a box of food there, consisting of dried beef, crackers, and such things; enough, I calculated, to last three days. I could hardly tell what to do about water, but at last tried the plan of chopping ice into small pieces and putting them into some of Mrs. Sour's empty glass fruit jars. My notion was that in case I was imprisoned there I could button a can inside of my coat and thus thaw enough of the ice to get a drink.

I was very well pleased with what I called my fire stronghold. I could enter from a hidden place in the barn, and could get into the barn through the tunnel from the hotel, which connected with the whole tunnel system. I knew if every house in town burned that it would not melt the snow around the stronghold, and I thought if I were in it when the barn burned I could push down the snow where it melted along the tunnel so that it would not be noticed.

In short, I was so tickled over my Eskimo house that I took Kaiser the first night it was done and slept in it, and though it was one of the coldest nights we were comfortable. I heard the wolves sniffing about on the roof, but we were getting used to wolves. I didn't know that we were going to have to sleep under snow again before spring, and in less comfortable quarters.

(To be continued.)

Went Away in a Hurry.

An Irishman was hauling dynamite in a quarry. He let a stick drop, and the whole box went up, taking Mike with it. The quarry boss came around later and said to another Irishman:

"Where is Mike?"

"He's gone," replied Pat.

"When will he be back?" asked the boss.

"Well," replied Pat, "if he comes back as fast as he went he'll be back yesterday."—O. E. R. Bulletin.

A Long Time Ago.

School Teacher (to little boy)—If a farmer raises 3700 bushels of wheat and sells it for $2.50 per bushel, what will he get?

Little Boy—An automobile.



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For the Skin
Soap, Ointment, Talcum, 25c. everywhere. For samples address: Cuticura Laboratories, Dept. U, Malden, Mass.



In keeping the dairy and farm buildings sanitary—the orchard and fields free from insects and plant diseases, extreme care must be taken to select the *right* cleansing agents and spray materials.

Likewise in caring for the teeth, progressive farm families, through their dentists and physicians, have learned that the most desirable dentifrice is one which "cleanses" naturally. They select one that doesn't "scratch" or "scour" the teeth with soapless grit.

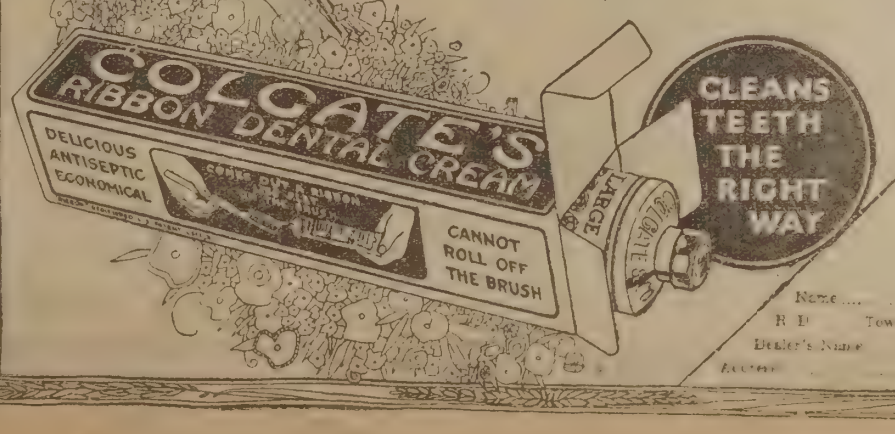
COLGATE'S CLEANS TEETH THE RIGHT WAY

The combined action of *non-gritty*, specially prepared chalk and pure soap cleanses thoroughly and does not irritate the delicate mouth tissues or "scour" the precious enamel.

So, if your teeth are "on edge" from using a harsh, gritty, soapless tooth paste, try a safe, *common sense* dental cream. Try Colgate's Ribbon Dental Cream with its delicious flavor that makes tooth brushing a pleasure—there's no disagreeable "druggy" taste.

More dentists recommend Colgate's than any other dentifrice. You can get a large tube of Colgate's Ribbon Dental Cream at your store for considerably less than fifty cents.

If you wish samples of the other Colgate products mentioned in the coupon, check those desired and mail it to us.



COLGATE & CO.
Farm Household Dept. 258-W
199 Fulton Street, New York, N. Y.

Please send me *samples* of the following articles. I enclose the amount of stamps shown for each one checked.

[ ] Face Powder - - - - - 4c
[ ] Baby Talc - - - - - 4c
[ ] Shaving Cream - - - 4c
[ ] Ribbon Dental Cream, Free

Name .....
R. D. Town ..... State .....
Dealer's Name .....
Address .....

FAMILY CIRCLE

ALICE BARLAND
EDITORIAL CONTRIBUTOR

Dear Mrs. Barland: Will some one tell me how to clean taffeta silk? I have used gasoline with no effect.

I had bad luck with my jelly last summer. It wouldn't jell as it should, but is like sirup. Do I get it too sweet or what is wrong? MRS. R. P.

Dear Mrs. R. P.: You do not say what sort of soil is to be removed from your taffeta. If grease, gasoline should remove it. When using gasoline, in order to make a good job of it the garment should be put right into a vessel of it and it helps to stand the vessel in a pan of hot water. Then rub the garment just as you would if washing with water and have more gasoline to rinse with. Of course, this will not remove fruit stains, but will take out about all other sort of dirt. I know of nothing better, but you could send it to a dry cleaner. Be sure not to use the gasoline in a room where there is a fire or a flame of any kind, because of its inflammable nature.

I think you must have failed in your jelly making when using some too sweet fruit. You do not say what fruit you used. I could better advise you if I knew. There must be acid in fruit to make really good jell. If you want to use strawberries it is better to extract the juice and mix some sour apple juice or plum or currant juice with it. In making jelly of apples or any fruit where one must cook it to extract the juice you should be careful to have as little water as is possible to get the juice out. But if you do have too much, so it tastes weak and flat, better boil out some of the water before adding the sugar. Then measure cup for cup of juice and sugar. A little lemon juice to real sweet fruit will aid in making it jell. A. W. B.

A sister from Pasco writes: "I have two little girls, three years' difference in age, and to tell their bloomers apart without measuring I work their initials in the front band and by this they can tell which is front and back. MRS. J. M. L.

Hot School Lunch

By MRS. E. M. ANDERSON.

If the school provides for no regular hot luuch an excellent substitute can be provided by using thermos bottles and every child not otherwise supplied with a hot bite at noon should most certainly have one, but in most rural schools there are three or four pupils who have none for every one who has such an article; hence, some other arrangement is very essential. All schools have either a stove or a furnace and any child can just as easily bring bread or soup or stew, as to bring doughnuts, pickles and thick meat sandwiches. A slice of bread put in a toaster and quickly toasted on both sides over a bed of coals and buttered hot makes an appetizing addition to any lunch and most children like it. My pupils and I learned last winter that a slice of bread and butter held carefully over the coals in a toaster till the under side browns delicately and the butter begins to melt is delicious.

It is far easier to prepare a little extra quantity of soup or stew for supper than it is to bake a cake and the surplus, put into a small pail or a large bottle for the school lunch, is fine heated on the stove at noon. A bit of meat hash left from breakfast reheats very appetizingly, too. Coco is nice, but it should be made at noon, otherwise the milk in it may sour. I never could quite see why doughnuts need be so severely criticized; most children like them and, when rightly made, they need not be indigestible. The recipe for doughnuts is never rich and if no grease is soaked in and the cakes are carefully drained they are more digestible than layer cake and as much so as the average cooky. Some people object to potatoes for little folks, but in a simple stew or soup I'll risk the quantity of them any one would get in a cup or two of the mixture. The fact that it is hot should certainly counteract the evil of the potato. Of course nothing is nicer than a cup of hot broth with crackers or croutons, but anything that can easily be reheated on the school stove makes an acceptable substitute for either a warm dinner or a regulation hot lunch and along in February, on zero days, no child should go all day without anything warm—it is neither natural nor safe.

CLEANING POTS AND PANS.

Where it is necessary to scour metal, whiting as a scouring substance will give the metals the least wear, says Extension Service News of the Washington State college. The acid of common foods, such as rhubarb, tomatoes, lemons or oranges, will often remove discolorations.

Whiting moistened with any food acid such as mentioned above is good for aluminum. Washing soda should not be used, as the alkali it contains darkens the metal.

A weak soda solution will remove grease from brass, and whiting and a dilute acid will remove tarnish; brass may be polished with rotten stone and sweet oil and dried with a soft cloth. Copper may be cleaned in the same way.

Kerosene will remove rust and grease from iron. It may also be boiled in a strong solution of washing soda.

Your Health

By Royal S. Copeland, M. D., F. A. C. S.

WHAT TO DO FOR CHILBLAINS.

When I was a young chap I taught school in the country one winter.

I feel sorry for one who has not had the privilege of real country life.



Dr. Copeland.

I stationed myself at the door every zero winter morning and closely inspected every boy or girl. A white nose or a bleached ear was the signal for me to grab the youngster and lead him to a snow pile. With a handful of soft snow I would rub the frozen spot until the blood returned and the tingling nerves gave promise of returned circulation.

This is the way to treat frostbite:

Massage the affected part with snow or cold water.

If this is done at once no bad aftereffects are noticed.

Chilblains are the painful result of neglected frostbite. Women who work in kitchens on cold floors and persons who are out of doors in all kinds of weather are liable to this trouble. Wet feet, tight shoes and some trouble of circulation are the causes underlying chilblains.

You can not be comfortable unless your feet and hands are dry and warm. Make it a point to keep them in this condition. Then you will avoid frostbite and chilblains.

The following prescription is very valuable in the relief of chilblains:

Iodine crystals, five grains; collodion, one ounce; ether, two drachms. Paint this on the chilblain every day. It stops the burning and itching, protects the skin and quickly cures the condition.

If you get home with badly chilled feet don't stand on the radiator or put your feet in the oven. Take off your shoes and stockings, put your feet in cold water, and then rub them vigorously with a rough towel. This treatment will restore the circulation and prevent chilblains.

Treat your ears in a similar way. Massage with cold water will warm them quicker than heat, and will prevent the bad effects of frostbite.

This seasonable advice may spare you the painful and long-continued symptoms which frequently follow exposure to cold weather.

Just Folks

Peculiarities narrow.

Acts may be declarations.

The fullness of time is hid from men.

Most of life is a hop, skip and jump.

Suspicion muddies the waters of thought.

Hard sense may have a sandy foundation.

Commanding power comes from saying what you mean.

Ability depends on foundation as well as upon superstructure.

Many dwellings do not contain the darkened chamber of reflection.

Life may be nine-tenths luck, but sooner or later the other tenth counts.

Every person needs periodical shaking up. Not necessarily for honesty, but for mental balance generally.

WINTER GARDENING.

It is a grave mistake not to "make" your garden in the winter. Gardens that are rushed in after spring opens, without any previous planning, are usually only half satisfactory.



FORTY-THREE years ago Alexander Graham Bell, the inventor of the telephone, wrote this inspired forecast: "It is conceivable that cables of telephone wires could be laid underground or suspended overhead, communicating by branch wires with private dwellings, country houses, shops, manufactories, etc., and a man in one part of the country may communicate by word of mouth with another in a distant place."
At the right, an old print of Bell lecturing on telephony, 1877.

Foresight

More than forty years ago, when the telephone was still in its experimental stage, with but a few wires strung around Boston, the men back of the undertaking foresaw a universal system of communication that would have its influence upon all phases of our social and commercial life.

They had a plan of organization capable of expansion to meet the growth they foresaw; and their wisdom is borne out by the fact that that plan which they established when telephones were numbered by dozens is efficient now when telephones are numbered by millions.

This foresight has advanced the scientific development of the art of telephony to meet the multiplied public requirements. It has provided for funds essential to the construction of plant; for the purchase of the best materials on the most advantageous terms; for the training of employees to insure skilled operators; for the extension of service in anticipation of growth, with the purpose that no need which can be foreseen and met will find the Bell System unprepared.

The foresight of the early pioneers has been developed into a science during the years which have elapsed, so that the planning of future operations has become a function of the Bell System. This is why the people of the United States have the most efficient and most economical telephone service in the world.

"BELL SYSTEM"
AMERICAN TELEPHONE AND TELEGRAPH COMPANY
AND ASSOCIATED COMPANIES
One Policy, One System, Universal Service, and all directed toward Better Service



You don't need a wringer when you have a LAUN-DRY-ETTE



THAT'S what makes the Laun-Dry-Ette different and better. Women everywhere tell how it saves clothes, how it never damages buttons, snap fasteners, hooks and eyes; how it dries comforts and blankets for the line in one minute better than any wringer—and how it makes it unnecessary for you to put your hands in hot or cold water. But let us give you a demonstration—that's proof that proves. Write us today.

"If it has a wringer it isn't a Laun-Dry-Ette"

L. C. Warner Co.
Distributors.
508 First Ave., S., Seattle, Wash.
Name of Nearest Dealer Supplied on Request.

LAUN-DRY-ETTE
WASHES AND DRIES WITHOUT A WRINGER

Bits of Fun for Everyone

No Breach of Promise.

The swain and his swainess had just encountered a bulldog that looked as if he might shake a mean lower jaw.

"Why, Percy," she exclaimed as he started a strategic retreat, "you always swore you would face death for me."

"I would," he flung back over his shoulder, "but that darn dog ain't dead." American Legion Weekly.

She Had Heard of Them.

Admiral Eberle, new head of the Pacific fleet, said the other day to a San Francisco reporter:

"Your questions, young man, show a good deal of naval ignorance. You are like the young lady who said:

"'Oh! What are those great, funny-looking things?'

"'Them's men-o-war,' her companion, a boatman, answered.

"'How lovely,' said the young lady. 'And what are those fussy little things behind them?'

"'Tugs, miss.'

"'Yes, naturally! Tugs-of-war. How stupid of me,' said the young lady. 'I've often heard of tugs-of-war, of course.'"—Columbus Dispatch.

The Rush.

Senator Borah was talking about a lobbyist.

"The fellow," he said, "is as resourceful and persevering as the Atlantic City girl who wanted a husband.

"'That girl out there,' an old lady said excitedly to a young man, pointing with her parasol out to sea—'that girl out there is drowning. Why don't you swim out and rescue her?'

"The young man addressed gave an embarrassed cough.

"'Well, you see, ma'am,' he said, 'it would hardly be good form. I rescued her yesterday.'"—Detroit Free Press.

Latest High Class Patterns for the Home

Please order the patterns you desire at least two or three weeks before you wish to use them. Desiring to obtain the latest high-class patterns for its readers, THE FARMER has made arrangements to have them sent direct from the east, and under present mailing conditions it takes about that time for them to reach you.



3867. Misses' dress. Cut in three sizes: 16, 18 and 20 years. An 18-year size requires 3 3-4 yards of 54-inch material. The width of the skirt at the foot is two yards. Price 10 cents.

3846-3843. Ladies' costume. Guimpe 3846, cut in seven sizes: 36, 36, 38, 40, 42, 44 and 46 inches bust measure. It will require 2 3-4 yards of 44-inch material. Skirt 3843, cut in four sizes: Small, 34-36; medium, 38-40; large, 42-44; extra large, 46-48 inches bust measure. A medium size will require 2 7-8 yards of 38-inch material. The width at the foot is two yards. Two separate patterns, 10 cents for each pattern.

3691. Ladies' house dress. Cut in seven sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. A 38-inch size will require 4 7-8 yards of 36-inch material. The width at the foot is about two yards. If made of contrasting material, collar, belt, cuff and pocket facings require three-fourths yard. Price 10 cents.

3868. Ladies' apron. Cut in four sizes: Small, medium, large and extra large. A medium size requires 2 1-2 yards of 36-inch material. Price 10 cents.

3860. Girl's dress. Cut in four sizes: 6, 8, 10 and 12 years. A 10-year size requires two yards of 27-inch material for the guimpe and 2 1-4 yards of 36-inch material for the dress. Price 10 cents.

3312-2939. An "up-to-date" frock. Waist 3312, cut in seven sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. Overdress 2939, cut in seven sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. To make the waist will require 2 1-2 yards of 36-inch material. The overdress requires 3 1-2 yards of 40-inch material. Two separate patterns, 10 cents for each pattern.

3850. Ladies' dress. Cut in seven sizes: 36, 38, 40, 42, 44, 46 and 48 inches bust measure. A 38-inch size requires five yards of 36-inch material. The width at the foot is about 2 1-4 yards. Price 10 cents.

3858. Junior's dress. Cut in three sizes: 12, 14 and 16 years. A 14-year size will require three yards of 38-inch material. Price 10 cents.

3844. Ladies' blouse. Cut in six sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. A 38-inch size requires 2 3-4 yards of 36-inch material. Price 10 cents.

3841. Ladies' skirt. Cut in seven sizes: 26, 28, 30, 32, 34, 36 and 38 inches waist measure. A 30-inch size requires 2 3-8 yards of 38-inch material. The width at the foot is two yards. Price 10 cents.

3862. Child's romper. Cut in four sizes: 1, 2, 3 and 4 years. A 2-year size requires 3 1-8 yards of 27-inch material. Price 10 cents.

3863. Child's set. Cut in five sizes: 6 months, 1, 2, 3 and 4 years. The dress requires 2 1-4 yards of material; the petticoat requires 1 7-8 yards, and the drawers one yard for a 2-year size. For ruffles of embroidery on petticoat and dress, 2 1-4 yards for each will be required. Price 10 cents.

Please fill in this order and mail with remittance to:

PATTERN DEPT., PACIFIC NORTHWEST FARM TRIO, Spokane, Wash.

Enclosed find.....cents for which send me the following:

Pattern No..... Size..... Pattern No..... Size.....

Pattern No..... Size..... Pattern No..... Size.....

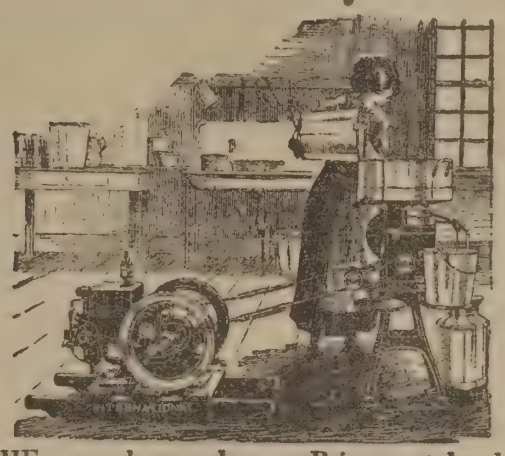
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Postoffice..... State.....

R. F. D..... Box No..... St. No. .....

Be sure to give the pattern number and the correct size.

Primrose — Builder of Dairy Profits



THE man who purchases a Primrose takes home to his dairy a product held in high esteem. He is fortified by the definite knowledge that it will go quietly to work for him in plain, practical, efficient fashion. He is comfortably certain that it will continue to conserve cream dollars for him, month after month for many years, in a degree excelled by no cream separator on earth.

Two factors convince the man of long-standing experience as to the wisdom of Primrose purchase. The prime factor of International Harvester quality manufacture, which has created International Harvester reputation, guarantees the worth of Primrose separators without more ado. The secondary factor lies in the popularity of the thousands of Primroses which have been placed in service in the nation's dairies during past years.

Cream separator investment is best made, and without long experimental delays or gambling with unknown values, by Primrose purchase.

Primrose Separators run easily and steadily, skim with exceeding closeness, and serve their owners reliably for many years. Direct power drive and electric motor drive equipment available. Built in four sizes with capacities ranging from 350 to 850 pounds of milk per hour. Sold by International Dealers.

INTERNATIONAL HARVESTER COMPANY OF AMERICA (INCORPORATED)

CHICAGO U S A

92 Branch Houses and 15,000 Dealers in the United States



DOES BABY VOMIT?

Dennos often agrees when all else has failed. Send for sample and booklet. Sold by druggists. Endorsed by physicians.

DennosFood Portland.Ore



"More Potatoes"

From ground planted secured by use of The KEYSTONE POTATO PLANTER than by any other method of planting. Work perfectly accurate. A simple, strong, durable machine. Write for CATALOG, price, etc.

A. J. PLATT, MFR.
BOX 13 STERLING, ILL.

Western Canada Offers Health and Wealth



and has brought contentment and happiness to thousands of home seekers and their families who have settled on her FREE homesteads or bought land at attractive prices. They have established their own homes and secured prosperity and independence.

In the great grain-growing sections of the prairie provinces there is still to be had **on easy terms**

Fertile Land at $15 to $30 an Acre

—land similar to that which through many years **has yielded from 20 to 45 bushels of wheat to the acre**—oats, barley and flax also in great abundance, while **raising horses, cattle, sheep and hogs** is equally profitable. Hundreds of farmers in Western Canada have raised crops in a single season worth more than the whole cost of their land. Healthful climate, good neighbors, churches, schools, rural telephone, excellent markets and shipping facilities. The climate and soil offer inducements for almost every branch of agriculture. The advantages for

Dairying, Mixed Farming and Stock Raising

make a tremendous appeal to industrious settlers wishing to improve their circumstances.

For illustrated literature, maps, description of farm opportunities in Manitoba, Saskatchewan, Alberta and British Columbia, reduced railway rates, etc., write

J. L. PORTE.
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160 ACRE FARMS IN WESTERN CANADA FREE

High Points in News of the Week

The big news event of the last week was the closing of the arms conference in Washington, Monday's session of this week being devoted to final signatures of the conference treatise and to an address by President Harding voicing the appreciation of the work accomplished. Most of the foreign delegates left Washington Monday night or Tuesday.

With slight modifications, the program outlined by Secretary Hughes at the opening of the conference, regarding the scrapping of capital ships and the limitations of the remaining capital ships and the naval holiday for the 10 years, was adopted. The United States will scrap 30 capital ships, Great Britain 24, Japan 17, and it is agreed that Great Britain shall not have at any time more than 500,000 tons of capital ships, the United States 500,000 tons and Japan 300,000 tons.

Termination of the Anglo-Japanese alliance was a notable accomplishment of the conference, with regard to the Far Eastern question, as well as the return of the province of Shantung by Japan to China.

As to aiding China in securing real independence, the results of the conference are more doubtful, in the opinion of Frank H. Simonds, a noted correspondent. After the last document of the conference was duly signed Japan still has armies on Chinese and Siberian soil; their presence will be an ever apparent promise of ultimate war and that no man can say when that war will come, "but the sure thing is that whenever China or Russia feels herself strong enough to drive the invader out, war must come."

David Lawrence, another noted correspondent, declares that a war with Japan has at least been deferred for a long time.

Perhaps the broadest view of the results of the conference is voiced by Sir Robert Borden, a Canadian delegate, who believes that the educative influences of such a conference on the participating nations is of more value than the notable concrete results which have been attained. To him the only practical means to prevent wars is to educate the public opinion so that the government of each state will be constrained to settle international differences by peaceful means.

* * *

Republican leaders in congress are understood virtually to have abandoned the idea of financing the soldiers' bonus bill by a general sales tax.

Developments at further hearings before the house ways and means committee disclosed that in spite of Secretary Mellon's opposition to the plan a number of the majority members favor the use of part of the proceeds from the refunded British debt in helping finance the adjusted compensation.

Increased inheritance taxes as another means of financing the bonus were advocated by Mr. Ramseyer, who said such taxes could not be passed on and would not be a penalty on initiative and enterprise.

A bill to reduce the number of army officers to 12,000, as compared with 17,000 now authorized, has been transmitted to congress by General Pershing, as chief of staff, and introduced by Chairman Wadsworth of the senate military committee.

* * *

The biggest item of business news in the Pacific northwest last week and one which betokens in a remarkable manner the returning of business prosperity is the announcement by the Washington Water Power company of the immediate extension of its power lines into several districts in Grant county at a cost of $250,000. The building of the power lines will make possible the development of 25,900 acres of fertile land. It is estimated that water can be pumped with the electric current at from $3 to $15 an acre, while gasoline pumping would cost from $15 to $50 an acre.

* * *

The bill authorizing the refunding of the $11,000,000,000 foreign debt into securities maturing in not less than 25 years has been passed by the senate.

* * *

Washington, D. C., Tuesday, January 31, held the first of its many funerals for the 97 persons who perished when the roof of the Knickerbocker theater collapsed under the weight of snow. Congress is making a vigorous investigation of the disaster.

* * *

Prompt action marked the reception by congress of the Ford proposal for lease and purchase of the Muscle Shoals (Ala.) nitrate and water power projects, as referred to the house by Secretary Weeks, for its decision, and afterward for consideration by the senate. Speaker Gillett sent the offer immediately on its receipt to the house military affairs committee.

* * *

At the wool auction held Thursday in Boston by the government, when 7,000,000 pounds of wool were offered, not a pound of wool was withdrawn and competition was keen. Prices advanced on an average of about 25 per cent over the rates at the January sale.

* * *

When the snows melt this spring the Russian steppes will be strewn with skeletons, the Associated Press correspondent in the Volga region writes. They will resemble the high prairies of the American cow country in the days when big cattle outfits had insufficient hay for a hard winter. But among the skeletons of cattle and camels there will be bones of hundreds of thousands of men, women and children who fell exhausted in their quest for bread; who lived the simple lives of the peasant and had little conception of the political upheaval which made this famine more terrible than that of 1891.

* * *

Cardinal Achille Ratti, archbishop of Milan, has been selected by the cardinal college to succeed the late Pope Benedict. Coronation will take place February 12. The new pope will be known as Pius XI.

THE TROPICS COMPETE WITH US.

A new economic factor in our agriculture and in our consumption will be the opening up of the tropical belt to development, Dr. Alfred Atkinson, president of the Montana State college, predicted in a recent address. One-half the arable lands of the world are within the tropical and subtropical belt, he said. Of the tropical arable lands only one-fourth are now in cultivation; of the subtropical there remain yet undeveloped three-times as much arable land as there is left in the temperate latitudes. The output of sugar from the tropics exceeds already that of other latitudes, and if tariff did not enter in sugar would probably be now exclusively a tropical product. Tropical vegetable oil is already affecting our markets, and it is likely that our imports of tropical products will increase, favored by our country's purchasing power. The rate of exchange is, of course, but a temporary factor, but in bringing poor lands to productivity at heavy charge we must reckon with cheap tropical production.

EVIDENCE OF FALLING PRICES.

Notwithstanding the fact that the price that the farmer must pay for his implements and other equipment are yet much higher in proportion than are the prices that he receives for his product, evidence continues to accumulate that the leveling process is going on. Just now comes the report from Detroit that a reduction in the price of the Fordson tractor has been made. The piece of power machinery has been $625 f. o. b Detroit, and has sold for $714 at such distributing points as Spokane. The Detroit price is now announced as $395, with a Spokane quotation of $484.

THE SUMMER FALLOW.

The purpose of summer fallow is not only to conserve moisture, but to get plant food, and the summer fallow should be plowed early and cultivated well.

Farm Business and Markets Outlook

(Continued from page five.)

LATEST QUOTATIONS.

The Live Stock Market.

PORTLAND, Ore., Feb. 3.—Cattle—Choice steers, $7@7.50; medium to good steers, $6.25@7; fair to medium steers, $5.75@6.25; common to fair steers, $4.75@5.75; choice feeders, $5@5.50; fair to good feeders, $4.50@5; choice cows and heifers, $5.75@6.25; medium to good cows and heifers, $5@5.75; fair to medium cows and heifers, $4.25@5; common cows, $3.25@4.25; canners, $2.25 @3.25; bulls, $3.50@5.50; choice dairy calves, $11@12; prime calves, $7.70@10; heavy calves, $5.50@7.50.

Hogs—Prime light, $10.25@10.50; smooth heavy, 200 to 300 lbs., $9.25@10; smooth heavy, 300 lbs. up, $8.25@9; rough heavy, $6@8.25; fat pigs, $9.75@10; feeder pigs, $9.75@10; stags, subject to dockage, $5@6.50.

Sheep—East-of-mountain lambs, $9.75@10.50; best valley lambs, $8.25@9.25; cull lambs, $4.75@6.25; fair to good, $6.75@8.25; eastern Oregon feeders $7@8; light yearlings, $7.50@8; heavy yearlings, $6.50@7.50; light wethers, $6.50@7; heavy wethers, $4.50@6.50; ewes, $3@6.

SPOKANE, Feb. 3 Cattle Prime steers, $6.50@7.50; good to choice steers, $5.75@6.50; medium to good steers, $5.25@5.75; fair to medium steers, $4.75@5.25; common to fair steers, $4.25@4.75; choice cows and heifers, $5@6; good to choice cows and heifers, $4@5; medium to good cows and heifers, $3.50@4; fair to medium cows and heifers, $3@3.50; canners, $2@3; bulls, $3@5; light veal calves, $8@9.50; heavy veal calves, $4@8; stockers and feeders, $4.50@5.

Hogs—Prime mixed, $9.50@10; medium, $8.75@9.50; heavies, $6.75@8.75; fat pigs, $9.25@9.75; stockers and feeders, $8@9.

Sheep—Prime lambs, $9@10; fair to medium, $8@9; yearlings, $6@8; wethers, $4.50@6; mutton ewes, $2@6; feeder lambs, $6.50@9.

The Grain Market.

PORTLAND, Ore., Feb. 4.—Wheat—Hard white, $1.16; hard winter, $1.15; soft white, white club, $1.13; northern spring, $1.12; red Walla, $1.09.

Today's car receipts: Wheat, 47; flour, 10; oats, 3; hay, 8.

Grain futures, bids: Wheat—Hard white, Feb. and March, $1.16; soft white, white club, Feb. and March, $1.13; hard winter, Feb. and March, $1.15; northern spring, Feb. and March, $1.12; red Walla, Feb. and March, $1.09.

Oats—No. 2 white feed, Feb. and March, $28; No. 2 gray, Feb. and March, $27.

Barley—Brewing, Feb. and March, $27; standard feed, Feb. and March, $26.

Corn—No. 2 eastern yellow shipment, Feb. and March, $25.50; No. 3 eastern yellow shipment, Feb. and March, $25.25.

POMEROY, Feb. 4.—Turkey, 93c; club, 91c.

ODESSA, Feb. 4.—Marquis, $1.12; Bluestem and Bart, $1.10; Turkey red, $1.08; Jones Fife, 95c.

DAYTON, Feb. 4.—Club wheat, 97c; red, 94c.

DAVENPORT, Feb. 4.—Marquis, $1.03; Bluestem, $1.02; Gold Coin, 92c.

PULLMAN, Feb. 4.—Red wheat, 90c; white wheat, 93c.

WALLA WALLA, Feb. 4.—Club wheat, 98c; Bluestem, 98c; Turkey red, 97c.

LEWISTON, Idaho, Feb. 4.—Fortyfold, Turkey, 90c; hard winter, 93c.

Hay and Grain Feed.

PORTLAND, Ore., Feb. 4.—Millfeed—Price f. o. b. mill: Millrun, ton lots, $23; mixed cars, $22; straight cars, $21 per ton; middlings, $34; rolled barley, $34@36; rolled oats, $36; scratch feed, $45 per ton.

Corn—White, $32; cracked, $35 per ton.

Hay—Buying price, f. o. b. Portland: Alfalfa, $13.50 per ton; cheat, $10.50@11; oat and vetch, $14.50; clover, $11; valley timothy, $14@15; eastern Oregon timothy, $16@17.

SPOKANE, Feb. 4.—Flour—Washington patent, $6.90 brl.; hard wheat, $7.50; eastern rye meal, $9.50; whole wheat, 49s, $5.70; 24½s, $5.90; pancake, $5.25 case.

Wheat—Feed wheat, $36 per ton.

Oats—$34 per ton; steam rolled, $36.

Corn—$32 per ton; cracked corn, $34 ton.

Barley—$30; steam rolled, $32 per ton.

Bran and shorts—$22 per ton.

SEATTLE, Feb. 4.—Wheat—Hard white, soft white, white club, soft red winter, northern spring, $1.14; hard red winter, $1.15; eastern red Walla, $1.10; Big Bend bluestem, $1.20.

General Produce.

CHICAGO, Feb. 4.—Butter—Lower; creamery extras, 36c; firsts, 30@35c; seconds, 27@29c; standards, 34c.

Eggs—Higher; receipts, 9266 cases; firsts, 37c; ordinary firsts, 31@33c; miscellaneous, 35@36c.

PORTLAND, Ore., Feb. 4.—Butter—Prints, extras, 38c; cubes, extras, 33c; prime firsts, 32c; butter fat, Portland delivery, No. 1 sour cream, 34c.

SEATTLE, Feb. 4.—Eggs and butter unchanged.

SPOKANE, Feb. 4.—Creamery butter, cartons 39c; without cartons, 38c lb; in quarters, 39c lb; solid pack, 38c lb.

Dressed poultry—Fancy dressed hens, 25@30c lb; roosters, 22c lb; springs, 25c lb.

Eggs—Select storage, $9.50; fresh local ranch eggs, $12 case; farm pullet eggs, $11 case.

Range of Live Stock Prices for the Week Ending Feb. 1

CATTLE.	Chicago.	Spokane.	Portland.	N Salt Lake
Choice, prime heavy steers (1100 lb up)	9.00@10.00	.....	.....	.....
Good heavy steers	7.85@ 9.15	.....	.....	.....
Medium heavy steers	6.85@ 8.15	.....	.....	.....
Common heavy steers	6.00@ 7.00	.....	.....	.....
Choice, prime light steers (1100 lb do'n)	8.75@ 9.75	.....	.....	.....
Good light steers	7.75@ 9.00	.....	.....	.....
Medium light steers	6.65@ 8.00	5.75@ 7.25	6.00@ 7.50	5.75@ 6.75
Common light steers	5.75@ 6.75	4.25@ 6.00	4.75@ 6.25	4.25@ 6.00
Common to choice butcher heifers	4.00@ 7.50	3.50@ 6.25	3.75@ 6.50	3.25@ 5.50
Common to choice butcher cows	3.65@ 6.00	3.00@ 5.25	3.50@ 5.50	3.00@ 4.75
Bologna and beef bulls	3.90@ 6.00	3.00@ 5.00	3.50@ 5.00	2.00@ 3.50
Canners and cutters, cows and heifers	2.60@ 3.85	2.00@ 3.00	2.25@ 3.25	1.50@ 3.00
Canner steers	3.15@ 4.25	2.50@ 3.50	2.50@ 3.50	2.00@ 3.50
Medium to choice light veals	7.75@11.25	8.00@ 9.50	8.00@12.00	6.00@ 7.00
Common to choice heavy veals	4.00@ 8.50	4.00@ 8.00	5.50@ 7.50	.....
Common to choice feeders (1000 lb up)	5.25@ 6.75	.....	.....	.....
Common to choice feeders (750-1000 lb)	5.15@ 6.75	4.50@ 5.00	4.00@ 5.00	.....
Common to choice stocker steers	4.50@ 6.65	.....	.....	.....
Com. to choice stocker cows & heifers	3.00@ 5.00	.....	.....	.....
HOGS.				
Top of market	9.60	9.85	9.75	8.75
Bulk of sales	8.25@ 9.25	8.50@ 9.50	.....	8.25@ 8.60
Heavy (250 lb up)	8.20@ 9.10	7.50@ 8.75	8.00@ 9.25	.....
Medium (200-250 lb)	8.35@ 9.25	8.50@ 9.25	8.50@ 9.50	8.00@ 8.60
Light (150-200 lb)	8.50@ 9.40	9.00@ 9.85	9.50@ 9.75	8.50@ 8.75
Light lights (130-150 lb)	8.60@ 9.50	9.00@ 9.75	9.25@ 9.75	8.25@ 8.75
Smooth packing sows (250 lb up)	7.00@ 8.40	7.00@ 7.50	6.75@ 7.75	.....
Rough packing sows (200 lb up)	6.75@ 8.00	6.50@ 7.00	6.00@ 6.75	.....
Medium to choice pigs (130 lb down)	8.50@ 9.50	9.00@ 9.75	9.25@ 9.75	.....
Stocker pigs	.....	8.00@ 9.00	9.00@ 9.50	6.50@ 7.50
SHEEP AND LAMBS.				
Medium to prime lambs (84 lb down)	11.75@14.00	7.50@ 9.25	7.50@10.00	7.50@ 9.50
Culls and common lambs	9.25@11.75	6.00@ 7.50	4.75@ 7.50	5.50@ 7.50
Medium to prime yearling wethers	9.50@12.90	5.50@ 7.00	6.50@ 8.00	5.00@ 6.00
Medium to prime wethers	6.50@ 9.75	4.00@ 5.50	4.50@ 7.00	4.50@ 5.50
Medium to choice ewes	5.00@ 8.00	3.00@ 5.50	3.00@ 6.00	3.00@ 4.00
Culls and common ewes	2.50@ 5.00	2.00@ 3.00	2.00@ 3.00	2.00@ 3.00
Feeder lambs	10.50@12.75	6.00@ 8.00	7.00@ 8.00	.....

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Stumping Powder and Dynamite

"The Best by Test"

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is best adapted for clearing land. Farmers everywhere find results the best and cost the lowest—for stumping, ditching and tree-planting.

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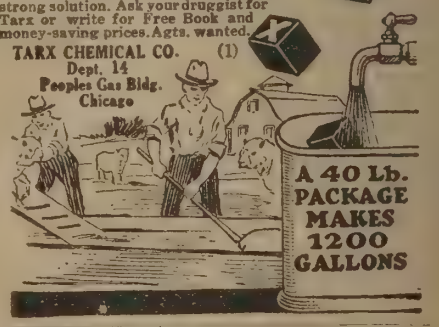
Tarx is a money saver for every user of dips and disinfectants. Just drop one small cube in a gallon of water and you have one gallon of the best dipping and disinfecting solution. You pay nothing for bottles, barrels or cans, nothing for waste or breakage or leakage. No freight on factory water which you can just as well add at home.

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by Parcel Post, Takes up small space. Will not freeze. Keeps indefinitely. Won't lose its strength. Makes any strength solution you need. Tarx positively destroys lice, ticks and other vermin.

Comes in 5 lb. package divided into 150 cubes—enough to make 160 gallons of strong solution. Ask your druggist for Tarx or write for Free Book and money-saving prices. Agts. wanted.

TARX CHEMICAL CO. (1)
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Peoples Gas Bldg.
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YOU'LL be surprized at the little cost at which you can make your house look distinctive. The window cut accompanying this ad, is known as the "Queen Anne" design.

For an additional $15 or $20 your whole house can have this classy window. Before you finish building send for our catalog. Rovig, 2201 First Avenue South, Seattle.

"Better Millwork."



"I have a pet rabbit, two cows and a little heifer named Pollyanna," says Edith Saunders. Edith also has some chickens and some of them will let her pick them up. She has two cats, too. The one named Tabbia does funny pranks. The big cat's name is Jamie. Edith lives in Kitsap county, Washington.

Seven-year-old Alice M. Jones is in the second grade at school. Her teacher's name is Miss Ristau. Ila and Ethel are her sisters and Eldred and Perry are her brothers. Her birthday is October 23. She says they have 36 hens. Alice lives near Eloika lake, in eastern Washington.

Ludvig Lundstrom is getting along well at school. He is in the fourth grade and his teacher's name is Mrs. Howard Barnes. Ludvig says she is a good teacher. This cousin was 9 years old January 30, 1922, and lives near the Yakima river in Washington.

We have another letter from the Stormes home in northeastern Washington. George Stormes says he has four calves, six cows, three cats and a dog for pets. He goes to school, but had a good time at a party the day he wrote, which was Saturday. August 25, 1922, he will be 12 years old.

"I was 10 years old January 31, 1922," writes Eunice Claudine Stormes. "My pets are three cats, one dog and four calves. I have two brothers, Clifford and George Stormes. I live one and a half miles from school." Eunic'e home is near the Kettle river, in northeastern Washington.

Edward Leppaner writes his first letter to Aunt Nellie. Here is what he says: "I am 8 years old and I am in the second grade. I like to go to school. There are three in my class. We have eight pupils in our school. Our teacher's name is Miss Mary Jane Walsh. I like her. I have two sisters and two brothers. My birthday is April 10." Edward lives in southern Klickitat county, Washington.

"My father takes THE FARMER and I surely do enjoy reading the stories and letters," says Clara Peterson of northwestern Washington. Clara is 10 years old. Her birthday is the 6th of March and she is in the fifth grade at school. She walks a mile and a half to school. Her pets are two dogs. Their names are Trixie and Sport.

For pet Dorothy Palmer has two cats—a big cat and a little kitten. Some time she may send us a picture of the big cat. (We should like that, Dorothy). There is good coasting in northeastern Washington, where Dorothy lives. She says they can coast a long ways and it is fun. She doesn't see how we can read all the letters we get from the cousins, but we think it is fun. This is what she writes about her school. "There are six kids in my class. I am in the sixth grade. I take arithmetic, spelling, language, history, reading, hygiene and geography. Arithmetic is the easisest and the nicest study." Dorothy will be 11 years old October 7, 1922. Her papa has taken THE FARMER ever since it has been published.

Lora Ditmore writes her second letter to Aunt Nellie. She lives on the Stilaguamish river, in northwestern Washington, and was 10 years old February 5, 1922. She says her school had a Christmas program December 23, 1921.

"My name is Marion Meyers and I live in the country," says a cousin in southern Clarke county, Washington. "I have two sisters and one brother. I am 10 years old and am in the fifth grade. I was born on leap year, February 29, 1912. I celebrate my birthday on February 28 all other years."



THURSDAY, February 9—Clara Beeman, 9 years old; Laura Brand, 11; Edwin Hall, 10; Florence Eleanor Martin, 10.

FRIDAY, February 10—Helen Berry, 11 years old; James Brooks, 10; Viola Johnson, 11; Margaret Plett, 10; Rex Rainbolt, 10; Muriel Stahly, 10.

SATURDAY, February 11—Elsie Fields, 10 years old; Linnea Gord, 11; Katherine Ottmer, 11; Fred Ritzschke, 11.

SUNDAY, February 12—Frank Neimela, 10 years old; Eva Pyne, 11.

MONDAY, February 13—Agnes Regan, 11 years old; Grace Shaw, 11.

TUESDAY, February 14—Jessie Manis, 9 years old; Golda Mae Myers, 11; Orla Kirchner, Glen Pate, 7.

WEDNESDAY, February 15—Sima Erickson, 10 years old; Goldie Green, 11; Edith Osborne, 10; Elizabeth Parrish, 10; Helen Sicilia, 11; Erma Sills, 9.

In each issue a list of the cousins' birthdays for the week will be published. At the close of each letter you write be sure to tell how old you are and when your birthday comes.

LETTERS WELCOMED BY AUNT NELLIE.

Among recent letters received by Aunt Nellie are those from cousins whose names follow. A few of these will be published each week in the regular edition of THE FARMER, and others will appear from time to time in The Junior Farmer:

Alvin Cline, Mary Lautenschlager, Norma Hubbard, May Davis, William Engbretson, Alice Harding, Mayme Mattila, Grace Grandstaff, Robert Osborn, Elenor Geneva Hagy, Virginia Hershey, Marguerite Edlin, Adna Evans, Bertha Osborn, Alice Larson, Joe Staadt, Lora Ditmore, Helen Paulsen, Lawrence Wade, Eunice Claudine Stormes, George Stormes, Esther Lund, Bernice Stichler, Leander Carlson, Glen Brem.

BEDTIME STORIES

By THORNTON W. BURGESS.

Copyright, 1919, T. W. B.

JERRY MUSKRAT'S SECRET DOOR.

Jerry Muskrat's new house was growing. Yes, indeed, it certainly was growing. With so many helpers to cut alder and willow shoots and bulrushes and to bring them to him, Jerry was kept busy building. It was no time at all before the walls of Jerry Muskrat's new house showed above the water, and then they grew higher and higher and higher.

Jerry Muskrat worked and worked and worked with might and main. You see, no one could help him actually build the new house, because no one but himself knew just how it should be built. He put the willow and alder shoots just so. He placed the rushes and grass just where they were needed, and then he kept them in place with mud.

"That's a queer-looking house," said Sammy Jay. "It looks to me like nothing but a pile of old rubbish."

"Just you wait," replied Jerry Muskrat, as he climbed up to place more bulrushes on the roof.

So Sammy Jay waited, for there was nothing else to do, and the house grew and grew and grew. By and by the roof was on and Jerry Muskrat sat on top of it to rest and eat his supper of fresh-water clams, which he had brought up from the bottom of the Smiling Pool. Sammy Jay cocked his head on one side.

"Pooh!" said Sammy Jay. "That's no kind of a house! It hasn't any door."

Jerry Muskrat just grinned and said nothing. He was too busy opening a clam



Jerry Muskrat didn't seem to mind.

for thought. Sammy Jay began to laugh.

"What are you laughing at?" asked his cousin, Blacky the Crow.

"I am laughing at Jerry Muskrat. He's built a new house and it hasn't any door. Ha, ha, ha!" replied Sammy Jay.

Blacky the Crow flew close down to Jerry Muskrat's new house and looked it all over; that is, he looked at all that he could see. Sure enough, he could find no door. Then Blacky the Crow began to laugh, too, and flew over on the Green Meadows to tell the little meadow people about the great joke on Jerry Muskrat—how he had built a house without any door.

But Jerry Muskrat didn't seem to mind, not the teeniest, weeniest bit. When he had finished his last fresh-water clam Jerry washed his face and combed his hair. His eyes twinkled as he shouted to Sammy Jay:

Some folks believe just what they see,
And some folks think that nothing else can be.
But some folks don't know all they might;
My door is hidden out of sight.

Splash! Jerry Muskrat had dived into the Smiling Pool. Two minutes later he was making his bed of soft grass in the upper room of his new house.

WATER
FOR THE WHOLE FAMILY 2c A DAY

Everyone wants the home convenience of "water at the turn of a faucet"—hot or cold—for drinking, bathing, laundering, and other needs.

This new plant is automatic, simple, wonderfully well made—specially designed for constant home water service from a shallow well, cistern or spring.

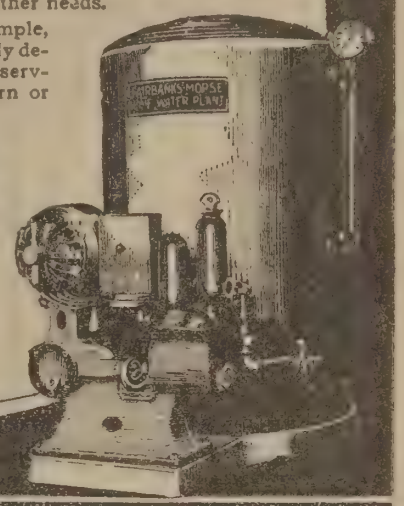
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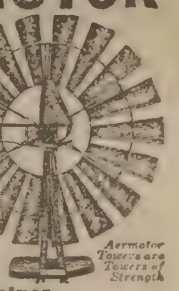
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Any windmill which does not have the gears running in oil is only half oiled. A modern windmill, like a modern automobile, must have its gears enclosed and run in oil. Dry gears, exposed to dust, wear rapidly. Dry bearings and dry gears cause friction and loss of power. The Aermotor pumps in the lightest breeze because it is correctly designed and well oiled. To get everlasting windmill satisfaction, buy the Aermotor.

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Field Seeds, pure with good germination. Pasture Mixture adapted to western soils. Lawn Grass, free from adulteration. Chick Food, scientifically prepared. Uinta Basin water white honey.

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Queen features are:

—self-regulating hot water heating system, preventing "drying out."

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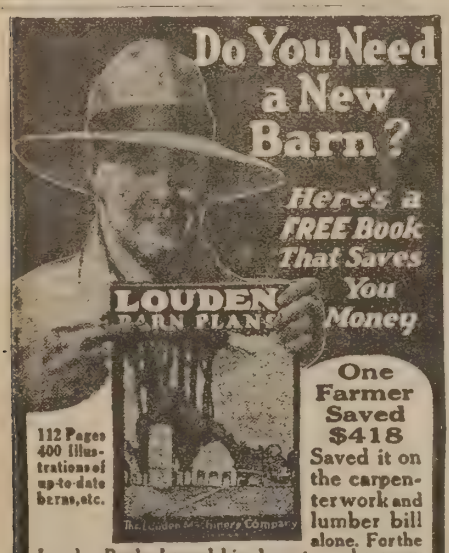
—pure copper boiler and radiator.

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Please send without cost, book checked.
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Cattle and Hog Sales

With the stronger tone that has appeared in the beef and pork markets the breeders who are planning sales this spring are expecting greater interest on the part of buyers than has been manifested at auctions for the last couple of years. Increasing strength in cattle and hogs, together with continued low prices for hay and greatly reduced prices for grain feed from even one year ago, has given a stimulus to the live stock industry, the like of which it has not felt for many months.

There are several important sales announced for the next two weeks. Today (February 9) at Sunnyside occurs the annual sale of the Yakima Valley Duroc Jersey association, at which a considerable number of swine consigned by members of the association will go to the highest bidders. On February 18 Hugh Walter & Son of Townsend, Mont., will offer 40 head of his well-known Poland Chinas at auction at Yakima. February 21 there will be held at the Spokane Union stockyards the largest single purebred swine sale in recent years, when the Western Royal Swine Breeders' association offers about 150 head of the four leading breeds consigned by breeders of the Pacific northwest. At all of these sales bred sows and gilts are offered, enabling farmers to get quick starts in breeding purebred swine. Many smaller sales are being held, and many breeders are disposing of much of their good stuff at private treaty.

There is marked activity at this time among the Shorthorn breeders. Four large sales are announced, though the date of the fourth has not yet been selected officially. The first will be held at Spokane February 22, when the Northwest Shorthorn Breeders' association offers about 25 bulls and 25 females consigned by breeders throughout the territory. This sale occurs at the time of the northwest live stock conference, as does also the association swine sale previously referred to.

On February 23 the Day & Rothrock Co. will hold its third annual sale of Hercules Shorthorns, when 16 bulls and 28 females will be offered. For the first time the sale will be held on Hercules farm at Sprague, previous sales having been held in Spokane. Among the offerings are several young bulls by the well-known herd sires of the farm, including Gainford Perfection, whose get has never been defeated in the get-of-sire class at any of the many shows where entered. One of the bulls offered is Hercules Snowstorm, a calf by Village Sultan and out of the grand champion cow, Hercules Matchless.

The third Shorthorn sale of the series is that on the A. D. Dunn place, near Wapato, in the Yakima valley, on February 24. At that time Mr. Dunn will offer about 40 head, including a few to be consigned by other nearby breeders.

The fourth sale will be an association consignment sale at Portland some time in March, the exact date not having yet been announced.

GUERNSEYS ON TEST.

A herd of Guernseys that is making good milk and butter records, after making a good record on the show circuit, is that of Wallace & Fordyce of Sunnyside, Wash. Edna of Mountain View, four-and-a-half-year-old, was put on test before she showed at the Pacific International, where she stood third in class. In November she produced 73 pounds of fat and in December 87 pounds, not officially reported when this was written, but according to the tester's figures. Two on test are two-year-olds and all are making good records. It is the plan to give records to the entire herd of about 25 head.

NEW WORLD RECORDS.

Among five new world records which will presently be announced by the Holstein-Friesian association are two in the 305-day division by Washington cows. Tyee Hiske Fayne, a junior 4-year-old in the herd of E. E. Heg & Sons of East Stanwood, has finished a test of 25,210.1 pounds of milk and 896.10 of butter.

Gerben Bracelet Bessie, a junior 3-year-old owned by T. J. Owens of Kirkland, has finished a 10-months' test with 761.4 pounds of butter from 23,429 of milk.

FARM BUREAU HOG SALE.

The purebred hog sale under the direction of the Whitman county farm bureau will take place February 17, in Colfax. This will be a sale of bred females of several breeds and includes consignments from G. O. Swales, Johnson; Frank Bush, Colton; Fred Hoffman, Albion; P. L. Sain, Oakesdale; J. H. McCroskey, Garfield; H. S. Curtis, Oakesdale; S. W. Shoemaker, Garfield, and J. E. Trimble, Garfield.

HOLSTEINS AND DUROCS.

S. L. Banks of Tekoa, Wash., announces February 28 as the date on which he will offer for sale at auction some 30 head of purebred Duroc Jersey swine and several young Holstein bulls and other live stock. The swine include both boars and females, the latter bred to farrow this spring. The sale will be cried by Colonel Harry C. Cranke of Moscow.



"Happy Days! I'll say!"

"MY brothers were fine upstanding youngsters. As for me—I was badly sweenied and nobody gave a hook-joint whether I became a plough-horse or a saw-horse.

I WAS swapped around 'till finally I got a regular boss who said, 'Sound as a nut, except that blamed sweeny. We'll soon get rid of that.' And he did with Gombault's Caustic Balsam".

GOMBAULT'S CAUSTIC BALSAM does the work better than firing. Hair will positively grow back natural color.

A positive remedy for Curb, Splint, Sweeny, Capped Hock, Strained Tendons, Founder, Windpuffs, Skin Diseases, Thrush, Spavin, Ringbone, Throat and Bronchial Troubles. Will not scar or blemish. Supercedes all firing and cautery.

Sold by druggists, or sent by parcel post on receipt of price $1.50 per bottle.

AS A HUMAN LINIMENT

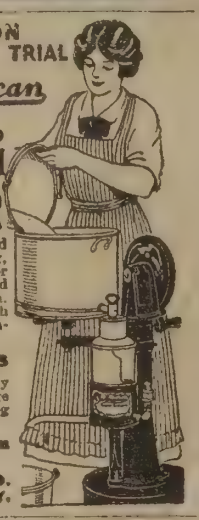
It is unsurpassed for muscular and inflammatory rheumatism, sprains, sore throat, burns, bruises, cuts, etc.

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GOMBAULT'S Caustic BALSAM

$24.95 Upward ON TRIAL

American FULLY GUARANTEED CREAM SEPARATOR



A SOLID PROPOSITION to send new, well made, easy running, perfect skimming separator for $24.95. Closely skims warm or cold milk. Makes heavy or light cream. Different from picture, which illustrates larger capacity machines. See our easy plan of

Monthly Payments

Bowl a *sanitary marvel*, easily cleaned. Whether dairy is large or small, write for free catalog and monthly payment plan.

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AMERICAN SEPARATOR CO.
Box 3137 Bainbridge, N. Y.

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Guaranteed One Year—Price 75¢

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Accept no substitutes—look for name on buckles

Nu-Way Strech Suspender Co., Mfrs., Adrian, Mich.

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Ship your cattle, hogs, sheep, fat or feeders, to the SPOKANE UNION STOCK YARDS, Spokane, Wash.

Market reports mailed on request.



SELDOM SEE a big knee like this, but your horse may have a bunch or bruise on his ankle, hock, stifle, knee or throat.

ABSORBINE TRADE MARK REG. U.S. PAT. OFF.

will clean it off without laying up the horse. **No blister, no hair gone.** Concentrated—only a few drops required at an application. $2.50 per bottle delivered. Describe your case for special instructions, and Book 8 R free. ABSORBINE, JR., the antiseptic liniment for mankind, reduces Painful Swellings, Enlarged Glands, Wens, Bruises, Varicose Veins; allays Pain and Inflammation. Price $1.25 a bottle at druggists or delivered. Liberal trial bottle postpaid for 10c.

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Breeders' Dept.

Work Horses and Mules
Young, Sound, in Good Condition

We are feeding for the spring market four loads of geldings and mares, from four to six years old, weight from 1200 to 1600 lbs.; mostly broken and fat, and two loads of good young mules, three to five years old. If interested, write or see

LACY BROS.
Ironside, Ore.

Mammoth Missouri Jack

We will sell, or will trade for Percheron stallion.
RIVER BANKS FARMS.
GRANTS PASS, ORE.

Big Type Duroc Jersey Hogs

One spring boar, gilts bred to Model Giant. Fall boars and gilts. Reasonable prices. Orion and Gano stock. Pedigrees furnished.
S. S. MORRISON, R. F. D. 2, Parma, Idaho.

Richards Champion Durocs

Last year we exhibited our Durocs at Oregon, Washington, Idaho, Utah and Montana fairs and stock shows, winning 326 prizes, of which 137 were champion and first prizes. A record never before equaled. We have 200 spring pigs, the best we ever raised. Write us your wants, we guarantee satisfaction. Meet us at the fairs.
Richards Live Stock Company, Virginia, Idaho.
"THE HOME OF CHAMPION DUROCS."

ROYAL RANCH DUROCS Have two or three real fall boars that will price from $25 to $35; sired by Royal Marker, a real boar of big type. Junior champion at Boise, 1921.
ROY SHUTWELL, Route 3. Boise, Idaho.

300 Bred Sows Duroc gilts, guaranteed in farrow, immune, delivered safe. Priced right; pedigrees recorded; freight prepaid on carloads.
Box W. F. C. CROCKER. Filley, Neb.

Great I Am 1st. Duroc-Jersey junior boar. Western Royal and Pacific International, 1921, at head of herd. Bred gilts and weaned pigs for sale.
CRESCENT STOCK FARM, Johnson, Wash.

Duroc Jersey Hogs of Quality

A few choice fall gilts and boars of Pathfinder and Great Wonder breeding. Priced to sell. Satisfaction guaranteed.
F. D. GANO, Sunnyside, Wash.

River Banks Better Berkshires

Order now. Bred gilts for spring farrow.
RIVER BANKS FARMS.
GRANTS PASS, ORE.

Berkshire Fall Pigs By a great son of Royal Dominator 4th. Extra good type, well grown. Prices reasonable. Booking orders for spring pigs. J. ALVA BULL, Ellensburg, Wash.

Pay for Berkshires in Pork

Improve your stock. You get the breeding hog now; pay when you get the pork. Write for plan.
F. M. CURTISS, Fruitland, Wash.

Big Type Poland Chinas

My herd boar won the past two years at state fair. 50 bred gilts, young boars, weaned pigs. Live and let-live prices. Satisfaction guaranteed.
H. J. STILLINGS, Hermiston, Ore.

Real Poland Chinas Headed by Victory Boy, son of Black Price, grand champion at Omaha. Spring pigs, bred gilts, proven sows. Write for prices.
A. C. PETERSON,
BOX 897. Port Angeles, Wash.

If You Keep Live Stock

you should also keep a careful record of your stock, milk records, breeding records, labor and feeding records, live stock accounts, general farm accounts and expense accounts for household and personal expenses. We will send you a record book covering all these matters, free. The supply is limited. Address
THE PACIFIC NORTHWEST FARM TRIO.
Dept. B., Review Bldg., Spokane, Wash.

Third Annual Sale

Hercules Shorthorns

at

Hercules Ranch, SPRAGUE, WASHINGTON

Thursday, February 23, 1922

16 Bulls 28 Females

With few exceptions these cattle are of our own breeding. We are holding the sale at our ranch so that you may have the opportunity of seeing our herd bulls and breeding females—the sires and dams and brothers and sisters of the cattle we will offer for sale.

The females include 4 cows with calves at foot, 10 bred heifers and 14 open heifers. These females are suitable foundation material for the most discriminating breeders.

We particularly call your attention to Hercules Snowstorm by Village Sultan and out of Hercules Matchless, the famous show cow which defeated Little Sweetheart, 1919 International Grand Champion, at the Western Royal in Spokane in 1920. We also call attention to Hercules Imperial by Gainford Perfection, Hercules Callant by Village Sultan, Knight Superior, Royal Marshall and other herd bull material of unusual merit. There are also a number of excellent range bulls. All in all, this is the

BEST LOT OF CATTLE WE HAVE EVER OFFERED

(Our entire herd is under federal supervision)

D. C. KEITH,
E. O. WALTER,
Auctioneers.

For catalog write
DAY & ROTHROCK COMPANY,
Spokane, Washington.

Sale Circuit—
Combination Sale, Spokane, Wash., February 22.
Day & Rothrock Sale, Sprague, Wash., February 23.
A. D. Dunn Sale, Wapato, Wash., February 24.
Northwest Live Stock Conference, Spokane, Wash., February 20, 21 and 22.

Western Royal Swine Breeders' Association

QUALITY SWINE SALE

WILL BE HELD AT THE

Spokane Union Stock Yards, Spokane, Wash.

February 20-21, 1922

150-HEAD-150

This Will Be a Quality Sale

We will have Duroc Jersey, Poland China, Chester White and Berkshire Hogs, all of the BEST TYPE and Breeding from the LEADING HERDS of the Northwest in this sale.

Now Is the Time

to

Pick a Pure Bred and Eliminate the Scrub

For information address W. T. O'Brien, Sales Manager.

1002 Old National Bank Bldg.
Spokane, Washington

You Are Invited to Attend the Northwest Live Stock Conference in Spokane, February 20, 21 and 22.

Hog Growers, Attention

I have accepted the secretary's job at the Ogden Chamber of Commerce and am closing out my live stock complete, including

Our Entire Show Herd of Duroc-Jersey Hogs

Also 100 head of bred gilts and sows, every one sired by a grand champion and bred to a grand champion—will farrow in March and April.
50 last September pigs—boars and sows.

Pedigrees Furnished With All Hogs

All stock guaranteed to please or return same and we pay express both ways and refund purchase price. All hogs cholera immune for life.
First come, first served. We will sell one pig or the whole herd. Write us your wants.

Prices Reduced in Order to Make Immediate Sale.

Richards Livestock Company

Jesse S. Richards, Mgr. **Virginia, Idaho.**

Sows of Quality From the Blue Ribbon Herd of Big Type Poland China Hogs

TO BE SOLD FEBRUARY 18, 1922
At the WASHINGTON STATE FAIR GROUNDS
YAKIMA, WASH.

Consisting of 40 Head of Bred Sows and Gilts

These sows are sired by such boars as **Big Bob Wonder**, the great breeding boar, owned by H. B. Walter & Son of Bendena, Kansas; **Big Ben Wonder**, the Grand Champion boar of the Missouri State Fair; **A Big Timm**, by **Big Timm**; **Montana Big Bob**; **W. W.**

W. W. sired more first prize winners than any boar we know of in the Northwest the last two years.

These sows will be bred to **Smooth Big Orphan**, five times grand champion in four different states the last two years; **Montana Giant Jr.**, champion boar at Helena, September, 1921, also junior champion at Ogden, Utah, January, 1922; **Montana Big Bob, Montana 4**, the best pig that Ed Fraizer raised last year, and **Liberator Leader 2d**, by **Liberator Leader**, grand champion boar of Billings, Mont., September, 1921.

Our catalog wil be ready to mail out by February 8. Any one wishing a catalog drop us a card at Townsend, Mont.

GEO. A. GUE, Auctioneer
HUGH WALTER, Owner
Townsend, Mont.

Public Auction of Registered Holsteins and Durocs

Tekoa, Wash., Feb. 28.
Included in this sale are 28 tried sows and gilts of the SENSATION blood lines: 2 tried sows by Western Orion, all bred to a good son of Giant Wonder I Am, twice grand champion of Iowa. Dam, an 800-lb. champion sow by PATHFINDER. Four real SENSATION boars, ready for service. Six Holstein bulls by Sir Fayne Pietertje Phebe, he by the great Findern Pietertje Fayne bull. One by Hazelwood Fobes Pontiac. Every animal guaranteed. Write for catalog.

HARRY C. CRANKE, Auctioneer.
S. L. BANKS, Owner. **Tekoa, Wash.**

SPECIAL OFFER—JERSEYS

Small herd of select jerseys, popular western blood lines, headed by a sire whose daughters are making him a silver medal bull. No culls. Priced for quick sale. A real opportunity. Communicate with—

K. HANNEMAN, Corbett, Ore.

CAN YOU USE THIS HOLSTEIN BULL?

Sire: Sir Johanna Fayne Bonheur De Kol No. 188160, whose dam made at 2 years, milk, 22.449 pounds; butter, 859; at 3 years, 7 days, milk 649 pounds; butter, 32.89 pounds; 30 days, milk, 2727.9 pounds; butter, 130.37 pounds.

Dam: Lucy Freela Pontiac No. 256613

6 years, 365 days—milk, 26,661.6 pounds; butter, 1056.5 pounds.

A handsome, straight, long-bodied fellow; half black, half white; 13 months old; weight, 1100 pounds.

LET US TELL YOU MORE ABOUT HIM.
ARP'S DAIRY, EUGENE, ORE.

ABERDEEN-ANGUS

bulls will mature your steers earlier, give them a heavy, thick and low set conformation, dehorn them and add to their quality so that they will top the market every time. We have a wonderful lot to select from, both range and herd bulls, at prices which will move them.

CONGDON & BATTLES.
P. O. BOX 275. YAKIMA, WASH
Write for prices and literature.

Milk Beef

Oakleign Stock Farm Shorthorns

204 S. First St., Medford, Ore.
Milking Shorthorns. Several record cows—50 head in herd.

High Production Jersey Bulls

Sired by a son of the silver medal bull, St. Mawes of Ashburn, sire of Lulu Alphea of Ashburn, ex-world record senior yearling, 994 lbs fat. Dams all have good register of merit records. Priced for quick sale.

J. H. TAYLOR & SON, **Montesano, Wash.**

Arrorok Shorthorns

Herd headed by True Baron, 1st premium Idaho state fair, 1918-1920. A superb collection of Scotch breeding matrons. Write your wants in range and herd bulls.

ARROROK HERD FARM. **Boise, Idaho.**

St. Mawes Strain Jerseys

One yearling bull and three bull calves from high producing R. of M. dams. Unusual quality at low prices. Herd sire is backed by four gold medal ancestors.

P. O. POWELL & SON, **Monmouth, Ore.**

IDABOIS FARMS SHORTHORNS.

King Lavender, the bull that topped the Portland sale in 1920, heads a herd of superior Scotch breeding matrons. Write us for range and herd bulls. A great collection to choose from.

O. O. HAGA, **Boise, Idaho.**

629 LBS. FAT AS JR. 2-YR.-OLD

is the record of the dam of a young Jersey bull, ready for light service, that we are offering. Write today for price and full particulars.

J. J. VAN KLEEK & SONS,
BOX P, BEAVERTON, ORE.

Hampshires for Sale

Tried sows, last April gilts, Sept. pigs, both sexes, unrelated.

J. M. FRUITTS, **Cambridge, Idaho.**

AYRSHIRE BULL CALF

From advanced registry dam with record for last December 1830 lbs. milk, 71.18 lbs. butterfat. Priced very reasonable.

EARLCREST STOCK FARM,
EAGLE CREEK, ORE.

HOLSTEIN-FRIESIANS

Well bred heifers, bull calves. Herd sire brother to Queen De Kolb Bonheur Pontiac (1270 lbs. butter, 31,000 lbs. milk). 7th highest cow in world for milk production. All our cows are bred to him. All dams on official test. Herd on accredited list. Also have few bred Poland China gilts, good breeding.

ALOYS SCHULER, **New Plymouth, Idaho.**

Broadmead Aberdeen Angus

Ten bulls, ready for service, now offered at special prices and terms. Also a number of promising bull calves, some that should make show winners or high class herd headers. Can supply your needs for either sex.

J. A. SCOLLARD, **Chehalis, Wash.**

Send for Free Booklet

"Some Suggestions to Live Stock Advertisers," outlining the practices of successful men of long experience. Helps in determining how much to spend, the mediums to select, preparing advertisements, handling inquiries, the use of photographs, etc.

Write today.

THE PACIFIC NORTHWEST FARM TRIO
Dept. L. **Spokane, Wash.**

When you write to advertisers be sure to state that you saw their advertisement in this paper.

Glance over the bargains on the "Want Ad" page.

Invest in farm land or improved farms NOW. Our "Want Ads" offer some A1 opportunities. Read them.

WIN $5000

Big Picture FREE on Request



Bank Guarantee

State Bank of Philadelphia
PHILADELPHIA PA

TO WHOM IT MAY CONCERN:

Mr. E. J. Reefer has deposited $10,000.00 with this bank as a guarantee that he will pay all the prizes awarded by the judges to the winners of this puzzle contest. This bank guarantees Mr. Reefer will do as he agrees.

STATE BANK OF PHILADELPHIA

F. L. Mouson
Cashier.

THE PRIZES

Winning Answers Will Receive Prizes as Follows:

	If No 'More Eggs' is ordered	If $1 worth of 'More Eggs' is ordered	If $2 worth of 'More Eggs' is ordered	If $5 worth of 'More Eggs' is ordered	If $10 worth 'More Eggs' is ordered
1st Prize	$40	$300	$600	$2,000	$5,000
2nd Prize	20	150	300	1,000	2,500
3rd Prize	10	75	150	500	1,250
4th Prize	10	50	100	250	625
5th Prize	10	30	60	150	375
6th Prize	6	20	40	100	250
7th Prize	6	15	30	80	200
8th Prize	6	10	20	60	150
9th Prize	4	10	20	40	100
10th to 15th	4	10	20	40	100

Observe These Rules:

1. The contest is open to every man, woman, girl or boy living in America, except employees or relatives of employees of E. J. Reefer. There is no entrance fee of any kind.

2. You must use only one side of paper. You must number your list of names in regular order—1, 2, 3, etc. Your full name and address must be written on each page in the upper right hand corner. Use a separate sheet for anything you may wish to write outside of your list of names and your name and address.

3. English words only will be accepted as they appear in the English dictionary. Obsolete words will not be counted. Both the singular and plural of a word will not count; either one of them may be used.

4. Compounds or words which are made up of two or more complete English words cannot be used.

5. The same spelling of a word will be counted only once even though it is used for different articles or objects, or parts of them. Each article or object can be given only under one name.

6. Two or more people may co-operate in answering the puzzle. However, only one prize will be given to any one household. No prize will be awarded to more than one of any combination outside of the family where a number—two or more—have worked together.

7. If a contestant sends more than one list under the same name, an assumed name, or a pre-married name then all lists of such contestant will be disqualified. If more than one list is sent by any group or by any members of the same group who have co-operated in the preparation of such lists, then all lists of such contestants will be disqualified.

8. All answers must be received through the mail by E. J. Reefer, 9th and Spruce Streets, Philadelphia, Pa., and must be post-marked by Post Office closing time, March 11, 1922.

9. The first prize will be awarded for the answer containing the largest and most nearly correct list of the names of visible objects and articles beginning with the letter "P" shown in the picture. No other consideration, such as neatness, style or handwriting, will have any bearing in making the decision.

10. The full amount of any of the prizes will be awarded to each contestant in the event of a tie.

11. The decision will be made by three judges entirely independent of and having no connection with E. J. Reefer. They will judge the answers submitted and award the prizes at the end of the contest. Participation in the contest carries with it the acceptance of the decision of the judges as final and conclusive.

12. All answers will receive full consideration whether or not "More Eggs" is purchased. At the close of the contest, when all lists have been graded, the names of the prize winners will be announced and the list of words will be sent upon request to any participant who sends us a stamped, addressed envelope.

How many objects beginning with "P" can you find in this picture?

Open to Everybody

Come on. Join in the big puzzle game. Your chance to win $5,000 or one of the 14 other big cash prizes. Easy and lots of fun. All you have to do is write down the names of the objects beginning with "P" on this picture and send your list in to us. If your list is largest and nearest correct, the judges will award you First Prize; if your list is second largest and nearest correct, you will win Second Prize, etc.

Get a pencil and paper. Start right now. Find all the objects in the picture beginning with letter "P", such as "pistol", "picture", etc. See how easy it is. Nothing is hidden. You don't have to turn the picture upside down. Every object is in plain sight. You can find them all. Start right away.



Costs Nothing to Try!

All you have to do is send in your list of "P" words. If the judges decide that your list is largest and nearest correct, you will win First Prize of $40 even if you don't send in an order for "More Eggs". But if you order $1 worth of "More Eggs" and you also win First Prize, you will get $300. If you order $2 worth of "More Eggs" and if your list of of words wins First Prize, you will get $600. And if you order $5 worth of "More Eggs" and your list is awarded First Prize, you win $2,000 — but if you order $10 worth of "More Eggs" and your list is awarded First Prize, you will win $5,000.

Win All You Can

You don't have to send in an order for "More Eggs" in order to enter this contest. You can win $40 as First Prize even if you have sent in no order. But if you ordered $10.00 worth of "More Eggs" the same list would win $5,000.00 for you. A difference of $4960.00. Which prize do you want?

Get Busy NOW

Today! Get your list in early. Send your order for "MORE EGGS" at the same time. Qualify for the biggest prize—for the $5,000.

E. J. Reefer Dept. 4892. **9th and Spruce Streets Philadelphia, Pa.**

Additional Pictures Sent Free on Request

Copyright 1922, by E. J. Reefer

Special Offer on "More Eggs" During This Puzzle Contest

2 One Dollar Pkgs. for $1.00
5 One Dollar Pkgs. for $2.00
20 One Dollar Pkgs. for $5.00
50 One Dollar Pkgs. for $10.00

No goods bought during this puzzle contest are subject to exchange, refund, or approval.

THE WASHINGTON FARMER
ESTABLISHED 1894
SPOKANE. SEATTLE.

Prize Gilt Will Help Clear Stump Farm

By HORACE ADDIS

It was the desire of the WASHINGTON FARMER, when it offered prizes for the best letters on "The Hog as a Farm By-Product in Washington," to benefit the recipient of the prizes, as well as to emphasize the value of a few hogs on nearly every farm. Perhaps nothing could have been more fortunate than the winning of the gilt by a man who is struggling to get a start in farming, with small capital but an undaunted courage, a wife willing to share his lot and do her full part, and a family of growing children. These are assets which count more than mere dollars in the struggle of life.

Following instructions from the head office to go and see the winner of the gilt, ascertain his choice and complete arrangements for the delivery of the pig, I was driven by auto out from Rochester, in Thurston county, on the morning of January 29, four miles to the foot of a hill, where we "parked" our machine and walked the remaining three-quarters of a mile to the farm of Mr. and Mrs. M. A. Hall. The night had been quite cold and a very slight thawing of the ground made it hard for the "flivver" to make the grade.

The top picture herewith gives a fairly good idea of the farm we found. Mr. Hall bought 40 acres for $1800, and then purchased nine and a half acres more of broken hillside for $250, to get an outlet to the public road. His three-room house is shown in the picture, while further back is a small barn. Out of sight behind the house is the chicken house. It shelters 25 good, young Brown Leghorn hens, of which Mrs. Hall is very proud, and which yielded a nice profit last year, and promise to again this season, in spite of the fact that, regardless of all precautions, a "varmint" will occasionally catch one of the chickens. The house and barn were on the place when purchased. The poultry house Mr. Hall built himself. He also bought a fine type Brown Leghorn cockerel at Colfax, Wash., to head the flock, paying five dollars for him.

Mr. Hall has a farm of mostly good land. It is all fenced, a part of it with logs and brush which turn stock as well as a more expensive material. When he moved on the place a year ago, two acres were cleared, ready for the plow. On this land he grew potatoes, mangels and a little garden truck. He worked for a logging and mill company, whose mill is a mile and a half away, and from his wages he is paying for the farm by the month. All his spare time is given to clearing land and working on the place. This year he will have five acres in cultivation. Potatoes and garden will be grown on some of the new land and some oat hay will be raised.

The equipment of this farm, besides the hardened muscle and willing minds of the Hall family, is a grade Holstein cow, a light hack and one horse, besides the poultry already mentioned and miscellaneous small stuff.

Four years ago Mr. Hall's home in the town of Shelton, Wash., was burned, with everything in it. He had been working for a logging company, but went to Seattle, where he worked in a shipyard, during the war.

He understands the use of powder and the handling of stumps. He says he has demonstrated that the cheapest way to remove stumps is to use powder. He blasts, not excessively, and then pulls the stump pieces out with a horses and block and tackle.

Mr. Hall was born 35 years ago and was raised on a farm in Snohomish county. He was on a Yakima valley farm for five years. Mrs. Hall is five years his junior and they have five children, the oldest 12 years. The three oldest are boys, the other two, girls. The three boys were in school when I was there, hence their not being in the picture.

Optimism, courage and determination to overcome obstacles seem to be the ruling spirit of both Mr. and Mrs. Hall. Not one word of discontent did I hear while at the Hall homestead. Big fir stumps to combat seemed to be taken as a part of the battle of life, to be met the best they could, just like the disaster of a fire, or any other seeming adversity.

Mr. Hall wants to breed O. I. C. hogs. First, he likes them best and believes he can make at least as much from them, either for meat or breeding stock. Then, he has two neighbors breeding O. I. C.'s, and he has the community idea. He hopes to trade boars and make some saving that way.

As stated last week he was presented with a purebred gilt secured by The Washington Farmer from the herd of O. O. Phelps, of Dryad, Lewis county. She will bring pigs this spring

Continued on page six.

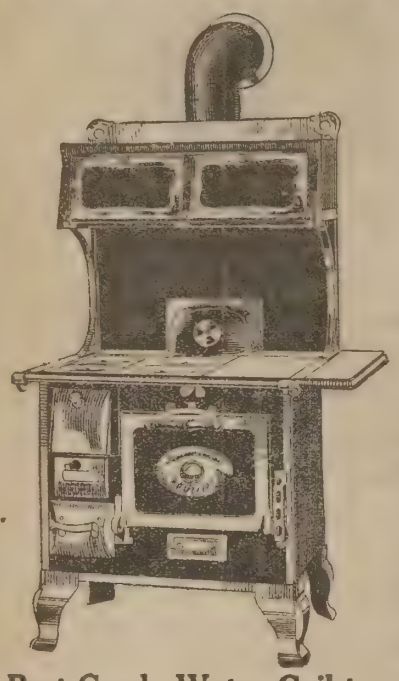


The upper picture shows what The Washington Farmer camera saw of the Hall farm on a pretty dark day for taking pictures. The lower one is not, to be sure, the prize won by the Halls, but possibly it suggests the dream that they have, and which THE FARMER hopes will be realized this spring when the purebred O. I. C. gilt that they won brings her litter of pigs.

You Can Now Buy

The OHIO Steel Range

at the new Low Price



$69.00

(We Pay the Freight)

THE four-hole Ohio Range (exactly as pictured) with 17-inch oven, now quoted at the lowest price in years!

Frederick & Nelson have sold the Ohio over a long period of years and recommend it to you unreservedly. It is a great Range value at the new price.

Many know it as the *"8-minute"* Range. The oven is at baking heat 8 minutes after you touch a match to the kindling. For baking results the Ohio is unexcelled. For fuel economy it is famous (burns wood or coal).

Best Grade Water Coil to fit this range is priced at - $3.00

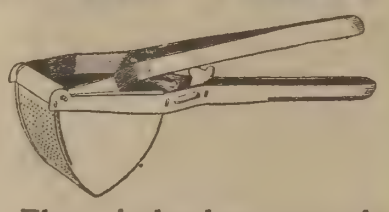
The OHIO is the best Range investment we know today, at the new price—$69.00.

Please note that WE PAY THE FREIGHT on furniture, metal wares and other bulky goods, when purchase amounts to $5 or over, to any railroad station or steamboat landing in the State of Washington.

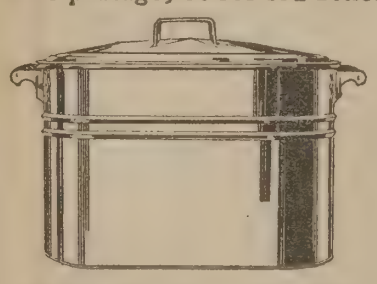
Other Splendid Values for the Woman of the House

Family Size POTATO RICER 25c

As Pictured



A very useful implement for the kitchen. Rices potatoes, extracts fruit juices and is useful in a score of other ways. Eleven inches long; strongly constructed of galvanized steel and heavy tin; nothing to get out of order. Exactly as pictured. *(Remit 6c for 1st and 2nd zone postage; 8c for 3rd zone.)*



Copper-bottom LAUNDRY BOILER $2.15

As Pictured

Choice of two sizes: 22¼ and 23½-inch. Strongly constructed Boilers, exactly as pictured, with copper bottom and fit-in cover.

(Remit 24c for 1st and 2nd zone postage; 44c for 3rd zone.)

Improved Model FOOD CHOPPER - $1.45

As Pictured



Five extra cutting knives enable this Chopper to be used to good advantage in preparing a wide variety of dishes. A very strongly constructed Chopper. A great improvement is the clamp which enables the "barrel" or main part of the Chopper to be completely opened up for cleaning.

(Remit 9c for 1st and 2nd zone postage; 14c for 3rd zone.)

Address Mail Order Department A

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SEATTLE, WASHINGTON



Home Builders --Save Money

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Ready Cut Houses and Their Lesson

From the Olympia Daily Recorder

The work the six Anderson brothers of Tumwater are doing in the manufacture of ready cut houses, as sketched briefly elsewhere in today's Recorder, has significance for Olympians who look expectantly to the future. These men have something good for the years to come, something which avoids waste of natural products, which opens the way for other natural development and which will spread the name of Olympia and Tumwater far afield as the home of industry whose products promise to be sold everywhere. This is the sort of industry most appropriate and most needed in the northwest at this time. It is the "cleaning up" type of industry, the industry that conserves and leads to other possibilities of conservation, following the larger timber industry which hews the way in a new land and must of necessity waste much as it passes. The ready cut house idea and the veneer plant are two which naturally present themselves in transition between the lumber mill which conquers the greater forests and the factories for ladders, clothes pins, handles for tools, furniture, matches, toothpicks, boxes, kegs and barrels and woodenware of all sorts.

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For Good Farming, Attractive Country Homes and Happy Country People

"Mr. Gompers Catches a Tartar"

Labor Leader's Attitude Causes Vigorous Action at Recent Conference

Wall street is waking up to the breadth, sanity and ability of farm leadership. Herewith is given an editorial from the Wall Street Journal of January 31. This editorial refers to an exceedingly interesting debate at the final afternoon session of the national agricultural conference at Washington, D. C. The debate was over the adoption of the report of the subcommittee on railway transportation of which Howard Leonard was chairman. Mr. Leonard is president of the Illinois Agricultural association and is also a member of the executive committee of the American Farm Bureau federation. After the reading of the report Samuel Gompers, president of the American Federation of Labor, contended that labor has been deflated already and at once moved to strike out the alst paragraph of this report, which was as follows:

"In conclusion, we insist that the railroad corporations and railroad labor should share in the deflation in charges now affecting all industries. This is essential to the restoration of normal conditions in agriculture and it is essential to the welfare of the entire community. We earnestly appeal to those in authority to take such action as may be necessary in order to accomplish that result."

Here is the Wall Street Journal editorial:

Perhaps without intending it, Mr. Gompers has performed a real service to the country. Farmers attending the agricultural conference will go home with a clearer idea of the cause of high freight rates than they ever had before.

One of the committee reports laid some of the present burden on railroad labor. The labor union head took the platform and made a bitter speech. Later Mr. Gompers declared that all labor would regard the adoption of the report as an "unfriendly act," and challenged the accuracy of the statement ascribing an undue proportion of operating expense to labor. The result must have been surprising to him, as indeed it was to many onlookers.

Farm work is not generally looked upon as conducive to oratory, but few are the conventions that have witnessed more real eloquence than was exhibited in the ensuing debate. Many of these speakers were the real dirt farmers, but they were as keen in debate as trained speakers, and better, for they know and felt their topic. They were eloquent because they were conversant with the facts, and spoke to the point in a clear and convincing manner. They were men of independent minds, thinking for themselves, dealing in facts and not in "slogans."

These farmers proceeded to smash the labor arguments. They quoted from the interstate commerce commission reports to show that 60 per cent of the gross operating expense went to labor. They showed from official records that the railroad labor averaged $1640 a year, while the farmer, with his whole family working 13 1-4 hours a day, has averaged $460.

Concrete instances were given of what high railroad labor costs the farmers. And then their attitude was expressed without regard to the feelings of Mr. Gompers. "We will not be called upon to justify our actions to a local boilermakers' union," said a Kansas man, "but we must go home and justify ourselves to the farmers who, with their families, work three days of 14 hours each to make enough to pay the boilermaker for one day of eight hours."

Instead of being moved by the Gompers plea for the "5,500,000 unemployed men" the farmer delegates turned the tables and showed that labor exactions were the cause of unemployment. One said there could be no general prosperity while the farmer's purchasing power was curtained. "Give us a living wage for our work," said one, "and we will underwrite the country's prosperity and there will be no unemployment."

These speakers among the farmer delegates have sown good seed. The farmers, as individuals and untainted by populism or socialism, are independent men who want to think for themselves. They are not the kind who will take just what the labor leaders and the politicians hand out to them. They differ from the disciples of Mr. Gompers. The farmers are beginning to think.

L. J. Tabor, state commissioner of agriculture in Ohio, was one of the speakers in this debate. He declared for the adoption of the report "because it is fair, because it is square, because it presents a proposition that inevitable adjustment must come. We are not asking one class to bear those adjustments; we are asking all to share equally."

Dean E. J. Iddings, of the Idaho college of agriculture, especially brought out the point that "the organized labor here in this country makes an announcement of five million unemployed and claims that the laborer who works today and is idle tomorrow has to be paid for the idle days."

Probably no one in the conference summed up the situation more pointedly than President J. R. Howard of the American Farm Bureau federation, who said:

"I am here as an Iowa farmer and I hold a brief for about 6,000,000 farm laborers of this country. I have been an employer of labor for years. I want them to have a living wage. They can not have it at the price which I get for my product from my Iowa farm. That laborer on the farm, and there are 6,000,000 of them, is entitled to just as good as the laborer in the city. I know they haven't today and it is not in prospect until we have a change in things. What the farmer wants is to get our economic system back into the balance. It is out of balance. Deflation hit us—it hit us suddenly. It is a crime the way it hit us. Our prices went down. I doubt if they will ever come back to where they were, but there must be a meeting of the earning powers of the various industries of our community.

"It is true that railroad labor is highly paid in comparison with other labor. The matter was discussed this morning. Last week I made a careful investigation at the railroad labor board in Chicago, taking the month of August, with a total wage paid to labor for that month and dividing by the number of employees, and I found that the average railway laborer for the month of August received $135, or a total of $1620 per year, as compared to $400 or $500 for the laborer on the farm. The farm laborer must buy the same clothing, food, shoes, as the railway laborer.

"We want to get a balance, as I said before, as between the railroad, industry and agriculture. Until we get that balance things won't be any better. The great amount of unemployment of labor has been referred to. Farm prosperity and nothing else will bring about reemployment of labor. The farmer has the biggest contract that was ever made, that of feeding 110,000,000 people with American standards of living and American ideals. You give us a reasonable return upon our investment and a reasonable wage for our labor and we will underwrite the prosperity of American business."

Thomas C. Atkeson, representative of the National Grange at Washington, D. C., summarizes this important debate:

"Half of the Friday forenoon and afternoon session was taken up with an effort by Samuel Gompers and a few friends who showed themselves among the delegates, to forestall and prevent references in various committee reports to frank statements that the high wage level of union labor must come down to meet farm wage levels and farm product price levels. levels. Gompers won a temporary victory by getting referred back to Dean Russell's committee on costs, prices and readjustments a resolution so phrased that it called on labor to deflate, and not on capital.

"Late in the afternoon the Russell committee re-reported the resolution, reworded, but not weakened in any particular, charging that prosperity could not come back until 'labor and capital had accepted their full part in price readjustment.'

"Prior to this Gompers had moved to strike out of the transportation committee report these words: 'In conclusion we insist that railroad corporations and railroad labor must share in the deflation in charges now affecting all industries.'

"In the debate following, but a single voice was raised to support his motion. Farm leader after farm leader from Thompson, the veteran granger from Maine, to Howard, the farm bureau president, from Illinois, warned Gompers that his position was untenable. His motion was defeated without a division, but the volume of votes indicated less than a score of votes for, and 200 against.

Another Veterinary Series

On page 10 of this issue appears the first article in the sixth series of Dr. E. E. Wegner's presentation of important veterinary subjects for readers of this paper. The new series will take up the important subject of "Infectious Diseases." This is one of the most important subjects with which the farmer must contend. Dr. Wegner, who is dean of the college of veterinary science at the State College of Washington, is a past master in veterinary science, and is unusual in his ability to so describe ailments, both as to causes and remedies, that any one can understand and benefit from his advice. A weekly study of his articles would give a reader a fund of invaluable information. Those who clip these articles each week and paste them in a scrapbook, properly indexed, will have available for instant use practical information that may save the lives of valuable animals that would otherwise be lost, or prevent injury to those that might otherwise become useless. Do not fail to read this first article in series six, on page 10, this week.



Dr. Wegner.

Inland Empire Dairymen Meet

"We hung on, kept a stiff upper lip and have won out," Vice President Charles Wagner told producers last Saturday in closing a recital of the inside facts of the present "milk war" in Spokane between the distributors and the Inland Empire Milk Producers' association. The statement was made at the association's annual meeting, when Mr. Wagner was defending the board of directors and the management for their method of conducting the fight against the big distributors since the producers' byproducts plant opened in Spokane last August.

Mr. Wagner admitted that the association had been losing money while selling milk at 10 cents per quart, but declared that it had been necessary in order to win the battle.

"When we entered this fight it was under instructions from you to whip the distributors into line if it took every dollar we had," Mr. Wagner told the dairymen present. "We have won, and the cost is reasonable."

He said that if the management and the directors had told the members of the association exactly what the situation was the information would have leaked out and have been used by the big distributors as a further weapon with which to break the association if possible.

It was brought out at the meeting that the price paid to the producers by the association for their milk prior to December was $2.46 per hundred or more; that the price was cut to $2 for December and to $1.75 for January. Referring to these decreases, Mr. Wagner declared that they were made in order to absorb the losses that had been accumulated and that the February checks should be almost back to normal.

The statement by Mr. Wagner was precipitated by the declaration of Silas Cook, a former organizer for the association, that the management was paying the producer for his milk one month with the money received from the milk of the following month.

Under present arrangements the large milk distributors in Spokane, with one exception, are under contract to buy nearly all of their milk from the producers' association at a price of $2.85 per hundred pounds net to the association. This agreement was entered into three weeks ago, following which the price of milk in Spokane was raised from 10 cents to 13 cents per bottled quart, delivered. Thus the milk producers, for the first time in the history of the Inland Empire associations, have something to say about the price received by them for their milk.

Manager A. A. Newbery reported that since the milk plant was put into operation last August 6,488,000 pounds of milk had passed through it up to February 1, at a cost of operation and management of $27,286. Sales of milk totaled $158,812. He said that the amount of milk handled had steadily increased from 220,117 pounds in August to 1,612,928 pounds in January. He reported a membership of 725 producers, as against only about 300 when the association decided last June to establish its own milk plant in Spokane.

Cut Tractor Prices

One of the farmer's "five points," as presented to the recent agricultural conference in Washington, D. C., and to President Harding, was that there must be a price leveling between what the farmer sells and what he must buy. It is gratifying to discover occasional industries in which this leveling process is already under way.

Recently the Ford company announced a reduction of $230 on the Fordson tractor. Comes now the International Harvester company with the announcement that they are making a corresponding reduction. As reported before, the Fordson tractor was $625 f. o. b. Detroit. It is now $395. The factory price of the 8-16 horsepower International tractor, with regular wheels, clutch pulleys and angle lugs, has been $900. It is now announced as $670. The $900 10-20 horsepower Titan tractor, with regular wheels, friction clutch pulley and angle lugs, is now quoted at $700.

The International company apparently desires to go the Ford concern one better, for it offers free to every farmer who purchases one of the Titan tractors for delivery on or before May 1 a three-bottom P. & O. plow. A two-furrow plow goes with the smaller tractor. If the purchaser already owns a suitable plow he may obtain instead a tractor disk harrow.

To what extent these reductions indicate a general reduction in the price of farm machinery is uncertain, but THE FARMER repeats with emphasis, its "first point"—that prices must be leveled before prosperity can return to this country.

Livestock Conference

The annual northwest live stock conference will be held in Spokane next week, beginning Monday morning, February 20, and closing Wednesday evening. A program of unusual interest is announced, including speakers of prominence and subjects of importance. Among the speakers will be Lester Armour of Chicago, whose subject will be the general live stock outlook. Of special interest will be the address by President J. A. Scollard of the United Dairy Associations of Washington, an association operating largely in western Washington and one of the most successful of its kind in America.

On Tuesday, February 21, will occur the first annual swine sale of the Western Royal Swine Breeders' association, when about 70 head, representing nearly all of the common breeds, were offered. On the following day, Wednesday, will occur the annual consignment sale of the Pacific Northwest Shorthorn Breeders' association. The day following the conference there will be held at Hercules farm, near Sprague, Wash., the third annual sale of Hercules Shorthorns by the Day & Rothrock company.

Those interested in the purchase of Shorthorn breeding stock will have a three-sale circuit at this time, as the sale of A. D. Dunn at Wapato, Wash., in the Yakima valley, occurs on the next day, February 24.

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Should Grow Better Potatoes

There is a great opportunity for the farmers of this state to produce a higher quality of potatoes than they frequently do. Unfortunately, the average farm potato patch is seldom entirely free from disease of one kind or another. Very often it is seriously affected, cutting down the yield and reducing the quality of the product.

The extension division of the State College of Washington is doing a great deal to assist the farmers of the state in removing potato troubles from their fields. The college extension plant pathologist, Mr. Zundel, is soon to begin a state-wide campaign, during which he will visit many sections of the state and bring before the local farmers the information necessary to improve their potato production. Methods of selecting seed as nearly disease-free as possible will be illustrated and methods of seed treatment emphasized. Later many field demonstrations will be held in which the symptoms of disease in the plants will be described and illustrated and the method of rogueing made clear.

The farmers of the state, whether they are growing potatoes merely for their own use or for market, should cooperate in this movement and thereby benefit from it.

Orchard Clean-Up Campaign

The orchard clean-up campaign that is being carried on in different parts of western Washington is being met with favor by orchard owners whose trees need attention, according to Charles L. Robinson, state supervisor of horticulture.

In most cases the rundown condition of the orchard is due to a lack of proper equipment for spraying and pruning.

In many cases, however, it is due to a lack of knowledge of the proper methods of caring for fruit trees.

The orchard in western Washington is usually a backyard affair or it is planted on a city lot. Where it is not the main issue such as is the case in eastern Washington, there is apt to be more neglected orchards.

C. A. Huntley reports that he is well pleased with the attitude of the orchardists wherever approached on the subject, and all have been more than willing to do their part of the cleaning up when the plan is outlined before them.

Cleaning Up Fairs

By refusing to pass a resolution which indorsed games of chance at the state fair and other fairs, the Washington wool growers, at their annual convention, have done themselves great credit. It is true that the resolution, as presented, urged the plea that Washington made blankets could be disposed of through the game of chance. But this deceived no one.

The principle is the same, whether the thing gambled for is a blanket, a kewpie or a box of cheap candy. It is principally children and young people whose characters are in the formative periods who are caught by the alleged chance to get something for practically nothing. The "chance" is generally a long one, even if the game is on the square, often less than one to a hundred. They simply give a band of grafters an opportunity to prey on the public and detract from the high character of the fair. They center much of the interest in these demoralizing games when it should and could just as easily be drawn in the direction of the live stock and agricultural exhibits and clean sports.

A Live Farm Bureau.

A live county farm bureau can no more exist without aiding its members in a business way, cooperatively, than can a live man enjoy health without a sufficient supply of wholesome food, and wholesome food for the county bureau means dollars and cents in the pockets of its members as well as the bread of better production methods in their minds.

It is not at all surprising, therefore, to find county farm bureaus entering into pooling arrangements for purchasing supplies. For example: Fifteen community pool leaders met the other day with County Agent Patton and T. S. Brown, secretary of the Spokane county farm bureau. It was decided to pool orders for many products required on the farms this year. The campaign will start immediately by pooling orders for spray oil for nearly $20,000. Orders amounting to more than $200,000 on various supplies will be pooled.

Secretary Brown says: "We will later pool orders for the strawberry supplies. We can already see that about 18 carloads of spray oil will be required. This order will be the first one. The project heads are sticking together, as they can see it is to their advantage. Where we get the prices we think are right, we will purchase from dealers here."

Part of the Plan

"All partial evil is universal good," Pope's line reminds us. While some of us are fretting because of the never-ceasing drift of the youth of the farm to the city, where its vigor seems to rapidly disappear, Emily Hoag, economist, has written: "The transplanting of youth from farm life to city life appears to be not only a process highly essential to national virility, but an inevitable process."

It well may seem that this constant tide of new, strong, clean blood, so vitalizing to the city's life, is not a total waste when its vigor is tempered by the infusion of the blood of the cities; that the stronger, fresher blood can not but leave the dominant influence for a time, in the amalgamation of the two currents of life; that the individual's transference to the city, at the cost to him of stronger ties exchanged for weaker, of colder, impersonal relationships for the closer, simpler, more loyal ones, of sentiment for disillusion and the zest of life for ennui, are somewhat made up to the human race by benefits to the city populace. It is the old, pathetic story, it seems, of the sacrifice of the individual's happiness to the race's renewal, where one must give way.

It Is Now Too Late

Presently we shall be going out into the garden lot to begin preparation for the season's vegetable crops. Most of us, however, are beginning too late. Gardening should have begun last fall, as soon as the vegetables of last year were harvested.

Right now, while we are impressed with the need of it, is a good time to resolve to prepare our garden soil next fall for a good crop the following year. It should be plowed and cultivated well, so as to permit the moisture to sink deep. It should be well fertilized at that time so as to give the manure time to rot well before it will be needed by the plants in the spring.

Put down on your September calendar right now a note that will remind you of this very essential task.

State Farm News

The Cowlitz County Holstein-Friesian club held its annual meeting January 16 in the office of the county agent at Kelso and reelected all its officers for the ensuing year. S. V. Butchart of the state association outlined activities planned by the state organization. The Cowlitz club will urge the organization of calf clubs this year. The officers are: H. G. Huntington, Castle Rock, president; J. E. Smearman, Woodland, vice president; John Bogart, Woodland, secretary-treasurer; A. E. Raglin and Edward Johnson, Castle Rock, directors.

* * *

Black currants must go from Challam county—that is the edict of the department of agriculture, given by H. N. Putnam, from Berkeley, Cal., who visited Port Angeles recently. The black currants act as host to white pine blister rust and as a spreader. Deputy Horticulturist Stephen Land declares that there are few black currants in the county.

* * *

A survey of live stock in Grays Harbor county, conducted by the county agent, has yielded the following information from the 95 farms which have been canvassed: Forty-seven farmers own or use purebred dairy sires, while seven use or own cross-breds, 46 use grades and two use scrubs. The breeding females are listed as follows: One hundred twenty-two purebreds, 16 cross-breds, 476 grades, or a total of 783. There are 80 bulls owned for this number of cows, approximately an average of one bull for every 10 cows.

* * *

A. R. Badger of the St. Helens Incubator company, with a factory on Ford's prairie, in Lewis county, has announced that his company will this spring hatch 100,000 chicks, for which most of the orders have been booked. Two thousand White Leghorn chickens are kept at the factory grounds. Several other utility breeds of birds are kept also.

* * *

George Spaulding of Montesano has reported to County Agent Cowan of Grays Harbor county the fine results he obtained last year in experiments he conducted at his Satsop valley farm to determine the value of potash as a fertilizer for potatoes. He planted two rows, each 220 feet long, with 18 pounds of potatoes to the row. One row, not fertilized, produced 317 pounds of potatoes of an inferior grade. The fertilized row produced 428 pounds of excellent potatoes.

* * *

Edward Valentine and W. J. Berns, prominent Wynooche valley farmers and dairymen, have purchased a yearling Holstein bull from William Todd & Sons of Yakima. The animal was selected by County Agent Cowan. The bull, shown in the senior bull calf class at Portland last fall, won third place.

* * *

The greatest rush of applications to purchase timber that his office has experienced in a year and a half is reported by Clark V. Savidge, state land commissioner at Olympia, during January. So many applications were filed that in order to get all of the timber in the April land sale, which closed February 5, Commissioner Savidge found it necessary to employ three extra crews of timber cruisers. This activity is taken as proof of the stability of the revival in the lumber industry. The applications are scattered over the west side of the state.

* * *

Mr. and Mrs. Alfred J. Baker have sold a tract of 15 acres south of Monitor for a consideration of $6000, to Mr. and Mrs. F. A. Wood. The land is partly improved with young orchard. A 29-acre tract west of Cashmere was sold for $12,000 to Fred Helley.

* * *

Two hundred acres of logged-off land 12 miles up the Wishkah valley, sold by the Washington Colonization company to Guy R. Batterton of Seattle, will be stocked next spring with goats, says an Aberdeen report. Batterton says the climate here is ideal for goat raising, and anticipates extension of this branch of the live stock industry.

* * *

C. B. Sherwood's cows at Satsop are eating sunflowers this winter and thriving on the diet. Last summer Mr. Sherwood planted a quarter acre to this crop and got a yield at the rate of 18 tons to the acre. The flowers make fine silage and the cows seem to like it well.

* * *

Heavy tonnage of fruits and vegetables was shipped out of Walla Walla valley in 1921, according to the annual report of J. B. Wiley, district horticulturist. The report shows 967 cars of apples, 375 cars of prunes and 10 cars of watermelons out of this county alone.

The report shows 19 carloads of apples were made into byproducts.

* * *

Net sales totaling $1,053,111.53 were made by the Bellingham and Lynden plants of the dairy association in 1921, according to figures compiled by Manager C. C. Davis. The association, which has 1651 members and 11,776 cows signed up, sold last year 2,220,668 pounds of butter, representing more than 100 carloads, receiving an average price of 40 3-5 cents a pound. The association, beginning in May, sold 1,295,141 pounds of powdered milk. The average price paid for butterfat for the year was 45 1-3 cents a pound.

With a capacity large enough to take care of 30,000 pounds of milk a day Lynden's cheese factory was recently opened by the Whatcom County Dairymen's association. A total of 1157 pounds of cheese was turned out in one day.

Coming Events of Interest

Feb. 15-17—W. Wash. Horticultural assoc., Mt. Vernon.
Feb. 18—Carlton road opening meet, Chehalis.
Feb. 18—Hugh Walter Poland China sale, Yakima.
Feb. 20-22—Northwest live stock convention, Spokane.
Feb. 20-21—Western Royal swine sale, Spokane.
Feb. 22—Shorthorn consignment sale, Spokane.
Feb. 23—Day & Rothrock Shorthorn sale, Sprague.
Feb. 24—A. D. Dunn Shorthorn sale, Wapato.
Mar. 8—F. Sinnes Berkshire sale, Prosser.
Mar. 22—Shorthorn consignment sale, Portland.
March 7—Holstein-Friesian Ass'n meet, Seattle.
June 7-9—Union live stock show, Union, Ore.
March 9—Stevens county live stock sale, Chewelah.
July 27-28—Whatcom co. Guernsey gallop, Bellingham.

FARM BUSINESS AND MARKETS OUTLOOK

January was a constructive month in the farmer's markets. Hog prices averaged over $8 per hundred pounds at Chicago, which is at least $1 higher than seemed probable 60 days ago, and the top of the market is now back to $10. Fortunately, too, the higher level was reached while farmers had many hogs still to be sold so that they will receive the benefit of it.

The advances in the sheep, lamb and wool markets have healed many of the wounds received a year ago by those engaged in the sheep industry.

Steers are paying for their board in most cases and the cattle market appears about ready to follow the upturn in hogs and lambs.

Butter and eggs have not performed so well in the last 30 days as production has shifted in that direction, but they are still on a paying basis.

After slumbering for weeks, the bullish situation in wheat has begun to manifest itself and prices reached the highest level in four months.

Farmers are selling corn at the most rapid rate ever known, most of it bringing 5 to 10 cents a bushel more than was paid 10 weeks ago and buyers are greedy for it, as they realize that it is on the bargain counter.

Oats and rye have been slow to respond, but both of these grains will ultimately follow the course of the rest of the list.

A number of farm commodities are now bringing nearly as much and in some cases even more than they did at this time last year.

Costs of production have decreased so that the farmer's net return on such products is much more satisfying than a year ago.

Count your blessings.

MEAT SUPPLY DIMINISHING

Predictions that the meat supply would diminish during 1922 have made good thus far. In every class of live stock January receipts at the seven leading markets were the lightest for that month in more than five years. The following table tells the story:

Month	Cattle	Hogs	Sheep
January, 1922	784,000	2,399,000	914,000
January, 1921	865,000	2,692,000	1,016,000
January, 1920	1,099,000	3,158,000	949,000
January, 1919	1,256,000	3,624,000	1,011,000
January, 1918	1,048,000	2,720,000	948,000
January, 1917	996,000	3,304,000	1,121,000

These markets are representative of the total supply for the entire country and show why the hog and lamb markets have been booming while reduced beef consumption explains the laggard behavior of the cattle market.

BETTER TONE IN CATTLE MARKET.

Cattle market receipts decreased in the last few days and gave that division of the trade an opportunity to get on its feet. Beef consumption has not increased noticeably but panicky sellers of half finished steers are less numerous. As the fat cattle market is showing more strength and most of the steers being sold have paid for their feed, those who were fearful have regained some confidence. Always those who carry cattle for the spring market are of the "strong-handed" sort who refuse to let go when the market is temporarily depressed. Young cattle able to make substantial growth are being held back as feedlots can not be refilled at prices equal to those which some of the light killing steers are bringing. It is generally believed that the low point of the winter has been passed and that another month or two will bring substantially higher prices for finished steers.

No strictly prime cattle are arriving even at Chicago.

BROAD INTEREST IN STOCK CATTLE.

Commission house mails are freighted with inquiries as to prospective values upon stock cattle a month or two hence. Some fleshy steers are going into feedlots, but the bulk of shipments to the country are on the lightweight order, many of them evidently intended to go on grass. With the fat cattle market showing a firmer tone, prices upon stockers and feeders have advanced slightly and there appears to be a little prospect of buying them much cheaper during the rest of the winter and spring.

HOG MARKET HEALTHY.

Although the advance in hog prices gives the market a topheavy appearance, the underlying conditions are healthy. Indications that hogs were being held back early in the season are contradicted by the volume of current receipts, and by private estimates showing a decrease in the number of hogs on farms compared with a year ago. There is still a large supply to be marketed, however, and liberal receipts are in prospect for February, which may cause the market to lose some of its recent bloom.

Stocks of lard at the principal packing points in the middle west increased only 11,000,000 pounds during January and were 28,000,000 pounds on February 1 compared with 48,000,000 pounds a year ago.

COLORADO LAMBS NEXT.

Fed western lambs from cornbelt feedlots have constituted the bulk of the supply for a number of weeks, but Colorado lambs are now coming freely and the movement from that state is expected to reach heavy volume in the next two or three weeks. Although most of the lambs went into feedlots late in the season, receipts at Denver during January showed an increase of about 75 per cent over January a year ago.

The $14 lamb has appeared several times at Chicago with the top at $14.30. Partly finished stuff is selling at only a moderate discount. The market appears topheavy, but the Colorado supply usually is fed upon the market gradually and since it must furnish the bulk of receipts until June no severe break is anticipated. Purchases of lambs for feeding or shearing at prevailing levels, however, are fraught with danger. It is reported that speculators have made a cleanup by purchasing at low prices in the range country in sections where market news evidently failed to penetrate.

FARM CHUNK SEASON OPENS.

Lower prices at Chicago attracted fewer horses and more buyers and part of the recent loss was restored. St. Louis is absorbing liberal runs from week to week, but prices are comparatively low.

St. Louis—Medium and good drafters, $110-225; medium to good chunks, $40-100; southern chunks, $35-80; draft mules, $150-200; sugar mules, $150-185; mine mules, $85-165; cotton mules, $60-165; farm mules, $120-150.

ANOTHER SPURT IN WOOL.

Wool prices at the government auction on February 2 showed an advance of 25 per cent over the sale early in January. The market became less active in the last week or two, but developed life again, owing to the outcome of the government sale, and prices upon stocks in private hands advanced 2 to 3 cents higher than a week ago. In the west the new clip is being contracted at prices as high as 33 cents. Foreign auctions have continued strong, especially upon merinos, for which Americans were bidding as they are not far from an import basis, but most purchases are to be held until the permanent tariff has been enacted.

In some quarters a belief is growing that the advance in the market has about spent its force.

EUROPE ANXIOUS FOR WHEAT

A profound change occurred in the wheat market in the last 10 days. The Argentine market, which has been declining and a cause of weakness in North American and European markets, suddenly turned strong and led an advance in which all markets participated. Heavy European buying in the Argentine seems to have initiated the movement.

In the long period from the middle of September to the end of December during which prices maintained a downward course most of the time, European buyers failed to provide adequately for their requirements. There was widespread lack of confidence in the future stability of values and propaganda that European needs were small was used to depress prices still further. Stocks of cash wheat abroad declined to small proportions. Liverpool stocks, according to latest reports, are only 760,000 bushels compared with 6,900,000 bushels at this time a year ago.

European buyers finally have been forced to enter the market at a time when no wheat was pressing for sale in any country and prices have advanced rapidly. The North American market lagged at first, but eventually hard winter wheat was cheaper than either Argentine or Canadian wheat, deflecting export business in this direction and a rapid advance in our own market followed. In the last week over 6,000,000 bushels of hard winter, durum and Manitoba wheat have been sold abroad, and about 2,000,000 bushels of rye sold from Baltimore.

Prices have advanced over 20 cents from the low point of the season and are now at the highest level since early October. Reactions may occur at any time, but it is believed that the strength of underlying conditions has not been exhausted by any means and that prices will advance still further in the coming months.

WHEAT CROP SCARE NEAR.

Within a month growing weather may be experienced in the drought stricken sections of Kansas and Oklahoma, which will make more apparent the severe damage to new winter wheat as a result of the prolonged dry spell. In western Kansas it is said that 50 per cent of the wheat is not showing above the ground. In Nebraska and some other sections, wheat fields are covered with ice and injury from this cause is feared. It is generally believed the average condition is no better at present than it was at the time of the last official report. It is believed that acreage abandonment in the spring will be unusually heavy.

MOUNTAIN OF OATS DOESN'T MELT.

The huge mountain of 68,000,000 bushels of oats in the visible supply has decreased only 2,000,000 bushels in the last three months. Farm stocks are unusually light according to private reports, and some normal surplus sections are said to be going elsewhere for supplies. Nevertheless, the disappearance of oats from primary markets into consumptive channels is disappointing and this grain has made only a small response to the upturn in wheat.

CASH GRAIN MARKETS.

The range of cash grain prices for the week ending February 8 was as follows:

Chicago—Wheat—No. 3 red, $1.27@1.29 3-4; No. 2 hard, $1.18 1-4@1.28 1-4.

Corn—No. 2 mixed, 49 1-2@54c; No. 3, 48 1-2@52 3-4c; No. 4, 46 1-2@51c; No. 2 yellow, 49 3-4@54c; No. 3, 48@53c; No. 4, 46 1-2@51 1-2c; No. 2 white, 49 1-2@54c; No. 3, 48 3-4@54c; No. 4, 46 1-2@51c.

Oats—No. 2 white, 36 3-4@39 3-4c; No. 3, 34 1-4@38 1-4c; No. 4, 33@35 1-2c. Barley—50@66c. Rye—87 1-2@91 1-2c.

SEED MARKETS LOOK ROBUST.

Both clover and timothy seed markets show sustained strength and since the spring demand is on the horizon, advances in values are much more probable than declines. At Toledo receipts of clover for the season to date have been about 30 per cent more than the average of the preceding four years.

Toledo, per bushel—Prime red clover, $14.60; prime timothy, $3.25; prime alsike, $12.05@12.15.

LOWER PRICES ATTRACT FEED BUYERS.

All of the recent decline in wheat feed prices has now been recovered. Lower prices attracted buyers and the advance in wheat also helped. Jobbers are reselling at prices below mill quotations. Near capacity operations by corn industries are making gluten feed and hominy feed abundant.

POOR HAY HARD TO SELL.

Light receipts serve to maintain prices at most hay markets, but Kansas City has just received the largest run in a number of months and prices were reduced. Low grades are relatively abundant and are difficult to move from distributing markets even at a big discount. Alfalfa hay remains at a high premium with prairie hay most difficult to sell. Price fluctuations for the most part are traveling a narrow range.

Prices per ton in carlots:

Chicago—No. 1 timothy, $21@22; No. 2, $18@19; No. 1 light clover mixed, $19@20; No. 2 timothy, $14@15; No. 1 clover mixed, $17@18; No. 1 clover, $16@17; No. 1 alfalfa, $15@23; upland prairie, $12@16; rye straw, $14@15; oat and wheat straw, $11@13.

EGG MARKET ERRATIC

Egg markets still fluctuate violently, although over a smaller range than in early January. Weather conditions will continue as the dominating influence for several weeks. The supply of eggs during January at the four leading cities was 20 per cent larger than a year ago. Nevertheless, cold storage holdings at these four markets decreased much more rapidly than in January, 1921, pointing to extremely heavy consumption. Receipts of dressed poultry have fallen off in the last month and the addition to cold storage holdings in January was slightly smaller than in January, 1921. Total stocks at the four leading cities on February 1 were more than 72,000,000 pounds.

BUTTER MARKET MORE STABLE.

After weeks of rapid fluctuation, the butter market became relatively stable during the last week. Consumptive demand has increased as a result of lower prices and supplies have been more closely cleaned up. Heavy arrivals of New Zealand, Australian and Danish butter at New York, and of Australian at San Francisco presumably for shipment to New York, and lower quotations on the Danish market made the tone in New York and Philadelphia less firm than in Chicago.

CHEESE MARKET FIRM.

Cheese markets failed to decline when the butter prices melted away during December and January. As the butter market is on a firmer basis, fears of an early decline in cheese markets have largely dissipated. Country cheese markets have been strong and distributing markets firm with constant demand for immediate consumption.

Prices for No. 1 American fresh cheese on February 8 were: Chicago—Twins, 20 1-2@21c; flats, 20 3-4@21 1-4c; S. Daisies, 21@22c; D. Daisies, 20 1-2@21c; Longhorns, 21@22c; square prints, 23@24c.

FRUITS AND VEGETABLES.

Potato markets have been unsettled recently with the demand and the movement at country shipping points relatively slow. Colorado and Idaho continue prominent as shippers with Maine in the lead at the present time and Minnesota a big factor. Northern

(Continued on page twenty.)

Little Journeys to Market

HOW CROP ESTIMATES ARE MADE.

At regular intervals for more than 50 years the United States department of agriculture has been estimating the acreage, condition and yield of various crops and the number of live stock on farms.

The evidence upon which these estimates are based is obtained through a group of traveling agents of the department, statistical agents assigned to each state and a number of voluntary correspondents who report upon conditions in a county, a township or upon their individual farms.

Since the estimates upon crops in which there is speculation, such as the cereals and cotton, may have a profound effect upon prices when they are issued, the information is closely guarded until a definite date, when it is made available for every one. The reports from the voluntary correspondents are sent to the department in sealed envelopes, while the reports from the field agents and state statisticians are sent to the secretary in envelopes especially marked and locked in a safe. The combination for opening this safe is known only to the secretary and the assistant secretary of agriculture.

The final estimates are made up each month by the crop reporting board of five members from the crop reporting division of the department. The personnel of the board changes each month. While it is in session on the day that the report is to be issued, the room is locked, no one is allowed to leave or enter and telephones are disconnected. When the board has assembled, the members are given the figures in parallel columns, which have been made up from the reports of the several classes of correspondents. With these several separate estimates for each state before him, each member computes his own estimate of the acreage, condition or yield of the crop or number of farm animals. These estimates by each member are compared and discussed and the final figures agreed upon.

When the report has been completed, copies of it are placed face downward on the table in the crop reporting room and newspaper correspondents and representatives of the Western Union and Postal Telegraph companies are admitted a few minutes before the announced hour for the release of the report. When the clock ticks the time for the release, each of these men picks up a copy of the report and rushes to the nearest telephone or telegraph office and in a few minutes the news has been announced almost simultaneously throughout the entire United States. Copies are also mailed on the same day to interested parties and printed cards are sent out to be displayed in the 77,000 postoffices, where they can be seen by every one.

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Davis-Butchart Holstein Sale

Strengthens Confidence of Believers in the Dairy Cow

By GEORGE N. ANGELL.

A sale to strengthen the confidence of believers in the dairy cow, a sale which scattered widely over the state the "Bessie" breeding that has proved so good both in the ring and at the pail, but which left in the Yakima valley the sire himself and enough of his offspring and cows bred to him to make a fine foundation on which breeders of that district can build again, was that which dispersed the Holstein herds of H. C. Davis and Butchart Brothers, at the Davis farm near Granger February 6 and 7—the first two-day sale in the Pacific northwest. There were buyers present from Cowlitz, Jefferson, King, Benton, Klickitat, Walla Walla and Spokane counties, in addition to Yakima, and, while there were no sales at extraordinarily high prices, the general average for 123 head—$230—was considered excellent for the times, and of the total of $28,430, more than one-third was paid in cash. Butchart Brothers, who are dissolving partnership, reaped the benefit of having their stock in better sale condition and of official testing, for their average for 44 head was $290, a total of $12,745. This was Mr. Davis' third dispersal sale since 1913, and his average for 70 head was $205, a total of $14,410. He retains Sir Bessie Fobes Tritomia and a few females, and is expected to build up another herd. Butchart Brothers held a farm sale a few days later, but their plans are uncertain. Stanley Butchart, senior member of the firm and secretary of the state Holstein-Friesian association, retains his interest in Chief of the Ormsbys.

Heaviest purchaser and purchaser of the highest priced individual is Lloyd Garretson of Yakima, who paid $3320 cash for nine animals picked with a discriminating eye and including Chimacum Wayne Pontiac Burke 2d, a beautiful heifer of Bishop breeding, on which a junior 4-year-old record of 30.14 pounds in seven days was finished shortly before the sale. She cost Mr. Garretson $850. He paid $625 for a 27-pound junior 4-year-old daughter of Mutual Fobes Longfield De Kol and Maldeta Canary Mercedes; $515 for a 21-pound daughter of Chimacum King Korndyke Sadie Vale, and smaller amounts for six others. The animals will be added to the herd at his show place, Painted Rocks ranch, near Yakima.

R. L. Rice of Grandview gave $815 for Princess Pietertje Artis, new seven-day champion of the Yakima valley, on which Percy Butchart, who has had charge of the testing, made 31.5 pounds just before the sale. Princess topped the first day's selling, and was second high individual of the sale.

John Bogart of Woodland was second highest purchaser. He gave $2600 for 12 head of varying ages. William Bishop of Chimacum paid $2100 for seven head, including a Bessie bred 4-year-old bred to Bessie, at $530; a 3-year-old bred to Chief of the Ormsbys at $450, and several of his own line of breeding. John L. Smith of Spokane paid $2085 for nine head, including one of the bargains of the sale, a 6-year-old granddaughter of King Segis 10th, out of a granddaughter of Colantha Johanna Lad, due in May by the Bessie bull, at $420. C. G. Sprong bid in six for S. E. Chaffee of Sunnyside at $1100 and William Elmer of Trout Lake paid $1060 for four. Elmer is one of a group of five breeders who are stirring things up for the Holstein breed in Klickitat county and who took home 12 head of purebreds at a total cost of $3090. His brother, C. A. Elmer, obtained a granddaughter of King of the Pontiacs, due in April by the Bessie bull, for $430.

County Club Leader E. C. Scott and local club leaders were on hand to secure calves for the Moxee Calf club, which paid $1240 for eight head, and for another club in process of formation, but not yet named, near Ahtanum and Wiley City. F. R. Beals of Tillamook, Ore., who retained his Bessie bull from the recent deal with Carnation, and who had in his barn another group of 20 or 25 daughters and granddaughters of the bull soon after the Carnation consignment left the farm, came the greatest distance of any buyer, but took home only two head, both youngsters.

Ralph H. Tuttle of Walla Walla, president of his county Holstein association, bought two daughters of Friday Harbor Cornucopia for $415. Homer Splawn, younger son of the late "Jack" Splawn, who brought the first purebred cattle into Yakima, bid in four youngsters for $650. E. O. Fawcett of Taranaki farms, Prosser, secured the prettiest heifer in the sale, a daughter of Sir Korndyke Ormsby Piebe, the Todd bull, and Maldeta Canary Mercedes, the best known cow for both show and production the valley has produced. The calf was born last July. She brought $530, and will make a nice addition to the six daughters of the same bull purchased some time ago by E. F. Benson for $4500. Maldeta herself, now 13 years old, but in calf to Sir Bessie and apparently good for several years of work, went to Drake & Duffield of Moxee for $340. Her three daughters brought $1455 and a grandson $275. The latter went to John Bogart. He is a show calf by a son of Sir Korndyke Ormsby Piebe and Cascade Jessie, a prospective 1250-pound 4-year-old, and out of the daughter of Mutual Fobes and Maldeta, for which Garretson paid $625. The Methow Valley Live Stock company of Seattle bid in three head at $645, and three breeders from Touchet obtained several head.

Other buyers are all from Yakima, many of them from the vicinity of Granger. The following list includes only catalogued females, four of them animals which were reserved from the last E. B. Marks sale and consigned to this one by Mrs. Marks. Mr. Davis sold two or three extras, Dr. L. G. Stickney of Toppenish three, Louis Malmgren of Granger four. There was very little demand for bulls. D. F. Nugent sold a grown son of the Bessie bull for $100 and Mrs. Marks obtained $175 for a March Bessie son out of a show daughter of Sir Ormsby Burke Segis. One or two of lesser breeding went still lower. Auctioneer George Gue was assisted by George Gochnour and W. C. Hobson.

The detailed report of the sales, showing purchaser and price of each animal will be given next week.

Prize Gilt Will Help Clear Farm

(Continued from page one.)

from a son of Mr. Phelps' herd sire, a big type boar, bred by a well-known Iowa breeder, and a really great animal. The gilt's mother is of Wildwood Princess breeding, what Mr. Pelps considers his best sow. She is of a prolific strain, and will farrow in March.

Mr. Hall has shown by the prize letter he wrote that he has good ideas about the breeding and care of swine. He was quite willing to keep account of costs and income, as required by THE FARMER. His indomitable courage, in attemmpting to hew out a farm from among those stumps, shows that he will "tackle" his breeding problems with the same determination he brings to all his farm activities. I predict his success as a breeder, and if ever a man deserves not only to win the gilt, but to succeed, Mr. Hall is the man.

As announced in last week's issue of The Washington Farmer, the second prize letter in The Washington Farmer's prize pig contest was written by Samuel I. Hopkins of St. John, Whitman county. The third prize letter was written by L. P. Powers of Palouse, also in Whitman county. These letters will be published soon.

When Using Gasoline

By PROFESSOR L. J. SMITH, W. S. C.

1. Never lose sight of the fact that gasoline is dangerous when handled inside any building. Take no chances with this powerful explosive.

2. Gasoline should always be stored in a tight, covered can—never in glassware.

3. Never uncover or use gasoline in a house at night or when there is a fire in the range or fireplace.

4. Never use gasoline for cleaning purposes when using a lamp, except it be an electric light.

5. Keep your gasoline in a can painted red.

6. Never smoke in a garage.

7. Make it a rule to shut off your motor when filling the gas tank at the rear of a car.

8. If you use gasoline by the drum, keep it outside on blocks and have a spigot screwed into the drum, so that it runs out by gravity.

9. Do not try to put out a gasoline fire with water. Smother it with earth or sand. Fire extinguishers which contain the chemical in a water solution only spread a gasoline fire.

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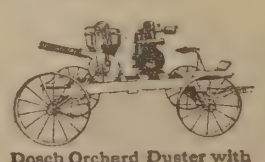
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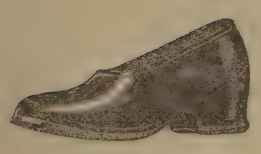


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Income Tax

Act Contains Two New Provisions

The following statement is issued by Collector of Internal Revenue Burns Poe for the district of Washington:

The revenue act of 1921 contains two new and important provisions, which are the subject of frequent inquiry. The first relates to the personal exemptions allowed married persons, and the second to the provision requiring that a return be made of gross income of $5000 or more.

The act provides that a married person, living with husband or wife, whose net income for 1921 was $5000 or less shall be allowed a personal exemption of $2500. If the net income of such person was over $5000 the exemption is $2000. Under the revenue act of 1918 the personal exemption allowed a married person was $2000, regardless of the amount of net income. The normal tax rate remains unchanged, 4 per cent on the first $4000 of net income above the exemptions and 8 per cent on the remaining net income.

In order that an income slightly in excess of $5000 shall not be subjected to an inordinately disproportionate tax because of the reduction of the exemption to $2000 thereon, the law provides that such reduction shall not operate to increase the tax, which would be payable if the exemption were $2500, by more than the amount of the net income in excess of $5000.

For example, on a net income of $5010 the tax, without this saving clause, would be $120.40, which is 4 per cent on $3010, the amount of net income less an exemption of $2000. The actual tax is $110.40, computed as follows: From the net income of $5010 is deducted $2500, leaving $2510, the 4 per cent tax on which amounts to $100.40. To this is added $10, "the amount of net income in excess of $5000."

The personal exemptions allowed married persons apply also to the head of a family, a person who supports in one household one or more relatives by blood, marriage or adoption.

Heretofore a person whose net income was less than his exemption ($1000 if single, or $2000 if married) was not required to file a return. Under the revenue act of 1921, if the gross income of an individual equaled or exceeded $5000, or if the combined gross income of a married couple and that of dependent minor children equaled, or exceeded $5000, a return must be filed, regardless of the amount of net income.

"Net income" is gross income, less certain deductions. The fact that allowable deductions from gross income, for business expenses, losses, bad debts, etc., may reduce the net income to an amount below the personal exemptions of $1000 or $2000 does not alter the requirement to file a return of gross income, if such gross income equaled or exceeded $5000.

All returns must be filed by March 15.

Scrap Book

Where is that article you read in one of the papers a few weeks ago that struck you as such a good suggestion that you cut it out and laid it "aside"? Perhaps you laid it where it was brushed away and burned with the daily cleaning of the room. It may be that the clipping was put away somewhere and forgotten. In any case you do not have the idea at hand when you want to refer to it and it might as well have been thrown away.

H. J. Cundy, who owns a farm a few miles out of Republic, Ferry county, Wash., is among the farmers who avert misplacing such details. He keeps a scrapbook for the filing of all articles in his farm paper that appeal to him or which are of particular interest to his farming operations.

Raising Rabbits

It is hard to convince a beginner in the rabbit business that he can obtain as much weight from a litter of six as from one of eight or ten, provided the doe is in good condition and has an abundance of feed. T. A. Howland, a rabbit breeder of Seattle, says that he always kills all over six in each litter. At the end of three months' time the six will weigh as much, if not more, than would the litter of eight, had they been allowed to live. The reason, he says, is because the six have a better chance to grow, get more nourishment from the doe, and are not so crowded in the nest. In some cases where the doe shows exceptional quality her litter is divided and part of them given to a scrub doe, bred the same day. In this way all of her litter is saved, and there is less chance of losing some outstanding individuals.

"If I was going into the business again I would never begin until I had enough money to buy the best stock," declared Mr. Howland. "By starting out right one never has to begin again at the bottom. Most breeders, however, have to learn this lesson by experience since they can not see paying purebred prices at the outset. It is just as easy to learn the business while your good stock is increasing, as it is if you are raising scrub stock.

"In order to be a success in the rabbit game it is necessary to have a live interest in rabbits," continued Mr. Howland. "One must study the details, and know his stock. Rabbit breeding is a complicated undertaking. It is often hard to select the proper matings to make the best show animals, and the breeder must know what he is working for in order to get results."

Mr. Howland suggested the different rabbit magazines as good sources of information for the beginner since their cost is nominal, and they contain up-to-date matter. His own rabbitry consists largely of New Zealand Reds, many of which have won ribbons. One of his rabbits has an exceptionally fine color. A solid red color is very desirable in the New Zealand breed, and is produced only by the mating of the proper individuals.

Form Club to Learn Housekeeping

Ten girls in Cowlitz and Benton counties have joined home management clubs and 10 mothers are enthusiastic over their daughters' ability to keep house. This club was started late this fall by Miss Mabel Greene and Miss Nora Kelley, county club agents, who receive their club plans from Miss M. Minerva Lawrence, home management demonstrator of the state college.

The girls forming this unique club and finishing their work were: In Benton county, Cora E. Houk, White Bluffs, and Martha Bash, Handford; Cowlitz county, Helen Leonard, Luella Klawitter, Gwendlyne Furbish, Mabel Bassett, Bessie Gross, Bertha Bailey and Irene Hett of Kelso and Dee Ruckles of Kalama.



NOWHERE is the need for reducing the cost of production more urgent than in the case of the great staple crops *Corn, Grain, Hay.* These have always been low value per acre crops. Their labor cost factor is high. A double yield per acre involves but little additional labor.

Fertilizers are the direct means to increase yield.

For the best results, fertilizers must be properly balanced.

One-sided fertilization spells soil exhaustion.

Balance the fertilizer with 5 to 10 per cent. of Potash.

There is plenty of it now.

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POTASH PAYS

Mention **THE WASHINGTON FARMER** when writing advertisers.

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New Price Opens Opportunity to Farmers



IT IS NOW POSSIBLE FOR EVERY FARMER TO HAVE A TRACTOR

The new price on the Fordson is within the reach of all. And, terms of payment can be made upon application to your nearest Fordson dealer.

Every farmer needs a tractor. Fordson is the "Perfect Hired Man." For you it will—

PLOW, DISK, HARROW, THRESH, BALE HAY, SAW WOOD, PUMP WATER, GRADE, PULL STUMPS, FILL YOUR SILO, GRIND YOUR FEED—

and take care of every other power job on the farm, besides saving from 30 to 50 per cent of your time.

Write for free literature. Or ask for an actual free demonstration, which will be made for you without cost or obligation to buy. Please state the principal classes of work you wish to have demonstrated.

Henry Ford Says—

"I have been a farmer all my life, and now I am doing everything possible to cut the cost of farming.

"I think it will help the country to make farm machinery cheaper as spring is coming on."

The Fordson dealer nearest you will make a free demonstration.

SIGN and MAIL COUPON

NORTHWEST FORD DEALERS,
700 Fairview Ave., Seattle.

Please send me free information on Fordson Tractors. (Mark X in square opposite literature or service desired).

—Fordson Tractor Manual.
—The Fordson at Work.
—Free demonstration. (State purpose for which tractor is intended.) .....

If you own a tractor, state what make .....

Name .....

Address .....

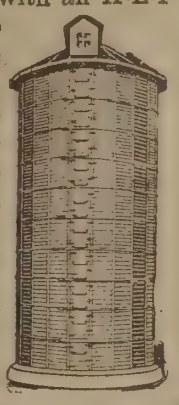
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Northwest Ford Dealers

Washington: 700 Fairview Ave., Seattle
Oregon - Montana - Idaho: East Eleventh and Division Sts., Portland, Ore.

"Saved Two-Thirds of Hay; Got One Third More Milk."

That's what J. W. Jamison of Nezperce, Idaho, wrote me last Spring after his first winter with an H-L-F Silo. "I had about 25 tons in the silo," he said in his letter, "and fed nine cows from October 15th to April 19th. I think it is the finest feed I ever fed to cows."



Mr. Jamison thinks that his H-L-F Silo is a fine silo, and easy to build. His silo is 10 by 30 feet, and he and his fourteen-year-old boy built it from the ground up.

3632 H-L-F Silos in use

It takes no expert skill to build an H-L-F Silo. It is simply a double-wall building, practically round, very strong and tight. Every piece cut exactly to fit in our factory.

The double-wall feature is fine for western conditions, especially where the summers are dry and hot, because outer wall protects inner wall from sun and weather.

H-L-F Silo

Direct to You at Factory Price

We have no glad-hand men touring the country in automobiles to tell you how to run your business. You can just answer this advertisement, look over our printed matter, and order or not, according to whether the deal looks good to you. In a few places old customers act as local representatives and the small commission we pay them comes from our profit and is charged to advertising. Either way, you get the silo at the factory price.

Big Cut This Year In H-L-F Silo Prices

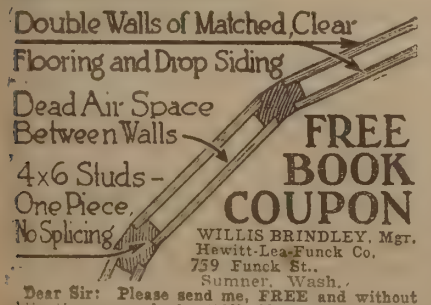
Prices this year show a cut of $100 or more on the average silo outfit. On every one of the first 300 sold we lose money. You're welcome. If we sell enough silos, we'll make a little on the tail enders.

Carload Price on Single Silo

No matter where you live, you get the carload price on your order for a single silo. That's done by bunching, to form a carload, the orders from nearby points. Terms are $25.00 cash, balance November 1 without interest.

$35 Saved on Early Orders

It saves us money on manufacture and shipment to get orders early. Therefore, on early orders we give a roof free—late orders pay $35.00 for the roof. Better fill out the coupon below, right now when you think of it. It will bring you a book I wrote entitled "All About Silos," with a list of H-L-F Silo owners and a price list—the complete proposition. Come ahead quick with that coupon.



FREE BOOK COUPON

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Hewitt-Lea-Funck Co.
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Dear Sir: Please send me, FREE and without obligation, your book, "All About Silos," with owner list and price list and FREE Roof offer.

Name.....

Postoffice.....

R. F. D..... State.....

Limits the Breeds

A rather unusual ruling has been placed on the settlements of the state land in the White Bluffs-Hanford area of Benton county under the land settlement board. Only the following breeds will be allowed on the land for herd sires, all of which must be registered animals: Holsteins, Duroc Jerseys, and any of the beef breeds of cattle. The ruling, which was compiled by the state department of conservation and development, applies merely to animals that are brought onto the land for breeding purposes.

Before he can purchase his farm unit the settler must comply with other regulations included in the contract, as follows:

"Every contract between the department and the settler shall provide, among other things, that the purchaser shall prepare for cultivation, cultivate, irrigate and develop the land of his unit in a manner which shall meet the approval of the department both as to character of development and kind and variety of crops to be produced; that the purchaser shall keep in good order and repair all buildings, fences, the irrigation system and all other improvements of his farm unit.

"The purchaser shall insure, during the life of his contract with the department, against fire all buildings situated on his farm unit, the policies to be for five years.

Under State Supervision.

"The contract between the purchaser and the department may not be assigned, transferred, or in any way encumbered, without the consent of the department.

"The contract between the purchaser and the department shall provide, that in the event of the failure of the purchaser to comply with any of the terms or conditions of his contract with the department to purchase, the department shall have the right, at its option, without notice, to take possession of the said premises and protect the interest of the state therein; and the purchaser shall forfeit all rights under such contract. All payments made, labor performed, and improvements constructed pursuant to such contract, shall constitute and be deemed rental paid for occupancy. Failure of the department to exercise any option to cancel for any default shall not be deemed a waiver of the right to exercise the option to cancel for any default thereafter on the part of the purchaser.

"The department may, in its discretion, require rotation of irrigation and use of power, or either, among the purchasers and for the purchase within the community.

No Delinquencies.

"Taxes, power bills and assessments and charges of every character must be paid promptly by the purchaser before they become delinquent.

"Every contract between the department and the purchaser shall provide, among other things, that the state shall reserve such easements as in the judgment of the administrative officials of the department may be necessary to provide adequate highways, electric lines, drainage and irrigation ditches and canals for the development of the land settlement project.

"The department deems it to be advisable for approved applicants to make a personal inspection of the land offered for settlement.

"The value of the agricultural land and possessory rights of applicants shall be determined by the department.

"Subsequent to the year 1922, not less than one-half of the area of each unit shall be utilized for the production of feed for live stock to be fed on such farm unit."

Will Resist Freezing

Kale plants which have been acclimated for western Wassington climates have been found to resist freezing and come out in a fairly good condition, according to M. E. McCollum, agronomist of the western Washington experiment station at Puyallup. It was feared by some that growing the plants in a moderate climate continually for a period of years would produce a type that would not stand the heavy freezing that is common in other parts of the state. Although the leaves should never be handled or fed while they are frozen, the arrival of moderate weather will bring the tissues back to their natural state and good condition.

Crossed Plains in 1852

"I see an account occasionally where some old pioneer has passed over the road, who came across the plains in 1870," writes J. C. Hudson of Pullman, Wash., to The Washington Farmer. He continues:

"I wonder what I would be called. I crossed the plains in 1852. Not only that, but I have been half way over about 25 or 30 times. I think I know the road better than any one living now. We had the largest immigrant train that ever crossed the plains. There are but a few left—most all have answered the roll call. We were from Missouri and were going to Oregon or bust, as the saying is, and when we got there we were busted."

Why does any healthy person want to be kicked into wakefulness in the morning?

Many people feel that they have to be agitated into wakefulness in the morning. They think that without the tea or coffee they take in the morning that they will not be able to meet the tasks and duties of the day.

Nothing could be more false than this reasoning. Any doctor can tell you this. For a healthy body does not require a stimulant. It gets all the stimulant it needs from food.

The thein and caffeine found in tea and coffee are irritating to the heart and nervous system. They jolt the nerves into undue activity. The result is a reaction. This is why regular tea and coffee drinkers think they must have their stimulant the first thing in the morning to wind them up for the day.

If you will stop using tea and coffee for a week, and drink Postum, the pure cereal beverage instead, it will give Nature an opportunity to rid the system of the irritating substances that harass your nerves, upset digestion, increase your heart action, and make you nervous and irritable.

Many people who have tried Postum say that inside of a week they wake in the morning without that "all gone" feeling that they used to have, and are full of energy, strength and endurance.

Order Postum from your grocer today, and make it according to directions. Your first sip of Postum will surprise and please you.

Postum comes in two forms: Instant Postum (in tins) made instantly in the cup by the addition of boiling water. Postum Cereal (in packages of larger bulk, for those who prefer to make the drink while the meal is being prepared) made by boiling for 20 minutes.

Postum *for* Health
"There's a Reason"

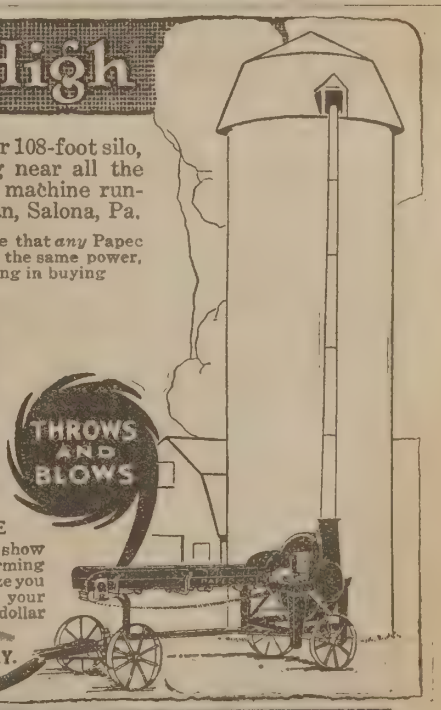
Made by Postum Cereal Co., Inc., Battle Creek, Mich.

No Silo Too High

"We used your 19-inch cutter to fill our 108-foot silo, putting it over the top without using near all the power of a 20-h. p. steam engine, the machine running at normal speed."—E. E. Heckman, Salona, Pa.

No silo is too high for a Papec. We guarantee that *any* Papec Cutter will cut and *elevate more ensilage*, with the same power, than *any* other blower cutter. You can't go wrong in buying

The Powerful PAPEC Ensilage Cutter



The Papec runs easier because it is built simpler. The silage is *thrown* from the knives far up the blower pipe. It is then caught by a powerful air blast concentrated into small diameter that carries over the top of the highest silo.

Farmer's Record and Account Book—FREE

A few entries weekly in this 50-page Book will show you at any time where you stand with your farming business. Write us the size of your silo, or the size you intend to buy, and the name and address of your dealer. We'll mail the Book promptly. Worth a dollar to any farmer. Ask also for *free* Catalog.

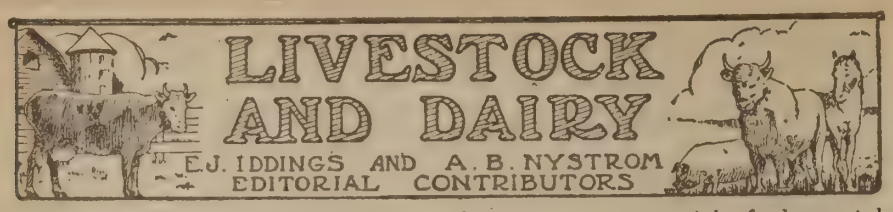
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36 Distributing Houses Give Prompt Service

Papec Cutters Distributed in the Northwest by

Monroe & Crisell
Everything for the Dairyman
PORTLAND, OREGON

Dairy Machinery Co.
A Complete Line of Dairy Supplies
SEATTLE, WASH.

LOOK AT THE GOOD FARM BARGAINS THAT ARE OFFERED ON THE FARMERS' "WANT AD" PAGE THIS WEEK.



Better Feeding

Farmers Can Make Up Rations

By E. B. FITTS, O. A. C.

Feeds vary widely in the proportions of digestible nutrients or actual feed materials they contain. Some feeds have the digestible feed materials in the right balance to meet all the requirements of the animal body for maintenance and for milk production, some have a surplus of carbohydrates and fats and others a surplus of proteins.

Feeds or rations suitable for milk production have a balance of nutritive ratio, which means relationship of proteins to carbohydrates and fats, of from 1 to 5 to 1 to 7. Feeds with a wider balance than 1 to 7 are known as carbohydrate feeds, while those with a balance of less than 1 to 5 are called protein feeds. If a feeder will keep this classification in mind it will aid him in selecting the feeds necessary to make a balanced ration.

The following gives a classification of some of the more important feeds:

Feeds in balance—Clover hay; oats and vetch hay; oats and pea silage; turnips; pumpkins; oats; rye bran.

Carbohydrate feeds—Grain hay; mixed hay; corn silage; carrots; mangels; barley; corn; beet pulp; molasses.

Protein feeds—Alfalfa hay; vetch hay; kale; cabbage; wheat bran; wheat middlings; wheat mill run; oil meal; cotton seed meal; soy bean meal.

Feeds in balance are complete within themselves and can be fed in any amount or in any combination without disturbing the balance or relationship of protein to carbohydrates and fats. If, however, any carbohydrate feed or feeds are used then one or more protein feeds must be included. Conversely any protein feeds used must be balanced by a selection from among the carbohydrate feeds.

The correct amount of each to be used can be accurately determined only by careful computation. A person feeding animals, however, and carefully studying feeds and the needs of his individual animals can soon learn quickly to make the proper feed combinations.

A great need of the dairy industry is the general adoption of a better feeding practice. Rations out of correct balance, if long continued, reduce profits or cause actual loss.

LIFE PRESERVERS FOR LIVE STOCK

By DR. E. E. WEGNER, W. S. C.

INFECTIOUS DISEASES, ARTICLE I.

Bacteria.

One must consider the causes of diseases in order to understand some of the terms that are applied to them. The first great division that is usually made is that of infectious and noninfectious diseases. The former are diseases that are caused by some specific organism, and by that I mean that there are one-celled beings belonging to the plant or animal family that have the power of causing illness of a specific nature when they are allowed to enter the body of a susceptible animal. These organisms do not have the power to cause disease in all species, but only in certain ones. In the case of blackleg, cattle suffer very frequently, while horses are entirely free from it; hogs suffer from hog cholera, but other animals are not affected. This is commonly true of many diseases, but there are a few that are common to many species, such as tuberculosis, which is no respecter of species, though sheep and goats rarely suffer.



Studying the Causes.

It is possible to study certain organisms of disease with a great deal of accuracy, while others are not so easily identified and studied. Certain ones may be isolated and studied under laboratory conditions and by injecting them into suitable animals specific diseases may be produced and from these animals the organisms may be isolated again. Such tests prove the connection of certain bacteria with disease when the disease can be produced again and again by animal injections. Some other diseases are in all probability due to bacteria, but the specific organisms have never been isolated so that they can be studied; it may be that the organisms are too small to be seen with the present microscopes or that they can not be properly stained or for some other reason we are unable to see the individual germs. We may know, however, that bacteria are the cause if we can produce the disease time and again by injecting fluids from the sick animal into a well animal of the same species.

The organism that causes hog cholera has never been seen, but we can cause the disease in a well hog by injecting the fluid part of the blood of a sick hog into the body of a well one. This establishes the fact that in all probability the disease is infectious, but we have not succeeded in actually seeing the germ that causes all the trouble. This is true of many other diseases, but if the evidence is sufficient we classify these diseases as infectious, even if we have not seen the causative agent.

Habits of Bacteria.

Bacteria vary greatly in their habits and modes of living and abilities to get about from place to place, so that we find a corresponding difference in the rapidity with which different diseases spread. They vary also in their powers of resistance to outside influences, such as heat, cold, light, dryness, etc., so that certain diseases are hard to eradicate from a building or pasture when they have once been planted. It is seen, then, that the different infectious diseases have to be handled in different ways in order to get rid of them when they have once been present on a farm or in a building. Certain germs have the natural ability to form spores or go into a resting stage to remain in that condition until suitable conditions arise for their farther development. This class is very hard to eradicate, as it withstands strong antiseptics, and may live in the ground for years without losing the power to produce disease, only waiting for the opportunity to get into a suitable location in the body of a suitable animal.

All bacteria are not disease producers,

SAVED THREE COWS BY TIMELY AID

Jacob Germann of Farmingdale, Ill., tells of his experience with cow ailments much the same as hundreds of others who take the trouble to write us every year. He says:

"I had three cows this Spring, one had garget and one had milk fever, and one was done up completely from calving and could not get up or walk and I had a veterinarian with no good results. I began feeding Kow-Kare and she is able to go to pasture with the other cows now. I just know I would have lost the three if I had not had your medicine."

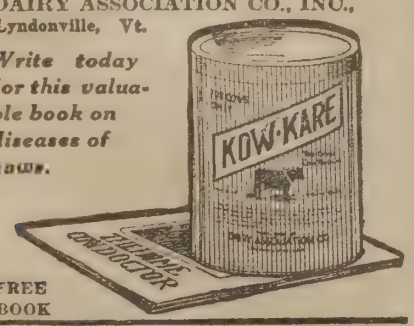
D. B. Thomas of Knightville, Utah, had an experience with a barren cow that is just like scores of others who have kept cows on a paying basis with the aid of Kow-Kare. He writes:

"Had a valuable Jersey cow eight years old that had had seven calves. Something went wrong with her after her last calf came, so that for two years she failed to become with calf. Fed her some of your Kow-Kare last January and she was all right the first serving, and long before I had given her the whole package of your Kow-Kare that I purchased."

For the prevention or successful treatment of Barrenness, Abortion, Retained Afterbirth, Scouring, Bunches, Milk Fever, Loss of Appetite, etc., no cow medicine has such a record of constant successes as Kow-Kare. Every cow owner should keep it on hand. **Sold by general stores, feed dealers and druggists at the new reduced prices—65c and $1.25**

DAIRY ASSOCIATION CO., INC.,
Lyndonville, Vt.

Write today for this valuable book on diseases of cows.



Write for Catalog and full information
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DEALERS IN SUPPLIES FOR DAIRY, POULTRY, BEES AND ORCHARD.
Catalog Free.

You Need a Farm in Canada

If you are to secure that independence, success and prosperity which has been the reward of thousands of American farmers who have preceded you.

¶ These farmers knew of the rich tracts of Canadian Pacific agricultural land for sale in Western Canada at low prices—open prairie, partially wooded or park lands—all virgin, fertile and productive. They knew they could not obtain such lands elsewhere at such prices—at an average of $18 per acre.

¶ They knew that Western Canada has carried away, year by year, first international honors for wheat, oats, barley and livestock.

¶ They knew of the success that had been won by farmers from their own state who had preceded them. They knew that Canadian farm values are steadily increasing and that each year they delayed they would have to pay more to purchase desirable farms.

¶ They wanted larger holdings for their growing families. They knew they could secure sufficient land upon terms unobtainable elsewhere—20 YEARS TO PAY.

¶ As a result, 16,000 American farmers took advantage of their knowledge and moved to Western Canada last year.

¶ In Canada the government and the railroads help the farmer in every possible way. It is to their interest to do so. Taxes are moderate; laws are just; transportation facilities and markets are excellent. Language, social customs, religion, money and other conditions are the same as in the United States.

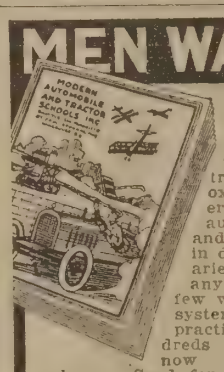
Ask the Canadian Pacific about Canada
CANADIAN PACIFIC

Thousands of American farmers have made prosperous homes in Canada. There will be more this year. Can you afford not to follow them?

Investigate these facts for yourself and let us fill your need. Write today for information to

M. E. THORNTON, Superintendent of Colonization
CANADIAN PACIFIC RAILWAY
936 First Street, E. CALGARY, ALBERTA

MEN WANTED



Get Ready for the Spring Season.

Practically trained auto and tractor repair men, oxy-acetylene welders, tire vulcanizers, auto electricians and battery men are in demand at big salaries. We teach you any or all of these in few weeks' time. Only system of its kind. All practical work. Hundreds of our graduates now own their own places. Send for our 100-page free catalog No. 14 and special low tuition rates. Do it now. Join the money-makers.

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Learn Tractor and Automotive Engineering. Every man interested in autos and tractors should have our catalog. Best equipped school in the Northwest. Practical instructors. Write Dept. 2.



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Glance over the bargains on the "Want Ad" page.



"He ought to use SAVE-THE-HORSE too"

Then he can cure while plowing.

A HORSE goes lame—that means no plowing today. Tomorrow a six-day rain may set in. That means "No plowing this week!" A smaller yield; a late crop; money lost and time wasted, by one lame horse. **Don't take the chance.**

A bottle of SAVE-THE-HORSE, the humane treatment for sore, lame and blemished horses, is the surest safeguard against these losses. It saves much because horse may work while being cured.

SAVE-THE-HORSE cures—that's why we sell it with signed Guarantee to cure Ringbone, Thoropin, SPAVIN—or Shoulder, Knee, Ankle, Hoof or Tendon Disease or return money. Cures the so-called "incurables" without blistering or lost work.

BOOK FREE Our FREE 96-page BOOK makes it possible for you to locate, understand, and treat all lameness, and our expert veterinary's advice is yours, free for the asking, if you are not sure. *Don't run the Risk* of having horse laid up when you most need him. Use it once and you'll always depend upon SAVE-THE-HORSE. Remember the GUARANTEE and let *us* take the risk for you. Write today for sample of this MONEY-BACK Guarantee, BOOK and advice—all FREE.

TROY CHEMICAL CO.
318 State Street, BINGHAMTON, N. Y.

At Druggists and Dealers with Signed Contract or sent prepaid.

however, as many of them are of a distinctly different nature. In fact, most bacteria are harmless and only a small proportion are capable of producing disease, only a few will thrive in the animal bodies, as their natural place of living is elsewhere, but the small group that may cause disease when they get into the body is sufficiently active to make life of a susceptible animal uncertain when they are in the vicinity.

VETERINARY

By DR. S. B. NELSON.

Apply Tincture of Iodine.—I have a cow that was taken sick about two weeks ago with sore throat and I bathed it with turpentine and lard and gave her a little strong alum water twice a day. She eats well now, but there is a hard ridge on the left side of her neck five or six inches long. What should I do for it? J. R. L.
Reardan, Wash.

Apply tincture of iodine to the lump morning and evening.

Rubs Off Hair.—I have a horse that rubs the hair from his tail and mane every summer. He keeps this up until cool weather comes. L. M. L.
Sunnyside, Wash.

I think the horse should have a thorough purging. One ounce of aloes and two drams of ginger made into a ball and given to him after he has been starved a day will do this. The tail might be washed with a 1 to 1000 solution of corrosive sublimate and water. This is poisonous and should be kept away from animals and children.

Dehorning Cows.—What is the best way to dehorn cows, saw the horns off or use a dehorner? Should anything be applied to the head afterward to prevent excessive bleeding? I also have a cow that coughs. She is in good health and eats well.
Mabton, Wash. H. B.

As a general practice a dehorner works much better than any other instrument with which to dehorn cows. The horns should be taken off just near the hair line. Brush the hair back, so that you can find it. Many people apply a little tar to the rough edges.

If your cow is in good health I doubt whether there is anything very seriously the matter with her. Animals that are heavy eaters like cows frequently have a little dry, hacking cough.

Cow Has Cough.—I have a heifer that freshened in August. She began to cough when we began to give her mill feed and seems to be getting worse. It is a dry cough, but she does not cough up anything. I dampened her feed, but she refuses to eat it that way. I also have another cow that has hard lumps in her udder. F. N. E.
Clayton, Wash.

Give your first cow 10 grains of potassium iodide on her feed or in a drench once daily for some time. Treat your second cow by giving her a pound and a half of epsom salts in a quart of water. Paint the udder where the lumps are, after each milking, with an application composed of soap liniment, six ounces, and tincture of iodine, two ounces.

Give Dry Feed.—We have a fine milch cow that has had four calves and always has milk fever when fresh. She will be fresh again in March, is now giving four gallons of milk per day and probably will not go entirely dry. We are feeding twice daily a gallon of dairy feed and alfalfa hay. Could she be fed to prevent the trouble mentioned? J. P. W.
Willapa, Wash.

You should dry this cow up immediately. She should have from four to six weeks' rest. Take away the dairy feed and give her dry hay, not too much of it. After she is dried up you can begin feeding her more liberally until within 10 days of her freshening, at which time put her on the poorest hay you have. When you have her on this very dry feed, without roots or anything to aid her digestion, give her a cupful of epsom salts in a quart of water daily to prevent digestive troubles. As soon as she calves you can begin to feed her bran mash and hay gradually until after three or four days you can again have her on regular feed. This method often prevents milk fever.

Need Exercise.—We have a pig that is in fine condition, eats well, but after eating seems to cough and wheeze. We just bought two little pigs and they seem to have the same cough, only they cough more or less all the time. They have a good, warm place to sleep and get warm feed. I also have a cow that will freshen soon. Along toward the last of her milking period she had garget. If she has it again what treatment should I give? J. V. C.
Okanogan, Wash.

You do not mention whether or not the pigs have opportunity for exercise. I would judge from your letter that they do not. You will find that if you can give them exercise the wheezing will probably disappear. You might lessen a little of the feed and give them more exercise. If the cow gets garget again, wash the udder with hot water in which salt has been dissolved, a handful to a pail of water. Dry carefully and milk often. Cut down on her feed so as to lessen the milk supply for two or three days. When she gets better increase the feed.

Lumps in Udder.—I have a cow that will freshen soon and she has two lumps in her bag about the size of a hen's egg.
Tenino, Wash. A. S. D.

Paint it with tincture of iodine after the night milking.

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POULTRY

Why the Slump in Egg Prices?

The news letter of the Washington state department of agriculture recently contained the following suggestions as to the causes of the recent slump in egg prices:

The commencement of the year found a rapid and extraordinary decline in the price of eggs. Indeed, in the eastern markets the price dropped to what would be considered a low price during the spring, when the bulk of the eggs produced in the country are rushed to market. In New York the price of select Pacific coast white eggs was cut squarely in two within the space of a couple of weeks.

The explanation of the decline is not any falling off in consumption. On the direct contrary, New York reports that during December the amount of eggs which reached that market was 45 per cent greater than during the same month of last year. Yet, they were all consumed and the amount of eggs in cold storage declined 7 per cent during the month. The fact seems to be that the heavy increase in the amount of eggs on the market broke the price and the lowered price stimulated consumption. So far as cold storage eggs were concerned, it is probable that the owners of those eggs, when they saw the price fresh eggs breaking at this time of the year to 42 cents, became panicky and decided to get their eggs out before the price sagged further.

The explanation of overproduction at this season of the year, at that, seems fairly plausible. Almost all specialists in egg production have been breeding for winter layers, because in winter the price of eggs is uniformly the highest or has been so in the past. It will be remembered by those who follow market conditions closely that for a time in the fall of last year practically the only eggs on the Seattle market were pullet eggs. The spring hatch of pullets were coming into laying and they have been laying all through the winter, with the consistency of fowls line bred for big egg production. There is a chance that the commercial egg producers have rather overdone this business of winter egg production and among them are making the winter instead of the spring and early summer the season of the greatest egg production in this country.

Chickens and Orchard

J. H. McCoy of Kirkland is getting a small home orchard planted to Montmorencey sour cherries. Gooseberries and currants have been planted in the rows of trees and for the first few years small garden crops will be planted between. A small flock of hens were secured last summer and Mr. McCoy plans to weed out all but the Barred Rocks.

"I am going to put in some kale and rape for the birds to work on this summer," said Mr. McCoy. "I will fence in the orchard and let them run at all times. They are a benefit to an orchard, since they will eat many insects and put much fertilizer on the soil.

"I expect to keep rather busy with the place, even though it is only a little over an acre in size. I am a carpenter and spend most of my time working, but there will be odd times when I will be improving the home and orchard."

GREASES BALD-HEADED HENS.

To the editor of The Washington Farmer: My attention has been drawn by an article or two in your very valuable paper lately on "Bald-Headed Chickens." More than likely it is caused by tiny parasites that infest poultry and eat the feathers. They attack different parts of the fowl and are so very small that they can not be detected with the naked eye and will cause spots to become completely bare. Simply grease the spot and a little around the spot with any kind of grease, lard, fryings or vaseline.

I have seen several dozen chickens become infested by putting a strange fowl in among them that has a bare spot and have remedied the trouble by greasing them.

After my first experience along this line I always kept my "new cockerels" in quarantine for two weeks before putting them with the flock, giving them thorough treatments for lice or mites or scaly legs, colds, etc. Prevention is better than a cure. MRS. W. H. YEO.

Spokane, Wash.

CAPONS NEED COLDER CLIMATE.

Mrs. Peter Tait of Kirkland inquires if it would be practical to caponize young White Leghorn cockerels in order to increase their size and have them ready for an early fall market.

George Shoup, poultryman of the Western Washington experiment station, replies that caponizing is very seldom profitable for Pacific coast districts. A capon will not produce rapid growth in moderate weather, but in other parts of the United States where it gets cold the practice is more profitable, since the birds have better appetite and eat more feed.

SHOULD BE WATCHFUL.

The good poultryman keeps a close watch of his flock to guard against the entrance of disease. It is a good idea to go out to the roosting house at night and listen to the flock as they breathe. Coughing, sneezing and gurgling in the throat are pretty good evidences of colds that should be given immediate attention. Hens that have colds should be separated from the others at once in order to prevent the spread of the trouble. Roup, one of the most troublesome poultry ailments, results from neglected colds.

ANOTHER THREE-YOLK EGG.

To the Editor of The Washington Farmer: I read in your paper of E. W. Corner of Spokane getting an egg with three yolks. We also gone with three yolks from a Rhode Island Red hen. Two were extra large and the third one about half as large. The egg measured 8 1-2 inches the long way and 6 1-2 inches around. There seemed to be plenty white for the yolks. J. P. RICHARDS.

Hamilton, Wash.

DANGERS FROM VIBRATION.

When incubators are set near a railroad track there is some danger of damage to the eggs from excessive vibration. The same is true of heavy blasts of powder and it is a good plan to avoid turning the eggs when a blast is about to occur.

Injury is caused by the air vibrations and if the incubators are kept closed there is less danger. After the eggs have been set a few days they are practically out of danger.

KALE IN BROODER YARDS.

When using the sectional brooder yards plant the rows of kale lengthwise to the units. It will be easier to cultivate and the chicks will follow the rows readily.

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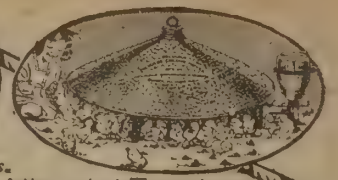
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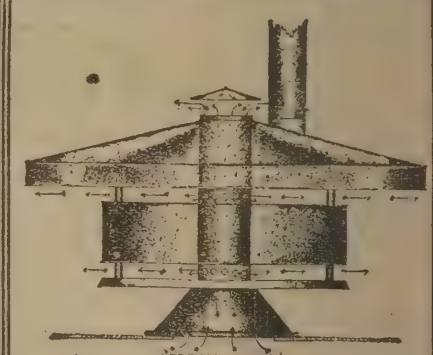
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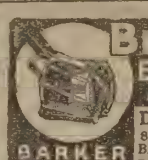
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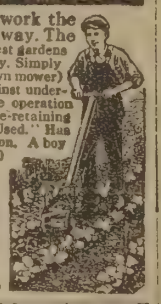
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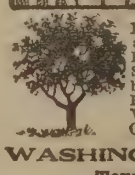


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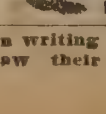
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Building Berry Farm

"It takes a lot of money to build up a berry farm, especially when you are trying to build it up within two or three years' time," is the opinion of J. H. Clark of Bellevue, who has a 15-acre farm and is getting it planted to small fruits. "I am setting out several different kinds of fruits in order to have a longer season for harvesting. I don't care about making a specialty of any fruit until I get better acquainted with the soil and climatic conditions.

"I set out an acre and a quarter of raspberries, most of which are Cuthberts, but I wanted to try out the Marlborough and the Antwerp. The plants are getting a fine start and there are an abundance of new shoots. I did have some blackcaps, but they didn't get a very good start and I was afraid the climate was not right for them and I dug them out."

When setting out the two acres of loganberries Mr. Clark tried both transplants and sets, planting them in alternate rows in order to find out which would first produce bearing vines. The growth of the transplants during the summer was much greater than the sets and the vines are now of sufficient size to produce a crop of berries next season. Both kinds of plants had similar treatment during the summer. From this trial he is convinced that sets are not as vigorous as are the plants that have been transplanted before setting.

In another field are some everbearing blackberries. The patch, which is only an acre and a quarter in size, is on bottom soil, but has been well drained by a system of ditches and a furrow between each two rows of vines. Mr. Clark has used a unique method of trellising, since there are no staples or nails used to support the wires. Notches were cut in cross pieces on the posts with a saw and the wires inserted. For the spreaders between the posts, notches are cut at both ends just large enough to admit the wire. This process not only saves the cost of staples, but allows for the removal of the wires when cutting out the old canes.

"I am also putting out two acres of grapes," said Mr. Clark," and I am getting the Island Belle. I am trying out a plan of fertilization of the soil while the grapes are getting their growth. I have been told that grapes should never be planted on soil unless it is fertile, but this piece of land is high and was cropped to strawberries before I bought it. I am building it up while the plants are getting established. Late this fall I scattered barnyard and hen manure around the plants and will turn it under with the spring cultivation.

"It is my purpose to establish a small fruit farm which will require a minimum of spraying. I am not setting out any trees for that reason. What few trees I have will be cherries and perhaps an occasional apple for the home orchard. The berries will not need much attention, with the possible exception of the blackberries, and I figure it will eliminate much labor in the busy season."

Mr. Clark then told of a cover crop experiment which he carried on last summer in the young cherry orchard. Vetch, wheat and oats were seeded together in the fall of 1920 and allowed to grow the following spring. The growth was very heavy and it turned under in fine shape. I made one mistake by leaving it too long before plowing and it took some of the moisture from the trees.

A field of buckwheat was tried out as a cheap crop to turn under, but it is not considered as good as vetch or clover because of its lack of nitrogen. It does, however, put the soil in a good physical condition and is an easy crop to grow in this section, according to Mr. Clark.

Humus in Orchard Soils

Much is being said about the value of humus in orchard soils, especially after a series of years in clean cultivation. It now appears that there may be too much of a good thing even with regard to humus. According to Professor O. M. Morris of the state college, a slight excess of humus will tend to throw the trees into a heavy foliage and big growth, resulting in large sized, yet poorly colored fruit.

The fact yet remains that the soils of the Inland Empire when first brought under cultivation contained a relatively small quantity of humus and relatively large quantity of plant food material. This fertility has been preserved in the soil for ages, as it has never been washed away by rain. For the first few years of cultivation it is very productive, especially in tree growth. Then came the era of clean tillage. High temperature and control of water exhaust the humus supply rapidly with the result that in a relatively short time the production of the soil is dropping from the original indications.

Professor Morris goes on to point out that normally all these irrigated soils show quick and good response in plant growth to the application of nitrogen having fertilizers. This fact is the explanation largely why the legumes, such as alfalfa, have given splendid results in soil improvement.

But it is to be remembered that the growing of alfalfa upon this soil and using the entire products of the plant for hay is exhaustive to the soil. Often the crop is shipptd out of the country entirely to the stock and the dairy farms of western Washington instead of being fed to stock at home, where the manure can be put on the ground, and thus at least a part of the soil building material is returned.

The big problem seems to be how much humus to introduce into the soil by plowing under legumes and when to stop. In Professor Morris' own words: "We have found that there is a sort of knife-edge in this matter and too much one way or the other will affect the quality and quantity of the fruit."

Worms in Potatoes

When I harvested my potato crop I found quite a few were wormy. One-half of them were dipped in mercury solution and the other half were not, and they are all the same. Can you tell me the cause and remedy for this? T. M. R.
Plum, Wash.

It will be necessary to send some specimens of the affected tubers in order that we may find out which worms these are in yours, as there are several types of worms that infest potatoes.

Treatment of seed in the spring before planting with mercuric chloride would not have any effect in preventing worms on the tubers formed. That treatment is aimed at the control of scab and also rhizoctonia, both fungous diseases.

We have in this region the wireworm, which enters tubers and causes trouble. Often the larvae of the flea beetles attack the tubers. When tubers rot from any cause many small maggots are formed in them, the larvae of small flies.

ARTHUR FRANK, Plant Pathologist.

OFFERS DUROCS AND HOLSTEINS.

S. L. Banks of Tekoa has announced February 28 as the date of his sale at which he will dispose of about 40 head of Duroc Jersey swine and Holstein cattle. The sale will be cried by Colonel Harry C Cranke of Moscow, Idaho.

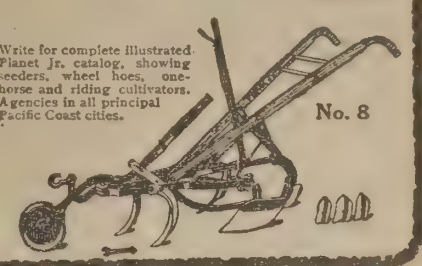
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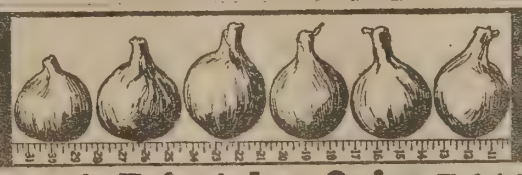
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Get a start with Hubam, the marvelous annual White Sweet Clover, greatest money-making crop known. Sure growth, heavy yield. Grows as high as six feet. Wisconsin farmer got $4200 from five-acre crop. Seed yield brings $75 to $300 per acre. Makes excellent Bee pasture. We have only a limited amount of 99¾ per cent pure Hubam at only $1.40 per pound. State certified seed. Order from this ad or write for money-saving price list. Full instructions for growing Hubam with every order. Don't wait. We pay the freight.
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Immense yields year after year without replanting. Seed from original stock, scarified to increase germination. Booklet and seed sample Free. A. B. LYMAN, Introducer of Grimm Alfalfa.
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DOES NOT WINTERKILL

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400 BU. PER ACRE



$950 PER ACRE

Sonderegger's Prizetaker Onion We find this to be the largest and handsomest Yellow Globe Onion for home or market. It grows to an immense size, but is fine-grained, mild and of delicate flavor. Fine for fall and winter use. Frank Woodfill, a Nebraska farmer, wrote: "Six Sonderegger Prizetaker Onions, set side by side, measured 22 inches. I used 100 lbs. of nitrate of soda and grew 400 bushels of Prizetaker Onions on less than one acre. They were the finest onions I ever grew."

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Wagner's Giant Winter Rhubarb and all varieties of Berries. Also a general line of Fruit Trees and Nursery Stock. Write for Catalog and Prices.
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(J. B. Wagner & Son)
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Everbearing Strawberry Plants
produce fresh fruit 100 days from planting.
Asparagus and Rhubarb roots, annual and perennial flowering plants. Seed potatoes. Our handsome FREE catalogue describes fully how to produce sure crops of tomatoes, peppers, cabbage and other vegetables and flowers.
KELLY GARDENS, Spokane, Washington

The Diener Tomato



Increase your tomato yield one hundred per cent by raising the new DIENER TOMATO. 30-40 tons of ripe fruit to the acre.

This tomato was raised last year all over the United States and Canada with the greatest satisfaction.

As smooth as an apple and of a magnificent dark red color. Single tomatoes weigh up to 3 lbs. each. The flesh is more solid than that of any other tomato. The fruit contains very little seed and is solidly filled out. This tomato is free of the acid taste, and for dehydrating, catsup and canning it is the best tomato in existence today.

The DIENER TOMATO is blight-resisting as well as drought-resisting. It will not crack from the rain and will not rot while lying on the ground in wet weather. This tomato will grow in almost any kind of soil and it commences to ripen the first part of August.

It is the greatest novelty in the tomato line, and it will soon crowd out the present varieties from the market by its far superior quantities.

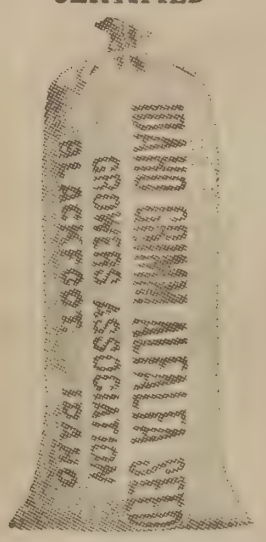
Price of the DIENER TOMATO SEED: Sample pgk., 25c; one-quarter of an acre pkg., 50c; one acre pkg., $1.50.

Our 1922 catalogue will be sent upon receipt of 25c in stamps, which amount may be deducted when sending in first order.

RICHARD DIENER CO., Inc.

Kentfield, Marin County, Calif.

GENUINE GRIMM ALFALFA SEED CERTIFIED



In Sealed and Labeled Bags

Insure your crop by planting seed of known origin.

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LILLY'S

You Should Grow Gradus Peas Too

Extra early and equal in quality to most late varieties, our Gradus, or Prosperity, has few if any equals. Thoroughly acclimated. Together with many other desirable varieties it is described fully in our big 1922 SEED ANNUAL just issued. Reliable information about the cultivation of all kinds of vegetables and flowers. Every grower should have it. Get it, free, today.

Ask Your Dealer or Write

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SEEDS

Glance over the bargains on the "Want Ad" page.

FARMERS' WANT ADS

This is the farmers' "want," "sale" and "exchange" department for small advertisements of farmers, including live stock and poultry

Advertising rates for ads running 1 to 3 times, 10c per word per insertion, with a special rate to Farmer subscribers, as follows: Ads running 4 to 12 times, 9c per word per insertion; ads running 13 times or more, 8c per word per insertion.

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Above rates include insertion in The Washington Farmer, The Idaho Farmer and The Oregon Farmer, which constitute the Pacific Northwest Farm Trio, 46 Review Building, Spokane, Wash.

HELP WANTED—Male 3

RAILWAY MAIL, GOV'T CLERKS-CARRIERS; $125-$200; experience unnecessary. Particulars free. Write Mokane Institute, Dept. A28, Denver, Colo.

SITUATIONS WANTED—Male 21

HOLLANDERS, HEALTHY, WANT JOB, MODern dairy; state kind of farm, wages and other conditions. R. Van Twisk, Ontario, Ore. R. D.

WANTED — TO MANAGE ON SHARES, stocked dairy. Alfred O'Hara, Denison, Wash.

FRESH FOOD PRODUCTS 51-1

HONEY BRAND HONEY—PURE, LIGHT, thick, and good flavored; from alfalfa and sweet clover; one 60-lb. can, $7.50; two 60-lb. cans, $14.50. Write for circular and complete price list in pails; salesmen wanted. Oliver Sires, Wapato, Wash.

WHITE ALFALFA, SWEET CLOVER honey; 1 60-lb. can, $7.50; 2 60-lb. cans, $14.50; six 10-lb. cans, $8.50; three No. 10 pails, prepaid third zone, $5.50. Wells D. Rose, Sunnyside, Wash.

YAKIMA VALLEY HONEY. BEST PRODuced; from alfalfa and sweet clover. 60-lb. can, $7.20; two for $14; satisfaction guaranteed. Theodore Sires, Congdon Orchards, Yakima, Wash.

HAPPY HOME HONEY FROM BLOSSOMS of alfalfa and sweet clover, in liquid form; 6 10-lb. pails, $8.50; 1 60-lb. can, $7.50; 2 cans, $14.50, at Mabton. H. N. Paul, Mabton, Wash.

HONEY—ALFALFA, SWEET CLOVER; FINE quality; 60-lb. can, $7.50; two 60-lb. cans, $14.50; three 10-lb. pails, prepaid second zone, $5. Harry Fisher, Prosser, Wash.

SMOKED SALMON, 5-POUND BOX, $1.25; salt salmon bellies, 5 pounds, $1.25, delivered by mail. Coffin Fish Co., Seattle, Wash.

GUARANTEED FINEST FLAVORED HONEY, 60-lb. can, $6.25, delivered for $7.75. J. Walsh, Box 38, Hagerman, Idaho.

FINEST ALSIKE CLOVER HONEY, ONE sixty-pound can, $7.50; two cans, $14.50. Roy Selwyn Wilson, Buhl, Idaho.

MISCELLANEOUS—FOR SALE 60

SASH AND DOORS—O. B. WILLIAMS CO., 1943 First ave., So. Seattle. Chicken house sash, 20" wide by 25" high, 80c; a dozen different sizes in stock for immediate shipment. Skylights for chicken houses, 36"x40" price, glazed, $2. This is the size recommended by the Western Washington experiment station. We carry them in stock for immediate shipment. Sash and doors for all purposes at lowest prices. All orders receive prompt attention. Our large illustrated catalogue No. 35, showing full line of building material and built-in fixtures for the home, free on request. O. B. Williams Co. Established 1899.

KENTUCKY LEAF TOBACCO, 3 YEARS OLD; nature cured. Don't send a penny, pay for tobacco and postage on arrival; extra fine quality chewing or smoking, 10 lbs., $3; medium quality smoking, 10 lbs., $1.25. Farmers' Union, D 44, Hawesville, Ky.

TOBACCO, NATURAL LEAF—SWEET AND mellow hand-picked chewing or smoking, 5 lbs., $1.50; 10 lbs., $2.50; smoking, 10 lbs., $2. Furnish free recipe for preparing. Quality and delivery guaranteed. Farmers' Tobacco Exchange, Sedalia, Ky.

WALL BOARD—WRITE FOR SAMPLE OF Washington plaster wall board; won't warp, won't burn. Manufactured by Washington Building Products company, 6851 E. Marginal Way, Seattle, Wash.

PIPE — NEW AND SECOND-HAND, ANY size; low price; standard grade roofing paper at a big saving; belting, all plies, all sizes, cheap. Write Alaska Junk Co., S120 Adams st., Spokane, Wash.

E. Z. BUILT SILO, ERECTED IN SECTIONS; has double walls with 6-inch air space; freeze proof; built of fir lumber; strong, durable and low priced. J. F. Jacobson Lumber Co., Tacoma, Wash.

CEDAR CHESTS DIRECT FROM FACTORY to your home; Tennessee cedar, solid copper trimmings. Write for catalogue. J. W. Higgins & Sons, 1912 Gilsan st., Portland, Ore.

OUR FREE CATALOG OF GROCERIES AND general merchandise will save you big money; a postal card brings it. Write today. Jordan-Lawler company, Box 615T, Spokane, Wash.

TOBACCO—NATURAL LEAF FOR MILD smoking. 10 lbs., $1.50; 20 lbs., $2.75; will furnish free recipe for preparing. Leaf Tobacco Exchange, Mayfield, Ky., Star Route.

HOMESPUN SMOKING OR CHEWING TObacco, collect on delivery; 5 pounds, $1.50; 10 pounds, $2.50; 20 pounds, $4. Farmers' association, Paducah, Ky.

GLASS CLOTH—A TRANSPARENT, WATERproof fabric as efficient as glass for hotbeds. Catalog free. Turner Bros., Bladen, Nebraska.

CEDAR POSTS, POLES, PILING AND STUBS; lengths and sizes to order. Marsden Red Cedar company, Calder, Idaho.

TOBACCO—HOMESPUN MILD SMOKING, 10 lbs., $2; 20 lbs., $3.50; chewing, 10 lbs., $2.75. Farmers' Club, Mayfield, Ky.

MISCELLANEOUS. 61

USED CORRESPONDENCE COURSES BOUGHT and sold. Write for prices. Spokane Sales Agency, Golden Gate bldg., Spokane, Wash.

MISCELLANEOUS—Wanted 63

WANTED—BUY CANARIES CAGES, 1615 12TH ave., Seattle.

MACHINERY—For Sale 93

THE WRIGHT GARDEN PLANTER WILL evenly drop any number of seeds per foot of any kind you may wish to plant. It has a force feed, does not skip, and thinning unnecessary. Free illustrated booklet. Geo. H. Wright, 1925 Pacific avenue, Spokane.

STUMP PULLER—THE DOW HAND STUMP puller, complete, triple power outfit, $118 machine only priced $60. All steel and absolutely guaranteed. Write for catalogue. David Dow & Son, Seattle, Wash.

STOVE REPAIRING. 128

WRITE MYER RUBENS, SPOKANE, ABOUT stove repairs, welding broken parts, nickle plating.

FUR-BEARING ANIMALS 170

FOR SALE—FEMALE SKUNK, AA MARKING, $20 for quick sale. Wm. McConnell, Moscow, Idaho.

PETS—Dogs, Birds, Etc. 171

FOR SALE—THOROUGHBRED AIREDALE terrier pups. M. Woodcock, Yakima, Wash.

WHITE COLLIE PUPPIES. URBANDALE Farm, Oakley, Idaho.

RABBITS and HARES 173

WE ARE BOOKING ORDERS NOW FOR EGGS from our Mammoth Toulouse geese. 35 cents each, and are quoting very special prices this month on New Zealand Reds and Blue Flemish Giants from winners. East Larchmont Pet Stock farm, R. 4, Box 49, Tacoma, Wash.

PEDIGREED FLEMISH AND CHECKERED Giants. Prices not fancy. Brookside Rabbitry, Hubbard, Ore.

FOR SALE—PEDIGREED NEW ZEALAND rabbits, $3.50 each. Wm. Plank, Prosser, Wash. Route 2.

POULTRY (Baby Chicks) 174

"WHAT THEY SAY."—"YESTERLAID EGG Ranch, Kent, Wash. Dear Sir:—Is there any chance for 1200 chicks the 1st of April? Well pleased with your pullets last year. They laid between 50 per cent and 60 per cent since last October." Jack Sheridan, Greenacres, Wash. "Dear Sir: I bought 400 chicks of you last spring and will say they were the best layers I have. I would like to buy between 400 and 500 more next month. What time in February could I get them?" Mrs. Leonard Fossett, Dungeness, Wash. "Jan. 6th, 1922. Dear Sir: Enclosed find $7.50 as 15 per cent payment on 250 chicks. Our neighbor, Mr. Wood, got some from you last year and they certainly are good layers." William Stark, Coeur d'Alene, Idaho. We hatch 12,000 chicks every 5 days from our own wonderful trap nested White Leghorns. All of our 8000 laying hens are trap nested and bred to lay. We have 40 acres devoted exclusively to White Leghorns, all with wonderful egg records. More than 50,000 chicks already sold, but we still have good dates left if you book your orders at once. Send for price list and dates you would like chicks shipped. Yesterlaid Egg Ranch, Kent, Wash.

WHITE LEGHORN AND ILL-A-HEE BARRED Rock chicks—Buy chicks this year that live and grow and are bred to lay. Butler White Leghorns and Ill-a-hee Barred Rocks are known for high average flock production. Before ordering elsewhere, write for circular telling how our breeding methods produce 200 flocks for our customers. All stock trap nested and pedigreed. Also get our prices on breeding cockerels and hatching eggs for each breed. Address Butler Poultry Farms, or Ill-a-hee Poultry Farm, Jennings Lodge, Ore.

"FRESHLAID" WHITE LEGHORN CHICKS have the qualities you want; vigor and scientific breeding for the heaviest egg production; every "Freshlaid" male is from a high record hen. Freshlaid Farm is one of the largest and oldest chick plants in the Inland Empire. There is a real demand for "Freshlaid" chicks, especially from our old customers. We are sold out until May 1. Write at once if you wish May chicks. May chicks make ideal winter layers. Catalog. Freshlaid Farm, Colfax, Wash.

THE PROGRESSIVE HATCHERY — BABY chicks from vigorous range bred stock; trapnested S. C. White Leghorns, $20 per 100; selected S. C. White Leghorns, $18 per 100; S. C. R. I. Reds and Barred Rocks, $25 per 100; safe delivery of live, vigorous chicks, full number ordered; absolutely guaranteed. Send for circular of special matings and hatching eggs. 1534 East 12th North, Portland, Ore.

BABY CHICKS FROM PETALUMA ELECtric incubator have "pep" that surprises customers. Electricity is life. Modern poultrymen are rapidly adopting our system with splendid results. Safe, efficient, economically better chicks. Hatch for yourself or get chicks from hatcheries using Petaluma incubators. Write for our free catalog. Petaluma Electric Incubator Co., Petaluma, Cal.

CRYSTAL WHITE POULTRY FARM—BREEDers of S. C. White Leghorns; baby chicks a specialty; hatched from eggs laid by our great egg producers. Price, $17 per 100; $160 per 1000. Order early to get the best dates. Send for circulars. Mr. and Mrs. Jno. Eborall, McMinnville, Ore. Box 33.

WHITE LEGHORN BABY CHICKS FROM heaviest laying stock. Booking orders now for spring, 1922, delivery. Safe arrival live, vigorous chicks guaranteed. Prices on request. Reliable since 1898. Must Hatch Incubator Co., 445 Seventh st., Petaluma, Cal.

BABY CHICKS, HATCHING EGGS—FROM Hoganized hens, well mated. White and Brown Leghorns, R. I. Reds, Barred Rocks. Safe arrival guaranteed. Order early. Write for circular. Stubbe Poultry Ranch & Hatchery, Box 67J, Palo Alto, Cal.

WHITE ROCK BABY CHICKS, "DANIEL'S IDEALS," from our own trapnested stock entirely. Write for prices and dates, also eggs for hatching. Free catalog. Ideal Poultry Yards, Hoquiam, Wash. Star Route No. 25.

BABY CHICKS FROM TRAP NESTED STOCK. Write for dates and prices. Don't expect cheap prices as we handle only the best. Swayne's Fancy Egg Farm, Centralia, Wash.

BABY CHICKS FROM TRAPNESTED WHITE Leghorns of superior quality; 14 years breeding for egg production. $18 per hundred. Chas. L. Perkins, 1337 Burrage, Portland, Ore.

WHITE LEGHORN BABY CHICKS FROM two and three year old selected hens, mated to cockerels from high producing stock; $14 per 100. O. H. Shaw, Cottage Grove, Ore.

BABY CHICKS, S. C. RHODE ISLAND REDS, $22.50 per 100; S. C. White Leghorns, $18 per 100; March chicks all sold. Maple Brook Poultry Farm, Southworth, Wash. Box 2.

BABY CHICKS — WE GUARANTEE OUR chicks to be from the highest producing hens in Petaluma. Write for further information. The White Hatchery, Petaluma, Cal.

POULTRY—Baby Chicks (Continued) 174

BABY CHICKS — REDUCED PRICES ON White Leghorns, Reds, Barred Rocks, White Rocks, Minorcas, and Anconas; booking orders now; postal secures free catalog. Write today. C. N. Needham, Salem, Ore.

CHIX—BIG, HEALTHY, HEAVY LAYING kind, from our own record hens. Feb. and March hatch, $15 per 100. Chandler's Poultry Farm, Lebanon, Ore.

TANCRED STRAIN WHITE LEGHORN BABY chicks, $18 per 100; eleventh season; incubator capacity, 18,000 eggs. D. A. Gillette, R. 4, Yakima, Wash.

WHITE LEGHORN BABY CHICKS; OREGON Agricultural college stock exclusively. Write for circular. Russell Poultry Farm, Route 3, Corvallis, Ore.

BABY CHICKS, COCKERELS, SINGLE COMB White Leghorn; heavy laying strain. Grape Lane Poultry Farm, Turner, Oregon.

BABY CHIX—REDS, ROCKS, WHITE ORpington's and White Leghorns. Hansen's Poultry Yards, Olympia, Wash.

ANCONA COCKERELS. HATCHING EGGS, chicks. Get our prices. Oscar Dunlap, Junction City, Ore.

BABY CHICKS; BEST WHITE LEGHORNS; free circular. Acme Poultry Farm, Dirston route. Cottage Grove, Ore.

Leghorns.

"HENACRES" 8 WEEKS' OLD PULLETS; March or May hatched; big, healthy, vigorous bred to lay. Booking orders now. 6000 to sell, $1.50 each or 500 for $700. Satisfaction guaranteed or money back. Baby chicks for February, March and April all sold to old customers. May chicks, $22 per 100; $200 per 1000. June, $16 per 100; $140 per 1000. Safe delivery guaranteed. Hatching eggs, $2 per 15; $9 per 100; $80 per 1000. "HENACRES" Leghorns are known all over the northwest. Ask your neighbor. Illustrated catalog and booklet on poultry management free. "HENACRES," Box A, Prosser, Wash.

PURE BRED S. C. WHITE LEGHORNS—ALL breeding hens and pullets of trap nested strain; carefully selected for vitality and standard requirements; eggs, $1.50 for 15; $8 100; baby chicks, $18 per 100; safe delivery guaranteed. A few cockerels from 280 to 304 egg hens, $3 to $5 each. Frank Volland, Rt. 1, Kennewick, Wash.

O. A. C. WHITE LEGHORNS—WORLD-FAmous egg producers; vigorous, free range stock; baby chicks, eggs, cockerels for sale. Our entry is leading pen for value of eggs produced in November and December, Western Washington egg laying contest. Write for free circular. Corvallis Poultry Farm, Corvallis, Ore.

SINGLE COMB WHITE LEGHORNS (TANcred strain); selected heavy laying second and third year hens mated to cockerels from 250 to 275 egg trap nested dams; hatching eggs, $1.50 per 15; $7.50 per hundred; chicks, $18 per hundred, safe delivery guaranteed. Oaklawn Poultry Farm, Hillsboro, Ore.

TRAPNESTED WHITE LEGHORN BREEDING stock and setting eggs; famous Carnation high record stock; pedigreed breeding for heavy winter layers. Improve your flock by adding Carnation stock. Ernest W. Raush, Carnation Poultry Farm, Kent, Wash.

SINGLE COMB WHITE LEGHORN CHICKS, hatching eggs, yearling pullets, cockerels and 2-year-old breeders; flock built up of Barron and Hollywood strains; all good, healthy stock, on free range. Prices reasonable. B. S. Meckly, Glen Rock, Pa.

PRIZE-WINNING S. C. BROWN LEGHORN (light strain), single comb White Leghorn (Tancred strain); baby chicks, $15 per 100; order now. Satisfaction and delivery guaranteed. G. R. Lumberg, Springdale, Wash.

WE ARE NOW OFFERING A REDUCED price of $8 per 100 on hatching eggs from our Hoganized White Leghorns. Chicks, 20 and 30 cents each. Mrs. Arp, St. John, Wash.

WHITE LEGHORN EGGS FOR HATCHING—Oregon Agricultural college stock; $2 per setting, or $8 per 100 prepaid. Russell Poultry Farm, Route 3, Corvallis, Ore.

S. C. WHITE LEGHORN HATCHING EGGS; hen's records, 209 to 294; mated to pedigreed cockerel from 297-egg hen, $5 for 15. Y. L. Swartz, Menlo, Wash.

HATCHING EGGS, 90 PER CENT FERTILITY guaranteed; 100, $4.75; from White Leghorns; chicks, 13½c. Order now. Singing Hen Poultry Plant, Walker, Ore.

FORD'S BRED-TO-LAY S. C. WHITE LEGhorns. Hatching eggs, $2 per setting; $8 per 100; special matings on request. W. A. Ford, Umatilla, Oregon.

COCKERELS, SCOTT'S STRAIN S. C. WHITE Leghorns, big type; only a few left; act quick; $5 each. Louis I. Carpenter, King Hill, Idaho.

S. C. WHITE LEGHORN BABY CHIX FROM trap nested, Hoganized hens; also cocks and cockerels. J. Panck, Sherwood, Ore. R. 1.

S. C. BUFF LEGHORNS; EGGS FOR HATCHing; good layers; guaranteed all eggs fertile stock. M. H. Mann, Woods Cross, Utah.

WHITE LEGHORNS, TRAP NESTED STRAIN, hatching eggs, baby chicks. Write us. Washington Poultry Farm, Hartford, Wash.

Barred Rocks.

FREE MATING LIST, DESCRIBING OUR ideal Barred Rocks; 37 1sts, 10 specials for 1921. High egg record; 303 eggs; average egg record 229 eggs. Jacobson's Poultry Yards, 3596 Tacoma, ave., Tacoma, Wash.

OREGON AGRICULTURAL COLLEGE Barred Rock hatching eggs; 200-egg strain, $1.50 per 15; $2.50 per 30; $7 hundred. Miles Tetherow, Central Point, Ore.

HATCHING EGGS, OREGON AGRICULTURAL college Barred Rocks; choice pen, $2 per 15; utility stock, $1.50; great layers. J. M. Steen, Lebanon, Ore.

RINGLET BARRED ROCK COCKERELS; THE finest lot I ever raised, for sale cheap; all birds sent on approval. J. O. Watts, Eugene, Oregon.

MY SUPERIOR BARRED ROCKS WON 38 prizes, three shows. If you want good ones write C. E. Dibble, Payette, Idaho.

O. A. C. STRAIN BARRED ROCKS; EGGS, $6 hundred; chicks, $25 hundred. The Idle Hour Poultry Farm, McCoy, Ore.

DARK BARRED ROCK COCKERELS. THOMPson's ringlets. Ray Leftwick, R. 4, Box 855A, Tacoma, Wash.

HUNT'S FINE BARRED ROCKS. WRITE for circular on eggs. W. A. Hunt, Lebanon, Ore.

PURE BRED BARRED ROCK COCKERELS, dark, $4. August Anderson, Pullman, Wash.

O. A. C. STRAIN BARRED ROCK COCKerels. Write George Gellatly, Corvallis, Ore.

FANCY BARRED ROCK COCKERELS $5 UP. J. E. Horton, 2408 Altamont, Spokane.

Turkeys, Ducks, Geese

PURE BRED MAMMOTH BRONZE TURKEYS. S. L. Maltby, Rogerson, Idaho.

(Continued on the following page.)

FARMERS' WANT ADS

This is the farmers' "want," "sale" and "exchange" department for small advertisements of farmers, including live stock and poultry.

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Poultry—Turkeys, Ducks, Geese (Continued) 174

ROUEN DUCKS, WINNERS AT WALLA WALla, $4 each, $10 per trio; eggs eleven, $2. White Wyandottes, heavy layers; show winners; eggs, fifteen, $2. P. H. Tomlinson, College Place, Wn.

GIANT STRAIN PURE BRED MAMMOTH Bronze turkeys, from prize-winning stock. Mrs. C. R. Lowery, Route 4, Boise, Idaho.

MAMMOTH PEKIN EGGS FROM DUCKS that take the prizes. Booking advance orders. Mrs. E. A. Bennett, Salem, Ore.

PURE BLOOD MAMMOTH BRONZE TURkeys, prize winning stock. Mrs. Frank Browning, Route 1, Nampa, Idaho.

TOULOUSE GEESE EGGS—PROPERLY MAted, good color, immense size; fifty cents per egg; lots of six or more; none better. T. J. Damnen, Shedd, Ore.

THOROUGHBRED BARRED ROCKS, RUNNER ducks, males and females, $2, $2.50, $3; ducklings, hundred, $33. C. A. Muths, Route 1, Box 49, Salem, Ore.

GIANT M. BRONZE TOMS, LATE HATCHED, weight 21 lbs; $10 each. Mrs. Roy Watkins, Olex, Ore.

FOR SALE — MAMMOTH BRONZE, PART wild turkeys. Eleanor Moore, Route 1, Ashland, Ore.

7 MAMMOTH BRONZE TURKEY HENS FOR sale, $6 each. C. Shafer, Wymer, Wash.

PURE BLOOD TOULOUSE GEESE, $6. DR. Nichol, Mosier, Ore.

Miscellaneous Poultry.

CHICKS OF QUALITY—HOLLYWOOD, TANcred and commercial strains of White Leghorn chicks from pedigreed males, $20 per hundred. R. I. Reds, Barred Rocks, Black Minorcas and Ancona chicks, $25 per hundred. These prices are for February and March delivery. We sell Queen incubators, Queen brooder stoves, Reliable Blue Flame brooders, Petaluma Electric and Charters' incubators and American brooder stoves. A complete line of poultry supplies and remedies, including leg bands, egg scales, trapnest records, etc. Catalogue free, Queen Hatchery, Fourth and Pine. Elliott 2054, Seattle, Wash.

A FEW CENTS MORE IN BEGINNING MEANS nothing if results are obtained. Our stock pure bred Tom Barron White Leghorns not to be excelled; booking orders for spring chix and pullets; demand heavy. Write for full particulars. All styles and sizes incubators, brooders and stoves. Our 1922 catalogue a valuable book for poultrymen. C. E. Hill Co., 418 11th st., Oakland, Cal.

FREE INCUBATOR CATALOG — INCUBAtors, brooders, oat sprouters, baby chicks, hatching eggs, trap nests, poultry books and supplies. You can't beat the St. Helens incubator in either price or hatch. From 60 to 4000 egg capacity; electric and lamp heated. St Helens Incubator Co., Centralia, Wash.

WINTER EGGS PROFITABLE — "SNOWflake" White Orpingtons establish highest American Orpington pen record, Western Washington contest; average 204 eggs; utility cockerels, $5; pedigreed males, $7.50, $10. Booking egg orders, $3, $5, $10. W. T. Thompson, Bozeman, Mont.

S. C. ANCONA PRIZE WINNING STOCK. ORders booked for eggs at $2 setting; $11 hundred lots; baby chix, 20c each. Deposit with order. Toulouse geese eggs, 50c each. Faun Runner duck eggs, $2 setting of 11 eggs. Karl Broeder, Sherwood, Ore.

GRIFFIN'S FAMOUS WHITE WYANDOTTES, the combined market fowl and egg producer. A nice lot of stock for sale. Order that cockerel now. Big, husky, white boys at reasonable prices. Send for catalogue. J. A. Griffin, Box 457, Eugene, Oregon.

S. C. RHODE ISLAND REDS—OUR FLOCK IS one of the best in the Willamette valley, and we have hatching eggs from our best matings to deliver to our customers after March first. All baby chicks for 1922 are sold. G. B. Dimick, Oregon City, Ore.

ON ACCOUNT OF OTHER BUSINESS I AM compelled to dispose of my birds this season and offer my few remaining pullets at twenty dollars per dozen; hatching eggs, six dollars per hundred. Mrs. Rominger, Underwood, Wash.

BUFF ROCK COCK AND TWELVE COCKerels; show birds and heavy laying strain; cock holds two blue ribbons, one red; will exchange for one of same breed. Hatching eggs. S. B. Shiley, R. 8, Yakima, Wash.

COCKERELS—ROSE AND SINGLE COMB Brown and Buff Leghorns, Anconas, Black Minorcas, Rhode Island Reds, Blue Andalusians. Boone Avenue Poultry Yards, E1601 Boone ave., Spokane.

BOGANIZED SINGLE COMB BUFF ORPINGtons; descendants of British Columbia contest winning hens; Mammoth Bronze turkeys, stock and eggs for sale. Mrs. J. Wellborn, Warren, Oregon.

SILVER WYANDOTTES AND SILVER SPANGled Hamburgs, Golden Campines, choice birds for sale. No baby chicks or eggs by the 100. Birds, $5 and up. G. G. Wherry, Payette, Idaho.

STOP, LOOK, LISTEN—CHIX AND EGGS from Cecil Sheppard's high grade laying strain of Anconas. Inquiries promptly and courteously answered. Cona Villa, R. R. 8, Salem, Ore.

ARE YOU INTERESTED IN AN INCREASED egg production? D. G. Gifford, 155 Grand ave., Portland, Oregon, will supply valuable information with no obligation on your part.

VIGOROUS, HEAVY-LAYING WHITE ROCK breeding stock; pure Fishel strain; hens, pullets, $2, $3; cockerels, $3, $5, $10; prices on quantities. J. B. Axtelle, Hood River, Ore.

SETTINGS FROM BROOK'S HAVEN SINGLE Comb Reds; Redwing strain (Hoganized); bred for color, type, capacity; range raised. Chas. S. Brooks, Underwood, Wash.

WHITE ORPINGTON COCKERELS FROM first prize cock and Princess Pat strain. Rose Comb Rhode Island Reds, $3 and $5. Economy Farms, Tekoa, Wash.

SINGLE COMB RHODE ISLAND REDS; EXtra good; four young hens, $2.50 each; one cock, one cockerel, $5 each. G. W. Lawson, McMinnville, Ore.

POULTRY RAISERS, SEND FOR FREE BOOKlet on poultry advertising. The Pacific Northwest Farm Trio, Dept. P, Review bldg., Spokane, Wash.

DOLLARS FOR YOUR EGGS—WE PAY THE top market prices for your eggs and poultry. Daily cash remittances. Western Produce Co., Spokane.

SAY!—EGGS MEAN DOLLARS TO YOU, ALSO your poultry, veal and dressed hogs, when shipped to us. Top prices. Prompt remittances. Hotchkiss Produce Co., Spokane.

QUALITY BARRED PLYMOUTH ROCKS and Black Langshans, cockerels and cock birds; also a few females; prize winners. B. D. Reser, Walla Walla, Wash.

SHIP YOUR LIVE POULTRY AND EGGS TO us. Highest prices paid; daily remittance. Inland Poultry House, Spokane, Wash.

ALLEN'S PRIZE BARRED ROCKS AND White Leghorns are wonderful layers. Write D. W. Allen, LaConner, Wash.

POULTRY—Miscellaneous (Continued) 174

POULTRYMEN—SEND EIGHT TWO-CENT stamps for special three months' trial for the best and oldest journal in the west. The articles and advertisements are of special interest to the poultry breeders of the northwest. They tell you how successful poultrymen have achieved best results. Northwest Poultry Journal, 213 Commercial st., Salem, Oregon.

PARAMOUNT WHITE WYANDOTTES "BRING home the bacon." Trap nested, pedigreed. Instructive catalog free. Bayard H. Moul, 1226 Washington blvd., Seattle.

SINGLE COMB RHODE ISLAND RED COCKerels; hen hatched, range raised; hatching eggs, $3 per setting (Owen strain). Joe Brunsell, Mt. Vernon, Wash.

WHITE LEGHORN AND WHITE ROCK COCKerels; 300-egg strain; baby chicks, hatching eggs. Palouse Falls Ranch, Palouse Falls, Wash.

TRAP NESTED WHITE LEGHORN AND Barred Rock eggs and chicks; records, 200 to 311. Mrs. W. M. Roberts, Elmira, Oregon.

STERLING STRAIN SILVER WYANDOTTES—Eggs $2.50 and $5 per setting; $7 per 100. Chicks, 45c. Henry Domes, McCoy, Ore.

HOGANIZED WHITE WYANDOTTE COCKerels; Ringhouse Griffith breeding; $5 and $10, prepaid. Adams, Warren, Ore.

RHODE ISLAND WHITES, COCKERELS from heavy producers; $5 and $7.50 each. Van K. Lawson, McMinnville, Ore.

BLUE ANDALUSIANS AND WHITE ROCK cockerels; extra good; order now. Mrs. C. W. Armstrong, Freewater, Ore.

BLACK MINORCAS AND WHITE WYANdotte cockerels; high class stock. C. McClelland, R. 1, Boise

SINGLE COMB RED COCKERELS ALSO DAY old chicks and hatching eggs. A. E. Bosworth, Omak, Wash.

ANCONAS, SHEPPARD STOCK COCKERELS, $3; pullets, $2; eggs, $2 setting. R. P. Irwin, Tonasket, Wash.

BRED TO LAY ANCONAS; HATCHING EGGS. Price list free. Yew Lane Farm, Sherwood, Oregon.

1949 COCKERELS, HATCHING EGGS, 49 VArieties; free book. Aye Bros., Box 14, Blair, Nebr.

WHITE WYANDOTTE COCKERELS, $3 AND $4. Wm. Dunning, Creston, Wash.

LIVE STOCK 177

SEND FOR FREE BOOKLET, "SOME SUGgestions to Live Stock Advertisers," outlining the practices of successful men of long experience. Helps in determining how much to spend, the mediums to select, preparing advertisements, handling inquiries, the use of photographs, etc. Write today. The Pacific Northwest Farm Trio, Dept. W, Spokane, Wash.

PURE BRED HAMPSHIRES—LEAVING FARM must sell small herd; carefully selected individuals; bred sows and gilts, farrow March, April; prize winners Pacific International and Multnomah county fair, including grand champion sow, Multnomah, 1921. Choice stock, rock bottom prices. Mrs. Marion Johnson, Gresham, Oregon.

LARGE, HEAVY PRODUCING HOLSTEINS for sale at all times in car lots; tuberculin tested; 150 to 200 head always on hand; well marked heifer calves from registered sires and heavy producing dams; crated for shipment anywhere, $25 f. o. b. Levinson & Balmelli, Yakima, Wash.

SHIP US YOUR POULTRY AND LIVE STOCK. We pay the top market price for your live or dressed veal, beef, hogs and poultry. Write for quotations. We also offer for sale at wholesale prices hams, bacon, lard, compounds and fresh meats. John Lewis & Co., Spokane, Wash.

MILCH GOATS—REGISTERED TOGGENBURG grade does, freshen Feb. and March; three quarts and better, $35 to $75. Foundation does bred to pure bred bucks; fresh in February and March, $20 each. Pure bred Toggenburg buck kid, $75. M. P. Eggers, Woodinville, Wash.

FOR SALE—THREE BIG TYPE POLAND China gilts bred for March fallow, to a grandson of The Pilot. Gilts have size and quality and a combination of Bob Wonder-Ike Knox breeding; guaranteed to please, $50 each. C. R. Evans, Halsey, Ore.

WE PAY TOP PRICES FOR YOUR LIVE OR dressed veal, hogs and poultry. Your check by return mail. Shipping tags on request. M. & J. Packing Co., Spokane.

TILLAMOOK CALVES—SEASON NOW OPEN. Price lists ready; strictly dairy stock. Smith, the Calf Man, Tillamook, Ore.

FOR SALE—CHOICE DUROC JERSEY SOWS and gilts; bred to farrow in March. Geo. DeBok, Oregon City, Ore.

REGISTERED O. I. C. SWINE FOR SALE; shipped C. O. D.; guarantee satisfaction. Tony Johnson, Polson, Mont.

FOR SALE—MAMMOTH JACK, WEIGHT, 1120. Address Cloverleaf Ranch, Lamona, Wash.

DUROC BOAR, 2 SOWS, 2 GILTS, REGISteredd; $50 each. R. Gralapp, Route 5, Spokane.

REGISTERED SHORTHORN CATTLE FOR sale. Elton Webb, New Plymouth, Idaho.

FOR SALE—JERSEY BULL NINE MONTHS old. J. Zodrow, Chewelah, Wash.

TOGGENBURG MILCH GOATS. FANNIE Branson, Falls City, Ore.

HARNESS and SADDLERY 189

SEND FOR FREE HARNESS AND SADDLE catalog today; cut out the middleman, buy direct from the manufacturer. Lowest prices in the west; satisfaction guaranteed. Established 1881. Write Pierce Harness Co., dept. T, Spokane, Wash.

HAY FOR SALE. 200

ALFALFA HAY—BUY DIRECT, SAVE MONey; quality guaranteed. Write or wire for prices. Ernest T. Freepons, Walla Walla, Wash.

JOB PRINTING 372

GUARANTEED BETTER BUTTER WRAPpers; 100, 60c; 250, $1.50; 500, $2.50; 1000, $4.25; printed to order. Home Specialty Co., Middleton, Idaho.

MONUMENTS 510

COMPLETE STOCK, RIGHT PRICES. CORrespondence solicited., J. W. Harding, Inland Monument Co., N1001 Monroe, Spokane.

BUILDING MATERIAL 588

NO WASTE, LESS LABOR. BUILD WITH ready cut houses and barns and save money. Attractive new plan book sent free. 4c postage. Prices quoted on material list. Write today. Price advance certain to come soon. Local Keystone Lbr. Co., 3000 Sprague, Tacoma, Wash.

SEEDS 620

ALFALFA SEED, CLOVER SEED, SEED corn—We are located in the heart of the largest and best alfalfa and clover seed district in the west and can give you both quality and price. Get our samples and quotations before buying. Our seed corn is of the finest acclimated strains. Garden and flower seeds of all kinds. Send for our catalog. Darrow Bros. Seed & Supply Co., Twin Falls, Idaho.

HANCHEN SPRING BARLEY, $2.50 PER cwt.; common vetch seed, $4 per cwt.; red clover, $20 per cwt. Oregon standard purity seeds, all f. o. b. Corvallis, Ore. J. J. Denson.

RED CLOVER, ALSIKE, RYE GRASS, TIMothy and vetch seed for sale; good quality, lower prices; by freight or parcel post. Rhoten Farms, Salem, Ore.

FOR SALE—CERTIFIED IDAMINE SEED oats; first prize, Idaho state seed show; supply limited. C. E. Pratt & Son, Hillcrest Farm, Aberdeen, Idaho.

HUBAM CLOVER, CERTIFIED SEED OF THE earliest strain; Idaho grown. DeKalb County Agricultural association, DeKalb, Ill.

HAND-PICKED LITTLE MARVEL GARDEN peas, $7 100 pounds; small lots 10c pound, all net. W. A. Bower, Avon, Idaho.

COSSACK ALFALFA SEED—SEND FOR samples. S. H. Hillman, Box 5, Thompson Falls, Mont.

WRITE FOR SEED CATALOGUE FOR 1922. Union Seed & Fuel Co., Boise, Idaho.

NURSERY STOCK 621

15 TO 20 FEET SQUARE GOOD SOIL, planted to everbearing strawberries, will supply average family same year; keep cultivated, runners off, fertilize lightly, keep moist (avoid alkali). My Progressive and Superb are true to name; known and tried standard varieties, come to you inspected and prepaid, parcel post, $1.40 per 100; $6 per 500; $11 per 1000; 2 dewberry plants free long as they last, with orders. Dewberry plants, 75c doz; rooted Concord grapes $1.50 doz, all prepaid, insured mail. Plant early. Model Fruit Farm, N. Matthiessen, proprietor, Route 1, Emmett, Idaho.

PROGRESSIVE EVERBEARING STRAWberry plants at $1 per 100, or $8 per 1000. St. Regis everbearing Raspberry plants at 10 cents each or $7 per 100; also one crop strawberries, currants, dewberries, loganberries, blackberries, asparagus and Greg's blackcap raspberries, very fine. W. L. Seaman, Boise, Idaho.

PLANT WINDBREAKS OR A WOOD LOT FOR shelter and profit; black locust in Idaho produced in eight seasons posts worth $1000 per acre. Free book tells how. Our special trees get quick results and cost little. Washington Nursery Co., Toppenish, Wash.

RELIABLE NURSERY STOCK—ITALIAN AND Petite, 4-6 ft., and 3-4 ft.; Concord, Worden and Moore's Early grapes; grafted Franquette walnut, all sizes. Send for catalog and price list. Villa Nurseries, Route 1, Portland, Ore.

GROW GRAPES FOR PROFIT—SPECIAL LOW prices; grape vines, berries, asparagus, for commercial planting; peaches, cherries, apricots, apples; satisfaction guaranteed. Write today. Home Nursery Co., Richland, Wash.

TREES—ALL KINDS FRUIT AND ORNAmental trees, vines, etc. Growers of general nursery stock. Lowest quotations on application. Send your want list. Can use few good salesmen. Albany Nurseries, Albany, Ore.

CLARK SEEDLING, THE STRAWBERRY that made Hood River famous. Write for list of other varieties and prices. Plant nurseries at Hood River and Prosser, Wash. W. R. Gibson & Son, Hood River, Ore.

GLADIOLA — BEAUTIFUL, MAGNIFICENT summer and fall blooming flowers that please all and are of easy culture. My stock is fine and prices right. Catalog free. Jungst Gladiola Farm, Ellensburg, Wash.

WANTED—OREGON CHAMPION GOOSEberry cuttings. Have a quantity of choice grown Yellow Danvers onion seed for sale at $1.50, postpaid. Red Feather Berry Farm, Clackamas, Oregon.

STRAWBERRY PLANTS, EVERBEARING and others; inspected plants, strong and healthy, well packed. Send for prices and book on care of strawberries. F. I. Moffett, Ellensburg, Wash.

CORY THORNLESS BLACKBERRY—DELIcious, very large and early. You get strong, well rooted plants, true to name, from pioneer grower. Wm. Mortenson, Route 1, Lodi, Calif.

APPLE TREES AND A FULL LINE OF NURSery stock at reasonable prices; save agents' commission by ordering direct from nursery. Write for price list. Lawson Nursery, Gates, Ore.

NURSERY STOCK, ITALIAN PRUNE TREES and trees of all kinds. Berries and small fruits of all varieties. Buy direct and save 50 per cent. Brooks Nursery, Lafayette, Ore.

STRAWBERRY PLANTS—HEAVILY ROOTED and free from disease. Wilson, Gold Dollar, Trebla, Marshalls, $4 per 1000. O. H. Shaw, Cottage Grove, Ore.

FILBERT TREES OF APPROVED VARIEties; true to name; state when writing, the number of trees wanted. Dr. J. H. Wilkens, McMinnville, Ore.

SEND FOR OUR NEW PRICE LIST ON FRUIT trees, berry bushes, shade trees and roses on their own roots. Krause Nursery, Spokane, Wash.

STRAWBERRY PLANTS—OREGON, WILSON, Etterberg, $3.50 per 1000. C. E. Turnidge, Talbot, Oregon.

LOGANBERRY PLANTS — 50,000 CHOICE plants; unusual low price. Harry Lanum, Salem, Ore.

NURSERY STOCK. (Continued.) 621

LOGANBERRY PLANTS, 6, $1; TIPS, 18, $1; Cuthbert raspberries, 75, $1; 1000, $10, prepaid. Alvin Myers, Doebay, Wash.

TREES—PEAR, APPLE, PLUM, PRUNE, NUTS and berries at cost. Homer Brixey, McMinnville, Ore.

LOGANBERRY PLANTS FURNISHED BY the grower. Grape Lane Farm, Turner, Ore.

STRAWBERRY PLANTS, $5 PER 1000. Briggs, Plant Nursery, Olympia, Wash.

FARM LANDS FOR SALE. 651

WE SELL FORECLOSED LANDS FOR A loan company for one-third cash, balance easy terms. When writing tell us what you want, where preferred, how much you will invest; kind of farming you contemplate, as we have no list and must write special description in each case. No trades. Hartford Land company, 601 Paulsen building, Spokane, Wash.

SNOHOMISH COUNTY, WASH.—6000 ACRES of the finest dairy, berry or general high-grade farm lands in the northwest, rapidly improving section; no drouths; bumper crops; tracts 1 to 80 acres; 10 yearly payments. This is your opportunity. Send for literature. Brownell Land Co., Birmingham, Wash.

DAIRY FARMERS INVESTIGATE THIS UNusual opportunity. Fine paying irrigated dairy and alfalfa ranch; famous Deschutes valley, central Oregon. $16,000. Small initial payment, new easy payment plan; ideal climate. Full particulars on request. Redmond Land & Loan Co., Inc., Redmond, Ore.

IF YOU ARE LOOKING FOR A GOOD LITtle ranch at a reasonable price, write for full particulars pertaining to my 80-acre dairy and stock ranch, in good neighborhood, half mile from store and big sawmill. Price including personal property, $4000. Address P. O. Box 222, Cottage Grove, Ore.

200 ACRES—ONE OF THE BEST STOCK ranches in Okanogan; 7 miles from Oroville, on state highway; 8 acres under irrigation, balance meadow, cuts about 200 tons of hay. Price $75 acre, ½ cash, balance terms. Also 200 beef cattle at market price. G. W. Loudon, Chopaka, Wash.

RARE MINERAL SPECIMEN, EDUCATIONAL and entertaining; quartz showing free gold, rich silver ore, galena (lead) ore, cinnabar (quicksilver), placer gold dust, antimony, (stibnite), chromite; all these specimens sent for one dollar. Western Specimen Agency, Ashland, Ore.

WENATCHEE DISTRICT—18-ACRE, 10-YEARold orchard; Winesap, Delicious, Jonathan; soft fruits, alfalfa cover; good buildings; farm equipment; near high school; $18,000, part cash, some trade, balance crop payment. Baker Realty Co., Box 464, Bellingham, Wash.

IRRIGATED LAND, RICH, LEVEL, NO waste; ready for plow; large tract to select from; small cash payment, bal. crop payments. A wonderful opportunity; will send particulars. E. T. Staples, Box 203, Ashland, Ore.

80 ACRES FINEST SOIL; 40 CLEARED; good buildings; gravity water system; 8 cows, 20 hogs, team, all kinds farm machinery; 2 miles to town; price $7500; terms. Chas. D. Edwards Co., Centralia, Wash.

20 ACRES FRUIT ORCHARD, IN HOOD RIVer valley; all kinds fruit; good buildings; mail route, telephone, electric lights; near school and church; three miles from Hood River. A. F. Linn, owner.

FOR SALE—EQUITY IN 15-ACRE RANCH; team, farm implements, 5 pure bred Poland China sows, reg., bred March farrow; 2 cows, chickens, 2 miles out. Ben Rose, Ontario, Ore.

GOOD DAIRY RANCH, 800 ACRES, WITH several thousand dollars' worth personal property; will sell $55,000; $20,000 down, balance at 5 per cent. Joshua Beeman, Usk, Wash.

SMALL ACREAGE TRACTS, ORCHARD AND dairy homes in sunny southern Oregon; improved and unimproved; particulars. Staples Realty Agency, Ashland, Ore.

SELL YOUR PROPERTY QUICKLY FOR cash; no matter where located. Particulars free. Real Estate Salesman company, 501 Brownell, Lincoln, Neb.

40 ACRES FINE SOIL; FIFTEEN CLEARED; fenced, cross-fenced; buildings; near school, Snap at $2000; $600 cash. Chas. D. Edwards Co., Centralia, Wash.

80-ACRE DAIRY AND GENERAL CROP farm; running water; well improved (on reservation); act quick. J. W. Palmer, Toppenish, Wash.

A FINE RANCH, NEAR TOWN; TERMS TO suit purchaser; five acres in berries. L. E. Dailey, Box 306, Port Angeles, Wash.

CALIFORNIA FARMS, NEAR SACRAMENTO; for sale; terms. Write for list. E. R. Waite, Shawnee, Oklahoma.

400-ACRE DAIRY OR STOCK RANCH; LOW price; easy terms. Theo. Johnson, Tenino, Wn.

FOR SALE—13 4-100 ACRE FRUIT AND berry farm. E. Schudeiske, Sutherlin, Ore.

FARM LANDS—Wanted 654

WANT TO HEAR FROM OWNER HAVING farm for sale; give particulars and lowest price. John J. Black, 80th st., Chippewa Falls, Wis.

WANTED—TO HEAR FROM OWNER OF land for sale. O. K. Hawley, Baldwin, Wis.

FOR SALE OR EXCHANGE 702

BY OWNER—FINE UNIMPROVED LAND, with good water right; located in Owsley projects, near Idaho Falls, Roberts and Hamer, Idaho; adjoining the proposed Dubois reclamation project of over 200,000 acres; ideal for general farming, seed growing and dairying; certain to make big increase in value. Price $75 per acre; good terms. Ben H. Matkins, Hamer, Idaho.

FOR SALE OR TRADE—ALL OR PART OF 622 acres; thirty miles east of Calgary, in wheat belt; one mile from Ardenode; excellent train service; good buildings, running water; 500 acres broken; 400 acres crop; $45 per acre, with crop. Write owner, James Whitehouse, Ardenode, Alberta.

SELL OR TRADE 160 A.; 90 IN CULTIVAtion, balance pasture. Write owner, R. N. Bickell, Winlock, Wash.

CANADIAN WHEAT AND STOCK RANCHES for sale or exchange. Write Arthur Lundy, Edmonton, Alberta.

80 ACRES, NEAR BEND, OREGON, FOR SALE or trade. What have you? J. W. Palmer, Toppenish, Wash.

SPLENDID 120 ACRES AT SACRIFICE; WANT acreage near good town. L. E. Moore, Kettle Falls, Wash.

320 ACRES WELL IMPROVED WHEAT LAND for sale or trade. Box 164, Wilson Creek, Wash.

ALBERTA FARM FOR SALE OR TRADE. Write Calvin Garvey, Avon, Idaho.

TO EXCHANGE—Real Estate 705

360 ACRES, PART IRRIGATED; UNENCUMbered; with stock and machinery; trade for smaller place. Tom Black, Leahy, Wash.

TRACK'S END

By HAYDEN CARRUTH

A Stirring Story of Adventure

(Copyright by Harper & Bros.)

CHAPTER XVI.

Telling of how Pike and his Gang come and of what Kaiser and I do to get ready for them; together with the way we meet them.

Here, now, I must tell of how the outlaws came to Track's End, and of the fight we, that is to say, Pike and his gang on the one side and I, Judson Pitcher, on the other side, had that day.

I may speak in prejudice, though I mean to be fair, when I say that I believe them to have been as bad a gang of cutthroats as you could well scare up. Though I fought them all as best I could I make no bones of saying that I should 10,000 times rather have been at home blowing the bellows, or doing anything else.

I was very lucky with these villains and was not caught away from home flat on my back, as I had been by those other scoundrels, the Indians; if I had not been lucky I should not now be here to tell the tale. Those fellows meant no good to me nor to anybody else. It would have been no bad thing if they could all have been hanged by the neck.

They came, then, to Track's End to rob, and to murder if needs be, on Saturday, February 5th. My good luck consisted in this: The evening before, just as the sun was about to go down, I saw them at Mountain's from the windmill tower with Tom Carr's field glass. I had gone up on purpose to have a look about, as I did two or three times every day when the weather was so I could see. For three days the weather had been much better than at any time before, and it had even thawed a little; so I was not much surprised when I saw horses coming up to the shack from the west. I made out seven men, all told, and some extra led horses. I could see that the men went into the shack and that many of the horses lay down. By this I knew they were tired, and guessed that the gang would probably stay there that night and rest. I was surprised that they had got through on horses at all. I stayed on the tower till itwa s so dark that I could not see any more. The longer I stayed the louder my heart thumped.

I knew they might, after all, come that night, either with the horses or on snowshoes, so I did what I could to get ready for them. The fires were all going well, and I lit several lamps about town. I wished a thousand times for the population I was pretending I had. I thought if I could have even one friend just to talk to perhaps my heart wouldn't act quite so unreasonably. But after a while it tired out and quieted down. My knees got stronger and more like good, sensible knees that you don't have to be ashamed of. I took a look at all the guns and wiped them up. I locked and bolted every thing except the doors or windows which led into the tunnels. There wasn't anything more I could do except wait and try to keep that crazy heart of mine a little quiet.

I knew that whenever or however they came they would be most likely to come in on the grade, so I thought the best place to wait was in Townsend's store, as they would have to come up facing the back of it. The windows were planked up; but I knew that there were no windows in town, or even sides of houses, either, which would stop a bullet from a good rifle. I calculated if they came in the night it would probably be about 1 or 2 o'clock, and if they waited till morning I could look for them when it began to get light.

I went over to Townsend's early in the evening and sat down close to a back window in the second story. I had Kaiser with me. I think he was gradually getting the thing through his head, because he had stopped wagging his tail and begun to growl once in a while. I thought I could trust him to hear any sound for three or four hours, and I tried to sleep, but I couldn't. Every few minutes I went up a short ladder and put my head out the scuttle in the roof to look and listen. I heard a good deal, but except for the wolves away off it was all in my ears. About midnight by the stars I went to sleep in my chair before I knew it.

When I woke up I gave a great jump. It seemed as if I had been asleep a week; and it certainly had been several hours. Kaiser was siting on the floor beside my chair. I knelt down and threw my arms around his neck and gave him such a prodigious hug that it must have hurt him. "We will do the best we can!" I said to him.

From the roof I could see a faint light in the east. The wind was fresher from the northwest and it was drifting a little; this was good. I scolded myself for having slept so long. I knew if they had come that I should not have been ready for them.

I hurried around and fixed the fires. I drank a cup of coffee at the hotel, but couldn't eat anything. I think if I had had outlaws every day that my keep wouldn't have cost Sours very much. I was back at Townsend's in a jiffy. It was getting red in the east now, and the moon, which had shone all night, was about down. It was light enough so I could see pretty well by this time; but I heard the crunching of the crust by the horses' feet before I could see them at all. Then I saw the whole gang coming on a dog-trot along the grade, two abreast, with one ahead, seven pleasant neighbors coming to call on me at Track's End. I let them come as near as they deserved to come to any honest town and then fired a shot in front of them. I tried to see if the bullet skipped on the snow, but the smoke got in my eyes.

Anyhow, they stopped pretty quick, and stood all in a bunch, talking. "Maybe you don't like to be shot at," I said out loud. I don't know how it was, but my heart was doing better. I thought I would wait and see before I did any more shooting.

They talked a few minutes; then one of them got off his horse, handed his gun and belt to one of the others, took off his big fur coat, pulled out a white cloth and waved it and came walking very slowly toward the town. This seemed fair enough; I had heard my Uncle Ben tell about flags of truce in the war. I waved my handkerchief out of the porthole and then waited three or four minutes as if we in the houses were talking it over; then I walked boldly out the back door. Kaiser wanted to go along, so I let him.

The man walked very slowly, and I did the same, but we came up within a few steps of each other at last. This was out not very far from the water tank. I had expected it was Pike himself, and, sure enough, it was, wearing a leather jacket with the collar turned up.

"It's you, is it, Jud?" said he in a kind of sneering tone. (It seemed strange to me to hear a man's voice, I had been so long alone.)

"Yes, it's me," I answered. "What do you want?"

"I sort of thought these here Track's Enders might send out a full grown man to talk to me about such an important matter," he went on.

"I was man enough to catch you a couple of times and it was only your good luck that you weren't hung up here in Track's End by the neck," I said, a little put out by the way he spoke, because I was almost as big as he was.

"Oh, well, no matter. Now you——"

"I'll tell you the reason I was sent out," I broke in, just thinking of something.

"What is it?"

"I can say all there is to say as well as anybody, but I'm a poor shot, so it was decided that if I didn't get back it wouldn't make much difference in the matter of shooting you fellows down if you come any nearer."

He pulled his collar down and looked at me over his crooked nose. Kaiser began to growl, but I poked him in the ribs with my foot to let him understand that there was a flag of truce on and he must behave himself. I guess Pike didn't like it, because this sounded as if we couldn't trust him, but he didn't say anything.

"Well," he broke out, "there's no use of us standing here and talking. We've come after that $5000, and you fellers know it."

"We told you all we had to say about that in the letter."

"Then we'll bust that safe and burn your town," he said, like a savage.

"Go ahead, and try it," I answered. "We're ready for you."

His face, which had looked black as night all the while, now turned white with rage.

"We'll try it fast enough and we'll do it fast enough, too," he cried, with some prodigious oaths, bad enough for any pirate. "Look here; I ain't got any gun with me, and I s'pose you ain't, if you're any man at all. But you're as near your gun as I am mine, hey?"

"Yes," I said.

"Then this here flag of truce is ended right now. When I get hold of my gun I shoot, and you're welcome to do the same!"

He turned and started back on the run. So there was nothing for me but to face about and do the same.

CHAPTER XVII.

The fight, and not much alse; except a little happening at the end which startles me greatly.

It seems a good deal to believe, but I actually half think that Kaiser had begun to get hold of the fine points of a flag of truce, and that he understood it was ended. What makes me have this idea is that I think he must have taken after Pike at first, though I wasn't doing much looking back just then, being busy at something more important; but anyhow he



"Yes, it's me," I answered.

wasn't with me till I was halfway to the store, when he passed me with a great bark and went on tearing up the snow a few steps ahead. I wish he had got ahead sooner, as I think I ran faster trying to keep up with him; but as it was I don't know but he saved my life.

Either Pike got back before I did, or one of his cutthroats fired for him; I know not, probably the latter, but the shot was for me and well aimed, so well that I guess the bullet went where I was when it started. Thus it was: Kaiser was ahead, and reared up and threw himself at the store door, which, being unlatched, flew open; it stopped him a little, and I, being close behind, went down over him and into the store head first, as if I had been fired out of a cannon; and at that istant the bullet I spoke of struck the open door half way up. I slammed the door shut, grabbed my rifle, stuck the muzzle through the porthole, and pumped three shots out of it without once trying to aim.

Then, without taking breath, I ran out the front by way of the tunnel to the bank, and so upstairs, where with another rifle I pumped out two more shots, and then looked. The men had left the grade, and were coming full tilt out around the water tank and grader's carts, their horses rearing and floundering through the drifts. I fired twice, aiming carefully each time, but I don't think I hit. I saw they would soon be out of range. Again I dropped my gun, ran downstairs and through tunnel No. 1 to the hotel and upstairs to a corner window, doubleplanked up, and giving me the range on the square and the foot of the street. I was there first, with the hammer of my winchester back, and with Kaiser behind me, wishing, I know, that dogs could shoot.

The next second they came in sight and charged for the street. I aimed and fired; I hit this time; one of the horses went down and the man over his head. The other six came straight for the end of the street. I fired again, but saw no results. I counted on the drift stopping them. It did so less than I expected. Two went down in the snow; four came on. I fired and one man dropped off his horse. The hard crust was holding the other three. I fired again, but it did no good. Then the head one, on a pinto pony, went down like a flash out of sight, horse and man. He had gone into tunnel No. 3, leading toTownsend's store.

I fired three shots as fast as I could work the lever, without stopping to aim. Then I looked out. The other two riders had turned tail. The horse of one had gone down in the snow and he was running away on foot; the other had got off the drifts without going down. I thought it was Pike. It seemed a good time to shoot at him, and I did so, but without so much as touching him, as I think. The man in the tunnel got out and dodged around the corner of Townsend's store before I could do my duty by him. They were all the next minute at the depot, either in it or behind it.

This thing of their taking the depot was something which I had not thought of. They were now as well covered and protected as I; and it was still seven against one, because the man that I shot off of his horse got over with the other by the help of one whose horse went down in the drift. But their building was more exposed than mine, and they could do nothing about their robbery so long as they stayed there.

They now began to fire their first shots since the one which followed me into Townsend's store. They were well-aimed shots, too, and the bullets came through my window as if the planks were gingerbread. A splinter of wood struck my left eye and closed it up; but I had it shut most of the time anyhow, aiming with the other, so it didn't matter. However, I didn't like the place and went back into the room in the northwest corner and got a range on them from one of the front windows. I thought their bullets would glance off the planks here, and they did; however, the ones which struck the side came right on through, lath partitions and all; but I kept close to the floor. All the time Kaiser stayed close behind me, barking so that I thought he would tear himself to pieces, and with the hair on his back standing straight up.

I had two rifles and a hundred or more cartridges, and I began to give the depot a pretty stiff bombarding. I don't think I missed the building once, and I knew every ball went through the side; but what they did after that I couldn't tell. There were three windows in the depot on the side toward me, all close together near the east end, but none at all to the right of them. None of them were boarded up and the robbers were pretty careful about showing themselves much at them. They gradually dropped off the platform on the other side and crawled under to the front from where I had watched the Indians that day. They were well protected here, but the wind swept across the west end of the square and blew such a spray of snow in their faces that they could not see to aim well. On the other hand the sun had now got up and the reflection came in my eyes and hurt my shooting. I wished that the horse was out of the way so I could get through tunnel No. 3 into Townsend's, where a side window, well planked, looked right down on the depot; but it was just as well that I couldn't, as I found out afterward.

They were still thinking that there was a large population in Track's End, and I could see splinters flying all over town where they were plugging away at windows and doors.

I soon noticed that they were not shooting quite so much, and thought some of them might be sneaking around and thinking of coming up from the west, so I went through to the bank once in a while, firing a few shots from its front window at the depot so as to keep up their large-population idea. At the third visit I looked out back and saw a man run from the coal-shed to behind the water-tank. I got ready and waited. Another ran across. I gave him a shot which made him jump. Then I fired half a dozen shots through the inclosed part below the tank, and if any of the balls missed the big timbers they must have gone through. I thought those fellows would keep awhile and ran back to the hotel and began to pepper

Bits of Fun for Everyone

Color No Obstacle.

"I want a loaf of bread," said the small boy.

"Would you like white or graham?" from the clerk.

"It doesn't make any difference. This is for a blind woman."

Skin Probably.

Teacher—So you don't know which letter comes next to H?"

Willie—No'm.

Teacher—What have I on each side of my nose?

Willie—Looks like powder, ma'am, from here.

Silence?

The reading lesson had begun, and it was Tommy's turn to read aloud. He came to the sentence, "Silence reigned in the house."

"Now," said the teacher, "can you tell me what silence is?"

Tommy thought for a minute, then said eagerly: "Yes, teacher, I know; it's what you don't hear when you listen."

Such a Good Baby.

One hot afternoon a young man in shirt sleeves was wheeling a baby carriage back and forth before a small house in Washington. He looked hot, but contented.

"My dear!" came a voice from an upper window of the house.

"Now let me alone!" he called back. "We're all right."

An hour later the same voice, again, in earnest, pleading tones:

"Arthur dear!"

"Well, what do you want?" he responded. "Anything wrong in the house?"

"No, Arthur dear, but you have been wheeling Clara's doll all the afternoon. Isn't it time for the baby to have a turn?"—Harper's Magazine.

Naming the Baby.

"I've decided on a name for baby," said the young mother. "I shall call her Euphrosyne."

Her husband did not care for the suggestion; but being a tactful fellow he was far too wise to say so.

"Splendid," he said cheerfully. "The first girl I ever loved was called Euphrosyne, and the name has very pleasant memories for me."

There was a brief silence. Then: "We will call her Elizabeth, after my mother," said the young wife, firmly.—Watchman and Examiner.

away at the depot again. This I kept up for an hour, I think, when I caught a glimpse of one of the men from the tank going back and thought likely they had both gone.

The outlaws made just one more rally, and it was very well planned, and if I had not been expecting it it might, after all, have gone hard with the town of Track's End. All at once they began an uncommonly lively firing from under the depot platform. I thought this might mean a charge from the other side, so I started to see. Joyce's store ran back farther than any of the others on that side of the street and had a side window near the corner; so I went there instead of to the bank.

It was slow work crawling under the sidewalk and getting up through the trap-door, but I made it at last and ran to the window. Two of the men were charging straight across the square for the rear of Townsend's, carrying a big torch of sticks and twisted hay. The window was not boarded up, but I stuck my rifle barrel through the glass and fired at them. The bullet, I think, struck the torch, because I saw the fire fly in all directions. They dropped it and retreated in a great panic, while I shot again.

I ran back to the hotel and began shooting once more at the depot. They never fired another shot. I went over to the bank and from the back window I could see them going away to the southwest, keeping under cover of the tank and coal-shed. They came around up on to the grade a half-mile to the west. I had a look at them through the glass. Some were walking and some riding. There seemed to be two men on one horse. I think that more than one of them was wounded, but the drifting snow now made it hard to see. I went back through the hotel and down the street to watch them from the tower above the snow. The pony which had fallen into the tunnel was still there. I noticed it wore an expensive Mexican saddle, all heavy embossed leather, with a high cantle, silver ornaments, big tapaderos on the stirrups, and a horsehair bridle with silver bit. There was a red blanket rolled up and tied on behind the saddle.

As I went by Townsend's I saw that the window I wanted to get to was as full of holes as a skimmer, and I was glad the horse had blocked up my way. I noticed that the depot wasn't much better off, however, for holes. I went up the tower and watched the outlaws for half an hour. They stopped a few minutes at Mountain's to get their extra horses and then went on.

The wind was coming fresher all the time and I was pretty well chilled when I got down. I was hurrying along across the drifts to the hotel when I noticed the horse in the tunnel again. But his fine saddle and bridle were gone. I knew instantly that it must be the work of my unknown night visitor, who had not stolen anything for some time. This was the first thing that had been disturbed by daylight; it was growing bolder. My heart had behaved itself so well during the fight that I had forgotten that I had such a thing; now it started to thumping so hard that I thought it was all there was to me.

(To be continued.)

Women in the Grange

By MRS. J. M. SIMPSON

Women and men are not, in the organization, on a different footing, and either may be master of a grange, or lecturer. In practice it developes that the lecturer is more frequently a woman. The women members do not meet separately, but the general program at the grange meeting includes numbers discussing women's activities and interests so far as the grange affects them. There are two regular monthly meetings of the organization, the lecturer putting on one and the master the other. The state lecturer issues a general outline which the programs will follow, supplementing, perhaps, with the local demands of the hour the topics suggested by the state lecturer for discussion each month. The state lecturer's program, as issued this year, for instance, suggested as the women's part of the local lecturer's July programs a discussion by the sisters severally of "The piece of work that it has been most satisfaction to me to do." The October program planned by the state lecturer included discussion, this time on the part of the men of the grange, of the question, "Has woman measured up to what was expected of her in her use of the ballot?"

The musical and dramatic numbers on the program naturally draw upon the activities of the women of the organization extensively, and refreshments are not an infrequent item in the order of the regular meetings. In the initiation of members into the fourth degree, or Pomona grange, refreshments enter formally into the order of procedure. The Pomona grange is a county-wide organization drawing its members from the various locals by its own election, and aiding in bringing the locals to concerted and efficient action.

Mrs. Harriet Lycette of the city home bureau of Spokane and Miss Inez Arnequist of the county home bureau are members of the East Spokane grange, a fact that makes for the helpful diffusion among its members of the home arts which these leaders among the women of the county are advancing in the homes in general. Grange membership is open to teachers and they widely avail themselves of the privilege.

Dress Forms Popular

"It is not so much the amount of money saved by using the home-made dress forms that gives them their value as it is the fact that they will be nearer the shape of the model than any adjustable form that can be purchased," says Miss Elmina White, home demonstration agent of Pierce county. In order to have a dress form which will give good results one would have to pay quite a sum and then it would not be as true as the one made on the model for $1.50.

"We are striving to show what can be done with what is already on hand," continued Miss White, "and not so much to see how much can be put in the bank. In the farm homes there are so many clothes to be made over and new ones to be made that something of the kind is almost a necessity.

There were 494 of these dress forms made in Pierce county last year by the farm women, and 484 hats. For 1922 the home economics work will include much nutrition work, most of which will be done in the public schools.



Scientists, as Well as Practical Farmers, Contribute to Your State Farm Weekly



In addition to printing hundreds of articles from practical farmers, fruitgrowers, market gardeners, stock breeders and dairymen, The Washington Farmer gives space to the scientist and the agricultural expert who carry on careful research work with regard to seeds, plant growth, soils, fertilizers, the care and breeding of poultry and farm animals, the eradication of pests, and many other matters which have a close bearing on agricultural production and prosperity of this state. He has a vast store of information garnered together from many sources which can help solve the farm problems peculiar to this section. What the experimenters at the agricultural schools are finding out, what the scientists who specialize on agricultural problems discover are given to our readers in complete, reliable form. This feature helps round out the paper, and gives it greater value to those who make a business of farming.

Your state farm weekly gives big value at low cost on account of its cooperative subscription plan.

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FAMILY CIRCLE

ALICE BARLAND
EDITORIAL CONTRIBUTOR

Experience Letters

From Our Family Circle Women

Dear Family Circle: This is a hard time of the year on hands when we have to handle so much fuel and so constantly wash our hands afterward. Several sisters have sent in remedies which are good to have on hand for every member of the family and especially children who often have chapped hands in winter. One sister says it is helpful to rinse the hands in vinegar after having them in soapy water. Another says oil of tar is good.

Another says she finds a lotion of equal parts of alcohol, bay rum and glycerine very healing and it has been beneficial to many to whom she has recommended it.

I have received several recipes for cream puffs. They are almost exactly alike, so you mustn't be offended if I print but one. —A. W. B.

Cream puffs—Butter 1 cup, boiling water 1 cup, flour 1 cup, eggs 4. Pour butter and water into a sauce pan and when boiling add the flour, beating hard. Remove from the fire and add the eggs unbeaten, one at a time, beating till thoroughly mixed. Drop by spoonfuls on a buttered pan as nearly round as you can make them, leaving space for them to spread. Bake 30 minutes in a moderate oven. This makes 12 large or from 15 to 18 small puffs.

Cream to fill—One cup sugar, 1-3 cup corn starch, pinch of salt, 1 egg, 2 cups scalded milk, 1 teaspoon vanilla; mix dry ingredients, add egg slightly beaten and stir into this gradually the scalded milk. Cook about 15 minutes in a double boiler stirring frequently. To test puffs take one from the oven and if it doesn't fall they are done. I sometimes add 2 teaspoons of baking powder and use but 3 eggs.—Mrs. H. B. B.

One says the tops of the puffs may be brushed with a little beaten egg and milk before putting into the oven. This makes them crisp and brown.

Dear Mrs. Barland: I have very good success in raising little chickens and will tell how I manage. Perhaps it will help some one.

I select a quiet old mother hen and grease her thoroughly in case of mites and put her in a clean pen on grass and give her all the chickens she can care for, sometimes as many as 35, when the weather is warm. I do this even when I hatch in incubators.

I save all my sour milk and make it into curd, scald it and drain out all the whey. When the days are cold and windy I sprinkle a little ginger over the curd and feed it to the little chickens.

When I have plenty of sour milk I keep on feeding the curd till the chickens are large enough to fry, giving it with other food, of course. So far I have never had sick chickens—Mrs. H. C.

Dear Family Circle: I enjoy THE FARMER very much and will send a recipe for vinegar pie which was requested.

Vinegar pie—One egg, 1 heaping tablespoon of flour, 1 teacup sugar; beat well together and add 1 tablespoon of sharp vinegar, teacup cold water, flavor with nutmeg and bake in bottom crust.

Lemon pie—Juice and grated rind of 1 lemon and 1 orange, 2 cups sugar, yolks of 4 eggs, 2 cups hot water, 2 heaping tablespoons of corn starch. Cream together the juice of lemon and orange, sugar and yolks of eggs, add hot water and let come to a boil then stir in corn starch dissolved in a little cold water. When cool put into baked crust and cover with meringue made as follows: Beat whites of 4 eggs to a stiff froth, add 4 tablespoons of powdered sugar and brown slightly in oven. This will make two pies.—Mrs. Ray Irion, Monida, Mont.

Another sister sends an old-fashioned way to dry pumpkin, here it is: Cut the pumpkin in two parts, remove all seeds and stringy substance and then cut in rings and hang on a line to dry taking care to keep separate as they will mold if allowed to touch. They must dry in a warm place, behind a stove or in the hot sun. When perfectly dry put in a sack and hang in a dry place.

When you want to use put in a kettle on back of stove and let soak or soak over night then stew in the same water it soaked in.

Dear Mrs. Barland: Having seen requests in THE FARMER for recipes for old-fashioned black molasses cookies, dried pumpkin and grape juice, I am sending mine.

Molasses cookies—One pint molasses, 1-2 cup water or coffee, 1 cup shortening, 1-2 cup sugar, 1 teaspoon soda, flour enough to make dough stiff enough to roll; ginger may be added if desired.

Dried pumpkin—Cook without peeling till as dry as possible then put through a colander. Turn out on plates in layers and dry, turning frequently. When ready to use soak over night and in the morning stew to original softness and make the pies as with the fresh.—Mrs. I. J. H.

This sister sends also a recipe for grape juice which will appear when the season for it comes again.—A. W. B.

Quite a number of sisters have been so kind as to give methods of canning pumpkin, but as all use about the same system I will print but one.

Canning pumpkin—Peel and cut in pieces, cook till tender, fill glass jar to 1 1-2 inches of top then finish filling with warm water; put on rubbers and cover, place in boiler with false bottom and fill with water to the neck of jars and boil for one hour after water begins to boil. Leave the tops loose on the jars till you remove from boiler then tighten. Some use old rubbers while boiling and put on new ones before tightening after removing from the boiler. I have canned pumpkin left from year to year as good as when put up.—Mrs. Henry Eddy, Jerome, Idaho.

Dear Mrs. Barland: I am sending recipe for ginger snaps for Mrs. F. A. H. who wants one like those we buy in the stores. Every one who eats these say they are very much like the store kind.

Ginger snaps—One cup each of sugar, molasses and butter and lard half and half, 3 eggs, 3 tablespoons of ginger, 1 tablespoon soda dissolved in the molasses, a little salt, flour to roll nicely. Use no milk or water and use soda and ginger as given above. Many think this is a mistake, but it isn't, just try it. The snaps improve with age.—S. A.

I have a letter from a sister who signs herself "Mrs. F. J." She may have hives or eczema, but she must write again and sign her name so I can write to her personally. I am unable to give advice without more information about her trouble.—Alice W. Barland.

Hints for the Homemaker

By Mrs. C. B. Smith.

White spots on varnished surfaces may be removed by rubbing vigorously with a soft cloth moistened with essence of peppermint.

Touch the under side of scuffed leather on shoes with mucilage, press down smooth, then apply a coat of shoe polish. When dry, the shoes will look like new.

For rainy days try coating a few pairs of the men's work gloves with melted paraffin. It will render them waterproof for some time.

For a change, put several whole cloves in prunes when cooking them. The flavor is new and pleasing, if not too many are used.

If shelves are used for shoes and various other articles which usually litter the closet floor, much stooping will be dispensed with when the latter is swept.

When renovating furniture with common paint, it is well to remember that an outside paint requires the addition of a considerable amount of turpentine to prevent the articles from acquiring an objectionable stickiness in damp weather. If a good enamel is not available the best substitute is a good indoor paint.

Swiss Steak

Get a round steak 1½ inches thick. Lay it on a bread board and dredge with flour. Beat well with a mallet or the hammer end of a hatchet, continuing to dredge with flour till the meat will absorb no more. Beat and dredge both sides of the steak. Then put the meat into a hot, well buttered skillet and brown well on both sides. Pour over it a cup of boiling water and cover. Simmer slowly for two hours adding hot water as it evaporates and turning often to keep it from sticking to the bottom of the skillet. Remove to a buttered dripping pan, season with salt and pepper, dot thickly with butter, and brown in the oven for 15 minutes. Mix the gravy from the skillet with the drippings from the steak and pour over the meat when it is ready to serve. E. M. A.

MAKING CANNED FRUIT.

Often there are a few jars of old fruit left over when canning times comes again and we wish some means of distinguishing between the old and the new. It is somewhat of an expense to buy books of gummed markers each time, so all through the year we save the flaps of all used envelopes that still have a gummed edge. We tear them off and put away in a certain drawer, and it is surprising how rapidly they accumulate until there is a sufficient supply by next canning time.—G. R. S.

Just Folks

Multiply the littles of life.

To see is better than to learn.

Curiosities are what you don't know.

Adaptation is better than adoption.

The truest enjoyment comes from ideals.

If you can busy yourself you are not neglected.

Uninterrupted success is bad for him who succeeds.

Making the worse appear the better is one of the fine arts.

Current genius finds its place in dressing up current notions.

There is no such thing as a final finish among the affairs of men. E.A.S

At Gift Time

Save all usable pieces of tissue paper and bits of ribbon that come about gifts. Press with a warm iron, fold the paper, and wind the ribbon about a card to keep it in shape, then put away where they can easily be found when gifts are to be sent out. We have a suitcase in which we keep such paper and ribbons, small, clean boxes, left-over stickers, cards to be attached to gifts, postcards that are out of season. This suitcase is particularly useful at the holiday time; we use what we can of the store before starting on new materials.—G. R. S.

PUMPKIN PIE RECIPE.

Mrs. T. D. Weger of Deer Park, Wash., has kindly sent THE FARMER her favorite recipe for making pumpkin pie. It follows:

One pint of pumpkin pulp, one pint of rich milk, three eggs, one cup of grated coconut, one tablespoon of butter, one-half teaspoon of salt, one-half teaspoon of ginger, one teaspoon of vanilla, one cup of sugar, one-half teaspoon of nutmeg.

Mix the dry ingredients together thoroughly. Beat the yolks and whites of eggs separately.

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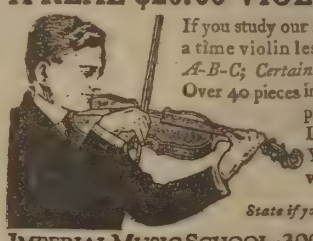
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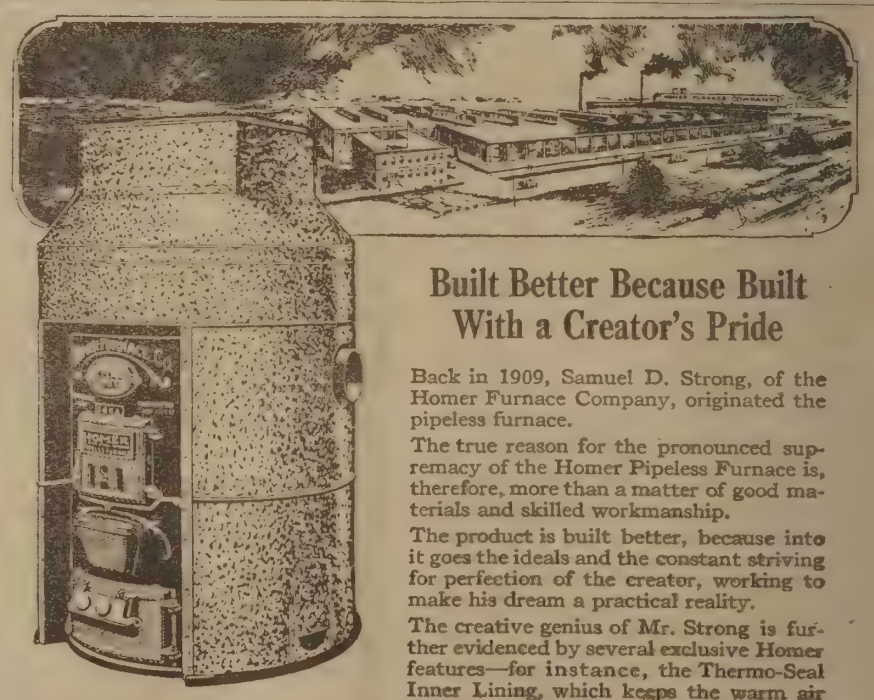


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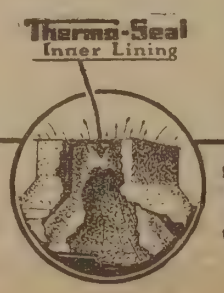
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Your Health

By Royal S. Copeland, M. D., F. A. C. S.

THE MISUNDERSTOOD CALORY.

No discussion of food values would be complete without reference to the "calory." It must be conceded, however, that the calory does not hold the important place in the food world it occupied a few years ago.



Dr. Copeland.

In some restaurants the menu card indicates the calorie value of each serving of food. By selecting such foods as make a sum total of eight or nine hundred calories you are supposed to have given yourself an ideal meal.

What is a calory?

A calory is the standard for measuring heat production. As the yard is a standard for measuring length, and the quart is a standard for measuring liquids, the calory is the standard for measuring heat energy.

The amount of heat necessary to raise the temperature of two quarts of water one degree Farenheit is called "one calory."

Food taken into the body acts just as fuel does in a furnace. It "burns" and generates heat.

Carbohydrates and protein are about equal in calories per ounce, while fat contains about twice as much as either of the other foods. This is not surprising, because we all know that fat or oil will make a very hot fire.

An average helping of lean beef weighs about three ounces. This amount of lean beef contains 80 calories in protein and 20 calories in fat.

A portion of bacon weighs about one-half an ounce. It contains seven calories in protein and 93 in fat.

An ounce of sugar contains 100 calories in carbohydrates.

An egg contains 36 calories in protein and 64 in fat.

Six ounces of milk contain 61 calories in fat, 22 in protein, and 34 in carbohydrates.

About 100 calories are supplied by an ounce of honey, cheese, crackers, biscuits, ripe olives, a cereal or a sandwich of any sort, or by a baked potato, a small chop or a slice of bread.

Theoretically, the average man requires every day food containing 2500 calories. If he works at hard, physical labor, he needs more.

Oatmeal with cream and sugar gives you 400 calories. Coffee with cream and sugar, 400 calories. Buttered toast at least 200 calories. This would be considered a small breakfast by most persons, yet it totals more in calories—1000—than the body requires at one of the three meals.

If you will study the caloric contents of this sample breakfast you will see at once how much better off you would be to omit the coffee, and, in its place, to take half a pint of good milk. Then you will have room for a couple of eggs, and still keep your intake to about a thousand calories.

Ordinarily, the proportions of food required are 10 per cent of protein, 25 per cent of fat, and 65 per cent of carbohydrates. In calories, this would be 250 of protein, about 600 of fat, and 1650 of carbohydrates.

Give the calory system a little thought, apply it for a day or two to your eating.

Latest High Class Patterns for the Home

Please order the patterns you desire at least two or three weeks before you wish to use them. Desiring to obtain the latest high-class patterns for its readers, THE FARMER has made arrangements to have them sent direct from the east, and under present mailing conditions it takes about that time for them to reach you



3900. Lady's Dress—Cut in six sizes: 34, 36, 38, 40, 42, and 44 inches bust measure. A 38-inch size requires 3 1-2 yards of 54-inch material. The width at the foot is 2 1-4 yards. Price 10 cents.

3894. Girl's Dress—Cut in four sizes: 10, 12, 14, and 16 years. A 12-year size requires 4 1-8 yards of 42-inch material. Price 10 cents.

3872-3871. Lady's Costume—Blouse 3872 cut in six sizes: 34, 36, 38, 40, 42, and 44 inches bust measure. Skirt 3871 cut in eight sizes: 24, 26, 28, 30, 32, 34, 36, and 38 inches waist measure. The width at the foot is 2 yards. To make this suit for a medium size will require 4 3-4 yards of 44-inch material. Two separate patterns, 10 cents for each.

8391-3898. Lady's Costume—Blouse 3891 cut in six sizes: 34, 36, 38, 40, 42, and 44 inches bust measure. Skirt 3898 cut in six sizes: 24, 26, 28, 30, 32, and 34 inches waist measure. Its width at the foot is about 2 yards. To make the dress for a medium size requires 5 3-8 yards of 40-inch material. Two separate patterns, 10 cents for each pattern.

3705. Lady's House Dress—Cut in seven sizes: 36, 38, 40, 42, 44, 46, and 48 inches bust measure. A 38-inch size will require 6 3-4 yards of 27-inch material. The width at the foot is 2 1-4 yards. Price, 10 cents.

3896. Lady's Apron—Cut in four sizes: Small, medium, large and extra large. A medium size will require 2 3-4 yards of 36-inch material. Price, 10 cents.

3496. Girl's Dress—Cut in four sizes: 8, 10, 12, and 14 years. A 12-year size will require 2 5-8 yards for the midy and 3 1-4 yards of 27-inch material for the skirt, collar and cuffs. Price, 10 cents.

3686. Lady's Dress—Cut in six sizes: 34, 36, 38, 40, 42, and 44 inches bust measure. A 38-inch size will require 4 7-8 yards of 42-inch material. For panel, collar and cuffs of contrasting material 1 3-8 yards is required. Price, 10 cents.

3674. A Comfortable Corset Substitute—Cut in four sizes: Small, 34-36; medium, 38-40; large, 42-44; and extra large, 46-48 inches bust measure. A medium size requires 1 1-2 yards of 32-inch material. Price, 10 cents.

3723. Girl's Dress—Cut in four sizes: 4, 6, 8, and 10 years. An 8-year size requires 3 3-4 yards of 27-inch material. Price, 10 cents.

3595. Girl's Bloomer Dress—Cut in four sizes. 4, 6, 8, and 10 years. An 8-year size will require 2 3-4 yards of 32-inch material for the dress in bloomer style. With plain skirt it will require 2 3-8 yards. Price, 10 cents.

3887. Girl's Dress—Cut in four sizes: 8, 10, 12, and 14 years. A 12-year size requires 4 1-4 yards of 32-inch material. Price, 10 cents.

Please fill in this order and mail with remittance to:
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High Points in News of the Week

Four days after the adjournment of the Washington conference for the limitation of armaments President Harding last Friday appeared in person before the United States senate and submitted to it the seven treaties that had been agreed upon by this conference. Together with these treaties he laid before the senate the complete minutes of both plenary sessions and of all committee meetings held throughout the conference.

The president realized fully that in laying all these official matters before the senate and thereby before the American public as a whole he was setting a precedent in national and international diplomatic procedure. He referred to the complete minutes of the sessions and committee meetings as "a new accompaniment to the executive report of a treaty," and added the explanation, "but they are fitting testimonial to that open and simpler diplomacy for which the world has asked, and the practice of which contributed largely to the success of the conference so recently adjourned I hope they will facilitate that ample and helpful understanding which is desirable in the senate, and reflect that understanding which was the keynote of the conference itself."

The Washington conference convened on Armistice day, November 11. It adjourned on Monday, February 6. The American delegation, headed by Secretary of State Hughes, immediately prepared its formal report and submitted it to President Harding, who had called the conference. The treaties were submitted to the senate for consideration February 10, one day less than three months after the conference convened.

The seven treaties which the senate of the United States and corresponding treaty-making bodies in England, France, Italy, Japan, China and the other nations participating in the conference are considering for ratification are:

The covenant of limitation to naval armament between our republic, the British empire, France, Italy and Japan.

The treaty between the same powers in relation to the use of submarines and noxious gases in warfare.

The treaty between the United States, the British empire, France and Japan, relating to their insular possessions and their insular dominions in the Pacific.

A declaration accompanying the four-power treaty reserving American rights in mandated territory.

An agreement supplementary to the four-power treaty defining the application of the term "insular possession and insular dominions" as relating to Japan.

A treaty between the nine powers in the principles and policies to be followed in matters concerning China.

A treaty between the nine powers relating to Chinese customs tariff.

While there will undoubtedly be some opposition in the senate to several, if not all, of these treaties, indications are that the third above-mentioned, frequently called the four-power pact, will be the one against which the greatest opposition will be expressed. Following the address of President Harding last Friday, however, several of the leaders in the expected opposition have expressed themselves as much more favorable to the adoption of the entire treaty program. Senators Borah of Idaho and Johnson of California, who have been listed as "irreconcilables" on the treaty program, were apparently convinced that this four-power treaty lacked what they had believed to be dangerous international provisions. With special reference to this treaty, which has been declared by some to contain provisions similar to the objectionable ones in the league of nations treaty, President Harding said:

"The world has been hungering for a better relationship for centuries since it has attained its larger consciousness. The conception of the league of nations was a response to a manifest world hunger. Whatever its fate, whether it achieves the great things hoped for, or comes to supersedure, or to failure, the American unwillingness to be a part of it has been expressed. That unwillingness has been kept in mind, and the treaties submitted today have no semblance of relationships save as the wish to promote peace has been common inspiration.

"The four-power treaty contains no war commitment. It covenants the respect of each nation's rights in relation to its insular possessions. In case of controversy between the covenanting powers it is agreed to confer and seek adjustment and if said rights are threatened by the aggressive action of any outside power, these friendly powers, respecting one another, are to communicate, perhaps confer, in order to understand what action may be taken, jointly or separately, to meet a menacing situation. There is no commitment to armed force, no alliance, no written or moral obligation to join in defense, no expressed or implied commitment to arrive at any agreement except in accordance with our constitutional methods.

"It is easy to believe, however, that such a conference of the four powers is a moral warning that an aggressive nation, giving affront to the four great powers ready to focus world opinion on a given controversy, would be embarking on a hazardous enterprise.

"Frankly, senators, if nations may not safely agree to respect each other's rights and may not agree to confer if one party to the compact threatens to trespass, or may not agree to advise if one party to the pact is threatened by an outside power, then all concerted efforts to tranquilize the world and stabilize peace must be flung to the winds. Either these treaties must have your cordial sanction or every proclaimed desire to promote peace and prevent war becomes a hollow mockery."

* * *

General George W. Goethals is this week completing his two weeks' personal investigation of the proposed Columbia basin irrigation project and is expected soon to make an official report as to its feasibility. The first week was spent in the field, during which he covered the territory from the proposed water supply source on the Pend Oreille river to the land to be irrigated. He also made personal investigation of the conditions of the Columbia river at the point that has been considered for the building of a dam for the purpose of providing irrigation water by a large pumping system, instead of by the gravity system from the Pend Oreille. The second week General Goethals spent in the office of the Columbia basin survey commission at Spokane studying data that has been compiled by the commission and by the federal government.

* * *

Pius XI. was crowned pope in the basilica of St. Peter's Sunday amid scenes of pomp and enthusiasm, in the presence of princes and dignitaries of the church, the diplomatic representatives of foreign countries, members of the Roman aristocracy and a vast assemblage filling the great structure to the very doors. The ancient custom was carried out with impressive ceremonies, and the newly elected pontiff now occupies the throne of the first pope reported crowned, Leo III., who reigned from 795 to 816.

Farm Business and Markets Outlook

(Continued from page five.)

sacked round whites f. o. b. shipping points are quoted at $1.35 to $1.60 per 100 lbs. At Idaho shipping points growers are receiving 90c to $1 per 100 lbs. for Rurals in wagonloads. The Chicago carlot market is quoted at $1.70 to $1.85 for round whites with most city wholesale markets at $2.25 to $2.45.

Apple markets have advanced slightly with Baldwins now quoted at $7.50 to $8 per barrel in wholesale markets and $7 to $7.25 per barrel at New York shipping points. Winesaps and Spitzenbergs are bringing $3 to $3.50 per box for extra fancy stock.

LATEST QUOTATIONS.

The Live Stock Market.

PORTLAND, Ore., Feb. 11.—Cattle—Choice steers, $7@7.75; medium to good steers, $6.25@7; fair to medium steers, $5.7@6.25; common to fair steers, $4.75@5.75; choice feeders, $5@5.30; fair to good feeders, $4.50@5; choice cows and heifers, $5.75@6.25; medium to good cows and heifers, $5@5.75; fair to medium cows and heifers, $4.25@5; common cows, $2.25@3.15; bulls, $3.50@5.50; choice dairy calves, $11@12; prime light calves, $10@11; medium light calves, $7@10; heavy calves, $5.50@7.50.

Hogs—Prime light, $10.50@10.75; smooth heavy, 200 to 300 lbs., $9.25@10.25; smooth heavy, 300 lbs. up, $8.25@9.25; rough heavy, $6@8.75; fat pigs, $10.25@10.50; feeder pigs, $10@10.25; stags, subject to dockage, $5@7.

Sheep—East-of-mountain lambs, $9.75@10.50; best valley lambs, $8.25@9.25; cull lambs, $4.75@6.25; fair to good, $6.75@8.25; eastern Oregon feeders, $7@8; light yearlings, $7.50@8; heavy yearlings, $6.50@7.50; light wethers, $6.50@7.50; heavy wethers, $4.50@6.50; ewes, $3@6.

SPOKANE, Feb. 11.—Cattle—Prime steers, $6.50@7.50; good to choice steers, $5.75@6.50; medium to good steers, $5.25@5.75; fair to medium steers, $4.75@5.25; common to fair steers, $4.25@4.75; choice cows and heifers $5@6; good to choice cows and heifers, $4@5; medium to good cows and heifers, $3.50@4; fair to medium cows and heifers, $3@3.50; canners, $2@3; bulls, $3@5; light veal calves, $8@9.50; heavy veal calves, $4@8; stockers and feeders, $4.50@5.

Hogs—Prime mixed, $10@10.50; medium, $9@10; heavies, $7@9; fat pigs, $9.50@10; stockers and feeders, $8.50@9.50.

Sheep—Prime lambs, $9@10; fair to medium, $8@9; yeralings, $6@8; wethers, $4.50@6;; mutton ewes, $2@6; feeder lambs, $7@8.

The Grain Market.

PORTLAND, Feb. 11.—Wheat—Hard white, soft white, white club, $1.18; hard winter, $1.17; northern spring, $1.14; red Walla, $1.14.

Today's car receipts—Wheat, 76; flour, 16; hay, 13.

Grain futures, bid: Wheat—Hard white, February, March, $1.18; soft white, $1.18; white club, $1.18; hard winter, $1.17; northern spring, $1.14; red Walla, $1.11.

Oats—No. 2 white feed, February, $29.50; March, $30; No. 2 gray, $28.

Corn—No. 2 eastern yellow, shipment, $26; No. 3 eastern yellow, shipment, $26.

SEATTLE, Feb. 11.—Wheat—Hard white, soft red winter, northern spring, $1.18; soft white, white Club, $1.17; hard red winter, $1.19; eastern red Walla, $1.13; Big Bend Bluestem, $1.25.

DAVENPORT, Feb. 11.—Marquis, $1.07; Bluestem, $1.06; Gold Coin, 94c.

RITZVILLE, Feb. 11.—Bart., $1.18; red, $1.14; Fife, 93c.

LEWISTON, Idaho, Feb. 11.—Fortyfold, club, hard winter, 93c.

DAYTON, Feb. 11.—Club wheat, $1.03; red, $1.

POMEROY Feb. 11.—Turkey, $1; Hybrid, 97c.

ODESSA, Feb. 11.—Marquis, $1.18; Bart and Bluestem, $1.17; Turkey red, $1.15; Jones' Fife, $1.

WALLA WALLA, Feb. 11.—Club wheat, 99c; Turkey red and Bart, $1.05; Bluestem, $1.

Hay and Feed Grain.

PORTLAND, Feb. 11.—Millfeed—Price f. o. b. mill: Millrun, ton lots, $24; mixed cars, $23; straight cars, $22 per ton; middlings, $38; rolled barley, $34@38; rolled oats, $37; scratch feed, $45 per ton.

Corn—White, $32; cracked, $34 ton.

Hay—Buying price f. o. b. Portland: Alfalfa, $13.50 per ton; cheat, $10.50@11; oat and vetch, $14.50; clover, $11; valley timothy, $14@15; eastern Oregon timothy, $16@17.

SPOKANE, Feb. 11.—Wheat—Feed wheat, $38 per ton.

Oats—$34 per ton; steam rolled, $36.

Corn—$34 per ton; cracked corn, $36 ton.

Barley—$32; steam rolled, $34 per ton.

Bran and Shorts—$25 per ton.

Alfalfa—$18; timothy, $18 ton; mixed hay, $18 ton.

General Produce.

PORTLAND, Feb. 11.—Butter—Cubes, extras, 35@36c per lb.; parchment wrapped, box lots, 41c; cartons, 42c. Butterfat, buying prices: No. 1 grade, 37c delivered Portland.

Eggs—Buying prices, 25@27c dozen, case count; jobbing prices, case count, 27@28c; candled ranch, 30c; association selects, 32c; association firsts, 30c; association pullets, 28c.

Cheese—Tillamook triplets, price to jobbers, f. o. b. Tillamook, 26c; young Americas, 27c lb.

Poultry—Hens, 17@24c; springs, 22c; ducks, 22@28c; geese, 20c; turkeys, live, nominal; dressed, 40c.

Pork—Fancy, 13½c per pound.

Veal—Fancy, 14½@15c.

SPOKANE, Feb. 11.—Butterfat—39c lb.

Eggs—Fresh ranch eggs, $11; fresh pullet eggs, $9.

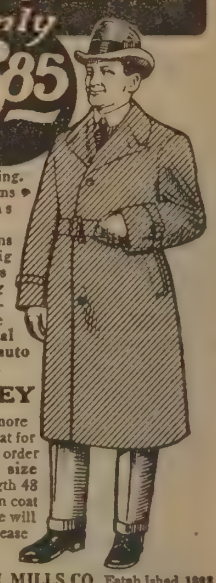
Live Poultry—Springers, 19c lb; springers, staggy, 15c lb; hens, fat, 4 lbs up, 23c lb; 2 to 4 lbs, 19c lb; old roosters, 12c lb. Rabbits, 10c lb.

Range of Live Stock Prices for the Week Ending Feb. 8

CATTLE.	Chicago.	Spokane.	Portland	N Salt Lake
Choice prime heavy steers (1100 lb. up)	9.00@10.00			
Good heavy steers	8.10@ 9.15			
Medium heavy steers	7.00@ 8.35			
Common heavy steers	6.00@ 7.25			
Choice prime light steers (1100 lb. do'n)	8.85@ 9.75			
Good light steers	7.85@ 9.00			
Medium light steers	6.85@ 8.15	6.25@ 7.50	6.50@ 7.50	5.85@ 6.75
Common light steers	5.75@ 7.00	4.25@ 6.50	4.75@ 6.50	4.00@ 6.00
Common to choice butcher heifers	4.35@ 7.75	3.50@ 6.50	3.75@ 6.25	3.25@ 5.50
Common to choice butcher cows	4.00@ 6.25	3.00@ 5.75	3.25@ 5.50	3.00@ 5.00
Bologna and beef bulls	3.75@ 5.75	3.00@ 5.00	3.50@ 5.50	2.00@ 3.50
Canners, cutters, cows and heifers	2.75@ 4.00	2.00@ 3.00	2.25@ 3.25	1.50@ 3.25
Canner steers	3.15@ 4.25	2.50@ 3.50	3.00@ 3.75	2.50@ 3.50
Medium to choice light veals	7.00@11.25	8.00@ 9.50	7.70@12.00	6.00@ 7.00
Common to choice heavy veals	4.00@ 8.25	4.00@ 8.00	5.50@ 7.50	
Common to choice feeders (1000 lb. up)	5.25@ 7.00			
Common, choice feeders (750-1000 lb)	5.15@ 7.00	4.50@ 5.00	4.50@ 5.50	
Common to choice stocker steers	4.50@ 6.85			
Common, choice stocker cows, heifers	3.40@ 5.00			
HOGS.				
Top of market	10.10	10.25	10.50	9.25
Bulk of sales	8.75@ 9.75	8.50@10.00	9.00@10.25	8.50@ 9.00
Heavy (250 lb. up)	8.65@ 9.40	7.75@ 8.75	8.25@ 9.75	
Medium (200-250 lb.)	8.75@ 9.90	8.75@ 9.75	9.25@10.00	
Light (150-200 lb.)	8.90@10.10	9.50@10.25	9.75@10.50	8.75@ 9.25
Light lights (130-150 lb.)	9.00@10.05	9.50@10.25	9.75@10.50	
Smooth packing sows (250 lb. up)	7.75@ 8.75	7.25@ 7.75	7.00@ 8.25	
Rough packing sows (200 lb. up)	7.50@ 8.40	6.75@ 7.25	6.00@ 7.00	
Medium, choice pigs (130 lb. down)	8.50@10.00	9.25@ 9.50	9.75@10.25	
Stock pigs		8.00@ 9.00	9.75@10.25	6.50@ 7.75
SHEEP AND LAMBS.				
Medium, prime lambs (84 lb. down)	11.75@14.30	8.00@10.00	8.00@10.75	8.75@ 9.75
Culls and common lambs	9.25@12.00	6.00@ 8.00	4.75@ 8.00	6.50@ 8.75
Medium to prime yearling wethers	9.50@13.00	6.00@ 8.50	6.50@ 8.25	5.00@ 7.00
Medium to prime wethers	6.50@ 9.50	4.50@ 6.00	4.50@ 7.50	4.50@ 5.75
Medium to choice ewes	5.00@ 7.75	4.00@ 6.00	3.00@ 6.00	3.50@ 5.00
Culls and common ewes	2.50@ 4.75	2.00@ 4.00		2.00@ 3.50
Feeder lambs	10.50@13.00	6.50@ 9.00		

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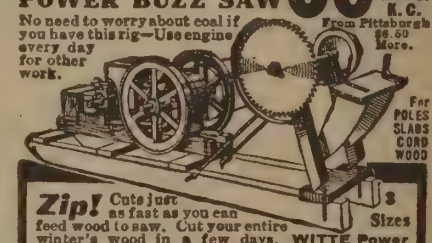
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How would you catch a squirrel? Go up the tree and talk nutty to it.—Sent in by Violet Ruby, Snohomish county, Wash.

Ruby Woods enjoys reading the stories and letters in our paper. She is in the seventh grade. Mr. Witt is her teacher. Ruby likes school. Her home is in northern Washington.

HAS GOOD TEACHER.

Melvin Hendrickson, one of our Washington graduates, sent us the picture of his twin pups, and I am sure you would all like to see them, for they are very cute. The picture will not make a good cut, though, so we can not print it. We thank Melvin for sending it. Melvin is in the seventh grade. Mr. Petite, his teacher, is a very good one.

START "LITERARY."

We have started "literary" over here and we think it is a success. At one meeting I sang a song entitled "In Dear, Old Washington." At the teachers' institute also I sang a song. I am in the seventh grade. We have two reading circle books to read this year. "Tales of the Tepee" and "Community Hygiene." — Lucille McKinney, Washington Children's Corner graduate.

FINDS PETS IN THE WOODS.

Once upon a time I went for a walk in the country. It was a nice day. The sun was shining and the beautiful flowers were in bloom.

When I was walking I met a cat. She came crying: "Meow! meow!" Then she walked ahead of me till she came to a thick brush where she stopped and I stopped, too. There, in that thick woods, stood a little box with four little baby kittens in it. I took the mother cat and her little babies and went home. I kept them for my pets, and they live happily now with their mother.—Martha. (What is your last name, Martha? If you will send it to Aunt Nellie, with your address, we shall send you The Junior Farmer.—Aunt Nellie.)

LETTERS WELCOMED BY AUNT NELLIE.

Among recent letters received by Aunt Nellie are those from cousins whose names follow. A few of these will be published each week in the regular edition of THE FARMER, and others will appear from time to time in The Junior Farmer:

Sadie James, Karl C. Widrig, Lenora Delma Powell, Sarah Neomia Ruth Cross, Mildred Mast, Milo Gould, Elma Larsen, Nilah Eddings, Evelyn Hale, Josephine Bobner, Helmi Johnson, Esther Jacobs, Ruby Woods, Marie Purtteman, Johnnie Swinger, Bessie Lovegrove, Benn Everett Nesbitt, Mary Patricia Walsh, Ruth Fox, Esther Bakke, Ruth Tobeck, Julia Gradishnik, Edna Stoller, Martha Kokko, Emma Harmon, Alice Halsted, Everett Joseph Scott, Lora Draper.

Henry Besel Jr., Erma Hoyt, Esther Strunk, Wilma Grace Gross, Herman Flottman, Edith Van Hoy, Othielia Franz, Ida Paul, Lucille McKinney, George Gugat, Violet Matson, Katherine Lund, Herbert Conner, Camilla Eliason, Carroll Conner, Pearl Eddings, Saima Erickson, Inez Hubbard, Thelma Bury, Jack McPhail, Eleanor Bemis, Esther Eliason, Ruth Nance, Mae Mahoney, Karl Stauffacher, Mary Neiland, Eva Howell, Dorothy Timm, Otto Kantz, Bernice Tobin, Gladys Stone, Helen Staadt, Elizabeth Felchlin, Violet Bond, Marcus Ruth, Naomi Gould, Marie Felchlin, Violet Clark, Mildred McDougall, Thelma Paul, Millard Hale, Cecilia E. Stuhr, Cornelia Muyskens, Roy Kister, Etoile Cook, Dorris Eddings, Edith Bell, Dorothy Hutson, Thelma Leonard.

BEDTIME STORIES

By THORNTON W. BURGESS.

Copyright, 1919, T. W. B.

JERRY HAS ANOTHER SECRET.

No one but Billy Mink and little Joe Otter had found the secret door to Jerry Muskrat's new house. Billy Mink had watched Jerry dive from the top of the new house, and Jerry had not come up again for a long, long, long time. Billy Mink and Little Joe Otter had put their two little brown heads together and decided that Jerry Muskrat's secret door must be way down under water. So one day when Jerry Muskrat was off hunting for freshwater clams, Billy Mink proposed that they hunt for Jerry's secret door.

"I'll beat you down to the bottom of the Smiling Pool," cried Little Joe Otter. Splash! The two little rascals were under water, and there was nothing but a great big ripple to tell where they had gone. It didn't take them long to find Jerry Muskrat's secret door, for really it wasn'tsecret at all for the little people of th eSmiling Pool. Grandfather Frog's grandchildren, the pollywogs, knew all about it. So did Mr. and Mrs. Trout. Billy Mink peeped inside. Then they swam back to the big rock and climbed up on it to dry off.

"Let's not say anything about it to Jerry Muskrat," said Billy Mink. "We'll get him to play hide andseek. Of course he'll hide in his new house. Then we'll give him a surprise by finding the secret door."

So as soon as Jerry Muskrat came in sight, Billy Mink shouted to him: "Hi, Jerry Muskrat! Bet you can't hide where we can't find you."

Jerry Muskrat's eyes twinkled. "Will you give me two minutes to hide?" he asked.

Billy Mink and Little Joe Otter agreed. Jerry Muskrat took a long breath and then dived out of sight. Little Joe Otter nudged Billy Mink, and they bot hchuckled as they watched Jerry Muskrat disappear. They waited two minutes.

"Now we will give Jerry Muskrat a surprise," said Billy Mink, as they prepared to dive into the Smiling Pool.

Grandfather Frog, sitting on his big green lily pad, chuckled to himself as he



Grandfather Frog, siting on his big green lily pad, chucked to himself.

watched them. "Chugarum!" said Grandfather Frog. "Somebody is going to be surprised, sure enough, but I'm not so sure that it will be Jerry Muskrat."

Billy Mink and little Joe Otter swam straight to Jerry Muskrat's secret door and slipped inside. They were in the nice little room Jerry had built under water, adn right up above was the passage to Jerry's bedroom. It was so easy that they wanted to laugh, but they couldn't because they were under water, you know, and had to hold their breath.

Up the passage they scrambled, and in a minute were in Jerry Muskrat's snug little bedroom which is warm and dry because it is above water.

"Didn't fool us this time, did you, Jerry Muskrat?" shouted Billy Mink. Then Billy blinked both eyes. Jerry Muskrat wasn't to be seen, no sir; Jerry Muskrat wasn't to be seen! They pulled his soft, warm bed of grass to pieces, but no Jerry Muskrat.

Wherewas he? Perhaps if you ask Grandfather Frog or write to him he will tell you, for this is Jerry Muskrat's other secret, and Grandfather Frog is the only one who knows it.



THURSDAY, February 16 Rosana Doran, 9 years old; Della Kimble, 8; Helmie Manson, 11.

FRIDAY, February 17.—Katherine Buckley, 9 years old; Marie Litt, 11; Audrey Miller, 11; Anna Flork, 9.

SATURDAY, February 18—Orval Beasley, 11 years old; Louise Evans, 8; Marvin Grivstll, 10; Esther Hanhi, 5; John Kramer, 11; Mildred McDoughall, 11; Albine Wiideanen, 10.

SUNDAY, February 19—Helen Berry, 11 years old; Pearl Kilty, 10; Marcella Meyer, 9; Fay Morrison, 9; Helen Dorothy Top, 9; Alice Vance, 11.

MONDAY, February 20—Beatrice Bowman, 10 years old; Esther Eastgard, 10; Esther Eliason, 10; Glenn Jack, 10; Lillian Kidwell, 9; Cornelia Muyskens, 11; Charley Niskaparvi, 10; Katherine Petersen, 11; Lucile Scoles, 11.

TUESDAY, February 21—Olive Magnuson, 9 years old; Lawrence McNeil, 9; Emman Yeomen, 10.

WEDNESDAY, February 22—George Ludwig, 8 years old; Earl Luiten, 11.

In each issue a list of the cousins' birthdays for the week will be published. At the close of each letter you write be sure to tell how old you are and when your birthday comes.





Floors—

Refinish Yours Yourself

with paint or varnish—We tell how

IT'S a simple matter, if you cannot get a painter to refinish your farm house floors yourself.

Fuller's Floor Paints are the finest finishes and last the longest. They dry over night so you can walk on them in the morning.

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Women can apply these floor paints as well as men.

Fuller makes a special paint for every purpose and our Rubber Cement Floor Paint is especially adapttable for farm house floors.

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We also make a special line of paints, varnishes, enamels, etc., for all kinds of interior decorating. We specialize in these materials and methods after 72 years' experience with paints and painting practice.

We are one of the largest paint manufacturers in the United States.

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If properly applied, such house paints will last five or more times as long as cheap paint, and looks better through the years.

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Send coupon for "Save the Surface," a free book which tells of the importance of good paint, and the need for painting now if your paint is wearing off. Also ask for small booklet of Fuller's Farm Paints and Varnishes.

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Ask our Specification Department any question that you'd like to have answered about painting—complete detailed advice is given free.

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Dept. F-117, San Francisco.

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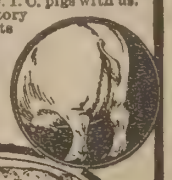
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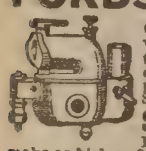
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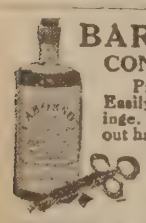


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We Buy and Sell
Grade and Pure Bred Dairy Cattle.
We can save you money whether you wish to buy or sell. One or a carload.
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NEAR CARSTENS' PACKING PLANT.

Carnation Buys Herd

Carnation stock farm of Seattle, Wash., recently closed a deal for the entire herd of Holsteins of F. R. Beals of Tillamook, Ore. The herd consists of 68 head and has been built up by Mr. Beals at much expense and by careful selection and breeding. It includes the famous cow, Lady Aaggie Ormsby of Rock, that was first in class and senior and grand champion at the Oregon state fair and the Pacific International Live Stock show, and her son and daughter, both of whom were prize winners at the shows mentioned. It also includes Chimacum Wayne Monarch Cornucopia, the world record senior 3-year-old in the 305-day division, and a 29-pound daughter of Hollywood Lilith Palmyra. Twenty-five daughters of Johanna Bonheur Sir Fayne were among the herd. The entire lot are of good type and most of the cows in milk have been tested and have good records. Several now on yearly test will have their records completed on the Carnation farm. The purchasers report that the herd arrived at the farm all in good condition.

Burton Hartog, DeKol Ormsby, the son of Lady Aaggie, referred to above, has been sold at private sale to the Pabst stock farm at Oconomowoc, Wis., where he will be used as the junior herd sire. This firm tried to buy him at the Pacific International, but Mr. Beals was not at that time ready to sell. Lady Aaggie's daughter will be consigned to the Brentwood sale, where she is confidently expected to bring a long price. The amount paid for the herd is not officially given out, but is understood to average above $650 a head. Mr. Beals is known to have refused $5000 for Lady Aaggie. The object is to cross this good herd with the great sire, Matador Segis Walker, and with the son of the world record cow, Segis Pietertje Prospect, by him. The Carnation company is consigning about 20 head to the Brentwood sale, mostly by Matador Segis Walker and Carnation King Sylvia.

Holstein breeders generally, and those of Oregon in particular, deeply regret Mr. Beals' retirement from Holstein breeding, and Mr. Beals regrets it himself. But he finds that his various interests are such that he can not give his cattle the attention they deserve. He feels that they have gone into hands where the line of breeding he had so carefully built up will be carried on and crossed with the great producing and show strains of the breed.

RICHARDS WILL SELL OUT.

Breeders of the northwest, especially hog men, will be interested to learn of the announcement of Jesse S. Richards of Virginia, Idaho, that he is going out of the hog business. He has for several years been secretary of the Ogden Live Stock show and closely connected with the business interests of that city. He has recently accepted the position of secretary of the chamber of commerce of Ogden and is, therefore, placing his entire herd of Duroc swine on the market. The herd includes some 200 head, many of which are heavy winners on the show circuits, with several grand champions among them.

PORTLAND SHORTHORN SALE.

March 22 is the date that has been selected by the Northwest Shorthorn Breeders' association for its annual spring sale at Portland. On that date about 60 head consigned by breeders throughout the northwest will be offered at public auction at the Pacific International show grounds. The sale is under the management of A. E. Lawson, northwestern representative of the American Shorthorn Breeders' association. This will be the secnd consignment sale of the northwest association this year, the first being held at Spokane February 22, during the northwest live stock conference.

SEVEN PER CENT BUTTERFAT.

A record of 10,000 pounds of milk and 700 pounds of butter in 305 days has just been made by Baby Buff's Adelaide, a Jersey owned by C. A. Phipps of Spanaway, Pierce county, Wash. The animal has been on official test for the past year and her test has run as high as 7 per cent butterfat.

SALE OF BERKSHIRES.

Fred Sinnes of Prosser, Wash., announces his first public sale of registered Berkshire swine, to be held at the D. C. Bunn farm, three miles east of Prosser, on March 8.

TWO GOOD SWINE SALES.

Two excellent swine sales were held in the Yakima valley last week, those of W. A. May of Toppenish, and the Duroc Jersey association. A detailed report of these sales will be given soon.

The Washington Farmer Index

The index of The Washington Farmer for the months of July to December, 1921, inclusive, is now ready for distribution. As long as the supply lasts, any reader may obtain a copy upon request. A 2-cent stamp should be enclosed.

$24.95 Upward ON TRIAL
American FULLY GUARANTEED CREAM SEPARATOR



A Solid Proposition to send new, well made, easy running, perfect skimming separator for $24.95. Skims warm or cold milk; heavy or light cream. Different from picture, which shows larger capacity machines. See our plan of

MONTHLY PAYMENTS

Bowl a *sanitary marvel* easily cleaned. Whether dairy is large or small, write for free catalog and monthly payment plan. *Western orders filled from western points.*

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WHY THE COWS LIKE THE PERFECTION MILKER



A gentle suction, spiral downward squeeze and a period of complete release.

Don't fail to see our new electric milker, complete outfit for $260.

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In writing advertisers, be sure to say you saw their advertisement in this paper.

Breeders' Dept.

CAN YOU USE THIS HOLSTEIN BULL?

Sire: Sir Johanna Fayne Bonheur De Kol No. 188160, whose dam made at 2 years, milk, 22.449 pounds; butter, 859; at 3 years, 7 days, milk 649 pounds; butter, 32.89 pounds; 30 days, milk, 2727.9 pounds; butter, 130.37 pounds.

Dam: Lucy Freela Pontiac No. 256613

6 years, 365 days—milk, 26,661.6 pounds; butter, 1056.5 pounds.

A handsome, straight, long-bodied fellow; half black, half white; 13 months old; weight, 1100 pounds.

LET US TELL YOU MORE ABOUT HIM.
ARP'S DAIRY, EUGENE, ORE.

HOLSTEIN-FRIESIANS

Well bred heifers, bull calves. Herd sire brother to Queen De Kolb Bonheur Pontiac (1270 lbs. butter, 31,000 lbs. milk). 7th highest cow in world for milk production. All our cows are bred to him. All dams on official test. Herd on accredited list. Also have few bred Poland China gilts of good breeding.

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Holstein Bulls sired by son of world record cow, from dams sired by brother to Segis Pietertje Prospect. Prices low.

H. R. BOOMER, Payette, Idaho.

Broadmead Aberdeen Angus

Ten bulls, ready for service, now offered at special prices and terms. Also a number of promising bull calves, some that should make show winners or high class herd headers. Can supply your needs for either sex.

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ABERDEEN-ANGUS

bulls will mature your steers earlier, give them a heavy, thick and low set conformation, dehorn them and add to their quality so that they will top the market every time. We have a wonderful lot to select from, both range and herd bulls, at prices which will move them.

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Write for prices and literature.

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Oakleign Stock Farm Shorthorns

204 S. First St., Medford, Ore.
Milking Shorthorns. Several record cows—50 head in herd.

Weatherford Bros. Herefords

We have for sale a few choice herd bulls and bulls for the farm and range, at prices in keeping with the times. Herd headed by the great breeding bull, Beau Blanchard 59th, whose calves show great bone, size and quality.

WEATHERFORD BROS. Dayton, Wash.

Orchard Hill Farm Guernseys

"Home of high class Guernseys."
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Brown Swiss Stock Farm

Breeders of Brown Swiss cattle, the farmers' dairy cow. Young stock for sale.

THEO BRUGGER, Route 3, Gresham, Ore.

Jersey Cows and Heifers Grade Cows, Registered Bulls, Baby Calves

Every cow offered has a Cow Testing association record and is a good producer. To make room for pure bred heifers, I am making good offers on good cows.

Two young bulls by a strongly bred St. Mawes sire, out of Register of Merit dams.

Baby calves by a richly bred sire out of high producing cows.

Come and see my herd, one of the largest in Tillamook county, established in 1867, or write for full information of records, breeding and prices.

Don Meadows Farm
JOE DONALDSON, Prop., Tillamook, Ore.

Oreglow Jersey Herd

Iron Mine Farm being only leased property we have adopted the permanent herd name above, meaning "an Oregon Golden Glow Jersey herd."

IRON MINE FARM, Oswego, Ore.
W. M. LADD, Owner.
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Anoka Farm Jerseys

We have your wants in a bull calf dropped July 1. He is a beauty and his dam has a record of 504 lbs. fat. Priced to suit the most conservative buyer. Address

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RY. STATION, WILSONVILLE, ORE. ELEC.

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Ashnook Farm offers a few heifers and young bulls, sired by the gold and silver medal sire, Silver Chimes, of S. B., sire of ex-world champion heifer, Silver Chimes Gwendola, and 20 register of merit daughters, and more qualifying.

DEL PERKINS, Carlton, Ore.

Register of Merit Jerseys

Young bulls out of dams with good official records and sired by Foxhall's Chief Engineer, combining the blood of the great Foxhall's Fern Lad and Golden Glow's Chief strains.

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We Are Entirely Sold Out

of bulls ready for service. We can furnish a splendid St. Mawes bull calf at a reasonable price. Write for partciulars.

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Locust Lane Farm Jerseys

Sybil's, Noble's, accredited and R. of M. Jerseys; type, size and production through our blood lines.

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Fourth Gold Medal Jersey Bull

now in use in my herd. No other herd ever had so many. Young stock for sale.

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Jersey Bulls at Bargain Prices

Send today for our special sale list of registered Jersey bulls from R. of M. dams. Easy terms, liberal credit.

WARREN GRAY, Box T, Jefferson, Ore.

Ayrshires

Outstanding bull calves, ready for light service; sired by grand champion Willowmoor Peter Pan 25th, and from high producing cows with show records.

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Ayrshires Bred heifers, heifer calves and two choice bulls for sale. All sired by Will Peter Pan 16th. No. 16020.

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Work Horses and Mules
Young, Sound, in Good Condition

We are feeding for the spring market four loads of geldings and mares, from four to six years old, weight from 1200 to 1600 lbs.; mostly broken and fat, and two loads of good young mules, three to five years old. If interested, write or see

LACY BROS.
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Mammoth Missouri Jack

We will sell, or will trade for Percheron stallion.

RIVER BANKS FARMS,
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If You Keep Live Stock

you should also keep a careful record of your stock, milk records, breeding records, labor and feeding records, live stock accounts, general farm accounts and expense accounts for household and personal expenses. We will send you a record book covering all these matters, free. The supply is limited. Address

THE PACIFIC NORTHWEST FARM TRIO.
Dept. B., Review Bldg., Spokane, Wash.

Read the "Want Ad" page this week for good offers of all kinds.

Western Royal Swine Breeders' Association

QUALITY SWINE SALE

WILL BE HELD AT THE

Spokane Union Stock Yards, Spokane, Wash.

February 21, 1922

50-HEAD- 50

This Will Be a Quality Sale

We will have Duroc Jersey, Poland China, Chester White and Berkshire Hogs, all of the BEST TYPE and Breeding from the LEADING HERDS of the Northwest in this sale.

Now Is the Time

to

Pick a Pure Bred and Eliminate the Scrub

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You Are Invited to Attend the Northwest Live Stock Conference in Spokane, February 20, 21 and 22.

THIRD ANNUAL SALE

Hercules Shorthorns — Hercules Ranch

Sprague, Wash., Thursday, Feb. 23, 1922

16 Bulls — 28 Females

with few exceptions of our own breeding. Sale is being held at the ranch so you may see our HERD BULLS and BREEDING COWS.

The bulls include herd and show bull prospects, range bulls and bulls from good milking dams. Your especial attention is directed to Hercules Snowstorm, Hercules Imperial, Hercules Calfant, Knight Superior, Royal Marshal and others.

The females include 4 cows with calves and re-bred, 10 bred heifers, and 14 open heifers. Hercules Elvira 2d, Hercules Susan, Hercules Violet 3d, Hercules Violet 5th and Village Rose 7th, are all real show prospects of outstanding breeding. The other females are of quality and breeding desirable for any breeder.

This Is the Best Lot of Cattle We Ever Offered

For catalog write,

DAY & ROTHROCK COMPANY, Spokane, Wash.

We call attention to Shorthorn association sale, Spokane, February 22, and A. D. Dunn Shorthorn sale, Wapato, Wash., February 24.

Shorthorn Cattle Auction

Spokane, Wash., Feb. 22, 1922--Washington's Birthday

25 BULLS AND 25 FEMALES have been selected from the leading Shorthorn herds of the Inland Empire for this offering and you will buy them at your price.

Both Shorthorn breeders and range cattle men should be interested in this offering as there are both choice breeding stock and strong range and farm bulls listed.

Attend the Northwest Live Stock conference and this sale at the same time.

Sale at Spokane Union Stock Yards

WASHINGTON'S BIRTHDAY.

D. C. KEITH, Auctioneer.

For catalog write
C. A. GRIEF, Sales Mgr.
Uniontown, Wash.

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GUERNSEY BULL CALVES

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CHICONA FARM, Chinook, Wash. A. L. Gile

Berkshires

A four months old boar and gilt out of Royal Woodrow II. A first prize winner wherever shown, including 1920 Pacific International, and a grandson of Laurel Champion Lady Blossom 2d. Winner of many firsts, including state fair.

Some February weanlings out of the above sire and a grand young sow—second litter.

Farmer's prices.

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Riverby Orchard Berkshires

Oldest established Berkshire herd in the northwest. Young pigs and bred sows for sale. Address
D. C. BUNN, Prosser, Wash.

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River Banks Better Berkshires

Order now. Bred gilts for spring farrow.
RIVER BANKS FARMS,
GRANTS PASS, ORE.

Berkshire Fall Pigs

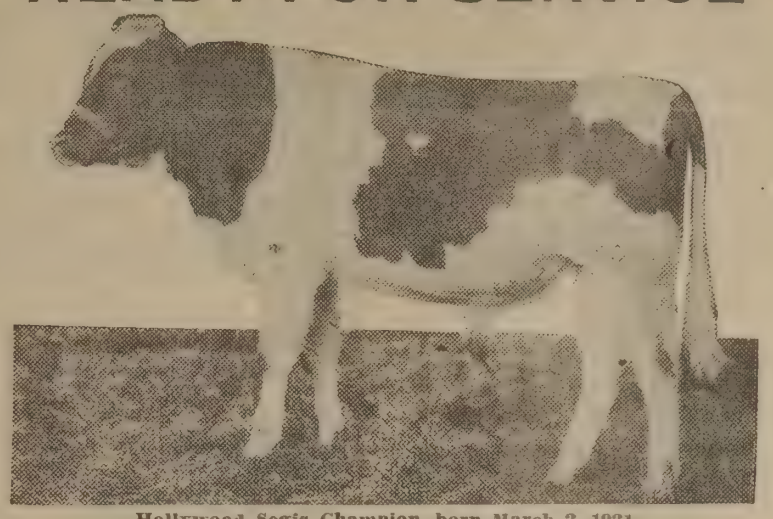
By a great son of Royal Dominator 4th. Extra good type, well grown. Prices reasonable. Booking orders for spring pigs. J. ALVA BULL, Ellensburg, Wash.

Hampshires for Sale

Tried sows, last April gilts, Sept. pigs, both sexes, unrelated.
J. M. FRUITTS, Cambridge, Idaho.

Read the "Want Ad" page this week for good offers of all kinds.

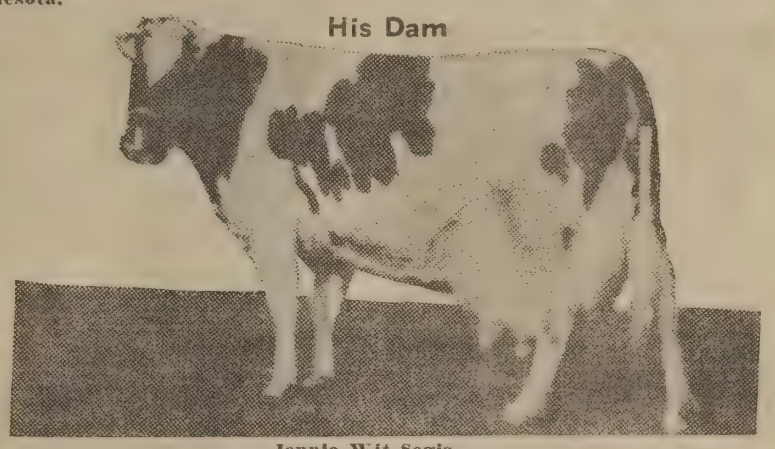
READY FOR SERVICE



Hollywood Segis Champion, born March 2, 1921

His sire, who is a grandson of Colantha 4th Johanna, has 25 advance register daughters, and is at the head of Mr. Moscrip's large herd at Lake Elmo, Minnesota.

His Dam



Jennie Wit Segis
7 days—Milk, 620.2 lbs., butter, 24.24 lbs.
At 6 years old, 305 days.....milk 17,436.0 lbs., butter 683.85 lbs.
At 7 years old, 305 days.....Milk 20,297.5 lbs., butter 809.31 lbs.

A few other good bulls from yearly record dams, sired by Judge Segis, whose 2-year-ild daughters are making large yearly records.

Herd under federal supervision. Correspondence solicited.

Visitors interested in Holsteins always welcome.

HOLLYWOOD FARM, Hollywood, Wash.

Public Auction of Registered Holsteins and Durocs

Tekoa, Wash., Feb. 28.

Included in this sale are 28 tried sows and gilts of the SENSATION blood lines: 9 tried sows by Western Orion, all bred to a good son of Giant Wonder I Am, twice grand champion of Iowa. Dam, an 800-lb. champion sow by PATHFINDER. Four real SENSATION boars, ready for service. Six Holstein bulls by Sir Fayne Pietertje Phebe, he by the great Findern Pietertje Fayne bull. One by Hazelwood Fobes Pontiac. Every animal guaranteed. Write for catalog.

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CHAS. M. TALMADGE, Sale Manager.
GEO. GOCHNOUR, Auctioneer. Box T, Salem, Oregon.

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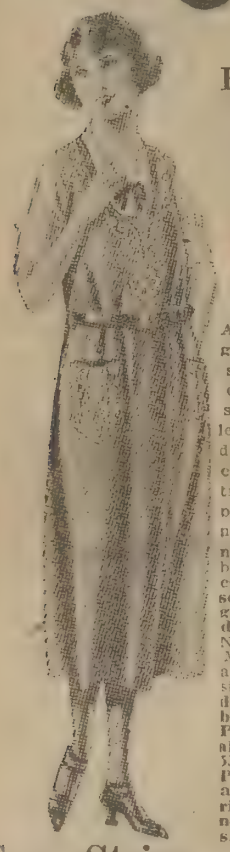
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Wonderful quality, superb value in men's blucher shoe of black soft gunmetal finished leather. Leather insole and extension oak outsoles. Perforated tips. Sizes 6 to 11. Wide widths

$2.39

Give size.

Order black by No. 53A674. Pay $2.39 and postage on arrival. Order brown by No. 53A675. Send no money. Pay $2.79 and postage on arrival. State size.

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Send Now

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Men's Storm Boots

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Wonderful 11-in. hi-cut storm boots of soft brown cowhide leather, absolutely barnyard proof. Solid leather, double chrome outsoles, sewed and nailed, solid leather insoles; durable counters; dirt-excluding bellows tongues. Sewed throughout with heavy waxed linen thread. Sizes 6 to 12. Wide widths. Order by No. 53A770. Send no money. Pay $3.98 and postage on arrival. State size.

Similar style boys' brown calf boots, double oak soles, sewed and nailed; bellows tongue. Order big boys' sizes, 1 to 6, by No. 53A570. Price $2.79. Order small boys' sizes, 9 to 13½, by No. 53A571. Price $2.39. State size.

Brogue, Dress Shoe Goodyear Welt Brown Russian Calf

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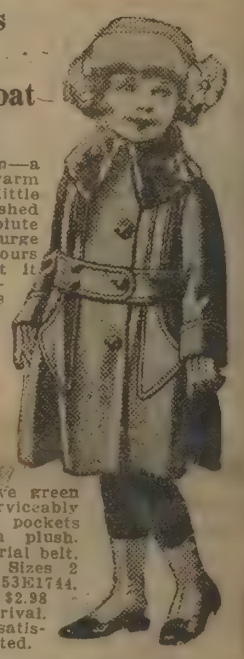


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Most popular color men's dress shoe for spring. Dark mahogany brown Russian calf—new brogue style, with full vamp (not cut off), and fancy perforations on tip and vamp, as pictured. Extension Goodyear sewed soles; pure gum rubber heels; leather insoles. Sizes 6 to 11. Wide widths. Order by No. 53A635. Pay $3.98 and postage on arrival.

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Yes, a bargain—a startling value in warm winter coat for little girls. We have smashed the price to absolute rock bottom and urge you to send for yours quickly. Don't put it off—don't risk disappointment. Stocks limited.



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Hip Boots Bargain



Don't fail to make this big saving on men's pure gum hip boots: friction lined; heavy corrugated sole and heel; guaranteed first quality. Made of the very best rubber. Usually retailed at $5. Be sure to order your pair while this great saving offer lasts. Sizes 6 to 14. Wide widths. No half sizes.

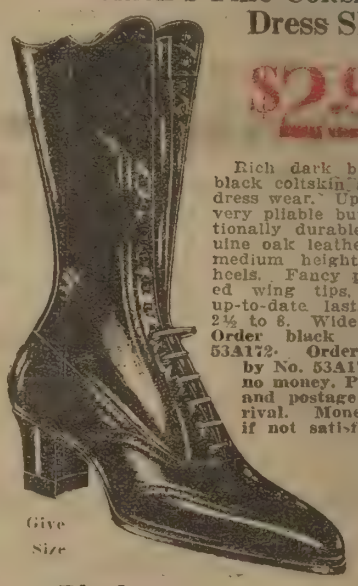
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Women's Fine Coltskin Dress Shoe

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Women's black or brown kid oxford in dressy last with medium heels with rubber top lift. Genuine oak leather soles. Fancy perforated inverted wing tip with perforated vamp. Beautiful model of selected soft kid leather. Sizes 2½ to 8. Wide widths. **Order black by No. 53A193. Order brown by No. 53A194. Send no money. Pay $2.79 and postage on arrival. Money back if not satisfied. State size.**

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FEBRUARY 23, 1922. Washington's Great Farm Magazine EVERY THURSDAY

THE WASHINGTON FARMER

ESTABLISHED 1894 SPOKANE. SEATTLE.

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Spray Must Be Driven into the Hiding Place of Every Pest



See Page 6 for Detailed Recommendations for Orchard Spraying

Cowlitz Cheese Association Meets at Toledo

Authorizes Directors to Contract With United Dairy Association for Marketing Its Products for One Year.

Authorizing the directors to enter into a contract with the United Dairy Associations of Washington for the marketing of its product for one year was the big thing of the annual meeting of the Cowlitz Valley Cheese association, at its annual meeting at Toledo, Wash., February 13.

Outside of this important step, however, the meeting was a most satisfactory one in every way. The attendance was large, interest in all the proceedings was keen and the satisfactory hot lunch prepared by wives of the members helped to make the day pass pleasantly.

Mr. Cleaver, secretary and manager, after reading the minutes, discussed the question of the merger with the united dairy associations. He called attention to the fact that expenses are too high because of the small amount of winter milk. While he urged more winter cows, he said the overhead is slightly under 2 per cent, while most cooperative factories run at a cost of about 3 per cent and most privately owned plants at about 5. In summing up the year's work Mr. Cleaver showed that 2,450,105 pounds of milk had been received, which contained 101,460.9 pounds of butterfat. From this 254,163 pounds of cheese were made. This in an average of 10.37 pounds of cheese per 100 pounds of milk. The average price for cheese was 21.1 cents per pound and the average price for butterfat, 46.5 cents. Patrons delivering milk received $47,-177.35.

G. W. Greece was elected a director for the lower river district and Elmer Boone for the Toledo district. As Mr. Cleaver positively declared he could not accept the position of secretary and manager again the board of directors recommended that P. G. Packard, the cheese maker, hold both positions, and before the day was over his appointment was confirmed.

Upon reassembling J. A. Scollard, president of the United Dairy Associations, addressed the meeting on the subject of making an agreement to handle their product. He called attention to the fact that the associations have just passed through a successful year in spite of all the bad conditions prevailing. He thought this shows some business judgment. Their business amounted to $5,500,000 and the money was invariably back in the 30-day period. In securing private capital to handle and sell their product, he said, they no doubt saved their organization. He gave details of the cheese making in several plants, all under the Darigold brand. Greater concentration of sales, he said, means cheaper selling cost and the elimination of competition. He showed how this association and the United associations had come in competition to some extent the last year.

Mr. Scollard believed the ideal plan would be for this association to belong to the United associations, but he was willing to take over the selling for one year on the same terms as the five-year contracts of the regular members.

A number of questions were asked and the chairman then asked Horace Addis of THE FARMER staff to tell of the Tillamook association and its methods. He asserted that the Tillamook cooperative factories began having one selling agency before they had any kind of an association; that they were fortunate enough to get Carl Haberlach, who used good judgment from the start, and soon was selling for practically all the factories. Later they organized to standardize their product. Their success was predicted on the fact that they had a practical cooperative selling agency. He told of the high prices received and of the fact that Tillamook is doing more advertising than ever before.

A motion was then made and, after some discussion, unanimously passed that the Cowlitz Valley Cheese association enter into a contract with the United Dairy Associations of Washington for one year for the marketing of their product, if it can be done to the satisfaction of the directors.

R. G. Fowler, county agriculturist, whose subject was "Better Bulls," showed why it pays to have the cows freshen in the fall. The cow will give a good flow of milk through the winter, if cared for, and will flush up in the spring, practically making two freshenings in the year. He gave statistics from Humboldt county, Cal., where 42 daughters of purebred sires gave an average production of 420 pounds of fat in a year, while the same number of daughters of scrub sires averaged only 106 pounds. The tremendous difference in profits were also shown by charts.

F. L. Audrain, state leader of boys' and girls' clubs, said the place to plant an idea is in the minds of boys and girls. He wanted them trained so they will be better farmers than their parents and gave instances of what had been done.

C. L. Woodrum, field secretary of the Lewis county farm bureau, told of a series of farm conferences that will be held and of the subjects that will be discussed. He declared there is great need of elimination of competition between cooperative associations.

N. C. Sears told of his experience in dairying with poor cows and of the good results he is now having with purebred Jerseys. In 1914, with scrubs, he had a herd average of 19.5 pounds of fat per cow in a month. In December last, with purebreds, he had an average of 42.5 pounds, and most of them heifers. He urged betters sires.

Before adjournment it was decided to hold the June cheese carnival as usual, and a rising vote of thanks was given the retiring manager, Mr. Clearver.

PUREBRED DAIRY SIRES PLACED.

As a direct result of the purebred sire movement, five purebred dairy sires were placed in San Juan county during the month. Another sire was also placed, but arrangements had been made for his purchase before the campaign. The dams of all these sires except one, reports County Agent Will Henry, have butterfat records of not less than 500 pounds, while the exception has a record of over 800 pounds.

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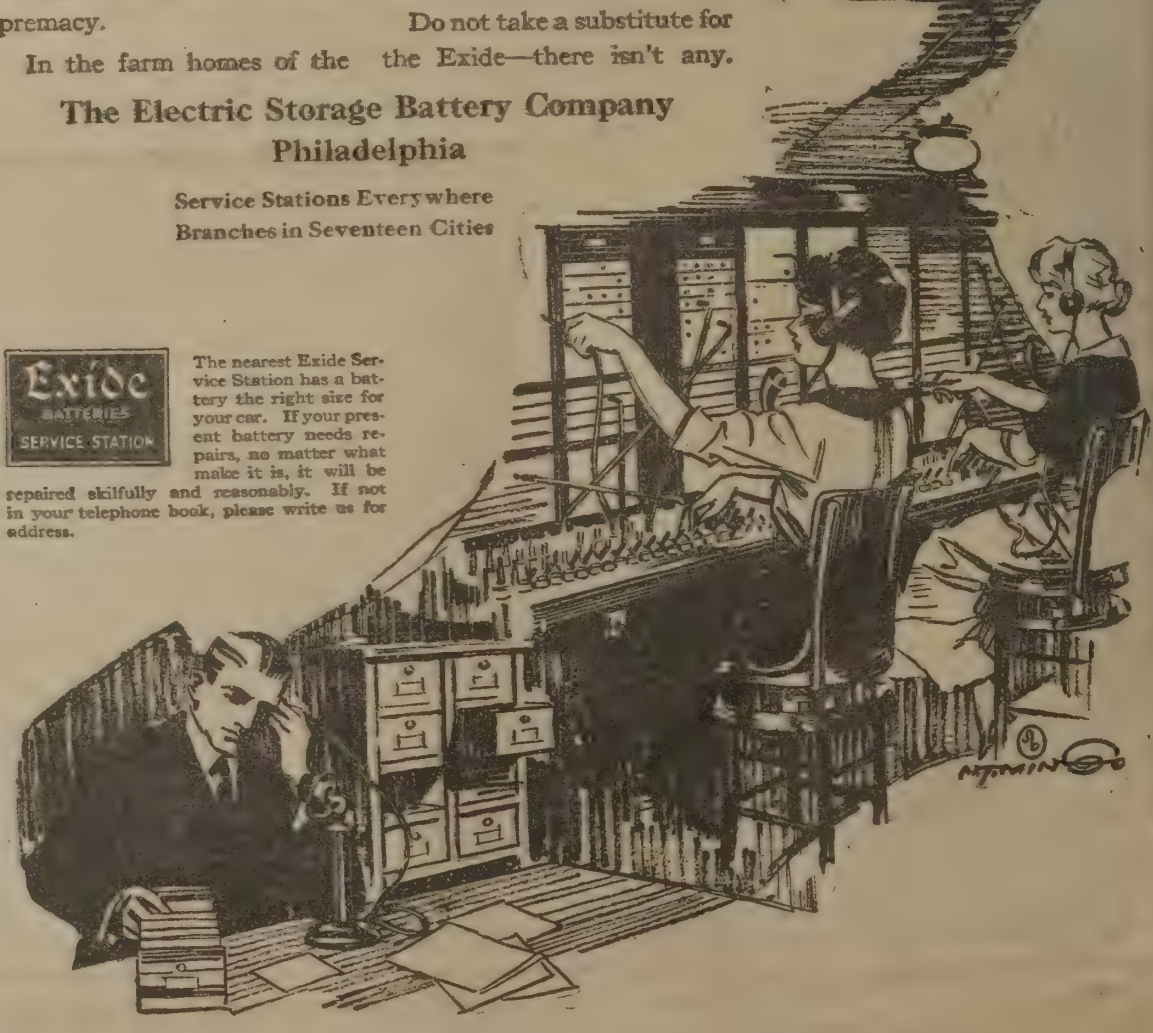


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THE WASHINGTON FARMER

Vol. 46. No. 8 THE RANCH SUCCESSOR TO PACIFIC DAIRYMAN HORN AND HOOF February 23, 1922

For Good Farming, Attractive Country Homes and Happy Country People

Spraying to Control Orchard Pests and Diseases

By F. E. BAILEY, District Horticultural Inspector

Spraying for the control of orchard pests and diseases is one of the largest factors in the production of a commercial fruit crop, considered both from the standpoint of the labor involved and of the material and equipment required. Furthermore, it is a subject to which every orchardist must give considerable study as it applies to his own local conditions. It is not the intent of this article to go into great detail on any one phase of spraying operations, but rather to point out the essentials to clean fruit production in eastern Washington during the year 1922.

First it is necessary to have a spray machine capable of maintaining high pressure with the ordinary nozzle equipment; a pressure of 200 pounds or higher should be maintained.

Whether the rod or the spray gun is used as nozzle equipment is largely for the choice of the individual operator, since it has been demonstrated that equally efficient work can be done with either. The gun throws a larger stream of spray and permits of covering free surface more rapidly, but it also requires that the operator be alert every second of the time and constantly adjust the spread of the spray stream to the distance and area of the surface to be sprayed. The rod with the Clipper or Bordeaux nozzles throws a smaller spray stream over a lesser range, and requires a somewhat longer time to cover the same tree area. In the hands of the indifferent or inefficient operator the rod will probably give better results than the gun because the nozzle adjustment of the rod remains unchanged during spraying operations.

Whatever type of nozzle is used the desired result is that the spray liquid between the time it leaves the nozzle and reaches the tree surface shall be broken into particles so fine as to form a mist which will evenly and thoroughly coat all parts of the tree surface. The fine droplets wet the surface evenly with the least drip-off; larger drops do not cover the surface as thoroughly and they have a greater tendency to run together and run off the surface. High pressure and proper nozzle adjustment to that pressure are the requisites to a good mist spray application.

Every effort should be made to wet all parts of the tree, especially the most accessible parts. It is poor economy to hasten the spray application for the sake of economizing on material.

If the trees are old with the dead outer bark, rough, cracked and sloughing off, it will insure better control for such insects as scale if the loose bark on the trunk and lower parts of the branches be scraped off prior to spraying.

Proper pruning of a tree is a necessary preliminary operation to all spraying. Thinning of the fruit is essential to efficient control by spraying of the codling moth.

The accompanying table states briefly the proper solution and time of spraying for some of the more common orchard troubles found in eastern and central Washington. These recommendations are general and it may be that local climatic conditions in some sections will demand a variation from the method offered here; in a case of this kind or whenever there is doubt regarding any detail of test or disease control consult your county agent, horticultural inspector or other recognized authority. Sometimes it is necessary to vary spraying methods considerably within a range of a few miles.

Orchard insects may be divided into two general classes:

First—Sucking insects, including all of the scales, aphides and mites. This class of insects obtain their sustenance by sucking the sap from within the living tissue of the plant, usually by means of a tubular mouth part adapted to this purpose. Taking no food from the exterior surface of the plant, leaf or fruit, these insects can only be controlled by a spray which wets their body surface. Such a spray is known as a "contact spray."

Second—Biting insects, of which the codling moth of the apple and pear is the most typical example. Biting or chewing insects have mouth parts adapted to their method of feeding. With a few exceptions they are best controlled by a stomach or internal poison sprayed on the surface where they feed. Such a spray is known as a "stomach poison spray."

Orchard diseases may be divided into three general classes:

First—Fungous diseases, such as apple scab, powdery mildew and peach-leaf curl. A fungus is a microscopic plant living on another plant. Fungous diseases can be controlled by spraying affected plants with a class of sprays known as "fungicides." All fungicides are contact sprays in that they must wet the diseased area in order to effect control.

Second—Bacterial diseases such as fire blight and crown gall. Very few bacterial diseases are controlled by spraying. Surgical removal of fire blight-infected areas and guarding against planting of gall-infected nursery stock are typical examples of control methods for bacterial diseases.

Third—Nonparasitic diseases such as Baldwin spot, rosette, winter injury, Jonathan spot and many others. Spraying operations are useless in the case of any of this class of diseases; attention must be turned to cultivation and irrigation practices and soil fertility improvement for their correction and prevention.

Of the more commonly used spraying materials, lime-sulphur solution serves the greatest number of purposes, being a contact spray for the control of many sucking insects and a fungicide for the control of fungous diseases. While commercial manufacturers aim to produce a solution with a relatively high specific gravity of Baume test, good home-prepared solution of lower test gives equally efficient results, but a correspondingly increased amount per tank should be used.

Oil emulsions of different types are used as insect destroyers (insecticides) and insect egg-destroyers (ovicides). An oil emulsion is oil broken up into very fine particles and held in suspension throughout a volume of water by means of an emulsifier (usually some chemical of a soap nature). For winter or dormant use, crude or other heavy oils are used, and in the emulsified form are known as "miscible oils." For summer use emulsions of distillate and kerosene are used.

While it is possible to prepare oil emulsions of different types at home, it is usually better to purchase one of the prepared emulsions (even though the cost be more) and use it as directed by the manufacturer. Oil emulsion sprays which show free or unemulsified oil floating on the surface of the spray tank should never be used, because free oil will kill the trees. Neither should an oil spray be used when there is a possibility of freezing weather following soon.

Arsenate of lead is the most generally used stomach poison for fruit tree sprays. In recent years the powdered form has practically displaced the paste form. The many commercial brands of arsenate of lead on the Washington market today are the most thoroughly standardized of all the spray materials used in this state. One brand varies but little from another as to killing power. This cannot be said so readily of commercial oil emulsions and lime-sulphur solutions.

Nicotine sulphate is a contact insecticide of value for aphis and other pest control. It should never be used except in combination with some caustic and penetrating agent, such as soap, fresh slaked lime, oil emulsion or lime sulphur solution.

General Spray Recommendations for Eastern and Central Washington

WHAT FOR	WITH	WHEN
Codling Moth	Lead Arsenate— 2 lbs. powder or 4 lbs. paste } 100 Gals. Water	First, when petals are falling (calyx spray). Second, just before first brood worms hatch. Third, 10 days or two weeks after second spray. Fourth, just before second brood worms hatch. Fifth, 10 to 20 days after fourth spray. Use codling moth cage, banded trees and thermometer to determine brood hatchings or consult horticultural inspector or county agent.
Scale—San Jose Oyster Shell Other Types	Lime Sulphur (32 degrees Baume) Solution— 10 gals. to 100 gals. of water or Miscible Oil— 8 gals. to 100 gals. water	While trees are dormant.
Aphis—Green Rosy Cherry Woolly—Aerial Form Root Form	Nicotine Sulphate (40%) ¾-pint— and 2 lbs. fresh lime or 2 lbs. soap } 100 Gals. Water Distillate Oil Emulsion 1½ gals— and Nicotine Sulphate ¼-pint } 100 Gals. Water Expose roots and apply above solution. For all types of aphis release Lady Bird Beetles (if supply is available) only when aphis are present.	As soon as discovered. When discovered. Band trees with tanglefoot in spring.
Fruit Tree Leaf-Roller	Miscible Oil— 8 gals. to 100 gals. water Followed by Lead Arsenate— 4-6 lbs. powder to 100 gals. water—one, two or three applications.	In spring while trees are still dormant. First, when bud clusters begin to show pink (pink spray). Second, when petals begin to fall (calyx spray). Third, at time of first spray for first brood codling moth.
Bud Moth Canker Worm Other Leaf-Eating Insects	Lead Arsenate— 2 lbs. powder or 4 lbs. paste } 100 Gals. Water	When insects are discovered.
Scab—Apple and Pear	Lime Sulphur Solution (32 degrees Baume). First application— 4 gals. to 100 gals. water. Second and later applications— 3 gals. to 100 gals. water.	First, when bud clusters begin to show pink (pink spray). Second, when petals begin to fall (calyx spray). Later, at intervals of 15 days, depending on the weather.
Blister Mite Peach Leaf Curl Peach Twig Borer	Lime Sulphur Solution (32 degrees Baume)— 9 gals. to 100 gals. water.	In spring before buds start.
Powdery Mildew Remove all mildew infected twigs during the winter pruning	First application— Lime sulphur solution (32 degrees Baume). 2 gals. to 100 gals. water. Second application— Same material as first. Third application— Ammoniacal copper carbonate.	Before blossoms open (pink spray). As petals fall (calyx spray). Three or four weeks after second application.
Fire Blight	No spray effective. Remove holdover cankers and diseased wood. Cut 18 inches below infection. Burn prunings.	Disinfect pruning wounds with solution of 1 gram cyanide of mercury to 500 grams water.

In an early issue a discussion of the control of the leaf roller by H. E. Newman, Spokane county horticultural inspector, in charge of pest control investigation, will be given in THE FARMER.

Yakima Hop Growers Meet

Hop growers of the Yakima valley met in conference at Yakima at the suggestion of H. L. Hull, president of the Yakima farm bureau, and effected an organization that will work through the farm bureau for the development of that industry. About 30 growers were present. A summary of the results is shown in the appointment of two committees. One of these is to study the problems of growing hops and preparing them for market and the other is to study marketing conditions. Any suggestions members of these committees may see fit to make will be considered at a further conference which may be called at the will of the chairman, Andrew Slavin, who is also to appoint the committees.

"We consider hop growing one of the stable industries of the valley," said Mr. Hull commenting on the movement to bring growers together, and we want to offer the machinery of the farm bureau organization to hop growers to help them solve their problems. What these problems are is for them to determine. They are in the business and know its needs The farm bureau in studying all phases of the marketing may be in a position to be of valuable assistance to growers. This is the service we stand ready to give the industry."

Issues Potato Quarantine

In order to prevent the potato eelworm and potato tuber moth from entering the state of Washington from the state of California a new quarantine order has been issued by E. L. French, director of agriculture. Both of these pests have been found to be very destructive to potato crops and the department is determined to guard against its getting a foothold in this state.

The quarantine prohibits the entry into Washington of all potatoes from the state of California or that may have been in the state of California except as under such conditions as listed in the quarantine order, as follows: Each shipment must be accompanied by a certificate, signed by an authorized inspector in the state of California, stating that he has inspected the field in which the potatoes were grown and found it to be free from the potato eelworm and from the potato tuber moth. He must also state that he has made an inspection of the potatoes when ready for shipment and found them free from any infestation of any stage in the development of the pests. This certificate must be attached to the bill of lading accompanying the car.

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Would Throttle Vote of Farming Counties in Legislature.

If the farmers of Washington ever get an opportunity to swat a certain initiative measure that was filed with the secretary of state at Olympia last week, they will hit it hard. It is a proposed act brought forward by State Senator Palmer of King county to redistrict the state into 21 senatorial districts and 63 single representative districts. It would cut the senate membership from 42 to 21 and the house from 97 to 63, and would put control of the legislature in the hands of the politicians of two or three large counties.

King county, for instance, which means Seattle, would have 18 of the 63 representatives. Its representation in the house would exactly equal the combined representation of the following 24 counties: Adams, Grant, Douglas, Okanogan, Asotin, Garfield, Whitman, Benton, Klickitat, Skamania, Chelan, Clarke, Columbia, Franklin, Walla Walla, Pacific, Wahkiakum, Cowlitz, Kitsap, Lincoln, Ferry, Stevens, Thurston and Yakima.

The three counties of King, Pierce and Spokane, which take in the three large cities of the state, Seattle, Tacoma and Spokane, would have 30 members in the house, very nearly half of the total membership, and would have 10 of the 21 state senators.

Seattle and King county, with nearly one-third of the total membership of the house and the senate, would be in a position to trade for a little outside support and seize control of the law-making of this state and the appropriation of the millions collected from the people in taxes.

The inevitable effect of this bill, if it were adopted at the polls, would be to weaken the influence of the agricultural districts of the state and intensify the power of the great cities, particularly of Seattle.

From time to time The Washington Farmer will keep its readers informed of the manipulations that are back of this iniquitous measure and will point out the throttling effects it would have upon the rights and interests of the agricultural communities.

What School Lunch Does

Hot lunches have been tried in 36 country schools in Pierce county, according to Miss Elmina White, county home demonstration leader.

The children are required to spend 20 minutes eating their lunch and it has been found that they are eating all that they bring instead of throwing half of it away as they are tempted to do when they can hurry out and play in the school yard.

The janitor of one of these schools says he now finds only a half can of garbage where the children threw their lunch waste, when before the hot lunch was established there were two cans daily.

Eternal Vigilence the Price

That civilizations are never finished, that the struggles of democracy are eternal, was one of the things forcibly expressed by President E. O. Holland of the State College of Washington, in a stirring address at Spokane on Lincoln's birthday. Every freeman must be educated to take his place in the state. He must learn, in the words of Dr. Holland, to carry his own load; to obey the commandment, "Thou shalt not interfere with others' right"; and to cooperate with others toward worthy ends.

"In the magnificent Greek civilization, one freeman stood on the backs of nine slaves," said Dr. Holland. Within our own history was a time, he added, when men were educated only for the law, medicine or the ministry. Harvard, Yale, Michigan and Columbia, together, had fewer students than various single high schools within our larger northwestern cities number today. Now, there are courses in social sciences available to high school boys and girls that were undreamed of by the university man of other days.

University education is being extended within the reach of the hundreds of thousands, in rural communities as well as in the cities.

It is to Abraham Lincoln, who signed the Morrill bill, that we owe the liberal practical education of the industrial classes. Until the hour when he wrote across that bill, "I approve," education had followed classic lines along which it was molded in the days of Greece—the days when one freeman stood on the back of nine slaves. Without liberal industrial education of today, as President Holland pointed out, our great bridges, our enormous turbines, our astonishing advance in the use of electricity, our forward strides in scientific agriculture, would be unheard of.

We Should Be Grateful

Some time when the state authorities or federal government announce a quarantine on some of our products, or on something that we want to ship into the state for our personal profit, we feel a bit inclined to complain. The fact about it is that we should be grateful for quarantine regulations of this kind and should lend our aid in their rigid enforcement.

It may be a quarantine against alfalfa from districts infested with weevil, against sheep that have scab or other disease, against potatoes from a territory afflicted with the tuber moth, or against any other pest or disease that may be communicated from one infected district to another.

If the authorities were lax in quarantine orders and their enforcement and allowed the industry in our locality to become ruined as a result, we should have a just complaint against them. They have a just complaint against every producer who obstructs rather than assists in the carrying out of these regulations.

A Belated New Year's Pledge



—Washington Evening Star.

State Farm News

The Grays Harbor county commissioners have awarded the contract for the construction of seven 50 and 60-foot Howe truss bridges and one trestle bridge 80 feet long to the Pacific Construction company of Aberdeen for $12,609.19. The contract for the construction of one-half mile of plank roadway across the sands near Westport went to the Western Construction company for $2245. Charles Ewart of Hoquiam was awarded the contract for the construction and graveling of about two and one-half miles of the Westport Junction-Markham road on his bid of $12,670.

* * *

The Winlock Cooperative creamery has had a busy year, according to the reports rendered at the annual meeting of stockholders. During the year a total of 320,466 pounds of butter were manufactured. In 1920 the creamery made 288,797 pounds of butter and in 1919 the output was 225,098 pounds. Receipts last year were $124,567.

* * *

R. H. Kipp, for several years head of the Red Apple Orchard company of Quincy, will leave soon for Valley City, Ill., where he has purchased an interest in and will become manager of a large apple orchard. Mr. Kipp has sold his interest in the Red Apple orchard to the Wenatchee-Quincy Orchard company, the reported price being $175,000 for 175 acres of bearing orchard, together with an interest in the warehouses and pumping plant.

* * *

The sale of 1500 tons of powdered milk from the Lynden plant to a New York firm was made recently by the Whatcom County Dairy association. The deal represents more than $200,000, and delivery of the order will take from six to eight months.

* * *

A survey of the Lynden district, in Whatcom county, to determine the number of purebred sires owned by the dairymen, is now being undertaken by Charles Galbraith and B. C. Vander Griend, in behalf of the state college, the United States department of agriculture and the farm bureau. The same information is desired in connection with the swine, sheep and chickens of the district.

* * *

Ninety-five cows out of 480 tested in the Clallam county cow testing association made over 40 pounds of butterfat during the month of January. Ben H. Ridgway's herd of 19 cows made the highest average of 46.74 pounds butterfat.

* * *

Nine cars of certified seed potatoes of the Burbank and other varieties recently were shipped from the potato farm of Carles H. Greely at Pioneer, near Ridgefield, to Watsonville, Cal. The ranch has an extensive certified seed potato department in connection and is the home of the certified seed potato in Clarke county.

* * *

The Snake river district of Asotin, Garfield and Whitman counties produced 724 carloads of prunes and plums, 55 carloads of peaches, 12 cars of pears, 72 of cherries and 42 of apples last year.

* * *

An American cheddar cheese weighing 153 1-2 pounds, representing the cheese content of 1500 pounds of milk, was on exhibition in Mount Vernon recently.

Herman Stutzman, cheesemaker at the Burlington plant of the Skagit County Dairymen's association, where the cheese was made, christened it "Skagitonia."

* * *

Six dairy feeding schools have been held in Grays Harbor county by Extension Dairy Specialist Don G. Magruder One hundred and forty-four dairymen attended.

* * *

The Naselle calf club of Pacific county was organized with 11 members. Nine of these are to have grade or purebred Jerseys. The following officers were elected: President, Francis O'Connor; vice president, Oscar Nasi; secretary, Tauno Wiitala. County Agent J. R. Beck perfected the organization.

* * *

Mrs. Earl Sprago of Puyallup was elected president of the Pierce County Honey Producers' association at its annual meeting held recently. Other officers are L. M. Prosser, vice president, and Mrs. J. M. Black of Tacoma, secretary-treasurer.

* * *

The dairy and live stock division of the state department of agriculture has begun the testing for tuberculosis in Thurston county where they expect to examine 3000 animals. An application for the testing of 10,000 head has been filed for Whatcom county.

* * *

E. B. Arthaud of Hoquiam was elected president of the Grays Harbor Development council. He has named six projects to be worked upon as follows: Tax regulation, cheap and steady power, more industries, reforestation, agricultural development, and port and commerce development. The committee of the council for agriculture is W. C. Mumaw, Aberdeen, chairman; Oscar Blechschmidt, Elma; Lloyd C. Pickering, Montesano, secretary.

* * *

Andrew Slavin of the Moxee district was elected to head a committee to study hop growing and the preparation of hops for the market, with a view to putting authoritative information in the hands of the Moxee growers. In the past years buyers have paid a bit under the ruling market price at times on the plea the Moxee hops were not up to the standard in preparation, and the growers intend to forestall such action in the future. Adolph Fontaine was named head of a like committee to make a special study of marketing.

Coming Events of Interest

Feb. 23—Day & Rothrock Shorthorn sale, Sprague.
Feb. 24—A. D. Dunn Shorthorn sale, Wapato.
Feb. 24, 25, 26 and 27—Poultry extension meetings at Vancouver, Camas, LaCenter and Winlock, respectively.
March 4—Pioneer reunion, Bucoda.
March 7—Holstein-Friesian Ass'n meet, Seattle.
Mar. 8—F. Sinnes Berkshire sale, Prosser.
March 9—Stevens county live stock sale, Chewelah.
March 9—Stevens county live stock sale, Chewelah.
Mar. 22—Shorthorn consignment sale, Portland.
April 5—Pierce county poultry meet.
April 16—Easter.
June 7-9—Union live stock show, Union, Ore.
July 27-28—Whatcom co. Guernsey gallop, Bellingham.

FARM BUSINESS AND MARKETS OUTLOOK

KEEP AN EYE ON THE MARKET

A western sheep speculator is said to have made a million and a half dollars in the last few weeks, recovering a fortune lost during the period of deflation. Other operators have made huge sums as they have been able to pick up bands here and there from owners who were uninformed as to the extremity of the advance in sheep and lamb prices.

Of course, the speculator assumed risk of a decline in the market before the shipments arrived and would aim to buy on a safe margin anyway, but this factor does not explain some of the extremely wide margins it has been possible to obtain.

The speculator thrives through knowing more of market prices and market conditions than those with whom he deals so that he can take advantage of them. The lack of standardization in market classes and grades of live stock makes the close comparison of different markets a difficult matter and thus plays into the speculator's hands.

The producer who visits the central market but once, or at most only a few times a year, is at a disadvantage in appraising his own stuff by examining market quotations. He needs to study market news at all times to get the "feel" of the market and learn to read between the lines, but especially when prices are advancing he must watch carefully lest he be caught unawares.

LIVE STOCK ESTIMATES REVISED.

Whole hearted revision of the live stock estimates of the department of agriculture to align them with the findings of the census bureau resulted in slashing over 12,000,000 head from the estimate upon hogs, 8,000,000 head from the sheep and 1,000,000 head from the estimated horse population. The estimate upon the total number of cattle was but little affected, as it was already in substantial agreement with the census. The estimated number of mules was increased nearly 400,000 head.

The department's revised estimates as of January 1 for the last three years are as follows:

Swine—1922	56,996,000	Other cattle—1922	41,324,000
1921	56,097,000	1921	41,993,000
1920	59,344,000	1920	43,398,000
Sheep—1922	36,048,000	Mules—1922	5,436,000
1921	37,452,000	1921	5,455,000
1920	39,025,000	1920	5,427,000
Milk cows—1922	24,028,000	Horses—1922	19,099,000
1921	23,594,000	1921	19,208,000
1920	23,772,000	1920	19,766,000

The largest change in any class compared with a year ago is a reduction of 4 per cent in the sheep population.

Profitable prices for hogs and dairy products apparently have stimulated effort in those fields, as the number of milk cows reported is 1.8 per cent higher and of hogs 1.6 per cent higher than on January 1, 1921. The number of horses and mules and other cattle all are slightly smaller than a year ago.

The number of horses on January 1, 1922, was the smallest since 1906 and the number of milk cows the largest ever reported. The number of sheep the smallest since the census of June 1, 1890, and the smallest reported by the department of agriculture since 1878. The number of other cattle was the smallest since 1916, but 15 per cent larger than at the time of the last cattle shortage in 1914.

CATTLE RECEIPTS INCREASE

During January receipts of cattle at the leading markets ran considerably behind the average for that month, but since the first of February the movement has been slightly greater than the average for the last seven years. Nevertheless, the market has begun to show greater activity.

Price advances made slight headway during the last week. Cattle feeders took a larger share of the receipts and a small amount of buying for export occurred at Chicago. Steers with weight are more popular, although no prime yearlings are arriving to test out the market for light cattle.

Cows nad heifers have advanced more than steers. Only a light supply of grass beef from Texas is expected during the spring months so that the seasonal upturn in butcher stock prices promises to come to pass on schedule time.

FEEDER MOVEMENT EXPANDS.

The movement of stocker and feeder cattle has increased recently and is larger than usual at this season of the year.

Interest in breeding cows is on the increase and the tone of the entire cattle industry has improved in the last two or three months. No wild furor over stock cattle is likely during the spring, but it is doubtful if values will sag much lower at any time in the next four months, and the general trend is likely to be upward until the spring demand is satisfied.

ADVANCE DOES NOT ATTRACT HOGS.

In spite of the advance in hog prices beyond the $10 line at Chicago receipts have not increased. Evidence is growing that the supply remaining to be marketed is not excessive. Since the first of February receipts at the seven leading markets have run nearly 20 per cent below the average for the corresponding period in recent years. Prices have reached the highest level in more than six months and the market is slightly top-heavy, but until receipts enlarge sufficiently to place the advantage in buyers' hands, present prices will be maintained.

Domestic demand shows sustained breadth and clearances for export are large. A big order for special cuts from light hogs is said to have stimulated the market in the last few days.

LAMB SCARCITY CONTINUES.

Although receipts of lambs at the seven leading markets in the last 10 days have been only about 12 per cent less than in the corresponding period of 1921, the supply has been considerably below the requirements of the trade and prices have advanced almost without interruption. In both the hog and lamb markets present quotations are materially above any believed possible three months ago and higher prices have not increased the movement to market perceptibly. That still higher lamb prices will be seen is not improbable, although the advance seems to be approaching its limit.

FARM CHUNK EXPANDING.

Trade in farm chunks is gathering volume, although limited in many cases because farmers are obliged to buy on credit. The number of horses passing through central markets has practically doubled in the last two months.

WOOL DEMAND SLACK.

Demand for wool in the principal markets subsided last week on the part of both manufacturers and dealers. Mill operations are said to have decreased slightly and the demand for goods with some exceptions, has not been entirely satisfactory. A belief is spreading that the advance has about exhausted its momentum.

In the range country contracting of the new clip is active and prices have scored further advances. Purchases have been largely for speculation. A great many wools have been bought at a range of 28 to 32 cents and a bid of 36 1-8 cents was refused for the Jericho, Utah, wool pool for which 16 7-8 cents was the initial bid a year ago.

The Boston market is quoted as follows:

Oregon—Eastern No. 1 staple, $1.10@1.12; fine and fine medium clothing, 88@92c; fine and fine medium French clothing, $1@1.05.

WHEAT SITUATION TIGHTENS

The world's statistical position so far as wheat is concerned continues to grow tighter. The official Argentine crop estimate has been reduced to 155,000,000 bushels, or 15,000,000 bushels less than last year and 16,000,000 bushels less than the five-year average. This change indicates an exportable surplus of around 100,000,000 bushels old and new crop from that country. With this revision, world's surpluses for the crop year 1921-1922 are practically balanced by probable requirements of importing countries.

Millers in the United kingdom have bought freely of Argentine and Australian wheat and are said to have contracted all of the grain due to arrive at United kingdom ports during the next five weeks. Argentine and Liverpool prices have advanced faster than those in this country with Liverpool nearly 25 cents higher than at the beginning of the month.

SOUTHWESTERN DROUGHT UNBROKEN.

It is still too early to estimate the severity of damage from dry weather in the southwest but there has been but little relief thus far and every day without rain or snow heightens the critical condition of the crop.

With a bullish statistical situation and prospects of a small winter wheat crop, the market promises to be influenced very strongly by the character of the weather in the southwest, but even with the most favorable conditions it is doubtful if the highest prices of the season have been seen.

The flour trade in this country finally improved after the wheat market revealed its strength, but milling demand has not been sufficient to advance prices for cash wheat as rapidly as for future delivery.

CORN HIGHEST IN MONTHS.

Although the quantity of corn arriving at terminal markets is far above the average for this season of the year, the advance in wheat prices coupled with a broad demand for corn has advanced corn prices to the highest level in several months.

The oats market is following other grains and has not yet shown any independent strength. Farm reserves are believed to be unusually small. Receipts at primary markets, however, continue large and the visible supply at terminals is around 68,000,000 bushels. The total disappearance of oats from primary markets during the first half of the crop year was only 91,445,000 bushels. Conditions are shaping up to favor an increase in the rate of disappearance and a more rapid reduction in the visible supply during the spring months. The Canadian crop estimate was reduced recently and the Argentine crop is now estimated at only 32,000,000 bushels compared with a five-year average of 53,000,000 bushels.

The cash grain prices for week ending February 15 were:

Chicago wheat—No. 2 red, $1.36 1-4; No. 3, $1.27@1.34 1-2; No. 4, $1.23@1.32 1-4; No. 2 hard, $1.25 3-4@1.34; No. 3, $1.24@1.31; No. 4, $1.28

Corn—No 2 mixed, 52 1-2@56 1-4c; No. 3, 51 1-4@55 1-2c; No. 4, 49 3-4@53 1-2c; No. 2 yellow, 52 1-2@57c; No. 3, 51 1-4@56c; No. 4, 49 1-2@54c; No. 2 white, 52 1-2@57c; No. 3, 51 1-4@55 1-2c. Oats—No. 2 white, 38@41c; No. 3, 35@39c; No. 4, 34@37c. Rye—93c@$1.02. Barley—54@66c.

HIGHER PRICES FOR CLOVERSEED.

Clover seed prices reached a new high level last week. Offerings are light and there is a fair demand, although it is believed that buying by farmers will come later than usual. Statistically, the market is in a strong position. The price which farmers will be willing to pay is the chief limiting factor in further advances.

NEW HIGH ON WHEAT FEEDS.

Wheat feed prices recovered all of their recent loss and advanced into new high ground for the season, due in part to the advance in the wheat, corn and oats markets. Actual consuming demand is limited, as present prices make country buyers hesitate. Oil meal prices are practically unchanged.

Chicago—Bran, $26.50; standard middlings, $26.50; flour middlings, $28.50; hominy feed, $22; gluten feed, $31.65; cottonseed meal, 36 per cent, $40; 43 per cent, $44; tankage, $52.50@55; oil meal, $46.

HAY DEMAND LIMITED.

Except for alfalfa, demand for hay continues disappointing to producers and dealers, although spells of cold weather bring an occasional increase. Receipts of hay at Kansas City, the leading distributing market, since the first of the year, total only 2154 cars compared with 3287 cars in the same period last year, and 7786 cars in the same period two years ago. Michigan, Wisconsin and the Dakotas seem to be shorter on forage than other states.

Prices per ton in carlots were as follows:

Chicago—No. 1 timothy, $22@23; light clover mixed, $19@21; No. 2 timothy, $19@20; No. 1 threshed clover, $12@15; No. 1 to choice alfalfa, $23@25; Nebraska and South Dakota prairie, $12@16; rye straw, $13@14; oat straw, $11@12; wheat straw, $10@11.

EGG MARKET IN TRANSITIONAL STAGE.

The egg market is in a transitional stage as the spring increase in production is showing up in the southern sections, although receipts at the leading markets have not increased as much as they did at this season last year. The preliminary report on cold storage holdings in the United States on February 1 was 182,000 cases compared with 43,000 cases on the same date last year and a five-year average of 173,000 cases. The decrease in storage stocks during January was 704,000 cases compared with a five-year average of 809,000 cases.

BUTTER MARKES MIXED

Butter markets have presented a mixed appearance recently with eastern cities weak and Chicago disposed to advance. Receipts of fresh butter at New York increased notably with 1300 boxes of Australian butter received by rail from the west and about 5000 boxes more of Argentine butter due to arrive. Reports of a lighter make have not been borne out by market receipts, although at Chicago the supply was barely sufficient to satisfy requirements. Nevertheless, receipts at that market were in excess of the same week of 1921.

CHEESE SHORTAGE DEVELOPS.

Long continued buying on a hand to mouth basis eventually led to light stocks of cheese in retailers' hands and buyers were obliged to reenter the market last week and pay higher prices. Country markets advanced as much as 1 cent per pound. Chicago prices also were raised and eastern markets were firm.

(Continued on page twenty.)

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Little Journeys to Market

BUSINESS CYCLES.

For two centuries our commercial history has been a series of "business cycles," each lasting from three to 20 years. A cycle is divided into two parts—a period of prosperity or expansion and a period of depression or reaction.

The two halves can be subdivided into two periods, each with its own characteristic features as follows:

I. Expansion.

1. Revival: Easy credit, low interests rates, rising prices for stocks and later for commodities, increasing employment.

2. Prosperity: High prices for commodities, strikes and advances in wages, increasing real estate prices, extreme prosperity, inefficiency and extravagance, declining bond prices.

II. Reaction.

3. Decline: Credit scarce, interest rates high, violent slump in commodity prices, numerous business failures, strikes against wage reductions.

4. Depressions: Hard times, trade dullness, unemployment, declining real estate prices, increasing thrift, rising bond prices.

Stability in our commercial and industrial affairs has never been obtained and it is safe to assume that these "tides in the affairs of men" will continue to flow for a long time to come. Not infrequently the government or the "money power" or some other influence is blamed for causing the period of depression, but it is the inevitable reaction from overdoing on the part of nearly everybody during the preceding period of prosperity. The attitude of powerful agencies, however, may soften the blow or make it more severe.

These periods are not distinctly divided, as all businesses are not affected by them at the same time in equal proportions, but few lines of endeavor go entirely unscathed.

The last period of prosperity or expansion reached its maximum in the latter part of 1919 and the first half of 1920. The subsequent decline occurred in the last half of 1920 and the first part of 1921. This was followed by a period of depression. Fortunately, we seem now to have emerged into the revival period which marks the start of a new cycle.

Farmers who are able to foresee these changes and act accordingly by saving money during the prosperity period and having as few debts as possible as the first half of the cycle draws to a close, should be ready to weather the "cyclone" which always follows.

Two Hog Sales

Durocs and Polands Are Dispersed

Two hog sales in the lower Yakima valley on successive days, that which dispersed most of W. A. May's herd of high-class Poland Chinas from his ranch near Toppenish February 8, and that which inaugurated a series of annual sales by the Yakima Valley Duroc Breeders' association, at the H. W. Turner ranch, near Sunnyside, February 9, resulted in the distribution of more than 70 head of purebreds at prices which farmers could afford to pay under almost any circumstances. Neither sale was largely attended and bidding was inclined to be sluggish.

A cold rain undoubtedly dampened the ardor of bidders at the May sale, which, under the persuasive tongue of Auctioneer George Gue and the inducement of owning high-class Poland Chinas, brought an average of $61.50 for 29 catalogued individuals. In addition a number of fall pigs were sold from $8 to $25 each. Baker & Paddison of Ahtanum paid $112.50, the top price, for Cedar Daisy D., an Iowa bred sow soon to farrow by Western Designer, May's herd sire. An especially nice individual, Daisy C., from another litter bred in Iowa, cost H. Van Wechel of Yakima $100, but litter mates in each case went considerable lower.

Only two boars were sold, Superintendent Roy P. Bean of the Prosser branch experiment station taking Western Designer for use by the state college at Pullman for $102.50 and Ray Wright of Ahtanum taking a fall boar by Pacific Flossmoor for $40. The former is an outstanding individual bred by C. K. Loe of Silverton, Ore.

The Duroc Sale.

When the Yakima Valley Duroc Breeders' association was formed two years ago, following the importation which was sold at the state fairgrounds, it was intended to hold a sale annually. Conditions last year seemed to justify postponing the first one, hence that of February 2 inaugurates the series. Everything appeared favorable for a somewhat higher average than was realized. The day was one of the first warm ones; the animals consigned represented some of the several breeders' best stock, carefully selected by C. M. Hubbard, live stock extension specialist at the state college, and the eight months' credit extended allowed time in some instances for the purchaser to procure two litters before paying for the dam. Auctioneer George Gochnour had to do considerable coaxing, however, to obtain an average of $44.50 for 29 head. As in the May sale, there were several instances of animals bringing only 25 to 30 per cent of what consignors paid for them during the period immediately after the war, but satisfaction was expressed in some quarters that prices are down again to where the average farmer can afford to buy hogs for joint use with dairy cattle.

An uncatalogued sow owned by Chester Murphy, a Sunnyside pig club boy, topped the consignment sale at $80, but Chester had to mount the block and do some auctioneering on his own account before bidders would go even that high. Later he offered I. F. Kneeland of Sunnyside $25 for choice of the coming litter. Kneeland was the purchaser also at $61 of Sensation Lady 4th, one of S. D. Cornell's best consignments. The latter, who paid $600 for the sow's dam, immediately bought her back at small premium.

The Poland Chinas.

Western Designer, Washington State college, $102.50.
Pioneer, Ray Wright, Ahtanum, $40.
Females—
Cedar Daisy C, L. J. Goodrich, Toppenish, $70.
Cedar Daisy D, Baker & Paddison, Ahtanum, $112.50.
Cedar Mastodon, E. V. Taylor, Selah, $55.
Cedar Mastodon A, H. H. Brons, R. F. D. 8, Yakima, $62.50.
Fox's Model, H. Van Wechel, R. 1, Yakima, $60.
Show Me 1st, E. M. Dorsey, Pasco, $67.50.
Best Ever Again 4th, L. J. Goodrich, $50.
Lady Mastodon, I. J. Oder, Yakima, $80.
Lady Mastodon A, George S. King, Mabton, $52.50.
Daisy C, H. Van Wechel, $100.
Daisy D, Gust Kanlos, Toppenish, $55.
Daisy E, H. H. Brons, $70.
Daisy M, A. B. Bartlett, Toppenish, $50.
Mastodon Maid, Van Wechel, $60.
Mastodon Maid 1st, William Muthall, Buena, $80.
Mastodon Maid 2d, L. E. Cox, Buena, $70.
Mastodon Maid 3d, J. A. White, Toppenish, $60.
Flossmoor Again, H. H. Brons, $50.
Flossmoo Best, O. S. Gossard, $47.50.
Miss Flossmoor 2d, Van Wechel, $70.
May's Mastodon 2d, Van Wechel, $70.
May's Mastodon 3d, H. H. Brons, $47.50.
May's Mastodon 4th, Bartlett, $47.50.
Flossmoor Girl, Bartlett, $42.50.
America, G. S. King, $40.

The Duroc Jerseys.

Consigned by F. D. Gano:
Giant Wonder Lady, S. D. Cornell, Grandview, $47.50.
Victoria's Wonder Lady 1st, W. A. Eves, Outlook, $47.50.
Victoria's Wonder Lady 2d, J. E. Thomas, Grandview, $37.
Consigned by S. D. Cornell:
Chief's Wonder Girl, J. E. Thomas, $44.
Wonder Pathfinder 2d, Maynard Hagerman, Sunnyside, $61.
Miss Wonder Chief, N. H. Thompson, Grandview, $48.
Miss Wonder Chief 2d, F. D. Gano, Grandview, $40.
Sensation Lady 4th, Ira F. Kneeland, Sunnyside, $61.
Consigned by C. T. Myers:
Hazel Colonel 5th, George Chase, Grandview, $40.
Consigned by Howard and Harold Bagley:
Grandridge Advance Lady, Ira F. Kneeland, $56.
Grandridge Model Queen, Ed Henkle, Sunnyside, $52.
Rose Lady Merit 1st, Ed Henkle, $47.50.
Advance Wonder Lady, W. A. Eves, $49.
Consigned by J. N. Price:
Yakima Wonder Queen, Yakima Indian mission, White Swan, $45.
Grandridge Orion Gyp, Maynard Hagerman, $46.
Queen Orion Colonel, S. D. Cornell, $50.
Yakima Wonder Lady, Ira F. Kneeland, $35.
No. 95, E. J. Warner, Sunnyside, $34.
No. 97, N. H. Thompson, $28.
No. 74, W. A. Eves, $35.
Consigned by H. W. Turner:
No. 24, Bert Snider, Sunnyside, $42.
No. 25, C. M. Hubbard, $32.50.
No. 26, Bert Snider, $30.
Oo. 27, Bert Snider, $45.
No. 28, Philip Hitchcock, $47.
No. 29, H. B. Ramsey, Mabton, $39.
No. 30, W. A. Eves, $36.
No. 31, Yakima Indian mission, $45.

Coglon to Leave Yakima

Yakima county is to lose its agricultural agent March 1, when R. B. Coglon, who has been there about a year, leaves to take the management of a 5000-acre stock and grain ranch near Lethbridge, Alberta, Canada. Coglon was county agent leader for the state before going to Yakima, where he has made an enviable record as an executive. The county farm bureau is the largest in the state and is functioning effectively; several "allied industries" are doing equally well, and altogether extension work in the county is in a highly satisfactory condition.

W. A. WALLACE, Pasco, Wash.—The Washington Farmer is surely a fine paper.

Apple Prices Are Up

The state of Washington and the Pacific northwest in general not only had a large crop of excellent apples last year, but the price has ruled generally satisfactory throughout the season, with a strong upturn during the last few weeks. An advance of from 25 to 50 cents a box has been noted recently.

Concerning the general apple situation, and especially the favorable position in which the growers of the Pacific northwest find themselves, C. F. Karkalits of the Earl Fruit company says: "The eastern crop last fall was short. We had an extraordinary crop in the northwest. There has been no shortage of apples, because the two crops have balanced each other. However, the eastern apples have been used up and the eastern trade is turning from their barrel packages to boxed apples from the northwest. This has resulted in unusually heavy orders for this section during the last two weeks. On top of this, it is a fact that while the Wenatchee district this season produced about 16,000 carloads of apples, 4000 cars more than the normal crop, all the producers took the precaution to move their apples as largely as possible before cold weather set in.

"The result has been that by January 1 about 65 per cent of the crop in this district had been shipped. Ordinarily not more than 55 per cent of the crop has been distributed by the first of the year. There has been, therefore, a slight shortage of apples to supply a larger than usual demand from this territory.

"Within the next six weeks the entire crop will have been cleaned up. Present quotations are expected to hold to the end of this season's market, with the possible exception of a few well-preserved cars of Winesaps, which may bring higher prices."

Ask Questions

This paper has on its staff and among its editorial contributors men and women qualified by their experience and training to answer every reasonable question that any of its readers desire to ask. Questions may deal with any of the problems that the farmer or members of his family face. It may be something that the housewife, the live stock man, the dairyman, the poultryman, the orchardist, the gardener or the general crop farmer wishes to know. From the sick animal to the gas engine that is in trouble, the experts that are at the service of our readers are able and ready to answer the inquiry.

There is only one condition placed upon those who ask questions. That is that the inquirer show his good faith by giving his name and post-office address. No question will be answered unless the name and address are given. Just the initials are not enough. To be sure, The Washington Farmer does not desire, except in special cases, to publish the name of an inquirer, but it is entitled to know and must know the identity of those writing.

Utility!



—all around usefulness a striking feature of

CATERPILLAR

T-35 Tractor

The small size—light weight—compact power—rugged strength and dependability of this machine adapt it for all power work—tractive and stationary.

If you farm a limited acreage, the T-35 Tractor will do all the work—plowing, harrowing, discing, leveling and other jobs. If you are a "big farmer" the T-35 Tractor will do the light jobs quickly and economically, in place of big tractors or horses. It is ideal for orchards, vineyards and berry fields—for road work, hauling and contracting.

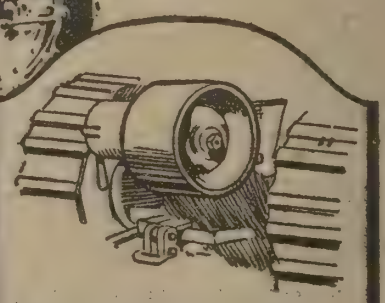
Whatever your power needs, there is a size of "Caterpillar" Tractor to meet them. Write for full information.

THE HOLT MANUFACTURING CO.

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Factories at Stockton, Calif. Peoria, Ill.

Oregon Representative, J. W. Hill, Henry Bldg., Portland.



For belt jobs

The belt pulley unit extends the usefulness of the T-35 Tractor. With it you can pump water, grind feed, saw wood and do other belt jobs easily and quickly. The belt pulley is an independent unit that bolts on rear end of the transmission case. It operates at 3000 feet per minute belt speed.

There's only one Caterpillar Holt builds it

Has Dollar Value

Farm Boys and Girls' Club Work

"If the farmers of Washington had produced the same yields per acre that the boys and girls in their club work did last year, several million dollars would have been added to the wealth of the state. On potatoes alone the boys outstripped the men by 23 bushels per acre, which yield, had it been produced on the 56,000 acres in crop, would have added $1,545,000 to the farmers' buying power."

This is the way that G. L. Noble of Chicago figures it out. Mr. Noble is secretary of the recently organized business men's national committee on boys and girls' club work and has been making a trip through the Pacific northwest. In an interview with THE FARMER representative Mr. Noble adds:

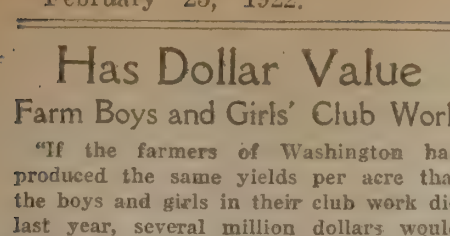
"These Washington boys and girls are demonstrating to their elders what can be done by improved methods advocated by the agricultural college—yet less than 10 per cent of the farm boys and girls of Washington are now being reached. The need is for more paid county club leadership and for increased support from the business and manufacturing interests.

The boys and girls' club work is an activity in which every business man is interested and should support, both from an immediate business standpoint as well as the maintaining of a high-class of citizenship on our farms to supply our manufacturers with raw products and a citizenship which will require good homes, supplied with modern conveniences, thereby furnishing a market for all products manufactured by the industries.

"A national committee on boys and girls' club work, composed of the leading businesss men of the nation and comprising representatives of the American Bankers' association, the American Farm Bureau federation and legislators, is active in increasing the scope of boys and girls' club work. In the United States there are 11,000,000 boys and girls on our farms, whereas only 350,000 are now doing club work and using the practices advocated by the agricultural colleges, the United States department of agriculture cooperating."

Spark Plug Points

By PROFESSOR L. J. SMITH, W. S. C.



Every one knows that if the points of a spark plug are too close together, or too far apart, one is apt to have a poor spark. Another point right along this line is not so clear, namely, the correct relation of the points to each other. There are two correct ways and one very poor way to set the points.

The figures "a" and "b" show proper methods. The points are "square at" each other in either case. In "c" the spark has to jump from the edge of one point to the edge of the other, and the proper spacing is not so easily maintained. In the last mentioned position, the spark fails because of dirt, usually a bit of carbon, sticking between the points, thus allowing the spark to "short circuit," that is, the electricity passes from one point to the other without jumping an air gap and, therefore, without making a spark to ignite the mixture of gasoline and air at the end of the compression stroke.

Study the illustration and avoid the "c" method.

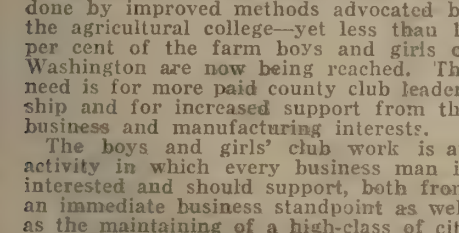
A Quarantine Order

A quarantine order has just been issued by E. L. French, director of agriculture for the state of Washington, which prohibits the shipping of filbert stock or cions into the state from the states of Montana, Colorado, Wyoming, New Mexico or any other state to the east of the above.

The order is placed to prevent the eastern filbert blight from entering the state. The disease has caused considerable damage to filbert trees in the eastern states, but as yet has not been found west of the Rocky mountains. It has caused injury that threatens the filbert industry in some districts, but the authorities in this state are determined that it shall not get a foothold on the Pacific coast, where the nut seems to have a very promising future.

THE PUREBRED FLOCK.

For the present perhaps the greatest value of the purebred flock to the average farmer lies in the higher price obtainable when its members are sold as breeding stock.



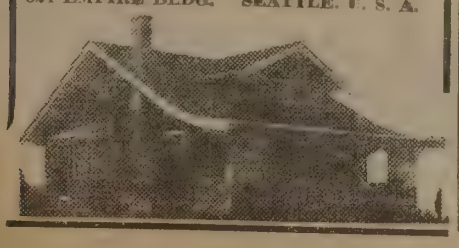
Every Farmer Needs These New Building Books!

Just off the press! Two new art books on home building. CRAFTSMAN BUNGALOWS, 1922 Edition De Luxe, 112 pages of beautiful, distinctive homes costing from $800 to $8000 to build. Gives pictures of exteriors, interiors, floor plans, etc., with all necessary information. Will save many dollars for builders. Price $1 postpaid.

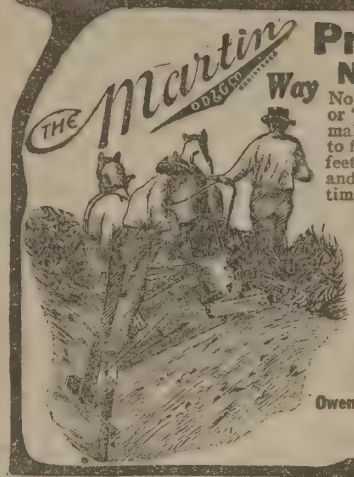
COLONIAL HOMES. Most original and complete book ever printed on this beautiful type of home. Only 50c postpaid.

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For small laterals or big ditches; for terracing, rice levees, alfalfa checks and borders and for road building. The MARTIN does the job.

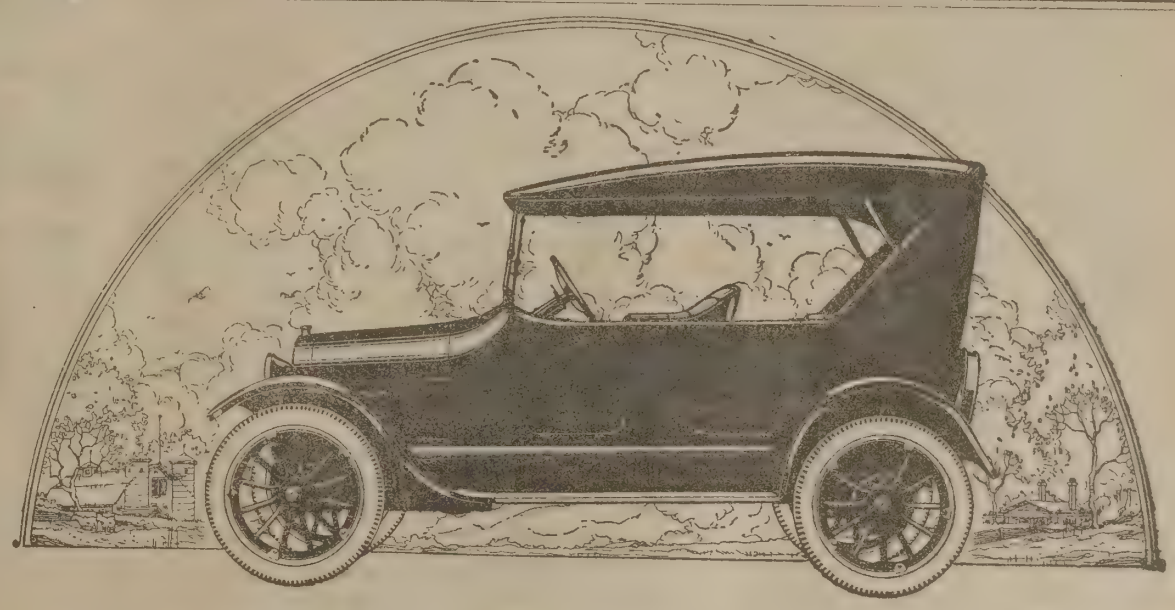
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The complete equipment of the new Superior Chevrolet is an evidence of the real economy you can rightly expect from this car. Not an extra dollar to spend. The Chevrolet is complete and modern to the minute.

Economy after the purchase price is assured. The new Superior Chevrolet gives far more than the unusual mileage from gasoline, oil and tires, and requires fewer parts replacements.

Twenty to thirty miles to the gallon of gasoline

$525 f.o.b. Flint.

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CHEVROLET

For Economical CHEVROLET *Transportation*

Shows Big Growth

Washington Cooperative Egg and Poultry Association

An increase of 236 per cent has been made in the shipment of cased eggs in 1921 over the number shipped in 1920 by the Washington Cooperative Egg and Poultry association as was brought out at their annual meeting at Seattle recently. There has also been practically a 100 per cent increase in the number of members over 1920, and they expect a 26 per cent increase in production of the average flocks.

The association, now two years old, has far exceeded its greatest expectations. The officers have had to use every means available to keep sufficient warehouse room.

During the year 1920 a total of 8560 cases was shipped by the members through the association, while in the past 12 months there were 200,287 cases marketed. A total of $2,460,453.59 was paid to members for their shipments of eggs and live poultry.

The association has established a grading system that has done much to help market the Washington eggs. General Manager J. M. Wells made a trip to New York to investigate marketing conditions. He recommended grades that will comply with the demands of the New York markets. Consequently the best eggs produced at home are sold as "Washington extras" and "Washington firsts" at New York markets, while all brown or discolored eggs are sold for the local trade.

Officers of the association for 1922 are: G. W. Holt, Auburn, president; W. H. North, Burlington, vice president; R. T. Hawley, Bellingham, secretary-treasurer, and J. H. Guffy, Langley, and F. C. McClane, Alderwood Manor, are additional members of the executive committee. Members of the board of directors are J. L. Snyder, Gig Harbor; C. L. Smith, Sunnyside; E. A. Hamilton, Kirkland; B. H. Vining, Marysville, and Carl Laakso, Winlock.

The organization has its headquarters and main plant at Seattle with branch houses at Bellingham, Lynden, Tacoma, Winlock and Yakima. The Yakima plant has just been established, but is now handling eggs from members in the Yakima valley.

Prize Pig Letters

As previously stated, Daniel I. Hopkins, St. John, was second prize winner in The Washington Farmer's recently closed prize pig contest. The letter of M. A. Hall, Rochester, who won the purebred gilt as first prize, has been published. The following is Mr. Hopkins' letter:

THE SECOND PRIZE LETTER.

I am located on a 600-acre rented wheat farm in the drier part of the Palouse country, where many of my neighbors think it unprofitable to keep hogs. Once I was of the same opinion, but during the last several years I have been following a system of hog management which I find profitable. I keep four or five brood sows (five at present) bred to farrow about April 1. During the fall and winter the sows are fed some wheat screenings and skimmed milk and allowed to pick up waste all over the farm. My poultry yards, house yard and garden are fenced pig tight and the hogs are allowed free range of the rest of the farm, including barnyard and cow-feeding shed. Some farmers, unless they naturally liked pigs, would object to this, but it is the only way to save the waste. Especially in the cow-feeding shed during the winter the sows get much of their living.

In the spring the sows and litters are allowed to pasture on the fall wheat, the sows being fed some middlings mixed in slop from the kitchen. In a pen into which the pigs may enter, but not the sows, the pigs are fed skimmed milk, into which has been mixed a little rolled wheat and rolled oats. If I were without the skimmed milk from my small dairy I should get and feed a small amount of tankage to balance the ration for the growing pigs.

Some time during May the sows are shut up in a small rye or wheat pasture, leaving the pigs to range at will. About the middle of June the pigs are weaned by being shut out of the sow pasture. I am of the opinion that pigs do not injure growing wheat until it begins to head. When the fall wheat has reached this stage the pigs are removed and placed on the summer fallow, where a strip of rye pasture and some field peas have been sown. (The cows have kept the rye pastured down.)

After the wheat is harvested the pigs and sows are put on the stubble. Also, the hogs have access to the orchard, where they clean up all windfall and waste fruit. Each year I raise some corn and potatoes in the gulches on the summer fallow. The corn is used to help fatten the pigs in the fall, while the fodder is fed to the cows. The small potatoes, undesirable for table use, are cooked and fed to the pigs.

Sometimes I market in December, but usually earlier, the pigs weighing from 175 to 200 pounds when sold. Good grade sows and a purebred sire are used. However, purebred sows also would be profitable. If any fall litters are raised the pigs are sold as soon as they can possibly be weaned, as I have not found it very profitable to feed pigs over winter. I plan to market from 25 to 40 hogs each fall. Better not raise too many, but rather take better care of the few you do raise. The number one should raise depends on the size of the farm and the available amount of waste and byproducts to be fed. With me the hogs are a by-product, as I can produce them without materially reducing the amount of grain sold from the farm each year, and in keeping them I utilize most waste and odd products that would otherwise be total loss.

DANIEL I. HOPKINS.

St. John, Wash.

The third prize letter, written by L. P. Powers, Palouse, will be published in an early issue.

Davis-Butchart Sale

Space limitations last week prevented the publication of the detailed report of the joint Holstein sale of H. C. Davis of Granger and Butchart Bros. of Sunnyside. The report of the animals sold, the buyers and the prices follows:

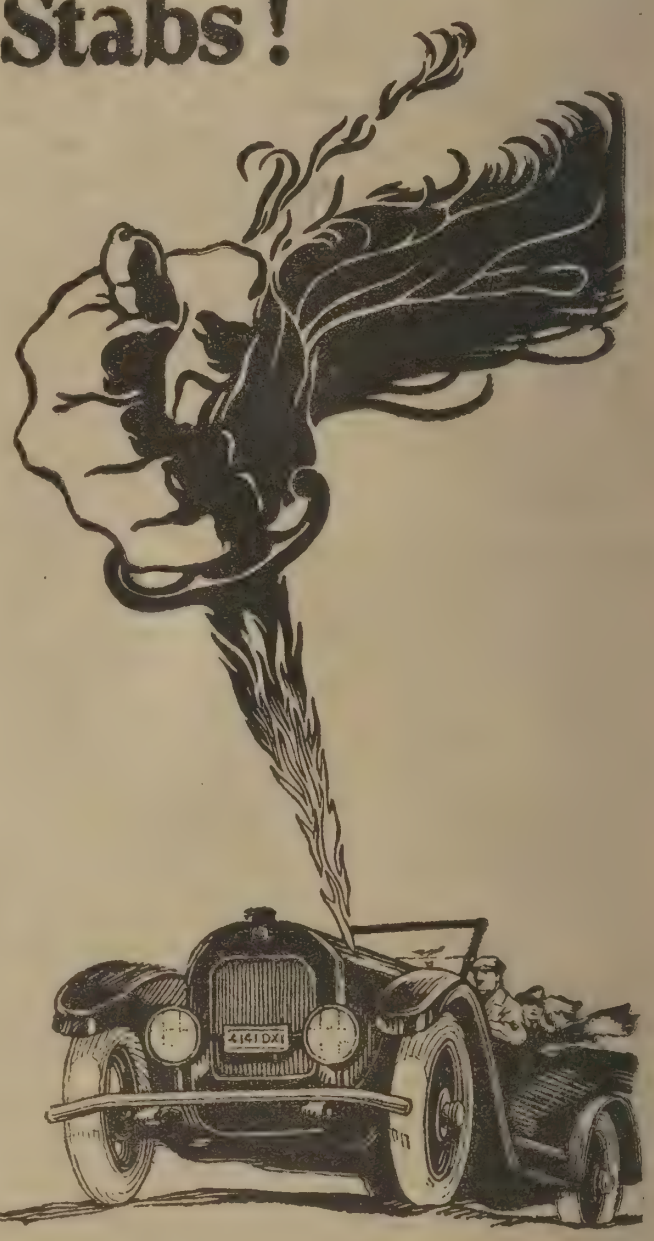
Consigned by H. C. Davis.

Annette Pietertje 2d, Jan. 29, 1914, Sanford B. Peterson, Trout Lake	$245
Castine Lyons Ormsby, April 11, 1917, John L. Smith, Spokane	260
Rose Pietertje Segis, Feb. 28, 1917, John Bogart, Woodland	300
Piertertje Segis Annette, April 9, 1917, Edward Henkle, Sunnyside	150
Miss Aaggie Cornucopia Johanna 2d, July 9, 1914, J. C. McMechan, Grandview	265
Miss Aaggie Burke Segis, Feb. 22, 1917, W. R. Elmer, Trout Lake	275
Lyons Lass Bracelet Segis, August 10, 1918, Edward Henkle	220
Segis Lyons Lass, March 8, 1921, Lloyd Garretson, Yakima	155
Pietertje De Kol Segis, Sept. 15, 1920, Homer Splawn, Cowiche	175
Unnamed heifer calf, John L. Smith	160
Valentine Bracelet Segis, Feb. 14, 1919, S. E. Chaffee, Sunnyside	175
Unnamed heifer calf, Ahtanum Calf club	165
Countess Jewel Burke Segis, Jan. 15, 1918, John Bogart	260
Rose Burke Segis, August 25, 1920, H. A. Cummins, Touchet	215
Segis Burke Mary, July 25, 1920, Edward Henkle	180
Martha Pontiac Segis, Dec. 24, 1919, Albert and Jacob Swynenburg, Sunnyside	170
Johanna Cornucopia Segis, August 10, 1918, William Bishop, Chimacum	230
Riverview Johanna Bracelet, May 25, 1921, J. C. Hanson, Yakima	165
Lady Annette Burke Ormsby, April 20, 1918, Methow Valley Live Stock Co., Seattle	235
Unnamed heifer calf, John Bogart	130
Lady Ormsby Burke, Dec. 3, 1919, L. Rasmussen, Trout Lake	210
Bracelet Aaggie Cornucopia, April 3, 1920, William Elmer	200
Miss Fobes Sadie Vale, Dec. 29, 1920, Woodson Cummins, Walla Walla	195
Miss Coquette Veeman, Dec. 30, 1918, Methow Valley Live Stock Co.	225
Bessie Fay Hengerveld, August 31, 1921, George A. Gue, Yakima	145

(Continued on the following page.)

200,000 Heat Stabs!

Each one aimed at the thin film of oil on the cylinder walls of your engine. How Veedol protects against this deadly heat.



Spark! Explosion! Heat!

Spark! Explosion! Heat!

That's the tune your six cylinder motor hums 200,000 times every hour you cover 25 miles on the road. You think only of the power explosions that drive your car steadily forward.

But what about the heat of those explosions—heat that hits the piston heads at 1000 degrees and averages 300—400 degrees on the cylinder walls? What protection have you against this deadly heat that makes most oils quickly evaporate, break down, lose their body and leave the costly metal of your car a prey to destructive friction?

1. You have a cooling system that circulates *outside* the moving parts of your engine. That helps, but you have little control over its operation.

2. Your only other protection is your lubricating oil which circulates *inside* your engine, and which must bear the brunt of the battle with heat. You have every control over that.

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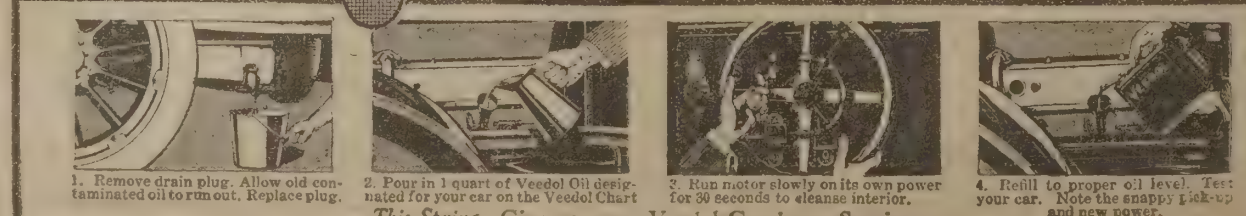
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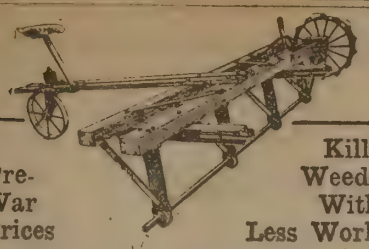
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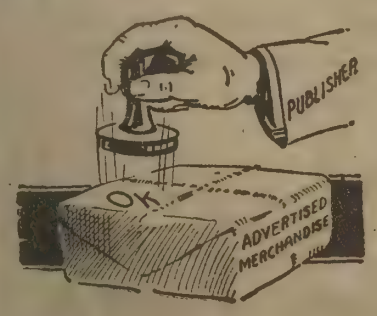
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Bitter Milk

We have a cow that gives bitter milk and cream. We feed her mill run, mangels, beets and a little alfalfa meal. What is the matter? E. H.

Tacoma, Wash.

Holding the cream too long at low temperatures bfore churning is the most important cause of bitter cream and butter. Certain bacteria brushed from the cow's udder into the milk cause the bitter flavor. These bacteria grow well at low temperatures, while the lactic type, that we count on to crowd out the undesirables, does not develop well at low temperatures. The remedy is to store the cream at a temperature of about 65 to 70 or even 75 degrees at this time of the year, and then churn often. Using a good lactic acid starter (sour milk of clean flavor) will help to get the right flavor.

A. B. N.

Decrease in Milk Flow

I have been feeding my fresh cows mill run and rolled oats, about equal parts. I have been soaking the grain in water, about 12 hours before feeding, and one of my cows has failed quite a bit in her flow of milk. Would the wet mash cause this decrease? Ten of my cows have been fresh about two weeks, the other nine seem to be doing fairly well. This cow is a hearty eater and eats the wet mash well. We have changed lately to the same amount of dry feed, but haven't had time to see how she will be. This cow's udder seems to be hard on one side after milking. Would that cause her to fail in her milk? B. H.

Chewelah, Wash.

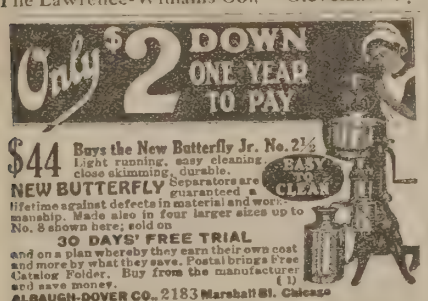
It is not likely that the wet mash has caused this decrease in the milk flow. However, you will get just as good results by feeding the grain dry rather than wet.

The after effects from calving may be the cause. Look to see if the cow cleaned well. Also see that she has plenty of the right kind of feed. Does she get plenty of good hay and succulence? During cold weather it is common for cows to drop off in milk because they do not drink enough water. Cows will not drink as much water as they need when the water is ice cold. This will cause a decided drop in the milk flow. Water at about 60 degrees is the best.

The lump in the udder is probably due to lack of circulation. If ordinary massaging will not remove it in a few days it would be well to call in a veterinarian. Better feed, better care and a well-bedded box stall for a few days will go a long way toward bringing the cow back to normal. A. B. N.

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VETERINARY

By DR. S. B. NELSON.

Many readers of this department have forgotten our rule not to answer questions unless the writer signs his or her name and gives postoffice address. Occasionally questions have been answered when the inquirer signed initials only, but this will not be done in the future. The name will not be published if given confidentially, but THE FARMER must know with whom it is dealing.

Horse Rubs Hair Off.—I have a mare that rubs the top of her neck and her tail against the limbs of trees or fence posts. H. M. S.

Olympia, Wash.

Try treating the parts that she rubs once daily or every two or three days with a solution of corrosive sublimate, 1 to 1000 parts in a little water. Give it a good soaking. This is poisonous, so should be kept from children and animals.

Milk Is Strong.—We have a cow coming 6 years old and when she gets five months along with calf her milk gets strong. At first it seems to be the cream, but when she gets about seven months along the milk is strong, too. A READER.

South Tacoma, Wash.

Give your cow a handful of epsom salts in a suart of water once daily for a few days and see if that will help.

Lumpy Jaw.—I have a good heifer that will be fresh in six weeks. She has a hard bunch on her jaw. If it is lumpy jaw, can she be used for milking or beef? H. S.

Plaza, Wash.

The disease is probably lumpy jaw. If the disease has not affected the jaw very long and has not broken and is rather loose from the jaw, it probably can be cured by removing the tumor and giving the wound daily treatment with iodine. I wish, however, to say that the disease is very infectious and if you have any other cattle it might be well to sacrifice this animal than to allow her to go along and scatter the germs of the disease.

Pink Cream.—Can you tell me why our Jersey cow's cream becomes pink in color after it sets for two or more days? She freshened May 28. She is on clover and brush pasture and we feed her about one gallon of millrun a day and some grass and clover mixed hay. She seems to be in good health. There is lots of alkali in the water. Could that be the cause? MRS. M. H.

Napavine, Wash.

The pinkness in your cow's milk is caused by a bacterial infection. Wash the udder out with a 2 per cent solution of boracic acid. This should be boiled and cooled and the end of the teat dipped in iodine before being used. The surgical instruments should be thoroughly sterilized.

Treat Udder.—I have a cow that lost her calf ahead of time. I found her after it had been raining for several days and she could hardly walk. She gave very little milk at first, but increased to a quart later. One quarter of her udder is hard and I can get only a few drops of milk out of it. The cow has no appetite. F. S.

Kalama, Wash.

Treat the hard quarter of the udder by bathing night and morning with hot salt water. Gently rub and apply the following liniment with a little friction: Fluid extract of belladonna, one ounce; fluid extract of poke root, one ounce. She should be milked three or four times daily. To bring back her appetite a tablespoonful of compound tincture of gentian will probly be of value.

Might Be Mange.—1. I have a cow that scratches her head and licks herself when I turn her out of the barn in the morning. I have looked for lice, but can not find any. She has a few little scabby spots somethings like dandruff. 2. What will cure warts on cows' teats? MRS. C. S.

Arlington, Wash.

1. It may be that your cow has some form of mange. You might try for a little while the application of an ointment made of sulphur and petroleum, making it semiliquid and applying it once every four or five days. From two to four applications should be sufficient. 2. For warts on cows' teats the following prescription should be carefully used night and morning: Chloral hydrate, one and one-half drams; acetic acid absoluate, one and one-half drams; salicylic acid, one dram; spirts of ether, one dram; colodion, four drams.

To win a race a Jockey doesn't put extra weight on the horse that helps him succeed

No man or woman who wants to succeed in the race of life can afford the handicap of headaches, insomnia, indigestion and debility. Nor can they afford to take anything that may keep up a continual irritation of the nervous system.

Yet this is what many people do who drink excessive amounts of tea or coffee. For tea and coffee contain caffeine, a substance that is sometimes very injurious. Many doctors say that caffeine raises the blood pressure, irritates the kidneys and over-stimulates the entire nervous system. Also that it is especially bad for growing children, or for any one who has any tendency to nervousness or insomnia.

If you want to avoid a possible cause of headache, insomnia, or nervousness, it might be well to stop taking tea and coffee for awhile, and drink rich, satisfying Postum, instead.

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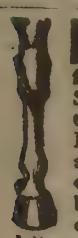
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By DR. E. E. WEGNER, W. S. C.

INFECTIOUS DISEASES, ARTICLE 2.
How Bacteria Are Transmitted. Vaccines, Serums, Etc.



Two terms are frequently used to mean the same thing when in reality they do not mean the same. These terms are infectious and contagious. The first refers to any disease that is caused by a specific organism, regardless of the nature or capabilities of that particular one. The term contagious refers to the manner of transmission of the organism from one susceptible animal to another. That is, if the organism is readily transmitted from one animal to another the disease is said to be very contagious; if, however, it is transmitted with difficulty from one to another it may be said to be only slightly contagious. In the case of the influenza epidemic of three years ago the organism spread very rapidly from one person to another and we would classify such a disease as very contagious. Glanders in horses is contagious, but the spread through a group of horses is comparatively slow and not to be compared with influenza of horses.

Certain other diseases are caused by specific organisms, but those organisms are not transmitted directly from one animal to another, these are infectious, but not contagious. Tetanus, or lockjaw, is infectious, but there is no danger of its spreading through a group of animals, so it is not contagious. The organism may be thrust into the tissues of the body by a dirty nail and a serious illness may result, but other animals do not need to fear that they will suffer from association with the diseased one.

Contagious diseases are infectious, but all infectious diseases are not contagious. In the discussion of the various diseases that will follow the habits of the causative organism will be discussed, as it is only in that way that an efficient means of preventing these diseases can be established.

Vaccines.

It is well known that certain diseases will attack an animal only once, and that if the animal recovers it need not fear a second attack. The reason for this is, briefly, that there is stored up in the animal's body certain substances that will neutralize the poison of the particular organism that causes that disease, so that if that organism should again enter the system of that animal it could do no harm. This fact has been made use of in the treatment of animals and man to reduce the loss from certain diseases, and it has been quite effective against those diseases that attack the body only once. In such cases the organisms causing the particular disease, or a very similar one, are subjected to a treatment that nearly kills them or so reduces their vitality that they are no longer dangerous or capable of producing a serious attack of the disease that they represent. These weakened organisms are then injected in small numbers only and the manufacture of the protective substances immediately takes place within the body. The animal recovers from this mild attack, but during it there has been produced the protective substances which remain as long as the animal lives to protect it against similar invasions from any source in the future. If these vaccines have been properly produced the value of them is very great and the dangers very small. The most common one in use today is the blackleg vaccine, which is of immense value to the live stock industry, and has saved many animals from this fatal disease.

Serums.

Immune serums are sometimes used in the treatment of animals that are suffering from certain infectious diseases, but, unlike the vaccines, they are to be used after the animal becomes sick, while the vaccines are to be used while the animal is still in good health. The vaccines are preventive, while the serums are curative. The serums are made by giving a susceptible animal a small dose of a vaccine until it produces its protective substances; it can then be given a larger dose and it produces a greater amount of this substance, increases doses are given until the animal has a very great amount of this protective substance in its blood. If this blood is then withdrawn and the fluid part injected into an animal that is suffering from that particular disease the injected fluid neutralizes the poison of the organism in the system and an improvement may be quickly apparent. In certain diseases this method has been very valuable in the treatment of the sick.

All of these factors will be considered in the discussions of infectious diseases that are to follow.

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If you have to change your ration, no matter what particular live stock you are feeding, make the change as gradually as possible.



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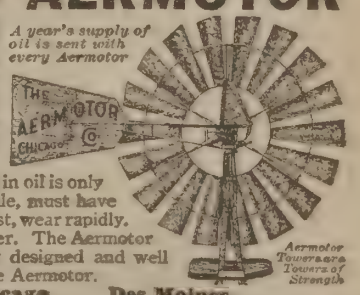
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LOOK AT THE GOOD FARM BARGAINS ON THE FARMERS' "WANT AD" PAGE THIS WEEK.

POULTRY

A Little Planning

Sometimes a very little planning will change things about a chicken house so the hens will begin to lay. Proper egg-producing feed is necessary, of course, but if hens are allowed to run out in the damp and cold weather they are not likely to produce many eggs.

It is not necessary to have a very fancy house for hens, but a scratching shed light and dry, adjoining the roosting and laying room is very profitable and can be nailed up in a little while out of almost any lumber one happens to have. It should have a sunny exposure if possible and be enclosed on three sides with boards. The fourth can have glass if you happen to have some old window sash. Many times old sash can be picked up cheap at a place where material from wrecked buildings is sold. If one can't get window sash wire will do very well.

The roof should be water-tight so as to keep the ground dry and straw should be kept on the grund and the grain scattered in it so the hens must scratch for it. It is surprising how fine they will work up the straw in a week. The straw should be taken out when it becomes very fine, as by that time it is foul and will make a splendid top dressing for the garden.

Always send your hens to bed with full crops, but make them work for their grain in the morning.

One Way to Sprout Oats

I am sending my way of sprouting oats for laying hens. I use four butter boxes, or those similar. I soak 12 quarts for 190 hens in a gunnysack over night or all day, but not longer. They say the right way is 18 hours, but I don't see that it makes much difference if they soak a little longer. I have a small barrel into which I put the gunnysack and the water must be changed every morning, as it gets stagnant. I take out the sack and let drain and put the oats into the butter box and keep this up till I have four boxes filled and by the time the fourth is placed for sprouting the first one is ready to feed. The sprouts should be only about one-eight of an inch long, but if they get longer it doesn't hurt them. They must be sprinkled and stirred up each morning while in the boxes. I take them out on the porch to do this and allow them to drain when it is warm enough, but if too cold I do it in the house and wipe up the water that drains out.

I am fortunate in having room enough for the boxes behind my range, which makes a warm place for the oats to sprout. They must be in a warm place to hasten the sprouting. I keep my little soaking barrel in the house and my sack of oats in the pantry, so as to have them handy; they are not very ornamental, but very convenient. One might think this hard to do, but it isn't for one who wishes to help along and I can do all I have to do about it in 15 minutes every morning. If one can afford to buy a regular sprouter it is, of course, the best.

MRS. W. J. HUDSON.
East Stanwood, Wash.

Plan to Feed Cockerels

A plan to feed several thousand cockerels as they are separated from the pullets in the spring has been outlined by the Lynden and Bellingham branches of the Washington Cooperative Egg and Poultry association. In this section of the state the poultry flocks are more numerous and the local markets are well supplied when the male birds from the many brooding houses, where the baby chicks are raised, have attained sufficient size for table use. The association tried out their plan of feeding the birds in large quantities and dressing them for the market with good results, but it was found necessary to freeze the meat before shipping. In this way shipments were made as far east as New York, arriving in perfect condition.

The association plans to build more room onto the plant at Lynden and erect a building for the purpose at Bellingham. It will be necessary, however, to limit the daily supply of birds from the producers, because of insufficient room for feeding.

Get the Coops Ready

It is a good plan to look over the coops where you will want to put your hens when they come off with their broods. Too often an old barrel is turned down and a few stakes driven into the ground in front of it and the poor hen is kept in there for a month or more. This is not only cruel, but very poor management, as the hen has been sitting for weeks and has no chance for exercise or for a dust bath, and the latter is very necessary to keep her free from mites. One should always place a hen on clean, dry ground when taken from the nest and in the early spring when the weather is cool she should be placed where the sun will shine into the coop. The old-fashioned "A" coops are as good as any and easy to make. It is best to have the back of the coop entirely closed so as to keep the wind out.

Keep Only Profitable Fowls

Now is the time to be looking over your flock and to kill off for market or your own use all those hens which are to old or small or for other reasons are not profitable to keep. And it is also time to thin out the cocks if you have more than one for each group of 10 hens. This should be done in the fall, but if it has been neglected the sooner it is done now the better, as every day counts when you are feeding fowls which are unprofitable to keep.

Every home should have a few jars of canned chicken on hand as it is so convenient to have a supply to draw from and it is as simple a process to can chicken as fruit. If you are far from a market you can stop the expense of feeding by canning.

MILK AND MEAT FOR POULTRY.

When milk, either sweet or sour, is fed to poultry the proportion of meat in the mash or in other forms may be considerably reduced. In fact, it can be largely eliminated if all of the milk that the hens will eat is given them. Sour milk is to be preferred to sweet milk for poultry feeding. It is even considered unwise to feed the partially sour, or "blink" milk, since it has a tendency to complete its souring process in the fowl's crop or stomach, thus interfering with the digestive process.

ECONOMY IN FEEDING.

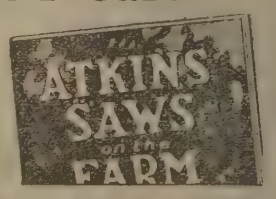
There is no question that poultry need a wide variety of feed in their bill of fare. There is a limit, however, to the degree to which this varied bill may be carried. Profit is what the poultryman is after, and when his feed cost exceeds his income he can get little enjoyment out of the fact that he gave his birds an exceptional ration. A middle ground in feeding is best for the average producer.

PLANS FOR POULTRY HOUSES!
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Recommended by the Western Washington Experimental Station at Puyallup, Wash.
This is one unit 20x30 feet, designed to accommodate 200 hens. We will furnish the plans for these chicken houses free of charge with each lumber order for a chicken house.
We will furnish all the lumber and sash of the proper grades and sizes recommended by the designer, with wood floor, for..... $132.60
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Read the "Want Ads" in this issue. You may find something you have been looking for.

ORCHARD

GRANVILLE LOWTHER
EDITORIAL CONTRIBUTOR

Plants Asleep

Awaken Slowly From Winter Rest

By O. M. MORRIS,
Head of Department of Horticulture, State College of Washington.

The common fruit trees have a normal rest period and are dormant during the early part of the winter. During the latter part of the winter they gradually awaken and the first evidence of growth is noted in the swelling of the buds.

The date at which the trees come into blossom is modified most by two conditions.

The trees that go into winter quarters or become dormant first in the fall are the ones that ordinarily start growth first in the spring. This statement is true particularly in comparing different trees of the same variety. Trees of different varieties or species can not be compared so well with each other.

The other factor that influences the date at which trees come into blossom is the amount of heat to which they are exposed during the middle and latter part of the winter.

The plant contains in the branches and trunk enough stored food to put out its blossoms without any growth taking place, and the placing of mulch or material over the soil to keep it cool and prevent root action is more liable to do harm to the trees than any good and it can not in the least modify the date at which the trees will come into blossom.

Whitewashing the trunk and branches of the tree and keeping them perfectly white during the winter and spring will sometimes delay the blossoming period. In order for this to be effected, however, the whitewash must be applied early in the winter and kept white until blossoming time in the spring.

Mulching the soil to keep it cool will retard root growth and is liable to cause the trees to suffer for plant food that should be gathered by the roots early in the spring.

Fruit Trees

Choose Best Producing Varieties

"There are many trees in western Washington that are not bringing in a profitable return merely because they are not the varieties that are best suited to our climatic conditions," said Charles L. Robinson, head of the division of horticulture of the state department of agriculture in a recent talk before a group of farmers. "No matter whether one is going into the commercial orchard business or merely planting a few trees for home use, they should be varieties that will produce the greatest returns. No one can afford to 'board a fruit tree' any more than he can afford to feed a cow that does not pay for her feed.

"If I were to recommend varieties of fruit trees for this western Washington section I would list them as first and second choice as follows:

"**Apples**—First choice: Yellow Transparent, Gravenstein and Northern Spy. Second choice: Winter Banana, King, Glowing Coal and the Golden Russet.

"**Pears**—First choice: Bartlett, Bosc and the Anjou. Second choice: Anjouleme, Fall Butter and Flemish Beauty.

"**Plums**—First choice: Any of the Reine Claude group, and Green Gage. Second choice: Bradshaw, Peach, Columbia, Coe's Golden Drop and the Blue Damsen. The Italian and French prunes do well in some parts of the Pacific coast, yet not so well in the central and northern section of the state as they do in the southern.

"**Sweet Cherries**—Bing, Lambert and Royal Anne. The Long Stemmed Waterhouse should be used as a pollenizer for best results. It is much like the Royal Anne.

"**Sour Cherries**—First choice; Mount Morenci and English Morello. Second choice: Early Richmond, Wragg, Late Duke and May Duke.

"**Grapes**—Island Belle, Moore's Early and Campbell's Early.

Raspberries—Cuthbert, Antwerp, Marlboro, and King. Blackcaps are profitable in western Washington, but they are subject to disease.

"**Strawberries**—Marshall, Clark's Seedling, Goodell and Gold Dollar."

IT KILLED THE WILLOWS.

To the Editor: In The Washington Farmer of December 29 U. G. Frantz of Outlook, Wash., gives a method of killing willows. I saw the same item in another farm paper in 1901 and tried it out. The item said to cut with a scythe the next spring, but there wasn't a willow to be seen. The same thing works on alder and a lot of other brush.—W. F.

The method to which the writer above refers was given in the words of Mr. Frantz as follows: "An irrigation lateral runs through my farm and in the early years it became badly infested with willows. I got rid of them with practically one cutting. I took my pruning shears, having two-foot handles, and cut off everything close to the ground, leaving no stubs, but digging nothing. Every time you break a willow root you have two sprouts. One cutting in July and one in August will clear them up. Treat the few that come again the same way in the fall or following summer."

To Reclaim 15,000 Acres

Plans have been adopted by Brewster and Pateros whereby an irrigation system for the two towns and vicinity can be furnished water at an estimated cost of $80 an acre, eliminating the Methow-Okanogan irrigation plan approved by the state to irrigate the same lands at a cost of $300 an acre. Brewster and Pateros will share the expense of construction equally.

The main system without the laterals will be approximately 25 miles long, and will reclaim over 15,000 acres.

Spray for Profit

Big crops of high grade fruit come only from clean well kept trees. Thoro spraying is absolutely essential. Adequate spraying equipment is of first importance. For best results, use one of the famous

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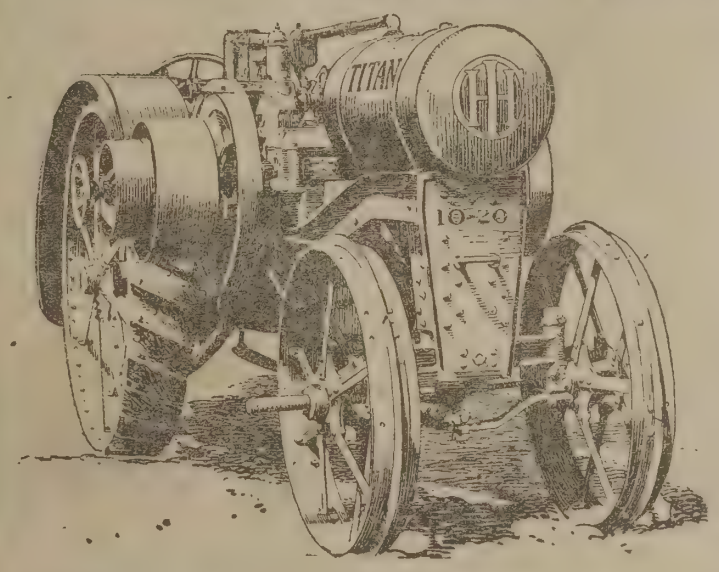
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Kind of fruit grown
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$200 Cut in Titan Price

Now $700 f. o. b. Chicago

—and a P & O 3-furrow Plow FREE



Harvester Company's Exceptional Offer
Effective Feb. 3, to May 1, 1922

The Harvester Company makes this special offer to apply on all new International 8-16 and Titan 10-20 tractors purchased by its dealers on 1922 account: Each farmer purchasing one of these Titan tractors, for delivery on or before May 1 next, will be given by the Company ***absolutely free,*** f. o. b. Chicago, a 3-furrow P&O plow. On the same terms, each farmer who purchases an International 8-16 will be given a 2-furrow P & O plow.

THE Titan is not a stripped tractor, pared down to make a price, but complete with all essential equipment—***friction clutch pulley, fenders, platform, throttle governor, adjustable drawbar, angle lugs, brakes.*** This equipment, worth more than $100 and necessary on any tractor to make it serviceable and safe, is included in the new $700 price. ***No extras to buy.***

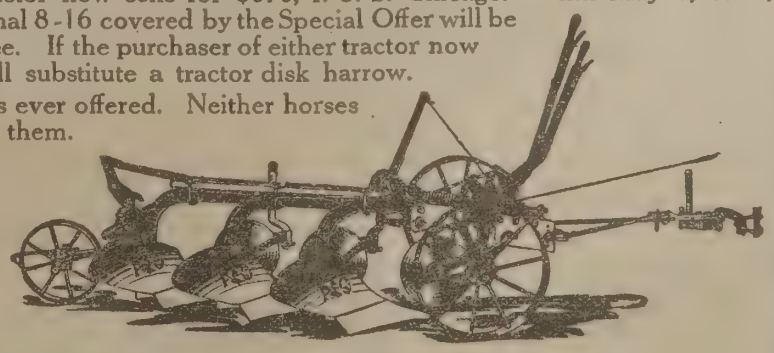
The Titan is a real 3-plow tractor and has belt power in proportion. It has enormous reserve power. Its 3-plow capacity cuts the labor cost on every field operation—a big item in farm operating expense. Titan is famous for long life. It has proved in eight years of use that it outlasts two or three small inferior tractors. Does best work on cheap kerosene. Low repair and upkeep expense. Always on the job.

$230 Cut in International 8-16

The International 8-16 tractor now sells for $670, f. o. b. Chicago. Until May 1, 1922, each purchaser of an International 8-16 covered by the Special Offer will be given a P & O 2-furrow plow free. If the purchaser of either tractor now owns a suitable plow we will substitute a tractor disk harrow.

Greatest farm power values ever offered. Neither horses nor any other tractor can equal them.

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INTERNATIONAL HARVESTER COMPANY
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CHICAGO (INCORPORATED) U S A

Pigs Raised on Farms

Pigs were raised in 1919 on 3,161,100 farms, or 49 per cent of all farms in the United States, according to the fourteenth census. The total number of pigs raised was 62,083,392, an average of 19.6 per farm.

Six states reported more than 3,000,000 pigs raised on farms in 1919, as follows: Iowa, 8,804,746; Illinois, 5,364,756; Indiana, 4,646,894; Missouri, 4,484,884; Ohio, 3,989,970, and Nebraska. 3,335,006.

There were 226,839 pigs on the farms of Montana in 1919, 263,610 on the farms of Idaho, 258,944 on the farms of Oregon and 301,767 on the farms of Washington.

HELP WANTED—Male 3

RAILWAY MAIL, GOV'T CLERKS-CARRIERS; $125-$200; experience unnecessary. Particulars free. Write Mokane Institute, Dept. A28, Denver, Colo.

$900 CONTRACT AND FIVE YEAR LEASE, small irrigated ranch; east side Cascades; contractor furnish own equipment. Theo. Hubbard, Culver, Ore.

AGENTS WANTED 9

AGENTS—MAKE MONEY SELLING SPRAYers and autowashers; profits $2.50 each; many practical uses; experience unnecessary. Free sample proposition. Autowasher Co., Johnstown, Ohio.

AGENTS—MASON SOLD 18 SPRAYERS AND auto washers one Saturday, profits $2.50 each. Square deal. Particulars free. Rusler company, Johnstown, Ohio.

SITUATIONS WANTED—Male 21

WANTED — TO MANAGE ON SHARES, stocked dairy. Alfred O'Hara, Denison, Wash.

MUSICAL INSTRUMENTS. 42

EDISON AMBEROLA, PERFECT CONDITION, $13; Edison Triumph, without horn, $6; also 2 and 4 minute records. Pac. Record Ex., 709 Pike st., Seattle.

FRESH FOOD PRODUCTS 51-1

HONEY BRAND HONEY—PURE, LIGHT, thick, and good flavored; from alfalfa and sweet clover; one 60-lb. can, $7.50; two 60-lb. cans, $14.50. Write for circular and complete price list in pails; salesmen wanted. Oliver Sires, Wapato, Wash.

WHITE ALFALFA, SWEET CLOVER honey; 1 60-lb. can, $7.50; 2 60-lb. cans, $14.50; six 10-lb. cans, $8.50; three No. 10 pails, prepaid third zone, $5.50. Wells D. Rose, Sunnyside, Wash.

YAKIMA VALLEY HONEY. BEST PRODuced; from alfalfa and sweet clover. 60-lb. can, $7.20; two for $14; satisfaction guaranteed. Theodore Sires, Congdon Orchards, Yakima, Wash.

HAPPY HOME HONEY FROM BLOSSOMS of alfalfa and sweet clover, in liquid form; 6 10-lb. pails, $8.50; 1 60-lb. can, $7.50; 2 cans, $14.50, at Mabton. H. N. Paul, Mabton, Wash.

HONEY—ALFALFA, SWEET CLOVER; FINE quality; 60-lb. can, $7.50; two 60-lb. cans, $14.50; three 10-lb. pails, prepaid second zone, $5. Harry Fisher, Prosser, Wash.

HONEY—LIGHT AMBER HONEY, LIQUID form; one sixty-pound can, $7; two cans, $13.50. A. L. Traner, Touchet, Wash.

3-POUND BOX ABSOLUTELY BONELESS codfish, fine white, new catch fish, delivered by mail, $1. Coffin Fish Co., Seattle, Wash.

FINEST ALSIKE CLOVER HONEY, ONE sixty-pound can, $7.50; two cans, $14.50. Roy Selwyn Wilson, Buhl, Idaho.

MISCELLANEOUS—FOR SALE 60

SASH AND DOORS—O. B. WILLIAMS CO., 1943 First ave., So. Seattle. Chicken house sash, 20" wide by 25" high, 80c; a dozen different sizes in stock for immediate shipment. Skylights for chicken houses, 36"x40" price, glazed, $2. This is the size recommended by the Western Washington experiment station. We carry them in stock for immediate shipment. Sash and doors for all purposes at lowest prices. All orders receive prompt attention. Our large illustrated catalogue No. 35, showing full line of building material and built-in fixtures for the home, free on request. O. B. Williams Co. Established 1899.

KENTUCKY LEAF TOBACCO, 3 YEARS OLD; nature cured. Don't send a penny, pay for tobacco and postage on arrival; extra fine quality chewing or smoking, 10 lbs., $3; medium quality smoking, 10 lbs., $1.25. Farmers' Union, D 44, Hawesville, Ky.

WALL BOARD—WRITE FOR SAMPLE OF Washington plaster wall board; won't warp, won't burn. Manufactured by Washington Building Products company, 6351 E. Marginal Way, Seattle, Wash.

PIPE — NEW AND SECOND-HAND, ANY size; low price; standard grade roofing paper at a big saving; belting, all plies, all sizes, cheap. Write Alaska Junk Co., 8120 Adams st., Spokane, Wash.

E. Z. BUILT SILO, ERECTED IN SECTIONS; has double walls with 6-inch air space; freeze proof; built of fir lumber; strong, durable and low priced. J. F. Jacobson Lumber Co., Tacoma, Wash.

CEDAR CHESTS DIRECT FROM FACTORY to your home; Tennessee cedar, solid copper trimmings. Write for catalogue. J. W. Higgins & Sons, 1912 Gilsan st., Portland, Ore.

OUR FREE CATALOG OF GROCERIES AND general merchandise will save you big money; a postal card brings it. Write today. Jordan-Lawler company, Box 615T, Spokane, Wash.

TOBACCO—NATURAL LEAF FOR MILD smoking. 10 lbs., $1.50; 20 lbs., $2.75; will furnish free recipe for preparing. Leaf Tobacco Exchange, Mayfield, Ky., Star Route.

LEAF TOBACCO, 3 YEARS OLD. PAY FOR tobacco and postage when received. Chewing, 5 lbs., $1.50; smoking, 6 lbs., $1. Farmers' Grange, No. 92, Hawesville, Ky.

HOMESPUN SMOKING OR CHEWING TObacco, collect on delivery; 5 pounds, $1.50; 10 pounds, $2.50; 20 pounds, $4. Farmers' association, Paducah, Ky.

GLASS CLOTH—A TRANSPARENT, WATERproof fabric as efficient as glass for hotbeds. Catalog free. Turner Bros., Bladen, Nebraska.

TOBACCO — KENTUCKY'S PRIDE; RICH, mellow chewing, 10 lbs., $3.25; smoking, 10 lbs., $2.50. Farmers' Club, Mayfield, Ky.

TOBACCO—KENTUCKY FINEST CHEWING, 10 lbs., $3; smoking, 10 lbs., $2; 20 lbs., $3.75. Producers' Exchange, Mayfield, Ky.

MISCELLANEOUS. 61

A REAL OPPORTUNITY TO THE PURCHASer of my new 16-30 Twin City tractor; will rent my 960-acre farm in Montana; real bargain; terms. Address Dr. M. Hopkins, Prescott, Wash.

FARMERS' WANT ADS

This is the farmers' "want," "sale" and "exchange" department for small advertisements of farmers, including live stock and poultry.

Advertising rates for ads running 1 to 3 times, 10c per word per insertion, with a special rate to Farmer subscribers, as follows: Ads running 4 to 12 times, 9c per word per insertion; ads running 13 times or more, 8c per word per insertion.

All commercial and land advertising 10 cents per word each insertion. Open also to nonsubscribers.

In using these columns advertisers must observe: (1) No advertisements will be inserted for less than $1.00. (2) Every word, number and initial, including name and address, must be paid for. (3) New advertisements, changes of copy or cancellations must reach general office, Spokane, Wash., 10 days in advance of publication date. (4) Cash must accompany order.

Above rates include insertion in The Washington Farmer, The Idaho Farmer and The Oregon Farmer, which constitute the Pacific Northwest Farm Trio, 46 Review Building, Spokane, Wash.

MISCELLANEOUS (Continued) 61

1917 FORD FOR TRADE; REGISTERED RED Poll Angus cattle preferred. Ben Merich, Route 2, Rosalia, Wash.

MACHINERY—For Sale 93

TANK TYPE TRACTOR BARGAINS—CLEtrac rebuilt model "H," 12-20, $850; Cletrac, nearly new "W," guaranteed, $1100; Cletrac, new "H," big bargain at $1100. Oldsmar garden tractor demonstrator, $395. O. V. Badley, 425 E. Mor., Portland, Ore.

THE WRIGHT PLANTER—A NEW MAchine—will evenly drop any number of seeds per foot of any kind that you may desire to plant. Free illustrated booklet. Geo. H. Wright, 1925 Pacific avenue, Spokane.

STOVE REPAIRING. 128

WRITE MYER RUBENS, SPOKANE, ABOUT stove repairs, welding broken parts, nickle plating.

RABBITS and HARES 173

FOR SALE—PEDIGREED NEW ZEALAND rabbits, $3.50 each. Wm. Plank, Prosser, Wash. Route 2.

RABBIT CRAFT MAGAZINE—RABBIT NEWS monthly; copy 10c. Harvey Norris, Goldendale, Wash.

POULTRY (Baby Chicks) 174

"WHAT THEY SAY."—"YESTERLAID EGG Ranch, Kent, Wash. Dear Sir:—Is there any chance for 1200 chicks the 1st of April? Well pleased with your pullets last year. They laid between 50 per cent and 60 per cent since last October." Jack Sheridan, Greenacres, Wash. "Dear Sir: I bought 400 chicks of you last spring and will say they were the best layers I have. I would like to buy between 400 and 500 more next month. What time in February could I get them?" Mrs. Leonard Fossett, Dungeness, Wash. "Jan. 6th, 1922. Dear Sir: Enclosed find $7.50 as 15 per cent payment on 250 chicks. Our neighbor, Mr. Wood, got some from you last year and they certainly are good layers." William Stark, Coeur d'Alene, Idaho. We hatch 12,000 chicks every 45 days from our own wonderful trap nested White Leghorns. All of our 8000 laying hens are trap nested and bred to lay. We have 40 acres devoted exclusively to White Leghorns, all with wonderful egg records. More than 50,000 chicks already sold, but we still have good dates left if you book your orders at once. Send for price list and dates you would like chicks shipped. Yesterlaid Egg Ranch, Kent, Wash.

WHITE LEGHORN AND ILL-A-HEE BARRED Rock chicks—Buy chicks this year that live and grow and are bred to lay. Butler White Leghorns and Ill-a-hee Barred Rocks are known for high average flock production. Before ordering elsewhere, write for circular telling how our breeding methods produce 200 flocks for our customers. All stock trap nested and pedigreed. Also get our prices on breeding cockerels and hatching eggs for each breed. Address Butler Poultry Farms, or Ill-a-hee Poultry Farm, Jennings Lodge, Ore.

HUSKY, VIGOROUS WHITE LEGHORN BABY chicks from genuine Yesterlaid Egg Ranch of Kent, Wash., stock. I can fill any size order, large or small, full count and safe arrival guaranteed. Place your order now, today. Orders are coming in fast. I ship every Wednesday. I give full directions for the care of baby chicks with each order, if requested, written by a noted expert. Write for shipping dates, prices, etc., at once. Small deposit required with order. T. E. Schreiner, Kent, Wash.

"FRESHLAID" WHITE LEGHORN CHICKS have the qualities you want; vigor and scientific breeding for the heaviest egg production; every "Freshlaid" male is from a high record hen. Freshlaid Farms is one of largest and oldest chick plants in the Inland Empire. There is a real demand for "Freshlaid" chicks, especially from our old customers. We are sold out until May 1. Write at once if you wish May chicks. May chicks make ideal winter layers. Catalog. Freshlaid Farm, Colfax, Wash.

THE PROGRESSIVE HATCHERY — BABY chicks from vigorous range bred stock; trapnested S. C. White Leghorns, $20 per 100; selected S. C. White Leghorns, $18 per 100; S. C. R. I. Reds and Barred Rocks, $25 per 100; safe delivery of live, vigorous chicks, full number ordered; absolutely guaranteed. Send for circular of special matings and hatching eggs. 1534 East 12th North, Portland, Ore.

TRY OUR PARCEL POST PACKAGE—KEEP the old hen busy. We will ship you first-class baby chicks, postpaid to your door, direct from the hatchery and guaranteed all alive. Price, $4.50 per 25; $8 per 50. For delivery April, May or June. Order now. The White Hatchery, Petaluma, Cal.

CRYSTAL WHITE POULTRY FARM—BREEDers of S. C. White Leghorns; baby chicks a specialty; hatched from eggs laid by our great egg producers. Price, $17 per 100; $160 per 1000. Order early to get the best dates. Send for circulars. Mr. and Mrs. Jno. Eborall, McMinnville, Ore. Box 33.

BABY CHICKS, HATCHING EGGS—FROM Hoganized hens, well mated. White and Brown Leghorns, R. I. Reds, Barred Rocks. Safe arrival guaranteed. Order early. Write for circular. Stubbe Poultry Ranch & Hatchery, Box 67J, Palo Alto, Cal.

WHITE ROCK BABY CHICKS, "DANIEL'S IDEALS," from our own trapnested stock entirely. Write for prices and dates, also eggs for hatching. Free catalog. Ideal Poultry Yards, Hoquiam, Wash. Star Route No. 25.

BABY CHICKS FROM TANCRED AND HOLlywood strain; heavy laying White Leghorns, mated to cockerels from W. W. experiment station hens, 265-314 egg record; $19 per 100. Wax's Poultry Farm, Kent, Wash.

BABY CHICKS — REDUCED PRICES ON White Leghorns, Reds, Barred Rocks, White Rocks, Minorcas, and Anconas; booking orders now; postal secures free catalog. Write today. C. N. Needham, Salem, Ore.

BABY CHIX WELL HATCHED ARE HALF raised. Petaluma incubators produce that kind. They have lots of "pep." We supply chicks. Catalog free. Petaluma Electric Incubator Co., Petaluma, Cal.

BABY CHICKS FROM TRAPNESTED WHITE Leghorns of superior quality; 14 years breeding for egg production. $18 per hundred. Chas. L. Perkins, 1337 Burrage, Portland, Ore.

POULTRY—Baby Chicks (Continued) 174

WHITE LEGHORN BABY CHICKS FROM heaviest laying stock. Booking orders now for spring, 1922, delivery. Safe arrival live, vigorous chicks guaranteed. Prices on request. Reliable since 1898. Must Hatch Incubator Co., 445 Seventh st., Petaluma, Cal.

WHITE LEGHORN BABY CHICKS FROM two and three year old selected hens, mated to cockerels from high producing stock; $14 per 100. O. H. Shaw, Cottage Grove, Ore.

BABY CHICKS, S. C. RHODE ISLAND REDS, $22.50 per 100; S. C. White Leghorns, $18 per 100; March chicks all sold. Maple Brook Poultry Farm, Southworth, Wash. Box 2.

BABY CHICKS — WE GUARANTEE OUR chicks to be from the highest producing hens in Petaluma. Write for further information. The White Hatchery, Petaluma, Cal.

CHIX—BIG, HEALTHY, HEAVY LAYING kind, from our own record hens. Feb. and March hatch, $15 per 100. Chandler's Poultry Farm, Lebanon, Ore.

TANCRED STRAIN WHITE LEGHORN BABY chicks, $18 per 100; eleventh season; incubator capacity, 18,000 eggs. D. A. Gillette, R. 4, Yakima, Wash.

WHITE LEGHORN BABY CHICKS; OREGON Agricultural college stock exclusively. Write for circular. Russell Poultry Farm, Route 3, Corvallis, Ore.

BABY CHICKS, COCKERELS, SINGLE COMB White Leghorn; heavy laying strain. Grape Lane Poultry Farm, Turner, Oregon.

BABY CHIX—REDS, ROCKS, WHITE ORpington's and White Leghorns. Hansen's Poultry Yards, Olympia, Wash.

CHICKS FROM LEGHORN HENS, 223-EGG average; reduced price. Acme Poultry Farm, Cottage Grove, Ore.

ANCONA COCKERELS, HATCHING EGGS, chicks. Get our prices. Oscar Dunlap, Junction City, Ore.

HOGANIZED WHITE LEGHORN CHICKS and eggs; guaranteed. Mrs. Ard, St. John, Wash.

Leghorns.

"HENACRES" 8 WEEKS' OLD PULLETS; March or May hatched; big, healthy, vigorous bred to lay. Booking orders now. 6000 to sell, $1.50 each or 500 for $700. Satisfaction guaranteed or money back. Baby chicks for February, March and April all sold to old customers. May chicks, $22 per 100; $200 per 1000. June, $16 per 100; $140 per 1000. Safe delivery guaranteed. Hatching eggs, $2 per 15; $9 per 100; $80 per 1000. "HENACRES" Leghorns are known all over the northwest. Ask your neighbor. Illustrated catalog and booklet on poultry management free. "HENACRES," Box A, Prosser, Wash.

PURE BRED S. C. WHITE LEGHORNS—ALL breeding hens and pullets of trap nested strain; carefully selected for vitality and standard requirements; eggs, $1.50 for 15; $8 100; baby chicks, $18 per 100; safe delivery guaranteed. A few cockerels from 280 to 304 egg hens, $3 to $5 each. Frank Volland, Rt. 1, Kennewick, Wash.

O. A. C. WHITE LEGHORNS—WORLD-FAmous egg producers; vigorous, free range stock; baby chicks, eggs, cockerels for sale. Our entry is leading pen for value of eggs produced in November and December, Western Washington egg laying contest. Write for free circular. Corvallis Poultry Farm, Corvallis, Ore.

SINGLE COMB WHITE LEGHORNS (TANcred strain); selected heavy laying second and third year hens mated to cockerels from 250 to 275 egg trap nested dams; hatching eggs, $1.50 per 15; $7.50 per hundred; chicks, $18 per hundred, safe delivery guaranteed. Oaklawn Poultry Farm, Hillsboro, Ore.

TRAPNESTED WHITE LEGHORN BREEDING stock and setting eggs; famous Carnation high record stock; pedigreed breeding for heavy winter layers. Improve your flock by adding Carnation stock. Ernest W. Raush, Carnation Poultry Farm, Kent, Wash.

SINGLE COMB WHITE LEGHORN CHICKS, hatching eggs, yearling pullets, cockerels and 2-year-old breeders; flock built up of Barron and Hollywood strains; all good, healthy stock, on free range. Prices reasonable. B. S. Meckley, Glen Rock, Pa.

PRIZE-WINNING S. C. BROWN LEGHORN (light strain), single comb White Leghorn (Tancred strain); baby chicks, $15 per 100; order now. Satisfaction and delivery guaranteed. G. R. Lumberg, Springdale, Wash.

SINGLE COMB BROWN LEGHORNS; BEST winter layers. Pacific international prize winners. Cockerels, $3; eggs, $1.50 per 15. Circular free. J. E. Dickerson, Parma, Idaho.

WHITE LEGHORN EGGS FOR HATCHING—Oregon Agricultural college stock; $2 per setting, or $8 per 100 prepaid. Russell Poultry Farm, Route 3, Corvallis, Ore.

HATCHING EGGS, 90 PER CENT FERTILITY guaranteed; 100, $4.75; from White Leghorns; chicks, 13½c. Order now. Singing Hen Poultry Plant, Walker, Ore.

FORD'S BRED-TO-LAY S. C. WHITE LEGhorns. Hatching eggs, $2 per setting; $8 per 100; special matings on request. W. A. Ford, Umatilla, Oregon.

WHITE LEGHORN COCKERELS, $5 TO $7.50; vigorous breeding hens, laying pullets, $1.50, 220-240 stock. Watterson Pullet Farm, The Dalles, Ore.

COCKERELS, SCOTT'S STRAIN S. C. WHITE Leghorns, big type; only a few left; act quick; $5 each. Louis L. Carpenter, King Hill, Idaho.

S. C. WHITE LEGHORN BABY CHIX FROM trap nested, Hoganized hens; also cocks and cockerels. J. Panck, Sherwood, Ore. R. 1.

S. C. BUFF LEGHORNS; EGGS FOR HATCHing; good layers; guaranteed all eggs fertile stock. M. H. Mann, Woods Cross, Utah.

WHITE LEGHORNS, TRAP NESTED STRAIN, hatching eggs, baby chicks. Write us. Washington Poultry Farm, Hartford, Wash.

Barred Rocks.

OREGON AGRICULTURAL COLLEGE Barred Rock hatching eggs; 200-egg strain, $1.50 per 15; $2.50 per 30; $7 hundred. Miles Tetherow, Central Point, Ore.

FANCY BARRED ROCK COCKERELS $5 UP. J. E. Horton, 2408 Altamont, Spokane.

POULTRY—Barred Rocks (Continued) 174

FREE MATING LIST, DESCRIBING OUR ideal Barred Rocks; 37 1sts, 10 specials for 1921. High egg record; 303 eggs; average egg record 229 eggs. Jacobson's Poultry Yards, 3596 Tacoma, ave., Tacoma, Wash.

HATCHING EGGS, OREGON AGRICULTURAL college Barred Rocks; choice pen, $2 per 15; utility stock, $1.50; great layers. J. M. Steen, Lebanon, Ore.

RINGLET BARRED ROCK COCKERELS: THE finest lot I ever raised, for sale cheap; all birds sent on approval. J. O. Watts, Eugene, Oregon.

MY SUPERIOR BARRED ROCKS WON 38 prizes, three shows. If you want good ones write C. E. Dibble, Payette, Idaho.

O. A. C. STRAIN BARRED ROCKS; EGGS, $6 hundred; chicks, $25 hundred. The Idle Hour Poultry Farm, McCoy, Ore.

DARK BARRED ROCK COCKERELS, THOMPson's ringlets. Ray Leftwick, R. 4, Box 855A, Tacoma, Wash.

HUNT'S FINE BARRED ROCKS. WRITE for circular on eggs. W. A. Hunt, Lebanon, Ore.

PURE BRED BARRED ROCK COCKERELS, dark, $4. August Anderson, Pullman, Wash.

O. A. C. STRAIN BARRED ROCK COCKerels. Write George Gellatly, Corvallis, Ore.

Turkeys, Ducks, Geese

MAMMOTH PEKIN DUCKS; AMERICA'S FINest new blood this year; direct from C. C. Shoemaker. Eggs, $2 per setting, $12 per 100. Crystal White Poultry Farm, McMinnville, Ore. Box 33.

ROUEN DUCKS, WINNERS AT WALLA WALla, $4 each, $10 per trio; eggs eleven, $2. White Wyandottes, heavy layers; show winners; eggs, fifteen, $2. P. H. Tomlinson, College Place, Wn.

MAMMOTH BRONZE TURKEY TOMS, ALL choice stock; range raised, healthy and vigorous, $12 to $15; eggs in season. Effie Shepardson, Kelso, Wash.

GIANT STRAIN PURE BRED MAMMOTH Bronze turkeys, from prize-winning stock. Mrs. C. R. Lowery, Route 4, Boise, Idaho.

MAMMOTH PEKIN EGGS FROM DUCKS that take the prizes. Booking advance orders. Mrs. E. A. Bennett, Salem, Ore.

PURE BLOOD MAMMOTH BRONZE TURkeys, prize winning stock. Mrs. Frank Browning, Route 1, Nampa, Idaho.

TOULOUSE GEESE EGGS—PROPERLY MAted, good color, immense size; fifty cents per egg; lots of six or more; none better. T. J. Dannen, Shedd, Ore.

THOROUGHBRED BARRED ROCKS, RUNNER ducks, males and females, $2, $2.50, $3; ducklings, hundred, $33. C. A. Muths, Route 1, Box 49, Salem, Ore.

MAMMOTH BRONZE TURKEYS, PRIZE stock; 20-lb. hens; 40-lb. toms; eggs, $5 for 10. Inglewood Poultry Co., Inglewood, Cal.

FOR SALE — MAMMOTH BRONZE, PART wild turkeys. Eleanor Moore, Route 1, Ashland, Ore.

FIVE MAMMOTH BRONZE TURKEY HENS, $7 each. Mrs. Sam R. White, St. John, Wash.

MAMMOTH PEKIN DUCK EGGS IN SEASON, doz., $2. Mrs. Earl Davis, Elk, Wash.

7 MAMMOTH BRONZE TURKEY HENS FOR sale, $6 each. C. Shafer, Wymer, Wash.

PURE BRED MAMMOTH BRONZE TURKEYS. S. L. Maltby, Rogerson, Idaho.

PURE BLOOD TOULOUSE GEESE, $6. DR. Nichol, Mosier, Ore.

Miscellaneous Poultry.

WHITE LEGHORN EGGS; LARGE EASTERN strain; single and double comb Rhode Island Reds; eggs, $1.50 per 15; $7.50 per 100; magnificent dahlia bulbs, over 100 named varieties. Edward C. Brockway, Sunnyside, Wash.

WON 14 PRIZES AT WINTER STOCK SHOW. Chix, Martin best White Wyandottes, Thompkin Reds, 35c; Ferris Leghorns, 25c; eggs, $3; cockerels, $5. Nick Sabadin, Spokane, E1015 Nebraska.

YOUR HENS ARE EGG FACTORIES. ARE they operating on a paying basis? D. G. Gifford, 155 Grand ave., Portland, Ore., will supply valuable information with no obligation on your part.

BUFF LEGHORNS EXCLUSIVELY; EGGS, chicks, cockerels; proven and acknowledged leaders of their kind for laying and exhibition. Mating list free. R. Stromquist, Tigard, Ore.

BARRED ROCKS, S. C. AND R. C. REDS, Buff Orpingtons and White Wyandotte pullets; cockerels, $3.50; pullets, $35 dozen. W. A. Rowe, American Falls, Idaho.

PARAMOUNT WHITE WYANDOTTES "BRING home the bacon." Trap nested, pedigreed. Instructive catalog free. Bayard H. Moul, 1226 Washington blvd., Seattle.

SINGLE COMB RHODE ISLAND RED COCKerels; hen hatched, range raised; hatching eggs, $3 per setting (Owen strain). Joe Brunsell, Mt. Vernon, Wash.

SUPREME WHITE WYANDOTTE COCKERels; bred up for eight years; all birds guaranteed. Price $2.50 and $3. Mrs. Earl Murray, Box 170, Ione, Wash.

PUREBRED ROSE AND SINGLE COMB Rhode Island Red cockerels, bred from prize winning stock, $5. F. E. Mohr, Orchard Ave., Spokane.

WHITE LEGHORN AND WHITE ROCK COCKerels; 300-egg strain; baby chicks, hatching eggs. Palouse Falls Ranch, Palouse Falls, Wash.

TRAP NESTED WHITE LEGHORN AND Barred Rock eggs and chicks; records, 200 to 311. Mrs. W. M. Roberts, Elmira, Oregon.

STERLING STRAIN SILVER WYANDOTTES—Eggs $2.50 and $5 per setting; $7 per 100. Chicks, 45c. Henry Domes, McCoy, Ore.

HOGANIZED WHITE WYANDOTTE COCKerels; Ringhouse Griffith breeding; $5 and $10, prepaid. Adams, Warren, Ore.

RHODE ISLAND WHITES. COCKERELS from heavy producers; $5 and $7.50 each. Van K. Lawson, McMinnville, Ore.

BLUE ANDALUSIANS AND WHITE ROCK cockerels; extra good; order now. Mrs. C. W. Armstrong, Freewater, Ore.

SINGLE COMB RED COCKERELS ALSO DAY old chicks and hatching eggs. A. E. Bosworth, Omak, Wash.

ANCONAS, SHEPPARD STOCK COCKERELS, $3; pullets, $2; eggs, $2 setting. R. P. Irwin, Tonasket, Wash.

BRED TO LAY ANCONAS: HATCHING EGGS. Price list free. Yew Lane Farm, Sherwood, Oregon.

ROSE COMB BLACK MINORCA COCKERELS, only few left, $3 each. Mrs. Carley, Carley, Wash.

1949 COCKERELS, HATCHING EGGS, 49 VArieties; free book. Aye Bros., Box 14, Blair, Nebr.

WHITE WYANDOTTE COCKERELS, $3 AND $4. Wm. Dunning, Creston, Wash.

(Continued on the following page.)

POULTRY—Miscellaneous (Continued) 174

CHICKS OF QUALITY—HOLLYWOOD, TANcred and commercial strains of White Leghorn chicks from pedigreed males, $20 per hundred. R. I. Reds, Barred Rocks, Black Minorcas and Ancona chicks, $25 per hundred. These prices are for February and March delivery. We sell Queen incubators, Queen brooder stoves, Reliable Blue Flame brooders, Petaluma Electric and Charters' incubators and American brooder stoves. A complete line of poultry supplies and remedies, including leg bands, egg scales, trapnest records, etc. Catalogue free. Queen Hatchery, Fourth and Pine. Elliott 2054. Seattle, Wash.

A FEW CENTS MORE IN BEGINNING MEANS nothing if results are obtained. Our stock pure bred Tom Barron Whité Leghorns not to be excelled; booking orders for spring chix and pullets; demand heavy. Write for full particulars. All styles and sizes incubators, brooders and stoves. Our 1922 catalogue a valuable book for poultrymen. C. E. Hill Co., 418 11th st., Oakland, Cal.

FREE INCUBATOR CATALOG — INCUBators, brooders, oat sprouters, baby chicks, hatching eggs, trap nests, poultry books and supplies. You can't beat the St. Helens incubator in either price or hatch. From 60 to 4000 egg capacity; electric and lamp heated. St Helens Incubator Co., Centralia, Wash.

S. C. ANCONA PRIZE WINNING STOCK. ORders booked for eggs at $2 setting; $11 hundred lots; baby chix, 20c each. Deposit with order. Toulouse geese eggs, 50c each. Faun Runner duck eggs, $2 setting of 11 eggs. Karl Broeder, Sherwood, Ore.

S. C. RHODE ISLAND REDS—OUR FLOCK IS one of the best in the Willamette valley, and we have hatching eggs from our best matings to deliver to our customers after March first. All baby chicks for 1922 are sold. G. B. Dimick, Oregon City, Ore.

ON ACCOUNT OF OTHER BUSINESS I AM compelled to dispose of my birds this season and offer my few remaining pullets at twenty dollars per dozen; hatching eggs, six dollars per hundred. Mrs. Rominger, Underwood, Wash.

COCKERELS—ROSE AND SINGLE COMB Brown and Buff Leghorns, Anconas, Black Minorcas, Rhode Island Reds, Blue Andalusians. Boone Avenue Poultry Yards, E1601 Boone ave., Spokane.

SILVER WYANDOTTES AND SILVER SPANGled Hamburgs, Golden Campines, choice birds for sale. No baby chicks or eggs by the 100. Birds, $5 and up. G. G. Wherry, Payette, Idaho.

STOP, LOOK, LISTEN—CHIX AND EGGS from Cecil Sheppard's high grade laying strain of Anconas. Inquiries promptly and courteously answered. Cona Villa, R. R. 8, Salem, Ore.

VIGOROUS, HEAVY-LAYING WHITE ROCK breeding stock; pure Fishel strain; hens, pullets, $2, $3; cockerels, $3, $5, $10; prices on quantities. J. B. Axtelle, Hood River, Ore.

SETTINGS FROM BROOK'S HAVEN SINGLE Comb Reds; Redwing strain (Hoganized); bred for color, type, capacity; range raised. Chas. S. Brooks, Underwood, Wash.

WHITE ORPINGTON COCKERELS FROM first prize cock and Princess Pat strain. Rose Comb Rhode Island Reds, $3 and $5. Economy Farms, Tekoa, Wash.

SURE HATCH INCUBATORS, BROODERS, prepaid prices. Send for catalog. S. C. Brown Leghorn eggs, chicks. Idahome Poultry Farm, R. 3, Nampa, Idaho.

WHITE ROCK EGGS, PURE FISHEL STRAIN; blue ribbon males, with hens trap nested up to 270 eggs; 15, $2.50; 100, $14. C. Gustafson, R. 1, Milwaukie, Ore.

POULTRY RAISERS, SEND FOR FREE BOOKlet on poultry advertising. The Pacific Northwest Farm Trio, Dept. P, Review bldg., Spokane, Wash.

DOLLARS FOR YOUR EGGS—WE PAY THE top market prices for your eggs and poultry. Daily cash remittances. Western Produce Co., Spokane.

QUALITY BARRED PLYMOUTH ROCKS and Black Langshans, cockerels and cock birds; also a few females; prize winners. B. D. Reser, Walla Walla, Wash.

SHIP YOUR LIVE POULTRY AND EGGS TO us. Highest prices paid; daily remittance. Inland Poultry House, Spokane, Wash.

ALLEN'S PRIZE BARRED ROCKS AND White Leghorns are wonderful layers. Write D. W. Allen, LaConner, Wash.

WHITE WYANDOTTE COCKERELS, MARTIN and Fischer strain. F. Todd, Coeur d'Alene, Idaho, R. 1.

EGGS—BLACK MINORCA, WHITE MINORCA, 200-egg strain. Mrs. Frank Winnard, Heppner, Ore.

LIVE STOCK 177

SEND FOR FREE BOOKLET, "SOME SUGgestions to Live Stock Advertisers," outlining the practices of successful men of long experience. Helps in determining how much to spend, the mediums to select, preparing advertisements, handling inquiries, the use of photographs, etc. Write today. The Pacific Northwest Farm Trio, Dept. W, Spokane, Wash.

PURE BRED HAMPSHIRES—LEAVING FARM must sell small herd; carefully selected individuals; bred sows and gilts, farrow March, April; prize winners Pacific International and Multnomah county fair, including grand champion sow, Multnomah, 1921. Choice stock, rock bottom prices. Mrs. Marion Johnson, Gresham, Oregon.

LARGE, HEAVY PRODUCING HOLSTEINS for sale at all times in car lots; tuberculin tested; 150 to 200 head always on hand; well marked heifer calves from registered sires and heavy producing dams; crated for shipment anywhere, $25 f. o. b. Levinson & Balmelli, Yakima, Wash.

MILCH GOATS—REGISTERED TOGGENBURG grade does, freshen Feb. and March; three quarts and better, $35 to $75. Foundation does bred to pure bred bucks; fresh in February and March, $20 each. Pure bred Toggenburg buck kid, $75. M. P. Eggers, Woodinville, Wash.

SHIP US YOUR POULTRY AND LIVE STOCK. We pay the top market prices. Light veal, fat fancy, 16c, dressed block hogs, 13c; hens, 18c to 22c. Prompt returns. John Lewis & Co., Spokane, Wash.

GOOD MILCH GOATS, COMING FRESH SOON. In buying now you get the increase; only six more to sell; all registered in their line. M. Montchalin, milch goat breeder, Carson, Wash.

WE PAY TOP PRICES FOR YOUR LIVE OR dressed veal, hogs and poultry. Your check by return mail. Shipping tags on request. M. & J. Packing Co., Spokane.

FOR SALE—CLYDESDALE STALLION, FOUR years old; good, big fellow, bred right, raised right, priced right. Write or phone W. L. Skipton, Trout Lake, Wash.

FOR SALE—SOME VERY FINE POLAND CHIna gilts; bred to first prize futurity boar at state fair, to farrow in March. Buck & McDonald, Yamhill, Ore.

WILL EXCHANGE REGISTERED PERCHERon for five brood mares under seven; must weigh at least 1300. C. A. Hungate, Route 3, Waitsburg, Wash.

FARMERS' WANT ADS

This is the farmers' "want," "sale" and "exchange" department for small advertisements of farmers, including live stock and poultry.

Advertising rates for ads running 1 to 3 times, 10c per word per insertion, with a special rate to Farmer subscribers, as follows: Ads running 4 to 12 times, 9c per word per insertion; ads running 13 times or more, 8c per word per insertion.

All commercial and land advertising 10 cents per word each insertion. Open also to nonsubscribers.

In using these columns advertisers must observe: (1) No advertisements will be inserted for less than $1.00. (2) Every word, number and initial, including name and address, must be paid for. (3) New advertisements, changes of copy or cancellations must reach general office, Spokane, Wash., 10 days in advance of publication date. (4) Cash must accompany order.

Above rates include insertion in The Washington Farmer, The Idaho Farmer and The Oregon Farmer, which constitute the Pacific Northwest Farm Trio, 46 Review Building, Spokane, Wash.

LIVE STOCK (Continued.) 177

FOR SALE—THREE BIG TYPE POLAND China gilts bred for March fallow, to a grandson of The Pilot. Gilts have size and quality and a combination of Bob Wonder-Ike Knox breeding; guaranteed to please, $50 each. C. R. Evans, Halsey, Ore.

DARK GRAY, COMING THREE-YEAR-OLD Percheron stallion; out of imported sire and dam; for sale cheap. Steve Inglin, Route 4, Boise.

FOR SALE—THREE REGISTERED HOME bred Belgian stallions, two Shorthorn roan Durham bulls. W. I. Ebbert, Condon, Ore.

TILLAMOOK CALVES—SEASON NOW OPEN. Price lists ready; strictly dairy stock. Smith, the Calf Man, Tillamook, Ore.

REGISTERED SHORTHORNS—4 COWS, 2 heifers, 1 bull; price, $1200 f. o. b. Wenatchee. S. O. Pool, Wenatchee, Wash.

FOR SALE—CHOICE DUROC JERSEY SOWS and gilts; bred to farrow in March. Geo. DeBok, Oregon City, Ore.

REGISTERED O. I. C. SWINE FOR SALE; shipped C. O. D.; guarantee satisfaction. Tony Johnson, Polson, Mont.

CRUIKSHANK THREE-YEAR-OLD SHORThorn bull for sale cheap. W. A. Moore, Route 4, Boise, Idaho.

DUROC BOAR, 2 SOWS, 2 GILTS, REGISTered; $50 each. R. Gralapp, Route 5, Spokane.

REGISTERED SHORTHORN CATTLE FOR sale. Elton Webb, New Plymouth, Idaho.

FOR SALE—JERSEY BULL NINE MONTHS old. J. Zodrow, Chewelah, Wash.

SWISS TOGGENBURG MILCH GOATS AT ALL times. Goatery, Caldwell, Idaho.

TOGGENBURG MILCH GOATS. FANNIE Branson, Falls City, Ore.

HARNESS and SADDLERY 189

SEND FOR FREE HARNESS AND SADDLE catalog today; cut out the middleman, buy direct from the manufacturer. Lowest prices in the west; satisfaction guaranteed. Established 1881. Write Pierce Harness Co., dept. T, Spokane, Wash.

HAY FOR SALE. 200

ALFALFA HAY—BUY DIRECT, SAVE MONey; quality guaranteed. Write or wire for prices. Ernest T. Freepons, Walla Walla, Wash.

JOB PRINTING 372

GUARANTEED BETTER BUTTER WRAPpers; 100, 60c; 250, $1.50; 500, $2.50; 1000, $4.25; printed to order. Home Specialty Co., Middleton, Idaho.

TANNING 425

LET US TAN YOUR HIDE—COW AND HORSE hides for fur coats and robes. Cow and steer hides into harness or sole leather. Catalog on request. The Crosby-Frisian Fur Co., Rochester, N. Y.

MONUMENTS 510

COMPLETE STOCK, RIGHT PRICES. CORrespondence solicited. J. W. Harding, Inland Monument Co., N1001 Monroe, Spokane.

BUILDING MATERIAL 588

NO WASTE, LESS LABOR. BUILD WITH ready cut houses and barns and save money. Attractive new plan book sent free. 4c postage. Prices quoted on material list. Write today. Price advance certain to come soon. Local Keystone Lbr. Co., 3000 Sprague, Tacoma, Wash.

SEEDS 620

ALFALFA SEED, CLOVER SEED, SEED corn—We are located in the heart of the largest and best alfalfa and clover seed district in the west and can give you both quality and price. Get our samples and quotations before buying. Our seed corn is of the finest acclimated strains. Garden and flower seeds of all kinds. Send for our catalog. Darrow Bros. Seed & Supply Co., Twin Falls, Idaho.

HANCHEN SPRING BARLEY, $2.50 PER cwt.; common vetch seed $4 per cwt.; red clover, $20 per cwt. Oregon standard purity seeds, all f. o. b. Corvallis, Ore. J. J. Denson.

2 CARS NETTED GEM SEED POTATOES, part car certified, rest uncertified; grown from certified seed; nonirrigated. Miller & Rosenthal, Thompson Falls, Mont.

RED CLOVER, ALSIKE, RYE GRASS, TIMothy and vetch seed for sale; good quality, lower prices; by freight or parcel post. Rhoten Farms, Salem, Ore.

HUBAM CLOVER, CERTIFIED SEED OF THE earliest strain; Idaho grown. DeKalb County Agricultural association, DeKalb, Ill.

HAND-PICKED LITTLE MARVEL GARDEN peas, $7 100 pounds; small lots 10c pound, all net. W. A. Bower, Avon, Idaho.

SEEDS—FARM AND GARDEN; ALL STATE tested. Write for catalog. Washburn & Wilson Seed Co., Moscow, Idaho.

COSSACK ALFALFA SEED—SEND FOR samples. S. H. Hillman, Box 5, Thompson Falls, Mont.

WRITE FOR SEED CATALOGUE FOR 1922. Union Seed & Fuel Co., Boise, Idaho.

ONION SEED, POSTPAID, $1.50 POUND. L. J. Shippy, Goldendale, Wash.

NURSERY STOCK 621

15 TO 20 FEET SQUARE GOOD SOIL, planted to everbearing strawberries, will supply average family same year; keep cultivated, runners off, fertilize lightly, keep moist (avoid alkali). My Progressive and Superb are true to name; known and tried standard varieties, come to you inspected and prepaid, parcel post, $1.40 per 100; $6 per 500; $11 per 1000; 2 dewberry plants free long as they last, with orders. Dewberry plants, 75c doz; rooted Concord grapes $1.50 doz all prepaid, insured mail. Plant early. Model Fruit Farm, N. Matthiessen, proprietor, Route 1, Emmett, Idaho.

GLADIOLA — BEAUTIFUL, MAGNIFICENT summer and fall blooming flowers that please all and are of easy culture. My stock is fine and prices right. Catalog free. Jungst Gladiola Farm, Ellensburg, Wash.

STRAWBERRY PLANTS—OREGON, WILSON, Etterberg, $3.50 per 1000. C. E. Turnidge, Talbot, Oregon.

NURSERY STOCK. (Continued.) 621

PROGRESSIVE EVERBEARING STRAWberry plants at $1 per 100, or $8 per 1000. St. Regis everbearing Raspberry plants at 10 cents each or $7 per 100; also one crop strawberries, currants, dewberries, loganberries, blackberries, asparagus and Greg's blackcap raspberries, very fine. W. L. Seaman, Boise, Idaho.

WANTED—10,000 ORDERS TO FILL FROM our large stock of trees, shrubs, roses, vines and perennials. We prepay the freight. Orders filled in rotation as long as we have stock. Only thirty days until shipping time. Catalog on request. Kimberly Nurseries, Kimberly (Twin Falls county), Idaho.

PLANT WINDBREAKS OR A WOOD LOT FOR shelter and profit; black locust in Idaho produced in eight seasons posts worth $1000 per acre. Free book tells how. Our special trees get quick results and cost little. Washington Nursery Co., Toppenish, Wash.

RELIABLE NURSERY STOCK—ITALIAN AND Petite, 4-6 ft., and 3-4 ft.; Concord, Worden and Moore's Early grapes; grafted Franquette walnut, all sizes. Send for catalog and price list. Villa Nurseries, Route 1, Portland, Ore.

GROW GRAPES FOR PROFIT—SPECIAL LOW prices; grape vines, berries, asparagus, for commercial planting; peaches, cherries, apricots, apples; satisfaction guaranteed. Write today. Home Nursery Co., Richland, Wash.

TREES—ALL KINDS FRUIT AND ORNAmental trees, vines, etc. Growers of general nursery stock Lowest quotations on application. Send your want list. Can use few good salesmen, Albany Nurseries, Albany, Ore.

CLARK SEEDLING, THE STRAWBERRY that made Hood River famous. Write for list of other varieties and prices. Plant nurseries at Hood River and Prosser, Wash. W. R. Gibson & Son, Hood River, Ore.

STRAWBERRY PLANTS, EVERBEARING and others; inspected plants, strong and healthy, well packed. Send for prices and book on care of strawberries. F. I. Moffett, Ellensburg, Wash.

CORY THORNLESS BLACKBERRY—DELIcious, very large and early. You get strong, well rooted plants, true to name, from pioneer grower. Wm. Mortenson, Route 1, Lodi, Calif.

APPLE TREES AND A FULL LINE OF NURSery stock at reasonable prices; save agents' commission by ordering direct from nursery. Write for price list. Lawson Nursery, Gates, Ore.

NURSERY STOCK, ITALIAN PRUNE TREES and trees of all kinds. Berries and small fruits of all varieties. Buy direct and save 50 per cent. Brooks Nursery, Lafayette, Ore.

FILBERT TREES OF APPROVED VARIEties; true to name; state when writing, the number of trees wanted. Dr. J. H. Wilkens, McMinnville, Ore.

STRAWBERRY PLANTS; IMPR. NEW OREgon, Ettersburg 121; large, vigorous and healthy; 80c 100; $5 1000. Christian Arnesen, Canby, Ore.

SEND FOR OUR NEW PRICE LIST ON FRUIT trees, berry bushes, shade trees and roses on their own roots. Krause Nursery, Spokane, Wash.

LOGANBERRY PLANTS, 6, $1; TIPS, 18, $1; Cuthbert raspberries, 75, $1; 1000, $10, prepaid. Alvin Myers, Doebay, Wash.

LOGANBERRY PLANTS — 50,000 CHOICE plants; unusual low price. Harry Lanum, Salem, Ore.

TREES—PEAR, APPLE, PLUM, PRUNE, NUTS and berries at cost. Homer Brixey, McMinnville, Ore.

LOGANBERRY PLANTS FURNISHED BY the grower. Grape Lane Farm, Turner, Ore.

STRAWBERRY PLANTS, $5 PER 1000. Briggs, Plant Nursery, Olympia, Wash.

FARM LANDS FOR SALE. 651

130 ACRES, 8 MILES FROM OLYMPIA, Wash.; on Pacific highway; 100 acres low, rich soil; 100 orchard, garden, pasture and timber; 7-room house, bath, fireplace; running water; 2 barns, outhouses; water piped; windmill, gas engine, pump, spring and creek on place; all fenced; near good schools; would make one of best dairy ranches in state; good location for store and oil station; improvements alone worth $4000 to $5000, will sell land and all improvements for $60 an acre or $7800; terms, $1000 down, long term mortgage for balance; low interest. Owner, C. J. Chamberlain, Olympia, Wash.

5-ACRE CHICKEN RANCH, 5 MILES FROM center Spokane; 7-room modern house; water and lights all over place; 3 modern plastered coops; 1200 White Leghorn hens, brooder houses for 6000 chicks; 5000 already ordered for March delivery; Henacres and O. A. C. strains; all paid for, $4500 cash, balance payments suit buyer, 6 per cent. J. Vandamme, Route 1, Spokane.

ASHLAND REALTY COMPANY HAVE RESIdences, ranches and business places for sale; candy and ice cream, express business. The best bakery and other business for sale; furnished houses and furnished rooms for rent and for sale. Write fully what you want and your expectations and send addressed, stamped envelope to Ashland Realty Company, Ashland, Ore.

RAIN BELT, MILD WINTERS; 160 ACRES; 5 cultivated; 20 pasture, balance timber; spring water; house and barn, gas log saw, farming tools, horses, cows, bees, hay, potatoes and household goods. Price $2300 cash. Henry Luiten, Myrtle Point, Ore.

HERE IT IS, MR. STOCK MEN—941 ACRES; all fenced; miles of good bunchgrass country surrounding; winter range. $3000 will buy this direct from the owner, and balance on terms. Write D 3, Oregon Farmer, Spokane.

2.8 ACRES, NEW HOUSE, BARN FURNIture, Ford car, 2 cows and 50 chickens; outside city limits; $3000; 1-3 cash. 320 acres, in Alberta, $15 per acre; 1-3 cash. For particulars write C. Halseth, Silverton, Ore.

ALBERTA LAND, TWO SECTIONS, AT SACRIfice; excellent farm and stock proposition; running water; adjacent to good town. Address owner, A. D. Saulsberry, Centralia, Wash.

160 ACRE GOOD WHEAT FARM; LITTLE Bitterroot valley, Mont. John Thiard, owner, Murray, Idaho.

400-ACRE DAIRY OR STOCK RANCH; LOW price; easy terms. Theo. Johnson, Tenino, Wn.

FARM LANDS FOR SALE (Continued) 651

EQUIPPED STOCK AND DAIRY RANCH, 480 acres, of which 200 acres is the best bottom land; part in timothy and clover, balance grain and stubble; 80 acres timber, balance pasture adjoining free outside range 20 miles square; large trout creek through place, from which most of the meadow can be irrigated if desired. Improved with 2 houses, large stock and hay barn, baled hay barn, feeding barn for range cattle; water piped to house and large cement trough in yards from never-failing spring. Personal property consists of 7 horses, 3 colts, 21 head of cattle, 7 hogs, chickens, 2-ton Signal truck, 4 horse engine cream separator and complete farming and blacksmith outfit. Price $28,000, on very easy terms. The Big Bend Land company, Spokane, Wash.

39 ACRES, 6 MILES FROM KELSO; 20 ACRES cleared, rest can nearly all be cleared; 80 assorted fruit trees, good spring water; pig pen and chicken house, large barn, 5-room house, telephone and one-fifth interest in telephone line; included are 22 head of cattle, one team and harness, one hog, 30 chickens, three stands bees, one wagon, all farm machinery. Price $4500. Emelia Alberti, Kelso, Wash.

LOGGED-OFF LAND IN STEVENS COUNTY, Washington, at greatly reduced prices. Most of land sells at from $5 to $20 per acre; thickly settled community; good schools, hard surfaced and paved roads to Spokane; best county in state for dairy and stock raising; most places water can be found at shallow depths. Write for folder. Phoenix Lumber company, Dept. T, Spokane, Wash.

WE SELL FORECLOSED LANDS FOR A loan company for one-third cash, balance easy terms. When writing tell us what you want, where preferred, how much you will invest; kind of farming you contemplate, as we have no list and must write special description in each case No trades. Hartford Land company, 601 Paulsen building, Spokane, Wash.

IDAHO IRRIGATED FARM, 480 ACRES; 300 cultivated; twenty acres bearing orchard; best river bottom land and decreed water right in county; modern home; concrete house and dairy barn, rock lambing shed; twenty-five thousand invested for improvements; $50,000 takes it. Half cash. John W. McFall, Shoshone, Idaho.

300 ACRES IN VALLEY COUNTY, IDAHO, IMproved; running water; fences, etc.; will divide, 70 acres, sunny slope, fruit, lettuce and spud land; 25 acres under water and cultivation. Two modern homes in Caldwell, Idaho; can use approved securities and give terms. Address Box A, Route 2, Caldwell, Idaho.

SNOHOMISH COUNTY, WASH.—6000 ACRES of the finest dairy, berry or general high-grade farm lands in the northwest, rapidly improving section; no drouths; bumper crops; tracts 1 to 80 acres; 10 yearly payments. This is your opportunity. Send for literature. Brownell Land Co., Birmingham, Wash.

DAIRY FARMERS INVESTIGATE THIS UNusual opportunity. Fine paying irrigated dairy and alfalfa ranch; famous Deschutes valley, central Oregon. $16,000. Small initial payment, new easy payment plan; ideal climate. Full particulars on request. Redmond Land & Loan Co., Inc., Redmond, Ore.

RARE MINERAL SPECIMEN, EDUCATIONAL and entertaining; quartz showing free gold, rich silver ore, galena (lead) ore, cinnabar (quicksilver), placer gold dust, antimony, (stibnite), chromite; all these specimens sent for one dollar. Western Specimen Agency, Ashland, Ore.

IRRIGATED LAND, RICH, LEVEL, NO waste; ready for plow; large tract to select from; small cash payment, bal. crop payments. A wonderful opportunity; will send particulars. E. T. Staples, Box 203, Ashland, Ore.

80 ACRES FINEST SOIL; 40 CLEARED; good buildings; gravity water system; 8 cows, 20 hogs, team, all kinds farm machinery; 2 miles to town; price $7500; terms. Chas. D. Edwards Co., Centralia, Wash.

20 ACRES FRUIT ORCHARD, IN HOOD RIVer valley; all kinds fruit; good buildings; mail route, telephone, electric lights; near school and church; three miles from Hood River. A. F. Linn, owner.

108 ACRES; HOUSE WITH BASEMENT; FURnace, electric lights, water works; barn 40x70; about 400 yards from oil derrick. Particulars, write owner, F. W. Newman, Amity, Ore.

FOR SALE—EQUITY IN 15-ACRE RANCH; team, farm implements, 5 pure bred Poland China sows, reg., bred March farrow; 2 cows, chickens, 2 miles out. Ben Rose, Ontario, Ore.

GOOD DAIRY RANCH, 800 ACRES, WITH several thousand dollars' worth personal property; will sell $55,000; $20,000 down, balance at 5 per cent. Joshua Beeman, Usk, Wash.

SMALL ACREAGE TRACTS, ORCHARD AND dairy homes in sunny southern Oregon; improved and unimproved; particulars. Staples Realty Agency, Ashland, Ore.

SELL YOUR PROPERTY QUICKLY FOR cash; no matter where located. Particulars free. Real Estate Salesman company, 591 Brownell, Lincoln Neb.

40 ACRES FINE SOIL; FIFTEEN CLEARED; fenced, cross-fenced; buildings; near school. Snap at $2000, $600 cash. Chas. D. Edwards Co., Centralia, Wash.

SACRIFICE PRICE, FRUIT AND DAIRY ranch, 200 acres; 20 acres bearing apples; good buildings; spring water. Box 134, Wenatchee, Wash.

80-ACRE DAIRY AND GENERAL CROP farm; running water; well improved (on reservation); act quick. J. W. Palmer, Toppenish, Wash.

A FINE RANCH, NEAR TOWN; TERMS TO suit purchaser; five acres in berries. L. E. Dailey, Box 306, Port Angeles, Wash.

160-ACRE FARM; MUST SELL; OWNER WILL tell why; small trade; little cash. Terms. A. Brauner, Bossburg, Wash.

SNAP—10 ACRES, SUBURBAN, FRUIT, IMproved; equity $2200. Morris, Rt. 3, Spokane.

480-ACRE WHEAT RANCH FOR SALE. Write owner, Box 202, Sprague, Wash.

FOR SALE—13.04 ACRE FRUIT AND BERRY farm. E. Schudeiske, Sutherlin, Ore.

FOR SALE OR EXCHANGE 702

FOR SALE OR TRADE—ALL OR PART OF 622 acres; thirty miles east of Calgary, in wheat belt; one mile from Ardenode; excellent train service; good buildings, running water; 500 acres broken; 400 acres crop; $45 per acre, wtih crop. Write owner, James Whitehouse, Ardenode, Alberta.

CANADIAN WHEAT AND STOCK RANCHES for sale or exchange. Write Arthur Lundy, Edmonton, Alberta.

80 ACRES, NEAR BEND, OREGON, FOR SALE or trade. What have you? J. W. Palmer, Toppenish, Wash.

TO EXCHANGE—Real Estate 705

360 ACRES, PART IRRIGATED; UNENCUMbered; with stock and machinery; trade for smaller place. Tom Black, Leahy, Wash.

WOULD TRADE $1300 EQUITY HALF SECtion, unimproved, for improved small tract on west coast. Paul E. Green, Downs, Wash.

TRACK'S END

By HAYDEN CARRUTH

A Stirring Story of Adventure

(Copyright by Harper & Bros.)

CHAPTER XVIII.

After the fight: also a true account of the great blizzard: with how I go to sleep in the stronghold and am awakened before morning.

So that is the true history of the fight, just as it all happened at Track's End, Territory of Dakota, on Saturday, February 5, and thus, through good luck and being well intrenched behind my fortifications, and having plenty of Winchesters, I beat off the cutthroat outlaws and held the town. If they had waited one day longer for their coming they would have waited a good while longer, for the next day there came such a blizzard as I had never seen before nor since, which roared without ceasing six days, lacking 12 hours, and for two weeks more the weather stayed bad, and seemed to have relapses, as they say of a person sick. No robbers could have come through it, but the ones that had come got back to their headquarters through the first of it, as I have good reason to know.

And for almost six weeks after the fight I lived regularly and without much disturbance, with Kaiser and the other animals for company by day and the howling of the wolves and my own thoughts by night. If the thoughts had given me no more trouble than the wolves I should have been happy, for I think I had got so that I could not sleep unless there was a wolf howling somewhere about in the neighborhood. The loneliness, the dread of the outlaws coming back, the mystery of what or who was in or near the wretched town besides myself, all kept with me and made me wish ten thousand times that I had never heard of the place, or of any place except home.

Though, of course, I did not keep so miserable all the while. There was plenty of work to be done, and I kept at it most of the time. My eye soon got well. The day after I beat off the outlaws and had a little recovered from the work and strain of that and of the strange start the disappearance of the saddle gave me, I found so many things waiting to be done that I scarce knew what to turn my hand to first. But I had thought the poor pony in the tunnel deserved to be got out before anything else was done, and this I attended to an hour after the robbers had gone. I went out half expecting to find it gone, too, with its saddle, but it was not.

It was quite tired out and stood hangings its head. To get it out the way it had tumbled in would take a great amount of shoveling in the hard snow, I soon saw, so I decided I would try to lead it through the tunnel and on out by way of the hotel, though it seemed an odd thing to do. So I put a halter on it and tried that plan, and though its back scraped a little in places, what with me ahead and with Kaiser behind barking a good deal, we got it along and into the office and then on through the storeroom and kitchen and out to the barn. Dick and Ned were much excited by the new arrival, and so for that matter was Blossom, and Crazy Jane was like to have cackled her head off. The poor things were the same as I, half dead from lonesomeness.

Then I straightened up things about town which had been put out of order by the fight, fixed the fires again and cleaned up the guns. I didn't forget to go up the windmill tower several times to have a look for the outlaws, but I saw no more of them. Another thing I did was to lay some big slabs of frozen snow over the hole in the tunnel where the pony fell through, and it was a good thing I did this or I believe the blizzard would have gone near to filling the whole tunnel system. As it was it piled on more snow and covered all trace of the robbers' charge on the street.

I think it would not be possible for me to make you understand what a blizzard that was, which began the next day and kept up for the best part of a whole week. All day and night it roared and pushed at the windows and drove the snow in every crack and hole; here it piled up and there swept it away clean down to the ground. Not once did I go out beynd the tunnels. The fire at the depot I let go out, and the others I kept up more to have something to do than for any use they were, because I knew no outlaws could ever come in such a storm.

While the blizzard lasted I had a hard time to find enough to do to keep my mind off of my troubles. In an old recipe book, which I found in the closet under the stairs it told how to tan skins, so I began tanning my wolf skins. I whittled out some puzzles, too, and made a leather collar for Pawsy, but she would not wear it. I forgot to say that after the fight I found her in her old place over the door. I taught Kaiser some tricks, too, and gave the cat a chance to improve herself in the same way, but she refused the opportunity.

I did some reading, too, during these days. There was little to read in the Headquarters house, but among Tom Carr's things I found a book by Dr. Kane, telling of his life in the arctic regions, and this I enjoyed a great deal, feeling that I was in a country not much warmer, and that I must be more lonely than he was, since he always had human companions, while I had not one. In Mr. Clerkinwell's rooms over the bank I found some other books, all with very fine leather covers. Some of these I took the liberty of borrowing, but was very careful of them. One was "The Pilgrim's Progress," and I liked most of it exceedingly, especially the fight in the king's highway which Christian had with Apollyon. Another book was a story, very entertaining, by Charles Dickens, about little Pip and the convict who came back from Australia; I felt very sorry for Pip when he had to go out on the wet marshes so early, he being so little and the marshes so big.

There was another thing that I tried to amuse myself with, being nothing less than music. I found an old banjo belonging to Tom Carr and an accordion which Andrew had left behind. The banjo I could not do much with, but when I saw the accordion I said to myself that if I could blow the bellows in my father's forge, I ought to be able to work an accordion. So I went at it, hammer and tongs, and soon could produce a great noise, though mighty dismal, I think, and maybe what you would (had you heard it) have called heartrending, since whenever I started up Kaiser would point his nose to the ceiling and howl, very sad indeed. I think when one of our concerts was going on that could a guest have arrived at the Headquarters house he would have thought he had found a home for lunatics and not a hotel for an honest traveler who could pay his way.

During the blizzard also I drew up in black and white a program for each day which I decided I must follow out when the weather became better, though I had lived up to most of it from the first. Thus it was:

Five o'clock—Get up, start fire in hotel and make cup of coffee.

Five-thirty—Inspect fires in bank and three stores.

Six o'clock—Feed horses and cow and chickens, and milk cow.

Six-thirty—Get breakfast for self and Kaiser and Pawsy (which included washing the dishes, a hard job).

Seven-thirty—Inspect depot fire and



We got it along and into the office.

climb windmill tower and look over country with glass.

Eight o'clock—Finish work at barn, and for two hours such miscellaneous work as might be doing, as tunnels or other fortifications.

Ten o'clock—Windmill mounting again; miscellaneous work for two hours.

Noon—Dinner for family and work at barn.

One-thirty—Inspection of fires and windmill mounting; followed by miscellaneous work.

Three o'clock—Windmill mounting; miscellaneous work.

Four-thirty—Final daylight inspection of country from windmill; miscellaneous work.

Six o'clock—Supper and work at barn.

Eight o'clock—General inspection of fires and town, including observation from windmill for lights or fires.

Nine o'clock—Bed.

This system I followed out pretty closely whenever the weather was at all fair. When there was no miscellaneous work I would practice on the skis, shoot at the target, or something of this sort. Quite often on days when the weather would allow (though there were few enough of them) I would go up around and beyond the Butte on a little hunt. I got several jackrabbits and three more wolves. One of the wolves I left outside the shed, forgetting it. In the morning it was gone. There were not many thefts, however, and the shed was not broken into any more, though, to be sure, I had made the door twice as strong as it was before, and kept everything about town carefully and strongly locked, especially the buildings where the guns and ammunition were.

During the worst storms I used to sleep on the lounge in the hotel office, but at other times I always retired to the other building and took in the drawbridge. Two or three times, just for a change, I took Kaiser and slept in the fire stronghold. Kaiser and Pawsy still remained as much company for me as they had been from the first. What I should ever have done in that solitude without them I don't know. The great bushy wag of Kaiser's tail, and the loud purr of the cat, were the two things that cheered me more than anything else. I do believe that cat to have had the loudest purr of any cat that ever lived. A young tiger need not have been ashamed of it. And as for the grand wave and flourish of Kaiser's tail, it is beyond all description.

On one of my rabbit hunting trips, about a week after the big blizzard, I very foolishly got both of my feet frost-bitten and paid the full penalty. The day seemed not quite so cold, and I did not put on the heavy pair of woolen stockings which I commonly wore outside of my shoes and inside of my overshoes. I crouched behind a snowbank beyond the Butte for some time waiting for a rabbit which I saw to come within range, something which he did not do, and was so interested in this that I did not notice what was happening to my feet. But what had happened was quite plain enough when I got home and a great ache set up in my toes. I got the dishpan full of snow and thrust my feet in, to draw out the frost gradually, but this did not save me.

Two days later I was fairly laid up. One whole day I could scarce crawl about the hotel office and keep the fire going. I could not get to the barn to feed the animals, though they were suffering for food and water, and what I called my war fires in the other buildings I knew were out. My feet were much swollen, and the pain and the worry must have brought on a fever, and I lay on the lounge all day expecting nothing less than a fit of sickness, and what will become of me? I asked myself. I had no appetite for food, which alarmed me very greatly. I remember no day of my life at Track's End which seemed darker to me.

Toward night I fell asleep, and awoke with Kaiser licking my face and whining. I remembered that I had seen in the pantry a package of boneset, an herb by which my father set great store, holding it a sovereign remedy for all common complaints. I roused up, and by clinging to the back of a chair hobbled after it, and steeped myself a large mugful, very hot, and I believe it did me good. Be this as it may, as the saying is, I was better the next day, and managed to feed the poor, hungry creatures at the barn, and the day after I was able to start the fires. But for a week my feet were very painful and I suffered much.

It was a little more cheerful as the days began to get longer as February went on, and in the latter part of the month I thought the weather seemed to grow slightly better on the whole. For three days after the big blizzard the thermometer had stood from 40 to 45 below zero each morning, and it did not get up much higher at any time during the day. On the last two days of February it thawed a little in the afternoon, and on March 2 the snow was soft enough so I could make snowballs to throw at Kaiser, but it soon turned cold again.

There were northern lights many nights, flaming all over the heavens, like long swords, and on the night of February 15 there were some more prodigious than I would believe were possible had I not seen them with these eyes. They hung, wavering and trembling, over the whole northern sky almost to the zenith, like the lower edges of vast, mighty curtains, swaying and moving, now here, now there, and with all colors, yellow, violet, scarlet, blood red, as if the whole heavens were going to burn up, the thing being so marvelous that had I not seen lesser displays before I should have thought the world were at an end, no less, and have died, I do believe, of terror. As it was I stood in the snow by the barn gazing till my feet were like blocks of ice and I knew not if I were in Track's End or in the moon. Kaiser at first barked at the sight, then growled, then whined, and next ran yelping away to the shed, where I found him crept beneath a bench. Never in my life before nor since have I seen anything to equal the heavens that night. Early on the morning of February 24 I saw a beautiful mirage. I could see plainly, high in the air, the timber and bluffs along the Missouri, and the Chain-of-Lakes and coteaux. It lasted for a full half hour.

It happened on the night of March 14 that I took it into my head to sleep another night in the stronghold with Kaiser, and so brought about one more startling thing. It seemed that I must always be doing something instead of staying content with things as they were. It had been thawing a little for several days and I was beginning to wonder if I could not hope for such weather that the train might get through before long and release me from the awful place, though I knew the snow was packed in the cuts all along the line to the east like ice, and that it would take a great thaw to make any impression on it.

About 9 o'clock I left the hotel, after carefully locking everything, and went through the tunnel to the barn with Kaiser, my rifle and the lantern. I locked all the doors behind me, and then we crawled through the small door under Ned's manger, and that I fastened also. In the stronghold I rolled up in a blanket and the buffalo robe with Kaiser beside me. I left the lantern burning in the tunnel just beyond my feet at the edge of the stack. Kaiser barked at something when we first got in; later I heard wolves sniffing about on the roof; then we both went to sleep.

Some time in the night I awoke; what woke me I suppose I shall never know. But when I awoke I sat up suddenly as if I had never been asleep. I was face to face with the worst-looking creature I had ever seen in my life, black and blear-eyed and ugly, on his hands and knees in the tunnel beyond the lantern drawing my gun toward him by the stock. Then Kaiser sprang up like any wild beast, but I held him back by the collar.

CHAPTER XIX.

I find out who my visitor is: with something about him, but with more about the Chinook which came out of the northwest: together with what I do with the powder and how I again wake up suddenly.

When I sat up there in the stronghold and saw that creature with the glare of the lantern on his hideous face I knew two things, and these were, first, that it was an Indian, and, second, that he was the thief who had made me so much trouble, though how I knew this latter I can't say. I knew, too, that I was at his mercy.

What I should have done first I don't know if it had not been for Kaiser, but he acted so that it took all my strength to quiet him. I saw it would not do to let him spring at the wretch, who was now squatting in the snow at the mouth of the tunnel with my gun on his knee, the muzzle pointed straight at me.

When at last Kaiser began to act like a reasonable being, I said to the Indian, pretty loud and sharp, so he wouldn't know I was scared:

"What do you want?"

He grunted and made a noise down in his throat, which I couldn't see meant anything. So I said:

"Don't understand. Where'd you come from?"

He only grunted again. I knew that a great many times an Indian will pretend he can't talk English when he can, so I kept at him.

"What you going to do with my gun?" I next asked him.

This seemed to interest him. He looked down at it over his thick eyelids and said in very good English:

"Shoot thieves. Steal Indians' ponies."

It flashed upon me that perhaps I could make him help me after all, though I could see that he was a renegade and a drunkard.

"Did you see the fight?" I asked, beginning vaguely to suspect the truth.

He gave a grunt which meant yes. "Heap good fight," he added.

"Will you help fight if they come again?"

He said nothing, but sat looking at Kaiser, who was still growling, and only kept back because I held him by the collar.

"Where do you stay?" I asked. He made no answer.

"How did you come here?" I went on.

"Other Indians," he said. "Long sleep—gone when wake up."

"Did you see face—all fire—looking at you down in cellar?"

He only gazed at me out of his little black eyes. I guessed that he had drunk more than the others and had gone to sleep before the bad spirit looked in at the window, and so had not seen it and had been left behind.

"Did you see barn burn—big fire?" I asked.

He made not a sound in reply to this.

"Give me the gun," I said.

He gave his head a little shake and jerked out a sharp grunt.

"Give it to me and I give you another tomorrow."

He made not a movement or sound. I

could see that he had no intention of giving it up.

"Do you live in cellar?" I asked. He made the sound that seemed to mean yes. I remembered that I had not gone down into Fitzsimmons' cellar after the Indians went away because things were in such confusion that I saw I could do nothing with them. Since that I had had no occasion to go into the store at all. I had no doubt that he had stolen everything I had missed, but had been unable to get a gun before, because I had kept them very carefully under lock and key. I thought from his looks that he had probably lived principally on the liquor in the cellar, with the groceries that were in the store and what meat he had stolen from me. I could feel that it was getting colder in the stronghold, and guessed that he had broken open the tunnel, either purposely, after hearing Kaiser bark, or by accident when walking over it, as the thaw had weakened the roof a good deal.

"Want to get out," I said. "Go first!"

He pressed back close to the wall of the tunnel. "You go—take dog," he said. I made Kaiser go ahead, took the lantern and followed, saying "Come" to the Indian. He did so, simply stooping down, though I crawled on my hands and knees. Sure enough, the tunnel was broken down near the barn. We got out through the hole and went across the drifts to the open place back of the hotel. I tried again to get the gun away from him, but he hung on to it tighter than ever. I asked him if he were hungry, and he forgot to grunt and said "yes."

I brought out some food for him, and he stood in the shed and ate it like a hungry wolf. He gave a satisfied grunt when he got through, and I once more tried to get him to let me have the gun, but he hung to it without even a grunt, and started in the direction of the Fitzsimmons building. I went with him, as I could not understand how he had gone in and out for so long without my seeing some traces of it.

He stalked on in silence, his moccasins not making a sound on the hard snow. There was a well with a high curb a few feet behind the Fitzsimmons building and directly opposite the window through which I had shown the jacklantern. There was now a big bank of snow as high as the well curb from it to the building. He stepped over in the well curb, and, without looking back, disappeared through a hole in the side of it where he had pried off some of the boards. He had borrowed one of my ideas and made a tunnel between the well and window.

I went back to the hotel, and though I did not like the notion of his having the gun, there was a great load gone from my mind. I saw that every mysterious happening could be explained by the presence of the Indian. I made no doubt he had set the livery stable on fire by using matches when visiting it to find something to steal. A few sounds and part of the glimpse I got of him that night when I watched in the shed would have to be charged to my imagination, but I guess it could stand it. I had to laugh at myself when I remembered how I had thought I heard strange noises before the Indians came at all.

I think I slept better the rest of the night (though it was only a few hours) than I had for a long time, notwithstanding the shock I had got when I sat up and saw the Indian, when my heart, instead of beating too much, just stood still and didn't beat at all.

I saw nothing of the Indian the next morning, and after breakfast went to the Fitzsimmons store. I took the lantern and went down cellar. Everything was still in the greatest disorder. Boxes of groceries had been broken upon, and empty cans were scattered everywhere. The missing saddle lay in one corner. I looked about for the Indian, and at first thought he was gone. But at last I found him half in a big box turned on its side, rolled up in blankets, some of which he had stolen from the bed in the hotel. One was a horse blanket which I was sure came from the livery stable, so I now felt certain that he had been responsible for the fire. He was sound asleep. I poked him with my foot, but he did not move. I instantly knew that he had been drinking more of the whisky and was sleeping off its effects. I picked up a hatchet, knocked off the spigot and let the contents of the barrel run on the ground.

I took my lantern and started for the cellar stairs. I glanced back at the Indian, and just as I did so he moved one foot a trifle and I saw something under it. I went back and looked closer and saw that it was the stock of my rifle, of which I had not once thought that morning. I instantly decided that I must get it away from him.

I stood my lantern in line with the foot of the stairs, knelt down and very slowly and cautiously began to pull the gun from beneath the Indian. He was lying on it full length, and I knew there was vast danger of waking him. He was much larger than I, and I made no doubt three times as strong. I fairly held my breath as the weapon slowly yielded to my efforts. I got it perhaps a third of the way out when it stuck fast, caught, perhaps, on some of the Indian's clothing. I pulled as hard as I could. It disturbed him, and he moved his feet, and then with one arm threw off the blanket from his shoulders. Like a flash I made up my mind to have that gun regardless of anything.

I jumped forward, and with my knees and hands rolled that savage over as if he had been a log of wood, grabbed the rifle, and started for the stairs. I snatched at the lantern, but missed it and knocked it over. The flame wavered for an instant and went out. Up the stairs in total darkness I swarmed on all fours, dragging the gun by the muzzle, so that had the hammer caught on anything I am sure the bullet had gone clean through my body. I slammed the door at the top, scrambled out a side window where I had got in, and ran across the drifts to the hotel like a scared coyote, sitting down in the office weak as a cat. I expected no less than that he would follow me, but he did not, and I question if he roused up further from his drunken stupor. Looking back I see what a coward I showed my self, but it seemed quite natural at the time.

(To be continued.)

TO ORGANIZE DAIRY CLUBS.

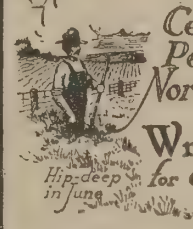
Cooperating with the Yakima county Holstein breeders and the Guernsey breeders' association, plans have been formulated for the organization of several dairy calf clubs on a three-year basis. Yakima banks have given assurance of financial backing to as much as $12,000 to $13,000 to put over the organization of these clubs. County Agent E. C. Scott is promoting the movement.

MRS. I. DIVINE, Spokane, Wash.—I like The Washington Farmer and would not be without it.

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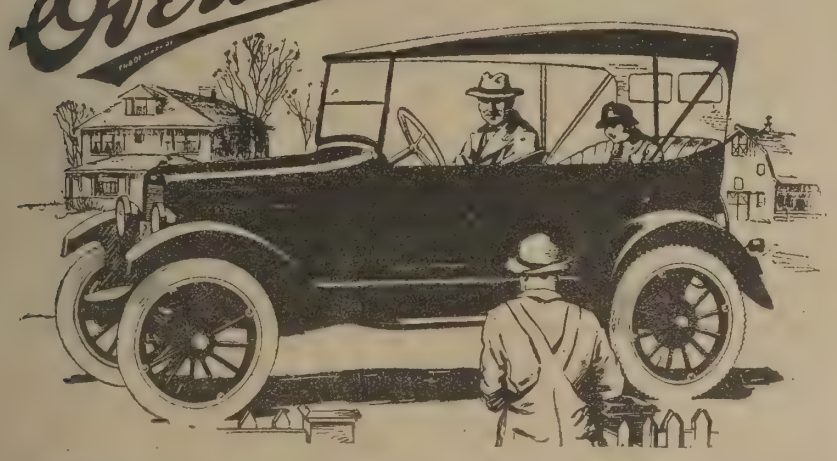
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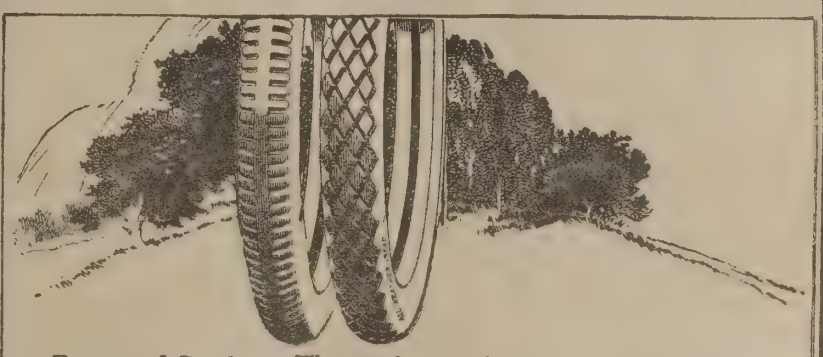
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You can get these tires from your nearest Goodyear Service Station Dealer. Ask him to explain their advantages.

GOODYEAR

FAMILY CIRCLE

ALICE BARLAND
EDITORIAL CONTRIBUTOR

Experience Letters

From Our Family Circle Women

Dear Sisters of the Family Circle: Since most of us have to make, mend, patch and darn to extend the usefulness of garments, I will give some hints and methods.

If socks and stocking are darned on the heels before they are worn they will last twice as long before showing holes. It is easy to do this when the hose are new and soft and one may use yarn, coarse thread or string, the soft kind taken from the seams of flour sacks, run lengthwise first then on the bias. The knees of children's stockings can be protected this way, having the long stitch on the inside and the short one outside. The same can be done with the heels of stockings to be worn with low shoes so the stitches won't show. It can be done in a few odd minutes.

In mending underwear I cut the patches on the bias whether I use knit goods or plain, for patches. In making dress waists, kimonos, etc., I put a patch on the underside of the sleeves, next to the arm hole and also on the back edge of the fronts next to the armhole, taking care to match if the goods is figured. When the elbows and knees of knit wear show thinness I cut them off several inches above the thin places, sewing the left on to the right and the right onto the left, stretching the seams as I sew them

When making children's dresses put the tuck in the hem then when it is let out the bright cloth will be at the bottom and will not look tacky. Cut sleeves of coats two or three inches longer at the top, sew up the length first required and the extra length will fit the garment easily and can be let down as needed; also cut the cuffs deep enough to let down, thus keeping the shape of the sleeve balanced.

Out of a sweater which was "passed on" to me, I made a small sweater, cap and mittens for a boy of 6 years. Out of wool sock tops I make cute tams, bootees, and mittens, using bright yarn for pompons, edgings, etc. For the little tots, too young to wear knit garments, but who should have limbs protected, cut out leggings from discarded underwear, leaving about 21-2 inches open at the ankle, so if necessary to remove unbutton the shoe, let down the stocking and the legging will slip off. Hold them in place with supporters over both leggings and stockings. They are a great protection and three pairs are a plenty.

If others have helps please send them along as I have 10 grandchildren—one pair of twins—and as I like to help, would like to get ideas along these lines.—Mrs. L. A. P.

Corn Bread Without Eggs

When we lived in Alaska my wife said she could not make corn bread without eggs or sour milk. Here is an invention of mine to overcome the difficulty, and we still make our corn bread by this recipe, though we have both eggs and milk:

Sift together one cup of corn meal, one cup of wheat flour, one teaspoon of salt, two heaping teaaspoons of baking powder. Stir in and beat well enough sweet milk so that it will pour into the bake pan and run down flat. Bake one-half hour.

Rogue River, Ore. WM. M. CARLE.

Your Health

By Royal S. Copeland, M. D., F. A. C. S.

HOW TYPHOID IS "CARRIED."

It was not long ago that typhoid fever was one of the most common and most fatal of diseases. Today, in a well-conducted community it is almost never met.



Dr. Copeland.

I often wonder why any educated person can sneer at the germ theory of disease and scoff about what the laboratory has done for the world. The control of typhoid fever should be enough to convince the most skeptical that society owes an overwhelming debt of gratitude to the bacteriologist.

When I was a medical student we used to hear dreadful tales of the decimation of communities by this dread disease. The bullets of the Spanish war did little harm compared with the devastation of the germs of typhoid.

Fortunately for the world, the control of typhoid had been learned before the advent of the World war. It was of little importance, because of the means of protection provided by the medical corps.

The typhoid germ or bacillus is hardy. In the presence of moisture it will live for months. Even in river or harbor water it will remain alive for weeks. One writer says the bacillus has lived in a sealed tube for more than a dozen years. When typhoid-infected water freezes, the germ will live for three or four months in the ice.

The germ enters the human body through food or drink. Water, milk, contaminated vegetables and other articles of food may carry the bacillus.

The person who has once had the disease may be spreading the germs of typhoid for months or years after he has recovered. Examination of the urine sometimes reveals them. In some reported cases they have been discovered here years after the patient had the disease.

The "typhoid carrier" usually has a colony of germs growing in his gall-bladder. A noticeable example of this sort is "Typhoid Mary," who has been under quarantine for years, because of the large number of cases of typhoid traced to her.

Every case of typhoid fever means that some one else had the disease, and, by careless disposal of the body wastes, has passed it on to the present victim. This might be done through food or drink, or the contagion might be carried by flies.

The doctor, nurse, members of the family, and the servants of the place in which lives a person sick with typhoid should be impressed with the importance of guarding against the transmission of this dread disease.

If the first patient is properly cared for that case will be the end of the typhoid flurry in that neighborhood.

Just Folks

Law means order.

Acquirement may be a burden.

Better leave some things undone.

Charity is the bigger part of wisdom.

Part of disappointment is in naming it.

Mistakes give the other fellow a chance.

A good time and a bad time are near neighbors.

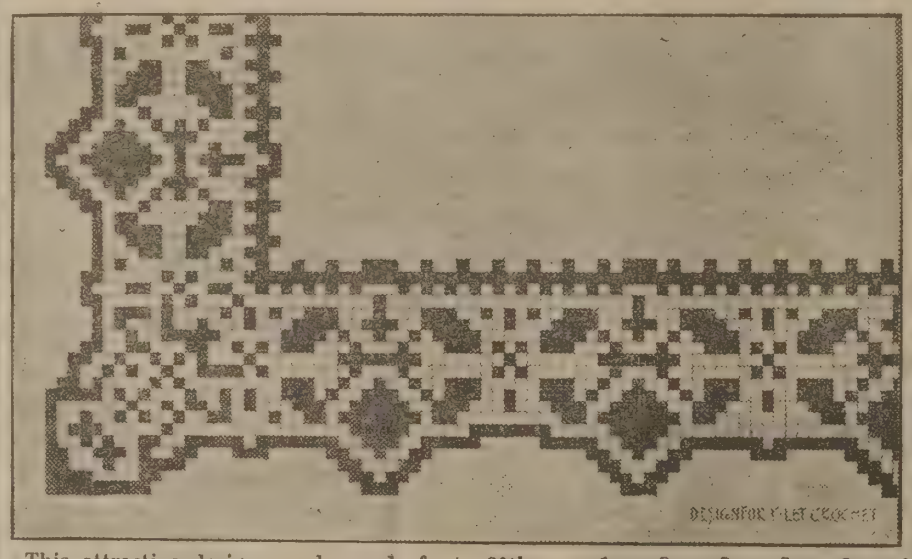
One of the high lessons of life is to learn to overlook.

Garnished platitudes are more pleasing than ungarnished facts.

Joys bring no more blessings than necessity—probably not as many.

E A S

Filet Crochet for Various Uses



This attractive design can be made for various uses and the size thread to be used should be gauged by the width desired. For edging square or oblong pieces of fine linen, the medium or fine thread should be used. If for heavier materials for table covers, piano scarf, dresser scarf or bedspread the coarser cottons are used. The number of stitches is the same whether the thread be Cordonnet crochet cotton No. 100 or No. 10. Start with 57 ch sts.

1st row: 1 sp, 2 gr, 4 sp, 1 gr, 1 sp, 1gr, 5 sp, 2 gr, 3 ch sts.

2d row: 1 gr, 3 sp, 2 gr, 2 sp, 1 gr, 2 sp, 2 gr, 2 sp, 1 gr, 1 sp, 3 ch sts, turn.

3d row: 3 gr, 4 sp, 1 gr, 1 sp, 1 gr, 5 sp, 2 gr, turn, 3 sl sts, 3 ch sts, dropping 1 gr.

4th row: 1 gr, 1 sp, 1 gr, 8 sp, 1 gr, 2 sp, 1 gr, 1 sp, 5 ch sts, turn.

5th row: 1 sp, 2 gr, 3 sp, 2 gr, 2 sp, 2 gr, 3 sp, 1 gr, 3 ch sts, turn.

6th row: 1 gr, 2 sp, 3 gr, 2 sp, 3 gr, 3 sp, 2 gr, 5 ch sts, turn.

7th row: 1 sp, 2 gr, 1 sp, 4 gr, 2 sp, 4 gr, 1 sp, 1 gr, 3 ch sts, turn.

8th row: 1 gr, 1 sp, 2 gr, 5 sp, 3 gr, 2 sp, 1 gr, 1 sp, 3 ch sts, turn.

9th row: 3 gr, 1 sp, 2 gr, 5 sp, 1 gr, 3 sp, 2 gr (to form a gr, without a foundation make 1 t c into same st as last d c, * 1 t c, catching into lower portion of t c, just completed, repeat * together forming 1 gr), 5 ch sts, turn.

10th row: 1 d c into 4th ch st, 1 d c into each of next 2 sts, forming 1 gr, 1 gr, 2 sp, 1 gr, 2 sp, 1 gr, 1 sp, 1 gr, 1 sp, 1 gr, 4 sp, 1 gr, 1 sp, 5 ch sts, turn.

11th row: 1 sp, 2 gr, 4 sp, 3 gr, 2 sp, 3 gr, 2 sp, 2 gr, 5 ch sts, turn.

12th row: 2 gr, 2 sp, 5 gr, 2 sp, 1 gr, 2 sp, 1 gr, 3 sp, 2 gr, 3 ch sts, turn.

13th row: 1 gr, 2 sp, 4 gr, 1 sp, 1 gr, 1 sp, 7 gr, 2 sp, 1 gr, 3 ch sts, turn.

14th row: 2 gr, 2 sp, 5 gr, 2 sp, 1 gr, 2 sp, 1 gr, 3 sp, 2 gr, 5 ch sts, turn.

15th row: 1 sp, 2 gr, 4 sp, 3 gr, 2 sp, 3 gr, 2 sp, 2 gr, turn, 3 sl sts, 3 ch sts.

16th row: 2 gr, 2 sp, 1 gr, 2 sp, 1 gr, 1 sp, 1 gr, 1 sp, 1 gr, 4 sp, 1 gr, 1 sp, 3 ch sts, turn.

17th row: 3 gr, 1 sp, 2 gr, 5 sp, 1 gr, 3 sp, 2 gr, turn, 3 sl sts, 3 ch sts.

18th row: 1 gr, 1 sp, 2 gr, 5 sp, 3 gr, 2 sp, 1 gr, 1 sp, 5 ch sts, turn.

19th row: 1 sp, 2 gr, 1 sp, 4 gr, 2 sp, 4 gr, 1 sp, 1 gr, 3 ch sts, turn.

20th row: 1 gr, 2 sp, 3 gr, 2 sp, 3 gr, 3 sp, 2 gr, 5 ch sts, turn.

21st row: 1 sp, 2 gr, 3 sp, 2 gr, 2 sp, 2 gr, 3 sp, 1 gr, 3 ch sts, turn.

22d row: 1 gr, 1 sp, 1 gr, 8 sp, 1 gr, 2 sp, 1 gr, 1 sp, 3 ch sts, turn.

23d row: 3 gr, 4 sp, 1 gr, 1 sp, 1 gr, 5 sp, 2 gr, 3 ch sts, turn.

24th row: 1 gr, 3 sp, 2 gr, 2 sp, 1 gr, 2 sp, 2 gr, 2 sp, 1 gr, 1 sp, 5 ch sts, turn.

25th row: 3 sp, 1 gr, 3 sp, 1 gr, 1 sp, 1 gr, 5 sp, 2 gr, turn, 3 sl sts, 3 ch sts.

26th row: 1 gr, 1 sp, 3 gr, 1 sp, 1 gr, 4 sp, 1 gr, 1 sp, 1 gr, 1 sp, 1 gr, 5 ch, sts, turn.

27th row: 2 sp, 1 gr, 3 sp, 1 gr, 2 sp, 1 gr, 3 sp, 1 gr, 1 sp, 1 gr, 3 ch sts, turn.

28th row: 1 gr, 2 sp, 1 gr, 2 sp, 5 gr, 5 sp, 5 ch sts, turn.

29th row: 1 sp, 1 gr, 1 sp, 1 gr, 2 sp, 2 gr, 3 sp, 2 gr, 2 sp, 2 gr, 5 ch sts, turn.

30th row: 2 gr, 2 sp, 1 gr, 2 sp, 1 gr, 1 sp, 1 gr, 1 sp, 1 gr, 3 sp, 1 gr, 2 sp, 5 ch sts, turn.

31st row: 1 sp, 1 gr, 1 sp, 4 gr, 2 sp, 1 gr, 2 sp, 1 gr, 1 sp, 1 gr, 2 sp, 1 gr, 5 ch sts, turn.

32d row: 2 gr, 1 sp, 1 gr, 4 sp, 1 gr, 1 sp, 1 gr, 8 sp 5 ch sts turn.

33d row: 2 sp 1 gr, 1 sp, 1 gr, 2 sp, 1 gr, 3 sp, 1 gr, 1 sp, 1 gr, 1 sp, 5 gr, 3 ch sts, turn.

34th row: 1 gr, 6 sp, 1 gr, 2 sp, 1 gr, 1 sp, 2 gr, 1 sp, 1 gr, 1 sp, 1 gr, 2 sp, 3 ch sts, turn.

35th row: 1 gr, 3 sp, 2 gr, 2 sp, 1 gr, 2 sp, 1 gr, 1 sp, 1 gr, 2 sp, 1 gr, 2 sp, 1 gr, 3 ch sts, turn.

36th row: 1 gr, 1 sp, 3 gr, 5 sp, 1 gr, 9 sp, 3 ch sts, turn.

37th row: 2 gr, 1 sp, 5 gr, 2 sp, 2 gr, 2 sp, 1 gr, 1 sp, 1 gr, 2 sp, 1 gr, 3 ch sts, turn.

38th row: 2 gr, 2 sp, 3 gr, 1 sp, 1 gr, 2 sp, 2 gr, sl st down side of st, and across 3 gr, 3 ch sts, 3 gr, break thread.

39th row: Join at left-hand side to 4th d c of the 2 gr, of previous row, 3 ch sts, 4 gr, 2 sp, 1 gr, 3 sp, 2 gr, 3 ch sts, turn.

40th row: 4 gr, 4 sp, 2 gr, turn, 3 sl sts, 3 ch sts.

41st row: 9 gr, break thread.

Join at the inside edge, using the turn of each row as a foundation for your work, continue the pattern to the next corner, this first row, repeats 21st row and repeat backward to start.



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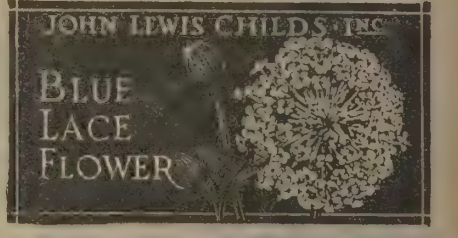
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Bits of Fun for Everyone

Ode to a Young Man.

There was a young man from Hoboken
Who wished that he never had spoken
When he cried "Fire! Fire!"
For they said: "What a liar!
That's only the smokehouse a-smokin'."
Armour Swift Cudahy.

The First Three Times.

She—If I refuse you, will you commit suicide?

He—Er—that has been my usual custom.—Passing Show, London.

Got Results.

Stockson: "One day last week old man Gotrox bought a lot of those 'Do It Now' signs and hung 'em around the office."

Bond: "How did the staff take it?"

Stockson: "Almost unanimously. The cashier skipped with $30.000; the head bookkeeper eloped with the private secretary; three clerks asked for an increase of salary, and the office boy lit out to become a highwayman and got as far west as Pittsburgh before he was caught and disarmed."—National Magazine.

Hog Meat.

"I once printed a poem for that rural subscriber and today he sent me another valuable contribution from his pen."

"Another poem?"

"No. A prime pig."

Powder Might Do as Well.

Maud—Why should she want her portrait painted?

Grace—Well, she's getting too old to look well in a photograph.—London Opinion.

Latest High Class Patterns for the Home

Please order the patterns you desire at least two or three weeks before you wish to use them. Desiring to obtain the latest high-class patterns for its readers, THE FARMER has made arrangements to have them sent direct from the east, and under present mailing conditions it takes about that time for them to reach you.



3462. Ladies' dress. Cut in six sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. A 38-inch size will require 6 1-2 yards of 44-inch material. The width of the skirt at lower edge is 1 7-8 yards. Price 10 cents.

3831-3695. Ladies' costume. Waist 3831, cut in six sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. Skirt 3695, cut in six sizes: 24, 26, 28, 30, 32 and 34 inches waist measure. The width of the skirt at the foot is 2 3-4 yards. To make the dress as illustrated will require seven yards of 36-inch material. Two separate patterns, 10 cents for each pattern.

3890. Ladies' wrap. Cut in four sizes: Small, 34-36; medium, 38-40; large, 42-44; extra large, 46-48 inches bust measure. A medium size will require 4 3-4 yards of 44-inch material. Price 10 cents.

3593. Junior dress. Cut in three sizes: 12, 14 and 16 years. A 14-year size will require 3 3-4 yards of 38-inch material. Price 10 cents.

3895. Misses' one-piece dress. Cut in three sizes: 16, 18 and 20 years. A 16-year size requires 4 1-2 yards of 36-inch material. The width of the skirt at the foot is about two yards. Price 10 cents.

3398. Ladies' apron. Cut in four sizes: Small, medium, large and extra large. A medium size will require 3 7-8 yards of 36-inch material. Price 10 cents.

3877. Ladies' apron dress. Cut in four sizes: Small, 34-36; medium, 38-40; large, 42-44; extra large, 46-48 inches bust measure. A medium size requires 6 1-2 yards of 27-inch material. Price 10 cents.

3523. Girl's dress. Cut in four sizes: 8, 10, 12 and 14 years. A 12-year size will require 3 1-4 yards of 36-inch material for skirt and suspenders, and 1 3-4 yards for the waist. Price 10 cents.

3505. Child's short clothes set. Cut in four sizes: Six months to 1 year, 2, 3 and 4 years. A 1-year size will require 1 3-4 yards for the dress, 1 3-8 yards for the petticoat and 5-8 yard for the drawers of 36-inch material. Price 10 cents.

3396. Child's dress. Cut in four sizes: 2, 4, 6 and 8 years. A 6-year size will require 3 1-4 yards of 27-inch material. Price 10 cents.

3879. A group of dress accessories. Cut in three sizes: Small, medium and large. The sizes for the bodice corresponding respectively to 36-38, 40-42 and 44-46 inches bust measure. It will require one yard of 38-inch material for the bodice. three-eighths yard of 36-inch material for collar and one pair of cuffs and one-half yard of 36-inch material for one pair of under sleeves. Price 10 cents.

3878. Boy's suit. Cut in four sizes: 6, 8, 10 and 12 years. A 10-year size requires 3 3-4 yards of 27-inch material. Price 10 cents.

CATALOGUE NOTICE.

Send 12 cents in silver or stamps for our up-to-date spring and summer 1922 catalogue, showing color plates and containing 500 designs of ladies', misses' and children's patterns, a concise and comprehensive article on dressmaking, also some points for the needle (illustrating 30 of the various simple stitches), all valuable hints to the home dressmaker.

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Enclosed find.....cents for which send me the following:

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Pattern No..... Size ..... Pattern No..... Size .....

Name .....

Postoffice..... State.....

R. F. D..... Box No. ..... St. No. .....

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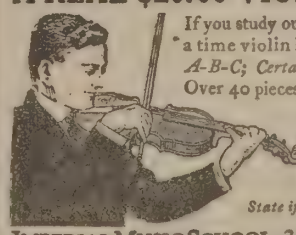
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High Points in News of the Week

Possibly the outstanding news developments of the last week have been in connection with the proposed soldiers' bonus. While there is a great demand for a bill of this kind, and while the sentiment in congress appears to be strong for its passage, President Harding, Secretary Mellon of the treasury department and others responsible for the financial administration of the country's affairs have expressed doubt as to its being advisable at this time to pass a bonus bill. All manner of methods of raising the money have been discussed, including the floating of government bonds and the levy of taxes to redeem them, levy of several forms of special taxes or the levy of a general sales tax. President Harding has personally and officially announced that he considers the sales tax as the only practical means of raising the money to pay the proposed bonus.

The development is of special interest in the farmers of the country because of the unalterable opposition of organized farmers to the sales tax for any purpose whatsoever. It is considered extremely doubtful whether a bonus bill carrying with it a provision for a general sales tax can be passed by the senate, owing to the opposition that would be made to it by the farm bloc.

This is one of the first instances in the history of this country when the farmers have been in position to play a leading part in determining the character of an important piece of national financial legislation. It is not to be understood that the farm bloc has gone on record as opposed to the bonus for the ex-service men, but that it is opposed to raising the money by a sales tax on the things that the general public, including the farmers, must buy. Opposition to the sales tax is based on the ground that it would have to be paid by the ultimate consumer.

* * *

There appears to be no longer any doubt that the general business condition of the United States is improving. Resources of the national banks of the United States, which are considered a reasonably accurate indicator of financial conditions, were shown by last week's report of the comptroller of currency to total $19,422,000,000, or about $406,000,000 more than six months ago. All deposits in these national banks totaled over $16,000,000,000, or about $514,000,000 more than six months ago. An official statement accompanying the comptroller's report says that the figures "demonstrate that the peak of liquidation and consequent depression was passed somewhere between September 6 last and December 31, and the tendency has been steadily toward improving business."

The prices of farm products in comparison to what the farmer must buy have been gradually improving. This is no doubt partially due to an improvement in the export demand.

* * *

Committees in the United States senate are already at work on the treaties that President Harding recently submitted to them following the adjournment of the recent conference on the limitation of armaments. It is expected that the seven treaties will all be acted upon at about the same time. The only one that is expected to develop strong opposition in the senate is that of the so-called four-power pact between this country, England, Japan and France, providing for the peaceable control of the affairs of three nations on the Pacific ocean.

* * *

With a view to building up the American merchant marine, a movement is under way for the subsidizing of owners and operators of American ships. It is proposed to provide governmental aid to the extent of some $30,000,000 a year. This is a plan followed for many years by the British government, and under which that country has built up her merchant fleet to a commanding position.

* * *

Senate Capper of Kansas appears to be the most likely senator to take the place of Senator Kenyon of Iowa as leader of the farm bloc in congress. Senator Kenyon resigned recently to accept appointment as federal judge in a middle western district.

* * *

President Harding last week signed the Capper-Volstead bill legalizing cooperative farm marketing organizations. It will be remembered that one of the "five points" that THE FARMER urged in its letter to President Harding and the recent agricultural conference in Washington was that a bill be enacted removing every possible doubt as to the right of farmers to organize and market their products collectively. It is hoped that this bill will go far toward that accomplishment.

* * *

The president is expected early this week to appoint the commission upon whose shoulders rests the responsibility of working out the plan for handling the foreign debt situation. Foreign countries owe America several billion dollars as a result of war loans, and the commission is required to work out equitable plans under which these loans may be paid during a period of years.

* * *

There is a sturdy fight on in congress over whether the American valuation or foreign valuation of imports shall be used as the basis on which to calculate protective tariffs. This question must be settled before the permanent tariff bill can be enacted and put into effect.

* * *

Secretary of the Interior Fall has announced as the administration's plan the inclusion of all four forms of reclamation of land under any comprehensive measure passed by congress. This idea is proposed to be incorporated in the present McNary reclamation bill, under which a revolving fund of $350,000,000 would be appropriated by the government. This fund would ultimately produce some $2,000,000,000 for reclamation purposes. The four kinds of reclamatoin given by Secretary Fall are: Irrigation, drainage, diking and clearing logged-off lands.

Wheat $1.20 at Hooper

The McGregor Land and Live Stock company of Hooper, of which Peter McGregor is president, has just sold 10,000 bushels of Early Baart wheat at Hooper, Whitman county, Wash., at $1.20, making the sale one of the best of the season in the amount net to the grower.

KITSAP JERSEY MEN ORGANIZE.

Jersey breeders of Kitsap county recently organized the Kitsap County Jersey Cattle club, Harold Todhunter of Port Gamble, president, and F. G. Zeigler of Port Blakeley as secretary.

Farm Business and Markets Outlook

(Continued from page five.)

Prices for No. 1 American cheese on February 11 were:

Chicago—Flats, 21 1-2@22c; twins, 21@21 1-2c; S. Daisies, 21 1-2@23 1-4c; D. Daisies, 22@22 1-2c; Longhorns, 22 1-2@24c; square prints, 23@24c.

FRUITS AND VEGETABLES.

The total movement of potatoes for the season up to February 12 amounted to 169,274 cars compared with 151,188 cars in the same period last year. Since the 1921 crop was smaller than that of 1920, the quantity remaining in producing sections is believed to be smaller than a year ago. Wisconsin and Colorado are said to have a large surplus still to be shipped. Northern sacked round whites are quoted at $1.50 to $1.70 f. o. b. shipping points and $1.60 to $1.95 in the Chicago carlot market.

Apple markets advanced again last week, Baldwins being quoted at a range of $7.50 to $8.50 in wholesale markets and $7 to $7.25 f. o. b. New York shipping points. Boxed apples advanced more than barreled stock with extra fancy Spitzenburgs quoted at $2.75 to $4 in wholesale markets.

LATEST QUOTATIONS.

The Live Stock Markets.

PORTLAND, Feb. 18.—Cattle—Choice steers, $6.75@7.50; medium to good steers, $5.50@6.75; fair to medium steers, $5.50@6; common to fair steers, $4.50@5.50; choice feeders, $5@5.50; fair to good feeders, $4.50@5; choice cows and heifers, $5.75@6.25; medium to good cows and heifers, $5@5.75; fair to medium cows and heifers, $4.25@5; common cows, $3.25@4.25; canners, $2.25@3.25; bulls, $3.50@5.50; choice dairy calves, $10@11; prime light calves, $9@10; medium light calves, $6.50@9; heavy calves, $4.50@6.50.

Hogs—Prime light, $11.50@11.75; smooth heavy, 200 to 300 lbs., $10@11; smooth heavy, 300 lbs. up, $9@10; rough heavy, $7.50@9.95; fat pigs, $11@11.50; feeder pigs, $10.75@11.50; stags, subject to dockage, $6@9.

Sheep—East-of-mountin lambs, $9.75@10.65; best valley lambs, $8.25@9.25; cull lambs, $4.75@6.25; fair to good, $6.75@8.25; eastern Oregon feeders, $7@8; light yearlings, $7.75@8.25; heavy yearlings, $6.75@7.75; light wethers, $6.75@7.75; heavy wethers, $4.75@6.75; ewes, $3@6.

SPOKANE, Feb. 18.—Cattle—Prime steers, $6.50@7.50; good to choice steers, $5.75@6.50; medium to good steers, $5.25@5.75; fair to medium steers, $4.75@5.25; common to fair steers, $4.25@4.75; choice cows and heifers, $5@6; good to choice cows and heifers, $4@5; medium to good cows and heifers, $3.50@4; fair to medium cows and heifers, $3@3.50; canners, $2@3; bulls, $3@5; light veal calves, $8@9.50; heavy veal calves, $4@8; stockers and feeders, $4.50@5.

Hogs—Prime mixed, $10.75@11.25; medium, $9.75@10.75; heavies, $7.75@9.75; fat pigs, $9.75@10.75; stockers and feeders, $8.75@9.75.

Sheep—Prime lambs, $9@10; fair to medium, $8@9; yearlings, $6@8; wethers, $4.50@6; mutton ewes, $2@6; feeder lambs, $7@8.

The Grain Market.

PORTLAND, Ore., Feb. 18.—Wheat—Hard white, $1.23; soft white, white club, hard winter, $1.21; northern spring, $1.20; red Walla, $1.15.

Grain futures: Wheat—February, March, April, bid: Hard white, $1.23; soft white, $1.21; white club, $1.21; hard winter, $1.21; northern spring, $1.20; red Walla, $1.15. Oats—No. 2 white feed, $31; No. 2 gray, February, $29; March and April, $30. Barley—Brewing, $27.50; standard feed, $26.50. Corn—No. 2 eastern yellow, shipment Februray, $27.50; March and April, $27.75; No. 3 eastern yellow, shipment February, $27.25; March and April, $27.50.

SEATTLE, Feb. 18.—Wheat—Hard white, soft white, hard club, soft red winter, northern spring, $1.22; hard red winter, $1.23; eastern red Walla, $1.19; Big Bend bluestem, $1.30.

WALLA WALLA, Feb. 18.—Wheat—Hard white, $1.05; white club, $1.03; red Walla, 98c.

RITZVILLE, Feb. 18.—Bart, $1.28; red, $1.22; Fife, $1.04.

PULLMAN, Feb. 18.—Red wheat, 97c; white wheat, $1.

LEWISTON, Idaho, Feb. 18.—Club, Fortyfold, $1; hard winter, $1.02.

Hay and Grain Feeds.

PORTLAND, Feb. 18.—Millfeed—Price f. o. b. mill: Millrun, ton lots, $27; mixed cars, $26; straight cars, $25 per ton; middlings, $32; rolled barley, $36@38; rolled oats, $38; scratch feed, $47 per ton.

Corn—White, $34; cracked, $36 ton.

Hay—Buying price f. o. b. Portland: Alfalfa, $13.50@14 per ton; cheat, $10.50@11; oat and vetch, $14.50; clover, $11; valley timothy, $14@15; eastern Oregon timothy, $16@17.

SPOKANE, Feb. 18.—Wheat—Feed wheat, $40 per ton.

Oats—$36 per ton; steam rolled, $38.

Corn—$34 per ton; cracked corn, $36 ton.

Barley—$32; steam rolled, $34 per ton.

Bran and shorts—$29 per ton.

Alfalfa, $18 ton; timothy, $18 ton; mixed hay, $18 ton.

General Produce.

PORTLAND, Feb. 18.—Butter—Cubes, extras, 35@36c per lb.; parchment wrapped, box lots, 41c; cartons, 41c. Butterfat, buying prices: No. 1 grade, 37c, delivered Portland.

Eggs—Buying price, 25@26c doz., case count; jobbing prices, case count, 27c; candled ranch, 28@30c; association selects, 32c; association firsts, 30c; association pullets, 28c.

Cheese—Tillamook triplets, price to jobbers, f. o. b Tillamook, 26c; young Americas, 27c lb.

Poultry—Hens, 20@25c; springs, 22c; ducks, 22@28c; geese, 20c; turkeys, live, nominal, dressed, 38@40c.

Pork—Fancy, 15c per pound.

Veal—Fancy, 15½c per pound.

SPOKANE, Feb. 18.—Butterfat—33c lb.

Eggs—Fresh ranch eggs, $9.60; fresh pullet eggs, $9.

Live poultry—Springers, 19c lb; springers, staggy, 15c lb; hens, fat, 4 lbs. up, 23c lb.; 2 to 4 lbs., 19c lb.; old roosters, 12c lb.; rabbits, 10c lb.

SEATTLE, Feb. 18.—Eggs—Select local ranch, white shells, 30; do., mixed colors, 28@29c; pullets, 26c.

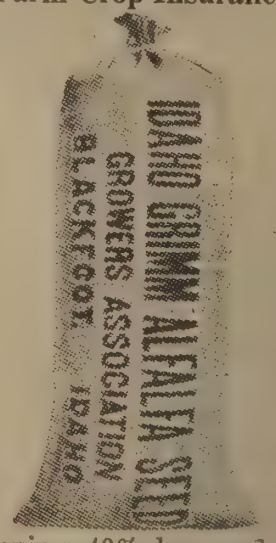
Butter—City creamery cubes, 41c; bricks or prints, 42c.

Range of Live Stock Prices for the Week Ending Feb. 15

CATTLE.	Chicago.	Spokane.	Portland.	N Salt Lake
Choice, prime heavy steers (1100 lb up)	9.00@ 9.85	.....	.....	.....
Good heavy steers	8.25@ 9.15	.....	.....	.....
Medium heavy steers	7.15@ 8.35	.....	.....	.....
Common heavy steers	6.10@ 7.35	.....	.....	.....
Choice, prime light steers (1100 lb do'n)	8.85@ 9.75	.....	.....	.....
Good light steers	8.00@ 9.00	.....	.....	.....
Medium light steers	6.75@ 8.15	6.00@ 7.50	6.50@ 7.75	5.50@ 7.00
Common light steers	5.85@ 7.15	4.25@ 6.00	4.75@ 6.50	4.00@ 6.00
Common, choice butcher heifers	4.25@ 7.75	3.50@ 6.00	4.00@ 6.25	3.50@ 5.25
Common, choice butcher cows	4.00@ 6.25	3.00@ 5.25	3.00@ 5.75	3.00@ 4.75
Bologna and beef bulls	3.50@ 5.75	3.00@ 5.00	3.50@ 5.50	2.00@ 3.50
Canners, cutters, cows, heifers	2.75@ 4.10	2.00@ 3.00	2.25@ 3.15	1.50@ 3.00
Canner steers	3.50@ 4.50	2.50@ 4.00	2.50@ 4.00	2.00@ 3.50
Medium, choice light veals	7.00@11.00	8.00@10.00	9.00@12.00	6.00@ 7.00
Common, choice heavy veals	4.00@ 7.50	4.00@ 8.00	5.50@ 9.00	.....
Common, choice feeders (1100 lb. up)	5.25@ 7.25	.....	.....	.....
Common, choice feeders (750-1000 lb.)	5.15@ 7.25	4.50@ 5.25	4.50@ 5.00	.....
Common, choice stocker steers	4.50@ 7.00	.....	.....	.....
Common, choice stocker cows, heifers	3.40@ 5.25	.....	.....	.....
HOGS.				
Top of market	10.25	10.50	10.60	9.50
Bulk of sales	9.20@10.15	10.00@10.50	10.25@10.60	9.00@ 9.40
Heavy, (250 lb. up)	9.15@ 9.90	7.50@ 9.00	9.25@10.00	.....
Medium (200-250 lb.)	9.30@10.20	8.75@10.00	9.50@10.25	9.00@ 9.40
Light (150-200 lb.)	9.75@10.25	9.50@10.50	10.00@10.60	9.25@ 9.50
Light lights (130 150 lb.)	9.75@10.25	9.50@10.50	10.00@10.60	.....
Smooth packing sows (250 lb. up)	8.25@ 9.10	7.50@ 8.50	7.50@ 9.00	.....
Rough packing sows (200 lb. up)	8.00@ 8.60	6.75@ 7.50	6.00@ 8.00	.....
Medium, choice pigs (130 lb. down)	9.00@10.00	9.25@10.00	10.00@10.25	.....
Stock pigs	.....	8.00@ 9.50	10.00@10.25	7.50@ 8.50
SHEEP AND LAMBS.				
Medium, prime lambs (84 lb. down)	12.50@15 30	8.50@10.00	8.50@10.50	9.00@10 50
Culls and common lambs	9.75@12.75	7.00@ 8.50	4.75@ 9.00	7.00@ 9.00
Medium, prime yearling wethers	10.00@13.50	6.00@ 8.00	6.50@ 8.00	5.00@ 7.00
Medium to prime wethers	6.75@10.00	4.50@ 6.00	4.50@ 7.50	4.50@ 5.00
Medium to choice ewes	5.25@ 8.50	4.00@ 6.00	3.00@ 6.00	3.50@ 4.50
Culls and common ewes	2.50@ 5.00	2.00@ 4.00	2.00@ 3.00	2.00@ 3.50
Feeder lambs	11.00@13.50	7.00@ 8.00	7.00@ 8.00	.....

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Emma Pflug is learning to write letters on the typewriter. She is going to typewrite her next letter to Aunt Nellie, if she learns how by that time. This is Emma's sixth letter to the Corner. She says she goes sleighriding. One Sunday when her friend, Etta, came to see her, they had a good time sleighing. Emma lives east of the Okanogan river in north Washington.

Jack Litt, 8 years old May 23, 1922, says he likes Aunt Nellie. Aunt Nellie thinks Jack likes to work because he sent us a little story about bees and bees are great workers. Here it is: Honey bee, honey bee, where are you going? To fill my basket with precious pelf; to toil for my neighbor as well as myself; to find out the sweetest flower that grows. Jack lives near Crab lake in east Washington.



THURSDAY, February 23—Otto Loy, 11 years old; Helen Owen, 10; Freda Stump, 11.

FRIDAY, February 24—Sadie Nieme, 9 years old; Esta Rivers, 11; Clayton Smith, 8.

SATURDAY, February 25—Howard McLehn, 8 years old.

SUNDAY, February 26—Elwood Alexander, 10 years old; Margaret Liebing, 10; Millard Hale, 11; Corrinne Wyer, 11.

MONDAY, February 27—Jack Campbell, 8 years old.

TUESDAY, February 28—Cleo Beck, 10 years old; Alta Cason, 9; Alta Eaton, 9; Virginia Hershey, 10; Leonard Kinkaid, 11; Hazel Knapp, 10; Naomi Miller, 7; Karl Stauffacher, 10; Dora Urquhart, 8; Jennie Holmes, 10.

WEDNESDAY, March 1—Ora Bateman, 11 years old; Slyvia Johnson, 11.

Marion Meyers is a leap year girl. She was born February 29 10 years ago.

In each issue a list of the cousins' birthdays for the week will be published. At the close of each letter you write be sure to tell how old you are and when your birthday comes.

LETTERS WELCOMED BY AUNT NELLIE.

Among recent letters received by Aunt Nellie are those from cousins whose names follow. A few of these will be published each week in the regular edition of THE FARMER, and others will appear from time to time in The Junior Farmer:

Lucile Martha Harding, James Arthur Webb, Annis Demko, Ruth Reynolds, Gerda Ekholm, Clairinda Fagan, Genevieve Halverson, Essie Grant, Rebecca Gorremans, Elizabeth Reykjalin, Esther Bakke, Ellen Make, Edna Kimble, Ruth Williams, John and Margaret May Blake, Helen and Elmer Prien, Anna Johnson, Doris and Cora Turner, Donald Whalen, Berniece Wynecoop, Evelyn Starr, Jewel Field.

Jack, Molly, Andrew and Marie Litt, Anna Thornton, Emma Pflug, Aileene Grainger, Gladys Rise, Jahan Van Ry, George Johnson, Everett Frye, Ida May McAuley, Helena Peters, Priscilla Oatman, Bertha Van Derschelden, George Lovos Kenneth Strong, Leonard Kinkaid, Lawrence McNell, May Dickenson, Aaro Ahonen, Florence Frye, Margaret Irwin, Rena Rise, Hazel Prien, Margaret Berg, Alfreda J. Kelly, Robert Gilmore, Elvira Case, Lottie and Eva Baumgardner, Leda Ruby Harrell, Frances Montague, Alice Larison, Astrid Larsen, Bessie Wagner, Alice Blakeman.

BEDTIME STORIES

By THORNTON W. BURGESS.

Copyright, 1919, T. W. B.

BILLY BECOMES A BOASTER.

Billy Mink, Little Joe Otter and Jerry Muskrat sat on the Big Rock in the Smiling pool. Over on his big green lilypad sat Grandfather Frog. The Merry Little Breezes of Old Mother West Wind were playing with the buttercups and daisies on the bank, and Mrs. Redwing was singing to her babies in their cradle in the bulrushes.

Billy Mink was feeling very fine, very, very fine indeed, that morning. He had actually beaten Little Joe Otter in a swimming race. He can not do it very often, but he had done it that morning, and it made him feel very important. Now when people begin to feel important the feeling grows and grows. It was so with Billy Mink. He swelled himself up and began to walk back and forth on top of the Big Rock, and as he walked he began to boast.

"I can swim like a fish," said Billy Mink.

"Pooh! So can I!" exclaimed Little Joe Otter.

"Peter Rabbit can run faster!" said Jerry Muskrat.

"I can follow a track with my nose!" continued Billy Mink.

"So can Bowser the Hound!" grunted Little Joe Otter.

"I can climb trees like a flash!" bragged Billy Mink.

"So can Happy Jack Squirrel," said Jerry Muskrat, sliding into the Smiling Pool in disgust.

"I can do anything that anybody who wears fur and lives on the Green Meadows or in the Green Forest can do!" cried Billy Mink, and strutted up and down, on top of the Big Rock.

Grandfather Frog had listened and said nothing until Billy Mink had boasted that he could do anything that anybody else could do. Then he rolled his big, goggly eyes up at jolly, round Mr. Sun and began to sing in a deep voice:

"The boaster brags what he can do;
He swells his chest; his head swells, too.
Some day he'll burst, and then you'll find
He nothing had but an empty mind."



"I can do anything that anybody who wears fur can do."

Billy Mink stopped short and glared across at Grandfather Frog. "What's that you are saying?" demanded Billy Mink.

"Who can?" asked Billy Mink.

"Chugarum! I say you are a foolish boaster," replied Grandfather Frog, "for it is the easiest thing in the world to find somebody who wears fur to do something you can't do."

"I'm not going to tell," replied Grandfather Frog.

"You can't, because you don't know any one," sneered Billy Mink.

Grandfather Frog solemnly hopped up in the air and caught a foolish green fly who came too near for his own good.

"I never say what I can not prove, Billy Mink," said Grandfather Frog in his deepest voice. "I will prove it to you tomorrow night at sundown if you will agree to be here."

Of course, Billy Mink agreed. You see, little Joe Otter was listening, so he felt that he had to agree.

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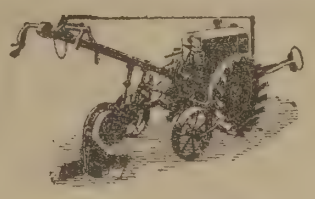
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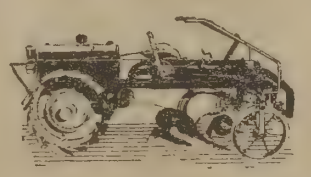
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145-147 Second St., Near Alder, Portland, Oregon

Potato Disease Control in Washington

By GEORGE L. ZUNDEL, Extension Plant Pathologist, Washington State College.

There are two troubles found in our Washington potato fields that are causing millions of dollars' loss. They are mosaic, which is a physiological trouble, and rhizoctonia, which is a fungus disease.

Of the two diseases, mosaic is causing the greater amount of damage. The early symptoms are not easily recognized except by the professional. A mottling, of light and dark green appears on the leaves. There is a dwarfing of the leaves, petioles and stems. The leaves later become somewhat wrinkled. The entire plant is apt to be brittle. The later stages of mosaic are known as curly dwarf, which is known by most of our growers. It takes about three years from the time the first mosaic symptoms appear till the final curly dwarf stage is reached. The yield of affected plants is materially reduced. Sometimes there are several small tubers produced, but occasionally one or two good, smooth tubers are produced that would be used for seed if field rogueing is not practiced.

Mosaic can be transmitted from diseased to healthy plants in the field by means of sucking insects. This fact in the life history has just been found by recent experiments by the United States department of agriculture. Since mosaic can be recognized in plants six inches tall it is well to begin rogueing very early in the season.

Only One Means of Control.

Seed treatment will not control mosaic, since it is a physiological disease and can be told only while the vines are green. There are no symptoms on the tubers to tell which ones are produced from mosaic plants. Besides being disseminated by insects in the field mosaic is also transmitted through tubers from diseased vines. The only known means of controlling mosaic is by rogueing out all diseased vines from the field as early in the season as possible. It is possible that the field will need to be rogued several times during the season. In rogueing a field the farmer must be careful and remove all tubers as well as the vines.

The second important disease is rhizoctonia. This trouble is caused by a fungus. There is a long list of symptoms attributed to rhizoctonia, such as (a) attacking the sprout of the seed piece and killing it, thus causing missing hills, (b) retarding the growth of the young shoots, thus producing plants that are late in coming up (these plants are usually weak and do not produce any marketable tubers), (c) stimulating the production of a large number (50-75) small tubers, (d) the production of irregular tubers, (e) killing the stolens and forcing the tubers to form near the base of the stem, (f) the production of tubers on the stem above ground, (g) the production of a rosette stem, (h) the production of a large vine, but no tubers. These are only some of the symptoms. The brown lesions on the outside of potato stems are usually caused by the rhizoctonia fungus.

Two Ways to Control.

There are two ways of controlling this disease: (1) The use of clean seed planted on clean ground. (2) If sclerotia or "the dirt spots that will not wash off" are on the seed tubers, seed treatment should be used and the planting be done on clean soil. This fungus lives over winter in the soil and if the soil is infected neither clean seed nor seed treatment will amount to much in the control of this disease.

Another factor in the control of rhizoctonia must now be considered, and that is the date of planting. It has recently been found that a low temperature is favorable for infection. If, then, potatoes are planted early in the spring they will be more apt to become infected. This has been true, according to my observations over the state. It often happens that infected plants do not show symptoms of disease, while there is abundant moisture, but as soon as a hot, dry period of weather comes they will die very suddenly, due to the fact that part of the water-carrying tubes have been destroyed by the fungus and the roots can not supply the plant with water as fast as it leaves the plant by transpiration.

The late planting is also of advantage in that the tubers are not formed until after the July-August heat is past and a more vigorous tuber is the result. Under ordinary conditions the tubers do not form until late in the growing season.

Good Seed Is Essential.

With the above two diseases to combat the need of good seed is evident. The most vigorous seed is grown on non-irrigated soil in elevated mountain valleys. The use of seed from hot, irrigated valleys has not been successful, since the vigor rapidly deteriorates. The loss to potato growers in the United States from the use of poor seed amounts up into millions of dollars. No farmer ought to plant only the best certified seed.

The need of good seed in this state has been forcibly impressed upon me during the last two years in going over the state as extension plant pathologist. This need is especially evident in our irrigated sections.

Potato growers west of the Cascades need not fear degeneration of their potatoes, but need to rogue for mosaic. They have a climate suitable to the production of first-class seed stock. Seed can also be grown in the elevated portions of eastern Washington from the foothills of the Blue mountains up to Stevens and Pend Oreille counties.

Club Members Buy Purebreds

Ten swine club members of Kittitas county purchased purebred Chester White stock from Whitman county breeders for their club work during the last month. These members were: Warde Pugh, Helen Krege, Florence Robinson, of Ellensburg, and Louis F. Edes, Elmer Harvey, Merle Yearwood, Leonard Newman, Jack Snyder, Raymond Snyder and Ivan Hutchinson, all of Thorp.

The purebred Chester White gilts were selected and shipped to Kittitas county from Whitman county through the efforts of County Agent W. L. Davis and C. M. Hubbard. The stock was selected from the herds of H. S. Curtis of Palouse and Mr. Hoffman of Albion.

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Feb. 23, 1922.

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BIG AUCTION SALE OF BRED SOWS

Baker, Oregon

Tuesday, March 7, 1922

Your last chance to get sows at your own price for spring farrow.

35 head of tried sows, yearlings, and spring gilts. An offering of the biggest, smoothest Poland China sows to sell this winter. Attractions:

A daughter of East Lynn Timm, by the Champion Big Timm.

A 2-year sow by Fox's A Wonder, undefeated in two years at all Northwest shows, bred to Big Buster, by Buster King, first at National Swine Show and sire of Grand Champion sow at Salem in 1921, he by Giant Buster.

Four choice yearlings by—the great boar Bailey's Superba, weight 1200 lbs.

Five summer boar pigs, ready to use.

Sale held in heated building.

Send for catalog at once. Mail or wire bids to Geo. A. Gue or A. L. Wilson, auctioneers; or J. E. Nessly of the Oregon and Idaho Farmer, in care of

L. F. Bailey and Fred D. Entermille, Baker, Oregon.

Big Type Poland Chinas

My herd boar won the past two years at state fair. 50 bred gilts, young boars, weaned pigs. Live and let-live prices. Satisfaction guaranteed.

H. J. STILLINGS, Hermiston, Ore.

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Some choice fall boars and open gilts, $15, including papers. Write for particulars.

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Won 24 firsts out of 28. Won 9 champions out of 12. Won 5 grand champions out of 6. Nehawaka Lad, Cherokee Lad and Gen. Tipton breeding.

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Tried sows, last April gilts, Sept. pigs, both sexes, unrelated.

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Dept. L. Spokane, Wash.

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At Auction by Mail
RICHLY BRED GUERNSEY BULL CALF

Dropped July 12, 1921. Fine individual, well grown. Sire, Frenchman's Gov. of Linwood, son of Langwater Frenchman, he by the greatest Guernsey sire of sires, Dolly Dimple's May King of Langwater, and out of Almanda of Linwood (515.99 lbs. fat), a daughter of Gov. of the Chene, the only Guernsey sire having 100 A. R. daughters.

Calf's dam, Dream of Hope Farm (405.82 lbs. fat) Class D, by Ferndale's Fern, sire of 5 A. R. daughters, and is A. R. cow herself.

Highest bid accompanied by check, mailed by March 10, takes him, absolutely without reserve, registered, transferred and crated, f. o. b. Ferndale. All other checks will be returned, with notice of buyer and price. This ad will not appear again.

Hope Farm
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CAN YOU USE THIS HOLSTEIN BULL?

Sire: Sir Johanna Fayne Bonheur De Kol No. 188160, whose dam made at 2 years, milk, 22,449 pounds; butter, 859; at 3 years, 7 days, milk 649 pounds; butter, 32.89 pounds; 30 days, milk, 2727.9 pounds; butter, 130.37 pounds.

Dam: Lucy Freela Pontiac No. 256613

6 years, 365 days—milk, 26,661.6 pounds; butter, 1056.5 pounds.

A handsome, straight, long-bodied fellow; half black, half white; 13 months old; weight, 1100 pounds.

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Jersey bulls, 2 sons of Glen Tana Golden Fern Lad, out of register of merit dams. Ready for service, $150 and $200.

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St. Mawe's Sultan, 1 year old, carries the blood of 4 gold medal bulls, $150.

2 granddaughters of Rosaire's Olga Lad; September and November calves, $100 each.

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By a son of St. Mawes Lad, sire of the world record senior yearling, St. Mawes Lad's Lady, 828 lbs. fat. Dam's record, 536 lbs. fat as four-year-old, and a three times grand champion cow. Priced for quick sale. One other well bred calf.

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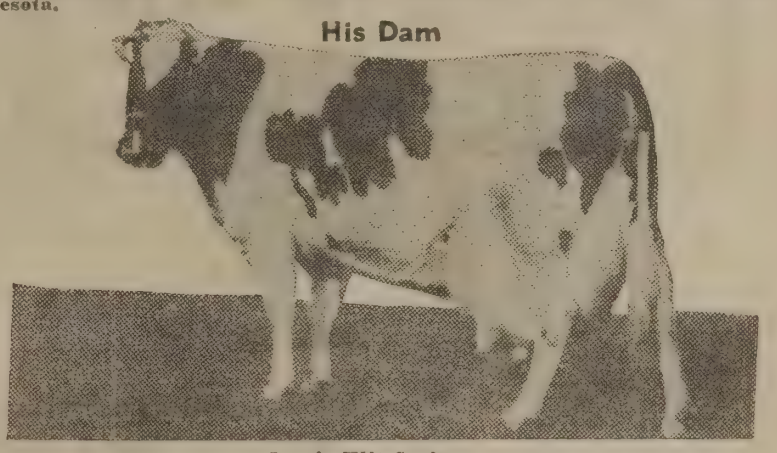
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His Dam



Jennie Wit Segis
7 days—Milk, 620.2 lbs., butter, 24.24 lbs.
At 6 years old, 305 days.....milk 17,436.0 lbs., butter 683.85 lbs.
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A few other good bulls from yearly record dams, sired by Judge Segis, whose 2-year-ild daughters are making large yearly records.

Herd under federal supervision. Correspondence solicited.

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Public Auction, February 27, 1922.

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HORSES AND MULES 135
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Includes 9 registered Belgian and Percheron mares—all blue ribbon winners; 70 geldings and brood mares; 46 mules; 1 registered mammoth jack; 20 registered Berkshire pigs. Mail bids will be considered at ringside. Write **W. W. DOWNIE, Clerk, Harrington, Wash., or SANDY KEITH, Davenport, Wash.**

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At the Kintyre Farm, on the Yellowstone Trail, 4 Miles East of PROSSER, WASHINGTON, WEDNESDAY, MARCH 8, 1922.

40—HEAD OF REGISTERED BERKSHIRES—40

Bred sows and gilts, open gilts and fall pigs of both sexes of highest quality. Write to Sales Manager today for catalog giving full particulars.

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Tekoa, Wash., Feb. 28.

Included in this sale are 28 tried sows and gilts of the SENSATION blood lines; 2 tried sows by Western Orion, all bred to a good son of Giant Wonder I Am, twice grand champion of Iowa. Dam, an 800-lb. champion sow by PATHFINDER. Four real SENSATION boars, ready for service. Six Holstein bulls by Sir Fayne Pietertje Phebe, he by the great Findern Pietertje Fayne bull. One by Hazelwood Fobes Pontiac. Every animal guaranteed. Write for catalog.

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Oakleigh Stock Farm Shorthorns

204 S. First St., Medford, Ore.

Milking Shorthorns. Several record cows—50 head in herd.

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Herd headed by True Baron, 1st premium Idaho state fair, 1918-1920. A superb collection of Scotch breeding matrons. Write your wants in range and herd bulls.

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IDABOIS FARMS SHORTHORNS.
King Lavender, the bull that topped the Portland sale in 1920, heads a herd of superior Scotch breeding matrons. Write us for range and herd bulls. A great collection to choose from. **O. O. HAGA, Boise, Idaho.**

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From advanced registry dam with record for last December 1830 lbs. milk, 71.18 lbs. butterfat. Priced very reasonable.

EARLCREST STOCK FARM.
EAGLE CREEK, ORE.

Broadmead Aberdeen Angus

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Every Strap in Good Repair

Successful Marketing of Milk by Producers of Western Washington. See Page 6

Farmer Again Has a Place in the Sun

The farmer again has a place in the sun. When most farm prices remained in the dumps in December and the mystical index numbers came out showing that average prices on farm products during that month had lost all of the slight gains made since last June the landscape became black and it looked like a mighty hard winter.

Early in January farm prices began to take an upward trend. Some of them have already reached an altitude which seemed impossible three months ago. Evidently the turn of the year has meant the turn of the tide of deflation so far as agriculture is concerned.

The advance of nearly 50 per cent in the hog market has done most to increase the income of the farmer, revive hope, pay the taxes and the interest on the mortgage and, in places, leave a little for the improvement fund. The time-honored "Nice day" as a morning greeting among farmers can now be replaced by "Ten-dollar hogs."

Even the most rash of the optimists have been outdone by the actual performance of the hog market, which has risen from a Chicago average of $6.60 early in December to $9.85. There was nothing on which to base prediction of such an upturn three months ago, again demonstrating that fact is stranger than fiction.

The packers who were expecting to store away products from $6 and even $5 hogs have been badly defeated in their bear campaign. The winter packing season is in its last days, a period when the supply ordinarily equals only consumption is at hand and their cellars are minus the usual stocks of hog meats and lard to be merchandised in the summer scarcity season.

The number of hogs slaughtered at western packing points since November has fallen about 15 per cent under last year. Shippers have taken a record number to the east, trainloads have been moved toward the Pacific coast and farmers all over the cornbelt have butchered a lot of hogs and sold the meat locally.

The large proportion of barrows in the run is another link in the chain of evidence that hog production has been stimulated and breeding herds increased, which suggests that the handsome profits in making corn into pork will not last indefinitely, but the market has the prospect of several months of prosperity ahead of it before increased production can do damage.

Lambs are gamboling upon a price level nearly 70 per cent higher than last September. The altitude looks dangerous, but there is nothing immediate to smash the market. Profits on lamb feeding this winter should put that phase of the industry back on its feet. With the sheep population on January 1 the smallest reported by the department of agriculture since 1878 there is but little danger of greatly overdoing production for a number of years.

Wool has ceased to be a drug on the market, and buyers are on the anxious seat, with prices showing advances of 50 to 75 per cent and in some cases more.

The stage is set for an advance in the cattle market and unless something goes wrong the curtain will go up soon. Nothing spectacular to correspond with the advances in hogs and lambs is on the program, but a healthy advance that will warm up the cockles of the cattleman's heart.

The latest revisions of estimates upon the world's supply of and demand for wheat practically show a balance between the two, which puts a tremendous level in the hands of any small group of holders. Not over 15 or 20 per cent of the wheat crop is still on the farm, but this fraction has appreciated almost 30 cents a bushel in value since January 1, and further advances are logical.

Corn is nearly 10 cents a bushel higher than when the outlook was at its worst. The strength in wheat has helped corn, but realization has evidently set in that corn has been selling below its intrinsic worth and buyers have surrounded the bargain counter, heaped high with the phenomenal receipts of the last month. That such huge quantities were absorbed on an advancing market reveals the profound change that has occurred.

Rye has followed wheat, rather laggardly at times, nevertheless it has followed. Oats have fallen behind the other grains, but events appear to be shaping up for better things there.

Eggs and butter have not done so well, as they have declined sharply from the early December level, but they are on a much higher level than last spring. With trend of prices on other products slanting upward it is possible that the products of the cow and the hen will not dip below a profitable level very long this coming spring, even though production has been stimulated. Furthermore, cheese and chicken prices are holding up well.

Cotton prices are about 70 per cent up from the bottom. They have lost about $25 a bale of the advance attained late last summer, but as a partial effect to this decline, growers have 1,500,000 more bales to sell than were expected at that time.

According to a price chart, a score of farm products were higher on February 10 than when the market was at the bottom in 1921. Two others had advanced entirely too far to show satisfatorily. Onions are 625 per cent higher than the cheapest prices reported last spring and potatoes are 140 per cent higher. Clover seed, timothy seed, cottonseed, broom corn and some grades of tobacco are selling substantially above their low points.

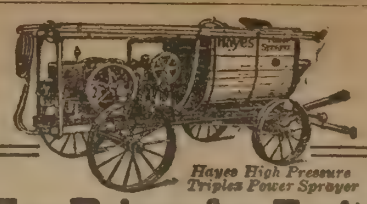
These advances are not enough to pull all of the farmers out of the mire. Financial distress was too severe for that, but the wheels are beginning to move forward and the farmer has been given heart to make the pull.

Candy for Bees

In order to have success with bees it is essential that they have an abundance of feed during the winter months. If too much honey has been taken from them in the fall they are apt to run short during the winter. In such a case it is necessary to feed them with honey or candy, having it before them on a warm afternoon, suggests B. A. Slocum, extension bee specialist of the state college, who gives the following recipe for a good bee feed:

Twelve pounds of granulated sugar, one and one-half pounds of liquid glucose, one and one-quarter quarts of water and one-fourth teaspoonful of cream of tartar. This candy is made by using a good grade of granulated sugar.

The water should be heated and the sugar added only as fast as it will dissolve, in order that it will not be scorched. The glucose may be added before or after the sugar. When the sirup comes to a boil, add the cream of tartar. As soon as the sirup is boiling, remove and stir until thick enough to pour into moulds. To make the moulds, take a standard wire frame and nail a tin board on one side. This board may be removed when the candy is cold. One then has a frame of candy which may be slipped down next to the cluster. By using the amounts above, enough feed can be made to fill two frames.



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For Good Farming, Attractive Country Homes and Happy Country People

As Lambing Time Is at Hand on the Farm

When the Difference Between Profit and Loss Is Quite Largely Determined on the Flock

By C. M. HUBBARD.

The yearly income from the farm flock is determined quite largely at lambing time, because, other factors being equal, the difference between profit and loss depends upon the per cent of lambs saved. If the losses are heavy, the chances of the flock earning a reasonable interest on the investment in them are correspondingly less. To one who has a liking for sheep the hours necessarily spent in the lambing barn at this season are not monotonous and tiresome, but rather a labor of love.

Where the proper amounts of feed and exercise have been furnished the flock during the fall and winter, lambing time should not be a serious problem. If the ewes are neither too fat nor too thin, but are in strong breeding condition, if the exercise has been abundant but gentle, the lambing season should be comparatively easy for the ewes and the attendant as well. If the ewe flock is too fat, together with a lack of exercise, they are likely to lamb with difficulty, giving birth to large, flabby lambs, lacking in vigor and vitality; on the other hand, where the ewes are thin they will usually lamb easily, but have an insufficient milk supply. In either case the flock master's troubles are trebled or quadrupled.

If the flock is in strong breeding condition little, if any, grain is necessary before lambing. Good, clean legume hay should be furnished. Roots or silage should be fed in only limited amounts, as they have a strong tendency to bring on the milk flow a little too early. In cases where the flock is in thin condition oats alone or oats and bran, two and one parts each by weight, should be furnished in addition to the legume hay. From one-half a pound to a pound of the grain mixture should be sufficient.

As lambing time nears, the shed should be kept well bedded. It is wise to have several lambing pens on hand for use as the ewes lamb, especially in the case of twins. These pens should be about four feet by four or six feet, made of one-inch by three-inch or four-inch, and about three feet in height. The space between the lower boards should be narrow enough so that the lamb or lambs can not crawl out. These panels should be hinged together in pairs and fastened to the back wall of the shed, in a series, by means of hooks and eyes. Sheep dip, epsom salts, ginger, soap, syringe, several long-necked bottles and swan-bill nipples should be on hand, as well as vaseline, turpentine and lard. The sheep dip, diluted, is handy for disinfecting purposes. Epsom salts (three

By C. M. HUBBARD

Extension Live Stock Specialist Washington State College

ounces is the ordinary dose), with a touch of ginger, serves as a physic. The soap may be dissolved in water for injection where the young lambs are constipated. The vaseline is essential in case of difficult lambing, the hands being smeared with it before rendering assistance to the ewes. The turpentine and lard are for udder troubles.

Many do not know the symptoms of lambing. Naturally, the parts are enlarged. However, the indications of lambing which occur within a short time of the birth of the lamb, are a "hollowness of the upper flank" and if the hand is placed on the teats it will usually be found that they are full of milk. This is not the case where the ewe has a day or so to run before the lamb arrives. As the hour of birth approaches, she becomes uneasy, bleats, and may seem desirous of owning any other lambs which may be on haud.

When the ewe is giving birth to the lamb she should not be disturbed as long as everything seems to be going well. Often enough, if the flock has been well fed or in the case of certain breeds of sheep, the lambs' heads may be very large. In such cases all that is required is a little gentle manipulation, first being sure the hands are clean, and making use of the vaseline. In other cases both legs may not be forward under the lower jaw of the lamb, as should be the case in normal birth. All that is necessary is to gently push the lamb back into the uterus, carefully bring forward the two front legs, and birth usually follows without further difficulty. Where the hind legs are delivered first, birth should be given quickly, or the lamb will smother to death. Patience and gentleness are prime requisites in cases of wrong presentations.

With the birth normal, the lamb should be able to nurse without assistance. Where the lamb is weak, either the ewe should be turned over on her rump and the lamb assisted to nurse, or she should be backed into a corner and the lamb held up to the teat. When a lamb is chilled or nearly frozen, immersion in a pail of water, as hot as the hand will bear, followed by rapid rubbing with a rough cloth, will often save it.

Often young ewes, and sometimes older ones, will not own their lambs. Such a ewe should be placed in a small pen with her lamb and assistance given the lamb in nursing. Bringing a dog into the pen may arouse the mother instinct of the ewe. Again, milk a little of her milk upon the lamb's rump and put some on her own nose. Often if the ewe is tied up so that she can not bunt and the lamb may suck as it desires, she will soon own it. Where a ewe has lost her lamb and it is desirous that she should raise a twin of another ewe, it is wise to tie the skin of her own dead lamb over the back of the twin for a few days, when little further trouble is usually experienced.



After lambing it may be found that the ewe is giving an insufficient supply of milk. In such cases, especially where there are twins, the grain ration should be increased, feeding from a pound to a pound and a half of grain mixture daily, where one-half pound was fed before lambing. Oats, bran and oil meal (or cotton seed meal), 6-3-1 parts each by weight, make a most acceptable grain ration. Any good legume hay makes a splendid roughage. Grain straws are worse than useless. Not over three pounds of roots or silage daily also promotes the milk flow.

Udder troubles usually follow too heavy a milk flow, although in some cases mechanical injuries of the teats, brought about by the lamb biting while nursing, may cause trouble. In such cases the ewe will refuse to let the lamb nurse, the udder fills with milk and caked bag results. The teat should be examined from time to time and vaseline applied daily to the sores after the ewe has been milked out. This trouble necessitates prompt treatment. Bathing the udder with a solution of epsom salts assists materially. The ration should be radically reduced and a mixture of lard and turpentine applied to the udder and rubbed in well. Painting the udder with tincture of iodine is helpful. Wet bedding or lying on the cold, damp ground may cause "blue bag." Usually when this condition is discovered the ewe is beyond asistance, as the udder has begun to slough off. The lamb should be taken away immediately. This trouble usually takes the best milkers in the flock. Prevention is the treatment. Watch the udders and supply plenty of dry bedding.

Is the lamb well or sick? Watch him when he gets up. If he stretches himself, all is well; if not, something is wrong. Constipation may be, often is, the trouble. A dose of epsom salts to the ewe and the use of the syringe on the lamb (using the soap solution) should remedy the difficulty. When diarrhea is present, cut off any laxative feeds being fed the ewe until the lamb returns to normal.

Last but not least, remember to castrate the ram lambs and dock both ram and ewe lambs at from 7 to 14 days of age. Your season's profits will be the larger, due to the fact that wether lambs fatten more quickly than rams, and that both docked and castrated lambs look more attractive, pleasing and uniform to the buyer, thus bringing a higher market price.

To Preserve the Cooperative Idea

Declared Purpose of Receiver Schreiner of the Washington Hay Growers' Association

Upon the successful management of its receivership by J. F. Schreiner, an Ahtanum member hay grower, who has been in charge of its affairs since January 17, depends the future of the Washington Hay Growers' association.

The situation is not at all hopeless, notwithstanding the facts that the association's liabilities are about $35,000 and its tangible assets only about $7500; that adjustments of claims by customers, resulting from alleged inferiority of shipments, now total around $9000 and demurrage charges as a result of those adjustments around $3000; that the market has been so well supplied the outlook is not rosy, by any means, for sales, and that there has not been so much hay in the Yakima valley at this time of the season for years.

It is true, no doubt, that similar circumstances surrounding any ordinary business undertaking would result swiftly and surely in resort to bankruptcy, and indeed this resort was considered in the case of the late association. But as Senator D. V. Morthland, attorney for the receiver and recognized advocate of cooperative marketing, expressed it: "We are trying to save the cooperative idea, and there is the double problem, in doing so, of helping the growers get the money out of their hay crops and of paying off the creditors of the association. There are about 250 of these, mostly men who delivered hay and received for it only part of its value, or nothing. Our idea in maintaining a receivership is to protect them in further shipments of hay, which they were afraid to make for fear of garnishment.

Protect All Interests.

"The receivership was asked for by outside creditors, and all parties may rest assured that their interests will be protected to the utmost. The receiver can not act without permission of the court, but with the hope, as I said, of saving the cooperative idea, he has been given permission to start suit for collection of accounts due, and to sell hay on a margin of $2 per ton. There are about 15,000 tons of hay available, and this will be sold if a market can be found for it. Whether or not there will be a reorganization of the association I can not say."

The receiver has a desk in the office of the Yakima county farm bureau at the county seat, and is going diligently about the business of checking over the association's accounts. He does not hesitate to point out wherein he thinks mistakes were made, and he seeks to avoid their repetition in his own conduct of the business. He is heart and soul for the cooperative plan of marketing. He believes that it will apply to the marketing of hay better perhaps than to that of any other commodity and that hay growers need it as much or worse than any other class of producers. He has a way of sharing his hopefulness with others that bodes well for the association, and it is significant that he is already converting the doubters and the discouraged into boosters.

"We've got a fine bunch of cooperators left in the association," he assured me. "Two men from Harrah came in the other day to go over the situation, and went away apparently well satisfied. It was only a few days before they were back with reports of demand for the association, and wanting to reorganize in their community at once. I refused to let the members live on promises, however, and counseled them to wait until the time was ripe." Which perhaps is another indication of his ability to handle the difficult situation successfully.

When hay buying started soon after organization in the fall of 1920 payments were made immediately upon delivery to within $1 per ton, the amount reserved for operation. There was no adequate inspection service at either end of the line—this was before the days of satisfactory state inspection—and customers often found fault with the hay they received.

Claims for adjustment began to come in on shipments for which cash had already been paid. These amounted, as stated, to $9000 or more; there was nothing to cause paid-up members to "blow back," and the result was that later shippers received little or nothing for their hay.

In other words, the association handled 23,000 tons of hay at a cost of $2 or $2.25 per ton, when only $1 per ton had been reserved for that purpose. When the association was first formed the 54,000 tons which its 550 members contracted to sell appeared to be a controlling factor in the disposal of 80,000 to 100,000 tons grown in the valley. If it had reserved $2 or $2.25 instead of $1 for handling there would have been no deficit, it is claimed, but $54.000 looked like more money than it really was, and the full amount was spent in marketing about 23,000 tons.

"The association's predicament is due to mistakes, as I see it," said Receiver Schreiner, "but there is palliation for mistakes in the fact that the management was without cooperative marketing experience and had no precedents to follow. The farm bureau had not been organized, hence had nothing to do with it; the state cooperative marketing law was yet to be passed. The first mistake was perhaps in using contracts that were not absolutely binding. Members had the privilege, by paying a penalty, of selling their hay outside the association, and many of them did that. There was a big mistake in selling each individual's hay direct instead of

(Continued on page twenty.)

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President Harding Approves the Cooperative Marketing Bill

After several years of persistent appeal by farm organizations, congress has passed and President Harding approved the Capper-Volstead cooperative marketing bill. The house bill was accepted by the senate by a vote of 58 to 1.

The American Farm Bureau Federation pronounces this "the greatest victory of the agricultural bloc, the American Farm Bureau Federation and the other farm organizations which have supported it. The new law will make possible the fullest development of the farm bureau's cooperative marketing program."

The gist of this important measure is found in section 1 as follows:

That persons engaged in the production of agricultural products as farmers, planters, ranchmen, dairymen, nut or fruit growers may act together in associations, corporate or otherwise, with or without capital stock, in collectively processing, preparing for market, handling and marketing in interstate and foreign commerce, such products of persons so engaged. Such associations may have marketing agencies in common, and such associations and their members may make the necessary contracts and agreements to effect such purposes: Provided, however, that such associations are operated for the mutual benefit of the members thereof, as such producers, and conform to one or both of the following requirements:

First. That no member of the association is allowed more than one vote because of the amount of stock or membership capital he may own therein, or,

Second. That the association does not pay dividends on stock or membership capital in excess of 8 per centum per annum.

And in any case to the following:

Third. That the association shall not deal in the products of nonmembers to an amount greater in value than such as are handled by it for members.

Opponents of the bill contended that it was unfair, as it allowed an exclusive privilege to farmers to engage in monopoly. That objection was met by section 2, which gives the secretary of agriculture authority to proceed against associations which monopolize or restrain trade to such an extent as to enhance prices unduly. United States district courts are given jurisdiction in case of appeals from orders of the secretary of agriculture, who has authority to direct associations to cease and desist from monopolization or restraint of trade.

Notwithstanding this restraining provision, which seems fair and sufficient, the new law is severely attacked by some newspapers, particularly by grain trade journals. One of these journals calls it an example of "sycophant law-making." Senator King of Rhode Island, the one senator who opposed the measure, said it only added one more act to "the existing deluge of ill-digested and half-baked laws already so numerous on the statute books that, as Herbert Spencer more than a half a century ago said, 'it is no longer a disgrace for a judge not to know the law.'"

We quote these extremes as indicative of the bitter opposition to this measure. But the fact that it was supported by 58 senators, with only one dissenting voice, seems conclusive that it appeals to the senators not only as advisable, but as reasonable and just. It is foolish to say that this bill would not have been passed if it had not been for the agricultural bloc in the senate, for that bloc numbers fewer than 25 senators, when the record shows that 58 voted for it.

It is true that the law just passed puts agriculture upon a slightly different footing from some other industries, but there are strong justifying reasons for that preferential action. Economists generally agree that it is practically impossible to monopolize farm products, or for cooperative associations unduly to enhance prices.

Another justifying reason is the one advanced by Mr. Hughes, now secretary of state, when he argued before the United States supreme court for the constitutionality of the exemption of federal farm loan bonds from taxation. Mr. Hughes argued, and the supreme court sustained his view, that the food supply of the nation was so vital to its very existence that it was justifiable in the national welfare for congress to give special consideration to that industry.

In other words, it is not a question of legislating merely for the benefit of the farmer, but whether it is wise to pass such legislation for the benefit of the nation.

The Capper-Volstead cooperative marketing bill should be weighed in all its aspects and judged by its actual effect upon the people. If, by and large, it should be found injurious to the public, the fact that the farmers wanted it would not justify its enactment. On the other hand, if it shall tend toward the reasonable prosperity of agriculture and thus contribute to an assured food supply for the people, it is justifiable and congress and the president are to be approved for its enactment.

At all events, the new law should be given a fair trial, and we believe a very large majority of the people will pronounce it, after it has had full trial, both fair and beneficial. If, on the other hand, it should be found to be oppressive, we do not doubt that the farmers of this country would be among the first to assent to its repeal or modification.

Our own belief is that it will stand the test of time, that it will prove to be immensely beneficial to cooperative production and that it will tend to give the public more and better food supplies and stabilized prices, which in the long run will prove to be a real saving to the consumers.

Popularizing Purebred Sires.

Millions of dollars are being lost annually through the use of scrub sires. Many of the rank and file of the producers of market stock have not yet been "sold" to the idea of the extra dollars available through the use of high class registered sires. Farmers still persist in following the lines of least resistance.

This is the problem—how is it to be met? It may be stated right here that it is up to the breeders. They are the ones to put the work across. We hear the answer that they have been doing it for years. They have been breeding good stock; they have been breeding, feeding and advertising and showing good stock for decades. Our breeders have been doing a wonderful work in developing live stock. Our breed associations have performed a splendid service in building up the quality of their breeds, but those who should be reached are the farmers and stockmen who have never used a registered bull, boar or ram. These are the men who must be made to realize the value of the good purebred sire in making their harvest more abundant and certain.

The breeders of purebreds realize more and more that they are in the business not only for their own gain, but for the good they may do their fellow farmers and stockmen. Their work is of the nature of a public servant. They are breeding purebred horses, cattle, sheep and swine for the good of the countryside, for the good of their fellows as well as themselves.

The question is, how can the breeders, the breed associations and the various agricultural extension agencies reach the users of scrub sires with a gospel of "Why scrub sires must go?" The next question concerning us is how to get rid of the scrubs and how to replace them. Progressive breeders and breed associations see the handwriting on the wall, they must spend of their own valuable time in furthering the elimination of "the most expensive sire in the world;" they must assist in carrying the story of the superior merits of the good purebred sire into the various communities of each county; relating their own experiences in this connection in order to "sell" the purebred sire idea to their hearers. They must work together as breeders, as associations in studying these methods and in executing these means and methods to the end that the most efficient sire, the good purebred sire, may be placed on those farms which have not yet felt his beneficial influence.

State Farm News

The annual Cowlitz county fair will be held Wednesday, Thursday, Friday and Saturday, September 27-30, the board of county commissioners has decided. Premium lists are now being prepared. Joseph Gardner, county superintendent; T. Y. Blanton, county agent, and Miss Nora Kelly, county club leader, are revising the premiums and classifications in their departments. Mrs. C. C. Ruckles, Kalama; Mrs. B. M. Atkins, Kelso; Mrs. P. A. Parker and Mrs. Loring of Castle Rock and Mrs. Mills of Woodland are also assisting with preparation of the premium lists.

* * *

C. P. and Earl Boyer of Porter have purchased a young purebred Jersey bull from J. H. Taylor of the Wynooche valley and will discard all their grade sires. The bull is a half-brother of the cow that was grand champion at the Elma fair last year.

* * *

The Hub Guernsey Calf club of Ferndale, Whatcom county, held its first calf show early in January. The awards went to the following boys: Floyd Kinley, first; Billy Kellman, second, and Ted Plaster, third.

E. W. West of the Ferndale creamery judged the animals, while H. B. Carroll Jr. and F. L. Audrain assisted the boys in staging the show.

* * *

More than 4500 head of dairy cows have been tested for tuberculosis in the vicinity of Enumclaw by the dairy and live stock division of the state department of agriculture. These cattle comprise practically all the herds that supply the local creamery.

* * *

The Skamokawa Farmers' Cooperative association, a cooperative concern which has been doing business for 27 years, made 245,700 pounds of butter in 1921. The newly elected trustees of the association are: M. S. Hougen, Gordon G. Wiest, Peter Johnson, W. J. Strong, J. A. Martin, Theodore Anderson and Emil C. Martin. The officers are: President, M. S. Hougen; vice president, Gordon G. Wiest; secretary, Emil C. Martin; treasurer, W. J. Strong. George M. Grant, for three years past buttermaker of the creamery, was retained.

* * *

An amendment to the alfalfa weevil quarantine has just been added which curtails the shipment of alfalfa meal from counties where the alfala weevil is prevalent as mentioned in the previous quarantine order on baled hay. The order is signed by E. L. French, state director of agriculture, who stated that there is no immediate danger of the spread of the pest, but the people can not afford to take any chances.

* * *

J. Propstra, formerly owner of the Vancouver creamery at Twentieth and Main streets, announced February 12 he will open another creamery at Vancouver March 1 in the Coast Tinning company's block. The creamery will be called the Holland and the plant will have a capacity of a ton of butter daily. It will require seven men to operate the plant. Mr. Propstra sold his interest in the Vancouver creamery and took a trip to the old country for several months.

* * *

The Lewis County Cow Testing association was organized in Chehalis on February 4, starting with 373 cows in Lewis county. Testing began February 10, an official tester having been hired. E. A. Donaldson was elected president of the organization, Carl Taylor vice president and A. T. Flagg secretary. These officials, with A. Adolphsen and Chris Hendrickesen, comprise the board of trustees.

* * *

Klickitat wool growers are making arrangements to pool their wool at Portland, where it will be stored and graded. Led by the example of Idaho wool growers a committee of five from the Klickitat County Wool Growers' association went to Portland to make arrangements for storage facilities for 300,000 pounds, which will represent the 1922 clip. The committee consisted of John Jackel, president of the association; Dr. H. H. Hartley, R. A. Jackson, Manuel Lenardo and J. D. Akins. Some of these were at the state wool growers' convention, which met here last month. While Seattle offered Yakima valley growers similar facilities, the sentiment seems to favor storing at Portland and it is likely that a Yakima delegation will be sent to Portland on a similar errand soon.

Coming Events of Interest

March 4—Pioneer reunion, Bucoda.
March 7—Holstein-Friesian Ass'n meet, Seattle.
Mar. 8—F. Sinnes Berkshire sale, Prosser.
March 9—Stevens county live stock sale, Chewelah.
Mar. 22—Shorthorn consignment sale, Portland.
April 5—Pierce county poultry meet.
July 27-28—Whatcom co. Guernsey gallop, Bellingham.
April 16—Easter.
June 7-9—Union live stock show, Union, Ore.

FARM BUSINESS AND MARKETS OUTLOOK

WHO MADE MONEY IN MEAT IN 1921?

There were few live stock producers who made a profit on their year's farming operations in 1921, especially if a minimum wage were allowed for the labor and managing ability of the farmer or the labor of members of his family. Those who can show a moderate profit for the year are more than offset by the larger number whose losses were severe, so that the live stock industry as a whole would show a loss.

Four of the large meat packers have issued their annual reports for the year ending October 31, 1921. All of them lost on the year's operations, the aggregate loss being over $52,000,000. Of course, the employees and managers received their wages and salaries, although some reductions were made and enough was left from profits during war years to pay part of the annual dividends on the capital stock of the companies.

Now comes a report upon a survey of cost of selling meat through retail stores in 1921, made by the bureau of markets and crop estimates. Complete accounts of 440 stores in 30 cities were included in the survey. It was found that the retailers made a net profit of 2.29 cents on the average on each dollar of sales in contrast with the loss suffered by the packing industry and severe losses on the part of live stock producers. This profit, of course, was the amount left after salaries, wages, rent, ice and refrigeration, wrappings, heat, light, power, interest and miscellaneous expenses were paid. Here alone money was made in handling meat in 1921.

CATTLE READY FOR UPTURN

Although receipts of cattle at the seven leading markets are running ahead of the average for this season of the year, they have decreased about 15 per cent in the last three weeks when compared with the three weeks preceding.

Besides a lighter supply, demand for stockers and feeders has broadened and has withdrawn a larger fraction of the total, so that the supply of beef has been cut down.

The wholesale price of beef is down to the 1914 level and its cheapness, compared with other meats, has begun to attract attention of consumers.

Cattle values advanced slightly and the activity of buyers has increased sufficiently to suggest that the long expected turn for the better in the steer market is not far away. The Pacific coast section is drawing upon Kansas City and Texas markets for its beef supply. Any advance in prices may be irregular, but the prospect appears stronger than at any time in the last 60 days.

Texas advices point to a light supply of Texas grass beef, so that butcher cows and heifers should respond proportionately to any advance in the steer market. Cutters and canners have been relatively high compared to other classes, so that readjustment in this division is probable.

High prices for veals have attracted an early run of calves. A sharp downward trend will begin soon, to endure until the spring avalanche from dairy districts is over.

STOCKERMEN ARE ACTIVE.

Shipments of stockers and feeders from the leading markets are running far ahead of the same period a year ago and are practieally equal to the movement of two years ago. Shipments of thin cattle from Kansas City during February are expected to set a new record. It is possible that too many cattle will be placed on short feed for the late spring market, but thus far feed lots do not seem to have been filled to the danger point. In Kansas and Oklahoma cattlemen are bargaining for cattle and for grass and the northwest movement is expected to be heavy, but only a few transactions have been closed thus farm. Buyers from Montana, Dakota and Nebraska are canvassing Texas in an effort to locate a supply to move into the northwest.

HOG MARKET AVIATES.

The advance in the hog market is still unchecked. The top price at Chicago has reached $10.65, with the average above $10. No sustained increase in market receipts has followed the payment of higher prices. Demand for hog products has increased in the east and storage stocks of meats and lard at Chicago decreased in the first half of February, whereas a substantial increase is normal for this season of the year. Stocks of meat and lard for the entire United States increased only half as much during January as during January, 1921.

The government's report showing a larger number of hogs on farms on January 1 than were there a year previously may have some bearing upon the course of the market later in the year. There is nothing to indicate a loss of strength in the next few weeks.

LAMBS AT $16.15.

Lambs sold for $16.15 at Chieago during the last week and established a new high since July, 1920. High prices for wool have made a wide spread on shorn and wooled stock. The lamb market has advanced at a much more rapid rate and to a greater height than the decrease in market receipts would seem to justify. Nevertheless, there is nothing to indicate an early change. Over 200,000 head of Texas lambs have been moved into the corn belt for fattening and have been fed upon the market gradually, otherwise still higher prices might have occurred. At the same time the supply to be marketed during the spring months has been cut down by an equivalent amount. Shipments of feeder lambs are running about three times as large as at this time a year ago, but somewhat lighter than two years ago. The total sheep population is too small to develop any fear of overproduction for a long while.

CITY BUYERS OUT OF HORSE MARKET.

Although farm chunk trade from the eastern states is picking up, there is no urgent buying and receipts have enlarged sufficiently to keep the market relatively weak.

UNCLE SAM QUITS WOOL BUSINESS.

With the sale of 4,000,000 pounds of wool on March 2 the government will have completed liquidation of its holdings carried over from war times. Wool growers are in an exceedingly strong position, although the advance in prices has already discounted most of the strength. As high as 39 cents is said to have been offered for a choice Montana clip. Demand at the leading markets has fallen off in the last week and some of the lower grades are slightly weaker in price. At the last British and Australian auctions values declined 5 to 10 per cent.

ALL GRAINS AT HIGH POINT

Led by the advance in the wheat market, which has reached the highest level attained since last June, other grain prices have rallied sharpiy during the last week to the highest prices during the present crop year. The close adjustment of the world's supply of and demand for wheat has been the foundation for the advance. This has attracted an enormous increase in the amount of speculative buying on the grain exchanges.

The official figures show 211,000,000 bushels of wheat, corn and oats, rye and barley in the visible supply in the United States and Canada and there are around 40,000,000 bushels more of corn on track and in transit. Practically all of this grain is hedged in the speculative markets, so that prices have advanced in spite of the fact that a heavy load had to be carried.

Foreign markets, especially Liverpool, have been advancing even more rapidly than the market in this country. Foreign consumers have taken alarm after allowing their stocks to run low in anticipation that Argentine and Australian crops would be sold at sacrifice prices.

WHEAT MARKET MAKES BIG SWINGS.

Barring minor fluctuations, the wheat market maintained an upward trend from July 1 up to September 10. From that date until early January prices were weak and depressed most of the time. In the last six weeks a pronounced upward swing has occurred. All of these changes have been paralleled by changes in the world's outlook for a supply of bread.

At the beginning of the crop year the exportable surplus of the various countries was estimated at around 700,000,000 bushels, while the requirements of importing countries were placed at around 600,000,000 bushels. Some estimates showed an even wider margin.

Drouth in Europe caused the grain trade to anticipate an extremely active export demand for wheat and enormous quantities were sent abroad in the first three months after harvest, causing the upturn in values which culminated on September 10. This advance occurred in spite of an exceptionally rapid movement of wheat from farms to primary markets.

In the latter half of September it developed that European demand was insufficient to absorb immediately all of the wheat consigned abroad and prices declined precipitately when concessions began to be made in order to dispose of this unsold wheat. The Canadian crop estimate was raised, official reports on the wheat reserve on farms on October 1 were unexpectedly large, and European buyers began to sit back and wait for the movement from Australia and Argentina. They expected that pressure from these countries and Canada would furnish them a supply of cheap wheat.

TABLES TURNED ON BUYERS.

These expectations were not realized. The Canadian crop moved more slowly than was anticipated. Shipments from Argentina have increased rapidly in the last few weeks, but are only two-thirds as large as expected by foreign buyers and extreme pressure to sell has not been manifest much of the time.

Estimated surpluses and import requirements have been gradually revised until the 100,000,000 bushels margin believed to exist at the beginning of the crop year has practically disappeared. The Canadian crop was reduced by 30,000,000 bushels, both the Australian and Argentine crop estimates were cut down and the unofficial reports recently issued upon farm holdings of wheat in the United States indicate a smaller reserve than was expected.

At the same time non-European countries have been taking much more wheat than they usually do, so that the total requirements of importing countries have been increased. If the disappearance of wheat in the world's movement during the rest of the crop year remains at the same rate as it has been thus far, the total increase will be about 50,000,000 bushels.

The carry-over in the wheat surplus countries at the end of the last crop year was about 100,000,000 bushels more than normal. This extra carry-over, as well as this extra carry-over, is expected to disappear into consumption before the present crop year is out.

If this possibility is realized increased production will be necessary during tthe coming crop year in order to supply the world's demand. It is this angle of the situation which makes the low condition of new winter wheat in the southwest such an extremely serious matter. No relief has arrived in that section thus far and growing weather can be expected soon, which will be followed by numerous damage reports.

RECORD CORN MOVEMENT CONTINUES:

Aside from the advance in prices into new high ground, the corn market developed no new features during the last week.

CASH GRAIN MARKETS.

The range of cash grain prices for the week ending February 21 was:

CHICAGO—Wheat—No. 2 red, $1.36 1-4@1.42 1-2; No. 3, $1.33@1.40 1-2; No. 3, $1.29 1-2@1.34 1-2.

Corn—No. 2 mixed, 54 3-4@59c; No. 3, 53 1-4@57 1-2c; No. 4, 51 1-4@55c; No. 2 yellow, 56 1-4@59 1-2c; No. 3, 53 1-2@57 1-2c; No. 4, 50 1-2@55 1-2c; No. 2 white, 55@59 1-2c; No. 3, 53 1-2@57 1-2c; No. 4, 51@55 1-2c.

Oats—No. 2 white, 38 3-4@44c; No. 3, 34 3-4@39c; No. 4, 33 1-2@36 3-4c.

Rye—99 1-2c@$1.04 1-2.

Barley—55@68c.

CLOVER AND GRASS SEED STRONG.

Prices upon all kinds of legume seed are gradually working higher. The advance in red clover led the way, but demand is now being diverted to alsike, sweet clover and alfalfa. Since the spring demand is not yet at high tide, the market promises to rise still further.

FEED MARKETS WEAKEN.

Offerings of wheat feeds for March and April shipments are much more liberal than for prompt shipment. Flour mill operations have increased, so that larger quantities of wheat feeds are being produced and mills have been offering eagerly for March and April shipment. Warehouse stocks are fairly large. Cottonseed mills have 30,000 tons more of cake and meal on hand than at this time last year. Practically all feeds are quoted materially higher than at this time in 1921. Buyers began to hold back when feeds and oil meals advanced to the highest levels of the season.

CHICAGO—Bran, $28; standard middlings, $23.50; flour middlings, $31; hominy feed, $22.50; gluten feed, $32.15; cottonseed meal, 36 per cent, $42.50; 43 per cent, $47; tankage, $55; oil meal, $51.

HAY MARKETS TURN STRONGER.

Under lighter receipts and improved demand, hay markets have turned stronger. Prices are moving over a narrow range. The supply of low quality hay is excessive.

CHICAGO—Timothy, No. 1, $22@23; No. 2, $19@20; No. 3, $15@18; No. 1 clover mixed, $18@19; sample and threshed hay, $10@16; No. 1 clover, $17@18; alfalfa, $15@25; Nebraska and North Dakota prairie, $12@16; rye straw, $13@14; oat straw, $11@12; wheat straw, $10@11.

EGG MARKET TRENDING LOWER

The egg market had a hard fall during the last week and opinion in the trade is unanimous that lower prices are on the horizon. Holders are inclined to push sales at concessions if necessary, while buyers are filling only their most pressing needs, expecting to be able to purchase cheaper later on. Quotations on eggs for March and April delivery are considerably below current prices.

A year ago at this time the spring increase in production was already quite marked, so that receipts at the four leading cities at the present time are running lighter than they were last year. The supply during January ran considerably ahead of January, 1921, but February receipts have fallen behind more than enough to offset the January gain, so that the total for the year to date is lighter than in the corresponding period of 1921.

BUTTER MARKETS CAUTIOUS.

Butter dealers are operating on a cautious basis as they expect lower prices later on. Production has begun to increase again and there is a liberal supply of cold storage butter which holders are pushing on the market as fast as it can be absorbed. Butter from sections which had been shipping to eastern markets was diverted so that the leading cities were restored to a normal parity. Some New Zealand and Australian butter is said to be afloat for San Francisco, but no Danish was purchased during the last week, as quotations on that market were above an import basis. The southern hemisphere is past the flush season and the English market is firmer recently and is absorbing more of the foreign offerings.

CHEESE MARKETS SENSITIVE.

Cheese markets have been in a sensitive state during the last week, with prices ready to move either way, according to developments.

FRUITS AND VEGETABLES.

According to a report just made public by the bureau of markets, stocks of potatoes on hand on January 1 were 144,042,000 bushels, compared with 145,286,000 bushels a year ago. Of the holdings, 20,434,000 bushels were in Maine, 14,514,000 bushels in New York, 13,752,000 bushels in Wisconsin, 12,811,000 bushels in Michigan, 11,698,000 bushels in Minnesota and 6,570,000 bushels in Colorado. It will take only 24,000 carloads after February 11 to bring the total shipments for the present season from the leading states up to the total for the 1920-1921 season. New potatoes are already being seeded in extreme southern states. Most markets have been steady recently. Growers are receiving 90c to $1 per 100 pounds for Rurals in Colorado and Idaho. Northern whites are bringing $1.70 to $2 in Chicago.

Cold storage holdings of apples on February 1 were 1,422,000 barrels, compared with 3,016,000 barrels last year and a five-year average of 2,232,000 barrels. Boxed apple holdings were 8,645,000 boxes, compared with 6,268,000 boxes a year ago and a five-year average of 5,360,000 boxes. Total holdings converted to barrels are slightly larger than the five-year average on February 1. The boxed apple movement has run 61 per cent ahead of that of last year, while the barreled apple movement shows a 60 per cent decrease.

Baldwins are quoted at $7.50 to $8.25 in Chicago. Extra fancy northwestern Spitzenburgs and Jonathans are bringing $3 to $3.75 per box in the same market.

(Continued on page twenty-eight.)

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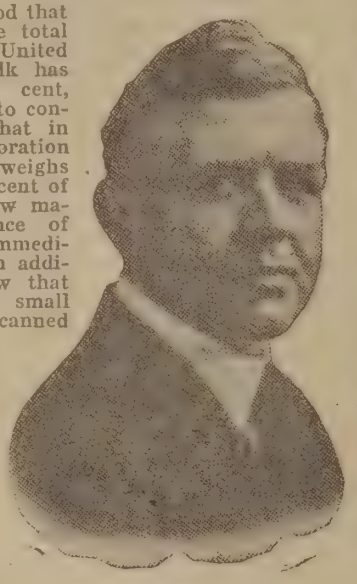
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Successful Marketing of Dairy Products

By J. A. SCOLLARD

President of United Dairy Association of Washington

Prior to the organization of the United Dairy Association of Washington on their present plan, approximately 50 per cent of the milk produced in this state found its way into tin cans in the form of evaporated milk.



J. A. Scollard.

When it is understood that the percentage of the total milk produced in the United States in canned milk has never reached 5 per cent, and when you take into consideration the fact that in the process of evaporation the finished product weighs approximately 50 per cent of the weight of the raw material, the significance of these two facts will immediately impress you. In addition, when you know that but a comparatively small percentage of the canned article was consumed locally and that the balance bore a heavy freight rate to the consuming centers of the east and middle west, you will grasp the fundamental reasons for the forming of these associations and the necessity of the introduction of a more flexible system.

It should be borne in mind that a practical monopoly was held by one of the large corporations in the districts of heavy milk production; that the plants which this company had established were built and equipped solely for the purpose of canning milk, a rigid system with no facilities for turning the raw material into other products, when the canned milk market was unduly depressed or the outlet for it was completely closed.

I might say here that canned milk is the most erratic of all manufactured dairy products; it is either a feast or a famine with the manufacturers of these products practically all of the time, and certainly it is the least dependable product from the standpoint of the producer, who must needs have something in the nature of a stable market for his product, which is one of daily production.

By way of further illustration of the disadvantages of surplus milk, in canned form, as against other dairy products, when these products must take freight shipment, I need only point to the fact that a case of milk ready for shipment, representing 100 pounds of whole milk, weighs 65 pounds; that cheese from 100 pounds of milk weighs not to exceed 11 pounds; that the butter from 100 pounds of milk, of average test, would weigh only 4 pounds, and that the weight of the dry or powdered skim milk from 100 pounds would average about 8½ pounds.

With these comparisons in mind, you will conclude, as we did, that since we were producing more canned milk than could be consumed here and at the same time were importing butter, cheese and other more highly concentrated dairy products, that the situation was badly in need of adjustment.

So long as the dairymen were satisfied to supply condensers at the prices which the latter were willing to fix the situation of the manufacturer was highly satisfactory, for, by quoting a lower price here than was paid at the company's plants in the middle west and east, the producer could be and was made to absorb freight and other charges, and thus this wrongful economic situation was being perpetuated.

It was the knowledge of these conditions and the expressed unwillingness on the part of the corporation which held the field to cooperate with the dairymen in working out a solution which resulted in the determination on the part of the dairymen to form an organization on cooperative lines to cope with the situation. This determination was reached a little over three years ago. At that time several loosely organized county or district associations existed, but in most of the western counties no organization of dairymen, worthy of the name, was functioning.

The first need, therefore, was to establish associations in every heavy milk producing district upon some uniform plan.

After studying the organization plans of a number of dairymen's associations in other fields, we decided to organize along lines similar to those under which the California dairymen had organized, and this was done.

Six County Associations.

Our association, as it now exists, is composed of six county associations with an aggregate membership of about 6000. These county associations have a strong contract with each dairyman member by which he agrees to sell all of his milk or cream through the association, the association agreeing to find the best possible market for it.

The county association has in turn a contract with the United Dairy Association of Washington, making the latter its sales agent for all its surplus finished product. The contract also permits the United Dairy Association of Washington to prescribe the selling territory of the county association and to have complete supervision of their plants for the purpose of standardizing the whole output of all of the factories.

The state association, therefore, has virtual control of the county units by virtue of this contract with them.

The county associations are all organized on a non-profit basis, with capital stock varying according to the number of dairy cows in the respective districts, but always on the basis of one share of stock for each cow owned by the member, at $10 per share. Each member is entitled to one vote only, regardless of the amount of stock held by him.

After the canvass for membership was concluded in all of the counties, plans were laid for constructing plants of sufficient capacity, in each county, to take care of the milk of its members. After numerous conferences in which representatives from all county associations participated, an acceptable construction program was outlined. Most of the plants, under this program, were built so as to permit the manufacture of any one of several dairy products as the demand for it seemed to warrant. These are referred to as utility plants.

$1,500,000 in Plants.

The total value of the plants owned by the association is approximately $1,500,000. The capital stock of the association was entirely inadequate to finance the building of these plants and first mortgage bonds were issued in amounts necessary to cover the cost of construction and equipment. These bonds were sold almost entirely to dairymen members of the association.

We now have in operation seven plants which can be properly called major plants, and three minor plants. The major plants have a combined rated capacity of 750,000 pounds of whole milk daily, but are capable of taking care of 1,000,000 pounds of milk daily during the peak of the surplus period. These plants are modern and efficient and, with the exception of one acquired by purchase, are newly constructed. The three minor plants represent a total investment of about $70,000—two are cheese factories and one a milk distributing depot and small dairy products factory.

The association plants are located as follows: Lynden, Bellingham, Burlington, Mt. Vernon, Arlington, Snohomish and Chehalis. All of these are major plants. The minor plants are located at Menlo, Satsop and Aberdeen.

The total output of these plants, during 1921, reached approximately $5,500,000, and we anticipate an output with a money value of about $8,500,000 in 1922.

We are basing these calculations on the fact that three of our larger plants were not ready to operate until after the 1st of April, 1921. The Chehalis plant did not begin receiving milk until almost May 1; the Lynden plant about June 1, and the Burlington plant not until August of last year.

Of the total sales, over $3,000,000 was disposed of under the contract with the United Dairy Association of Washington, the balance being sold locally by the county associations. The ratio of sales through the state association will be greatly increased in 1922, while the local sales will presumably increase in but a small degree. It is safe to assume that the local sales will not exceed $3,000,000 in 1922, while the sales through the central sales organization can reasonably be expected to exceed $5,000,000.

Plan of Organization.

The United Dairy Association of Washington is made up of one representative from each county association; its nominal capital stock is $100, made up of 20 shares at $5 per share. This association had no money with which to undertake the marketing of such a vast quantity of product in a manner that would admit of payment to the producer for his milk on a monthly basis; the directors realized that to open up markets and successfully dispose of the immense output of the association plants would require men of experience as well as the necessary capital.

They, therefore, caused to be formed, the Consolidated Dairy Products company. This company had paid up capital of $250,000 and was organized for the sole purpose of selling association products. The basis of its formation was a contract with the United Dairy Association of Washington whereby the latter was to sell through it the association products not disposed of locally.

A rigid investigation of the selling costs of various dairy products was made by the United Dairy Association of Washington and the commission on sales by the Consolidated Dairy Products company were based on the results of this selling cost investigation. The contract between the United Dairy Association of Washington and the Consolidated Dairy Products company is for one year and contains three salient features which fully protect the association.

First, the contract can be terminated by either party on 60 days' notice and the association has the option of buying, at cost less depreciation, the distributing machinery of the Consolidated Dairy Products company in the event the contract is terminated.

Second, the association fixes the selling prices of all commodities sold.

Third, commissions, as fixed by the contract, are subject to revision whenever it becomes apparent that they are out of line with actual selling costs.

The contract further provides that the United Dairy Association of Washington shall have one of its members on the board of directors of the Consolidated Dairy Products company with access to all records. A monthly statement of all sales and transactions is rendered to the association.

Selling System.

The present system of sales is conducted as follows: All sales of canned milk in western Washington are made direct to the retailer. In eastern Washington, Montana and Idaho the distribution of all commodities is made through jobbers, shipments being made in carload lots. The selling organization, however, maintains salesmen who cover these fields. The Consolidated Dairy Products company has a branch in Tacoma and active sales agencies in Portland and Los Angeles, a branch selling agency will be established in San Francisco this year, and we are now entering into arrangements with California dairymen's associations to supply them with canned milk, a commodity which they do not manufacture.

Practically all of our butter and cheese, with the exception of what is disposed of locally, is sold in Seattle; the former in cubes. Considerable quantity, however, goes to Alaska where we are rapidly winning favor in that market with the excellent flavor and keeping qualities of our butter.

Seattle Plant in Prospect.

We expect, in the near future, to establish a plant in Seattle especially for butter handling and distribution under the "Darigold" label. This will greatly add to our strength and prestige in that great consuming center and put us in a position to have more to say in connection with butterfat quotations, and enable us to further protect the dairymen against unwarranted declines. All of the butter disposed of by us on the Seattle market has brought us a premium over other butters by reason of its high standard, and because of our ability to constantly assure the required volume of uniformly high class butter.

Our cheese, with the brand lettered on the rim, is rapidly displacing Tillamook in this territory, and we have practically shut out Wisconsin made cheese. Our entire cheese output is of uniformly high quality as a result of the strict standardization methods enforced in all of our plants.

Output of Milk Powder.

Our immense output of milk powder, packed in 200-pound barrels, is largely consumed by the baking industry to which we have access through the largest bakery supply house in the United States. We recently contracted with this concern for the sale of 50 carloads of 60,000 pounds each, for delivery between now and August 1, 1922. Our dealings with this concern, which handled our last year's output, are eminently satisfactory. The 50 carloads, above mentioned, amounting to about 3,000,000 pounds, will consume our surplus make until August 1, 1922.

We are supplying practically all of the skim milk powder now used by Washington buyers, but the great bulk of this product is distributed in large and small lots in practically every state in the Union, as well as in the export trade. We have demonstrated the superiority of milk powder made from Washington milk over all others.

I believe this about covers the field of our operations. We are not involved directly, to any great extent, in the distribution or sale of city milk, although three of our county associations supply distributors in certain cities of their districts and have greatly benefited the dairymen by their activities.

Seattle Milk Distributors.

I might also say that the United Dairy Association of Washington practically fathered the Seattle Milk Shippers' association, which has been instrumental in putting the Seattle milk situation in its present favorable condition. This organization, which our association was instrumental in forming about a year ago, now sells 90 per cent of the milk supplied to Seattle distributors. It has a large part in the establishment of the retail consumer's price in that city as well as the price paid to its members. The present price for 3.6 per cent milk in Seattle is $2.50 per hundredweight for February and March. The Seattle Milk Shippers' association does not manufacture dairy products, and consequently the United Dairy Association of Washington can not directly render them the selling service. The shippers' association, however, is closely affiliated with the United Dairy Association of Washington and cooperates with it very closely.

In summing up the operations of the United Dairy Association of Washington for the year 1921, I believe we can, with modesty, claim to have attained success. Beyond a doubt, the year 1921 was the worst year in the history of business in America, yet in that year we accomplished the following:

1. Operated every association plant full time without a skip, including Sundays and holidays.
2. Met every payroll for labor or milk with full payment on the regularly designated pay day.
3. Successfully marketed and collected for the immense and varied output of all of our factories, developing local, eastern and even foreign markets for Darigold products.
4. Through standardization and efficient handling of products established a record for quality of butter, cheese, evaporated milk and milk powder unequaled by its oldest and largest competitors.
5. Not only met fully every interest obligation on association bonds when due, but retired a considerable portion of their bond issue.
6. Enjoyed the loyalty and complete cooperation of over 5500 dairymen, from whose ranks less than 1 per cent deserted.

We did this in our first year against competition that was ingeniously directed against us in a manner clearly intended to put us out of business. Our chief competitor for raw milk (perhaps 'opponent' would be the more proper term) quoted

(Continued on page thirty.)

If you will grant that our county dairy associations included in the United Dairy Association of Washington have been successful, and if you were to ask what thing contributed most to that success, I would say that the several most important factors were:

1. Our determination to turn out products of the highest quality. We have carried out this policy, which was made possible by strict methods of standardization in modern, well-equipped plants.

2. The fact that we organized and built plants in all of the counties simultaneously, making it possible to present a solid front all along the line, thus withstanding the onslaught of our vindictive enemies. It is safe to say that operating on a separate unit not one of our associations would have survived the year.

3. The decision of our directors to enlist sufficient private capital and experienced, competent men in our marketing program. Our associations would not be in existence today had we adopted pooling or other plans and failed to pay the dairymen fully for their milk once each month. We have never regretted this decision.

4. Last, but not least, the splendid loyalty and morale of our membership in almost completely cooperating in every way. The earnest and capable men who formed the leadership of the county associations were responsible for this spirit and their own sacrifices of time and effort gave the members confidence and strength in supporting their policies.

These factors may not have been set down in the order of their importance, but without each and all of them the measure of success which we have attained could not have been possible.

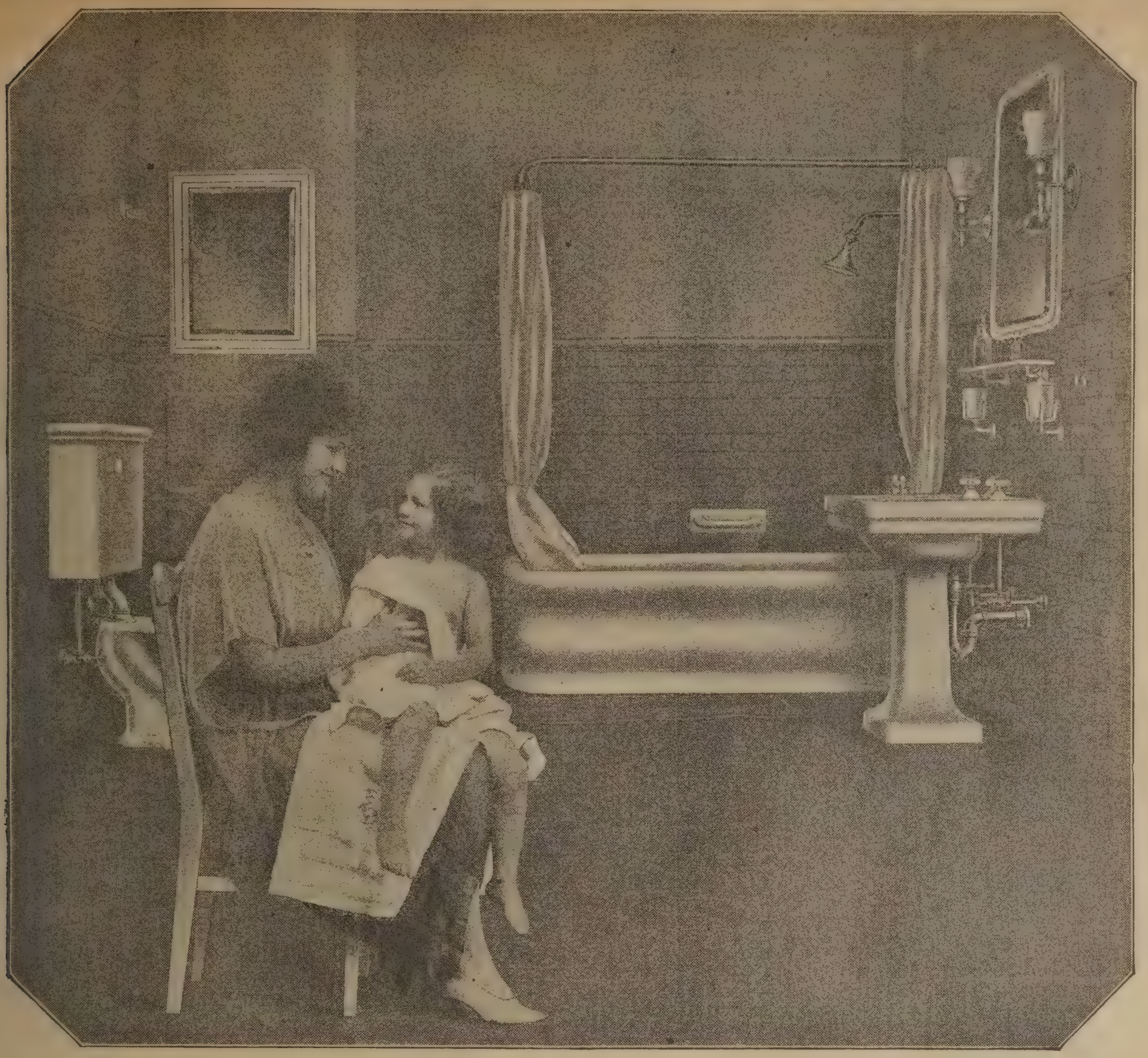


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Live Stock Conference Held

Excellent Program Is Heard by Small Crowds at Spokane

A renewed onslaught by the cold weather man apparently kept most of the farmers and live stock men of the Inland Empire at home February 20-22, taking care of their stock. Notwithstanding one of the best programs that has ever been arranged and carried out for the Northwest Live Stock conference, in Spokane on those dates, the attendance was the smallest in the history of the conference.

The conference opened Monday noon with a luncheon given by the agricultural bureau of the Spokane Chamber of Commerce to about 75 boys and girls engaged in live stock club work in the territory tributary to Spokane. Nearly all of these boys and girls had been financed in their club work by the banks of that city. During the day they visited these banks and made the personal acquaintatnce in each case of the officers, from the president down. J. K. McCornack; banker, and chairman of the chamber of commerce agricultural bureau, declared at the luncheon that the boys and girls were as good "risks" for loans as were their parents, if not a little better on an average.

Dairy Day.

The first afternroon of the conference program was devoted in large measure to the dairy industry. Professor E. G. Woodward of the State College of Washington discussed dairy production as applied to the average Inland Empire farm, especially the wheat farm of the Palouse country. He declared that there were insufficient milk and butter produced in the wheat-growing districts to supply the local demand, and urged that nearly every wheatgrower place from 5 to 10 head of milch cows on his place. He urged this not only because of the necessity of producing more milk and butter, but because he considers the dairy cow the beginning of a better general system of farming in the grain-growing section.

"Diluted" Cooperation.

The principal address of this session was that of J. A. Scollard, president of the United Dairy Associations of Washington. Mr. Scollard told of the success of the six county associations united under his presidency, and described the brand of cooperation they were using as "diluted" in contrast with the so-called "pure" cooperation. He declared that he would rather be connected with a successful organization operating on the diluted cooperative plan than with an unsuccessful one built on the pure cooperative principle.

Mr. Scollard dealt a vigorous blow to the filled milk industry, urging the conference to go on record as in favor of the passage by congress of the Voight bill, which will, if passed, prevent interstate traffic in products made up of skimmed milk and some oil or fat other than butter fat.

The conference without dissenting voice adopted the following resolution on this point:

Whereas, the manufacture and distribution of imitation milk products is recognized as a menace to the dairy industry of the United States and particularly to the industry in the states of Washington and Idaho; and

Whereas, the Voight bill, now pending in congress, which prohibits the interstate movement of so-called filled milk products, would remedy the existing conditions; and

Whereas, it is our desire to promote in every possible way the best interests of the dairy industry of the United States and the states of Washington and Idaho; be it therefore

Resolved, That the sixth annual northwest live stock conference assembled on February 20, 1922, express its approval of the Voight bill and recommend to its representatives in congress their complete support of this measure.

Urges Purebred Sires.

Dr. S. B. Nelson, dean and director of the extension department of the state college, under whose supervision a survey of the state is now being taken with a view to eliminating the scrub sires of all classes of live stock found in the state—cattle, horses, hogs and sheep—outlined the work that is being done and urged the advisability of a vigorous campaign with this accomplishment in view.

The Boys and Girls.

"Purebred animals, purebred wheat, purebred buildings and purebred methods mean purebred and happy boys and girls on the farm," said O. M. Plummer, president of the Pacific International Live Stock exposition, in an address on the future live stock breeders of the country. He declared that we ought to forget the "back to the farm" idea and concentrate our efforts on a "stay on the farm" movement. The place to begin this "stay on the farm movement," he said, is with the boys and girls, and the best way to begin with them is to assist them in their efforts to have and develop something of their own, especially live stock in some form.

The subject of the address of C. W. Hickman of the animal husbandry department of the University of Idaho was the production of pork on northwest farms. He took up the subject from the standpoint of utilization of waste products, declaring that the amount of waste that could be turned into pork was the limiting factor in hog production on the average farm. He urged the necessity of a few hogs on many farms, rather than many hogs on a few farms.

G. O. Swales of Johnson, breeder of purebred Duroc swine, discussed the production of hogs from the purebred point of view. He declared that there was an actual shortage of purebred breeding stock at the present time in this state. Yet he urged, however, that no one rush pellnell into the purebred game, emphasizing the fact that it requires training and experience to make a success in it.

The Bankers' Viewpoint.

The bankers' attitude toward the live stock industry was discussed by George H. Greenwood of the Old National bank of Spokane. Mr. Greenwood declared that when there was depression in any of the major industries the banker felt it as actually as did any one else. He declared that there was no difference in the attitude of the average banker toward different legitimate industries, but that

(Continued on page twenty-five.)

Farm Accounts

There are two types of farm account books that are especially adapted to farm use, according to R. N. Miller, farm management specialist of the state college. First, the farm record book, which shows the total cost and labor income of the entire farm. The second one is known as the enterprise record book, which goes more into detail and shows the cost of production and yearly income for each separate enterprise that is in operation on the farm.

"The two main ideas to carry out are cost of production and profit. It is not necessary to use any standardized account book in order to know exactly what the yearly income is. Almost any book can be used. Simplicity is an important point because no one can afford to spend too much time in keeping their accounts. In any system used, however, one should not forget to take inventories at the beginning of each year, so that this can be taken into consideration.

"There are some who keep their accounts for profit alone and do not estimate the labor income. This is sometimes an excellent idea because it is often hard to figure the value of one's own labor. Some farm owners estimate their own labor at $2000 a year, while at the same time others feel that $350 a year is sufficient. This merely shows how much a little difference of opinion will make.

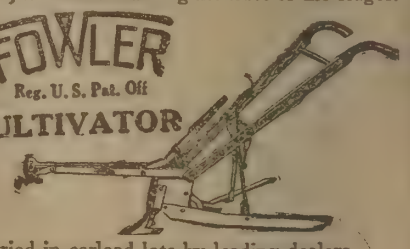
"There are two ways of figuring depreciation, concluded Mr. Miller, "one is on the original price of building, animals, or whatever the case may be; while the second is based upon the replacement value. The latter will always fluctuate with labor and material price, or with changes in the stock market. The former method is the one most dependable, and is usually best for farm use."

It Works Like a Hoe

The FOWLER Light Draft Cultivator makes ***bigger crops*** because it does not disturb plant roots. It puts the land in perfect condition to absorb rain, and makes a mulch of fine dust which conserves plant food and prevents the escape of moisture.

Covers 8 acres a day with one horse. One trip to the row. ***Cuts every weed.*** Does as good work as you can do with a hoe. ***Saves time and labor.*** Remove the plow foot, and you can cultivate astride the row.

The ideal cultivator for potatoes, corn, tobacco, beans, beets, tomatoes and truck crops. Can be adjusted to cultivate above or below the level, without disturbing the sides of the ridges.

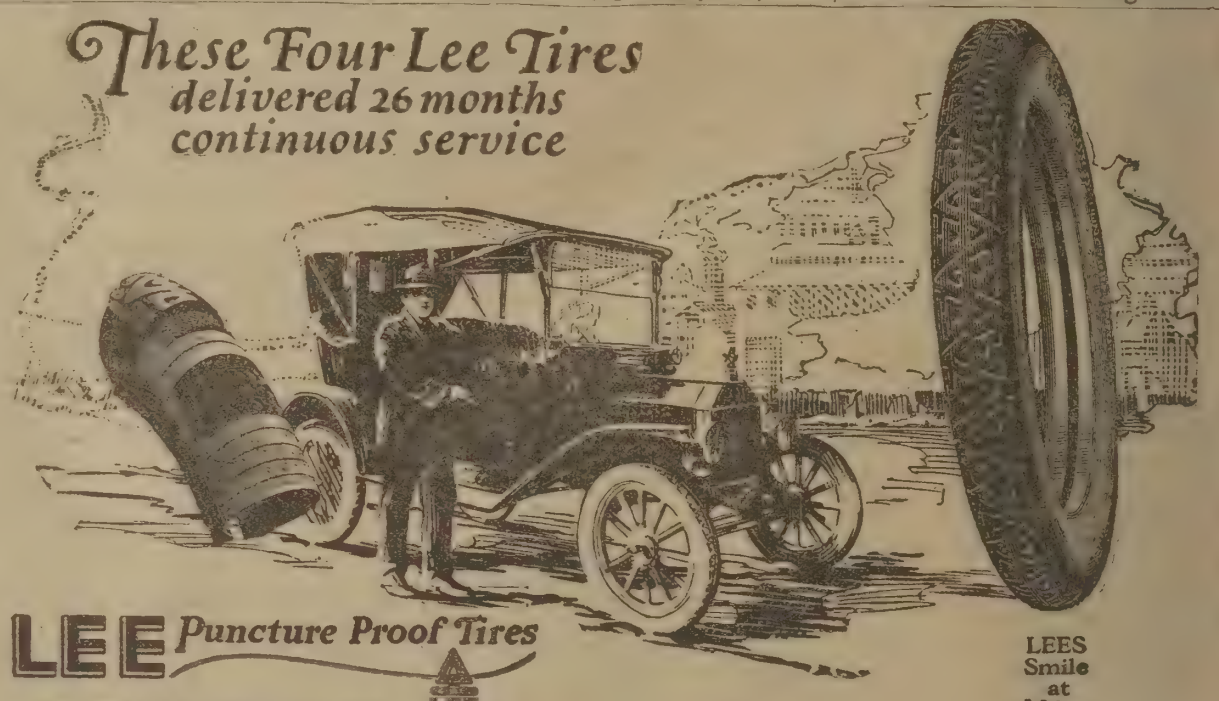


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Every week day for more than two years (26 months) this set of Lee Puncture-proof Tires carried J. L. Hodges of Spray, N. C. to and from his work, without a puncture, blowout or other trouble.

IN the experience of Mr. Hodges there is food for serious thought by every farmer in the land. For it is just such continuous service that is required of every farm owned automobile, truck and general service car, if it is to deliver full return on the investment it represents.

Lee Puncture-proof tires are unlike all other pneumatics in that they do away entirely with the annoyance, delay and expense of punctures.

While the first cost of Lee Puncture-proofs is a trifle higher than Lee Regular Fabric or Cord tires, they are by no means a "rich man's tire." It is the man who must secure maximum service per dollar of tire investment who most appreciates Lee Puncture-proofs.

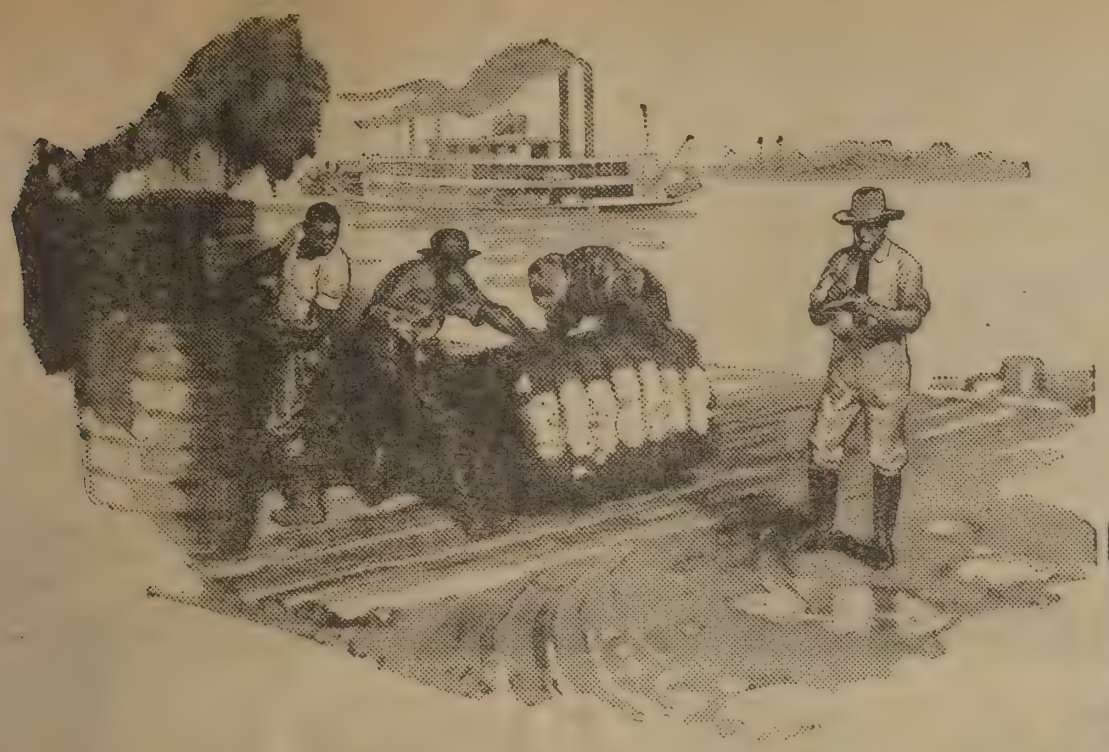
The added service, protection and mileage assured by the Lee exclusive puncture-proof feature, make this the most ecomonical and satisfactory pneumatic made, for any car used where road hardships are most severe and uninterrupted performance most desirable.

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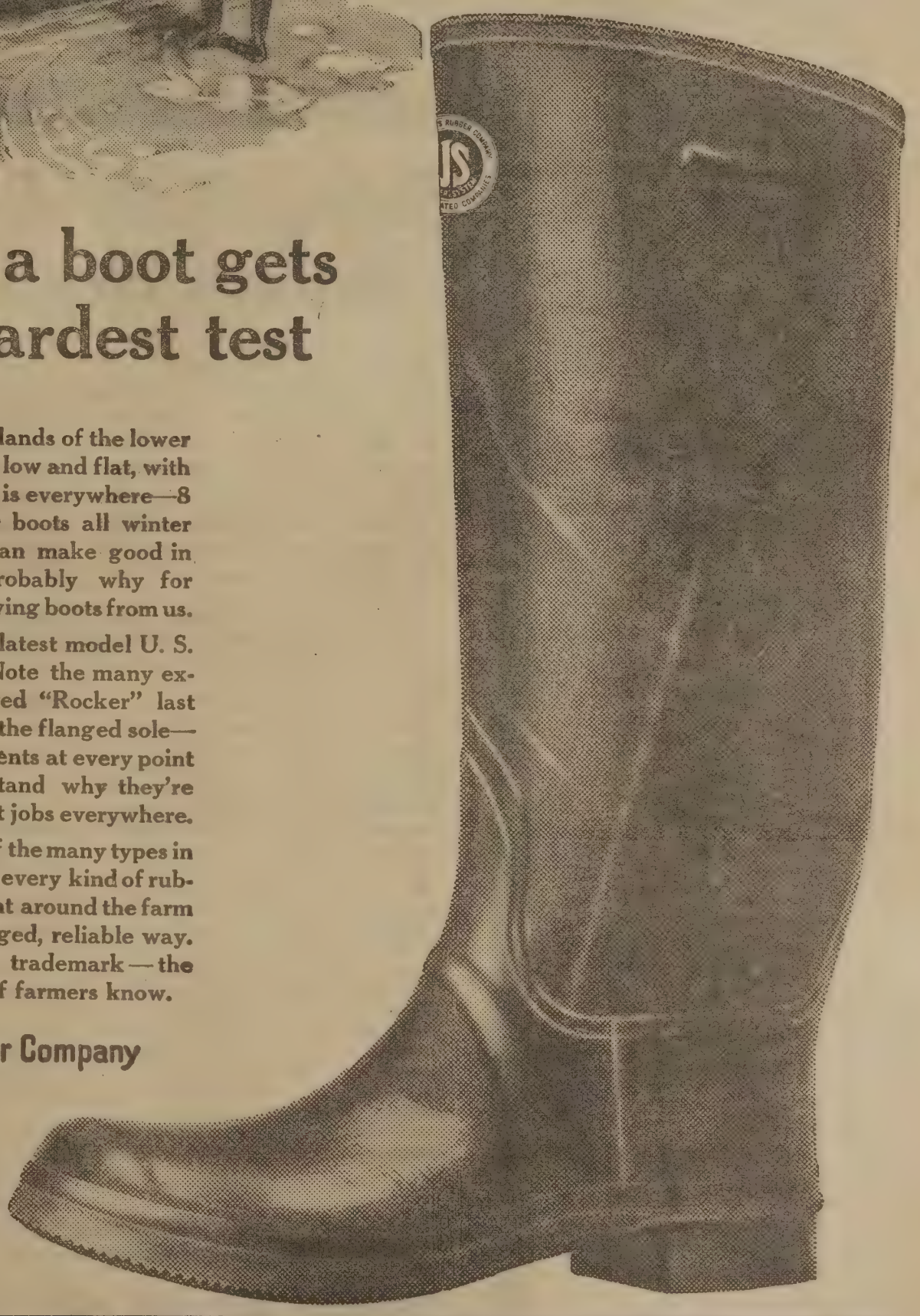
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Look over a pair of the latest model U. S. Boots at your dealer's. Note the many exclusive features—the curved "Rocker" last that makes walking easy—the flanged sole—the extra heavy reinforcements at every point of strain. You'll understand why they're making good on the hardest jobs everywhere.

U. S. Boots are just one of the many types in the big U.S. line. We make every kind of rubber footwear you could want around the farm—all built in the same rugged, reliable way. Always look for that U. S. trademark—the honor mark that millions of farmers know.

United States Rubber Company

Look for this trademark on **all "U. S." Rubber Footwear**

Marketing Berries

Cooperation That Will Protect Against Own Dishonesty

In an address to the Washington Berry Growers' association at Sumner, Wash., N. H. Nelson of Omaha said that during the last season he handled something like 31 or 32 cars of fruit for the association, adding that the great majority of the fruit was in fine condition. "We did have some slack boxes. This you should try and overcome, as it injures the sale of the entire car. There were also some lines of berries that would show mold, while other lines next to them in the same row would be in perfect condition, showing that they were either overripe or handled badly at the time they were picked and packed.

"A chain is just as strong as the weakest link. So with a cooperative association. It will only be as strong as its individual members are loyal. The greatest enemies of an association are sometimes its own members. There are always some seeking special privileges. Some who in putting up a case of fruit camouflage it with just enough good fruit to pass the inspector, while the case as a whole will have neither quality nor weight. Such growers think only of cooperation extending as far as themselves and perhaps a few of their immediate friends. What we must have is cooperation that will protect us against our own dishonesty while protecting us against the dishonesty of others—cooperation that is constructive and not destructive.

"When you ship out a car of fruit 500, 1000 or 1500 miles it is very easy for the man at the receiving end to pick out the weak points in that car of fruit. During the transit period every case of berries has been subjected to a constant jarring and jolting for those hundreds of miles and the fruit has settled down to a compact mass. If the boxes were slack-filled they would be about two-thirds full or if the fruit was overripe it will show heavy mold. The result of this is a lower average price on the entire car. Now this may not have been due to any dishonesty of any grower, as I have found that the great majority of growers are strictly honest and anxious to do the right thing. All they need is proper instruction and a thorough understanding of what is required of them."

Mr. Nelson adds a few words as to the prospects and conditions which will affect the selling of fruit the coming season:

"The coming season is likely to be a complex one for your sales manager. The most difficult problem—the one that requires the finest judgment—is to determine how high a price the consumer will take your berries at. My experience has been that the tendency has been rather to put the price too high than too low. If you have only a car or two to put into each market, put the price as high as you can. Get every dollar they will bring. But this policy will not do where you have a volume to move if you expect the market to use your berries for a period of time and in quantities that will feed 75 per cent of the people in that market; you must place a price on your product that will harmonize with the values of similar products, especially so in these unsettled times.

"There is no question but what you men are growing a fruit that there is a splendid demand for. In fact, they are growing in favor year by year and with men of vision and initiative to handle the distributing end of it there can be no question of success.

"If you growers do your part by putting up the best case of berries that you know how, so that we receivers can tell the trade that we are offering them the best that is to be had, after the consumers have had one or two boxes and found they contain both quality and measure, they will begin calling for your berries and the demand for them will grow from year to year.

Just Folks

In his days Alexander conquered the known world, but the orbit of the earth was not changed by a hair's breadth nor was the orbit of human affairs disturbed seriously.

We have just passed through the greatest of world wars and yet the old world wags on much the same.

Whether you have more money or less money is not fundamental. Whether you are enjoying happiness or suffering pain are incidentals.

Whether you live in America, or Asia, or Africa, or in the far islands of the sea, is not fundamental. Whether you sit in the presidental chair or are the doorkeeper at the White House, is immaterial when considering the fundamentals of life.

Today you are poor—tomorrow you are rich. You are the same individual on both days.

For 30 years I have watched the ups and downs of people in a thriving western city. The incidental changes of life have been many. Popular families have passed into obscurity and out of obscurity have come popular families.

Nor is so-called fortune always to the so-called deserving. Nor is so-called misfortune always the part of those who follow devious paths.

Even influence and power are not of the fundamentals. Influence and power may come, influence and power may go, or influence and power may remain for a season. Yet these things do not disturb the tenor of human life.

What you love and what you hate, what you hope and what you fear—these are fundamentals. In short, what you want and what you don't want are fundamentals. What you get and what you don't get are incidentals.

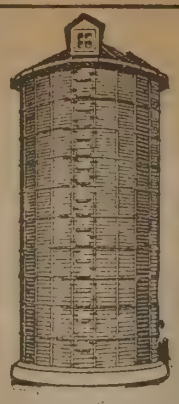
There are also fundamental facts as well as fundamental desires in life. Birth and marriage and death are fundamental facts.

There are fundamentals in races as well as in individuals. The ancient Egyptian symbolized the borderlands of the unknown; the ancient Hebrew the borderlands of righteousness; the ancient Greek the borderlands of art, and the ancient Roman the borderlands of government. The insights given to these races were fundamental in history.

While the ancient Egyptian explored and symbolized the unknown the modern American is exploring and symbolizing what can be used, and in that is doing fundamental work. Great cities and great manufactories and great railroads are largely incidental. But that certain inventive genius which converts the forces of nature into the uses of man—that is a fundamental contribution to the race.

Years ago we had a milkman who delivered the milk from his own cows. There were a lot of the fundamentals in his life. He knew as he went his rounds when to expect the flowers in the spring. He knew where the birds nested. He read contentment in the green carpet of the earth and in the blue of the heavens. He had a deeper possessory right of the shrubbery of the gardens and of the trees where he delivered his milk than did the owners themselves. And yet, as success is counted, he had more or less of a losing game to the end. Peace be to his ashes.

"Give us the luxuries of life and we will dispense with its necessaries," was the bright saying of John Lothrop Motley. So we might say, "Give us the incidentals of life and we will get along without the fundamentals." In fact, it is probably better that incidentals do engross our attention. But perhaps a thought or two of the fundamentals might be hidden away in the back of our heads awaiting the time of their need. E. A. S.



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I invented the H-L-F silo, which everybody seems to like. I have written a book, entitled "All About Silos," which I will be glad to send free and without obligation to anybody who is considering purchase of a silo. Lots of good facts in it. Write your name and address below and mail.

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Kirkland.....Kirkland Storage Battery Co.
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Okanogan.....Oliver G. Corbin
Olympia.....Olympia Battery Co., Inc.
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Walla Walla.....Johnston Auto Electric Co., Inc.
Wenatchee.....Electric Supply Co.
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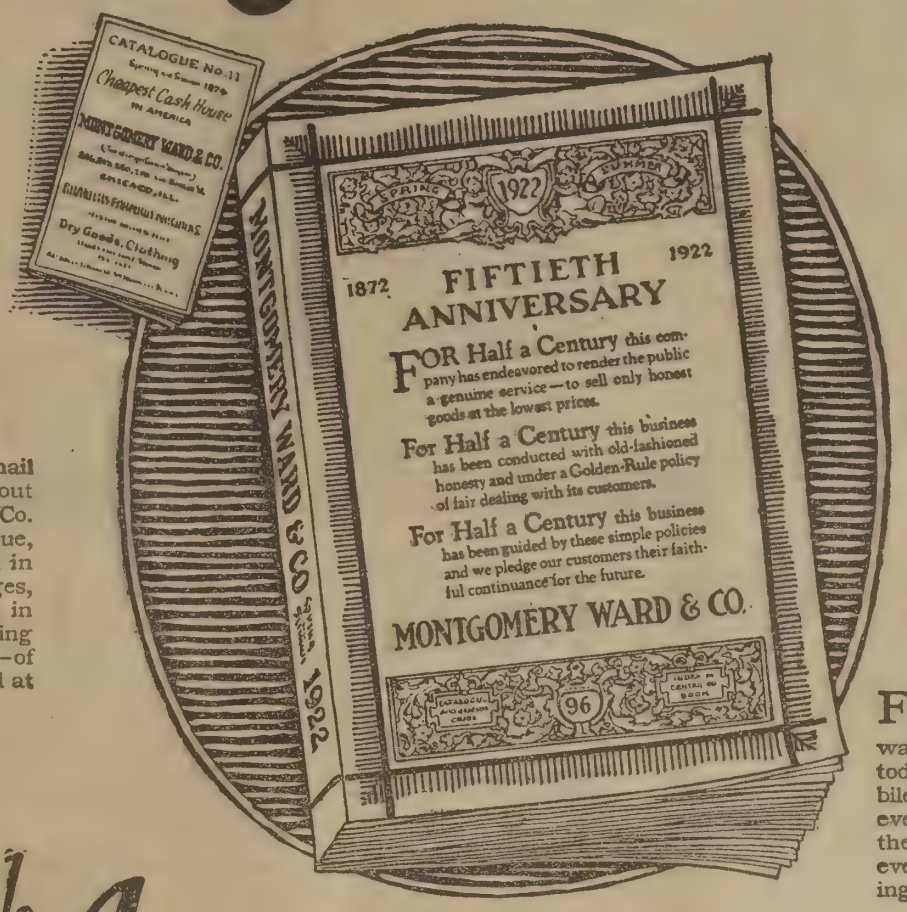
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Montgomery Ward & Co.

The Oldest Mail Order House is to-day the *most progressive* —



1872

THE first little one-page mail order leaflets were sent out by Montgomery Ward & Co. in 1872. The first catalogue, pictured above, was issued in 1874. It contained eight pages, about three by five inches in size. This was the beginning of the mail order business—of selling goods direct by mail at one small profit.

1922

FIFTY years of fair dealing, of prices that always offered a saving, and today this big Golden Jubilee Catalogue contains everything for the Home, the Farm and the Family—everything at money-saving prices.

50th Anniversary

This big Golden Jubilee Catalogue pictured above is priced to match the spirit of the times. Some things are priced at no profit, many things at very little profit. It is your best guide to the lowest prices.

THIS is the Golden Anniversary of Montgomery Ward & Co. We have completed Fifty Years in the service of the American Public.

In 1872 this business was begun in one small room, twelve by fourteen feet.

Today, millions buy from us on faith in the name: "Montgomery Ward."

Upon what is that faith founded? Upon Fifty Years of fair dealing, upon Fifty Years devoted to selling only goods of standard quality at the lowest possible prices.

This 50th Anniversary Catalogue keeps faith with our customers. It is priced to meet present-day conditions. It is filled with new, fresh merchandise with every price based upon the new low costs of production.

Some things at No Profit Many things at Little Profit

At Montgomery Ward & Co. we believe we owe a duty to our customers—that it is our duty to sell everything today at the lowest possible prices.

We believe we owe a duty to the American Farmer. Therefore, we are selling *all our Tillage Tools absolutely without profit to us.*

Many of these tools are actually priced at less than it would cost us to replace them today. This is the way we are keeping faith with the American Farmer.

And to the American Woman we are offering almost equal advantages—everything needed in the home—everything to make the home more attractive—everything priced at a big saving for you.

All are offered at the lowest prices possible today.

The New-Old Spirit of Montgomery Ward & Co.

We are entering our second half century of business existence. And we step forward with the spirit of youth, of progress in Service and Saving for you.

To give you bigger and bigger values, to give you better and still better service, to quote always lower and lower prices—that is our work and our accomplishment today.

Buy from this 50th Anniversary Catalogue. Know that the price you pay is the right price for whatever you buy. Know that every order you send, every letter you write, will be handled in the full spirit of the Golden Rule.

If you have a copy of our 50th Anniversary Catalogue, lend it to your friends.

MONTGOMERY WARD & CO.

KANSAS CITY CHICAGO FORT WORTH
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If you have not a copy of our 50th Anniversary Catalogue, borrow one from a neighbor.

Livestock and Dairy

Won Third Prize

The following is the letter written by L. P. Powers, Palouse, Wash., in The Washington Farmer's recent prize contest on the subject, "Hogs as a Byproduct on the Farms of Washington." This letter was awarded third prize:

It is an accepted fact that a few pigs should be raised on every farm to utilize the windfall fruit and waste products of the house and garden; it is equally true, though not so generally recognized, that this is only the beginning rather than the end to the usefulness of the hog as a by-product of the farm.

A careful study of conditions in the wheat belt shows strikingly some very undesirable conditions. Our system of continuous grain growing is slowing depleting the supply of humus in the soil. This is shown by its greater tendency to run together and bake and to wash during fall and winter rains.

A more diversified system of farming, including soil improving, forage crops and sufficient live stock to consume them on the farm, is necessary that the soil may be maintained in a sufficiently high state of fertility to insure the production of profitable wheat crops. Alfalfa is the most valuable and generally grown soil improving forage crop in this section of the country, being a nitrogen-gathering plant having the power to bring the free nitrogen of the air into the soil. It also has a large tap root system which extends several feet into the soil, producing by decay a large amount of humus evenly distributed through the soil exactly where it will do the most good. This increase in the humus not only increases the capacity of the soil to absorb moisture, but also promotes the better circulation of the air through the soil and hastens the chemical changes necessary to render plant food available.

Nearly half of our great wheat belt is in summer fallow each year, representing idle capital. Over the greater portion we receive sufficient rainfall to produce a good crop each year if proper precautions are taken to conserve the moisture. In this part the idle summer fallow is necessary and represents a great loss. Experiment has shown that wheat sown on pea stubble yields fully as well as and in many cases better than when sown on summer fallow. The only objection to the peas is that the market, at a price that will show a fair profit after paying the high harvesting expense, is very limited.

In deciding the kind of live stock to raise as a byproduct the first thing to consider is their ability to utiltze to the best advantage the crops produced as a byproduct for which there is not a ready cash sale. It is readily seen that in the wheat belt alfalfa and peas are the natural byproduct crops. The danger from bloat being too great with cattle or sheep, pigs and horses are the only farm animals that can profitably be pastured on alfalfa, and pigs are the only ones that can make economical use of the peas. Keeping this in mind, one may easily see that pigs are the live stock best adapted to this type of farming.

The best results are obtained by having the sows farrow about the middle of April, in houses so located that the alfalfa pasture is easily available. When handled in this way the pigs will start grazing when only a few weeks old. A medium grain ration should be fed until peas ripen, when the pigs should be allowed to harvest the peas. When handled in this way alfalfa will show gains of 500 to 700 pounds per acre, after making allowance for gains from grain fed, and the peas 400 to 500 pounds gain per acre, without any exepense for harvesting and with all the vines and manure left on the fields.

L. P. POWERS.

Palouse, Wash., R. 1.

Study Lamb Feeding

On Tuesday, March 7, there will be held at the Prosser experiment station of the state college a meeting of much interest to the live stock men and farmers of the state, especially those interested in the sheep business. On that date final results will be available on a series of lamb-feeding experiments conducted by the animal husbandry department of the college.

For several weeks 14 lots of 50 lambs each have been receiving at the station 14 distinct feeding rations. Among the questions that these experiments are expected to answer are: What is the difference in feeding value of first, second and third cuttings of alfalfa hay? How does sweet clover compare with alalfa hay in feeding value? How do results from full grain feeding compare with those from limited grain feeding? What is the value of cottonseed meal in the ration? What is the value of silage in lamb rations? What is the value of beet molasses when fed to replace one-third of other concentrates?

March 7 will be known as feeders' day at the Prosser station, and a large attendance is expected.

Butter Will Not Gather

I can not make the cream come to butter. No matter what temperature I have the milk, nor how long I churn the butter will not make. The cream is nice and there are signs of butter, but it does not gather and warm or cold water to assist in gathering it will turn it back to milk. What is the matter with it?—Mrs. T. P. C., Yakima, Wash.

There are many causes of difficult churning. The most important ones are unripened cream and low temperature. The former being a result of the latter to a certain extent.

The cream is often kept so cold that the bacteria producing the lactic acid, which in turn makes the casein of the cream brittle, have not been able to develop. Thus the cream remains sweet and tough, almost leathery in consistency. To overcome this difficulty the cream must be warmed and given time to sour.

The low temperatures also harden the fat globules to such a point that they will not stick together easily in the churning process. Certain feeds and dry grass hays will also cause hard fats. On the other hand, feeds such as silage, root crops, bran, linseed oil meal produce soft fats which churn easily.

Cows far advanced in lactation very often produce hard fats.

Ripening the cream well as suggested previously and then churning at a comparatively high temperature will make it possible in nearly every case to make the butter come in 30 to 40 minutes regardless of the condition of the cream. Making changes in the ration will also help. Be sure to use a thermometer and try to churn around 60 to 65 degrees at this time of the year.—A. B. N.

For Greater Activities

The Washington Jersey Cattle club anticipates greater activities for the year 1922 than it has ever experienced in the past. At their annual meeting late in December the members asked E. W. Trezise of Tolt, the newly elected president, to act as field man and line up the Washington Jersey men for a stronger organization. The club set the membership fee at $1 for each purebred animal and 25 cents for each grade animal in the herd.

It is the aim of the club to affiliate with Jersey breeders of Idaho, Oregon and California and employ a field man who can spend his entire time in the four states in the interests of the breed.

Officers for 1922 are as follows: E. W. Trezise, president; R. L. Tanner, Sumas, vice president; Warren Lincoln, Potlatch, secretary-treasurer; N. C. Sears, Winlock, and William Auld, Waikiki farm, Spokane, members of the board of directors.

NEW STATE CHAMPIONS.

Several new state champions for milk or butterfat production have recently been reported for the Pacific northwest by the Holstein-Friesian Association of America One of the two for Washington is Pietertje Mutual Fobes, T. J. Owens' junior 3-year-old world champion, which made 654.72 pounds of fat from 21,368.3 of milk in 305 days. The other is Countess Matador Segis, a senior 3-year-old, which becomes state seven-day champion, with 25.668 pounds of fat from 540.2 of milk.

In Oregon F. W. Connell of Hillsboro

SMOKES HIS MEATS BY PAINTING IT

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Mr. Laws simply paints his meat with Wright's Smoke. By this method he smokes meat perfectly in a few minutes without fire, trouble or loss. Wright's Smoke gives the meat a better flavor than the old method, keeps all insects away and prevents shrinkage. Mr. Laws sugar cures his meat with a mixture of 27 pounds of salt and a bottle of Wright's Ham Pickle. Get these genuine, guaranteed Wright Pure Food Products from your dealer.

Simply send your name to E. H. Wright Co., 850 E. Broadway, Kansas City, Mo., for valuable illustrated book on expert methods of curing meat. Also learn how you can get a complete, highest-grade butchering set at lowest factory cost.—Adv.

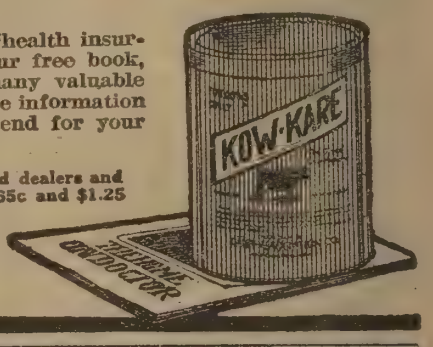


WHY take chances with cow health, when such a little outlay will keep the whole herd in the pink of condition and producing at maximum profit? Now-a-days Kow-Kare is being used fully as much as an aid to perfect health and milk yield during the winter as it always has been as a medicine for cow diseases.

Actual tests in hundreds of dairies prove that Kow-Kare can be used as a preventive and production aid with wonderful results, at a cost of only about a cent a day per cow. Easy to prove it for yourself; select a poor milker and use Kow-Kare according to directions for a short period. By improving the assimilation and digestion, you will note a decided gain in milk yield.

Kow-Kare has positive medicinal qualities that build up and strengthen the organs of production and reproduction. As a sure, reliable remedy for Barrenness, Abortion, Retained Afterbirth, Scouring, Bunches, Milk Fever, Loss of Appetite, etc., Kow-Kare has a reputation of twenty-five years success.

Dairies that use Kow-Kare as "health insurance" are the profit makers. Our free book, "The Home Cow Doctor," has many valuable hints for cow owners, besides definite information on how to treat cow diseases. Send for your copy today.



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Glance over the bargains on the "Want Ad" page.

developed a new senior 4-year-old 305-day champion in Nellie Marilla Netherland, which made 469.7 pounds of fat from 12,851.7 of milk, and in Idaho there are three new champions, all in the 305-day division. Dorothy Walker De Kol, a junior 3-year-old, tested by the Intermountain institute of Weiser, made 392.75 pounds of fat from 11,404.9 of milk; Zeldenrust Kirby 2d, a full-aged cow, also owned by the institute, made 364.85 pounds of fat from 10,020.4 of milk, and Alaska Yukon Colantha 3d, a junior 4-year-old, owned by the University of Idaho, made 319.09 pounds of fat from 9466.4 of milk.

VETERINARY

By DR. S. B. NELSON.

Examine Cow's Mouth—We have a cow that just had her calf and is very sick. She has lost weight fast, can hardly eat and slobbers most of the time. Her salivary glands are swollen badly and she can hardly chew. This sickness lasted about nine days then she got better and gained weight, now she is sick again. The calf is about four weeks old. She cleaned soon after the calf was born. Please advise us what to do. Is the disease catching?

F. D.

Keller, Wash.

Examine the cow's mouth and see the contents that you find in there. It is possible that she has some derangement in the mouth, either by her teeth or by foreign substance. Try washing her mouth out with a sodium hypo-phosphite solution, about a teaspoonful to a cup of water.

Pig Affected with Scurvy—I have a pig six months old that has the scurvy. Its teeth have become black and are breaking off and are falling out. Can anything be done for it and will its teeth grow again? What causes this condition? A. K. T.

Republic, Wash.

Feed your pig with boiled bran mash with a small quantity of linseed meal in it. Add to this about a teaspoonful of epsom salts, and I think the matter will clear up.

Contagious Abortion.—Last spring I purchased a 4-year-old bull for service. A number of cows served by him repeated. The first cow served did not repeat, but dropped her calf after six months. She was in good health and showed no unusual signs prior to time of parturition. She did not clean very well, but has showed little or no discharge. She eats well, keeps in good flesh and gives about three gallons of milk daily. I have kept her from the rest of the herd. Would an examination of both sire and dam show if affected with abortion? M. B.

Monroe, Wash.

If you will write to the extension service, State College of Washington, asking for a bulletin on contagious abortion, the same will be sent to you. This will give you the latest advice on contagious abortion.

May Need Operation.—Is there any remedy for a cow that will not get with calf?

Brush Prairie, Wash. T. H.

It is quite possible that your cow is suffering from a cystic ovary. This needs an operation if that is the trouble, and your local veterinarian will be able to give you advise and suggestions. It takes about four or five operations, covering a period of four or five weeks. The cyst has to be broken about that often to prevent its further development.

Mare Sleeps Standing.—I have a mare about 10 years old, gentle and sound. She never lies down in stable and sleeps standing, and in that condition falls down on her knees. Sometimes when loose in pasture she lies down and rolls, but won't lie down to rest. She also coughs several times after drinking water. Any other time she does not cough. She is sound and a fast traveler. F. W. H.

Kapowsin, Wash.

There are some horses that never lie down to sleep. You should keep her well bedded, so that when she does fall she will not hurt her knees. Maybe the following stimulating liniment applied to the throat will stop the cough: Croton oil, one part; olive oil, 20 parts. Mix well and rub on the throat. This will blister. After three or four days apply olive oil to the scab and in about 8 or 10 days or two weeks it will come off.

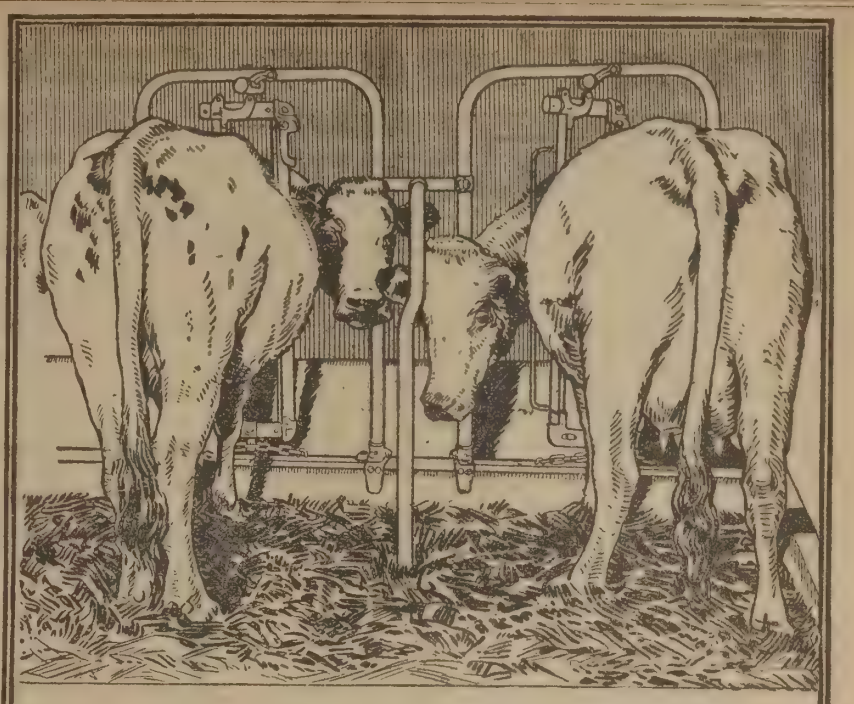
Clots in Milk.—Our cow's milk has clots that look like cream in it. What is the matter? H. B.

Newport, Wash.

Your cow has a slight attack of garget due to infection. Possibly just a purge will clean up her system. Give her one and one-half pounds of epsom salts and then you might give a tablespoonful of fluid extract of phytolacca in a pint of water once daily for a few days.

Milk Gets Bitter.—I have a cow that was fresh last April and she will freshen again in April. She is still giving two gallons of milk a day, but her milk gets bitter when it stands and the cream will not

(Continued on page twenty-one.)



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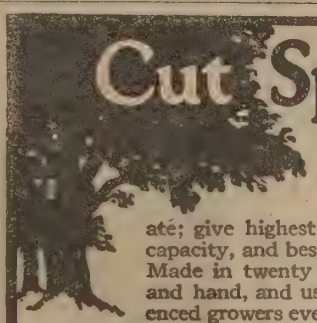
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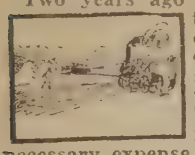
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The department editors of this paper are anxious to be of service to you. Do not fail to write to us if they can be of help to you.

Farm Machinery Entitled to Good Care

By PROF. L. J. SMITH, W. S. C.



Two years ago it was not popular to talk economy. We were on the crest of the greatest wave of reckless spending that this nation has ever known. Today, however, the cry is to pare off every unnecessary expense, to make the old last a while longer if it can be done without decreased efficiency. There is no branch of farming where economy can be practiced to better advantage than in first-class equipment, well cared for, for carrying on farm operations. Farm machinery is often notoriously abused and neglected. It is left to the tender mercies of the elements after its season of use is over. It is put back into the next season's work with but little attention.

The mortality of farm implements has been ruinously high. When they should have been in the prime of usefulness, they have succumbed to neglect and gone to the scrap heap. Here, then, is a splendid chance to cut down operating expenses during the next few years. Help the old machine hold out another season or two. It will be well worth while. Give proper care right from the start to the new machinery that you find it necessary to buy.

In the first place, every used machine has some weak spots, and these must be given the attention they require. Certain bolts are apt to loosen and if allowed to remain loose a little while become hard to keep tight. Take out such a bolt and examine it. You will often find that it has been loose so long that it no longer fits the hole—the hole has been worn larger and the bolt smaller. Often the threads are no longer sharp and tight fitting. Throw the old bolt away. Its usefulness is past; put in a new full-size bolt and, if neccessary, put a spring washer under the nut. Spring washers do not cost a great deal and they save a lot of unnecessary work in tightening up loose bolts.

Sometimes a bolt is loose and the nut is rusted so tight that it is very hard to get off, or the end of the bolt has been riveted down to hold the nut on. Possibly it is a carriage bolt and hard to keep from turning. In such a case, hold a sledge or heavy piece of metal against one side of the nut and split it with a chisel. If carefully done the threads on the bolt will not be spoiled.

Look over the brace rods and angle iron on the machine. Often they are bent out of line. This causes an extra strain on some other part or throws some part out of alignment. Farm machines are made as light as possible on account of draft, and while the parts are strong enough for their work, yet they will not stand abuse.

Good paint goes a long way toward prolonging the life of farm machinery. If one prefers not to buy a ready to use paint he can mix his own, using white lead, red lead, dry colors, such as the ochres and venetian red, and raw linseed oil and turpentine for drying. Paint saves the wood and protects the iron. Don't put it on unless the wood is thoroughly dry. Don't put it on too thick. Brush it in well, and put on several coats.

Farm machinery is worth housing. To pay out good money for high-grade machinery and let the weather slowly eat away one's hard-earned purchases is not wise.

Modern Machinery Essential.

Each generation sees more machinery used in agriculture. Never will we go back to the old hand methods. When the cradle was thrown aside for modern harvesting machinery it was estimated that the time required to produce a bushel of wheat was reduced from three hours to 10 minutes.

The farmer must more and more be a good mechanic. The success of his business will more and more depend upon his ability to get the most out of his machinery in the least time and in making his machinery last.

To do these things he must have a repair shop and some good tools. It will soon be said that a farmer will be known by the tools he keeps. Encourage the boys to go some place where they can learn how to use tools and take care of high-grade machines. The young farmer should know a gas engine or tractor thoroughly, yet with the idle winter months we get only a hundred young men in our gas engine and tractor short courses and we have practically every make of gas engine and tractor in common use waiting for men to learn to handle them properly. Surely the young farmer is missing the "big chance" in neglecting his winter opportunities for self-improvement.

Use Only Good Tools.

Buy good tools and take good care of them. Have a definite place for each tool and see that it is kept there. Keep a stock of bolts, washers, cotterpins and rivets in a set of pigeon holes on the wall where you can lay your hands on them without pawing over a lot of junk in a box. Have a small, strong bench and a good machine vise for iron work, and a larger bench for wood work. Don't mix iron and wood working tools; if you do, the wood tools are soon in worse than bad shape.

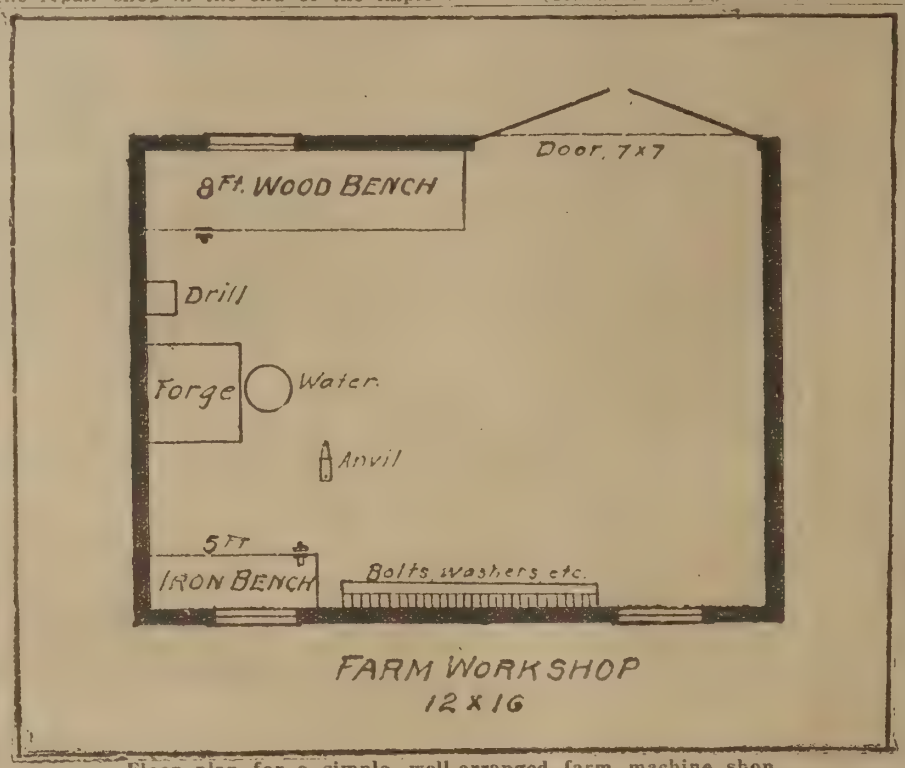
The accompanying sketch shows a well laid out repair shop. Any one can build it. It has the benches well located and there is a good floor space to bring in machines if necessary.

On a large farm many prefer having the repair shop in the end of the implement shed, which is also essential to good farming, but that arrangement increases the fire hazard.

Use Oil Wisely.

Lubrication is an important item in the upkeep of any machine. Farm machinery is no exception to the rule. Good oil is cheaper than repair bills. Where one part moves against another, there is wear. Oil

(Continued on page twenty.)



Floor plan for a simple, well-arranged farm machine shop.

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"The only results obtained from complete fertilizers have been secured where Nitrogen was used."

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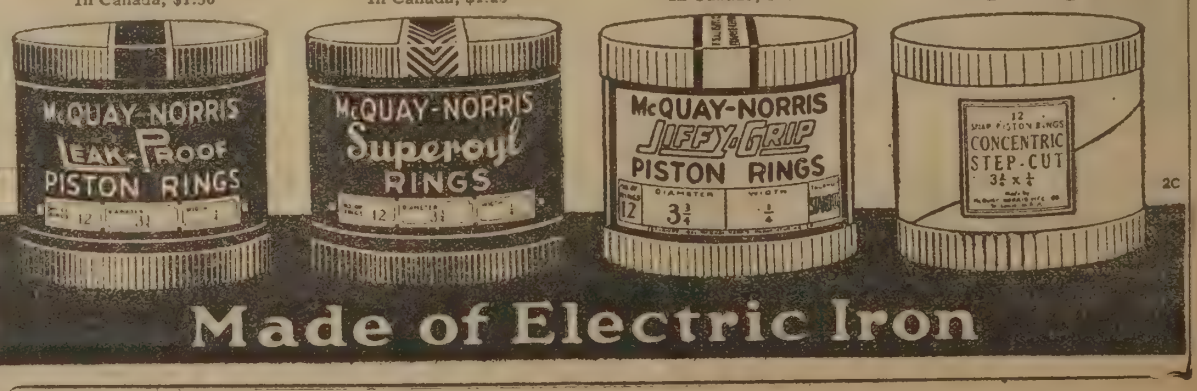
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And Snap Rings of the highest grade



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Sales of Purebred Shorthorns

A total of 78 purebred Shorthorns brought $17,625 at the association consignment sale and the Day & Rothrock sale held in connection with the northwest live stock conference last week. The general average for the entire 78 head was about $226, with the prices paid at the Day & Rothrock sale on Hercules ranch, near Sprague, much higher than those at the general consignment sale held at the Spokane Union stockyards. An average of $282.61 was paid for 44 head of the Hercules herd, with an average of about $284 for the bulls and $281 for the cows and heifers.

The top-priced animal was Hercules Snowstorm, the yearling calf of the grand champion cow, Hercules Matchless; sire, Village Sultan. He was taken by J. E. Trimble of Farmington, Wash., at $960. Albert Owes of Amber, Wash., paid the next high price of $705 for Hercules Imperial, a Gainford Perfection calf. The top-priced female was Hercules Violet 2d, a roan 3-year-old, bought by W. L. Henderson of Revere for $490. W. L. Henderson was the largest single buyer at the Day & Rothrock sale, taking 11 cows and heifers and two bulls for a total of $3900, or an average of $300.

A feature of both sales was the large number of animals purchased by Whitman county farmers and breeders, to be used in connection with wheat farming. Two club boys, active in last year's Hercules steer club, Ralph Cole of Pullman and Eugene Harms of Tekoa, were buyers.

A third Shorthorn sale was scheduled for last week as one of the circuit, that of A. D. Dunn of Wapato. Owing to the inability of certain prospective buyers to get away from their farms during the extreme cold weather and their snowbound condition, Mr. Dunn postponed his sale until Thursday, March 16, when it will be held at his place near Wapato.

Both sales last week were cried by "Sandy" Keith of Davenport, Wash., and E. O. Walter of Filer, Idaho. The consignment sale was managed by Carl A. Greif of Uniontown, Wash.

The following is a detailed report of both sales, giving the animal, date of birth, buyer, address and price paid. When not otherwise stated the address of the buyer is in Washington state:

THE HERCULES SALE.

Bulls.

Hercules Snowstorm, Feb. 8, 1921, J. E. Trimble, Garfield $960
Hercules Imperial, March 15, 1921, Albert Owes, Amber 705
Silver Doune, March 28, 1921, W. L. Henderson, Revere 400
Knight Superior, May 10, 1920, W. L. Henderson 400
Royal Marshal, May 18, 1920, Taylor Land & Live Stock Co., Hooper 220
Hercules Gallant, April 12, 1920, Hunters Cattle Co., Daisy 250
Roan Doune 928853, June 3, 1920, Taylor Land & Live Stock Co. 210
Queen's Brace, June 21, 1920, Hunters Cattle Co. 180
Columbia, Oct. 9, 1920, Taylor Land & Live Stock Co. 200
Victor Doune, October 19, 1920, Taylor Land & Live Stock Co. 155
Violet's King, November 5, 1920, Carl Huntley, Wisdom, Mont 145
Roan Doune 1026699, November 20, 1920, Carl Huntley 130
Viscar, December 5, 1920, Taylor Land & Live Stock Co. 145
Disturber, November 25, 1920, Taylor Land & Live Stock Co. 155
Royal Dale, February 14, 1921, Taylor Land & Live Stock Co. 155
Aurora Dale, Carl Huntley 145

Cows and Heifers.

Hercules Violet 3d, November 30, 1919, W. L Henderson 400
Hercules Rosebud, November 8, 1919, Broughton Bros., Dayton 400
Dunbro's Secret, January 3, 1920, Hunters Cattle Co. 430
Maud Muller 8th, January 12, 1920, Broughton Bros. 400
Hercules Sylvia, February 6, 1920, Broughton Bros. 375
O. K. Gloster, July 20, 1920, Ralph Cole, Pullman 300
Sultan's Belle, March 2, 1920, W. L. Henderson 360
Hercules Susan, Jan. 5, 1921, Albert Owes.. 380
Village Rose 7th, April 25, 1921, Albert Owes 410
Hercules Violet 5th, March 7, 1921, Eugene Harms, Tekoa 190
Hercules Elvira 2d, February 10, 1921, Broughton Bros. 350
Village Rose, October 7, 1920, W. L. Henderson 240
Ramona 3d, October 7, 1920, W. L. Henderson 250
Hercules Moss Rose 2d, November 15, 1920, W. L. Henderson 200
Isabella 5th, January 10, 1921, W. L. Henderson 225
Miss Rosewood, December 2, 1920, Eugene Harms 180
Dale's Rosebud, December 22, 1920, W. L. Henderson 140
Dainty Maid 2d, January 21, 1921, B. S. Burger, Pomeroy 155
Zephyr 2d, February 25, 1921, T. L. Henderson, Winona 115
Flower Girl 3d, March 15, 1921, J. E. Trimble 225
Mabel, April 5, 1921, T. L. Henderson 140
Cleopatra 2d, April 5, 1921, T. L. Henderson 135
Flower 5th, April 5, 1921, J. E. Trimble.. 180
Medina 2d, April 20, 1921, W. L. Henderson 125
Rosebud 9th, January 16, 1914, W. L. Henderson 470
Hercules Violet 2d, Feb. 22, 1919, W. L. Henderson 490
Maud Muller 7th, February 4, 1918, Hunters Cattle Co. 395
March Lady 2d, May 6, 1921, W. L. Hunter 220

THE CONSIGNMENT SALE.

Bulls.

Consigned by Austin Corbin 2d, Corbin, Idaho:
Royal Lad, March 27, 1921, Albert Esgate, Coeur d'Alene, Idaho $160
Chilco Prince, Jan. 6, 1921, G. C. Deschiell, Mt. Hope, Wash. 110
Chilco Dale, Jan. 16, 1921, P. W. Murphy, Spokane 170
Chilco Boy, May 4, 1921, G. F. Moreland, Rockford, Wash. 70
Consigned by G. E. Imler, Elberton, Wash.:
Unnamed, April 15, 1921, G. E. Moreland... 60
Unnamed, April 1, 1921, P. P. Kloppenberg, Spokane 55
Interstate Lad, May 11, 1919, George Hepton, Spokane 115
Consigned by P. P. Kloppenberg, Spokane:
Challenger, April 9, 1918, T. L. Henderson, Winona 115
Consigned by J. Houston McCroskey, Garfield:
Red Villager, Jan. 19, 1921, W. J. Schwab, Dalkena, Wash. 165
Spicy Villager, Feb. 5, 1921, G. E. Imler, Elberton, Wash. 200
Chinook Royal, April 23, 1921, Carl Huntley, Wisdom, Mont. 80
Chinook Villager, Feb. 23, 1921, Carl Huntley 105
Avon Villager, April 24, 1921, T. L. Henderson 115
Consigned by J. E. Trimble, Farmington, Wash.:
May's Duke, April 21, 1920, A. L. Crawford, Daisy, Wash. 110
Silver King, April 10, 1920, T. L. Henderson 190

Cows and Heifers.

Consigned by Carl A. Greif, Uniontown, Wash.:
Village Surprise, April 5, 1920, T. L. Henderson 150
Flora 3d, April 11, 1918, T. L. Henderson.. 305
Surprise, Aug. 13, 1918, A. L. Crawford... 160
Consigned by G. E. Imler, Elberton.
Lady Sunbeam, Nov. 15, 1916, W. J. Schwab 185
Consigned by Nordby Bros., Genesee, Idaho:
Waterloo Sunflower, August 12, 1919, J. E. Trimble 190
Missie's Minerva, April 5, 1921, Albert Esgate 155
Barmpton's Primrose 4th, Sept. 23, 1920, P. B. Barr 135
Barmpton's Missie, Dec. 19, 1913, T. L. Henderson 270
Barmpton's Barilla, Feb. 28, 1920, W. J. Schwab 150
Primrose Maid, Jan. 24, 1921, F. W. LaFrenz, Coeur d'Alene, Idaho 155
Nonpareil 46th, Jan. 16, 1921, F. W. LaFrenz 165
Barmpton's Faith, Jan. 28, 1921, P. B. Barr 160
Barmpton's Primrose, Feb. 8, 1921, F. W. LaFrenz 150
Consigned by J. F. Pappineau, Moscow, Idaho:
New Year Lass, Jan. 1, 1921, T. L. Henderson 155
Winsome, Sept. 30, 1916, Dr. Shanks, Spokane 200
Duchess Daisy, Jan. 14, 1919, T. L. Henderson 150
Louisa, Sept. 15, 1917, M. O. Miller, Harrison, Idaho 215
June Burnsides, Nov. 11, 1916, R. Jensen, Harrison, Idaho 165
Inglefield Rosemary, April 13, 1916, T. L. Henderson 155

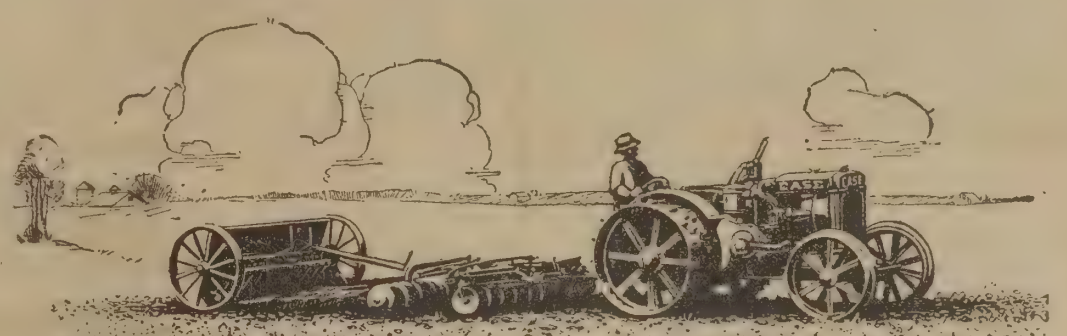
F. W. HILGERT, Kapowsin, Wash.—I wouldn't be without The Washington Farmer for $5 a year. I get more information out of it than the most of my papers together.

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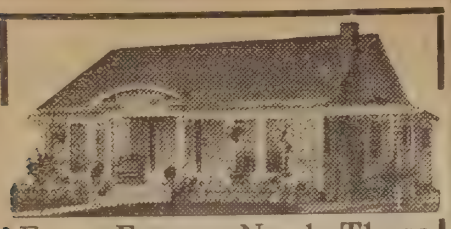
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Get Ready for Leaf Roller

Dormant Oil Spray and Arsenate of Lead Are the Weapons

The following is the spraying table for the control of the fruit tree leaf-roller:

Severely infested orchards	Dorm-oil	8 gal .....100 gal.	Late Dormant
	Lead Arsenate	4 to 6 lbs. ..100 gal.	Pink Spray
	Lead Arsenate	4 to 6 lbs. ..100 gal.	Calyx Spray
	Lead Arsenate	6 lbs. ..... 100 gal.	First codling moth cover spray
Moderately infested orchards (between 1 per cent and 5 per cent fruit injury)	Lead Arsenate	4 to 6 lbs. ..100 gal.	Pink spray
	Lead Arsenate	4 to 6 lbs. ..100 gal.	Calyx spray
	Lead Arsenate	6 lbs. ..... 100 gal.	First codling moth cover spray
Lightly infested orchards (less than 1 per cent fruit injury)	Lead Arsenate	4 to 6 lbs. ..100 gal.	Calyx spray
	Lead Arsenate	6 lbs. ..... 100 gal.	First codling moth cover spray

FRUIT TREE LEAF-ROLLER.

H. E. Newman, Spokane county horticultural inspector, in charge of pest control investigations, gives the following spray recommendation of the state horticultural division for fighting the fruit tree leaf-roller in Spokane county for the year 1922:

At least 24 hours without rain should follow an application of oil. Do not attempt to spray with any material when the trees are wet.

Avoid fall or winter applications of oil. Ordinary low temperatures may be disregarded in using oil in the spring.

Continued use of oil year after year has never been shown to injure the trees. Two applications of oil at Otis Orchards last spring did not injure the trees.

A few early applications of oil have given as good results as any late applications. On the average, late applications have given better results than early applications. But orchardists who have no spray machines of their own can not all postpone their oil spraying till late in the season—unfavorable weather conditions and lack of sufficient equipment will not permit.

Oil may safely be applied with only slight burning till the cluster blossom buds appear.

Thoroughness and care in mixing and applying oil sprays are absolutely essential to success.

Allow no orchard to omit the first two codling moth sprays. To do so may make such orchards leaf-roller breeding grounds.

The above recommendations are based on the experimental work conducted in the Spokane valley in 1921 by the horticultural division in cooperation with the farm bureau, on observation of the results secured by a large number of orchardists, on the recommendations of investigators in other leaf-roller infested districts and on the cost and availability of the materials.

Of all the materials in use in the valley last season, but two have proven worthy of mention. These are dorm-oil and arsenate of lead. On the experimental plots arsenate of lead seemed to give better actual control of the larvae than did the dorm-oil. On the other hand most investigators in other districts have not given lead a very high place in their control program. Furthermore, wherever used, including the Spokane experimental plots, the percentage of fruit injury has always been greater in the orchards sprayed with lead than in those sprayed with dorm-oil.

So far as can be judged from the results of 1921, at least 24 hours dry weather should follow an application of oil if favorable results are to be expected. A few cases were reported where satisfactory control resulted when the application was followed by rain the same evening, but these cases are rare. Of course the trees should not be wet, either from rain or from fog when the oil or any other spray material is put on.

Fall or winter oil sprays are to be avoided. Numerous instances have been cited where fall spraying with oil has resulted in severe injury to the trees. The ordinary low temperatures of spring, however, did no apparent damage in the Spokane valley last season. Several oil applications are known to have been made when the minimum temperatures of the nights following ranged from 18 degrees to 26 degrees F. No injury to the trees has been apparent to date though they were watched closely all summer; and in the one such plot in which egg counts were made, (the one where the following night temperature dropped to 18 degrees F.) better than 80 per cent of the eggs failed to hatch.

According to the best opinion available, continued use of oil year after year does not injure the trees. Childs of Hood River has stated that he did not think any damage had resulted there in orchards where oil had been applied for five consecutive years. Here in the Spokane valley no evidence of injury has yet appeared on trees sprayed with dorm-oil 8-100, both in 1920 and 1921. Nor has any damage so far resulted in trees which, because of rain following close after the first application, were given a second application of oil last spring.

The Spokane experiments shed but little light on the question of late versus early season spraying with oil. One plot sprayed March 26 gave as good results as were secured at any time during the season. On the average ranch under observation, however, better results were obtained late in the season than early. Where possible it is probably advisable to delay the spraying till the last two or three weeks previous to the bursting of the leaf buds. Several orchards were sprayed last year when the first leaves were three-fourths or one inch long, with but little damage

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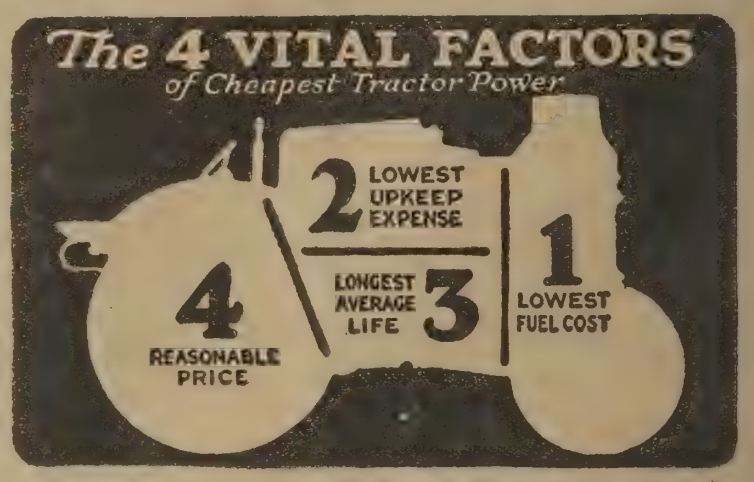
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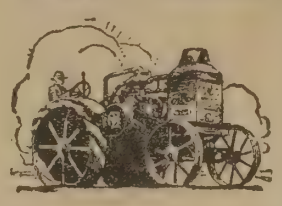
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resulting—the leaves were burned a trifle, a very few fruit spurs were killed. A month later practically no damage was apparent. In connection with delaying the spraying, probable weather conditions must be considered. A survey of Spokane's weather records for the last 10 years gives some interesting figures. During the months of March and April an average of slightly less than six dry periods of two days' or more duration occurred. These periods averaged 5.4 days in length. This means that if 1922 is an average year, a total of 31 days' spraying weather (or, if the last day of each period is counted out, then 25 days) may be expected; about 15 of them in March and 16 in April. In 1911 there was no spraying weather from April 13 to April 31; in 1915 there was none from April 15 to April 28, and in 1918 there was none from April 17 to April 31. Chances are being taken when the spraying is postponed till the last of the season.

There can be little doubt that the oil used in the Spokane valley last spring varied somewhat from barrel to barrel. Some barrels were more effective than others. But probably the biggest factors contributing to the unsatisfactory results secured on some orchards were:

1. Failure to rock the barrel long enough to get a thorough mixture of the contents before drawing it out for mixing with the water. The oil as it comes in the barrel is not a single definite compound, but is a mixture of materials which to some extent separate upon standing, the lighter materials rising to the top.

2. Failure to get a proper emulsion in mixing the oil with the water. If a scum of free oil forms on the surface of a tank of spray a good emulsion has not been obtained. The spray is weakened and the trees struck by the free oil will probably be burned.

3. Failure to thoroughly cover the trees. In over half of the orchards where egg counts were made last spring from 15 per cent to 40 per cent of the egg masses had not been struck by the oil. Perhaps such results are to be expected where oil is being used for the first time. The spray is very light compared with the lead spray or lime sulphur, it has little carrying power when applied against the wind. Therefore, it is but natural that any one accustomed to using these other sprays should make a few misses when first tackling oil. It must be remembered, too, that the egg masses are not the easy marks that a casual observation would indicate. Practically all of them are found on the upper sides of the limbs to which they are attached, a large percentage are cleverly hidden just below a projecting spur or twig, over half of them occur in the top of the tree attached to the tips of the smaller branches. Further explanation should not be required to show the extreme care that is essential to success in spraying with oil.

Spraying from the top of the machine or from a tower is strongly urged. In many orchards it will be found advisable to spray only one side of a tree row at a time in order that, when spraying against the wind, the machine may be kept as close as possible to the trees. It is impossible to spray from the middle of a tree row to the opposite side of both rows of trees if even a slight breeze is blowing.

Fruit Selling

Will Be Conducted by New Agency

Articles of incorporation have been filed with the secretary of state at Olympia for the North American Fruit Exchange of the Pacific Coast, a Washington corporation, having a capitalization of $100,000. Officers and directors of the company are Reginald H. Parsons, chairman of the board; W. F. Gwin, president; A. R. Rule, vice president; D. H. White, vice president and treasurer; A. A. Prince, secretary and sales manager; J. Curtis Robinson, general traffic manager; Worrall Wilson, counsel.

With the exception of A. R. Rule the incorporators, officers and directors of the new fruit marketing corporation live in Seattle. Mr. Parsons was formerly chairman of the board of the Northwestern Fruit Exchange; Mr. Wilson is president of the Seattle Title Trust company, and was formerly general counsel of the exchange, while W. F. Gwin, former president; Robinson, Prince and White were also long identified with that corporation.

The company declares its purpose to specialize in the service of the growers' cooperative movement and will confine its operations to a strictly service basis.

A news dispatch from Wenatchee says:

One of the most dramatic events in the fruit history of north central Washington was enacted during the closing sessions of the Skookum Packers' association when members passed a resolution giving the locals the right to contract their fruit with other selling agencies, reserving only one car for shipment through the Skookum association. The effect of the resolution was scuttling the old organization, if necessary, to release the membership from its marketing contract with the Northwestern Fruit Exchange.

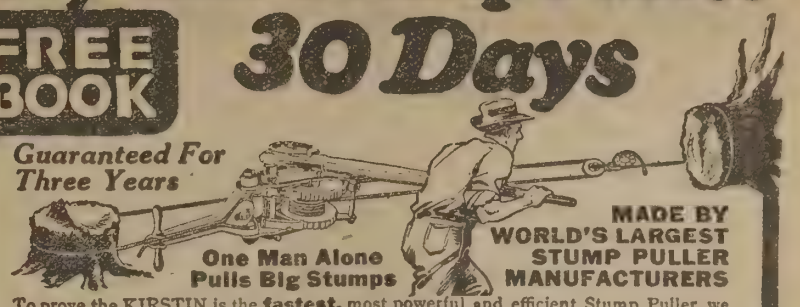
It was a dramatic moment for the members, allied for cooperative effort, when the work of years in building and planning for a grower-owned and controlled organization was endangered because of the necessity to forever free themselves from a marketing contract.

That action was taken after J. S. Crutchfield of Pittsburgh had appeared before the executive committee, the trustees and the general meeting and discussed the issue. It puts the growers of the Wenatchee region back where they stood nearly 10 years ago before they tied up with the Northwestern Fruit Exchange, a privately owned marketing agency controlled by Crutchfield.

Consignment Swine Sale

The first annual consignment sale by the Western Royal Swine Breeders' association, held at Spokane February 21, was a demonstration of the fact that interest in the hog business in the Pacific northwest is picking up. This demonstration lay not so much in the high prices paid, for the prices were not high, as in the fact that the breeders throughout the district were unable to send animals to the sale because of having already sold all their surplus or having already contracted them at private sale. About 30 head were sold, with William O'Brien, secretary of the association, as sales manager, and D. C. (Sandy) Keith, auctioneer. The top price of the sale was $75, paid by H. J. Shinn, Spokane, for a large Duroc Jersey sow consigned by Frank P. Busch of Johnson, Wash. The prices averaged around $50. Hogs of all the more common breeds were consigned.

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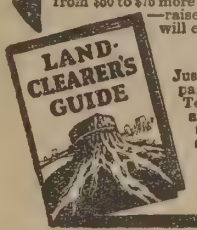
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There's only one Caterpillar Holt builds it

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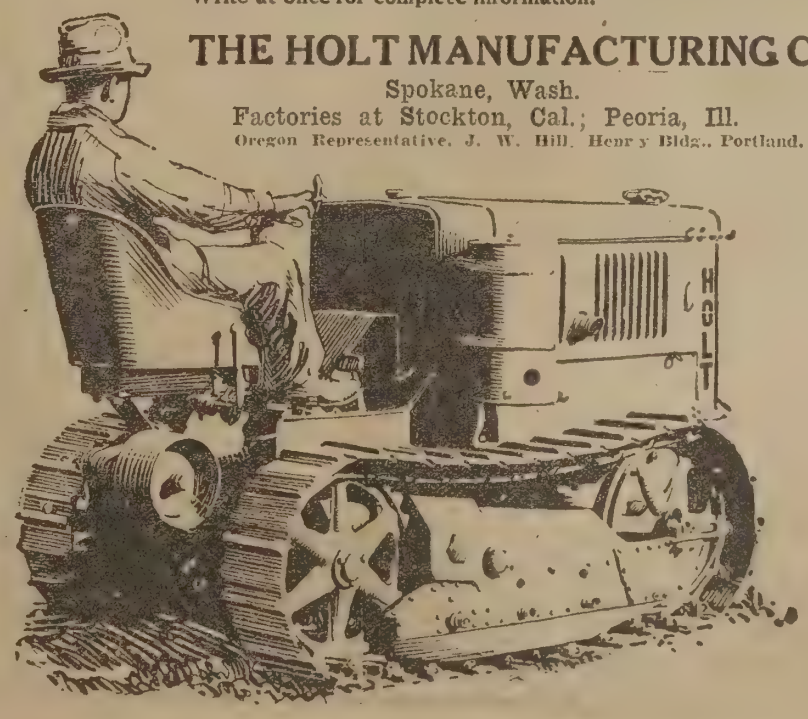
CATERPILLAR

T-35 TRACTOR

In a space only four foot by six this tractor concentrates 25 motor and 15 drawbar horsepower. The T-35 weighs only 4000 pounds—ground pressure less than 4 pounds per square inch. It is a marvel of simplicity—contains only three units—motor, transmission, trucks with tracks. All parts enclosed. All bearings anti-friction.

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Poultry

The following points on poultry were picked up in Mrs. George W. Shoup's poultry class at the western Washington experiment station:

Millet seed is not a good grain for chicken feed.

Rye has plenty of feeding qualities, but chickens will seldom eat it.

The green leaves of cabbage have high feeding value, but the white leaves are apt to cause indigestion.

Dried blood is not desirable for feeding in a poultry ration. The blood should be fed as fresh as possible.

When buying fish meal for the poultry flock care should be taken to get the feed and not the fertilizer. Fish meal that has been prepared for a fertilizer is very apt to cause protein poisoning.

Beet pulp is never as good as beets or mangels, because it has had the juice squeezed out of them, which contains much of the feeding qualities.

When rape is fed in large quantities to laying hens it is almost sure to cause a greenish color to the whites of the eggs.

The first few hours of baby chick's life it is very sleepy. It has been through a severe strain getting out of the shell and it needs a rest.

Some hatches are ruined by the ventilators being clogged up with the downy formation thrown off by the chicks of the previous hatch. Such deposits should be thoroughly removed, both for the purpose of getting better ventilation and to eliminate disease germs.

After the incubator has finished the first hatch it should be thoroughly cleaned and sprayed with a 2 per cent solution of a good disinfectant. Don't fail to regulate the machine carefully before putting in another batch of eggs.

Watch for Symptoms

When I killed two nice healthy looking young roosters recently I found when I dressed them that the entrails had little white bumps on them a little larger than the head of a pin. The liver of one had dark red spots on it. Both birds were fat and looked perfectly healthy. S. T.
Riverside, Wash.

It is barely possible that the birds which you write of were affected with tuberculosis. However, generally we find yellowish, cheesylike spots in the liver and spleen, so that it is possible that some other infection is present.

I would suggest that you watch your flock carefully for the development of the following symptoms in any of the birds:

Lameness, gradual loss of flesh, determined by the amount of flesh on the breastbone, diarrhea, as indicated by soiled vent fluff and noting that these conditions develop principally in hens. If, on posting such individuals, you consistently find nodules on the intestines, and yellowish spots in the liver and spleen, you can rest assured that you have tuberculosis in the flock.

One should not be too hasty in diagnosing the disease as tuberculosis, as when it is determined this disease is present, radical measures must be taken to eliminate it. W. T. JOHNSON.
Western Washington Experiment Station.

Ration for Pullets

My young pullets have a floored scratching shed, with plenty of light and clean, dry straw to scratch in. Shed faces the south. Will you please tell me what ration or what kind of food and how much of each kind they require for egg production? If they have oyster shell before them all the time do they require any other dirt or gravel? F. C. K.
Kamiah, Idaho.

For egg production give your pullets a ration as follows:

Mix together 30 pounds of bran, 30 pounds of meat meal, 20 pounds of corn meal, 20 pounds of shorts and 20 pounds of ground oats. This constitutes the laying mash, which is to be placed before the birds at all times in a self-feed hopper.

For the scratch grain to be fed in the litter mix two parts wheat and one part corn and feed morning and evening in the litter. Do not overfeed. Have the birds hungry at feeding time. You can sprout oats from one-eighth inch to one-fourth inch in length and feed in the morning instead of the corn and wheat. Keep oyster shell, grit and charcoal before the birds all the time.

Trays for Oats

Would the clipping of chickens' wings in any way injure them? Please tell me some simple method of sprouting oats for 50 hens. How long should the sprouts be?
Jerome, Idaho. F. M. M.

The clipping of a chicken's wing would not injure it except for show purposes. In clipping the fowl's wings to keep it from flying over a fence, clip only one wing. In this manner it is thrown off balance when it tries to fly.

To sprout oats simply have five or six trays arranged in a rack within a closed cabinet. Soak the oats for 12 hours, then drain and place in pan on top rack. Next day move the tray down to next rack and repeat. The oats should be sprouted sufficiently in four or five days. The sprouts should be one-eighth inch to one-fourth inch in length and fed in the litter. In cold weather you will need to provide heat by the use of an oil lamp in the bottom of the cabinet.

Plan Better State Fair

Completion of the water grade road to Ellensburg, construction of the Naches Pass highway, suitable hotel accommodations in Yakima, direct rail connections to the fairgrounds, and a statewide exhibit of resources, including dairying, fishing and lumbering, were among the suggestions for the improvement and perpetuation of the Washington state fair at Yakima, at a meeting of the Kiwanis club of that city early in February with Secretary H. P. Vermilye, Senators William Bishop and D. V. Morthland and Representatives H. O. Lucas and W. P. Sawyer as honor guests. It was generally conceeded also that with all or part of these things accomplished, the levying of a millage tax to support the fair would be justified, and that such support is about the only thing which can give the state fair the place in Washington life to which it is entitled.

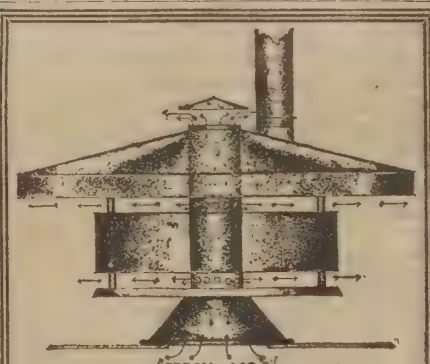
Last year the Kiwanis club maintained an information booth and a women's rest room on the fairgrounds. These facilities will be enlarged and continued, and the Kiwanians will work for the accomplishment of part at least of the foregoing suggestions. Completion of the road to Ellensburg, provision for state fair visitors and construction of railroad connections are considered among the most important undertakings for this year.

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Hens Not Laying

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anywhere from 200 to 1500 BABY CHICKS and would like to have a SYSTEM that will furnish all the WARM FRESH AIR required, no matter what the climatic conditions may be, write us for our

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These rams are constructed in sizes from 1 inch to 24 inches furnishing any amount of water from home supply to large irrigation units. They work with high efficiency and at no operating cost. Pump day and night operated by the power of the water, itself. No fuel — no engineer.

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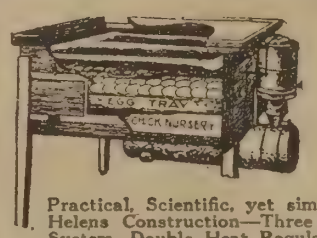
In laying out an irrigation project a great saving can frequently be effected by leading the ditch to a middle level and placing the ram below it so that part of the water can be raised by the ram to the higher bench and the discharge water can pass to the lower level without any waste of water.

If you are interested in irrigation—if you have land that is now above the level where you can flood — if you are using an engine where the water could be made to pump itself — fill out the coupon below. The catalog and information you will receive may show you how to save many dollars.

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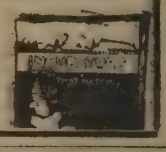
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Orchard

Mice Injury to Orchard Trees

By O. M. MORRIS

Head of Horticultural Department, Washington State College

Many orchardists are finding that the field mice have gnawed away the bark at the base of their apple and pear trees. Some of the trees are completely girdled. These pests will continue to be active through the remaining part of the winter and sometimes well into the early spring. Orchards in which poisons were distributed last fall are not immune to the trouble. The mere fact that poisons and definite efforts were made to control the mice should not be taken as a guarantee that harm is not done. In the late winter and early spring very careful observation should be made to see that the trees are not damaged. In many cases it would be worth while where there is any evidence of mice at work in orchards to distribute poison again. The best formula for this poisoning material is the one put out by the United States department of agriculture and is as follows:

"Mix thoroughly one ounce of powdered strychnine alkaloid with one ounce of baking soda and about one-eighth ounce of saccharine. Put the mixture in a tin pepper box, or a similar container, and sift it gradually over 20 pounds of steam crushed oats or the ordinary table rolled oats. Stir the grain constantly in the process, so that the poison will be evenly distributed."

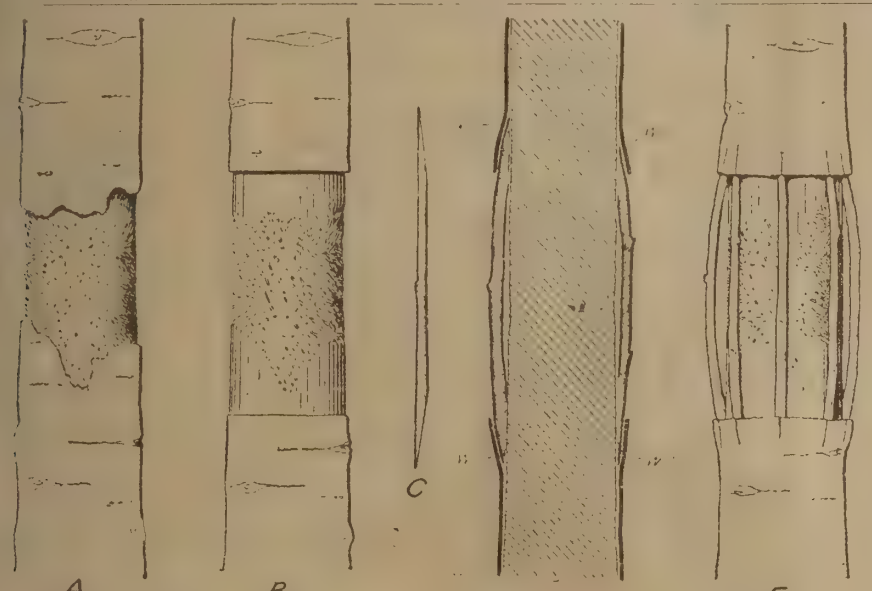
Distribute this preparation over the infested areas, not more than a teaspoonful in a place, care being taken to place it in mouse-runs and at the entrance of burrows. To avoid destroying birds it should whenever possible be placed in the mouse runs under such shelter as piles of weeds, straw or other litter or under brush. The poison mixture can be put in old tin cans with the edges bent nearly together and these placed one by each tree.

The mice are much worse in orchards that have a cover crop or growth of weeds and grass than in the cleaned tilled orchards. Yet the mere fact that an orchard is clean tilled does not make it proof against the mice.

If damage is found provisions should be made for bridge grafting over these damaged areas on the tree trunks and roots. Scion wood should be collected during the pruning work and kept dormant for this bridge grafting. Clean straight twigs of last summer's growth make the best kind of grafting wood. These should be collected and buried in moist soil on the shady side of a building or placed in moist sawdust or material of that kind and kept in as cool a place as can be, provided in order that their growth may be retarded.

The bridge grafting can be done best just about the time the trees start rapid development in the spring or when the buds begin to swell rapidly. The wounds made by the mice should be treated as soon as possible after they are found.

If only the outer bark has been removed and the inner bark is left intact earth should be thrown over the wood as much as possible to prevent the bark drying out. If the bark has been entirely removed and the wood is exposed it should be carefully painted with a mixture made by dissolving coal tar in creosote. Apply this material with a brush and be careful to not spread the paint over the edge of the bark. The bridge grafting should be done after this painting.



Details of bridge grafting: (a) The trunk of a tree girdled by mice; (b) the wound cleansed and the bark along the margins trimmed back to healthy, growing tissue; (c) a scion, with beveled ends ready for insertion; (d) longitudinal section of the trunk with scions in place, showing their insertion under the bark of the trunk (w); (e) scions in place ready for waxing.

Club Work in Pierce County

An effort is being made to reach the out-of-the-way places in Pierce county and organize boys' and girls' clubs. Miss H. M. Hainke, county club leader, reports 250 farms in the county where there are boys or girls enrolled in club work. On a general average there will be two children in each family, thus making a total of 500 who will know the farming game fairly well before they have finished high school.

Wins Silver Loving Cup

The Tenino community of the Thurston county farm bureau won the silver loving cup offered by the four banks in the county for the community which put in the largest number of purbred sires. This district has placed 30 registered animals, most of which were dairy bulls. P. D Northcraft is the community chairman and T. O. McGuire is president.

TREES AND SHRUBS



Fruit trees budded from bearing orchards. Apple, Pear, Cherry, Peach, Plum, Prune, Apricot, Quince, Grape Vines, Shrubbery, Plants, Raspberries, Blackberries, Logans, Dewberries, Asparagus, Rhubarb, Flowering Shrubs, Roses, Vines, Hedge, Nut and Shade Trees. Carriage paid. Satisfaction guaranteed.

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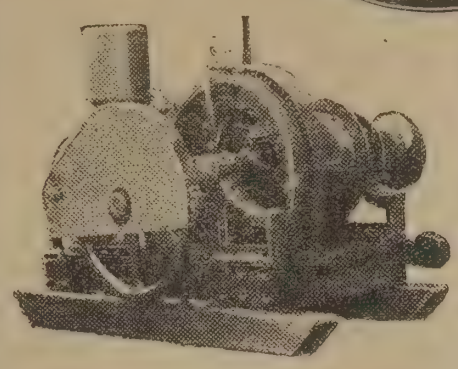
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World Seed Company
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We Pay the Freight

Glance over the bargains on the "Want Ad" page.

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USE GAS TO PULL YOUR STUMPS

NOVO Engine Effective in Clearing Land as Well as for General Utility Purposes.

Make Your Waste Stump Land Produce--Put It to Work by Clearing It With a Slow-Speed DH-T Hoist

The NOVO DH-T Heavy Duty Hoist is particularly adapted to land clearing and can also be used for moving buildings and other heavy objects about the farm.

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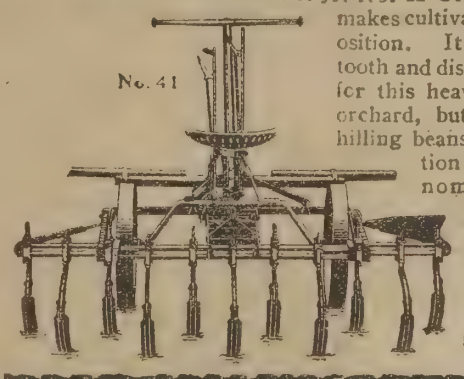
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The Planet Jr. No. 41 Orchard and Universal Cultivator makes cultivating the orchard a paying proposition. It does the work of both spring tooth and disc harrows, yet is very light draft for this heavy work. Not only for the orchard, but for working fallow ground, hilling beans and potatoes, running irrigation ditches, it is a valuable, economical implement with a wide variety of uses.



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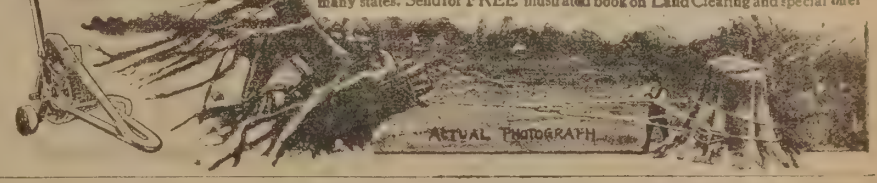
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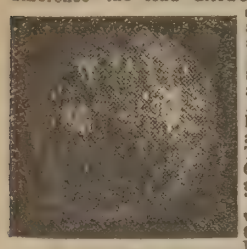
In writing advertisers, be sure to say you saw their advertisement in The Washington Farmer.

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Prevent

the "blotch" or "burn" of the spray on fruit

Observe this study in contrasts. The apple at the left was sprayed with Arsenate of Lead—a wonderfully good spray. But the user neglected to mix "Spray Spread" with it. Below is a similar apple—sprayed with the same kind of spray—but Albatross Spray Spread was mixed with the spray. Note the difference—the "lead" dried on the FIRST apple in spots or blotches. The second apple received an equal amount of protective spray—but it spread over the apple in a thin film. Appearance and marketing appeal of the apple is thus retained. The pictures tell why Government experts are so enthused over "Spray Spread"—why experienced horticulturists say it has NO equal for spreading an "arsenate of lead" spray.



Note the "blotch" or "burn" of the lead on this apple

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Quality Features:

1. Very finely ground—always uniform.
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Note the uniform, adhering film on this apple

Directions sent with each order

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Freight prepaid to Northwest points.

NOTE: If you use Casein, specify ALBATROSS Superfine. Also call for Albatross Dry Bordeaux.

General Basic Products Co., *Sole Manufacturers*, 4796 E. Marginal Way, Seattle, U. S. A. **Dealers:** Address us for attractive sales proposition.

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Are you satisfied with the returns from your shipments?

TRY US

We give full weight and test, and pay top prices at all times.

Checks mailed promptly.

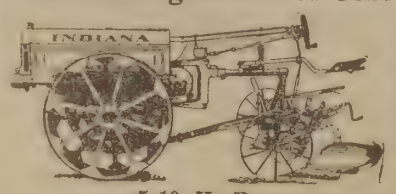
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Forced to Sell Indiana Tractors Regardless of Cost



5-10 H. P.

One man can operate the Indiana, it couples to all horse-drawn planting, seeding, cultivating and harvesting implements already in use on the farm. Belt work.

Parts Carried in Stock.

W. U. SMITH,
Western Distributor,
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Cooperative Idea

(Continued from page three.)

putting it in a pool and giving each his proportion of the returns. Credits were extended to several concerns from which collection is in some doubt, though on the whole its collections were good in proportion to the amount of business it did. There is some question as to whether expense accounts run up by salesmen were justified by the amount of business they did, and the organization of the association on a falling market and the very bad seasons of 1920 and 1921 were contributing causes of the misfortune."

Hopes for Reorganization.

"I can't say whether they will reorganize or not, though I hope they will," said Mr. Schreiner. "Hay growers would have greater advantages in organization than any other class of growers in the valley. They can ship in carlots direct to the consumer and they don't have to ship very far, so it isn't as though they had to hunt up a retailer to peddle out their product. Hay doesn't spoil, either, and that gives them an edge on the market. With a contract that is a contract they could finance their weaker members, and I see no reason why they could not operate on practically a cash basis. With state inspection to guarantee quality, they could ship hay to any firm or private customer and secure payment by sight draft attached to the bill of lading. From that standpoint a new association would have a great advantage over the old one. There isn't a commodity in the valley that needs organization as badly as hay, and if this association goes entirely to the wall it will be only a matter of time before there is another one. I'd like to see this one continued."

With this in mind the receiver has sent out notices to the growers explaining the situation and assuring them that it will be entirely safe to ship hay through the receivership. As they come in with claims details are explained to them and in many cases active enemies are converted into friends. Notice has gone to former customers as well, and it is hoped to keep the association functioning and to do enough business on the 1921 crop to liquidate some of its indebtedness.

"The market has been so thoroughly convassed that there is not much chance for very big business," said Schreiner. "However, I have sent out circular letters to all old customers and to dairy association members on the West Side, and we may drum up some trade. No solicitors will be sent out, and we've got to sell for cash, but we'll be glad to handle business on that basis. Clarence Glenn of Montesano, who was in the office the other day, says that the dairymen of Grays Harbor county are getting short of hay, and there is considerable inquiry from other sources. Some of the big mills are said to have been buying hay in large quantities to sell at cost with bran and shorts, which their mills are full of, and this and other factors have had a stimulating effect on the market even since I took hold of this job. The Canadian market probably will not be as good this year as last, but there's bound to be reaction from present low prices sooner or later, and after things have settled down a bit we'll see what can be done about reviving the association."

Taking everything into consideration, it appears to me that the cooperative idea, as far as the haygrowers are concerned, is in a very fair way to be preserved in Yakima.

Farm Machinery

(Continued from page fourteen.)

acts as a film of minute ball bearings and keeps the wearing surfaces apart. All bearings should be thoroughly cleaned and oiled before the implement is put out on the land. If possible, the bearing surfaces should be thoroughly washed with kerosene.

For liquid oils, use a good grade of mineral oil. Avoid castor oils. Where bearings are oiled with hard oil cups, clean out the hardened grease. Scrape the old grease from the cups and put in fresh grease. Often a little graphite mixed with the grease when the machine is first put on the land assists lubrication.

Look over the machines and other necessary repairs early. Then, if the wrong parts are received, there is still time to back order.

Keep your repair books for each implement hung up in the repair shop and order by number.

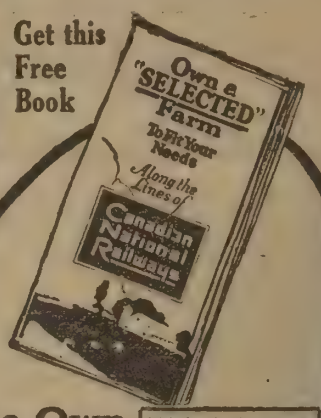
At the end of the day in the field spend a few minutes going over the machine and tighten any loose bolts or bearings, fill grease cups, examine cutter bar, etc. Don't wait to do this until you have the horses on the machine. By thus keeping the equipment in constant repair the machines will last longer and less time will be lost.

LENA DEMING, Aladdin, Wash.—We enjoy The Washington Farmer very much, especially the stories. They are all good and any one can read them. No trash in them.

Tenant Farmers—Fathers starting sons—Young men looking for a future—Farmers who have decided to seek Virgin Soil—

Why rent when you can own a farm?

Get this Free Book



Any Man Can Own His Own Farm in Western Canada

In Western Canada, rich, fertile land is within the reach of any man. It is not uncommon for tenant farmers to pay for their new farms with the profits of a few crops. Fathers starting up their sons are able to buy acreage they can't obtain in ordinary overcrowded farming districts.

Men who were never able to make money out of their poor soil or expensive farms, have come to Canada and achieved independence within just a few years. Canada welcomes such men—for here they can succeed.

This free book tells you why you will succeed in Western Canada. It tells what other men have done. It will put you in touch with your opportunity. Send for it now. It is free—your enquiry will not obligate you in any way. For a real future—investigate. You will find this book interesting as well as descriptive. Send for it now.

Independence! Success!

Here, in Western Canada, independence awaits you with every advantage at hand—schools, churches, social life, markets—everything you are now accustomed to. It is the land of unrestricted opportunity.

Western Canada wants you if you will come prepared to gather the great harvest of a bountiful nature. Here you can share in bumper crops. Wheat averages are high. Rich, black loam, only awaits your hand to yield abundantly.

Dairy farming is highly profitable in Western Canada. Warm, sunny summers provide unexcelled grazing—excellent hay. Dry healthy winters make natural shelter suffice, as a rule.

Canadian National Railways

Help You Select Your Farm

This department of the Canadian National Railways will help you select the farm that meets with your needs. Buy the "cream" of the richest, most fertile wheat and cattle country of America. Own a farm that will actually pay for itself in a very few years. Taxes on land are low—buildings, improvements, animals, machinery and personal property *Are Not Taxed at All.*

Next Spring—Own Your Farm

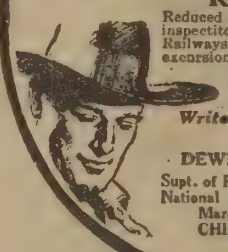
Be your own man. Rear a future in the rich spaces of Canada. Give your children the advantages they should have. Feel "at home" with the knowledge that **all your work is to *your own profit*—that it is** bringing to you a reward that can't be taken away.

Low Prices—Increasing Values—Easy Terms

You can still buy land in this last great West for as low as $20 per acre. Yet, since 1915 values have increased materially. Buy now. Terms on "SELECTED" Farms: about 10 per cent cash down, balance in equal payments over a term of years, interest usually 6 per cent.

Reduced Rates and Special Excursions

Reduced railway rates will be made for landseekers and their effects to encourage inspection of the "SELECTED" farms along the lines of the Canadian National Railways. Personally conducted excursions for this purpose also will be arranged. Full information will be sent free on request.



Write or mail coupon today

DEWITT FOSTER
Supt. of Resources, Canadian National Rys., Dept. 2673 Marquette Bldg. CHICAGO, ILL.

DEWITT FOSTER, Supt. Resources, Canadian National Rys., Dept. 2673 Marquette Bldg., Chicago

Please send me free and without obligation to me, complete information on the items concerning Western Canada checked below:

(1) Opportunities for Big Profits
(2) Reduced Railway Rates for Landseekers
(3) Business and Industrial Opportunities
(4) Personally Conducted Excursions

Name .....
Address ..... R. F. D. .....
Town ..... State .....

The Genuine **FAIRBANKS SCALE**

500 lb. Size

$16.15

1000 lb. Size **$18.90**

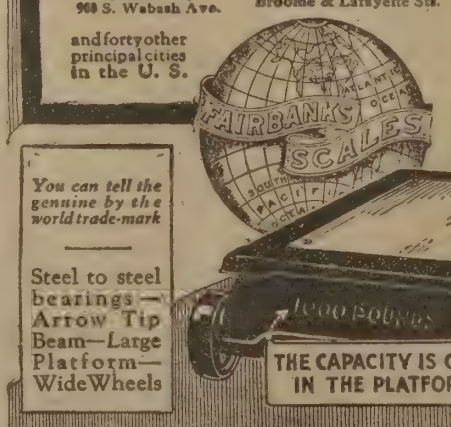
F.O.B. Factory

Volume production makes these low prices possible. It's the time tried and proven Fairbanks Scale. You've always wanted one. It will give you the accurate weight of everything you buy or sell or use.

CHICAGO, 900 S. Wabash Ave.

NEW YORK, Broome & Lafayette Sts.

and forty other principal cities in the U. S.



Your local dealer has both sizes in stock.

You can tell the genuine by the world trade-mark

Steel to steel bearings—Arrow Tip Beam—Large Platform—Wide Wheels

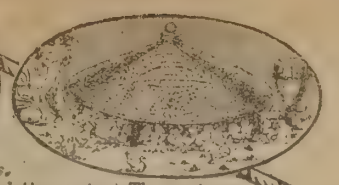
LOOK AT THE GOOD FARM BARGAINS THAT ARE OFFERED ON THE FARMERS' "WANT AD" PAGE THIS WEEK.

The Service Given by the Local Dealer Is Worth Consideration

The doctor who answers a hurry call with the greatest possible speed is more valuable than a physician of equal skill who drives up to the patient's door at his own convenience. Service counts. It is worth money. Who is there who doesn't agree with this general principle? And doesn't it apply also in the buying of merchandise? The progressive merchant in your own trading center gives service along with the goods. He has a selection of merchandise continually in stock. You don't have to wait. When you enter the store you are able to see the article itself in which you are interested. You see it with your eyes, feel it with your fingers; note its actual size, shape and color; compare it with other goods at different prices, and, if it is what you want, take it away with you. If you have questions to ask, you are given an explanation on the spot. The answer given your first question may suggest another query. It is answered within half a minute of the first interrogation. No time is lost. You benefit from the dealer's practical knowledge, from the fact that he is on the ground and ready at all times to see to it personally that the article he has sold you gives satisfaction. The wise buyer will not forget that such matters have a dollars and cents' value and should enter into the reckoning whenever a price comparison is being made.

RELIABLE
Standard
BLUE FLAME
Wickless
Oil Heated Colony Hover *J.W.Myers, Pres.*





AN INVENTION of our President, thoroughly covered by letters patent. The most practical heating and brooding device known to the poultry fraternity. Our 1922 model **Wickless and Valveless Oil Heated Colony Hover** embraces all the latest and best known improvements in hover construction. From the very beginning it has been the best. It is still far ahead in the front rank. We make sure that every one is right before they leave the factory. Every burner is tested and adjusted to the maximum flame. It will not overflow. It is impossible to clog and slow down the oil flow—it burns until you turn it out.

It Is Dependable—"Reliable Because Right"

Burns ordinary kerosene or coal oil with a clear, blue flame; absolutely no fumes; no soot; no odor; no wicks to trim; no smoke. It gives a pure, clean heat necessary for the comfort and health of chicks beneath the canopy, regardless of outside weather conditions. It is easily regulated. Automatically controlled. Insures the raising of chicks with least work and care at the lowest cost.

Hovers are built of galvanized steel. Shipped completely assembled, ready to bolt the legs to the canopy. Place the heater where wanted, fill with oil, adjust burner to the heat required, and it is ready to start and will continue to go, with little cost, in fact, a great saving in fuel, as long as you want it.

Our money-back guarantee completely covers your purchase, either through our dealers, or direct from us.

Write for literature, poultry guide and sales book, thoroughly descriptive of our Reliable Line.

All Reliable Incubators, Brooders, Hovers, Poultry Appliances and Equipment made at our factory are guaranteed to give absolute satisfaction. We are prize winners throughout the world.

Write Our Distributors
Charles H. Lilly Co., Seattle, Wash.

RELIABLE INCUBATOR & BROODER CO.
BOX 36 QUINCY, ILL., U.S.A.
Reliable because right.

Please mention THE WASHINGTON FARMER when writing advertisers.—Adv.

VETERINARY

(Continued from page thirteen.)

churn. I feed alfalfa, beets, carrots and bran and shorts. W. R.
Colville, Wash.

Try giving her a handful of epsom salts in a quart of water once daily and see if that helps. Along about the first of February you will probably be wanting to dry her up, anyway, and give her a rest.

Goiter.—I have a 6-week-old heifer that has quite a large goiter. It has reduced considerably since she was born without any treatment at all. Would you advise me to keep her and doctor her? I also have a cow whose milk after being strained leaves particles of butterfat upon the strainer. Do you think this might be caused from what we are feeding her? We are giving her first cutting alfalfa and wheat hay, one-half pail of apples a day and warm bran mash twice a day.
Yakima, Wash. D. E. DeF.

I would suggest that you paint the skin over the goiter with tincture of iodine. With a young calf this treatment often is of value. Paint it morning and evening. Try giving your cow one and one-half pounds of epsom salts in three quarts of water and see if that overcomes the ailment she has.

Causes Inflammation.—Does soapy dishwater with other liquid feeds hurt pigs? Can a very young calf, a week old, be fed skimmed milk, raw or boiled, with gruel made of barley, linseed meal and anise seed meal? A. B. L.
Addy, Wash.

Experiments carried on at Cornell, N. Y., showed conclusively that liquid feeds containing too much alkali develops inflammation of the intestines. This may result from too much soapy dishwater.

Calves can be fed on the ration which you use and be fairly well. It would be much better, however, if you could use whole milk for a while.

Hair Comes Off.—We have two yearling heifers and the hair comes off of their neck and around their eyes. They are continually rubbing and it seems to be contagious, as a young calf and cow also have it now. W. B. C.
Yelm, Wash.

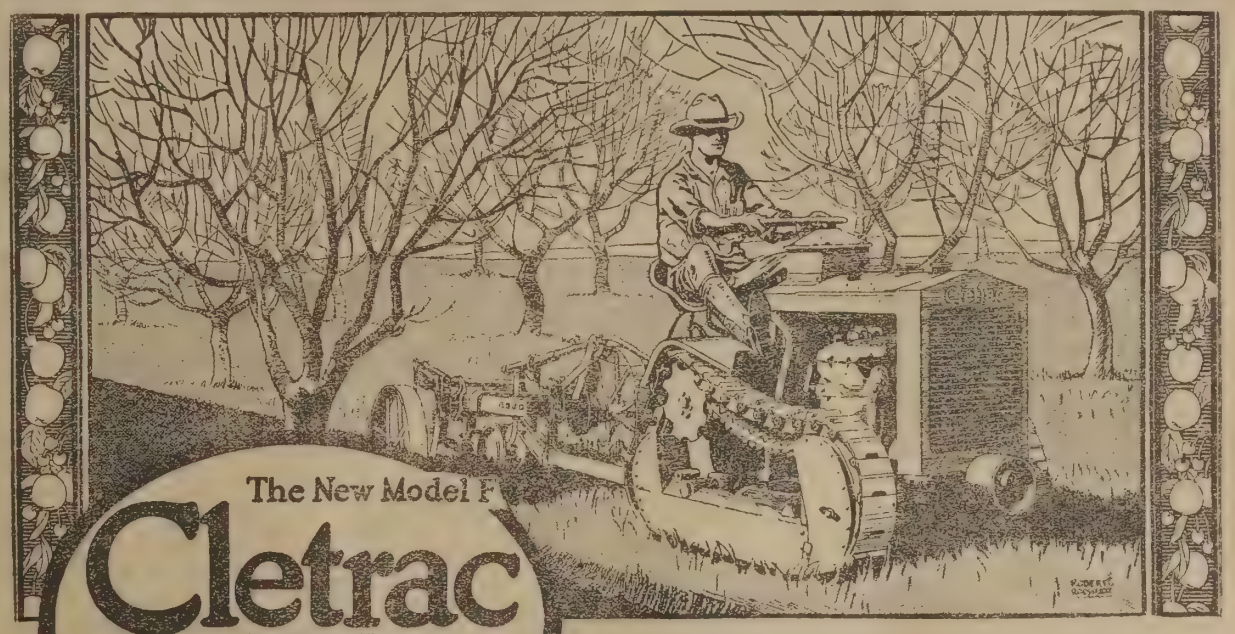
Paint the spots where the hair comes off with tincture of iodine. Immediately afterward apply above the iodine a 5 per cent solution of silver nitrate. The treatment should extend one-half to three-fourths inch beyond the spot where the hair is off.

Delegate Plan

For Holstein-Friesian Meeting

Based on the membership count of January 21, Washington is entitled to three delegates for 317 members, Oregon to two for 158 and Idaho to one for 71, at the annual meeting of the Holstein-Friesian Association of America at Kansas City June 7. This is the first year that the delegate plan has been in use in the association. Its provisions, briefly, are as follows: Each state or territory is entitled to one delegate for the district and one additional for each 200 members or fraction thereof. On or before February 7, the association notifies all members of the number of delegates to which their district is entitled. On or before March 9 any 10 members within a district may nominate any member as a delegate, and in districts with fewer than 50 members, any two may do so. By April 8 each member will receive a ballot for his district and this must be returned, properly marked, to the secretary by April 28. On May 8 a credentials committee will receive the ballots, and by May 20 will have canvassed them and reported a preliminary roll to the secretary. On or before May 24 he will send notice of election to each delegate, and when the convention assembles June 7 the permanent roll will stand as the official list of delegates until the next annual meeting.

Almost 400 members were recently added to the national body, and among them are 11 from northwestern states.



The New Model F
Cletrac
Reg. U.S. Pat. Off.
TANK-TYPE TRACTOR
$795
Complete f. o. b. Factory



Hard this way, but—



Easy on a track—The Cletrac Way

1. Handles every farm job.
2. Plows 6 to 8 acres a day using any 2-bottom 12-inch plow.
3. Every part subject to wear constructed of chrome steel—weighs only 1820 lbs.
4. Automatically lubricated—no grease or oil cups.
5. Simple, care-free design—burns kerosene, distillate or gasoline.
6. Every working part quickly accessible.
7. Unprecedented value.

Model "F" Cletrac is made in four sizes: 31 inches wide, with 8 inch clearance; 41 inches wide, with either 8, 14, or 18 inch clearance.

Unbeatable for Orchard work

The "impossible" has been done! A tractor that is unbeatable for orchard work in addition to handling all other farm jobs, including all kinds of cultivating, has been developed!

With a complete range of usefulness for all farm work—with a price that is right in line with the demand of the hour—Cletrac F will actually make you figure the use of tractor power all over again.

Cletrac F does all your orchard plowing and cultivating, using the tools that you have on hand at present. It is low set and compact—works right up close to the trees without scraping bark or branches. Its remarkable short-turn ability allows it to swing from one row into the next with a single twist of the wheel. In addition—Cletrac F does all the regular farm jobs outside the orchard, including row-crop cultivation.

Its capacity for work is enormous—plows 6 to 8 acres a day—discs 15 to 20—harrows 20 to 25—and withal it is so simple, care-free and accessible. Equipped with a sturdy, powerful 4-cylinder kerosene, distillate or gasoline burning motor.

See your local Cletrac dealer or write our nearest office for full information.

THE CLEVELAND TRACTOR CO.
"Largest Producers of Tank-Type Tractors in the World"
19087 EUCLID AVE., CLEVELAND
PACIFIC COAST FACTORY BRANCHES
LOS ANGELES, CAL. SAN FRANCISCO, CAL. SPOKANE, WASH.

Waxed Paper

By ELIZABETH QUAKER.

About the only use our grandmothers found for paraffined, or oiled, paper, as they called it, was to line the cake pan when they baked fruitcake. The modern housewife uses waxed paper in many and varied ways. The slice of cheese is wrapped in a piece of waxed paper before putting it away, as are the small pieces left from the meal. This preserves their moisture, so they are in a palatable condition for the next meal.

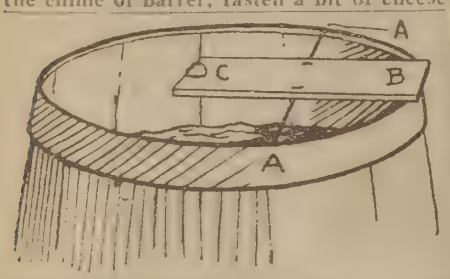
The mothers of school children have learned its value in the lunchbox. It may not be practical to wrap each sandwich separately, but the piece of soft pie or the cake with the soft icing, when wrapped in paraffined paper, will carry nicely without becoming mixed up with everything else in the lunchbox. When using part of a lemon, if the remaining piece is wrapped tightly in a bit of waxed paper it will keep in a usable condition for several days.

If one has occasion to wrap a piece of meat, especially fresh beef or liver, it is best to use waxed paper. This does not absorb the juices of the meat, as does ordinary wrapping paper or newspaper; neither will it stick to the meat.

A Rat Trap Always Ready

Here is a suggestion for a rat and mouse trap sent in by Wesley Ray of Rainier, Ore. One of the merits claimed by him for it is that it always "sets" itself after catching a victim:

Fill a 40 or 50-gallon barrel half full of water; get a piece of board six or seven inches wide and long enough to reach from the chime two-thirds of the way across (B). Now take a wire and staple the board on top of this, so the board will swing free (AA). Put the ends of wire through the chime of barrel; fasten a bit of cheese



on end of board (C); set the barrel wherever the rodents frequent. A fine way is to sink it in the ground to within one foot of top of ground, anyway make it easy for them to get upon the board. They see and smell the bait, run out to get it, the end tips down and they take a plunge into the water where they soon drown, the board settles back in place, baited and ready for another victim.

This is the only trap in the world that is always set and baited. It catches them while you sleep. The end of board (B), which rests upon chime must be a fraction heavier than the bait end so it will settle back when tipped up.

FARMERS' WANT ADS

This is the farmers' "want," "sale" and "exchange" department for small advertisements of farmers, including live stock and poultry

Advertising rates for ads running 1 to 3 times, 10c per word per insertion, with a special rate to Farmer subscribers, as follows: Ads running 4 to 12 times, 9c per word per insertion; ads running 13 times or more, 8c per word per insertion.

All commercial and land advertising 10 cents per word each insertion. Open also to nonsubscribers.

In using these columns advertisers must observe: (1) No advertisements will be inserted for less than $1.00. (2) Every word, number and initial, including name and address, must be paid for. (3) New advertisements, changes of copy or cancellations must reach general office, Spokane, Wash., 10 days in advance of publication date. (4) Cash must accompany order.

Above rates include insertion in The Washington Farmer, The Idaho Farmer and The Oregon Farmer, which constitute the Pacific Northwest Farm Trio, 45 Review Building, Spokane, Wash.

AGENTS WANTED 9

AGENTS—MAKE MONEY SELLING SPRAYers and autowashers; profits $2.50 each; many practical uses; experience unnecessary. Free sample proposition. Autowasher Co., Johnstown, Ohio.

SITUATIONS WANTED—Male 21

ALL-AROUND REPAIR MAN WANTS POSItion on large ranch; have some tools my own. C. C. Farris, Route 2, Kendrick, Idaho.

WANTED — TO MANAGE ON SHARES, stocked dairy. Alfred O'Hara, Denison, Wash.

FRESH FOOD PRODUCTS 51-1

HONEY BRAND HONEY, PURE, LIGHT, thick and good flavored, from alfalfa and sweet clover. One 60-lb. can, $7.50; two for $14.50. Write for circular and prices in pails. Salesmen wanted. Oliver Sires, Wapato, Wash.

WHITE ALFALFA SWEET CLOVER honey; 1 60-lb. can, $7.50; 2 60-lb. cans, $14.50; six 10-lb. cans, $8.50; three No. 10 pails, prepaid third zone, $5.50. Wells D. Rose, Sunnyside, Wash.

YAKIMA VALLEY HONEY, BEST PRODuced; from alfalfa and sweet clover. 60-lb. can, $7.20; two for $14; satisfaction guaranteed. Theodore Sires, Congdon Orchards, Yakima, Wash.

HAPPY HOME HONEY FROM BLOSSOMS of alfalfa and sweet clover, in liquid form; 6 10-lb. pails, $8.50; 1 60-lb. can, $7.50; 2 cans, $14.50, at Mabton. H. N. Paul, Mabton, Wash.

HONEY—ALFALFA, SWEET CLOVER: FINE quality; 60-lb. can, $7.50; two 60-lb. cans, $14.50; three 10-lb. pails, prepaid second zone, $5. Harry Fisher, Prosser, Wash.

SMOKED SALMON, 5-POUND BOX, $1.25; salt salmon bellies, 5 pounds, $1.25, delivered by mail. Coffin Fish Co., Seattle, Wash.

HONEY—LIGHT AMBER HONEY, LIQUID form; one sixty-pound can, $7; two cans, $13.50. A. L. Traner, Touchet, Wash.

FINEST ALSIKE CLOVER HONEY, ONE sixty-pound can, $7.50; two cans, $14.50. Roy Selwyn Wilson, Buhl, Idaho.

WORLD'S BEST CLOVER HONEY, 60 pounds, $6.15; two 60s, $12. Browne, Box 499, Twin Falls, Idaho.

MISCELLANEOUS—FOR SALE 60

KENTUCKY LEAF TOBACCO, 3 YEARS OLD; nature cured. Don't send a penny, pay for tobacco and postage on arrival; extra fine quality chewing or smoking, 10 lbs., $3; medium quality smoking, 10 lbs., $1.25. Farmers' Union, D 44, Hawesville, Ky.

DAVIS ACETYLENE PLANT AND FIXTURES. Aloha Ranch, Route 1, Medford, Ore.

MISCELLANEOUS—FOR SALE (Continued) 60

TOBACCO, NATURAL LEAF—SWEET AND mellow hand-picked chewing or smoking, 5 lbs., $1.50; 10 lbs., $2.50; smoking, 10 lbs., $2. Furnish free recipe for preparing. Quality and delivery guaranteed. Farmers' Tobacco Exchange, Sedalia, Ky.

WALL BOARD—WRITE FOR SAMPLE OF Washington plaster wall board; won't warp, won't burn. Manufactured by Washington Building Products company, 6851 E. Marginal Way, Seattle, Wash.

PIPE — NEW AND SECOND-HAND, ANY size; low price; standard grade roofing paper at a big saving; belting, all plies, all sizes, cheap. Write Alaska Junk Co., S120 Adams st., Spokane, Wash.

E. Z. BUILT SILO, ERECTED IN SECTIONS; has double walls with 6-inch air space; freeze proof; built of fir lumber; strong, durable and low priced. J. F. Jacobson Lumber Co., Tacoma, Wash.

WE ABSOLUTELY SAVE YOU MONEY ON groceries and general merchandise; prompt and careful service. Write today for our free catalog. Jordan-Lawler Co. Box 615T, Spokane.

CEDAR CHESTS DIRECT FROM FACTORY to your home; Tennessee cedar, solid copper trimmings. Write for catalogue. J. W. Higgins & Sons, 1912 Gilsan st., Portland, Ore.

LEAF TOBACCO, 3 YEARS OLD, PAY FOR tobacco and postage when received. Chewing, 5 lbs., $1.50; smoking, 6 lbs., $1. Farmers' Grange, No. 92, Hawesville, Ky.

HOMESPUN SMOKING OR CHEWING TObacco, collect on delivery; 5 pounds, $1.50; 10 pounds, $2.50; 20 pounds, $4. Farmers' association, Paducah, Ky.

TOBACCO — KENTUCKY'S PRIDE; RICH, mellow chewing, 10 lbs., $3.25; smoking, 10 lbs., $2.50. Farmers' Club, Mayfield, Ky.

HOMESPUN CHEWING AND SMOKING TObacco, 5 lbs., $1.25; 10 lbs., $2.50; 20 lbs., $4.25. Farmers' Union, Mayfield, Ky.

TOBACCO—KENTUCKY FINEST CHEWING, 10 lbs., $3; smoking, 10 lbs., $2; 20 lbs., $3.75. Producers' Exchange, Mayfield, Ky.

JOHNSON'S PACKAGE BEES, QUEENS. Write for remarkable prices. 165 Raymond ave., San Jose, Cal.

MISCELLANEOUS. 61

A REAL OPPORTUNITY TO THE PURCHASer of my new 16-30 Twin City tractor; will rent my 960-acre farm in Montana; real bargain; terms. Address Dr. M. Hopkins, Prescott, Wash.

MACHINERY—For Sale 93

TANK TYPE TRACTOR BARGAINS—CLEtrac rebuilt model "H," 12-20, $850; Cletrac, nearly new "W," guaranteed, $1100; Cletrac, new "H," big bargain at $1100. Oldsmar garden tractor demonstrator, $395. O. V. Badley, 425 E. Mor., Portland, Ore.

THE WRIGHT PLANTER—A NEW MAchine—will evenly drop any number of seeds per foot of any kind you may desire to plant, with fair accuracy. Free illustrated booklet. Geo. H. Wright, 1925 Pacific avenue, Spokane.

STOVE REPAIRING. 128

WRITE MYER RUBENS, SPOKANE, ABOUT stove repairs, welding broken parts, nickle plating.

RABBITS and HARES 173

PEDIGREED FLEMISH AND CHECKERED Giants. Prices not fancy. Brookside Rabbitry, Hubbard, Ore.

POULTRY (Baby Chicks) 174

"WHAT THEY SAY."—"YESTERLAID EGG Ranch, Kent, Wash. Dear Sir:—Is there any chance for 1200 chicks the 1st of April? Well pleased with your pullets last year. They laid between 50 per cent and 60 per cent since last October." Jack Sheridan, Greenacres, Wash. "Dear Sir: I bought 400 chicks of you last spring and will say they were the best layers I have. I would like to buy between 400 and 500 more next month. What time in February could I get them?" Mrs. Leonard Fossett, Dungeness, Wash. "Jan. 6th, 1922. Dear Sir: Enclosed find $7.50 as 15 per cent payment on 250 chicks. Our neighbor, Mr. Wood, got some from you last year and they certainly are good layers." William Stark, Coeur d'Alene, Idaho. We hatch 12,000 chicks every 5 days from our own wonderful trap nested White Leghorns. All of our 8000 laying hens are trap nested and bred to lay. We have 40 acres devoted exclusively to White Leghorns, all with wonderful egg records. More than 50,000 chicks already sold, but we still have good dates left if you book your orders at once. Send for price list and dates you would like chicks shipped. Yesterlaid Egg Ranch, Kent, Wash.

WHITE LEGHORN AND ILL-A-HEE BARRED Rock chicks—Buy chicks this year that live and grow and are bred to lay. Butler White Leghorns and Ill-a-hee Barred Rocks are known for high average flock production. Before ordering elsewhere, write for circular telling how our breeding methods produce 200 flocks for our customers. All stock trap nested and pedigreed. Also get our prices on breeding cockerels and hatching eggs for each breed. Address Butler Poultry Farms, or Ill-a-hee Poultry Farm, Jennings Lodge, Ore.

HUSKY, VIGOROUS WHITE LEGHORN BABY chicks from genuine Yesterlaid Egg Ranch of Kent, Wash., stock. I can fill any size order, large or small, full count and safe arrival guaranteed. Place your order now, today. Orders are coming in fast. I ship every Wednesday. I give full directions for the care of baby chicks with each order. If requested, written by a noted expert. Write for shipping dates, prices, etc., at once. Small deposit required with order. T. E. Schreiner, Kent, Wash.

THE PROGRESSIVE HATCHERY — BABY chicks from vigorous range bred stock; trapnested S. C. White Leghorns, $20 per 100; selected S. C. White Leghorns, $18 per 100; S. C. R. I. Reds and Barred Rocks, $25 per 100; safe delivery of live, vigorous chicks, full number ordered; absolutely guaranteed. Send for circular of special matings and hatching eggs. 1534 East 12th North, Portland, Ore.

BABY CHICKS, COCKERELS, SINGLE COMB White Leghorn; heavy laying strain. Grape Lane Poultry Farm, Turner, Oregon.

POULTRY—Baby Chicks (Continued) 174

"FRESHLAID" WHITE LEGHORN CHICKS have the qualities you want; vigor and scientific breeding for the heaviest egg production; every "Freshlaid" male is from a high record hen. Freshlaid Farms is one of largest and oldest chick plants in the Inland Empire. There is a real demand for "Freshlaid" chicks, especially from our old customers. We are sold out until May 1. Write at once if you wish May chicks. May chicks make ideal winter layers. Catalog. Freshlaid Farm, Colfax, Wash.

WHITE LEGHORN BABY CHICKS FROM heaviest laying stock. Booking orders now for spring, 1922, delivery. Safe arrival live, vigorous chicks guaranteed. Prices on request. Reliable since 1898. Must Hatch Incubator Co., 445 Seventh st., Petaluma, Cal.

TRY OUR PARCEL POST PACKAGE—KEEP the old hen busy. We will ship you first-class baby chicks, postpaid to your door, direct from the hatchery and guaranteed all alive. Price, $4.50 per 25; $8 per 50. For delivery April, May or June. Order now. The White Hatchery, Petaluma, Cal.

CRYSTAL WHITE POULTRY FARM—BREEDers of S. C. White Leghorns; baby chicks a specialty; hatched from eggs laid by our great egg producers. Price, $17 per 100; $160 per 1000. Order early to get the best dates. Send for circulars. Mr. and Mrs. Jno. Eborall, McMinnville, Ore. Box 33.

BABY CHICKS HATCHED IN PETALUMA INcubators are a superior class; strong, vigorous, sturdy, grow rapidly, lay early. Buy chicks from hatcheries using Petaluma incubators. You will find one near you. If not, write us. Catalog free. Petaluma Electric Incubator Co., Petaluma, Cal.

BABY CHICKS, HATCHING EGGS—FROM Hoganized hens, well mated. White and Brown Leghorns, R. I. Reds, Barred Rocks. Safe arrival guaranteed. Order early. Write for circular. Stübbe Poultry Ranch & Hatchery, Box 67J, Palo Alto, Cal.

WHITE ROCK BABY CHICKS, "DANIEL'S IDEALS," from our own trapnested stock entirely. Write for prices and dates, also eggs for hatching. Free catalog. Ideal Poultry Yards, Hoquiam, Wash. Star Route No. 25.

BABY CHICKS FROM TANCRED AND HOLlywood strain; heavy laying White Leghorns, mated to cockerels from W. W. experiment station hens, 265-314 egg record; $19 per 100. Wax's Poultry Farm, Kent, Wash.

BABY CHICKS — REDUCED PRICES ON White Leghorns, Reds, Barred Rocks, White Rocks, Minorcas, and Anconas; booking orders now; postal secures free catalog. Write today. C. N. Needham, Salem, Ore.

BABY CHICKS FROM TRAPNESTED WHITE Leghorns of superior quality; 14 years breeding for egg production. $18 per hundred. Chas. L. Perkins, 1337 Burrage, Portland, Ore.

WHITE LEGHORN BABY CHICKS FROM two and three year old selected hens, mated to cockerels from high producing stock; $14 per 100. O. H. Shaw, Cottage Grove, Ore.

BABY CHICKS, S. C. RHODE ISLAND REDS, $22.50 per 100; S. C. White Leghorns, $18 per 100; March chicks all sold. Maple Brook Poultry Farm, Southworth, Wash. Box 2.

BABY CHICKS — WE GUARANTEE OUR chicks to be from the highest producing hens in Petaluma. Write for further information. The White Hatchery, Petaluma, Cal.

WHITE LEGHORN CHIX, FROM OUR FREE range selected heavy laying breeders; after May 3d, $12.50 per 100. Chandler Poultry Farms, Lebanon, Ore.

TANCRED STRAIN WHITE LEGHORN BABY chicks, $18 per 100; eleventh season; incubator capacity, 18,000 eggs. D. A. Gillette, R. 4, Yakima, Wash.

BABY CHIX—REDS, ROCKS, WHITE ORpington's and White Leghorns. Hansen's Poultry Yards, Olympia, Wash.

CHICKS FROM LEGHORN HENS, 228-EGG average; reduced price. Acme Poultry Farm, Cottage Grove, Ore.

ANCONA COCKERELS, HATCHING EGGS, chicks. Get our prices. Oscar Dunlap, Junction City, Ore.

WHITE LEGHORN BABY CHICKS. CIRCULAR on request. San Jose Poultry Yards, San Jose, Cal.

HOGANIZED WHITE LEGHORN CHICKS and eggs; guaranteed. Mrs. Arp, St. John, Wash.

Leghorns.

"HENACRES" 8 WEEKS' OLD PULLETS; March or May hatched; big, healthy, vigorous bred to lay. Booking orders now. 6000 to sell, $1.50 each or 500 for $700. Satisfaction guaranteed or money back. Baby chicks for February, March and April all sold to old customers. May chicks, $22 per 100; $200 per 1000. June, $16 per 100; $140 per 1000. Safe delivery guaranteed. Hatching eggs, $2 per 15; $9 per 100; $80 per 1000. "HENACRES" Leghorns are known all over the northwest. Ask your neighbor. Illustrated catalog and booklet on poultry management free. "HENACRES." Box A, Prosser, Wash.

PURE BRED S. C. WHITE LEGHORNS—ALL breeding hens and pullets of trap nested strain; carefully selected for vitality and standard requirements; eggs, $1.50 for 15; $8 100; baby chicks, $18 per 100; safe delivery guaranteed. A few cockerels from 280 to 304 egg hens, $3 to $5 each. Frank Volland, Rt. 1, Kennewick, Wash.

SINGLE COMB WHITE LEGHORNS (TANcred strain); selected heavy laying second and third year hens mated to cockerels from 250 to 275 egg trap nested dams; hatching eggs, $1.50 per 15; $7.50 per hundred; chicks, $18 per hundred, safe delivery guaranteed. Oaklawn Poultry Farm, Hillsboro, Ore.

PRIZE-WINNING S. C. BROWN LEGHORN (light strain), single comb White Leghorn (Tancred strain); baby chicks, $15 per 100; order now. Satisfaction and delivery guaranteed. G. R. Lumberg, Springdale, Wash.

SINGLE COMB BROWN LEGHORNS; BEST winter layers. Pacific international prize winners. Cockerels, $3; eggs, $1.50 per 15. Circular free. J. E. Dickerson, Parma, Idaho.

EMERSON—MARTINI STRAIN S. C. WHITE Leghorn breeding cockerels from heavy producing hens; exhibition quality. Mrs. J. W. Marsh, Underwood, Wash.

POULTRY—Leghorns (Continued) 174

TRAPNESTED WHITE LEGHORN BREEDING stock and setting eggs; famous Carnation high record stock; pedigreed breeding for heavy winter layers. Improve your flock by adding Carnation stock. Ernest W. Raush, Carnation Poultry Farm, Kent, Wash.

FORD'S BRED-TO-LAY S. C. WHITE LEGhorns. Hatching eggs, $2 per setting; $8 per 100; special matings on request. W. A. Ford, Umatilla, Oregon.

WHITE LEGHORN COCKERELS, $5 TO $7.50; vigorous breeding hens, laying pullets, $1.50, 220-240 stock. Watterson Pullet Farm, The Dalles, Ore.

COCKERELS, SCOTT'S STRAIN S. C. WHITE Leghorns, big type; only a few left; act quick; $5 each. Louis I. Carpenter, King Hill, Idaho.

HANSON STRAIN S. C. WHITE LEGHORN pullets (laying 60 per cent), from 265 and 302 egg ancestry. Mrs. J. W. Marsh, Underwood, Wash.

S. C. WHITE LEGHORN BABY CHIX FROM trap nested, Hoganized hens; also cocks and cockerels. J. Panck, Sherwood, Ore. R. 1.

S. C. BUFF LEGHORNS; EGGS FOR HATCHing; good layers; guaranteed all eggs fertile stock. M. H. Mann, Woods Cross, Utah.

S. C. W. LEGHORN HATCHING EGGS, HOLlywood strain; six dollars per hundred. Mrs. Rominger, Underwood, Wash.

THE LAYING BROWN LEGHORNS. WRITE for prices on eggs, cockerels. Harvey Bean, New Plymouth, Idaho.

PRIZE BUFF LEGHORNS; EGGS 15C EACH; cockerels, $2. C. E. Cleveland, Stanfield, Ore.

Barred Rocks.

OREGON AGRICULTURAL COLLEGE Barred Rock hatching eggs; 200-egg strain, $1.50 per 15; $2.50 per 30; $7 hundred. Miles Tetherow, Central Point, Ore.

HATCHING EGGS, OREGON AGRICULTURAL college Barred Rocks; choice pen, $2 per 15; utility stock, $1.50; great layers. J. M. Steen, Lebanon, Ore.

RINGLET BARRED ROCK COCKERELS: THE finest lot I ever raised, for sale cheap; all birds sent on approval. J. O. Watts, Eugene, Oregon.

MY SUPERIOR BARRED ROCKS WON 38 prizes, three shows. If you want good ones write C. E. Dibble, Payette, Idaho.

O. A. C. STRAIN BARRED ROCKS; EGGS, $6 hundred; chicks, $25 hundred. The Idle Hour Poultry Farm, McCoy, Ore.

HUNT'S FINE BARRED ROCKS. WRITE for circular on eggs. W. A. Hunt, Lebanon, Ore.

O. A. C. STRAIN BARRED ROCK COCKerels. Write George Gellatly, Corvallis, Ore.

FANCY BARRED ROCK COCKERELS $5 UP. J. E. Horton, 2408 Altamont, Spokane.

Turkeys, Ducks, Geese

MAMMOTH PEKIN DUCKS, "AMERICA'S finest." New blood this year direct from C. C. Shoemaker; eggs, $2 per setting, $12 per 100. Crystal White Poultry Farm, McMinnville, Ore. Box 33.

EGGS, MAMMOTH TOULOUSE AND WHITE Chinese geese; Mammoth Pekin ducks, pearl guineas, Single Comb Reds. C. O. Johnson, R. 1, Medical Lake, Wash.

GIANT STRAIN PURE BRED MAMMOTH Bronze turkeys, from prize-winning stock. Mrs. C. R. Lowery, Route 4, Boise, Idaho.

MAMMOTH PEKIN EGGS FROM DUCKS that take the prizes. Booking advance orders. Mrs. E. A. Bennett, Salem, Ore.

PURE BLOOD MAMMOTH BRONZE TURkeys, prize winning stock. Mrs. Frank Browning, Route 1, Nampa, Idaho.

TOULOUSE GEESE EGGS—PROPERLY MAted, good color, immense size; fifty cents per egg; lots of six or more; none better. T. J. Dannen, Shedd, Ore.

THOROUGHBRED BARRED ROCKS, RUNNER ducks, males and females, $2, $2.50, $3; ducklings, hundred, $33. C. A. Muths, Route 1, Box 49, Salem, Ore.

DUCKS—EXTRA LARGE MAMMOTH PEKIN. Eight eggs, $1.60; save this ad. E. Wilson, Rosburg, Wash.

FOR SALE — MAMMOTH BRONZE, PART wild turkeys. Eleanor Moore, Route 1, Ashland, Ore.

MAMMOTH BRONZE TURKEY TOMS, $15; weight 26 pounds. Harry Smith, Coupeville, Wash.

MAMMOTH PEKIN DUCK EGGS IN SEASON. doz., $2. Mrs. Earl Davis, Elk, Wash.

Miscellaneous Poultry.

WHITE LEGHORN COCKERELS, $3; CHOICE, $5; baby chicks, 18c; utility stock. My pullets carried first prize Sherwood and first pullet, Portland stock show. Mammoth Pekin duck eggs, $2 for eleven; ducklings, 40c each. G. H. Lewis, Route 3, Sherwood, Ore.

GRIFFIN'S FAMOUS WHITE WYANDOTTES, the best for market and egg producers; eggs for hatching from best mated pens in northwest; your opportunity to get started with my famous stock. Send for catalog. J. A. Griffin, Box 457, Eugene, Ore.

WHITE LEGHORN EGGS; LARGE EASTERN strain; single and double comb Rhode Island Reds; eggs, $1.50 per 15; $7.50 per 100; magnificent dahlia bulbs, over 100 named varieties. Edward C. Brockway, Sunnyside, Wash.

EGGS FOR HATCHING FROM ESTABLISHED laying strain of White Plymouth Rocks, $2 per setting; $10 per 100. Price on stock on application. Chas. W. Brewster, 3514 20th st., Everett, Wash.

WON 14 PRIZES AT WINTER STOCK SHOW. Chix, Martin best White Wyandottes, Thompkin Reds, 35c; Ferris Leghorns, 25c; eggs, $3; cockerels, $5. Nick Sabadin, Spokane, E1015 Nebraska.

HOW ABOUT THOSE EGG FACTORIES? ARE they working full capacity? D. G. Gifford, 155 Grand ave., Portland, Ore., will supply valuable information with no obligation on your part.

RHODE ISLAND WHITES. COCKERELS from heavy producers; $5 and $7.50 each; eggs, $2.50 and $3.50 per 15; $12.50 per 100. Van K. Lawson, McMinnville, Ore.

PARAMOUNT WHITE WYANDOTTES "BRING home the bacon." Trap nested, pedigreed. Instructive catalog free. Bayard H. Moul, 1226 Washington blvd., Seattle.

SUPREME WHITE WYANDOTTE COCKERels; bred up for eight years; all birds guaranteed. Price $2.50 and $3. Mrs. Earl Murray, Box 170, Ione, Wash.

PEDIGREED ANCONA COCKERELS AND hatching eggs from 330-egg strain; eggs, $2.50 per setting. Smith's Ancona Farm, Nampa, Idaho.

PUREBRED ROSE AND SINGLE COMB Rhode Island Red cockerels, bred from prize winning stock, $5. F. E. Mohr, Orchard Ave., Spokane.

(Continued on the following page.)

POULTRY—Miscellaneous (Continued) 174

CHICKS OF QUALITY—HOLLYWOOD, TANcred and commercial strains of White Leghorn chicks from pedigreed males, $20 per hundred. R. I. Reds, Barred Rocks, Black Minorcas and Ancona chicks, $25 per hundred. These prices are for February and March delivery. We sell Queen incubators, Queen brooder stoves, Reliable Blue Flame brooders, Petaluma Electric and Charters' incubators and American brooder stoves. A complete line of poultry supplies and remedies, including leg bands, egg scales, trapnest records, etc. Catalogue free. Queen Hatchery, Fourth and Pine. Elliott 2054. Seattle, Wash.

A FEW CENTS MORE IN BEGINNING MEANS nothing if results are obtained. Our stock pure bred Tom Barron White Leghorns not to be excelled; booking orders for spring chix and pullets; demand heavy. Write for full particulars. All styles and sizes incubators, brooders and stoves. Our 1922 catalogue a valuable book for poultrymen. C. E. Hill Co., 413 11th st., Oakland, Cal.

FREE INCUBATOR CATALOG — INCUBAtors, brooders, oat sprouters, baby chicks, hatching eggs, trap nests, poultry books and supplies. You can't beat the St. Helens incubator in either price or hatch. From 60 to 4000 egg capacity; electric and lamp heated. St Helens Incubator Co., Centralia, Wash.

BARRED PLYMOUTH ROCK COCKERELS for sale—You will find no better on the Pacific coast; $6 each, f. o. b. Hubbard, Ore. If not as represented, send them back and get your money. We guarantee them. Dimick & Waldron, Hubbard, Ore., Route 2.

S. C. RHODE ISLAND REDS—OUR FLOCK IS one of the best in the Willamette valley, and we have hatching eggs from our best matings to deliver to our customers after March first. All baby chicks for 1922 are sold. G. B. Dimick, Oregon City, Ore.

COCKERELS—ROSE AND SINGLE COMB Brown and Buff Leghorns, Anconas, Black Minorcas, Rhode Island Reds, Blue Andalusians. Boone Avenue Poultry Yards, E1601 Boone ave., Spokane.

SILVER WYANDOTTES AND SILVER SPANGled Hamburgs, Golden Campines, choice birds for sale. No baby chicks or eggs by the 100. Birds, $5 and up. G. G. Wherry, Payette, Idaho.

STOP, LOOK, LISTEN—CHIX AND EGGS from Cecil Sheppard's high grade laying strain of Anconas. Inquiries promptly and courteously answered. Cona Villa, R. R. 8, Salem, Ore.

VIGOROUS, HEAVY-LAYING WHITE ROCK breeding stock; pure Fishel strain; hens, pullets, $2, $3; cockerels, $3, $5, $10; prices on quantities. J. B. Axtelle, Hood River, Ore.

SETTINGS FROM BROOK'S HAVEN SINGLE Comb Reds; Redwing strain (Hoganized); bred for color, type, capacity; range raised. Chas. S. Brooks, Underwood, Wash.

WHITE ORPINGTON COCKERELS FROM first prize cock and Princess Pat strain. Rose Comb Rhode Island Reds, $3 and $5. Economy Farms, Tekoa, Wash.

SURE HATCH INCUBATORS, BROODERS, prepaid prices. Send for catalog. S. C. Brown Leghorn eggs, chicks. Idahome Poultry Farm, R. 3, Nampa, Idaho.

POULTRY RAISERS, SEND FOR FREE BOOKlet on poultry advertising. The Pacific Northwest Farm Trio, Dept. P, Review bldg., Spokane, Wash.

DOLLARS FOR YOUR EGGS—WE PAY THE top market prices for your eggs and poultry. Daily cash remittances. Western Produce Co., Spokane.

QUALITY BARRED PLYMOUTH ROCKS and Black Langshans, cockerels and cock birds; also a few females; prize winners. B. D. Reser, Walla Walla, Wash.

WHITE LEGHORN AND WHITE ROCK COCKerels; 300-egg strain; baby chicks, hatching eggs. Palouse Falls Ranch, Palouse Falls, Wash.

TRAP NESTED WHITE LEGHORN AND Barred Rock eggs and chicks; records, 200 to 311. Mrs. W. M. Roberts, Elmira, Oregon.

STERLING STRAIN SILVER WYANDOTTES—Eggs $2.50 and $5 per setting; $7 per 100. Chicks, 45c. Henry Domes, McCoy, Ore.

FOR SALE—ROSE COMB RHODE ISLAND Red cockerels. First and second premium birds. Mrs. E. J. Allen, Elma, Wash.

HOGANIZED WHITE WYANDOTTE COCKerels; Ringhouse Griffith breeding; $5 and $10, prepaid. Adams, Warren, Ore.

SHIP YOUR LIVE POULTRY AND EGGS TO us. Highest prices paid; daily remittance. Inland Poultry House, Spokane, Wash.

ALLEN'S PRIZE BARRED ROCKS AND White Leghorns are wonderful layers. Write D. W. Allen, LaConner, Wash.

BLUE ANDALUSIANS AND WHITE ROCK cockerels; extra good; order now. Mrs. C. W. Armstrong, Freewater, Ore.

SINGLE COMB RED COCKERELS ALSO DAY old chicks and hatching eggs. A. E. Bosworth, Omak, Wash.

WHITE WYANDOTTE HATCHING EGGS, $2; Holmes strain; cockerels, $5. Mrs. F. Raglin, Castle Rock, Wash.

ANCONAS, SHEPPARD STOCK COCKERELS, $3; pullets, $2; eggs, $2 setting. R. P. Irwin, Tonasket, Wash.

BRED TO LAY ANCONAS; HATCHING EGGS. Price list free. Yew Lane Farm, Sherwood, Oregon.

ROSE COMB BLACK MINORCA COCKERELS, only few left. $3 each. Mrs. Carley, Carley, Wash.

1949 COCKERELS, HATCHING EGGS, 49 VArieties; free book. Aye Bros., Box 14, Blair, Nebr.

EGGS—BLACK MINORCA, WHITE MINORCA, 200-egg strain. Mrs. Frank Winnard, Heppner, Ore.

S. C. BLACK MINORCA HATCHING EGGS, $2 per 15. John Zack, Kalama, Wash.

WHITE WYANDOTTE COCKERELS, $3 AND $4. Wm. Dunning, Creston, Wash.

PEARL GRAY GUINEA FOWLS, $1.50 EACH. Mrs. Mary Insel, Shelton, Wash.

LIVE STOCK 177

SEND FOR FREE BOOKLET, "SOME SUGgestions to Live Stock Advertisers," outlining the practices of successful men of long experience. Helps in determining how much to spend, the mediums to select, preparing advertisements, handling inquiries, the use of photographs, etc. Write today. The Pacific Northwest Farm Trio, Dept. W, Spokane, Wash.

LARGE, HEAVY PRODUCING HOLSTEINS for sale at all times in car lots; tuberculin tested; 150 to 200 head always on hand; well marked heifer calves from registered sires and heavy producing dams; crated for shipment anywhere, $25 f. o. b. Levinson & Balmelli, Yakima, Wash.

FOR SALE—JERSEY BULL NINE MONTHS old. J. Zodrow, Chewelah, Wash.

TOGGENBURG MILCH GOATS. FANNIE Branson, Falls City, Ore.

FARMERS' WANT ADS

This is the farmers' "want," "sale" and "exchange" department for small advertisements of farmers, including live stock and poultry.

Advertising rates for ads running 1 to 3 times, 10c per word per insertion, with a special rate to Farmer subscribers, as follows: Ads running 4 to 12 times, 9c per word per insertion; ads running 13 times or more, 8c per word per insertion.

All commercial and land advertising 10 cents per word each insertion. Open also to nonsubscribers.

In using these columns advertisers must observe: (1) No advertisements will be inserted for less than $1.00. (2) Every word, number and initial, including name and address, must be paid for. (3) New advertisements, changes of copy or cancellations must reach general office, Spokane, Wash., 10 days in advance of publication date. (4) Cash must accompany order.

Above rates include insertion in The Washington Farmer, The Idaho Farmer and The Oregon Farmer, which constitute the Pacific Northwest Farm Trio, 46 Review Building, Spokane, Wash.

LIVE STOCK (Continued.) 177

FOR SALE—THREE BIG TYPE POLAND China gilts, bred for March fallow, to a grandson of The Pilot. Gilts have size and quality and a combination of Bob Wonder-Ike Knox breeding; guaranteed to please. $50 each. C. R. Evans, Halsey, Ore.

FOR SALE—COMING 3-YEAR-OLD REGIStered French draft stallion; black; weight 1500; grandsire and granddam first winners Chicago international. Sire winner Illinois and Spokane Interstate. Bargain. F. W. Pratt, Rockford, Wash.

SHIP US YOUR POULTRY AND LIVE STOCK. We pay the top market prices. Light veal, fat, fancy, 17c; dressed block hogs, 13c; hens, heavy, 25c; light, 20c. Prompt returns. John Lewis & Co., Spokane, Wash.

WE PAY TOP PRICES FOR YOUR LIVE OR dressed veal, hogs and poultry. Your check by return mail. Shipping tags on request. M. & J. Packing Co., Spokane.

DARK GRAY, COMING THREE-YEAR-OLD Percheron stallion; out of imported sire and dam; for sale cheap. Steve Inglin, Route 4, Boise.

FOR SALE—REGISTERED GRAY PERCHERon stallion; nice disposition; will work single or double. Write John Stastny, Neppel, Wash.

REGISTERED SHORTHORN BULLS, MILKing strain; best of breeding. Also grade cows. DeGraaff Brothers, Route 1, Lynden, Wash.

FOR SALE—THREE REGISTERED HOME bred Belgian stallions, two Shorthorn roan Durham bulls. W. I. Ebbert, Condon, Ore.

GUERNSEY BULL CALF, GLENWOOD AND May Rose breeding; beautifully marked; good color. J. C. Trotter, Rockford, Wash.

TILLAMOOK CALVES—SEASON NOW OPEN. Price lists ready; strictly dairy stock. Smith, the Calf Man, Tillamook, Ore.

REGISTERED SHORTHORNS—4 COWS, 2 heifers, 1 bull; price, $1200 f. o. b. Wenatchee. S. O. Pool, Wenatchee, Wash.

TWO YOUNG, REGISTERED SHIRE STUDS; the blue ribbon kind; priced to sell. O. B. Skidmore, Plummer, Idaho.

FOR SALE—CHOICE DUROC JERSEY SOWS and gilts; bred to farrow in March. Geo. DeBok, Oregon City, Ore.

REGISTERED O. I. C. SWINE FOR SALE; shipped C. O. D.; guarantee satisfaction. Tony Johnson, Polson, Mont.

FOR SALE—MAMMOTH JACK, HEIGHT 16 hands. Address Joseph Naffziger, Pullman, Wash. Route 2.

GRADE HOLSTEINS, MILKING, FRESHENing, $80 f. o. b. Hadlock, Wash. J. J. Dee, Hadlock, Wash.

REG. PERCHERON STALLIONS; COLTS from $250 up. Iowa Percheron Farms, Redmond, Oregon.

DUROC BOAR, 2 SOWS, 2 GILTS, REGISTered; $50 each. R. Gralapp, Route 5, Spokane.

REGISTERED SHORTHORN CATTLE FOR sale. Elton Webb, New Plymouth, Idaho.

HARNESS and SADDLERY 189

SEND FOR FREE HARNESS AND SADDLE catalog today; cut out the middleman, buy direct from the manufacturer. Lowest prices in the west; satisfaction guaranteed. Established 1881. Write Pierce Harness Co., dept. T, Spokane, Wash.

HAY FOR SALE. 200

ALFALFA HAY—BUY DIRECT, SAVE MONEY; quality guaranteed. Write or wire for prices. Ernest T. Frecpons, Walla Walla, Wash.

JOB PRINTING 372

GUARANTEED BETTER BUTTER WRAPpers; 100, 60c; 250, $1.50; 500, $2.50; 1000, $4.25; printed to order. Home Specialty Co., Middleton, Idaho.

PARCHMENT BUTTER WRAPPERS, 100, 55C; 250, $1.45; 500, $2.45; 1000, $4.20; prepaid return mail. Printery, Box 499, Twin Falls, Idaho.

FURRIERS 429

WANTED — LIVE, GROWN AND BABY skunks this spring. Write, stating price and how many you can trap. C. A. Ferdon, Room 18, Mulkey bldg., Portland.

MONUMENTS 510

COMPLETE STOCK, RIGHT PRICES. CORrespondence solicited., J. W. Harding, Inland Monument Co., N1001 Monroe, Spokane.

BUILDING MATERIAL 588

NO WASTE, LESS LABOR. BUILD WITH ready cut houses and barns and save money. Attractive new plan book sent free. 4c postage. Prices quoted on material list. Write today. Price advance certain to come soon. Local Keystone Lbr. Co., 3000 Sprague, Tacoma, Wash.

SEEDS 620

ALFALFA SEED, CLOVER SEED, SEED corn—We are located in the heart of the largest and best alfalfa and clover seed district in the west and can give you both quality and price. Get our samples and quotations before buying. Our seed corn is of the finest acclimated strains. Garden and flower seeds of all kinds. Send for our catalog. Darrow Bros. Seed & Supply Co., Twin Falls, Idaho.

2 CARS NETTED GEM SEED POTATOES, part car certified, rest uncertified; grown from certified seed; nonirrigated. Miller & Rosenthal, Thompson Falls, Mont.

RED CLOVER, ALSIKE, RYE GRASS, TIMothy and vetch seed for sale; good quality, lower prices; by freight or parcel post. Rhoten Farms, Salem, Ore.

GET ONION SEED OF GROWER. SOUTHport Red Globe, Yellow Globe Danvers, $1.35 lb., prepaid. Cornell Seed Ranch, Caldwell, Idaho.

HUBAM CLOVER, CERTIFIED SEED OF THE earliest strain; Idaho grown. DeKalb County Agricultural association, DeKalb, Ill.

SEEDS—FARM AND GARDEN; ALL STATE tested. Write for catalog. Washburn & Wilson Seed Co., Moscow, Idaho.

ONION SEED, POSTPAID, $1.50 POUND. L. J. Shippy, Goldendale, Wash.

SEEDS (Continued.) 620

HANCHEN SPRING BARLEY, $2.50 PER cwt.; common vetch seed, $4 per cwt.; red clover, $20 per cwt. Oregon standard purity seeds, all f. o. b. Corvallis, Ore. J. J. Denson.

TIMOTHY, ALSIKE, CLOVER, MIXED, 9C; purity, 98.72; germination, 94; Timothy, 6c. M. Meador, Norwood, Idaho.

RED AND ALSIKE CLOVER SEED, VETCH; highest quality; prices right. M. Senders & Co., Albany, Ore.

EXTRA YELLOW DANVER ONION SEED, $1.35 per lb.; 5 lb. lots, $1.25. E. Dammel, Rupert, Idaho.

COSSACK ALFALFA SEED—SEND FOR samples. S. H. Hillman, Box 5, Thompson Falls, Mont.

GUARANTEED SEED, TIMOTHY, ALSIKE and timothy mixed. M. Hill, McCall, Idaho.

WRITE FOR SEED CATALOGUE FOR 1922. Union Seed & Fuel Co., Boise, Idaho.

NURSERY STOCK 621

15 TO 20 FEET SQUARE GOOD SOIL, planted to everbearing strawberries, will supply average family same year; keep cultivated, runners off, fertilize lightly, keep moist (avoid alkali). My Progressive and Superb are true to name; known and tried standard varieties, come to you inspected and prepaid, parcel post, $1.40 per 100; $6 per 500; $11 per 1000; 2 dewberry plants free long as they last, with orders. Dewberry plants, 75c doz; rooted Concord grapes $1.50 doz all prepaid, insured mail. Plant early. Model Fruit Farm, N. Matthiessen, proprietor, Route 1, Emmett, Idaho.

PROGRESSIVE EVERBEARING STRAWberry plants at $1 per 100, or $8 per 1000. St. Regis everbearing Raspberry plants at 10 cents each or $7 per 100; also one crop strawberries, currants, dewberries, loganberries, blackberries, asparagus and Greg's blackcap raspberries, very fine. W. L. Seaman, Boise, Idaho.

RELIABLE NURSERY STOCK—ITALIAN AND Petite, 4-6 ft., and 3-4 ft.; Concord, Worden and Moore's Early grapes; grafted Franquette walnut, all sizes. Send for catalog and price list. Villa Nurseries, Route 1, Portland, Ore.

GROW GRAPES FOR PROFIT—SPECIAL LOW prices; grape vines, berries, asparagus, for commercial planting; peaches, cherries, apricots, apples; satisfaction guaranteed. Write today. Home Nursery Co., Richland, Wash.

TREES—ALL KINDS FRUIT AND ORNAmental trees, vines, etc. Growers of general nursery stock. Lowest quotations on application. Send your want list. Can use few good salesmen. Albany Nurseries, Albany, Ore.

CLARK SEEDLING, THE STRAWBERRY that made Hood River famous. Write for list of other varieties and prices. Plant nurseries at Hood River and Prosser, Wash. W. R. Gibson & Son, Hood River, Ore.

GLADIOLA — BEAUTIFUL, MAGNIFICENT summer and fall blooming flowers that please all and are of easy culture. My stock is fine and prices right. Catalog free. Jungst Gladiola Farm, Ellensburg, Wash.

CORY THORNLESS BLACKBERRY—DELIcious, very large and early. You get strong, well rooted plants, true to name, from pioneer grower. Wm. Mortenson, Route 1, Lodi, Calif.

APPLE TREES AND A FULL LINE OF NURSery stock at reasonable prices; save agents' commission by ordering direct from nursery. Write for price list. Lawson Nursery, Gates, Ore.

CHOICE LOGANBERRY TIPS, $25 PER THOUsand; personally inspected by our county fruit inspector before they are shipped. I pay express. G. W. Johnson Jr., Salem, Ore., Route 4.

NURSERY STOCK, ITALIAN PRUNE TREES and trees of all kinds. Berries and small fruits of all varieties. Buy direct and save 50 per cent. Brooks Nursery, Lafayette, Ore.

FILBERT TREES OF APPROVED VARIEties; true to name; state when writing, the number of trees wanted. Dr. J. H. Wilkens, McMinnville, Ore.

STRAWBERRY PLANTS; IMPR. NEW OREgon, Ettersburg 121; large, vigorous and healthy; 80c 100; $5 1000. Christian Arnesen, Canby, Ore.

SEND FOR OUR NEW PRICE LIST ON FRUIT trees, berry bushes, shade trees and roses on their own roots. Krause Nursery, Spokane, Wash.

FOR SALE—EXTRA LARGE (CUMBERLAND) blackcap plants; six dollars per hundred. E. W. Raush, Carnation Poultry Farm, Kent Wash.

LOGANBERRY PLANTS, 6, $1; TIPS, 18, $1; Cuthbert raspberries, 75, $1; 1000, $10, prepaid. Alvin Myers, Doebay, Wash.

STRAWBERRY PLANTS—OREGON, WILSON, Etterberg, $3.50 per 1000. C. E. Turnidge, Talbot, Oregon.

TREES—PEAR, APPLE, PLUM, PRUNE, NUTS and berries at cost. Homer Brixey, McMinnville, Ore.

LOGANBERRY PLANTS FURNISHED BY the grower. Grape Lane Farm, Turner, Ore.

STRAWBERRY PLANTS, $5 PER 1000. Briggs, Plant Nursery, Olympia, Wash.

FARM LANDS FOR SALE. 651

5-ACRE CHICKEN RANCH, 5 MILES FROM center Spokane; 7-room modern house; water and lights all over place; 3 modern plastered coops; 1200 White Leghorn hens, brooder houses for 6000 chicks; 5000 already ordered for March delivery; Henacres and O. A. C. strains; all paid for. $4500 cash, balance payments suit buyer, 6 per cent. J. Vandamme, Route 1, Spokane.

2.8 ACRES, NEW HOUSE, BARN FURNIture, Ford car, 2 cows and 50 chickens; outside city limits; $3000; 1-3 cash. 320 acres, in Alberta, $15 per acre; 1-3 cash. For particulars write C. Halseth, Silverton, Ore.

ALBERTA LAND, TWO SECTIONS, AT SACRIfice; excellent farm and stock proposition; running water; adjacent to good town. Address owner, A. D. Saulsberry, Centralia, Wash.

FOR SALE—53 ACRES, ½ MILE WEST OF Aumsville, Ore.; stock and machinery. Write for terms. Henry Fennell, Aumsville, Ore.

160 ACRE GOOD WHEAT FARM; LITTLE Bitterroot valley, Mont. John Thiard, owner, Murray, Idaho.

400-ACRE DAIRY OR STOCK RANCH; LOW price; easy terms. Theo. Johnson, Tenino, Wn.

FARM LANDS FOR SALE (Continued) 651

EQUIPPED STOCK AND DAIRY RANCH, 480 acres, of which 200 acres is the best bottom land; part in timothy and clover, balance grain and stubble; 80 acres timber, balance pasture; adjoining free outside range 20 miles square; large trout creek through place, from which most of the meadow can be irrigated if desired. Improved with 2 houses, large stock and hay barn, baled hay barn, feeding barn for range cattle; water piped to house and large cement trough in yards from never-failing spring. Personal property consists of 7 horses, 3 colts, 21 head of cattle, 7 hogs, chickens, 2-ton Signal truck, 4 horse engine cream separator and complete farming and blacksmith outfit. Price $28,000, on very easy terms. The Big Bend Land company, Spokane, Wash.

PARADISE, THE SIERRA FRUIT, NUT AND berry district; prize winners of northern California. The country district with city conveniences. Deep, wonderfully productive soil. Pressure pipe sytem of irrigation. Railroad, finest roads, electricity, phones; elevation 2000; ideal for health and climatic delights; near fine hunting and fishing; finest environment for retirement homes. American community; 5 to 40 acre tracts, $80 acre; 25 acres, with new $2000 bungalow, 10 cleared, 3 young planting pears, family fruits, berries, $5000. All adjoining railroad siding. Bearing pears in same subdivision clearing $500 per acre yearly. Eckles & Eckles, Paradise, Butte county, California.

A SUBURBAN PRODUCING HOME AT SUMmit View Farms, between Puyallup and Tacoma, with one acre cleared on each five-acre farm. City water, paved road, phone, lights and only short distance from the state experimental station at Puyallup; berries and poultry for income with city conveniences; good berry land and excellent view property. Write us today for map and full details. You deal direct with the loggers. We have no agents. Electric Logging Co., Inc., 216 Marion st., Seattle, Wash. A. R. Todd, Mgr.

WE SELL FORECLOSED LANDS FOR A loan company for one-third cash, balance easy terms. When writing tell us what you want, where preferred, how much you will invest; kind of farming you contemplate, as we have no list and must write special description in each case No trades. Hartford Land company, 601 Paulsen building, Spokane, Wash.

SACRIFICE 63 ACRES, IRRIGATED, NEAR Gooding, Idaho; fine alfalfa; 6-room house, barn, granary, garage, hen house, fine well, cistern. Price, including 7 horses, 5 cows, 4 hogs, necessary farm machinery, only $117.50 per acre. $3800 cash, $3600 federal loan. Write or wire Hodgson, Schmitt & Whipkey, Gooding, Idaho.

SNOHOMISH COUNTY, WASH.—6000 ACRES of the finest dairy, berry or general high-grade farm lands in the northwest, rapidly improving section; no drouths; bumper crops; tracts 1 to 80 acres; 10 yearly payments. This is your opportunity. Send for literature. Brownell Land Co., Birmingham, Wash.

STOCK RANCH, WITH 500 CATTLE, 200 range horses, 920 acres land; a modern ranch, fully equipped; in heart of good range; 5-year grazing permit, Lemly reserve. Right dates back to 1883. Any one interested, address J. D. Ellis & Co., Idaho Falls, Idaho.

WE WANT TO TELL YOU MORE ABOUT the famous Deschutes valley in central Oregon; a dairy, potato and stockman's paradise; a card brings full particulars. Redmond Land & Loan Co., Inc., Redmond, Oregon. (King Murphy's canitol.)

FARMERS — RICH, FERTILE FARMS bought through our "Own your own farm" thirty-year improvement plan, mean wealth and prosperity. Illustrated booklet free. Write C. E. Taylor Land Co. Saco, Mont.

A 160-ACRE DAIRY RANCH FOR SALE; three miles from station; nearly all creek bottom; good improvements; stock and machinery included. For full particulars write Adolph Hill, Menlo, Wash.

THE BEST EQUIPPED RANCH IN THIS county; 4½ miles from county seat; will sell on easy terms, low interest. Real dirt ranches. Write for particulars. A. G. Kugler, Soda Springs, Idaho.

20 ACRES FRUIT ORCHARD, IN HOOD RIVer valley; all kinds fruit; good buildings; mail route, telephone, electric lights; near school and church; three miles from Hood River. A. F. Linn, owner.

SELL YOUR PROPERTY QUICKLY FOR cash; no matter where located. Particulars free. Real Estate Salesman company, 501 Brownell, Lincoln, Neb.

FOR SALE BY OWNER—WELL IMPROVED dairy farm, 80 acres; paid up water right; for $9000. Will give terms. C. E. Adams, Route 1, Emmett, Idaho.

SACRIFICE PRICE, FRUIT AND DAIRY ranch, 200 acres; 20 acres bearing apples; good buildings; spring water. Box 134, Wenatchee, Wash.

80-ACRE DAIRY AND GENERAL CROP farm; running water; well improved (on reservation); act quick. J. W. Palmer, Toppenish, Wash.

A FINE RANCH, NEAR TOWN; TERMS TO suit purchaser; five acres in berries. L. E. Dailey, Box 306, Port Angeles, Wash.

160-ACRE FARM; MUST SELL; OWNER WILL tell why; small trade; little cash. Terms. A. Brauner, Bossburg, Wash.

160 ACRES, WATER, IMPROVEMENTS; NEAR school, road, transportation; bargain. J. M. Finney, Harrison, Idaho.

54 ACRES—SPLENDID OPPORTUNITY FOR party desiring small farm. Box 155, Harrison, Idaho.

480-ACRE WHEAT RANCH FOR SALE. Write owner, Box 202, Sprague, Wash.

FOR SALE—13.04 ACRE FRUIT AND BERRY farm. E. Schudeiske, Sutherlin, Ore.

FARM LANDS—Wanted 654

WANT TO HEAR FROM OWNER HAVING farm for sale; give particulars nad lowest price. John J. Black, 80th st., Chippewa Falls, Wis.

FOR SALE OR EXCHANGE 702

FOR SALE OR EXCHANGE—320 ACRES Alberta wheat land; 80 acres fall rye; 23 horses, 25 cattle. For particulars write A. F. Piehl, Suffield, Alta.

80 ACRES, NEAR BEND, OREGON, FOR SALE or trade. What have you? J. W. Palmer, Toppenish, Wash.

TO EXCHANGE—Real Estate 705

FOR TRADE—320-ACRE WHEAT RANCH; 150 farmed; fair improvements; mortgage $1700; desire small farm or acreage. L. T. Griswold, Mansfield, Wash.

265 ACRES TO TRADE FOR SOUTHERN OREgon property; hay, grain, part river bottom; close in; springs for stock. Box 7, Midvale, Idaho.

360 ACRES, PART IRRIGATED; UNENCUMbered; with stock and machinery; trade for smaller place. Tom Black, Leahy, Wash.

TO TRADE—80 ACRES IRRIGATED LAND for stock ranch. E. Coulter, Burley, Idaho.

TRACK'S END

By HAYDEN CARRUTH

A Stirring Story of Adventure

(Copyright by Harper & Bros.)

CHAPTER XIX. (Continued.)

It was this day, March 15, that there began the big thaw. I could not hope spring had come to stay, and that there would be no more winter weather, but it gave me hope that a train might get through. I needed hope of some kind to keep up my spirits, because I felt that with a little good weather I could look for the Pike gang again. If I could have been sure that the train would come first I should have been gladder to see the thaw than anything else in the world; as it was I wished it might hold off till I could feel that spring had come in earnest.

The 15th was warm, but the snow melted very little. The next morning came the chinook. It was straight from the northwest, where all the blizzards had come from, but it was warmer than any south wind. All day it blew, and the snowbanks disappeared as if they were beside a hot stove. Before night there was a hole in the roof of tunnel No. 3. When I went to bed there were patches of bare ground and pools of water in the square.

The next morning the chinook was still blowing. It had been eating away at the snowbanks all night. I saw the top of the stronghold haystack from my bedroom window. Tunnel No. 1 had caved in. All day the wind kept up. By night the tunnel system was nothing but a lot of gaping cuts in the snow. The drifts had settled so much that the windows and doors were exposed, and it would soon be possible to ride on horseback along the street.

I had never seen a chinook wind before, of course, but Tom Carr had told me about them. This one was a strong, steady wind sweeping all day and all night straight from the northwest, and seemed to blow right through the drifts. I had rather have seen the snow going in any other way, because I knew this wind only followed the valley of the Missouri river and I was afraid that it did not reach far enough east to thaw out the cuts on the railroad so that the longed-for train could get through. But, on the other hand, it of course covered all of the country between Track's End and the outlaws' headquarters, and I knew that there was now nothing to hinder their coming, and I was afraid that if they did come I could not keep them off. This day the Indian came out for the first time. I tried to talk with him some more, but could not get much out of him. He cast some very black looks at me, as I supposed for my taking away the gun and, more important, probably, knocking the spigot off of the barrel.

This night I felt sure the outlaws would come again, and I did not go to bed at all. I stayed all night in Townsend's store, thinking to give them as warm a reception as I could. The next morning, the 18th, the chinook had stopped, but it was still thawing, though not so fast. There was scarcely any wind, but the sun was warm. I tried to take a nap after dinner, but I was too nervous. The prairie was half bare. The little drifts were all gone and the big ones had shrunk to little ones. There was a good deal of snow in the street yet, but it would be easy to ride through it. I walked about all day trying to think of what was best to do. I knew that I could not keep awake another night. At last I decided to try putting the Indian on guard part of the night. He had said (I thought that was what he meant) that the outlaws had stolen ponies from his tribe, and I concluded he could have no love for them, even if he had none for me. I found him in the store, but he was still sullen about the spigot.

"Want you to watch tonight for robbers," I said to him.

He only looked at me, so I repeated it, and added: "I will give you rifle, shoot if they come."

At this he grunted and said, "All right." He waited a moment and seemed to be thinking; then suddenly he raised his left hand tightly shut above his head, looked at it with half-closed eyes, and said, "Ugh! scalp 'em!"

It made my blood run cold to see that big savage standing there within arm's length gloating over an imaginary scalp, knowing as I did that he would probably enjoy scalping me quite as much. But I said nothing except to make him understand that he could go to bed if he wanted to, and I would wake him when it was time. I thought I would stay up as long as I could myself.

Twenty times that day I climbed the windmill tower and looked one way for the outlaws and the other for the train, but got no sight of either. The track was mostly bare as far as I could see, but I knew that even if the chinook had reached so far east many cuts around where Lone Tree had been and west even as far as the last siding, No. 15, would still be half full of snow and ice which would need a vast deal of shoveling and quarrying before any train could come through.

It was growing colder, and after the sun went down it began to freeze. I thought I could easily sit up till midnight, and after it was dark began patrolling the sidewalk like a policeman. The Indian had gone to sleep in his cellar. There was an east wind which felt as if it might bring snow. I was getting so tired that I could scarce drag my feet and was having another fit of the shivers thinking about the outlaws, when suddenly, as I stood in front of Taggart's, something popped into my head which I had not thought of for almost three months. This was the big can of powder inside the store.

I forgot my shivers and ran to the hotel for the lantern. Then I had another look at the powder can. It was like any tin can, only big, almost, as a keg. There was an opening in the top with a cover which screwed on. I was wondering if there was not some way that I could put the can under the floor of the bank and blow up the robbers if they tried to open the safe. I felt that the chances for beating them off again in a fight, with no fortifications, were very slim. You may think it strange that I felt so sure the robbers would come again, after having been beaten off once. I was not certain of it, of course, but I knew Pike was not a man to give up easily, and that he must have fully understood how much the snow helped to defeat them. I knew that since the weather had moderated a spy might have come in the night and discovered that I was alone and how defenseless the town was.

I had heard of fuse, but it happened that I had never seen any in my life. I remembered I thought it must be white and soft like the string of a firecracker. So I began to rummage through all the drawers and boxes for fuse. One of the first things I came across was a coil of black, stiff, tarry string, but I threw it to one side and went on looking for fuse. After I had hunted half an hour and found none, I gave up. As I stood there thinking a good deal discouraged, my eye lighted on the black coil again. My curiosity made me pick it up, and on looking at at one end closely I thought I could see powder. I cut off about six inches of it and touched one end to the lantern flame. There was a little fizz of fire and I stood holding it in my hand and wondering what it was doing inside, when suddenly there was a bigger fizz at the other end and a streak of fire shot down inside my sleeve to my elbow. I concluded that I had found some fuse.

In five minutes I had the powder and fuse in the bank. Then the hopelessness of putting it under the floor dawned upon me. I looked under the building and found a solid square of stones laid up beneath where the safe stood to keep the floor from settling. Everywhere else the water was six inches deep. I went back into the bank. Eight or 10 feet in front of the safe was a high counter running straight across the room. Under it was a wastebasket, a wooden box of old newspapers, a spool cabinet for legal papers, a copying press and some other stuff.

I stood the can of powder in the wastebasket. It was a good fit, with room enough around the outside to stuff in some paper to hide it. Then I put the basket in the box of newspapers. I cut the fuse in two in the middle, unscrewed the cover and put the ends of the two pieces down in the powder, balancing the copying press on top to hold them in place. I covered the whole thing up with newspapers. Then I brought an auger from Taggert's and bored a hole a little above the floor through the side of the building, and right on through the side of the building to the south, which stood so close that it almost touched the bank. There was nothing to either except a one-inch board and a thickness of lath and plastering. I passed the two lines of fuse through the two holes, and into the other building, which was a drug store. In the other building I tied a loose knot in the ends of the fuse and left it lying on the floor behind the counter and covered with a doormat.

Ten minutes later I had my Indian ally posted on the platform of the depot with his gun.

"If pony thieves come, shoot at them," I said to him. "I'll get up and shoot at them, too."

"All right, me shoot," he said; "take plenty scalp."

I went back to the drug store feeling better. There were now two chances for defeating the outlaws if they came; to beat them off, or blow them up with the powder. I lay down on the floor back of the counter with my head on the doormat. The windows were boarded up, and I felt sure that even if they came they would never find me here.

I woke up three hours later, as I had that first six months before in the Headquarters house, with Pike hold of my ear, and a man poking a smoky lantern in my face.

CHAPTER XX.

What the outlaws do on their second visit: with the awful hours I pass through, and how I find myself at the end.

The first thing I head was a loud laugh, and then:

"How are you, Jud?" said Pike. "Back again, you see. Hope yer feeling all right."

I saw I might as well make the best of it, though you may be sure I was half scared to death.

"Yes, I'm feeling pretty well," I said. "I was able to be about the last time you were here, maybe you remember."

Pike scowled at me. "Yes, that's so, you was," he said. "You stood us off in pretty good shape that time—you and the snow. We were fools not to find out that you were all alone. But we app'inted an investigating committee this time, and we're onto your game. Just excuse me, but I'll have to ask you to wear a little of Taggart's jewelry while we tend to some important business."

He pulled out a pair of handcuffs and slipped one of them around my wrist and shut it up so tight that it pressed into the flesh. Then he led me in front of the counter, slipped the other cuff through a brace under the front edge of the counter and then clasped it around my other wrist, leaving the short chain which connected the cuffs behind the brace, so that I was a prisoner. He pushed up a chair and said:

"Sit down and make yourself comfortable, Jud. I'll see if I can't find a handful of buttons for you, and you can put 'em on the counter and play checkers with your nose."

The men laughed at this, and Pike went on:

"We met your pardner out here, the dark-complected feller. He was a-riding off our pinto that we left here by mistake last winter, with our saddle and things, and a-leading your two broncs, so we just stopped him and gathered 'em in, and I reckon they're all our'n now, most of 'em, anyhow. And in consideration of our only shooting him around the edges careful like, he give us some valuable information, such as just where you was a-sleeping, Jud, and where we'd find the black-



"Jud, what do you say to comin' in with us?"

smith tools, and so forth. That's the way to get along with an Injun and have everything all easy-going—shoot 'im, very careful, around the edges."

Again they all laughed, and then went out the back door, which, I noticed, had a small hole cut in it over the bolt big enough to let in a man's hand. There were five of them, counting Pike. The windows were boarded up and it was dark in the store, but as the door opened I saw it was quite light outside and that it was snowing.

As I sat there in the dark unable to move and with the handcuffs cutting into my wrists you may believe I was miserable enough. I expected nothing short of being killed by the gang before they left. I saw what a fool I had been to trust the scroundrelly Indian even as much as I had. It was little satisfaction, however, to know that he had failed to get off with his stolen property even if it had fallen into the hands of a worse set of thieves. I soon heard them at work on the safe in the bank. Of course I thought of my fuse, but it was a dozen feet away, the other side of the counter, and I could see not a shadow of hope of getting at it.

I think I sat there as much as two hours, listening to the noise in the next building, when Pike came in and said:

"You'll be glad to hear, Jud, that we're getting along beautiful on that safe. We're a-going to blow the stuffing out of it the next thing you know. Reckon if you ain't particular we'll just borrow a sleigh we see out here and a set of Sours' harness for a couple of our horses when we go away, 'cause we think the specie may be a little heavy. Besides, we're calculating there may be some other stuff around town worth taking off—Winchesters and such agricultural and stock-raising implements," and he laughed. He seemed to be in very good humor.

He went back, and for another long while I heard nothing but steady drilling on the safe and a little of their talk, though I could not catch much of that. Sometimes, too, I could near Kaiser barking. He was locked in the hotel, and I thought he knew I was in trouble and wanted to get out and help me.

After what seemed hours Pike came in again.

"We blow 'er open now very shortly," he said. "A reg'ler little Fourth o' July celebration of our own, hey, Jud?" Then he laughed and went on: "We need that money and you bet it's going to come handy." He looked at me, came closer with the lantern, and said:

"Jud, what d'ye say to coming in with us and having your share like a man? You're a good one, if you are young, and we can find plenty of work for you, and always you get your share."

"No," I said, "I don't care to."

He looked at me sharply a moment and then went on:

"Just as you please, of course. But me and the boys was talking it over and we calculated it was the best way to dispose of you, a pile the best for you and some better for us."

I had kept looking straight into his eyes, under his big eyebrows. "No," I said, "I won't do it."

"Oh, take your choice," he answered, "take your choice. Just as you think best, of course. Only you know the old saying about how dead men don't tell any tales. And if you come in with us you get your share, just the same as if you'd done your part of the work."

I said nothing. He waited a minute, then went out and shut the door. I sprang up and pulled and wrenched at the brace with all my strength. The handcuffs cut into my wrists, but I did not feel it. The brace stayed as firm as ever. I sad down weak and trembling with my last hope gone. A minute later there was a loud explosion in the bank, which shook the building I was in. Next came a cheer from the men. Then voices, and I heard Pike shout:

"It's all afire here—bring a pail of water, Joe!"

The well windlass creaked and I heard a man start in from the back. Next I heard Pike say, "We'll soon fix that fire," then came an explosion and a crash, like an earthquake, and the wall came down upon me, and the counter came over and I was half under it. I heard the cries of the men, and, wriggling about, I got out from under the counter and found my hands free from the brace, and the snowflakes coming in my face through where half the side of the building had been blown away.

(To be continued.)

Bits of Fun for Everyone

Fish Won't Bite "Patience."

To illustrate her point the teacher drew on the blackboard a picture of a small boy sitting on the bank of a stream fishing.

"You see this boy," she said, beaming on her pupils. "He is fishing. He must be prepared to sit and wait. He must have patience."

For a little while longer she dilated on the beauties of being patient. Then came the time for her to test her scholars.

"Now, can any of you boys tell me what we need most when we go fishing?" she invited.

Like one voice came a chorus from the class:

"Bait!"

Auntie Policeman.

Mrs. Sharp—Did you have any visitors while I was out last evening?

Maid—Yes, ma'am; only my aunt.

Mrs. Sharp—Well, next time she calls tell her not to leave her pipe and tobacco on the piano.

Evening Clothes.

Author—Well, the evening wore on——

Friend—It did, eh? What did it wear?

Author—If you must know, the close of a summer day.

Two Teeth Named Kate.

Stranger—Could you tell me if there is a man living in this hotel with one eye named Bill Jones?

Clerk—Maybe I can help you. Do you know the name of his other eye?

Insulting.

"We had not been hunting long when there lay a rabbit dead at my feet."

"What had it died of?"

Dairy Barn on Walla Walla College Farm

Any bovine might point with pride to a home such as this on the Walla Walla college farm at College Place, and both the heifers in the foreground and the milking cows which were resting in the shade on the other side of the barn when the picture was taken, appeared perfectly satisfied with their quarters. The barn is 44x115 feet in size and thoroughly modern, and to a lover of the neat and clean in dairy barns it is about as easy to look at as a dairy barn could be.



The herd of about 50 Holsteins which occupies it under the care of Herdsman James Schram includes a number of daughters of two unusually well bred sires, College Belle Mercedes and Baumheim Johanna De Kol. The former, now 4 years old, is a 38-pound son of a 35-pound sire and a grandson of Sir College Cornucopia. His dam, a granddaughter of De Kol Burke, is by the same sire as King Segis. The Baumheim bull, now coming 5, is by Mutual Piebe De Kol and out of Raphaella Johanna Aaggie 3d, the 30,000-pound cow which was bred by John L. Smith of Spokane. The main crop of calves is by "College Belle," but such daughters of the other bull as have appeared are about as fine as anything in the herd.

There are 60 acres of valley land in the college farm, which is but a short ride out of Walla Walla in one of the most beautiful sections of that famous district.

Live Stock Conference

(Continued from page eight.)

there was a great difference in his attitude toward the man who conducts his business in a prudent and efficient way and the man who practices slipshod and unsafe methods. He emphasized the point that it is absolutely necessary that a bank protect itself in every loan that it makes, because any suggestion of insolvency on the part of a bank immediately affects all of its depositors.

The essentials in the purebred live stock business were discussed by Dean E. J. Iddings, of the agricultural college of the University of Idaho. His address was followed by a discussion in which a large number of those present took part. C. M. Hubbard, live stock extensison specialist at the state college, led the discussion.

Would Combat Rabies.

Having received word from the state department of agriculture that rabies had developed to a menacing degree among the coyotes in Douglas, Grant, Adams, Franklin and Benton counties and that the funds appropriated for the use of the United States biological survey in this state for the extermination of these predatory animals had been withdrawn, the conference adopted a resolution as follows:

That the live stock men of Washington assembled in Spokane this 22d day of February, 1922, in attendance at the sixth annual northwest live stock conference most earnestly urge upon the United States biological survey and the senators and representatives in congress from the state of Washington that every effort be made to secure sufficient appropriations to permit the work of exterminating rabid coyotes in central Washington to be expedited in every possible and practical way. Be it further resolved, that a copy of this resolution be transmitted to our senators and representatives in congress and to Dr. E. W. Nelson, chief of the bureau of biological survey, United States department of agriculture.

In connection with the live stock conference three live stock sales were held. A consignment swine sale occurred at the Union stockyards Tuesday afternoon, with a consignment Shorthorn sale at the same place the following afternoon. The third annual Shorthorn sale of the Day & Rothrock company occurred at Sprague on the day following the sale. These three sales will be reported under separate headings.

GUERNSEY CLASS LEADER.

LaFrance of Bralee, a Guernsey senior 3-year-old heifer owned by Dr. A. McRae Smith of Bellingham, Wash., is now one of the "class leaders" of the Guernsey breed. That is, her record puts her among the 10 highest in her class. LaFrance of Bralee produced in a year 594.58 pounds of fat and 10,507 pounds of milk, and carried her calf not only the required time for the double letter class, but 274 days. She is a half sister of Gladiola of Bralee, who is also a class leader, and both are daughters of Gladiola's May King. This bull has only four daughters, and two of them are class leaders.

Two Streams of Profit



Cash Income every day



Bank Account



Buying Power

CREAM TO SELL



SKIM MILK TO GROW ANOTHER CROP



Calves



Pigs



Chickens

No matter what your system of farming may be or where you live, you need a De Laval Separator and some cows.

Cows furnish the best market for your feeds, and they keep the fertility of the soil on your farm.

Then the De Laval separates the cream, which brings you in a steady cash income, and leaves the skim-milk in the best condition for feeding calves, pigs and chickens.

This is the surest, safest and most profitable system of farming—and the De Laval Separator has made it possible. It is the original separator, skims cleaner, lasts longer, turns easier than any other. There are over 2,500,000 De Laval Separators in use the world over—about as many as all the rest put together. The De Laval has always led in every important separator improvement and is recognized everywhere as the world's standard.

You may be wasting enough cream to pay for a De Laval by using a worn-out separator or by hand skimming.

EASY TERMS

Sold on such easy terms that it will pay for itself while you are using it. See your De Laval agent now or write us about getting a new one

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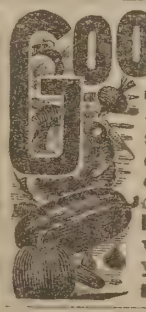
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FAMILY CIRCLE

ALICE BARLAND
EDITORIAL CONTRIBUTOR

Experience Letters

From Our Family Circle Women

Dear Family Circle: Let me once more urge you to give name and address with every letter. Sometimes I am asked a question that I can't reply to through the paper for various reasons; often I am asked for information which I could and would give in a personal letter by return mail if I had the address, whereas when I must reply through the paper it is likely to be two weeks or more before it can be done. Under such circumstances it must seem a long time to the one who wants the information. Also let me urge that names and addresses be written very plainly. Most of you do write plainly, but sometimes I must waste much valuable time studying out addresses. You never need fear that I shall print any names if the writer objects.
ALICE W. BARLAND.

Dear Mrs. Barland: I see that some one has asked for a recipe for curing bacon, ham, etc. I will give the following:

For every 100 pounds of trimmed meat use eight pounds of fine salt, two pounds of brown suger, one and one-half ounces of black pepper, one teaspoon of pulverized salt peter; mix together well. If hams and shoulders are large, take a butcher's steel and run through the thick parts in four or more different places, then rub in well the salt mixture and place on a shelf or table for 20 or 25 days. Wash off in very warm water and hang up and allow to dry for 24 hours, then begin to smoke. The first two days have very little fire, use green alder or vine of hard maple and continue to smoke for 10 or 12 days, and you will surely have a good article.

If you want to keep your meat through the summer pack it in a box, using a layer of shelled corn or oats to a layer of meat and cover well. J. H. OSBORN.
Ashford, Wash.

Dear Mrs. Barland: We have been taking THE FARMER for six years and I read every bit of it.

I am sending you a few recipes which are very nice:

Fruit cheese: Grind together one pound each of raisins, figs, dates, currants and blanched almonds, mix well and press into a pan, set away for a week, then cut the fruit in squares and dip into melted chocolate. MRS. E. W. BOWEN.

(Mrs. Bowen sends other candy recipes, which will appear at some other time. The one given above would be nice to put as a surprise in a child's lunch for school, as it would be better than candy and as satisfying.—A. W. B.)

Dear Mrs. Barland: I am a young woman with a splendid husband and three children, two boys age 3 1-2 and 2 years and a girl just 2 months old.

I have received a great deal of help and encouragement from the Circle and I should like to hear from any of the sisters living in Curry county, Oregon. We are anxious to learn about homestead lands and living conditions in that part of the country.

I am sending my recipe for raisin cake; it is a favorite with us.

Raisin cake: Boil together for three minutes two cups of white sugar, one cup of seedless raisins, two large tablespoons of shortening and two cups of water. When cool add one heaping teaspoon each of soda and salt, one level teaspoon each of cinnamon, cloves and nutmeg and three cups of flour. Make the dough rather stiff and bake in a moderate oven about 35 minutes. MRS. E. G. SEELY.
Cottage Grove, Ore., Box 384.

Dear Mrs. Barland: I, too, have been reading the Family Circle and always enjoy the "helps." I have tried some of the recipes given and have had success, so will offer the sisters this cake recipe, so excellent for school lunches.

Burn one-half cup of sugar until it smokes, then add one-half cup of cold water, set aside to cool. Cream one and one-half cups of sugar, one cup of shortening, two eggs beaten separately, one cup of cold water, three and three-fourths cups of sifted flour with one rounded teaspoonful of baking powder and, lastly, add the one-half cup of burnt liquid with one level teaspoon of soda dissolved in the liquid. This makes a large cake and is very nice.

Here is something else so well worth knowing that I thought to pass it along: For oil to use for brightening furniture and also for a dustless mop I use equal parts of crude paraffin oil and benzine. These are cheap and I am sure you will like to use the combination. R. W.

Mrs. C. R.: You ask how to get rust out of table linen. Apply salt and lemon juice and lay in the sun. You will soon see a method for bleaching dish towels and unbleached muslin on the Circle page, perhaps before you see this. A. W. B.

Dear Mrs. Barland: I saw a question some time ago as how to restore old and faded furniture. I have never seen anything better than common floor oil applied with a woolen cloth. It is also good to restore faded wood work.
LIZZIE STEWART.

Another floor finish: To one gallon of linseed oil add five ounces of beeswax and apply plenty to the floor while good and hot; when dry paint the floor and you will have next thing to a hardwood floor.
Sisters, Ore. MRS. N. J.

Here is still another, said to be cheap and good, wears well, dries quickly and cleans easily:

Five pounds of yellow ochre, two pounds of whiting, one-half pound of sizing glue; dissolve the glue, stir ochre and whiting into one gallon of water, add dissolved glue, apply to the floor with a brush then go over the floor with boiled lin seed oil. MRS. W. S. K.
Oregon.

Dear Mrs. Barland: I would like a recipe for a solid cake, rich with fruit and eggs, suitable for children's lunches.
MRS. I. W. B.

Plain fruit cake: Two cups of brown sugar, one cup of molasses, one cup of butter or other shortening, one cup of sour milk, one cup of coffee, four eggs well beaten, one nutmeg or one teaspoon of ground nutmeg, one teaspoon of cloves, two teaspoons of cinnamon, two teaspoons of salaratus dissolved in a little water, two pounds of raisins or one pound each of raisins and currants carefully washed and added to five cups of flour, shaking well into the flour. This keeps the fruit from sinking to the bottom of the cake. Bake in two good-sized loaf tins, with a slow fire, for at least an hour. Place a greased paper on the bottom of the tin and slip an asbestos mat under the pans before they begin to bake if your oven bakes fast on the bottom. Much depends upon the careful baking of this cake for its goodness. It will keep a long time in an earthern jar well covered and grows better with age. Don't use the very black molasses. Sorghum is good or any of the light colored kinds. A. W. B.

I will give you something else fine for lunches:

Meat loaf: Two pounds of good hamburger steak (no poor cuts), one-fourth pound of pork sausage. Soak in two cups of cold water six slices of bread toasted till dry as crackers, grate or put through meat grinder one medium-sized onion, place meat, bread and onion in a pan large enough to permit of mixing well and add one teaspoon of salt and same of sage and mix thoroughly and mold into a long loaf and bake slowly till done, about an hour. You can spoil it by baking too long or too rapidly. This is fine hot and slices well for sandwiches when cold, and, best of all, doesn't cost very much for what you have. A. W. B.

Dear Mrs. Barland: To harden a soft wood floor use the following:

For a new fir floor, which must be perfectly clean, get enough raw linseed oil to cover it, heat until bubbles appear on the top, but do not boil; pour into the oil any desired color stain, and mix; apply to the floor while oil is hot. Do not use a can or pail with a soldered bottom, as the hot oil will melt it.

After the oil is on the floor 30 minutes wipe off any remaining on the surface with a dry cloth and get off as much as you can. Let the floor stand for five or six days, then take orange-colored shellac and apply on a few boards at a time and hurry, or the seams will show. Use care and don't splash the shellac when you lap, but use your brush fast and get it all the same thickness. Shellac dries so fast that much depends upon the skill of the one applying it. After the shellac is thoroughly dry apply a coat of clear varnish and let dry. If you want your floor finished in natural color leave out stain entirely and apply just the hot linseed oil and use clear-colored shellac and clear varnish and follow same directions as given above. The ready mixed stuff is all right to touch up old furniture, but for a good floor finish it falls short.

To clean silver, cut the skin from a raw potato and dip in common baking soda and you will be surprised at the result.

For the mothers whose children quarrel and fight try my method. I have five children and my two oldest, 11 and 9, fought often and it seemed whipping did them no good. The fighting began one day when it chanced I had a lame arm and I dreaded the exertion of punishing them, so I gave each a good whip and made them fight for an hour. It has never happened since; the nearest was an argument which, when nearing a fight, ended with: "We must quit this or mamma will make us fight." HARRIET.

Your Health

By Royal S. Copeland, M. D., F. A. C. S.

If you have occasion to look over the home or the grounds of some stranger, you note the neatness or the shiftless appearance of the place.



Dr. Copeland.

We can always find the defect in the homes of other persons. Somehow, it is harder to discover our own shortcomings.

It is because of this all-too-common human weakness that in the army and navy there are regular "inspections." At these times the commanding officer makes a tour of the tents, the barracks or the ship, examines the beds or the hammocks and the bedding, the personal equipment of his men, the state of the bathing quarters and latrines and the general cleanliness of the kitchen and the men themselves.

Last summer, when I was crossing the ocean, the captain of the vessel invited me to go with him on his daily tour of the ship. He visited every part of the great liner, and called attention to every sanitary lapse and physical defect.

It would be a good thing if the head of each household—or better still—one member of the family in turn, should make a weekly inspection of the buildings and grounds. This inspection, so far as the house is concerned, should extend from cellar to attic.

The cellar should be dry, clean and sweet in smell. The floor should be free from litter. There should be no piles of rubbish, newspapers or firewood. Everything should be off the floor, so that rats and mice can not find convenient resting places. The windows should be screened, and there must be no wet places where mosquitoes can breed.

The same precaution should be observed as regards the attic and all storerooms.

Is there a covered garbage pail, which is frequently emptied and scalded out at regular intervals?

Are the floors under the beds and in out-of-the-way places free from dust and lint?

Are the bed slats and side pieces free from dust? How often are the beds taken apart and washed?

Are the woodshed, back yard and outbuildings free of litter? Fires, the breeding of vermin and other menaces to life and health are guarded against by such vigilance.

Is the barn free from litter, cobwebs and dust? Is the litter carried a long way from the stables? Are the walls whitewashed and the place kept clean?

We are so used to our own surroundings that it seems foolish to talk about "regular inspections." But let's try it once, anyhow.

I know that many families will improve in health and vigor when frequent sanitary inspections are as much a part of our lives as fire drills are now considered a part of school life.

A CORRECTION.

On the Family Circle page of THE FARMER of the issue of February 16 there appeared a recipe for making cream puffs. This recipe called for, among other ingredients, one cup of butter. This should have read one-half cup of butter

Color Your Butter

"Dandelion Butter Color" Gives That Golden June Shade and Costs Really Nothing. Read!

Before churning add one-half teaspoonful to each gallon of cream and out of your churn comes butter of Golden June shade to bring you top prices. "Dandelion Butter Color" costs nothing because each ounce used adds ounce of weight to butter. Large bottles cost only 35 cents at drug or grocery stores. Purely vegetable, harmless, meets all state and national food laws. Used for 50 years by all large creameries. Doesn't color buttermilk. Absolutely tasteless.
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Washroom Off From Kitchen

By a slight alteration in many farm homes the back entrance may be arranged so that the men folks will not have to tramp through the kitchen before removing their boots and overalls, claims Miss M. Minerva Lawrence, extension home management specialist of the Washington State college.

There are two methods that can be used. One way would be to have a back hall, with a door leading into the kitchen and another to the washroom, or making the entrance hall a washroom. Whether this washroom be off to one side or the entrance hall built large enough for a hall and washroom, it should have sufficient space to hang all work clothes and take care of the dirty boots.

Another plan would be to have two back entrances into the kitchen. One for the housewife, the other leading into a washroom and then to the kitchen, for the men of the house. The washroom should have a place for a wash basin or running water where possible, so the men could clean up before entering the kitchen.

The kitchen should not be the dividing place for the mud of the farm and the comfort of the home, but this should happen before reaching the housewife's workshop.

CONVENIENT WOOD BOX.

A very convenient wood box can be made by cutting a hole in the wall and building the box in on both sides with lids on the outside as well as in the kitchen. In this way the wood can be placed in it without carrying it through the door. A box of this kind will not only eliminate much time and labor, but will also avoid the scattering of dirt on the kitchen floor.

Harry Gibson, R. 5, Seattle, Wash.—Good luck and success to what I believe is the best farm paper.

Latest High Class Patterns for the Home

Please order the patterns you desire at least two or three weeks before you wish to use them. Desiring to obtain the latest high-class patterns for its readers, THE FARMER has made arrangements to have them sent direct from the east, and under present mailing conditions it takes about that time for them to reach you.



3888. Misses' dress. Cut in three sizes: 16, 18 and 20 years. An 18-year size requires 4 1-2 yards of 44-inch material. The width of the skirt at the foot is 2 1-4 yards. Price 10 cents.

3471. A pretty dress. Cut in six sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. The width of the skirt at lower edge is two yards. A 38-inch size will require 4 5-8 yards of 44-inch material. Price 10 cents.

3899. Ladies' dress. Cut in six sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. A 38-inch size requires 5 3-4 yards of 42-inch material. The width of the skirt at the foot is about two yards. Price 10 cents.

3596. Ladies' apron. Cut in four sizes: Small, 34-36; medium, 38-40; large, 42-44; extra large, 46-48 inches bust measure. A medium size will require 4 1-4 yards of 36-inch material. Price 10 cents.

3517. Work or morning dress. Cut in seven sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. For a medium size six yards of 36-inch material will be required. The width at the foot is 2 1-4 yards. Price 10 cents.

3875. Child's set of short clothes. Cut in five sizes: 1, 2, 3, 4 and 5 years. Size 4 requires for the dress 2 3-8 yards, for the petticoat 1 5-8 yards, for the combination 1 1-2 yards of 36-inch material. Price 10 cents.

3874. Boy's suit. Cut in four sizes: 2, 3, 4 and 5 years. A 4-year size requires 1 3-8 yards of 27-inch material. Price 10 cents.

3594. Girl's dress. Cut in four sizes: 8, 10, 12 and 14 years. A 10-year size will require 3 1-2 yards of 40-inch material. Price 10 cents.

3626. Junior's dress. Cut in three sizes: 12, 14 and 16 years. A 14-year size will require 4 1-8 yards of 27-inch material. Price 10 cents.

3739. A pretty negligee. Cut in four sizes: Small, 34-36; medium, 38-40; large, 42-44; extra large, 46-48 inches bust measure. A medium size will require 5 5-8 yards of 36-inch material. For sack length 4 7-8 yards will be required. Price 10 cents.

3881. Ladies' skirt. Cut in six sizes: 24, 26, 28, 30, 32 and 34 inches waist measure. A 28-inch size requires 2 5-8 yards of 36-inch material for the skirt, and 3 5-8 yards for the tunic. The width of the skirt at the foot is about two yards. Price 10 cents.

3883. Ladies' waist. Cut in seven sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. A 38-inch size requires 3 1-4 yards of 27-inch material. Price 10 cents.

CATALOGUE NOTICE.

Send 12 cents in silver or stamps for our up-to-date spring and summer 1922 catalogue, showing color plates and containing 500 designs of ladies,' misses' and children's patterns, a concise and comprehensive article on dressmaking, also some points for the needle (illustrating 30 of the various simple stitches), all valuable hints to the home dressmaker.

Please fill in this order and mail with remittance to:

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Enclosed find.....cents for which send me the following:

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Pattern No. ..... **Size** ..... **Pattern No.** ..... **Size** .....

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Be sure to give the pattern number and the correct size.

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High Points in News of the Week

The three outstanding problems at the national capital during the past week continue to be the soldiers' bonus, the international treaties proposed by the recent conference on the limitation of armaments, and the offers made by Henry Ford and others for the lease of the government's Muscle Shoals nitrate property.

The greatest part of the opposition to the early ratification of the seven treaties proposed has been based upon the belief on the part of some senators that the so-called four-power treaty would require the United States to take up arms in defense of the rights of another nation in case of a dispute. With a view to eliminating this opposition and at the same time making it clear that the treaty as agreed upon at the conference does not make such provision, a "reservation" is reported to have been agreed upon by President Harding and the American delegation to the conference. The reservation, as it is now proposed, reads: "The United States understands that under the statement in the preamble, or under the terms of this treaty, there is no commitment to armed force, no alliance, no obligation to join in any defense."

* * *

The situation surrounding the proposed soldiers' bonus legislation has been becoming more and more complicated. Recently President Harding and Secretary Mellon of the treasury department made formal statements that they considered a general sales tax as the only equitable means of raising the money to pay the proposed bonus of several billion dollars during the next several years. The committee of the lower house, having in charge the matter of drafting the proposed bill, last week voted overwhelmingly against the sales tax as the means of raising the money. A new proposal, as a way to raise the money, has been suggested by Representative Andrews of Nebraska. He recalls that in 1836 the United States government had some money on hand with nothing apparently to do with it, and that it turned it over to 26 states to be kept by them "until otherwise ordered by congress." He now recommends that congress order that these 26 states pay this money back, with interest at 4 per cent for the 86 years that it has been kept out, and that this money be used to pay the bonus. The states having this money are all east of the Rocky mountains and nearly all east of the Mississippi river. Another new proposal, during the week, was that the manufacture and sale of beer be again legalized and a tax of 20 cents per gallon be placed on it. It was estimated that this tax would raise over $600,000,000 per year, with which to pay the bonus. It would require a 20-cent per gallon tax on over 3,000,000,000 gallons of beer to raise this amount.

There has been some talk of postponing all action on the soldiers' bonus bill until June or later, but the committee working upon it expresses a desire to draft and enact a bill in the near future. There is some talk of enacting a bill providing for the payment of the bonus without any definite provision for raising the money. President Harding has gone on record as firmly opposed to this plan, and might be expected to veto such a bill if it were passed.

Considerable opposition as well as favorable sentiment toward the proposed bonus has been created throughout the United States. The opposition is found both in and out of the American legion. A branch of the legion in New York city has issued a challenge to National Commander MacNider to debate the question publicly. Commander MacNider is leading the fight for the bonus. The spokesmen for the New York legion declare that the government should bend its full effort toward compensating and caring for injured veterans of the World war, but should not endeavor to raise the money for a bonus to able-bodied veterans.

* * *

The debate continues pro and con on the proposal of Henry Ford to lease for a period of 100 years the Muscle Shoals nitrate project. The government is considering a number of applications from others than Mr. Ford, but it appears that the Ford offer is the one about which the arguments center. Gray Silver, representing the American farm bureau at Washington, D. C., last week appeared before the committee that is considering the problem and went on record strongly in favor of accepting the Ford offer. It is understood that Mr. Ford has agreed to a number of additional provisions in the proposed contract between him and the government. One of these provisions is a guarantee that he will operate the plant so as to produce a constant supply of fertilizers, the minimum amount to be specified in the contract. Another is that this fertilizer shall be delivered to the farmers at such price as to limit Mr. Ford's profit to 8 per cent.

* * *

In an address before a convention of the Nebraska nonpartisan league at Lincoln last week, President A. C. Townley is quoted as saying that the nonpartisan league can not win any lasting victory as long as it pursues the policies that it has in the past, and is pursuing at the present time. The press dispatch quotes him as saying that "too many rascals and incompetents were put into office by the league. It went out into the woods and got some mighty green timber, some of which afterward proved pretty rotten, and tried to teach him to play politics against professionals. So far as I am concerned, the men we brought from the woods as green timber can go back. The league found itself worse off when it got its own men into office because they were utterly untrained and some of us were unable to train them because we did not, ourselves, know practical politics of statecraft."

* * *

Senator Capper of Kansas has been chosen officially as chairman of the agricultural bloc in the senate. Senator Capper succeeds Senator Kenyon of Iowa, who recently resigned from the senate to accept a federal judgeship.

Powell Was Leader

The death of G. Harold Powell, general manager of the California Fruit Growers' exchange, which occurred Sunday, February 19, removed the foremost figure in agricultural cooperation in America and one of the leading men in modern industrial enterprises. He was in large degree responsible for the great development of the marketing organization of which he has been manager for more than 10 years, and was a strong influence in the general growth of cooperation in California, which has become known as the leading cooperative state in the Union. His influence had become national, even the organization of the United States Grain Growers, Inc., the farm bureau's grain marketing body, being formed in considerable degree upon the basis of his experience and advice. He was one of the leading witnesses before the committee of 17 that drafted the grain marketing plan.

Mr. Powell has left much written record of the growth of the cooperative movemeit. His leading book is "Cooperation and Agriculture."

Mr. Powell's death occurred suddenly and unexpectedly at dinner time, when he appeared in the best of health. Some form of heart trouble is believed to have been the cause. He had but recently returned from the agricultural conference at Washington, D. C.

Mr. Powell was born in Ghent, New York, February 8, 1872. He was reared on a farm and graduated from Cornell university in 1895, specializing in horticulture and entomology. Mr. Powell joined the staff of the United States department of agriculture in 1901, and was assistant chief of the bureau of plant industry from 1909 to 1911. In 1911 he was appointed as general manager of the California Fruit Growers' exchange.

HONEY.

Honey contains vitamines.

Farm Business and Markets Outlook

(Continued from page five.)

LATEST QUOTATIONS.

Live Stock Market.

PORTLAND, Feb. 25.—Cattle—Choice steers, $6.75@7.50; medium to good steers, $5.50@6.75; fair to medium steers, $5.50@6; common to fair steers, $4.50@5.50; choice feeders, $5@5.50; fair to good feeders, $4.50@5; choice cows and heifers, $5.75@6.25; medium to good cows and heifers, $5@5.75; fair to medium cows and heifers, $4.25@5; common cows, $3.25@4.25; canners, $2.25@3.25; bulls, $3.50@5.50; choice dairy calves, $10@11; prime light calves, $9@10; medium to light calves, $6.50@9; heavy calves, $4.50@6.50.

Hogs—Prime light, $11.50@12; smooth heavy, 200 to 300 lbs., $10@11; smooth heavy, 300 lbs. up, $9@10; rough heavy, $7.50@9.75; fat pigs, $11.50@11.75; feeder pigs, $11.50@11.75; stags, subject to dockage, $6@9.

Sheep—East-of-mountain lambs, $10@10.75; best valley lambs, $10@10.75; fair to good, $8@10; cull lambs, $6@8; eastern Oregon feeders, $8@9; light yearlings, $7.75@8.25; heavy yearlings, $6.75@7.75; light wethers, $6.75@7.25; heavy wethers, $4.75@6.75; ewes, $3@6.

SPOKANE, Feb. 25.—Cattle—Prime steers, $6.50@7.60; good to choice steers, $5.75@6.50; medium to good steers, $5.25@5.75; fair to medium steers, $4.75@5.25; common to fair steers, $4.25@4.75; choice cows and heifers, $5@6; good to choice cows and heifers, $4@5; medium to good cows and heifers, $3.50 @4; fair to medium cows and heifers, $3@3.50; canners, $2@3; bulls, $3@5; light veal calves, $8@9; heavy veal calves, $4@8; stockers and feeders, $4.50@5.

Hogs—Prime mixed, $10.75@11.50; medium, $9.75@10.75; heavies, $7.75@9.75; fat pigs, $9.75@10.75; stockers and feeders, $8.75@9.75.

Sheep—Prime lambs, $9@10; fair to medium, $8@9; yearlings, $6@8; wethers, $4.50@6; mutton ewes, $2@6; feeder lambs, $7@8.

The Grain Market.

PORTLAND, Feb. 25.—Wheat—Hard white, $1.30; soft white, white club, hard winter, $1.19; northern spring, $1.28; red Walla, $1.24.

Oats—No. 2 white feed, February, March, April, $32.50; No. 2 gray, February, March, April, $31.50. Barley—Brewing, February, March, April, $28; standard feed, February, March, April, $27.50. Corn—No. 2 eastern yellow, shipment February, March, April, $29; No. 3 eastern yellow, shipment February, March, April, $28.50.

ODESSA, Feb. 25.—Marquis, $1.39; Bart and Bluestem, $1.37; Turkey red, $1.32; Jones Fife, $1.11.

LEWISTON, Idaho, Feb.25.— Fortyfold, Club hard winter, $1.10.

PULLMAN, Feb. 25.—Wheat touched a new high mark today. Red wheat, $1.04; white wheat, $1.07.

WALLA WALLA, Feb. 25.—Club wheat, $1.10; Bluestem, Turkey red and Bart, $1.14.

POMEROY, Feb. 25.—Turkey, $1.10; Hybrid, $1.07.

SEATTLE, Feb. 25.—Wheat—Hard white, soft white, white club, soft red winter, northern spring, $1.30; hard red winter, $1.32; eastern red Walla, $1.25; Big Bend bluestem, $1.40.

Hay and Feed Grain.

PORTLAND, Feb. 25.—Millfeed—Price f. o. b. mill: Millrun, ton lots, $27; mixed cars, $26; straight cars, $25 per ton; middlings, $32; rolled barley, $36@38; rolled oats, $38; scratch feed, $47 per ton.

Corn—White, $34; cracked, $36 ton.

Hay—Buying price, f. o. b. Portland: Alfalfa, $13.50@14 per ton; cheat, $10.50@11; oat and vetch, $14.50; clover, $11; valley timothy, $14@15; eastern Oregon timothy, $16@17.

SPOKANE, Feb. 25.—Wheat—Feed wheat, $40 per ton.

Oats—$36 per ton; steam rolled, $38.

Corn—$34 per ton; cracked corn, $36 ton.

Barley—$32; steam rolled, $34 per ton.

Bran and shorts—$29 per ton.

Alfalfa, $18 ton; timothy, $18 ton; mixed hay, $18 ton.

SEATTLE, Feb. 25.—City delivery: Barley, whole, $35; ground and rolled, $37; clipped, $42; chop, all grain, $41; coconut meal, $29; corn, $36; corn, cracked and feed meal, $38; linseed meal, $65; scratch food, $47@48; wheat, $48; Puget sound, $44; others unchanged.

General Produce.

PORTLAND, Feb. 25.—Butter—Cubes, extras, 35@36c per lb.; parchment wrapped, box lots, 41c; cartons, 41c. Butterfat, buying prices: No. 1 grade, 37@41c, delivered Portland.

Eggs—Buying prices, 22@23c dozen, case count; jobbing prices, case count, 25c; candled ranch, 26@28c; association selects, 30c; association browns, 29c; association firsts, 28c; association pullets, 26c.

Cheese—Tillamook triplets, price to jobbers, f. o. b. Tillamook, 26c; young Americas, 27c lb.

Poultry—Hens, 22@26c; ducks, 24@27c; geese, 20c; turkeys, live, nominal; dressed, 37@38c.

Pork—Fancy, 15@15½c per pound.

Veal—Fancy, 15½@16c per pound.

SPOKANE, Feb. 25.—Butterfat, 39c lb.

Eggs—Fresh ranch eggs, $8.50; fresh pullet eggs, $8.

Live poultry—Springers, 19c lb; springers, staggy, 15c lb; hens, fat, 4 lbs. up, 23c lb.; 2 to 4 lbs., 19c lb.; old roosters, 12c lb.; rabbits 10c lb.

SEATTLE, Feb. 25.—Eggs—Select local ranch, white shells, 28c; select local ranch, mixed colors, 26c; pullets, 24c.

Range of Live Stock Prices for the Week Ending Feb. 22

Cattle.	Chicago.	Spokane.	Portland.	N Salt Lake
Choice, prime heavy steers (1100 lb. up)	9.15@ 9.85	.....	.....	.....
Good heavy steers	8.35@ 9.15	.....	.....	.....
Medium heavy steers	7.40@ 8.35	.....	.....	.....
Common heavy steers	6.40@ 7.40	.....	.....	.....
Choice, prime light steers (1100 lb. d'n)	9.00@ 9.75	.....	.....	.....
Good light steers	8.25@ 9.00	.....	.....	.....
Medium light steers	7.25@ 8.25	6.25@ 7.50	6.25@ 7.50	5.75@ 7.00
Common light steers	6.25@ 7.25	4.50@ 6.25	4.50@ 6.25	4.00@ 6.00
Common to choice butcher heifers	4.25@ 7.75	3.00@ 6.25	3.50@ 6.50	3.50@ 5.75
Common to choice butcher cows	3.90@ 6.25	3.00@ 5.25	3.25@ 5.25	3.00@ 5.00
Bologna and beef bulls	3.50@ 6.00	3.00@ 5.00	3.50@ 5.50	2.50@ 3.50
Canners and cutters, cows and heifers	2.60@ 4.00	2.00@ 3.00	2.00@ 3.00	1.50@ 3.25
Canner steers	3.50@ 4.50	3.00@ 3.75	3.00@ 4.00	2.75@ 3.75
Medium to choice light veals	7.00@11.00	8.00@ 9.50	8.00@11.00	6.00@ 7.00
Common to choice heavy veals	4.00@ 7.50	4.00@ 8.00	4.50@ 7.00	.....
Common, choice feeders (1000 lb up)	5.50@ 7.25	.....	.....	.....
Common, choice feeders (750-1000 lb.)	5.35@ 7.25	4.50@ 5.00	4.50@ 5.50	.....
Common to choice stocker steers	5.00@ 7.00	.....	.....	.....
Common, choice stocker cows, heifers	3,75@ 5.25	.....	.....	.....
HOGS.				
Top of market	10.65	11.00	11.25	9.75
Bulk of sales	9.75@10.55	10.00@10.75	10.25@11.00	9.00@ 9.60
Heavy (250 lb. up)	9.75@10.30	8.50@ 9.50	8.75@ 9.50	.....
Medium (200-250 lb.)	9.80@10.50	9.50@10.50	9.50@10.75	9.00@ 9.60
Light (150-200 lb.)	10.10@10.65	10.50@11.00	10.75@11.25	9.25@ 9.75
Light lights (130-150 lb.)	10.00@10.60	10.25@10.75	10.50@11.00	9.00@ 9.50
Smooth packing sows (250 lb. up)	8.50@ 9.50	8.00@ 8.50	8.00@ 8.75	.....
Rough packing sows (200 lb. up)	8.25@ 9.00	7.50@ 8.00	7.00@ 8.00	.....
Medium to choice pigs (130 lb. down)	8.00@10.25	9.50@10.50	10.75@11.00	.....
Stock pigs	.....	8.50@ 9.50	10.75@11.00	7.50@ 8.50
SHEEP AND LAMBS.				
Medium to prime lambs (84 lb. down)	13.25@16.10	9.00@10.00	9.00@10.65	9.50@10.75
Culls and common lambs	10.00@13.25	7.00@ 9.00	5.00@ 9.00	7.00@ 9.50
Medium to prime yearling wethers	10.50@14.00	6.00@ 8.00	6.75@ 8.25	6.00@ 8.00
Medium to prime wethers	6.75@10.25	4.50@ 6.00	4.75@ 7.75	5.00@ 7.00
Medium to choice ewes	5.25@ 8.75	4.50@ 6.00	4.50@ 6.00	4.00@ 6.00
Culls and common ewes	2.50@ 5.50	2.00@ 4.50	2.50@ 4.50	2.00@ 4.00
Feeder lambs	11.50@13.50	.....	7.00@ 8.00	.....

The Diener Tomato



Increase your tomato yield one hundred per cent by raising the new DIENER TOMATO. 30-40 tons of ripe fruit to the acre.

This tomato was raised last year all over the United States and Canada with the greatest satisfaction.

As smooth as an apple and of a magnificent dark red color. Single tomatoes weigh up to 3 lbs. each. The flesh is more solid than that of any other tomato. The fruit contains very little seed and is solidly filled out. This tomato is free of the acid taste, and for dehydrating, catsup and canning it is the best tomato in existence today.

The DIENER TOMATO is blight-resisting as well as drought-resisting. It will not crack from the rain and will not rot while lying on the ground in wet weather. This tomato will grow in almost any kind of soil and it commences to ripen the first part of August.

It is the greatest novelty in the tomato line, and it will soon crowd out the present varieties from the market by its far superior quantities.

Price of the DIENER TOMATO SEED: Sample pgk., 25c; one-quarter of an acre pkg., 50c; one acre pkg., $1.50.

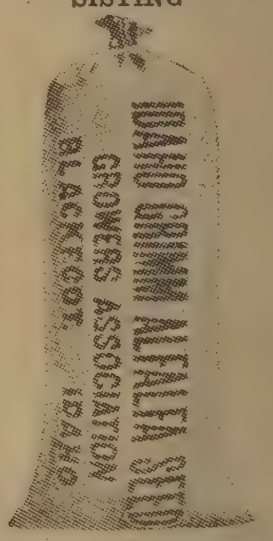
Our 1922 catalogue will be sent upon receipt of 25c in stamps, which amount may be deducted when sending in first order.

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HARDY AND DROUT RESISTING



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Write for information and prices.

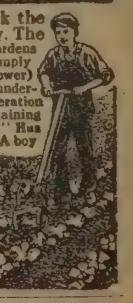
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Read the "Want Ad" page this week for good offers of all kinds.



Daisy Case, 10 years old, has good times. In the winter she goes skating and in the summer she swims. She says she likes to swim. Daisy has a little pony named Kid. She is very fond of Kid. Her brother gave him to her. Daisy lives in western Washington.

Here is another letter from the Case home in western Washington. This one is from Leone Case. Leone is 5 years old. She says she got four valentines. Some time Leone is going to send us her picture. (We will be glad to get it).

We have a little letter from Billy Case, who is 4 years old. Billy lives in northern Pierce county, Washington. He likes The Junior Farmer. (Write us another letter, Billy.).

Merna Van Leuven says they had a valentine box at school and lost only five minutes after school called at lunch time. Doc and Jule are the names of two horses at the Van Leuven home. There is a kitty named Tabby. They had another cat named Tabby, too, but he ran away. Merna won't be 10 until June 17, 1922. She lives near the Colville river, in northeastern Washington.

We have a little note from Jerome Burbank, who lives in eastern Grant county, Washington. He sent Aunt Nellie a poem about a dog named Spot. Aunt Nellie appreciates it very much. Jerome says he won a prize at school. We congratulate Jerome, don't we?

A cat named Pat and a cow named Tommy are Clohe Hancock's pets. Clohe is a new cousin with three sisters and two brothers. They live near the Methow river, in Okanogan county, Washington. Aunt Nellie is very glad to hear from Clohe. She was 9 years old May 19, 1921, and goes three miles to school.

Another new cousin for the Corner. What a family we are getting to be! This cousin is a central Washington girl and her name is Arlene Nehr. She says: "I live four miles from town. We have 10 acres of apple orchard. We have one Jersey cow and 75 chickens." Every time The Junior Farmer comes Arlene reads it. She likes the funny papers her aunt sends her, too. Arlene was 10 years old September 9, 1921.

Theodore Kores is a northwestern Washington boy and writes his second letter to the Corner. He says he likes The Junior Farmer very much. At school they had a Christmas program and he was in a play called "Mr. St. Nicholas." He has two brothers. At this home they have ducks. Theodore will be 12 years old October 7, 1922.

Lillian Peterson stayed home from school two days because she had a cold. She is a Yakima county, Washington, girl and her birthday is March 18. She says pussy willows will soon be out. Myrtle McCadden is her chum at school.

"We have six calves, five horses, 16 cows, two dogs and seven cats," writes Joe Staadt, Cowlitz county, Washington. Joe is in the fifth grade at school. His teacher is Miss Inez Vanderhill and he thinks she is a fine teacher. He says: "The girls say she is the best teacher in the world." She gives them intelligent tests to see how quick they are. After his lessons are finished Joe paints pictures. He has a printer set and a dictionary he got for Christmas. (Write another letter, Joe.)

Molly Litt of eastern Washington tells us a little story about the fairies. The story books have told you of the fairy folk so nice that make their leather aprons of the ears of little mice, and wear the leaves of roses, like a cap upon their heads, and sleep at night on thistledown, instead of feather beds. Molly will be 10 years old April 20, 1922.

We have another letter from the Litt home in east Washington. This one is from Andrew Litt, who will be 9 April 21, 1922. The following little verse, he says, was written by Phoebe Cary. Through young birds, in flying, fall; their wings grow stronger. The next time they fly, they can keep up a little longer.

Anna Thornton says she is sorry she waited so long to write this time, but every time she thought of it she was doing something else at school. She is busy at school every day. Anna says: "Tell all the cousins hello for me." Anna lives in southwestern Washington.

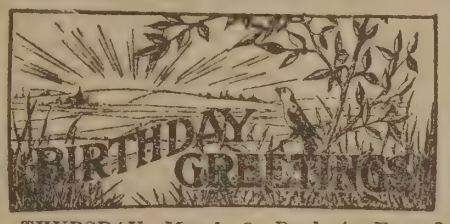
To remind the cousins to get up early in the morning Marie Litt, eastern Grant county, Wash., sends in this little story. Cock-a-doodle-doo. Wake up, boys and girls! You lazy, lazy children! Why do you lie in bed Wake up, Wake up! Cock-a-doodle-doo. Marie is sorry she hasn't a picture to send us. Her birthday is February 17.

"I have one brother; he is 3 months old, writes Maxine Ohmat. Maxine is 8 years old and lives on a fruit ranch. At school she is in the second grade. She has a pet kitty. (There was no address on this letter. If Maxine will send it to Aunt Nellie we shall see that The Junior Farmer is sent to her.—Aunt Nellie.)

"My name is Louise Scheel. I am 9 years old. My birthday is March 9. My little sister, Margaret, is 8. We both had a garden. We had beans, corn and a few flowers. We have nanny goats. Papa has 25 of them. My nanny's name is Daisy and Margaret's is Nelly. I have four brothers and three sisters. Some of them were born in Spokane, but I was born in Tacoma. I like the farm very well."—(We should like to send you The Junior Farmer, Louise, if we had your address, but it was not on your letter. Please send it.—Aunt Nellie.)

George Gugat says he is alone in his class at school and when he gets his lessons studied he can make pictures. He goes three miles to school and is in the fourth grade. George lives in Okanogan county, Washington. He was 10 years old July 15, 1921.

Jewel Field gave her little twin cousins, 8 years old, a birthday party at her home. Fourteen children came to the party and played from 2 until 5 o'clock. Jewel's birthday comes November 24. Her home is in Grant county, Wash.



THURSDAY, March 2—Paul A. Fox, 9 years old; Thurman Lawrence, 11; Harvey Lueck, 11; Edgar Van Ausdle, 10.

FRIDAY, March 3—Gracie Browne, 11 years old.

SATURDAY, March 4—Julia Lillquist, 10 years old; Elmer Prien, 6; Leona Reinhart, 10; Irene Waranka, 10.

SUNDAY, March 5—Arvo Larson, 11 years old.

MONDAY, March 6—Arlynn Mayfield, 11 years old; Clara Peterson, 11; Ida Stiner, 9; Pauline Manson, 9.

TUESDAY, March 7—Florence Torpey, 10 years old.

WEDNESDAY, March 8—Zelma Graham, 10 years old; Mabel Hamilton, 8; Franklin M. Smith, 11; Elizabeth Thomas, 10; Dorothy Timm, 10.

LETTERS WELCOMED BY AUNT NELLIE.

Among recent letters received by Aunt Nellie are those from cousins whose names follow. A few of these will be published each week in the regular edition of THE FARMER, and others will appear from time to time in The Junior Farmer:

Daisy, Leone and Billy Case, Merna Van Leuven, Jerome Burbank, Clohe Hancock, Arlene Nehr, Theodore Kores, Dorothy Peterson, Lillian May Dunning, Preston Palston, Lillian Peterson, Cecilla and Ruth Stuhr, Wilber Van Leuven, Roy Norton, Bessie Pullin, Clairice Haxton, Bernice Almlee, Gladys Cook, Juanita Anderson, Marjorie Nettie Sutton, Clarence Newton, Augusta Lutz, Virginia Frances Littell, Emma Rennick, Hilda Thompson, Eo McCormick, Clarence Brado, Viola Waggoner.

BEDTIME STORIES

By THORNTON W. BURGESS.

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BILLY FEELS UNCOMFORTABLE.

Billy Mink was feeling uncomfortable. Yes, sir, way down deep inside Billy Mink was feeling uncomfortable. He was beginning to wish that he had not boasted so much the night before. He had said that he could do anything that any of the other little people who wore fur and lived in the Green Meadows or in the Green forest could do. Grandfather Frog had called him a boaster and had said that he knew some one who could do something that Billy Mink could not do, and that if Billy Mink would be at the Smiling Pool at sundown that night he would prove it. Billy Mink had had to say that he would be there, for, you see, Little Joe Otter and Jerry Muskrat were listening.

Now Billy Mink sat on the Big Rock in the Smiling Pool kicking his heels.

"I can run fast, swim fast, climb fast



Billy Mink Was Feeling Uncomfortable.

I can dive deep. I can jump. I can dig. I can follow a track with my nose, and can see in the dark," thought Billy Mink. The more he thought of all he could do the better he felt. One by one he thought of the little meadow and forest people whom he knew and what each one could do. Think as hard as he would, he could think of no one who could do anything which he couldn't do.

"There isn't any one," said Billy Mink right out loud. Just like that. "There isn't any one!"

"Chugarum!" said Grandfather Frog.

Billy Mink looked over to the big green lily pad where Grandfather Frog was sitting. Grandfather Frog was gazing solemnly up at jolly round Mr. Sun. There wasn't the teeniest, weeniest bit of a smile about Grandfather Frog's big mouth, and yet Billy Mink somehow felt that way down inside Grandfather Frog was laughing at him.

All at once Billy Mink felt more uncomfortable than ever, and he didn't feel a bit better when Grandfather Frog turned his back to him and began to sing in a deep voice that seemed to come from the very bottom of his stomach.

"Bragging tongues, so I've heard say,
For sure discomfort pave the way."

"Now, what do you mean by that?" snapped Billy Mink.

Grandfather Frog turned around and seemed very much surprised to see Billy Mink.

"Oh, nothing, nothing, nothing at all! I was just talking to myself," said he.

Billy Mink looked at him very hard, but Grandfather Frog looked as solemn as ever.

"Huh!" said Billy Mink, and slid down into the Smiling Pool. He swam across and started up the Laughing Brook, and as he went he heard Grandfather Frog singing once more. He stopped to listen, and this is what he heard:

"Pride runs on before a fall,
And doesn't mind its feet;
The one who wins a race keeps still
Till after he has beat."

"Huh!" said Billy Mink. But just the same he felt more uncomfortable than ever.

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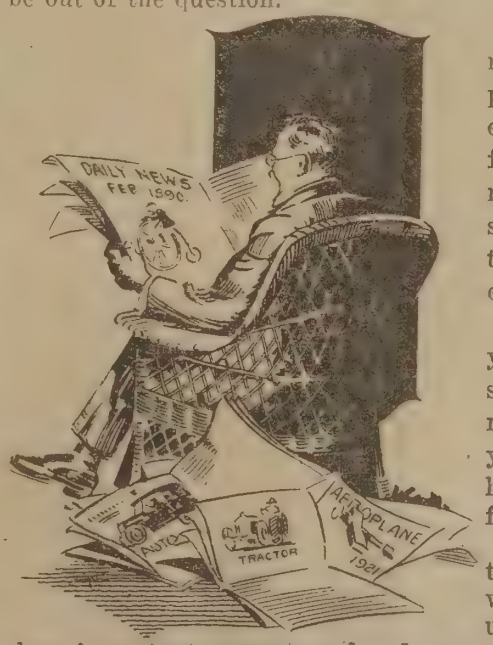
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Perhaps some innovations have been adopted with which you are as yet unfamiliar. For news of these important matters read and re-read our advertising columns. And remember that we safeguard you in your dealings with our advertisers.

When you write them for additional particulars please say: "I saw your advertisement in The Washington Farmer."

Dairy Products

(Continued from page six.)

higher prices here for raw milk than elsewhere, holding the price at a higher level than ever before under similar conditions. We successfully survived these unfair tactics and we have no fears for our future existence.

I firmly believe we are now established beyond the ability of any outside force to disrupt us, and I am confident that the manner of our organization, which permits the equitable administration of the affairs of the association for the benefit of all the members, is a safeguard against internal dissention, which has proven the chief factor in the downfall of cooperative movements that have registered failure.

This story of our cooperative effort would not be complete if it failed to record the fact that we are members of the National Milk Producers' federation, with headquarters in Washington, D. C. I have the honor to be a member of the board of directors of that organization. It has in its membership practically every cooperative dairymen's association in the United States and its influence for the good of the industry is far-reaching. Every piece of legislation presented before congress that in any way affects the dairy industry is carefully scrutinized and the member associations at once advised of its character. The national federation has been assiduously working for the passage of the Capper-Volstead act, which has not become a law and which provides the proper protection for nonprofit cooperative farmer organizations. The national federation has been aggressively active on tariff legislation affecting dairy products and is hopeful of securing a 10 per cent import duty on butter, with tariffs on other dairy products in proper ratio.

The national organization is also bending every effort to have passed the Voight bill, which prohibits the interstate shipment of so-called "filled milk." The passage of this bill would practically result in the abolition of the manufacture of "Hebe" and similar bogus dairy products.

The president of the National Milk Producers' federation is Mile D. Campbell, a Michigan dairyman. Mr. Campbell is a retired lawyer, whose every heartbeat is for the dairyman and who is at once a capable and energetic leader and a genial gentleman.

The formation of the "farm bloc" in congress was the result of the combined efforts of the farm bureau, the national board of farm organization, the National Milk Producers' federation and other national farm bodies working in harmony and unison.

The United Dairy Association of Washington, for its members, has many plans for the betterment of conditions, to put into execution during the year 1922. It knows it will extend its membership and the field it now covers. At least two districts of importance will be organized during the present year. Other important plans in our program I am not at liberty, at this time, to divulge, but you can count upon finding this association in the forefront in any fight to protect and maintain the rights of farmers and farmers' organizations in a local or a national way. There is nothing romantic about such a venture as we have undertaken, and the record of what we have accomplished makes dry reading at best, but hidden in this dull record are a thousand worrisome details, seemingly small, but important, that faithful men wrestled with until they in some way untangled and solved them. the debt that is owed these men will never be fully realized and certainly will never be paid unless it be in the satisfaction that comes with conscientious effort and work well done.

Summer Fallow Culture

The Washington Farmer was pleased to receive a call from A. Allen of Mondovi, Lincoln county. Mr. Allen says that the farmers are greatly pleased over the results of winter wheat and that every bit of summer fallow around him has been put into winter wheat this fall. The farmers are finding that by proper cultivation the summer fallow can be kept in condition for seeding, even if there is not much of any rain.

"I did not believe this could be done," Mr. Allen said, "but I found it can be done, as I have done it myself this year. By plowing the summer fallow early, right after seeding, and immediately harrowing twice, then later in the season running over the land with the home-made rod weeder twice, my land was in condition for seeding for winter wheat even before the rain."

Some years ago the editor of THE FARMER made a trip to Mondovi with President Showalter of the Cheney Normal school. President Showalter was greatly interested in the Mondovi school, as the people were taking pains to make it one of the noticeable schools in that part of the country.

Being asked about this school, Mr. Allen, who is one of the directors, says they are about putting up a $7000 school house. They had $6000 raised, but need another thousand and are waiting for election before awarding the contract.

Many Farms Have No Chickens

Figures recently compiled show that on 14 out of every 100 farms in the state of Washington no poultry is kept. In other words, there are nearly 10,000 farms in this state that have no poultry even as a side line. Those who want to emphasize the popularity of the poultry industry may look at it from a more pleasant point of view by comparing the number of farms in the state that have no poultry with those that have no horses, dairy cattle, beef cattle or sheep. More farms in the state have poultry than do any other class of live stock, if poultry can be classed as live stock. On 21 per cent of the 66,288 farms in Washington there are no horses. Dairy cattle are absent on 24 per cent, hogs on 46, beef cattle on 85 and sheep on 93.

WHATCOM COUNTY UNIT AN EXAMPLE.

"Out of 1650 members, only 15 notified us of a desire to withdraw at the end of the year," said David McLeod of Bellingham, Wash., vice president of the Whatcom county unit of the United Dairy associations of Washington. "Where 22 months ago we had no rating," he added, "now our rating is as good as anybody's and if we want to borrow money it is easy." This is the largest of the county associations. Last year it received 22,682,974 pounds of milk. The prices received for all the products have been satisfactory and, best of all, as Mr. McLeod expresses it, no obligation has ever had to wait, but has been met promptly when due.

We Buy and Sell
Grade and Pure Bred Dairy Cattle.
We can save you money whether you wish to buy or sell. One or a carload.
Graham Livestock Co.
E2605 Broadway, Spokane, Wash.
NEAR CARSTENS' PACKING PLANT.



Localized Service Wins Friends

The "Old Timer" of Washington knows at first hand the peculiar conditions which surround farming and fruit growing in his state. With his own eyes he has seen great areas of sagebrush converted into flourishing gardens and orchards by the magic touch of irrigation. With his own hands, perhaps, he has helped convert the primeval forest into producing acres. You can't tell him that the farmer in an irrigated or cut-over section is coping with the same problems which confront a Michigan farmer who depends upon the rainfall for his moisture or a farmer in Iowa, where 95 per cent of the land is under cultivation.

Practically everything is different out here, he will tell you; so he appreciates the more the work of his state farm weekly, which is devoted to Washington alone. Very likely he has watched the development of this paper, for its beginnings date back to the time when farming in the Pacific Northwest was in its infancy. The Washington Farmer is the successor to the Ranch, established in 1894, the Pacific Dairyman, Horn and Hoof, and the Washington circulation of the Agricultural Age.

This state farm weekly shares with "Old-Timer" the distinction of having grown up with its field, and he is therefore justified in regarding THE WASHINGTON FARMER as an old friend—a fellow pioneer.

We have every confidence that you will continue to cooperate and repeat our request that you take thought as to your subscription renewal. Instead of waiting for a notification, mail in your order at least 60 days in advance of the address label on your paper. Tell your friends and neighbors about our cooperative plan and include their orders with your own. By all pulling together we can and will make 1922 a big year for cooperation. Let's do it!

Subscription Rates of The Washington Farmer:

$1.00 for Five Years 25 Cents for 1 Year. 50 Cents for 3 Years.

In Canada add 1 cent a copy for extra postage.

Mar. 2, 1922. .....1922.

THE WASHINGTON FARMER,
Review Building, Spokane, Wash.

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I enclose herewith $..... for a ..... year subscription to

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If your subscription is already paid in advance, it will be extended from the date to which it is paid.

QUALITY ON THE RANGE.

One of the big range cattle operators of Montana, J. H. Bray of Lakeview, believes that quality is just as essential on the range as it is in the breeding herd, and accordingly, through a recent purchase of 13 Aberdeen-Angus bulls from Congdon & Battles of Yakima, has increased to 36 head the number of purbred "doddie" bulls which he will run on the range next season. Mr. Bray operates in southwestern Montana, runs his cattle on the range during the summer and carries them through the winter on a ration of native hay only.

He now handles all three of the beef breeds, but is working into Angus exclusively as rapidly as possible. One reason for doing so is that they are hornless by nature and save their owner the disagreeable and expensive job of dehorning. He says he finds them the easiest keepers also and unbeatable as grazers and rustlers, particularly in severe weather.

NEW HOLSTEIN CALF CLUB MAN.

Earl J. Cooper, assistant state club leader of Wisconsin, has been employed by the Holstein-Friesian Association of America to take charge of its calf club work under the direction of President Frank O. Lowden. Mr. Cooper will begin his duties March 15, making his headquarters in the extension offices of the Holstein-Friesian Association of America at 910 South Michigan avenue, Chicago, Ill.

Breeders' Dept.

Jersey Cows and Heifers Grade Cows, Registered Bulls, Baby Calves

Every cow offered has a Cow Testing association record and is a good producer. To make room for pure bred heifers, I am making good offers on good cows.

Two young bulls by a strongly bred St. Mawes sire, out of Register of Merit dams.

Baby calves by a richly bred sire out of high producing cows.

Come and see my herd, one of the largest in Tillamook county, established in 1867, or write for full information of records, breeding and prices.

Don Meadows Farm
JOE BONALDSON, Prop., Tillamook, Ore.

Oreglow Jersey Herd

Iron Mine Farm being only leased property we have adopted the permanent herd name above, meaning "an Oregon Golden Glow Jersey herd."

IRON MINE FARM, Gaston, Ore.
W. M. LADD, Owner.
D. BROOKS HOGAN, Mgr.

Laurchester Place Jerseys

Young bulls out of register of merit dams and sired by Daisy's Golden Poppy, that will soon be silver medal bull, besides having two gold medal daughters. He is sire of many prize winners at Pacific International. Good individuals, priced for quick sale.

CHESTER MULKEY, McMinnville, Ore.

Jersey--Gold and Silver Medal Sire

Ashnook Farm offers a few heifers and young bulls, sired by the gold and silver medal sire, Silver Chimes, of S. B., sire of ex-world champion heifer, Silver Chimes Gwendola, and 20 register of merit daughters, and more qualifying.

DEL PERKINS, Carlton, Ore.

Register of Merit Jerseys

Young bulls out of dams with good official records and sired by Foxhall's Chief Engineer, combining the blood of the great Foxhall's Fern Lad and Golden Glow's Chief strains.

FOX BROS., Silverton, Ore.

We Are Entirely Sold Out

of bulls ready for service. We can furnish a splendid St. Mawes bull calf at a reasonable price. Write for particulars.

J. C. BROWN & SONS, Shedd, Ore.

Locust Lane Farm Jerseys

Sybil's Noble's, accredited and R. of M. Jerseys; type, size and production through our blood lines.

L. S. DILLE & SON, R. 4, Caldwell, Idaho.

ASHBURN FARM Premier breeders of medal winning cows for 1920. Write for our illustrated folder and further information.

J. M. DICKSON & SON, Box T, Shedd, Ore.

Wild Cherry Farm Jerseys

All tested 2 and 3 year olds, average over 400 lbs. fat. Young bulls close to 5 gold medal sires.

D. C. LILLY, Forest Grove, Ore.

Fourth Gold Medal Jersey Bull

now in use in my herd. No other herd ever had so many. Young stock for sale.

ED CARY, Carlton, Ore.

Jersey Bulls at Bargain Prices

Send today for our special sale list of registered Jersey bulls from R. of M. dams. Easy terms, liberal credit.

WARREN GRAY, Box T, Jefferson, Ore.

Jersey Bull for $1000 Why Not Start at the Top?

Inda's Nehalem King, No. 190,617, full brother to Goldie's Nehalem Beauty, world's champion 3-year-old, 1916; highest record of any Jersey in the world, all ages, 1917, and was only 4 years old. All records class AA. Will go on test again soon; is expected to make another world record.

CLIFFORD F. REID
Gordon Building, Portland, Oregon.

Meadow View Jersey Farms
W--O--N

At the State fair, Salem, Ore., Sept. 27, 1921: 1, 2, 3, aged cow; 2, 3, three-year-old; 1st, senior yearling; 2d, senior heifer calf; 1st, senior bull calf; 2d, junior bull calf; 1st, dairy herd; 1st and 2d, get of sire; 1st, produce of cow. We entered 12 head. Grand champion cow, 129 Jerseys competing. Nuf said.

Mr. and Mrs. J. B. Neal
TURNER, ORE.

Jersey Bred Heifers and Bulls

Sired by Bluster's Lad, son of the great sire, Engineer's Bluster, and out of Brown Bessie Alphena's Gem, 712 lbs. fat in a year. Dam of one bull is in the register of merit and the other on test. Some of the heifers' dams on test. All of best Jersey blood lines and priced to sell.

H. S. RULEY, Mt. Vernon, Wash.

Choice Jersey Heifers

And richly bred young bulls, out of register of merit cows with records of over 600 lbs. fat, with common herd care, or that are now on test. Sired by Kallonders Eminent or Oxford Raleigh Lad, both register of merit bulls.

B. C. CRABTREE, Lynden, Wash.

Anoka Farm Jerseys

We have your wants in a bull calf dropped July 1. He is a beauty and his dam has a record of 504 lbs. fat. Priced to suit the most conservative buyer. Address

E. E. SEELY, Sherwood, Ore.
RY. STATION, WILSONVILLE, ORE. ELEC.

Broadmead Aberdeen Angus

Ten bulls, ready for service, now offered at special prices and terms. Also a number of promising bull calves, some that should make show winners or high class herd headers. Can supply your needs for either sex.

J. A. SCOLLARD, Chehalis, Wash.

ABERDEEN-ANGUS

bulls will mature your steers earlier, give them a heavy, thick and low set conformation, dehorn them and add to their quality so that they will top the market every time. We have a wonderful lot to select from, both range and herd bulls, at prices which will move them.

CONGDON & BATTLES,
P. O. BOX 275. YAKIMA, WASH.
Write for prices and literature.

Weatherford Bros. Herefords

We have for sale a few choice herd bulls and bulls for the farm and range, at prices in keeping with the times. Herd headed by the great breeding bull, Beau Blanchard 59th, whose calves show great bone, size and quality.

WEATHERFORD BROS. Dayton, Wash.

Ayrshires

Outstanding bull calves, ready for light service; sired by grand champion Willowmoor Peter Pan 25th, and from high producing cows with show records.

E. W. VAN TASSELL, Wenatchee, Wash.

Guernseys

Special prices on a few reg. bull calves with from 16 to 24 tested dams, averaging as high as 663 lbs. fat. Act now. Do not wait.

FOSHAY FARM,
O. & M. L. VOGET: HUBBARD, ORE.

Orchard Hill Farm Guernseys

"Home of high class Guernseys."
DR. PARK WEED WILLIS, Owner.
REDMOND, Wash.

Pure Bred Guernsey Calves

of both sexes, from good producing cows.

NOBLES BROS., Bow, Wash.

Brown Swiss Stock Farm

Breeders of Brown Swiss cattle, the farmers' dairy cow. Young stock for sale.

THEO BRUGGER, Route 3, Gresham, Ore.

BRED SOWS AT AUCTION

Baker, Oregon, Tues., March 7, 1922, At Bailey Farm.
35 Registered Big Type Poland China Sows and Gilts, 35.

Farmers and breeders will do well to attend this sale of most popular breeding sows. Last bred sow sale of this season. Write today for catalog giving full particulars. See last week's Farmer. Geo. A. Gue and A. L. Wilson, auctioneers. J. F. Nessly, Farm Exp.

L. F. BAILEY, Owners. FRED D. ENTERMILLE.

GRADE CALVES

from dams producing 300 to 700 lbs. butterfat in Tillamook County Cow Testing Association.

Price, $11.50 crated f. o. b. Tillamook, with guarantee of breeding and production of dams.

Jersey, Guernsey and Holstein Breeds. Write County Agricultural Agent, Tillamook, Ore.

GRANDLY BRED AYRSHIRE BULLS AT LOW PRICES

All sired by Oregon Peter Pan; he by a son of Beuchan Peter Pan, undefeated show bull in Scotland and America. His dam, Willowmoor Etta 3d, is world champion junior two-year-old, with 16,021 lbs. milk, and 666.06 lbs. fat.

Two are yearlings ready for active service and two only a little younger. Most of the dams have good official records, with big production records in their pedigrees.

These bulls are priced low enough to be in reach of every dairyman wishing to increase production and good enough to head high class pure bred herds. Write at once for pedigree, and full particulars to

Corvallis. DAIRY DEPT. OREGON AGRICULTURAL COLLEGE. Oregon.

CAN YOU USE THIS HOLSTEIN BULL?

Sire: Sir Johanna Fayne Bonheur De Kol No. 188160, whose dam made at 2 years, milk, 22,449 pounds; butter, 859; at 3 years, 7 days, milk 649 pounds; butter, 32.89 pounds; 30 days, milk, 2727.9 pounds; butter, 130.37 pounds.

Dam: Lucy Freala Pontiac No. 256613

6 years, 365 days—milk, 26,661.6 pounds; butter, 1056.5 pounds.

A handsome, straight, long-bodied fellow; half black, half white; 13 months old; weight, 1100 pounds.

LET US TELL YOU MORE ABOUT HIM.
ARP'S DAIRY, EUGENE, ORE.

HOLSTEIN BULL BARGAIN
Great Authenticated Records to Back Him Up

Sired by Chimacum King Wayne Gettie, whose four nearest dams average 25,549 lbs. milk and 1133.34 lbs. butter. Dam, Susie Korndyke Pontiac, 28.36 lbs. butter in 7 days, 814.59 in a year; over 100 lbs. milk in one day. Other bulls by same sire out of high record dams. Priced at less than half their value.

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Holstein Bulls sired by son of world record cow, from dams sired by brother to Segis Pietertje Prospect. Prices low.

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A.R.O. Holsteins Accredited herd headed by proven grandson of King of Pontiacs; 4 daughters ave. 421.2 lbs butter, 20,016 lbs. milk, official 7-day tests at 2 yrs. 3 mos. MAPLEROSE LANE HOMESTEAD
A. BENSON, PROP. LYNDEN, WASH.

Milk Beef
Oakleigh Stock Farm Shorthorns

204 S. First St., Medford, Ore.
Milking Shorthorns. Several record cows—50 head in herd.

Shorthorns

Both milking and beef strains. Address DesChutes Valley Shorthorn association.

A. J. HARTER, Pres., Tumalo, Ore.

Work Horses and Mules
Young, Sound, in Good Condition

We are feeding for the spring market four loads of geldings and mares, from four to six years old, weight from 1200 to 1600 lbs.; mostly broken and fat, and two loads of good young mules, three to five years old. If interested, write or see

LACEY BROS.
Ironside, Ore.

Registered Shire Stallions

mares in foal and fillies, including junior champion stallion at Portland, Ore., 1921, and junior champion mares at Yakima, Wash., for sale at breeders' prices.

W. A. CLARK, Route 1, Tekoa, Wash.

Mammoth Missouri Jack

We will sell, or will trade for Percheron stallion.

RIVER BANKS FARMS,
GRANTS PASS, ORE.

If You Keep Live Stock

you should also keep a careful record of your stock, milk records, breeding records, labor and feeding records, live stock accounts, general farm accounts and expense accounts for household and personal expenses. We will send you a record book covering all these matters, free. The supply is limited. Address

THE PACIFIC NORTHWEST FARM TRIO,
Dept. B., Review Bldg., Spokane, Wash.

HAMPSHIRES
Heart o' the Valley Ranch
GRAND CHAMPION HERD
OF THE
PACIFIC COAST, 1921

Won 24 firsts out of 28. Won 9 champions out of 12. Won 5 grand champions out of 6. Nehawaka Lad, Cherokee Lad and Gen. Tipton breeding.

Bred sows, open gilts, boars, young pigs, one to a carload. Sow groups, with unrelated boar a specialty. Guaranteed breeders. Write for price list and catalog.

HAYES & HARTER, Grants Pass, Ore.

LAST CALL
FRED SINNES' SALE OF REGISTERED BERKSHIRES
NEAR
PROSSER, WASHINGTON MARCH 8th, 1922

WRITE TODAY FOR ILLUSTRATED CATALOG.

CHAS. M. TALMADGE, SALE MANAGER.
BOX T. SALEM, OREGON.

Berkshire Fall Pigs By a great son of Royal Dominator 4th. Extra good type, well grown. Prices reasonable. Booking orders for spring pigs. J. ALVA BULL, Ellensburg, Wash.

River Banks Better Berkshires

Long, smooth, deep fall pigs. Either boars, gilts or trios.

RIVER BANKS FARMS, Grants Pass, Ore.

Riverby Orchard Berkshires

Oldest established Berkshire herd in the northwest. Young pigs and bred sows for sale. Address

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ROYAL RANCH DUROCS Have two or three real fall boars that will price from $25 to $35; sired by Royal Marker, a real boar of big type. Junior champion at Boise, 1921.

ROY SHUTWELL, Route 3, Boise, Idaho.

Big Type Poland Chinas

Four July boars and four gilts, sired by West Price, first prize junior yearling Oregon State Fair, 1921. One older boar.

SLOPER BROS., Independence, Ore.

Polands--The Big Wonder Herd

of genuine big type Poland China hogs. Home of the grand champion sow of the northwest. Satisfaction guaranteed on all orders.

E. O. LOE, Silverton, Ore.

Reg. Big Type Poland China Gilts.
Bred to Designer's Model Smooth Giant for February-March farrowing; best of breeding; long, tall.
B. F. KAMMERZELL & SONS,
COLFAX, WASH. R. 5.

Chester White Swine

Herd headed by Oregon Buster, grand champion Oregon State Fair and winter circuit, 1921. Fall gilts now offered.

CASS A. NICHOLS, Salem, Ore.

Flathead's Pure-Bred O. I. C.'s

Big, smooth, prolific, easy feeding, prize winning, quality hogs; 8-week-old pigs, $10 up; monthly payments. Order now.

FLATHEAD HOG FARMS, Kalispell, Mont.

Send for Free Booklet

"Some Suggestions to Live Stock Advertisers," outlining the practices of successful men of long experience. Helps in determining how much to spend, the mediums to select, preparing advertisements, handling inquiries, the use of photographs, etc.

Write today.

THE PACIFIC NORTHWEST FARM TRIO
Dept. L. Spokane, Wash.

In writing advertisers, be sure to say you saw their advertisement in The Washington Farmer.

"Cut The Price" SAYS MELOTTE

MELOTTE, the Edison of Europe, manufacturer of the greatest Cream Separator the world has ever known, announces a sweeping reduction in prices. Labor conditions in general together with tremendous re-building and re-organizing efforts put forth by this big man of Belgium has resulted in cutting production costs to the bone.

And right now *at this particular time* exchange rates are extremely favorable. Take advantage of this condition while it lasts. Get the most for your American dollar. Buy now and save money.

Before buying any separator find out how the Melotte has won 264 Grand and International Prizes and how, for efficiency of skimming, ease of turning, convenience of operation and durability—the Great Belgium Melotte has won every important European contest. Find out why 500,000 Melotte Separators are in continuous use today.

Belgium Imported MELOTTE

From Belgium to The Pacific Coast by Water

The increasing demand for Melotte Separators on the Pacific Coast has prompted us to open a Pacific Coast Office to receive direct shipments by water from Belgium. Because of this, farmers and dairymen all over the West now have a wonderful opportunity to save money in the purchase of a Melotte Separator. A Melotte can now be ordered direct from our Pacific Coast Office, which means a saving in time to you of one to two weeks. You are losing money every day you are without it, so send the coupon today to the Pacific Coast Office.

Self-Balancing Bowl

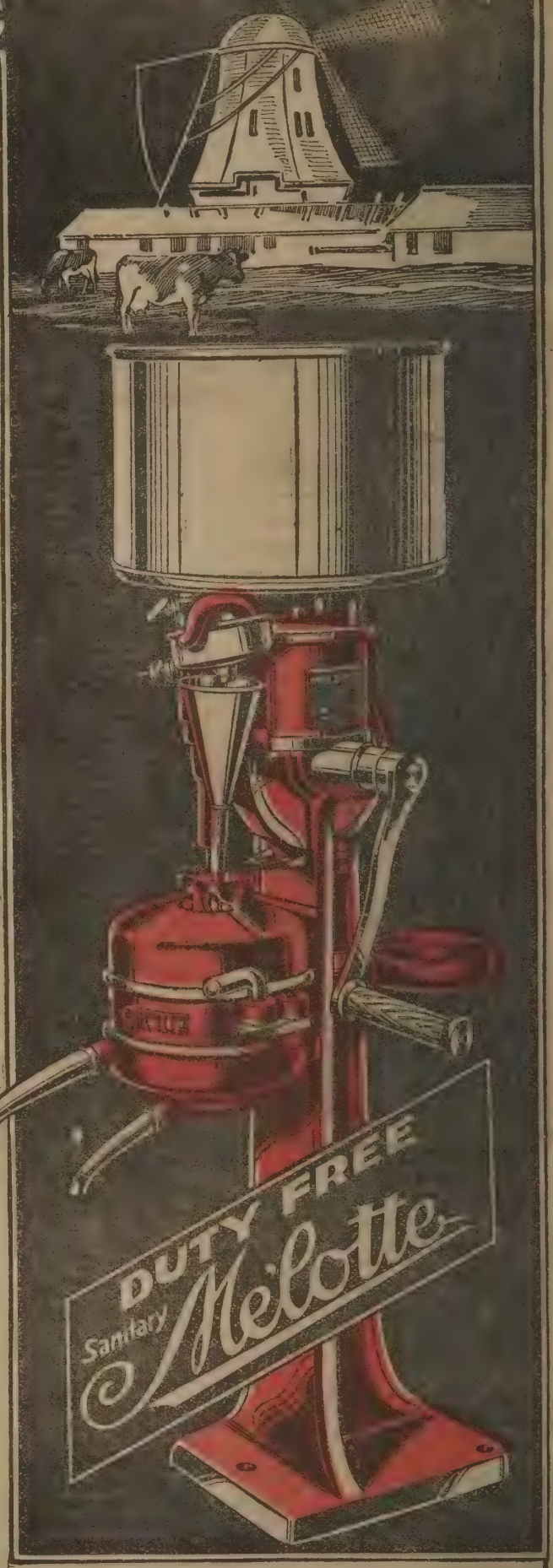
The Belgium Melotte is the only single-bearing-bowl separator made. This patented bowl hangs from one frictionless ball bearing and spins like a top. It is *self-balancing*. It skims as perfectly after 15 years' use as when new. Positively can not ever get out of balance—can not vibrate and thus cause cross currents which waste cream by re-mixing with the milk. The 600 lb. Melotte turns as easily as the 300 lb. machine of other makes. Spins for 25 minutes unless brake is applied. No other separator has or needs a brake. The Melotte bowl has solved the problem of perfect skimming.

Our 15 Year Guarantee

Every Belgium imported Melotte Cream Separator is sold under an absolute, ironbound, 15-year guarantee. No Melotte is ever sold except under this guarantee. A guarantee written in plain English so that you can understand it. A guarantee that is 100% stronger than any other separator guarantee ever made. A guarantee that really guarantees something—upon which you can absolutely rely—an absolute protection to the purchaser, and which binds us to our bargain.

What U. S. Government Says:

Vibration of a cream separator's bowl will soon cost you more money in cream waste than the price of your separator. U. S. Government Bulletin No. 201 says that a perfectly true motion of the bowl is *absolutely necessary*. the bowl is the vital part of any separator—the part where the cream separation takes place.



$7.50 after 30 Days Free Trial

—NO MONEY DOWN—FREE TRIAL
—SMALL MONTHLY PAYMENTS—DUTY FREE

We will send an Imported Melotte Cream Separator direct to your farm on a 30 days' absolutely Free Trial—no deposits—no papers to sign—use it as if it were your own separator. Satisfy yourself that the porcelain bowl is as easy to clean as a china plate. Compare it—test it in every way.

When you are convinced the Melotte skims cleaner, turns easier, washes quicker, has one-half less tinware to clean, lasts longer than all others, then pay $7.50 as first payment and the balance in small monthly payments until the separator is paid for.

Send No Money!—Easy Payments!

After 30 days free trial, then send only the small sum of $7.50 and the balance in small monthly payments. The Melotte pays for itself from your increased cream checks.

You're not to send one cent until you've used this great Belgium Melotte and have made up your mind it is the machine you want. Keep it for 30 days and use it just as if it were your own machine.

Compare the Melotte separator with any other—test them side by side. Then send your milk to the creamery. Let *them* prove which separator skims the cleanest.

The Melotte Separator, *H. B. Babson, U. S. Mgr.*
Dept. 3233 2445 Prince Street, Berkeley, California
2843 West 19th Street, Chicago, Illinois

Without cost to me or obligation in any way, please send me the Melotte catalog which tells the full story of this wonderful separator and M. Jules Melotte, its inventor. Also send me your revised price list showing big reductions.

Name _____

Address _____

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Send This Coupon

Mail coupon for catalog giving full description of this wonderful cream separator. Read about the porcelain-lined bowl. Easy to clean as a china plate. One-half less tinware to clean. An exclusive Melotte feature. Other exclusive Melotte features described in full.

Don't buy any separator until you have investigated the Melotte. Take advantage of the 30 day free trial which Mr. Melotte has now authorized us to offer. Test the Melotte against all other separators and satisfy yourself as hundreds of American farmers have done that it is the world's greatest separator. The only separator that requires a brake. It is so easy to turn that it spins twenty-five minutes after you stop cranking. And remember it is guaranteed for 15 years. Don't wait—be sure to mail coupon TODAY!

The Melotte Separator, H. B. BABSON U. S. Manager

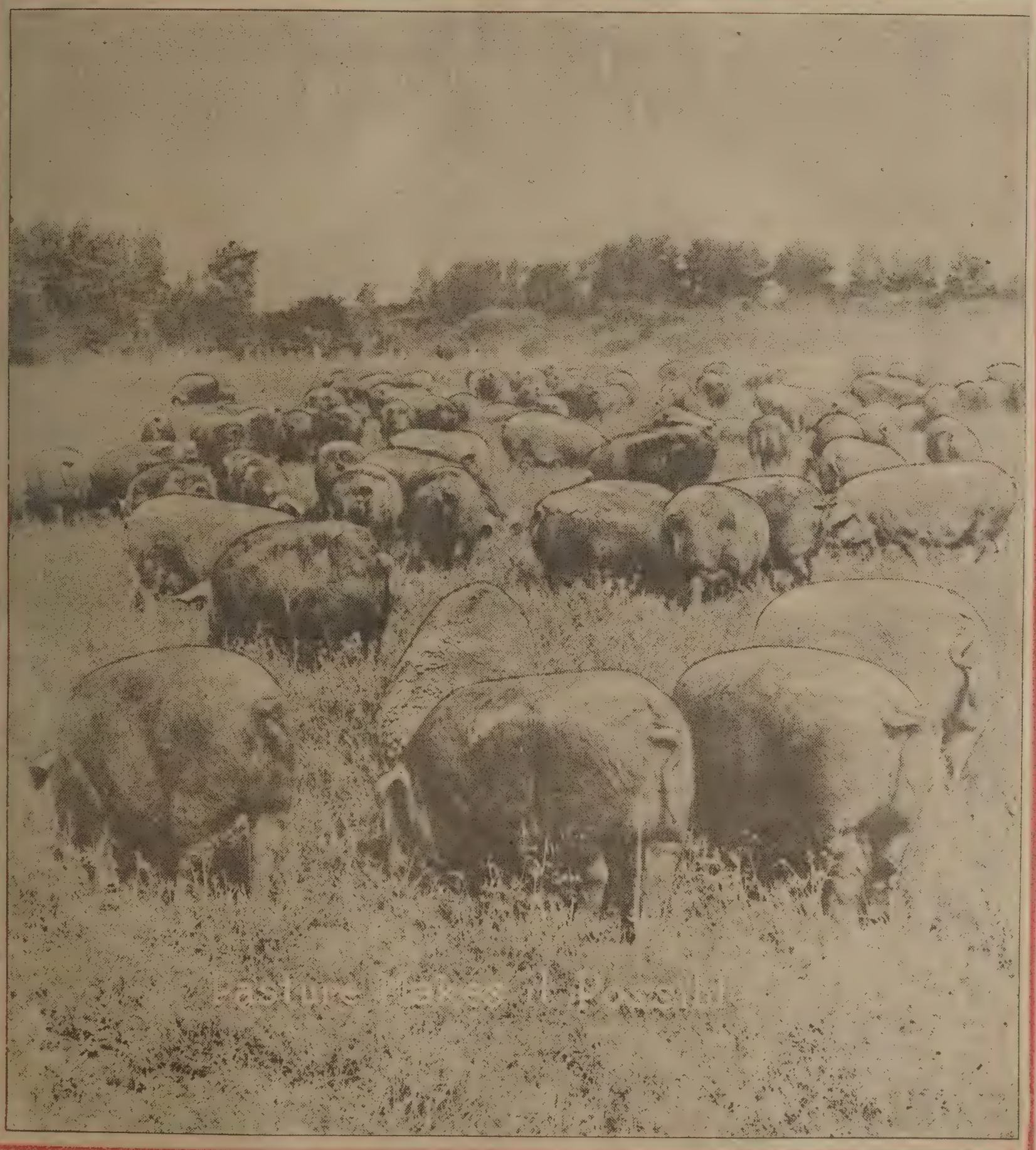
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MARCH 9, 1922. Washington's Great Farm Magazine EVERY THURSDAY

THE WASHINGTON FARMER

ESTABLISHED 1894 SPOKANE. SEATTLE.

AGRICULTURE LIBRARY



Pasture Scene in Powell

Movement Is Launched to Federate All Grain Marketing Associations—Page 6

Pig Contest in The Farmer

Has Done Much to Stimulate the Hog Industry

To the Editor: Through the courtesy of Mr. Horace Addis I received a copy of The Washington Farmer, dated February 9, and hence this letter to you. I wish to congratulate you in offering a prize for the best letter on the hog as a farm byproduct. You have done much to stimulate the hog industry. It caused the young people on the farm as well as the older ones to think on this most important subject. Through its discussion it will be a big factor in causing a greater production of swine, so much needed at this time. It is teaching what we of the Portland Union Stock Yards are advocatingthe utilization of waste on the farm. If only enough hogs were kept on the farms of the three northwest states, i. e., Oregon, Washington and Idaho, to utilize the feeds which would otherwise go to waste, the supply of hogs would be very nearly adequate to demand, making money for the producer, and keeping in our home territory the millions of dollars that are being sent to the midwest states for hogs.

We believe there will be good profit in hog raising for a period of two or three years. The shortage in beef animals in the northwest will of necessity cause a greater consumption of swine products. Hog prices are very high now, and will continue so through the packing season. After this season is over there will in all probability be a slight decline in prices. The supply being short means strong competition later when receipts fall to proportions scarcely heavy enough for fresh pork demand. The demand for brood sows is greater and greater. Supply of stocker and feeder pigs is far short of demand. So, if we do not get overzealous and cause overproduction, we can not help but believe there will be good money in hog raising for as long as cost of production remains as it is now.

I have read with increasing interest the letters written in the contest. In awarding Mr. Hall the first prize you have made no mistake (as I see it). It would be almost an impossibility to improve on his letter. He has covered the case in a masterly manner, convincing the reader he has had experience and given the subject much consideration.

Just as I was closing this letter a copy of The Idaho Farmer, under date of February 9, was handed me. It shows that Mr. E. B. Snow of Indian Valley, Adams county, Idaho, won first prize in his state. I wish to say that my comments on Mr. Hall's letter apply equally to Mr. Snow's.

I am glad to see that you have secured gilts with which to make awards from the best herds in the northwest. I admire Mr. Wilson as a man, and as an advanced, constructive breeder. His herd is of the best of the Poland China breed.

Your Mr. Addis is to be congratulated on the very appropriate cover page of The Washington Farmer magazine of February 16. Mr. Addis is a much-appreciated booster for all classes of live stock.

Again congratulating you on the success of your endeavors, I remain, yours sincerely.

C. M. M'ALISTER,
Field Man, Portland Union Stock Yards.

A BIG LITTLE MISTAKE.

There is not much difference between a period and a comma, but the use of one where the other should have been used often results in a huge error in a printed statement. For instance, in a recent issue of The Washington Farmer it was stated that a Holstein cow belonging to Butchart Brothers of Sunnyside had produced 24,896 pounds of butterfat in seven days. That was some production, beating all past records and all future records all to smash. The truth about it is that there was a comma used where a period should have been. This cow produced just a little less than twenty-four and nine-tenths pounds of butterfat, or the equivalent of 31.12 pounds of 80 per cent butter.

Can Be Registered

By H. HACKEDORN.
(Department of Animal Husbandry, Washington State College.)

I would like to know if you cross a roan Shorthorn cow with a red Shorthorn bull, if the offspring could be registered as a thoroughbred? Also, what is the difference between whiteface cattle and a Hereford? J. W. T.
Miles, Wash.

The color of Shorthorn cattle is described as red, white and roan. The roan is a mixture of the red and white and is the preferred one. Spotted cattle are not popular, although they can be recorded. The roan color is the most popular and most breeders prefer to mate white cows with a red bull in order to get as many roans as possible, although it does not follow that this mating will produce roans. The offspring of a registered bull and a registered cow can be recorded. The official registry association for Shorthorn is the American Shorthorn Breeders' association, 13 Dexter Park avenue, Chicago, Ill.

The difference between white-faced cattle and Hereford cattle is that the Hereford is a distinct breed of cattle which have breed character. They have white faces, white along the under line and the lower side of the neck, red bodies and a stripe of white at the top of the neck and over the top of the shoulders. The white face is very predominant and where Herefords are crossed with other breeds and grades the offspring are usually whitefaced, although they are not Herefords. The official registry association for Herefords is the American Hereford Cattle Breeders' association, Kansas City, Mo.

Value of Cow Testing

The value of a year's cow testing for one animal is vividly portrayed by Fred J. Vetter of Machias, Snohomish county, Wash., who claims that it is worth three times what it cost for the entire year. The figures are taken from the books of the Snohomish County Cow Testing association, according to F. W. Kehrli, extension dairy specialist of the state college.

A short time before the association began the year's work Mr. Vetter tried to sell one of his cows for $100, since he thought she was below the standard of his high grade Guernseys. His neighbors, however, refused to buy because they had the same opinion as the cow's owner. When the test began she surprised every one because her test ran high and she produced 463 pounds of fat in the year, which brought a net return of $142. Although she was second cow in the herd in butterfat production, she was first when it came to returns above the cost of feed.

Since she made this test Mr. Vetter placed a valuation of $175 on her, yet she is not for sale. Her record in the association cost only $25, but it raised her valuation three times that amount, or a net return of 300 per cent on the investment.

News for Breeders

TESTS BOOSTED PRICES.

Official testing at Butchart Brothers' farm, near Sunnyside, just before they disposed of their herd early in February, resulted in some excellent records and aided mightily in boosting the average prices obtained for their consignments.



Princess Pietertje Artis.

The work was done by Percy Butchart, who, though comparatively inexperienced, produced a new Yakima valley champion, a 30-pound junior 4-year-old, a 22-pound junior 2-year-old and another that made 18 pounds. Princess Pietertje Artis, the new champion, made 31.5 pounds and brought $815. Chimacum Wayne Pontiac Burke 2d made 30.14 pounds and topped the sale at $850. Newaukum Netherland is now one of five 20-pound junior 2-year-old daughters of Chimacum King Korndyke Sadie Vale, whose dam, S. V. H. Mollie, made 36 pounds in the state herd at Steilacoom.

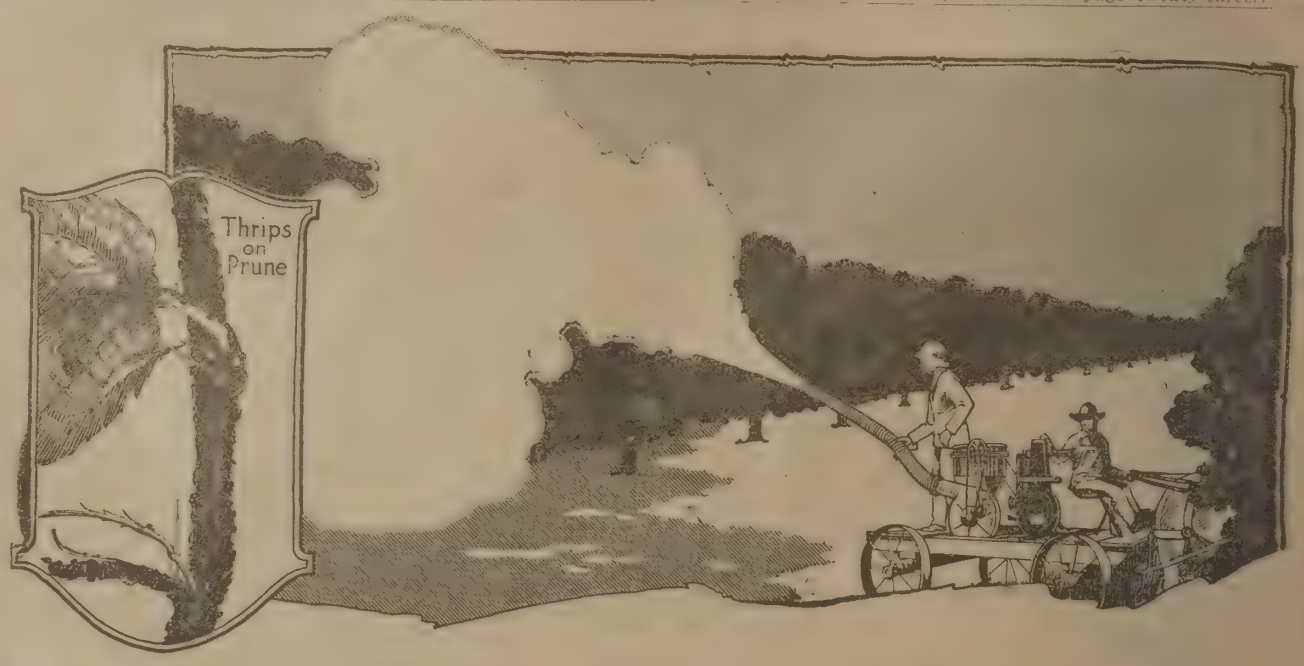
ELIMINATES THE SCRUBS.

A few years ago Trumkey & Wolf of Wenatchee, Wash., traded a scrub cow to S. O. Pool & Sons of the same city for a high grade Jersey cow. They now have three females by purebred sires. These are so satisfactory that a short time since they went to Mr. Pool and said they must have a purebred Jersey bull calf. They were soon supplied with a grandson of Poppy's Golden St. Mawes, sire of the new world record senior 2-year-old Jersey, and are headed in the direction of a herd of purebred Jerseys. Mr. Pool reports the sale of several registered Jersey bulls to parties with grade herds. A bull he sold now heads the purebred herd of Lloyd Corle, a contractor of Wenatchee, who now has indulged his fancy for Jerseys to the extent that he has a herd of several purebred cows.

SHORTHORN MEN ORGANIZE.

The Washington Shorthorn Breeders' association was organized at Spokane February 22, following the consignment sale at that place and just preceding the Day & Rothrock sale at Sprague. Carl A. Greif of Uniontown was chosen president; J. E. Trimble, Farmington, vice president; A. E. Lawson, secretary; F. M. Rothrock, treasurer; and A. D. Dunn, Wapato, George Bertrand, Castlerock, and J. [illegible]

(Continued on page twenty-three.)



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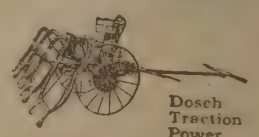
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THE WASHINGTON FARMER

SUCCESSOR TO

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For Good Farming, Attractive Country Homes and Happy Country People

Two New Outstanding Wheats

Hybrid 128 and Triplett Important Plant-Breeding Results of State Experiment Station Work

By S. B. NELSON

Dean and Director Extension Service, State College of Washington

Some 20 years ago Professor W. J. Spillman, then head of the department of agriculture of the State College of Washington and agriculturist to the experiment station, rediscovered the mendelian law in heredity. Being intensely interested in the improvement in cereals, Professor Spillman gave his attention to the cross-breeding of wheats.

This work has been continued until the present time at the experiment station of the State College of Washington. Much work along the same line has also been done at other experiment stations.

It takes approximately nine years to fix definitely any characteristic which might be developed in the crossing of two breeds, so out of these 20 or more years of breeding work two or three outstanding varieties of wheat have resulted from the work at the State College of Washington. One is known as Hybrid 128 and the other as Triplet.

Hybrid 128, at the present time one of the most important winter wheats grown in Washington, is the outcome of crossing Winter Fife on Little Club, while the Triplet wheat is the result of crossing Winter Fife on Little Club at the same time crossing Winter Fife on Turkey, then again crossing the result of these two crossings on each other, using the cross of Winter Fife and Little Club as the male parent. At the end of 10 years of experimentation it is ready for distribution. There, of course, is where the extension service becomes interested.

The results obtained in extending Hybrid 128 can not be entirely credited to the extension service because that work was started at about the same time that the extension service was started, as such. The plan that was used in changing from the growing of other wheat to either of these two has been, first, to send out to a small number of the best farmers a small quantity of the seed, maybe enough to sow one or five acres, under the arrangement that the crop was to be carefully measured and the results reported to the college.

After these field trials, covering two or three years, a strong campaign was put on through various agencies, such as the county agent, milling companies, the Washington Wheat Growers' association, etc., to further the general use of these varieties of wheat for seed.

One of the most important factors in doing this is the milling interests, because the milling interests have rapidly developed the differentiation of wheat in price according to gluten content.

As a result of the publicity given and the suggestions made, beginning about 10 years ago, the average crop of Hybrid 128 in 1918 and 1919 was practically 3,800,000 bushels, or 11 1-2 per cent of the wheat grown in the state of Washington, and this report covers only about five counties of the state.

In the case of Triplet wheat, 100 bushels of seed was distributed for the first time in 1918, enough to seed 80 acres. In 1921, three years after the first 80 acres were planted, there were put into crops and harvested in nine counties of the state approximately 40,000 acres, which yielded 1,250,000 bushels of wheat, an average of about 30 bushels per acre. This was again accomplished through general newspaper publicity, the personal demonstrations of the county agent and the soils and crops specialist of the extension service, the cereal specialist of the agricultural college, the grain companies and the milling interests.

Just lately Triplet wheat is getting a stimulus through the latter because the gluten value is greater than that of the other wheats, and there has been one instance where a sufficiently large lot was obtained, at a price 3 cents above the market. Once only has this occured, because it is not yet grown in sufficient quantities to supply flouring mills so that they can afford to change their rollers in order to put into practice the special process necessary to mill this wheat. This will, however, come within the next year or two, when much larger quantities will be available.

As a specific instance of the extension of growing Triplet wheat in one county it is found that in 1919 12 farmers grew 120 acres of the wheat, in 1920 56 farmers grew 611 acres of the wheat, in 1921 100 farmers grew 7000 acres and in the fall of 1921 130 farmers seeded 11,000 acres. So far in this county the average increase over other wheat is about nine bushels to the acre. This does not, however, hold good in certain other sections of the state. It is quite possible that Triplet wheat will replace a number of the better varieties of winter wheat grown in eastern Washington within the next two or three years.

Another instance of a rapid turn in the growing of certain wheats occurred in Douglas county, where the county agent in the fall of 1918 contributed toward the importation of 8000 bushels of Kharkov wheat, this wheat being shipped in from Oregon. In 1921, three years later, 140,000 acres were seeded to this wheat. Although this wheat is apparently no better than the type of Turkey which was grown in that section, yet because of the care which had been used in growing the seed and keeping it clean and true to type; the farmers have taken up this wheat above all others. The indications are, however, that greater consideration will be given to the relative value of this wheat with others that have been grown in that section which may tend toward a lessened acreage of Kharkov in the future. This wheat was not spread as much on its real merits as it was on impulsive receptive judgment. One important factor which may determine increased or decreased planting is the not yet determined problem of fall and spring seeding in that section.

Another cereal, Rosen rye, has been extended very rapidly in its use in some of the dry sections of the state of Washington. Because of two or three years of drought in these dry sections, which drought did not allow sufficient moisture for growing of wheat, and because of the lessened acreage production of the then common rye used, which crop was from four to six bushels per acre, the soils and crops specialist and county agents in three counties decided to advise the introduction of certified Rosen rye from Michigan.

In the fall of 1919 there was imported into Franklin county one carload of Rosen rye for seed and 1800 acres were seeded that fall and certified the following year. The following year 730 bushels were introduced into Grant county from Franklin and two carloads shipped to Douglas county. I have no report on the number of acres seeded in Grant county, but 1000 acres were seeded in Douglas county in 1920 and 2500 in Franklin county. In the fall of 1921 15,000 acres were seeded in Douglas county. Because of the change of county agents in Franklin county recently it has not been possible to obtain the acreage seeded in that county this year.

This rye will yield in the neighborhood of 20 bushels on summer fallow and 10 bushels when stubbled in, while on stubble common rye only yields from four to six bushels. Whether or not this Rosen rye will hold its place or yield to Minnesota winter rye No. 12 is not yet known. The county agent in Adams county, Washington, has two fields of each, which may be used for comparison this year. However, there may occur in this demonstration a variation of error because of different types of farming.

Considering the development of the use of these cereals from all angles, the intrinsic value of the wheat as to gluten, the adaptability to climate and soil conditions, the resistance to disease and pests, possible increased yield, clearly defined by strong publicity through the several available agencies, are the reasons responsible for the results which have caused the rapid change from one type of cereal grown to that of another.

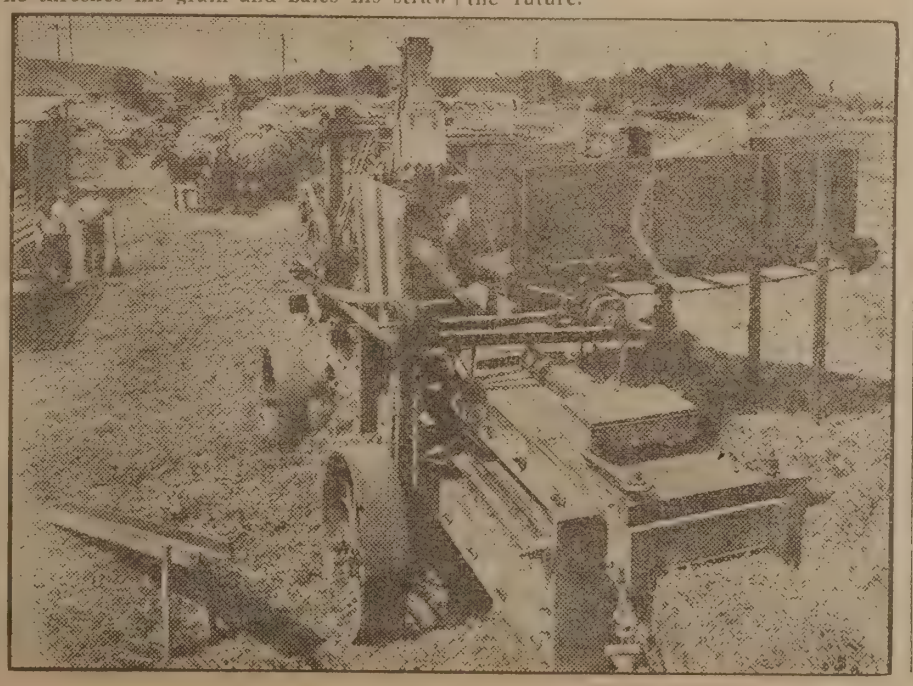


Reading from left to right, the varieties of wheat in the above illustration are: First two heads, Jones Fife; second two, Little Club; third two, Turkey Red; fourth two, Hybrid 128, and last two, Triplet.

Bales Straw at Threshing Time

Comparatively few farmers and live stock men realize the actual value of straw for feeding and bedding purposes. Many who do, however, realize also the great difficulty in caring for it conveniently and efficiently. Nels Anderson, a rancher of Bow, in Skagit county, knows the value of it in his section and has been busy for several years perfecting a device to make it convenient to save and feed the straw from his fields. The picture herewith shows the device by which he threshes his grain and bales his straw at one operation. The same power that drives his thresher drives the baler also, the latter being placed at the rear of the threshing machine. On October 7, last fall, this machine baled 68 tons of oat straw in nine hours and seven minutes, according to Mr. Anderson, who says that the cost was $1.05 per ton, including the wire.

Only one of these machines has been built so far, and the inventor has not announced what further plans he has for the future.



Seed Potato Growers

Seed potato growers of Stevens county will meet at Colville March 17 to organize a cooperative association to further the growing of seed potatoes and to assist in marketing.

"The record which the Stevens county seed potato has made in the irrigation belt justifies everything possible being done to stimulate its production," said County Agricultural Agent Glen Plumb. "Several cars of potatoes have been sold by the Stevens county farm bureau and offers have been received for a small supply on hand. It is estimated that next year Stevens county will market 150 cars of Netted Gem seed."

HERCULES BEEF CLUB.

Eleven Mabton, Wash., boys are members of the Hercules Beef club, with two steer calves each, furnished by Frank Rothrock, proprietor of Hercules stock farm. Mr. Rothrock made his offer of the calves on the boys' notes, the steers to be sold at the Western Royal next winter, at the Yakima farm bureau meeting, and George Varnum of Mabton, who is chairman of the county live stock committee, volunteered to take a carload of the steers for Mabton. He had no trouble in placing the 22 head, and could have placed more. The boys who are members of the club are Harold Holmes, Fred Schlein Jr., Chester Schlein, James Gordon, Floyd Hager, John Turner, David and Simon Bos and Gerald and Harvey Varnum, all of Mabton, and Ray Olson of Sunnyside. Mr. Varnum is leader of the club and says he has a set of "herdsmen" to be proud of.

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Farm Bureau Contends for Absolute Long-and-Short-Haul Clause

According to a statement just published by the Association of Railway Executives, there was a falling off in railroad traffic during 1921 of 23.3 per cent under that of 1920. The association says that this is the greatest slump ever recorded in American transportation history. The statement says that in 1921 the number of tons of freight carried one mile in the United States was 344,167,000,000, or 104,390,000,000 less than the ton-miles of 1920. The decrease in the eastern district was 24 1-4 per cent; in the western, 22 1-2; and in the southern, 20.6.

We suppose these estimates are approximately correct, for they are compiled from reports to the interstate commerce commission. Yet in the face of that sharp slump in the volume of business done the transcontinental railroads were pretty prosperous in 1921. For example, the Northern Pacific Railroad company's preliminary statement for 1921 shows that after deduction of operating expenses, taxes and fixed charges the company had net earnings of $22,065,399. This is equivalent to $8.89 a share for the $248,000,000 of capital stock outstanding, and compares with $7.69 a share earned in 1920, when the railroad had the assistance of federal compensation and guaranteed payment.

In other words, the Northern Pacific earned nearly 9 per cent net on its total capital stock in 1921. The official figures are not yet available for the other roads of the Pacific northwest, but it will probably be found that the Great Northern and the Union Pacific did as well as or better than the Northern Pacific. The Milwaukee will not make so good a showing.

The point to be kept in mind is this, and it is a just and reasonable point: The transcontinental lines of this zone are prosperous even in time of industrial depression and distress. They show good net earnings in a year when the farmer had to endure the heaviest losses suffered by agriculture in a generation, and when the mortality in industrial and commercial institutions was extraordinarily high.

When industry and business come back to normal, as it bids fair to come in 1922, the transcontinental railroads, if they are allowed to go on charging existing excessive freight rates, will earn excessive dividends. As soon as business comes back approximately to normal, there should be an all-round reduction of freight rates, and that reduction should be applied to the interior communities as well as to the Coast cities.

The interstate commerce commission should not permit the railroads to enter into a rate war with the ships at the Pacific coast terminals. The purpose of the roads' application to the commission at this time is to enable them to drive the ships out of the harbors, and that should not be permitted. With the return of normal industry and business the country will need all of its transportation facilities, the ships as well as the railroads. The government should not allow the railroads to oppress the interior for the benefit of the industrial centers of the Coast. It should require fair freight rates all around.

With that thought in mind, both the national and Washington state farm bureau federations have gone emphatically on record in favor of an absolute long-and-short-haul clause to prohibit the railroads from charging more for a shorter haul to interior communities than they charge for the longer haul to the Coast cities.

Realism and Romance of Cooperation

If there should be within the range of our circulation any cooperative associations that are discouraged, any individual members who are faint-hearted, or any farmers who are skeptical of the benefits of cooperation, we commend to their careful reading the article in the last number of The Washington Farmer by J. A. Scollard, president of the United Dairy Association of Washington.

Mr. Scollard's article is at once a narrative of realism and romance. The state association is composed of six big county associations, with an aggregate membership of nearly 6000 dairy producers. The association has built up a great property that covers $1,500,000 in modern dairy plants. The total output of these plants in 1921 reached approximately $5,500,000, and Mr. Scollard anticipates an output with a money value of about $8,500,000 in 1922.

Notwithstanding that 1921 was one of the worst years for agriculture in the history of this country, the association operated every plant full time without a skip, including Sundays and holidays; met every pay roll for labor or milk with full payment on the regular designated pay day; not only met fully every interest obligation on the association bonds when due, but retired a considerable portion of the bond issue.

The fact that fewer than 1 per cent of the association's members withdrew from the organization in 1921 is pretty conclusive proof that the association is satisfying its membership.

The organization is purely cooperative up to the point of the marketing of its products, and there it is practically cooperative because it holds the whip hand over the marketing association with which it does business. It fixes the selling prices of all its commodities and pays an agreed commission to the marketing association. Moreover, it can terminate the selling contract on 60 days' notice and has the option of buying at cost, less depreciation, the distributing machinery of the marketing company. In other words, as Mr. Scollard explains it, the marketing company is the creature and the servant of the United Dairy Association of Washington.

President Scollard has told in a big way of the big work of a big organization.

One Big Accomplishment

"One big thing the farm bureau is doing in this county," said E. B. Stookey, county agriculturist of Thurston county, Wash., "is the bringing together, in a better understanding, of the farmers and local business men." A meeting at Olympia, on January 23, at which lunch was served, lasted till 4 p. m.

This meeting was productive of such good results that it was there decided to hold another meeting in another community at an early date.

At these community meetings both farmers and merchants speak. It has already been decided to standardize several farm products, as a means of assuring a better market.

Avoid It Next Year

There is not a farmer in this state who has not experienced some inconvenience about his regular farm tasks this winter. Now is the time to plan to avoid the like inconvenience next winter by making the required changes of equipment or arrangements.

State Farm News

A meeting of seed potato growers of Stevens county will be held at Colville March 17. A cooperative association will be organized to further the growing of seed potatoes and to assist in marketing.

"The record which the Stevens county seed potato has made in the irrigation belt justifies everything possible being doing to stimulate its production," said County Agricultural Agent Glen Plumb. "Several cars of potatoes have been sold by the Stevens county farm bureau and offers have been received for a small supply on hand. It is estimated that next year Stevens county will market 150 cars of Netted Gem seed."

* * *

J. B. Rennie of Naches recently sold to J. R. Reynolds, banker of Naches, for $25,000 the Rennie 40-acre tract, one mile west of Naches. The land, which is practically all in fruit trees, has been the home of Mr. Rennie for 18 years. He took better than $10,000 in fruit returns from this place last year.

* * *

The output of the Jones Brothers' vinegar plant in Yakima in 1921 exceeded that of the previous season. The present year the plant will have an output of 125 to 150 carlots of vinegar, according to Sam F. Jones of San Francisco, president of the company, who spent a few days in Yakima recently. Mr. Jones is well pleased with the support which Yakima has given the industry. The company recently shipped an entire trainload of vinegar from the Pacific coast east, while 20 years ago the company shipped a whole trainload of vinegar from its Kentucky plant to the Pacific coast, and that attracted a great deal of attention at that time.

* * *

The first of the "hot house" lambs in the Yakima valley arrived the second week in February at the lambing sheds of Ellis Ragan, who has 9000 ewes. The Yakima Sheep company has about 3500 ewes and in the lower valley it is reported that Frank Rothrock has 4000 ewes near Outlook.

* * *

S. K. Bowes, newly elected president of the Aberdeen Pioneers' association, at the close of a talk following the annual banquet of the association January 26, assured the banqueters that they might count on seeing the proposed pioneer association home listed among the building operations of 1922.

Mr. Bowes followed his statement by the appointment of a committee composed of Mrs. Jean B. Stewart, donor of the park where the home will stand; Mrs. A. D. Wood, Mrs. William Irvine, J. A. Taft and J. J. Carney, to supervise the plans for the building.

* * *

E. A. Tyrell, fruit grower of Selah Heights, used an ax in pruning his trees a short time ago, but he explains that they were pear fillers and he thought it were time for them to come out. Mr. Tyrell has an orchard in which the alfalfa has not been cut for several years and which has produced exceptionally well. He does not propose to let the fillers remain to interfere with apple production, hence they came out this winter. He took them out on eight acres and the removal of the fillers leaves his apple trees 26 feet apart.

* * *

Citizens of Pasco and vicinity will be asked to subscribe $50,000 to constitute a revolving fund designed to take up delinquent assessments of the Franklin county irrigation district, according to plans laid before the chamber of commerce by B. B. Horrigan, attorney for the district.

At a recent meeting Mr. Horrigan stated that these bonds are to be redeemed in one, two and three years, paying 8 per cent.

Dr. Fred Barber of the government biological survey and A. J. Rousch, architect, also addressed the meeting. Dr. Barber stated that 644 dairy cows had been tested in the county for tuberculosis, with only 12 reactors.

* * *

Machinery for making motor license plates will be installed in the state penitentiary at Walla Walla by April 1 and a carload of steel material for the plates will be on hand to start the work, according to I. L. Lockney, engineer in the department of business control, who returned to Olympia from an inspection trip in the middle west. The plant will cost about $15,000 and will turn out all 1923 license plates in connection with the new industrial plan for state institutions.

* * *

A meeting of dairymen of Ridgefield and the surrounding country was held for the purpose of considering the reopening of the cheese factory of the Ridgefield Milk Products company at Ridgefield, and if satisfactory arrangements can be made it is felt certain the plant will resume operations some time in March. It has been idle for several months. More than a year ago the factory was taken over and operated by the Oregon Dairymen's league, now a defunct organization, with which a number of farmers here were associated.

* * *

Lower records for the 1922 egg laying contest now being conducted at the western Washington experiment station are predicted in the monthly bulletin just issued on the contest. The bulletin points out that the steady nine weeks of freezing weather ended February 1 destroyed the kale supply and in general retarded the production of the contest birds.

The contest closed its third month January 31, with the birds in a satisfactory condition, according to the bulletin. None of the birds suffered frozen combs during the cold weather.

The monthly bulletin announces that a silver cup will be given by William M. Coates, well-known poultry judge, for the pen in the third annual contest which has the highest production record at the close of the 12 months of the contest.

Coming Events of Interest

Mar. 15.—Shorthorn sale by Post schools, Camp Lewis.
Mar. 15.—Kittitas live stock banquet, Ellensburg.
Mar. 18.—Boys', girls', garden club rally, Puyallup.
Mar. 22—Shorthorn consignment sale, Portland.
April 5—Pierce county poultry meet.
April 5-6.—Okanogan live stock meet-sale, Okanogan.
July 27-28—Whatcom co. Guernsey gallop, Bellingham.
April 16—Easter.
June 7-9—Union live stock show, Union, Ore.

FARM BUSINESS AND MARKETS OUTLOOK

AGRICULTURE PROSPEROUS IN 1922

The remarkable advance in prices of farm products in the last few weeks is capable of but one interpretation: The return of prosperity for agriculture.

In some instances prospective scarcity has provided a foundation for the advance in commodity prices, but most of the upturns have been much more rapid and profound than the shortages, actual or impending, would indicate.

The swinging of the economic pendulum toward revival of industry, business expansion and prosperity has been the most powerful factor.

It is only natural that agriculture should be first to feel the effect of what some folks like to call the "secondary inflation," as farm products were over-deflated, but other lines are going to prosper also. Freight loadings are on the increase, thus adding to railroad income; a building boom is in the incubation stages, and the number of men employed in automobile factories, cotton manufacturing, cotton finishing, hosiery and underwear, woolen and silk mills and leather, boot and shoe factories during January was considerably larger than in January, 1921.

These things point to more ready outlets for the products of the farm.

Foreign problems affecting the American farmer are troublesome, but the best barometer of financial progress in Europe is found in the exchange rate. Sterling has risen above $4.40, compared with a par of $4.86 and a low figure of $3.16 in 1920. Central European exchanges have not done so well, as their budgets are too far out of balance and paper money inflation has been many times more severe. But Europe seems to find funds for food and raw materials and she has been a willing buyer in this country.

Labor troubles are on the horizon in this country, with a soft coal miner's strike scheduled for April 1, but if prosperous conditions return a conflict over wages may be deferred. On the other hand, labor leaders should be too wise to press immoderate demands if industrial revival has not appeared.

FAT CATTLE PAYING OUT

In spite of the mean behavior of the market, most of the cattle sold during the last six weeks have made a little money for their owners. Nothing like the profits shown by lamb and hog feeders have been garnered, but moderate margins of $1 to $2 per hundred pounds have been obtained between cost and fat cattle prices.

Total supply at the leading markets has changed but little in the last two weeks, but the reduction from late January has permitted distinct improvement in the tone of the dressed beef market. The lenten season is at hand and may prevent further progress while it lasts. The result of taking out light feeders last fall is showing up in the present arrivals, most of which are below average in weight, thus reducing beef tonnage. Eastern markets have not been liberally supplied, so that shipping orders have been numerous at Chicago, Omaha and Kansas City and exporters are taking several hundred head every week.

The percentage of steers which show the effects of corn feeding is on the increase, but common and medium grades are still excessive in number and there are practically no long fed steers arriving. Competition from feeder buyers has caused gradual appreciation on the lower grades of steers in the last month, so that few suitable for carcass beef are available at under $7 at Chicago.

With an abundance of light steers, yearlings showing only medium finish are selling at a big discount. Choice yearlings, when available, are selling at the top of the market and feeders are hot after thin, light steers with quality.

Higher prices for lower grades of steers have helped the market for cows and heifers. Veal calves advanced last week. The spring deluge is just ahead, but high prices for lambs will help to support the market for well finished veals.

HIGH PRICES CHECK STOCK CATTLE BUYERS.

Shipments of stocker and feeder cattle from the 12 leading markets have averaged over 50,000 head a week for the last six weeks. High prices, compared with fat steer values, are checking the enthusiasm of buyers, while the advance of 50 cents to $1 in the last month has given owners of thin steers with quality courage to hold, so that the percentage of suitable stockers and feeders in the run has declined.

HOG MARKET STILL BOOMING.

Hog prices continue to ascend and crossed the $11 line at Chicago at the close of the week, with numerous predictions of $12 hogs before long. Receipts have not expanded and eastern buying competition is still lively in the middle west. The total decrease in hog slaughter in the west since November 1 amounts to 1,571,000 head, a reduction of 14 per cent. Domestic consumption of hog meats is as large as ever and exports of meats and lard in the first seven weeks of 1922 totaled 224,000,000 pounds, compared with 164,000,000 pounds in the same period of 1921.

Stocks of hog meat and lard in cold storage in the United States increased only half as much in January as in the same month a year ago and total stocks on February 1 were 542,604,000 pounds, compared with 752,380,000 pounds on the same date last year. Evidently small packers are not loaded with product, as they are still buying freely. Big packers are still bearish on the market and are buying only for fresh meat needs. They claim that hogs packed at prevailing prices show a loss, are indifferent to small reserves for the summer season and predict that the hog run will increase enough in the late spring to enable them to buy on a substantially lower basis. Present prices may not be fully held, but there is nothing to indicate a pronounced break before June.

Stock hogs are being snapped up greedily and there is every indication that production is being expanded as rapidly as possible. The market, however, will not feel the effect of this expansion for a number of months.

LAMB MARKET IN SETBACK.

The lamb market has had its first setback in a long while. Receipts show little change, but many feeders are cashing in early with partly finished lambs. This is subtracting from the supply to be marketed later on, so that the break should not be severe. Many shorn lambs are arriving, but the discount is too great to make the shearing operation look attractive. On February 1, 1921, there were 73,082,000 pounds, equal to about 2,000,000 carcasses, of frozen lamb in storage in the United States. Most of this meat was reexported, so that stocks on February 1 this year were only 3,930,000 pounds, a decrease of 2,514,000 pounds during January. British markets have advanced along with the upturn in this country, so that frozen lamb from the southern hemisphere is not coming into the United States.

HORSE RECEIPTS EXCEED DEMAND.

The spring demand for farm chunks has expanded to some extent, but not as much as the supply has increased since December. But for the fact that many farmers wish to buy on credit, the prospects for a large distribution are brighter than for two years. Prices declined $5@10 at Chicago last week, bulk of the desirable chunks selling at $100@165. Demand for big horses broadened at St. Louis.

WOOL MARKET QUIETS DOWN.

The wool market has quieted down considerably in the last few weeks. Quotations on some of the very inferior wools may be slightly lower, otherwise they remain practically unchanged in this country, although declines of 5 to 10 per cent have been noted in both British and Australian auctions. The woolen goods market is reported unsatisfactory, although the American Woolen company has withdrawn many of its lines of fall goods. Woolen mills are less active than they were six weeks ago. Speculative efforts to advance the price of wool have practically ceased.

The Boston market is quoted as follows:

Wisconsin, Missouri and average New England, 1-2 blood, 38@39c; 3-8 blood, 38@39c; 1-4 blood, 36@37c.

Scoured basis:

Texas—Fine, 12 months, $1.05@1.10; fine, 8 months, 90@95c.

Oregon—Eastern No. 1 staple, $1.10@1.12; fine and fine medium combing, $1@1.05; eastern clothing, 85@90c; valley No. 1, 90@95c.

Territory—Fine staple, choice, $1.10@1.15; 1-2 blood combing, $1; 3-8 blood combing, 75@80c; 1-4 blood combing, 65@70c.

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WHEAT RESERVES LIGHT

Unofficial reports upon farm holdings of wheat indicate a total of around 125,000,000 bushels. About 30,000,000 bushels will be required for spring seeding and a carry-over of 20,000,000 bushels on farms would be unusually light. On this basis there would remain 75,000,000 bushels for sale from farms during the next four months. It is estimated also that total holdings of wheat at primary markets, mills and elevators and on farms are only 247,000,000 bushels, compared with 327,000,000 bushels at this time last year.

Receipts of wheat at primary markets have not declined as much as reported light farm reserves would indicate and the visible supply at terminals is considerably larger than at this time last year. These factors are likely to change, however, within the next few weeks.

SOUTHWESTERN DROUGHT BROKEN.

Generous rains have relieved the drought in the southwest and crop reports from that section are much more favorable. The effect of the severe drought extending back to seeding time last fall, however, can not be entirely overcome, no matter how favorable the weather during the rest of the crop year.

The change in the weather in the southwest, together with less urgent demand for wheat on the part of European buyers, has caused a moderate reaction in the market after reaching a new high level on the crop. Statistical analyses still point to import requirements for the rest of the year as large as the known surpluses, if not slightly larger. There is a possibility also that the estimated surplus for Canada may be reduced 28,000,000 bushels, which would create an extremely tight situation. It is estimated that around 50 per cent of the Argentine surplus has been sold for export already and that Great Britain alone must buy 50,000,000 bushels more to supply her needs for the rest of the crop year. Large quantities of wheat are clearing from the Argentine and Australia every week, so that the total quantity on passage is quite large, but stocks of wheat immediately available in Europe are low and European consumers have been buying from North America as well as from the southern hemisphere because wheat from the former would arrive more quickly.

CORN SCORES BIG ADVANCE.

Corn prices advanced fully 20 cents per bushel at the outside over the low point of last November, although there has been a reaction from the top. Prices to producers have advanced even more because of the decline in freight rates since that time. All of the future deliveries for corn at Chicago sold above 70 cents per bushel when the market was at its height, exceeding slightly the prices paid at the corresponding time in 1921.

EXPORTERS AFTER OATS.

The oats market has finally begun to receive a little benefit from export demand, as sales estimated at around 3,000,000 bushels have been made in the last few days. If it continues this grain should advance into higher ground. Domestic distribution also appears to be improving slightly. Primary receipts are expected to decline within the next month, which will necessitate drawing upon the enormous visible supply at terminal markets. Farm reserves of oats as of March 1 are estimated about 380,000,000 bushels, compared with the official estimate of 684,000,000 bushels on the same date in 1921.

SEEDS TO COST LESS.

Prices for vegetable seeds as quoted by mail order retailers and wholesale dealers for the coming spring will be lower in most cases than at any time since 1917, according to a recent report of the bureau of markets and crop estimates. As a rule, wholesale prices for 1922, when compared with 1921, show a greater reduction than do the prices given in retail catalogues. Upon beans, peas, sweet corn, beets, cabbage, carrots, celery, onions and squashes wholesale prices have declined from 15 to 30 per cent in the last year, while the retail prices of the same seeds, with the exception of cabbage, are only 5 to 15 per cent lower than a year ago. Tomato seed prices at wholesale are 10 per cent lower and average retail prices are about 8 per cent lower.

Average prices per pound of standard varieties of vegetable seeds as quoted by reputable dealers and representative mail order retail seedsmen are as follows:

Kind of Seed.	Wholesale Price.	Retail Price.
Beans, dwarf snap	$0.13	$0.37
Beans, garden pole	.15	.39
Beets, garden	.38	1.00
Beets, mangel	.27	.70
Cabbage	2.00	3.15
Carrot	.40	1.00
Celery, domestic	1.60	2.75
Celery, imported	3.00	9.05
Cucumber	.81	1.35
Lettuce	.76	1.55
Muskmelon	.76	1.50
Watermelon	.46	1.05
Onion seed	1.20	2.55
Parsley	.50	1.10
Parsnip	.35	1.00
Peas, garden	.14	.37
Radish	.50	1.10
Spinach	.20	.60
Squash, summer	.75	1.50
Squash, winter	.80	1.40
Sweet corn	.10	.32
Tomato	2.80	3.90
Turnip, English	.35	.95
Turnip, Swede	.27	.90

CASH GRAIN MARKETS.

The range of cash grain prices for the week ending March 1 was as follows:

Chicago—Wheat: No. 1 hard, $1.38@1.43 1-4; No. 2, $1.37 1-2@1.43 3-4. Corn—No. 2 mixed, 58 3-4@64 1-2c; No. 3, 57@63c; No. 4, 55 3-4@62c; No. 2 yellow, 59@65 1-2c; No. 3, 57 1-2@58c; No. 4, 55 3-4@62c; No. 2 white, 58 3-4@64 1-2c; No. 3, 57 1-2@63c; No. 4, 55 3-4@62c. Oats—No. 2 white, 39@45c; No. 3, 34 3-4@40 1-2c; No. 4, 32 3-4@39 1-2c. Rye—$1.00 1-2@1.04. Barley, 60@70c.

SEED MARKETS BRISK.

Spring buying of clover and grass seed will be at its height during March. The advance in prices of these seed has not reduced the farmer's willingness to buy, as other farm products are also higher. Inquiries for clover seed have increased, as buyers fear that the market is getting away from them.

Toledo, per bushel—Prime red clover, $5.75; prime alsike, $12.50; prime timothy, $3.15.

LIMITED DEMAND FOR FEEDSTUFFS.

High prices and favorable weather have curtailed demand for feedstuffs, but values on most classes are firm. Flour mill operations have increased and offerings of wheat feeds are more liberal. With the coming of spring middlings will be wanted on account of the pig crop, while as soon as pasture is available demand for bran usually declines. Middlings may sell at a substantial premium in a month or two.

CHICAGO—Bran, $28.50; standard middlings, $29; flour middlings, $31.50; cottonseed meal, 43 per cent, $47; 36 per cent, $42.50; gluten feed, $32.65; hominy feed, $23; linseed oil meal, $54; tankage, $60.

EGGS NEARLY ON SPRING BASIS

Egg prices lost ground last week. The market has discounted in advance most of the spring increase in production, so that declines from the present level should not be severe, although the season's low point probably has not yet been reached. Cold weather has delayed the increase in the lay, so that combined receipts of eggs at Chicago, New York, Philadelphia and Boston are about 30 per cent lighter than at this season last year, when weather conditions were unusually favorable.

HAY MARKETS SLUGGISH.

Demand for hay remains limited, but loadings are moderate, so that prices are practically steady in most markets. Cold weather is helping to sustain the market. The supply of low grades is extremely high.

CHICAGO—No. 1 timothy, $20@22; No. 2, $19@20; No. 1 clover mixed, $19@20; sample and threshed hay, $8@16; No. 1 clover, $16@18; alfalfa, $11@15; Nebraska and South Dakota prairie, $11@15. Straw: Rye, $13@14; oats, $11@12; wheat, $9@10.

BUTTER MARKET UNSETTLED.

Lighter receipts and reports from country districts of a lighter make failed to restore a firm tone to the market. Eastern markets and Chicago were quoted on about the same basis, so that the amount of intermarket trading was small. Demand is broad and foreign markets have turned firm, so that there is little danger of further imports in the near future.

(Continued on page twenty.)

Plan Federation of Grain Growers

Denver Meeting, Called by Northwestern Producers, Works Out Plan for National Consolidation

By RAY McCLUNG

(Special by Wire to THE FARMER.)

DENVER, Col., March 3.—A national organization for marketing of wheat is projected as a result of the conference held in Denver this week under call by the Northwest Wheat Growers, Associated. The conference included representatives of all of the state wheat marketing associations of the country that are organized on the 100 per cent pool basis. Among the states represented in the meetings in addition to Washington, Oregon, Idaho and Montana, which are combined in the Northwest Wheat Growers, Associated, were Kansas, Oklahoma, Nebraska and Colorado. There also were representatives of the United States Grain Growers, Inc., in attendance. With the states of North Dakota and Texas, which have voiced their intention of joining with the other organizations in the national federation, the new organization, if effected, will start operation with a membership producing between 75,000,000 and 85,000,000 bushels of wheat annually.

While the United States Grain Growers, the national organization with a contract based on an optional plan of pooling or direct selling, is not included in the proposed federation, arrangements for cooperation between the two large societies were one of the results of the conference.

Have Single Purpose.

"The United States Grain Growers, Inc., and the American Wheat Growers, Associated, the organization now in process of formation by combining the existing 100 per cent pooling wheat growers' associations, are each engaged in organizing American farmers for the cooperative and orderly marketing of grain for the benefit of growers only," recites a resolution signed by representatives of United States Growers and all of the other marketing associations attending the conference. "Mutual accusations and charges as to the methods and purposes of each group have been made by representatives and agents of the others to the detriment of each. Resolved, that we recognize the good faith and high purpose of all the various groups engaged in organizing the grain growers of America and that we pledge ourselves to conduct our respective campaigns for membership and the favor of the public in conformity with fair play."

Will Operate This Season.

The proposed national organization, which has been named the American Wheat Growers, Associated, is to be put on its feet as soon as organization work in any two of the middle western states is at such a place that they can competently care for the marketing of wheat.

This stipulation was made by the Northwest Wheat Growers, Associated, inasmuch as none of the central states have yet completed organization work. It is expected that Kansas, Oklahoma and Nebraska all will be in shape to operate prior to the next selling season.

Jewett Heads Committee.

George C. Jewett, general manager of the Northwest Wheat Growers, Associated, was named by the convention as chairman of the committee which will provide plans for the national federation. W. C. Lansdon, lecturer for the National Farmers' union and public representative on the Kansas Wheat Growers, Associated, board of directors, is the second member of the committee and D. G. Murley, president of the Oklahoma Wheat Growers' association, the third member. The committee will hold its first meeting in Kansas City March 9.

All of the middle western organizations were insistent on the employment of Mr. Jewett to head the American Wheat Growers, Associated, which, according to tentative plans, will include a department to care for the export sales of all of the organizations. It also will act to coordinate domestic sales, provide funds to the state organizations from which they may make advances to growers, exercise considerable control over publicity and organization work. The federation will include, when established, a legal bureau and department of statistics and accounting.

"We certainly are going to establish the national federation just as quickly as the states in the middle west are in condition to use it," said Mr. Jewett. "The results of the Denver conference promise an end to the enmities and friction between the organizations of the central states, and if they get down to real work there is no reason why they can not succeed just as have associations in Washington, Oregon, Idaho and Montana. I shall make a survey of the different state offices while in the middle west to determine about when they will be able to operate."

Several plans are being discussed for grouping states in zones. Under the plan most favored now Montana would be taken from the present Northwest Wheat Growers, Associated, and placed with North and South Dakota. Another zone is expected to include Kansas, Nebraska and Colorado and still another Texas, Oklahoma and New Mexico.

Throughout the conference the successful results of the marketing associations of the Pacific states were the subject of comment. Delegates from the far west were besieged with questions regarding their methods of operation and the middle west associations are planning to adopt the systems of accounting developed by the Northwest Wheat Growers, Associated.

U. S. Growers Form Sales Agency.

A Chicago dispatch states that the United States Grain Growers, Inc., March 5, announced incorporation of the United States Grain Growers' Sales company, a subsidiary organization, which plans to operate at once in the Chicago, Kansas City, Omaha, Indianapolis and Minneapolis markets. The subsidiary organization, according to officers of the United States Grain Growers, will be the largest grain selling firm in the world.

More than 110,000,000 bushels of grain will be marketed each year by the selling company on present membership basis, officials said.

"The United States Grain Growers' Sales company will be able to engage in a general grain business and perform all the functions of grain firms in the terminal markets at the present time," President C. H. Gustafson said.

Membership in the United States Grain Growers, Inc., has passed the 50,000 mark, officials said today, and announced that more than 85 per cent of the 50,705 grain growers are concentrated in the states of Illinois, Nebraska, Indiana, North Dakota, Iowa and Missouri.

Fruit Marketing Mixup

To What Extent Are the Crutchfield, Rule and Other Eastern Agencies Concerned?

The North American Fruit exchange of the Pacific coast has just filed articles of incorporation at Olympia, Wash.

In this new fruit marketing agency, Reginald H. Parsons is chairman of the board; W. F. Gwin, president; A. R. Rule, vice president; G. H. White, vice president and treasurer; A. A. Prince, secretary and sales manager; J. Curtis Robinson, general traffic manager, and Warrall Wilson, counsel.

With the exception of A. R. Rule, these men were formerly actively identified with the management of the Northwestern Fruit exchange, controlled by J. S. Crutchfield of Pittsburgh, Mr. Parsons having been chairman of the board and Mr. Gwin former president. A. R. Rule is the new man in the organization and he is identified with the North American Fruit exchange of New York city.

One report has it that Messrs. Parsons, Gwin, White et al. resigned from the Northwestern Fruit exchange because of the growing dominance of the J. S. Crutchfield interests in its management, and that by withdrawing from the older organization and forming a new marketing agency these men can furnish the growers of the northwest with a more direct and less expensive medium of marketing their fruit.

On the other hand, W. F. Gwin, former manager of the Northwestern Fruit exchange, says, according to a newspaper interview in Wenatchee:

"The complete severance of my connection with the Northwest Fruit exchange was a voluntary act. Eastern minority stockholders showed no disposition to interfere with the management and policy of the company, which had chosen to align itself with the growers' cooperative movement. There was no conflict of interest or policy anywhere among the stockholders of the exchange. When two of its largest eastern stockholders became associated together in a large eastern merger, embracing a chain of jobbing and commission houses, they acted in concert to bring pressure to bear on the management of the exchange to force an alliance with the eastern combination. After a fair trial of the new conditions we were compelled to make a squaretoed choice between the service of the one or the other. We chose the side of the growers rather than that of the stockholders of the corporation."

The Crutchfield interests came into the Pacific northwest some 10 or 12 years ago and organized the Northwestern Fruit exchange as a marketing agency for local cooperative associations of fruit growers, and as such have marketed a considerable

(Continued on page eight.)

Tractors Are Put to Many Farm Uses

The Longer You Own One Adapted to Your Farm the More Jobs You Find It Capable of Doing

The farmer's main object in buying a tractor is to be able to do the heavy field work more quickly and easily than it can be done with horses, so that he can farm a greater acreage or handle his present acreage in a more efficient manner. This is the conclusion reached after investigating 191 farms in the corn belt where tractors are used. The investigation was made by the United States department of agriculture.

The report goes on to show that it is noticeable that the men who have owned a machine for one year or less use it as a rule only for plowing and a little belt work. However, there are exceptions to this rule for some who have owned machines less than a year use them on every operation possible, even outdoing the older operators on the total number of different uses. As a rule, the longer a machine is owned and the more experienced the operator becomes the more operations he finds the tractor can be used for.

While there is objection on the part of some to using the tractor on prepared ground, especially after disking, it was seen that nearly 50 per cent of the owners used the tractor for harrowing.

It will be of interest to note that of the operators who use only tractors for disking and harrowing the majority use two-plow machines, the remaining few using three-plows.

In any section it will be found that plowing is the principal operation for which the tractor is used, and that, on the average, the days it is used in draw-bar work will outnumber those devoted to belt work.

The list of operations obtained brought to light some uses that were of a rather unusual nature. To both the experienced and the inexperienced operator a list of these operations, both common and uncommon, should be of interest as suggestive of the possibilities of the tractor.

The largest number of different operations carried on by any one individual was 11, while several others use their tractors for 10 distinct operations. For all farms the operations averaged about five, which seems low considering what individual farmers have done. Among the operations named in draw-bar work are the following:

Plowing.	Listing.
Disking and spading.	
Harrowing and planking.	
Rolling and culti-packing.	
Seeding grain.	Pulling hay fork.
Cultivating corn.	Grain harvesting.
Loading hay.	Manure spreader.
Road grading and dragging.	
Moving buildings.	Building dike.
Clearing land.	Stretching fence.

Among the operations carried on by the tractor in belt work are the following:

Threshing grain.	Baling hay.
Hulling clover.	Sawing wood.
Elevating grain.	Sawmill.
Shelling corn.	Cider mill.
Ensilage cutter.	Feed grinding.
Concrete mixer.	Pumping water.
Pumping for irrigation.	

While many of the above operations are exceptional they nevertheless show the large possibilities of the tractor as a source of power for farm work as well as its adaptability to a large variety of uses.

As is natural to suppose, plowing leads all operations from the standpoint of number of users, with 96 per cent. Over 50 per cent used their tractors as a source of power for sawing wood, in many cases saving the expense of the purchase of a stationery engine to do this work.

Twelve per cent of the operators use their machines for pulling the hay wagon and loader. Labor shortage was principally responsible for the size of this group, for the work was done with one man fewer than when horses were used. Each of the farmers seemed to be pleased with the results obtained and stated that it was his intention to continue the operation another year. All of these operators used the tractor with one wagon and loader. If two wagons and two loaders were arranged so that they could be pulled at the same time, as is frequently done, it would result in still greater saving of time and labor.

Taking into account different soil con-



One man with tractor and double-disk harrow (upper) doing the work of two men and two four-mule teams with two single-disk harrows (lower).

ditions in different seasons of the year, the use of the tractor as well as horses, is not only the most common practice, but in most cases the most practical.

Referring to the belief that enough horses will have to be kept on the farm to carry on the operations for which it is not practicable to use the tractor, an exception might be noted—where it would be cheaper to hire an extra horse or two for a short period to carry the work on rather than keep them at a big expense throughout the year for a short period when needed. It was found that 22 men did just this thing, finding it a great deal cheaper to hire than own. This practice was highly recommended by some, as it saved the team and the necessary cost connected therewith, including investment, harness, feed and care. Help being scarce, many said it was their only way of obtaining an extra man when needed. Most of the men with teams for hire will not hire out their teams alone. It was the general opinion that a man and team could be hired relatively cheaper than a man alone, and this opinion is borne out by the prices paid by the majority of the men who hired.

All the reports emphasized the fact that the great advantage of the tractor lies in its ability to save time at critical seasons when time is precious and the success or failure of an entire crop hangs on the speed with which it is handled.

Summing up the whole problem, the first questions that the prospective tractor owner will naturally ask are:

For what operations can I use the tractor?

In what operation will it displace horses in whole or in part?

How many horses will it displace on my farm?

The above investigation was carried on in Ohio, Indiana, Illinois, Iowa, Missouri, Kansas and Nebraska. In each of these states localities were visited in which a large number of tractors were in operation. Briefly summarized these are the principal points brought out by this investigation:

1. The number of horses disposed of on 141 farms averaging 346 acres on which tractors had been used for a year or over was 2 1-2 per farm.

2. The average number of tillable acres per horse increased from 26 1-2 to 38 1-2 after the purchase of the tractor.

3. Nine operators out of 191 displaced horses entirely on plowing, disking and harrowing.

4. Only 16 operators allowed their horses to stand idle while the tractor was in use.

5. The number of horses displaced by the tractors on these farms was governed by the number it was necessary to retain for corn cultivation and other work current at the same time, which the tractor could not do.

6. The horses remaining on these farms are doing about 75 per cent of the tractive work and the tractors the remainder.

7. The tractor was used for an average of 29 10-hour days per year on the home farm.

8. A three-plow tractor on these farms does the work of 8 1-2 horses, plowing, disking, harrowing and harvesting.

9. After purchasing the tractor the average size of the farm was increased by 22 acres, or 6 1-3 per cent.

10. The principal advantage of a tractor is its ability to do heavy work in a shorter time than it can be done with horses.

Quarantine Against
Peach, Nectarine, Apricot Trees

The peach yellows and peach rosette have both been found to be dangerous diseases in the southeastern part of the United States, and the state department of agriculture has issued a quarantine prohibiting the entrance of peach, nectarine or apricot trees, cuttings, grafts, scions or buds from entering the state of Washington. The quarantine applies to the following states: Massachusetts, Connecticut, Rhode Island, Pennsylvania, West Virginia, Virginia, North Carolina, Tennessee, Kentucky, Mississippi, Ohio, Michigan, Indiana, Illinois, Arkansas, Nevada, Florida and the Province of Ontario, in Canada.

The quarantine is necessary, states E. L. French, director of agriculture, upon issuing the order, because the diseases can not be determined by the most rigid inspection of the nursery stock in question. It is, therefore, considered best to quarantine all shipments coming from states infested with the disease.

SEEK PERMIT TO GRAZE BUFFALO.

Application for a permit to graze 66 head of bubffalo on the national forests near Yakima, Wash., brought out the fact that N. F. Crawford, in charge of grazing there, could find no regulations governing the grazing of buffalo and had to wire to Washington for information. The application was made by Gipson Brothers of the Yakima Meat company, who bought the Conrad herd and brought them to Yakima from Kalispell, Mont., recently. This is said to be the best small herd of buffalo in the United States and was received in fine condition.

Bee Time Again
Think Now About Spring Work

By GEORGE W. YORK.

Spring will soon be here again with all its profusion of flowers that invite the bees with their wonderful nectar-gathering and pollenizing abilities.

No doubt there will be the usual number of people who will want to embark in the business of beekeeping, so perhaps a few suggestions at this time will not be out of place.

If you are unable to secure full colonies of bees near where you live, say, about April 15 or May 1 here in the northwest, the next best thing to do is to send to any responsible dealer in bees. I say "responsible," for you don't want to take any chance on buying disease with your start of bees. And you want to get Italian bees, as they are the best kind. You didn't know that there are other kinds? Oh, yes; there are Carniolan bees from Carniola, Austria; Caucasian bees from the Caucasus mountain country, Cyprians from the Island of Cyprus, Holy Lands from Palestine. Punics from North Africa, etc. But you had better get some of the "old standbys," the Italians.

If you can not get a full colony of bees, either in an eight-frame or in a 10-frame modern hive, then I would get a three-frame nucleus. This latter would consist of three frames of comb with the adhering bees, queen, and any honey or brood already in the combs. Such nucleus is usually sent by express in a light shipping box. When received, each frame is lifted (with bees and all) into an empty hive previously prepared.

If the three-frame nucleus is put into an eight-frame hive, then you would need five extra frames filled with comb foundation; or, if put into a 10-frame hive, then you will need seven more frames with foundation to fill the hive.

I would not advise starting with more than one or two colonies at first. It is better to let your number of colonies increase with your knowledge of the business. You will be more likely to be permanently successful in that way.

Usually, of course, you would hardly expect to get much, if any, surplus honey the first season from a three-frame nucleus, although it has been done, all depending upon the season as to weather conditions, amount of blossoms and the nectar-secretion. One spring I got five three-frame nuclei, and by fall I had increased them to six full colonies, and took off 300 pounds of fine comb honey in the little square frames, thus making 60 pounds from each of the original five three-frame nuclei. Each of the six full colonies had stored enough honey to carry them through the following winter also.

Small Cow Has Large Calf



The picture herewith was sent in by Fred Thoni of Addy, in Stevens county. It shows a grade cow, weighing about 900 pounds, with a calf at her side that weighed 102 pounds at birth. The calf is sired by the registered Holstein bull of the Thoni herd.



What a difference Delco-Light has made"

WHAT a difference it would make in *your* home tonight if at supper you could flood the whole room with bright, clean, safe electric light!

You *can* do this if you have Delco-Light—the very day you install Delco-Light you can have all the things you need to make your home more modern, better, brighter and happier.

You will be able to have electric light at the touch of a button whenever and wherever you want it. No more lamps and lanterns. No more danger of fire. The same kerosene you now burn in lamps and lanterns will even give *cheaper* light when used as fuel for Delco-Light.

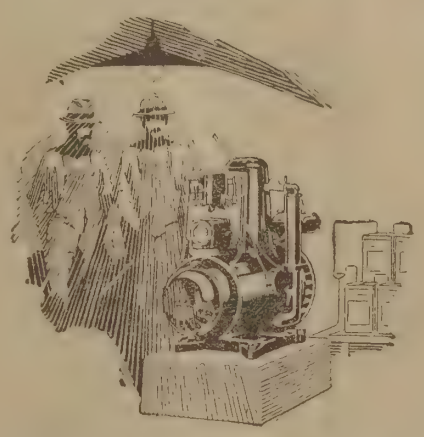
And electric power! Think of the convenience and labor saving! You will have power to pump all the water used in the house and barns—power for the milking, separating, churning, washing, ironing, sweeping and many other tasks that are now done by hand.

Your supply of electric light and power will be thoroughly reliable because it will come from the dependable Delco-Light plant. The air-cooled, valve-in-head, kerosene engine, and the thick-plate, long-lived batteries are giving continuous satisfaction to over 150,000 Delco-Light users.

If you haven't had a recent estimate on Delco-Light for your home, you will be surprised how little Delco-Light will cost at the new low prices and how easily it can be bought on our new time payment plan.

Just ask the nearest Delco-Light dealer to explain these things to you. Or mail us the coupon at the bottom of this page and we will send you our catalog, new prices and details of our easy-payment plan.

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More than 150,000 Satisfied Users

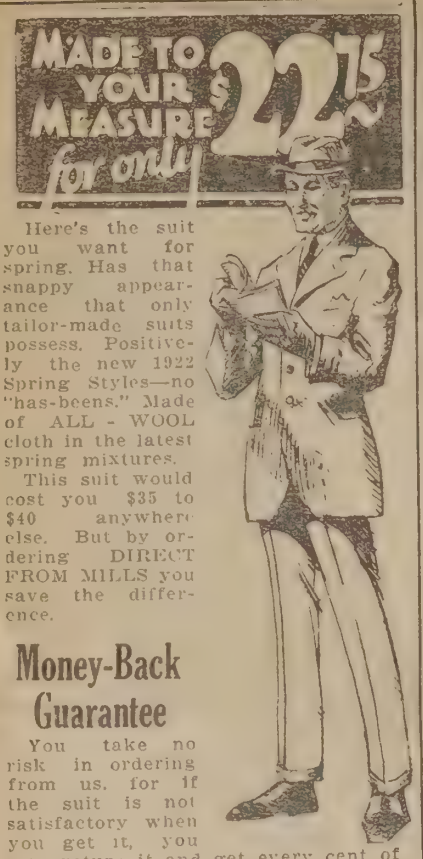
Modern Appliance Co., Seattle, Wn.
Please send me, without obligation, the Delco-Light catalog, new prices and details of easy payment plan. P-4

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Here's the suit you want for spring. Has that snappy appearance that only tailor-made suits possess. Positively the new 1922 Spring Styles—no "has-beens." Made of ALL-WOOL cloth in the latest spring mixtures.

This suit would cost you $35 to $40 anywhere else. But by ordering DIRECT FROM MILLS you save the difference.

Money-Back Guarantee

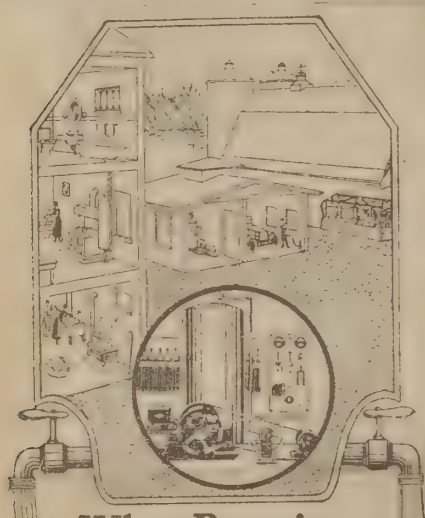
You take no risk in ordering from us, for if the suit is not satisfactory when you get it, you may return it and get every cent of your money refunded. Ask any bank in Salt Lake City about our reliability.

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Write for folder showing styles and samples of fabrics, also Order Blank and Measuring Chart. ALL FREE. Write TODAY!

Jordan Valley Woolen Mills

"Where the Wool Is Grown."
P. O. Box 1109 Salt Lake City, Utah.



What Running Water Means

Barn work easier, house work easier; less time given for chores, more for field work and recreation; more time for the woman away from stove and sink.

Healthier stock, better gardens and orchards. A cleaner farm and house in every way. Fire protection, health protection.

Milwaukee Air Power Water Systems bring all these things to you—*water direct from the well*—and so reasonably.

Write today for Catalog.

FARM UTILITIES COMPANY
281 E. Morrison St.
PORTLAND, OREGON.

TREES AND SHRUBS



Fruit trees budded from bearing orchards. Apple, Pear, Cherry, Peach, Plum, Prune, Apricot, Quince, Grape Vines, Shrubbery, Plants, Raspberries, Blackberries, Logans, Dewberries, Asparagus, Rhubarb, Flowering Shrubs, Roses, Vines, Hedge, Nut and Shade Trees. Carriage paid. Satisfaction guaranteed.

WASHINGTON NURSERY CO.
Toppenish, Washington.
Salesmen everywhere. More wanted.

WRITE OUR ADVERTISERS

It will pay you to write for free booklets and information offered in the advertising columns; and when you DO write, please mention THE WASHINGTON FARMER.

Seed Potatoes

Corrosive Sublimate Treatment

It is far better to use clean seed potatoes which have never been treated than to use seed that are slightly diseased and give them treatment, provided the soil is free from disease. This is the opinion of George L. Zundel, extension plant disease specialist of the Washington State college.

"There are few of our soils that are free from potato disease and it is for this reason that we find it more profitable to treat the seed before planting. Potato growers are losing money every year from diseases, the most common of them being rhizoctonia. Such losses can largely be eliminated by the use of cleaner seed and the proper treatment of tubers before they are planted.

"Corrosive sublimate is the best solution to use for treating seed potatoes. Formaldehyde is used in treating potato seed, but does not control rhizoctonia. Neither will bluestone, which is sometimes used.

To treat with corrosive sublimate use this solution before the potato tubers sprout. Wash the potato as free from dirt as possible, then cover with burlap or some other thick covering, so the potatoes will be kept wet from 24 to 48 hours. This is done in order to start the fungus, or "dirt that will not wash off," growing.

Next soak the potatoes in the solution from one to one and one-half hours, drying as soon as taken out. This solution is made by using four ounces of corrosive sublimate to 30 gallons of water. Use an open vat where possible.

Corrosive sublimate is very poisonous. Mix it in wood, cockery or glass containers. Keep it away from children and don't feed the treated potatoes to stock.

Fruit Marketing Mixup

(Continued from page six.)

portion of the fruit output of this section.

It is generally understood that the Crutchfield interests organized the North American Fruit exchange of New York city as a medium for marketing the fruit received by the Northwestern Fruit exchange and other similar organizations throughout the country, the North American Fruit exchange taking its toll and passing on the marketing to brokers in different parts of the country.

The Skookum Packers' association of Wenatchee, about a year ago, entered into contract with the Northwestern Fruit exchange to market the fruit of its members through this agency for a period of five years, the Northwestern Fruit exchange being possessor of the Skookum brand, which brand was nationally advertised.

Following the organization of the North American Fruit exchange of the Pacific coast the Skookum Packers' association, at a meeting in Wenatchee, adopted a resolution giving the local organizations in the Skookum association the right to contract their fruit to other selling agencies outside of the Northwestern Fruit exchange, reserving only one-car shipments through the Skookum association, thereby aiming to keep within the contract of the Northwestern Fruit exchange. This action is interpreted by some as scuttling the old organization, if that becomes necessary, in order to release the members from the marketing contract with the Northwestern Fruit exchange. At the same time, it is claimed that the Skookum association has not openly broken its contract with the Northwestern Fruit exchange.

Meanwhile, former members of the Skookum Packers' association have reorganized under the name of the United Apple Growers.

Certain pertinent questions arise out of this apple marketing mixup.

It is reasonable to believe that the Crutchfield interests are now withdrawing from the Pacific northwest, after having invested largely in fruit growing lands of this section and already marketing a large portion of the apples grown in the Pacific northwest?

Are the United Apple Growers assured of the complete severance of the Crutchfield interests in the North American Fruit exchange of the Pacific coast?

While Parsons, Gwin et al. have left the Northwestern Fruit exchange and organized the North American Fruit exchange of the Pacific coast, the reasons thus far given are not definite and satisfactory for the fruit growers.

A truthful, simple and understandable statement of the fruit marketing situation would be greatly appreciated by northwest growers.

WHATCOM SHIPS AYRSHIRES.

Two carloads of Ayrshires were sent out of Whatcom county, Washington, late in last November for the vicinity of Santa Barbara, Cal. They were purchased by Henry and Beatrice Gants, proprietors of the H. G. ranch. William Lauckhart of Lynden and several other breeders of that place and Bellingham supplied the cattle. Mr. and Mrs. Gants had been using Ayrshire grades for some years. They liked them and decided to start in purebreds, with the result that they came to Whatcom county for them.

He beat the train to the crossing a good many times

"It's never touched me yet," he explained when they pointed out the risks.

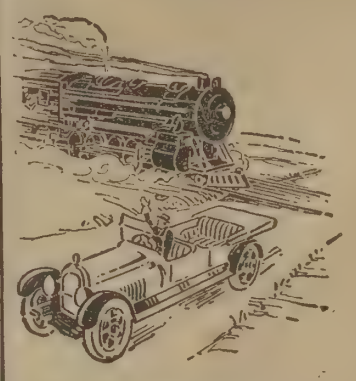
That's the answer a good many people make when they hear that the drug element in tea and coffee often harms nerves and health. They say it's never touched them yet.

Sometimes they only *think* it hasn't.

Wakeful nights, drowsy days, headaches that keep coming more frequently—often are blamed on bad luck when the blame belongs on bad judgment in taking needless chances with harm.

Over on the safe side is Postum, a pure cereal beverage, delicious and satisfying—containing nothing that can harm nerves or digestion. Thousands who used to try their luck with tea or coffee are enthusiastic over having found safety and satisfaction in Postum.

It's worth your while to make the test with Postum for ten days. Postum is a delightful drink for any member of the family, at any meal.



Your grocer has both forms of Postum: Instant Postum (in tins) made instantly in the cup by the addition of boiling water. Postum Cereal (in packages of larger bulk, for those who prefer to make the drink while the meal is being prepared) made by boiling for 20 minutes.

Postum *for* Health

"There's a Reason"

Made by Postum Cereal Company, Inc., Battle Creek, Mich.

Cossack Alfalfa

Is a hardy branch root variety that will stand severe winters and dry summers. It was brought from Russia by Prof. H. E. Hansen. Buy direct from grower. Send today for free sample and booklet.

S. H. HILLMAN, Box 17, Thompson Falls, Mont.

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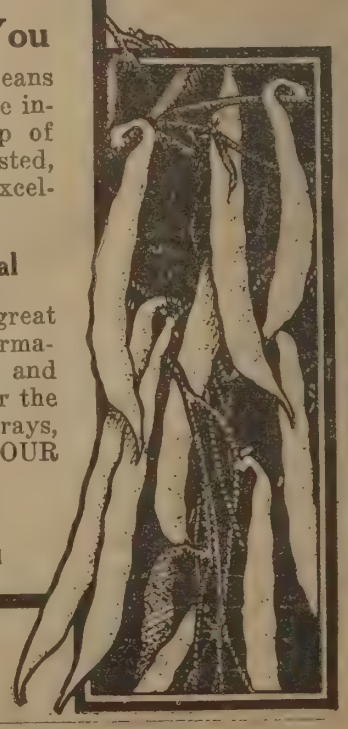
ONE of the very best pole snap beans for home or market. Enjoy the intense satisfaction of raising a crop of these fine beans from our long-tested, pure-bred seed. A score of other excellent varieties are fully described in

1922 LILLY'S Seed Annual

This valuable book contains a great wealth of practical, helpful information about all kinds of vegetables and flowers from seeds proved "Best For the West". Sections on fertilizers, sprays, poultry and bee supplies. Get YOUR copy TODAY.

Ask your dealer or write

Seattle LILLY'S Portland



Would Inspect at Loading Points

Movement Is Launched to Prevent Heavy Losses in Fruit Shipments

Since the following discussion of the problem of inspection of fruit at loading stations was written word has been received from Washington, D. C., that Congressman Summers of this state, who had introduced the bill referred to in this article, has revised the bill in some important particulars. The details of these revisions have not yet been received by The Washington Farmer, but will be published and discussed as soon as possible after receipt.

Northwest fruit growers have sustained heavy losses owing to the alleged defective conditions in which their fruit arrives at eastern cities.

These losses have been especially heavy during the last few years by reason of large consignments of apples and pears being held up or condemned in several large cities on the charge that the fruit contained an excessive amount of poison spray residue.

In some cases the fruit was a complete loss, while in others the authorities were induced to release it after promises to have the growers reduce the use of the spray or to wipe the fruit before shipment. The growers contend that these heavy losses would be obviated by having the inspection made at loading stations in the northwest.

The demand for inspection at loading stations was made a prominent feature of the program of a recent meeting in Spokane of the fruit growers of Oregon, Washington, Idaho and Montana. A committee was appointed to put this matter before the United States department of agriculture as well as before the members of congress from the northwestern states in the matter of additional legislation to put the movement into effect. It is understood that the department of agriculture has agreed to consider the suggestion of the northwest fruit growers and Congressman John W. Summers of Washington state has introduced house bill No. 9952 with a view of affording the necessary legislation. This bill authorizes the secretary of agriculture to establish:

Uniform standards of classification.
An inspection service.
A market news service.
A system of adjustment of disputes.
A system of approved dealers and handlers for farm products.
And for other purposes.

Explaining his bill, Congressman Summers says that the demand that provision be made by which shippers of fruit and vegetables can obtain a United States certificate at shipping point is practically nationwide and that such a system would be of immense value to shippers is beyond question.

The trouble with the state work at shipping points is that no certificate issued by the state has any legal standing outside of the state's boundaries, whereas the controversies over grade and quality of the products shipped usually arise in distant markets and very often in small cities and towns where it is impossible under present authorities and appropriations to maintain inspectors.

This bill introduced by Mr. Summers is wholly permissive in its character, but it is inteneded to be educational and to accomplish the purpose of a regulatory act in bringing about certain reforms in this industry.

Section 3 would enact into permanent law the authority for grading and standardization work now carried on by the United States department of agriculture from year to year in the regular appropriation bill.

Section 4 would give the department of agriculture authority to license as United States inspectors competent persons not regularly in its employ for the purpose of grading in accordance with the standards established by the department. Through this section the department could exercise the authoritative and vital contact with state inspection services, which many of the states are now asking the department to maintain.

Section 5 would put into the permanent law the authority for the present inspection service with a widening of its scope, which would enable the department to make it almost, if not entirely, self-supporting.

Section 6 provides for the punishment of certain offenses, but in case of any complaint or action under this section the recourse would be directly to a court.

Section 7 would enact into permanent legislation the authority carried from year to year in the appropriation bill to maintain a market news service and provide specifically for obtaining information from common carriers, which they are now giving voluntarily, and might at any time refrain from giving. While this news service is of great value to the country as a whole, those who derive an immediate personal financial benefit from it should make some direct contribution to its maintenance. Therefore, it is believed that any permanent legislation providing for this service should have incorporated such a revenue-producing feature as is indicated in the bill.

Under section 8 there could be set up what would amount to a voluntary licensing system for shippers, representatives and agents of every kind. It is believed that the army of the best shipping agencies and growers' organizations would be quick to enroll and that public sentiment would quickly force almost every important fruit and vegetable handler to operate in accordance with these suggestions.

Section 9 proposes to do the same thing for wholesale buyers and shippers who may actually own or contract for the products they handle and do not operate as growers, agents or representatives.

Section 10 aims to revive upon a purely voluntary basis the system of arbitration in vogue during the war under the food administration.

Section 11 provides that those who enroll with the bureau of markets as agreeing to abide by approved rules for the conduct of their business and who subsequently violate the confidence may be punished by publication.

A part of the work to be done under this act is provided for under current appropriations, but it would be necessary to have additional funds to cover the salaries of the force employed in connection with the voluntary licensing of handlers and dealers, the occasional inspection of their books and records, etc.

It is believed that the passage of an act embodying the ideas and principles set forth in this bill would enable the department of agriculture to render a service of the highest importance. The department could cooperate effectively with the best elements in the trade in the accomplishment of the purposes for which their own organizations have been ostensibly formed.

Finally, Congressman Summers believes that this measure will help to stabilize the market and, while preventing controversies between producers and shippers in the west and buyers of fruits and vegetables in the east, it will be the best possible guarantee that the consuming public is getting what it pays for.

Inspection of fruits at loading stations by inspectors working under the authority of the United States department of agriculture will mean dollars and cents to the producer.

Congressman Summers' bill, the main points of which are given above, aims to do just this. The provisions of the bill, however, should be thoroughly considered by the growers of fruits, especially by the cooperative organizations handling fruits for the producer.

THE FARMER is arranging for several articles on this subject of inspection of fruits and other perishable products on the farm at the point of loading to be prepared by producers and by those who are closely connected with the organizations of producers.

To Sell Sows in "Units"

The arrest recently at Sacramento, Cal., of Charles Calloway, president and manager of the C. & H. Hog syndicate, opens another chapter in the story of an enterprise through which it is said gullible investors were defrauded out of $120,000. The syndicate was organized at Yakima to sell brood sows in "units," the profits to accrue from the increase. A year or so ago suit was brought for payment on some of the hogs and the court appointed a receiver, who immediately closed up the syndicate's affairs. Warrants were issued for three officers, but Calloway is the only one who has been apprehended.

A. L. MARSHALL, Bethel, Wash.—"We couldn't get along without The Washington Farmer. We look for it as we do for the newspaper. The farm crops reports are exceedingly valuable, and we wish we could have more of them."

E. JAYNES, Orin, Wash.—I think a lot of The Washington Farmer and I want others to know it.

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GRIMM

Assures You Hardy, Long-Life Crop

Thrives under severest climatic conditions and extreme temperatures.

Powerful Soil Improver
Producing abundant nitration and humus.

Drought Resisting
No farm crop does better under summer drought conditions.

Largest Yield
Tests prove it outyields common one to two tons per acre.

Best Hay Crop
Most palatable, most nutritious of farm crops.

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Stands more abuse, makes later pasture than any other variety.

Prosperity
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Write at Once
for samples and prices.

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Blackfoot, Idaho.

LOST If you can't locate a thing, it might as well be lost. Maybe the very thing you want is offered on our "Want Ad" page in this issue.



FISK TIRES

RED-TOPS proved their merit—sales grew five-fold

IN a mountainous region in a Southern state, where there is not a single good road in four counties—

—Fisk Red-Tops have increased in sales five-fold in three years.

—Because they gave remarkable service, where other tires were ground up and torn to pieces on the flinty shale and racked highways.

This is only one of the many instances where Red-Tops won out against all competition on merit alone.

Comparison tells the story

LIVESTOCK AND DAIRY

Dairy Questions Answered

How to Make Cheese at Home--Bitterness in Cream --Feeding Sugar Beets to Milch Cows.

By A. B. NYSTROM.

I would like to know how to make cheese at home. Can a lard press be used? How do you keep it from spoiling? How long can you keep cheese before it gets too old or can you keep it from getting old? Can it be made in a wash-boiler? Do you cut it with a butcher knife if you don't have cheese knives? What do you color it with?

Waitsburg, Wash. MRS. F. M'K.

Farmers' Bulletin No. 1191 of the United States department of agriculture gives specific directions for making cheese at home. A lard press can be used in cheesemaking, but it is sometimes difficult to get a continuous pressure with such a press. An ordinary lever press is as good as any. Cheese does not spoil readily when it is properly made and paraffined. A wash-boiler may be used for a vat. It should be placed in hot water and the heat applied to the water rather than directly to the milk. A butcher knife may be used for the vertical cutting and a piece of fine wire properly bent may be used for the horizontal cutting. Cheese is colored with a special cheese color that can be obtained at dairy supply stores and at some drug stores.

The following summary is taken from the bulletin referred to:

1. Use clean, sweet milk for cheesemaking.
2. Heat milk to 86 degrees F. Use a thermometer to determine the temperature.
3. Add cheese color if desired, using one-half teaspoon to 100 pounds of milk. Do not use butter color.
4. Add rennet, first diluting it with a pint of cold water. Use one-third ounce (two teaspoons) to 100 pounds of milk. Stir rennet in thoroughly, then leave milk and container undisturbed for 30 minutes.
5. Cut the curd when sufficiently firm. Do not crush or break it.
6. Stir the curd gently for 15 or 20 minutes.
7. Heat at the rate of 2 degrees in five minutes, until the temperature reaches 100 degrees F. Stir while heating.
8. Allow curd to remain in whey at 100 degrees F. until firm and until acid enough has developed. Do not let curd mat together.
9. Sufficient acid has developed when the curd will form strings one-fourth to one-half inch long on a hot iron.
10. The curd is firm enough if a handful of it pressed together between the hands falls apart readily when the pressure is released.
11. When the curd is firm and sufficient acid has developed draw off the whey and put the curd on a draining rack. Do not let the curd form into pieces larger than a hickory nut. Keep the curd warm while on the rack.
12. When the curd forms strings from three-fourths to one inch long on a hot iron add salt at the rate of three ounces for 10 pounds of curd.
13. Have the curd at a temperature of about 85 degrees F.; put it into a hoop and apply pressure gently.
14. Dress cheese, return it to the press and apply full pressure for 24 hours.
15. Place the cheese in a curing room at at temperature of between 50 degrees and 60 degrees.
16. While curing turn the cheese daily for two weeks, then twice a week. Paraffin cheese when two weeks old by dipping it in paraffin heated to a temperature of 240 degrees F.

* * *

Am using milk from a cow that has one teat that gives bloody milk. Also cream is so bitter that no butter can be made from it. Cow isn't bred and has been milking most of a year. Is this milk fit to drink? INQUISITIVE.

Cows that do not freshen within a year from previous calving very often give abnormal milk with a salty taste. It is also hard to churn. Bitterness, however, does not usually appear unless there is some contamination. This may come from a diseased gland, which may also produce bloody milk. If the udder is sensitive to manipulation there are probably internal sores and the milk should not be used until the animal is examined by a veterinarian.

Bitterness may also be caused by organisms that get into the milk after it leaves the cow. Thorough sterilization of all utensils will control this. The difficult churning is caused by the advanced stage of lactation, causing small fat globules, and also dry feed, which makes the fat hard. Giving succulent feed, such as silage or roots, will tend to correct this. After the cow freshens there will be no further difficulty.

* * *

I would like to know if sugar beets will take the place of grain for milch cows. If so, how many pounds to the cow per day? J. D. D.

Everett, Wash.

Root crops as a rule are considered watery concentrates. That is, the dry matter in them is highly digestible and there is very little fiber present. Under some conditions it is safe to replace about half of the grain ration by the use of sugar beets. However, since sugar beets are high in carbohydrates and since grain rations are often just the reverse, high in protein, it may not be wise to make this substitution. You can feed from 30 to 50 pounds of sugar beets as a daily ration to the average cow. More to the large cows that produce heavily. Cut the grain to half on the lowest producers as you increase on the beets. Your best producers should continue to get the full grain ration in addition to the beets. It pays to feed good cows well.

Must Standardize

Inefficient Dairying Unprofitable

There are too many haphazard methods being practiced in the dairy industry, in the belief of E. G. Woodward, until recently head of the dairy department of the State College of Washington. Professor Woodward urges a standardization in dairy farming, and emphasizes as the first essential in this movement the elimination of the low-producing cow. He doubts whether any cow producing less than 250 pounds of butterfat in a year should be kept in a dairy herd. Notwithstanding the fact that many herds throughout the Pacific northwest have production averages far above this amount, he declares it to be his belief that comparatively few herds except specialized herds, are made up of cows all of which produce 250 pounds or more. On the common farm the producer of a less amount is common, if not actually in the majority.

Another point recommended is that the



Homeward Bound— Eager to be Milked

Cows with healthy udders and teats "give down" the milk easily, freely. The slightest injury or discomfort means a sure milk-loss.

Bag-Balm pays for its slight cost many times over in providing a sure, quick relief from udder troubles. Sores, chaps, cuts, scratches, inflamed tissues, hardened or swollen teats, caked Bag—an abnormal udder condition is quickly cleared up by this great penetrating, healing ointment.

Big 10-ounce package at the reduced price of 60c, at general stores, feed dealers, druggists.

DAIRY ASSOCIATION CO., INC.
Lyndonville, Vt.

BAG BALM
MADE BY THE KOW-KARE PEOPLE

Write for Catalog and full information
DISTRIBUTING
PORTLAND SEED CO.
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TRADE MARK



Spring Is Here

Now come the Pigs—the Calves—the Colts—and the Lambs.

TIME for your work horses and mules to shed their winter's coat.

—TIME to tone them up—give their systems a spring house-cleaning—and drive out the worms.

Dr. Hess Stock Tonic

A Spring Conditioner and Worm Expeller

Your COWS that have long been on winter feed need the system-toning, bowel-cleansing, appetizing effects of Dr. Hess Stock Tonic. Puts them in fine condition for calving. It means more milk.

Your BROOD SOWS will be relieved of constipation and put in fine fettle for farrowing by a course of Dr. Hess Stock Tonic,—which means healthy pigs, and a mother with an ample milk supply to nourish them.

Your SHOATS will be greatly benefited by a course of Dr. Hess Stock Tonic. It drives out the worms—stimulates the appetite and makes them thrive.

Feed it to EWES before lambing time. It prevents fevered udders and scouring lambs. Feed it after lambing time to stimulate the flow of milk, insuring lambs for the early market.

Dr. Hess Stock Tonic contains Tonics for the digestion, Laxatives for the bowels, Diuretics for the kidneys, and Vermifuges for the worms.

Always buy it according to the size of your herd. Tell your dealer how many animals you have. He has a package to suit. Good results guaranteed.

Why Pay the Peddler Twice My Price?

25 lb. Pail, $3.50 100 lb. Drum, $12.00
Smaller packages in proportion.

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owner of cows, whether a specialized dairyman or a general farmer with a small herd, make it a practice to produce the greater part of his feed at home, with the exception of the concentrates. Grains and meals in the greater number of cases must be purchased, but the roughages should in all but exceptional cases be produced at home.

The feeding of the dairy cow is a science. In too many cases all the cows of the herd are given the same quantity of feed, when the amounts given should be definitely calculated for each individual on the basis of her ability to convert it into milk and butterfat. She should be given the maximum of feed that she will convert into these products, but no more. The low producer is often a heavy feeder if given an opportunity, though unable to convert more than a small proportion of the feed that she consumes into milk.

The profitable cow is the one that consumes much feed, possessing the ability to convert it into milk and butterfat instead of allowing it to pass on unutilized or be converted into bodily fat. Each individual should be studied and fed accordingly.

VETERINARY

By DR. S. B. NELSON.

Retention of Afterbirth.—I have had lots of trouble when my cows freshen. They do not clean. Does this always have to be taken off or is there something you could give the cow, after or before freshening, to avoid this trouble? H. S.
Plaza, Wash.

The retention of the afterbirth is generally caused either by excessive weakness in the cow or too great strength. In the first place there is not sufficient tone in the muscles of the womb to cause it to contract and release the attachments of the placenta. If the animal is too strong, we find that there is too much blood sent into the placenta which prevents the blood vessels from twisting and cutting off the supply. Depending upon which of the two causes is responsible for the trouble treatment will be as follows:

In the first case, begin building up the cows prior to the time that you expect them to freshen. This may be a grain feed for a week or two before this is to occur. If, however, they are in splendid good strength, then it is a case of weakening them, for instance, with a purge of one-half pound of epsom salts in two quarts of water, or it may be giving a sloppy food for two or three days before they freshen.

Use Teat Knife.—I have a heifer which freshened January 12. One teat has always been wrong. When I first start to milk her the teat will be full of milk. After milking it out it seems to fill with wind, then you have to wait for the milk to come slowly down from the udder into the teat. She gives as much from that quarter of the udder as any of the others, but it takes fully 15 minutes to get it out.
Seattle, Wash. MRS. R. A. D.

Apparently the trouble with your heifer is that the opening of the valve in the base of the teat is nearly obliterated. This may be remedied by the use of what is known as the teat knife, a small instrument which has a hidden blade. The instrument is inserted, after a thorough disinfecting of it, into the tip of the teat, with the knife hidden. It is pushed up through the valve and the blade is opened and the knife is drawn down, making a slit in the valve. The kife is again hidden, pushed up, turned one-fourth the way around and drawn again. This is repeated until four cuts are made.

Lumpy Jaw—I have a yearling that is in good health and eats heartily. About three weeks ago it got a lump on its jaw and the lump broke and ran some. Is this lumpy jaw and is it contagious? Is such an animal fit for beef? S. M. J.
Deer Park, Wash.

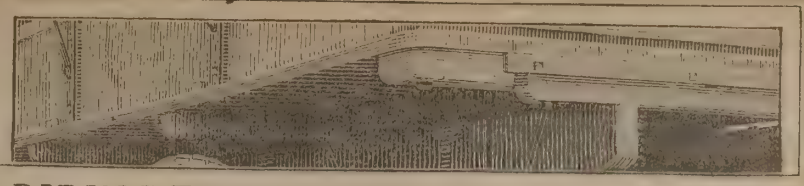
Whenever a lump appears on the jaw and breaks and heals it would make a person rather suspicious that it is lumpy jaw. If you have a number of good cattle it is dangerous to keep this animal on your place. I have always considered, personally, that meat from a lumpy jaw animal is not fit for human consumption.

Try Liniment.—I have a cow that gives lumpy milk. One quarter of the udder seems inclined to cake. She will freshen in April. A. C. R.
Kirkland, Wash.

I would suggest the use of the following liniment, applied to the affected part: Soap liniment, five ounces; tincture of iodine, three ounces; use night and morning after each milking. It might also be of value to give the cow one tablespoonful of fluid extract of phytolacca in a little water, once daily.

Bowel Trouble.—My dog has had bowel trouble for three months and the purging has made the rectum sore and swollen and blood passes from the bowels. What can I do for him? L. S.
Redmond, Wash.

Give your dog five grains of the triple sulpho-carbolates of calcium, zinc and soda and apply carbonated petrolatum to the opening of the bowel.



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POULTRY

Fowl Cholera

By J. W. Kalkus, Washington State College Veterinary Department

Discussing fowl cholera in the United States, a bulletin of the Nevada Experiment station says that the occurrence and distribution of the disease in the United States is a subject upon which opinions have differed widely for many years. The disease has been reported from many localities by poultrymen who are usually of the opinion that it is widely distributed and frequently encountered. On the other hand, the fact that in but a few instances have reported outbreaks been diagnosed by precise method has led many pathologists to doubt its frequent occurrence in this country. A careful investigation of fowl cholera will probably show that it has had a fairly wide distribution throughout the United States during the last 50 years, but that it occurred less frequently than poultry raisers believed. It is widely distributed throughout continental Europe, where the loss is heavy.—Editor.

Fowl cholera has recently made its appearence in Spokane county. A number of chickens from one flock were sent to the college of veterinary science at the State College of Washington and from these a pure culture of the organism which causes this infection has been isolated. This is a very highly contagious disease, which may attack chickens, turkeys, ducks, geese, pigeons and caged birds.

Whenever it makes its appearance it spreads rapidly through a flock and produces a high mortality, the losses frequently running as high as 90 per cent to 100 per cent before the outbreak can be checked. Since the disease is so highly contagious, it is quite likely that it may spread to other flocks and poultrymen generally should know something about the nature of the disease in order that they may guard against its being introduced into their flocks.

As a rule when the disease first attacks a flock it is so virulent in form that a number of birds may die suddenly without noticeable symptoms. In those birds which show symptoms the first thing noticed is a yellowish discoloration of the droppings. This may be followed by diarrhea, the droppings consisting of whitish or yellowish secretations mixed with considerable qualities of thin nucus, or there may be a brownish or greenish color and the droppings may become very fluid in consistency. There is considerable fever and sick birds separate from the rest of the flock, appear dull, dejected and droopy. The wings may droop, the feathers become ruffled and the comb and wattles may assume a dark bluish-red color. In some cases the bluish-red color may also appear on the skin of the abdomen. As a rule the appetite remains fairly good until the bird dies. But occasionally there may be a complete loss of appetite. Death, as a rule, occurs anywhere from a few hours to three or four days, but after the disease has been present in the flock for some time it may assume a more or less chronic form: in such case the birds may live for a week or two. All of the body discharges as well as the blood and tissues of the affected birds are literally filled with the germs which cause the disease. Hence the feed, the litter and water are being constantly contaminated by sick birds and in this way the disease is transmitted to healthy ones. Such infections may be carried from one poultry establishment to another on the clothing, feet and hands of attendants or by dogs, cats and flying birds. Treatment of individual birds is without avail and, therefore, our attention must be directed chiefly toward the prevention of the disease.

Biological products, such as vaccines, have not proven of sufficient value to be generally recommended as a means of prevention. Many such are on the market at the present time and can be used without fear of doing harm, but their value is questionable. Thorough cleanliness, disinfection and preventing the introduction of the infection on premises are the means to be relied upon to prevent the disease. After it has once made its appearance in a flock all sick birds should immediately be removed, killed and burned. The houses should be thoroughly cleaned daily, removing all litter and burning this also. Daily disinfection should also be done by the use of a 5 per cent solution of carbolic acid, compound cresol solution, or some reliable coal tar disinfectant. Feeding and drinking should be so arranged that birds are unable to get into them with their feet. It is also well to add some antiseptic to the drinking water, such as one dram of permanganate of potash to each gallon of water.

Of course a positive diagnosis can not always be made by clinical examination. In the event that the disease is suspected, live sick birds or those that have recently died can be sent for examination to the college of veterinary science, State College of Washington.

The Baby Chick

Requires Care the First Few Days

The first few days in the life of a baby chick are more important from the standpoint of his general well-being than are any other days during his early life. Mistakes in feeding or care at this time very often make the difference between a vigorous, profitable fowl in later days and a weak, useless one.

For the first 48 hours of the chick's life the two most fundamental points to be considered are heat and air. If the hatching has been done in the incubator, the door should be left slightly ajar the first day after the hatching is completed, so that the chicks will begin to harden for the colder temperature to which they will soon be subjected. This first day after hatching the temperature should be kept close about 98 degrees. The brooder, if chicks are not cared for by a mother hen, should make it possible for the chicks to have a temperature of about 95 degrees the first day they are in it. This does not mean that the entire space allotted to the little fellows should be kept at 95 degrees, but that there should always be a retreat where this temperature may be had when the chicks seek it. No opportunity should be given for the chicks to become chilled. In a day or two they will be sufficiently accustomed to their new form of life to get along well with a brooder temperature of about 80 degrees. Before long they will be able to run about where the temperature is much lower, though great care should always be exercised to insure against chilling.

Where the chicks are hatched and cared for by the hen, both they and the mother bird should be confined to quarters to insure against the little ones becoming too cold. There are few things more fatal to the vigor of a chick than chilling temperatures during these earlier days. In fact, a chick should never be permitted to get cold, even though several weeks old.

Fresh Air Needed.

Notwithstanding the fact that air is the most plentiful and the cheapest possession we have, it is a common failing even of professional poultrymen to allow the chicks too little of it. There is probably no other animal that requires as much fresh air, pound for pound or ounce for ounce, as does the baby chicks. Heat must not be sacrificed, but one must not think that he is providing everything the chick needs by merely furnishing plenty of warmth. Air does not have to be cold to be fresh, and sufficient heat must be supplied one way or another to keep the fresh air warm. As soon as possible after hatching, the chicks should be given an open space in which to exercise, but this should be limited and so arranged as to insure their speedy return to the warmth of their enclosure.

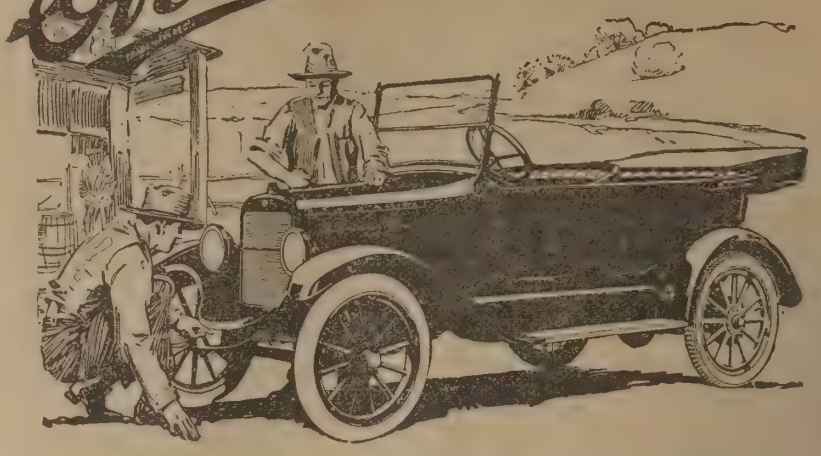
The little chicks should not be fed, at the earliest, prior to 24 hours of age, and preferably not for 48 hours.

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The Orchard

Strawberries

Two Systems of Planting Shown

One of the most interesting booths at the Pacific Northwest Fruit exposition was the one arranged by the Kitsap county berry growers, who had a small bed of strawberries illustrating two systems of planting. L. Finholm and F. D. Lillie were in charge of the booth and explained the methods to inquirers and also told of the success of the North Pacific Cooperative Growers, of which association both men are members.

"We use the matted row system for the Diemen variety," said Mr. Finholm. "This is a one-crop variety and seems to give better results through this type of planting. In the beginning a single row is planted in the spring with plants 24 to 36 inches in the row, and the rows 36 inches apart. The following fall the runners are weighted down with stones so they will take root and start new plants a few inches from the mother row.

"In this way we can get more plants to the acre and it is easier to pick the berries. They are an early bearing variety and a long-distance shipper. The fruit, however, is slightly smaller than some of the more common varieties.

"The Marshalls are always planted in single rows 2 1-2 to 3 feet apart and 12 to 18 inches in the row. Runners are not allowed to grow permanently, but the new plants are either taken up for new planting or destroyed. Everbearing varieties are also set out with the single row system."

Both Mr. Finholm and Mr. Lillie attended their booth during the entire 10 days of the exposition and felt that, although they were more tired at night than if they had been doing the hardest kind of work at home, their efforts were well worth while. They met many strawberry growers and orchardists, from whom they picked up ideas that were invaluable to them.

"It is not alone from the association standpoint that the show was beneficial," remarked Mr. Lillie, "but we have gone around to the men who are attending their booths and gotten acquainted with them whenever we had an opportunity. To me it has been one of the most profitable weeks I have ever spent."

Bee Notes

By GEORGE W. YORK.

It is reported that a beekeeper in New York state was so unfortunate as to have a bee crawl into his ear and sting him there. It continued to crawl deeper into the ear, so that it was finally necessary to have a physician get it out.

Better take sound advice and always wear a bee veil when working with the bees. It doesn't pay to go unprotected. A bee veil enables one to go right along with his bee work, as he knows the bees then just can't stab him in the face or on the head.

Paste for Labeling Tin and Glass.

Take one part honey, three parts flour, with water enough to cook thoroughly into a smooth paste, says H. H. Brown in Gleanings in Bee Culture. To use, leave the paste a trifle stiff, and dip the tip of the brush in water, then lightly over the top of the paste.

This paste will keep sweet a long time and will stick labels on tin and glass.

"Honey Week" in California.

The governor of California issued a special proclamation making the week of February 6 to 11 "California honey week." It was very appropriately the week of the annual meeting of the California Beekeepers' association, held at Visalia. Why not a "Honey week" in Washington? But it would be better for every family in this state just to declare a continuous "honey week" throughout the entire year, and every year.

Increasing Clover Acreage.

The American Farm Bureau federation suggests that the acreage of clover grown be increased everywhere. It has also been advised that beekeepers get busy and try to have grown more of the sweet clovers (Hubam and biennial varieties), as well as alsike clover. These are not only valuable forage crops for farm animals, but their blossoms are superior honey-producers. Alfalfa may also be added, especially in irrigated locations. Beekeepers can do much not only to help themselves in this matter, but also to get their neighboring farmers started right.

PLANT A POLLENIZING CHERRY.

Be sure your plum or cherry plantings include two varieties, unless you are positive that the variety of either which you plant is a self-fertilizing variety. One should know, too, whether the two varieties he chooses, either of plum or cherry, are interfertile, or whether an occasional tree of some other variety must be interspersed to secure a developing bloom. Among varieties successful as pollenizers are the Waterhouse, the Black Tartarian and the Black Republican. The Republican is the best shipping cherry. The Waterhouse commands a good price at the cannery. It is in color like the Royal Ann, but somewhat smaller and softer and is sweet. The Waterhouse is among the very heaviest in yield of the commercial cherries. The long-stemmed Waterhouse is desirable over the short-stemmed.

Gassing Insect Pests

The airplane and poison gas played a large part in the recent World war. There is another world war going on, namely, a war on insect pests of orchard and field. It is not altogether to be wondered at that these two agencies of destruction are being brought into play in this present conflict.

The most successful experiment, and that upon which most of the high hopes seem to be based, was the spraying of a grove of ornamental trees in Ohio from an airplane, which completely destroyed the caterpillars infesting the trees at a single flight. The material used was calcium arsenate carried in a hopper below the plane. As the machine passed over the trees it heavily dusted with the poisonous material a belt of land 600 feet wide. It is reported that 99 per cent of the caterpillars were killed and that the ground, after the attack, was literally covered with the dead.

Now the department of agriculture is at work on a plan for the use of the airplane in fighting the south's ancient enemy, the cotton boll weevil. Millions have already been spent by the government in its fight on the weevil, and billions have been lost by reason of the fact that the boll weevil has not been destroyed. The boll weevil has for generations literally been eating the shirts off our backs and tires off our cars—for cotton, as much as rubber, is the basis of tire construction.

A report, also from Ohio, tells of an experiment in which powdered arsenate of lead was scattered by an airplane over an insect-infested orchard, with good results in eradication.

Unquestionably there are many problems to be solved in this new method of combating insect pests. But powdered poisons have long been used in the control of some insects operating under various conditions. Sodium fluoride, a powder, destroys chicken lice by suffocating them. Ants are destroyed in their ground retreats by the use of carbon bisulphide, a gas that is heavier than air and sinking to their tunnels suffocates them. Likewise, a dust or a gas that would deposit a stomach poison where it would be eaten by the insects should do the work as well as though deposited by the liquid spray method. The problems are to develop the gas or the poison dust that will reach the pest in the manner necessary.

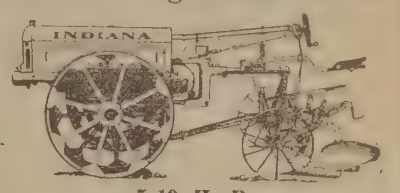
SCALE ON THE CHERRY.

San Jose scale rarely attacks the sour varieties of cherry, but there is a cherry scale that does. The San Jose scale also chooses the variety when working among the plums, the Japanese plums being the varieties most susceptible to its attacks.

COMBAT THE CROWN GALL.

All orchard nursery stock that is found to be afflicted with crown gall should be burned instead of planted.

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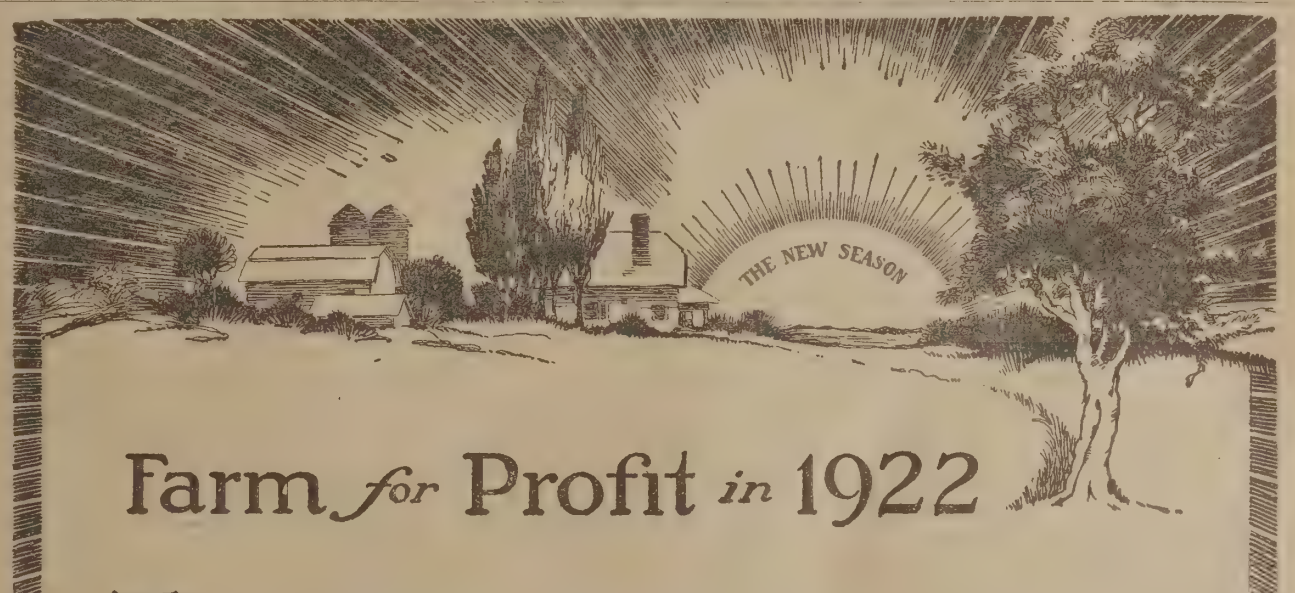


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Farm for Profit in 1922

THE year 1921 did not entangle itself in the heartstrings of the American farmer. It went out under a cloud and he shed no tears. Yet this cloud, like so many of the clouds in life, had its silver lining.

The agricultural ills and ailments of 1921 brought with them their own remedies. At Washington today the governmental forces, wide awake to the vital co-relation of farm and industrial welfare, are fortifying the weak places in the business of farming. The farm public has created a hundred active, vigorous movements, many of them now bearing fruit. Freight reductions, better financing and better marketing conditions, lower labor and equipment costs, legislation tending to higher farm product prices—items like these build up the optimistic outlook for the summer ahead.

For you, the individual farmer, all the factors in the situation center of course on your own acres. In so far as you are a believer in the inevitable return swing of a pendulum, you will apply your best knowledge and the most efficient and modern equipment to make your fields produce bumper crops.

As you come to the spring season you will probably discover the need of one or more new machines and we want to call your attention to the standard popular equipment that makes up the **McCormick-Deering Line,** sold by a good dealer in your community. For reliable machines and equipment, repairs, and ever-ready service, consider the **McCormick-Deering Dealer** fully qualified to serve you.

These
McCormick-Deering
Products are in Demand at this Time of Year:

Tractors
- Titan 10-20
- International 8-16
- International 15-30

Plows—Tractor and Horse
Disk Harrows
Spring and Peg Harrows
Culti-Packers
Drills, Seeders, and Alfalfa Drills
Fertilizer and Lime Sowers
Corn Planters
Corn Cultivators
Beet Seeders
Listers
Engines
Cream Separators
Manure Spreaders
Motor Trucks
Twine
Repairs

The
McCormick-Deering
Dealer Offers You Standard Tractors and the Best-known, Most-complete Line of Tractor-operated Equipment on the Market.

INTERNATIONAL HARVESTER COMPANY
CHICAGO OF AMERICA (INCORPORATED) U S A
92 Branch Houses and 15,000 Dealers in the United States

New Market Law

Explained by Secretary Wallace

Asked to explain the significance of the Capper-Volstead cooperative marketing law, Secretary of Agriculture Wallace made the following comment:

The Capper-Volstead cooperative marketing law, signed by the president, is the result of several years of effort on the part of the farmers to clear up their legal and, therefore, their economic status from a national standpoint.

The new law expressly authorizes farmers and others engaged in the production of agricultural products, including nut and fruit growers, to act together in associations for the purpose of marketing their products collectively in interstate and foreign commerce.

On the other hand, the interests of consumers and the public generally are safeguarded, since the secretary of agriculture is authorized to proceed against an association of this sort if he finds that it is operating in restraint of trade to the extent that prices of farm products are unduly enhanced. For such cases a special proceeding is authorized. The secretary of agriculture will hold hearings and determine all the facts before action is taken in the courts.

These associations may incorporate, or not, according to the wishes of their members, and have capital stock if they so desire. They may also have marketing agencies in common. They must be operated for the mutual benefit of their members, but may also deal in the products of nonmembers, with the express limitation that the value of such products must not exceed the value of the products of their members. It is required that they comply with either of the provisions that no member shall have more than one vote and that dividends shall not exceed 8 per cent.

Farmers have always felt that conditions governing the marketing of their products are essentially different from those governing the marketing of the products of other industries, and that if they are to be on a comparable basis without being deprived of individuality in production, they must have the right to bargain collectively.

The new law expressly recognizes these contentions and greatly reduces the possibility of litigation, which farmers' marketing associations have frequently faced in the past when they have associated themselves together for their mutual benefit.

Wallis Tractor Price Cut

President H. M. Wallis of the J. I. Case Plow Works company has announced a reduction of the price of the Wallis tractor to $995. This includes a three-bottom plow. This same combination sold a year ago for $2023. The present price is the lowest at which this equipment has ever been quoted. Mr. Wallis says that the reduction is made as his company's contribution toward "relieving the frozen channels of agricultural and related business and helping the farmer restore agricultural conditions to normalcy."

ARE YOU READY?

Is your harness ready and your plows, harrows and drill in good shape? It will soon be time to go to the field for the spring work.

FARMERS' WANT ADS

This is the farmers' "want," "sale" and "exchange" department for small advertisements of farmers, including live stock and poultry.

Advertising rates for ads running 1 to 3 times, 10c per word per insertion, with a special rate to Farmer subscribers, as follows: Ads running 4 to 12 times, 9c per word per insertion; ads running 13 times or more, 8c per word per insertion.

All commercial and land advertising 10 cents per word each insertion. Open also to nonsubscribers.

In using these columns advertisers must observe: (1) No advertisements will be inserted for less than $1.00. (2) Every word, number and initial, including name and address, must be paid for. (3) New advertisements, changes of copy or cancellations must reach general office, Spokane, Wash., 10 days in advance of publication date. (4) Cash must accompany order.

Above rates include insertion in The Washington Farmer, The Idaho Farmer and The Oregon Farmer, which constitute the Pacific Northwest Farm Trio, 46 Review Building, Spokane, Wash.

HELP WANTED—Male 3

RAIWAY MAIL, GOV'T CLERKS,-CARRIERS; $125-$200; experience unnecessary. Particulars free. Write Mokane Institute, Dept. A28, Denver, Colo.

AGENTS WANTED 9

AGENTS—MASON SOLD 18 SPRAYERS AND auto washers one Saturday; profits $2.50 each. Square deal. Particulars free. Rusler Co., Johnstown, Ohio.

SITUATIONS WANTED—Male 21

WANTED — TO MANAGE ON SHARES, stocked dairy. Alfred O'Hara, Denison, Wash.

FRESH FOOD PRODUCTS 51-1

HONEY BRAND HONEY, PURE, LIGHT, thick and good flavored, from alfalfa and sweet clover. One 60-lb. can, $7.50; two for $14.50. Write for circular and prices in pails. Salesmen wanted. Oliver Sires, Wapato, Wash.

WHITE ALFALFA, SWEET CLOVER honey; 1 60-lb. can, $7.50; 2 60-lb. cans, $14.50; six 10-lb. cans, $8.50; three No. 10 pails, prepaid third zone, $5.50. Wells D. Rose, Sunnyside, Wash.

HAPPY HOME HONEY FROM BLOSSOMS of alfalfa and sweet clover, in liquid form; 6 10-lb. pails, $8.50; 1 60-lb. can, $7.50; 2 cans, $14.50, at Mabton. H. N. Paul, Mabton, Wash.

HONEY,—FINE QUALITY ALFALFA SWEET clover; 60-lb. can, $7.50; 2 cans, $14.50; three 10-lb. pails prepaid, second zone, $5. Harry Fisher, Prosser, Wash.

3-POUND BOX ABSOLUTELY BONELESS codfish, fine white, new catch fish, delivered by mail, $1. Coffin Fish Co., Seattle, Wash.

HONEY—LIGHT AMBER HONEY, LIQUID form; one sixty-pound can, $7; two cans, $13.50. A. L. Traner, Touchet, Wash.

FINEST ALSIKE CLOVER HONEY, ONE sixty-pound can, $7.50; two cans, $14.50. Roy Selwyn Wilson, Buhl, Idaho.

WORLD'S BEST CLOVER HONEY, 60 pounds, $6.15; two 60s, $12. Browne, Box 499, Twin Falls, Idaho.

MISCELLANEOUS—FOR SALE 60

TOBACCO—KENTUCKY FINEST CHEWING, 10 lbs., $3; smoking, 10 lbs., $2; 20 lbs., $3.75. Producers' Exchange, Mayfield, Ky.

MISCELLANEOUS—FOR SALE (Continued) 60

SASH AND DOORS—O. B. WILLIAMS CO., 1943 First ave., So. Seattle. Chicken house sash, 20" wide by 25" high, 80c; a dozen different sizes in stock for immediate shipment. Skylights for chicken houses, 36"x40" price, glazed, $2. This is the size recommended by the Western Washington experiment station. We carry them in stock for immediate shipment. Sash and doors for all purposes at lowest prices. All orders receive prompt attention. Our large illustrated catalogue No. 35, showing full line of building material and built-in fixtures for the home, free on request. O. B. Williams Co. Established 1899.

TOBACCO, NATURAL LEAF—SWEET AND mellow hand-picked chewing or smoking, 5 lbs., $1.50; 10 lbs., $2.50; smoking, 10 lbs., $2. Furnish free recipe for preparing. Quality and delivery guaranteed. Farmers' Tobacco Exchange, Sedalia, Ky.

WALL BOARD—WRITE FOR SAMPLE OF Washington plaster wall board; won't warp, won't burn. Manufactured by Washington Building Products company, 6851 E. Marginal Way, Seattle, Wash.

PIPE — NEW AND SECOND-HAND, ANY size; low price; standard grade roofing paper at a big saving; belting, all piles, all sizes, cheap. Write Alaska Junk Co., S120 Adams st., Spokane, Wash.

E. Z. BUILT SILO, ERECTED IN SECTIONS; has double walls with 6-inch air space; freeze proof; built of fir lumber; strong, durable and low priced. J. F. Jacobson Lumber Co., Tacoma, Wash.

WE ABSOLUTELY SAVE YOU MONEY ON groceries and general merchandise; prompt and careful service. Write today for our free catalog. Jordan-Lawler Co. Box 615T, Spokane.

CEDAR CHESTS DIRECT FROM FACTORY to your home; Tennessee cedar, solid copper trimmings. Write for catalogue. J. W. Higgins & Sons, 1912 Gilsan st., Portland, Ore.

TOBACCO—KENTUCKY HOMESPUN, NATURal leaf. Chewing or smoking, 2 years old. Ripe, wild, strong, 10 lbs., $3; 20 lbs., $5. Maddox Bros., Dept. 50, Mayfield, Ky.

TOBACCO, NATURAL LEAF, FOR MILD SMOking; 10 lbs., $1.50; 20 lbs., $2.75; will furnish free recipe for preparing. Leaf Tobacco Exchange, Mayfield, Ky., Star Route.

LEAF TOBACCO, 3 YEARS OLD, PAY FOR tobacco and postage when received. Chewing, 5 lbs., $1.50; smoking, 6 lbs., $1. Farmers' Grange, No. 92, Hawesville, Ky.

HOMESPUN SMOKING OR CHEWING TObacco, collect on delivery; 5 pounds, $1.50; 10 pounds, $2.50; 20 pounds, $4. Farmers' association, Paducah, Ky.

RATS, MICE POSITIVELY EXTERMINATED. Send $2 for proven method, satisfaction guaranteed. Hanson, 2720 State st., Everett, Wash.

TOBACCO — KENTUCKY'S PRIDE; RICH, mellow chewing, 10 lbs., $3.25; smoking, 10 lbs., $2.50. Farmers' Club, Mayfield, Ky.

HOMESPUN CHEWING AND SMOKING TObacco, 5 lbs., $1.25; 10 lbs., $2.50; 20 lbs., $4.25. Farmers' Union, Mayfield, Ky.

JOHNSON'S PACKAGE BEES. QUEENS. Write for remarkable prices. 165 Raymond ave., San Jose, Cal.

MISCELLANEOUS. 61

1917 FORD FOR TRADE—REGISTERED RED Poll cattle preferred. Ben Ulrich, Route 2, Rosalia, Wash.

MACHINERY—For Sale 93

FARM MACHINERY—WILL SELL TO FARMers or dealers over stock of International, John Deere, and Moline plows, including J. D. 3 and 4 bottom power lift tractor plows, harrows, cultivators, pulverizers, drills, mowers, binders, fanning mills, corn planters, wagons, etc.; some 40 per cent below factory cost. Eastern Oregon delivery. Name your requirements for special prices. J. & F., 600 Chamber of Commerce, Portland, Ore.

TANK TYPE TRACTOR BARGAINS—CLEtrac rebuilt model "H," 12-20, $850; Cletrac, nearly new "W," guaranteed, $1100; Cletrac, new "H," big bargain at $1100. Oldsmar garden tractor demonstrator, $395. O. V. Badley, 425 E. Mor., Portland, Ore.

THE WRIGHT PLANTER—A NEW MACHINE, will positively drop any number of sugar beet per foot you may desire to plant, with fair accuracy. Free illustrated booklet. Geo. H. Wright, 1925 Pacific avenue, Spokane.

STOVE REPAIRING. 128

WRITE MYER RUBENS, SPOKANE, ABOUT stove repairs, welding broken parts, nickle plating.

RABBITS and HARES 173

RABBIT MAGAZINES — RABBITCRAFT, Iowa; Outdoor Enterprises, Mo.; Hares and Rabbits, Ohio; Poultry and Pets, Illinois; Rabbit Breeder, California, all for 50c, coin. Harvey Norris, Goldendale, Wash.

CLOSING OUT MY FUR-BEARING HIMAlaya rabbits, $1.50 each. Cloyd Clark, La Grande, Ore.

POULTRY (Baby Chicks) 174

WHITE LEGHORN AND ILL-A-HEE BARRED Rock chicks—Buy chicks this year that live and grow and are bred to lay. Butler White Leghorns and Ill-a-hee Barred Rocks are known for high average flock production. Before ordering elsewhere, write for circular telling how our breeding methods produce 200 flocks for our customers. All stock trap nested and pedigreed. Also get our prices on breeding cockerels and hatching eggs for each breed. Address Butler Poultry Farms, or Ill-a-hee Poultry Farm, Jennigs Lodge, Ore.

"FRESHLAID" WHITE LEGHORN CHICKS have the qualities you want; vigor and scientific breeding for the heaviest egg production; every "Freshlaid" male is from a high record hen. Freshlaid Farms is one of largest and oldest chick plants in the Inland Empire. There is a real demand for "Freshlaid" chicks, especially from our old customers. We are sold out until May 1. Write at once if you wish May chicks. May chicks make ideal winter layers. Catalog. Freshlaid Farm, Colfax, Wash.

CHICKS FROM LEGHORN HENS. 228-EGG average; reduced price. Acme Poultry Farm, Cottage Grove, Ore.

POULTRY—Baby Chicks (Continued) 174

YESTERLAID EGG RANCH, KENT, WASH.—Dear Sir: Am more satisfied every day with the chicks received the 17th. They are certainly husky and while Feb. chicks may be supposed to lack vigor, it is certain yours lack nothing. May I increase my order 150 chicks to be delivered with my March 22d order. Irving Kunz, Hoquiam, Wash. Dear Sir: The chicks I got from you the 20th of May are fine. Please let me know your prices for 1922, as I am in the market again for a good order. A. E. Rackow, Hollister, Idaho. Dear Sir: Please let me know the date my 1000 chicks will be delivered. The chicks you sent me in 1921 are just wonderful. Got 70 per cent lay all winter. H. H. Coffey, Chehalis, Wash. We hatch 12,000 of these kind of White Leghorn chicks every 5 days from our own eggs. All sold out until May 1st. Orders for hatching eggs can be filled any time. Largest, most modern and up-to-date trap nest poultry ranch in the world. Yesterlaid Egg Ranch, Kent, Wash.

THE PROGRESSIVE HATCHERY — BABY chicks from vigorous range bred stock; trapnested S. C. White Leghorns, $20 per 100; selected S. C. White Leghorns, $18 per 100; S. C. R. I. Reds and Barred Rocks, $25 per 100; safe delivery of live, vigorous chicks, full number ordered; absolutely guaranteed. Send for circular of special matings and hatching eggs. 1534 East 12th North, Portland, Ore.

BABY CHICKS FROM PETALUMA ELECtric incubator have "pep" that surprises customers. Electricity is life. Modern poultrymen are rapidly adopting our system with splendid results. Safe, efficient, economically better chicks. Hatch for yourself or get chicks from hatcheries using Petaluma incubators. Write for our free catalog. Petaluma Electric Incubator Co., Petaluma, Cal.

EBORALL'S STRAIN WHITE LEGHORNS. Our hatch of 2300 chicks per week is now booked for Feb., March and April, principally to old customers. Your inspection is invited at all times. We are now booking chicks for May at $14 per 100. Write for circular. Crystal White Poultry Farm, McMinnville, Ore. Box. 33.

WHITE LEGHORN BABY CHICKS FROM heaviest laying stock. Booking orders now for spring, 1922, delivery. Safe arrival live, vigorous chicks guaranteed. Prices on request. Reliable since 1898. Must Hatch Incubator Co., 445 Seventh st., Petaluma, Cal.

TRY OUR PARCEL POST PACKAGE—KEEP the old hen busy. We will ship you first-class baby chicks, postpaid to your door, direct from the hatchery and guaranteed all alive. Price, $4.50 per 25; $8 per 50. For delivery April, May or June. Order now. The White Hatchery, Petaluma, Cal.

UNION DISTRICT HATCHERY IS NOW booking orders for the best thoroughbred baby chicks at the right price. White, Buff and Brown Leghorns, Rhode Island Reds, Black Minorcas, Anconas and Barred Plymouth Rocks. F. & L. Downing, Los Gatos, Cal.

BABY CHICKS, HATCHING EGGS—FROM Hoganized hens, well mated. White and Brown Leghorns, R. I. Reds, Barred Rocks. Safe arrival guaranteed. Order early. Write for circular. Stubbe Poultry Ranch & Hatchery, Box 67J, Palo Alto, Cal.

WHITE ROCK BABY CHICKS, "DANIEL'S IDEALS," from our own trapnested stock entirely. Write for prices and dates, also eggs for hatching. Free catalog. Ideal Poultry Yards, Hoquiam, Wash. Star Route No. 25.

BABY CHICKS FROM TANCRED AND HOLlywood strain; heavy laying White Leghorns, mated to cockerels from W. W. experiment station hens, 265-314 egg record; $19 per 100. Wax's Poultry Farm, Kent, Wash.

BABY CHICKS — REDUCED PRICES ON White Leghorns, Reds, Barred Rocks, White Rocks, Minorcas, and Anconas; booking orders now; postal secures free catalog. Write today. C. N. Needham, Salem, Ore.

BABY CHICKS FROM TRAPNESTED WHITE Leghorns of superior quality; 14 years breeding for egg production. $18 per hundred. Chas. L. Perkins, 1337 Burrage, Portland, Ore.

BABY CHICKS, S. C. RHODE ISLAND REDS, $22.50 per 100; S. C. White Leghorns, $18 per 100; March chicks all sold. Maple Brook Poultry Farm, Southworth, Wash. Box. 2.

BABY CHICKS — WE GUARANTEE OUR chicks to be from the highest producing hens in Petaluma. Write for further information. The White Hatchery, Petaluma, Cal.

WHITE LEGHORN CHIX, FROM OUR FREE range selected heavy laying breeders; after May 3d, $12.50 per 100. Chandler Poultry Farms, Lebanon, Ore.

TANCRED STRAIN WHITE LEGHORN BABY chicks, $18 per 100; eleventh season; incubator capacity, 18,000 eggs. D. A. Gillette, R. 4, Yakima, Wash.

BABY CHICKS, COCKERELS, SINGLE COMB White Leghorn; heavy laying strain. Grape Lane Poultry Farm, Turner, Oregon.

BABY CHIX—REDS, ROCKS, WHITE ORpington's and White Leghorns. Hansen's Poultry Yards, Olympia, Wash.

WHITE LEGHORN BABY CHICKS. CIRCULAR on request. San Jose Poultry Yards, San Jose, Cal.

HOGANIZED WHITE LEGHORN CHICKS and eggs; guaranteed. Mrs. Arp, St. John, Wash.

Leghorns.

"HENACRES" 8 WEEKS' OLD PULLETS; March or May hatched; big, healthy, vigorous bred to lay. Booking orders now. 6000 to sell, $1.50 each or 500 for $700. Satisfaction guaranteed or money back. Baby chicks for February, March and April all sold to old customers. May chicks, $22 per 100; $200 per 1000. June, $16 per 100; $140 per 1000. Safe delivery guaranteed. Hatching eggs, $2 per 15; $9 per 100; $80 per 1000. "HENACRES" Leghorns are known all over the northwest. Ask your neighbor. Illustrated catalog and booklet on poultry management free. "HENACRES," Box A, Prosser, Wash.

PURE BRED S. C. WHITE LEGHORNS—ALL breeding hens and pullets of trap nested strain; carefully selected for vitality and standard requirements; eggs, $1.50 for 15; $8 100; baby chicks, $18 per 100; safe delivery guaranteed. A few cockerels from 280 to 304 egg hens, $3. to $5 each. Frank Volland, Rt. 1, Kennewick, Wash.

POULTRY—Leghorns (Continued) 174

SINGLE COMB WHITE LEGHORNS (TANcred strain); selected heavy laying second and third year hens mated to cockerels from 250 to 275 egg trap nested dams; hatching eggs, $1.50 per 15; $7.50 per hundred; chicks, $18 per hundred, safe delivery guaranteed. Oaklawn Poultry Farm, Hillsboro, Ore.

TRAPNESTED WHITE LEGHORN BREEDING stock and setting eggs; famous Carnation high record stock; pedigreed breeding for heavy winter layers. Improve your flock by adding Carnation stock. Ernest W. Raush, Carnation Poultry Farm, Kent, Wash.

PRIZE-WINNING S. C. BROWN LEGHORN (light strain), single comb White Leghorn (Tancred strain); baby chicks, $15 per 100; order now. Satisfaction and delivery guaranteed. G. R. Lumberg, Springdale, Wash.

BUFF LEGHORNS EXCLUSIVELY; EGGS, chicks, cockerels; proven and acknowledged leaders of their kind for laying and exhibition. Mating list free. R. Stromquist, Tigard, Ore.

SINGLE COMB BROWN LEGHORNS; BEST winter layers. Pacific international prize winners. Cockerels, $3; eggs, $1.50 per 15. Circular free. J. E. Dickerson, Parma, Idaho.

300-EGG AVERAGE HOLLYWOOD WHITE Leghorns, 4½ lbs., as pullets, mated to cockerels from 300-eggs strain; eggs, $1.75 setting, $10 hundred. L. P. Young, Elltopia, Wash.

FORD'S BRED-TO-LAY S. C. WHITE LEGhorns. Hatching eggs, $2 per setting; $8 per 100; special matings on request. W. A. Ford, Umatilla, Oregon.

WHITE LEGHORN COCKERELS, $5 TO $7.50; vigorous breeding hens, laying pullets, $1.50, 220-240 stock. Watterson Pullet Farm, The Dalles, Ore.

S. C. WHITE LEGHORN BABY CHIX FROM trap nested, Hoganized hens; also cocks and cockerels. J. Panck, Sherwood, Ore. R. 1.

THOROUGHBRED WHITE LEGHORN SETting eggs, postpaid fourth zone, $8 hundred. Washbond Fruit Farm, Newberg, Oregon.

WHITE LEGHORNS, TRAP NESTED STRAIN, hatching eggs, baby chicks. Write us. Washington Poultry Farm, Hartford, Wash.

S. C. BROWN LEGHORNS, SHOW BIRDS, eggs and cockerels; reasonable prices. Harvey Bean, New Plymouth, Idaho.

S. C. W. LEGHORN HATCHING EGGS, HOLlywood strain; six dollars per hundred. Mrs. Rominger, Underwood, Wash.

BROWN AND BLACK LEGHORN SPECIAList; contest and show winners. Clifton Dickerson, Silverton, Ore.

SINGLE COMB WHITE LEGHORN HATCHing eggs, $1.50 per 15. Edw. W. Meyer, Pullman, Wash.

PRIZE BUFF LEGHORNS; EGGS 15C EACH; cockerels, $2. C E. Cleveland, Stanfield, Ore.

Barred Rocks.

FREE MATING LIST, DESCRIBING OUR ideal Barred Rocks; 337 1sts, 10 specials for 1921. High egg record, 303 eggs; average egg record 229 eggs. Jacobson's Poultry Yards, 3596 Tacoma ave., Tacoma, Wash.

HATCHING EGGS, OREGON AGRICULTURAL college Barred Rocks; choice pen, $2 per 15; utility stock, $1.50; great layers. J. M. Steen, Lebanon, Ore.

O. A. C. STRAIN BARRED ROCKS; EGGS, $6 hundred; chicks, $25 hundred. The Idle Hour Poultry Farm, McCoy, Ore.

HUNT'S FINE BARRED ROCKS. WRITE for circular on eggs. W. A. Hunt, Lebanon, Ore.

O. A. C. STRAIN BARRED ROCK COCKerels. Write George Gellatly, Corvallis, Ore.

BARRED ROCK CHICKS, HEAVY LAYING O. A. C. strain. Mrs. E. Hodge, Waterloo, Ore.

FANCY BARRED ROCK COCKERELS $5 UP. J. E. Horton, 2408 Altamont, Spokane.

Turkeys, Ducks, Geese

EGGS FROM PRIZE-WINNING MAMMOTH Toulouse geese, the kind that hatch; 50c each, $45 per 100. Imperial white Pekin duck eggs, $2.50 per 15, $14 per 100. Goslings, ducklings. R. E. Baumgardner, Wenatchee, Wash.

MAMMOTH PEKIN DUCKS, "AMERICA'S finest." New blood this year direct from C. C. Shoemaker; eggs, $2 per setting, $12 per 100. Crystal White Poultry Farm, McMinnville, Ore. Box 33.

EGGS, MAMMOTH TOULOUSE AND WHITE Chinese geese; Mammoth Pekin ducks, pearl guineas, Single Comb Reds. C. O. Johnson, R. 1, Medical Lake, Wash.

GIANT STRAIN PURE BRED MAMMOTH Bronze turkeys, from prize-winning stock. Mrs. C. R. Lowery, Route 4, Boise, Idaho.

MAMMOTH PEKIN EGGS FROM DUCKS that take the prizes. Booking advance orders. Mrs. E. A. Bennett, Salem, Ore.

PURE BLOOD MAMMOTH BRONZE TURkeys, prize winning stock. Mrs. Frank Browning, Route 1, Nampa, Idaho.

THOROUGHBRED BARRED ROCKS, RUNNER ducks, males and females, $2, $2.50, $3; ducklings, hundred, $33. C. A. Muths, Route 1, Box 49, Salem, Ore.

TWO MAMMOTH BRONZE TOMS FROM 38-lb. tom; none better, $12 each. E. A. Goodhue, 416 Mohawk bldg., Spokane.

DUCKS—EXTRA LARGE MAMMOTH PEKIN. Eight eggs, $1.60; save this ad. E. Wilson, Rosburg, Wash.

FOR SALE — MAMMOTH BRONZE. PART wild turkeys. Eleanor Moore, Route 1, Ashland, Ore.

MAMMOTH BRONZE TURKEY TOMS, $15; weight 26 pounds. Harry Smith, Coupeville, Wash.

MAMMOTH PEKIN DUCK EGGS IN SEASON, doz., $2. Mrs. Earl Davis, Elk, Wash.

PURE BRED MAMMOTH BRONZE TURKEYS. S. L. Maltby, Rogerson, Idaho.

Miscellaneous Poultry.

WHITE LEGHORN EGGS; LARGE EASTERN strain; single and double comb Rhode Island Reds; eggs, $1.50 per 15; $7.50 per 100; magnificent dahlia bulbs, over 100 named varieties. Edward C. Brockway, Sunnyside, Wash.

EGGS FOR HATCHING FROM ESTABLISHED laying strain of White Plymouth Rocks, $2 per setting; $10 per 100. Price on stock on application. Chas. W. Brewster, 3514 20th st., Everett, Wash.

PARAMOUNT WHITE WYANDOTTES "BRING home the bacon." Trap nested, pedigreed. Instructive catalog free. No baby chicks. Bayard H. Moul, 1226 Washington blvd., Seattle.

SUPREME WHITE WYANDOTTE COCKERels; bred up for eight years; all birds guaranteed. Price $2.50 and $3. Mrs. Earl Murray, Box 170, Ione, Oregon.

COCKERELS—BROWN AND BUFF LEGhorns, Black Minorcas, Blue Andalusians. Boone Avenue Poultry Yards, E1601 Boone ave., Spokane.

PEDIGREED ANCONA COCKERELS AND hatching eggs from 330-egg strain; eggs, $2.50 per setting. Smith's Ancona Farm, Nampa, Idaho.

(Continued on the following page.)

POULTRY—Miscellaneous (Continued) 174

CHICKS OF QUALITY—HOLLYWOOD, TANcred and commercial strains of White Leghorn chicks from pedigreed males, $20 per hundred. R. I. Reds, Barred Rocks, Black Minorcas and Ancona chicks, $25 per hundred. These prices are for February and March delivery. We sell Queen incubators, Queen brooder stoves, Reliable Blue Flame brooders, Petaluma Electric and Charters' incubators and American brooder stoves. A complete line of poultry supplies and remedies, including leg bands, egg scales, trapnest records, etc. Catalogue free. Queen Hatchery, Fourth and Pine. Elliott 2054. Seattle, Wash.

A FEW CENTS MORE IN BEGINNING MEANS nothing if results are obtained. Our stock pure bred Tom Barron White Leghorns not to be excelled; booking orders for spring chix and pullets; demand heavy. Write for full particulars. All styles and sizes incubators, brooders and stoves. Our 1922 catalogue a valuable book for poultrymen. C. E. Hill Co., 418 11th st., Oakland, Cal.

FREE INCUBATOR CATALOG — INCUBAtors, brooders, oat sprouters, baby chicks, hatching eggs, trap nests, poultry books and supplies. You can't beat the St. Helens incubator in either price or hatch. From 60 to 4000 egg capacity; electric and lamp heated. St Helens Incubator Co., Centralia, Wash.

BARRED PLYMOUTH ROCK COCKERELS for sale—You will find no better on the Pacific coast; $6 each, f. o. b. Hubbard, Ore. If not as represented, send them back and get your money. We guarantee them. Dimick & Waldron, Hubbard, Ore., Route 2.

FOR SALE—SINGLE COMB BROWN LEGhorns, Rhode Island Reds, Mammoth White Pekin ducks, male birds, hatching eggs, baby chicks. Write for mating list. The Up-to-Date Poultry Farm, Established 1907. Arthur W. Wade, Marysville, Wash.

POULTRYMEN—SEND EIGHT TWO-CENT stamps for special three months' trial for the best and oldest journal in the west. The articles and advertisements are of special interest to the poultry breeders. Northwest Poultry Journal, Salem, Oregon.

S. C. RHODE ISLAND REDS—OUR FLOCK IS one of the best in the Willamette valley, and we have hatching eggs from our best matings to deliver to our customers after March first. All baby chicks for 1922 are sold. G. B. Dimick, Oregon City, Ore.

SILVER WYANDOTTES AND SILVER SPANGled Hamburgs, Golden Campines, choice birds for sale. No baby chicks or eggs by the 100. Birds, $5 and up. G. G. Wherry, Payette, Idaho

PURE BRED S. C. RHODE ISLAND RED EGGS for hatching from non-setting, non-fading strain, $3, $5 and $10 per fifteen. Mrs. L. Wham, Double Diamond Ranch, Omak, Wash.

VIGOROUS, HEAVY-LAYING WHITE ROCK breeding stock; pure Fishel strain; hens, pullets, $2, $3; cockerels, $3, $5, $10; prices on quantities. J. B. Axtelle, Hood River, Ore.

SETTINGS FROM BROOK'S HAVEN SINGLE Comb Reds; Redwing strain (Hoganized); bred for color, type, capacity; range raised. Chas. S. Brooks, Underwood, Wash.

SURE HATCH INCUBATORS, BROODERS, prepaid prices. Send for catalog. S. C. Brown Leghorn eggs, chicks. Idahome Poultry Farm, R. 3, Nampa, Idaho.

S. S. HAMBURGS, COCK AND COCKERELS; prize stock, $5; old hens, $3.50; 15 eggs, $3.50; pullets, $3.50. E. E. Enos, W1908 Montgomery, Spokane, Wash.

BLUE ANDALUSIANS; EGGS FOR HATCHing, $2 per setting; heavy layers from beautiful prize winning stock. Mrs. Wm. Rommel, Leahy, Wash.

POULTRY RAISERS, SEND FOR FREE BOOKlet on poultry advertising. The Pacific Northwest Farm Trio, Dept. P, Review bldg., Spokane, Wash.

DOLLARS FOR YOUR EGGS—WE PAY THE top market prices for your eggs and poultry. Daily cash remittances. Western Produce Co., Spokane.

QUALITY BARRED PLYMOUTH ROCKS and Black Langshans, cockerels and cock birds; also a few females; prize winners. B. L. Reser, Walla Walla, Wash.

WHITE LEGHORN AND WHITE ROCK COCKerels; 300-egg strain; baby chicks, hatching eggs. Palouse Falls Ranch, Palouse Falls, Wash.

TRAP NESTED WHITE LEGHORN AND Barred Rock eggs and chicks; records, 200 to 311. Mrs. W. M. Roberts, Elmira, Oregon.

FOR SALE—WHITE ROCK COCKERELS, C. Daniels strain, $3 and $5 each, also hatching eggs. Harry Hass, Naches, Wash.

ALLEN'S PRIZE BARRED ROCKS AND White Leghorns are wonderful layers. Write D. W. Allen, LaConner, Wash.

BLUE ANDALUSIANS AND WHITE ROCK cockerels; extra good; order now. Mrs. C. W. Armstrong, Freewater, Ore.

WHITE WYANDOTTE HATCHING EGGS, $2; Holmes strain; cockerels, $5. Mrs. F. Raglin, Castle Rock, Wash.

ANCONAS, SHEPPARD STOCK COCKERELS, $3; pullets, $2; eggs, $2 setting. R. P. Irwin, Tonasket, Wash.

SINGLE COMB REDS, CHICKS, 20C EACH; eggs fifteen for three dollars. A. E. Bosworth, Omak, Wash.

BRED TO LAY ANCONAS; HATCHING EGGS. Price list free. Yew Lane Farm, Sherwood, Oregon.

ROSE COMB BLACK MINORCA COCKERELS, only few left, $3 each. Mrs. Carley, Carley, Wash.

1949 COCKERELS, HATCHING EGGS, 49 VArieties; free book. Aye Bros., Box 14, Blair, Nebr.

EGGS—BLACK MINORCA, WHITE MINORCA, 200-egg strain. Mrs. Frank Winnard, Heppner, Ore.

BUFF ROCKS, BUFF MINORCAS, COCKERels, eggs. Mrs. Day Woodruff, Bow, Wash.

S. C. BLACK MINORCA HATCHING EGGS, $2 per 15. John Zack, Kalama, Wash.

WHITE WYANDOTTE COCKERELS, $3 AND $4. Wm. Dunning, Creston, Wash.

PEARL GRAY GUINEA FOWLS $1.50 EACH. Mrs. Mary Insel, Shelton, Wash.

LIVE STOCK 177

SEND FOR FREE BOOKLET, "SOME SUGgestions to Live Stock Advertisers," outlining the practices of successful men of long experience. Helps in determining how much to spend, the mediums to select, preparing advertisements, handling inquiries, the use of photographs, etc. Write today. The Pacific Northwest Farm Trio, Dept. W, Spokane, Wash.

LARGE, HEAVY PRODUCING HOLSTEINS for sale at all times in car lots; tuberculin tested; 150 to 200 head always on hand; well marked heifer calves from registered sires and heavy producing dams; crated for shipment anywhere, $25 f. o. b. Levinson & Balmelli, Yakima, Wash.

REGISTERED SHORTHORN BULLS, ONE yearling, one four-year-old. Carl T. Beyer, Norwood, Idaho.

FARMERS' WANT ADS

This is the farmers' "want," "sale" and "exchange" department for small advertisements of farmers, including live stock and poultry.

Advertising rates for ads running 1 to 3 times, 10c per word per insertion, with a special rate to Farmer subscribers, as follows: Ads running 4 to 12 times, 9c per word per insertion; ads running 13 times or more, 8c per word per insertion.

All commercial and land advertising 10 cents per word each insertion. Open also to nonsubscribers.

In using these columns advertisers must observe: (1) No advertisements will be inserted for less than $1.00. (2) Every word, number and initial, including name and address, must be paid for. (3) New advertisements, changes of copy or cancellations must reach general office, Spokane, Wash., 10 days in advance of publication date. (4) Cash must accompany order.

Above rates include insertion in The Washington Farmer, The Idaho Farmer and The Oregon Farmer, which constitute the Pacific Northwest Farm Trio, 46 Review Building, Spokane, Wash.

LIVE STOCK (Continued.) 177

FOR SALE—HOLSTEIN BULLS, SERVICEable age; sired by son of King of the Sadie Vales. Sire's dam, 30.62 lbs., 2-year-old daughter of Korndyke Abbikerk, son of Pontiac Korndyke. Prices reasonable. D. F. Nugent, Granger, Wash.

SHIP US YOUR POULTRY AND LIVE STOCK. We pay the top market prices. Light veal, fat, fancy, 18c; dressed block hogs, 14½c; large hens, 25c; light, 20c. Prompt returns. John Lewis & Co., Spokane, Wash.

WE PAY TOP PRICES FOR YOUR LIVE OR dressed veal, hogs and poultry. Your check by return mail. Shipping tags on request. M. & J. Packing Co., Spokane.

DARK GRAY, COMING THREE-YEAR-OLD Percheron stallion; out of imported sire and dam; for sale cheap. Steve Inglin, Route 4, Boise.

REGISTERED FOUR-YEAR-OLD SHIRE stallion; registered eight-year-old mammoth jack for sale cheap. A. O. Krueger, Colfax, Wash.

FOR SALE—REGISTERED GRAY PERCHERon stallion; nice disposition; will work single or double. Write John Stastny, Neppel, Wash.

REGISTERED SHORTHORN BULLS, MILKing strain; best of breeding. Also grade cows. DeGraaff Brothers, Route 1, Lynden, Wash.

FOR SALE—THREE REGISTERED HOME bred Belgian stallions, two Shorthorn roan Durham bulls. W. I. Ebbert, Condon, Ore.

FOR SALE—REGISTERED GUERNSEY BULL calves and occasionally a heifer; federal accredited herd. Fred Jenner, Oso, Wash.

FOR SALE—FIFTEEN HIGH GRADE SHORThorn cows; will calve in March and April; good milkers. W. J. Neylon, Tenino, Wash.

TILLAMOOK CALVES—SEASON NOW OPEN. Price lists ready; strictly dairy stock. Smith, the Calf Man, Tillamook, Ore.

TWO YOUNG, REGISTERED SHIRE STUDS; the blue ribbon kind; priced to sell. O. B. Skidmore, Plummer, Idaho.

REGISTERED O. I. C. SWINE FOR SALE; shipped C. O. D.; guarantee satisfaction. Tony Johnson, Polson, Mont.

FOR SALE—MAMMOTH JACK, HEIGHT 16 hands. Address Joseph Naffziger, Pullman, Wash. Route 2.

GRADE HOLSTEINS, MILKING, FRESHENing, $80 f. o. b. Hadlock, Wash. J. J. Dee, Hadlock, Wash.

REG. PERCHERON STALLIONS; COLTS from $250 up. Iowa Percheron Farms, Redmond, Oregon.

FOR SALE—JERSEY BULL NINE MONTHS old. J. Zodrow, Chewelah, Wash.

TOGGENBURG MILCH GOATS. FANNIE Branson, Falls City, Ore.

HARNESS and SADDLERY 189

SEND FOR FREE HARNESS AND SADDLE catalog today; cut out the middleman, buy direct from the manufacturer. Lowest prices in the west; satisfaction guaranteed. Established 1881. Write Pierce Harness Co., dept. T, Spokane, Wash.

HAY FOR SALE. 200

ALFALFA HAY, GUARANTEED QUALITY; prompt shipment; buy direct and save money. Prices upon application. Ernest T. Freepons, Walla Walla, Wash.

JOB PRINTING 372

GUARANTEED BETTER BUTTER WRAPpers; 100, 60c; 250, $1.50; 500, $2.50; 1000, $4.25; printed to order. Home Specialty Co., Middleton, Idaho.

PARCHMENT BUTTER WRAPPERS, 100, 55C; 250, $1.45; 500, $2.45; 1000, $4.20; prepaid return mail. Printery, Box 499, Twin Falls, Idaho.

TANNING 425

WE WILL TAN YOUR COW OR HORSE HIDES into robes or coats at the right prices and guarantee our work as we are custom tanners and manufacturers. We also buy hides, furs, wools and pelts, or will exchange harness and sole leather for same. Write for prices. Spokane Fur Tanning Co., 7 Pine st., Spokane.

LET US TAN YOUR HIDE—COW AND HORSE hides for fur coats and robes. Cow and steer hides into harness or sole leather. Catalog on request. The Crosby-Frisian Fur Co., Rochester, N. Y.

MONUMENTS 510

COMPLETE STOCK, RIGHT PRICES. CORrespondence solicited.. J. W. Harding, Inland Monument Co., N1001 Monroe, Spokane.

PERSONAL 537

FARMER WOULD LIKE TO CORRESPOND with a lady between the age of 30 and 40, object matrimony. J. E. W., Lock Box 57, Lostine, Oregon.

BUILDING MATERIAL 588

NO WASTE, LESS LABOR, BUILD WITH ready cut houses and barns and save money. Attractive new plan book sent free. 4c postage. Prices quoted on material list. Write today. Price advance certain to come soon. Local Keystone Lbr. Co., 3000 Sprague, Tacoma, Wash.

SEEDS 620

ALFALFA SEED, CLOVER SEED, SEED corn—We are located in the heart of the largest and best alfalfa and clover seed district in the west and can give you both quality and price. Get our samples and quotations before buying. Our seed corn is of the finest acclimated strains. Garden and flower seeds of all kinds. Send for our catalog. Darrow Bros. Seed & Supply Co., Twin Falls, Idaho.

RED CLOVER, ALSIKE, RYE GRASS, TIMothy and vetch seed for sale; good quality, lower prices; by freight or parcel post. Rhoten Farms, Salem, Ore.

CERTIFIED LITTLE MARVEL GARDEN peas, hand picked, $7 hundred pounds; small lots, 10c pound. All net. W. A. Bower, Avon, Idaho.

GET ONION SEED OF GROWER—SOUTHport Red Globe, Yellow Globe Danvers, $1.35 lb., prepaid. Cornell Seed Ranch, Middleton, Idaho.

SEEDS (Continued.) 620

HANNCHEN BARLEY SEED—BEST WESTern Oregon spring variety. One of the best for eastern Oregon; best grade, $40; second grade, $35 ton cash f. o. b. Corvallis. O. A. C. Farm Crops Department, Corvallis, Ore.

HUBAM CLOVER, CERTIFIED SEED OF THE earliest strain; Idaho grown. DeKalb County Agricultural association, DeKalb, Ill.

SEEDS—FARM AND GARDEN; ALL STATE tested. Write for catalog. Washburn & Wilson Seed Co., Moscow, Idaho.

IDAHO GROWN TIMOTHY, ALSIKE CLOVER, mixed, 9c; purity 98.72; germination, 90 per cent. M. Meador, Norwood, Idaho.

EXTRA YELLOW DANVER ONION SEED, $1.35 per lb.; 5 lb. lots, $1.25. E. Dammel, Rupert, Idaho.

COSSACK ALFALFA SEED—SEND FOR samples. S. H. Hillman, Box 5, Thompson Falls, Mont.

GUARANTEED SEED, TIMOTHY, ALSIKE and timothy mixed. M. Hill, McCall, Idaho.

GRIMM ALFALFA SEED, DIRECT FROM grower. O. E. Nelson, Sterling, Idaho.

ONION SEED, POSTPAID, $1.50 POUND. L. J. Shippy, Goldendale, Wash.

NURSERY STOCK 621

15 TO 20 FEET SQUARE GOOD SOIL, planted to everbearing strawberries, will supply average family same year; keep cultivated, runners off, fertilize lightly, keep moist (avoid alkali). My Progressive and Superb are true to name; known and tried standard varieties, come to you inspected and prepaid, parcel post, $1.40 per 100; $6 per 500; $11 per 1000; 2 dewberry plants free long as they last, with orders. Dewberry plants, 75c doz; rooted Concord grapes $1.50 doz all prepaid, insured mail. Plant early. Model Fruit Farm, N. Matthiessen, proprietor, Route 1, Emmett, Idaho.

PROGRESSIVE EVERBEARING STRAWberry plants at $1 per 100, or $8 per 1000. St. Regis everbearing Raspberry plants at 10 cents each or $7 per 100; also one crop strawberries, currants, dewberries, loganberries, blackberries, asparagus and Greg's blackcap raspberries, very fine. W. L. Seaman, Boise, Idaho.

BLACKBERRIES — CORY'S THORNLESS; largest berry; Macatawa large, splendid flavor; best shipper; everbearer. Alton improved raspberry, delicious flavor, large, twice as productive as Cuthbert. John Lammiman, Route 1, Palo Alto, Cal.

RELIABLE NURSERY STOCK—ITALIAN AND Petite, 4-6 ft., and 3-4 ft.; Concord, Worden and Moore's Early grapes; grafted Franquette walnut all sizes. Send for catalog and price list. Villa Nurseries, Route 1, Portland, Ore.

GROW GRAPES FOR PROFIT—SPECIAL LOW prices; grape vines, berries, asparagus, for commercial planting; peaches, cherries, apricots, apples; satisfaction guaranteed. Write today. Home Nursery Co., Richland, Wash.

TREES—ALL KINDS FRUIT AND ORNAmental trees, vines, etc. Growers of general nursery stock. Lowest quotations on application. Send your want list. Can use few good salesmen. Albany Nurseries, Albany, Ore.

CLARK SEEDLING, THE STRAWBERRY that made Hood River famous. Write for list of other varieties and prices. Plant nurseries at Hood River and Prosser, Wash. W. R. Gibson & Son, Hood River, Ore.

GLADIOLA — BEAUTIFUL, MAGNIFICENT summer and fall blooming flowers that please all and are of easy culture. My stock is fine and prices right. Catalog free. Jungst Gladiola Farm, Ellensburg, Wash.

GLADIOLA BULBS, SURE TO BLOOM; BRILliant colors; good varieties; $1.50 per hundred; large size, 50 cents per doz, postpaid. Cash with order. Rupert Floral Co., Rupert, Idaho.

CORY THORNLESS BLACKBERRY—DELIcious, very large and early. You get strong, well rooted plants, true to name, from pioneer grower. Wm. Mortenson, Route 1, Lodi, Calif.

APPLE TREES AND A FULL LINE OF NURSery stock at reasonable prices; save agents' commission by ordering direct from nursery. Write for price list. Lawson Nursery, Gates, Ore.

CHOICE LOGANBERRY TIPS, $25 PER THOUsand; personally inspected by our county fruit inspector before they are shipped. I pay express. G. W. Johnson Jr., Salem, Ore. Route 4.

NURSERY STOCK, ITALIAN PRUNE TREES and trees of all kinds. Berries and small fruits of all varieties. Buy direct and save 50 per cent. Brooks Nursery, Lafayette, Ore.

STRAWBERRY PLANTS; IMPR. NEW OREgon, Ettersburg 121; large, vigorous and healthy; 80c 100; $5 1000. Christian Arnesen, Canby, Ore.

SEND FOR OUR NEW PRICE LIST ON FRUIT trees, berry bushes, shade trees and roses on their own roots, Krause Nursery, Spokane, Wash.

FOR SALE—EXTRA LARGE (CUMBERLAND) blackcap plants; six dollars per hundred. E. W. Raush, Carnation Poultry Farm, Kent Wash.

LOGANBERRY PLANTS, 6, $1; TIPS, 18, $1; Cuthbert raspberries, 75, $1; 1000, $10, prepaid. Alvin Myers, Dodbay, Wash.

STRAWBERRY PLANTS—OREGON, WILSON, Etterberg $3.50 per 1000. C. E. Turnidge, Talbot, Oregon.

LOGANBERRY PLANTS—50,000 CHOICE plants; unusual low price. Harry Lanum, R. 4, Salem, Ore.

TREES—PEAR, APPLE, PLUM, PRUNE, NUTS and berries at cost. Homer Brixey, McMinnville, Ore.

LOGANBERRY PLANTS FURNISHED BY the grower. Grape Lane Farm, Turner, Ore.

STRAWBERRY PLANTS, $5 PER 1000. Briggs, Plant Nursery, Olympia, Wash.

FARM LANDS FOR SALE. 651

480-ACRE WHEAT RANCH FOR SALE. Write owner, Box 202, Sprague, Wash.

FOR SALE—13.04 ACRE FRUIT AND BERRY farm. E. Schudeiske, Sutherlin, Ore.

FARM LANDS FOR SALE (Continued) 651

A SUBURBAN PRODUCING HOME AT SUMmit View Farms, between Puyallup and Tacoma, with one acre cleared on each five-acre farm. City water, paved road, phone, lights and only short distance from the state experimental station at Puyallup; berries and poultry for income with city conveniences; good berry land and excellent view property. Write us today for map and full details. You deal direct with the loggers. We have no agents. Electric Logging Co., Inc., 216 Marion st., Seattle, Wash. A. R. Todd, Mgr.

5-ACRE CHICKEN RANCH, 5 MILES FROM center Spokane; 7-room modern house; water and lights all over place; 3 modern plastered coops; 1200 White Leghorn hens, brooder houses for 6000 chicks; 5000 already ordered for March delivery; Henacres and O. A. C. strains; all paid for. $4500 cash, balance payments suit buyer, 6 per cent. J. Vandamme, Route 1, Spokane.

LOGGED-OFF LAND IN STEVENS COUNTY, Washington, at greatly reduced prices. Most of land sells at from $5 to $20 per acre; thickly settled community; good schools, hard surfaced and paved roads to Spokane; best county in state for dairy and stock raising; most places water can be found at shallow depths. Write for folder. Phoenix Lumber company, dept. T, Spokane, Wash.

WE SELL FORECLOSED LANDS FOR A loan company for one-third cash, balance easy terms. When writing tell us what you want, where preferred, how much you will invest; kind of farming you contemplate, as we have no list and must write special description in each case No trades. Hartford Land company, 601 Paulsen building, Spokane, Wash.

SNOHOMISH COUNTY, WASH.—6000 ACRES of the finest dairy, berry or general high-grade farm lands in the northwest, rapidly improving section; no drouths; bumper crops; tracts 1 to 80 acres; 10 yearly payments. This is your opportunity. Send for literature. Brownell Land Co., Birmingham, Wash.

STOCK RANCH, WITH 500 CATTLE, 200 range horses, 920 acres land; a modern ranch, fully equipped; in heart of good range; 5-year grazing permit, Lemly reserve. Right dates back to 1883. Any one interested, address J. D. Ellis & Co., Idaho Falls, Idaho.

WE WANT TO TELL YOU MORE ABOUT the famous Deschutes valley in central Oregon; a dairy, potato and stockman's paradise; a card brings full particulars. Redmond Land & Loan Co., Inc., Redmond, Oregon. (King Murphy's capitol.)

480 ACRES, 110 CULTIVATED, BALANCE pasture, timber; excellent stock ranch, Idaho county, Idaho, near reserve summer pasture; two cottages, barns, orchard; $40 acre. Particulars, B 5, Washington Farmer, Spokane.

90 ACRES, 15 CLEARED, 65 TILLABLE; 7-room house, large barn; 1 mile town, high school, stock, machinery, trade for outfit and lease on larger farm. $7000. Owner, Box 317, Maple Falls, Wash.

THE BEST EQUIPPED RANCH IN THIS county; 4½ miles from county seat; will sell on easy terms, low interest. Real dirt ranches. Write for particulars. A. G. Kugler, Soda Springs, Idaho.

20 ACRES FRUIT ORCHARD, IN HOOD RIVer valley; all kinds fruit; good buildings; mail route, telephone, electric lights; near school and church; three miles from Hood River. A. F. Linn, owner.

BUY THIS 10 ACRES, 4 IN CHERRIES, 4 IN apricots, bearing (800 trees); produce $1000 this year; improved; paved road; near city. $1700 cash, balance easy. W. E. Morris, Spokane.

108 ACRES, HOUSE, WITH BASEMENT; FURnace, electric lights, water works; barn 40x70; about 400 yards from oil derrick. Particulars, write owner, F. W. Newman, Amity, Ore.

237-ACRE STOCK RANCH; GOOD LOCALITY, good roads; take small place first payment; easy terms; poor man's chance. Write for information. Doss Moon, Klaber, Wash.

IF YOU ARE LOOKING FOR A GOOD DAIRY ranch of 120 acres, write for particulars. Price includes personal property, $4000. Address Alvin Carlson, Minerva, Ore.

SELL YOUR PROPERTY QUICKLY FOR cash; no matter where located. Particulars free. Real Estate Salesman company, 501 Brownell, Lincoln, Neb.

FOR SALE BY OWNER—WELL IMPROVED dairy farm, 80 acres; paid up water right; for $9000. Will give terms. C. E. Adams, Route 1, Emmett, Idaho.

SACRIFICE PRICE, FRUIT AND DAIRY ranch, 200 acres; 20 acres bearing apples; good buildings; spring water. Box 134, Wenatchee, Wash.

160 ACRES, WATER, IMPROVEMENTS; NEAR school, road, transportation; bargain. J. M. Finney, Harrison, Idaho.

160 ACRE GOOD WHEAT FARM; LITTLE Bitterroot valley, Mont. John Thiard, owner, Murray, Idaho.

54 ACRES—SPLENDID OPPORTUNITY FOR party desiring small farm. Box 155, Harrison, Idaho.

100-ACRE FARM, WITH 21 COWS. BEN Hillman, Sunnydell, Idaho.

FARM LANDS—Wanted 654

WANTED—TO HEAR FROM OWNER OF land for sale. O. K. Hawley, Baldwin, Wis.

FARM LANDS FOR RENT 657

STOCK, WHEAT, DIVERSIFIED, 1200 ACRES; also 480 acres, leased; under one fence; 4½ miles Farmington; 100 acres in cultivation; large orchard, abundance of water; 36 acres winter wheat, outfit for sale; good sale for wood. Further particulars, owner, P. S. Byrne, Farmington, Wash.

CITY PROPERTY FOR SALE 690

ACRE TRACT AND 6-ROOM SEMI-MODERN dwelling at Spokane city limits; fine place for retired farmer; $2600 cash or terms. D 4, Washington Farmer, Spokane.

FOR SALE OR EXCHANGE 702

FOR SALE OR EXCHANGE—162 ACRES, house, stable and chicken house; about 12 acres cleared; best of land; rest of place timber; good market for wood. Write Ray Hill, Route 2, Oroville, Wash.

SELL OR TRADE FIVE HUNDRED ACRES irrigated dairy and stock; fine soil, location, range, buildings; railroad station; coast property preferred. Frank Connors, Alberton, Mont.

320-ACRE IMPROVED WHEAT FARM; IN Alberta; for sale or trade for farm or city property. Write owner, Geo. Knudtson, Suffield, Alberta, Canada.

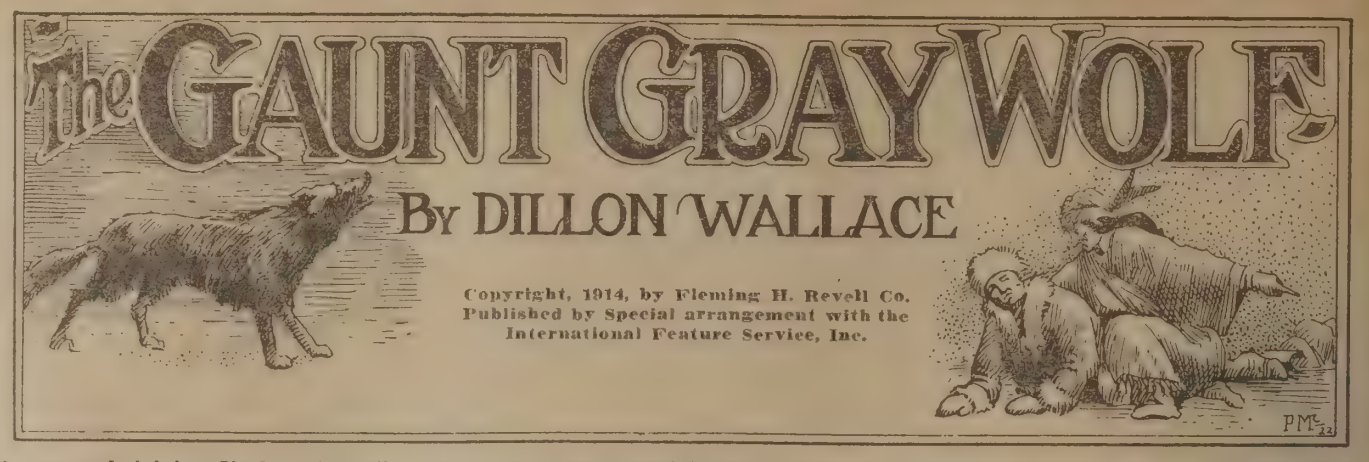
268-ACRE SHEEP OR CATTLE RANCH, OUTside range, $8000. What have you to trade? Write W. J. Laverty, Gannett, Idaho.

TO EXCHANGE—Real Estate 705

480 ACRES BIG BEND WHEAT LAND, NEAR Almira, Wash.; buildings; rented; trade for coast property. Box 897, Port Angeles, Wash.

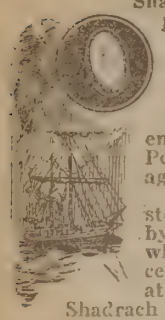
TO TRADE—80 ACRES IRRIGATED LAND for stock ranch. E. Coulter, Burley, Idaho.

This Story of the Northland Will Begin in the Washington Farmer March 16



CHAPTER I.

Shad Trowbridge.



ON a foggy morning of early July in the year 1890, the Labrador mail boat, northward bound from St. Johns, felt her way cautiously into the mist-enveloped harbor of Port Pelican and to her anchorage.

For six days the little steamer had been buffeted by wind and ice and fog, and when at last her engines ceased to throb and she lay at rest in harbor, Allen Shadrach Trowbridge of Boston, her only passenger, felt hugely relieved, for the voyage had been a most unpleasant one, and here he was to disembark.

"Shad" Trowbridge, as the fellows called him, and as we shall call him—had completed his freshman year in college. When college closed he set sail at once for Labrador, where he was to spend his summer holiday canoeing and fishing in the wilderness.

The rugged surroundings thrilled him with promise of adventure. The historic post of the old fur traders, the boundless, mysterious forest, and the romantic life of the trappers and dusky tribes which it sheltered, were pregnant with interest.

"A rough-looking country," remarked the steward, joining Shad at the rail.

"It's glorious!" exclaimed Shad enthusiastically. "A real frontier! And back there is a real wilderness!—just the sort of wilderness I've dreamed about getting into all my life."

A half dozen natives on the boat wharf watched Shad curiously as he paddled to a low stretch of beach adjoining the wharf, and two of them strolled down to inspect his canoe when he lifted it out of the water and turned it upon its side at a safe distance above the lapping waves.

"Now she's what I calls a rare fine canoe," observed one, a tall, big-boned, loose-jointed fellow with a straggly red beard, and picturesquely attired in moleskin trousers tucked into the tops of sealskin boots, a flannel shirt, a short jacket, and the peakless cap of the trapper.

"That she be, Ed, an' a wonderful sight better'n th' bark canoes th' Injuns uses," agreed the other, a powerful, broad-shouldered, deep-chested man, who wore a light-cloth ackicy, but whose dress was otherwise similar to that of his companion.

"She have better lines than th' Injun craft," said the one addressed as Ed, eyeing the canoe critically.

"An' she's stancher—a wonderful lot stancher," continued the other.

Be Sure to Read the Entire First Installment of This New Serial in Next Week's Issue

TRACK'S END

By HAYDEN CARRUTH

A Stirring Story of Adventure

(Copyright by Harper & Bros.)

CHAPTER XXI.

After the explosion: some cheerful talk with the thieves, and a strange but welcome message out of the storm.

As I struggled to my feet out of the wreck I was so dazed that I had to lean against the wall to keep from falling. I felt something running down my face and at first wondered what it was; then I saw it was blood. One of my arms felt numb and I was afraid it was broken, and my hands were all torn and bruised. I could not see into the other building for the smoke and falling snow, but I could hear the groans and curses of the men. I thought that if any of them were able they might come to take revenge on me, and that I best go away, especially as I was helpless with the handcuffs still on my wrists. I managed to pull open the front door and ran to Taggart's, thinking that I might get the handcuffs off in some way.

I found the box from which Pike had got them. There were two other pairs, with keys. I took the keys in my teeth and tried, but neither would fit mine. Then I went to the tin shop upstairs. There was a file on the bench and I managed to get this into the vise and began rubbing the chain up and down on the edge of it. It was the hardest work I ever did, but I soon saw that I could get my hands free in time if I kept on. Once or twice I heard Pike shouting something and I could still hear Kaiser barking in the hotel.

I don't know how long it took, but at last I got my hands separated, though, of course, the clasps were still tightly around my wrists. I looked out of the window and saw that the sleigh was in front of the bank with a pair of the outlaws' horses hitched to it. I was afraid that the safe had been blown open with the first explosion and that they were getting the money after all. I ran out the back door and along behind the buildings to the hotel. Kaiser bounded around me and Pawsey was again in her old place over the door.

I peeped through the cracks in the boards over one of the front windows. The whole front of the bank was blown away, but I could just make out through the snow that the inner door of the safe was still closed. Two of the men were lying in the bottom of the sleigh, motionless, whether dead or alive I knew not. Pike was on the floor of the bank, propped up on one elbow, giving orders to the one they called Joe, who was helping the fifth man into the sleigh, who seemed badly wounded and sat in the bottom of the box.

Then Joe went back to help Pike. He took him by the arms and was dragging him toward the sleigh, when I suddenly made up my mind that I would keep Pike. I went to the closet and got Sours' double-barreled shotgun. I knew there was no weapon that they would fear so much at close range. I opened the door and walked out into the street with it.

"Just leave Pike right here," I said. "I'll take care of him. The rest of you go on."

I guess they thought I was buried under the rubbish in the drug store, because I have seldom seen men more astonished. I walked up closer. Even Joe looked half wrecked and his face was all blackened with powder.

"Hello, Jud," called Pike. "You ain't a-going to strike a man when he's down, be you, Jud? I might 'a' been harder on you many a time than I was, Jud."

"No, I won't hurt you, but you've got ot stay, that's all," I said. "Help him over to the hotel and then go on with the others and don't come back," I added, looking at Joe.

There was nothing for him but to do as he was told, because I held the gun on them both, and they had heard the click as I drew back the hammers. Pike's left leg seemed to be broken and he was all burned and blackened with the powder. I sent Joe for a mattress, which he put on the floor of the office and rolled Pike on it. Then he drove off with the others.

So that is the whole account of the second visit of the outlaws to Track's End, just as it all happened, Saturday, March 19.

"Now, Pike," I said, ater Joe had gone, "the first thing—out with that handcuff key!"

He took it from his pocket and gave it to me. I unlocked each of my bracelets. They left deep red marks around my wrists. Pike asked for a drink of water and I got it for him. I could see that he was in pain.

"You've played it on us again, Jud, I'll be hanged if you ain't," he said to me. "What'd you have under that counter, Jud?"

"A can of blasting powder," I answered. "Dangerous place to store it when there's explosions, and kerosene lamps and hot stoves, and fires, and such truck around. It done us fellers up, and that's a fact."

"Well, I wasn't trying to make you feel at home," I replied. "How did you happen to be blowing open other folks' safes?"

"Oh, it's all right, Jud, it's all right," he said. "I ain't finding no fault. Only I think you'd 'a' done better to join us and get your share."

Though I still felt pretty dizzy and weak I started out to look about town. I found that the inside door of the bank safe was still tight shut, though the outer one was blown off. The building was wrecked and the drug store was not in much better shape. I could see that the bank had been afire, but that Joe had put it out with water from the well.

Outside the barn I found Dick and Ned the pony the Indian had taken, with three of the gang's horses which had been left behind, huddled together trying to keep out of the snow, which was still coming down at a great rate and was being swirled about by the wind. I let them in, and they were all very glad to get some feed, as were likewise the cow and chickens. I found that the Indian had pried open the back door with a crowbar from among the blacksmith's tools.

Night was already coming on and I was so tired and sleepy that I could scarce keep up. So I made Pike as comfortable as I could, and went to bed and slept like a log.

The first thing I knew in the morning was that the storm had turned into a raging blizzard. It was not yet very cold, but the snow was drifting as fast as it had any time during the winter. I found Pike more comfortable. I had hoped for the train, but the storm discouraged me. I began to wonder what I was going to do with him. That his leg was broken was certain, and I almost wished that I had let him go with the others.

It was Sunday, and the first thing I did after breakfast was to write my regular letter to my mother, telling her all that had happened the last week, and it was a good deal. Then I started out to take another look around town. My sleep had done me a world of good, though I still felt stiff and lame.

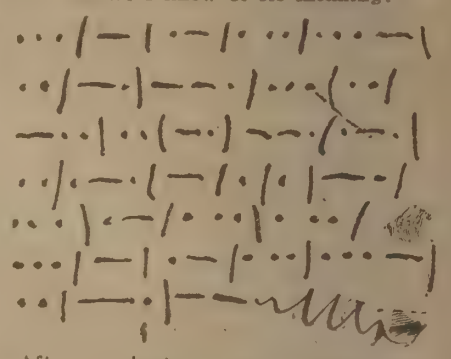
It was impossible to do much in the storm, but I covered up the bank safe with some blankets, and nailed boards over some windows in other buildings which had been broken by the explosion. I finally turned up at the depot and went in to see about the fire.

As I opened the door I was astonished to hear the telegraph instrument clicking. I knew the line was down and could not make out what it meant. I understood no more about telegraphing than Kaiser, but in visiting Tom Carr during the fall I had learned to know the call for Track's End, which always sounded to me like clicket-ty-click-click, click-et-ty, over and over again till Tom opened the switch and answered. Well, as I stood listening I heard this call for Track's End, clicket-ty-click-click, clicket-ty. Then I saw that the line must have been repaired, but if this were so a train must have come nearly through; otherwise the repairmen could not have reached the break, which, I remembered, Tom said was just beyond Siding No. 15, 14 miles east of Track's End.

I went to the table and sat down and listened to the steady clicking, the same thing, nothing but the call. It gave me a good feeling even if I didn't know where it came from. I could not understand why any other office should be calling Track's End, as they must all know the station was closed for the winter. Then it came to me that a train must be on the way, and somebody thought it had got here.

Just to see if I could, I reached over, opened the switch and tried giving the Track's End call myself. Of course I did it very slowly, with a long pause between each click, but I thought I would show the fellow at the other end that Track's End wasn't quite dead after all. Then I closed the switch, and instantly was surprised to hear the call repeated, but just as slowly and in the same way that I had given it. It came this way two or three times, then I gave it as best I could, then it came the same way once more.

After this there was a long pause, and then it began to click something else, very slowly, dot, dash, dash, dot, and so forth, with a long stop between each. I picked up a pencil and marked it down, slowly, just as it came. Every two or three clicks there was a very long pause, and I would put down a monstrous big mark, thinking it might be the end of a letter, and when it stopped this is what I had, just as I wrote it down (I have the paper to this day), though it might as well have been Greek for all I knew of its meaning:



After a minute or two it began again, but soon saw that I was getting the same thing. I leaned back in the chair and wished that I could read it. Then I sat up with sudden new interest, wondering if I could not find a copy of the Morse code somewhere and translate the message. It didn't seem likely that Tom would have one, as he was an old operator, but I began rummaging among his books and papers just the same. I had not gone far when I turned up an envelope directed to him on which was some printing saying that it contained a pamphlet about books for telegraphers. I opened it, and on the first page, as a sort of trademark, was what I wanted. In 10 minutes I had my message translated. It read: "Starving. Siding 15. Carr."

CHAPTER XXII.

The last chapter, but a good deal in it: a free lodging for the night, with a little speech by Mr. Clerkinwell: then, how Kaiser and I take a long journey, and how we never go that way again.

When I knew what the message said I saw that a train must have got to No. 15, and I jumped up and started for the door, then I ran back again and slowly spelled out O. K. on the instrument, and without waiting to see what came in reply hurried over to the hotel as fast as I could go.

It was now 11 o'clock, and though the storm was as furious as ever I was determined to set out and try to reach the siding. If it had been before the thaw, with all of the winter snow on the ground, I never should have thought of doing it, but most of the old drifts were either gone or frozen so hard that they could be walked over without the least fear of breaking down, and as for the new drifts they were soft and not yet deep. I first thought of taking the horses and large sleigh and of keeping on the railroad track, but I remembered that there were a good many culverts and little bridges which I could not cross that way, and I knew to leave the track would mean to be lost instantly. So I saw that the best I could do was to take Kaiser and the small sled.

I soon had this loaded with all the provisions that I thought we could get through with, though the selection was poor enough. But I got a lot of coffee from the store, with bacon and canned Boston baked beans and other such things. There was a little of the buffalo meat left, and as I had kept it buried in the snow during the thaw it was still as good as ever. This, with what eggs and other things in the hotel which I had, I put on, covered it all snugly with a blanket, tied the load firmly and was ready. I told Pike where I was going, though the next moment I saw from the look on his face that I should not have done so. Still, I

could not see what harm he could do, with his bruises and broken leg. I left food and water where he could reach them, and started off, walking beside Kaiser and helping him drag the load.

It was just noon when I got off. We went to the station and started down the track. It was impossible to see more than a few rods, but the wind, which all along had been in the northeast, had now shifted to the northwest, so it was partly in my back. It was both snowing and blowing, and we waded through the damp, heavy, new snow and slipped and stumbled over the old drifts. I soon saw that there was a big job before us, and I had not expected any pleasure excursion.

The first accident was when I fell through between the ties over a culvert up to my chin. It was too high to get back that way, so I went on down and floundered out at the end and so fought my way back up. We soon got used to these, and generally I told where they were by the lay of the land, and either we went round them or walked carefully over



Mr. Clerkinwell took off his watch and chain.

on the ties. But before I had gone three miles I saw that my only hope of reaching the siding that night was in the wind going down, but it was all the time coming up.

But we plodded on, in some places making pretty good time, but, on the other hand, we often had to stop to rest. Kaiser seemed not the least discouraged, and when we stopped even tried to wag his tail, but it was too bushy a tail to wag well in such a wind. After a while the blizzard became so blinding and the track so deep with snow that we had to leave it and follow the telegraph poles on the edge of the right of way, stopping and clinging to one pole till a little swirl in the snow gave me a glimpse of the next one; then we would plunge ahead for it, and by not once stopping or thinking I would usually bump up against it all right, though when I had gone 50 steps if I did not find it I would stop and stand still till a little lull made it so I could see the pole, and then sometimes I would find that I had passed it a few feet to one side.

At last (but too soon) I thought I noticed that the light was beginning to fail, and it was certainly all the time growing colder. A little farther on we came to a deep cut through a coteau. The cut was so filled with new snow that we could not wade through, and the side of the hill as covered with the old snow and so slippery that we could not scramble over. The only thing to do was to go around it. This I thought we could do and not get lost by keeping close to its foot all the way around.

We started and plowed on till I thought it time to see the telegraph poles again. We went on, but I saw the hill was not leading us right, and turned a little the other way. Another coteau was in our path and I turned to avoid it. For another five minutes we went on. I turned where I was sure the railroad must be, when suddenly it seemed as if the wind had changed and was coming out of the south. I knew it undoubtedly had not, but by this sign I understood that I was lost. I felt dazed and bewildered and was not sure if I were north or south of the track. But for another 15 minutes we strugged on. I had lost all sense of direction. I stopped and tried to think. Every minute it was growing colder; how long I stood there I don't know, but I remember that I heard Kaiser whine, and started at it, and realized that I was growing sleepy. I knew what the sleepiness which comes on at such times means, and I turned around square to the wind and started on.

A dozen steps away we came face to face with a big new snowdrift, its top blown over like a great white hood. I guessed that there was an old bunk under this one. I took a stake from the sled, dropped on my hands and knees and began to poke about for it. I soon found it, broke through the frozen crust with the stake and began pawing out a burrow with my hands. I dug like a scared badger and in a few minutes had a place big enough. I wriggled out, pushed Kaiser in, took the blanket from the sled, backed into my snow cave again and rolled up as best I could in the blanket. In five minutes the mouth of the burrow was drifted over and we were in total darkness.

I was not afraid to sleep now, as I knew, what with the snow, my big coat, and the blanket, not to mention Kaiser, I would be safe enough from freezing, so that is what I did till morning, scarce waking once. When I did wake, though I knew no more than anything if it were morning, I could no longer hear the wind roaring, so I burrowed out, which was no small job, either, since I had to dig through a wall of snow, packed solid as a cheese.

But when Kaiser and I burst out, like whales, I guess, coming up to breathe, we found it clear and calm, with the sun just peeping up above a coteau and the frost dancing in the air. And we were not five rods from the railroad, though in that blizzard we could no more see it than we could Jericho. It took half an hour to dig out the sled and get started, with Kaiser barking, and his breath like a puff of a locomotive at every bark, it was so cold. I put on the skis now (which I had had tied on the sled) and off we went over the drifts, now packed hard, at a good rate.

It was no more than 10 o'clock when I saw a white cloud of smoke far ahead and knew we were coming to the siding, and Kaiser saw it, too, I think, and we both started to run and couldn't help it. And half a mile farther we saw a man coming slowly, and who was it but dear old Tom Carr!

I think I never was so glad to see anybody in my life. The poor fellow was so weak that he could hardly stand, but he was making a start for Track's End.

"Jud," he said, "we started out Wednesday, with a dozen passengers, as many shovelers and three days' food. We got to No. 15 Saturday. Then the storm came and the food was about all gone. Yesterday the storm kept up and the men could have done nothing even if they had had food. This morning they are at it, but they are so weak that they can't do much, but with what you've got on your sled we'll get through."

He went back with me, and there were Burrdock and Sours and Allenham and some others, all shoveling at the cut with the men, and in the car was Mr. Clerkinwell, now recovered from his sickness, but weak from the lack of food. I won't try to tell how glad they were to see me, but I was gladder to see them. I felt that I was out of the prison of Track's End at last, and so many times I had thought I never should get out alive!

"And why didn't you die a thousand times from loneliness," cried Mr. Clerkinwell, after he had talked a few minutes, "if from no other cause?"

"Oh," I answered, "I had some company, you know; then there were callers, too, once in a while." Then I said to him that "I wrote every Sunday to my mother," at the which he patted me on the head, just as if I weren't taller than he!

The men all came in and we got up a sort of a meal; at least there was plenty of coffee, bacon and beans. Then they went at the shoveling again, the engineer got up steam and soon we left the short platform and little cube of a house at the siding behind. There was a snowplow on the engine, and the men now worked with so much energy that we bucked along through the cuts, and before sundown were at Track's End.

I had told part of my story, and we all went over to the Headquarters house, Allenham to arrest Pike. He was gone. The barn had been broken open that morning and one of his ponies taken out. How he ever did it with his broken leg was more than any of us could tell, but he had done it, and it seemed no use to try to follow him. I saw my mistake in telling him so much, but it was too late to remedy it.

The next day another train came, bringing a whole crowd of Track's Enders, and that night they held a little meeting at the hotel and were for giving me a reward for what I had done (which was no more than I had been left to do), but I told them no, that Mr. Sours had paid me my wages according to agreement and that I couldn't take any reward, but when Mr. Clerkinwell got up and took off his watch and chain (gold they were, you may be sure) and said I must take that whether or no, so that when I "looked for the time o'day I would always remember that a townful of people, and especially a certain old gentleman, thanked me and did not forget what I had done"—when Mr. Clerkinwell did this, I say, and I guess there were tears in his eyes, what could I do but take it? and take it I did, and wear it to this day.

Mr. Clerkinwell told me afterward that there was a full $20,000 in the safe.

So that is all there is to tell of my strange winter at Track's End, so many years ago. Three days later the regular trains began to run, and the first one took all of my letters to my mother, and no more than two days after she got them I was there myself, bringing only one important thing more than I had taken away (beside experience), and that was Kaiser. I had asked for him and got him; first I had thought to take away Pawsy, too, but concluded to leave her with Mr. Sours, where she could get on the door in case of trouble. And since, though I have done my share of wandering about the world I have never again visited Track's End; nor do I think I want to go back where the wolves howled so many dismal nights, and where the other things were worse than the wolves. (The end.)



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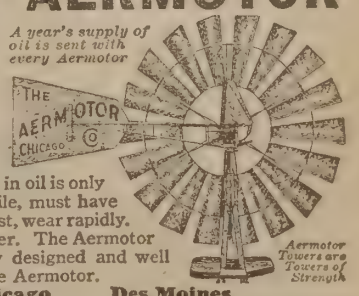
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LOOK AT THE GOOD FARM BARGAINS ON THE FARMERS' "WANT AD" PAGE THIS WEEK.

FAMILY CIRCLE

ALICE BARLAND
EDITORIAL CONTRIBUTOR

Experience Letters

From Our Family Circle Women

Several have sent in recipes for various things such as grape juice and other things which are just now out of season; all have been filed away awaiting the time when you women will be wanting to know how to make them. When the time comes they will be printed. Some of you have not given me names and addresses so I take this way of thanking you. Please, all send addresses.—A. W. B.

This is the season for soups and here is one called Scotch soup: 1 qt. boiling water, 1 1-2 cups of oatmeal, 1 tablespoon of finely chopped pork, 1 tablespoon of grated or ground onion, 1-2 cup of tomato juice. Season to taste with salt and pepper and let cook for about an hour stirring often to prevent scorching.—Mrs. M. M. C.

Dear Mrs. M. M. C., did you leave out something from your recipe for fruit pudding which you sent? It seems to me to be just a simple cake recipe as there is no fruit mentioned in it.—A. W. B.

Dear Mrs. Barland: Here is a good way to can apples: Select good, sound, tart apples, core them and fill the cavities with sugar and bake until tender in a pan with a little water, but not too soft to lift out. Place in sterilized jars and fill the jars with boiling sirup made of half sugar and half water boiled together for about two minutes. Seal the cans same as any canned fruit. These are good with whipped cream.

I would like to know how to make raised buckwheat cakes.—Mrs. G. H.

Dear Mrs. G. H.: I like best half white flour and half buckwheat.

Buckwheat cakes: For a family of four or five take a full quart of warm water, add half teaspoon of salt and half cup of liquid yeast or one-third of a compressed cake. Set a sponge with the flour half white and half buckwheat a little thicker than it should be for frying and in the morning add half cup of water in which half teaspoon of soda is dissolved. This will make them thin enough to fry nicely. If too thin add a little white flour. You should leave about a cupful of the batter for raising the cakes the next morning. As you continue the use of the batter it will grow more sour and you will need to increase the amount of soda, but too much will injure the flavor of the cakes. I think graham flour good to mix with buckwheat instead of white flour for a change.

Mrs. H. G. gives a remedy for easing whooping cough which must be good as several others have given the same. I will send it to any one who writes for it. —A. W. Barland.

A good suggestion for saving the hems of sheets and table cloths. Always hang them from the corners doubled back and the wind will not whip them out. Rub grease or butter on fruit stains before washing to remove the stain.—Mrs. H. H., Wendell, Idaho.

Dear Mrs. Barland: Will some one tell me how to clean a grass rug and how to make corn fritters.

Here is a good catsup recipe: Use good cooking apples, season with red pepper, salt, sugar and vinegar and color with cake coloring;. bottle and it will keep till used and is as good as that made of tomatoes.—"A Young Housewife."

Corn fritters: .To 1 qt. can of corn add 2 or 3 well beaten eggs and a tablespoon of flour and a little salt. Have a frying pan ready with plenty of butter or half butter and half meat frying and when good and hot drop the corn from a spoon into little patties and fry as you would pancakes. These are very good.—A. W. Barland.

Dear Sister Barland: I am 55 years old, have raised five children and never had a doctor. I have seven grandchildren.

I was born in Iowa, came to California when I was 4 1-2 years old and we came across in an emigrant train.

A 100-pound sugar sack makes four good napkins. You can ravel them out all around and have fringe. Four sacks joined together with coarse rickrack braid makes a good table cloth.

I would like the address of that lady who wrote last summer who lived 30 miles from a railroad. I would like to write to her.—A Reader.

My Dear Sister: You have not given either name or address, so how can I give you the information you wish? You ask for the last of the story of Big Smoke Mountain, but I can not send that either without your address. I infer that you live in Oregon, but am not sure of that. I am very much interested in your journey across the plains in the emigrant train and I want you to tell me all you can about it. I have never met but two people who came across that way. I am ready for the surprise whenever you send it on. I hope to hear from you soon with name and address, which will not be printed unless you wish. Please, everybody, send name and address. I can do so much more for you if I have them.—Alice W. Barland.

Dear Mrs. Barland:, I enjoy the Family Circle very much. Last year I did the housework, washing and ironing and all, for my father, brother and sister, and attended school all the time and passed my grade with honors. I am not a very old girl, but came out well at the last. I am writing for information concerning the addresses of private Protestant schools for girls in or about Spokane. Please let me know soon as possible.—F. C.

My Dear F. C.: If you had given me your name and address I would send you a personal reply giving you the information you wish. Another case like the two preceding letters where information must be delayed because I don't know how to reach you. Soon as other letters are received from you good sisters with name and address you shall have the information asked for.—Alice W. Barland.

A Christmas greeting came in too late for publication, but I thank the one who sent it. She wishes all the Circle a "bright and happy new year" and signs herself "A Young Reader."

Where to Plant Flowers

It is a principle well known to the landscape gardener that planting the lawn and garden according to various schemes will greatly increase their apparent size and their beauty, or will correspondingly diminish both. Little, choppy beds of geometrical design, set in the midst of the lawn space, will cut even a fair-sized expanse to most unimpressive dimensions. They will also break up an otherwise graceful effect, in nearly all cases. On the other hand, the disposal of the flowers in borders or shrubby clumps at the outer edges of open spaces and around the buildings will soften abrupt, square corners and afford taller and lovelier background for the low, flowering annuals, bulbs, etc. By judicious selection of the right exposure for each, one may give it the right shelter, sun or shade, turf or open soil, and the possibilities of color massing are a never-exhausted world of delight.

In almost any one species of annual or other small flowering plant, masses of one color are, of course, far surer to be effective than the results obtained by purchasing the seed in "mixed colors," though now and then a really charming bit of helter-skelter old-fashioned medley does happen.

Hints for Homemakers

By MRS. C. B. SMITH.

The leaves from old mail order catalogues, being soft and thin, are almost as good as tissue paper for polishing class or metal.

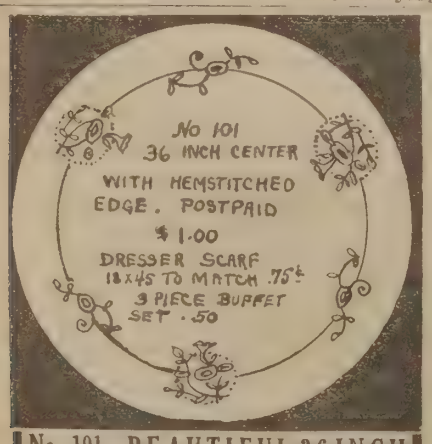
Soften paint on a window pane with turpentine and scrape off with a dull knife.

To impart a nice polish to the top of the range, rub with a cloth dipped in melted paraffin, to which has been added a few drops of kerosene. Polish with a soft, dry cloth.

The odor of onions may be removed from the vessel in which they have been cooked by partly filling with water and adding a handful of clean wood ashes or washing soda. Put on the stove and allow the water to come to the boiling point.

When the portion of the contents of a fruit jar remaining after emptying adheres to the inside of the jar and becomes dry and hard to remove, put in a teaspoonful of concentrated lye and fill with water. After soaking several hours the jar will clean easily.

A wastebasket in the kitchen is a litter saver. If no other kind is available, a banana crate, cut off at the second hoop, will answer the purpose very well. A clothes hamper that takes up little room in a corner of the closet may also be fashioned from a banana crate.



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Your Health

By Royal S. Copeland, M. D., F. A. C. S.

Sometimes we must speak very plainly, even though some one is disturbed by what we say. About this particular thing I have in mind today I want you to worry a bit.



Dr. Copeland.

Colds and coughs in children should not be neglected. You can hardly hope to have your child escape having an occasional cold, although much can be done to lessen the danger. But when your child is thus afflicted there must be watchful care to make certain that he fully recovers.

Did you know that almost every case of tuberculosis is due to an infection taking place in childhood?

I wonder, too, if you know that tubercular infection is very, very common. An eminent Italian pathologist found evidence of active or healed tuberculosis in 597 out of 600 bodies he examined. Of course, most of these were adults.

Among persons who live wholesome and hygienic lives tuberculosis is not so common as this, but its frequency is all too common no matter how optimistic may be the observer.

Many children are predisposed to tuberculosis. They have enlarged glands, bone trouble or give positive response to the tubercular test, even though they may appear perfectly well.

Fortunately, many children have an immunity to this disease and seem able to resist it, even if they are constantly in contact with it. But other children are not so blessed. The latter are in danger of tubercular infection.

The germ of tuberculosis is not very active. It is easily killed. A few hours of sunlight will end its career.

It is when one is run-down that he is in danger. Under such circumstances the powers of resistance are lowered and any disease-producing germ may take advantage of the opportunity to gain access to the tissues of the body. The germs are liable to be lurking in the nose and throat and when the body is weak from illness or overwork they have their chance.

Exposure, dust, wrong eating habits, loss of sleep and fatigue may lower the resistance and permit the "taking" of a cold. The inflammation of the nose, throat and bronchial tubes may extend into the lungs. Then the soil is all ready for a germ like that of tuberculosis.

A cold and a cough should not be neglected. Make it your business to get rid of it, and in this way to protect your child or yourself against the danger of tuberculosis infection.

Just Folks

A man, now in middle life, who has won an enviable position as a farm scientist, was telling me the other day of an early incident in his education. His early days were spent on a state of Washington farm, some 40 miles from a high school. That high school in the town looked good to him. It also looked good to another farmer boy, his neighbor. These two farm boys planned, only as farm boys can plan. After the harvesting season they took their team and farm wagon, loaded it with a little cook stove, a sack of potatoes and some blankets. They journeyed to the town with the high school. They found a merchant in the town who appreciated their situation. He had a wooden block containing rooms which he rented. The boys were able to get one of these rooms for $1 a month. They put up their little cook stove, unloaded their sack of potatoes and found their dream of a high school realized. Soon another of their farm boy neighbors joined them. That third farm boy today is at the head of a permanent department of the state educational institution.

As they are recalled now, those were days of real sport to these men in middle life.

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Soap, Ointment, Talcum, 25c. everywhere. For samples address: Cuticura Laboratories, Dept. U, Malden, Mass.

Read the "Want Ad" page this week for good offers of all kinds.

Bits of Fun for Everyone

A Story in Letters.

Sitting beside K. T.
Holding her hand was K. C.
He looked into her I's,
But by this time you're Y's,
For U. C. K. C. loved K. T.
Do you get the I. D.?
—Union Pacific Magazine.

A Deep Study

"What is this spiritualism all about?"
"Remains to be seen."

Views of His Own.

News agent: "Here are some fine post-card views taken along our railroad. Would you like some of them?"

Passenger: "I should say not! I have my own views about this railroad. Ex.

Was On the Job.

A man who was wanted by the police had been photographed in six different positions, and the pictures sent to the chief of police of a provincial town, where it was thought likely the fugitive was in hiding. After the lapse of a few days the following reply reached headquarters:

"Sir: I duly received the portaits of the six miscreants whose capture is desired. I have arrested five of them, and the sixth is under observation and will be secured shortly."—Tit-Bits.

He Inherited It.

"Late for reveille, again, I see, O'Malley," snorted the irate captain. "How do you account for this persistent tardiness?"

"'Tis inherited, sir," answered Private O'Malley. "Me father was the late Michael O'Malley."—American Legion Weekly.

Which Is Seldom.

Deceit is the quality that makes a man put on socks that have no holes on the day he intends to buy a pair of shoes.—Detroit Free Press.

Latest High Class Patterns for the Home

Please order the patterns you desire at least two or three weeks before you wish to use them. Desiring to obtain the latest high-class patterns for its readers, THE FARMER has made arrangements to have them sent direct from the east, and under present mailing conditions it takes about that time for them to reach you.



3504. Frock for the young miss. Cut in three sizes: 12, 14 and 16 years. A 14-year size will require 4 3-8 yards of 36-inch material. Price 10 cents.

3886. Girl's guimpe dress. Cut in four sizes: 8, 10, 12 and 14 years. A 10-year size requires 1 3-4 yards of 32-inch material for the guimpe and 3 1-2 yards for the dress. Price 10 cents.

3889. Girl's dress. Cut in four sizes: 4, 6, 8 and 10 years. The guimpe will require 1 1-2 yards of 27-inch material, and the dress 2 3-8 yards for a 6-year size. Price 10 cents.

3892-3571. Ladies' costume. Slip 3571, cut in four sizes: Small, 34-36; medium, 38-40; large, 42-44; extra large, 46-48 inches bust measure. It requires three yards of 36-inch material for a medium size. Blouse 3892, cut in seven sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure, and requires 3 3-4 yards of 40-inch material. Two separate patterns. 10 cents for each pattern.

3370. Girl's blouse suit. Cut in four sizes: 8, 10, 12 and 14 years. A 12-year size will require 3 7-8 yards of 38-inch material. Price 10 cents.

3885. Child's romper suit. Cut in four sizes: 2, 4, 6 and 8 years. A 4-year size requires 2 7-8 yards of 32-inch material. Price 10 cents.

3873. Girl's cape. Cut in five sizes: 6, 8, 10, 12 and 14 years. A 12-year size requires 2 5-8 yards of 54-inch material. Price 10 cents.

3697. Misses' dress. Cut in three sizes: 16, 18 and 20 years. An 18-year size will require 5 3-8 yards of material 44 inches wide. The width of the skirt at the foot is 2 1-8 yards. Price 10 cents.

3254. A dainty apron. Cut in three sizes: Small, medium and large. A medium size will require 2 1-2 yards of 36-inch material. Price 10 cents.

3716. Ladies' dress. Cut in seven sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. A 38-inch size requires 6 6-8 yards of 32-inch material. Without panels 4 1-4 yards. The width of the skirt at the foot is two yards. Price 10 cents.

3897. Ladies' house gown. Cut in four sizes: Small, 34-36; medium, 38-40; large, 42-44; extra large, 46-48 inches bust measure. A medium size requires 5 5-8 yards of 36-inch material. Price 10 cents.

3718. Ladies' house or day dress. Cut in seven sizes: 36, 38, 40, 42, 44, 46 and 48 inches bust measure. A 38-inch size requires six yards of 36-inch material. If made as illustrated it will require 4 3-8 yards of plaid and 1 5-8 yards of plain material 36 inches wide. The width of the skirt at the foot is about 2 1-4 yards. Price 10 cents.

CATALOGUE NOTICE.

Send 12 cents in silver or stamps for our up-to-date spring and summer 1922 catalogue, showing color plates and containing 500 designs of ladies', misses' and children's patterns, a concise and comprehensive article on dressmaking, also some points for the needle (illustrating 30 of the various, simple stitches), all valuable hints to the home dressmaker.

Please fill in this order and mail with remittance to:
PATTERN DEPT., PACIFIC NORTHWEST FARM TRIO, Spokane, Wash.

Enclosed find.....cents for which send me the following:

Pattern No..... Size..... Pattern No..... Size.....

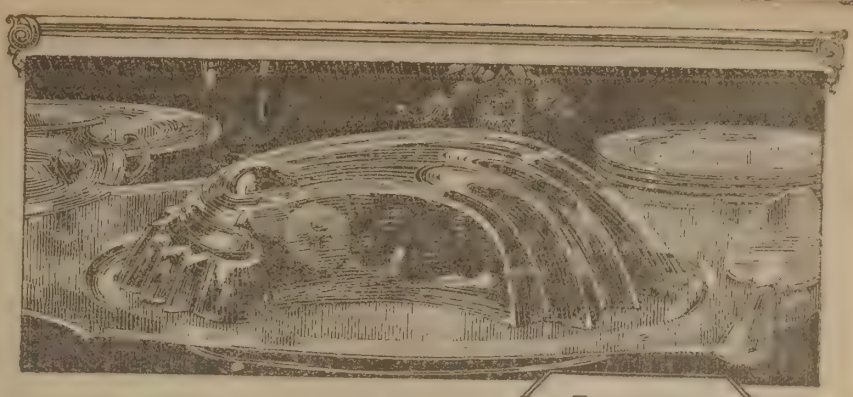
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A Beautiful Jell-O Book will be Sent Free to any address upon request.

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When the appetite has been satisfied with the meat and vegetable courses, bring on a dainty dish of fruit Jell-O with cream to add a last fillip, and to bring luncheon or dinner to its ideal conclusion.



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1922 ANNUAL CATALOG

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A Western Catalog for Western Buyers—160 pages—up-to-date, complete and nicely illustrated. A reliable, truthful guide.

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Glance over the bargains on the "Want Ad" page.

High Points in News of the Week

United States Attorney General Daugherty has announced that very soon he will make public schedules showing the retail prices of food, fuel and clothing at representative points throughout the United States as compared with the cost of manufacturing these articles in corresponding localities. The schedule will be the result of a survey conducted by the department of justice with a view to finding out whether or not retailers were charging exorbitant prices for essential commodities.

In a court case in Chicago last week testimony was given indicating that the cost of living in that city had gone down between 35 and 40 per cent below the high point of two years ago.

* * *

The United States senate this week takes up the open debate of the four-power treaty between this country, Great Britain, France and Japan for the control of affairs in which these four nations are interested on the Pacific ocean. One of the seven treaties submitted to the senate by President Harding following the recent conference in Washington on the limitation of armament has been ratified by the senate. It is that referring to the control of the Island of Yap.

* * *

A press dispatch from Washington, D. C., says that Senator Stanfield of Oregon is coming west soon to work out plans with wheat growers and their organization under which the war finance corporation can make loans on the growing crops of northwestern wheat this year. If the plan materializes it is hoped that as much as $5 per acre can be secured.

* * *

The United States supreme court has rendered a decision that the interstate commerce commission has power to govern railroad rates on traffic wholly within a state as well as traffic that crosses interstate lines. The decision is not understood to indicate any likelihood of widespread application of the principle involved, but declares that since the interstate commerce commission is responsible for the development of a great interstate commerce system, no state should be empowered to interfere with such development by the establishment of either inadequate or excessive rates within such state on an interstate railroad.

* * *

The United States supreme court last week in a formal case decided that the women's suffrage amendment to the Constitution is valid.

* * *

A dispatch from Washington, D. C., indicates that President Harding will probably make his trip to Alaska in the early summer. Senator Poindexter of Washington is endeavoring to have the president make a personal tour over the proposed Columbia basin irrigation project while in the northwest en route to or from Alaska.

* * *

A report from London says that the British government is planning a reduction of about $250,000,000 in the appropriations for its army and navy for the coming year.

* * *

The British government has decided to give Egypt independence as soon as the people of that country are able to work out a form of government that will safeguard their own interests and those of Great Britain. Egypt has heretofore been under a British protectorate.

* * *

President Harding recently went before congress and recommended the adoption of legislation to give financial aid to American merchant ships. He estimated that the aid necessary for the first year should approximate $15,000,000, with a later subsidy, either direct or indirect, of not to exceed $30,000,000 per year.

* * *

A conference of governors and their representatives from the four Pacific coast states last week at Portland laid plans for starting a nationwide campaign against the use of narcotics. A special effort will be made to secure national legislation prohibiting the sale of these drugs.

* * *

Announcement was made last week that Secretary of the Interior Fall had made a formal ruling that hereafter no leases will be given to Japanese on farm land lying within Indian reservations. This ruling is of special interest in the Yakima valley, where approximately 2000 Japanese now have leases running from one to three years on Yakima reservation land.

* * *

The early resignation of Premier Lloyd George of England was predicted last week, but later reports indicate that he has withdrawn a threat previously made to resign. Wide differences of opinion within the British cabinet, of which Mr Lloyd George is head, are responsible for the threatened resignation.

* * *

The executive council of the American Federation of Labor recently went on record as in favor of the repeal of the Volstead prohibition enforcement act and of enactment in its place of a measure permitting the manufacture and sale of wine and beer. The Volstead act is the measure passed following the ratification of the national prohibition amendment by the legislatures of 45 of the 48 states of the union.

* * *

The American legion has announced its intention of beginning a campaign to obtain employment for about 700,000 veterans of the World war who are now idle.

* * *

General Pershing last week expressed vigorous opposition to the proposal of congress that the standing army of this country be reduced from 150,000 to 115,000 men. General Pershing advocates at least 130,000. The present actual strength is said to be about 137,000.

* * *

A new plan for paying the proposed national soldiers' bonus was discussed last week in congress. It would provide for the issuance of government treasury certificates upon which local banks throughout the United States could advance money to the ex-service men, thereby virtually making these local banks lenders to the national treasury.

* * *

Hubert Work, first assistant postmaster general, has been appointed by President Harding to become postmaster general, taking the place made vacant by the resignation of Will H. Hays. Mr. Hays resigned to become head of the National Moving Picture association.

GUERNSEYS FROM WISCONSIN.

Twenty-seven head of purebred Guernseys purchased in Wisconsin by A. L. Wallace of Outlook, executive committee member of the Yakima Valley Guernsey Breeders' association, were shipped by freight February 3 and arrived in the lower valley 10 days later. Ebert Herron, a new man in the Guernsey business and a resident of the Liberty district, northwest of Outlook, accompanied Wallace and purchased some for himself. Some of them will be added to the Wallace & Fordyce herd and the rest will be consigned, together with some offerings by members of the association, to an early spring sale, the date for which has not yet been set.

Farm Business and Markets Outlook

(Continued from page five.)

CHEESE BUYERS CAUTIOUS.

The advance in the cheese markets two weeks ago has checked the demand, as buyers are purchasing only for their immediate needs.

FRUITS AND VEGETABLES.

Idaho, Maine, Montana, Nebraska, North Dakota, South Dakota and Washington have shipped more potatoes than for the entire season last year, but shipments from Michigan, Pennsylvania and Wisconsin have decreased this season.

The potato market has been inclined to drag. Northern sacked whites are bringing $1.55@1.60 per 100 lbs. f. o. b. shipping points and $1.70 to $2 in the Chicago carlot market.

The apple market shows little change. Baldwins are bringing $7.50 to $8.50 in consuming markets. Northwestern extra fancy boxed Jonathans are bringing $3 to $3.50 per box. The supply of apples for the rest of the season is slightly above the five-year average.

LATEST QUOTATIONS.

The Live Stock Market.

PORTLAND, March 4.—Cattle—Choice steers, $7@7.50; medium to good steers, $6.50@7; fair to medium steers, $6@6.50; common to fair steers, $5@6; choice feeders, $5@6; fair to good feeders, $4.50@5; choice cows and heifers, $6@6.50; medium to good cows and heifers, $5.25@6; fair to medium cows and heifers, $4.50@5.25; common cows, $3.50@5.25; canners, $2@4.50; bulls, $3.50@5.50; choice dairy calves, $10@11; prime light calves, $9@10; medium light calves, $6.50@9; heavy calves, $4.50@6.50

Hogs—Prime light, $11.25@11.75; smooth heavy, 200 to 300 lbs., $10.25@11.25; smooth heavy, 300 lbs. up, $9.25@10.25; rough heavy, $7.50@9.25; fat pigs, $11@11.50; feeder pigs, $11@11.50; stags, subject to dockage, $6@8.

Sheep—East-of-mountain lambs, $11@11.50; best valley lambs, $10@10.75; fair to good, $9@10; cull lambs, $6@8; eastern Oregon feeders, $8@9; light yearlings, $9@9.75; heavy yearlings, $8@9; light wethers, $8@9; heavy wethers, $8@9; ewes, $3@6.50.

SPOKANE, March 4.—Prime steers, $6.50@7.60; good to choice steers, $5.75@6.50; medium to good steers, $5.25@5.75; fair to medium steers, $4.75@5.25; common to fair steers, $4.25@4.75; choice cows and heifers, $5@6; good to choice cows and heifers, $4@5; medium to good cows and heifers, $3.50@4; fair to medium cows and heifers, $3@3.50; canners, $2@3; bulls, $3@5.50; light veal calves, $8@10; heavy veal calves, $4@8; stockers and feeders, $4.50@5.

Hogs—Prime mixed, $10.75@11.60; medium $9.75@10.75; heavies, $7.75@9.75; fat pigs, $9.75@10.75; stockers and feeders, $9.25@10.25.

Sheep—Prime lambs, $9@10; fair to medium, $8@9; yearlings, $6@8; wethers, $4.50@6; mutton ewes, $2@6; feeder lambs, $7@8.

The Grain Market.

PORTLAND, Ore., March 4.—Wheat—Hard white, $1.30; soft white, white club, hard winter, $1.28; northern spring, $1.26; red Walla, $1.22.

SEATTLE, March 4.—Yesterday's car receipts: Wheat, 83; oats, 2; barley, 1; corn, 5; hay, 6; flour, 5.

Grain futures—Wheat—Hard white, March, April, $1.30; soft white, white club, hard winter, March, April, $1.28; northern spring, March, April, $1.26; red Walla, March, April, $1.22.

Oats—No. 2 white feed, March, April, $35; No. 2 gray, March, April, $33.50.

Barley—Brewing, March, April, $29; standard feed, March, April, $28.50.

Hay and Grain Feed.

PORTLAND, Ore., March 4.—Millfeed—Price f. o. b. mill: Millrun, ton lots, $28; mixed cars, $27; straight cars, $26 per ton; middlings, $42; rolled barley, $37@39; rolled oats, $42; scratch feed, $45@50 per ton.

Corn—White, $36; cracked, $38.

Hay—Buying price, f. o. b. Portland—Alfalfa, $13.50@14 per ton; cheat, $10@11; oat and vetch, $14.50; clover, $11; valley timothy, $14@15; eastern Oregon timothy, $16@17.

SPOKANE, March 4.—Wheat—Feed wheat, $40 per ton.

Oats—$36 per ton; steam rolled, $38.

Corn—$34 per ton; cracked corn $36 ton.

Barley—$32; steam rolled, $34 per ton.

Bran and shorts—$30 per ton.

Alfalfa, $18 ton; timothy, $18 ton; mixed hay, $18 ton.

SEATTLE, March 4.—City delivery—Barley, whole, $36; ground and rolled, $38; clipped, $43; coconut meal, $31; linseed meal, $67. Others unchanged.

General Produce.

PORTLAND, March 4.—Butter—Cubes, extras, 33@34c per lb; parchment wrapped, box lots, 38c; cartons, 39c. Butterfat, buying prices: No. 1 grade, 34@37c, delivered Portland.

Eggs—Buying price, 20c dozen, case count; jobbing prices, case count, 22c; candled ranch, 24c; association selects, 26c; association firsts, 24c; association pullets, 23c.

Cheese—Tillamook triplets, price to jobbers, f. o. b Tillamook, 26c; young Americas, 27c lb.

Poultry—Hens, 22@26c; ducks, 24@27c; geese, 20c; turkeys, live, nominal; dressed, 37@38c.

Pork—Fancy, 15@15½c lb.

Veal—Fancy, 16c lb.

SPOKANE, March 4—Butterfat, 39c lb.

Eggs—Fresh ranch eggs, $7; fresh pullet eggs, $6.50.

Live poultry—Springers 19c lb; springers, staggy, 15c lb; hens, fat, 4 lbs up, 23c lb; 2 to 4 lbs, 19c lb; old roosters, 12c lb; rabbits, 10c lb.

CHICAGO, March 4.—Butter—Lower; creamery extras, 36½@36¾c; firsts, 32@36c; seconds, 29@31c; standards, 35¾c.

Eggs—Lower; firsts, 22¾@23c; ordinary firsts, 20@21c; miscellaneous, 22@22½c.

Range of Live Stock Prices for the Week Ending March 1

CATTLE.	Chicago.	Spokane.	Portland.	N Salt Lake
Choice, prime heavy steers (1100 lb. up)	9.15@ 9.85	.....	.....	.....
Good heavy steers	8.35@ 9.25	.....	.....	.....
Medium heavy steers	7.50@ 8.40	.....	.....	.....
Common heavy steers	6.60@ 7.60	.....	.....	.....
Choice, prime light steers (1100 lb. d'n)	9.00@ 9.75	.....	.....	.....
Good light steers	8.25@ 9.10	.....	.....	.....
Medium light steers	7.35@ 8.30	6.25@ 7.60	6.25@ 7.50	5.25@ 6.75
Common light steers	6.40@ 7.40	4.25@ 6.25	4.50@ 6.50	4.00@ 5.50
Common to choice butcher heifers	4.35@ 8.00	3.50@ 6.00	4.00@ 6.25	3.50@ 5.25
Common to choice butcher cows	3.90@ 6.50	3.00@ 5.50	3.25@ 5.75	3.00@ 5.00
Bologna and beef bulls	3.75@ 6.50	3.00@ 5.00	3.50@ 5.50	2.00@ 3.50
Canners and cutters, cows and heifers	2.60@ 4.15	2.00@ 3.50	2.25@ 3.25	1.00@ 3.50
Canner steers	3.50@ 4.75	2.50@ 4.25	2.50@ 4.25	2.00@ 3.50
Medium to choice light veals	7.25@12.00	7.50@ 9.50	9.00@11.00	6.00@ 7.00
Common to choice heavy veals	4.00@ 8.50	4.00@ 7.50	5.00@ 8.50	.....
Com. to choice feeders (1000 lb. up)	5.65@ 7.50	.....	.....	.....
Com. to choice feeders (750-1000 lb.)	5.50@ 7.50	4.50@ 5.00	4.50@ 5.50	.....
Common to choice stocker steers	5.10@ 7.25	.....	.....	.....
Com. to choice stocker cows, heifers	3.75@ 5.50	.....	.....	.....
HOGS.				
Top of market	11.35	11.60	12.10	1050
Bulk of sales	10.00@11.25	10.75@11.50	11.50@11.75	9.50@10.50
Heavy (250 lb. up)	10.05@11.10	7.75@ 9.75	9.50@10.50	.....
Medium (200-250 lb.)	10.15@11.25	9.75@10.75	10.00@11.50	9.50@10.00
Light (150-200 lb.)	10.40@11.35	10.50@11.60	11.00@12.10	9.50@10.50
Light lights (130-150 lb.)	10.15@11.25	10.50@11.60	11.00@12.10	.....
Smooth packing sows (250 lb. up)	9.00@10.40	7.75@ 9.00	9.00@10.00	.....
Rough packing sows (200 lb. up)	8.75@10.00	7.00@ 8.00	7.50@ 9.75	.....
Medium to choice pigs (130 lb. down)	9.00@10.90	9.75@10.75	11.50@11.75	.....
Stock pigs	.....	8.75@ 9.75	11.50@11.75	7.50@ 9.00
SHEEP AND LAMBS.				
Medium to prime lambs (84 lb. down)	13.25@16.25	9.00@10.50	9.50@11.00	10.00@12.00
Culls and common lambs	10.00@13.25	8.00@ 9.50	6.00@10.00	8.00@10.00
Medium to prime yearling wethers	10.50@14.50	6.00@ 8.00	6.75@ 8.25	7.00@ 9.00
Medium to prime wethers	6.75@11.00	4.50@ 6.00	4.75@ 7.25	6.00@ 8.00
Medium to choice ewes	5.50@ 9.25	4.00@ 6.00	3.00@ 6.00	4.00@ 6.50
Culls and common ewes	2.50@ 6.00	2.00@ 4.00	2.00@ 3.50	3.00@ 4.50
Feeder lambs	11.50@13.50	7.00@ 8.00	8.00@ 9.00	.....

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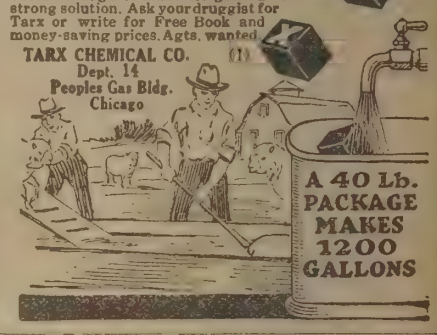
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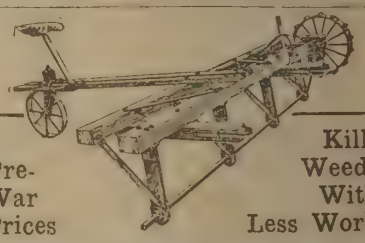
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Because he was so busy at school Wayne Reeder did not have time to write to the Corner any sooner. He says: "We have hauled water on this place ever since I can remember, but we have just finished a nice well." Wayne's papa bought a drill and drilled his own well. Now he is drilling a well for a neighbor. This year the Reeders are planning a nice garden. They live in Washington.

Millie Le Bret lives east of the Columbia river, in northeastern Washington. She says her twin brothers, 3 years old, are learning to box. Millie's pets are a cat and a dog.

Ella Littlejohn, who has been a Corner cousin for over three years, says: "I have not written to you for a long time. We have 10 cows, one little calf and six heifers, two work horses and a pony. We have a cat. His name is Tommy. We have a little kitten, too. It hasn't any name." Ella is 10 years old. Her birthday is July 12. She is in the sixth grade and has 13 classmates. Her home is in the country, in Thurston county, Washington. Ella says she likes it better than the city. She has never lived in the city, but has stayed there at different times.

A new cousin, near Silver Lake, in southwestern Washington, writes: "This is my first letter. My full name is Ernest Verner Wicklund. We have 14 cows, eight heifers, three horses and seven pigs. My birthday is January 1. I am 10 years old." We are glad to hear from Ernest.

Isabelle Redding, a northeastern Washington girl, says her favorite study at school is arithmetic. She is in the fifth grade this year and has two teachers. They are Miss Schelling and Miss Larson. Isabelle will be 11 years old October 9, 1922. She likes The Junior Farmer.

"I am 7 years old," says Margaret Pope. "I have a little sister 2 years old. Her name is Myrtle. My teacher's name is Mrs. Daily. We had 10 days of vacation because so many of us in the schoo were sick." Margaret's home is near the Snake river, in southeastern Washington.

"Arithmetic is hard," writes Paul Keller, who was 9 years old September 27, 1921. Paul says the schoolhouse burned down and he is now going to a temporary schoolhouse. He has a dog named Sox and a cat named Stub. Stub came to the house one day when it was cold and Paul fed him, so Stub decided to stay. He has a stub tail. Paul is a Wasington boy and lives in the Wenatchee valley.

Helen Lasti, a new cousin, writes: "I live on a farm and go to Clover valley school. I am in the fourth grade. I have no brother or sister, but I have two rabbits, two cats and a dog. I am 8 years old and my birthday comes April 7." Helen's home is in Pierce county, Washington.

Helen Marchant tells us about a basketball team which has been organized at school where she goes. There are eight girls in the team and they have great fun playing. Helen is in the eighth grade this year. She is a Washington girl and lives in northwestern Whatcom county.

"I am 11 years of age May 2," says Inez Baiha, a southwestern Washington girl. "I am in the third grade. My teacher's name is Miss Turula. I like her very much. I live on a 40-acre farm which is three-fourths of a mile from town. I have two little pet kittens which are very playful." Inez says because the upstairs of the school building was being fixed and there was so much noise the children were having a two weeks' vacation. This is Inez's first letter and she sends greetings to the cousins.



THURSDAY, March 9—Willie Ottmer, 11 years old; Louise Scheel, 10.

FRIDAY, March 10—Corleen McInroe, 10 years old.

SATURDAY, March 11—Bertha Van Derschelden, 10 years old.

MONDAY, March 13—Violet Bond, 8 years old; Ruth Conrad, 10; Arnold Dunbar, 11.

TUESDAY, March 14—Alvin Cline, 11 years old; Mildred Dicken, 9; Estella Wegner, 11; Clara Wiley, 11.

In each issue a list of the cousins' birthdays for the week will be published. At the close of each letter you write be sure to tell how old you are and when your birthday comes.

LETTERS WELCOMED BY AUNT NELLIE.

Among recent letters received by Aunt Nellie are those from cousins whose names follow. A few of these will be published each week in the regular edition of THE FARMER, and others will appear from time to time in The Junior Farmer:

Clairinda Fagan, Stella Newhold, Wayne Reeder, Millie LeBret, Ella Littlejohn, Ernest Verner Wicklund, Isabelle Redding, Margaret Pope, Paul Keller, Helen Lasti, Helen Marchant, Inez Baihi, Helen Turner.

Cecilia E. Stuhr, southeastern Washington, says: "Daddy bought us a phonograph and 14 records for Christmas." Cecilia thinks that was a fine Christmas present. Among her other presents were a doll, a pair of gloves, hair ribbons and a book, "The Campfire Girls at Long Lake." Cecilia says she likes to do housework.

On a farm in Grant county, Washington, where Roy Norton and his two brothers and three sisters live, there are 40 head of horses, two cows, a calf, a sheep and a dog. Aunt Nellie thinks the boys and girls in the Norton family surely have a jolly time. Roy says: "We have about two miles to go to school and we ride horseback."

We have a letter from Lillian May Dunning, who lives in southeastern Whitman county, Washington. Lillian wrote us some time ago about having a cast on her leg. She now writes that she has taken the cast off and can walk better than she did before. (Aunt Nellie is very glad you are getting better, Lillian.) Lillian goes to the Chambers school and likes it. She sends love to the cousins.

Preston Palston wants to join the Corner. He was 11 years old November 6, 1921, and is an eastern Washington boy. He says he has been reading the letters in THE FARMER. His pets are a pony, a cat and a dog with nine little puppies. Aunt Nellie thinks puppies are fine little pets. We shall be glad to hear from Preston again.

BEDTIME STORIES

By THORNTON W. BURGESS.

Copyright, 1919, T. W. B.

INVITATIONS ARE SENT OUT.

Billy Mink had gone off on the Laughing Brook feeling most uncomfortable. Grandfather Frog had watched him go. When Billy Mink was out of sight, Grandfather Frog suddenly smiled to himself. Then he opened his big mouth very wide and laughed and laughed without making a sound.

Pretty soon, Grandfather Frog beckoned to the Merry Little Breezes who were playing on the bank. At once, they stopped teasing the buttercups and daisies and hurried to gather around Grandfather Frog as he sat on his big, green lilypad in the Smiling Pool.

"Churgarum!" said Grandfather Frog. "How would you like a story?" The Merry Little Breezes clapped their hands and danced for joy. "Ever and ever and ever so much! Oh, ever so much, Grandfather Frog!" they all cried together.

"All right, you shall have it, if——" Grandfather Frog mused, and his eyes twinkled.

"If what, Grandfather Frog?" cried one of the Merry Little Breezes, anxiously.

"If you will do a favor for me," replied Grandfather Frog.

"Of course, we will, Grandfather Frog!



Grandfather Frog suddenly smiled to himself.

Of course, we will!" shouted the Merry Little Breezes.

Then Grandfather Frog whispered to the Merry Little Breezes and sent them hurrying over the Green Meadows and through the Green Forest.

One found Happy Jack Squirrel. "Grandfather Frog invites you to be at the Big Hickory Tree by the Smiling Pool at sundown tonight, and he says for you to be ready to climb your fastest," said the Merry Little Breeze.

Happy Jack smiled. "I will be there," said he.

Another Merry Little Breeze hunted until he found Peter Rabbit. "Grandfather Frog invites you to come to the Smiling Pool at sundown and be ready to show how fast you can run," said the Merry Little Breeze.

"I will be there," said Peter Rabbit, with a chuckle.

A third Little Breeze invited Johnny Chuck to come and show how fast he can dig, and a fourth Little Breeze invited Jumper the Hare to come and show how he can jump. The other Merry Little Breezes invited all the rest of the little meadow people and forest folks to be at the Smiling Pool at sundown, and, of course, everybody agreed to come.

All this time, Billy Mink knew nothing of what Grandfather Frog and the Merry Little Breezes were doing. He had boasted that he could anything that any of the others could do, and Grandfather Frog said that he could find some one who could do something that Billy Mink couldn't do, and had called Billy Mink a boaster.

Just now, Billy Mink was waiting for sundown, and feeling very uncomfortable, as he waited. He would have felt more uncomfortable had he known of Grandfather Frog's invitations.

Nature's Mighty Works.

"Little drops of water—little grains of sand,
Make the mighty ocean—and the land."
Little drops of gasoline, and a steady hand
Make an ancient "flivver" go to beat the band.
—J. D.

Or a Package of Gum.

"Well, well, Bill, I haven't seen you for years. Do you know where we can get a drink?" "No." "Well, come in here and have a necktie on me."—Louisville Courier-Journal.

Interested in Prices.

Boy—How much are the apples?
Fruit vendor—Five cents a piece.
Boy—How much for a whole one?

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Seven Essentials

Pure Breeding Makes Big Demands

There are seven essentials to a successful purebred live stock business, says Dean E. J. Iddings of the University of Idaho college of agriculture. They are: First, good live stock; second, conservatism in the prices paid for foundation breeding stock; third, common sense in the matter of pedigrees; fourth, advertising; fifth, judicious feeding and care; sixth, the maintenance of the business on a high plane of integrity, and seventh, the recognition by the breeder that genuine success is more than a matter of dollars and cents.

Discussing the first essential, Dean Iddings laid emphasis upon the fact that a pedigree alone is not sufficient proof of the quality of an animal. The individual himself must be good. Sires must conform to the standards of their breed. A beginner should start not with large numbers of purebreds of uncertain or even of outstanding pedigree, but with a few of good quality. A point frequently underestimated is the value of good foundation females in the beginning of the purebred business. The herds and flocks that have become outstanding in this country are, as a rule, noted because of the high quality of the females as well as of the sires.

Constructive Conservatism.

Regarding the prices that should be paid for purebred animals, Dean Iddings expressed conservative disapproval of the excessive and artificial prices sometimes paid, or claimed to be paid. He declared that the purebred live stock business must be conducted for the benefit not alone of the breeder, but even primarily for that of the general live stock man, as its basic purpose is the improvement of the average grade herd throughout the country. Breeding must be on such a basis that farmers and range men can afford to buy reasonably good bulls to head their herds. "If we set our sights too high we shall discourage expansion," he said. "No extremes in prices are justifiable, but rather we must strive for a conservatism of prices."

The breeder himself in special instances where the possibilities for unusual development are present, can perhaps pay a very high price for a sire or a dam of unquestionably outstanding quality. But such high prices should not be made the basis upon which to fix the prices for the reasonably good breeding stock required by the average producer.

The Pedigree.

There are two extremes in the matter of pedigree. In the one case anything that is a pedigree is acceptable, regardless of the family lines or lack of them that it indicates. In the other case nothing but a pedigree showing the bluest blooded ancestry can be considered. Either point of view, says Dean Iddings, is wrong. There should be real quality in an individual as well as in ancestry in order to give pedigree value, but the matter of family blood lines has been overdone, in his opinion. In 10 generations there would be over 2000 animals in the ancestry of an individual, each exerting some influence. Only in cases where the prepotency of a single animal appearing several generations back was exceptional would it exercise a dominant influence on the present generation individual. Dean Iddings makes it clear that he does not discount the value of blood line breeding, but rather vigorously approves it. The presence, however, of a single individual of a prominent family in a pedigree some generations back may, he feels, be greatly over-played as a factor in determining the quality of the present individual.

Must Become Known.

Those breeders who have been most successful have been those who, in addition to building up and maintaining high-class herds, have some systematic method of letting the public know what they have. An essential to success is skillful selling as well as skillful breeding. This advertising, he said, may be by means of the agricultural press, by means of mingling with farmers and breeders personally, or by any other method that educates the possible buyer to know that there, on a particular farm, such a breed type and strain of animal may be secured.

Special Care Essential.

The purebred of high quality is the result of special processes and special care. Purebred animals can not be given the same kind of care that the ordinary grade will thrive upon, but must be given special attention. The same degree of skill necessary to their development is necessary to their proper maintenance and further improvement.

Honesty an Essential.

Permanence in the business is essential to success, and a high standard of integrity on the part of the breeder is necessary to this permanence. Pedigrees must be absolutely honest. Dates and breeding must be reported to the record associations accurately. Animals must be sold for exactly what they are.

Dean Iddings paid the record associations of the various breeds a high compliment when he declared that, notwithstanding the many opportunities that are present for misrepresentation and error, the general public had learned to depend unquestioningly upon the records of the herd books.

Enthusiasm.

The last essential named by Dean Iddings might have been placed first as well as last. It is that of enthusiasm for the undertaking. The breeder that would succeed must be a creater. He must have visions of what he hopes to attain. He must have an ideal far above that of the acquiring of dollars and cents. He must possess an enthusiasm that knows no defeat.

Pacific County Farm Project

Only half enough eggs to supply the local demand are now produced in Pacific county, and this is one of the conditions which local farmers, through County Agent J. R. Beck and a comprehensive, forward-looking extension program, hope to correct within the next three years. More than 35 project leaders in drainage, farm sewage, dairying, crops, soils, horticulture, poultry, clothing and home management are cooperating with Beck in nine communities—Brooklyn, Frances, Menlo Willapa, South Fork, South Bend, Nasel, Wallicutt and Long Beach. A definite acreage for drainage has been set as a goal, and so on down the list of projects.

TO BE BRED FOR CLASS AAA.

Valley View Queen of L, a Jersey cow owned by H. S. Ruley of Mount Vernon, Wash., was started on official test November 8. For December she produced 68 pounds of fat and for January 67 pounds. She is being milked only twice a day. She will be run 305 days and bred for class AAA.

Built for Convenience

S. D. Cornell of Grandview, Wash., built a round barn last fall, which seems to be a model of convenience, coupled with a comparatively small cost of construction. The barn is 56 feet in diameter, 16 feet to the eaves and about 40 feet to the top. A silo is built in the center. The roof is self-supporting and three openings provide places in which to blow the silage or put in the hay or grain. A ceiling, well floored above, at the 16-foot level, forms the upper story. The floor is concrete, being about three inches higher in front of the gutter than behind it. The cows are fastened in stanchions, of which there are 19, besides five box stalls and room for four horses. Openings at different points allow of the hay, grain or silage being let through the ceiling, and one can feed the entire herd by walking around the silo.

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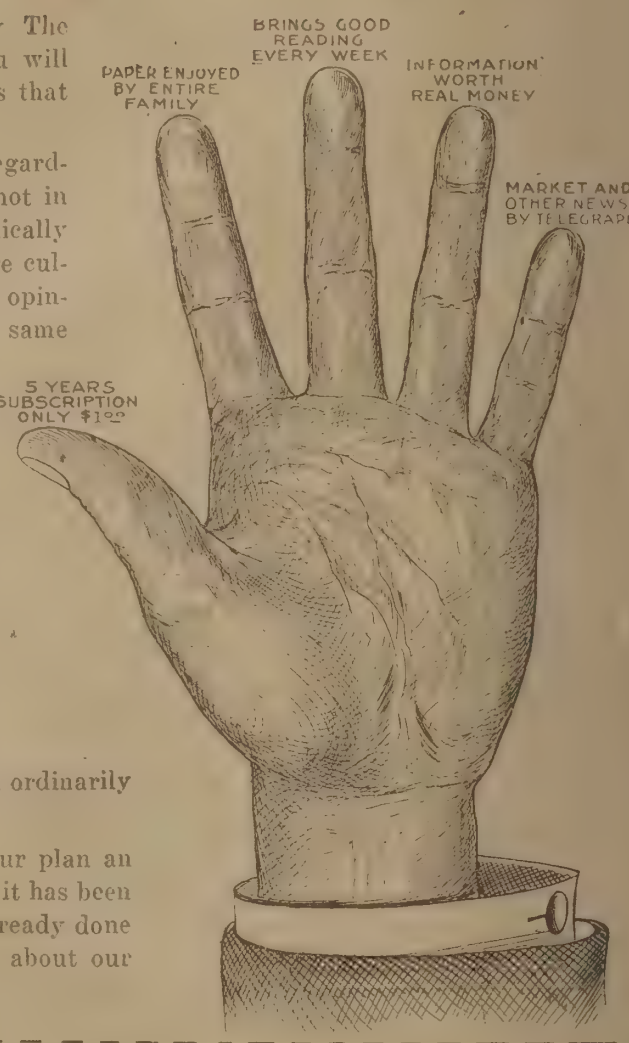
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News for Breeders

(Continued from page two.)

Hulburt, Mount Vernon, members of the board of directors. This association will join with like associations in other northwestern states in meeting the expenses of A. E. Lawson, field representative of the Shorthorn interests in these states.

SCHOOL BOY'S HERD.

George King, a school boy of Mabton, Wash., has a foundation herd of Poland China hogs that may well make the best breeders sit up and take notice. George has as a herd sire Yakima Pan, bred by Frand D. Winn of Kansas City, by the great boar, Peter Pan, said to be the largest pig ever shown as a year old. He has also two gilts by that other famous boar, Checkers.

George's entry into the swine-breeding game was after getting together $16.25 from the sale of chickens and eggs. With this as a starter, he bought a sow for $50 from C. B. Cox of the same place. He kept strict account of his expenses and sales and did so well his father went into partnership with him and furnished what finances were needed to buy the new and popular foundation stock, for George is a close reader of the swine journals and has a knowledge of pedigrees possessed by only a few men. Mr. King takes both his sons into partnership in hog breeding and other farm operations, and gives the boys a share of the profits.

BUY BOAR FROM NEBRASKA.

John F. Lynn & Son of Peach, Lincoln county, report the purchase of a Poland China boar from Lonergon & Sons of Omaha, Neb. The animal is a March pig weighing 350 pounds, and had been registered as Lynn's Royal Designator. He is sired by Designator, one of the show animals on the Lonergon farm. The Lynn herd will be remembered as the owner of Lynn's Long Joe, who won first in his class at the Western Royal Live Stock show last fall.

Harry Lynn, the junior member of the firm, while just entering his 'teens, is a real live stock breeder and can give the name of any animal in the herd, as well as mention the strong points of each. Soon after the herd was established Harry had made his pick of an outstanding gilt in one of the litters, as a reward for care and management during the fruit harvest. He sent in the record of the litter to the Poland China association, with instructions for his animal to be registered in his own name. Harry now has several of the sows as his own personal property.

John F. Lynn, the father, is operating a 10-acre fruit farm on the banks of the Columbia river in the extreme northern part of the county.

"OLD DUTCH" BACK AGAIN.

Back to service in the northwest after an extended absence in the east comes Dutchland Governor Sir Colantha, a son of Colantha Johanna Lad, formerly used in the Carnation stock farms herd. Through the Carnation manager at Oconomowoc, Wis., Ralph H. Tuttle of Walla Walla, who owns several of the bull's daughters, made an offer for him several months ago. The deal was recently completed and "Old Dutch" now heads the Tuttle herd. He is 11 years of age, but he has 32 A. R. O. daughters.

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Ship your cattle, hogs, sheep, fat or feeders, to the
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CAN YOU USE THIS HOLSTEIN BULL?

Sire: Sir Johanna Fayne Bonheur De Kol No. 188160, whose dam made at 2 years, milk, 22.449 pounds; butter, 859; at 3 years, 7 days, milk 649 pounds; butter, 32.89 pounds; 30 days, milk, 2727.9 pounds; butter, 130.37 pounds.

Dam: Lucy Freela Pontiac No. 256613

6 years, 365 days—milk, 26,661.6 pounds; butter, 1056.5 pounds.

A handsome, straight, long-bodied fellow; half black, half white; 13 months old; weight, 1100 pounds.

LET US TELL YOU MORE ABOUT HIM.
ARP'S DAIRY, EUGENE, ORE.

Broadmead Aberdeen Angus

Ten bulls, ready for service, now offered at special prices and terms. Also a number of promising bull calves, some that should make show winners or high class herd headers. Can supply your needs for either sex.
J. A. SCOLLARD, Chehalis, Wash.

ABERDEEN-ANGUS

bulls will mature your steers earlier, give them a heavy, thick and low set conformation, dehorn them and add to their quality so that they will top the market every time. We have a wonderful lot to select from, both range and herd bulls, at prices which will move them.
CONGDON & BATTLES.
P. O. BOX 275. YAKIMA, WASH.
Write for prices and literature.

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ARROROK HERD FARM. Boise, Idaho.

IDABOIS FARMS SHORTHORNS.
King Lavender, the bull that topped the Portland sale in 1920, heads a herd of superior Scotch breeding matrons. Write us for range and herd bulls. A great collection to choose from. O. O. HAGA. Boise, Idaho.

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From advanced registry dam with record for last December 1830 lbs. milk, 71.18 lbs. butterfat. Priced very reasonable.
EARLCREST STOCK FARM.
EAGLE CREEK, ORE.

St. Mawes Bred Jersey Bull

By a son of St. Mawes Lad, sire of the world record senior yearling, St. Mawes Lad's Lady, 828 lbs. fat. Dam's record, 586 lbs. fat as four-year-old, and a three times grand champion cow. Priced for quick sale. One other well bred calf.
P. MEENDERINCK, Lynden, Wash.

629 LBS. FAT AS JR. 2-YR.-OLD
is the record of the dam of a young Jersey bull, ready for light service, that we are offering. Write today for price and full particulars. J. J. VAN KLEEK & SONS.
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World Record Jersey, St. Mawes Pretty Lady, as Senior Two Year Old, 824.35 Pounds Fat

We offer a full brother in blood to this wonderful cow, whose new world record was finished Feb. 21. His sire, Poppy's Golden St. Mawes, is a son of the great gold medal cow, St. Mawes Poppy, 952 lbs. fat, and by the gold medal bull, Rosaire's Olga Lad. His dam, Olga Lad's Daisy Girl, is a full sister to the dam of "Lady," whose record is shown above.

He is 50 per cent common blood with Poppy's Dortha, world record junior three-year-old, 994 pounds fat, and

Over 40 per cent common blood with St. Mawes Lad's Lady, world record senior yearling, 824 lbs. fat.

He is a straight backed, long bodied, good individual. Where can you equal his breeding? DANIELS JERSEY FARM.
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Registered Shire Stallions

mares in foal and fillies, including junior champion stallion at Portland, Ore., 1921, and junior champion mares at Yakima, Wash., for sale at breeders' prices.
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Heart o' the Valley Ranch
GRAND CHAMPION HERD
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PACIFIC COAST, 1921

Won 24 firsts out of 28. Won 9 champions out of 12. Won 5 grand champions out of 6. Nehawaka Lad, Cherokee Lad and Gen. Tipton breeding.

Bred sows, open gilts, boars, young pigs one to a carload. Sow groups, with unrelated boar a specialty. Guaranteed breeders. Write for price list and catalog.

HAYES & HARTER, Grants Pass, Ore.

Richards Champion Durocs

Last year we exhibited our Durocs at Oregon, Washington, Idaho, Utah and Montana fairs and stock shows, winning 326 prizes, of which 137 were champion and first prizes. A record never before equaled. We have 200 spring pigs, the best we ever raised. Write us your wants, we guarantee satisfaction. Meet us at the fairs.
Richards Live Stock Company, Virginia, Idaho.
"THE HOME OF CHAMPION DUROCS."

Great I Am 1st. Duroc-Jersey junior boar, Western Royal and Pacific International, 1921, at head of herd. Bred gilts and weaned pigs for sale.
CRESCENT STOCK FARM, Johnson, Wash.

Duroc Jersey Hogs of Quality

A few choice fall gilts and boars of Pathfinder and Great Wonder breeding. Priced to sell. Satisfaction guaranteed.
E. D. GANO, Sunnyside, Wash.

Big Type Poland Chinas

My herd boar won the past two years at state fair. 50 bred gilts, young boars, weaned pigs. Live and let-live prices. Satisfaction guaranteed.
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Big Type Poland Chinas

Four July boars and four gilts, sired by West Price, first prize junior yearling Oregon State Fair, 1921. One older boar.
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Reg. Big Type Poland China Gilts.
Bred to Designer's Model Smooth Giant for February-March farrowing; best of breeding; long, tall.
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Long, smooth, deep fall pigs. Either boars, gilts or trios.
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Pay for Berkshires in Pork

Improve your stock. You get the breeding hog now; pay when you get the pork. Write for plan.
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Flathead's Pure-Bred O. I. C.'s

Big, smooth, prolific, easy feeding, prize winning, quality hogs; 8-week-old pigs, $10 up; monthly payments. Order now.
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Read our "Want Ad" Page for good offers this week.

GRADE CALVES

from dams producing 300 to 700 lbs. butterfat in Tillamook County Cow Testing Association.
Price, $11.50 crated f. o. b. Tillamook, with guarantee of breeding and production of dams.
Jersey, Guernsey and Holstein Breeds.
Write County Agricultural Agent, Tillamook, Ore.

Pacific Northwest Shorthorn Breeders' Ass'n
ANNUAL SHORTHORN CATTLE SALE
Portland, Oregon (Pacific International Livestock Exposition Building)
Wednesday, March 22, 1922

66 Head **41 Bulls --- 25 Females** **66 Head**

RANGEMEN and FARMERS have a large number of bulls from which to make selections. The 41 bulls include 8 over two years old, 27 yearlings, most of which will be two by summer, and 6 under one year of age. There are several herd bulls in the list and breeders should look them over. From the 25 females listed a man could obtain a valuable foundation herd at his own price. Almost all are young cows or heifers and are well bred.

A number of cattle in the sale are from good milking dams. At prevailing prices of both feed and cattle, now is an opportune time to establish a Shorthorn herd. A good Shorthorn cow bought now will make you a good investment.

The cattle are consigned from some of the leading herds of the Northwest, as A. Chalmers, Frank Brown, G. W. DeLay, W. J. Townley, A. H. Tarbell, Green & Sons, Oregon Agricultural College, Felzer Bros. and others.

REMEMBER: You can buy one or more carloads of bulls in this sale that are ready to go into service.

Get a catalog from— A. E. LAWSON, Sales Manager - 207 Exchange Bank Bldg., Spokane, Wash.



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NEW MERCHANDISE has been coming in every day and is still coming in by the carload. Our buyer has only just returned from an extensive buying tour of the biggest markets in the United States, with the result that our stocks are complete, new and up to date.

You will be pleasantly surprised with the wonderful values and low prices throughout our new big catalog, which is only made possible by our enormous buying capacity.

We are prepared for a brisk spring trade. Everything points to better times for the farmer. The price of wheat has improved, wool commands more money, sheep have gone up, and canned goods of all kinds are scarce at any figure; so, every indication sems to predict much better prices for nearly everything that the farmer has to sell.

We believe the worst is over; and that from now on the farmer will again be in a position to buy what he needs.

The items below are selected at random from the new catalog. You may order from this page or from the catalog itself. Your copy is ready—write for it, **now!**

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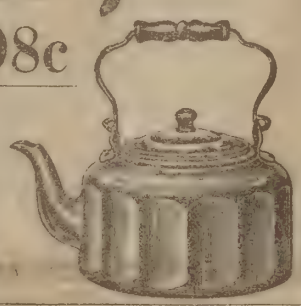


Glass Mixing Bowls
5 to 9 inches
Set of 5
98c



Our Roofing Material, Building Paper, Wall Board, Etc. **Will Save You Money**

Aluminum Tea Kettle
5-quart size—
$2.05



GARDEN TOOLS

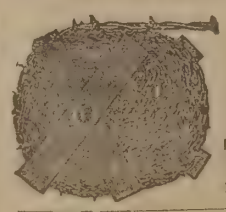


Steel Hoe **60c**

Steel Rake **$1.05**

Shovels and Spades **$1.25**

BARB WIRE



"Our Special" Barb Wire In 80-Rod Rolls

Heavily galvanized. Price, per reel... **$3.30**

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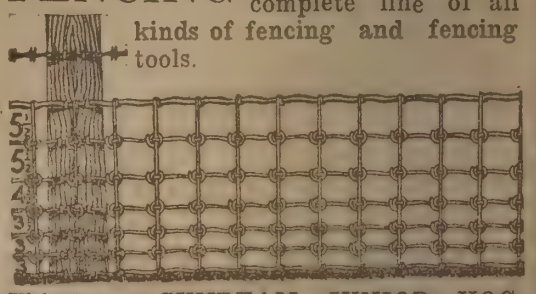
House paint, all colors, per gal... **$2.56**

In 5-gal. cans, gal. **$2.43**

Roof Paint
(Black Asphalt)
Per gallon..... **75c**

FENCING

We carry a complete line of all kinds of fencing and fencing tools.



This is our SUNBEAM JUNIOR HOG FENCE, 26 inches high; 7 line wires, stays 6 in. apart; a rod **35c**

Dairy Salt



Kitchen or table use, 50-lb. sack. **74c**

Black Figs

Very fine. 5 lbs. for..... **75c**

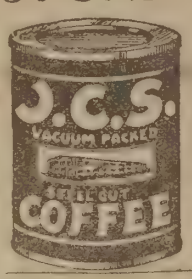
Bulk Cocoa

None better. 3 lbs. for..... **35c**

American Sardines

Good quality, 3 cans for..... **15c**

J. C. S. COFFEE



Very best obtainable, in vacuum sealed cans.

3-lb. can **$1.15**

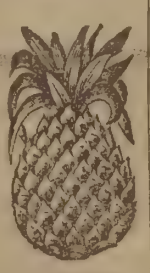
5-lb. can **$1.85**

Economy Coffee
5 lbs. for **$1.05**

PINEAPPLE

Extra standard No. 2½ cans,

3 Cans **75c**



Peaches

Lemon cling, halves, 2½ cans, 3 for **80c**



JONES' SODAS

3 lbs. in wooden box **58c**



Jones' Laundry Soap

Well aged—goes farther.

12 bars for.. **55c**

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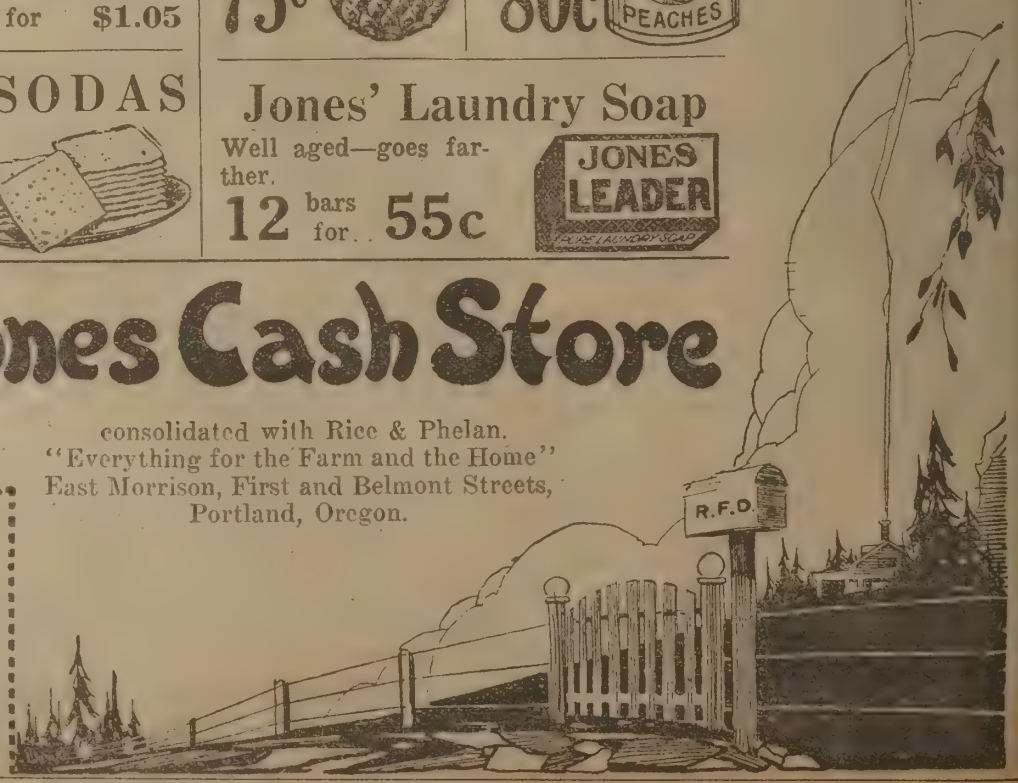
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THE WASHINGTON FARMER

ESTABLISHED 1894

SPOKANE. SEATTLE.

HAY is one of the great crops of the state of Washington. Sometimes it almost seems too great, for many is the hay grower who has found inadequate sale or inadequate price for his product after a year of costly production. There is an old saying, rich in significance, that faith without works is dead. The statement might well be paraphrased to read that the hay-growing industry, without live stock to consume the product, is useless and hence unprofitable.

The state of Washington is as well qualified for live stock production as it is for hay, and, take it year after year, there is no phase of agriculture more dependable than cattle, sheep, hogs and horses. A conservative development of it tends to improve the general industry of the state. It means more for the hay grower; more for the farmer whose soil needs fertility; more for the breeder; more for the feeder and fitter; more for the man who slaughters and packs; more for the laborer; and more for the general public, whose prosperity is linked up with the prosperity of the farm. Live stock is a basic essential of the essential industry, agriculture.



Read the First Installment of "The Gnant Gray Wolf"—Page 7

What Is Meant by Horse-Power?

PROFESSOR L. J. SMITH, State College of Washington.

Modern farming has reached a stage in its development where horsepower is used for so many purposes that the farmer should have a clear idea of that unit for power. We all know what a pound is when weights are spoken of; also what a foot or a rod means in measuring distances, and we should and can have a definite conception of the unit of power which is called a horsepower. Putting it in a general way, it means doing a certain amount of work in a certain time. The unit was gotten by testing a number of London draft horses to see how much they would pull, on the average, at the traces. It was found after a large number of tests that those horses would pull 150 pounds on the traces and walk at an average rate of 2 1-2 miles per hour, or 220 feet per minute. This amount of work down per minute was arbitrarily taken as the unit of power.

We must now learn what is meant by work. If the reader would hold anything that weighs one pound in his hand he would not be doing work, but if he raises the one pound vertically one foot he does one foot-pound of work. If he raises two pounds of three feet, or three pounds two feet, or one pound six feet, he does six foot-pounds of work. Or, to put it another way, suppose a small boy pulls a loaded cart horizontally along a surface and the pull, or draft, required to keep the cart going is three pounds; if the boy moves the car two feet he does 3 x 2 or six foot-pounds of work.

Now go back to the London draft horse. The pull was 150 pounds and the distance through which the resistance was overcome per minute was 220 feet. The amount of work done per minute was 150 x 220 or 33,000 foot-pounds of work. This 33,000 foot-pounds of work done in one minute is called one horsepower. The ordinary horse will not do this amount of work day after day for 10 hours a day, and keep up weight. They will average around two-thirds of a horsepower, or 22,000 foot-pounds, per minute. On the other hand, a good horse can develop four and up to five horsepower for a short haul of 100 or 200 feet. Usually, however, if the driver overloads the horse continuously it pulls more, but does it correspondingly slower, and so develops no more power.

Let us apply the term in another way. Suppose you want to pump 10 cubic feet of water per minute and raise it 66 feet. How much horsepower would it take? Water weighs 62 1-2 pounds per cubic foot, so 625 pounds of water would be lifted 66 feet, which would take 66 x 625, or 41,200 foot-pounds of work per minute. Divide this by 33,000, and the result is about 1.25 horsepower. This would require, however, at least a two horsepower engine, as the pump would likely not be much more than 60 per cent efficient. In other words, three-fifths of the power would lift the water and two-fifths would be used to overcome the friction of the pump and the water in the pipe.

To get down to gas engines, the ordinary stationary gas engine will not develop much more than its rated power. A three-horsepower engine, therefore, should not ordinarily be required to develop over 2 1-2 horsepower, so it will have a little reserve power. A good make of gas tractor will develop 20 to 25 per cent above its rated power on the belt. When plowing on the level with good footing it will develop 50 to 60 per cent of its rated horsepower, at the draw bar, the rest of the power being required to keep the tractor moving. That is the reason that a tractor has two ratings, as 10-20 horsepower. The 10 means the power at the draw bar, the 20 refers to its belt power rating.

Raising Potatoes

"The selection of the seed bed is the most important part of planting a potato crop," began Clarence Eifrig of Burlington, in his address at the western Washington horticultural convention at Mount Vernon. "No matter what type of soil is used, it is a good plan to use a clover or hay pasture which has been turned under in the fall. It should be worked thoroughly in the spring, and disked crosswise to the furrows.

"As a general rule the rows should be 36 inches apart with hills 14 to 16 inches in the row. The seed can be planted with a hand planter or with a horse-drawn machine. It is much easier to see the rows at the first cultivation when the machine is used.

"Cultivation produces deep root development and keeps out the weeds. Cultivation also keeps the soil in good physical condition. It is a good plan to alternate the cultivator with the drag harrow. The first cultivation should be given as soon as the plants are through the ground, and should be as deep as possible to throw the roots downward. Careless cultivation or cultivating too late nearly always results in a poor yield. All cultivation should stop when the vines are in full bloom."

At this point a question was brought up as to the effect of harrowing the field when the plants are first coming through. Mr. Walsh of Mount Vernon volunteered to answer, giving his own experience. "Harrowing will not hurt the crop," he said, "provided the teeth are set on a slant. It is best to harrow with the rows in order to keep the horses walking between the rows. The plants will all lean one direction for an hour or two after harrowing, but will soon straighten up. Harrowing will injure very few plants but it takes nerve. I am positive that an extra light two-section harrow, drawn by one horse, will pull out less than two per cent of the plants."

In concluding Mr. Eifrig said that a cellar or pit with a temperature of 35 to 40 degrees should be used for storing the potatoes. All light, foul air and excess moisture should be excluded.

ROTATE IN THE ORCHARD.

It is doubtful if continuous cover cropping in the average orchard is good practice. Neither is continuous clean cultivation. These practices should be rotated on many orchard farms.

Strawberry Plants

Bear This Year.

Everbearing and others. Inspected plants, strong and healthy, well packed. Send for prices and book on care of strawberries.

CANYON HOME NURSERY

Ellensburg Washington

Read the "Want Ad" page this week for good offers of all kinds.

Exide BATTERIES



The First Automobile Starting Battery

Not so long ago all automobiles were cranked by hand. The year 1911 saw the first car regularly furnished with electric starting and lighting equipment. *It had an Exide Battery.* Today more cars leave the factories equipped with the Exide than with any other battery.

Not so long ago farms were lighted by kerosene lamps; and farm work, like churning and pumping, was done by hand. Now, tens of thousands of farm homes have the modern comfort and economy of their own electric light and power plants—and a large majority of such plants get their current from sturdy, long-lasting Exide Batteries.

The entire history of storage batteries in all fields has been little else than a record of Exide accomplishments. Bear this in mind when it becomes necessary to replace the battery in your automobile. The experience built into the Exide, made for your car, means something to you. It means a *long-life battery* of always-dependable power.

That is more than a convenience; it is a genuine economy.

Exide BATTERIES SERVICE STATION

The nearest Exide Service Station has a battery the right size for your car. If your present battery needs repairs, no matter what make it is, it will be repaired skilfully and reasonably. If not in your telephone book, please write us for the address.

The Electric Storage Battery Co., Philadelphia

Service Stations Everywhere

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THE LONG-LIFE BATTERY FOR YOUR CAR

THE WASHINGTON FARMER

Vol. 46. No. 11 — SUCCESSOR TO THE RANCH PACIFIC DAIRYMAN HORN AND HOOF — March 16, 1922

For Good Farming, Attractive Country Homes and Happy Country People

Cooperation Makes Good in Neighboring State

By GEORGE N. ANGELL

Cooperative marketing of fruit is moving northward. California tried it and succeeded. Oregon is trying it and is succeeding. Several associations are already operating effectively in Washington, and the seed is sown for a yet greater crop of successful cooperative marketing organizations in this state.

Just at this time, when the apple marketing waters of Washington are somewhat troubled, a story of accomplishment from a neighboring state may help produce a calm. Whether you grow apples or prunes, cantaloupes or potatoes, read the accompanying story of the Oregon Cooperative Growers' association.

Having something to wholesale every day in the year is at once a reason for past success and a well-fixed purpose for the future of the Oregon Growers' Cooperative association. "Why pay a sales manager a full year's salary for a few months' work?" replied C. I. Lewis when I asked him to elucidate just what connection this had with successful cooperative marketing. "Why not give him something to do for the entire 12 months? Sales managers are expensive, and you can't turn them off when they're not needed, or some one else will hire them, if they're any good. So we figure on having them 'needed' the year around. For example, take the fresh fruit and vegetable department. Within the next month or six weeks it will be selling broccoli--not as much as it would have been selling if the cold weather had not cut the crop in two, but some broccoli. Soon after that there will be a large tonnage of strawberries, gooseberries, cherries and loganberries to dispose of, mostly to the canneries, and then will come car shipments of cherries, apricots, pears, and still later, apples, in addition to huge local express shipments from The Dalles of peas, cucumbers, eggplant, tomatoes and other vegetables. By the time this is all disposed of the year will be about gone and the fresh fruit salesman will be planning another season. The same way with dried fruits, and eventually we'll have an all-the-year canned goods man. But even for the product of 32,000 acres owned by our 2000 members, we shall never need more than three head salesmen."

The Pack Is Important.

Another thing: The Oregon Growers' association has worked harder on the community pack idea, perhaps, than any other organization in the northwest, and the results of its efforts along this line are beginning to come back. When Mr. Lewis was in the east recently on a trip during which he covered approximately 10,000 miles, visiting dealers in every section of the middle west and south as well as the Atlantic seaboard, he was told repeatedly that the association put out the heaviest and best packed fruit in the northwest, and in more than one market was offered a premium for association products over the best that the trade otherwise afforded. Indeed, there are markets where the excellence of the Oregon product has made it practically impossible to sell anything else.

"The pack is the foundation stone of good marketing," says Lewis, and the education of Oregon growers to the idea of a high standard of excellence he considers in itself a meritorious piece of work. Without this high standard as an integral part of the marketing system the benefits of inspection, no matter how rigid, will never fully be realized. And this inspection, in the Growers' plants, is extremely rigid. Fruit is inspected as it comes in, as it goes over the grading machines and as it is boxed. In the loading room there is another inspection, the boxes being opened at random. And this same care is exercised in the canneries and dried fruit plants as well as in the fresh. Eventually, possibly by next year, the association will market very little fruit that is not machine graded, packed in a community plant and inspected by a man who is not under the manager of that plant. "Standardize your product and put up a pack that can not be excelled for weight and uniformity, and as a rule it will bring more money than even a higher grade of fruit poorly put up."

"All-the-year selling, a standardized product, and a third thing that we have tried to develop is the necessity of wide distribution—extremely wide—for any commodity product of the northwest. Unless you have such distribution, gluts are bound to occur in particular districts, and while there might be years when a glut would be an advantage, nevertheless they must not be permitted. Without the widest possible distribution we can not fortify ourselves against the future. Wide distribution is one form of advertising, and it would be much better for our brand to go into 200 or 300 markets than into only a few. Not only national but foreign outlets are, therefore, sought."

The Selling Department.

No large results can be accomplished without a strong marketing organization, yet the representatives who make up that marketing organization must be picked with care or disaster may be looked for, thinks Mr. Lewis. In a very few markets the association has joint representation with some other agency, usually a cooperative body, but otherwise it has most painstakingly selected its own. "We avoid the speculative broker or jobber who is merely buying a lot of stuff to sell again in three or four months. We know very well that he will turn around and sell against us and, moreover, in any honest effort to get the industry off a speculative basis, which is one of the big objects of this association, we must have representatives who are not in business for speculation. This is the only way it can be accomplished. I doubt if there is a marketing organization in the northwest with a finer lot of representatives than we have. Our varied line is a help in this direction, as is also the reputation for pack, which I have spoken of. As our tonnage grows and our business becomes more valuable it will become increasingly easier to obtain as exclusive representatives the high-class salesmen whom we are after."

The association has direct representation in the chief marketing centers of the middle west, east and south, the same as the Yakima Horticultural union, the Hood River Apple Growers' association or any other large organization. Boston, New York, Chicago, Baltimore, Washington and Cleveland are its largest markets, but it does business also through the southern cities of New Orleans, Atlanta, Memphis and others. Through personal representatives in San Francisco and Los Angeles it satisfies the Californian's liking for red apples, some prunes and a few pears and cherries, and northwest business is handled direct either through the office at Salem or the one at The Dalles. There is a plan under consideration for putting on the association's own traveling representatives in certain areas within a short time to work with its regular representatives, and this will start with two or three in the northwest and several in the middle west and south. This sort of thing runs rapidly into money and requires a large tonnage of sales for support, and northwest shipments so far have been nearly all by express direct, though special men have been engaged, at certain times. Another department that is partly advertising and partly sales effort is the planning or demonstration work by specialists in the handling of dried and canned fruits in some of the principal consuming centers.

For handling its foreign business the association favors direct rather than auction sales, particularly now that the establishment of refrigerated boat service by the Panama canal has made possible the landing of 100,000 boxes or more of northwest apples in one load. This year English representatives of the association are being urged to secure for apples and prunes, for example, the widest possible distribution, even at the sacrifice of price in a great many markets. As previously stated, this is regarded as one form of advertising.

The Pooling System.

The system of pooling in effect in the Oregon Growers' association is somewhat complicated, due to the extent of territory over which it operates and the varying quality of products put out by growers even within a few miles of each other in the same district. The latter factor is being minimized by education, but it still exists. The pooling system is worked first by districts—the Umpqua, Rogue River and Willamette valleys and the district around The Dalles constituting the four divisions. The district pools are divided into separate pools for each variety of fruit, the variety pools into grade and the grade into size, a splitting of fine points which might be considered superfluous by some, but which is held by association officials to be one of the secrets of its strength. The value of the final pool on size can easily be pointed out from the surprising figures on production which the main office has at its command, figures which show the most amazing variation between the number of four and a half to five tier apples of a certain variety in the totals shipped from a particular district. The redivision of the pools makes possible the encouragement of the man who grows good stuff, by paying him for it, a form of encouragement which means boosters for the association and which certain fruit-growing districts in Oregon have seriously needed. Due to the wide variety of products handled there is seldom a time in the association year when all the pools are closed. It takes care of the grower's packing; it often carries him on spray materials, and it handles all of his marketing problems, so that the money it returns to him is net.

The maintenance of relations so intimate with 2000 growers necessitiates an intricate system of accounts and files, and to its system, which has been worked out practically unaided by the men at its head, is attributed a portion at least of its success.

Manager R. C. Paulus is a natural mathematician and accountant, and to his genius along this line, which was highly

(Continued on page twenty-one.)

Skookum Packers Face Big Problem This Week

Not since the formation of the Skookum Packers' association has a meeting of that organization faced a greater issue than that before it at a meeting called for Wenatchee Thursday of this week. In the words of one leader in the organization, "the work of years may be wiped away" at that meeting.

As previously stated in The Washington Farmer, the fruit marketing situation in Washington is in a state of uncertainty as a result of the resignation of the officers of the Northwest Fruit exchange and a movement on the part of the Skookum packers to free themselves from what they consider a growing domination of the fruit marketing of the Pacific northwest by the eastern interests of J. S. Crutchfield of Pittsburgh.

Will the growers' units making up the Skookum Packers' association make good at Thursday's meeting their threat to cancel their contracts with the Skookum packers, thereby taking their fruit out of the hands of the Crutchfield agency, the Northwestern Fruit exchange? That is the momentous issue. If they do complete the cancellation of their contracts, which cancellation has already been begun, through what agency or agencies will they market their 1922 apples?

What Started the Trouble?

The Skookum packers have a five-year contract with the Northwestern Fruit exchange to market all of their apples through it. The contract has four years yet to run. They make no charge of dissatisfaction with past performances of the Northwestern, but they do express great fear as to the wisdom of continued dealings with it. They appear to be convinced that Crutchfield is getting an ever increasingly tight hold on the fruit of the northwest, and that that hold must be broken. They point to the fact that he is the dominant influence in the American Fruit Growers, a large corporation owning much bearing orchard land throughout the United States, including the Congdon apple orchards of the Yakima valley. His marketing agencies are marketing this fruit—marketing it under the widely known Blue Goose trade mark in competition with the widely known Skookum brand fruit of the Skookum Packers, sold at the present time through the Northwestern Fruit exchange, the Crutchfield agency in the Pacific northwest. Will the Blue Goose be given preference over the Indian head of the Skookum trade mark? This is one question, among others, that has been agitating the Skookum Packers.

In a published interview, J. A. Warman, president of the Skookum Packers, says:

"The growers of the Skookum Packers' association are afraid Mr. Crutchfield is seeking a monopoly in the northwestern fruit industry for profit. I don't exactly believe that, although I do believe Mr. Crutchfield is ambitious to dominate the industry, because he has set his heart on a great plan of his own creation.

"The Skookum association has a contract to sell through the Northwestern all the tonnage it has and this contract has four years to run. We are not breaking that contract. The 14 Skookum units, 10 in the Wenatchee district, have one-year contracts with the Skookum association and can always cancel by giving 60 days' notice, prior to May 1. Every unit has filed such notice of cancellation and only one, the Wenatchee unit, has rescinded that action.

"We will deliver to the Northwestern one car of fruit from each unit and no more."

What Mr. Crutchfield Says.

In a formal statement, Mr. Crutchfield, while admitting that the contract between the Northwestern exchange and the Skookum Packers may be cancelled by the latter in case of unsatisfactory results, declares that any attempt to cancel it without proof of dissatisfaction is illegal. He expresses the belief that the grower-members of the Skookum Packers will stand by the contract, saying that a year ago when "two of the executives of the Northwestern Fruit exchange attempted to disrupt the business of the company" the effort was thwarted and the exchange reindorsed by the growers.

Suggestions have been made that appeal will be taken to the courts to enforce the existing contract if attempts are made to void it.

"If contracts entered into in good faith and carried out with satisfaction to both parties concerned are not valid, what might be the far-reaching result in this tremendous industry, which has always been regarded as somewhat hazardous?" asks Mr. Crutchfield. "Such action is impossible by a body of reputable and conservative growers.

"We have full confidence that the growers of the Skookum Packers' association, despite the sensational statements recently given out, will accord the Northwestern Fruit exchange the same fair and friendly treatment as was the case one year ago, when a similar situation arose. We take the position that the growers of the Skookum Packers' association are fully capable of attending to their own business along business lines. We have no desire to inject ourselves into their conventions and deliberations. The attempt of others to do so, in our opinion, will insure their future and permanent elimination."

It is evident at this writing that the members of the local units of the Skookum Packers are uncertain as to their next best move. The waters have been muddied rather than clarified by the controversy of recent weeks.

As previously stated in THE FARMER, all of the leading officers of the Northwestern Fruit exchange, with the exception of Sales Manager Fletcher, recently resigned. The same men almost immediately incorporated a new organizationto be known as the North American Fruit Exchange of the Pacific Coast, with a capitalization of $100,000. Officers of this new corporation are: Reginald H. Parsons, chairman of the board; W. F. Gwin, president; A. R. Rule, vice president; D. H. White, vice president and treasurer; A. A. Prince, secretary and sales manager; J. Curtis Robinson, general traffic manager; Worrall Wilson, counsel.

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Rural Counties Protest Against Palmer Initiative Measure

As we predicted in a recent issue, the rural counties of Washington are up in protest against the initiatve measure of State Senator E. B. Palmer of Seattle. This is a legislative reapportionment bill, and if the people should be so unwise as to adopt it, would tremendously increase the political grip of Seattle on the rest of the state.

A protesting meeting will be held soon at Olympia, when delegates from all parts of the state will organize a campaign of opposition. Another protesting meeting will be held at Spokane on April 8, and representatives of all parts of eastern Washington—legislators, business organizations, farmers, civic bodies, labor unions and others are invited.

Representative Wolf of Pend Oreille county has written to State Senator Carlyon of Olympia to learn of the west side plans, outside of King county, for fighting the Palmer initiative. "We are opposed to the rest of the state's being the tail for King county," Mr. Wolf declared. "We do not want Washington to have a Cook county, such as Illinois has."

Fred A. Adams of Spokane, former speaker of the house, also declared his strong opposition to the Palmer initiative.

On the west side Representative J. H. Davis of Tacoma and Senator Carlyon of Olympia have declared their opposition to the Seattle scheme. "We beat them in the legislature, and we'll beat them before the people," declared Mr. Davis to a reporter in Tacoma last week. "We have only Seattle to beat, as we have assurances enough to show that the rest of the state will be solidly against the measure."

The Washington Farmer opposed Senator Carlyon's road-bonding bill, but it cordially approves his opposition to the Palmer initiative. "Indifference to legislative reapportionment will pass when the people of other counties consider the legislative power that King county would gain under the Palmer plan," said Senator Carlyon.

At present Seattle and King county have 17.5 per cent of the house membership. If the Palmer initiative measure should be adopted at the polls next November they will have 28.5 per cent of the house membership.

The Seattle scheme of legislative reapportionment would be unfair to the rest of the state and unsound politically. It proposes to base apportionment on the single test of population, when democracies everywhere have found it neeessary in the interests of public welfare to take other tests into consideration, such as the extent of the areas represented, remoteness from the seat of government and approximate balance of representation between the agricultural interests and the great industrial centers.

This principle of legislative apportionment was recognized in the beginning of our federal government, when each state, regardless of population, was given two senators and at least one representative in the house.

Fair-minded political economists realize that if sparsely settled communities are to have any chance against the political weight of great city centers they must be given a representation somewhat in excess of proportionate population. In a big city like Seattle an adroit political boss can manipulate the entire legislative delegation of his county and direct it as a unit against the scattered and unorganized opposition coming from 30 or 35 other counties.

Experience has shown that King county already has a dangerous power in the legislature. The audacious proposal to increase that power from 17.5 to 28.5 per cent is alarming and should be met by vigorous resistance.

Farmers Can Get Information

Dr. S. B. Nelson, director of the state college extension service, in explaining the connection between the extension service and the experiment station to a group of farmers, told how new experiments are put before the people by means of the county agents and the county farm bureaus. The county agent knows whether or not an experiment is applicable to his own county. The proper cooperation of these forces results in more economical production, and eventually better consumption.

Any resident in the state of Washington may obtain without charge information upon agricultural subjects. He can also call at the office of his county agricultural agent and find out what results others have had with a certain crop either in that or in adjoining counties. In addition to this he can meet the extension specialists at different demonstrations given in the county. This last phase of the work is becoming more and more popular, and gives the people an opportunity to see the work properly carried out.

Every farmer has access to at least some of the above advantages. If he has no county agent, he may obtain data direct from the state college. The farmers of the state of Washington are fortunate in having these opportunities at their command, and should not fail to take advantage of them.

Unwise Economy

Attention is called by the state department of agriculture to the fact that the appropriation for the work of eradicating predatory animals under the United States biological survey has been withdrawn. Simultaneously comes the announcement that in certain counties in central-eastern Washington rabies among coyotes is rapidly becoming a menace to the live stock and human inhabitants of those regions.

The recent northwest live stock conference at Spokane took cognizance of this situation and adopted a resolution urging this state's representatives in congress and its senators to work for immediate return of this appropriation.

It is a piece of penny-wise and pound-foolish economy to handicap this excellent service by the withholding of the small appropriation that it requires. The predatory animal hunters under the federal and state direction have done much to rid the state of this menace. Cessation of the work for a short time would result in destroying in large measure the value of the accomplishment of several years' effort. Congress should immediately make it possible for this work to be resumed.

Worth the Extra Trouble

It undoubtedly takes a little more effort to give a purebred animal the care that it deserves than to give a scrub the care that it deserves. Put forth the same effort on the one that you do on the other and the results will almost inevitably be in favor of the purebred. The ability of the purebred to repay extra care on the part of his owner is much greater than is that of the scrub.

State Farm News

Jersey breeders of Grays Harbor county are expected to follow the lead of Holstein breeders there who early in February made arrangements with local bankers to help finance in long-term loans, to the extent of $20,000 if necessary, the purchase and immediate importation of at least 100 head of purebred dairy stock. Representatives of every bank in the county except the one at Oakville met 58 breeders and dairymen at Aberdeen and perfected the arrangement, under which the banks will furnish two-thirds of the money necessary and the farmers the balance.

* * *

About 20 carloads of hops were loaded out of Yakima recently for shipment to England. Robert Livesley was the principal shipper. The hops were contracted many months ago, but under English laws following the World war no hops can be imported into the kingdom till all the English hops are bought. This delays American importations. Mr. Livesley will have 23 cars for shipment.

* * *

The large barn of Hans Nelson, on his farm between Snoqualmie and Fall City, was completely destroyed by fire February 15. Five milch cows, seven head of young steers, three horses and 90 tons of hay were burned. The loss is estimated at $10,000, with only $500 insurance.

* * *

Sixty-seven head of stock and two dogs were burned when the barn on the farm owned by Mrs. John Moore, now occupied by A. Rickard, located a mile south of Everson, Whatcom county, burned shortly before midnight February 16.

The barn was 60x140 feet. The loss will probably total $30,000, partly covered by insurance.

None of the 50 head of cattle were rescued, nor were six hogs, 10 calves, one horse and two dogs that had been closed in the stable for the night.

Tons of hays and hundreds of bushels of grain and feed were also burned.

* * *

Orville Roundtree, formerly boys and girls' club leader in Lewis and subsequently in Grays Harbor county, is now representing the Lewis-Pacific Dairymen's association in the field. The position has been vacant since John Winkler resigned to enter business for himself.

* * *

Professor E. G. Woodward, head of the dairy department of Washington State college and president of the Western Dairy Instructors' association, has resigned to assume the management of a Massachusetts Guernsey breeding establishment owned by Robert Scoville, president of the American Guernsey Cattle club. Woodward has been at Pullman about five years. He is the second faculty member the college has lost to the Guernsey fraternity recently, Karl B. Musser, formerly dairy extension specialist, having enlisted in the extension forces of the American Guernsey Cattle club.

* * *

Storage for this year's crop of potatoes produced by members of the Washington Growers' Packing corporation is assured by the announcement that a warehouse of concrete and hollow tile, 50x100 feet in size and costing not more than $6500, will rise on railroad property adjoining the corporation's prune packing plant. The building will be of one story, with full basement.

* * *

Testing began February 10 in the Lewis County Cow Testing association, which includes 373 cows in Lewis county and a few in Cowlitz. E. A. Donaldson, Holstein breeder of Adna, is president of the association, and A. T. Flagg, formerly county agent and Jersey breeder of Chehalis, is secretary. Carl Taylor (vice president), A. Adolphsen and Chris Hendrichsen are the other members of the board of trustees. Both Lewis and Cowlitz counties have had association testing before, but it was interrupted in both cases by the war.

* * *

Two large areas of logged-off land in Whatcom and Skagit counties are now under consideration by the state department of conservation and development in launching the reforestation movement made possible through the $5000 appropriation of the last legislature. The lands have been found suitable for this purpose, but further investigation is to be carried on, according to Director D. A. Scott of the department, before final selection is made.

* * *

Paving of the Pacific highway between La Center and Woodland will be started as soon as weather conditions permit, the grading having been completed last fall, says a Kelso report.

* * *

The hops held for some time by the Klaber Investment company at its yard at Klaber, 12 miles southwest of Chehalis, recently were sold and are ready for shipment to London. The lot included 438 bales and the price is said to have been 25 cents a pound. The hopyard of the Klaber company for 1922 will contain 135 acres in full bearing. Of this 25 acres is the old yard, while the 110 acres will be 2 years old this season. The company also has five acres of loganberries that will come into good bearing the coming season and another three acres that were set out last spring.

* * *

Don G. Magruder, state dairy specialist, and Leonard Hegenaur, crops and soils specialist, addressed several meetings of farmers in Cowlitz county recently. The meetings were arranged by County Agent Blanton and were held at Mount Solo, Pleasant Hill, Castle Rock, Kalama and Woodland.

* * *

Stanley Millichamp of Wapato shipped a car of onions of the Spanish and Oregon varieties to Spokane recently. They were raised on the Harrah ranch at Harrah.

* * *

Dr. L. Christopherson of Grandview reports the sale of a 13-acre peach orchard in the Grandview orchard tracts at a price of $1000 per acre. The Christopherson orchard has been one of the best producers in the valley.

* * *

Mr. and Mrs. J. R. Vincent of Yakima have purchased a 40-acre fruit farm near Buena. The consideration was $32,632.60. The tract is a part of the Minneapolis Orchard company tracts on the Buena bench.

* * *

W. D. Lancaster of the Zillah district recently received a purebred Guernsey bull, Mambro Lad of Hood View, from Estacada, Ore. The sire of this bull is Red Wing Model's Jolly Lad and his dam is Mambro Hazel of Whitewater. His dam has a record of 13,688.70 pounds of milk in 10 months and 24 days, with a butterfat record in the same time of 535.80 pounds.

FARM BUSINESS AND MARKETS OUTLOOK

Although the margin between thin and fat steers is not a large one, there promises to be a buyer for every steer suitable for the country outlook.

Receipts of lambs and sheep at the 20 leading markets during January and February total 2,188,000 head, compared with 2,465,000 head in the same period a year ago.

Including the entire surplus of Australia and the Argentine, the quantities of wheat available in exporting countries up to July 1 are only about equal to the world's import requirements.

THE MEAT WE EAT.

Pork and lamb consumption in 1921 were at the highest level in five years, while beef consumption was at nearly the lowest point in a similar period, according to a recent report from the department of agriculture. These figures have some bearing on the low prices prevailing in the cattle market and the pronounced strength in hogs and lambs.

Estimated per capita consumption of dressed meat and lard by calendar years, as computed by the department, is as follows:

	1917.	1918.	1919.	1920	1921.
Beef	62.0	64.7	57.2	61.1	57.7
Veal	6.5	7.6	8.2	8.9	8.0
Mutton and lamb	4.7	4.7	5.8	5.0	6.3
Goat	0.2	0.1	0.1	0.1	....
Pork, including lard	58.4	69.8	67.1	68.9	72.8
Total meat	131.8	146.9	138.4	144.0	144.8
Lard	11.7	14.1	12.4	13.1	11.3
Total meat and lard	143.5	161.0	150.8	157.1	156.1

CATTLE PRICES CREEPING UPWARD.

Although the beginning of Lent caused momentary hesitation in the cattle market, dressed beef prices have been maintained or advanced and values on the hoof have followed suit. Net changes have been small in all classes, but prices are creeping upward and average nearly $1.50 higher at present than at the low period in late December.

Cattle prices during the spring usually show distinct seasonal trends. Steer prices customarily advance as the number in feedlots dwindles. This advance in average values is entirely separate and apart from the advance due to the fact that the cattle held until spring have had longer acquaintance with corn as a rule, and are superior in finish to those marketed during midwinter.

Plain light steers generally sell well during the spring because they are scarce at that season and there also is a scarcity of cow beef with which they compete. Feedlots were filled with light steers last fall, however, so that light beef should be abundant this spring. There will be less Texas beef than usual as a partial offset and there is but little frozen beef available from last fall.

Cow and heifer prices, including cutters and canners, advance during the spring months, usually reaching high point in May. Most of the cows and heifers to be disposed of are sold before this date and the demand for stock cattle helps the market for she stuff.

Veal calf receipts begin to decrease by the first or second week in March, reach the high point of the season late in the month or during April, then taper off gradually, but remain above the average until the end of May and sometimes throughout the month of June. The price indicator goes down when receipts increase. The sharp decline during March has already started, as prices broke around $1 last week.

Stockers and feeders almost invariably advance in value during the spring months, when pasturemen everywhere are in the market. Scarcity of light steers at this season also brings competition from slaughterers. Increased purchases on the part of country buyers are already in evidence and values have advanced since January fully as much as the fat cattle market. Although the margin between thin and fat steers is not a large one, there promises to be a buyer for every steer suitable for the country outlet. Graziers from the Mineral Point, Wis., district are beginning to buy and will take about the usual number. Their activity is an important factor in determining values upon fleshy feeders with quality throughout the spring months, both at Chicago and Omaha. In the southwest high prices for cattle and for grass have retarded the Kansas and Oklahoma pasture deal, but from all points of the compass evidence is appearing that stock cattle values will not sag much during the next 60 or 90 days.

PROVISION STOCKS UNUSUALLY LOW.

Stocks of lard at the leading packing points increased only to a negligible degree during February and the total on March 1 was only about half as large as on the same date in 1921. The increase in dry salt meats also was inconsiderable and the increase in pickled meats much less than usual. Stocks of meats at these points at the end of February were only 190,641,000 pounds, compared with 314,337,000 pounds on the same date in 1921. Both lard and dry salt meats have been selling at prices entirely too low to furnish a profit to the packer, which is one reason for the absence of an accumulation. Lard and cured hog meat prices have been advancing recently, however, so that on setbacks the hog markets should run into substantial support on the part of packers who wish to replenish reserves.

Receipts of hogs at the 11 leading markets during January and February were 5,241,000 head, compared with 6,313,000 head in the same interval of 1921. The supply this year was lightest since 1914. Receipts at the leading markets have not expanded, in spite of an advance in values above the $11 level at Chicago. Since light runs are the rule during late March, April and May, it is not believed that buyers will be given the advantage for more than the briefest periods until early in June, when receipts usually increase.

Weakness at eastern markets led to a sharp reduction in purchases by eastern shippers in the last week or 10 days. This factor delayed the progress of the market for a short time, but the small loss has been fully recovered.

HIGH LAMB PRICES HOLD.

Lamb prices suffered a sharp break early last week, due to sentimental causes rather than to any change of consequence in the dressed lamb trade. Damage to the price list was promptly repaired when the supply was shut off. Colorado lambs have been moving freely and it is estimated that one-half of the total has been sold, leaving around 450,000 head still in feeders' hands. The number in corn belt feedlots is believed to be light. Texas lambs and sheep will be much less numerous during April than they usually are, so that the visible supply until the southwestern lamb crop is ready to move is comparatively small.

Receipts of lambs and sheep at the 20 leading markets during January and February total 2,188,000 head, compared with 2,465,000 head in the same period a year ago. The decrease in supply as shown by these figures has been entirely too small to account for all of the advance in values. The general change in the economic outlook has played a major part.

LIGHT HORSE RUNS SUFFICE.

Eastern farm dealers are the principal buyers of horses at the present time and light receipts are sufficient to supply the demand. Farm trade has not reached the volume expected, although it has shown some expansion. City trade is disappointing, except for wagon horses, so that outlets for big drafters are inadequate. The southern trade is unsatisfactory, as only low prices can be obtained. Farm demand should remain on about the present basis and possibly increase slightly during the next five or six weeks, but it is evident that the supply will be adequate to prevent much advance in values. Chunks weighing 1400 to 1600 pounds are quoted at $135 to $165 at Chicago, with 1200 to 1300 pound chunks bringing $90 to $135. Sales above $200 are rare.

WOOL MARKET STILL SHOWS STRENGTH.

Although the wool market has become much more quiet in the last fortnight, it still shows some strength. At the final auction of government wools, held during the last week, prices were steady to 5 per cent higher than at the previous sale early in February. In the west wool growers have raised their asking prices to a level at which dealers are unwilling to take hold. The total quantity contracted for thus far is believed to be less than 20,000,000 pounds.

The woolen goods market is as pessimistic as ever and mills are not quite so active as they were during the last fall.

The department of agriculture has revised its interpretation of wool statistics and has recently called attention to the fact that consumption in most countries is back to a normal basis and that a good deal more wool has been consumed in the last year than was produced during the same period.

WHEAT RESERVES BELOW AVERAGE.

The government reported farm holdings of wheat on March 1 at 131,136,000 bushels. This is substantially below the 10-year average and compares with 217,000,000 bushels last year and 170,000,000 bushels two years ago. Stocks of wheat at mills, in country elevators and at terminal markets, are estimated at about 125,000,000 bushels. Since about 190,000,000 bushels are needed for home use during the next four months, the carry-over on July 1 will be small if exports maintain the volume which current sales to foreign countries now indicate. Last spring a shortage of wheat resulted in an advance of over 50 cents a bushel from the middle of April to the end of May. It is possible that a much more critical shortage will develop this year.

The world's wheat situation is still regarded as very strong. Including the entire surplus of Australia and the Argentine, the quantities available in exporting countries up to July 1 are only about equal to the world's import requirements. If this forecast of the situation proves to be correct there should be a keen demand for wheat from the United States and Canada in the first six months after the harvest of the 1922 crop.

The drought-stricken area in the southwest has had a great deal of snow and rain in the last 10 days, so that the new winter wheat is in position to make some recovery, but the government weather report indicates a poor condition of the crop in a number of states and a crop scare may develop at any time.

The wheat market has had a sharp setback in the last 10 days, due to some extent to profit taking in the speculative markets. Liverpool has been involved, along with the markets in this country, but it is believed that the decline has practically spent its force. European buying has been less urgent recently, as large quantities are afloat from Australia and the Argentine, but moderate quantities of durum and hard winter wheat have been sold abroad recently and Greece has just placed an order for nearly 2,000,000 bushels of Manitobas.

Although foreign buyers have been less active competitors for wheat recently, the domestic flour trade is improving and along with it the milling demand for wheat.

CORN SURPLUS DISAPPEARING.

Farm holdings of corn on March 1, according to the government's estimate, were 1,313,120,000 bushels, compared with 1,564,832,000 bushels on the same date a year ago. Since total stocks of corn on November 1, 1921, were larger than on the same date of 1920, the total disappearance of corn from farms from November 1 last year until March 1 has been the largest ever known. Disappearance of corn is not absolutely equivalent of consumption, however, and a part of the enormous disappearance is accounted for by larger stocks now in the hands of dealers and not included in commercial reports upon supplies. This factor only explains a small part of the increased disappearance, however. Changes in the numbers of various classes of live stock on farms compared with a year ago can hardly account for the enormous apparent farm consumption of corn. Low quality of the crop was not an important factor, either, since the per cent of merchantable corn as reported by the department was 87.5 per cent, compared with 86.9 per cent for the crop of 1920. It appears probable that the crop was slightly overestimated.

The stock of oats on farms was estimated at 404,461,000 bushels, compared with 683,755,000 bushels on March 1, 1921, and 409,730,000 two years ago. The 10-year average is nearly 500,000 bushels. Light farm reserves are partly offset by the enormous visible supply, which is 68,529,000 bushels, compared with 34,210,000 bushels at this time last year.

Primary receipts of oats are decreasing and distribution of oats from primary markets is beginning to increase. These factors should give the oats market a more independent tone than it has shown thus far in the crop year.

CASH GRAIN MARKETS.

The range of cash grain prices for week ending March 8:

CHICAGO—Wheat—No. 2 red, $1.38 1-2@1.40; No. 3, $1.35 1-2@1.38; No. 2 hard, $1.35@1.42 1-2; No. 3, $1.34@1.39.

Corn—No. 2 mixed, 57 1-2@62c; No. 3, 55@60 1-2c; No. 4, 54@59 3-4c; No. 2 yellow, 57 1-2@62 1-2c; No. 3, 55 1-2@61 1-4c; No. 4, 54@60c; No. 2 white, 57 3-4@62c; No. 3, 55 1-2@61 1-4c; No. 4, 54@59 1-2c. Oats—No. 2 white, 39 1-4@42c; No. 3, 36 1-2@40c; No. 4, 34 1-4@37 1-2c. Rye—$1@1.03. Barley—61@71c.

SEED MARKETS SLIGHTLY LOWER.

Seed markets have been easier in the last few days, although red clover seed has retained its advance. Demand for timothy has been disappointing and stocks at distributing markets are liberal. No big decline is likely to occur, especially in clover seed, within the next 30 days.

Toledo, per bushel—Prime red clover, $16.15; prime alsike, $12.30; prime timothy, $3.17 1-2.

FEED MARKETS FIRM.

Although demand for feedstuffs is slow, except for middlings and tankage, which have been aided by the advance in hogs, prices are holding on a high level. The supply of wheat feeds, corn by-products and cottonseed meal appears ample, but stocks of tankage and linseed meal are light.

Prices per ton (100-pound bags), in carlots: Chicago—Bran, $28; standard middlings, $29; flour middlings, $32; cottonseed meal, 36 per cent, $45.50; 43 per cent, $50; hominy feed, $24; gluten feed, $32.65; old process oil meal, $55; tankage, $60.

WEATHER HELPS HAY.

Cold weather and snows over large areas have helped the demand for hay and at the same time have obstructed the movement from surplus sections. Higher prices have been recorded, especially in the northwest. The south is a heavy buyer at this season and the northern and eastern sections are expected to purchase more freely during the next month or two, as supplies of forage are becoming depleted.

PRICES PER TON IN CARLOTS.

CHICAGO—No. 1 timothy, $21@23; No. 2, $18@21; No. 3, $14@17; No. 1 light clover mixed, $20@21; No. 1 clover mixed, $18@19; No. 1 alfalfa, $17@25; upland prairie, $11@15; midland prairie, $10@13; rye straw, $14@15; oat and wheat straw, $10@13.

EGGS GOING INTO STORAGE.

Although there have been numerous upturns, the egg market has been headed downhill during the last three months. Prices are the lowest at this season in a number of years and are practically down to the low point reached in April, 1921, so that the spring slump should be practically at an end. Receipts are increasing and withdrawals from cold storage are beginning to be exceeded by the movement into storage.

BUTTER PRODUCTION ON THE INCREASE.

Butter production is gradually increasing, according to reports to the American Creamery Butter Manufacturers' association. The increase is small, however, and may not become a big factor in the market for another month. Prices recently have been comparatively firm as a result of severe storms in some of the sections of heavy production, which delayed shipments to market. Receipts at the four leading cities during the last week, however, were materially larger than in the corresponding week of 1921. Demand also has increased to some extent, as buyers were disposed to take more than their immediate requirements and a large quantity of butter was removed from cold storage. The undertone of the market is rather nervous, with a prospect of lower prices within the next 30 days, although there may be but little change immediately.

Prices for 92-score fresh butter on March 8 were:

Chicago, 36c; New York, 37 1-2c; Boston, 38c; Philadelphia, 37 1-2c.

CHEESE MARKETS UNSETTLED.

Stormy weather in the principal cheese producing territory prevented shipments. This factor, together with some market manipulation by big buyers, caused a decline in country markets, while on the principal distributing markets supplies were light. Prices were firm at the opening of the week, but later on a nervous, unsettled attitude on the part of dealers developed, so that they moved their stocks as fast as they arrived. Prices were irregular, but became more stable toward the close of the week. The quantity of held cheese available is light and the demand appears adequate to take care of it, although premiums on fresh cheese have declined. Wisconsin cheese has been moving well in the east.

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Sunflower Silage for Beef

Tests at Experiment Station Indicate It a Cheap Feed

By JERRY SOTOLA, Animal Husbandry Department, State College of Washington.

The high and increasing price of feed a few years back caused northwestern sheep and cattle men to look for cheaper winter feed. The corn belt cattle and sheep feeders had had the same experience some years prior, and began substituting corn silage for hay. The western live stock men attempted to follow the same plan, but were handicapped by the fact that the climate was not suitable for the production of corn. The early frosts and light rainfall during the growing season made this crop impractical. Many different crops were tried by the farmers and the experiment station. In the sorting out of the more promising crops, sunflowers for a silage crop stood out because of their high yield per acre. The next step was to determine their feeding value.



At the Washington experiment station, Pullman, a good quality of corn silage is produced. However, the yield per acre is only about one-half that of sunflowers, corn producing on the average of six tons per acre. Hence in making comparison of silage, corn is used as a base crop.

At first 10-ton test silos were used. From the analyses of the two silages and from feeding and digestion tests with lambs the sunflower silage appeared to have a feeding value of about 75 per cent of good corn silage. Last season 200 tons of this silage were grown to test its value for the production of beef.

During the 75-day period between December 2, 1921, and February 14, 1922, two fairly uniform lots of grade Shorthorn and Hereford cattle were fed with the view of comparing sunflower and corn silages in roughage rations of steers. Analyses of the two feeds bring out differences in nutrient content as follows:

	Dry Matter	Crude Protein	Crude Fat	Crude Fiber	Nitrogen Free Extract
Corn silage	28.40	1.99	.91	5.94	17.58
Sunflower Silage	22.12	1.72	1.76	6.52	9.96

According to the plan of the experiment, one lot of 13 steers received a ration of cottonseed meal, alfalfa hay and corn silage. The other lot of 12 steers received the same feed except that sunflower silage was fed instead of corn silage. The average daily rations in pounds per head follow:

	Silage	Alfalfa Hay (cut)	Cotton-seed Meal
Corn silage lot	39.6	13.2	2.0
Sunflower silage lot	43.0	12.5	2.1

Both lots had access to salt and water throughout the feeding test. The hay was fed cut and mixed with silage, there being practically no waste. The weather was uniformly cold throughout the feeding period.

The following summary table shows very little difference in gains and feed requirements of steers in the two lots:

	Sunflower Silage	Corn Silage
Length of test (days)	75	75
No. of cattle	12	13
Initial weight (lbs.)	967.2	951.6
Final weight	1057.6	1041.9
Total gain	90.4	90.3
Daily gain	1.2	1.2
Daily ration:		
Silage	43.0	39.6
Alfalfa hay (cut)	12.5	13.2
Cottonseed meal (choice)	2.1	1.2
Feed, per 100 per cent gain:		
Silage	3618.3	3294.6
Alfalfa hay	1033.8	1098.2
Cottonseed meal	177.8	169.9
Total feed (per steer, (75 days):		
Silage	3273.1	2975.0
Alfalfa hay	935.2	991.7
Cottonseed meal	160.7	153.4
Financial statement (per steer):		
Cost at 5c per lb.	$ 45.36	$ 49.58
Total feed cost	13.50	15.97
Necessary selling price at feed lot	61.86	65.55
Necessary selling price per hundred	5.85	6.29

The prices of feeds per ton were as follows: Corn silage, $6; sunflower silage, $4; alfalfa hay, cut, $8; cottonseed meal, $40. Labor, depreciation on equipment and buildings are not included in the financial statement. If the low price of hay could have been anticipated cheaper gains would undoubtedly have been obtained by decreasing the proportion of silage. The sunflower silage, in spite of this, is a cheaper feed and in this instance it has produced cheaper gains.

No difference in condition of the two lots taken collectively could be detected at the close of the test. The tops in both lots (18 head total) were sold at $7.25 per hundredweight at Spokane. The others (seven head) were sold for $6.50 per hundredweight. Including freight charges, the greater moisture content of this feed, on a dry matter basis this difference is minimized. The favorable results with sunflower silage were made possible to a large extent by early frosts in this section in the fall of 1921. This condition forced the corn into the silo before the desired maturity was reached, and in consequence the corn silage was below the average in feeding value.

This experiment is one of a series planned at the Washington experiment station to supply a basis for figuring costs of feeding operations of steers receiving sunflower silage rations.

BUNN HEAD OF BERKSHIRE BREEDERS.

D. C. Bunn of Prosser was elected president of the Washington State Berkshire Breeders' association at the annual meeting in Walla Walla. L. J. Campbell of Walla Walla was named vice president and K. C. Wilcox of Wapato secretary-treasurer.

CLEVELAND PRICE CUT.

The Cleveland Tractor company has announced a reduction in the price of its model F tractor from $795 to 595 f. o. b. Cleveland. This is the fourth tractor concern to announce sharp reductions during recent weeks.



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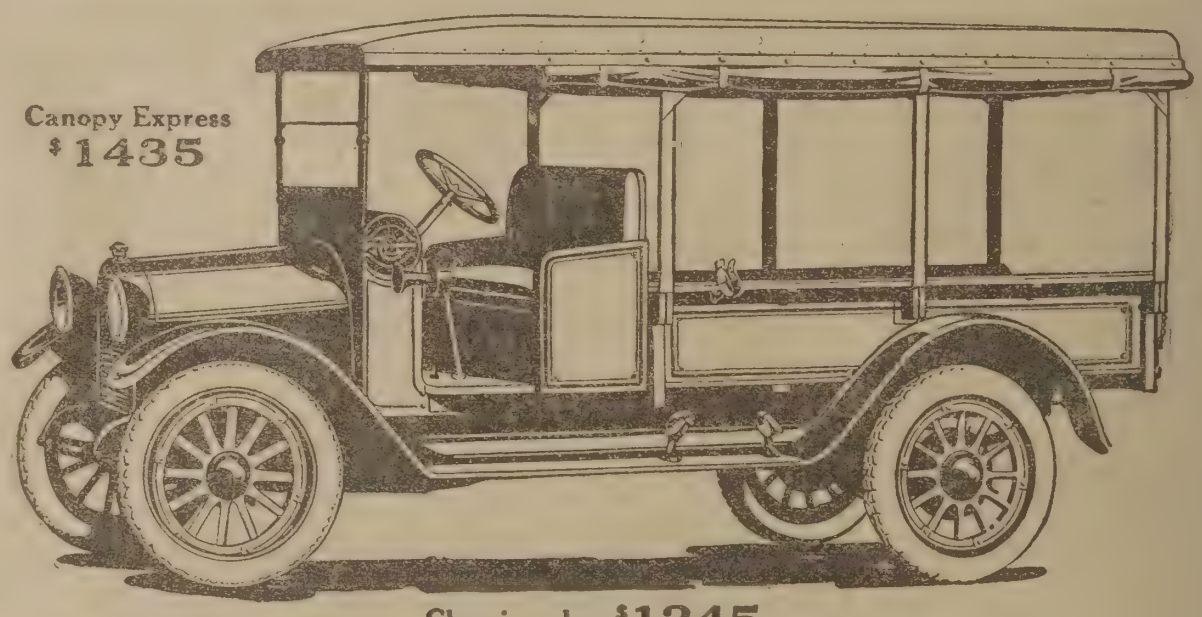
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By DILLON WALLACE





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CHAPTER I.

Shad Trowbridge.



N a foggy morning of early July in the year 1890, the Labrador mail boat, northward bound from St. Johns, felt her way cautiously into the mist-enveloped harbor of Fort Pelican and to her anchorage.

For six days the little steamer had been buffeted by wind and ice and fog, and when at last her engines ceased to throb and she lay at rest in harbor Allen Shradrach Trowbridge of Boston, her only passenger, felt hugely relieved, for the voyage had been a most unpleasant one, and here he was to disembark.

In June, Allen Shadrach Trowbridge—or "Shad" Trowbridge as the fellows called him, and as we shall call him—had completed his freshman year in college. When college closed he set sail at once for Labrador, where he was to spend his summer holiday canoeing and fishing in the wilderness.

This was the first extended journey Shad Trowbridge had ever made quite alone. For many months he had been planning and preparing for it, and he promised himself it was to be an eventful experience.

He was standing now at the rail, as the ship anchored, peering eagerly through the mist at the group of low, whitewashed buildings which composed Fort Pelican post of the Hudson's Bay company, and at the dim outline of dark forest behind—a clean-cut, square-shouldered, athletic young fellow, who carried his head with the air of one possessing a fair share of self-reliance, and whose square jaw suggested wilfulness if not determination.

The rugged surroundings thrilled him with promise of adventure. The historic post of the old fur traders, the boundless, mysterious forest, and the romantic life of the trappers and dusky tribes which it sheltered, were pregnant with interest.

"A rough-looking country," remarked the steward, joining Shad at the rail.

"It's glorious!" exclaimed Shad enthusiastically. "A real frontier! And back there is a real wilderness!—just the sort of wilderness I've dreamed about getting into all my life."

"The deck of the mail boat's about as near as I want to get to it," said the steward with a deprecatory shrug. "It's land o' hard knocks and short grub. You'd better leave it to the livyeres and Indians, young man, and go back to God's country with the ship."

"No, thank you," said Shad. "I'm going to have a rattling good summer hunting and fishing here before I see the ship again."

"When we come on our next voyage, a fortnight from now, you'll be standing out there on the dock looking for us, and mighty glad to see us," laughed the steward. "You'll have all you want of the Labrador by then. Shall I put your things ashore?"

"Yes, if you please—all but the canoe. I'll paddle that over, if you'll send a man to help me launch it."

"Pooh!" thought Shad, as the steward left him. "'Hard knocks and short grub'! Of course there would be some hard knocks, but he expected that, for he was going to rough it! But with the woods full of game and fish there'd be plenty to eat! He didn't expect any Pullman car jaunt; he could have had that at home. What kind of a fellow did the steward take him for, anyway?

A half-dozen natives on the boat wharf watched Shad curiously as he paddled to a low stretch of beach adjoining the wharf, and two of them strolled down to inspect his canoe when he lifted it out of the water and turned it upon its side at a safe distance above the lapping waves.

"Now she's what I calls a rare fine canoe," observed one, a tall, big-boned, loose-jointed fellow with a straggly red beard, and picturesquely attired in moleskin trousers tucked into the tops of seal-skin boots, a flannel shirt, a short jacket, and the peakless cap of the trapper.

"That she be, Ed, an' a wonderful sight better'n th' bark canoes th' Injuns uses," agreed the other, a powerful, broad-shouldered, deep-chested man, who wore a light-cloth adicky, but whose dress was otherwise similar to that of his companion.

"She have better lines than th' Injun craft," said the one addressed as Ed, eyeing the canoe critically.

"An' she's stancher—a wonderful lot stancher," continued the other.

"She is a pretty good canoe, and a splendid white-water craft," Shad remarked, to break the ice of reserve, and to give the two trappers the opening for conversation for which they were evidently hedging.

"Aye, sir," said the man in the adicky, "they's no doot o' that. Her lines be right, sir. She'd be a fine craft in th's rapids, now—a fine un."

"Be you comin' far, an' be you goin' back wi' th' ship?" asked Ed, unable to restrain his curiosity longer.

"I came from Boston, and if I can get a guide I shall stay for the summer and take a canoe trip into the country," answered Shad.

"I'm thinkin' you can get un in th' shop," suggested Ed.

"Get them in the shop?" asked Shad, in astonishment, not quite certain whether he was misunderstood, or whether the trapper was making game of him. Ed's respectful manner, however, quickly satisfied him that the former was the case.

"Aye," said Ed. "They keeps a wonderful stock o' things in the shop."

"I refer to a man," explained Shad. "I wish to employ a man to go into the country with me to show me about and to assist me."

"'Tis a pilot you wants!" exclaimed Ed, light breaking upon him.

"O' course 'tis a pilot!" broke in the other, with an intonation that suggested scorn of Ed's ignorance. "A pilot an' a guide be th' same thing. A pilot be a guide, an' a guide be a pilot."

"I'd like wonderful well t' pilot you myself, sir, but I couldn't do it nohow," volunteered Ed, in a tone of apology. "You see, I has my nets out, an' I has t' get in firewood for th' wife, t' last she through th' winter whilst I be on th' trail trappin'. An Dick here's fixed th' same. Dick an' me's partners fishin', an' he gives me a hand gettin' out wood, an' I helps he. This be Dick Blake, sir," continued Ed, suddenly remembering that there had been no introduction, "an' I be Ed Matheson."

"I'm glad to make your acquaintance, gentlemen," Shad acknowledged. "My name is Trowbridge. Perhaps you may be able to tell me where I can employ a guide. I would appreciate your assistance."

"Le'me see," Ed meditated. "Now I'm thinkin' Ungava Bob might go," he at length suggested. "He were home th' winter, an' they hauled a rare lot o' wood out wi' th' dogs, an' his father can 'tend th' nets. What d'you think, Dick?"

"Aye, Ungava Bob could sure go, whatever," agreed Dick.

"'Ungava Bob' sounds interesting," said Shad. "How old a man is this Ungava Bob, and is that his real name, or is 'Ungava' a title?"

"He's but a lad—18 years old comin' September—but a rare likely lad—good as a man. Aye, good as a man," declared Ed.

"His real name be Bob Gray," explained Dick, "but we calls him 'Ungava Bob' for a wonderful cruise he were makin' two year ago comin' winter."

"Seventeen years of age, and already so famous as to have won a title! I'm interested, and I'd like to hear more about him," suggested Shad.

"An' you wants t' hear," said Ed. "But now we be a-standin' an' a-keepin' you, when you wants t' see Mr. Forbes."

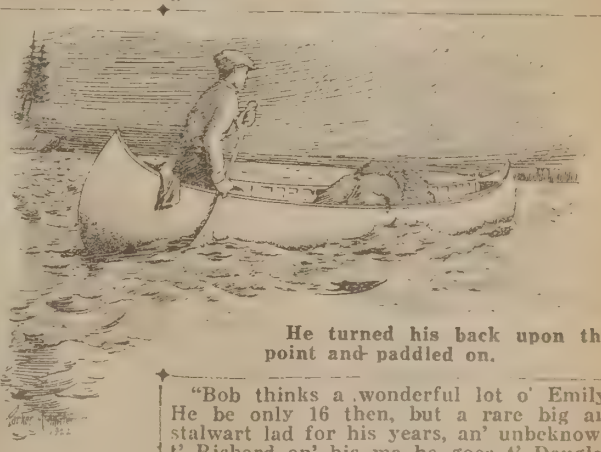
"Yes, I wish to see Mr. Forbes, if he is the factor of the post, but you haven't detained me in the least. I can see him presently," reassured Shad.

"Mr. Forbes be wonderful busy till th' ship goes, an' she'll be here for nigh an hour yet," advised Ed.

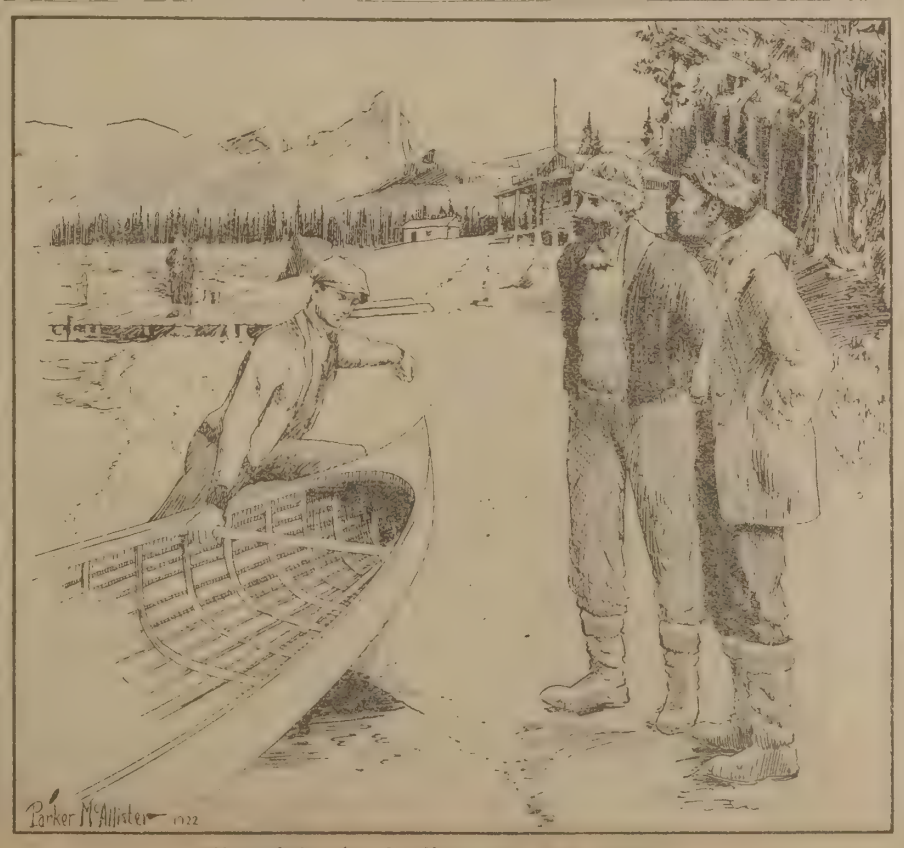
"Very well, I'll not call on him, then, till the ship goes," decided Shad, "and I'd be glad to hear something of Ungava Bob's travels, in the meantime."

"We might step into th' men's kitchen, where there be seats an' we can talk in comfort," suggested Ed. "This fog be wonderful chillin' standin' still."

"That's a good suggestion," agreed Shad. "The fog is cold." And he followed the two trappers down the long board walk to the men's kitchen.



He turned his back upon the point and paddled on.



"Now she's what I calls a rare fine canoe."

CHAPTER II.

The Lure of the Wilderness.

"Ungava Bob's father's name be Richard Gray," began Ed, while he cut tobacco from a black plug and stuffed it into his pipe, when they were presently seated in the men's kitchen. "Dick's name, here, be Richard, too, but we calls he 'Dick,' and Richard Gray 'Richard,' so's not t' get un mixed up. You see, if we calls un both 'Dick' or both 'Richard,' we'd never be knowin' who 'twas were meant."

"I see," said Shad.

"Well, Richard were havin' a wonderful streak o' bad luck," continued Ed, striking a match and holding it aloft for the sulphur to burn off, "wonderful hard luck. His furrin' fails he two years runnin', an' then th' fishin' fails he, an' his debt wi' th' company gets so big he's two year behind, whatever, th' best he does." Ed paused to apply the match to his pipe.

"Were you ever noticin', Mr. Toobridge——"

"Tumbridge," corrected Dick.

"Be it 'Toobridge' or 'Tumbridge,' sir?" asked Ed, unwilling to accept Dick's correction.

"Trowbridge."

"Leastways Toobridge were nigher right than Tumbridge," declared Ed, looking disdainfully at Dick. "Were you ever noticin' how bad luck, when she strikes a man's trail, follows him like a pack o' hungry wolves? Well, just at th' time I'm speakin' about, Richard's little maid Emily falls off a ledge an' hurts she so she can't walk. They tries all th' cures they knows, but 't weren't no good, an' then they brings Emily here t' Pelican, t' see th' mailboat doctor when th' ship comes.

"Th' mailboat doctor tells un th' only cure is t' take she t' th' hospital in St. Johns, an' so they fetches Smily back t' Wolf Bight, for a trip t' St. Johns takes a wonderful lot o' money, an' Richard ain't got un.

"Bob thinks a wonderful lot o' Emily. He be only 16 then, but a rare big an' stalwart lad for his years, an' unbeknown t' Richard an' his ma he goes t' Douglas Campbell, an' says t' Douglas, an' he lets he work th' Big Hill trail on shares th' winter, he's thinkin' he may ha' th' luck t' trap a silver fox, an' leastways fur t' pay t' send Emily t' th' hospital."

"Who is Douglas Campbell?" asked Shad.

"Oh, every one knows he, an' a rare old man he be. He comes t' th' bay from th' Orkneys nigh 40 year ago, workin' as servant for th' company, an' then leavin th' company t' go trappin'. He done wonderful well, buyin' traps an' openin' new trails, which he lets out on shares. Th' Big Hill trail up th' Grand river were a new one.

"Well, Bob goes in wi' me an' Dick an' Bill Campbell, Douglas' lad, we workin' connectin' trails, an' he done fine. He starts right in catchin' martens an' silver foxes—a wonderful lot for a lad——"

"He only catches one silver, barrin' th' one after he were lost!" broke in Dick. "Now don't go yarnin', Ed."

"Leastways, he gets one silver an' a rare lot o' martens an' otters up t' Christmas, an' a plenty t' send Emily t' th' hospital.

"Then Micmac John—he were a thievin' halfbreed as asks Douglas for th' Big Hill trail, an' feels a grudge ag'in' Bob because Douglas give un t' Bob—Micmac goes in an' steals Bob's tent when Bob were up country after deer. A snow comin' on—'twere wonderful cold—Bob gives out tryin' t' find his tilt, an' falls down, an' loses his senses. When he wakes up he's in a Nascaupee Injun tent, th' Injuns comin' on he where he falls an' takin' he with un.

"Bob not knowin' th' lingo they speaks, an' they not knowin' his lingo, an' he not knowin' how far they took he before he wakes up, or rightly how t' find his tilt, he sticks t' th' Injuns, an' they keeps workin' north till they comes t' Ungava."

"A wonderful trip that were! A wonderful trip! No man in th' bay were ever t' Ungava before, so we calls he 'Ungava Bob.'" interrupted Dick.

"Then Bob works 'cross th' nu'th'ard

(Continued on page twenty.)

Pool Seed Potatoes

T. S. Brown, secretary of the Spokane county farm bureau, announces that bureau members living in the Foothills district have pooled with the bureau 12 carloads of seed potatoes. About 10 carloads of them have passed the first two inspections for seed certification, and no doubt a considerable portion of these will pass the final inspection. The bulk of the potatoes pooled are Netted Gems, with some White Ohios and Earliest-of-Alls. While the growers have agreed on a minimum price for their consignments, all other conditions of the sale are left entirely with the farm bureau management, making it a strictly cooperative pool. Among the growers who have signed up their potatoes are John Hopper, E. W. Johnson, J. A. Lunneborg, Sid Packer, F. L. Dill, Herman Dill, C. H. Barnhart, George Hutlow, F. L. Capell & Son, A. Worthington and H. R. Anderson, all living on R. F. D. 6, out of Hillyard.

The Spokane county farm bureau has been one of the active and successful bureaus in this state in its pooling operations. It has a contract with a wholesale machinery concern whereby it secures machinery for its members at wholesale prices. It handles feed and fuel for its members, and reports saving them considerable money. The bureau has distributed to its members about 40 carloads, or some 1600 tons of coal during the last season, including some anthracite for use by the poultrymen.

Just now much interest is manifest in the dormant oil being purchased by the bureau for use in the war against the leaf roller that has invaded the Spokane valley. About 20 carloads of oil are ordered in one pool from the concern putting it out at Hood River, Ore. This oil is being furnished to farm bureau members and also to the members of other strictly cooperative organizations in the country. Arrangements have also been made for the purchase in large quantities of arsenate of lead for spraying purposes.

All the business of this nature done by the Spokane county farm bureau is on a strictly cash basis. All of the buying, where possible, is done in Spokane county, it being the attitude of the farm bureau that local business concerns should be patronized in every case where satisfactory goods can be secured at satisfactory prices. The bureau does not act in the capacity of a retailer, but gives orders to its members on the house or dealer with which the arrangement has been made. Thus a great deal of overhead expense is eliminated, the benefit accruing to the members of the bureau.

Just Folks

The best thing about necessity is that it does not permit a lot of words and arguments. It demands action right off the bat.

You should make plans and work according to plans, but there is such a thing as overdoing planning. Many years ago I knew a college professor who would take up half as much time in planning a trip downtown as it would take to make the trip. Perhaps this was the reason why he was invariably late at his appointments.

In fact, some of the most effective planning is done on the spur of the moment under that domineering master called necessity.

Planning comes easy when you are planning to do what you want to do; what it is a pleasure for you to do. Planning to get rid of work is more tempting than planning to do work.

Not much worth-while work is done until you get to the point of "root hog or die."

Even ambition finds its greatest stimulus in necessity.

More often than not, it is necessity which compels you to take that next step that separates failure from success.

Self-pampering vanishes before necessity.

Necessity has no regard for sex, color or previous condition of servitude. All nationalities look alike to necessity.

Necessity works both ways. It makes the timid bold and the forward weak. Necessity separates the chaff from the wheat in humans.

Parents may do their children an ill turn by putting off the day of necessity.

The best friends may be those who step aside as necessity approaches.

Decisions and fortitude are wonderfully quickened by necessity.

Hope that is hope conquers necessity. Work that is work is the right-hand of necessity. Purpose that is purpose does not quail before necessity.

Necessity may not be the chief consolation of human life, but there are few consolations superior to it.

Necessity can not do much for passive resignation.

Necessity fails him who accepts it without question.

Must is a bigger word than may any day of the week.

I know a young man today whose whole life is threatened with failure because he has not yet faced necessity. I am convinced that necessity is his only salvation. Purebred necessity resists; scrub necessity yields.

In other words, necessity reflects character.

Necessities are the vitamines of the soul.

It is up to you to clothe necessity. If you fail necessity, necessity will fail you. If you give your utmost to necessity, necessity in turn will give the utmost to you.

EAS

Grow Sweet Peas

Now is the time to plan for your flowers this coming summer. There is no flower which gives more satisfaction the season through than sweet peas. Every one with a strip of ground two feet wide and six feet long may have all the flowers any common home requires for a bouquet the season through.

As soon as the frost is out of the ground so a ditch can be dug is the time to begin. Have as long a row as you can care for, but don't plant any more than you can have time to cut the flowers from every day. If they are not cut every day they will go to seed and you will have only a few and they will be short-stemed and unsatisfactory. From 12 to 15 feet makes a fine bed.

Dig a ditch about 10 inches wide and eight inches deep and put into the bottom of it well-rotted manure, from the cow barn if possible, and wet it down well. Cover the manure three inches deep with earth well pulverized, sow your seed about one-half inch apart and on two sides of a cord which you should stretch from end to end of the ditch as a guide, and about five inches between its rows. Cover lightly with about two and one-half inches of earth.

Some plant only one row instead of the double row, but one can have more flowers with the same care with the double row. Place a post at each end of your row and if the row is long, one in the center, and to these fasten securely common chicken wire. Get the wire up at once so the peas will begin to climb soon as they put out their tendrils. Place the wire low, within two inches of the ground, so the first tendrils will reach it.

To hasten the sprouting, soak our seed over night in warm, not hot, water and keep the ground moist.

Sweet peas should have a good deal of

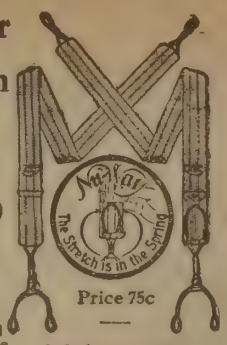
(Continued on page twenty-three.)

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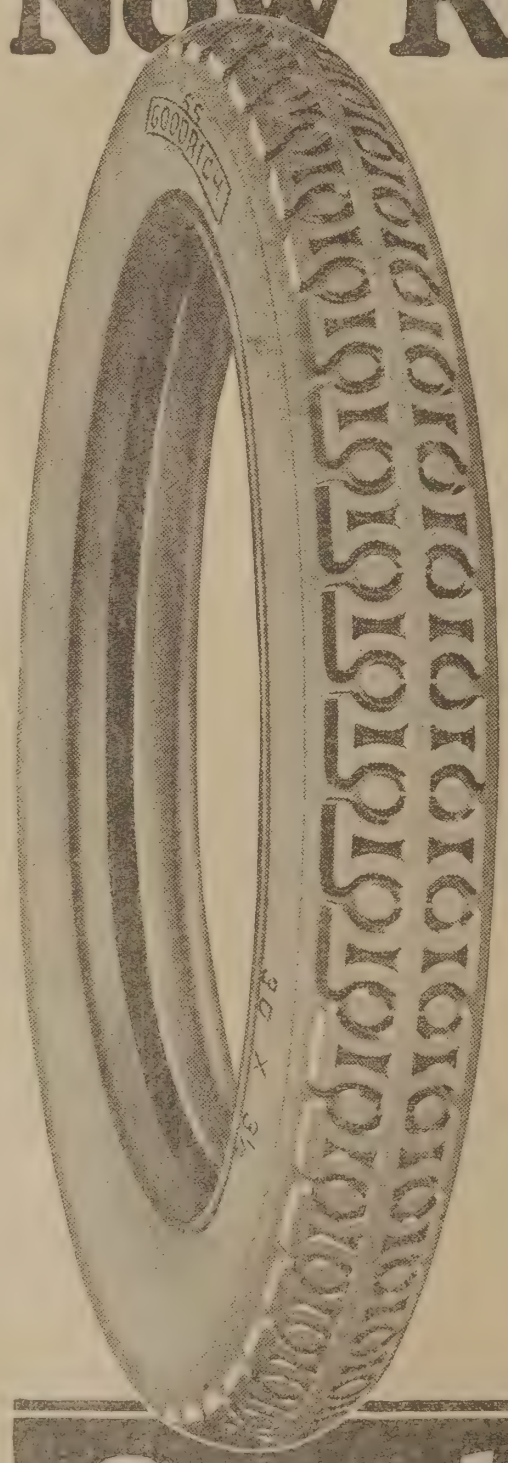
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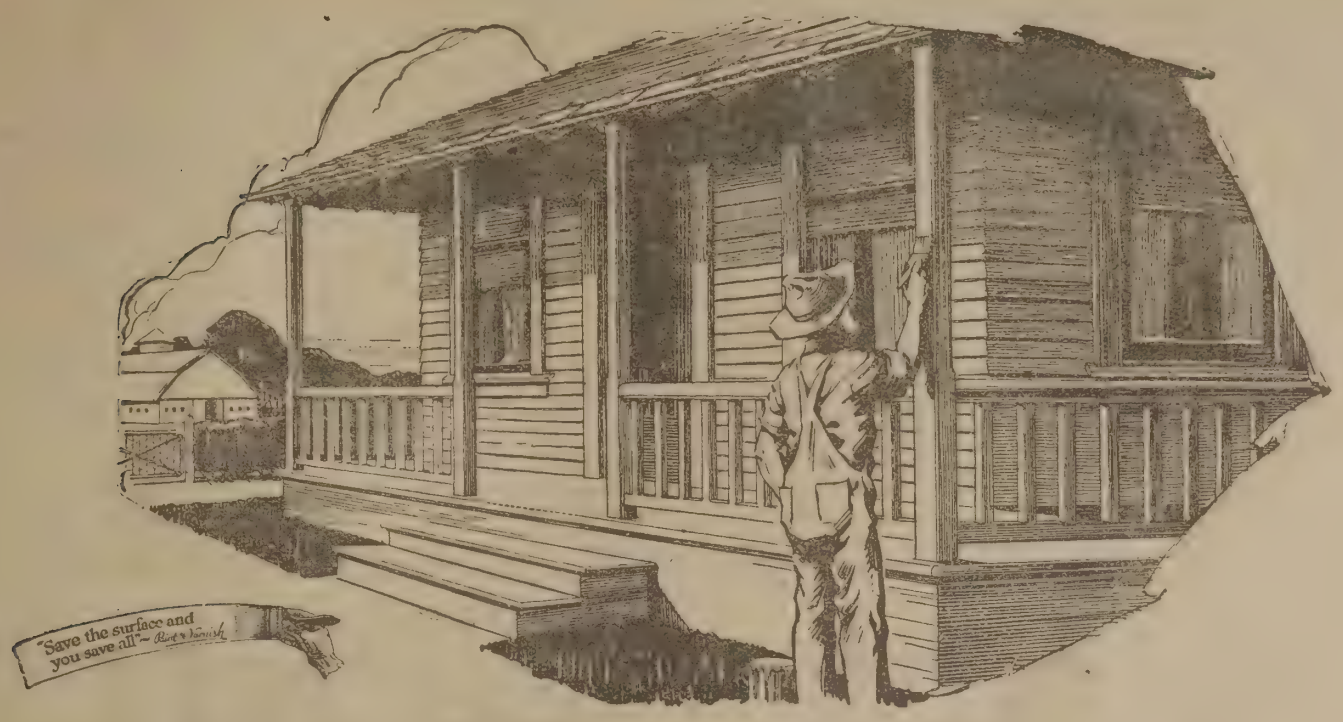
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How to Save in Painting—

Farm Buildings, Machinery, Etc.

REMEMBER first, it is what paint *covers* that you want to save — not merely a few cents per gallon in the purchase price of paint.

Note how the best paint spreads easier and covers more square yards than cheap paint does.

Figure in the *extra gallons* of cheap paint that you must buy, and the extra cost of application.

It means that cheap paint costs just as much as good paint on the house or barn.

The best paint then gives five or more years' protection to your property investment if properly applied. Cheap paint, on the average, starts cracking in twelve months. Which paint costs less?

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The paints we specify for farm use are the result of 72 years' experience in making paints and varnishes for every purpose. Made to stand the peculiarities of western weather.

The best materials—PURE PIONEER WHITE LEAD, pure linseed oil, zinc and color—are combined with long-time skill, in scientifically exact proportions.

Our white lead base must pass through a silk screen with 40,000 meshes to the square inch. A patented purifier makes it "whiter," so Fuller colors are exceptionally clear. The paint when applied on the house is a beautiful elastic, tough, protective coat.

Such paint costs but a trifle more to buy per gallon and is five or more times more economical in service rendered.

Cheap paints are costly—*in the long run*—good paints *save* money—*they protect.* Remember that when you buy paint. Don't allow surfaces to rot. It costs less to paint them.

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If you want to do your own work and get the best results, ask our Specification Department for *free advice.*

We'll tell you how to treat old paint, how many coats to use, what kind of brush, etc.

Use *Fuller Service* as well as Fuller Paints and Varnishes to insure good work.

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Send the coupon for "Save the Surface," a free book that tells why good paint is vitally important on your place—why your house, barn, silo, and machinery should be protected.

We'll send with it our small booklet of Fuller's Specification Farm Paints and Varnishes. You need both books. Send for them now.



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Early Spring Bee Keeping

Swarming can easily be prevented by giving careful attention to the colonies in the early spring and keeping them busy, according to A. B. Slocum, extension bee specialist of the state college, who recently made a tour of the state giving a series of bee schools. When rearing the new bees the worker broods are produced first and then the drones appear. When the drones begin to show themselves in the hive one should begin to watch the colony to prevent them from swarming. The appearance of the drones is one of the first symptoms of swarming.

The object of swarming is for the bees to make room for the new working force that is coming on. We must take away the swarming instinct by keeping them working and don't allow them to have an extra queen. A small hive is an incentive for bees to swarm. Give them plenty of space to store honey and leave at least three-fourths of an inch between the frames, so they will not crowd.

In a short season, when there is a large amount of brood present and plenty of workers, there is apt to be more swarming. On the other hand, when the weather is wet and the field bees are idle they are more apt to crowd the hives and cause swarming.

Hiving a Swarm.

When a hive has been allowed to become over-crowded and started to swarm they will usually have become clustered around the queen before they are noticed. One of the best ways to quiet a cluster of this kind is to take a garden hose and sprinkle them. Then take a hand net or a gunny-sack and shake them into it and place them in front of the new hive, which has a couple of frames of brood in it. This will attract the bees and they will not leave for another location. If the hive is not right they will swarm out and will be lost.

In some instances when a colony shows a tendency to swarm they can be satisfied by shaking a frame in front of a new hive, thus making them think they have swarmed. Give them a new queen and a good hive and they will start working as though they had swarmed of their own accord. Some beekeepers give the colony plenty of room and cut out the queen cells every 10 days and never allow them to start to swarm.

European Foul Brood.

One can easily tell European foul brood by the small, white lines on the back of each larva. There is also an irregular position of the larva, according to their different age. In fact, it looks more as if they had been thrown in the cells loose instead of hatching the natural way. There is also a darker color of the young when the disease is present.

Although the American foul brood affects the young larvae and the markings appear much the same as is found in the European disease, there are a few characteristics which are different. Sunken cell caps are found which later have a small hole in the center. The dark color also shows in the pupa stage, and in advance stages of the disease the "rope test" is used in locating the trouble.

In the early stages it is easy to tell the healthy cells by their normal arched appearance and their white color. If there are a few of the open cells that show the dark color the "rope test" can be applied by means of a toothpick touched to the dead pupa. If it is American foul brood the substance will adhere to the toothpick with a long, ropy formation, which snaps back when stretched.

The only treatment for either disease is the use of strict sanitation. Never allow diseased honey to lie exposed where the bees can get at it. They will spread the disease very rapidly to the clean hives. It should be placed in a covered receptacle upon removing. When the brood combs have been freed of the disease the bees should be shaken down on paper in front of a clean hive, using smoke if necessary. Care should be taken that all brood combs given to the new hive be absolutely free from the disease.

Honey from a diseased hive can be used for bee feed provided it is boiled well. The presence of foul brood germs will not prevent the honey being used for human consumption. Foul brood honey will not contaminate grown bees so long as they use it for their own nourishment. If, however, they use it for feeding the new brood the young will be affected. The process of digestion in the adult bee seems to completely destroy the germ.

After all of the diseased comb has been removed from the old hive the inside should be thoroughly charred before being used again for a colony. Never shake the supers when the bees are out. It is better to do it after dusk. In this way one is more apt to get all of the bees into the new hive. The colonies should be thoroughly inspected for foul brood at frequent intervals.

Paulhamus Remains President

The advisability of reorganizing the Puyallup and Sumner Fruit Growers' association is to be investigated by a special committee of five members to be appointed by President W. H. Paulhamus. This committee will report at an adjourned meeting of the association to be called within four weeks by President Paulhamus.

Decision to conduct such an investigation was made with the passage of a motion by E. R. Thomas of Sumner at the 22d annual meeting of the association, held in Puyallup.

Mr. Paulhamus predicted a prosperous year for the growers. In view of conditions he said he would consider serving as head of the association another year if the members desired. The growers expressed their approval by raising their hands and cheering.

Boys Serve Lunch

Three boys of Oakville, Grays Harbor county, Orven Williams, Ramond Burnett and Jesse Myers, under the supervision of Miss Clara Vesper, served the hot school lunch for a week in January. The boys prepared the hot dish, served it and washed all the dishes. An average of 68 boys and girls received the lunch each day during the week. The hot school lunch club was organized through the efforts of Miss Mabel Webber, home demonstration agent of Grays Harbor.

BUYS COWS TO MAKE MONEY.

"I haven't made any money since I sold my cows, and I've got to get hold of some more," averred D. J. Kelley of Touchet, and thereupon purchased two head for $595 at the Davis-Butchart dispersal sale. One of them is a yearling daughter of Sir Bessie Fobes Tritomia, out of a 26-pound dam; the other a son of the same sire, out of a daughter of Sir Ormsby Burke Segis. The calf will be a year old March 21. Kelley is the man from whom Butchart Brothers bought their ranch near Sunnyside.



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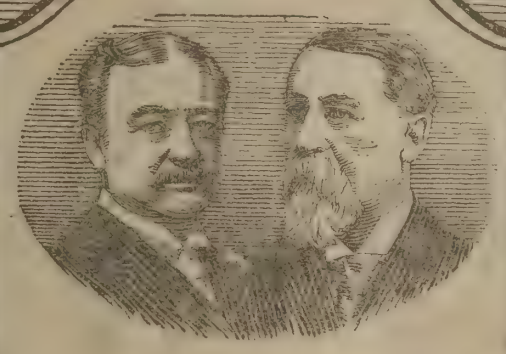


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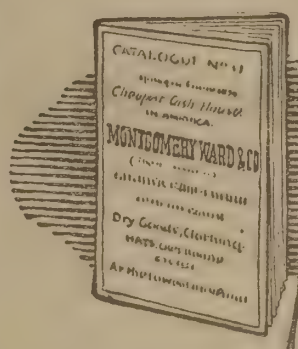
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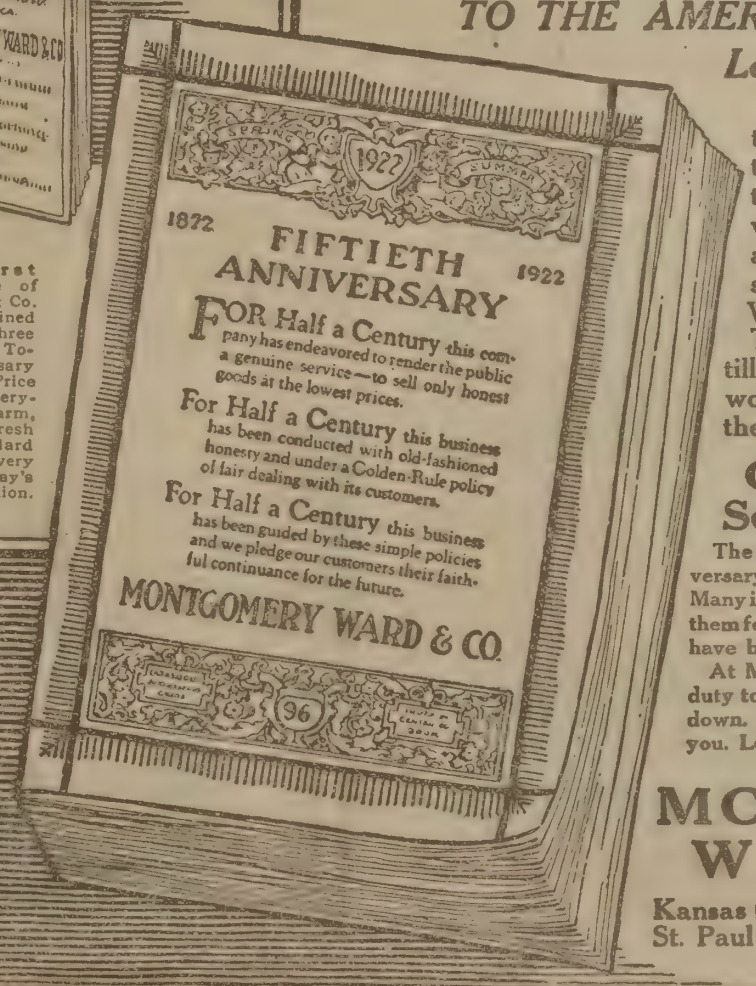


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We know business conditions on the Farms of America, as well as in the towns and cities. We have customers everywhere. We believe the worst is behind us and we are hopeful and encouraged. But we are all in the same boat. We must all pull together. We are going to do our part with you. This season you will need some new tillage tools to replace those that are worn out. We are going to furnish them without one cent of profit to us.

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The prices on Tillage Tools in our 50th Anniversary Catalogue are absolutely no-profit-prices. Many items are priced at less than we can replace them for today. And the prices all through this book have been made to meet present-day conditions.

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LIVESTOCK AND DAIRY

Dairy Questions
Are Answered by A. B. Nystrom

I am feeding my dairy cows grain, 50 pounds of corn, 50 pounds of ground oats, 60 pounds of bran or wheat. Is that a good feed for cows to make milk, and what is good in barley as a milk producing feed? I feed good alfalfa hay.
Yakima, Wash. E. C. C.

You have a splendid grain ration in such a mixture of corn, oats and bran. Barley is used by some to take the place of corn. However, I would not recommend such a change unless the barley is at least $10 per ton cheaper. It has been my experience that when a grain ration is high in barley there is more danger from udder troubles. Adding 25 pounds linseed oil meal to the above mixture will be beneficial.

Is the milk used from a cow that gives bloody milk from one teat, and the cream after 24 hours old is so bitter that no butter can be made from it, fit to give little children to drink? The milk tastes all right. She isn't bred and has been milking for about a year. We think she stepped on this teat and hurt it. The milk is milked out of this teat and thrown away. MRS. C. H. W.
Manette, Wash.

Milk that turns bitter in 24 hours should not be used for food. The one quarter that gives bloody milk should be bathed in hot water and dried carefully twice a day. Rubbing in a little carbolated vaseline after each washing will cause increased circulation and tend to effect a cure. The bitterness may not be caused from this infected teat, but may be the result of advance stage of lactation. We often find that cows that have not been fresh for a year or more give bitter milk, and the cream from such milk is often very hard to churn. Then again, the cause may not be the cow at all. If the milk does not taste bitter when fresh, but appears only after it stands 24 to 36 hours, it may be cause by certain bacteria that get into the milk from the pails, strainers or from the cow's body. Preventing contamination is the only way to control such a fermentation. It may be necessary to boil all milk utensils and strainers every day for a week to control the trouble.

SAN JUAN JERSEY CATTLE CLUB.

The San Juan County Jersey Cattle club was organized recently at Friday Harbor and the following officers elected: C. J. Sandwith, Friday Harbor, president; Chester R. Martin, Dolphin, vice president; Howard F. Shortley, Orcas, secretary and treasurer; directors, L. H. Richardson, Tom Hemphill, H. Woodworth and Ben E. Harrison.

Jersey breeders taken into the club were: C. J. Sandwith, Shortley Brothers, George S. Wright, A. T. Hemphill, L. J. Bertrand, Howard Shull, F. J. Doyle, John Arend, J. J. Sandwith, C. Van Moorhem, Chester R. Martin, J. W. Stephenson, L. H. Richard, Ben E. Harrison, James Gibson and Woodworth Brothers.

Sunflowers for Silage

By E. G. SCHAFER, Department of Farm Crops, Washington State College.

I would like to know the best variety of sunflower to plant for ensilage, the time and manner of planting, cultivation necessary, time of year it will be ready to cut, stage of plant growth in which to cut. Is there sufficient juice in plant to pack well in silo? What is approximtae yield? Is there much trouble in getting cows to eat it, do they eat it well when accustomed to it, and produce well?
Brinnon, Wash. E. S. H.

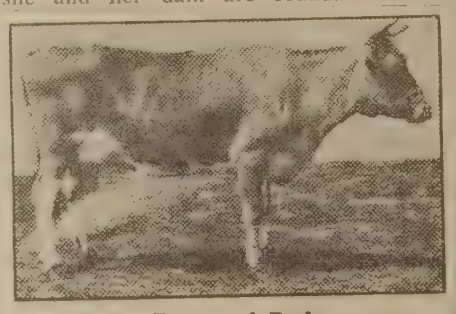
The variety of sunflowers used for the principal experimental work at the Washington experiment station is the Mammoth Russian. The crop was planted with an ordinary grain drill by stopping up a portion of the holes. The rows were left about 3½ feet apart and the plants thinned in the row so that there was one plant about every 15 inches. The crop should be planted early in the spring and where corn is grown they may be planted two or three weeks before it is safe to plant corn.

We did not cut the crop until about the time of the first frost or shortly thereafter. The seeds of the best developed heads were fully formed and commencing to harden. The character of the season near the time of maturity has considerable to do with the proper time for cutting. We found that sunflowers had a somewhat lower percentage of dry matter than corn at approximately the same time. There was little difficulty encountered in packing in the silo after the crop was cut.

For an average of two years sunflowers produced 11½ tons per acre, while corn produced but six tons per acre. The nutritive value was somewhat less in the sunflowers than in the corn and the silage made from sunflowers was less palatable. From our results we determined that there were approximately 2762 pounds of digestible nutrients in sunflowers from one acre, while one acre of corn contained 2371 pounds.

News for Breeders

That type and production in dairy animals do travel together was again demonstrated when La France of Bralee, second prize winner at the 1921 Pacific International and a show cow from nose to tail, became state champion in Washington in class DD and seventh cow among all Guernseys of this class. La France was bred by E. R. Brady of Satsop, but is owned and was tested in the herd of Dr. A. Macrae Smith of Bellingham, where she and her dam are foundation animals. The record which qualifies her for these honors is one of 594.58 pounds of butterfat from 10,537 pounds of milk at 3½ years. She carried a calf 274 days, freshening December 19, 1921. Woodvale Radium was grand champion Guernsey bull at the Washington state fair in 1920, the same week that La France of Bralee was grand champion female. La France of Bralee is the fourth daughter of Glendale's May King to complete an advanced register record and the second daughter of this sire to qualify for a place among the class leaders.



La France of Bralee.

PUTS COWS ON OFFICIAL TEST.

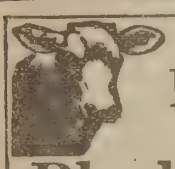
N. C. Sears of Winlock, Wash., after exhibiting his Jerseys two seasons and making notable winnings, has now begun official testing and it looks as if he would do equally as well in the line of official production as in the show ring. Two cows that he and his partner bought at the L. R. Campbell sale at Chehalis were on test when purchased. One of these, Glen's Pet of J. J., on a 305-day test finished Jan-

(Continued on page twenty-six.)

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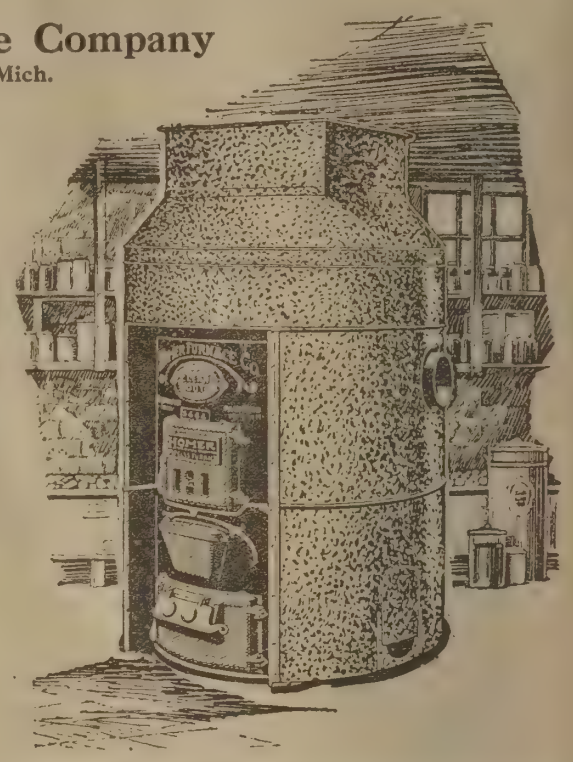
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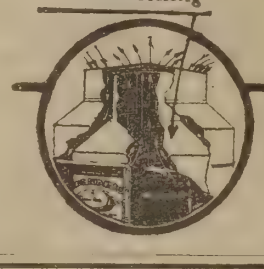
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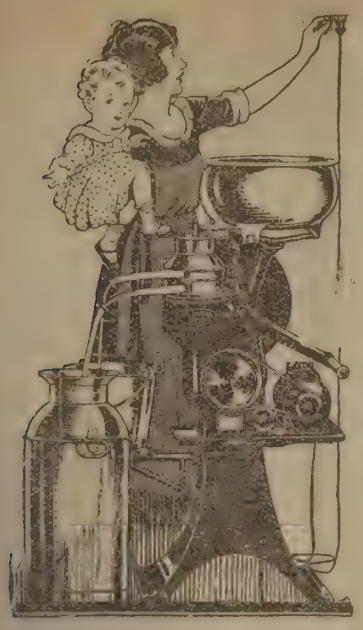
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Sooner or later you will use a
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Cream Separator and Milker

VETERINARY

By DR. S. B. NELSON.

To Cure Warts.—What is the best treatment for warts on cows' teats? I have a Holstein cow that freshened five days after being moved 100 miles by train. She started giving six gallons of milk a day, but soon went down to less than three. I am feeding alfalfa hay with bran and a little barley. Will she come back before her next calf or is she spoiled for good? What is good for chapped or cracked teats? F. G.
Colton, Wash.

For warts on cows' teats I would recommend the following treatment: Chloral hydrate, one and one-half drams; acetic acid absolute, one and one-half drams; salicylic acid, one dram; spirits of ether, one dram; collodion, four drams. Apply night and morning after milking.

I do not think that your cow will come back to her full milk flow at the first. The chances are, however, when she freshens the next time she will probably come back to stay.

Chapped and cracked teats may be overcome by using a little mercuric oxide ointment rubbed well into the teats.

Injured Teat.—I have a cow that got one teat hurt about two weeks ago. It seemed bruised and sore when I milked her. I can not get any milk from that teat now unless I force a milking tube in. A growth or skin forms each time just inside the teat and has to be broken before the tube will go in. A scab forms on the end of the teat. Will it be all right to stop milking her now, as she is giving just a little milk and will be fresh in a month or two? Will there be danger of the teat closing up entirely? C. W. F.
Curlew, Wash.

It is quite possible that you may have trouble with the cow when she comes fresh next month. I think this is a case where you might well use an injection of a 2 per cent solution of boracic acid in sterile water. Be sure that the tube is sterilized thoroughly by boiling before it is inserted into the teat. The teat should be soaked in hot water for a little while, then rubbed dry and dipped into tincture of iodine before the milking tube is inserted. When the udder is distended massage carefully and milk out the contents. I am afraid you will have trouble when the cow freshens if you let this go.

Lice on Horses.—Can you tell me how to get rid of lice on work horses?
Wheeler, Wash. O. D. M'C.

Some warm day wash your horses with a solution of steeped tobacco stems. After the bath blanket them, so that they will not catch cold. Another treatment is to dip a cloth in raw linseed oil and rub over the hair. This is also recommended to destroy lice.

Sheep Won't Eat—We have a sheep that is very poor and she won't eat. We feed her grain and good hay. N. M.
Yakima, Wash.

Try giving your sheep one teaspoonful of compound tincture of gentian in an ounce of water, morning and evening. You can give it to the sheep without choking it if you do not raise the head too high. If you can make the sheep sit on its haunches it makes it rather easy to give the medicine to it.

Cataract—What will remove a cataract on the eye of my collie dog? O. E. W.
Winesap, Wash.

A cataract is an opaque hardening of the lens of the eye. The only remedy is the removal of the lens from the ligaments holding it. Since he will be practically blind after its removal, unless glasses are fitted to him, which is rather impossible, I do not think there is any practical treatment for the trouble.

Feeding Alfalfa.—Does it do any harm to feed alfalfa to horses when it stimulates their kidneys? One neighbor feeds it regularly and his horses are fat, though worked hard. He says it does no harm. I have fed once a day all winter, but my horses are still loose in kidneys.
White Salmon, Wash. B. E. C.

Alfalfa hay is one of the great feeds of the world. In the alfalfa districts horses are fed alfalfa constantly. The only trouble with it is that it is a very high nitrogenous food and for that reason when fed alone is wasteful, but when fed with other hays or feeds, such as timothy hay or straw, is is of great value. Naturally, when you feed too much alfalfa hay the nitrogen salts are likely to stimulate secretion from the kidneys.

Stifle Joint—I have a 3-year-old colt that seems to have hurt its stifle joint. While attempting to break her to work she became frightened and kicked back with both hind legs. Now she has one thick stifle and is not so lame when walking, but very lame when she attempts to run. Is there any cure? A. E. G.
Davenport, Wash.

It is quite possible that the best treatment for your colt would be firing the stifle joint. She should have complete

(Continued on page sixteen.)

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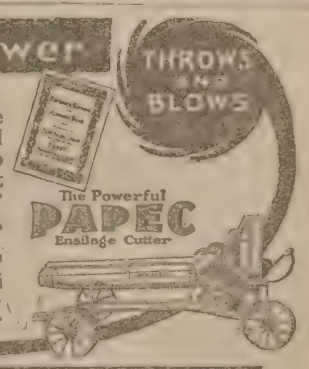
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POULTRY AND RABBITS

Health of Birds

Means Dollars to Poultry Keepers

By W. D. BUCHANAN, Poultry Extension Specialist, Washington State College.

The poultry industry in the state of Washington is growing by leaps and bounds. The last decade saw a yearly increase of 127,000 hens. The next decade will see the rate of increase doubled. By 1930 we will have at least 6,000,000 hens. If this vast industry is to be profitable we must look carefully to the essentials of poultry husbandry. In this article I shall deal only with the first, which is health.

Health, which is not only the absence of disease, but the perfect functioning of every organ and member of the body, is the biggest asset in life. It is the thing that all poultrymen must aim to maintain in every bird, and without which he can not succeed. A sick hen is a liability; a weak hen is a candidate for sickness. A condition or method of handling that makes for weakness ends in sickness, and sickness ends in ruin.

In feeding we must look to vigor and health rather than to egg production.

In the past there has been a tendency to feed for eggs and take what vigor we could get; in the future we must feed for health and take what eggs we can get. Ultimately we will get more eggs if we keep this thought in mind and allow ourselves to be guided by it.

The method of housing has much to do with the health of the birds. They must be kept warm and comfortable in winter if we are to get winter eggs, but if warmth and comfort are secured at the expense of fresh air we are gradually sapping the life and energy of the birds. They may lay a few more eggs for a time, but in the end they will rest or molt or die. Colds and roup are much more likely to result from impure air than from drafts.

Health is even more essential to the breeders than to the laying flock.

A weak pullet may slow up in egg production, but a weak hen, if she lays at all, will produce an egg that fails to hatch for want of strength. Or if it hatches it will die for want of vigor. If it happens to live it will be a low producer or a non-producer and is always a menace to the flock. The weak bird is always the first to catch disease.

Right now we are in the midst of the hatching season. The poultrymen of the state will set approximately 7,000,000 eggs; 3,000,000 of these will fail to hatch. Poor methods of incubation, improper care of eggs and infertile eggs will account for about 1,000,000 of these. The other 2,000,000 will fail to hatch because of a lack of vigor in the parent stock. Here is a loss, directly due to imperfect health, even if we figure eggs at market price, approaching $50,000 a year.

Nor is this all. Out of nearly 4,000,000 chicks hatched we lose almost 1,000,000. One-half of these were doomed to die before the egg was laid. They were born to die, "even as the smoke flieth upward." No amount of care and attention could save them. The drain on the poultrymen of the state amounts to $100,000 a year. It can be saved by building up the health and vigor of the parent stock.

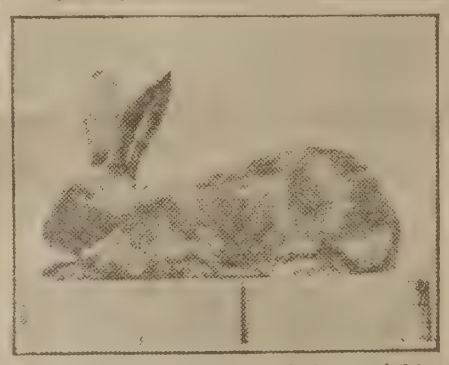
There is an impression among some people that high egg production is associated with a lack of vigor. It is not. A poor, weak hen never laid 300 eggs and she never will. A high producer is always a vigorous hen, a perfectly healthy hen. She may be pushed over the top, of course, and her health ruined by a too great desire to get a few more eggs. But at the beginning she had perfect health, and this health may be conserved and maintained over a number of years. Hen No. 224 at the western Washington experiment station laid 1043 eggs in five years. She laid 306 in her pullet year and 271 in her second year. There was no diminishing of vigor here. Hen No. 88 laid 365 eggs in her first year of 16 months. If she had been weak she would have quit in 10 months.

It is understood, of course, that health alone will not insure high egg production. A hen may be in perfect health and not lay many eggs, but if she is bred to lay and her mother and grandmother and the sires back of them have been kept in perfect health she will not only lay lots of eggs, but she will lay eggs that have hatching power. She is the hen that lays the golden eggs, a thing of beauty, a joy forever and the maker of a perfect food.

Belgian Hare

The Belgian hare was quite generally known in the northern part of continental Europe before the attention of English fanciers was directed to it. As their first stock came from Belgum, that country was credited with having originated the breed which was exploited in England and elsewhere as being a cross between the rabbit and the wild hare. This claim seems to have been fully disproved by many unsuccessful efforts to produce the same cross. The chief known reason for calling the animal a hare lies in its color resemblance to the wild hare.

In the hands of English fanciers, the Belgian hare was greatly improved, and it is still a popular breed with them. The animal was introduced into America over 20 years ago and for a time became a great craze, the finest show animals demanding enormous prices. In spite of the setback caused by the collapse of the boom, the breed has maintained a great popularity. The Flemish Giant, owning to its greater size is preferred by some.



Blue Flemish Giant rabbit, weighing 12 1-4 pounds when five months old.

The Belgian hare weighs more than most breeds of rabbits and is noted for the quality of its meat.

The Flemish Giant is a Belgian hare bred exclusively for large size, but its meat is declared coarser and less delicate in flavor.

It should be remembered, however, that much of the excellence of the rabbit as food depends upon its cooking and especial requirement in cooking the Belgian hare is that none of the natural juices of the meat be lost in the process.

MAKE OLD BIDDY WORK.

Feed activity into the hen by making her work for what she gets. Fowls should have all the feed they can take at the last feeding of the day. Make them scratch for their grain in a straw litter. The ration of itself may be as nearly perfect as it is possible to make it, but results unsatisfactory because it is not fed in the right way or in the right quantity or at the right time.

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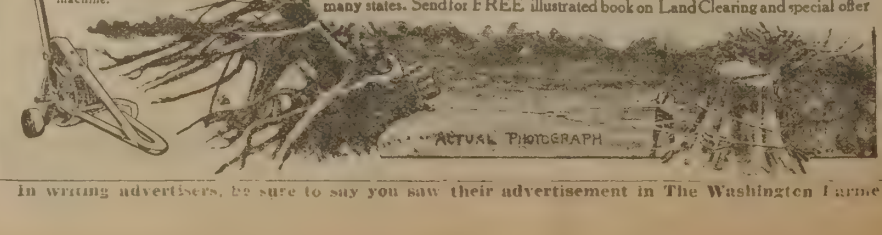
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ORCHARD AND GARDEN

Destroy Maggots

In the Gooseberries and Currants

By A. L. MELANDER, Entomologist, Washington State College.

What can I do to be rid of the maggot that bores the gooseberries and currants?
Addy, Wash. MRS. C. J. B.

Two species of small flies, one yellow, the other red, are responsible for the fruit of currant and gooseberry bushes becoming wormy. The fly appears shortly after the fruit has set and with its sharp tail-piece pierces through the skin of the young fruit and injects an egg. From this egg the maggot develops, often causing the fruit to ripen prematurely. At this time, when the maggots are fully grown, they work out and drop to the ground, where they change to a brown, seed-like stage, resembling a grain of wheat, and in this condition pass the winter.

From the nature of the attack it is impossible to destroy the maggots within the fruit by using a contact spray. Repellent sprays to keep the egg-laying flies away have not proved successful. The most promising spray treatment is a sweetened poison applied in drops to the foliage, beginning when all the gooseberries and most of the currants have set. At this time there is little danger of poisoning honey bees. The purpose of this spray is to attract and destroy the flies before they lay many eggs. Three or four light sprinklings of the poison should be applied, at intervals of about two weeks, and repeated in case of rain. The following formula may be used:

Sodium arsenite (poison)	1 ounce
Dissolved in boiling water	1 quart
Molasses	2 quarts
Water	1 gallon

This spray wil probably injure the foliage, but if judiciously applied should not be serious. Grass, fenceposts and near by shady places where the parent flies live should also be treated.

If the entire crop were stripped from the bushes early before the maggots escape, a clean crop for the next year would be almost assured. When sorted over the fruit could be used for jellies or preserves and the presence of some worms would not impair the quality of the product. As it is, a good many worms in currants are unconsciously used by every housewife. On the other hand, if the picking of the fruit be delayed as long as possible the maggots will have escaped and practically all the fruit remaining on the bushes will be free from the pest, although possibly overripe.

Many treatments have been suggested to reach the insects in the soil. A light cultivation of the soil during the late fall will tend to injure some of the worms in the ground and will be a slight help toward protecting next year's crop. However, since these plants have very shallow roots, care must be taken not to injure the root system of the bushes. Chickens do considerable good if allowed to scratch out the worms at the base of the plants after the fruit is picked, or very early in the spring, but they should not be allowed to scratch large enough holes so as to expose the roots. Removal of about three inches of the soil from under the plants would be of value, if the infested soil were scattered out on a road to destroy the worms. The removed soil should be replaced by fresh earth. Chemical treatment of the soil under the plants has not proved satisfactory.

About the Orchard

By ANTHONY SPULER, Department of Entomology, Washington State College.

Will arsenate of lead that falls on grass or grain around apple trees, from spray, kill chickens? D. O. J.
Valleyford, Wash.

Unless the spraying of fruit trees is overdone there should be but little danger of poisoning chickens. Under ordinary spraying practices but little of the spray collects on the ground or cover crop beneath the tree. Of course, where the spraying is overdone, enough might collect on the ground in pools where the chickens will drink it. If this heavy spraying is necessary, I would suggest that you lock up the chickens for a half hour or so, allowing the spray to dry.

Home-Made Tobacco Spray.

We would like to know if we buy tobacco from growers in Kentucky could we make our spray that would be as effective as the black leaf 40? About how many pounds of tobacco per gallon of spray? Do you think it would be better to boil the tobacco or just let it soak? This orchard has not been given the attention for aphis in the past, but we will do all we can to kill them off. What kind of soap is the best, whale oil soap or Fels Naptha? How many pounds of tobacco should be used to a gallon of spray? A. H.
White Salmon, Wash.

Tobacco decoctions may be prepared at home and, although varying somewhat in strength, will give a satisfactory result unless used too weak. I am afraid that by purchasing the tobacco from the growers you will have difficulty in determining the amount of nicotine that is present. The Virginia agricultural experiment station has found that various tobaccos vary greatly in the amount of nicotine that they contain. It was found that it requires all the way from 10 pounds of tobacco to 121 pounds to produce enough nicotine to make a spray of 100 gallons, containing 0.06 per cent nicotine.

The best way of preparing nicotine from tobacco is to soak the tobacco in water for some time. The tobacco should never be boiled, since nicotine is very volatile and would escape into the air if boiled.

You will find that any cheap grade of soap will answer quite well for spraying purposes.

Canaries Infested With Mites.

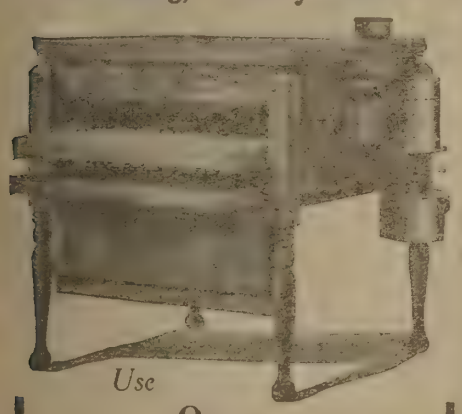
I have a couple of canary birds who are afflicted with little red lice or mites. Can you give me a cure for same? The birds are good singers, but since these lice appeared they seem sick. H. H.
Colfax, Wash.

Where canary birds are infested with mites it is best to remove these birds temporarily from the cages and give the cage a thorough cleaning. The mites normally leave the birds during the day and are found secreted in crevices on the perch or in other places about the cage. Dipping the cage into boiling water will destroy all of the mites, which ordinarily return to the bird at night to feed. Dusting the bird with sulphur of pyrethrum powder will also give some results. Some housewives have allowed the bird to rid itself of the mites. This is done by placing a greased dish underneath the perch where the birds roost at night. This to catch mites picked off by the bird during the night. The cage is then covered with a flannel cloth. This cloth answers a double purpose in that it reduces the light and prevents the bird from leaving the perch too early in the morning and also in providing a hiding place for the mites where they can easily be destroyed. Where this operation is repeated for a few nights the bird will be found to be quite free from mites.

TOO MUCH HUMUS.

Too much humus in orchard soil may be almost as bad for the crop as too little. There is a medium ground that is best.

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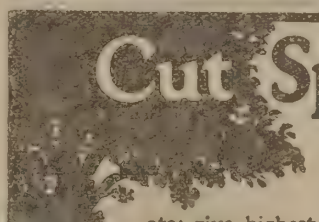
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Hardie Sprayers cost less to buy, cost less to own, cost less to operate; give highest pressure, biggest capacity, and best results.
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The Hardie Manufacturing Co.
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Mention THE WASHINGTON FARMER when writing advertisers.

VETERINARY

(Continued from page thirteen.)

rest on it. I would suggest that you invite your veterinarian to make a careful examination of the stifle and see if the suggested operation is not indicated.

Bloody Milk.—I have a fresh cow that gives blood out of one teat. The other three teats are all right. H. F. G.
Waterville, Wash.

Give your cow a teaspoonful of hyposulphate of soda in a pint of water daily for some time.

Sow Is Sick.—I have a sow 1 1-2 years old that has 11 pigs 5 weeks old. She has not been able to get up for 10 days. Her hind legs want to cross and she seems to be sore. I have just weaned the pigs. She has been fed on chopped wheat and a few table scraps, but does not want to eat much. H. E.
Penawawa, Wash.

Since you weaned the pigs from the sow and they will not get the milk, try giving the sow five grains of nux vomica in feed night and morning. I would also recommend daily massage across the loins.

Warts.—How can I remove a wart about as big as a medium-sized potato and several small ones around it from the side of the neck of a yearling heifer, and what is the cause of it? My cows seem to have a scale along the root of the tail and the hair comes off entirely. H. M.
Joyce, Wash.

The cause of these warts is probably a malnutrition. The chances are when you remove these five or six which she now has others will grow. The best way to remove them is to cut them off with a very dull pair of scissors and then apply a little tannic acid to the stump daily. A half ounce of Fowler's solution of arsenic given to the animal once daily may be of value to overcome the malnutrition. Regarding the scale along the root of the tail, I would suggest the application of carbolized petrolatum daily.

Fistula.—A 7-year-old mare of mine got a large boil on the top of her shoulders a year ago and we opened it and a large quantity of puss came out. It soon started to heal and when quite nicely healed it broke open again. The veterinarian said it was fistula and the only way to heal it was an expensive operation. F. W. S.
LaCrosse, Wash.

Generally an operation is the best thing for securing recovery from a fistula. However, the trouble is often bettered by the use of injections of biologic remedies like bacteriums, etc. Oftentimes an economical way of having your animal treated in case of this kind is to send her to the veterinary hospital at Pullman.

Give Yohimbin.—I have two heifers, one freshened in June and the other in November. Neither one has been in heat since. C. H. S.
Winlock, Wash.

Try giving your heifers three-fourths of a grain of yohimbin once daily or every other day for a few days.

Eye Is Sore.—I have a ewe that has one eye bothering her. The lower part of the eye ball is white and matter runs down from the eye. She keeps it partly closed most of the time. I have a lamb affected the same way. H. O. W.
Centerville, Wash.

I do not know just what the trouble is affecting the eyes of the ewe and lamb. Pull down the eyelid of the ewe and see if there is a foreign object on the eyeball of if it has been injured by straw or some other object. If there is a foreign object there, remove it carefully, then put a few drops of a 2 per cent solution of argyrol into the eye night and morning for a few days.

Sick Cats.—What is the matter with my cats. They have a cough and foam runs out of their mouths and their eyes water. It seems to be contagious. They do not have any appeite and are stiff.
Colfax, Wash. W. R. C.

The chances are that your cats are affected with stomach worms. Try the following treatment for them: Olei chenopodii, 16 drops; olei terebinthinae, 2 drops; oil of anisi, 16 drops; olei ricini, 3 1-2 drams; olei olivae, 3 drams. Mix and heat very gently. Give the cats one teaspoonful in a little milk and repeat in an hour. If necessary, repeat in four or five days.

Infected Udder.—Three weeks ago my cow's udder swelled up and the milk had a terrible odor. She quit eating and is giving only a little milk and it is thick.
Ellensburg, Wash. S. J. F.

It is quite likely that your cow has infectious catarrhal mastitis. It is suggested that you wash the udder out with a 2 per cent solution of boracic acid in boiled water. Sterilize the injecting instrument thoroughly by boiling or washing it with a 10 per cent solution of carbolic acid, then wash off in boiling water. Dip the end of the teat in tincture of iodine before inserting the injecting tube. Fill the quarter with a solution; holding the teat closed, massage gently but firmly, then milk it out. Later wash the entire udder and flank with a 2 per cent solution of lysol. Clean out all the bedding and disinfect the stall thoroughly with a saturated solution of copper sulphate, used hot. It will be well if you would do this to the two stalls on either side of the cow, also the gutter and the space behind the gutter.

Cystic Ovary.—I have a cow, 5 years old, that I seem unable to get with calf. It is two years since she dropped her last calf.
Amber, Wash. A. H.

There are three or four conditions that will cause the trouble you mention and a cystic ovary is the chief trouble. Some time when you have a veterinarian in your neighborhood have him examine the animal to ascertain the definite trouble and then he can give you advice.

Rubs Hair Off.—I have a mare that has rubbed the hair off her tail and mane and neck. She is in good condition, eats and drinks well. I am feeding oat hay.
Omak, Wash. E. T.

Wash the affected part with a 1 to 1000 solution of corrosive sublimate in water once daily for some time. This is very poisonous. Keep it where children and animals can not get at it.

Warts or Wens.—I have a 2-year-old heifer that has soft warts or wens on top of her head and neck and they are spreading to the body, some as large as walnuts. They are light in color and flat, with small neck. What are they and is there a remedy? H. A. A.
Friday Harbor, Wash.

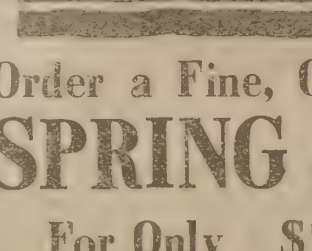
Try giving your cow a half ounce of Fowler's solution of arsenic in the feed for some time. This is to be done provided that she is not giving milk. If she is, then I have no treatment to advise.

Write US **Wool** Ship US
WE ARE PAYING TOP PRICE.
Hibbard-Stewart Co.
Hibbard Building, Seattle.

COLFAX DRAPERS
For All Kinds
HARVESTING MACHINERY
Special Drapers made to order on short notice. Largest Draper factory in the west.
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NITRATE of SODA
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The Fertilizer Your Land Needs
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Nitrate of Soda is the most economical form of Nitrogen now on the market.
Used NOW it will show increased yields this year on fruit, berries, market and home garden, wheat, oats, alfalfa, etc.
For maximum returns use Nitrate of Soda. Cheap, clean and easy to apply.
For literature, methods of application and prices write or wire
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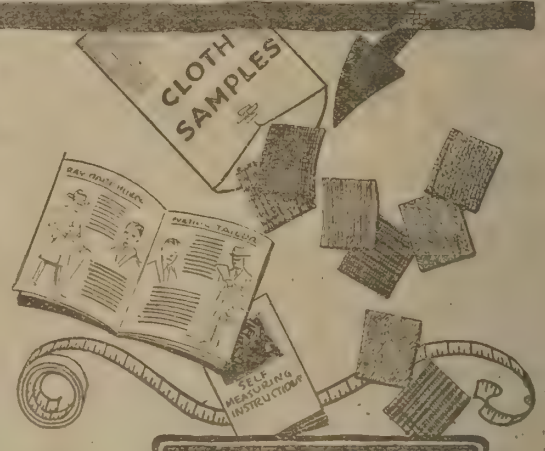
I want every Man in the Northwest to have this FREE Sample Packet -including Virgin Wool Cloth Samples - Tape Measure and Self-measuring Blank!



Order a Fine, Guaranteed, Virgin-Wool SPRING SUIT *Made to Your Measure!*

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Virgin Wool is 100 per cent pure, long, fleece wool—clipped from the sheep's back, washed, carded, spun and woven into cloth with no cotton, shoddy, or wool substitutes of any kind added. More than half of the suits on the market today are made from shoddy and reworked wool. (Shoddy is made from old wool rags—reworked wool from manufacturer's clippings. Neither have any life or strength because of the old, short wool fibers). My clothes are made of Guaranteed Virgin Wool cloth only—that's why they give double the service.



My big mail order department can FIT you and please you with one of these handsome Genuine Virgin Wool Spring Suits—just as satisfactorily as though you bought here in person! I have sold thousands of suits to my customers throughout the Northwest and can please you—just as I have ALWAYS pleased them. This house is famed throughout the West for its wonderful tailor-made clothes—and square deal to every man.

During the last 12 years I have been doing the largest custom tailoring business in the Northwest. Do not confuse this with factory tailoring or the commonly known Ready-Made system of making clothes.

My Guarantee Is Your Protection:
I guarantee that your suit will be perfect in every respect. That the workmanship—tailoring—linings and trimmings are of a very high quality—and that you will get a PERFECT FIT. And, if it doesn't meet your requirements of a perfect suit, I will return every cent of your money! Mail coupon now!

FREE COUPON MAIL TODAY!



Clip Coupon on Dotted Line

RAY BARKHURST
Largest Tailor to Men in the Northwest
PORTLAND, OREGON

Ray Barkhurst, (Dept. 2)
Largest custom tailor to men in the northwest.
Dear Sir: Please send me your FREE sample packet, including Virgin Wool cloth samples, self-measuring blank, style folder, tape measure, and instructions for ordering by mail.
Yours very truly,

Owing to the fact I carry the largest selection of woolens in the northwest, I want to send you exactly what you want. Give me a hint—mark (x) opposite the suggestions below.
( )Western Virgin Wool Samples, assorted colors.
( )Light and dark gray worsteds in stripes and colors.
( )Black and white silk mixed worsteds.
( )Blue serges.
( )Overcoat samples.

Name .....
Address .....

One Man Made Money Last Year

His Success Indicates Good Line of Farming to Follow

There is a prevalent feeling that during the late lamented year of depression, 1921, the farmers of even the favored Inland Empire made no money.

Comes now Dean E. J. Iddings of the college of agriculture of the University of Idaho with the announcement that he has found one farmer who did make money. This fortunate man lived with his contented family on a place that had a few good milch cows, some chickens and a few pigs. Some alfalfa, clover and peas were grown on land that would have lain idle in summer fallow under the ordinary one-crop system. Another field of a few acres grew sunflowers or corn with which to fill the silo that stood beside the barn.

This farmer did not buy canned milk, even though he did live on a farm that produced grain as one of its principal crops. He did not buy bacon, because he raised his own hogs and smoked his own meat in his own smokehouse. His cream checks and the returns from his eggs paid the grocery bill and bought most of the clothing that the family required.

This man's name was Mr. Diversified Farmer. Dean Iddings is a strong believer in him and never loses an opportunity to urge Mr. One-Crop Farmer to take the necessary steps to change his name and go and do likewise.

Dean Iddings sees the fertility of our Inland Empire soils slipping away because of the one-crop system that takes away plant food and leaves little or nothing in its place. He sees the price of this deteriorating land growing higher and higher, to a point where nothing but the most efficient system of production can return a profit on the investment.

The remedy for this situation, as suggested, is diversified farming. The introduction of legume crops, such as clovers, alfalfa and field peas, serves in two ways to improve soil conditions. First, the legume gathers nitrogen from the air and stores it in the soil in available plant food form, and at the same time aerates the soil by means of its root system and leaves a humus content in the soil when plowed up for a succeeding grain crop. Second, it leads to the production of live stock in various forms, which in turn leaves upon the soil a large percentage of the plant food that is taken out by the feeds that the animals consume. Dean Iddings reports experiments on the University of Idaho farm in growing field peas on summer fallow. During a period of four years the pork production from these peas averaged 454 pounds per acre. These experiments included the year 1920, when pea production was unusually low. He calculated that with hogs at only 4 cents per pound this would be a return of over $18 per acre, or the equivalent of 40 bushels of wheat at 45 cents per bushel. At the same price for pork it would have equaled a 30-bushel crop of wheat at 60 cents per bushel. On the basis of 5 cents per pound for pork it would have equaled a 40-bushel crop of wheat at 56 cents per bushel, or a 30-bushel crop at about 75 cents per bushel.

In addition to these actual cash values the pea crop left the soil in suitable condition for a crop of wheat the following year, thus avoiding a year's idleness of the field and the depletion of soil fertility that would have followed a continued one-crop system.

Dean Iddings shows that it is possible to grow alfalfa, one of the best soil-building legume crops, on the average Palouse wheat farm and secure as high as from one and a half to three tons per crop per acre, with frequently two crops per year, unirrigated. Clover has also done well under similar conditions.

Experiments with sweet clover on the university farm have indicated the value of this crop in a diversification program. Last summer, when everything else on the farm was dry, sweet clover was green and was supplying a surprising amount of forage.

The modern diversification system requires the use of a silo. Indications are that the year-round use of the silo instead of its use for winder feeding only is desirable. Dean Iddings calculates that the efficiency of an acre may be multiplied three or four times by the judicious use of the silo the year round. A yield of only six tons of silage per acre would feed one animal 30 pounds of silage per day for a period of 400 days, whereas an acre in pasture would, under ordinary conditions, maintain one animal or less a much shorter period of time.

To sum the whole thing up, Dean Iddings does not believe that the farmer of the Inland Empire, or of any other section, for that matter, should carry his eggs all in one basket. It is safer to have several sources of income. Proper diversification gives year-round employment, improves soil conditions and leads to the development of better farm homes by reason of increased prosperity and more varied interests.

Uniform Grade

Important Phase in Marketing

One of the most important phases of cooperative marketing is to get products put out under a uniform package or grade. It is also one of the hardest details to establish, especially among growers who have been in the habit of doing their own selling. It was for the purpose of establishing more uniformity of their product that the Island Belle Grape Growers' association was formed at Detroit, Mason county, the district where the new variety originated.

"We could get a much better price for our grapes if we were more particular about the manner in which they were put into the baskets," says W. O. Eckert, son of Adam Eckert of Detroit, who originated the variety. "Last year some of the grapes went out before they were sufficiently ripened, but those of us who waited a few weeks longer not only got a better sale, but our grapes were actually preferred on the market by those who knew where they came from. If we can establish a uniform grade and require all growers in the association to conform to the rules, we can keep out such grapes as are of an inferior quality and tend to give the industry a black eye.

Need Uniform Weight.

"There is also a great need of a more uniform weight to the baskets," said Mr. Eckert. "In some cases the basket will vary as much as three pounds and the buyer does not know how much he is getting. Well ripened grapes should weigh from 6 to 7 pounds in the basket, depending on the size of the bunches and the condition of the grapes. We hope to get some good results from the association in the future and will perhaps establish a central packing plant."

Speaking of the possibilities of the Island Belle grape for planting in western Washington, H. F. Schumacker of Seattle said he believed there is little danger of creating an oversupply on the market. In fact, he said, there is a better chance of marketing 40 or 50 carloads than merely 10,000 baskets. The Island Belle is at its best when other varieties are off the market and there is, therefore, a better chance of a good return. The grades, however, should be standardized and the production handled on a basis that would interest the jobbers in the middle west.

Invade California Market.

A trial shipment was made to California last fall with the result that a new trade channel shows itself for the Puget sound crop and more profitable market is expected next fall. Some cull grapes were sent to a cannery and are reported to have been used profitably and more have been ordered for next season.

The association has advised the members not to sell grape cuttings to nurseries in large quantities, but that it is better to keep the stock at home and make the variety a Puget sound product.

The climate here seems particularly adapted to the growing of this variety.

The directors of the association, J. F. Bauschert, E. Wilson and J. Wingert, were reelected and Mrs. Caroline Sund and W. B. Polk were added to the board. Adam Eckert, president; E. C. Suiter, vice president, and Charles Somers Jr., secretary, were reelected.

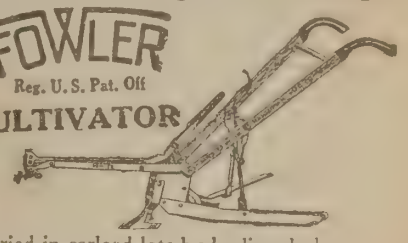
It Works Like a Hoe

The FOWLER Light Draft Cultivator makes ***bigger crops*** because it does not disturb plant roots. It puts the land in perfect condition to absorb rain, and makes a mulch of fine dust which conserves plant food and prevents the escape of moisture.

Covers 8 acres a day with one horse. One trip to the row. ***Cuts every weed.*** Does as good work as you can do with a hoe. ***Saves time and labor.*** Remove the plow foot, and you can cultivate astride the row.

The ideal cultivator for potatoes, corn, tobacco, beans, beets, tomatoes and truck crops. Can be adjusted to cultivate above or below the level, without disturbing the sides of the ridges.

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Carried in carload lots by leading dealers.
Write for FREE descriptive folder.

Distributors for Washington,
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Mention THE WASHINGTON FARMER when writing advertisers.



The Hood Service Man speaks:

WE Americans want to learn by experience. Not that we doubt the other fellow necessarily — we just want to *know*. It is a good habit.

And among other things, it makes a market for all kinds of safety razors, phonographs, automobiles—to say nothing of tires. Don't stop experimenting, but when you are quite content to call it a day, try HOODS, and see if they do not about combine the requirements your experience has taught you to look for in a tire.

We might almost say that HOOD Tires are built for those men who have run the gamut in tire buying, and wish to settle upon a tire which year in and year out, under all conditions, will give honest, dependable service.

Hood Rubber Products Co. Inc
HOOD
Watertown, Mass

Look for the sign of the HOOD Service Man

HOOD CORDS

Fur Auctions

Little Journeys to the Market

The largest market for raw furs in the United States, and one of the largest in the world, is located at St. Louis. New York is rapidly forging ahead and Chicago also aspires to honorable mention in the list of the world's fur markets.

Fur auctions are held at various times during the year at St. Louis and New York. Enormous quantities of skins are offered. Buyers and sellers attend from London, Paris, Leipsig, Moscow and Tokyo, as well as from leading cities throughout the United States and Canada.

At these auctions furs gathered from all over the world can be seen. Pelts obtained by the school boy who traps muskrats along the placid waters of Willow creek may keep company with skins bought from a native of Kamchatka. Mink, kolinsky, raccoon, squirrel, opossum, fox, muhkrat, fitch and fisher skins are always in abundance, while a whim of fashion decreases the featuring of Persian lamb and broadtails this year.

A few days before the auctions open the skins to be put on sale are exhibited to the inspection of prospective buyers. They are exhibited in lots just as they will be put up for sale, so that a buyer who sees a lot of skins he wants while on an inspection tour will know just which lot to bid upon when the auctioneer begins crying his wares.

Each prospective buyer is required to put down a cash deposit of 25 per cent of the amount he intends to spend before he is allowed to bid. All business is strictly cash.

At the auction held at New York during the week of February 6 pelts valued at $3,000,000 changed hands. The skins were offered in small lots to enable the little dealers to bid. Prices were indicative of those in the open market. Advances were noted in some instances, but according to members of the trade the catch this year, both abroad and at home, has been exceptionally large, with the demand less than it has been in the last few years, so that the outlook in the fur market is for slightly lower quotations.

Similar auctions, under the auspices of other companies, are held in London and Winnipeg.

Great Dairy Meeting

A great educational dairy exhibit and a sale of 150 selected Holsteins will be features in connection with the annual convention of the Holstein-Friesian Association of America, at Kansas City June 4 to 10, representation at which breeders of the northwest are now planning. State agricultural colleges of Kansas, Missouri, Nebraska and Oklahoma will display exhibits showing modern methods of dairying, and the National Dairy council will cooperate. For the sale each state will be allowed to furnish cattle in proportion to its Holstein population and in accordance with strict production requirements. For the exhibition prizes totaling $600 will be offered, to be returned to state associations.

MUST ELIMINATE BOARDER.

We test the cows. Why not test the hens? One of the greatest handicaps on the average farm is that the flock is not studied carefully enough. We must eliminate the nonproducer.

FARMERS' WANT ADS

This is the farmers' "want," "sale" and "exchange" department for small advertisements of farmers, including live stock and poultry

Advertising rates for ads running 1 to 3 times, 10c per word per insertion, with a special rate to Farmer subscribers, as follows: Ads running 4 to 12 times, 9c per word per insertion; ads running 13 times or more, 8c per word per insertion.

All commercial and land advertising 10 cents per word each insertion. Open also to nonsubscribers.

In using these columns advertisers must observe: (1) No advertisements will be inserted for less than $1.00. (2) Every word, number and initial, including name and address, must be paid for. (3) New advertisements, changes of copy or cancellations must reach general office, Spokane, Wash., 10 days in advance of publication date. (4) Cash must accompany order.

Above rates include insertion in The Washington Farmer, The Idaho Farmer and The Oregon Farmer, which constitute the Pacific Northwest Farm Trio, 46 Review Building, Spokane, Wash.

HELP WANTED—Male 3

RAIWAY MAIL, GOV'T CLERKS.-CARRIERS; $125-$200; experience unnecessary. Particulars free. Write Mokane Institute, Dept. A23, Denver, Colo

AGENTS WANTED 9

$21 DAILY AVERAGE IS WHAT OUR salesmen are clearing, selling Easy Pump Equalizers. They make hardest working pumps work easy; windmills turn in slightest wind; pumping engines go with less than half the gas or steam. Fit all pumps. Warranted five years. Needed everywhere. Consolidated Steel & Iron Co., Minneapolis, Minn.

AGENTS—MAKE MONEY SELLING SPRAYers and autowashers; profits $2.50 each; many practical uses; experience unnecessary. Free sample proposition. Autowasher Co., Johnstown, Ohio.

SITUATIONS WANTED—Male 21

MARRIED MAN WITH LIFE EXPERIENCE wants position on grain or stock ranch; capable of taking full charge; references exchanged; state wages. Box 453, Sandpoint, Idaho.

EXPERIENCED DAIRYMAN WANTS TO rent stock or dairy farm on shares; first-class references. John Stark, Pendleton, Ore.

FRESH FOOD PRODUCTS 51-1

HONEY BRAND HONEY, PURE, LIGHT, thick and good flavored, from alfalfa and sweet clover. One 60-lb. can, $7.50; two for $14.50. Write for circular and prices in pails. Salesmen wanted. Oliver Sires, Wapato, Wash.

WHITE ALFALFA, SWEET CLOVER honey; 1 60-lb. can, $7.50; 2 60-lb. cans, $14.50; six 10-lb. cans, $8.50; three No. 10 pails, prepaid third zone, $5.50. Wells D. Rose, Sunnyside, Wash.

HAPPY HOME HONEY FROM BLOSSOMS of alfalfa and sweet clover, in liquid form; 6 10-lb. pails, $8.50; 1 60-lb. can, $7.50; 2 cans, $14.50, at Mabton. H. N. Paul, Mabton, Wash.

HONEY,—FINE QUALITY ALFALFA SWEET clover; 60-lb. can, $7.50; 2 cans, $14.50; three 10-lb. pails prepaid, second zone, $5. Harry Fisher, Prosser, Wash.

HONEY—LIGHT AMBER HONEY, LIQUID form; one sixty-pound can, $7; two cans, $13.50. A. L. Traner, Touchet, Wash.

HONEY, BEST QUALITY; 1 60-LB. CAN, $7.50, discount on large quantities. E. Sires, Wapato, Wash.

FRESH FOOD PRODUCTS (Continued) 51-1

SMOKED SALMON, 5-POUND BOX, $1.25; salt salmon bellies, 5 pounds, $1.25, delivered by mail. Coffin Fish Co., Seattle, Wash.

FRESH SMELT, 50-LB. BOX, ONLY $1.50, Kelso. Good smoked, canned, salted. Recipes. Send check Cowlitz Smelt Co., Kelso, Wash.

FINEST ALSIKE CLOVER HONEY. ONE sixty-pound can, $7.50; two cans, $14.50. Roy Selwyn Wilson, Buhl, Idaho.

WORLD'S BEST CLOVER HONEY. 60 pounds, $6.15; two 60s, $12. Browne, Box 499, Twin Falls, Idaho.

MISCELLANEOUS—FOR SALE 60

SASH AND DOORS—O. B. WILLIAMS CO., 1943 First ave., So. Seattle. Chicken house sash, 20" wide by 25" high, 80c; a dozen different sizes in stock for immediate shipment. Skylights for chicken houses, 36"x40" price, glazed, $2. This is the size recommended by the Western Washington experiment station. We carry them in stock for immediate shipment. Sash and doors for all purposes at lowest prices. All orders receive prompt attention. Our large illustrated catalogue No. 35, showing full line of building material and built-in fixtures for the home, free on request. O. B. Williams Co. Established 1899.

ORIENTAL PEARLS, WONDERFUL, SOLID, indestructible; eighteen, twenty-four, and thirty inch necklaces; graduated sizes, white, pink or cream color; only 25c per inch, postpaid. Large, single pearl on stickpin, only 75c. Money back if not satisfied. Ring-Arrow Food Company, importers, 911 Western avenue Seattle.

TOBACCO, NATURAL LEAF—SWEET AND mellow hand-picked chewing or smoking, 5 lbs., $1.50; 10 lbs., $2.50; smoking, 10 lbs., $2. Furnish free recipe for preparing. Quality and delivery guaranteed. Farmers' Tobacco Exchange, Sedalia, Ky.

WALL BOARD—WRITE FOR SAMPLE OF Washington plaster wall board; won't warp, won't burn. Manufactured by Washington Building Products company, 6851 E. Marginal Way, Seattle, Wash.

PIPE — NEW AND SECOND-HAND, ANY size; low price; standard grade roofing paper at a big saving; belting, all plies, all sizes, cheap. Write Alaska Junk Co., S120 Adams st., Spokane, Wash.

E. Z. BUILT SILO, ERECTED IN SECTIONS; has double walls with 6-inch air space; freeze proof; built of fir lumber; strong, durable and low priced. J. F. Jacobson Lumber Co., Tacoma, Wash.

"MOTHER'S FRIEND," BEST KNIFE AND scissors sharpener on earth; last for years. Any one can use it. Postpaid, 50c. D. N. Byerlee, 249 Sixth street, Portland, Ore.

HOMESPUN CHEWING AND SMOKING TObacco 5 lbs., $1.50; 10 lbs., $2.50; valuable formula smoking, 5 lbs., $1. Pigeon Roast, Sedalia, Ky.

CEDAR CHESTS DIRECT FROM FACTORY to your home; Tennessee cedar, solid copper trimmings. Write for catalogue. J. W. Higgins & Sons, 1912 Gilsan st., Portland, Ore.

TOBACCO, NATURAL LEAF, FOR MILD SMOking; 10 lbs., $1.50; 20 lbs., $2.75; will furnish free recipe for preparing. Leaf Tobacco Exchange, Mayfield, Ky., Star Route.

LEAF TOBACCO, 3 YEARS OLD, PAY FOR tobacco and postage when received. Chewing, 5 lbs., $1.50; smoking, 6 lbs., $1. Farmers' Grange, No. 92, Hawesville, Ky.

CEDAR POSTS, POLES, PILING AND STUBS; lengths and sizes to order. Marsden Red Cedar company, Calder, Idaho.

RATS, MICE, POSITIVELY EXTERMINATED. Send $1 for proven method, satisfaction guaranteed. Hanson, 2720 State st., Everett, Wash.

TOBACCO—KENTUCKY FINEST CHEWING, 10 lbs., $3; smoking, 10 lbs., $2; 20 lbs., $3.75. Producers' Exchange, Mayfield, Ky.

TOBACCO — KENTUCKY'S PRIDE; RICH, mellow chewing, 10 lbs., $3.25; smoking, 10 lbs., $2.50. Farmers' Club, Mayfield, Ky.

HOMESPUN CHEWING AND SMOKING TObacco, 5 lbs., $1.25; 10 lbs., $2.50; 20 lbs., $4.25. Farmers' Union, Mayfield, Ky.

JOHNSON'S PACKAGE BEES, QUEENS. Write for remarkable prices. 165 Raymond ave., San Jose, Cal.

MACHINERY—For Sale 93

TANK TYPE TRACTOR BARGAINS—CLEtrac rebuilt model "H," 12-20, $850; Cletrac, nearly new "W," guaranteed, $1100; Cletrac, new "H," big bargain at $1100. Oldsmar garden tractor demonstrator, $395. O. V. Badley, 425 E. Mor., Portland, Ore.

THE WRIGHT PLANTER, A NEW MACHINE, positively drops 12 lettuce seed per foot, or 12 seeds of any other kind, or any number you may desire with fair accuracy. Free illustrated booklet. Geo. H. Wright, 1925 Pacific avenue, Spokane.

STOVE REPAIRING. 128

WRITE MYER RUBENS, SPOKANE, ABOUT stove repairs, welding broken parts, nickle plating.

RABBITS and HARES 173

EXCELLENT UTILITY YOUNG STOCK cheap. New Zealands, some bred, and Flemish. Lena Martin, Milltown, Wash.

PEDIGREED FLEMISH AND CHECKERED Giants. Prices not fancy. Brookside Rabbitry, Hubbard, Ore.

POULTRY (Baby Chicks) 174

WHITE LEGHORN AND ILL-A-HEE BARRED Rock chicks—Buy chicks this year that live and grow and are bred to lay. Butler White Leghorns and Ill-a-hee Barred Rocks are known for high average flock production. Before ordering elsewhere, write for circular telling how our breeding methods produce 300 flocks for our customers. All stock trap nested and pedigreed. Also get our prices on breeding cockerels and hatching eggs for each breed. Address Butler Poultry Farms, or Ill-a-hee Poultry Farm, Jennings Lodge, Ore.

WHITE LEGHORN CHICKS (TANCRED strain), from selected two-year-old hens mated to cockerels from 251 to 286 egg trap nested dams. March and April, $18 per 100, after April 22, $15 per 100. Bona Terra Ranch, Drain, Ore.

POULTRY—Baby Chicks (Continued) 174

YESTERLAID EGG RANCH, KENT, WASH.—Dear Sir: Am more satisfied every day with the chicks received the 17th. They are certainly husky and while Feb. chicks may be supposed to lack vigor, it is certain yours lack nothing. May I increase my order 150 chicks to be delivered with my March 22d order. Irving Kunz, Hoquiam, Wash. Dear Sir: The chicks I got from you the 20th of May are fine. Please let me know your prices for 1922, as I am in the market again for a good order. A. E. Rackow, Hollister, Idaho. Dear Sir: Please let me know the date my 1000 chicks will be delivered. The chicks you sent me in 1921 are just wonderful. Got 70 per cent lay all winter. H. H. Coffey, Chehalis, Wash. We hatch 12,000 of these kind of White Leghorn chicks every 5 days from our own eggs. All sold out until May 1st. Orders for hatching eggs can be filled any time. Largest, most modern and up-to-date trap nest poultry ranch in the world. Yesterlaid Egg Ranch, Kent, Wash.

400,000 BABY CHICKS—OUR WHITE LEGhorns are bred to lay; priced at $15 per 100. We hatch from some of the best flocks of R. I. Reds, Barred Rocks, Anconas and Minorcas to be found in the northwest. Chicks are priced at $22.50 per 100. Send $1 deposit per 100 with your order, paying the balance on inspection of chicks. Safe arrival guaranteed. We have a few standard makes of incubators and brooders at greatly reduced prices. Send for our circular offer. Seattle Hatchery, 1906 Pike place, Seattle.

"FRESHLAID" WHITE LEGHORN CHICKS have the qualities you want; vigor and scientific breeding for the heaviest egg production; every "Freshlaid" male is from a high record hen. Freshlaid Farms is one of largest and oldest chick plants in the Inland Empire. There is a real demand for "Freshlaid" chicks, especially from our old customers. We are sold out until May 1. Write at once if you wish May chicks. May chicks make ideal winter layers. Catalog. Freshlaid Farm, Colfax, Wash.

FOR SALE—WHITE LEGHORN BABY chicks from free range selected hens mated with pedigreed cockerels from 200-287 egg trap nest records. May and June prices $3.50 per 25; $6.50 per 50; $12 per 100. Special prices 500 and 1000 lots. Safe arrival guaranteed. You pay only for chix received alive and in good condition. No money in advance, pay on delivery. Order now. Established 1898. Must Hatch Incubator Co., 445 Seventh st., Petaluma, Cal.

EBORALL'S STRAIN WHITE LEGHORNS. Our hatch of 2300 chicks per week is now booked for Feb., March and April, principally to old customers. Your inspection is invited at all times. We are now booking chicks for May at $14 per 100. Write for circular. Crystal White Poultry Farm, McMinnville, Ore. Box. 33.

TRY OUR PARCEL POST PACKAGE—KEEP the old hen busy. We will ship you first-class baby chicks, postpaid to your door, direct from the hatchery and guaranteed all alive. Price, $4.50 per 25; $8 per 50. For delivery April, May or June. Order now. The White Hatchery, Petaluma, Cal.

UNION DISTRICT HATCHERY IS NOW booking orders for the best thoroughbred baby chicks at the right price. White, Buff and Brown Leghorns, Rhode Island Reds, Black Minorcas, Anconas and Barred Plymouth Rocks. F. & L. Downing, Los Gatos, Cal.

BABY CHICKS, HATCHING EGGS—FROM Hoganized hens, well mated. White and Brown Leghorns, R. I. Reds, Barred Rocks. Safe arrival guaranteed. Order early. Write for circular. Stubbe Poultry Ranch & Hatchery, Box 67J, Palo Alto, Cal.

BABY CHICKS, WELL HATCHED, ARE HALF raised. Petaluma incubators produce that kind. They have lots of "pep." We supply chicks. Catalog free. Petaluma Electric Incubator Co., Petaluma, Cal.

WHITE ROCK BABY CHICKS, "DANIEL'S IDEALS," from our own trapnested stock entirely. Write for prices and dates, also eggs for hatching. Free catalog. Idcal Poultry Yards, Hoquiam, Wash. Star Route No. 25.

BABY CHICKS FROM TANCRED AND HOLlywood strain; heavy laying White Leghorns, mated to cockerels from W. W. experiment station hens, 265-314 egg record; $19 per 100. Wax's Poultry Farm, Kent, Wash.

BABY CHICKS — REDUCED PRICES ON White Leghorns, Reds, Barred Rocks, White Rocks, Minorcas, and Anconas; booking orders now; postal secures free catalog. Write today. C. N. Needham, Salem, Ore.

BABY CHICKS FROM TRAPNESTED WHITE Leghorns of superior quality; 14 years breeding for egg production. $18 per hundred. Chas. L. Perkins, 1337 Burrage, Portland, Ore.

BABY CHICKS, S. C. RHODE ISLAND REDS, $22.50 per 100; S. C. White Leghorns, $18 per 100; March chicks all sold. Maple Brook Poultry Farm, Southworth, Wash. Box. 2.

BABY CHICKS — WE GUARANTEE OUR chicks to be from the highest producing hens in Petaluma. Write for further information. The White Hatchery, Petaluma, Cal.

WHITE LEGHORN CHIX, FROM OUR FREE range selected heavy laying breeders; after May 3d, $12.50 per 100. Chandler Poultry Farms, Lebanon, Ore.

TANCRED STRAIN WHITE LEGHORN BABY chicks, $18 per 100; eleventh season; incubator capacity, 18,000 eggs. D. A. Gillette, R. 4, Yakima, Wash.

S. C. ENGLISH WHITE LEGHORN CHIX, Hollywood strain, 15c; Barred Rock chix, 20c. Bertha Jorgensen, R. 1, Hillsboro, Ore.

WHITE LEGHORN BABY CHICKS. CIRCULAR on request. San Jose Poultry Yards, San Jose, Cal.

HOGANIZED WHITE LEGHORN CHICKS and eggs; guaranteed. Mrs. Arp, St. John, Wash.

Leghorns.

WHITE LEGHORN CHICKS FROM OLD hens, 228 eggs average; 100, $18; selected utility hens, 100, $14. Usual terms, reductions and guarantee. Acme Poultry Farm, Cottage Grove, Oregon.

SINGLE COMB BROWN LEGHORNS; BEST winter layers. Pacific International prize winners. Cockerels, $3; eggs, $1.50 per 15. Circular free. J. E. Dickerson, Parma, Idaho.

PRIZE BUFF LEGHORNS; EGGS 15C EACH; cockerels, $2. C. E. Cleveland, Stanfield, Ore.

POULTRY—Leghorns (Continued) 174

"HENACRES" 5 WEEKS' OLD PULLETS; March or May hatched; big, healthy, vigorous bred to lay. Booking orders now. 6000 to sell, $1.50 each or 500 for $700. Satisfaction guaranteed or money back. Baby chicks for February, March and April all sold to old customers. May chicks, $22 per 100; $200 per 1000. June, $15 per 100; $140 per 1000. Safe delivery guaranteed. Hatching eggs, $2 per 15; $9 per 100; $80 per 1000. "HENACRES" Leghorns are known all over the northwest. Ask your neighbor. Illustrated catalog and booklet on poultry management free. "HENACRES," Box A, Prosser, Wash.

SINGLE COMB WHITE LEGHORNS (TANcred strain); selected heavy laying second and third year hens mated to cockerels from 250 to 275 egg trap nested dams; hatching eggs, $1.50 per 15; $7.50 per hundred; chicks, $18 per hundred, safe delivery guaranteed. Oaklawn Poultry Farm, Hillsboro, Ore.

PUREBRED S. C. WHITE LEGHORNS; ALL breeding hens of trap nested strain, carefully selected for vitality and standard requirements; baby chicks, $18 100; safe delivery guaranteed. eggs, $1.50 for 15; $8 100. Frank Volland, Rt. 1, Kennewick, Wash.

TRAPNESTED WHITE LEGHORN BREEDING stock and setting eggs; famous Carnation high record stock; pedigreed breeding for heavy winter layers. Improve your flock by adding Carnation stock. Ernest W. Raush, Carnation Poultry Farm, Kent, Wash.

OREGON AGRICULTURAL COLLEGE WHITE Leghorns. May and June chicks, $14 per 100; eggs, $2 per setting; $8 per 100. Russell Poultry Farm, Corvallis, Ore.

FORD'S BRED-TO-LAY S. C. WHITE LEGhorns. Hatching eggs, $2 per setting; $8 per 100; special matings on request. W. A. Ford, Umatilla, Oregon.

WHITE LEGHORN COCKERELS, $5 TO $7.50; vigorous breeding hens, laying pullets, $1.50, 220-240 stock. Watterson Pullet Farm, The Dalles, Ore.

S. C. WHITE LEGHORN BABY CHIX FROM trap nested, Hoganized hens; also cocks and cockerels. J. Panck, Sherwood, Ore. R. 1.

WHITE LEGHORNS, TRAP NESTED STRAIN, hatching eggs, baby chicks. Write us. Washington Poultry Farm, Hartford, Wash.

S. C. W. LEGHORN HATCHING EGGS, HOLlywood strain; six dollars per hundred. Mrs. Rominger, Underwood, Wash.

BROWN AND BLACK LEGHORN SPECIAList; contest and show winners. Clifton Dickerson, Silverton, Ore.

SINGLE COMB WHITE LEGHORN HATCHing eggs, $1.50 per 15. Edw. W. Meyer, Pullman, Wash.

Barred Rocks.

BARRED PLYMOUTH ROCK COCKERELS for sale—You will find no better on the Pacific coast; $6 each, f. o. b. Hubbard, Ore. If not as represented, send them back and get your money. We guarantee them. Dinnick & Waldron, Hubbard, Ore., Route 2.

FREE MATING LIST, DESCRIBING OUR ideal Barred Rocks; 337 1sts, 10 specials for 1921. High egg record, 303 eggs; average egg record 229 eggs. Jacobson's Poultry Yards, 3596 Tacoma ave., Tacoma, Wash.

HATCHING EGGS, OREGON AGRICULTURAL college Barred Rocks; choice pen, $2 per 15; utility stock, $1.50; great layers. J. M. Steen, Lebanon, Ore.

QUALITY BARRED ROCKS, WINNERS, LAYers, eggs, setting, 3 and 5 dollars. Robt. L. Burkhart, Albany, Ore.

PURE BARRED ROCK HATCHING EGGS $2 and $3 per fifteen. Mrs. A. Natziger, Route 7, Box 151, Salem, Ore.

PURE O. A. C. BARRED ROCK EGGS, $1.50 per fifteen; $7 per hundred. Mabel Curran, Monroe, Ore.

OREGON AGRICULTURAL COLLEGE BARred Rock cockerel, $3. Jesse Morgan, Cosmopolis, Wash.

O. A. C. STRAIN BARRED ROCKS; EGGS, $6 hundred; chicks, $25 hundred. The Idle Hour Poultry Farm, McCoy, Ore.

HUNT'S FINE BARRED ROCKS. WRITE for circular on eggs. W. A. Hunt, Lebanon, Ore.

BARRED ROCK CHICKS, HEAVY LAYING O. A. C. strain. Mrs. E. Hodge, Waterloo, Ore.

FANCY BARRED ROCK COCKERELS $5 UP. J. E. Horton, 2408 Altamont, Spokane.

Turkeys, Ducks, Geese

EGGS FROM PRIZE-WINNING MAMMOTH Toulouse geese, the kind that hatch, 50c each, $45 per 100. Imperial white Pekin duck eggs, $2.50 per 15, $14 per 100. Goslings, ducklings. R. E. Baumgardner, Wenatchee, Wash.

EGGS, MAMMOTH TOULOUSE AND WHITE Chinese geese; Mammoth Pekin ducks, pearl guineas, Single Comb Reds. C. O. Johnson, R. 1, Medical Lake, Wash.

GIANT STRAIN PURE BRED MAMMOTH Bronze turkeys, from prize-winning stock. Mrs. C. R. Lowery, Route 4, Boise, Idaho.

MAMMOTH PEKIN EGGS FROM DUCKS that take the prizes. Booking advance orders. Mrs. E. A. Bennett, Salem, Ore.

PURE BLOOD MAMMOTH BRONZE TURkeys, prize winning stock. Mrs. Frank Browning, Route 1, Nampa, Idaho.

THOROUGHBRED BARRED ROCKS, RUNNER ducks, males and females, $2, $2.50, $3; ducklings, hundred, $33. C. A. Muths, Route 1, Box 49, Salem, Ore.

MAMMOTH BRONZE TURKEY TOMS, $15; weight 26 pounds. Harry Smith, Coupeville, Wash.

MAMMOTH PEKIN DUCK EGGS, $2 PER 10, postpaid. Art Moore, Persist, Ore.

MAMMOTH PEKIN DUCK EGGS IN SEASON, doz., $2. Mrs. Earl Davis, Elk, Wash.

PURE BRED MAMMOTH BRONZE TURKEYS. S. L. Maltby, Rogerson, Idaho.

Miscellaneous Poultry.

WE ARE HATCHING HOLLYWOOD AND Tancred strain of White Leghorns every Monday, Wednesday and Friday. Prices at $20 per 100; $195 per 1000. Commercial strain mated with 250-egg cockerels at $18 per 100. R. I. Red, Barred Rocks, Black Minorca and Ancona chicks are priced at $25 per 100. Send for free catalog and prices on incubators, brooders and pullets. Queen Hatchery, Seattle.

EGGS FOR HATCHING FROM ESTABLISHED laying strain of White Plymouth Rocks, $2 per setting; $10 per 100. Price on stock on application. Chas. W. Brewster, 3514 20th st., Everett, Wash.

PARAMOUNT WHITE WYANDOTTES "BRING home the bacon." Trap nested, pedigreed. Instructive catalog free. No baby chicks. Bayard H. Moul, 1226 Washington blvd., Seattle.

SUPREME WHITE WYANDOTTE COCKERels; bred up for eight years; all birds guaranteed. Price $2.50 and $3. Mrs. Earl Murray, Box 170, Ione, Oregon.

PEARL GRAY GUINEA FOWLS $1.50 EACH. Mrs. Mary Insel, Shelton, Wash.

(Continued on the following page.)

POULTRY—Miscellaneous (Continued) 174

A FEW CENTS MORE IN BEGINNING MEANS nothing if results are obtained. Our stock pure bred Tom Barron White Leghorns not to be excelled; booking orders for spring chix and pullets; demand heavy. Write for full particulars. All styles and sizes incubators, brooders and stoves. Our 1922 catalogue a valuable book for poultrymen. C. E. Hill Co., 418 11th st., Oakland, Cal.

FREE INCUBATOR CATALOG — INCUBators, brooders, oat sprouters, baby chicks, hatching eggs, trap nests, poultry books and supplies. You can't beat the St. Helens Incubator in either price or hatch. From 60 to 4000 egg capacity; electric and lamp heated. St Helens Incubator Co., Centralia, Wash.

PARKS BRED-TO-LAY BARRED ROCKS, dark strain; big ones; great layers; well barred; Barron English White Leghorns, big ones, headed by descendants of Keystone Maid, record 306 eggs; large lopped combs; beauties. All eggs, $2 per 15, prepaid. Fay Davis, Cambridge, Idaho.

GRIFFIN'S FAMOUS WHITE WYANDOTTES, the best for market and egg producers; eggs for hatching from best mated pens in northwest; your opportunity to get started with my famous stock. Send for catalog. J. A. Griffin, Box 457, Eugene, Ore.

FOR SALE—SINGLE COMB BROWN LEGhorns, Rhode Island Reds, Mammoth White Pekin ducks, male birds, hatching eggs, baby chicks. Write for mating list. The Up-to-Date Poultry Farm, Established 1907. Arthur W. Wade, Marysville, Wash.

THE PROGRESSIVE HATCHERY—PUREbred S. C. R. I. Red and S. C. White Leghorn baby chicks from vigorous trap nested or selected range bred stock; safe delivery guaranteed. Send for circular. 1534 Northeast 12th, Portland, Ore.

POULTRYMEN—SEND EIGHT TWO-CENT stamps for special three months' trial for the best and oldest journal in the west. The articles and advertisements are of special interest to the poultry breeders. Northwest Poultry Journal, Salem, Oregon

S. C. RHODE ISLAND REDS—OUR FLOCK IS one of the best in the Willamette valley, and we have hatching eggs from our best matings to deliver to our customers after March first. All baby chicks for 1922 are sold. G. B. Dimick, Oregon City, Ore.

WHITE LEGHORN EGGS; LARGE EASTERN strain; single and double comb Rhode Island Reds; eggs, $1.50 per 15; $7.50 per 100; magnificent dahlia bulbs, over 100 named varieties. Edward C. Brockway, Sunnyside, Wash.

STOP, LOOK, LISTEN—CHIX AND EGGS from Coral Sheppard's high grade laying strain of Anconas. Inquiries promptly and courteously answered. W. G. Pearmine, Cona Villa, R. R. 8, Salem, Ore.

SETTINGS FROM BROOKS HAVEN SINGLE Comb Reds; Redwing strain (Hoganized); bred for color, type, capacity, range raised. Chas. S. Brooks, Underwood, Wash.

SINGLE COMB RHODE ISLAND RED COCKerels; hen hatched, range raised; hatching eggs $3 setting (Owen strain). Joe Brunsell, Mt Vernon Wash.

PURITAN WHITE ROCKS. FISHEL STRAIN; blue ribbon males with hens trapnested to 270 eggs; 15 eggs, $2.50; 100, $14. C. Gustafson, R. 1, Milwaukie, Ore.

FOR SALE—ROSE COMB RHODE ISLAND Whites; twelve hens, one cockerel; fine layers. Eggs, $2.50 setting. Harold Price, Monmouth Ore.

PURE BRED S. C. RHODE ISLAND RED EGGS for hatching from non-setting, non-fading strain, $3, $5 and $10 per fifteen. Mrs. L. Wham, Double Diamond Ranch, Omak, Wash.

VIGOROUS, HEAVY-LAYING WHITE ROCK breeding stock; pure Fishel strain; hens, pullets, $2, $3; cockerels, $3, $5, $10; prices on quantities. J. B. Axtelle, Hood River, Ore.

SURE HATCH INCUBATORS, BROODERS, prepaid prices. Send for catalog. S. C. Brown Leghorn eggs, chicks. Idahome Poultry Farm, R. 3, Nampa Idaho.

S. S. HAMBURGS, COCK AND COCKERELS; prize stock, $5; old hens, $3.50; 15 eggs, $3.50; pullets, $3.50 E. E. Enos, W1908 Montgomery, Spokane, Wash.

COCKERELS—BROWN AND BUFF LEGhorns, Black Minorcas, Blue Andalusians. Boone Avenue Poultry Yards, E1601 Boone ave., Spokane

PEDIGREED ANCONA COCKERELS AND hatching eggs from 330-egg strain; eggs, $2.50 per setting. Smith's Ancona Farm, Nampa, Idaho.

BLUE ANDALUSIANS; EGGS FOR HATCHing, $2 per setting; heavy layers from beautiful prize winning stock. Mrs. Wm. Rommel, Leahy, Wash.

POULTRY RAISERS, SEND FOR FREE BOOKlet on poultry advertising. The Pacific Northwest Farm Trio, Dept. P, Review bldg., Spokane, Wash.

DOLLARS FOR YOUR EGGS—WE PAY THE top market prices for your eggs and poultry. Daily cash remittances. Western Produce Co., Spokane

WHITE LEGHORN AND WHITE ROCK COCKerels; 300 egg strain; baby chicks, hatching eggs. Palouse Falls Ranch, Palouse Falls, Wash.

S. C. ANCONAS, SHEPPARD'S SELECT AND 331 egg strains; eggs, $2 per 15; chicks, $20 per hundred. A. B. Larson, Warren, Ore.

S. C. RHODE ISLAND RED HATCHING EGGS; heavy laying strain; $1.50, 15; $7 hundred. Geo. Silvers Zillah, Wash.

SHIP YOUR LIVE POULTRY AND EGGS TO us. Highest prices paid; daily remittance. Inland Poultry House, Spokane, Wash.

TRAP NESTED WHITE LEGHORN AND Barred Rock eggs and chicks; records, 200 to 311. Mrs. W. M. Roberts, Elmira, Oregon.

ALLEN'S PRIZE BARRED ROCKS AND White Leghorns are wonderful layers Write D. W. Allen, LaConner, Wash.

BLUE ANDALUSIANS AND WHITE ROCK cockerels; extra good; order now. Mrs. C. W. Armstrong, Freewater, Ore.

ANCONAS, SHEPPARD STOCK COCKERELS, $3, pullets, $2; eggs, $2 setting. R. P. Irwin, Tonasket, Wash.

SINGLE COMB REDS. CHICKS, 20C EACH; eggs fifteen for three dollars. A. E. Bosworth, Omak, Wash.

BRED TO LAY ANCONAS; HATCHING EGGS. Price list free. Yew Lane Farm, Sherwood, Oregon.

ROSE COMB BLACK MINORCA COCKERELS, only few left, $3 each. Mrs. Carley, Carley, Wash.

1949 COCKERELS, HATCHING EGGS, 49 VArieties; free book. Aye Bros., Box 14, Blair, Nebr.

EGGS—BLACK MINORCA, WHITE MINORCA, 200-egg strain. Mrs. Frank Winnard, Heppner, Ore.

BUFF ROCKS, BUFF MINORCAS, COCKERels, eggs. Mrs. Ivay Woodruff, Bow, Wash.

FARMERS' WANT ADS

This is the farmers' "want," "sale" and "exchange" department for small advertisements of farmers, including live stock and poultry

Advertising rates for ads running 1 to 3 times, 10c per word per insertion, with a special rate to Farmer subscribers, as follows: Ads running 4 to 12 times, 9c per word per insertion; ads running 13 times or more, 8c per word per insertion.

All commercial and land advertising 10 cents per word each insertion. Open also to nonsubscribers.

In using these columns advertisers must observe: (1) No advertisements will be inserted for less than $1.00. (2) Every word, number and initial, including name and address, must be paid for. (3) New advertisements, changes of copy or cancellations must reach general office, Spokane, Wash., 10 days in advance of publication date. (4) Cash must accompany order.

Above rates include insertion in The Washington Farmer, The Idaho Farmer and The Oregon Farmer, which constitute the Pacific Northwest Farm Trio, 46 Review Building, Spokane, Wash.

POULTRY—Miscellaneous (Continued) 174

SILVER WYANDOTTES AND SILVER SPANGled Hamburgs, Golden Campines, choice birds for sale. No baby chicks or eggs by the 100. Birds, $5 and up. G. G. Wherry, Payette, Idaho.

LIVE STOCK 177

SEND FOR FREE BOOKLET, "SOME SUGgestions to Live Stock Advertisers," outlining the practices of successful men of long experience. Helps in determining how much to spend, the mediums to select, preparing advertisements, handling inquiries, the use of photographs, etc. Write today. The Pacific Northwest Farm Trio, Dept. W, Spokane, Wash.

LARGE, HEAVY PRODUCING HOLSTEINS for sale at all times in car lots: tuberculin tested; 150 to 200 head always on hand: well marked heifer calves from registered sires and heavy producing dams; crated for shipment anywhere, $25 f. o. b. Levinson & Balmelli, Yakima, Wash.

FOR SALE—HOLSTEIN BULLS, SERVICEable age; sired by son of King of the Sadie Vales. Sire's dam, 30.62 lbs., 2-year-old daughter of Korndyke Abbikerk, son of Pontiac Korndyke. Prices reasonable. D. F. Nugent, Granger, Wash.

SHIP US YOUR POULTRY AND LIVE STOCK. We pay the top market prices. Light veal, fat, fancy, 17c; dressed block hogs, 13c; hens, heavy, 25c; light, 20c. Prompt returns. John Lewis & Co., Spokane, Wash.

WE PAY TOP PRICES FOR YOUR LIVE OR dressed veal, hogs and poultry. Your check by return mail. Shipping tags on request. M. & J. Packing Co., Spokane.

DARK GRAY, COMING THREE-YEAR-OLD Percheron stallion; out of imported sire and dam; for sale cheap. Steve Inglin, Route 4, Boise.

REGISTERED FOUR-YEAR-OLD SHIRE stallion; registered eight-year-old mammoth jack for sale cheap. A. O. Krueger, Colfax, Wash.

REGISTERED SHORTHORN BULLS, ONE yearling, one four-year-old. Carl T. Bever, Norwood, Idaho.

FOR SALE—REGISTERED GUERNSEY BULL calves and occasionally a heifer; federal accredited herd. Fred Jenner, Oso, Wash.

FOR SALE—FIFTEEN HIGH GRADE SHORThorn cows; will calve in March and April; good milkers. W. J. Neylon, Tenino, Wash.

TILLAMOOK CALVES—SEASON NOW OPEN. Price lists ready; strictly dairy stock. Smith, the Calf Man, Tillamook, Ore.

TWO YOUNG, REGISTERED SHIRE STUDS; the blue ribbon kind; priced to sell. O. B. Skidmore, Plummer, Idaho.

REGISTERED O. I. C. SWINE FOR SALE; shipped C. O. D.; guarantee satisfaction. Tony Johnson, Polson, Mont.

FOR SALE—MAMMOTH JACK, HEIGHT 16 hands. Address Joseph Naffziger, Pullman, Wash. Route 2.

IMPORTED PERCHERON STALLION FOR sale or will trade for jack. Also some registered Shorthorn bulls left over. E. B. Coulson, Aberdeen, Idaho.

FOR SALE—93 HEAVY SHEARING ANGORA goats. Also one registered Angora buck, with papers. Frank Gunn, Logsden, Ore.

REGISTERED PERCHERON STALLIONS and mares. Priced to sell. Adams & Son, Yakima, Wash.

300 SHEEP FOR SALE—J. A. WHITWORTH, R. 2, Shelley, Idaho.

BIG TYPE POLAND CHINA GILTS, BOARS. Collins, Underwood, Wash.

FOR SALE—EIGHT MILCH GOATS, $100. Fred Hamlin, Merlin, Ore.

HARNESS and SADDLERY 189

SEND FOR FREE HARNESS AND SADDLE catalog today; cut out the middleman, buy direct from the manufacturer. Lowest prices in the west; satisfaction guaranteed. Established 1881. Write Pierce Harness Co., dept. T, Spokane, Wash.

HAY FOR SALE. 200

ALFALFA HAY, GUARANTEED QUALITY; prompt shipment; buy direct and save money. Prices upon application. Ernest T. Freepons, Walla Walla, Wash.

JOB PRINTING 372

GUARANTEED BETTER BUTTER WRAPpers; 100, 60c; 250, $1.50; 500, $2.50; 1000, $4.25; printed to order. Home Specialty Co., Middleton, Idaho.

PARCHMENT BUTTER WRAPPERS, 100, 55C; 250, $1.45; 500, $2.45; 1000, $4.20; prepaid return mail. Printery, Box 499, Twin Falls, Idaho.

TANNING 425

WE WILL TAN YOUR COW OR HORSE HIDES into robes or coats at the right prices and guarantee our work as we are custom tanners and manufacturers. We also buy hides, furs, wools and pelts, or will exchange harness and sole leather for same. Write for prices. Spokane Fur Tanning Co., 7 Pine st., Spokane.

MONUMENTS 510

COMPLETE STOCK, RIGHT PRICES. CORrespondence solicited.. J. W. Harding, Inland Monument Co., N1001 Monroe, Spokane.

BUILDING MATERIAL 588

NO WASTE, LESS LABOR. BUILD WITH ready cut houses and barns and save money. Attractive new plan book sent free. 4c postage. Prices quoted on material list. Write today. Price advance certain to come soon. Local Keystone Lbr. Co., 3000 Sprague, Tacoma, Wash.

SEEDS 620

ALFALFA SEED, CLOVER SEED, SEED corn—We are located in the heart of the largest and best alfalfa and clover seed district in the west and can give you both quality and price. Get our samples and quotations before buying. Our seed corn is of the finest acclimated strains. Garden and flower seeds of all kinds. Send for our catalog. Darrow Bros. Seed & Supply Co., Twin Falls, Idaho.

ALFALFA SEED, POSTPAID, ORENBERG, ounce, 25c; registered Cossack, pound, 75c. W. W. Perkins, Camas, Mont.

SEEDS (Continued.) 620

HANNCHEN BARLEY SEED—BEST WESTern Oregon spring variety. One of the best for eastern Oregon; best grade, $40; second grade, $35 ton cash f. o. b. Corvallis. O. A. C. Farm Crops Department, Corvallis, Ore.

ALFALFA SEED 99 PER CENT PLUS PURE; state test, 22c pound. Red clover seed, same test, 22c pound. Comb honey, choice, $5 per case, you pay postage. Farmers' Service, Box 472, Twin Falls Idaho.

CERTIFIED LITTLE MARVEL GARDEN peas, hand picked, $7 hundred pounds; small lots, 10c pound. All net. W. A. Bower, Avon, Idaho.

GET ONION SEED OF GROWER—SOUTHport Red Globe, Yellow Globe Danvers, $1.35 lb. prepaid. Cornell Seed Ranch, Middleton, Idaho.

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OREGON RYE GRASS, A 70-POUND SACK, postpaid, $6. Murphy's Seed Store, Albany, Ore.

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15 TO 20 FEET SQUARE GOOD SOIL, planted to everbearing strawberries, will supply average family same year; keep cultivated, runners off, fertilize lightly, keep moist (avoid alkali). My Progressive and Superb are true to name; known and tried standard varieties, come to you inspected and prepaid, parcel post, $1.40 per 100; $6 per 500; $11 per 1000; 2 dewberry plants free long as they last, with orders. Dewberry plants, 75c doz; rooted Concord grapes $1.50 doz all prepaid, insured mail. Plant early. Model Fruit Farm, N. Matthiessen, proprietor, Route 1, Emmett, Idaho.

BLACKBERRIES — CORY'S THORNLESS; largest berry; Macatawa large, splendid flavor; best shipper; everbearer. Alton improved raspberry, delicious flavor, large, twice as productive as Cuthbert. John Lammiman, Route 1, Palo Alto, Cal.

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CERTIFIED STRAWBERRY PLANTS—NEW Oregon Imp., $5 per 1000 f. o. b. Everbearing, $10 per 1000, f. o. b.; $1.50 per hundred, postpaid. Dodds & Hudson, Route 2; Canby, Ore.

PROGRESSIVE EVERBEARING STRAWBERry plants at $1.25 per 100, or $9 per 1000, postpaid; inspected, guaranteed. O. W. Zurcher, S104 17th street, Boise, Idaho.

CORY THORNLESS BLACKBERRY—DELIcious, very large and early. You get strong, well rooted plants, true to name, from pioneer grower. Wm. Mortenson, Route 1, Lodi, Calif.

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LOGANBERRY PLANTS—50,000 CHOICE plants; unusual low price. Harry Lanum, R. 4, Salem, Ore.

LOGANBERRY PLANTS FURNISHED BY the grower. Grape Lane Farm, Turner, Ore.

STRAWBERRY PLANTS, $5 PER 1000. Briggs, Plant Nursery, Olympia, Wash.

FARM LANDS FOR SALE. 651

EIGHTY ACRES, 6 MILES FROM GOLDENdale, Wash.; twenty-seven acres in wheat, balance timber and pasture; running water; fair buildings. Price $3000. J. A. Morrill, real estate, Goldendale, Wash.

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FARM LANDS FOR SALE (Continued) 651

A SUBURBAN PRODUCING HOME AT SUMmit View Farms, between Puyallup and Tacoma, with one acre cleared on each five-acre farm. City water, paved road, phone, lights and only short distance from the state experimental station at Puyallup; berries and poultry for income with city conveniences; good berry land and excellent view property. Write us today for map and full details. You deal direct with the loggers. We have no agents. Electric Logging Co., Inc., 216 Marion st., Seattle, Wash. A. R. Todd, Mgr.

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WE SELL FORECLOSED LANDS FOR A loan company for one-third cash, balance easy terms. When writing tell us what you want, where preferred, how much you will invest; kind of farming you contemplate, as we have no list and must write special description in each case No trades. Hartford Land company, 601 Paulsen building, Spokane, Wash.

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108 ACRES, HOUSE, WITH BASEMENT; FURnace, electric lights, water works; barn 40x70; about 400 yards from oil derrick. Particulars, write owner, F. W. Newman, Amity, Ore.

237-ACRE STOCK RANCH; GOOD LOCALITY, good roads; take small place first payment; easy terms; poor man's chance. Write for information. Doss Moon, Klaber, Wash.

MONEY MAKER — 10 ACRES CHOICEST fruit; improved, suburban; auto trade at door. $3500; terms. W. E. Morris, Route 3, Spokane.

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SACRIFICE PRICE, FRUIT AND DAIRY ranch, 200 acres; 20 acres bearing apples; good buildings; spring water. Box 134, Wenatchee, Wash.

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100-ACRE FARM, WITH 21 COWS. BEN Hillman, Sunnydell, Idaho.

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FARM LANDS—Wanted 654

WANT TO HEAR FROM OWNER HAVING farm for sale; give particulars and lowest price. John J. Black, 80th st., Chippewa Falls, Wis.

WANTED—TO BUY SMALL EQUIPPED farm; give description, price, terms. Address Box 602, Vancouver, Wash.

WANTED—TWENTY OR FORTY ACRES from owner, Northern Idaho. Martin Lutes, Ardmore, S. Dak.

LET ME HELP SELL YOUR FARM. WM. R. Hughes, Middle Granville, N. Y.

FOR SALE OR EXCHANGE 702

PUGET SOUND REAL FARM—SKAGIT VALley; finest 100 level acres; ¾ mile paved road to city; 90 acres cultivated; large dwelling, barns, 2 silos, concrete root house and granary, poultry house, shop, etc., orchard, berries; 7 cows and calves, majority registered; 90 hogs, 50 hens, 4 horses, harness, all implements, tools; feed to last until harvest; terms. Price attractive. Address J. W. A. Myers, owner, Route 2, Sedro-Woolley, Wash.

FOR SALE OR TRADE—255 ACRES DAIRY and grain ranch, well improved, stocked and equipped; best of soil; near Albany, Ore., county seat Linn county; trade for pasture and timber land, for smaller farm, some kind business or city property; will give some one good trade; must dispose of it at once. Owner, H. B. Snikker, Route 2, Tangent, Ore.

FOR SALE OR EXCHANGE—1240-ACRE stock ranch, 12 miles from Council, 1¼ miles to railroad station, postoffice and school; all fenced and cross-fenced; 240 acres hog-tight; 400 acres tillable, balance grazing; free water; good buildings. Machinery and horses included. Mrs. L. E. Ferguson, Goodrich, Idaho.

SELL OR TRADE FIVE HUNDRED ACRES irrigated dairy and stock; fine soil, location, range, buildings; railroad station; coast property preferred. Frank Connors, Alberton, Mont.

MY EQUITY IN 20 ACRES IRRIGATED, BURbank district; sale or trade. Write for particulars. Box 46, Burbank, Wash.

268-ACRE SHEEP OR CATTLE RANCH, OUTside range, $8000. What have you to trade? Write W. J. Laverty, Gannett, Idaho.

The GAUNT GRAY WOLF

By DILLON WALLACE



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(Continued from page seven.)

country with huskies," continued Ed, "an' up th' coast with huskies, until he goes adrift on th' ice—him an' his two huskies he has with he—an' when they thinks they's lost, or like t' be lost, they comes on a tradin' vessel froze in th' ice an' loaded wi' tradin' goods an' furs, an' not e'er a man aboard she. Bob an' th' huskies sails th' vessel in here when th' ice breaks up, an' th' ship goes free.

"That were just one year ago. Me an' Dick gets out from th' trails th' day Bob gets home, an' Douglas goin' with us, we sails th' vessel, which were 'The Maid o' the North,' t' St. Johns, an' Bob gets $15,000 salvage money A rare lot o' money, sir, that were for any man t' have, let alone a lad."

"What happened to the little girl—his sister?" asked Shad.

"She goes t' th' hospital, an' comes back t' Wolf Bight in September, cured an' fine. She be a fine little maid, too—a fine little maid," Ed asserted.

"What was done to the halfbreed Indian—Micmac John, I think you called him?"

"Micmac? Oh, he were killed by wolves handy t' th' place th' Injuns finds Bob. Me, wi' Bill an' Dick, here, goes lookin' for Bob an' finds Micmac's bones where th' wolves scatters un, an' handy to un is Bob's flat sled, an' thinkin' they's Bob's remains I hauls un out in th' winter, an' his folks buries un proper for his remains before he gets out in th' spring."

"What an experience for a kid!" exclaimed Shad. "He must have had some rattling adventures?"

"Aye, that he did," said Ed. "'Twould be a long story t' tell un all, but there were one, now——"

"Now don't go yarnin,' Ed," interrupted Dick, who had stepped out of doors and returned at this moment. "Ed never tells un straight, Mr. Trunbridge."

"Troonbridge," broke in Ed.

"Trowbridge," volunteered Shad.

"Mr. Trowbridge," continued Dick. "He makes un a lot worse'n Bob tells un. Fog's clearin', Ed, an' we better be goin' after we eats dinner."

"That we had, an' the fog's clearin'," agreed Ed.

"But how about Ungava Bob? I'd like to meet him. Do you really think I may be able to engage him to guide me on a two or three weeks' trip?" asked Shad.

"Aye," said Ed. "I'm thinkin,' now, you might. Bob's not startin' for th' trails for three weeks, whatever, an' he's bidin' home till he goes, an' not wonderful busy. I'm thinkin' Bob could go."

"That settles it," Shad decided. "I'll look him up."

"You'll be welcome t' a place in our boat," suggested Dick. "'Tis a two days' sail, wi' fair wind. They's plenty o' room, an' we can tow th' canoe. Me an' Ed lives at Porcupine Cove, an' you can paddle th' canoe over from there t' Wolf Bight in half a day, whatever."

"Done!" exclaimed Shad.

With the assurance of Mr. James Forbes, the factor, that the rivers flowing into the head of the bay, a hundred miles inland from Fort Pelican, offered good canoe routes, Shad felt that a kind fate had indeed directed him to Fort Pelican, and that he had been particularly fortunate in meeting the two trappers.

"Bob Gray will be a good man for you if you can engage him, and I think you can," said Mr. Forbes. "Bob has had some truly remarkable adventures, and he's an interesting chap. Ed Matheson will probably relate these adventures to you, properly embellished, if you go up the Bay with him and Dick Blake. Take Ed's stories, though, with a grain of salt. He is a good trapper, but he has a vivid imagination."

Shad accepted Mr. Forbes' invitation to dine in the "big house," as the factor's residence was called, and when, after dinner, Mr. Forbes accompanied him to the wharf, the trappers had already stowed his outfit into their boat, and the two men were awaiting his arrival. No time was lost in getting away. Sail was hoisted at once, and with Shad's canoe in tow the boat turned westward into the narrows that connect Eskimo Bay with the ocean.

"Th' wind shifted t' nu'th'ard, and when we gets through th' narrows there'll be no fog," Dick prophesied, and his prophecy proved true. Presently the sky cleared, the sun broke through the mist, the freshening north wind swept away the last lingering fog bank, and as a curtain rises upon a scene, so the lifting fog revealed to Shad Trowbridge the weird, primitive beauty of the rugged northland that he was entering.

The atmosphere, so lately clogged with mist, had suddenly become transparent. To the southward, beyond a broad stretch of gently heaving waters, rose a range of snow-capped mountains, extending far to the westward. Reaching up from the nearby northern shore of the bay, and stretching away over gently rolling hills lay the boundless evergreen forest.

Somewhere in the distance a wild goose honked. White-winged gulls soared gracefully overhead. Now and again a seal rose to gaze for an inquisitive moment at the passing boat, and once a flock of ducks settled upon the waters. The air was redolent with the pungent odor of spruce and balsam fir—the perfume of the forest—and Shad, lounging contently at the bow of the boat, drank in great wholesome lungfuls of it.

All this was commonplace to the trappers, and quite unmindful of it Ed Matheson launched upon tales of stirring wilderness adventures in which his imagination was unrestrained, save by an occasional expostulation from Dick.

The wild region through which they were passing gave proper setting for Ed's stories, and Shad, a receptive listener, wished that he, too, might battle with nature as these men did. How tame and uneventful his own life seemed. Already the subtle lure of the wilderness was asserting itself.

Three days after leaving Fort Pelican Shad and the two trappers sailed their dory into Porcupine Cove. It was mid-afternoon, and Shad, impatient to reach Wolf Bight and begin his explorations in company with Ungava Bob, prepared for immediate departure, after a bountiful dinner of boiled grouse, bread and tea in Dick Blake's cabin.

"Better 'bide wi' me th' evenin'," invited Dick, "an' take an early start in th' mornin'. Th' wind's veered t' th' nor'-nor'west, an' she's like t' kick up some chop th' evenin', an' 'tis a full half day's cruise t' Wolf Bight, whatever."

"I can make it all right," insisted Shad. "Bob may not be able to give me much time and I want to take advantage of all he can give me."

"Well, if you must be goin', I'd not hinder you, but," continued Dick, "keep clost t' shore until you reaches that p'int yonder, an' then make th' crossin' for th' south shore, keepin' that blue mountain peak just off your starboard bow, an' you can't be missin' Wolf Bight. If th' wind freshens, camp on th' p'int, an' wait for calm t' make th' crossin' t' th' s'uth'ard shore."

"Thank you, I'll follow your advice," said Shad.

"Wait, now," called Ed, who had disappeared into the cabin, and reappeared with a rope. "I'm thinkin' I'll lash your outfit t' th' canoe. They's no knowin' what's like t' happen, an' 'tis best t' be sure, whatever."

Shad felt truly grateful to the two bronzed trappers as he shook their hands and said adieu to them. It was only his impatience to plunge into the deep forests reaching away to the westward and a growing curiosity to meet Ungava Bob that induced him to decline the sincerely extended hospitality of Blake and Matheson.

Afternoon was waning into evening when Shad reached the point Dick had indicated, and the rising breeze was beginning to whip the wave crests here and there into white foam.

Dick Blake had advised him to camp here if the wind increased. It had increased considerably, but Shad had set his heart upon reaching Wolf Bight that night, and he did not wish to stop. The sun was setting, but there was to be a full moon, and he would be able to see nearly as well as by day. The sea, though a little rougher than it had been during the afternoon, was not, after all, he argued, so bad.

"I'll make a try for it, anyhow; I know I can make it," said he, after a little hesitation, and turning his back upon the point he paddled on.

Presently, however, he began to regret his decision. With the setting sun the wind increased perceptibly. The sea grew uncomfortably rough. Little by little the canoe began to ship water, and with every moment the situation became more perilous.

Now, genuinely alarmed, Shad made a vain attempt to turn about, in the hope that he might gain the lee of the point and effect a landing. But it was too late. He quickly found that it was quite impossible to stem the wind, and he had no choice but to continue upon his course.

With full realization of his desperate position, Shad paddled hard and paddled for his life. He was a good swimmer, but he could not hope to survive long in these cold waters.

The canoe was gradually filling with water, but he dared not release his paddle to bail the water out. With each big sea that bore down upon him he held his breath in fear that it would overwhelm him.

Nearer and nearer the south shore loomed in the moonlight, and with every muscle strained Shad paddled for it with all his might. If he could only keep afloat another 20 minutes!

But he had taken too desperate a chance. His goal was still a full mile away when a great wave broke over the canoe. Then came another and another in quick succession, and Shad suddenly found himself cast into the sea, struggling in the icy waters, hopelessly far from shore.

Twilight was settling into gloom, and the first faint stars were struggling to show themselves above the distant line of dark fir and spruce trees that marked the edge of the forest bordering Eskimo bay. Dark cloud patches scudding across the sky, now and again obscured the face of the rising moon. A brisk northwest breeze was blowing, and though it was mid-July the air had grown chill with the setting of the sun.

Ungava Bob, alone in his boat, arose, buttoned his jacket, trimmed sail, and by force of habit stood with his left hand resting upon the tiller while he scanned the moonlit waters of the bay before resuming his seat.

He was a tall, square-shouldered, well-developed lad of 17, straight and lithe as an Indian, with keen, gray-blue eyes, which seemed ever alert and observant. Exposure to sun and wind had tanned his naturally fair skin a rich bronze and his thick, dark brown hair, with a tendency to curl up at the ends, where it fell below his cap, gave his round, full face an appearance of boyish innocence.

He was now homeward bound to Wolf Bight from the Hudson's Bay company's post on the north shore, where he had purchased a supply of steel traps and other equipment preparatory to his next winter's campaign upon the trapping trails of the far interior wilderness, for Bob Gray, though but 17 years of age, was already an experienced hunter and trapper.

Suddenly, as he looked over the troubled sea, a small black object rising upon the crest of a wave far to leeward caught his eye. The small black object was Shad's canoe, and one with less keen vision might have passed it unnoticed, or seeing it have supposed it belated debris cast into the bay by the rivers, for the spring floods had hardly yet fully subsided. But Bob's training as a hunter taught him to take nothing for granted, and, watching intently for its reappearance from the trough of the sea, he presently discerned in the moonlight the faint glint of a paddle.

"A canoe!" he exclaimed, as he sat down. "An' what, now, be an Injun doin' out there this time o' night? An' Injuns never crosses where this un be. I'll see, now, who it is, an' what he's up to, whatever," and, suiting the action to the resolve, he shifted his course to bear down upon the stranger.

The hunter instinctively attributes importance to every sign, sound or action that is not in harmony with the usual routine of his world, and by actual investigation he must needs satisfy himself of its meaning. This is not idle curiosity, but an instinct born of necessity and lifelong training, and it was this instinct that prompted Ungava Bob's action in turning from his direct course homeward.

"'Tis no Injun," he presently said, as with a nearer approach he observed the stroke. "'Tis too long an' slow a paddle-stroke."

This puzzled him, for he knew well every white settler of the Bay within a hundred miles of his home, and he knew, too, that only some extraordinary mission could have called one of them abroad so late in the evening, and particularly upon the course this canoe was taking at a season of the year when all were employed upon their fishing grounds.

Gradually he drew down upon the canoe, until at length he could make out its lines, and observed that it was not a birch bark, the only sort of canoe in use in the Bay by either Indians of white natives. The canoeist, too, was a stranger in the region. Of this he had no doubt, though he could not see his features.

He was well within hailing distance, though it was evident the stranger in the canoe had not yet discovered his approach, when a black cloud passed over the face of the moon, plunging the sea into darkness, and when the moon again lighted the waters canoe and canoeist had vanished as by magic.

Like a flash, realizing what had happened, Bob seized a coil of rope, made one end fast to the stern of his boat, grasped the coil in right hand, and, tense and expectant, scanned the sea for the reappearance of the unfortunate stranger.

Presently he discovered the submerged canoe directly ahead, and an instant later saw Shad rise to the surface, strike out for it, and catch and cling to the gunwale.

Bob poised himself for the effort, and as he scudded past, measuring the distance to a nicety, deftly cast the line directly across the canoe and within the reach of Shad's hand, shouting as he did so:

"Make un fast!"

Without looking for the result, he sprang forward, lowered sail, shipped the oars, pulled the boat about, and Shad, who had caught the rope, had scarcely time to thrust it under a thwart and secure it before Bob, drawing alongside, caught him by the collar of his shirt and hauled him aboard the boat. Seizing the oars again and pulling safely free from danger of collision with the canoe, Bob hoisted sail, brought the boat before the wind and, resuming his seat astern, had his first good look at his thus suddenly acquired passenger.

Shad, amidships, was engaged in drawing off his outer flannel shirt, from which he coolly proceeded to wring, as thoroughly as possible, the excess water, before donning it again.

Not a word had passed between them, and neither spoke until Shad had readjusted his shirt, when, by way of opening conversation, Bob remarked:

"You'm wet, sir."

"Naturally," admitted Shad. "I've been in the bay, and the bay water is surprisingly wet."

"Aye," agreed Bob, "'tis that."

"And surprisingly cold."

"Aye, 'tis wonderful cold."

"And I'm profoundly grateful to you, for pulling me out of it."

"'Twere fine I comes up before your canoe founders, or I'm thinkin' you'd be handy t' drowned by now."

"A somber thought, but I guess you're right. A fellow couldn't swim far or stick it out long in there," said Shad, waving his arm toward the dark waters. "I'm sure I owe my life to you. It was lucky for me you saw me."

"'Tweren't luck, sir; 'twere Providence. 'Twere th' Lord's way o' takin' care o' you."

(To be continued.)

Bits of Fun FOR Everyone

They Knew.

Mr. Biggs was planning to build a garage in his yard, so he bought an expensive saw.

He left his office early the next afternoon with the intention of starting the job. Putting on a pair of overalls he went out into the garden.

"That new saw I bought isn't worth a nickel!" he stormed an hour later. "Why, the thing wouldn't cut butter."

"Oh, yes it would, daddy," he exclaimed earnestly. "Why, Ted and I sawed a whole brick in two with it this morning."—Pittsburgh Chronicle.

Discipline.

"Why don't you send your boy Josh to college?"

"I'm going to," replied Mr. Smith. "Not that I think a college education is necessary for success in life, but I want to get Josh cornered some place where he'll be compelled to admit there are a few things he doesn't know."—Washington Star.

Tied and Untied.

United States Senator Oddie of Nevada hails from Reno, where the divorce mills are said to work night and day, and he has been subject to quite a bit of wild spoofing from his colleagues on this account. The senator was in a group listening to some of these wise observations on his home city, and when he had an opportunity to get into the conversation he remarked: "Well, Reno is the only city in the world where the people go down to the trains to see the tied come in." For a second or two nobody got just what he meant, but about the minute it was beginning to percolate into the minds of his hearers he added with a smile: "And they go down to the trains to see the untied go out."—National Republican.

An Automobile Story.

A school girl was required to write 200 words about an automobile. She submitted the following: "My uncle bought a motor car. He was out riding in the country when it busted going up a hill. The other 180 words are what my uncle said when he was walking back to town, but I know you wouldn't want me to repeat them."—Boston Transcript.

Seemed Only Half as Long.

Teacher—Tell me, Freddie, how many days are there in a week?

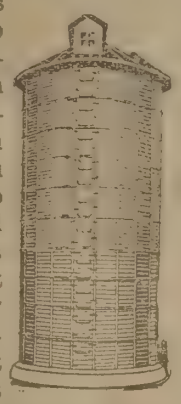
Freddie—Six and a half, ma'am.

Teacher—What do you mean, Freddie?

Freddie—Because Saturday always passes twice as quickly as the other days.—Detroit Free Press.

Last Chance for Free Roof With Your H-L-F Silo

Well, folks, if you want an H-L-F Silo, you'd better be getting it. Last call for Free Roofs. Roofs cost $35 each except on early orders.



The H-L-F Silo is the silo you want—no doubt about it. Listen to this from Sam Bowman, Clyde, Kansas: "The silo which we bought from you in 1914 is the best silo in this country. And it is as good today as when erected, as it does not show any signs of decay whatever, and I expect it to give service for at least fifty years more. It has the double-wall construction which prevents silage from freezing, as well as making it more substantial and durable than the single-wall construction."

H-L-F Silo

Direct to You at Factory Price

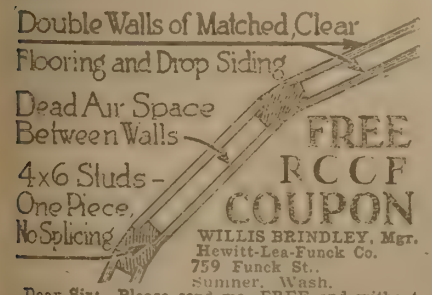
Direct to you at factory price means just one profit in the price you pay. We make the silo, ourselves, all the way from the tree. A few farmer representatives, mostly old customers, whose small commission comes from our profit and is charged to advertising. You get the rock-bottom price every time.

Free Roof
to Apr. 15th Only

This Free Roof offer means a saving to you of $35.00. It's worth $35.00 to us to have your order early. Also it gives us a chance to deliver silo to you when you want it. Therefore, if you place your order on or before April 15th, we'll cheerfully give you a complete All-Cedar Roof, made in sections, ready to put on, and including dormer and dormer window. If you answer this advertisement today, you will have plenty of time to look over our proposition and get your order in by April 15th. But April 15th is the dead line—NO FREE ROOFS AFTER APRIL 15TH, 1922.

Coupon Brings Silo Book and Full Information

I have no room in this advertisement to tell you all about the H-L-F Silo. But I have had plenty of room in a small book entitled "All About Silos," and this I'll gladly send you free, and with it a list of owners and price list. H-L-F prices are plainly printed in large figures, and include freight to your station. We have a system whereby every farmer gets a carload price on his order for a single silo. Fill in the coupon, please, right away, and Mail—then you'll be in time for a FREE ROOF if you decide to order.



FREE RCCF COUPON

WILLIS BRINDLEY, Mgr.
Hewitt-Lea-Funck Co.
759 Funck St.,
Sumner, Wash.

Dear Sir: Please send me, FREE and without obligation, your book, "All About Silos," with owner list and price list and FREE Roof offer.

Name.....

Postoffice.....

R. F. D.....State.....

Cooperation Succeeds

(Continued from page three.)

developed during 10 years' connection with the Salem Fruit union, was added that of his brother, who appears to have a natural "bent" for handling pools. In the sales department there is a system of filing which ordinarily in three minutes will furnish all the information needed on any car which has been sold. This is cross-indexed so that possession of any one of three facts about the car will make available its complete history. Records of sales and of the pools above mentioned are worked out to the finest details and nothing is allowed to be lost which would serve to market a car profitably, place it speedily or placate an irate cooperator. In this connection the association's system of keeping tab on its membership for purposes of classification and communication is interesting. On the wall in an outer office hangs a metal file of cards containing the names and "descriptions" of grower members, classified by districts and bearing also colored tabs which indicate the kinds of fruit grown on a member's farm. A glance at the file of a particular district shows what fruits predominate there—they like to keep the colors well distributed in the association office—and further examination shows the exact acreage in each fruit. For letter writing purposes there is an addressing machine using stencils which correspond to the grower's cards in the index. The G. M., desiring to fortify the prune growers, perhaps, against a barrage of misinformation from the enemy's camp, dictates a letter which is thereupon multigraphed. A single command: "Prune growers, front and center!" is issued to the addressing machine, and it does the rest. The association is strong on letter writing. Its officers believe that this is one of the most effective means of keeping its membership in line.

Would Stabilize Prices.

Instability of prices—one might almost say incongruity of prices—and lack of any attempt at distribution, even national, were perhaps the outstanding faults of the system which prevailed in Oregon before the Oregon growers organized. To these should be added also the utter absence of standardization and the fact that practically nothing was being spent in advertising Oregon fruits. Running afoul in its first season of one of the worst years for business in the history of the United States, the association nevertheless has knocked price cutting into a cocked hat, as one of its officers expressed it; has brought and held together 2000 growers owning 32,000 acres of fruit, by a program of education promoted through the holding of frequent meetings and publication of a house organ; has stood as a body against imports of Italian cherries and for reduction of freight rates, has constantly encouraged the growing of better stuff for market, and has worked continuously for the advancement of fruit interests of the northwest. Last year it put Maitland prunes in 40 new carload markets where prunes had never been before, and it is now completing an analysis of every big market in the United States, to show the attitude of that market toward the humble product that means a livelihood to hundreds of Oregon growers. In the fall of 1920 a small advertising campaign was started, limited almost entirely to New York city, and practically the same amount and kind of publicity was paid for in 1921. The advertising bill totaled $25,000 or $30,000 in the two years—hardly a drop in the bucket when compared with what some organizations are doing—and this will be increased as the association's tonnage becomes more dependable.

All-the-year selling, standardization of product and wide distribution, these three, and it would be difficult, perhaps, to say which of these is the greatest. But there is another factor in the success of the Oregon Growers' association which was particularly stressed by Mr. Lewis, viz., there is not a man in the organization—or at least if there is he won't be there long—who does not believe in cooperation.

"Nearly all of the men in charge of association affairs have been producers. Several now own orchards. Therefore they have the growers' point of view and the growers' interest at heart. The general manager of cooperative enterprise, as well as the men lower down, must believe in it, in its future, and in the things it aims to do. They must be men who are capable of hard work—"

"Yes, and of standing punishment," put in General Manager R. C. Paulus. "If the men in charge of this organization had not been just as described, and had not had in addition the vision to see beyond some of the clouds which at times have nearly obscured its path, it would not have been in existence today."

The Plan of Organization.

The Oregon Growers has this plan of organization:

1. Noncapital, nonprofit, purely cooperative in spirit.
2. Activities limited to members.
3. Fee $10.
4. Association reserves right to buy membership certificates in case of resale. (A very important consideration.)
5. Membership transferrable with property.
6. Member dropped when property sold.
7. All members have equal voting power.
8. Voting by mail allowed.
9. Proxies not allowed.
10. Each county elects its own directors.
11. Directors meet quarterly.
12. An executive committee elected from directors' meet once a month to transact business and hear reports of managers.

Its objects are to encourage production; preserve, store, can and market products, make advances, stop speculation, stabilize prices, develop markets, increase consumption, eliminate unnecessary middlemen and advertise Oregon products, particularly those of its fruit industry. The grower-member, who signs for five years, must ship to the association and may be charged liquidated damages if he fails to do so.

Has Grown Rapidly.

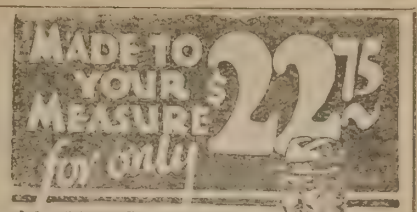
Starting August 1, 1919, with 134 members, controlling 3000 acres of fruit, the Oregon Growers' Cooperative association on September 1, 1920, had 1500 members, controlling 28,000 acres. Today it has 2050 members, controlling 34,000 acres from Medford to The Dalles, except Hood River, and in spite of serious problems which it still has to face, probably can be counted among the few successful cooperative organizations of the northwest. Over one-half of the prunes in the territory, about one-half of the Bartlett pears, one-third of the commercial apples, one-half of the walnuts, over one-half of the commercial cherries, about 25 per cent of the loganberries and a considerable proportion of the strawberries, raspberries, blackberries and (at The Dalles only) apricots, peaches, grapes and early vegetables were marketed through the association last year; also broccoli in the Willamette and Umpqua valleys only. Business ran close to $2,000,000 and included, in quantities handled, 7,500,000 pounds of prunes, 250 carloads of Bartlett and fall pears and 400 carloads of apples. The prune business last year totaled about half that of 1920 and the pear business only about 60 per cent, but the apple business was about the same and was more satisfactory because the "big freeze" of 1919 removed from the market many varieties that commercially were not only not in demand but undersirable. In 1921 the association became the largest handler in the state of both cherries and loganberries. It sold 1000 tons of the former, of which 40 tons went east under ice and the rest were used for canning and maraschino purposes. The association acreage in loganberries has increased so fast that with an average crop in 1922 it will handle 2000 tons, or twice as many as its nearest competitor. It marketed 1250 tons last season. In the winter of 1920 60 cars of broccoli, mostly from the Umpqua valley, were handled, and more than twice that quantity was in sight for this year, but the cold weather has cut the crop in half and it will be about the same as last season.

Operates All-Year Plants.

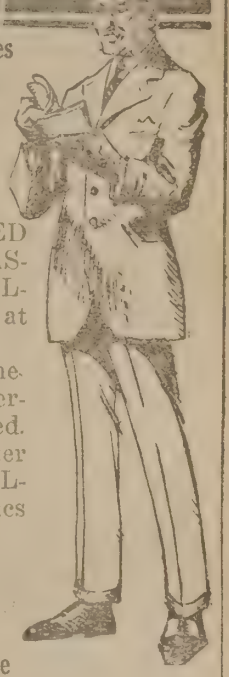
All-year plants of the association, where resident managers are employed, are at medford, Roseburg, Salem, Dalles, Sheridan and The Dalles. Packing plants for either apples or prunes are owned or rented for the seaso nat Grants Pass, Riddle, Myrtle Creek, Sutherlin, Corvallis, Dever, Scott's Mills, Yamhill, Forest Grove, Carlton, Newburg and (for the first time this year) at Canby and Hubbard. The growers own eight prune packing plants and lease one other—six in the Willamette valley, three in the Umpqua—and four large driers are owned—two 16, one 32 and one 40 tunnel, the latter one of the largest in the state.

A board of 21 directors elected annually from among the members, by plant districts, manages the association's affairs. It

(Continued on page twenty-six.)



Send for FREE Samples and Full Particulars



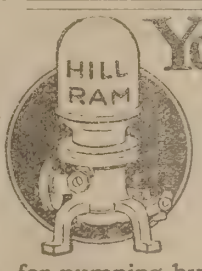
This is the opportunity of the spring to get a high-class HAND-TAILORED TO YOUR MEASURE suit of ALL-WOOL clothes at wholesale price.

Nifty, up-to-the-minute styles. Perfect fit guaranteed. Made by master craftsmen. ALL-WOOL fabrics woven in the latest 1922 patterns. Every suit is a winner.

Money-Back Guarantee

Buy Where the Wool Is Grown—Send a postcard or letter TODAY asking for FREE SAMPLES of fabrics and full particulars for measuring. No obligation. Act now and save money.

Jordan Valley Woolen Mills
Box 1109, Salt Lake City, Utah.



Your own water system

can be operated with no expense for pumping by using the fall from your spring, stream or flowing well to run a *Hill Hydraulic Ram.*

Made in 12 sizes — home supply to large irrigation units.

Write us about your water situation. We will send you information which may save you money. Free catalog on request.

Address Seattle Machine Works, 125 West Lander Street, Seattle, Washington.

NO COST TO OPERATE WATER IS ITS FUEL

In writing advertisers, be sure to say you saw their advertisement in The Washington Farmer.

Yakima Ranch for Sale

I own and offer for immediate sale, at a bargain, 112-acre dairy and hay ranch, located seven miles from Yakima and only one mile off paved road; all bottom land and level. Place has government water right to Natches river, giving plenty of water for irrigation without cost; also has good five-room plastered dwelling with basement, two wells, one of which is concreted, good hay barn and cow barn and milk house. All tools and implements, including separator, go with the place, as well as two fine large brood mares.

About 80 acres are under cultivation, balance in cottonwood timber and a small family orchard. For the person who wants a real place all ready to work and produce from the day he goes on it, he can't beat this and it is a real bargain at the price, $14,000. I will give terms with a reasonable payment down and balance over a long period of years with interest at 6 per cent. I purchased this place for a relative whose health failed him, making it necessary for him to leave, and am now going to sell it, as I am not a farmer.

CHARLES U. G. ROWLAND
P. O. Box 1136. Tacoma, Wash.

FAMILY CIRCLE

ALICE BARLAND
EDITORIAL CONTRIBUTOR

Experience Letters

From Our Family Circle Women

LET ME BE A FRIEND.

O Lord, I have no prayer for sect or creed,
But this: I pray when you are bending low.
Give me an eye to see my neighbor's need,
A heart to feel his woe.

To be called wise or great or good or grand
By men, is not my wish—a vain desire—
But just to clasp my neighbor by the hand
In friendship, I aspire.

Others may strive for honor, wealth or power,
May grasp in eagerness, in pleasure spend,
All these will vanish in a passing hour,
So let me be a friend.

—Selected.

Dear Mrs. Barland: I have been reading the Family Circle letters and find them very interesting. I am puzzled about several things and will ask your opinion concerning them.

If a stranger lifts his hat and says "how do you" are you supposed to pass without even seeming to notice him? If a friend lifts his hat should you smile and greet him? When a man thanks you for a dance what is the proper thing to say? I am 17 years old, 5 feet 6 inches tall and weigh 137 pounds. Am I too heavy for age and height? M.

My Dear Young Friend: If you had written your last name carefully so I could have made it out, I am sure the personal letter I wrote you wouldn't have been returned to me "unclaimed." I spent many valuable minutes trying to make it out but my guess was not correct, it appears.

I consider your questions important and will answer them here in the order given.

No girl should pay the least attention to any stranger who bows and lifts his hat. He is trying her out to see if she will take up with a stranger and will respect her if she ignores his presumptious advances. He might not acknowledge it, but down in his heart he will. The right sort of young man can manage to get an introduction if he is determined upon it and that is the proper way to meet young men.

Girls must protect themselves if they will keep free from embarrassing situations and the sooner they learn this the better it will be for them.

When a friend meets you and bows and lifts his hat it is proper to return the bow; in fact, it would be very discourteous not to do so. I can not imagine any well meaning young man bestowing a courteous greeting a second time on a friend who would cut him in so decided a manner as to ignore his bow.

When a man thanks you for a dance, a bow and pleasant smile is often sufficient, but it is good form to say "I, too, enjoyed the dance," or "thank you, it was a pleasure." I am assuming that you did enjoy the dance. If your partner was unduly familiar as I have seen happen, you are not called upon to even act as if you had enjoyed his attendance.

Never appear eager to receive attentions even if you really like the man and desire his attention. Men don't like to be chased and you will interest them more if you keep them guessing.

I think you are about the right weight for your height, but shouldn't be much heavier for a well proportioned figure

I am very glad to have you girls write me about these things. I shall never be too busy to answer you and I hope to hear from you again and from many more. You are 17 and what you do now and how you form your opinion of these matters will have great weight on all your life. My last word is to be the "captain of your own destiny" when associated with men. Retain your self-respect under all circumstance. Girls must take care of themselves in their association with men. They needn't be prudish, but just plain womanly and self-respecting, and the young people they mingle with will soon learn that one can be a good comrade and a jolly companion without permitting undue familiarity.

Remember this, dear girls, plain, genuine, simple goodness is always appreciated in young and old and every age.

ALICE W. BARLAND.

Dear Mrs. Barland: I give my method of bleaching dish towels or unbleached muslin. Wash cloth or towels before boiling, fill wash boiler half full of water, cut half bar of any good laundry soap into it and add two tablespoons of bluing and half-dozen lemon rinds or more. Put in the towels and boil hard for 15 or 20 minutes, rinse in two waters and hang out to dry. MRS. MABEL CLEMAN.

A young girl of 17 sent me a method something like this. She uses more soap and leaves out the lemon rinds. She gave me no address so will thank her here.

A. W. B.

Your Health

By Royal S. Copeland, M. D., F. A. C. S.

Cheerfulness is a habit which should be cultivated.



Dr. Copeland.

It must be admitted that cheerfulness is both a cause and an effect. It produces good digestion, makes work easy, and brings about contentment of mind.

In turn, success in business, gratified appetite and freedom from pain result in cheerfulness and joy.

Some folks are miserable and cranky on "blue Monday." They have formed the habit of "blowing off steam" on Monday. They clean house with their tempers on Monday.

This is a bad habit. It is an unnecessary habit. It is an inexcusable habit.

I look with pity upon a man who has everybody in a ferment of misery because he chooses to vent his feelings on his associates.

A business man who growls at his clerks all through the first half of the day is equaled in manners only by the clerk who "snaps the head off" of any customer she serves.

Why give way to such emotions? It shows as little character as to yield to the temptation to steal or to commit some other crime of impulse.

I confess I feel more or less hypocritical in preaching a doctrine which I do not practice fully. At least, however, I can admit that I know better, and that I am ashamed after I have yielded to the bad habit of depression, crustiness or open ugliness of spirit and action.

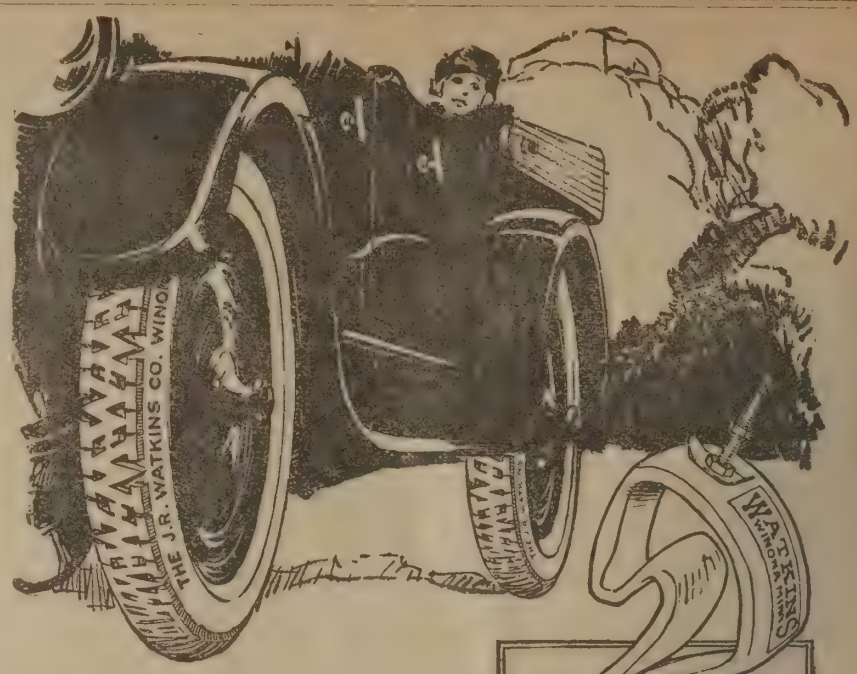
These bad habits undermine the health. They produce indigestion, headache, eyeache, temporary blind spots and all sorts of nervous symptoms.

If you had no regard for the feelings of your neighbors you would cultivate the habit of cheerfulness, because that habit, studiously practiced, will add to your health, to your efficiency, and to your length of life.

Fear of disaster, fear of the poorhouse, fear of failure—every sort of fear is fatal to cheerfulness. You must have faith in God, in your fellow-men and in yourself, or else you will have gloom of spirit, with all its evil effects upon your soul and mind and body.

Every doctor will tell you that a contented mind is better than great riches. The Psalmist sang it, the doctors preach it—now go thou and practice it!

When you have converted your crankiness of soul into cheerfulness of spirit you will have better health and serve society as you have never served before.



TIRES that will stand up in the service of the Watkins Dealer *must* be good tires. Watkins "Big W" Tires were designed for this hard usage. And now you, too, can get these tires. Ask the Watkins Dealer about "Big W" Cords and Fabrics—and the "Big W" Guarantee.

Watkins
OVER 150 PRODUCTS
A Store at Your Door

For 54 years Watkins Dealers have served the homes of this country. There are today twenty million satisfied users of Watkins Products, and more than 5,500 Watkins Dealers are required to supply the demand. This tremendous business is the outgrowth of service and quality dating back almost to Civil War days. Your Watkins Dealer saves you time and money when he brings Watkins Products direct to your home. And, above all, he supplies you with more than 150 home needs of the very highest quality. The usual liberal credit policy applies. Stock up well when the Watkins Dealers calls. It pays! If one has not called recently, write us and we will see that you are supplied.

THE J. R. WATKINS CO.
Dept. 573, Winona, Minn.
Established 1868 The Original — Largest and Best for Over 50 Years

The Watkins Extra Heavy Brown Tube has the greatest tensile strength of any inner tube ever produced. Try it!



The Watkins Spark Plug means *sure fire!* For better performance from *your* motor, equip with Watkins Plugs. Ask the Watkins Dealer.

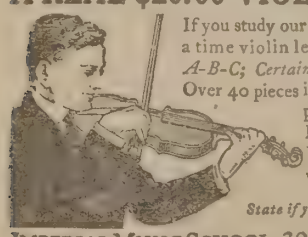
TREES AND SHRUBS



Fruit trees budded from bearing orchards. Apple, Pear, Cherry, Peach, Plum, Prune, Apricot, Quince, Grape Vines, Shrubbery, Plants, Raspberries, Blackberries, Logans, Dewberries, Asparagus, Rhubarb, Flowering Shrubs, Roses, Vines, Hedge, Nut and Shade Trees. Carriage paid. Satisfaction guaranteed.

WASHINGTON NURSERY CO.
Toppenish, Washington.
Salesmen everywhere. More wanted.

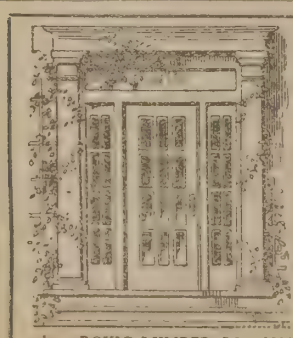
A REAL $20.00 VIOLIN FREE



If you study our *new* one note at a time violin lessons; *simple as A-B-C; Certain* as Arithmetic; Over 40 pieces included; Easy to play; *Easy* to pay; Lessons *only* cost; Your *success* and violin *guaranteed*

State if you have violin

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SASH DOORS MILL-WORK

beautifully designed, carefully manufactured from best material. Direct from manufacturer at real money saving prices. Send today for illustrated catalog. ROVIG LUMBER CO., 2201 First Avenue South, Seattle, Washington.

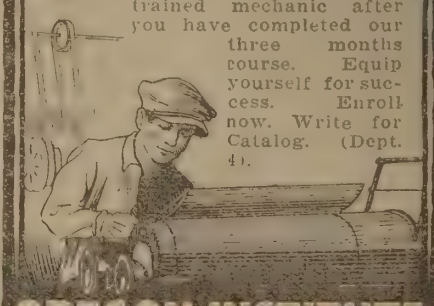
Color Your Butter

"Dandelion Butter Color" Gives That Golden June Shade and Costs Really Nothing. Read!

Before churning add one-half teaspoonful to each gallon of cream and out of your churn comes butter of Golden June shade to bring you top prices. "Dandelion Butter Color" costs nothing because each ounce used adds ounce of weight to butter. Large bottles cost only 35 cents at drug or grocery stores. Purely vegetable, harmless, meets all state and national food laws. Used for 50 years by all large creameries. Doesn't color buttermilk. Absolutely tasteless.
Wells & Richardson Co., Burlington, Vt.

GET INTO A BIG PAYING BUSINESS

Trained auto, tractor and gas engine mechanics are in constant demand. You can become a well-trained mechanic after you have completed our three months course. Equip yourself for success. Enroll now. Write for Catalog. (Dept. 40).



OREGON INSTITUTE OF TECHNOLOGY
PORTLAND OREGON

Read the "Want Ad" page this week for good offers of all kinds.

Prenatal Care

Do you know that the bureau of public health nursing and child hygiene of our Oregon state board of health is interested in the health and well-being of every rural home in the state? Do you know that this bureau is sending, free of charge, a series of letters of advice and information to every expectant mother in Oregon who may ask for this help?

These letters come once a month and are intended to encourage and advise women to the end that motherhood may be made as safe as possible and that our Oregon babies may be born healthy and strong. These prenatal letters will instruct in the matter of proper diet, clothes and personal hygiene and also as to danger signals and the need for consulting a physician early and periodically as well as having medical care during delivery.

It has been a well known fact for some time that proper instruction and care during pregnancy can and does prevent a large proportion of deaths of mothers.

If you desire these letters, apply to the child hygiene department, Oregon state board of health, Salem, Ore., giving your full name and address together with the date of expected confinement.

Grow Sweet Peas

(Continued from page eight.)

water and that is why it is best to plant in a ditch, leaving the seed well below the top of the ground, so that the water will not run off.

After the first two or three weeks of blooming the stems will begin to grow short and they will begin sooner if you don't give them lots of water and pick, or rather always cut, the flowers every day. Never pull or tear the vines, but use shears.

When the stems grow short put some barn bedding into an old tub or barrel, fill with water and allow to stand covered for 24 hours; dilute till you are certain you will not kill the plants, then pour it at the roots of the peas, keeping it off the plants; be very careful not to use it too strong. Make it weak and put it on three or four days in succession and you can almost see the stems grow.

Latest High Class Patterns for the Home

Please order the patterns you desire at least two or three weeks before you wish to use them. Desiring to obtain the latest high-class patterns for its readers, THE FARMER has made arrangements to have them sent direct from the east, and under present mailing conditions it takes about that time for them to reach you.



3746. Lady's Dress. Cut in seven sizes: 34, 36, 38, 40, 42, 44, and 46 inches bust measure. A 38-inch size will require 4 3-4 yards of 44-inch material. The width of the skirt at the foot is about 2 1-4 yards. Price, 10 cents.

3649. Misses' Dress. Cut in three sizes: 16, 18, and 20 years. An 18-year size requires 4 1-4 yards of 44-inch material. The width of the skirt at the foot is about 2 1-2 yards. Price, 10 cents.

3870. Lady's Dress. Cut in six sizes: 34, 36, 38, 40, 42, and 44 inches bust measure. A 38-inch size requires 4 yards of 44-inch material. The width of the skirt at the foot is about 2 yards. Price, 10 cents.

3694-3700. Lady's Costume. Waist 3694, cut in six sizes: 34, 36, 38, 40, 42, 44, and 46 inches bust measure. Skirt 3700 cut in seven sizes: 24, 26, 28, 30, 32, 34, and 36 inches waist measure. The waist will require 3 yards of 27-inch material. The skirt requires 3 1-2 yards of 40-inch material if without nap, and 3 1-8 yards of 44-inch material with nap. The width of the skirt at the foot is 2 5-8 yards. Two separate patterns, 10 cents for each pattern.

3884. Girl's Dress. Cut in four sizes: 6, 8, 10, and 12 years. A 12-year size requires 3 yards of 44-inch material. Price, 10 cents.

3262. Girl's Dress. Cut in four sizes: 8, 10, 12, and 14 years. A 12-year size will require 4 1-2 yards of 27-inch material for the dress, and 2 1-4 yards for the "jumper" or overblouse. Price, 10 cents.

3876. Girl's Dress. Cut in four sizes: 6, 8, 10, and 12 years. A 10-year size requires 3 yards of 38-inch material. Price, 10 cents.

3485. Lady's Apron. Cut in four sizes: Small, 32-34; medium, 36-38; large, 40-42; extra large, 44-46 inches bust measure. A medium size will require 7 1-4 yards of 27-inch material. The width of the skirt at lower edge is about 2 yards. Price, 10 cents.

3362. A Comfortable Negligee. Cut in four sizes: Small, 32-34; medium, 36-38; large, 40-42; and extra large, 44-46 inches bust measure. A medium size will require 8 1-2 yards of 27-inch material. Price, 10 cents.

3882. Lady's House Dress. Cut in seven sizes: 36, 38, 40, 42, 44, 46, and 48 inches bust measure. A 38-inch size requires 5 yards of 36-inch material. The width at the foot is about 2 yards. Price, 10 cents.

3893. Lady's Chemise and "Step In" Drawers. Cut in four sizes: Small, 34-36; medium, 38-40; large, 42-44; extra large, 46-48 inches bust measure. A medium size requires 1 1-4 yards of 36-inch material for the vest and 1 3-8 yards for the drawers. Price, 10 cents.

3901. Child's Dress. Cut in four sizes: 2, 3, 4, and 5 years. A 2-year size will require 1 5-8 yards of 32-inch material. Price, 10 cents.

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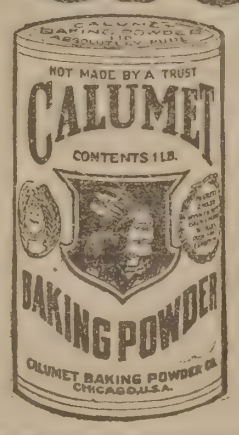
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High Points in News of the Week

The situation with reference to the soldiers' bonus bill appears as uncertain at the present time as at any period during its consideration. The measure was introduced into the lower house of congress last week carrying the provision that certificates should be issued to the ex-service men showing the intention of the government to pay them the bonus, these certificates to be used by the service men as collateral for loans at local banks. In the measure as drawn a number of choices of terms of payment are given to the ex-service men, and the uncertainty as to the number of men selecting the various options renders it impossible to estimate accurately the total amount necessary to pay the entire bonus. It is estimated all the way from $1,000,000,000 to $4,750,000,000.

The United States treasury department has gone on record strongly as opposed to this method of payment, even going so far as to suggest that local banks do not accept the certificates as collateral, as it would mean the tying up for several years of large sums of money needed in the conduct of the country's business.

President Harding still recommends the general sales tax as the most equitable means of raising the money. In order to give a little more time to consider the proposition, and for business conditions to adjust themselves, he last week recommended that further action on the measure be postponed for a period of 90 days.

* * *

With a view to conforming to the recently enacted budget law, the United States senate and the house of representatives have consolidated all appropriation work in the hands of a centralized appropriation committee in each house. Heretofore appropriation bills for such purposes as the army, navy, postoffice, agricultural department and so on have been handled by separate committees of both houses dealing with these particular departments. Under the new budget law the heads of all such departments and all other government departments are required to make an estimate of their needs for the ensuing year and submit it to the budget commission, which, in turn, submits it to congress. The two new appropriation committees are for the purpose of centralizing consideration of ways and means of raising the money, in somewhat the same way that the budget commission centralizes the consideration of department needs.

* * *

What is claimed to be the largest single rock blast ever fired in the United States reclamation service occurred recently at Rimrock, in the Yakima valley, when five tons of TNT were exploded under a wall of rock that it was desired to use in the construction of the Rimrock reclamation storage dam. The charge dislodged 5000 tons of rock, it is estimated.

* * *

American foreign trade showed a considerable decline in January of this year as against a year ago. Exports for the month and for the last six months of 1921 were about half what they were for the corresponding periods a year ago. Imports increased a little in January, but decreased in proportion with the last six months of the preceding year.

* * *

The Smith-McNary reclamation measure, which has been in the process of formation by the senate committee on irrigation and reclamation for several months, was formally introduced into the senate last week by Chairman McNary of the committee. The measure provides for the appropriation of $350,000,000 to be used as a revolving fund for the development of land. As lands are developed and become valuable, irrigation district bonds may be issued against them, these bonds to be sold to raise additional money with which to do reclamation work. It is estimated that $2,000,000,000 would be made available by this means before the total reclaimable arear of the United States was placed under development.

* * *

The United States government has officially declined the invitation to participate in the international economic and financial conference to be held at Genoa in April.

* * *

A far-reaching supreme court decision relative to Japanese ownership of land was rendered in a California court last week. The case was brought by the state of California in an effort to have a piece of land that had been bought by a citizen of Japan in the name of his two American-born children revert to the state. The court held that the children, being American-born, were, under the constitution of the United States, American citizens and, therefore, entitled to hold the lands purchased for them. While the case will probably be appealed to higher courts, it is feared by some that it will have the effect of enabling Japanese to secure possession of hundreds of thousands of acres of land in California and other parts of the United States by vesting the titles thereto in American-born Japanese children.

* * *

A widespread coal strike is threatened by the organized coal miners of America, to take place April 1 unless the mine owners agree to new wage agreements and working conditions to take place of those now expiring. Secretary of Labor Davis, in President Harding's cabinet, is endeavoring to get the mine workers and the mine owners together for the adoption of an agreement that will prevent the strike.

* * *

Mt. Vesuvius, the historic volcanic mountain near Naples, Italy, is reported to again be in a state of eruption.

Farm Business and Markets Outlook

(Continued from page five.)

Prices for No. 1 American cheese on March 8 were:

CHICAGO—Flats, 20 1-2@21c; twins, 20@20 1-2c; S. daisies, 20 1-2c; D. daisies, 20@20 1-2c; longhorns, 22@23c; square prints, 22@23c.

FRUITS AND VEGETABLES.

Total season's shipments of potatoes from the leading 18 states have been nearly 25 per cent larger than in the same period of the previous crop year. The movement from producing sections has slowed down and prices have become more firm. The supply for the rest of the season appears ample. Round whites, sacked, are quoted at $1.70 to $2 per 100 lbs. in various consuming markets.

Total shipments of apples from all sections up to February 25 have been 78,216 cars, compared with 98,339 cars to the same date of 1921. The market displays a firm tone, although the demand is slow and supplies in sight for the rest of the season are up to normal. Baldwins are bringing $7 to $8.25 per barrel and Winesaps are bringing $2.75 to $3.75 per box in city wholesale markets.

LATEST QUOTATIONS.

The Live Stock Market.

PORTLAND, Ore., March 11.—Cattle—Choice steers, $7.25@7.75; medium to good steers, $6.75@7.25; fair to medium steers, $6.25@6.75; common to fair steers, $5.25@6.25; choice feeders, $5@6; fair to good feeders, $4.50@5; choice cows and heifers, $6@6.50; medium to good cows and heifers, $5.25@6; fair to medium cows and heifers, $4.50@5.25; common cows, $3.50@5.25; canners, $2@3.50; bulls, 3.50@4.75; choice dairy calves, $10@10.50; prime light calves, $9@10; medium light calves, $6.50@9; heavy calves, $4.50@6.50.

Hogs—Prime light, $11.25@11.75; smooth heavy, 200 to 300 lbs., $10.25@11.25; smooth heavy, 300 lbs. up, $9.25@10.25; rough heavy, $7.50@8.25; fat pigs, $11.50@11.75; feeder pigs, $11.50@11.75; stags, subject to dockage, $6@8.

Sheep—East-of-mountain lambs, $11@11.75; best valley lambs, $11@11.50; fair to good, $10@11; cull lambs, $6@8; eastern Oregon feeders, $9@10; light yearlings, $10@10.50; heavy yearlings, $9@10; light wethers, $9.50@10; heavy wethers, $9@9.50; ewes, $3@7.

SPOKANE, March 11.—Cattle—Prime steers, $6.50@7.50; good to choice steers, $5.75@6.50; medium to good steers, $5.25@5.75; fair to medium steers, $4.75@5.25; common to fair steers, $4.25@4.75; choice cows and heifers, $5@6; good to choice cows and heifers, $4@5; medium to good cows and heifers, 3.50@4; fair to medium cows and heifers, $3@3.50; canners, $2@3; bulls, $3@5.50; light veal calves, $8@10; heavy veal calves, $4@8; stockers and feeders, $4.50@5.

Hogs—Prime mixed, $10.75@11.50; medium, $9.75@10.75; heavies, $7.75@9.75; fat pigs, $9.75@10.75; stockers and feeders, $9.50@10.75.

Sheep—Prime lambs, $9@10; fair to medium, $8@9; yearlings, $6@8; wethers, $4.50@6; mutton ewes, $2@6; feeder lambs, $7@8.

The Grain Market.

PORTLAND, March 11.—Wheat—Soft white, white club, hard winter, northern spring, $1.29; red Walla, $1.25.

SEATTLE, March 11.—Wheat—Hard white, soft white, white club, soft red winter, $1.28; hard red winter, $1.29; northern spring, $1.30; eastern red Walla, $1.24; Big Bend Bluestem, $1.50.

PULLMAN, Wash., March 11.—Red wheat, $1.02; white wheat, $1.05.

DAYTON, Wash., March 11.—Club wheat, $1.12; red, $1.09.

WALLA WALLA, March 11.—Club wheat, $1.13; Bluestem, Turkey red and Bart, $1.15.

DAVENPORT, Wash., March 11.—Marquis, $1.29; Bluestem, $1.27; Gold Coin, $1.04.

POMEROY, Wash., March 11.—Turkey, $1; Hybrid, 97c.

ODESSA, Wash., March 11.—Marquis, $1.42; Bluestem and Bart, $1.40; Turkey red, $1.35; Jones Fife, $1.12.

LEWISTON, Idaho, March 11.—Fortyfold, club, hard winter, $1.04 to $1.06.

RITZVILLE, Wash., March 11.—Bart, $1.40; red, $1.30; Fife, $1.12.

Hay and Feed Grain.

PORTLAND, March 11.—Millfeed—Price f. o. b. mill; Millrun, ton lots, $29; mixed cars, $28; straight cars, $27 ton; middlings, $43; rolled barley, $37@39; rolled oats, $42; scratch feed, $45@50 ton.

Corn—White, $36; cracked, $38.

Hay—Buying price f. o. b. Portland: Alfalfa, $13.50@14 ton; cheat, $11@11.50; oat and vetch, $15; clover, $11; valley timothy, $14@15; eastern Oregon timothy, $16@17.

SPOKANE, March 11.—Wheat—Feed wheat, $46 per ton.

Oats—$40 per ton; steam rolled, $42.

Corn—$36 per ton; cracked corn, $38 ton.

Barley—$32; steam rolled, $34 per ton.

Bran and shorts—$30 per ton.

Alfalfa—$18 ton; timothy, $18 ton; mixed hay, $18 ton.

General Produce.

PORTLAND, March 11.—Butter—Cubes, extras, 33@34c per lb; parchment wrapped, box lots, 38c; cartons, 39c. Butterfat, buying prices: No. 1 grade, 34@37c, delivered Portland.

Eggs—Buying price, 17c per doz.; resales, 18c doz.; jobbing prices, case count, 19c; candled ranch, 20c; association selects, 22c; association firsts, 20c; association pullets, 21c.

Cheese—Tillamook triplets, price to jobbers, f. o. b. Tillamook, 26c; young Americas, 27c lb.

Poultry—Hens, 21@25c; ducks, 25@30c; geese, nominal; turkeys, live, nominal; dressed, 35@40c.

Pork—Fancy, 15c per lb.

Veal—Fancy, 15c per lb.

SPOKANE, March 11.—Butterfat—39c lb.

Eggs—Fresh ranch eggs, $6.50; fresh pullet eggs, $5.50.

Live poultry—Springers, 19c lb; springers, staggy, 15c lb; hens, fat, 4 lbs up, 24c lb; 2 to 4 lbs, 20c lb; old roosters, 12c lb; rabbits, 12c lb.

CHICAGO, March 11.—Butter—Higher; creamery extras, 37c; firsts, 32@36c; seconds, 30@31½c; standards, 35¾c.

Eggs—Lower; receipts 18,258 cases; firsts, 22@22¼c; ordinary firsts, 19@20c; miscellaneous, 21@21½c.

Live Stock Conditions

Live stock is generally in good condition and health, says the United States bureau of crop estimates in its report for the last half of February. Losses have been light. A good demand for stocker hogs and brood sows is reported in many sections. Prices are generally higher and sales of sheep and hogs are more profitable. Interest in cooperative marketing of dairy products is manifested in Louisiana and a better grade of dairy cattle is being shipped in. A considerable increase in the number of poultry is reported in Arkansas.

Seeding of clover is in progress in some parts of Illinois and a heavy demand for high-grade clover seed is reported. Some injury to clover and alfalfa fields is reported in Indiana and Wisconsin because of the unfavorable weather conditions. Pastures and ranges are improved generally by increased supply of moisture.

Farm Labor.

The supply of farm labor is generally plentiful at lower wages. The demand for laborers is limited by low prices of farm produce and lack of finances. Men from cities are seeking employment on farms in Michigan, but wood cutting is practically the only work offered.

Range of Live Stock Prices for the Week Ending March 8

	Chicago.	Spokane.	Portland.	N Salt Lake
CATTLE.				
Choice, prime heavy steers (1100 lb. up)	9.15@ 9.75	.....	.....	.....
Good heavy steers	8.40@ 9.25	.....	.....	.....
Medium heavy steers	7.50@ 8.60	.....	.....	.....
Common heavy steers	6.60@ 7.75	.....	.....	.....
Choice, prime light steers (1100 lb.d'n)	9.00@ 9.65	.....	.....	.....
Good light steers	8.30@ 9.10	.....	.....	.....
Medium light steers	7.35@ 8.40	6.50@ 7.60	6.50@ 7.50	6.00@ 6.75
Common light steers	6.40@ 7.50	4.50@ 6.50	5.00@ 6.50	4.00@ 6.00
Common to choice butcher heifers	4.75@ 8.40	3.50@ 6.50	3.75@ 6.75	3.50@ 5.75
Common to choice butcher cows	4.15@ 7.00	3.00@ 5.50	3.50@ 5.75	3.00@ 5.00
Bologna and beef bulls	4.00@ 6.50	3.00@ 5.00	3.50@ 5.50	2.50@ 4.00
Canners and cutters, cows and heifers	2.75@ 4.25	2.00@ 3.00	2.00@ 3.50	1.50@ 3.25
Canner steers	3.75@ 5.00	2.75@ 3.75	2.50@ 4.50	2.00@ 4.00
Medium to choice light veals	7.00@11.50	8.00@ 9.50	8.00@11.00	6.00@ 7.00
Common to choice heavy veals	4.00@ 8.00	4.00@ 8.00	4.50@ 7.50	.....
Common to choice feeders (1000 lb. up)	5.65@ 7.65	.....	.....	.....
Common to choice feeders (750-1000 lb.)	5.50@ 7.65	4.50@ 5.00	4.50@ 6.00	.....
Common to choice stocker steers	5.10@ 7.40	.....	.....	.....
Com. to choice stocker cows, heifers	3.75@ 5.75	.....	.....	.....
HOGS.				
Top of market	11.40	11.60	11.75	10.50
Bulk of sales	10.75@11.25	9.75@11.50	10.25@11.60	10.00@10.50
Heavy (250 lb. up)	10.75@11.20	8.75@ 9.75	10.00@11.00	.....
Medium (200-250 lb.)	10.90@11.35	9.75@10.75	10.75@11.25	10.00@10.50
Light (150-200 lb.)	11.00@11.40	10.75@11.60	11.25@11.75	10.25@10.50
Light lights (130-150 lb.)	10.75@11.35	10.75@11.60	11.00@11.75	10.00@10.50
Smooth packing sows (250 lb. up)	9.75@10.50	8.25@ 8.75	8.25@ 9.25	.....
Rough packing sows (200 lb. up)	9.50@10.00	7.75@ 8.25	7.50@ 8.50	.....
Medium to choice pigs (130 lb. d'n)	9.25@10.75	9.75@10.75	11.00@11.50	.....
Stock pigs	.....	8.75@ 9.75	11.00@11.50	7.50@ 8.50
SHEEP AND LAMBS.				
Medium to prime lambs (84 lb. down)	12.75@16.30	8.00@10.00	9.00@11.50	10.00@12.00
Culls and common lambs	10.00@13.50	6.00@ 8.00	6.00@ 9.00	8.00@10.00
Medium to prime yearling wethers	10.25@14.75	6.00@ 8.00	8.00@ 9.75	7.00@ 9.00
Medium to prime wethers	7.00@11.50	4.50@ 6.00	8.00@ 9.00	6.50@ 7.50
Medium to choice ewes	5.50@ 9.50	4.00@ 6.00	4.00@ 6.50	4.50@ 5.50
Culls and common ewes	3.00@ 6.00	2.00@ 4.00	3.00@ 4.00	2.50@ 4.50
Feeder lambs	11.50@13.50	7.00@ 8.00	8.00@ 9.00	.....

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Wilber Van Leuven is 8 years old and will have another birthday December 19, 1922. Wilber says: "We have 11 cows. Their names are Star, Gertie, Lady, Bossy, Spot, Pet, Daisy, Stubby, Blossom, Whitey and Speck." Lady has a little new calf. Wilber's home is in Stevens county, Washington.

Hilda Stark likes The Junior Farmer very much. Her sister gets it. Hilda was 9 years old January 21, 1922. Elsie and Gertrude are her sisters. Her home is in central Douglas county, Washington. She is in the fourth grade at school.

Ella McHargue is an eastern Washington cousin. January 10, 1922, she was 10 years old. Ella has five sisters. There are two cows, two horses and two pigs at the McHargue farm.

BEDTIME STORIES

By THORNTON W. BURGESS.

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SOME ONE THAT BILLY FORGOT.

Just as jolly, round, red Mr. Sun went down to his home behind the Purple Hills, Billy Mink came down the laughing Brook to the Smiling Pool. When he came in sight of the Big Hickory Tree on the bank of the Smiling Pool he stopped. What do you think he saw? When, there were all the little people of the Green Meadows and the Green Forest—Johnny Chuck, Happy Jack Squirrel, Striped Chipmunk, Chatterer the Red Squirrel, Reddy Fox, Jimmy Skunk, Bobby Coon, Danny Meadow Mouse, Unc' Billy Possum, Prickly Porky, Old Mr. Toad, Digger the Badger, Jumper the Hare, Sammy Jay, Blacky the Crow, Ol' Mistah Buzzard. And on the Big Rock in the Smiling Pool, sat Little Joe Otter, Jerry Muskrat, and Spotted Turtle, while on his big green lilypad, smiling at every one, sat Grandfather Frog.

They seemed to be waiting for some one and Billy Mink knew that that some one was himself. How he did wish that he hadn't boasted of what he could do! He would have run back home, but just then Ol' Mistah Buzzard's sharp eyes saw him.

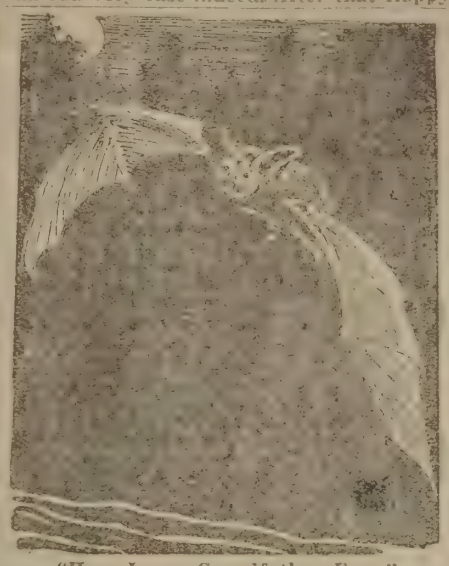
"Here he comes!" cried Ol' Mistah Buzzard.

So Billy Mink had to go on. Everybody set up a great shout when he climbed up on the Big Rock, and though he felt just a little foolish, he tried not to show it.

Grandfather Frog made a little speech. He told what a wonderful fellow Billy Mink is, or thinks he is, and how he had boasted that he could do anything that any one else who wears fur can do. Then he invited Billy Mink and Little Joe Otter to show how they could swim.

It was a great race. Yes, indeed, it was a great race! And though Little Joe Otter won, Billy Mink proved that he can swim very fast, indeed.

Then Peter Rabbit and Billy Mink ran a race, and though Peter was first Billy Mink almost beat him, and proved that he can run very fast indeed. After that Happy



"Here I am, Grandfather Frog."

Jack Squirrel showed how fast he could climb a tree, but when he reached the very tip top Billy Mink was right at his heels.

Jumper the Hare made some wonderful jumps. Billy Mink jumped, too. Of course he didn't jump nearly so far as Jumper the Hare, whose legs are long and meant for jumping, but he jumped very well indeed. Then Billy Mink proved that he can follow a track with his nose just as well as Reddy Fox. He dug a hole to show that he can dig. Everything that any one else did, Billy Mink did, and with each success he felt better, for all the little Meadow and Forest People clapped their hands and shouted, "Hurrah for Billy Mink!"

Then Billy Mink looked down at Grandfather Frog and grinned. "Where's that fellow that can do something that I can't do?" demanded Billy Mink. "Where is he? I want to see him" Billy swelled himself up and began to strut back and forth on the Big Rock.

Grandfather Frog looked around at all the Little Forest People, and first winked one big goggly eye and then the other. Just as he did so a funny little squeaky voice, that seemed to come right out of the air, said:

"Here I am, Grandfather Frog."

Every one but Billy Mink looked up. Billy didn't need to, for as soon as he heard that voice he knew who it is that wears fur that can do something that he can not do. He had forgotten all about him when he boasted.

What was it? Why, Flitter the Bat, of course, who, as every one knows, can fly, while Billy Mink can not.

LETTERS WELCOMED BY AUNT NELLIE.

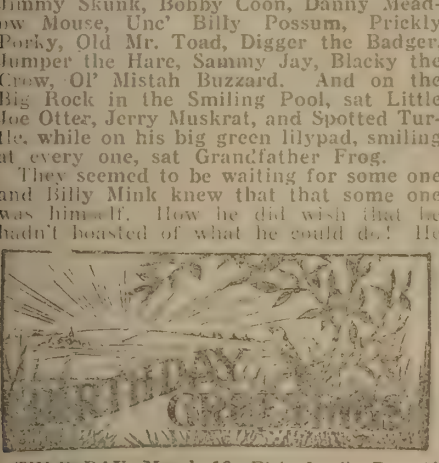
Among recent letters received by Aunt Nellie are those from cousins whose names follow. A few of these will be published each week in the regular edition of THE FARMER, and others will appear from time to time in The Junior Farmer:

Albert Harper, Minnie McHargue, Muriel Hanson, Sylvia Wilson, Kenneth Dadge, Joel Hood, Willard Harvey, Mary Patricia Walsh, Velzia Stevens, Mathilda Schmick, Bessie Harvey, Carl Olson, Kenneth Sieveke, Ruth Stuhr, Charles Leslie Hendrickson, Carl Sieveke, Margaret McKenzie, Ella McHargue, Bennie Greenwaldt, Lauretta Schuman, Alice Knapp, Irene Cresswell, Hilda Stark, Louise Gesler, Myrtle Inez Hendrickson, Winifred Angle, Alvin Eshelman, Thelma Johnson, Marguerite Henry, Kathryn Edna Lee, Monica Hanne.

Frances Letford, Mollie Bennett, Alice Sanstrom, Vienna Kainulainen, Ruth Stuhr, Sylvia Nasi, Ruby Adamson, Catherine Fay Moore, Donald Naff, Addiy Whitney, Bessie Wagner, Anna Mantey, Harold Thaden, Doris Johnson, Florence Ulrich, Marie Greenway, Lela Johnson, Evelyn Wall, Amy Longoria, Helen Anderson, Louise Hinricks, Opal Jenkin, Ruth A Hay, Francis Gallagher, Marie Strahm, Alice Sargant, Cecilia Stuhr, Lois Peck, Anna Mantey, Marguerite A. Campbell, Louise Boone.

Elvira Case, Florence Waugh, Lila Elliott, Elsie Greenwaldt, Clara Graham, Lavern Nichols, Pearl Fletcher, Edith Anderson Mildred Gallagher, Geneva Strahm, Grace Carlson, Elsie Sommers, Dora Mae Duffy, Inez Brown, Forrest Glenn Moore, Marguerite Duffy Forrest Dillard Pittman, Evelyn Bell, Edith Austin, John Almont Hendrickson, Mary Gesler, Hugo H. Hakala, Elma Wilson, Zelda Daley.

Bessie Pullin, Iva Carter- Mucyl Chase, Lillian and Inez Watson, Bertha and Edith Haas, Adele Matson, Myrtle Nelson, Alice Hutsell, Irene Valentine Hendrickson, Izora Bover, Ruth Wilson, Kathleen M. Stuhr, Inez Bennett, Patricia and Agatha Stuhr, Gaylus Adams, Helen Irene Besonen, Leatha Birdsell, Irene Tuiskn, Fred Ritzschke, Ruth Warner, Leona Elizabeth Hansen, Frances Sander, Dorothy Kane, Myrtle Hutsell.



THURSDAY, March 16—Elsie Lucile Roe, 11 years old; Howard Sackett, Alma Trumbo, 10; Hazel Thaden, 11.

FRIDAY, March 17—Marguerite Edlin, 9 years old, Nellie Hayden, 10; Esther Kayser, 10; Doris Weaver, 10; Myrtle Inez Hendrickson, 10.

SATURDAY, March 18—Myra Gullixson, 10 years old, Frances Kellogg, 11; Emily McNamara, 11, Leona Elizabeth Hagerty, 9

SUNDAY, March 19—Dorothy E. Balles, 11 years old; Eva Louise Baker 11; Maxine Graham, 9; Christ. Greenwalt, 9; Beryl Lynch, 11, Herbert Boesch, 11.

MONDAY, March 20—Beth Daniels, 11 years old, Velma Hubbard, 11; Dorothy Johnson, 11; Elna Marckx, 11; Leroy Wollenberg, 11

TUESDAY, March 21—Evelyn Moore, 11 years old.

WEDNESDAY, March 22—Emma Dahlin, 11 years old, Mildred Ellen Sive, 9

Her Face Beams



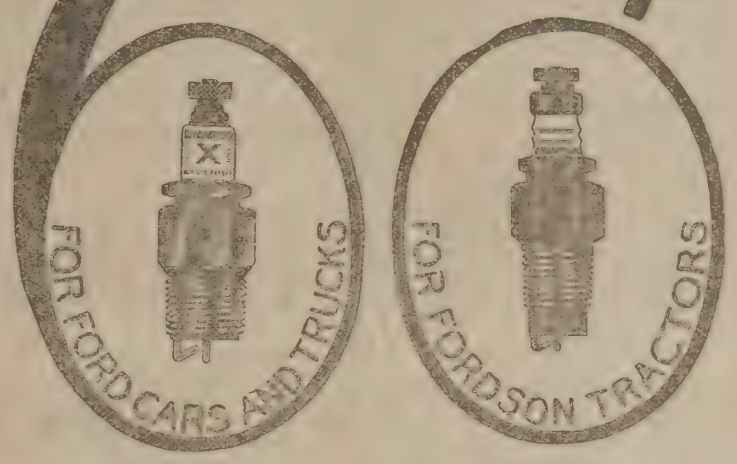
with the "Wash day *smile*," instead of the Wash Day Grouch, in sheer joy and delight at the dazzling, snowy white purity of her white goods.

Red Cross Ball Blue

will chase "wash-day-blues" — Succeed where others fail, and bring the smile of triumph to every housewife who *really cares* for pure, white, fresh clothes.

5 CENTS. AT ALL GROCERS.

Reduced to ¢



THE GOOD OLD GENUINE

CHAMPION X

Ten years satisfactory service in millions of Ford engines.

Be sure you get the Genuine CHAMPION X for you know, from experience, they mean to your Ford Engine the best possible results.

Champion Spark Plug Co., Toledo, Ohio.



Farmers and Advertising

Advertising has played a mighty important part in the agricultural development of America.

The tillers of the soil have benefited from advertising in innumerable ways. Through this agency they have learned of countless improved methods for cultivating their farms and of many conveniences for their homes. Advertising has been the good friend which has introduced the silo, the telephone, the harvester, the incubator, the cream separator, water and lighting systems and dozens of other useful articles.

It is an almost invariable rule that the manufacturer does not advertise until his product is thoroughly perfected. If the new implement or machine is advertised farmers can depend on it.

Without this widespread confidence in advertising modern "machine" farming would certainly not have advanced as it has in America.

Advertising will continue to perform a useful service. It will pay you to read and investigate the advertisements in every issue of your state farm paper.

The department editors of this paper are anxious to be of service to you. Do not fail to write to us if they can be of help to you.

News for Breeders

(Continued from page twelve.)

uary 17, produced about 461 pounds of fat, not yet all official. She was shipped from Oregon to Chehalis, sold and shipped to Winlock, and had 11 different milkers during the year. She stood in a stanchion at each place. Curtis Blossom, a junior 3-year-old, finished in December with about 517 pounds of fat. Star of Yewloa finished February 22 with about 457 pounds. A remarkable record is that of Dawn's Sunshine, one of the show heifers that Mr. Sears bred himself. She was injured on the show circuit and dropped a calf at only five months, freshening at just past 2, yet she has milked up to 21 pounds and in January produced over 31 pounds of fat.

Ayrshires Rank High

Stewart Robin, an Ayrshire cow owned by E. W. Van Tassell of Wenatchee, Wash., heads the breed's 50-pound list as published for January and February, according to the report of the Ayrshire Breeders' association. She is credited with producing 1922.1 pounds of milk and 87.07 pounds of butterfat and 1774.3 pounds of milk and 71.86 pounds of butterfat in the two months, respectively. She has a record of 11,779 pounds of milk and 445.98 pounds of butterfat in the 300-day roll of honor division.

Stewart Robin is sired by Willowmoor Robin Hood 16th, now in the herd of the State College of Washington. He is the sire of one world's record cow, as well as several that are among the high five of their different classes. Her dam is Lady



Stewart Robin.

Stewart of Menie, the foundation cow of the Van Tassell herd. This cow was 16 years old last August. She was put on test the 16th of November and up to March 1 had produced 6397 pounds of milk and 215 pounds of butterfat.

Several of the Van Tassell cows rank high in their respective classes for the entire United States. In the month of September Glengarry's Scottish Queen was fifth cow in the mature class, producing 1580 pounds of milk and 82.8 pounds of butter. In the junior 4-year-old class Stewart Robin, who as a 3-year-old finished in the second place for the United States, is milking heavily again this year, being first in her class for September with 1957 pounds of milk and 89.8 pounds of butter. In the junior 3-year-old class Queechy's Choice of Wenatchee, who has been milking seven months, placed 10th with a production of 1189 pounds of milk and 50 pounds of butter. In the 2-year-old class Scottish Queen of Wenatchee placed first with 1287 pounds of milk and 60 pounds of butter. In the same class Queechy's Robin Hood of Wenatchee placed fifth with 1054 pounds of milk and 49.4 pounds of butter. Stewart Robin was also second highest cow of any age for the United States.

For the month of October Glengarry's Scottish Queen holds third place in the mature class with 1423 pounds of milk and 85.7 pounds of butter. Stewart Robin holds first place in the junior 4-year-old class with 1922 pounds of milk and 102.4 pounds of butter. In the junior 3-year-old class Queechy's Choice of Wenatchee holds 11th place with 1043 pounds of milk and 53.1 pounds of butter. In October Stewart Robin holds the first place in production over all ages.

SCAMAHORN SELLS TOP ANIMAL.

In the recent Western Royal Swine association's consignment sale at Spokane A Kloppenburg of Spokane paid $80 for a senior Poland China gilt consigned by E. I. Scamahorn of Moran Prairie, near Spokane. It was previously stated that $75 paid by J. H. Shinn for a Duroc Jersey was the top price of the sale.

LIVE STOCK BUSINESS BETTER.

Increased interest and stronger prices in the live stock business, especially hogs, is reported by Colonel Harry C. Cranke of Moscow, Idaho, who has conducted several sales throughout the northwest during recent weeks. At the S. L. Banks sale February 28 at Tekoa, Wash., 34 head of Duroc Jerseys averaged $59, with a top price of $70 and a low price of $47.50. On March 1 40 head of Durocs belonging to J. Simpson, Belgrade, Mont., averaged $49.75. On the following day about the same number of Poland Chinas belonging to W. Niven of Manhattan, Mont., averaged $51. At the Banks sale six Holstein bull calves, ranging from 4 weeks to 9 months of age, averaged $125. Colonel Cranke announces the following sales that he will conduct during the next few weeks: March 22, a consignment sale of hogs representing several breeds, at Bozeman, Mont.; March 27, on the Wagner Brothers farm at Dishman, Wash., a sale of Holstein cows; April 6, at Okanogan, a sale of Hereford cattle belonging to Frank Wingo of Hassan, Wash.; April 19, on the farm of T. Harrison of Santa Rosa, Cal., a sale of milking Shorthorn cattle.

Cooperation Succeeds

(Continued from page twenty-one.)

meets quarterly, but an executive committee of five elected from its membership meets monthly and keeps in very close touch with the operation of its business. The executive officers are R. C. Paulus, general manager; C. I. Lewis, assistant manager; W. I. Staley, secretary-treasurer, and M. O. Evans, field manager, who directs four field men, two in the Willamette valley, one in the Umpqua and one in the Rogue.

The organization is on a five-year contract basis, beginning with 1920, which without much doubt is one reason it is alive today. It faced the same difficulties that have greatly handicapped all like organizations, namely, large carryover of supplies and very large overdrafts to members. To these possibly may be added a different marketing season and the overvaluation of plants purchased.

The association handles sprays, spray matrials, fertilizer and other orchard equipment at its all-year plants at cost to members, but it is not entensively engaged in the distributing business. Its headquarters are in the Masonic building, Salem.

Upon organization in August, 1919, the association began issuing the monthly service or "house organ," The Oregon Grower, which has proved to be a valuable means of disseminating information among members, keeping them in touch with concitions and with the activities of the organization, and preserving the ties of cooperation. It usually contains 20 to 24 pages and is sent free not only to all members, but to all fruitgrowers in Oregon and in Clarke county, Washington, who desire it. Its present circulation is 8500.

We Buy and Sell
Grade and Pure Bred Dairy Cattle.
We can save you money whether you wish to buy or sell. One or a carload.
Graham Livestock Co.
E2605 Broadway, Spokane, Wash.
NEAR CARSTENS' PACKING PLANT.

Poultry Department Is Popular Feature of Washington Farmer



There is a constant demand in all parts of Washington for live, reliable information about poultry. It is a big subject on the farms of the state, and it ought to be, for millions are invested in the poultry on Washington farms.

The Washington Farmer meets this demand by maintaining an accurate, up-to-date, helpful poultry department in every issue. This department is one of the most popular features of the paper. Instead of dealing with conditions in some distant locality, IT KEEPS YOU POSTED REGARDING THE POULTRY INDUSTRY IN THE VERY STATE WHOSE SOIL YOUR BIRDS ARE SCRATCHING. It gives you an interchange of ideas with other practical breeders all over the state who are facing the same problems and conditions that you are. It reports their experiences with the different breeds of fowls, their views on henhouse construction, incubators, brooders, trapnests and scores of other important matters which have to do with making a satisfactory profit. Moreover, the guide to various breeders of fowls found among the farmers' "Want" Ads is a very valuable directory.

Popular and helpful as the poultry department is, it is just one of scores of things for which our readers welcome their state farm magazine.

Owing to the success of our cooperative plan, this magazine sells at the rock-bottom price of $1 for five years, 260 live, worth-while, entertaining issues. Our Cooperative plan asks of you that you renew your subscription at least 60 days in advance of the expiration date on the address label of your paper, and that you include your neighbor's order with your own. Help us make 1922 our banner year in cooperation.

Subscription Rates of The Washington Farmer:
25 Cents for 1 Year.
50 Cents for 3 Years.
In Canada add 1 cent a copy for extra postage.

$1.00 for Five Years

March 16, 1922.
THE WASHINGTON FARMER,
Review Building, Spokane, Wash.
I desire to take advantage of your Cooperative Plan in securing new and renewal subscriptions.
I enclose herewith $.....for a.....year subscription to
THE WASHINGTON FARMER.
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If your subscription is already paid in advance, it will be extended from the date to which it is paid.

WHY SUFFER LOSS FROM SICK COWS!

Easy Home Treatment Keeps Cows Healthy and Profitable

Cows are pretty hardy animals. Practically the only diseases they suffer from are those which result from weakened vitality of genital or digestive organs. These, of course, are serious because they immediately reduce the milk-flow—and milk is money. We get scores of letters weekly like this one from W. H. Lawson, Petrolia, Ont., a dealer who sells Kow-Kare:

"We handle a lot of 'cow tonics', 'regulators', etc., but when it is up to us to sell something we can guarantee, we sell Kow-Kare. Only last month, we saved a valuable Registered Durham cow valued at $250 with Kow-Kare. The cow retained the afterbirth and after ten days' doctoring the veterinary said to kill the cow. The owner happened in when we were recommending your Kow-Kare, and told us his trouble. We donated a box of your Kow-Kare and he came back in five days for another box and paid for both."

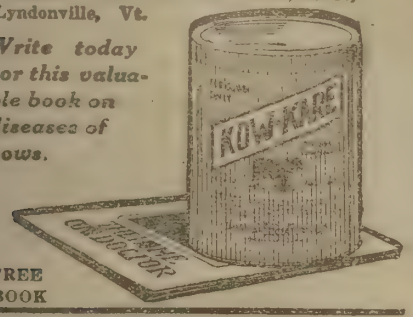
As a sample of the endorsements we get from cow owners themselves, read this letter from C. E. Dodge, Dewittville, N. Y.:

"Since I have been on the County Farm, I have been using Kow-Kare in the dairy for the last ten years. I have 52 cows. My experience is that a few dollars worth of Kow-Kare saves us a great many dollars worth of veterinary bills, and also every cow in the dairy that I feed it to produces more all the year thru because of the Kow-Kare. I have no sick cows or trouble, when I begin feeding Kow-Kare, from the first of January until I turn them out in the Spring."

You, too, can be free of such cow ailments as Barrenness, Abortion, Retained Afterbirth, Scouring, Bunches, Milk Fever, Loss of Appetite, etc., by using this reliable cow medicine. General store, feed dealers and druggists sell it at the new reduced prices—65c and $1.25.

DAIRY ASSOCIATION CO., INC.,
Lyndonville, Vt.

Write today for this valuable book on diseases of cows.



FREE BOOK

PORTLAND SEED CO.
PORTLAND OREGON

KOW-KARE
is also distributed by
Spokane Seed Company
904-6-8 First Ave., Spokane, Wash.
DEALERS IN SUPPLIES FOR DAIRY, POULTRY, BEES AND ORCHARD.
Catalog Free.



Prevent
Blackleg
by using
Blackleg Aggressin
(Germ-Free Vaccine)
Scientifically Prepared and Tested
Consult your veterinarian or druggist.
Write for booklet on blackleg prevention.
Animal Industry Department of
Parke, Davis & Company
DETROIT, MICH.

BLACK LEG
100% PROTECTION FOR LIFE
from *one* vaccination with Cutter's Liquid or Solid Blackleg Aggressin. Absolutely safe. Cutter's Solid Aggressin Injectors work just like Blackleg Pill Injectors. If Cutter's Aggressin is unobtainable locally, write
The Cutter Laboratory
"The Laboratory that Knows How"
Berkeley (U.S. License) California
N.B.—Old Style Powder and Pill Vaccines still made for those who prefer them.

When you write to advertisers be sure to state that you saw their advertisement in this paper.

Breeders' Dept.

World Record Jersey, St. Mawes Prett/ Lady, as Senior Two Year Old, 824.35 Pounds Fat

We offer a full brother in blood to this wonderful cow, whose new world record was finished Feb. 21. His sire, Poppy's Golden St. Mawes, is a son of the great gold medal cow, St. Mawes Poppy, 952 lbs. fat, and by the gold medal bull, Rosaire's Olga Lad. His dam, Olga Lad's Daisy Girl, is a full sister to the dam of "Lady," whose record is shown above.

He is 50 per cent common blood with Poppy's Dortha, world record junior three-year-old, 994 pounds fat, and

Over 40 per cent common blood with St. Mawes Lad's Lady, world record senior yearling, 824 lbs. fat.

He is a straight backed, long bodied, good individual. Where can you equal his breeding? DANIELS JERSEY FARM, LESTER C. DANIELS, Tillamook, Ore.

Oreglow Jerseys

As the twig is bent so will the tree incline—start right with proven stock. Write us for Golden Glows.

W. M. LADD, Owner.
D. BROOKS HOGAN, Mgr.
IRON MINE FARM, Oswego, Ore.

Anoka Farm Jerseys

We have your wants in a bull calf dropped July 1. He is a beauty and his dam has a record of 504 lbs. fat. Priced to suit the most conservative buyer. Address
R. B. SEELY, Sherwood, Ore.
RY. STATION, WILSONVILLE, ORE. ELEC.

Jersey--Gold and Silver Medal Sire

Ashnook Farm offers a few heifers and young bulls, sired by the gold and silver medal sire, Silver Chimes, of S. B., sire of ex-world champion heifer, Silver Chimes Gwendola, and 20 register of merit daughters, and more qualifying.
DEL PERKINS, Carlton, Ore.

Register of Merit Jerseys

Young bulls out of dams with good official records and sired by Foxhall's Chief Engineer, combining the blood of the great Foxhall's Fern Lad and Golden Glow's Chief strains.
FOX BROS., Silverton, Ore.

ST. MAWES JERSEY BULL.

Three nearest dams of sire average 841 lbs. fat. Dam on test, milking over 40 lbs. a day. Priced right.
J. C. BROWN & SONS, Shedd, Ore.

ASHBURN FARM Premier breeders of medal winning cows for 1920. Write for our illustrated folder and further information.
J. M. DICKSON & SON, Box T, Shedd, Ore.

Fourth Gold Medal Jersey Bull

now in use in my herd. No other herd ever had so many. Young stock for sale.
ED CARY, Carlton, Ore.

Jersey Bulls at Bargain Prices

Send today for our special sale list of registered Jersey bulls from R. of M. dams. Easy terms, liberal credit.
WARREN GRAY, Box T, Jefferson, Ore.

Locust Lane Farm Jerseys

Sybil's, Noble's, accredited and R. of M. Jerseys; type, size and production through our blood lines.
L. S. DILLE & SON, R. 4, Caldwell, Idaho.

HOLSTEIN BULL BARGAIN
Great Authenticated Records to Back Him Up

Sired by Chimacum King Wayne Gettie, whose four nearest dams average 25,549 lbs. milk and 1133.34 lbs. butter. Dam, Susa Korndyke Pontiac, 28.36 lbs. butter in 7 days, 814.59 in a year; over 100 lbs. milk in one day. Other bulls by same sire out of high record dams. Priced at less than half their value.
LEE BROS., Mt. Vernon, Wash.

Registered Holstein Bull For $100

Born April 9th, 1921. Sired by a son of one of the best bred "Bessie" bulls in the state. Sire's dam by Sir Ormsby Burke Segis, sire of a world's record cow.

His dam, [illegible] lbs. butter, 542 lbs. milk, 7 days. Record made 30 days from calving. His dam, 20.2 lbs. butter 7 days, at ten years old. A full sister, with 27 lbs. butter.

This calf is a splendid, good specimen, well grown and soon ready for service. Delivered at your station for $100. Only once. Act now.
GARFIELD STOCK FARM, Garfield, Wash.

Holstein Bulls sired by son of world record cow, from dams sired by brother to Segis Pietertje Prospect. Prices low.
H. R. BOOMER, Payette, Idaho.

WANT TO SELL YOUR FARM?

Now is a good time to sell or to buy. Our "Want Ads" are wonder workers in getting buyers and sellers together. Try a little ad with us if you wish prompt results.

LAST CALL
for
Annual Shorthorn Cattle Auction
WEDNESDAY, MARCH 22, 1922—PORTLAND, ORE.
(Pacific International Live Stock Exposition bldg.)
66 Head--41 Bulls--25 Females--66 Head

This sale presents an excellent opportunity to select either a herd bull, a farm bull or a carload of range bulls.

The 25 females listed should make up the foundation of a number of herds. They are a very well bred, attractive lot.

These cattle are consigned by some of the leading herds in the northwest.

For catalog write
A. E. LAWSON, 207 Exchange National Bank Bldg., Spokane, Wash.

ANNOUNCEMENT OF THE POSTPONEMENT OF THE SPRING SALE OF
The Boise Valley Shorthorn Cattle Breeders' Assn.

Owing to the shortage of live stock, the breeders feel that their Shorthorns are too good an investment to dispose of at this time.

FALL SALE ANNOUNCEMENT LATER.

GRADE CALVES

from dams producing 300 to 700 lbs. butterfat in Tillamook County Cow Testing Association.

Price, $11.50 crated f. o. b. Tillamook, with guarantee of breeding and production of dams.

Jersey, Guernsey and Holstein Breeds.

Write County Agricultural Agent, Tillamook, Ore.

GRANDLY BRED AYRSHIRE BULLS AT LOW PRICES

All sired by Oregon Peter Pan; he by a son of Beuchan Peter Pan, undefeated show bull in Scotland and America. His dam, Willowmoor Etta 3d, is world champion junior two-year-old, with 16,621 lbs. milk, and 666.06 lbs. fat.

Two are yearlings ready for active service and two only a little younger. Most of the dams have good official records, with big production records in their pedigrees.

These bulls are priced low enough to be in reach of every dairyman wishing to increase production and good enough to head high class pure bred herds. Write at once for pedigree, and full particulars, to
Corvallis, DAIRY DEPT. OREGON AGRICULTURAL COLLEGE, Oregon.

EXCEPTIONAL VALUES
in
GUERNSEY BULL CALVES
FROM
HIGH-PRODUCING COWS
CHICONA FARM, Chinook, Wash., A. L. GILE

Broadmead Aberdeen Angus

Ten bulls, ready for service, now offered at special prices and terms. Also a number of promising bull calves, some that should make show winners or high class herd headers. Can supply your needs for either sex.
J. A. SCOLLARD, Chehalis, Wash.

ABERDEEN-ANGUS

bulls will mature your steers earlier, give them a heavy, thick and low set conformation, dehorn them and add to their quality so that they will top the market every time. We have a wonderful lot to select from, both range and herd bulls, at prices which will move them.
CONGDON & BATTLES,
P. O. BOX 275, YAKIMA, WASH.
Write for prices and literature.

Weatherford Bros. Herefords

We have for sale a few choice herd bulls and bulls for the farm and range, at prices in keeping with the times. Herd headed by the great breeding bull, Beau Blanchard 59th, whose calves show great bone, size and quality.
WEATHERFORD BROS., Dayton, Wash.

Milk & Beef
Oakleign Stock Farm Shorthorns
204 S. First St., Medford, Ore.
Milking Shorthorns. Several record cows—50 head in herd.

Orchard Hill Farm Guernseys

"Home of high class Guernseys."
DR. PARK WEED WILLIS, Owner.
REDMOND, Wash.

Pure Bred Guernsey Calves

of both sexes, from good producing cows.
NOBLES BROS., Bow, Wash.

Brown Swiss Stock Farm

Breeders of Brown Swiss cattle, the farmer's dairy cow. Young bull calves for sale.
THEO BRUGGER, Route 3, Gresham, Ore.

If You Keep Live Stock

you should also keep a careful record of your stock, milk records, breeding records, labor and feeding records, live stock accounts, general farm accounts and expense accounts for household and personal expenses. We will send you a record book covering all these matters, free. The supply is limited. Address
THE PACIFIC NORTHWEST FARM TRIO,
Dept. B., Review Bldg., Spokane, Wash.

Ayrshires

Outstanding bull calves, ready for light service; sired by grand champion Willowmoor Peter Pan 25th, and from high producing cows with show records.
E. W. VAN TASSELL, Wenatchee, Wash.

Ayrshires [illegible] bred by Will Peter Pan 16th, also yearlings and calves. Only one bull calf left. Some blood of Lilly of Willowmoor's sire.
J. U. SMITH, R. 1, Newberg, Ore.

Registered Shire Stallions

mares in foal and fillies, including junior champion stallion at Portland, Ore., 1921, and junior champion mares at Yakima, Wash., for sale at breeders' prices.
W. A. CLARK, Route 1, Tekon, Wash.

River Banks Better Berkshires

Long, smooth, deep fall pigs. Either boars, gilts or trios.
RIVER BANKS FARMS, Grants Pass, Ore.

Riverby Orchard Berkshires

Oldest established Berkshire herd in the northwest. Young pigs and bred sows for sale. Address
D. C. BUNN, Prosser, Wash.

EPOCHAL BERKSHIRES

3 months' pigs from $20. Yearling boars from $40. Sire, the grand champion Pomona Sincerity. Herd boars from $75. Bred sows, from $75.
E. V. ORFORD, Boise, Idaho.

Polands--The Big Wonder Herd

of genuine big type Poland China hogs. Home of the grand champion sow of the northwest. Satisfaction guaranteed on all orders.
E. O. LOE, Silverton, Ore.

Big Type Polands

Special [illegible] Sept. boar pigs. A [illegible] good [illegible] to the Buster. One [illegible] Aug. boar, a good buy at $50.
LLOYD D. ENTERMILL, Baker, Ore.

Chester White Swine

Herd [illegible] champion Oregon State Fair and [illegible] cuit, 1921. Fall gilts now offered.
CASS A. McHENRY, Salem, Ore.

Flathead's Pure-Bred O. I. C.'s

Big, smooth, prolific, easy feeding, prize winning, quality hogs; 8-week-old pigs, $10 up; monthly payments. Order now.
FLATHEAD HOG FARMS, Kalispell, Mont.

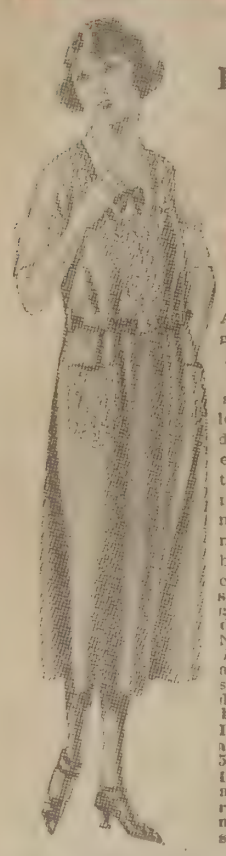
Duroc-Jersey Hogs

Buy your boar now. Choice "Sensation" and "Pathfinder" breeding; also big type gilts and fall pigs. Satisfaction guaranteed.
V. R. FISHER, Oxford, Idaho.

Read the "Want Ad" page this week for good offers of all kinds.

COMP G O
EXPERIMENT STATION
URBANA ILL

Positively Lowest Prices



Silk Embroidered Sleeveless Dress

$1.98

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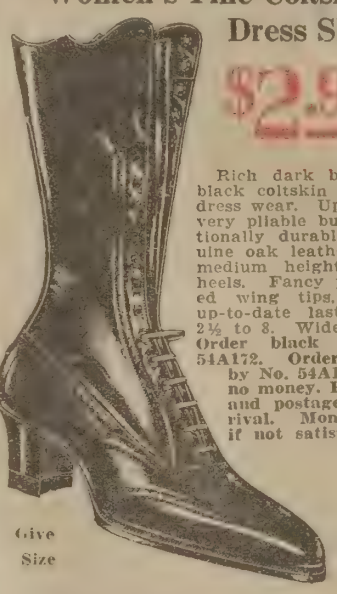
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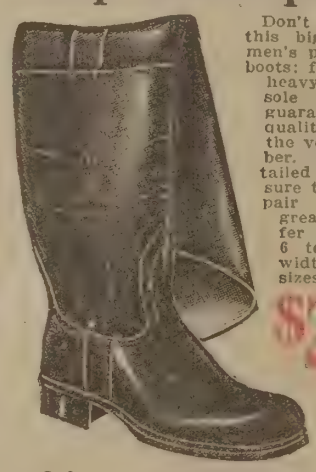


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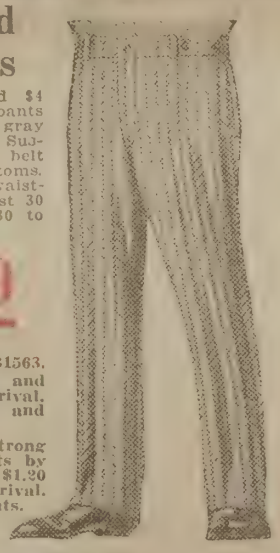
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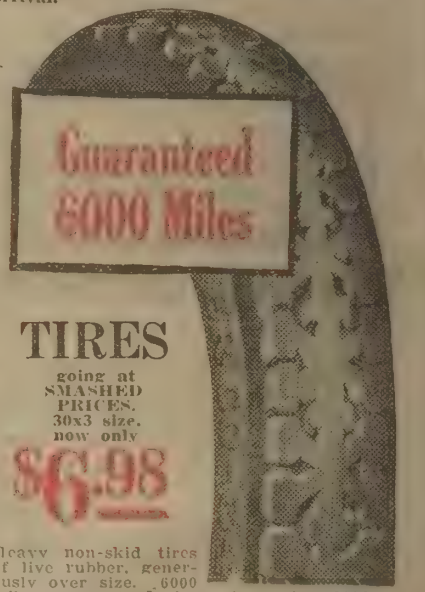
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Grange Makes Righteous Protest Against Threatened Coal Strike—Page 4



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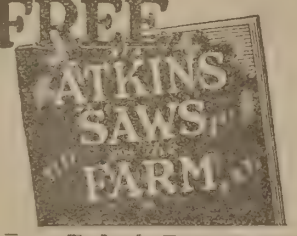
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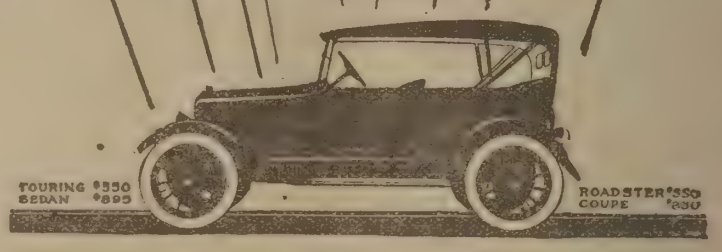
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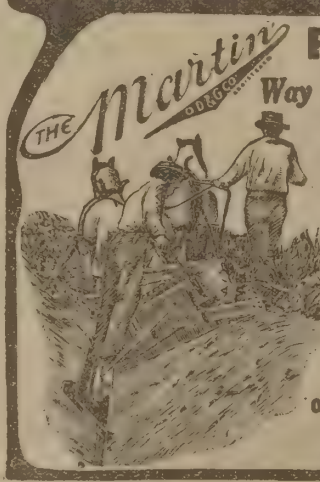
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THE WASHINGTON FARMER

SUCCESSOR TO

Vol. 46. No. 12 THE RANCH PACIFIC DAIRYMAN HORN AND HOOF March 23, 1922

For Good Farming, Attractive Country Homes and Happy Country People

Land Clearing Requires Hardheaded Judgment

A "stump" may be defined as any kind of a growth that obstructs land, whether it is the butt of a cut tree, a tall snag, a living tree or a bunch of sprouts or brush. From the viewpoint of a farmer it is a stump if it obstructs the plowing and other tillage of the land.

Before deciding to clear land, the owner should consider several features of the matter well. The reckless slaughtering of the timber has left in stumps many thousands of acres of land which is not fit for cultivation and that should go back into timber. Such land, of course, should not be cleared. On the other hand, it is folly to permit brush land which has good soil to lie idle when a hundred years will not develop profitable timber on it.

Much of the land that is in woods should be left so, for timber and for fuel. Every farm should have its timber tract, where the forest is conserved in a way to make it permanent. To cut young growth that will make good timber in a reasonable time is a mistake, no matter how good the soil is. Remember, too, the wind break value of a piece of woods adjoining farm land, and consider the effect on land you now farm of taking away the protection afforded.

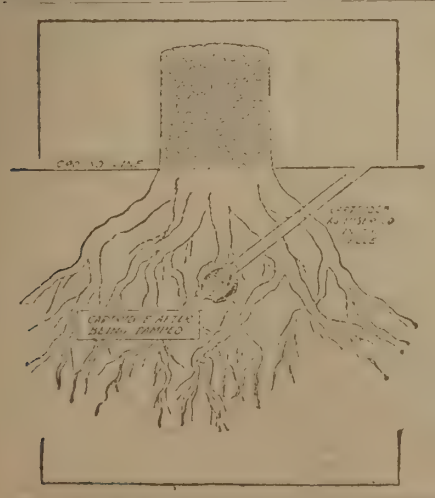
Do not clear land where the soil is too stony to be cultivated to advantage, or land that is exceptionally steep or incurably swampy. Do not clear when the profits would not justify the clearing. And do not clear when you can buy equally good improved land for less than the cost of clearing.

There is a certain sentimental satisfaction in clearing and cleaning up one's own place, connecting fields and improving it generally, even though such improving will not add greatly to the actual money income from the crops. This will have a bearing in some instances.

But hardheaded judgment should not be swayed too much by sentiment, for there are a good many thousands of acres that have been cleared and now are parts of farms which it would be wise and profitable to plant to forest again. Lay out your clearing carefully. Include no corners, gullies or steep places you will afterwards neglect. And make sure your field is rightly placed in relation to the rest of the farm.

These are among the points given in this article, taken from "Clearing Land of Stumps," by J. R. Martin, published by the Institute of the Makers of Explosives, New York city. This institute is made up of a dozen or more of the larger manufacturers of explosives and the bulletin's aim is to give the sum of the experiences to date of nearly all makers of explosives as well as of farmers who have coped successfully with the problem of stumps in the fields, roads or any land to be cleaned up.

About new clearing there may be some question, but about taking out stumps in good cultivated land there can be none. There are stumps in fields and along fences, roads, hedges and on home grounds. There are pastures that are pastures and not wheat fields or orchards because cultivation among the stumps is too inconvenient. There are old fruit trees and old shade trees that are diseased and a menace. All these should come out, and the quicker they come out the better.



How cartridges of powder swell and fill the hole when they are split and pressed with tamping stick.

There are about 500 different varieties of trees which make stumps in America. There are three general types of roots—lateral roots, semi-tap roots and tap roots. The largest class of stumps is the semi-tap root class.

REMOVING STUMPS.

Several methods of removing stumps are more or less well developed throughout the country. Probably no one method is best all the time and in many cases a combination of various means will be found most effective.

Digging out the stumps.

Pulling the stumps with horses or machines.

Burning the stumps, and

The use of explosives to blast out the stumps, are some of the chief methods employed.

It costs more to take out stumps while they are green than to do the work a year or more later after the bark and top wood have rotted from the roots. At the same time it costs money to miss crops—to wait from summer till the following spring is not a bad idea, for that loses little or no time and starts the rotting process which makes removal easier and cheaper.

When stumps are small or numerous they can be pulled by a team of horses hitched direct by a capstan puller, traction engine or donkey engine. The same is true to a lesser degree when larger stumps grow small and swallow roots, which require little power to lift and move.

For larger stumps, explosives have been found effective and economic, though there are important considerations which modify such a rule. One of them is that of the soil.

Explosives work more effectively in heavy, tight soil such as moist clay, than in dry sand.

Old, well decayed stumps may be blasted out. Small green stumps may be blasted out clean, roots and all.

Large green stumps nearly always require a combination of methods, as for instance, blasting and pulling. The cost of explosives often can be cut down by making use of such a combination or method. A heavy team or other means of pulling will take out roots after the ground has been loosened with explosives.

Generally speaking, tap root stumps larger than your arm should be blasted.

There are two ways of blasting out true tap-root stumps. One is to bore a hole in the wood of the tap root itself and the other is to place the charges right alongside the root and against it, like mudcap charges are placed in stone blasting. In placing the charge in the wood, make a hole in the ground down to a point a couple of feet below the surface of the ground. Then bore a hole in the wood with a wood augur. This hole should go two-thirds or three-fourths of the way through the root. Fill the hole in the wood with explosives, fire, and the resulting blast will cut off the root.

In placing the charge of explosive against the wood, get it at least four feet deep.

In all sorts of stump blasting the holes for the charges can be dug with narrow bladed shovels, spades or crow bars or bored with dirt augurs. All things considered it is hard to beat the bar and sledge combination for making holes for charges of no more than two or three sticks or for starting holes for larger charges.

The bored hole is better than the dug one because it can be tamped tighter. Holes for inch and a quarter sticks of explosives should be made with inch and a half augurs or bars.

In making holes for blasting out tap root stumps start the bar or augur straight down along the roots on the surface. When you have reached the required depth, wriggle the bar sideways to make the hole wide at the bottom.

When you have many stumps to blast out it often is a good practice to make holes in the forenoon and then to load and shoot after dinner.

Always fire the charges soon after they are loaded.

Use plenty of water when tamping the holes and tamp well.

Often there are holes dug by skunks, ground hogs, gophers, squirrels, rats or mice under stumps. Keep the charge of explosives away from these cavities—better fill them up.

A proper charge of explosive for a stump blast has a muffled report. It lifts out and splits the stump. Loud reports and the throwing of the pieces far shows that too much explosive has been used.

A green stump requires a great deal more explosive than one that has stood a few years. More explosives are required in stony land than in smooth land to blast out stumps. The harder and heavier the soil is, the less explosives are required and the looser and lighter it is, the more explosives are required. Dry soil requires more explosive than moist soil.

KINDS OF EXPLOSIVES.

There are scores of different kinds of explosives made and used for blasting purposes and many dozens of different names used for them. The most familiar name of any explosive in America is dynamite. Another familiar term is powder. Other names are farm powder, quarry powder, contractor's powder, coal powder, stumping powder, etc. Nearly every one of the explosives designated by these names is made in several strengths and in quantities to suit varying conditions.

All blasting explosives are not made of the same ingredients. They differ a great deal in many other ways than in quality, as quality is generally understood. Nearly every standard kind of grade is of excellent quality for some particular purpose and condition and practically every one can be classed as of poor quality for conditions and purposes to which it is not suited.

Some explosives are suitable for wet work and others only for dry work. Some are adapted to blasting on top rock, others to blasting ground only. Some freeze when chilled a little. Others can be exposed freely without freezing.

Blasting powder has been known and used for several hundred years and it is

(Continued on page twenty-two.)

According to figures supplied by the Washington state bureau of immigration aid statistics, there are 3,974,250 acres of cut-over lands in western Washington, and 629,200 acres in eastern Washington.

Of the 3,974,250 acres of cut-over lands in western Washington, 2,026,200 acres are classed as agricultural land, 1,438,000 as grazing lands and 482,600 acres as probably subject to reforestation.

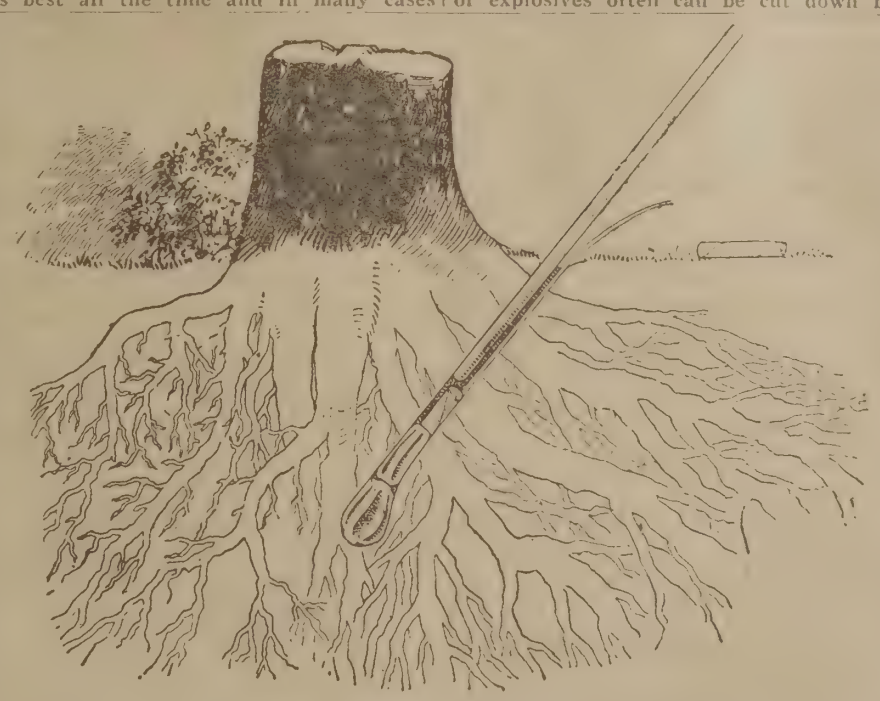
Of the 629,200 acres of cut-over lands in eastern Washington, 188,000 are classed as agricultural and 425,200 as grazing lands. This gives a total of 2,214,200 acres of cut-over lands in the state of Washington, which are classed as agricultural lands.

These figures show that the agricultural cut-over lands in the state of Washington make up considerably over 50 per cent of the farming lands now under cultivation in the state.

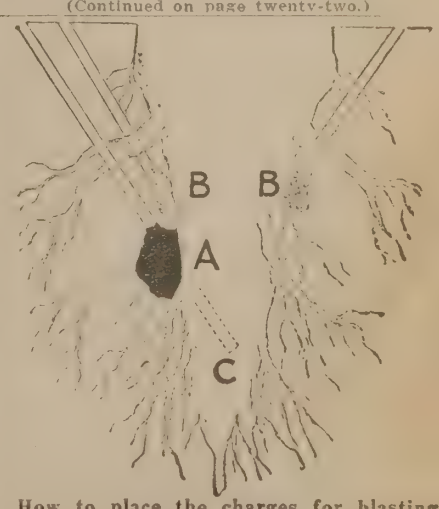
The agricultural cut-over lands in eastern Washington are largely in four counties, Pend Oreille leading with 70,000 acres, Stevens next largest with 65,000 acres and Klickitat and Spokane following, each with 20,000 acres.

Snohomish county leads all the counties in western Washington in cut-over agricultural lands, having 250,000 acres; Clarke and Grays Harbor counties each have 185,000 acres; King county, 160,000 acres; Lewis county, 152,000 acres; Whatcom, 150,000 acres. Kitsap, Mason, Pierce, Skagit, each have between 100,000 and 150,000 acres; Clallam, Cowlitz, Island, Jefferson and Thurston each have between 60,000 and 100,000 acres.

Eighty per cent of the cut-over lands in Clallam, Klickitat and Pierce counties are classified as suitable for agriculture, 75 per cent of the lands in Skagit and Whatcom counties; 70 per cent of Clarke; 60 per cent of Skamania and Snohomish; 50 per cent of Chehalis, Island, Lewis and Pacific; 45 per cent of Thurston; 40 per cent of Cowlitz; 25 per cent of King and Kitsap, and 20 per cent of Mason and Wahkiakum.



To show sticks of explosive expanded, as permitted by splitting of stick wrappings, in big hole.



How to place the charges for blasting out tap-rooted stump. Three methods are shown. "A" shows how to do it with one charge, using cap and fuse and not boring into the wood. "B" shows how to place two charges when electric blasting machine is available. "C" shows by dotted lines position of auger hole in wood where one charge could be placed to cut off the root and throw out the stump. Any one of three methods will do the work.

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We guarantee every subscriber against loss through dishonesty or swindle by any advertiser in this publication; we do not attempt, however, to adjust trifling differences between subscribers and honest, responsible bankrupts. Complaints must be sent to us within 30 days from the date of the transaction and the subscriber must have mentioned The Washington Farmer when writing the advertiser. This guarantee applies to live stock, except that we will not be responsible for claims for damages on account of diseasee in stock sold through these columns.

National Grange Master Writes an Epoch-Making Letter

In approving letters to Master S. J. Lowell of the national grange, Senators Poindexter of Washington and McNary of Oregon endorse his protest against a possible strike of coal mine workers and railroad employees. Mr. Lowell sent his protesting letter to 8000 granges and it is expected that it will be read in all of them this month. It is as follows:

The time has now arrived when it seems pertinent that the grange should express itself in no uncertain terms in protest of a possible strike of mine workers and railroad employees.

If the coal strike takes place, as seems possible, in April the production of the fuel, upon which the prosperity and well-being of millions depend, will cease. Although it is claimed that coal enough to last for a month or more is now above ground, any stoppage of production obviously will result in high prices in the near future. If railroad workers strike the transportation upon which the food of millions depends will stop.

A railroad strike now means the farmer's products remaining unsold and spoiling in his barns. And that may mean famine, suffering and perhaps death in the cities. It means farm supplies piled up in railroad yards while fields wait for seeds, fertilizer and machinery necessary to make them productive.

A strike in April at planting time wrecks a year's crop production plans.

A coal strike comes less directly home to our people than to the people living in the cities, but an obligation to help makes it clear that the interest of all, and not of a class or group, is paramount in this republic. It is none the less pressing because our interest in this is secondary and financial, instead of primary and vital.

If coal production stops people will suffer, and the spectacle of a comparatively small group of men and interests seizing the weapon of human misery and human suffering in order to impose their will, and their refusal to deal fairly with one another, and make others pay the penalty, is preposterous in this nation and time.

The decision of every member of the grange to do his part in building up an overwhelming public opinion for a fair and just settlement and the enforcement of such settlement to the utmost, will prevent any strike. Owners, workers and the government must feel the power of this public opinion.

No man or set of men in this country can succeed against a united public sentiment.

I want you to voice your protest against any owners or management of railroads, or owners of coal mines, or workmen in either, creating a condition that will stop the progress of our recovery from the terrible scourge of war, which we have just passed through, and express it in terms that will leave no doubt in any mind that we are in no way to be used to further the interest of either to the advantage of one over the other.

We are doing our part and it is not unfair for us to demand that both capital and labor do theirs. Whatever differences may exist between them must be adjusted without stopping the wheels of commerce.

I am expecting you, brothers and sisters, to take active interest in helping to promote the public sentiment that will bring this about. Whenever possible make every effort to have the opinion of your grange reported in the newspapers of your county, so that this protest against an impending menace may be widely noticed.

We are heartily in accord with the spirit and purpose of this righteous protest. There is no answer to Master Lowell's reminder that the American farmers are doing their part "and it is not unfair for us to demand that both capital and labor do theirs," and that "whatever differences may exist between them must be adjusted without stopping the wheels of commerce."

How to adjust those differences without stopping the wheels of commerce is one of the outstanding problems before the American people. Senator Poindexter of Washington has taken advanced ground on this great issue and some time ago introduced a bill to compel both capital and labor engaged in the operation of the railroads to submit their disputes to judicial determination.

The time is coming when that just principle will be written into the laws of this country and people then will look back and wonder at their long forbearance in permitting capital and labor to fight out their differences in transportation, coal mining and other vital industries where the rest of the nation must stand by and suffer incalculable losses. It seems all the more ridiculous when we stop to consider the elaborate machinery of courts that we have set up to compel individuals peaceably to adjust even their minor differences of a few dollars. We do not allow two individuals who have a dispute to go out and shoot up the town in trying to conquer each other. Then why do we permit organized capital and organized labor constantly to hold over the nation the danger and the threat of great strikes that would be almost as destructive as war?

So far as we can recall at this moment, the letter of National Master Lowell is the first emphatic protest to come from a great body of American citizens. We congratulate Mr. Lowell upon his foresight, his courage and the fair and thoughtful way he has taken to bring this tremendously important subject to the attention of congress and the American people.

Learn the Business First

"You should not give strong medicine to children in adult doses."

So says J. A. Scollard, president of the United Dairy Associations of Washington. He allows us to imply that it is all right to give strong medicines to grown folks in grownup doses.

When he made the above statement he was referring to the plan of cooperation adopted by the dairy associations of the six western Washington counties whose efforts are now coordinated in the association of which Mr. Scollard is president. He and his board of directors, when they were beginning their big fight in behalf of the dairy producer, went a little slowly on the matter of pure cooperation. They did not know everything that was to be known about the milk manufacturing and marketing business, and about cooperative enterprises in particular, and they knew they didn't know. Hence, they adopted a medium course. They put into effect what Mr. Scollard calls a "diluted" form of cooperation. They took in some outside capital and some outside experience to help them get started, though keeping at all times complete control in the hands of the producers.

The success that the United Dairy association has attained makes it worth while that other producers give their plan a thorough investigation before deciding upon the particular brand of cooperation that they will attempt to use.

The Place to Look

A prominent live stock man declared the other day that the place to find something was where you had lost it. He had in mind the possibilities of recuperation in the live stock industry.

Losses are often incurred in activities that should thereafter be avoided because of the unsoundness of the proposition itself. The live stock industry, however, is not one of that class. It is one of the stable and dependable industries of the country, year in and year out. Depression occasionally hits it, but the man who sticks through thick and thin and who conducts his business efficiently must inevitably win.

The live stock man above referred to was right in the statement he made. The man who, through no fault of his own, but as a result of the unfortunate conditions of recent months, lost money in the live stock business can do no better than to stay in it or get back in it if he is out. But it must always be remembered that this business, like all others, must be conducted conservatively and efficiently if profits are to be made.

State Farm News

Supported by a charter membership of 1200 and encouraged by backing assured from other communities in northwestern Washington, the Bellingham Tulip Festival association, organized on a nonprofit basis last year, has its plans well laid for this year's tulip festival, the third held by the city, on May 4, 5 and 6.

On the opening day a tulip show will be staged, and in the evening Queen Tulip will be crowned with elaborate ceremony. Following this feature there will be a grand ball. On the second day a tulip parade will be held, in which 30 or 40 floats are expected to appear. Prizes wil be given for the best floats as well as for the best displays at the blossom show, where any spring flower may be entered. The third day will be devoted chiefly to a carnival.

* * *

At a meeting held February 24 at the Odd Fellows' hall in Tenino a silver cup offered by Thurston county banks to the community placing the most purebred sires last year was presented to Tenino. L. H. Hubbard, cashier of the Tenino bank, made the presentation. C. M. Hubbard, Washington State college live stock specialist, also spoke. Seventeen purebred sires were placed in the Tenino district in 1921.

* * *

The Skagit County Live Stock association completed its organization at a meeting March 1 at Mount Vernon, adopting a constitution and electing officers. The following were chosen: President, H. S. Ruley; vice president, W. E. Jennings; secretary-treasurer, Iver Youngquist; directors, Dr. C. S. Philips, Mount Vernon; William Knutzen, Burlington and Olympia Marsh; J. M. Harrison, Sedro-Woolley; Aaron Snyder, Lyman; Nels Anderson, Sammish; James B. Hayton, Skagit island; A. J. Sennes, Conway-Fir; J. H. Hulbert, La Conner Flats, and J. A. Folsom, Beaver Marsh.

The association voted unanimously to request the county commissioners to obtain an agricultural agent for Skagit county.

* * *

Grays Harbor county fair will be held the week of September 4, according to S. K. Bowes, county commissioner, who attended the meeting of directors of the Northwest Fair association at Spokane.

* * *

Eighty-five stockmen and farmers who attended the organization meeting and first monthly banquet of the Columbia County Live Stock association at Dayton in mid-February pledged backing for the better sire campaign, boys and girls' club work and a proposal to reestablish the county fair, which has not been held in 13 years. A general live stock tour is planned for the early summer. C. J. Broughton was elected president; Henry Delaney, vice president; J. M. Lewis, secretary, and A. B. Burnett, treasurer.

* * *

Eggs produced and chickens raised last year in Spokane county were worth $750,000, according to County Agent Patton.

* * *

J. R. Martin of Satsop was elected president of the Grays Harbor County Jersey Breeders' club at its annual meeting at Monesano February 20. Parker Askew of Wynooche valley was chosen vice president; E. E. Hale of Montesano, secretary-treasurer, and E. L. Brewer of Satsop, J. H. Taylor of Wynooche valley and Merritt Twidwell of North River valley, directors. On the following Friday the members went in a body to the Warren Lincoln farm, near Shelton, for an inspection of the Lincoln herd.

* * *

A pig club of 11 members at Lind, financed by the First National bank, is the largest of four new ones recently formed in Adams county with a total of 27 boys and one girl enrolled. County Agent N. C. Donaldson is organizing them.

* * *

Governor Hart told Walla Walla men when he was there recently that the jute mill at the state prison will not be started again, as making of grain sacks has not been profitable. Large quantities of them are still on hand and can not be sold at less than cost before June 1, when it is permissible under the state law to sell them in open market. Warden Potts stated that there are 889,159 sacks on hand.

* * *

A farm bureau center was organized in the Willow Lawn district March 7, says a Yakima report. J. W. Andrews was elected chairman; Clarence Rusk, secretary; Anton Carlson, project leader in horticulture; J. A. Roberts, dairying; John Yule, farm crops; Webb Hallowell, live stock; E. L. Spring, poultry.

* * *

The spring poultry school, made necessary by the large number of applications for the winter school which could not be accepted, opened at the western Washington experiment station at Puyallup March 5.

The course will last six weeks and will cover virtually the same ground as that covered by the winter class, which recently closed its work. However, due to the season of the year, the spring class will be able to spend much more of its time with baby chicks in practice and observation than was possible with the winter class.

Professor George Shoup, head of the poultry department, has sent out word that the practice course is filled to capacity and that others desiring to study the poultry business at the spring term will be enrolled in the observation class. This is to be the last poultry course to be scheduled until January of next year. The major portion of the class is made up of women.

The school is under the direction of Professor and Mrs. George Shoup, with Dr. W. T. Johnson, poultry surgeon, assisting.

Coming Events of Interest

March 28—Water power hearing, Spokane.

The following schedule, in which the state college extension division and farm bureau are cooperating, has been arranged for squirrel poison mixing demonstrations in Whitman county: March 24, Endicott; March 25, Colfax; March 27, Garfield; March 28, Palouse, March 29, Oakesdale; March 30, Tekoa; March 31, Farmington; April 3, Thornton; April 6, Rosalia; April 7, Pine City; April 10, Colton; April 11, Pullman; April 12, St. John; April 13, Steptoe; April 15, Fairbanks.

April 5—Pierce county poultry meet.

April 5-6.—Okanogan live stock meet-sale, Okanogan.

April 15—Stock show and mock sale, W. S. C., Pullman.

May 4-6—Tulip festival, Bellingham.

July 27-28—Whatcom co. Guernsey gallop, Bellingham.

April 16—Easter.

FARM BUSINESS AND MARKETS OUTLOOK

Advance in Cattle Market Interrupted

The advance in the cattle market, which averaged 15 cents or more per week since late in December, has been interrupted and a loss of 40 to 75 cents sustained in the last few days. Supply at the leading markets increased, due probably to the fact that tax assessment day is on the horizon.

Nevertheless, the position of the market is believed to be strong and moderate advances later on are expected. The east has been a liberal buyer at middle western markets, exporters are buying 400 or 500 head per week at Chicago and the Pacific coast is buying killing cattle in the southwest.

Dressed beef prices have not lost ground.

Demand for stockers and feeders remains fairly uniform, shipments from the 12 leading markets totaling around 50,000 head per week. Values have been marked up consistently with the advance on killing grades and there has been a disposition to turn to stocker steers and stock cows in order to avoid high costs. Total shipments from the 10 leading markets during January and February were 373,000 head, an increase of 37 per cent over last year. In the southwest high prices are being asked for steers to be moved to northern pastures and the pilgrimage may be a light one. At the same time rains in Kansas, Oklahoma, Nebraska and Texas have revived grass in that section and increased the demand.

Hog Market in Setback

The hog market has weakened decidedly in the last few days, due mostly to a top-heavy condition. A decline of $1 per 100 pounds has occurred. Average weights have advanced, so that the yield of meats and fat has risen without any material increase in the run. The fresh pork market has not declined, so that the decline may not go much farther unless receipts expand.

Packers are still balking at the price of hogs, although obliged to buy enough to supply their fresh meat trade. Eastern shipping demand has been less active during the last two weeks. On a statistical basis, the market outlook is fairly strong and promises to remain so until the increase in production now taking place begins to affect market supply.

Sheep Men in Strong Position

Measured by the reduction in the sheep population and by the probable number of lambs on feed to be marketed during the next three months, sheep and lamb feeders are in a stronger position than producers of cattle or hogs. The market has been unsteady during the last two weeks, but feeders are able to shut off the supply on declines and dressed lamb prices remain at practically the high point of the year, so that the market is kept in a fairly healthy condition. If the rest of the winter crop of fed lambs is put upon the market gradually no serious decline should occur until southwestern lambs begin to move in the latter part of May.

Tone of the horse markets improved during the last week, due to an increase in the number of buyers for the farm trade and also to slight improvement in city demand. At a Chicago auction 1200 head were disposed of with prices $5 to $10 higher.

Mills Are After Wool

Although wool markets are quiet, mills are showing more interest than when the speculative fever was at its height and prices remain near the topmost levels. High-class foreign wools especially are scarce and the total supply of all kinds in the United States is less than usual. Contracting of the new clip in the west has ceased, as a deadlock over prices has developed. The asking price for fine and fine medium clips on the order is about 40 cents. Only a small quantity of new wool from the southwest has been shipped thus far, although that section usually consigns early. Foreign wool prices are about 5 per cent lower than in January, but the London auction has become firm and the foreign outlook is for steady prices.

The American Woolen company, which was the leading buyer at the government auction, is said to have sufficient orders for cloth to keep its mills going into the summer and the woolen goods market has improved slightly.

Mohair Price is Fixed

An opening price of 26 cents a pound has been fixed by Portland dealers for the new mohair clip. This price will hold until the market adjusts itself and actual values can be determined. The 26-cent quotation is on long staple mohair, delivered at Portland, tags and inferior fleeces out at value. Short staple six-months mohair is quoted at 18 cents.

Shearing started in western Oregon recently, but was stopped by rain before much was taken off. If the weather is favorable there should be active shearing in the coming week.

Dealers do not look for an advancing market this season, but the mohair trade is frequently more or less erratic and country buyers are disposed at times to bid more for hair than they can later realize on it.

The traders base their opinion of the probable future of the mohair market on the course of wool prices to date, the sharp advance in the commodity having been succeeded by a period of reduction which, if it has not left the market lower, has at least produced an uncertain condition.

Light Wheat Carryover in Prospect

An analysis of current wheat figures shows that stocks on farms and in the visible supply on March 1 were only 172,414,000 bushels, compared with a 10-year average of 209,478,000 bushels. About 16,000,000 bushels more wheat have disappeared into domestic and export channels since July 1 than the 10-year average for that period. The quantity of wheat remaining on farms and in the visible supply for use in the next four months is less than the quantity which disappeared from those sources in the corresponding period of 1921 and is only 14,000,000 bushels more than the 10-year-average disappearance, thus forecasting a small carryover at the end of the crop year.

Net exports of wheat and flour in the last four months of the crop year have averaged about 63,000,000 bushels in the 10-year period. They are almost certain to fall below that figure this year, but the foreign outlook indicates that enough will be taken to leave less than an average carryover. This indication will be further strengthened if country mill and elevator holdings on March 1, not yet reported by the department of agriculture, should prove to be below the 10-year average of 102,000,000 bushels.

The domestic wheat situation appears to be a tight fit and the same is true abroad. Undoubtedly the world is consuming more wheat this year than was grown during the year. With no reserve stocks to draw upon in the coming year, production must be increased or severe shortage will result.

Corn and Oats

Although farm stocks of corn are still the largest on record with the exception of last year, when they were 251,000,000 bushels greater than this year, yet if corn disappears as rapidly in the next eight months as it did in the same period of 1921, all of the big surplus which depressed the market last fall will have faded away, so that only a normal quantity will be left to carry into next year.

Farm reserves of oats were 404,000,000 bushels, compared with a 10-year average of 497,000,000 bushels, but the visible supply is of record size, so that the total supply for the rest of the crop year is only about 45,000,000 bushels less than the average. Although the quantity of oats available until August 1 is nearly 50,000,000 bushels less than the disappearance in that period last year, it is 54,000,000 bushels more than the 10-year average, promising a fair carryover at the end of the season.

A comparison of the data for this year on each grain, last year and the 10-year average follows:

WHEAT.

	1921-1922.	Bushels— 1920-1921.	10-Yr. Avg. 1911-1921.
Disappearance, farm and visible, July 1 to Mar. 1	688,019,000	656,997,000	672,091,000
Farm stocks, March 1	131,136,000	217,037,000	155,170,000
Commercial visible Mar. 1	41,278,000	28,159,000	54,308,000
Available for use next four months and carryover farm and visible stocks only	172,414,000	245,196,000	209,478,000
Disappearance, farm and visible stocks, March 1 to July 1	.....	279,656,000	158,080,000
Net exports, March 1 to July 1	.....	109,370,000	63,000,000

CORN.

	1921-1922.	Bushels— 1920-1921.	10-Yr. Avg. 1911-1921.
Disappearance Nov. 1 to March 1	2,026,137,000	1,769,258,000	1,817,747,000
Farm stocks March 1	1,313,120,000	1,564,832,000	1,056,977,000
Visible supply March 1	40,897,000	22,233,000	23,279,000
Available for use to November 1 and carryover	1,354,007,000	1,587,165,000	1,080,256,000
Disappearance March 1 to November 1	.....	1,289,083,000	964,585,000

OATS.

	1921-1922.	Bushels— 1920-1921.	10-Yr. Avg. 1911-1921.
Disappearance, Aug. 1 to March 1	781,974,000	835,447,000	881,997,000
Farm stocks March 1	401,461,000	683,759,000	496,840,000
Commercial visible on March 1	70,470,000	31,142,000	22,564,000
Available for use to August 1 and carryover	474,931,000	717,901,000	519,404,000
Disappearanch March 1 to August 1	.....	521,733,000	431,059,000

Decline in Grains Near Close

Grain prices have declined sharply during the last two weeks. Wheat values at the low point were 10 to 20 cents lower and the corn market was over 10 cents a bushel below the high point of the season.

Rains in the southwest have relieved drought in that section and crop reports are favorable. Large shipments of wheat from the Argentine and Australia, made since the first of the year, are nearing European ports, so that the foreign stampede to buy nearby wheat from North America has ceased and the decline has stimulated more or less reselling abroad by uneasy buyers.

The Argentine is clearing about 5,000,000 bushels per week and has shipped 36,000,000 bushels since January 1, or one-third of her estimated surplus. Australia is estimated to have 50,000,000 bushels left for export, of which 20,000,000 bushels are already sold.

Export buying was brisk on the decline in the corn market. Extensive purchases were made for Russia, both directly and through the relief organization. The continent also was a big buyer. White corn has advanced to a premium of 4 cents above yellow corn, due to export orders for corn grits. The exportable surplus of corn from the new Argentine crop is estimated at 108,000,000 bushels, or only two-thirds as large as that of last year.

The world's wheat situation shows no great change. There is no actual scarcity in this country and the temporary shortage in Europe has been relieved for the time being. The close adjustment of supply and demand may not be demonstrated until later on.

Cash grain markets:

The range of cash grain prices for the week ending March 15 was:

Chicago Wheat No. 3 red, $1.30@1.37 1-4; No. 2 hard, $1.29@1.35 1-2.

Corn—No. 2 mixed, 55 1-4@58 1-2c; No. 3, 54@57 3-4c; No. 4, 53@56 3-4c; No. 2 yellow, 55 1-2@59c; No. 3, 54 1-2@57 1-2c; No. 4, 54 1-2@56c; No. 2 white, 59@63c; No. 3, 57@60 1-2c; No. 4, 57@59 1-2c.

Oats—No. 2 white, 37@40 1-2c; No. 3, 33 3-4@39c; No. 4, 33@35 1-2c.

Rye—98 1-2c@1.02 3-4.

Barley—60@69c.

Seed, Feed and Hay

Receipts of clover and grass seed are running light and shipments from distributing centers are large, so that prices are holding well. Receipts of clover seed at Chicago since August 1 have been 10,931,000 pounds, compared with a three-year average of 10,032,000 pounds. Shipments from the same point were 7,819,000 pounds, compared with a three-year average of 5,630,000 pounds.

Toledo, per bushel—Prime red clover, $16.15; prime alsike, $11.75@11.85; prime timothy, $3.15.

Demand for most feedstuffs is quiet, particularly at eastern points. In the south pasture is already a factor in the demand. The prosperous hog market is maintaining a good outlet for middlings and tankage. Supplies are ample, with the exception of linseed meal. Corn industries are operating nearly at capacity. Flour mills have increased operations recently and are offering wheat feeds at slightly lower prices.

CHICAGO—Bran, $28; standard middlings, $29; flour middlings, $32.50; cottonseed meal, 36 per cent, $46.25; 43 per cent, $50.50; hominy feed, $22.50; gluten feed, $32.65; old process oil meal, $54.50; tankage, $60.

Receipts of hay at distributing markets have been light and prices have held firmly. Timothy prices are about $1 per ton higher. Alfalfa also has advanced slightly. Storms have increased the demand in some sections and have curtailed shipments. When these conditions pass, the advance may not be sustained, as pasture is gradually becoming available.

CHICAGO—No. 1 timothy, $22@24; standard, $20@21; No. 2, $19@20; No. 3, $14@17; No. 1 light clover mixed, $21@22; No. 1 clover, $17@20; No. 1 clover mixed, $18@20; No. 1 alfalfa, $15@26; upland prairie, $11@15; midland prairie, $10@13; rye straw, $13.50@14.50; oat and wheat straw, $9.50@12.50.

Egg Market Near Bottom

The egg market is apparently not far from its low points for the spring season. At Chicago fresh firsts sold as low at 21 1-2 to 22 cents during the last week, although the close was on a small upturn. The movement into storage has begun, as there are some operators evidently who believe that these levels are safe. In the spring of 1921 the lowest price paid for fresh firsts was 21 1-2 cents late in April. From this point the market advanced to 55 cents early in December. The supply of eggs in cold storage in tthe United States on March 1 had been cut down to 12,000 cases. Average holdings on March 1 during the last five years have been 25,000 cases.

Poultry prices have declined slightly in the last few days. Receipts of dressed poultry at the four leading cities since January 1 are practically the same as during the corresponding period of 1921. The supply in cold storage is still large, but is being cut down rather rapidly.

Butter and Cheese

Although receipts of butter at the leading markets are gradually increasing and are now running substantially ahead of those of last year, prices more than recovered a small loss during the early part of last week. Confidence in the maintenance of prevailing values for a little while longer has been more general, due to the passing of conditions which prevented shipments from producing sections. Although the supply of fancy fresh butter has been light, due, it is said, to local demand, which has absorbed all of the product of some creameries, the supply in the southwest especially is light and this section is drawing upon the outside. Production reports from creameries indicate a gradual increase in the make. Demand, however, is very broad at the present level of prices.

The preliminary report on cold storage holdings of butter in the United States on March 1 was 22,562,000 pounds, compared with a five-year average of 21,924,000 pounds.

The cheese market has been somewhat irregular, with twins and longhorns very firm, daisies draggy and other styles about steady. The general tone of the market has improved as demand has broadened. Higher prices upon cheese are not generally expected, nor are severe declines probable during the next few weeks. The supply of fancy held cheese is light and all markets report firm prices upon it.

Fruits and Vegetables

Under heavy shipments from producing sections the potato market has weakened recently, with northern round whites quoted down to $1.60@1.80 at Chicago. Northern sacked round whites at shipping points are quoted at $1.45 to $1.57, while sacked Rurals in wagonloads are quoted at 70 to 90 cents per 100 pounds at Idaho and Colorado shipping points.

Bulk of apple receipts are boxed stock, Oregon, Washington and Idaho furnishing about nine-tenths of the current supply. Prices are steady, with extra fancy Winesaps bringing $3 to $3.50 per box in consuming markets.

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Coordinate Grain Marketing

New Organization Will Sell a Hundred Million Bushels

At meetings in Denver plans were worked out for a federation of 10 state grain marketing association, controlling at the present time more than 75,000,000 bushels of pooled wheat.

The combination as planned will absorb the Northwest Wheat Growers, Associated, and the National Wheat Growers' association. The Northwest Wheat Growers, Associated, comprises the four statewide wheat marketing associations in Oregon, Montana, Washington and Idaho. The National Wheat Growers' association includes legally incorporated bodies in Oklahoma, Kansas and North Dakota and other associations now in process of formation in Texas, Nebraska and Colorado.

The total present membership in the 10 states named is slightly in excess of 35,000 farmers, all of whom grow wheat and all of whom have already signed legally binding contracts under which all the wheat they grow is pledged to be marketed through their own associations, on a completely pooled basis, for a five-year period.

Continuing membership campaigns in the 10 states are expected to bring the total membership to more than 50,000 and the total amount of controlled wheat to more than 100,000,000 bushels before July 1 of this year.

Negotiations sponsored by Carl Williams of Oklahoma and others have been under way for several months looking toward the federation of these various organizations. The result was an official call issued by George C. Jewett, representing the Northwest Wheat Growers, Associated, for a meeting of delegates from all similar wheat marketing associations, to be held in Denver on March 1. Representatives of the United States Grain Growers, the great cooperative commission sales agency at Chicago, were also invited to the meeting, though on account of differences in their plan of organization from that of the pooling organization no common ground for a federation with them could be found.

Means Big Sales Organization.

The plan as outlined for the new federation proposes no change whatever in the corporate forms of the existing state associations. It merely unites them in a gigantic sales organization which will cover practically all of the surplus wheat producing sections of the United States.

The nation will be divided into sales zones according to markets. All state associations chiefly patronizing the same market will be included in the same zone. State organizations may select the zone to which they wish to belong. At present it is probable that four zones will be created. Zone No. 1 will probably include the state associations of Oregon, Washington and Idaho. Zone No. 2 will cover Montana and North Dakota, with other spring wheat states yet to be organized. Zone No. 3 will doubtless include Kansas, Nebraska and Colorado and zone No. 4 will take in Oklahoma and Texas. Each state association will have two trustees on the zone board, with proportionate additional representation for states having more than 10,000,000 bushels of wheat under contract. One of the zone trustees from each state will be named as the state's member of the board of directors of the national organization, which is to be known as the American Wheat Growers, Associated.

Pools will probably be created by zones, and the some boards will have full detail control of sales under the general supervision of the national board. The latter will function directly for all the participating states in matters of finance, legal advice, field organization work, statistics and information, export sales, auditing and office management and general control of domestic sales in all zones.

Details of the general plan, which was unanimously agreed upon at the Denver conference, were further whipped into shape at a meeting in Kansas City on March 9, and were turned into legal form for final submission to state boards of directors at a committee meeting held in Chicago on March 20, which was attended by George C. Jewett of Oregon, Aaron Sapiro of California, W. C. Lansdon of Kansas and Dan G. Murley and Carl Williams of Oklahoma.

Northwest Pioneered the Way.

The Northwest Wheat Growers, Associated, comprising the states of Oregon, Washington, Idaho and Montana, has been in existence as a going farmers' organization for the last three years. It is actually handling this season about 20,000,000 bushels of wheat.

None of the state wheat growers' associations in the central west have as yet handled any pooled wheat, but all of them are preparing to do so in connection with the 1922 crops. The Oklahoma Wheat Growers' association, of which D. G. Murley is president and John Manley secretary, has 7,500,000 bushels pooled. The Kansas association has 11,000,000 bushels and the North Dakota association 10,000,000 bushels. Other central states have smaller amounts.

The basis on which all of these organizations work is that, to be effective in stabilizing prices and in properly merchandising the crop, the disposal of a large volume of wheat must be directed by a single agency or set of men. The larger the volume the greater the chance for success. The new organization has a prospect of going into the 1922 wheat season with from 12 to 15 per cent of the wheat crop of the United States under contract.

The name of Mr. Jewett, manager of the Northwest Wheat Growers, Associated, has been suggested as manager for the new national organization. Reports from the east say that he will take over the duties, but no confirmation has been received in the northwest up to this writing, and those closely associated with him here appear to doubt the likelihood of his becoming national manager.

Bishop Heads Holstein Association

Members of the Washington State Holstein-Friesian association at their annual meeting in Seattle March 7 made slight changes in their constitution and elected officers for the coming year.

The feature of the meeting was the election of officers, which placed William Bishop of Chimacum at the head of the association as president. As vice president the delegates unanimously chose Harold Stimson, son of the late F. S. Stimson, who held the office of president at the time of his death. A. B. Winters of Everett was chosen as treasurer.

A few changes were made with the executive board, the new board being as follows: E. A. Stuart, Seattle; John L. Smith, Spokane; H. C. Davis, Granger; A. E. Smith, Sumas; Alex. Todd, Yakima; T. G. Lockhart, Mount Vernon, and H. R. Sholtes, Adna.

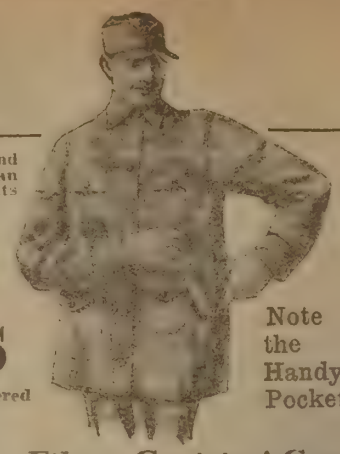
In changing the bylaws of the constitution the delegates decided to shift the financial burden of the association to the herds rather than on the owners of cattle by assessing graduated yearly dues, which are levied according to the number of animals in the herd. In place of the usual dues of $5 per year the new ruling reads that each member pays $5 as life membership dues with $2 additional for each animal up to 25, $2.50 for numbers under 50 head and $3 per head for herds of 100 head and over.

A report of the credentials committee was adopted, which favored the work of the extension department of the state college in its eradicationof the scrub sire and recommended that members of the association give any assistance possible in placing a purebred sire wherever one can be used to a better advantage.

A reduction in the number of delegates was made by allowing for one county delegate out of every 10 members instead of one out of every five, as has been the case in the past. The regular meetings of the association in the future will be held early in the months of February and September.

ASSOCIATION REDUCES FEES.

At the recent annual meeting of the Snoqualmie Valley Cow Testing association the yearly fee was reduced from $2.50 to $2.25 per cow. E. W. Trezise of Tolt was reelected president and L. J. Clark of Bellevue will be the secretary for the ensuing year.



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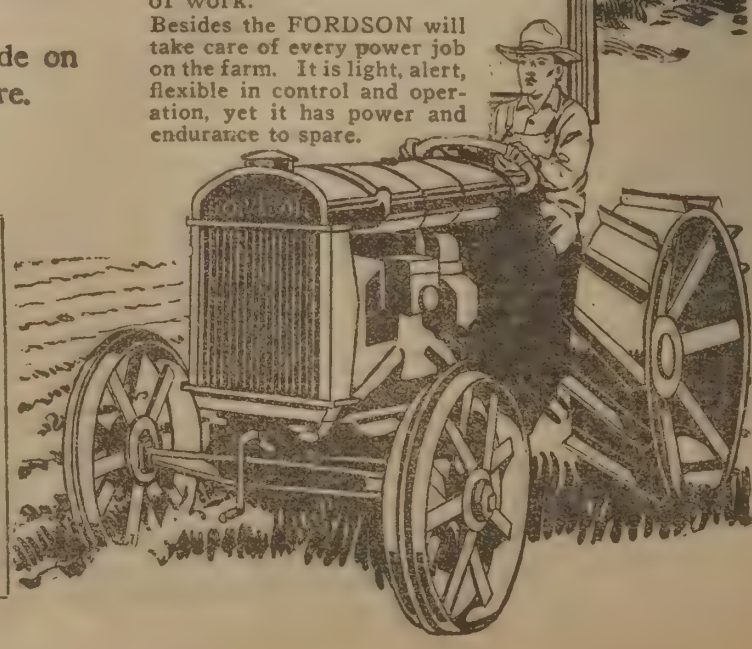
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Skookum Packers

Delay Action on Marketing Plans

Aside from the election of officers and the selection of an executive committee, little official business of importance was transacted at the meeting of the Skookum Packers' association at Wenatchee last week, according to the official statement given out by the officers following the meeting.

It is understood that the relationship between the association and the Northwestern Fruit exchange is no different than it has been for several weeks, notwithstanding that it was expected that action would be taken either confirming or withdrawing the action already taken by local units of the Skookum packers as the first step in cancellation of their contract with the Skookum association.

All of these locals have filed notice of such cancellation and, so far as is known at this writing, only one, that at Wenatchee, has rescinded that notice. They have until May 1 to complete the cancellation or to continue their membership throughout the 1922 season.

As previously stated in THE FARMER, the Skookum association is made up of local fruit growers' cooperative associations, the greater number of which are in the Wenatchee territory. These local associations have membership contracts with the Skookum Packers' association, one provision of which is that they may cancel their membership any year provided notice of such cancellation is given 60 days prior to May 1 of that year. These notices of cancellation are the ones above referred to. In turn, the Skookum Packers' association has a five-year contract, with four years yet to run, under which it sells all of its fruit through the Northwestern Fruit exchange, the marketing organization in the Pacific northwest representing the J. S. Crutchfield interests of Pittsburgh. Fear of what they believed to be a growing domination of northwestern fruit marketing by the eastern interests, as represented by Mr. Crutchfield, is given by the growers as their reason for considering marketing through other channels.

According to the statement given out by the officers of the Skookum Packers following last week's meeting, the following officers were eleeted and the following business transacted:

President, I. H. Logue of Pateros; first vice president, C. W. White of Peshastin; second vice president, A. F. Munson of Sunnyslope; secretary and treasurer, Miss Grace Lamphere; general manager, J. A. Warman.

The following exeeutive committee was chosen: C. W. White of Peshastin, A. F. Munson of Sunnyslope, J. W. Terry of Yakima, F. H. Phipps of Brewster, B. W. Johnson of Monroe, Ore., and B. M. Martin of Entiat.

A resolution was adopted by the board of trustees authorizing the disbursement of about $10,000 of the assets of the association among the various local units. There was a surplus of about $17,000 left over from the last year's operations and a portion of this will be returned to the units.

A resolution was so passed directing the general manager to abandon the Seattle office of the association and consolidate the business of the association in the Wenatchee office.

The following trustees were present at the meeting: Okanogan, H. J. Kerr; Omak, H. M. Holmes; Brewster, F. H. Phipps; Pateros, I. H. Logue; Entiat, W. S. Trimble; Sunnyslope, A. E. Munson; Cashmere, H. J. Olive; Peshastin, C. W. White; Leavenworth, J. B. Adams; Chelan, C. M. Wild; Yakima, J. W. Terry; Monroe, Ore.; B. W. Johnson; Wenatchee, O. T. Clawson; Kennewick, Frank Craver.

Shorthorn Sale

Dunn Bros.' Third Annual Event

The third annual Shorthorn sale of the Dunn Brothers was held at the ranch of Dunbro March 16. The bidding was somewhat more responsive than a years ago. Practically all of the purchasers of stock paid cash and very few notes were taken. The distribution of the stock was fairly wide, some animals going to Montana and eastern Washington and several head to the West Side. This year quite a few men who are beginners as Shorthorn breeders were at the sale to get foundation stock.

While stock of Dunn breeding made up the bulk of the sale, other Yakima breeders participated in it, including I. L. Jones of Sunnyside, J. E. Forsell of Grandview, H. O. Wicks of White Swan, Jones & Boose and Earl Mulhall of Grangeville, Idaho.

The total of the sale, comprising 39 heads, was $6305, with an average for the Dunn stock of $214, according to Guy Finlay, clerk of sale. The heifers sold at much higher prices than the bulls, the average price of the heifers being $36 above that of the bulls.

The sale was topped by a young bull, Sunny Boy, at $300, the purchaser being F. J. Taylor of Sunnyside. Two heifers brought $285 each, one going to Dr. R. E. Pearce of Granger and the other to Thomas McKeenan of Ellensburg, this being the top price of heifers. The auctioneers were George R. Gouchnour of Sunnyside and Sandy Keith of Davenport, Wash. The record of the sale is as follows:

Dunn Brothers Bulls.

Bulls consigned by Dunn Brothers—Village Pride, Lester Pearne, White Swan, $155; Lawson, John E. Sawyer, Wapato, Wash., $195; Queen's Cup, F. W. Bruce, Yakima, R. 4, $205; Watch Me Too, George Siegle, Toppenish, $140; Butterfly's Cup, Ervin Wallace, Mt. Vernon, Wash., $145; Cumberland Clip, W. R. Robbins, Toppenish, $155; Standard Bearer, P. J. Lyons, Yakima, $160; Barbara's Cup, H. O. Wick, White Swan, $210; Escana Star, Lester Pearne, White Swan, $120; Cup's Star, D. B. Jeffries, Ellensburg, $165; Sunny Boy, F. J. Taylor, Sunnyside, $300; Dora's Laddie, R. L. Simpson, Grandview, $130.

Heifers consigned by Dunn Brothers—Secret Bow, W. L. Hartman, Nisqually, Wash., $215; Mildred Gentry, Dr. R. E. Pearce, Granger, $285; Sarah Birthday 2d, J. H. McCroskey, Dayton, Wash., $180; Sunny Fly, W. L. Hartman, $195; Sweet Maid, Thomas McKeenan, Ellensburg, $285; White Butterfly, Dr. R. E. Pearce, $245; Princess of Dawn, D. B. Jeffries, $200; Charity Girl, Bert M. Wicks, White Swan, $155; Escana Maid, S. Woodhouse, Ellensburg, $245; Bonnie Mildred, S. Woodhouse, $140; Pride of Washington 2d, D. B. Jeffries, $200.

Grandview Consignments.

Bulls consigned by J. E. Forsell, Grandview—Skookum Beau, Carl Huntley, Wisdom, Mont., $120; Marcus Cumberland, Isaac Van Nostrem, Bickleton, $180; Roan Knight, bull, consigned by Jones & Boose of Sunnyside, $140. Butterland, bull, consigned by Taylor Brothers, W. A. Swartz, White Swan, $160. Grace 7th, cow with calf at side; consigned by Jones & Boose Phil Adams, Ellensburg, $115. Red Belle, cow with calf at side, consigned by Jones & Boose, Phil Adams, $155. Willow, cow with calf at side, consigned by I. L. Jones, Grandview, Lyle Heffron, Sunnyside, $165.

LYNN'S ROYAL DESIGNER.

John F. Lynn & Son of Peach, Wash., purchased recently from D. C. Lonergan & Sons of Omaha, Neb., the Poland China boar, Lynn's Royal Designer, and not Lynn's Royal Designator, as stated in a recent issue of THE FARMER. This boar was sired by Designer, grand champion of the breed at the Nebraska state fair in 1921.

NEW YAKIMA COUNTY AGENT.

S. B. Nelson, director of the state college extension service, has announced the appointment of A. E. Lovett to be county agricultural agent in Yakima county to succeed R. B. Coglan, who recently resigned.

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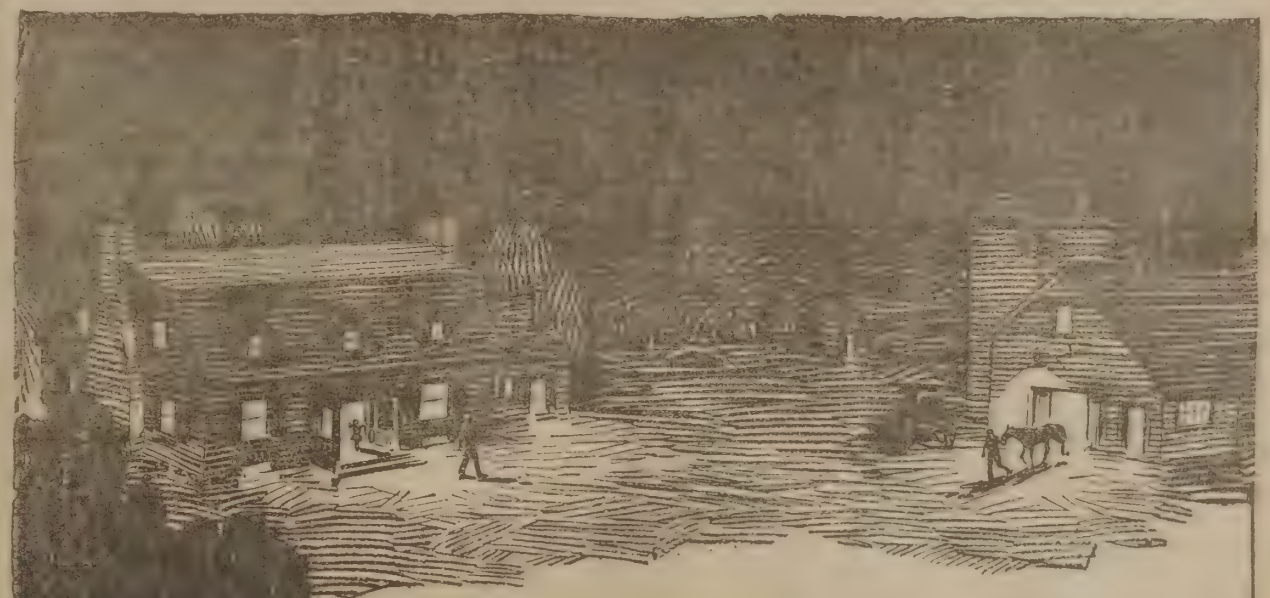
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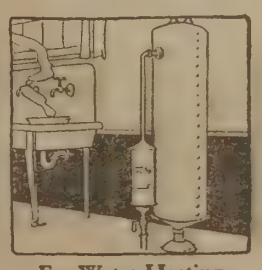
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How to Prevent Sore Shoulders

By DR. E. E. WEGNER, Dean of the Department of Veterinary Science, Washington State College.

Just at this time of the year, when many horses are being taken out for the work of the spring season, there is great danger of injuring their shoulders, as the shoulders have become soft and are easily injured when the pressure of the collar is applied steadily for hours at a time.



Dr. Wegner.

The principal reasons for the injury to the shoulder are the following: First, unequal distribution of weight on the collar bed. This may be produced by an ill-fitting collar or a collar pad that is old and bunchy and no longer of even thickness or it may be the result of the long hair on the shoulders becoming wet with sweat and rolling up in bunches under the collar, causing too much pressure at some one point. Whenever this excessive pressure occurs at any point the tissues are bruised at that point and a sore is almost certain to result. Then in some cases the moisture or sweat under the collars soaks the hair and collar pad, and this in constant contact with the skin in time scalds the skin and causes soreness.

Hames Must Be Properly Placed.

Hames are sometimes let down too low or too near the point of the shoulder. This does not spread the weight of the draft over a sufficiently large area and bruises the small area over which the weight is disfributed. Sometimes one trace is longer than the other and places more weight on one shoulder than the other, causing injury that might easily be prevented. Young and inexperienced animals sometimes do not pull straight in the collar; but pull sideways in the collar, causing unequal distribution of weight and a resulting injury.

Dirty collars or collar pads are also a frequent cause of soreness. They should be cleansed at regular intervals. I have seen pads taken from the shoulders of an animal that had sore shoulders and placed on the shoulders of a well horse and cause soreness of the shoulders of the second animal by infecting the skin of the healthy animal. Pads that have been badly soaked with infectious materials from wounds of the shoulders should be well cleansed before they are again used on healthy animals.

Pads Sometimes Harmful.

The collars should fit well and the hames should be so adjusted that the draft is relatively high on the shoulder. Collar pads should be omitted, if it is possible to get along without them, as they are a menace to the health of the animal's shoulder, since they absorb the moisture and collect the dirt more readily than the bare leather of the unpadded collar. Nothing is better for the horse than a plain, well-fitted, leather collar.

The shoulders may to advantage be clipped before the animals are put to work; this removes the long hair and prevents the balling up and accumulation of dirt and sweat in this matted hair. The mane should be left long ordinarily, as the stiff hairs when cut short may be turned inward by the weight of the collar and cause a great deal of irritation at the top of the neck. Care should be exercised, however, to see that the mane does not bunch up under the collar.

Keep the Shoulders Clean.

Cleanliness is of greatest importance and it is well to wash the necks and shoulders of the animals when they have been at work in the dust and heat. Plain water, to which a teaspoonful of salt has been added to each pint, makes as good a wash as one can well prepare, and if this is used after each day's work and the collar given attention to see that it is clean, the danger of soreness of the shoulders is greatly reduced. It is well to pass around in front of a team whenever they are stopped to rest and to raise the collars from the shoulders and admit the air to the skin and to rub off the moisture and dirt that has collected there and to lay the hair straight again. These simple attentions at frequent intervals are very necessary to the welfare of the shoulders.

Cleanliness with well-fitting collars and common sense and humane care of animals that must do the work is not expensive and will make the lot of the working animal much easier to bear. Sore shoulders are usually the result of neglect and carelessness.

In a second article on this subject Dr. Wegner will discuss the treatment of shoulders that have already become sore. —Editor.

Hold Mock Sale April 15

April 15 has been set as the date for the annual show and mock sale of the "All-Ag" club at Washington State college, and Manager E. E. Mundy of Ellensburg is already deep in plans for making it successful. The affair gives students an excellent opportunity to prepare cattle for the show and sale ring and to judge their values, and in addition it is the occasion of an annual intermingling of live stock students of the college and live stock breeders of the state.

Officers for the show are Harold Sorenson of Ellensburg, head of department; Fred Adams and Clarence Anderson of Seattle, editor and assistant editor of the catalogue; Cecil Compau of Walla Walla and Charles Averson of Centralia, business manager and assistant of the catalogue; Ralph Gillespie of Pullman, banquet; G. O. Baker of Clarkston, grounds; Ralph Singleton of Sweetwater, Idaho, prizes; Lorraine Boggs of North Bend, judging; Robert Bucklin of Port Blakely, publicity.

JERSEY COMES FROM CONNECTICUT.

Sybil's Gamboge Pearl is a beautiful little Jersey heifer that journeyed all the way across the continent from Hartford, Conn., to Bellingham, Wash. She is probably the only daughter in the Pacific northwest of the noted $65,000 bull, Sybil's Gamboge. Pearl was purchased last summer at the Waulkley Bellows farm sale by Cyrus Gates, well-known financier and Jersey fancier of Bellingham. Gates left her to be bred and she made the long trip in November, arriving at her new home on the 10th. She was dropped August 15, 1920. She was bred to Sybil Gamboge 3d, said by Tom Dempsey and other good Jersey judges to be the best son of Sybil's Gamboge. Sybil's Gamboge, the sire of Mr. Gates' heifer, is not only the highest priced Jersey bull ever sold at auction, but he is by Imp. Royal Majesty and out of Gamboge Oxford Sybil, a great show and production cow.

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How to Overhaul Tractor

By PROF. L. J. SMITH, W. S. C.

While the following article is written with special reference to the tractor, much of the advice applies equally well to automobile motors. There is little difference between the four-cylinder tractor motor and the auto motor, except that the tractor motor is heavier and has larger bearings.—L. J. S.

Tractor overhaul is a vital item in power farming. A good deal of the time the engine is being worked to its power limit, and it must not be neglected. Many complain that the tractor loses its power very rapidly, but with reasonable care this claim is without foundation. An engine well overhauled should start its second season at practically the same power it originally developed. The third season a 25-horsepower will likely fall off two to three horsepower. Before the fourth season (if it has hard continuous service) the cylinders should be ground and oversize pistons and rings put in; and then the motor will have a little more power than when it came from the factory.

The first step in the overhaul is to get the tractor into a building where there is plenty of light and, if possible, a clean floor. If there is a bench and vise available, carry them in alongside the tractor for greater convenience. Then gather together all the tools and wrenches about the place and you are ready to begin.

Clean It Well to Begin With.

One point should be mentioned first, that of thoroughly cleaning the grease and dirt off the tractor. A half-cleaned tractor takes more time and makes a dirty job all through the overhauling. After getting off all one can with scrapers and brushes, go over it again with plenty of rags and kerosene.

Get some of the boxes to put nuts and small parts in and start dismantling the motor. If several men are on the job, some can work on the wheels and axles, or, in the case of track-laying types, on the tracks. Examine and clean all bearings and renew badly worn parts. Take all play out of the steering gear, if possible.

Take off all grease cups and clean out the old grease in the cups and in the holes leading to the bearings. It is a good idea to refill the cups the first few times with graphite hard oil. Graphite is a splendid lubricant, but should not be used continuously, as it tends to flake up on the bearing surfaces. The above jobs are for the less experienced and can be going ahead while the motor, which is the vital part of the tractor, is being cared for.

In some cases, the whole motor can be loosened from the frame and lifted right out on the bench. If it is very heavy, it can be lifted by means of a tripod made of 4x4s and a block and tackle. More often the motor is overhauled on the tractor.

The First Step.

Usually, the first step is to take off the cylinder head, being careful to save the copper gasket. Scrape off all carbon deposits and grind the valves, being sure to number each valve with a center punch to correspond with its valve seat, for each valve must back to its old place. If the valves are badly worn or pitted, as is often the case with exhaust valves, they will need considerable grinding with the coarse paste before finishing with the fine. Be careful not to get any coarse paste in the part of the tin that holds the fine paste. Use the paste sparingly, and clean off thoroughly when through to avoid getting the grinding compound into the cylinders. It is a good plan to have a light spring under the valve so that each time the pressure is taken off the valve while grinding, the valve will lift off the seat. Then rotate the valve a quarter turn before starting grinding again to avoid grinding grooves in the seat. Never make a full turn when grinding; but rotate back and forth, then lift and turn the valve, and press down and repeat.

One should have a couple of valves and springs on hand for emergency. Also an extra cylinder head gasket.

Kerosene tractors run hotter than gasolene, and often require regrinding of valves once a month, if doing hard continuous work. Again, many tractors will require the valves ground but once in the middle of a season's run. Bad seating valves result in loss of power.

When tightening down the head be careful to tighten the center nuts first, else the gasket may not make a tight joint, and water will leak from the jacket into the cylinders. This is especially important on twin cylinder motors.

Placing the Rings.

If the tractor has had a heavy season's run, it is worth while putting in two new rings in the grooves nearest the compression end of the piston. Be sure that all groves are well cleaned of carbon. Before putting the rings in place revolve each in its respective groove to be sure it does not fit too tightly. In case the rings are too wide, dress them down carefully and uniformly by placing a piece of emery cloth on a flat, true surface, and rubbing the ring on the cloth. In the absence of emery cloth, dress the edges carefully and uniformly with a fine file.

There is also danger that the ring may be a little too large in circumference for the cylinder. Put the ring in the cylinder at the lower end or half way down from the top and note if the ends of the ring touch at the joint. Be sure the ring is in square and that the edges are in line. In a 20-horsepower four-cylinder motor, the slot where the ends of the rings meet should be about one-hundredth of an inch in width. In a two-cylinder 20-horsepower motor the space should not be less than one-sixty-fourth of an inch at the joint.

It is well to find if the new ring fits uniformly against the cylinder wall. To do this, rub a very small amount of lamp black around the cylinder, about half way down the cylinder. Put the rings in the piston, and put the piston in its cylinder and work it back and forth vigorously. Then remove and the spots of contact will readily be seen on the rings. It may be they will require a little fitting with a mill file in order to make a tight joint and therefore give a good compression.

Adjusting the Crank Shaft.

Another of the main items in the overhaul is the adjustment of the crank shaft, connecting rod (crank pin), and piston pin bearings. Many of the smaller four-cylinder motors have no adjustment of the piston pin bearings. In such a case, the piston pin and brass bushings are replaced possibly every three or four years. As the pin is hardened and ground it is often necessary to replace the bushings only.

The connecting rod or crank pin bearings get loose quickest, and pound badly. They must not be neglected or the babbitt will be spoiled and possibly the bearing gotten out of round. After the crank case is off, try the lower ends of the connecting rods for end play. The babbitted shell is made a little narrower than the bearing surface. If there is looseness, the lower end of the connecting rod can easily be moved from side to side. Take off the cap, noting how it is marked so it can be returned the same side to. If the surfaces are smooth, take out a thin shim from each side and replace the cap, screwing up the nuts evenly and tightly. If it is still loose, more shims must be removed. The bearing must not be so tight that one can not turn the crank shaft easily. Before finally tightening the nuts put a little thin oil on the bearing surface. It never should be set up dry, nor should the crank shaft bearings.

If the babbitted surface is rough and badly worn, it must be scraped. First mix up some lampblack and oil, or better still, get some prussian blue. Put the smallest bit on the tip of a finger and rub very uniformly over the bearing. Then tighten the cap and turn the crank a few revolutions; and loosen the cap. The high spots will be blackened and must be scraped down with a babbitt scraper. Continue the above until the dark spots are within a half inch of each other. The surface of the babbitt within a quarter inch of the shims should not touch the bearing, in

(Continued on page twenty-one.)

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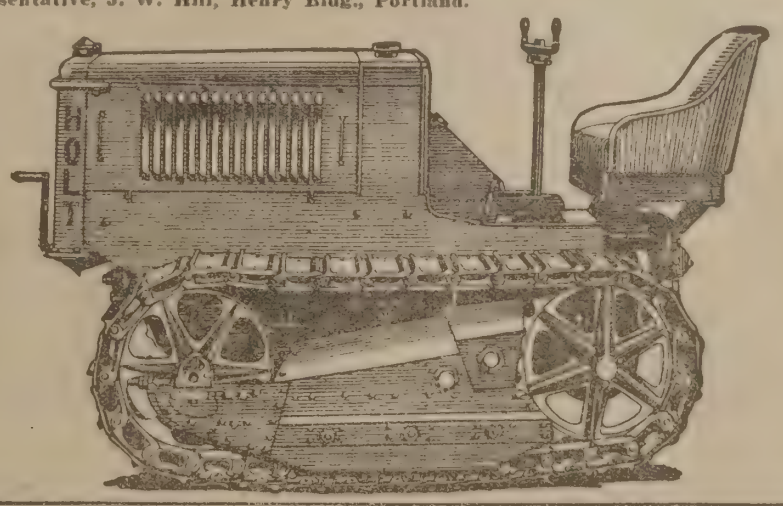
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No animal in a herd can secure the results it is capable of when it is sick, says William M. Rider, director of the extension service. Its breeding and individuality may be of the highest order, yet if it is afflicted with one of our contagious cattle diseases or contemporary illnesses it can not yield maximum results. Healthy dairy cattle are, therefore, essential to secure the highest net returns.

Form and function go hand in hand when it comes to economical milk production. Cows possessing correct dairy conformation and good size for their age are most likely to be good producers. Become familiar with correct dairy and breed type and keep only dairy animals of this kind.

In every case the sire of your herd should be a purebred animal, and conform to the requirements mentioned in 1 and 2 above. Retain only the best and highest bred of your grade cows which are of good dairy type. Breed these to good, purebred bulls, and raise the best heifers for your future herd. Keep milk and butterfat records of each animal in milk, know production and cost of production. Build your herd with profitable dairy animals only. Change from a herd of grade cattle to a purebred one as soon as possible. Your net returns will be greater, you will be more satisfied with the dairy business.

Good cows need plenty of right kind of feed to produce milk at a profit. Remember that about one-half the feed is used by the cow for her body upkeep. Feed enough feeds to keep her in good condition, and for a large flow of milk. Feed about one pound of a good grain mixture to each three pounds of milk, also about one pound of hay per hundredweight of the cow, and from three to four pounds of corn silage per hundred live weight. Feed at regular times each day. Supply plenty of fresh, clean water, and not too cold.

Provide clean stalls, with plenty of light, fresh air, and not too crowded. Have cow barn well ventilated. Avoid dampness, draughts and darkness in barn. Give cattle kind treatment and good care. Be regular each day in time of feeding, milking and doing the chores.

Advertise your herd and your farm. Let the public know what you have and they will buy your surplus stock and your dairy products. Give your local newspaper and your breed paper items about your herd and your plans. They want the news and will help you to gain favorable publicity. Besides using the press make use of attractive leaflets, folders, cards and the outdoor metal display signs. Advertise on your farm, tell your name or farm name, and what breed you have. Thousands of prospective customers pass your farm in a year, and you will find "it pays to advertise."

This is absolutely essential in the management of your dairy herd. Keep a record of expenses and receips, know what the herd is doing as a whole, and also have record of each cow in herd as to her expense and return. Get rid of unprofitable cows. Market your products profitably by knowing costs of production Use business stationery, letterheads and envelope. Answer correspondence promptly. Guarantee satisfaction with every sale and transaction.

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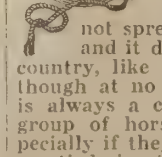
LIFE PRESERVERS FOR LIVE STOCK

By DR. E. E. WEGNER, W. S. C.

INFECTIOUS DISEASES, ARTICLE 3.

Distemper.

Distemper, or strangles, is one of the very common diseases of horses and mules: in fact, few escape this disease in some form during the early part of their lives. It may be quite severe or very mild, depending upon the resistance of the animal and the strength of the bacteria. This disease is contagious, though it does not spread widely except by contact, and it does not go in waves over the country, like some other animal diseases, though at no time is it far away. There is always a chance of it getting into a group of horses that haven't had it, especially if they have been on the highways or tied in town to a public hitching place, where other horses that are suffering have been tied. It is very easy for this disease to spread in this way, more easy than is generally supposed. Then once a single animal on a ranch is taken sick it is easy for it to transmit the disease to others with which it comes in contact, until it not uncommonly spreads to all the animals on a ranch. Spread is made easy and rapid because of the coughing and sneezing by the affected animals. They spread the materials from the nose and throat over a wide area and all animals within a radius of many feet are liable to be sprayed. Then, too, they contaminate mangers, feed racks, water troughs, halters, harness blankets and everything with which they come in contact.



When Symptoms Appear.

Symptoms of this disease appear from two to eight days after the animal has been exposed, and first may be noticed the evidence of fever, such as standing coat, slight loss of appetite and general indisposition. These symptoms may escape notice in animals that are not being used regularly and then the first noticeable symptom may be a discharge from the nose, which begins as a thin, watery one and quickly thickens until it becomes quite thick with pus. This pus discharge is very characteristic of strangles and is always one of the prominent symptoms.

Aside from the nasal discharge abscesses very frequently occur in the region of the throat; these are caused by the bacteria following the fluids from the nasal cavity downward to the throat, and there being stopped by the glands in the upper part of the neck. Stopping here, the bacteria continue to grow and form abscesses in this region. These abscesses are sometimes serious, as they get large and may cause so much swelling that they obstruct the breathing. As a rule strangles is confined to the head and upper part of the neck and for that reason treatment, to do the most good, ought to be given these parts.

Local Applications.

It does little good to give medicine internally, but much good may be done by giving most of the attention to the head and throat, where most of the trouble is located. Allowing the animals to inhale vapor from hot water to which has been

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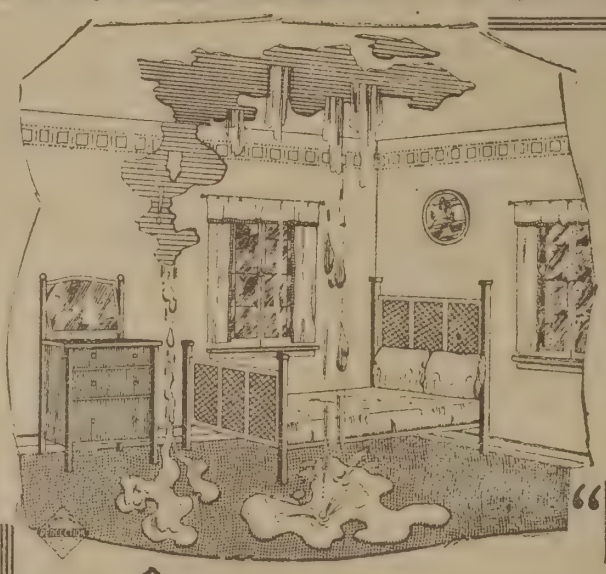
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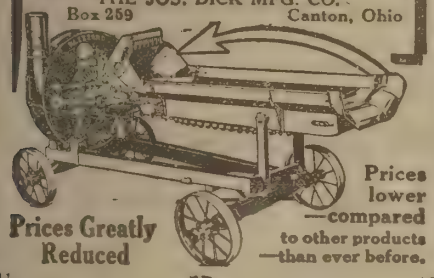
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added small amounts of eucalyptus oil or spirits of turpentine is very helpful. One should as carefully avoid anything that has a tendency to irritate the air passages, such as smokes of all kinds, which by some are considered helpful.

Attention to the throat is urgently needed to see that the animals do not suffer from the abscesses that may develop there. If abscesses start it is best to poultice them at once to cause them to develop as fast as possible, so that they may be opened and relieved as soon as possible. Before they are opened, however, one should wait until they are near the surface unless he is very familiar with the region to know that he isn't going to cut some large vein or nerve that is present in this region. The poultice should be large and hot as the skin can bear and continued until the abscess "heads up," so that it can be opened. Too often the poultices are so small and hold so little heat that they are quite useless.

Keep the sick animals away from the well ones as much as possible and try to prevent the spread of the disease, but unless the animals can be kept entirely away, that is, if they must use the same watering place and some other things in common, the chances of stopping the spread of strangles are very remote. Vaccination of well animals is often asked about, but, while I would not say that it does no good, it is not a specific and will not certainly prevent animals from getting this disease. It may at times make the attacks lighter. It is well enough to try to get the good that is in it, though too much must not be expected.

VETERINARY

By DR. S. B. NELSON.

Pneumonia.—I have a cow that has been sick for about 10 days. She will not eat any hay or mill feed. After she was sick for three days she became stiff. She was stiff for 24 hours and then got over it. She has a cough and goes along with her head down, when she coughs she slobbers at the mouth. One side of her nose has been running for the last three days. She was giving four gallons of milk a day, but only gives half a gallon now. H. R.
Spangle, Wash.

It is quite likely that your cow is suffering from either pneumonia or pleurisy, most likely pneumonia. By this time she will be better or dead. If she is still living, the thing that she will need is a tonic. You will find a tonic composed of one ounce of compound tincture of gentian and one-half dram of quinine in a solution of one quart of warm water, given to her morning and evening, will be of great value.

Cow Pox.—Will you please advise me what to do for a cow that has fallen off in flesh and stays that way, although fed the same as the other cows that are looking fine. Her bowels seem to be too loose and her hair is rough. She has been in this condition nearly two years; before that time she was always fat. Lately she she had small sores resembling boils come on her bag. R. A.
Colfax, Wash.

The chances are that your cow has had cow pox. If the small boils or sores still occur, wash the udder before and after each milking with a 2 per cent solution of lysol. After milking wash and dry the udder carefully and apply a little zinc oxide ointment to the scabs. Give her one-half ounce of compound tincture of gentian in a little water once daily for two weeks. Increase her grain ration gradually as she will take it.

Lame Pigs.—I have some 6-month-old pigs that are lame and they can hardly get up. I have been feeding mill run and milk and some corn, and they eat well. What is the matter with them? J. C.
Talmya, Wash.

I wonder if your pigs have a good place to sleep, where there is no draft. The first thing to do is to see that their sleeping quarters are not drafty. Put in bunches of three or four and give them two ounces of castor oil to the four pigs. Mix it well with the slop, so that one gets his share. The next day begin feeding five grains of potassium iodide to each pig. As soon as possible begin giving them a little exercise if they can take it.

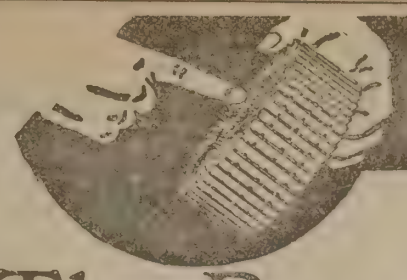
Wart Treatment.—I have a heifer coming fresh soon and her teats are covered with warts. What will take these off?
Brooklyn, Wash. D. R.

You will find the use of the following prescription valuable if applied to the teats after milking, morning and night: One and one-half drams of chloral hydrate, one and one-half drams of acetic acid absolute, one dram of salicylic acid, one dram of spirits of ether, four drams of collodion.

String Halt.—I have a fine saddle mare that has been troubled with string halt for about five months. She is not very bad and there are times when it is hardly noticeable. Is there a cure for it?
Tonasket, Wash. W. C. D.

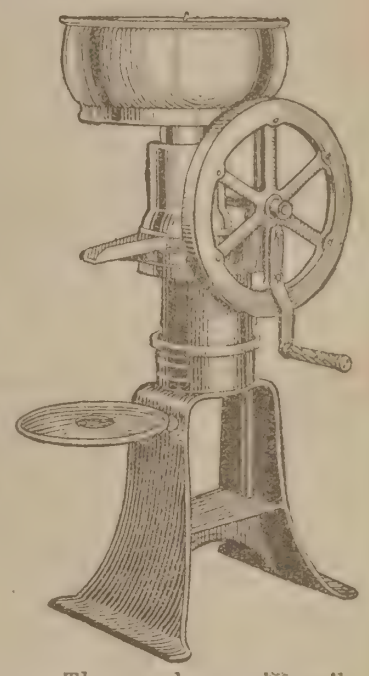
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(Continued on page Fourteen.)



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POULTRY AND RABBITS

Questions Answered

By GEORGE R. SHOUP, Poultryman, Western Washington Experiment Station.

I have 27 White Wyandotte chickens and would like to know how many roosters for every 12 hens and how often to change roosters to have good success.
LaCrosse, Wash. F. S.

We find White Wyandottes one of the most difficult breeds to secure fertile eggs from. This is one of the trials of the Wyandotte breeder. We usually recommend six hens to one cockerel, or four pullets to one cock bird, in mating this breed. Would also suggest that in the case of birds carrying very heavy fluff feathers, some of the fluff be pulled out.

Last year I penned my purebred Rhode Island Red pullets up with a good red rooster and raised some very pretty pullets. I have been advised by some to use this same rooster with his pullets this year. Would it be all right to do so? I would also like to know just how to cull my flock for good layers. I keep about 70 hens. I have only oats and wheat to feed them. How is best to feed them? We are 60 miles from the railroad, so it isn't practical to get prepared mashes.
May, Idaho. MRS. E. M.

It would not be advisable for you to use the male bird with his daughters this year, as you would be inbreeding, and unless the individuals have been very carefully selected there would be a tendency to reduce the vitality of the offspring. You will obtain better results, I believe, if you use one of the cockerels obtained from this mating with the hens that you used last year. As only one of these hens will be 50 per cent or more of the cockerel's blood you will not be inbreeding. I believe it would be more satisfactory for you to use the old hens mated to a cockerel than to try to use pullets for breeding.

At this time of the year it is hardly advisable to try to cull your flock for good layers, except to weed out small immature or sickly-looking individuals. If you have kept your birds as long as this you might as well keep them through the spring, because nearly any bird will lay enough eggs to pay for her keep during the next few months. About the 1st of July your county agricultural agent will probably be glad to aid you in culling your flock.

I suggest that you feed the birds four pounds of soaked or sprouted oats for morning feed and about eight pounds of whole wheat for the evening feed. You should be able to purchase corn meal, or corn to be ground, from your neighbors, as I believe it can be grown in May.

A satisfactory dry mash could then be made up of 60 per cent wheat meal, 2 per cent ground oats and 20 per cent corn meal. Give the birds all the sour skimmed milk and oyster shell they will eat.

What is the matter with my chickens? When they walk they stagger around, seem weak in their legs, and their heads jerk back and they act as if they would tip over backward. Some of them have swelled heads. A few of their combs have turned blue. One or two of them have flopped around on the ground a while and then got up and seemed all right. My henhouse has been very damp until lately.
Wilsall, Mont. MRS. G. T. M'B.

I believe that the swelled heads which you mentioned are due to a roupy condition brought on by the house being damp. The weak condition of the legs may be caused by a number of different conditions, such as rheumatism, tuberculosis or the feeding of too much protein in the mash. The action of the head and body could be caused by either intestinal worms or poisoning due to the birds eating decomposed meat, moldy foods or too much salt.

The only satisfactory way to diagnose your trouble is by a post mortem examination. The sick birds should be isolated immediately and the whole flock given a dose of epsom salts at the rate of one pound per 100 birds, fed in a crumbly, moist mash. They should be given what they will consume in about 15-20 minutes.

I suggest that you properly ventilate your poultry house to take the dampness out, and if in case any of the birds die or the trouble spreads that you send one or more birds to the veterinary section of your state college for examination.

Which is better, raw or cooked meat for laying hens? How many hens can be mated to one rooster? MRS. P. T. S.
Harrison, Idaho.

For laying hens the cooked meat in the form of meat scraps is more satisfactory than the raw meat, because it is more uniform in quality and does not have as great a tendency to throw the birds off feed. Raw meat should be fed to laying hens is only a limited amount. I would not use over an ounce per bird every other day and not even this amount in case the birds are getting meat scraps in the dry mash, or all the skimmed milk they will drink. The raw meat is so forcing that I have found in many cases the birds have lost the use of their limbs when it has been fed with other protein feeds.

One male can be mated with 8 or 10 females of the general purpose varieties when penned and 15 when on range. With the lighter varieties one male can be mated with 15 females when penned and 25 to 30 when on range.

Rabbits Out of Condition

By A. D. NORRIS.

(Rabbitry Department, Western Washington Experiment Station.)

Last summer my rabbits quit breeding and I thought it was on account of the bucks not being any good, so I killed the bucks and all the does except about 10 and bought a new buck. They are the Flemish Giant breed. Now only one doe has taken the buck. I have tried all of them several times, but it seems to do no good. They are all less than a year old.
F. M. F.
Selah, Wash.

Your trouble may have been in the buck. If with the does, they are out of condition. If the skin seems well cushioned underneath, the frame well rounded and the pelvis bones not prominent when the hair is pressed over the rump, there is no doubt but that she is too fat.

Feed her about 6 ounces good alfalfa hay each day and give her fresh water and every third day about seven ounces of mangels or carrots. If in the summer give her the amount of lawn clippings she will consume in an hour. Exercise by allowing her a runway each day for an hour or two. When the surplus flesh seems to be off feed the amount of grain necessary to keep her in fair condition. Lump salt should be accessible practically all of the time. Nothing is gained by giving something to create an abnormal condition.

In the fall of the year and when the Flemish Giants are not mating, until 10 months of age, it seems to be harder to get breeding results.

BE SURE OF VIGOR.

The breeding fowl should be a vigorous bird, with face, comb and wattles of a bright color, eyes bright and fairly prominent, head comparatively broad, legs short, set well apart and straight, plumage clean and smooth.

USE A GOOD ROOSTER.

A standard-bred male at the head of an inferior flock will improve the quality of the stock materially.

Chickens Sick?
Hens Not Laying

There's no excuse for roup, colds, canker, sore head, chicken pox, skin disorders, cholera, indigestion, bowel trouble and such ailments. GERMOZONE positively will rid your chickens of disease—and keep them healthy. For over 30 years the dependable remedy and preventive. Get Germozone and Lee's FREE BOOKLETS, which explain proper feeding and care and how to keep hens laying regularly the year round. At drug or seed stores. If no dealer, order by card. 75c and $1.50 sizes. Send no money—Postman will collect. No extra charge.

GEO. H. LEE CO., Dept. F-16 Omaha, Neb.

SPOKANE SEED CO., SPOKANE, WASH.
PORTLAND SEED CO., PORTLAND, ORE.
Pacific Northwest Distributors.

GENERAL ADVERTISING.

THE CAUSE OF WHITE DIARRHEA

White Diarrhea is caused by the bacillus Bacterium Pullorum transmitted through the yolk. There is scarcely a hatch without some infected chicks. The germs multiply very rapidly and one infected chick may infect the entire brood. The germs can be killed by the use of preventives. Intestinal Antiseptics to kill the germs should be given as soon as the chicks are out of the shell. It is much easier to prevent than it is to cure.

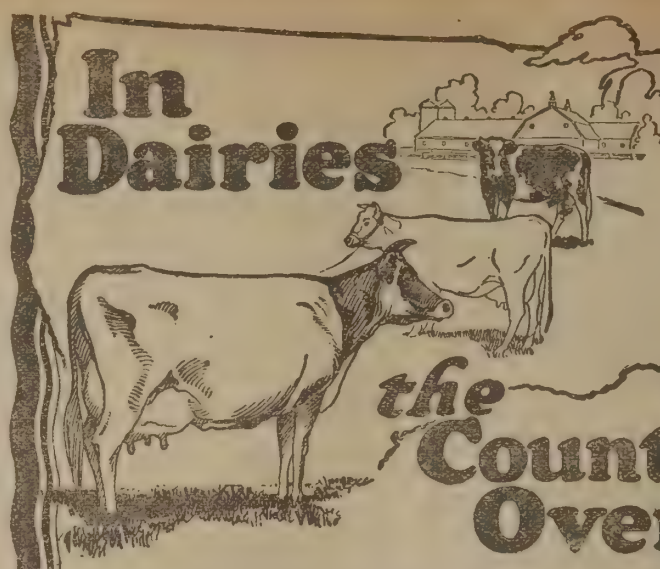
HOW TO PREVENT WHITE DIARREHA

Dear Sir: Last spring my first incubator chicks when but a few days old began to die by the dozens with White Diarrhea. I tried different remedies and was about discouraged. Finally, I sent 50c to the Walker Remedy Co., Dept. 543, Waterloo, Iowa, for a box of their Walko White Diarrhea Remedy. It's just the only thing for this terrible disease. We never lost a single chick after the first dose. We raised 700 thrifty, healthy chicks, where before we never raised more than 100 a year. I'd be glad indeed to have others know of this wonderful remedy. Ethel Rhoades, Shenandoah, Ia.

DON'T WAIT

Don't wait until White Diarrhea gets half or two-thirds your chicks. Don't let it get started. Be prepared. Write today. Let us prove to you that Walko will prevent White Diarrhea. Send 50c for box on our guarantee—money back if not satisfied. **Walker Remedy Co., Dept. 543, Waterloo, Iowa.**

In Dairies the Country Over



Bag Balm is greatly valued by cow owners everywhere because it is perfect insurance against the troubles that attack the milk yield through the udder or teats.

The slightest cut, bruise, chap or sore will make a cow restless and cause a "holding-up" of the milk. Besides, many serious ailments result from neglecting what may seem like very slight injuries of these milk-producing organs.

Any inflammation, soreness, congestion or hardened tissue will quickly heal and become soft and normal through the penetrating action of Bag Balm. Healthy tissue and normal circulation give the cow comfort and restore a full milk-flow. Caked Bag responds promptly to application of this ointment; equally valuable in treating Bunches and Cow Pox.

For the sake of safety, keep a package on hand; feed dealers, general stores and druggists sell big 10-ounce package at the reduced price, 60c.

Write for our valuable free booklet, "Dairy Wrinkles."

Dairy Association Co., Inc.
Lyndonville, Vt.



BAG BALM
MADE BY THE KOW-KARE PEOPLE

Write for Catalog and full information
DISTRIBUTING AGENTS PORTLAND SEED CO. PORTLAND OREGON

Shadeland "Certified" Oats, True Beardless Barley, Fancy True Seed Potatoes
Ask for latest prices, stating quantities wanted. We'll save you money
1922 COMPLETE CATALOG
Vegetable, Flower, Farm and Field Seeds



Garden and Poultry Supplies, Incubators, Brooders, Etc. Baby Chicks, Fertilizers, Sprays and Sprayers.

A western catalogue for western buyers—160 pages—up to date, complete and nicely illustrated. A reliable, truthful guide. Free on request.

Routledge Seed & Floral Co
145 147 2nd St. PORTLAND ORE.

Silo Fillers This Year
Will Be Bought on
Merit and Price
The "OHIO"
Has Both Advantages
Send for 1922 Prices



THE SILVER MFG. CO., Box 516, Salem, Ohio

The department editors of this paper are anxious to be of service to you. Do not fail to write to us if they can be of help to you.

ORCHARD AND GARDEN

Orchard Soils

Rains Leach Out Plant Foods

Almost any soil will grow apples provided the climate is not too severe. In fact, every state in the Union raises apples to some extent, but less than a third of them grow apples on a commercial scale, says O. M. Morris, head of the horticultural department, Washington States college, who spoke on the subject of "Orchard Fertility" at the western Washington horticultural convention at Mount Vernon recently.

"The degree in which any district succeeds depends in large measure on the selection of the proper location for orchards, the wood growth of the trees and the fruit production. Hand in hand with the foregoing points are proper climatic and soil conditions, and these have much to do with fruit production.

"Tillage the first few years should never stir the soil from around the roots, but should be just deep enough to cause a good physical condition of the soil," continued Professor Morris. "Too much cultivation often causes damage, especially when the soil is inclined to puddle. In many orchards clean cultivation has given way to a system of cover crops, but the practice is as yet in the experimental stage. It is often difficult to ascertain the results from cover croppings or fertilization because in many cases an increased production is credited to a method of pruning or to irrigation.

"It is necessary, however, that orchardists in Washington pay particular attention to fertilization and cultivation because the greater part of the Washington orchards are commercial orchards, the owner depending entirely upon the apple crop for his income. Experimentation has proven that such fertilizers as nitrogen, phosphorous and potassium, which are three of the principle plant foods, are found to be leached from the soil by excessive rainfall. In some sections, where the rainfall is heavy, such leaching has caused nitrogen to be the limiting factor, since it is very soluble.

"In irrigated districts, on the other hand, this condition is overcome by irrigation, which supplies only enough water to be used by the trees. In such cases when nitrogen is applied to the soil it appears to have a greater effect, but in reality it is merely because there is no leaching process to carry this element away.

"This is a question which should be remembered when considering the degree of permanent agriculture in any community. The condition will also apply to other soil elements, such as phosphorous and potassium, but to a more limited extent. An ample supply of all plant foods is necessary for the normal growth of the tree and maximum production of fruit. It is erroneous to believe that nitrogen alone will supply foliage while phosphorous will produce seed growth. Other elements are necessary and should be applied in the proper combination, as proved by the fact that a lack in any one plant food will result in an unfertile soil, and the addition of this element will restore the soil to fertility. This has caused people to get the impression that that particular element alone produced the results, when in fact it was the combination that was necessary.

"There is only one way to tell exactly which element is deficient, and that is to make the fertilizer applications in rows—leaving a check plot untreated to show the comparison when nothing is applied. As a double check a strip of lime can be applied at right angles to the rows. This will show in what combination lime should be applied. The same result can be had with a cross strip of vetch or other cover crop. In many cases, however, the value of a fertilizer will be indicated by its effect on a cover crop in the entire orchard, since the trees usually show the same results."

Forcing Rhubarb

The growing of rhubarb in warm cellars and roothouses during the winter months has become quite an industry in certain parts of Washington. The process is known as forcing, with artificial heat, but no light is needed.

Many growers make use of their root cellars, provided all potatoes and roots can be stored elsewhere by early January. Others have especially built houses covered with paper roofing instead of dirt, but in most cases a stove is placed at each end with each pipe running to the center, where it meets a chimney. The cellar under the dwelling house is often used if it is large enough and can be given sufficient heat.

E. C. Orton of Sumner, Wash., has a house 180x160 feet, which he built especially for forcing rhubarb. The concrete walls are three feet high and are set into the ground about 10 inches. The roof was boarded over and covered with a good grade of roofing. The roots are placed in three sections, with an aisle running the full length on each side of the center.

"Better rhubarb can be had by using roots that are 5 years old," said Orton. "Many growers try to get more use out of their plants by leaving them in the field until they are 6 and 7 years old, but plants more than 5 years old will produce small, slender stalks, which sell for a smaller price. It pays to use younger roots which are of good size and have not been pulled too heavy their second year. The season before it is put into the forcing cellar the patch should be pulled only twice. Heavier pulling will lower the vitality of the roots too much.



The large forcing house for rhubarb on the E. C. Orton farm near Sumner, Wash. The large double doors are wide enough to allow a team and wagon to drive the entire length when filling the cellar with roots.

"Three pullings is about all that can be expected from roots in the cellar. The roots need watering once a week and the temperature of the air should be kept at summer heat, or from 75 to 85 degrees Fahrenheit. When stoves are used for heating they should be guarded by boards or sheet iron in order to protect the plants from the direct heat rays. It is best to give the roots a slow growth, since it makes better colored stalks."

Most of the rhubarb used for forcing is the Mammoth Victoria, since it is an early variety and brings the highest price on the market. The roots should remain in the ground long enough to get the benefit of the first freeze, since it is better for the roots. They will make a quicker growth and produce better stalks than when they are dug earlier in the season.

In marketing rhubarb the stalks are packed in 20-pound boxes after being graded as to size and quality. The large, even sized and well colored stalks are sold as choice rhubarb while the smaller and broken stalks are put into a second grade.

Efforts are now being made to ship the winter rhubarb to Chicago markets, but as yet no carload shipments have been made. The indications are that more sales will be made to eastern markets in the future since the local markets are well supplied every year by the truck gardeners.

INTERLOCKING ROOTS.

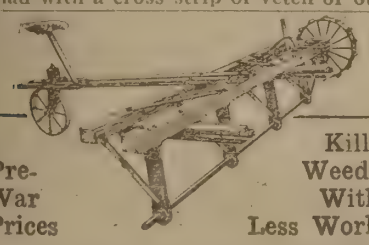
When the branches of apple trees interlock, it is safe to assume that the root systems under ground are also occupying about all the space there is for them.

SPACING PLUM TREES.

Lombard, Burbank and Red June plums are strong-growing varieties. Greengage and Damson will require not so much of space.

MUST USE JUDGMENT.

Mix your sprays according to the scientific formula given by those who know. Apply them with judgment.



Pre-War Prices

Kills Weeds With Less Work

Produce Your Crop Cheaper

WITH THE USE OF A

Junior

ROTARY ROD WEEDER

Once over completely prepares your ground and is sure death to Russian Thistle, Jim Hill Mustard, Pig Weed, or any weed that grows on plowed ground.

FREE descriptive literature. Write today.

Rotary Rod Weeder & Mfg. Co.

Dept. A, Cheney, Wash., U. S. A.

Wishing for sleep is a poor way to get it

A LITTLE wisdom in the daytime is a better assurance of rest than any amount of anxious wishing when nerves are a-jangle at night.

What you do at noon often has more influence on sleep than what you want and hope for, at midnight.

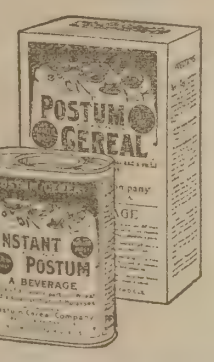
Coffee's drug element, caffeine, whips up the nerves, and when its use is continued there's usually a penalty which no amount of mental effort can avoid.

The part of wisdom, as so many thousands have found, is to turn away from nerve-stimulation and adopt rich, delicious Postum as the mealtime drink. Postum delights the taste, but brings no disturbance to nerves or digestion. Even the little children can share in the enjoyment of Postum at any meal.

It's better to anticipate warnings than to be driven by them.

It's better to encourage and preserve sound nerves and complete health than to listen to the clock ticks at night and say, "I wish!"

You can get Postum wherever good food or drink is sold and served. An order today may be the beginning, for you, of the great satisfaction and comfort which so many others have found in Postum.



Your grocer has both forms: Instant Postum (in tins) made instantly in the cup by the addition of boiling water. Postum Cereal (in packages of larger bulk, for those who prefer to make the drink while the meal is being prepared) made by boiling for 20 minutes.

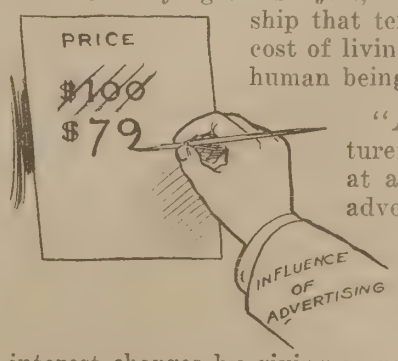
Postum *for* Health

"There's a Reason"

Made by Postum Cereal Co., Inc.
Battle Creek, Mich.

Advertising Lowers Cost of Goods

"Advertising," writes John Lee Mahin, a man who has spent his life studying the subject, "is an organized form of salesmanship that tends, in the long run, to make the cost of living more reasonable for the average human being.



"Advertising enables the manufacturer to give a better quality of goods at a lower price than he could if his advertising had not lifted him out of the rut of ruinous competition and standardized his articles of merchandise.

"Further, advertising reduces interest charges by giving manufacturers power to make quicker collections; it lowers the cost of production of standard articles, benefits skilled labor and improves all kinds of labor conditions.

"Modern advertising methods reduce the cost of everything that requires personal salesmanship in its distribution. Thus they reduce the ultimate cost of living."

The above truths are well illustrated by the advertising columns of this paper.

A great many money-saving opportunities are to be found constantly in them.

Are you reading and investigating our advertisements? When you write our advertisers, please mention The Washington Farmer.

VETERINARY

(Continued from page eleven.)

been very successful in many instances. If you are away from the services of a veterinarian, Fowler's solution of arsenic in one ounce doses daily, morning and evening, for a week to three weeks, has given good results. This, however, is probably not as good a treatment as the former.

Frozen Teat.—I have a cow that I dried up last fall; when cold weather started she got a front teat frozen and it stayed frozen all winter, thawing when the thaw came and freezing again when it got cold. It is now black and very soft. Can I save it or will it come off and what effect will it have on the cow? She will freshen the last of March and is a heavy milker.
Omak, Wash. L. S.

The frozen part of the teat will sluff off. The probability is that that teat will leak the milk constantly while that quarter is secreting. I do not believe there is any way that you can save it except by drying that quarter up as rapidly as possible.

Needs Examination.—I have a 6-year-old cow that came fresh the first of last June, but she has not come in heat since. She is a good cow and I would like to breed her again. C. H.

Of course, the advice would depend upon the cause of her trouble, which I am not able to determine. You do not state whether she is kept in the stable or given exercise, but I might say that it would be to advantage to see that she gets considerable exercise. But I would watch her closely, because, you know, some animals do not show much nervous excitement during the period of oestrum, but that should not be the case for a period of months, so there is probably something else the trouble. It might be a cystic ovary; in that case you would need the services of a veterinarian to determine whether it was or not.

Bowels Loose.—I have a mare 16 years old that is troubled with loose bowels in the morning and afternoon and gets normal at work. Is there anything that will give permanent relief? L. L. C.
Newberg, Ore.

Try giving your mare a teaspoonful of listerine on her feed two or three times daily.

Sow Eats Pigs.—I have a sow that eats her pigs. She has 15 or more at a litter, but usually eats half or more before she quits. I have given her all kinds of roots and green stuff, cooked potato peelings and salt water and all the salty fat pork she would eat, but it does not help. She is a purebred, so I would like to cure her of this habit. E. M. L.
Buena Vista, Ore.

Feed your sow more nitrogenous material during the time that she is carrying her litter. She does not want salt pork. She wants lean meat, peas, soy beans, tankage. By changing the diet you may stop her of the habit. If it is a fixed habit she may not quit it.

FARMERS' WANT ADS

This is the farmers' "want," "sale" and "exchange" department for small advertisements of farmers, including live stock and poultry

Advertising rates for ads running 1 to 3 times, 10c per word per insertion, with a special rate to Farmer subscribers, as follows: Ads running 4 to 12 times, 9c per word per insertion; ads running 13 times or more, 8c per word per insertion.

All commercial and land advertising 10 cents per word each insertion. Open also to nonsubscribers.

In using these columns advertisers must observe: (1) No advertisements will be inserted for less than $1.00. (2) Every word, number and initial, including name and address, must be paid for. (3) New advertisements, changes of copy or cancellations must reach general office, Spokane, Wash., 10 days in advance of publication date. (4) Cash must accompany order.

Above rates include insertion in The Washington Farmer, The Idaho Farmer and The Oregon Farmer, which constitute the Pacific Northwest Farm Trio, 46 Review Building, Spokane, Wash.

HELP WANTED—Male 3

RAIWAY MAIL, GOV'T CLERKS,-CARRIERS; $125-$200; experience unnecessary. Particulars free. Write Mokane Institute, Dept. A28, Denver, Colo.

AGENTS WANTED 9

$21 DAILY AVERAGE IS WHAT OUR salesmen are clearing, selling Easy Pump Equalizers. They make hardest working pumps work easy; windmills turn in slightest wind; pumping engines go with less than half the gas or steam. Fit all pumps. Warranted five years. Needed everywhere. Consolidated Steel & Iron Co., Minneapolis, Minn.

AGENTS—MASON SOLD 18 SPRAYERS AND auto washers one Saturday; profits $2.50 each. Square deal. Particulars free. Rusler Co., Johnstown, Ohio.

AGENTS — FAST SELLING, PROFITABLE line knitted pure silk ties. Write for sample, prices. B. & M. Co., 394 North Grove st., East Orange, N. J.

SITUATIONS WANTED—Male 21

JOB WANTED BY EXPERIENCED MAN FOR six or eight months on dairy farm in apple section; age thirty-four. Please state salary and length of employment first letter. Wm. F. Pursell, 443 Deming place, Chicago, Ill.

MARRIED MAN WITH LIFE EXPERIENCE wants position on grain or stock ranch; capable of taking full charge; references exchanged; state wages. Box 453, Sandpoint, Idaho.

EDUCATIONAL 45

EARN MONEY QUICKLY—THERE'S NO LIMit to one's earning capacity in business. And this great business college, after training you thoroughly, places you in a paying position. Courses include banking, stenography, accounting, private secretarial. Write for free catalogue. Behnke Walker Business College, Portland, Ore.

FRESH FOOD PRODUCTS 51-1

HONEY BRAND HONEY, PURE, LIGHT, thick and good flavored, from alfalfa and sweet clover. One 60-lb. can, $7.50; two for $14.50. Write for circular and prices in pails. Salesmen wanted. Oliver Sires, Wapato, Wash.

WHITE ALFALFA, SWEET CLOVER honey; 1 60-lb. can, $7.50; 2 60-lb. cans, $14.50; six 10-lb. cans, $8.50; three No. 10 pails, prepaid third zone, $6.50. Wells D. Rose, Sunnyside, Wash.

HONEY,—FINE QUALITY ALFALFA SWEET clover; 60-lb. can, $7.50; 2 cans, $14.50; three 10-lb. pails prepaid, second zone, $5. Harry Fisher, Prosser, Wash.

3-POUND BOX ABSOLUTELY BONELESS codfish, fine white, new catch fish, delivered by mail, $1. Coffin Fish Co., Seattle, Wash.

FRESH FOOD PRODUCTS (Continued) 51-1

HAPPY HOME HONEY FROM BLOSSOMS of alfalfa and sweet clover, in liquid form; 6 10-lb. pails, $8.50; 1 60-lb. can, $7.50; 2 cans, $14.50, at Mabton. H. N. Paul, Mabton, Wash.

HONEY—LIGHT AMBER HONEY, LIQUID form; one sixty-pound can, $7; two cans, $13.50. A. L. Traner, Touchet, Wash.

FINEST ALSIKE CLOVER HONEY, ONE sixty-pound can, $7.50; two cans, $14.50. Roy Selwyn Wilson, Buhl, Idaho.

WORLD'S BEST CLOVER HONEY, 60 pounds, $6.15; two 60s, $12. Browne, Box 499, Twin Falls, Idaho.

HONEY, BEST QUALITY; 1 60-LB. CAN, $7.50, discount on large quantities. E. Sires, Wapato, Wash.

MISCELLANEOUS—FOR SALE 60

SASH AND DOORS—O. B. WILLIAMS CO., 1943 First ave., So. Seattle. Chicken house sash, 20" wide by 25" high, 80c; a dozen different sizes in stock for immediate shipment. Skylights for chicken houses, 36"x10" price, glazed, $2. This is the size recommended by the Western Washington experiment station. We carry them in stock for immediate shipment. Sash and doors for all purposes at lowest prices. All orders receive prompt attention. Our large illustrated catalogue No. 35, showing full line of building material and built-in fixtures for the home, free on request. O. B. Williams Co. Established 1899.

TOBACCO, NATURAL LEAF—SWEET AND mellow hand-picked chewing or smoking, 5 lbs., $1.50; 10 lbs., $2.50; smoking, 10 lbs., $2. Furnish free recipe for preparing. Quality and delivery guaranteed. Farmers' Tobacco Exchange, Sedalia, Ky.

WALL BOARD—WRITE FOR SAMPLE OF Washington plaster wall board; won't warp, won't burn. Manufactured by Washington Building Products company, 6851 E. Marginal Way, Seattle, Wash.

PIPE — NEW AND SECOND-HAND, ANY size; low price; standard grade roofing paper at a big saving; belting, all plies, all sizes, cheap. Write Alaska Junk Co., S120 Adams st., Spokane, Wash.

E. Z. BUILT SILO, ERECTED IN SECTIONS; has double walls with 6-inch air space; freeze proof; built of fir lumber; strong, durable and low priced. J. F. Jacobson Lumber Co., Tacoma, Wash.

HOMESPUN CHEWING AND SMOKING TObacco 5 lbs., $1.50; 10 lbs., $2.50; valuable formula smoking, 5 lbs., $1. Pigeon Roast, Sedalia, Ky.

CEDAR CHESTS DIRECT FROM FACTORY to your home; Tennessee cedar, solid copper trimmings. Write for catalogue. J. W. Higgins & Sons, 1912 Gilsan st., Portland, Ore.

SHERWIN-WILLIAMS PAINT $1.80 GALLON; $125 3 h. p. Goss engine, $65; $42.50 Colt's automatic, $25; $65 Krisky brooder, $40; all like new. Beverly Egg Ranch, Leona, Ore.

TOBACCO, NATURAL LEAF, FOR MILD SMOking; 10 lbs., $1.50; 20 lbs., $2.75; will furnish free recipe for preparing. Leaf Tobacco Exchange, Mayfield, Ky., Star Route.

SWANLITE LIGHTING PLANT, ONE YEAR old; good as new; will give bargain, or exchange for anything I can use on farm. Box 79, Route 3, Kent, Wash.

HOMESPUN CHEWING OR SMOKING TObacco, collect on delivery; 5 pounds, $1.50; 10 pounds, $2.50; 20 pounds, $4. Farmers' association, Paducah, Ky.

CEDAR POSTS, POLES, PILING AND STUBS; lengths and sizes to order. Marsden Red Cedar company, Calder, Idaho.

RATS, MICE, POSITIVELY EXTERMINATED. Send $1 for proven method, satisfaction guaranteed. Hanson, 2720 State st., Everett, Wash.

TOBACCO — KENTUCKY'S PRIDE; RICH, mellow chewing, 10 lbs., $3.25; smoking, 10 lbs., $2.50. Farmers' Club, Mayfield, Ky.

HOMESPUN CHEWING AND SMOKING TObacco, 5 lbs., $1.25; 10 lbs., $2.50; 20 lbs., $4.25. Farmers' Union, Mayfield, Ky.

JOHNSON'S PACKAGE BEES, QUEENS. Write for remarkable prices. 165 Raymond ave., San Jose, Cal.

FREE SMOKING TOBACCO—SMOKE ON US. Write for free sample. Hawesville Tobacco Co., Hawesville, Ky.

EARLY OHIO AND RURAL NEW YORKER seed potatoes. C. J. Hagerman, Chewelah, Wash.

DEVRY PICTURE MACHINE, WITH SCREEN and rewinds. L. G. Sickles, Cashmere, Wash.

MACHINERY—For Sale 93

WHY WASTE TIME IN THINNING CARrots or any other vegetable? Wright Planter, a new machine, will evenly drop as many seeds per foot as desired. Illustrated booklet free. Geo. H. Wright, 1925 Pacific avenue, Spokane.

STOVE REPAIRING. 128

WRITE MYER RUBENS, SPOKANE, ABOUT stove repairs, welding broken parts, nickle plating.

PETS—Dogs, Birds, Etc. 171

REGISTERED AIREDALE PUPPIES—MALES, $25; females, $15. Wildwood Heights Farm, Spirit Lake, Idaho.

POULTRY (Baby Chicks) 174

BABY CHICKS HATCHED IN PETALUMA INcubators are a superior class; strong, vigorous, sturdy, grow rapidly, lay early. Buy chicks from hatcheries using Petaluma incubators. You will find one near you. If not, write us. Catalog free. Petaluma Electric Incubator Co., Petaluma, Cal.

BABY CHICKS FROM TANCRED AND HOLlywood strain; heavy laying White Leghorns, mated to cockerels from W. W. experiment station hens, 265-314 egg record, $19 per 100; hatching eggs, $7 per 100. Wax's Poultry Farm, Kent, Wash.

WHITE LEGHORN CHICKS (TANCRED strain), from selected two-year-old hens mated to cockerels from 251 to 286 egg trap nested dams. March and April, $18 per 100, after April 22, $15 per 100. Bona Terra Ranch, Drain, Ore.

WHITE LEGHORN BABY CHIX, $16 PER 100; eggs, $6. Mrs. Arp, St. John, Wash.

POULTRY—Baby Chicks (Continued) 174

YESTERLAID EGG RANCH, KENT, WASH.—Dear Sir: Am more satisfied every day with the chicks received the 17th. They are certainly husky and while Feb. chicks may be supposed to lack vigor, it is certain yours lack nothing. May I increase my order 150 chicks to be delivered with my March 22d order. Irving Kunz, Hoquiam, Wash. Dear Sir: The chicks I got from you the 20th of May are fine. Please let me know your prices for 1922, as I am in the market again for a good order. A. E. Rackow, Hollister, Idaho. Dear Sir: Please let me know the date my 1000 chicks will be delivered. The chicks you sent me in 1921 are just wonderful. Got 70 per cent lay all winter. H. H. Coffey, Chehalis, Wash. We hatch 12,000 of these kind of White Leghorn chicks every 5 days from our own eggs. All sold out until May 1st. Orders for hatching eggs can be filled any time. Largest, most modern and up-to-date trap nest poultry ranch in the world. Yesterlaid Egg Ranch, Kent, Wash.

400,000 BABY CHICKS—OUR WHITE LEGhorns are bred to lay; priced at $15 per 100. We hatch from some of the best flocks of R. I. Reds, Barred Rocks, Anconas and Minorcas to be found in the northwest. Chicks are priced at $22.50 per 100. Send $1 deposit per 100 with your order, paying the balance on inspection of chicks. Safe arrival guaranteed. We have a few standard makes of incubators and brooders at greatly reduced prices. Send for our circular offer. Seattle Hatchery, 1906 Pike place, Seattle.

"FRESHLAID" WHITE LEGHORN CHICKS have the qualities you want; vigor and scientific breeding for the heaviest egg production; every "Freshlaid" male is from a high record hen. Freshlaid Farms is one of largest and oldest chick plants in the Inland Empire. There is a real demand for "Freshlaid" chicks, especially from our old customers. We are sold out until May 1. Write at once if you wish May chicks. May chicks make ideal winter layers. Catalog. Freshlaid Farm, Colfax, Wash.

FOR SALE—WHITE LEGHORN BABY chicks from free range selected hens mated with pedigreed cockerels from 200-287 egg trap nest records. May and June prices $3.50 per 25; $6.50 per 50; $12 per 100. Special prices 500 and 1000 lots. Safe arrival guaranteed. You pay only for chix received alive and in good condition. No money in advance, pay on delivery. Order now. Established 1898. Must Hatch Incubator Co., 445 Seventh st., Petaluma, Cal.

EBORALL'S STRAIN WHITE LEGHORNS. Our hatch of 2300 chicks per week is now booked for Feb., March and April, principally to old customers. Your inspection is invited at all times. We are now booking chicks for May at $14 per 100. Write for circular. Crystal White Poultry Farm, McMinnville, Ore. Box. 33.

TRY OUR PARCEL POST PACKAGE—KEEP the old hen busy. We will ship you first-class baby chicks, postpaid to your door, direct from the hatchery and guaranteed all alive. Price, $4.50 per 25; $8 per 50. For delivery April, May or June. Order now. The White Hatchery, Petaluma, Cal.

UNION DISTRICT HATCHERY IS NOW booking orders for the best thoroughbred baby chicks at the right price. White, Buff and Brown Leghorns, Rhode Island Reds, Black Minorcas, Anconas and Barred Plymouth Rocks. F. & L. Downing, Los Gatos, Cal.

BABY CHICKS, HATCHING EGGS—FROM Hoganized hens, well mated. White and Brown Leghorns, R. I. Reds, Barred Rocks. Safe arrival guaranteed. Order early. Write for circular. Stubbe Poultry Ranch & Hatchery, Box 67J, Palo Alto, Cal.

WHITE ROCK BABY CHICKS, "DANIEL'S IDEALS," from our own trapnested stock entirely. Write for prices and dates, also eggs for hatching. Free catalog. Ideal Poultry Yards, Hoquiam, Wash. Star Route No. 25.

BABY CHICKS — REDUCED PRICES ON White Leghorns, Reds, Barred Rocks, White Rocks, Minorcas, and Anconas; booking orders now; postal secures free catalog. Write today. C. N. Needham, Salem, Ore.

BABY CHICKS FROM TRAPNESTED WHITE Leghorns of superior quality; 14 years breeding for egg production. $18 per hundred. Chas. L. Perkins, 1337 Burrage, Portland, Ore.

BABY CHICKS, S. C. RHODE ISLAND REDS, $22.50 per 100; S. C. White Leghorns, $18 per 100; March chicks all sold. Maple Brook Poultry Farm, Southworth, Wash. Box. 2.

BABY CHICKS — WE GUARANTEE OUR chicks to be from the highest producing hens in Petaluma. Write for further information. The White Hatchery, Petaluma, Cal.

WHITE LEGHORN CHIX, FROM OUR FREE range selected heavy laying breeders; after May 3d, $12.50 per 100. Chandler Poultry Farms, Lebanon, Ore.

TANCRED STRAIN WHITE LEGHORN BABY chicks, $18 per 100; eleventh season; incubator capacity, 18,000 eggs. D. A. Gillette, R. 4, Yakima, Wash.

WHITE LEGHORNS AND WHITE ROCKS; trap nested strains; chix and eggs, contest pen, $5 per 15. Palouse Falls Ranch, Palouse Falls, Wash.

S. C. ENGLISH WHITE LEGHORN CHIX, Hollywood strain, 15c; Barred Rock chix, 20c. Bertha Jorgensen, R. 1, Hillsboro, Ore.

ANCONA BABY CHICKS, SHEPPARD STOCK; hatching eggs, $2 per 15; $10 per 100, delivered. R. P. Irwin, Tonasket, Wash.

WHITE LEGHORN BABY CHICKS. CIRCULAR on request. San Jose Poultry Yards, San Jose, Cal.

Leghorns.

SINGLE COMB BROWN LEGHORN EGGS, from vigorous stock, hatched and raised by hens; heavy layers; unlimited range; $15 eggs, $1.50; 30, $2.75; 100, $7; charges prepaid. Incubator lot a specialty. L. Smitchger, Boise, Idaho.

WHITE LEGHORN CHICKS FROM OLD hens, 228 eggs average; 100, $18; selected utility hens, 100, $14. Usual terms, reductions and guarantee. Acme Poultry Farm, Cottage Grove, Oregon.

SINGLE COMB BROWN LEGHORNS; BEST winter layers. Pacific International prize winners. Cockerels, $3; eggs, $1.50 per 15. Circular free. J. E. Dickerson, Parma, Idaho.

PRIZE BUFF LEGHORNS; EGGS 15C EACH; cockerels, $2. C. E. Cleveland, Stanfield, Ore.

POULTRY—Leghorns (Continued) 174

"HENACRES" 8 WEEKS' OLD PULLETS; March or May hatched; big, healthy, vigorous bred to lay. Booking orders now. 6000 to sell, $1.50 each or 500 for $700. Satisfaction guaranteed or money back. Baby chicks for February, March and April all sold to old customers. May chicks, $22 per 100; $200 per 1000. June, $16 per 100; $140 per 1000. Safe delivery guaranteed. Hatching eggs, $2 per 15; $9 per 100; $80 per 1000. "HENACRES" Leghorns are known all over the northwest. Ask your neighbor. Illustrated catalog and booklet on poultry management free. "HENACRES," Box A, Prosser, Wash.

SINGLE COMB WHITE LEGHORNS (TANcred strain); selected heavy laying second and third year hens mated to cockerels from 250 to 275 egg trap nested dams; hatching eggs, $1.50 per 15; $7.50 per hundred; chicks, $18 per hundred, safe delivery guaranteed. Oaklawn Poultry Farm, Hillsboro, Ore.

PUREBRED S. C. WHITE LEGHORNS; ALL breeding hens of trap nested strain, carefully selected for vitality and standard requirements; baby chicks, $18 100; safe delivery guaranteed, eggs, $1.50 per 15; $8 100. Frank Volland, Rt. 1, Kennewick, Wash.

TRAPNESTED WHITE LEGHORN BREEDING stock and setting eggs; famous Carnation high record stock; pedigreed breeding for heavy winter layers. Improve your flock by adding Carnation stock. Ernest W. Raush, Carnation Poultry Farm, Kent, Wash.

WHITE LEGHORN EGGS FROM HEAVY laying hens and Tancred royal males; 15 for $1.50; from exhibition laying matings, 15 for $3; small mating strictly Tancred royal, $3 for 13. L. M. Patterson, E2517 First ave., Spokane.

WORLD-FAMOUS EGG PRODUCERS; O. A. C. White Leghorns; vigorous, free range stock; baby chicks and eggs; special low price for hi-grade chicks for May delivery. Write for circular. Corvallis Poultry Farm, Corvallis, Ore.

BUFF LEGHORNS EXCLUSIVELY; EGGS, chicks, cockerels; proven and acknowledged leaders of their kind for laying and exhibition. Mating list free. R. Stromquist, Tigard, Ore.

OREGON AGRICULTURAL COLLEGE WHITE Leghorns. May and June chicks, $14 per 100; eggs, $2 per setting; $8 per 100. Russell Poultry Farm, Corvallis, Ore.

FORD'S BRED-TO-LAY S. C. WHITE LEGhorns. Hatching eggs, $2 per setting; $8 per 100; special matings on request. W. A. Ford, Umatilla, Oregon.

HATCHING EGGS, TANCRED STRAIN, S. C. White Leghorns from Hoganized flock; $1 per 15; $3 per 50; $5 per 100. Fred Oberg, Redmond, Ore.

S. C. WHITE LEGHORN BABY CHIX FROM trap nested, Hoganized hens; also cocks and cockerels. J. Panck, Sherwood, Ore, R. 1.

WHITE LEGHORNS, TRAP NESTED STRAIN, hatching eggs, baby chicks. Write us. Washington Poultry Farm, Hartford, Wash.

S. C. W. LEGHORN HATCHING EGGS, HOLlywood strain; six dollars per hundred. Mrs. Rominger, Underwood, Wash.

POSTPAID—13 TORMOHLEN "EVERLAY strain" S. C. Brown Leghorn eggs, $1.50. E. J. Davis, Cambridge, Idaho.

BROWN AND BLACK LEGHORN SPECIAList; contest and show winners. Clifton Dickerson, Silverton, Ore.

SINGLE COMB WHITE LEGHORN HATCHing eggs, $1.50 per 15. Edw. W. Meyer, Pullman, Wash.

Barred Rocks.

BARRED PLYMOUTH ROCK COCKERELS for sale—You will find no better on the Pacific coast; $6 each, f. o. b. Hubbard, Ore. If not as represented, send them back and get your money. We guarantee them. Dimick & Waldron, Hubbard, Ore., Route 2.

FREE MATING LIST, DESCRIBING OUR ideal Barred Rocks; 337 1sts, 10 specials for 1921. High egg record, 303 eggs; average egg record 229 eggs. Jacobson's Poultry Yards, 3596 Tacoma ave., Tacoma, Wash.

HATCHING EGGS, OREGON AGRICULTURAL college Barred Rocks; choice pen, $2 per 15; utility stock, $1.50; great layers. J. M. Steen, Lebanon, Ore.

QUALITY BARRED ROCKS, WINNERS, LAYers, eggs, setting, 3 and 5 dollars. Robt. L. Burkhart, Albany, Ore.

PURE BARRED ROCK HATCHING EGGS, $2 and $3 per fifteen. Mrs. A. Nafziger, Route 7, Box 151, Salem, Ore.

PURE O. A. C. BARRED ROCK EGGS, $1.50 per fifteen; $7 per hundred. Mabel Currin, Monroe, Ore.

OREGON AGRICULTURAL COLLEGE BARred Rock cockerel, $3. Jesse Morgan, Cosmopolis, Wash.

O. A. C. STRAIN BARRED ROCKS; EGGS, $6 hundred; chicks, $25 hundred. The Idle Hour Poultry Farm, McCoy, Ore.

HUNT'S FINE BARRED ROCKS. WRITE for circular on eggs. W. A. Hunt, Lebanon, Ore.

BARRED ROCK CHICKS, HEAVY LAYING O. A. C. strain. Mrs. E. Hodge, Waterloo, Ore.

FANCY BARRED ROCK COCKERELS $5 UP. J. E. Horton, 2408 Altamont, Spokane.

Turkeys, Ducks, Geese

EGGS FROM PRIZE-WINNING MAMMOTH Toulouse geese, the kind that hatch; 50c each, $45 per 100. Imperial white Pekin duck eggs, $2.50 per 15, $14 per 100. Goslings, ducklings. R. E. Baumgardner, Wenatchee, Wash.

EGGS, MAMMOTH TOULOUSE AND WHITE Chinese geese; Mammoth Pekin ducks, pearl guineas, Single Comb Reds. C. O. Johnson, R. 1, Medical Lake, Wash.

SALE OR EXCHANGE—YOUNG TOMS, SEVen dollars, or will exchange tom for two females. P. A. Snyder, Elk, Wash.

MAMMOTH PEKIN EGGS FROM DUCKS that take the prizes. Booking advance orders. Mrs. E. A. Bennett, Salem, Ore.

PURE BLOOD MAMMOTH BRONZE TURkeys, prize winning stock. Mrs. Frank Browning, Route 1, Nampa, Idaho.

MAMMOTH BRONZE TURKEY TOMS, $15; weight 26 pounds. Harry Smith, Coupeville, Wash.

MAMMOTH PEKIN DUCK EGGS, $2 PER 10, postpaid. Art Moore, Persist, Ore.

Miscellaneous Poultry.

EGGS FOR HATCHING FROM ESTABLISHED laying strain of White Plymouth Rocks, $2 per setting; $10 per 100. Price on stock on application. Chas. W. Brewster, 3514 20th st., Everett, Wash.

PARAMOUNT WHITE WYANDOTTES "BRING home the bacon." Trap nested, pedigreed. Instructive catalog free. No baby chicks. Bayard H. Moul, 1226 Washington blvd., Seattle.

SUPREME WHITE WYANDOTTE COCKERels; bred up for eight years; all birds guaranteed. Price $2.50 and $3. Mrs. Earl Murray, Box 170, Ione, Oregon.

PEARL GRAY GUINEA FOWLS, $1.50 EACH. Mrs. Mary Insel, Shelton, Wash.

(Continued on the following page.)

FARMERS' WANT ADS

This is the farmers' "want," "sale" and "exchange" department for small advertisements of farmers, including live stock and poultry.

Advertising rates for ads running 1 to 3 times, 10c per word per insertion, with a special rate to Farmer subscribers, as follows: Ads running 4 to 12 times, 9c per word per insertion; ads running 13 times or more, 8c per word per insertion.

All commercial and land advertising 10 cents per word each insertion. Open also to nonsubscribers.

In using these columns advertisers must observe: (1) No advertisements will be inserted for less than $1.00. (2) Every word, number and initial, including name and address, must be paid for. (3) New advertisements, changes of copy or cancellations must reach general office, Spokane, Wash., 10 days in advance of publication date. (4) Cash must accompany order.

Above rates include insertion in The Washington Farmer, The Idaho Farmer and The Oregon Farmer, which constitute the Pacific Northwest Farm Trio, 46 Review Building, Spokane, Wash.

POULTRY—Miscellaneous (Continued) 174

SUMMER SALE—MAY AND JUNE BARGAIN prices. We want to put a flock of Butler Farm White Leghorns or Hi-a-Hee Barred Rocks on every farm in the northwest because they are the kind that will add to the farm income. If you want some of these high producers at bargain prices, write today for special prices and May and June eggs and chicks. Butler Poultry Farm, Jennings Lodge, Ore.

WE ARE HATCHING HOLLYWOOD AND Tancred strain of White Leghorns every Monday, Wednesday and Friday. Prices at $20 per 100; $195 per 1000. Commercial strain mated with 250-egg cockerels at $18 per 100. R. I. Red, Barred Rocks, Black Minorca and Ancona chicks are priced at $25 per 100. Send for free catalog and prices on incubators, brooders and pullets. Queen Hatchery, Seattle.

FOR SALE—SINGLE COMB BROWN LEGhorns, Rhode Island Reds, Mammoth White Pekin ducks, male birds, hatching eggs, baby chicks. Write for mating list. The Up-to-Date Poultry Farm. Established 1907. Arthur W. Wade, Marysville, Wash.

EGGS! EGGS! EGGS! "SNOWFLAKE" WHITE Orpingtons, establish highest official Orpington pen record western Washington laying contest. Average 204 eggs; free mating list; hatching eggs, $3, $5, $10 per fifteen. W. T. Thompson, Bozeman, Mont.

THE PROGRESSIVE HATCHERY—PUREbred S. C. R. I. Red and S. C. White Leghorn baby chicks from vigorous trap nested or selected range bred stock; safe delivery guaranteed. Send for circular. 1534 Northeast 12th, Portland, Ore.

POULTRYMEN—SEND EIGHT TWO-CENT stamps for special three months' trial for the best and oldest journal in the west. The articles and advertisements are of special interest to the poultry breeders. Northwest Poultry Journal, Salem, Oregon.

S. C. RHODE ISLAND REDS—OUR FLOCK IS one of the best in the Willamette valley, and we have hatching eggs from our best matings to deliver to our customers after March first. All baby chicks for 1922 are sold. G. B. Dimick, Oregon City, Ore.

NINE HUNDRED BRONZE TURKEY EGGS promised by May. Then more orders wanted. Eggs of pearl guineas just arrived from Illinois. Eggs of Hoganized Buff Orpingtons. Mrs. J. Wellborn, Warren, Ore.

STOP, LOOK, LISTEN—CHIX AND EGGS from Cecil Sheppard's high grade laying strain of Anconas. Inquiries promptly and courteously answered. W. G. Pearmine, Cona Villa, R. R. 8, Salem, Ore.

ANCONA EGGS AND CHIX—HEAVY WINTER layers; eggs, best pen, $2.50; second, $1.50; flock, $1 fifteen; $10 and $7 hundred; chix, $18 hundred. Order now. J. R. Hall, Hansen, Idaho.

SETTINGS FROM BROOKS HAVEN SINGLE Comb Reds; Redwing strain (Hoganized); bred for color, type, capacity, range raised. Chas. S. Brooks, Underwood, Wash.

WHITE ROCKS AND RHODE ISLAND REDS; eggs, utility stock, $1.50 per fifteen; $8 per hundred. Few cockerels, $4. Mrs. F. D. Terpening, Clatskanie, Ore.

COCKERELS AND EGGS: BARRED ROCKS, Buff Orpingtons, White Leghorns, Dark Cornish, Toulouse geese, Bronze turkeys. E. A. Kruse, Roseburg, Ore.

SINGLE COMB RHODE ISLAND RED COCKerels; hen hatched, range raised; hatching eggs $3 setting (Owen strain). Joe Brunsell, Mt. Vernon Wash.

FOR SALE—ROSE COMB RHODE ISLAND Whites; twelve hens, one cockerel; fine layers. Eggs, $2.50 setting. Harold Price, Monmouth, Ore.

PURE BRED S. C. RHODE ISLAND RED EGGS for hatching; from non-setting, non-fading strain, $3, $5 and $10 per fifteen. Mrs. L. Wham, Double Diamond Ranch, Omak, Wash.

VIGOROUS, HEAVY-LAYING WHITE ROCK breeding stock; pure Fishel strain; hens, pullets, $2 $3; cockerels, $3, $5, $10; prices on quantities. J. B. Axtelle, Hood River, Ore.

S. S. HAMBURGS, COCK AND COCKERELS; prize stock, $5; old hens, $3.50; 15 eggs, $3.50; pullets, $3.50. E. E. Enos, W1908 Montgomery, Spokane, Wash.

COCKERELS—BROWN AND BUFF LEGhorns, Black Minorcas, Blue Andalusians. Boone Avenue Poultry Yards, E1601 Boone ave., Spokane.

PEDIGREED ANCONA COCKERELS AND hatching eggs from 330-egg strain; eggs, $2.50 per setting. Smith's Ancona Farm, Nampa, Idaho.

BLUE ANDALUSIANS: EGGS FOR HATCHing, $2 per setting; heavy layers from beautiful prize winning stock. Mrs. Wm. Rommel, Leahy, Wash.

POULTRY RAISERS, SEND FOR FREE BOOKlet on poultry advertising. The Pacific Northwest Farm Trio, Dept. P, Review bldg., Spokane, Wash.

DOLLARS FOR YOUR EGGS—WE PAY THE top market prices for your eggs and poultry. Daily cash remittances. Western Produce Co., Spokane.

S. C. ANCONAS, SHEPPARD'S SELECT AND 331 egg strains; eggs, $2 per 15; chicks, $20 per hundred. A. B. Larson, Warren, Ore.

S. C. RHODE ISLAND RED HATCHING EGGS; heavy laying strain; $1.50, 15; $7 hundred. Geo. Silvers, Ziliah, Wash.

SHIP YOUR LIVE POULTRY AND EGGS TO us. Highest prices paid; daily remittance. Inland Poultry House, Spokane, Wash.

TRAP NESTED WHITE LEGHORN AND Barred Rock eggs and chicks; records, 200 to 311. Mrs. W. M. Roberts, Elmira, Oregon.

ALLEN'S PRIZE BARRED ROCKS AND White Leghorns are wonderful layers. Write D. W. Allen, LaConner, Wash.

S. C. R. I. RED EGGS, $2 PER 15; $10 FOR 100; special matings, $5 per 15. B. F. Kammerzell & Sons, Colfax, Wash. R. 5.

RANGE RAISED WHITE WYANDOTTE eggs, $1.50 setting; $8 hundred, prepaid, A. Krueger, Colfax, Wash.

BLUE ANDALUSIAN AND WHITE ROCK hatching eggs, $2 per 15. Mrs. C. W. Armstrong, Freewater, Ore.

SINGLE COMB REDS, CHICKS, 20C EACH; eggs fifteen for three dollars. A. E. Bosworth, Omak, Wash.

PARTRIDGE WYANDOTTES, EGGS, $2.50 setting. Hampshire pigs, $16. Merryvale, Barlow, Ore.

BRED TO LAY ANCONAS: HATCHING EGGS. Price list free. Yew Lane Farm, Sherwood, Oregon.

1949 COCKERELS, HATCHING EGGS, 49 VArieties; free book. Aye Bros., Box 14, Blair, Nebr.

EGGS—BLACK MINORCA, WHITE MINORCA, 200-egg strain. Mrs. Frank Winnard, Heppner, Ore.

BUFF ROCKS, BUFF MINORCAS, COCKERels, eggs. Mrs. Day Woodruff, Bow, Wash.

PARKS BRED-TO-LAY BARRED ROCKS, dark strain; big ones; great layers; well barred; Barron English White Leghorns, big ones, headed by descendants of Keystone Maid, record 306 eggs; large lopped combs; beauties. All eggs, $2 per 15, prepaid. Fay Davis, Cambridge, Idaho.

SILVER WYANDOTTES AND SILVER SPANGled Hamburgs, Golden Campines, choice birds for sale. No baby chicks or eggs by the 100. Birds, $5 and up. G. G. Wherry, Payette, Idaho.

LIVE STOCK 177

SEND FOR FREE BOOKLET, "SOME SUGgestions to Live Stock Advertisers," outlining the practices of successful men of long experience. Helps in determining how much to spend, the mediums to select, preparing advertisements, handling inquiries, the use of photographs, etc. Write today. The Pacific Northwest Farm Trio, Dept. W, Spokane, Wash.

LARGE, HEAVY PRODUCING HOLSTEINS for sale at all times in car lots; tuberculin tested; 150 to 200 head always on hand; well marked heifer calves from registered sires and heavy producing dams; crated for shipment anywhere, $25 f. o. b. Levinson & Balmelli, Yakima, Wash.

FOR SALE—HOLSTEIN BULLS, SERVICEable age; sired by son of King of the Sadie Vales. Sire's dam, 30.62 lbs., 2-year-old daughter of Korndyke Abbikerk, son of Pontiac Korndyke. Prices reasonable. D. F. Nugent, Granger, Wash.

SHIP US YOUR POULTRY AND LIVE STOCK. We pay the top market prices. Light veal, fat, fancy, 17c; dressed block hogs, 13c; hens, heavy, 25c; light, 20c. Prompt returns. John Lewis & Co., Spokane, Wash.

WE PAY TOP PRICES FOR YOUR LIVE OR dressed veal, hogs and poultry. Your check by return mail. Shipping tags on request. M. & J. Packing Co., Spokane.

REGISTERED SHORTHORN BULLS, ONE yearling, one four-year-old. Carl T. Bever, Norwood, Idaho.

FOR SALE—REGISTERED GUERNSEY BULL calves and occasionally a heifer; federal accredited herd. Fred Jenner, Oso, Wash.

220 HEREFORD COWS, HEIFERS, BULLS must be sold. Purebreds pay best. Start now. L. L. Young & Sons, Nampa, Idaho.

TILLAMOOK CALVES—SEASON NOW OPEN. Price lists ready; strictly dairy stock. Smith, the Calf Man, Tillamook, Ore.

DUROC BARGAINS—BRED GILTS FOR April, May farrow; registered and crated, $35. Shadeland Farms, Amity, Ore.

TWO YOUNG, REGISTERED SHIRE STUDS; the blue ribbon kind; priced to sell. O. B. Skidmore, Plummer, Idaho.

FOR SALE—MAMMOTH JACK, HEIGHT 16 hands. Address Joseph Naffziger, Pullman, Wash. Route 2.

IMPORTED PERCHERON STALLION FOR sale or will trade for jack. Also some registered Shorthorn bulls left over. E. B. Coulson, Aberdeen, Idaho.

REGISTERED PERCHERON STALLIONS and mares. Priced to sell. Adams & Son, Yakima, Wash.

BIG TYPE POLAND CHINA GILTS, BOARS. Collins, Underwood, Wash.

HARNESS and SADDLERY 189

SEND FOR FREE HARNESS AND SADDLE catalog today; cut out the middleman, buy direct from the manufacturer. Lowest prices in the west; satisfaction guaranteed. Established 1881. Write Pierce Harness Co., dept. T, Spokane, Wash.

HAY FOR SALE. 200

ALFALFA HAY, GUARANTEED QUALITY; prompt shipment; buy direct and save money. Prices upon application. Ernest T. Freepons, Walla Walla, Wash.

JOB PRINTING 372

GUARANTEED BETTER BUTTER WRAPpers; 100, 60c; 250, $1.50; 500, $2.50; 1000, $4.25; printed to order. Home Specialty Co., Middleton, Idaho.

TANNING 425

WE WILL TAN YOUR COW OR HORSE HIDES into robes or coats at the right prices and guarantee our work as we are custom tanners and manufacturers. We also buy hides, furs, wools and pelts, or will exchange harness and sole leather for same. Write for prices. Spokane Fur Tanning Co., 7 Pine st., Spokane.

LET US TAN YOUR HIDE—COW AND HORSE hides for fur coats and robes. Cow and steer hides into harness or sole leather. Catalog on request. The Crosby-Frisian Fur Co., Rochester, N. Y.

MONUMENTS 510

COMPLETE STOCK, RIGHT PRICES. CORrespondence solicited.. J. W. Harding, Inland Monument Co., N1001 Monroe, Spokane.

PERSONAL 537

LADY, STRONG, HEALTHY, EXPERIENCED in farm work; desires position as housekeeper and assisting in farm work; for bachelor or widower, 45 to 50; no children; object matrimony. D 6, Oregon Farmer, Spokane.

BUILDING MATERIAL 588

NO WASTE, LESS LABOR. BUILD WITH ready cut houses and barns and save money. Attractive new plan book sent free. 4c postage. Prices quoted on material list. Write today. Price advance certain to come soon. Local Keystone Lbr. Co., 3000 Sprague, Tacoma, Wash.

SEEDS 620

ALFALFA SEED, CLOVER SEED, SEED corn—We are located in the heart of the largest and best alfalfa and clover seed district in the west and can give you both quality and price. Get our samples and quotations before buying. Our seed corn is of the finest acclimated strains. Garden and flower seeds of all kinds. Send for our catalog. Darrow Bros. Seed & Supply Co., Twin Falls, Idaho.

ALFALFA SEED 99 PER CENT PLUS PURE; state test, 22c pound. Red clover seed, same test, 22c pound. Comb honey, choice, $5 per case, you pay postage. Farmers' Service, Box 472, Twin Falls Idaho.

SEEDS (Continued.) 620

FORAGE PEAS BUILD UP SOIL, FATTEN hogs and mutton, for hay, or maturing for crop. Price, per ton, $65, including bags; 1000 lbs. at one rate, f. o. b. St. Anthony, Idaho. Terms, cash with order, or draft with bill lading. Samples mailed promptly on application. Write for prices, larger quantities. The Everett B. Clark Seed Co., St. Anthony, Idaho.

HANNCHEN BARLEY SEED—BEST WESTern Oregon spring variety. One of the best for eastern Oregon; best grade, $40; second grade, $35 ton cash f. o. b. Corvallis. O. A. C. Farm Crops Department, Corvallis, Ore.

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CERTIFIED LITTLE MARVEL GARDEN peas, hand picked, $7 hundred pounds; small lots, 10c pound. All net. W. A. Bower, Avon, Idaho.

GET ONION SEED OF GROWER—SOUTHport Red Globe, Yellow Globe Danvers, $1.35 lb., prepaid. Cornell Seed Ranch, Middleton, Idaho.

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HUBAM CLOVER, CERTIFIED SEED OF THE earliest strain; Idaho grown. DeKalb County Agricultural association, DeKalb, Ill.

SEEDS—FARM AND GARDEN; ALL STATE tested. Write for catalog. Washburn & Wilson Seed Co., Moscow, Idaho.

ALFALFA SEED, POSTPAID, ORENBERG, ounce, 25c; registered Cossack, pound, 75c. W. W. Perkins, Camas, Mont.

IDAHO GROWN TIMOTHY, ALSIKE CLOVer; mixed, 9c; purity, 98.72; timothy, 6c. M. Meador, Norwood, Idaho.

EXTRA YELLOW DANVER ONION SEED, $1.35 per lb.; 5 lb. lots, $1.25. E. Dammel, Rupert, Idaho.

COSSACK ALFALFA SEED—SEND FOR samples. S. H. Hillman, Box 5, Thompson Falls, Mont.

GUARANTEED SEED, TIMOTHY, ALSIKE and timothy mixed. M. Hill, McCall, Idaho.

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15 TO 20 FEET SQUARE GOOD SOIL, planted to everbearing strawberries, will supply average family same year; keep cultivated, runners off, fertilize lightly, keep moist (avoid alkali). My Progressive and Superb are true to name; known and tried standard varieties, come to you inspected and prepaid, parcel post, $1.40 per 100; $6 per 500; $11 per 1000; 2 dewberry plants free long as they last, with orders. Dewberry plants, 75c doz; rooted Concord grapes $1.50 doz all prepaid, insured mail. Plant early. Model Fruit Farm, N. Matthiessen, proprietor, Route 1, Emmett, Idaho.

BLACKBERRIES — CORY'S THORNLESS; largest berry; Macatawa large, splendid flavor; best shipper; everbearer. Alton improved raspberry, delicious flavor, large, twice as productive as Cuthbert. John Lammiman, Route 1, Palo Alto, Cal.

RELIABLE NURSERY STOCK—ITALIAN AND Petite, 4-6 ft., and 3-4 ft.; Concord, Worden and Moore's Early grapes; grafted Franquette walnut, all sizes. Send for catalog and price list. Villa Nurseries, Route 1, Portland, Ore.

GROW GRAPES FOR PROFIT—SPECIAL LOW prices; grape vines, berries, asparagus, for commercial planting; peaches, cherries, apricots, apples; satisfaction guaranteed. Write today. Home Nursery Co., Richland, Wash.

CLARK SEEDLING, THE STRAWBERRY that made Hood River famous. Write for list of other varieties and prices. Plant nurseries at Hood River and Prosser, Wash. W. R. Gibson & Son, Hood River, Ore.

GLADIOLA BULBS, SURE TO BLOOM; BRILliant colors; good varieties; $1.50 per hundred; large size, 50 cents per doz, postpaid. Cash with order. Rupert Floral Co., Rupert, Idaho.

STRAWBERRY PLANTS—IMPR. NEW OREgon, Ettersburg 121; large, vigorous and healthy; guaranteed free from root weevil. 80c 100; $5, 1000. Christian Arnesen, Canby, Ore.

PROGRESSIVE EVERBEARING STRAWBERry plants at $1.25 per 100, or $9 per 1000, postpaid; inspected, guaranteed. O. W. Zurcher, S104 17th street, Boise, Idaho.

CORY THORNLESS BLACKBERRY—DELIcious, very large and early. You get strong, well rooted plants, true to name, from pioneer grower. Wm. Mortenson, Route 1, Lodi, Calif.

CHOICE LOGANBERRY TIPS, $25 PER THOUsand; personally inspected by our county fruit inspector before they are shipped. I pay express. G. W. Johnson Jr., Salem, Ore., Route 4.

NURSERY STOCK, ITALIAN PRUNE TREES and trees of all kinds. Berries and small fruits of all varieties. Buy direct and save 50 per cent. Brooks Nursery, Lafayette, Ore.

SEND FOR OUR NEW PRICE LIST ON FRUIT trees, berry bushes, shade trees and roses on their own roots. Krause Nursery, Spokane, Wash.

GENUINE SUPERB EVERBEARING STRAWberry plants, inspected, $1.25 hundred; $10 thousand. H. H. Skagen, Kent, Wash.

FOR SALE—EXTRA LARGE (CUMBERLAND) blackcap plants; six dollars per hundred. E. W. Raush, Carnation Poultry Farm, Kent Wash.

GRAPES—1 AND 2 YEAR OLD CONCORD, 6 and 8 cents; any variety grape scions, 2c, prepaid. E. L. Capps, Grandview, Wash.

LOGANBERRY PLANTS, 6, $1; TIPS, 18, $1; Cuthbert raspberries, 75, $1; 1000, $10, prepaid. Alvin Myers, Deebay, Wash.

CHOICE LOGANBERRY PLANTS, $20 PER thousand, prepaid. Ward K. Richardson, 2393 Front, Salem, Ore.

LOGANBERRY PLANTS—50,000 CHOICE plants; unusual low price. Harry Lanum, R. 4, Salem, Ore.

LOGANBERRY PLANTS FURNISHED BY the grower. Grape Lane Farm, Turner, Ore.

STRAWBERRY PLANTS, $5 PER 1000, Briggs, Plant Nursery, Olympia, Wash.

FARM LANDS FOR SALE. 651

130 ACRES, 8 MILES FROM OLYMPIA, WASHington; on paved Pacific highway; 100 acres low rich soil, balance upland, including orchard, garden and pasture; 7-room house, bath, fireplace, running water; 2 barns, outhouses; water piped; windmill, gas pump, spring and creek on place; near good school. Would make one of best dairy farms in state; good location for store, oil and gas station; improvements worth $4000 to $5000; will sell land and all improvements for $60 per acre, $1000 down, long time on balance, low interest. Owner, C. J. Chamberlain, Olympia, Wash.

A SUBURBAN PRODUCING HOME AT SUMmit View Farms, between Puyallup and Tacoma, with one acre cleared on each five-acre farm. City water, paved road, phone, lights and only short distance from the state experimental station at Puyallup; berries and poultry for income with city conveniences; good berry land and excellent view property. Write us today for map and full details. You deal direct with the loggers. We have no agents. Electric Logging Co., Inc., 216 Marion st., Seattle, Wash. A. R. Todd, Mgr.

LOGGED-OFF LAND IN STEVENS COUNTY, Washington, at greatly reduced prices. Most of land sells at from $5 to $20 per acre; thickly settled community; good schools, hard surfaced and paved roads to Spokane; best county in state for dairy and stock raising; most places water can be found at shallow depths. Write for folder. Phoenix Lumber company, dept. T, Spokane, Wash.

WE SELL FORECLOSED LANDS FOR A loan company for one-third cash, balance easy terms. When writing tell us what you want, where preferred, how much you will invest; kind of farming you contemplate, as we have no list and must write special description in each case No trades. Hartford Land company, 601 Paulsen building, Spokane, Wash.

SNOHOMISH COUNTY, WASH.—6000 ACRES of the finest dairy, berry or general high-grade farm lands in the northwest, rapidly improving section; no drouths; bumper crops; tracts 1 to 80 acres; 10 yearly payments. This is your opportunity. Send for literature. Brownell Land Co., Birmingham, Wash.

200 ACRES, 7½ MILES FROM DUFUR, WASco county; on Ramsey creek; 14 acres bottom, with water right; 25 acres fall wheat; 20 acres slashed, ready for clearing; 50 acres could be cleared. All stock and implements, $6500. $4000 down, balance to suit. Owner, G. R. Jones, Route 1, Dufur, Ore.

CENTRALIA, 2 MILES FROM TOWN ON PAcific highway; 5-acre ranch, 7-room house, with bathroom; 75 ft. modern chicken house, just built; equipped with hot water brooding system; 1 acre strawberries; 1 acre loganberries. Terms if desired. J. G. Button, Route 1, Box 92, Centralia, Wash.

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480 ACRES FINE CUTOVER LAND; 100 ACRES bottom; fine creek, springs, abundance tame grass; would subdivide at $15 to $25 per acre; great stock or dairy proposition. Owner would furnish stock on shares. Chas. D. Edwards, Centralia, Wash.

STOCK RANCH, WITH 500 CATTLE, 200 range horses, 920 acres land; a modern ranch, fully equipped; in heart of good range; 5-year grazing permit, Lemly reserve. Right dates back to 1883. Any one interested, address J. D. Ellis & Co., Idaho Falls, Idaho.

WE WANT TO TELL YOU MORE ABOUT the famous Deschutes valley in central Oregon; a dairy, potato and stockman's paradise; a card brings full particulars. Redmond Land & Loan Co., Inc., Redmond, Oregon. (King Murphy's capitol.)

NEAR PACIFIC COAST, IN PACIFIC COUNty, Wash. Best soil, water and location. Also work for settlers wishing small homes. Price and terms very reasonable. H. E. Scholz, Menlo, Wash.

FOR SALE—13 ACRES AT WALLACHET; 9 acres in cultivation; 2 acres bearing orchard; 1 acre strawberries and logans; good buildings; stock and tools. $3700. A. Larson, Route 1, 72 Big Harbor, Wash.

60-ACRE FARM, WITH STOCK FOR SALE —21 miles south of Tacoma; on paved highway; stores, school and church close. $5000. George Jensen, Box 145, Eatonville, Wash.

108 ACRES, HOUSE, WITH BASEMENT; FURnace, electric lights, water works; barn 40x70; about 400 yards from oil derrick. Particulars, write owner, F. W. Newman, Amity, Ore.

A BARGAIN IN A DAIRY RANCH—40 ACRES, all in alfalfa; good house, barn for 30 cows; 30 dairy cows, 14 dairy heifers; best milk route in city. Box B, Buhl, Idaho.

SELL YOUR PROPERTY QUICKLY FOR cash; no matter where located. Particulars free. Real Estate Salesman company, 501 Brownell, Lincoln, Neb.

80 ACRES; 35 CULTIVATED; 25 ALFALFA; orchard, house, barn, creek; 7 milch cows, 3 horses, tools, $4500; terms. F. A. Harris, Route 1, Boyds, Wash.

TEN ACRES BEAUTIFUL LEWISTON ORchard; on paved road; priced reasonable; easy terms. Henry Olander, owner, route 2, Lewiston, Idaho.

YAKIMA FARM AND CITY PROPERTY. Write your wants to Cooper, 9½ Fourth ave., north.

100-ACRE FARM, WITH 21 COWS. BEN Hillman, Sunnydell, Idaho.

HOMESTEAD APPLICANTS—640 ACRES EASily secured. Write Box 350, Casper, Wyo.

FARM LANDS—Wanted 654

LET ME HELP SELL YOUR FARM. WM. R. Hughes, Middle Granville, N. Y.

FARM LANDS FOR RENT 657

1580 ACRES WELL IMPROVED WHEAT ranch for lease; stock and machinery for sale. Box 164, Wilson Creek, Wash.

IRRIGATED LANDS—For Sale 663

40 ACRES, BOISE VALLEY IRRIGATED; 14 acres fruit, 6 bluegrass, balance alfalfa and stubble; new 5-room house, electric lights, telephone, shade and lawn; near school; large dairy barn, outbuildings; mail and milk route; good roads. Will sacrifice, $8500. Half cash, balance terms. H. C. Martens, owner, Nampa, Idaho.

FOR SALE OR EXCHANGE 702

FOR SALE OR EXCHANGE—1210-ACRE stock ranch, 12 miles from Council, 1¼ miles to railroad station, postoffice and school; all fenced and cross-fenced; 240 acres hog-tight; 400 acres tillable, balance grazing; free water; good buildings. Machinery and horses included. Mrs. L. E. Ferguson, Goodrich, Idaho.

268-ACRE SHEEP OR CATTLE RANCH, OUTside range, $8000. What have you to trade? Write W. J. Laverty, Gannett, Idaho.

The GAUNT GRAY WOLF



By DILLON WALLACE



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SYNOPSIS.

Shad Trowbridge, a New England lad of about 20 years, sails on a mail boat to Labrador, where he plans to spend a few weeks [illegible] hunting and fishing in the wilderness. Upon his arrival he meets two experienced fishermen and trappers, Dick Blake and Ed Matheson, who recommend to him a young lad of 17 known as Ungava Bob, as a guide for his hunting and fishing trip inland. Desiring to lose the least time possible in securing Ungava Bob's services and starting inland for his vacation, Shad starts across the bay in his canoe in the face of a threatening storm. In the darkness his canoe is capsized and he is plunged into the icy water. As he rises to the surface a rope is thrown to him and he hears a voice shouting to make it fast. He is soon drawn aboard a little sailboat which, unknown to him had approached at the moment of his great need.

"I'm sure I owe my life to you," he said to the lad piloting the sailboat. "It was lucky for me you saw me."

"'Tweren't luck, sir," said the lad. "'Twere Providence. 'Twere the Lord who were takin' care of you."

CHAPTER III.

Shad Is Guest of Ungava Bob.

"Well, it was a pretty good way, anyhow. But where did you drop from? I didn't see you till you threw me that line a few minutes ago."

"I were passin' t' wind'ard, sir, when I sights you, an' not knowin' who 'twere, I sails close in till I makes you out as a stranger, an' then you goes down an' I picks you up."

"That sounds very simple, but it was a good stunt, just the same, to get me the line and come around in this chop the way you did, and then haul me aboard before I knew what you were about—you kept your head beautifully, and knew what to do—and you only a kid, too!" added Shad, in surprise, as the moonlight fell full on Bob's face.

"A—kid?" asked Bob, not quite certain what "kid" might be.

"Yes—just a youngster—a boy."

"I'm 17," Bob asserted, in a tone which resented the imputation of extreme youth. "You don't look much older'n that yourself."

"But I am—much older—I'm 18," said Shad, grinning. "My name's Trowbridge—Shad Trowbridge, from Boston. What is your name? Let's get acquainted," and Shad extended his hand.

"I'm Bob Gray o' Wolf Bight," said Bob, taking Shad's hand.

"Not Ungava Bob?" exclaimed Shad.

"Aye, they calls me Ungava Bob hereabouts sometimes."

"Why, I was on my way to Wolf Bight to see you!"

"T' see me, sir?"

"Yes, I came up from Fort Pelican to Porcupine Cove with two trappers named Blake and Matheson, and they told me about you. They said I might induce you to take a trip with me."

"A trip with you, sir?"

"Yes. I want to take a little canoe and fishing trip into the country, and Blake and Matheson suggested that you might have two or three weeks to spare and could go along with me. I'll pay you well for your services. What do you think of it?"

"I'm—not just knowin'," Bob hesitated. "I leaves for my trappin' grounds th' first o' August t' be gone th' winter, an'—I'm thinkin' I wants t' stay home till I goes—an' my folks'll be wantin' me home."

"Well, let's not decide now. We'll talk it over tomorrow."

"You'm cold," said Bob, after a moment's silence, reaching into a locker under his seat and bringing out a moleskin adicky. "Put un on. She's fine and warm."

"Thank you. I'm thoroughly chilled," Shad admitted, gratefully accepting the adicky and drawing it on over his wet clothing.

"Pull th' hood up," suggested Bob. "'Twill help warm you."

"There, that's better; I'll soon be quite comfortable."

"We don't seem to be making much headway," Shad remarked, observing the shore after a brief lapse in conversation.

"No," said Bob, "th' canoe bein' awash 'tis a heavy drag towin' she, but we'll be in th' lee an' out o' danger o' th' sea smashin' she ag'in th' boat, an' then I'll haul she alongside an' bring your outfit aboard."

They were slowly approaching the south shore and presently, as Bob had predicted, ran under the lee of a long point of land, where in calmer water the canoe was maneuvered alongside, and Shad's outfit, so fortunately and securely lashed fast by Ed Matheson, was found intact, save the paddle which Shad had been using.

The things were quickly transferred to the boat, and, this accomplished, Bob bailed the canoe free of water, dropped it astern, now a light and easy tow, and catching the breeze again in the open, turned at length into Wolf Bight, where he made a landing on a sandy beach.

"That's where I lives," said Bob, indicating a little log cabin, sharply silhouetted against the moonlit sky, on a gentle rise above them.

When the canoe, quite unharmed, was lifted from the water and all made snug, Shad silently followed up the path and into the door of the darkened cabin, where Bob lighted a candle, displaying a large square room, the uncarpeted floor scoured to immaculate whiteness, as were also the home-made wooden chairs, a chest of drawers, and uncovered table.

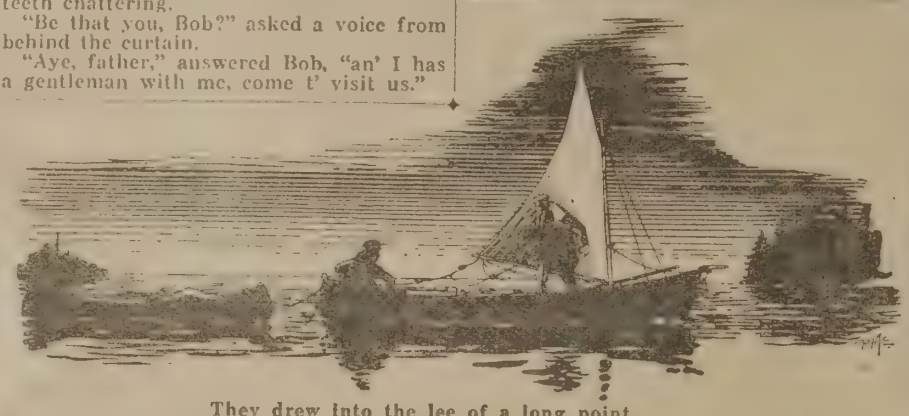
There were two windows on the south side and one on the north side, all gracefully draped with snowy muslin. A clock ticked cheerfully on a rude mantel behind a large box stove. To the left of the door a rough stairway led to the attic, and the rear of the room was curtained off into two compartments, the spotlessly clean curtains of a pale blue and white checked print giving a refreshing touch of color to the room which, simply as it was furnished, possessed an atmosphere of restfulness and homely comfort that impressed the visitor at once as cozy and wholesome.

"My folks be all abed," explained Bob, as he placed the candle on the table, "but we'll put a fire on an' boil th' kettle. A drop o' hot tea'll warm you up after your cold souse."

"I would appreciate it," said Shad, his teeth chattering.

"Be that you, Bob?" asked a voice from behind the curtain.

"Aye, father," answered Bob, "an' I has a gentleman with me, come t' visit us."



They drew into the lee of a long point.

"Now that be fine. I'll be gettin' right up," said the voice.

"Put a fire on, lad, an' set th' kettle over," suggested a woman's voice, "an' I'll be gettin' a bite t' eat."

"Please don't leave your bed," pleaded Shad. "It will make me feel that I am causing a lot of trouble. Bob and I will do very nicely."

"'Tis no trouble, sir—'tis no trouble at all," the man's voice assured.

"Oh, no, sir; 'tis no trouble," echoed the woman's voice. "'Tis too rare a pleasure t' have a visitor."

Both spoke in accents of such honest welcome and hospitality that Shad made no further objection.

The fire was quickly lighted, and Shad, as the stove began to send out its genial warmth, had just removed his borrowed adicky when the curtain parted and Mr. and Mrs. Gray appeared.

"Mr. Trowbridge, this be father and mother," said Bob, adding as a second thought, "Mr. Trowbridge lives in Boston."

"'Tis fine t' see a stranger, sir," welcomed Richard Gray, as he shook Shad's hand warmly, "an' from Boston, too! I have hearn th' fishermen o' th' coast tell o' Boston more'n once, but I never were thinkin' we'd have some one from Boston come t' our house! An' you comes all th' way from Boston, now?"

"Yes," admitted Shad, "but I feel sure I'm causing you and Mrs. Gray no end of inconvenience, coming at this time of night."

"Oh, no, sir! 'Tis no inconvenience in th' least. We're proud t' have you," assured Mrs. Gray, taking his hand. "Why, you'm wet, sir!" she exclaimed, noticing Shad's clinging garments, and her motherly instinct at once asserted itself. "You must have a change. Bob, lad, hold th' candle now, whilst I get some dry clothes."

"Please don't trouble yourself. I'm very comfortable by the fire; indeed, I am," Shad protested.

But Bob nevertheless held the candle while his mother selected a suit of warm underwear, a pair of woolen socks, a flannel outer shirt, and a pair of freshly washed white moleskin trousers from the chest of drawers.

"These be Bob's clothes, but they'll be a handy fit for you, I'm thinkin', for Bob an' you be as like in size as two duck's eggs," she commented, looking the two over for comparison. "Now, Bob, light a candle an' show Mr. Trowbridge above stairs. When you're changed, sir, bring your wet things down an' we'll hang un by th' stove t' dry."

"You're very kind, Mrs. Gray," said Shad gratefully, turning to follow Bob.

In the attic were three bunks spread with downy Hudson's Bay company blankets, two stools and a small table. It contained no other furniture, but was beautifully clean. There was an open window at either end, one looking toward the water, the other toward the spruce forest, and the atmosphere, bearing the perfume of balsam and fir, was fresh and wholesome.

"I sleeps here," informed Bob, placing the candle on the table and indicating one of the bunks, "an' you may have either o' th' other beds you wants. Now whilst you changes, sir, I'll bring up th' things from th' boat. Here's a pair o' deerskin moccasins. Put un on," he added, selecting a new pair from several hanging on a peg.

Shad made his toilet leisurely, and as he turned to descend the stairs with his wet garments on his arm he met the appetizing odor of frying fish, which reminded him that he had eaten nothing since midday and was ravenously hungry.

In the room below he found the table spread with a white cloth. A plate of bread and a jar of jam were upon it, and at the stove Mrs. Gray was transferring from frying pan to platter some deliciously browned brook trout. Bob, with his father's assistance, had brought up Shad's belongings from the boat, and Richard was critically examining Shad's repeating rifle.

"Let me have un," said he, putting down the gun, and reaching for the wet garments on Shad's arm proceeded at once to spread them upon a line behind the stove.

"Set in an' have a bite, now. You must be wonderful hungry after your cruise," invited Mrs. Gray.

"'Tis only trout an' a bit o' bread an' jam an' a drop o' tea," Richard apologized, as he joined Shad and Bob at the table, "but we has t' do wi' plain eatin' in this country, an' be content with what th' Lord sends us."

"Trout are a real luxury to me," assured Shad. "We are seldom able to get them at home, and a trout supper is a feast to be remembered."

"Well, now! Trout a luxury!" exclaimed Richard. "About all we gets t' eat in th' summer is trout an' salmon, an' we're glad enough when th' birds flies in th' fall."

"What birds do you get?" asked Shad.

"Duck and geese, and there's plenty of partridge in the winter," explained Richard.

"An' I were thinkin', now, you might not care for un," said Mrs. Gray. "I'm wonderful glad you likes un."

Richard asked the blessing, and then invited Shad to "fall to," and frequently urged him to take more trout and not to be "afraid of un," a quite unnecessary warning in view of Shad's long fast and naturally vigorous appetite.

"Mr. Trowbridge wants me t' go on a fortnight's trip up th' country with he," remarked Bob, as they ate.

"A trip up th' country?" inquired Richard.

"Yes," said Shad, "a fishing and canoeing trip."

"But Bob's t' be wonderful busy makin' ready for th' trappin'," Richard objected.

"So he tells me," said Shad, "but perhaps if we talk it over tomorrow you can make some suggestion."

"Aye," agreed Richard, with evident relief, "we'll talk un over tomorrow."

When the meal was finished Richard devoutly offered thanks, after the manner of the God-fearing folk of the country.

The mantel clock struck 2 as they arose from the table. Dawn was breaking, for at this season of the year the Labrador nights are short, and Shad, at the end of his long and eventful day, was quite content to follow Bob above stairs to his attic bunk.

CHAPTER IV.

Away to the Trails.

Sunshine was streaming through the open south window of the attic when Shad awoke. Just outside the window a jay was screeching noisily. Bob's bunk was vacant. It was evident that Shad had slept long and that the hour was late, and he sprang quickly from his bed and consulted his watch, but the watch, flooded with water when the canoe capsized the night before, had stopped.

He paused for a moment at the open window to look out upon the near-by forest and expand his lungs with delicious draughts of the fragrant air. It was a glorious day, and as he left the window to make a hasty toilet his nerves tingled in eager anticipation, for he was at last at the threshold of the great Labrador wilderness—his land of dreams and romance. He was certain it held for him many novel experiences and perhaps thrilling adventures. And he was not to be disappointed.

His clothes, which Richard had hung to dry by the stove the night before, lay on a stool at his bedside, neatly folded. Some one had placed them there while he slept. He donned them quickly, and descending to the living room found the table spread and Mrs. Gray preparing to set a pot of tea to brew.

"Good morning, sir," she greeted, adding solicitously: "I hopes you had a good rest, and feels none the worse for gettin' wet last evenin'."

"Good morning," said Shad. "I rested splendidly, thank you, and feel fine and dandy. Whew!" he exclaimed, glancing at the mantel clock. "Twelve o'clock!"

"Aye. We was wonderful careful t' be quiet an' not wake you, sir," she explained. "'Tis well t' have plenty o' rest after a wettin' in th' bay. Dinner's just ready," and going to the open door she called, "Emily! Emily!"

A young girl, perhaps 12 years of age, quickly entered in response to the summons. She was clad in a cool, fresh print frock and wore deerskin moccasins upon her feet. Her wavy chestnut-brown hair, gathered with a ribbon, hung down her back; her oval face, lighted by big blue eyes, was tanned a healthy brown, and Shad thought her a rather pretty and altogether wholesome looking girl, as she paused in confusion at the threshold upon seeing him.

"Emily, dear, get Mr. Trowbridge a basin o' water, now; he's wantin' t' wash up," directed Mrs. Gray. "Mr. Trowbridge, this is our little maid, Emily."

"I'm glad to know you, Emily," said Shad courteously. "Have you quite recovered from your injury? When I was at Fort Pelican I heard all about you and your trip to St. Johns."

"I's fine now, thank you, sir," answered Emily, flushing to the roots of her hair.

"Yes, Emily's fine an' well now, sir," assured Mrs. Gray, as Emily turned to fill the basin of water. "But she were wonderful bad after her fall till she goes t' the' hospital in St. Johns t' be cured. They's a fresh towel on the peg above th' bench, sir, an' a comb on th' shelf under th' mirror by th' window," she continued, as Emily placed a basin of water on a bench by the door.

"Thank you," acknowledge Shad, turning to complete his toilet.

"Now, Emily, dear, call father an' Bob," said Mrs. Gray; "dinner's sot." And Emily, glad of a respite from the embarrassing presence of the stranger, ran out, presently to return with her father and Bob.

When dinner was disposed of, Richard suggested that it was "wonderful warm so handy t' th' stove," and leaving Mrs. Gray and Emily to clear the table he conducted Shad and Bob to a convenient seat near the boat landing, where they could enjoy a cooling breeze from the bay. Here he drew from his pocket a stick of very black and very strong-looking tobacco, and holding it toward Shad, asked:

"Does you smoke, sir?"

"No, thank you," declined Shad. "I had just learned to smoke when I entered college, but I was trying for a place on the 'varsity nine and I had to drop smoking. A fellow can't play his best ball, you know, if he smokes. So I quit before I formed the habit."

"Is that a game like snowshoe racin'?" asked Bob.

"Oh, no!" and Shad described the game and its tactics minutely, with thrilling details of battles that his college nine had won and lost upon the diamond.

"Well, Bob," Shad asked finally, "have you decided to go with me for a trip into the country?"

"I'm not rightly knowin,' sir, where you wants t' go," said Bob.

Shad stated the object of his journey, and the three talked over the possibilities of making such a trip as he desired within the time at Bob's disposal.

"Countin' on bad weather, 'twouldn't be much of a trip you could make in a fortnut, and that'd be th' most time Bob could spare, whatever, with his gettin' ready t' go t' th' trails," Richard finally explained. "His mother an' me be wantin' he home, too, till he goes, for 'twill be a long for his mother t' have he away without seein' he.

"Now you says you has no hurry t' go away. Dick Black an' Bill Campbell goes t' th' handiest tilt o' th' Big Hill trail t' help Bob an' Ed Matheson in with their outfit, an' they starts th' first o' August. Then they comes back t' take their outfits up an' they has t' get in before breeze up.

"You bein' in no hurry, sir, could go with un on th' first trip, an' come back

with un, an' that gives you a fine trip an' a fine view o' th' country. It takes un a month t' go in, but runnin' back light wi' th' rapids they makes un in a week, so you gets back th' first week in September month."

"'Twould be grand t' have you along, sir!" exclaimed Bob. "An' I were never thinkin' o' that. Father's wonderful at plannin'."

"Done!" said Shad. "I'll do it, but I hope you won't find me a nuisance around here during the three weeks we have to wait."

"Oh, no, sir!" 'Tis a rare treat t' have you visit us, sir!" protested Richard.

And thus it was finally decided.

Bob was very busy during the days that followed. Not only his provision and clothing supply for a 10 months' absence from home was to be made ready, but also the full equipment for the new trails to be established.

The necessary traps had already been purchased, but sheetiron had to be fashioned into stoves and stovepipe to heat the tents and log tilts, and one new tent was to be made. It was imperative, too, that each minor necessity that the wilderness itself could not readily supply be provided in advance, and that nothing be forgotten or overlooked.

The establishment of these trails was an event of high importance in the Gray household. Bob's little fortune of a few thousand dollars, derived from the salvage of a trading schooner the previous year, had been deposited in a St. Johns bank, and his thrifty old friend, Douglas Campbell, had suggested that it might be invested to advantage in a small trading venture.

"Bob can lay his trails this winter," said Douglas, "an' next year take some tradin' goods in. Knowin' th' Nascaupee an' Mountaineer Injuns, an' a bit o' their lingo, he'll be able t' do a snug bit o' tradin' with un, along with his trappin'. An' if you opens a little store here at th' Bight next summer th' rest of you can 'tend un when Bob's inside trappin.'

"I were thinkin', too," said Douglas, "'twould be fine t' send Emily t' St. Johns t' school th' winter, an' she'd learn t' keep th' books. She's a smart lass, an' she'd learn, now, in a winter or two winters, whatever, an' 'twould pay—an' do th' lass a wonderful lot o' good. I'm wantin' a trip t' St. Johns, an' I'd take she on th' mail boat."

There were many long discussions before it was finally decided that Bob should launch upon the venture. Bob's mother opposed it. The terrible winter of suspense when Bob, lost in the snow, was given up for dead, was still a vivid remembrance to her. She recalled those tedious months of grief as one recalls a horrid nightmare, and she declared that another such winter, particularly if she were to be deprived of Emily's society, would be unendurable.

But her objections were finally overcome. Emily was to go to school and it was decided Bob should establish two new trails. One of these he was to hunt himself, the other one Ed Matheson had agreed to hunt on a profit-sharing basis. Dick Blake and Bill Campbell—a son of Douglass Campbell—were to occupy adjoining trails, and the four to work more or less in conjunction with one another.

Shad and Emily became fast friends at once. On pleasant afternoons she would lead him away to explore the surrounding woods in search of wild flowers, and after supper he would tell her fairy tales from Grimm, but best of all she liked his stores from Greek and Roman mythology.

She, and the whole family, indeed, listened with rapt attention when Shad related how Chronos attacked Uranos with a sickle, wounding and driving Uranos from his throne; how some of the drops that fell from Uranos' wounds sprang giants, the forefathers of the wild Indians; how from still other drops came the swift-footed Furies—the three Erinnyes—who punished those who did wrong, and were the dread of the wicked.

Thus the days passed quickly and pleasantly—even the occasional foggy or rainy days, when Bob and his father worked indoors, and Bob, at Emily's request, recounted very modestly his own adventures. Emily particularly liked to have Bob tell of Ma-ni-ka-wan, an Indian maiden who nursed him back to health after Sish-e-ta-ku-shin and Moo-koo-mahn, Manikawan's father and brother, had found him unconscious in the snow and carried him to their skin wigwam.

"Th' Nascaupees was rare kind t' me," Bob explained to Shad. "They made me one o' th' tribe, Sishetakuskin calls me his son, an' they gives me an Indian name meanin' in our talk 'White Brother o' th' Snow.' They were thinkin' I'd stop with un, an' they were wonderful sorry when I leaves un t' come home with th' huskies. Manikawan were a pretty maid—as pretty as ever I see."

"Were she as pretty as Bessie, now?" asked Emily slyly.

"Now, Emily, dear, don't go teasin' Bob," warned Mrs. Gray.

"I were just askin' he," said Emily; "he's so wonderful fond o' Bessie."

"O' course he's fond o' Bessie, and so be all of us. Emily's speakin' o' Bessie Black, sir," Mrs. Gray explained, to Shad. "She's Tom Black's lass. Tom is th' factor's man over t' th' post, an' th' Blacks be great friends of ours. Bessie's but a young maid—a year younger'n Bob. You'll see th' Blacks when you goes over t' th' post with Bob."

"I'm immensely interested in your Indian friends," said Shad. "Manikawan was a little brick, and the Nascaupees bully good fellows. Will there be a chance of my meeting them?"

"No, they camps on lakes down t' th' n'uth'ard in summer," Bob explained. "If you was stayin' th' winter, now, you'd see un."

"I'm almost persuaded to remain on the trails with you all winter and see something of the life of real, uncivilized Indians," asserted Shad. "I would stay if it were not for college."

"'Twould be fine t' have you, now!" exclaimed Bob enthusiastically. "But," he added doubtfully, "I'm fearin' you'd find th' winter wonderful cold, an' th' tilts lonesome places t' stop in, not bein' used to un."

"An' your mother would be worryin' amout you; now, wouldn't she?" suggested Mrs. Gray.

"My mother died when I was a little boy, and father died two years ago," said Shad. "I have one sister, but she learned long ago that I could take care of myself."

"Is she a little sister?" asked Emily.

"Oh, no," said Shad, "she's a big, married sister, and has a little girl of her own nearly as old as you are."

"'Twould be grand t' have you stay," Bob again suggested.

"Thank you, and it would be grand to

(Continued on page twenty-one.)



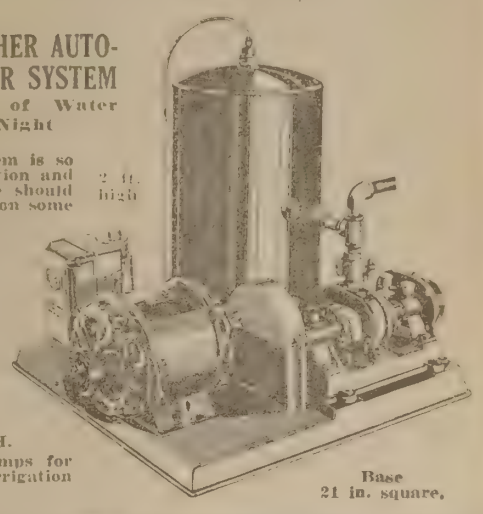
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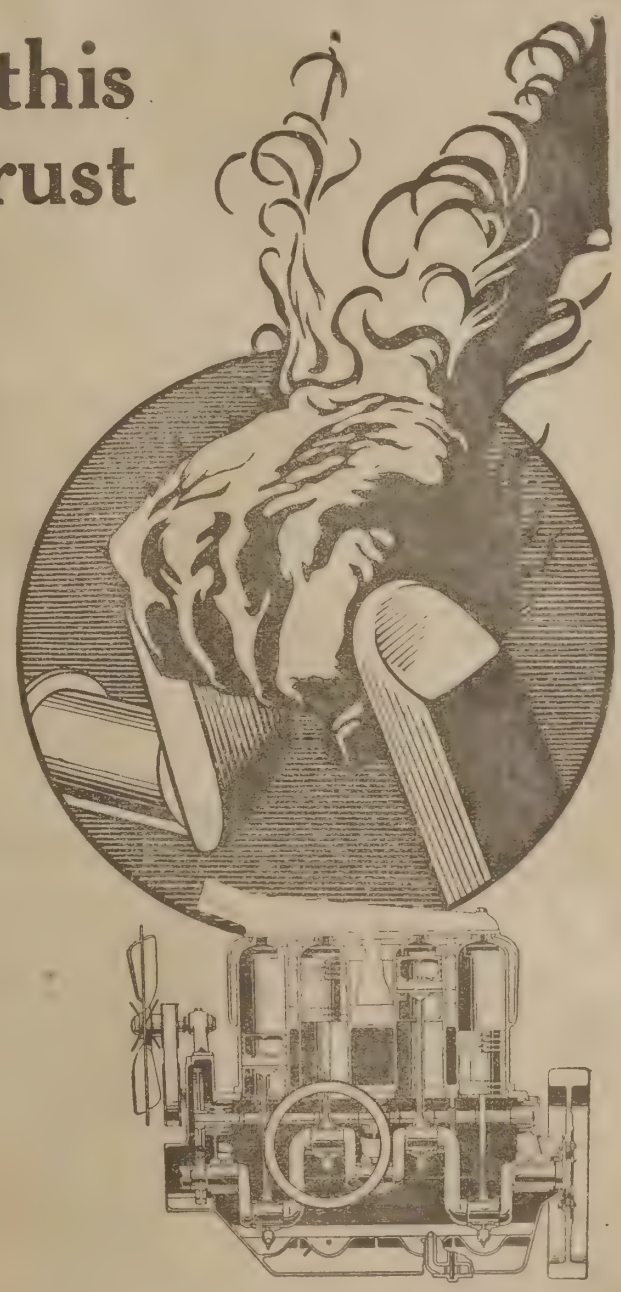
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FAMILY CIRCLE

ALICE BARLAND
EDITORIAL CONTRIBUTOR

Dear Mrs. Barland: A while ago some one wrote about trouble with oily hair. I will give my experience as I believe no one ever has had more oily hair than I have. I have found what I consider best of all cure. I was advised 12 years ago to use sal soda in washing my hair, as it would destroy the oil, and I did so, washing it about once a month or 6 weeks. It did make it sweet and free from oil, but as time went on my hair began to split and die and turn red, until I decided about three months ago that I must do something different or lose it all. I have a heavy head of dark brown hair and I had it cut off to my shoulders. I bought two ounces of orris root for 20 cents and I sprinkle that all through my hair and afterward wash it out with a certain kind of soap. The powder dries the oil up completely and it is a fine thing for oily hair. MRS. W. W. HALL.
Route 2, Winlock, Wash.

Dear Mrs. Barland: I wonder if others of the sisters of the Circle have been doing something as foolish as I have with my cream. I have been putting my cream into the churn as I separated it and have stirred it daily and on the day I churn I have not put in that day's cream, but kept it for the next churning.

I had for my churning about two gallons of cream, from which I got five pounds of butter when salted. I left my buttermilk in the churn till next day and on looking into it closely and finding it seemed so rich, I thought I would churn it again and see if I would get any more butter. I did, and got three pounds more butter for my trouble. LILLIAN PARKER.

Dear Family Circle: I think this is a good time to warn you butter makers of the danger of this happening. This sister leaves the impression that cream should be churned twice. This shouldn't be necessary. Cream must go through the process of "ripening" before it will become butter; cream added the day before churning will not become butter, but will remain in the buttermilk. In winter it takes longer for the cream to ripen and must be kept quite warm to have it do so even in 48 hours, and no cream will ripen under that time. If a little sour buttermilk is added to the cream when you start a new churning it will hasten the ripening process.
A. W. BARLAND.

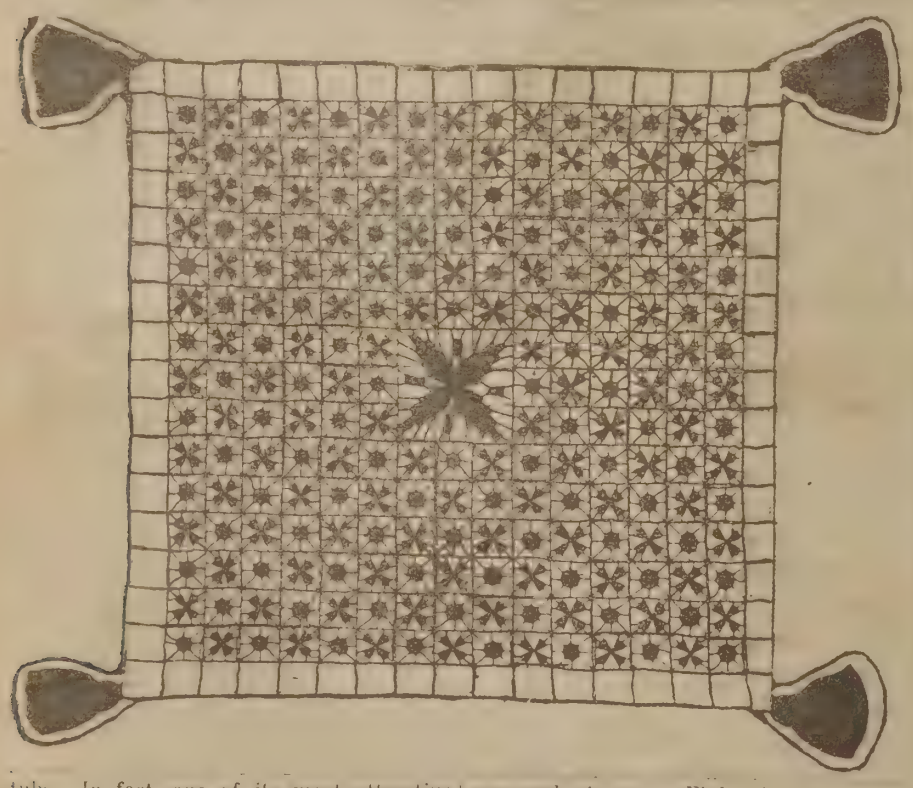
Cream Pie: One pint of milk, scald and thicken with 2 tablespoons of cornstarch dissolved in a little cold milk, yolks of two eggs and 1-3 cup of sugar, flavor. Bake a crust, fill with the custard and cover with the whites beaten stiff and brown in the oven. Add a scant half-cup of sugar to keep the whites from falling.
MRS. H. G. K.

Cream Pie: One quart rich milk, small lump of butter, 4 heaping tablespoons of sugar, 2 heaping tablespoons of cornstarch, 3 eggs (save the whites for meringue on top). I double this recipe, which makes 3 large pies or 4 medium ones. Mrs. Brent, I am sending this for you, do try it.
A SISTER FROM RANDLE, WASH.

Pillow Cover for Daily Use

By JEANETTE BELL.

This very practical pillow cover is at the same time inexpensive. For this the cross barred glass toweling is used. This comes in either red or blue stripes and is worked in single thread embroidery cotton to match. Each plain check forms the foundation of a woven square. Spider webs and Maltese crosses are alternated to form the square front of this pillow cover. The old time turkey red cotton, the kind formerly used for marking linens, is the best for this work. If this is not procurable get a cotton which is guaranteed to wash, as this cover is made for durability and will make many trips to the laundry



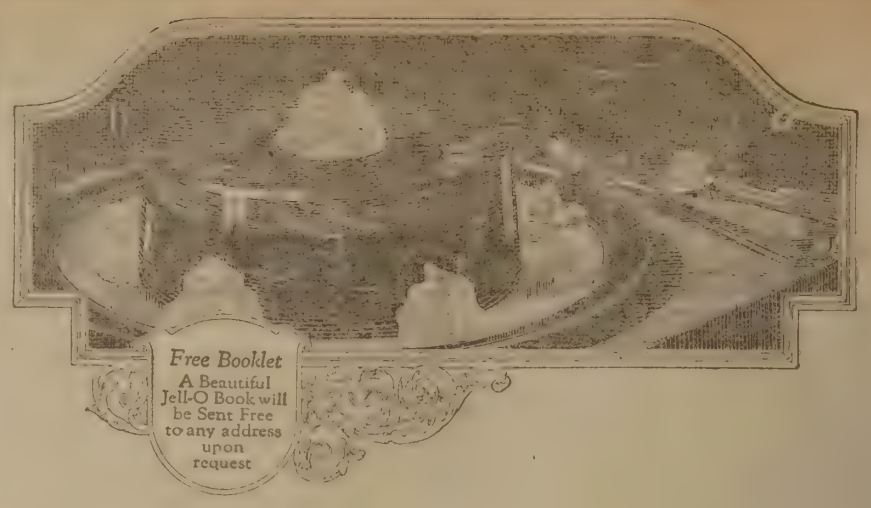
tubs. In fact, one of its most attractive qualities is the fact that it can be abused and knocked around more than any other kind of work and not show it.

You will observe that the spider webs form each corner and alternate with the crosses in every square except the center. This work is best done in close fitting hoops or in a square frame to prevent drawing the material.

For the spider web make one thread extend from one corner to the opposite corner, then one thread perpendicular through the center, then a thread from the next corner diagonally across to the remaining corner, then a thread from the center side to the center of the square, here join all the threads by a buttonhole stitch. Start to weave evenly round and round, drawing the thread tight at the center and gradually loosen as you reach the outer edge; this prevents cupping. Continue until you have covered about one-third of the space, then fastern your thread over the last stitch and bring your thread across to form the remaining stitch of the web, fasten securely at the back and cut thread.

For the cross, 12 threads are required for the foundation, three threads are used for each quarter. Make the threads equal distances apart, join together in the center and weave in the same manner as for the web, over the three threads to one corner, repeat three times to complete the cross.

The center cross is worked over nine squares of the material and two threads are used at once. Eight double threads are run for each corner, making 32 threads for all. Start at the center and weave with double thread until you have a circle about the size of a dime, then weave over eight threads for several rows, then drop one thread from each side, continue until at the top you have but two threads on which to weave, run the thread down the back of this portion to the center and repeat for the other three corners. Between the corners use one thread of each an dover these weave a separate portion. The tassels at each corner are made of yarn to match and are easily removed before washing. For these cut a piece of cardboard five inches wide, over this wind your yarn, cut at one end and tie, forming a tassel. This pillow is 18 inches square, but it can be made, the square of the width of the toweling, with back of same.



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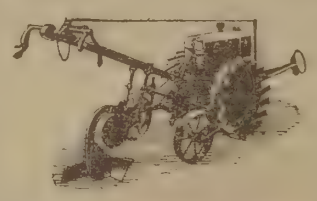
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Your Health

By Royal S. Copeland, M. D., F. A. C. S.

I said that personal hygiene is a debt you owe society. You have not done your full hygienic duty to yourself and to others simply because you bathe regularly and brush your teeth several times a day.



Dr. Copeland.

Naturally, we think of water whenever we talk about hygiene. As a matter of fact, the state of civilization may be determined by the per capita use of water. When water is measured in terms of pints instead of gallons or barrels I am suspicious of the real cleanliness of the people.

Universal and daily bathing of the entire body is a modern practice. Visit the ancient castles and medieval palaces of Europe and you will be shocked by the absence or by the cruelty and inconvenience of the bathing arrangements.

Immediately somebody will say that the people of those periods were healthy and lived just as long as we do. In the first place, they did not live as long as the average man does now. The expectation of life is much greater today than it was in olden times.

They did have an advantage over us in one respect. Their food was much simpler. There were gluttons in high places, but in the common walks of life the fare was plain and wholesome.

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Foods should be chosen because, among other reasons, they contain the essential minerals. If you take this dish or that simply because "it looks so good," you will probably rob your system of needed sustenance. Too frequently attractive-looking food is long on looks and short on food values.

You must learn the importance of a well-balanced ration of properly cooked food. If you must choose between overeating and undereating, accept the latter at once. To leave the table with an unsatisfied appetite is pretty good practice, especially if it has been a hastily eaten meal.

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3468. A Popular Apron Dress. Cut in four sizes: Small, 32-34; medium, 36-38; large, 40-42; and extra large, 44-46 inches bust measure. The width of the skirt at lower edge is 2 yards. A medium size will require 6 yards of 36-inch material. Price 10 cents.

3605. Lady's Apron. Cut in four sizes: Small, 34-36; medium, 38-40; large, 42-44; extra large, 46-48 inches bust measure. A medium size requires 3 1-2 yards of 36-inch material. Price 10 cents.

3907. Lady's Skirt. Cut in six sizes: 25, 27, 29, 31, 33, and 35 inches waist measure. A 29-inch size requires 2 1-2 yards of 54-inch material. The width of the skirt at the foot is about 2 yards. Price 10 cents.

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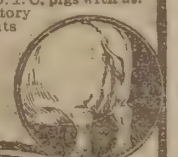
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High Points in News of the Week

The United States senate has set Friday of this week, March 24, as the date on which it will take its final vote on the most important of the seven treaties submitted to it for ratification by President Harding, following the recent international conference on the limitation of armaments. This treaty is the so-called four-power treaty between this country, England, Japan and France, looking toward the peaceable control of the various interests of these nations on the Pacific ocean. This treaty provides, among other things, that before any of these four nations shall go to war, a conference of the four shall be called in an effort to settle the misunderstanding peaceably. A reservation providing that other nations interested in any such dispute be called into the conference was defeated in the senate by a large vote. In order to dispose of this ratification question with the least possible delay, the senate has agreed to limit debate on the treaty itself and upon any reservations that may be proposed. The final vote will be taken when the senate meets on Friday, without any further debate.

* * *

At this writing, indications are that the lower house of congress possibly will pass the soldiers' bonus bill in about the form that it has been prepared by the ways and means committee. This includes the provision that certificates shall be issued to the service men which shall be presented to local banks throughout the country as collateral for loans until such time as the government redeems the certificates. This proposition has been vigorously denounced by the secretary of the treasury and is also known to be considered unfavorably by President Harding. It is freely predicted that the senate will refuse to pass the measure with this provision, some even going so far as to believe that the senate will fail to pass the measure in any form, for at least a few months. There is a widespread feeling, apparently on the increase, that the business conditions of the country are not such now as to stand the additional cost of a bonus bill requiring that several billion dollars be raised.

* * *

The bonus bill, as submitted by the committee, was estimated by Chairman Fordney to require the raising during the next 20 years of a little over $4,000,000,000. The principal part of this sum would be paid in the year 1943, when the certificates to be given to the ex-service men would mature in a sum totaling approximately $3,155,000,000.

* * *

Wenatchee fruit growers last week filed with the interstate commerce commission examiner at Seattle an application for freight rate reductions on the 1922 crop that would total approximately $3,000,000. The reduction is asked on about 15,000 carloads of apples that will be shipped out of the Wenatchee district if the yield is normal.

* * *

Secretary Davis of the department of labor in President Harding's cabinet is working out a plan under which the government and the general public would be kept informed as to the condition existing in each of the 32 leading industries of the United States. The purpose of the plan is to make it possible for both government and the people at large to know the exact situation in any industry when a controversy arises between employers and the employees. "As it is now," said Secretary Davis, "no one can tell which side to believe. There is propaganda sent out by both sides. Under the proposed plan the government, at the beginning of a labor difficulty, would give out an official statement which would form the basis for an accurate and just opinion."

* * *

The directors of the United States Grain Growers, Inc., met in Chicago this week for the election of officers and the conduct of other business relating to the operation of the organization. A meeting of the American Wheat Growers, Associated, the new organization formed to coordinate the activities of the various 100 per cent pooling associations, is also scheduled for Chicago this week.

* * *

There appears to be little inclination on the part of financial leaders in the administration at Washington to cancel the bill of $241,000,000 against the allies for the keeping of the American soldiers in the occupied territory of Germany. The maintenance of the American soldiers in the army of occupation was originally agreed to be borne by England, France and the other European allies, as the interests of America were not such as to warrant the retention of the soldiers there. Indications have come from Europe, however, that the allies expect this bill to be cancelled.

There are still in the occupied territory of Germany a little more than 2000 American soldiers. The number is gradually being reduced.

* * *

Chairman McCumber of the senate finance committee has announced that he expects to have the permanent tariff bill ready for presentation in the senate within a week or 10 days.

* * *

The middle west from the Mississippi to the Rocky mountains experienced a severe wind, rain and snow storm last week, the wind reaching 40 miles an hour in some sections.

* * *

Secretary Mellon of the treasury department intimates that approximately $460,000,000 will be collected by the federal government during the first quarter of the fiscal year from income and profits taxes.

Under Wapato Project

L. M. Holt, supervising engineer, estimates water is available for at least 5000 acres of new land under the Wapato project, in Yakima valley. Of this amount 2000 acres is on the island where a siphon was put in two years ago and another 2000 acres is made available by the draining of Mud lake, while 1000 acres is in the vicinity of Alfalfa, where a new lateral is about completed.

There was cropped on the reservation last year about 76,000 acres. Of this amount 70,000 acres is under the Wapato project and 4600 acres on the Ahtanum. The remaining 1400 is under the Toppenish-Simcoe project. Of the 5000 acres reclaimed by drainage or brought under new canals it is fair to presume that at least half of it will be added to the cropped area this season.

Winter Wheat and Rye

The condition of the winter wheat in Kansas has been improved by increased supply of moisture, although growth has been retarded by cold, says the United States board of crop estimates for the last half of February. Lack of moisture has resulted in a poor condition of the crop in parts of Nebraska, Colorado and New Mexico. Some damage from alternate freezing and thawing is reported in Illinois, Indiana and Ohio. Conditions are reported favorable in central Iowa, Georgia, North Carolina and Virginia. Lack of snow cover in the southern parts of Iowa and Wisconsin is detrimental to the growth of the crop. The condition of winter rye is generally favorable in the central states, although some injury from alternate freezing and thawing is reported. In eastern Colorado the condition is below normal, due to an insufficient supply of moisture. Injury from an ice sheet covering is feared in southern Wisconsin.

KEEP DRY AND WARM.

Little chicks should never get wet, either from rain or from poor drinking devices.

Farm Business and Markets Outlook

(Continued from page five.)

LATEST QUOTATIONS.

The Live Stock Market.

PORTLAND, March 18.—Cattle—Choice steers, $7.50@8; medium to good steers, $6.75@7.50; fair to medium steers, $6.25@6.75; common to fair steers, $5.25@6.25; choice feeders, $5@6.50; fair to good feeders, $4.50@5; choice cows and heifers, $6@6.50; medium to good cows and heifers, $5.25@6; fair to medium cows and heifers, $4.50@5.25; common cows, $3.50@5.25; canners, $2.00@3.70; bulls, $3.50@5.25; choice dairy calves, $10@10.50; medium light calves, $6.50@9; heavy calves, $4.50@6.50.

Hogs—Prime light, $11.25@11.60; smooth heavy, 200 to 300 lbs., $10@11; smooth heavy, 300 lbs. up, $9@10; rough heavy, $7.50@9.50; fat pigs, $11@11.50; feeder pigs, $11@11.50; stags, subject to dockage, $6@8.

Sheep—East-of-mountain lambs, $13@14.50; best valley lambs, $11@12; fair to good, $10@11; cull lambs, $6@8; eastern Oregon feeders, $9@10; light yearlings, $10@11; heavy yearlings, $9@10; light wethers, $9.50@10; heavy wethers, $9@9.50; ewes, $3@7.

SPOKANE, March 18.—Cattle—Prime steers, $6.50@7.50; good to choice steers, $5.75@6.50; medium to good steers, $5.25@5.75; fair to medium steers, $4.75@5.25; common to fair steers, $4.25@4.75; choice cows and heifers, $5@6; good to choice cows and heifers, $4@5; medium to good cows and heifers, $3.50@4; fair to medium cows and heifers, $3@3.50; canners, $2@3; bulls, $3@5.50; light veal calves, $8@10; heavy veal calves, $4@8; stockers and feeders, $4.50@5.

Hogs—Prime mixed, $10.75@11.50; medium, $9.75@10.75; heavies, $7.75@9.75; fat pigs, $9.75@10.75; stockers and feeders, $9.50@10.75.

Sheep—Prime lambs, $9@10; fair to medium, $8@9; weanings, $6@8; mutton ewes, $4.50@6; [illegible] $7@8.

The Grain Market.

PORTLAND, March 18.—Wheat—Hard white, $1.29; hard winter, northern spring $1.28; soft white, white club, $1.27; red Walla, $1.24.

Grain futures—Wheat—Hard white, March, April, May, $1.29; soft white, white club, March, April, May, $1.27; hard winter, northern spring, March, April, May $1.28; red Walla March, April, May, $1.24.

Oats—No. 2 white feed, March, April, $35.50; May, $36; No. 2 gray, March, April, May, $35.

Barley—Brewing, March, $29; April, May, $29.50; standard feed, March, $28; April, May, $28.50.

Corn—No. 2 eastern yellow shipment, March, April, May $28; No. 3 eastern yellow shipment, March, $28; April, May, $27.50.

SEATTLE, March 18.—Wheat—Hard white, hard red winter, $1.30; soft white, white club, soft red winter, northern spring, $1.29; eastern Washington bluestem, $1.30; hard red winter, $1.29; Big Bend bluestem, $1.30; red Walla, $1.25; Big Bend bluestem, $1.55.

POMEROY, March 18.—Turkey, $1.10; hybrid, $1.07.

DAYTON, March 18.—Club wheat, $1.09; red, $1.06.

WALLA WALLA, March 18.—Club wheat, $1.12; Bluestem, Turkey red and Bart, $1.13.

PULLMAN, March 18.—Red wheat, $1.03; white wheat, $1.06.

DAVENPORT, March 18.—Marquis, $1.34; Bluestem, $1.32; Gold Coin, $1.06.

LEWISTON, Idaho, March 18.—Fortyfold, Club, hard winter, $1.07 to $1.10.

Hay and Feed Grain.

PORTLAND, March 18.—Millfeed—Price f. o. b. mill; Millrun, ton lots, $29; mixed cars, $28; straight cars, $27 per ton; middlings, $43; rolled barley, $37@39; rolled oats, $42; scratch feed, $45@50 per ton.

Corn—White, $36; cracked, $38.

Hay—Buying price, f. o. b. Portland: Alfalfa, $13.50@14 per ton; cheat, $11@11.50; oat and vetch, $15; clover, $11; valley timothy, $14@15; eastern Oregon timothy, $16@17.

SPOKANE, March 18.—Alfalfa, $18 ton; timothy, $18 ton; mixed hay, $18 ton.

Wheat—Feed wheat, $46 per ton.

Oats—$40 per ton; steam rolled, $42.

Corn—$36 per ton; cracked corn, $38 ton.

Barley—$32; steam rolled, $34 per ton.

Bran and shorts—$30 per ton.

SEATTLE, March 18.—Feed and hay prices unchanged.

General Produce.

PORTLAND, March 18.—Butter—Cubes, extras, 34c per lb.; parchment wrapped, box lots, 39c; cartons, 40c. Butterfat, buying prices: No. 1 grade, 34@41c, delivered Portland.

Eggs—Buying price, 18c doz.; resales, 18½@19c doz.; jobbing prices, case count, 20c; candled ranch, 22c; association selects, 24c; association firsts, 22c; association pullets, 21c.

Cheese—Tillamook triplets, price to jobbers, f. o. b. Tillamook, 26c; young Americas, 27c lb.

Poultry—Hens, 20@24c; ducks, 25@30c; geese, nominal; turkeys, live, nominal; dressed, 35@40c.

Pork—Fancy, 15c per pound.

Veal—Fancy, 14c per pound.

SPOKANE, March 18.—Eggs—Fresh ranch eggs, $6; fresh pullet eggs, $5.

Live poultry—Springers, 19c lb; springers, staggy, 14@15c lb; hens, fat, 4 lbs up, 24c lb; 2 to 4 lbs, 20c ub; old roosters, 12c lb; rabbits, 12c lb.

Butterfat—35c lb.

CHICAGO, March 18.—Butter—Higher; creamery extras, 39c; firsts, 34@38c; seconds, 31@33c; standards, 38½c.

Eggs—Higher; receipts, 14,160; firsts, 23c; ordinary firsts, 21@21½c; miscellaneous, 22@22½c.

Range of Live Stock Prices for the Week Ending Mar. 15

CATTLE.	Chicago.	Spokane.	Portland.	N Salt Lake
Choice, prime heavy steers (1100 lb. up)	8.85@ 9.75			
Good heavy steers	8.15@ 9.25			
Medium heavy steers	7.25@ 8.60			
Common heavy steers	6.40@ 7.75			
Choice, prime light steers (1100 lb. d'n)	8.75@ 9.65			
Good light steers	8.00@ 9.10			
Medium light steers	7.15@ 8.40	6.25@ 7.60	6.50@ 7.75	6.00@ 7.00
Common light steers	6.25@ 7.50	4.75@ 6.25	5.25@ 6.50	4.50@ 6.00
Common to choice butcher heifers	4.75@ 8.50	3.50@ 6.25	4.00@ 6.75	3.50@ 5.25
Common to choice butcher cows	4.15@ 7.25	3.00@ 5.00	3.50@ 5.25	3.00@ 4.75
Bologna and beef bulls	3.75@ 6.50	3.00@ 5.50	3.50@ 4.75	2.00@ 3.50
Canners and cutters, cows and heifers	3.00@ 4.40	2.00@ 3.00	2.00@ 3.50	1.50@ 3.25
Canner steers	4.00@ 5.00	2.50@ 4.00	3.00@ 4.25	3.00@ 4.00
Medium to choice light veals	6.75@10.75	8.00@10.00	7.00@10.50	6.00@ 7.00
Common to choice heavy veals	4.00@ 7.00	4.00@ 8.00	4.50@ 7.50	
Common to choice feeders (1000 lb. up)	5.65@ 7.65			
Common to choice feeders (750-1000 lb.	5.50@ 7.65	4.50@ 5.50	4.50@ 6.00	
Common to choice stocker steers	5.25@ 7.40			
Common to choice stocker cows, heifers	4.25@ 5.75			
HOGS.				
Top of market	11.50	11.65	11.75	10.75
Bulk of sales	9.00@11.35	11.00	11.50	10.00@10.50
Heavy (250 lb. up)	9.90@11.15	9.00@10.00	9.50@10.50	
Medium (200-250 lb.)	10.05@11.40	10.00@10.75	10.25@11.25	9.75@10.50
Light (150-200 lb.)	10.25@11.50	10.75@11.65	11.00@11.75	10.25@10.75
Light lights (130-150 lb.)	9.50@11.45	10.50@11.50	11.25@11.75	10.00@10.75
Smooth packing sows (250 lb. up)	9.00@10.40	8.25@ 9.00	8.25@ 9.00	
Rough packing sows (200 lb. up)	8.75@10.00	7.75@ 8.50	7.50@ 8.25	
Medium to choice pigs (130 lb. down	8.00@10.65	9.75@10.75	11.00@11.75	
Medium to choice pigs (130 lb. down)	8.00@10.65	9.75@10.75	11.00@11.75	
Stock pigs		9.50@10.75	11.00@11.75	7.50@ 8.50
SHEEP AND LAMBS.				
Medium to prime lambs (84 lb. down)	13.00@16.00	8.00@10.00	9.00@11.75	10.50@12.00
Culls and common lambs	10.25@13.25	6.00@ 8.00	6.00@ 9.00	8.00@10.50
Medium to prime yearling wethers	11.00@14.50	6.00@ 8.00	9.00@10.50	7.50@ 9.00
Medium to prime wethers	7.50@11.75	4.50@ 6.00	9.00@10.00	5.50@ 7.50
Medium to choice ewes	6.00@10.00	3.50@ 6.00	4.00@ 7.00	4.50@ 5.50
Culls and common ewes	3.00@ 6.00	2.00@ 3.50	3.00@ 4.00	3.00@ 4.50
Feeder lambs	11.50@13.50	7.00@ 8.00	9.00@10.00	

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It all depends on how you use your spare hours during the next few years. If you use them to put increased practical knowledge into your head, you can hope for increased responsibility, more congenial work and better pay. You will be able to have a home of your own and be proud of it.

There is an unusual opportunity right now for ambitious ex-service men to prepare themselves for bigger jobs. As long as the funds appropriated by the War Work Council of the Y. M. C. A. last, ex-service men may enroll for any of the practical United Y. M. C. A. schools' correspondence courses at one-half of the usual tuition rates.

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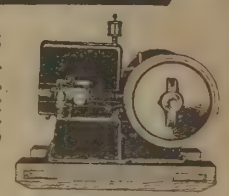
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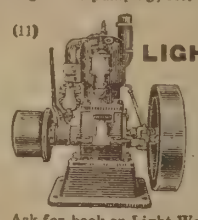
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LIGHT WEIGHT 4 H. P.

For all power jobs up to 5 H. P. Weighs only 190 lbs. May be attached to binder and other machines to save a team. This engine is a necessity on every farm. Improved Throttling Governor insures very steady running and less gasoline used.

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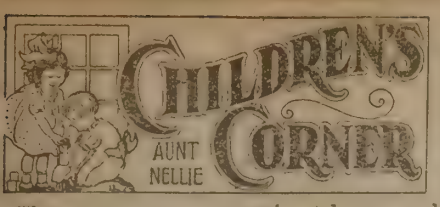
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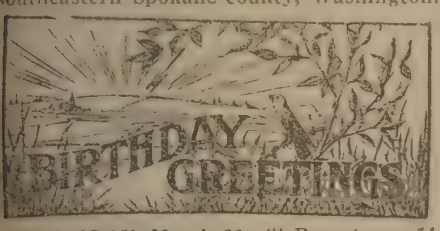
strengthens muscles of feet and ankles. Relieves pressure off bunions, corns, calluses. Get a pair, $2.39. Any J. C. Penney Co. Department Store. Write for booklet. Factory, Albany, Ore.

Glance over the bargains on the "Want Ad" page.



There was once a man in a house and he couldn't get out. How do you suppose he finally got out? He took the measles and broke out. Robert Gilmore received his Junior Farmer and likes the stories, jokes and riddles in it. He says a number of children who live in western Lewis county, Washington, where he lives, get The Junior Farmer. Round as the sun and thin as a knife blade. What is it? A dime.

Aunt Nellie received a nice letter from Estella Wegner, who told us the story of "Narcissus," who stood on the bank of a beautiful stream and gazed at his own shadow in the clear water, thinking it was the image of a beautiful water nymph. He grew pale and thin until his breath departed and there, instead of a youth, grew a beautiful flower, with its head bent toward the crystal fountain. Estella was 10 years old March 14, 1922. Her home is in southeastern Spokane county, Washington.



THURSDAY, March 23—Si Bergstrom, 11 years old; Joel Hood, 8; Anna Jaklewicz, 9.

FRIDAY, March 24—Elsie Early, 7 years old; Gladys Moline, 10.

SATURDAY, March 25—Everil Godfrey, 9 years old; Vera Maxine McPherson, 11; Ruth Nauert, 9; Myrle Parfitt, 11.

SUNDAY, March 26—Arletta Borgman, 11 years old.

MONDAY, March 27—Ellen Larsen, 11 years old; Rheabe Catherine Malone, 8; Bernice Tobin, 11; Beatrice Warfield, 11.

TUESDAY, March 28—Frances Anderson, 10 years old; Clara Hellinger, 10; Henrietta Pinster, 10; Leonard Kinkaid, 11; Leona Barraford, 10.

LETTERS WELCOMED BY AUNT NELLIE.

Among recent letters received by Aunt Nellie are those from cousins whose names follow. A few of these will be published each week in the regular edition of THE FARMER, and others will appear from time to time in The Junior Farmer:

Lavaid Skaug, Maxine Ahmart, Lilian Rinta, Carl W. Johns, Ruth Stark, Bernice and Doris Blanche Jones, Esther Smith, Thordis Pierce, Alma Laurene Stensaa, Clarence Breeden, Earl and Mildred Wuoriner, Alva Rotrah, Robert Franz, Bernice Dicken, Luella Jones, James Dicken, Anna Mae Tartar, Helen Richardson, Alma Marie Schneider, William Hays, James Akers, Jenny Johnson, Audrey Burnside, James Patterson, Bernard Kleinknecht, Howard D. Watt, Gladys McPall.

Emily Powell, Frank La Pine, Loretta La-Follette, Donald Weger, Elsie Reifenberger, Grace M. Forces, Edith McIlroy, Etta Jane Pickle, Lynn Colley, Alma Wst, Waltr Colly, Virginia Estlla Colly, Esther Laitinen, Hazel Evans, Joyce Mathews, Marie Wichert, Agnes Stonaker, Laura Thomas, Louise Calhoun, Lucile E. Mackey, Erma Sherry, Floretta Herrick.

Helen Skott, Burnice Ware, Elizabeth Bise, Jackson Wintersteen, Eda Gross, Essie Schutz, Cecil Houghton, Maxine Van Auken, Susie Dembke, Nina and Ella Boswell, Lois Catherine Thickson, Velma Regan, Bernice Longfort, Pauline and Henry Wertenberger, Lena Ragsdale, Florence Sloman, Robert Gilmore, George Loyos, Josie Schroeder, Alma Smith, Helen Miller, Otto Roth, Alice Loyos, Carl Gilmore, Reta Houghton, Mary Pogorele, Blanche Uribe, Drucy Morton.

Catherine E. Joyce, Marian and Opal Bridges, Marie Thornton, Alice Coons, Hattie Day, Viola Schoessler, Helen Owen, Leo Hardung, Edna Alice Pollock, Thelma Cruse, Lauretta Schuman, Lorraine Dawson, Helen and Glen Pate, Alma Leola Diefe, Mildred Stiles, Ethel Lindula, Grace Baskette, Leota Davis, Louise Wegener, Freda Stump, Elna Early, June Johnson, Helen Enzler, Ethel Irene Early, Tessie Allen, Grace Carlson, Hubert Roloff, Elsie Fern Early, Doris Munson, Septem A. Bee.

Beryl Snyder, Rebecca Biedel, Kathleen M. Stuhr, Mary E. Hall, Alice Malsted, Avabell Schultz, Herbert L. Pickle, Cecil Niva, Emelyn Burke, Rose Mary Davis, Leola Black, Hazel Whitford, Steinar Fjerlie, Idell Wolverton, Oliver Elmer Heino, Annie C. Rademaker, Bernice Anderson, Elsie Cooper, Madeline Moller, Dorothy Harvill, Cecilia E. Stuhr, Jenny Johnson, Cleo Beck, Bertha Eccles, Lois Shannon, Della Miller, Claire Kriffer, Bernis Godsey, Frances Dick, Helen Jarbeau, Willie Roth, Reta Godsey, Lola Adams, Vesta Lucile Pfarr, Doris Godsey, Impie Wilson, Esther Strunk, Orin E. Needham, Ethel Wynecoop, Florence Angle, Iva Harriet Hixson, Hazel House.

BEDTIME STORIES

By THORNTON W. BURGESS.

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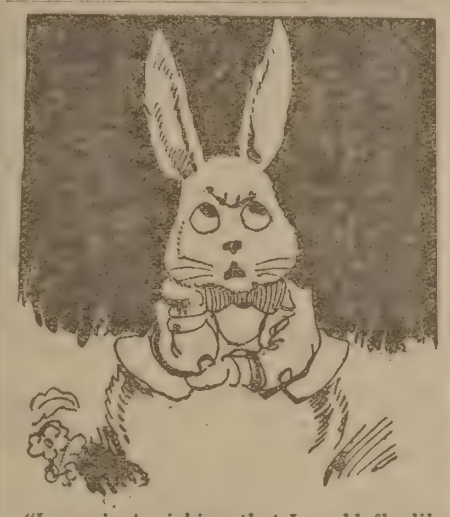
PETER RABBIT'S FOOLISH WISH.

Of course, Billy Mink had felt very foolish when Flitter the Bat had come sailing over the Smiling Pool. Billy wished that he hadn't boasted that he can do anything that any one else who wore fur can do. When he made that foolish boast he had not once thought of Flitter the Bat. Of course Grandfather Frog had chuckled and chuckled when he saw how foolish Billy Mink felt.

Peter Rabbit had laughed and laughed with all the other little meadow and forest people at the look in Billy's face when he first caught sight of Flitter the Bat. Then into Peter's head popped a funny little rime:

Doesn't like the sunshine;
Hangs up by his heels;
On the edge of darkness
Flitter darts and wheels.

Peter often had wondered and wondered how it happens that Flitter the Bat is the only one of all the little animals who can really fly. Now as he watched Flitter cutting up monkey shines over the Smiling



"I was just wishing that I could fly like Flitter the Bat."

Pool, Peter Rabbit suddenly gave a great sigh. Everybody heard it and turned to look at Peter.

"Hello, Peter. Do you feel as badly as all that?" asked Bobby Coon.

"No," replied Peter Rabbit. "No, I don't feel badly. I was just wishing—just wishing a foolish wish, that's all."

"You're foolish most of the time, aren't you, Peter?" asked Jimmy Skunk.

Peter Rabbit made a face at Jimmy Skunk, a good-natured face, you understand. "Anyway, I don't spend half my time wishing I could find some beetles and bothering every one I meet by asking them if they've seen any," replied Peter.

It was Jimmy Skunk's turn to look a little foolish, but he laughed with the others. Then he slapped Peter Rabbit on the back.

"Tell us, Peter, what that foolish wish is?" he cried.

Peter Rabbit smiled. "It's too foolish to tell," said Peter.

"Come on! Out with it!" shouted Johnny Chuck.

"Well, if you must know, I'll tell you," replied Peter Rabbit. "I was wishing that I could fly like Flitter the Bat."

Everybody began to laugh as they tried to picture to themselves how Peter Rabbit with his long ears and long legs would look flying, and Peter laughed, too.

Now Reddy Fox, who is very, very sly, as you all know, had been watching Peter Rabbit all this time and gradually creeping nearer and nearer. "Peter will never suspect danger here," thought Reddy Fox, and crept a few steps nearer. While every one was laughing at Peter Rabbit's foolish wish, Reddy Fox crept up behind a bunch of tall meadow grass just behind Peter Rabbit. Reddy began to lick his lips, for at last he had Peter Rabbit within reach. Just as Reddy prepared to spring, something black passed over his head and close to Peter Rabbit. A funny, squeaking little voice cried in Peter's ear, "Jump, Peter Rabbit! Jump!"

Peter jumped. He didn't wait to ask why. He did what he was told to do without waiting, and as he jumped Reddy Fox landed right where Peter Rabbit had been sitting. Then Reddy Fox started after Peter Rabbit, but somehow every one seemed to get in his way. He bumped into Baby Coon. He had to jump over Jimmy Skunk. He was tripped up by Digger the Badger.

Meanwhile Peter Rabbit had safely reached the dear old brier patch.

Who had told Peter to jump? Why, Flitter the Bat, of course.

How to Overhaul the Tractor

(Continued from page nine.)

order to let the oil get in good contact with the bearing.

The crankshaft bearings are adjusted in a similar manner. Adjust one bearing at a time with all other bearings slightly loose; then tighten all the caps and put in the cotterpins.

No owner of a tractor or car who does his own repairing should be without a set of bearing scrapers and a good oil stone to keep them sharp.

Before closing the crankcase, clean out thoroughly with kerosene and wipe dry. If the crankcase gasket is old, use plenty of shellac on the joints and tighten up at once.

The modern transmission case requires but little attention since the gears are cut and hardened and the bearings are as high grade as in a car. Run off the old oil and wash with kerosene and put in fresh oil, using the grade recommended by the tractor firm.

After the motor is reassembled, the proper clearance must be had between the push rods and the ends of the valve. When testing clearance be sure that the valve is on its seat. Each instruction book tells the exact clearance to give. Make this adjustment with care.

When ready to start the motor squirt plenty of oil into the compression space above the pistons, and give it plenty of time to work over the walls; for if not well lubricated, the motor will be hard to start. Then prime with gasoline at the spark plugs and away she goes.

Look over the clutch and brakes, if any, before you finish and see that they are adjusted to hold firmly. In the clutch it may be that the asbestos lining may need renewing, which is not difficult.

These are the more important items in overhauling the tractor. Other points come up as the operating season advances; but if the above mentioned items have been well looked after, a good year of work is ahead.

The Gaunt Gray Wolf

(Continued from page seventeen.)

stay, I'm sure, but," said Shad regretfully, "I can't do it. I must go back to college."

At length Bob announced one day that his outfit was completed and that all was in readiness, save a few incidentals to be purchased at the Hudson's Bay company's trading post, 15 miles across the bay. Shad, too, found it necessary to make some purchases preparatory to his journey to the interior, and the following morning the two sailed away in Bob's dory.

Tom Black, the post servant, welcomed them as they stepped ashore on the sandy beach below the post, and with him was Bob's old friend, Douglas Campbell, who stated that he had arrived at the post an hour earlier.

"I'm glad you come over, Bob," said he, as the four walked up toward Black's cabin "When I comes t' th' post this mornin' I were thinkin' t' go back t' Kenemish by way of Wolf Bight t' have a talk with you, but your comin' saves me th' cruise. Set down here, now, a bit, till dinner's ready I wants t' hear your plans for th' trails."

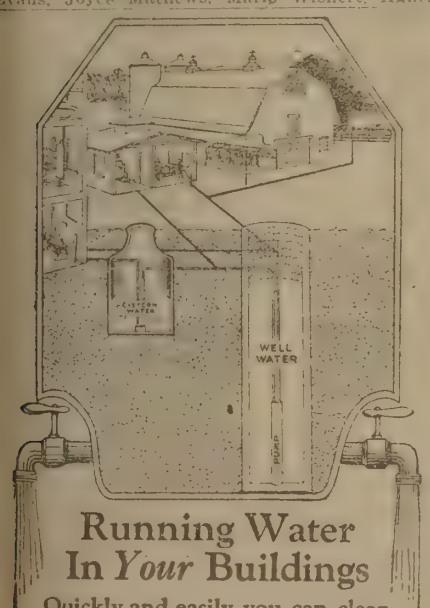
And while Shad was carried off by Tom to meet Mr. McDonald, the factor, Douglas and Bob seated themselves upon a bench before the cabin and discussed the proposed new trails.

"Now, Bob, 'tis this I were wantin' t' say to you, an' I weren't wantin' t' say it when your mother'd hear, an' set her worryin'," said Douglas finally. "Don't forget you're goin' where no white trapper was ever goin' before. You'll have to be a wonderful sight more careful than on th' Big Hill trail. Last year when I goes on th' Big Hill trail some Mingen Injuns come t' th' last tilt an' made some trouble, an' told me they'd never let a white trapper hunt th' country beyond th' Big Hill trail, an' you plans t' go, Bob. Now, if you works west'ard of a line from th' last tilt o' th' Big Hill trail an' th' river, be wonderful careful o' th' Mingens. They's a bad lot of Injuns."

"I'll be careful, sir," promised Bob, adding, however, "I'm not fearin' th' Injuns, though."

"You never knows what an Injun's goin' t' do," cautioned Douglas. "You was findin' th' Nascaupees friendly, but th' Mingens is different."

(To be continued.)



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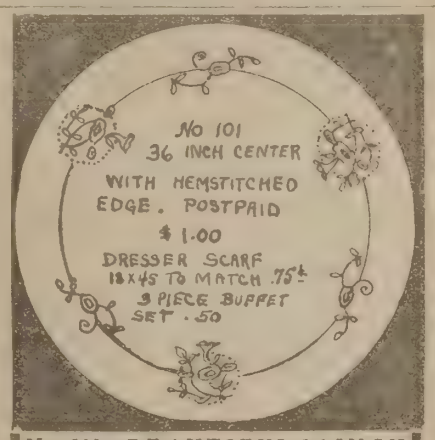
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Clearing Land

(Continued from page three.)

practically the same today as it has been for a long time.

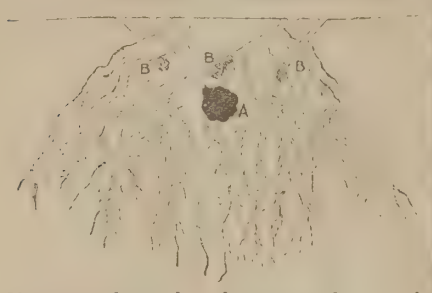
The dynamites and high explosive powders have little or no relation to black blasting powder. The first dynamite was made in Europe by mixing nitro-glycerine with a light spongy earth and packing the mixture in paper tubes as sticks of dynamite and powder are packed today.

Nitro-glycerine itself is a wonderfully efficient explosive when it can be controlled, but it is so dangerous and unstable that it must be mixed and treated to make it safe enough to handle.

Few blasting explosives contain no nitro-glycerine at all but many contain only 4 or 5 per cent of it.

The power of an explosive and its violence are two different qualities. The power or direct strength is due to the volume of the gases. The violence of the gases depends not on their volume, but on their speed. If they are comparatively slow in forming and in forcing their way out of their confinement they will break out large cracks and escape through them, pushing the material aside. If they are very fast or quick they will grind and pulverize everything they come in contact with and throw out the whole side of the confining material, but will not crack it so far.

In buying explosives look first to getting the one that is best suited for the work to be done and aside from that the cheapest one. There could be no object in using straight nitro-glycerine or a gelatine explosive when one of the ammonia farm powders would do the work, for the former explosive costs much more than does the latter. For example, for stump blasting in medium and heavy soils, wet



How to place the charges under semi-tap-rooted stumps. "A" shows proper position where one charge and cap and fuse are used. "B" shows proper positions of several small charges when electric blasting machine is used. Use either one or the other method illustrated—never both.

or dry, needs 20 per cent nitro-glycerine or ammonia dynamite or powder, is recommended, while for stump blasting in dry sand and other light soil a 50 per cent nitro-glycerine or ammonia dynamite or powder is recommended.

HANDLING EXPLOSIVES.

Dynamites and powders in boxes can be hauled freely in spring wagons. You should see that no bolt heads or other metal parts project from the wagon boxes to strike the boxes of explosives. Sweep all dirt out of the wagon. Have the beds clean or covered with straw or blankets.

Go over your wagon and harness before you load dynamite to make sure they will not break down while you have the explosive aboard. Be sure you have the hitching straps or tie-ropes along, and do not leave the horses standing without tying them securely. Break no colts while hauling explosives.

Keep the sticks of explosives in their original boxes until you are ready to use them. Don't have them around loose. In carrying them to the field, use a wood basket or a box and not a metal bucket. Always protect explosives from all possibility of being reached by falling sparks or from match heads or other source of fire. Rain, hot sun and the like must be kept away from explosives. Use care to lay sticks or set the boxes or baskets containing explosives where they will not fall down, be blown over by wind or knocked over by careless people or by animals. Cattle will eat sticks of dynamite or powder, because of their sweet and salty taste. The explosive will make them sick, sometimes kill them.

Since nitroglycerine often will cause headache when absorbed through the skin it is best to wear gloves when handling the sticks. For this same reason some people punch holes for caps in the sticks with a piece of wood rather than with the handle of the cap crimper.

Caps should not be carried in the same basket or box as explosive, but should be carried separately. Take only enough along to do the work in view and carry them in the tin boxes they come in. Many serious accidents have been caused by blasters having loose caps in their pockets during work or afterward. Sooner or later a chance jar is likely to set them off. When several caps have been taken out of the little tin box in which they come the rest will be loose and will rattle about. This should be stopped by filling up the empty space with paper.

The handling of caps is not dangerous provided you do it intelligently and with care. Keep them safe from any jars or heat. You can sometimes do many foolish things with dynamite and powder without serious results to yourself, but not with caps. Letting a cap fall to the ground or floor likely will cause it to explode. For this reason you should keep the caps and explosives apart, in hauling, storing and handling, bringing them together only at the last minute before you prepare the charge to be loaded in the hole. One cap can produce an explosion powerful enough to tear your hands off.

Electric blasting caps must be handled with the same care as regular blasting caps. All caps must be protected from dampness during handling. No trouble will be experienced if you use common sense at every turn, but thoughtlessness and carelessness in the handling of explosives will cause disaster. Bear in mind that when an accident happens with an explosive there is no time to save yourself, and no afterthought will prevent serious injury to you. Forethought is the thing with explosives. In an explosive, you are handling an enormous strength. The fact that it occupies small bulk now should not interfere with your imagining it as an enormous engine but under entire control if you do your part right.

BERKSHIRES SELL WELL.

An average of $65 per head was received at the sale of Berkshire hogs on the Fred Sinnes farm, near Prosser, March 9. The animals were widely distributed, some going to Oregon, but many remaining in the Prosser and Yakima districts. A meeting of Berkshire breeders was held and a movement started to hold a Berkshire futurity at the state fair at Yakima next fall.

COMPLETES YEAR'S RECORD.

Skagit Kaan Marie, a Holstein heifer owned by Lee Brothers of Mount Vernon, Wash., on December 23 completed a year's record with 19,072.3 pounds of milk and 651.51 pounds of fat, or 814.39 pounds of butter to her credit. She also qualified in the 305-day division, with 17,665.5 pounds of milk and 738.35 of butter. The most remarkable part of her record is the fact that she gave birth to a living calf seven days after her full year was up. Lee Brothers have been breeding Holsteins about four years and began testing in

Your Dollar Buys

Entertainment

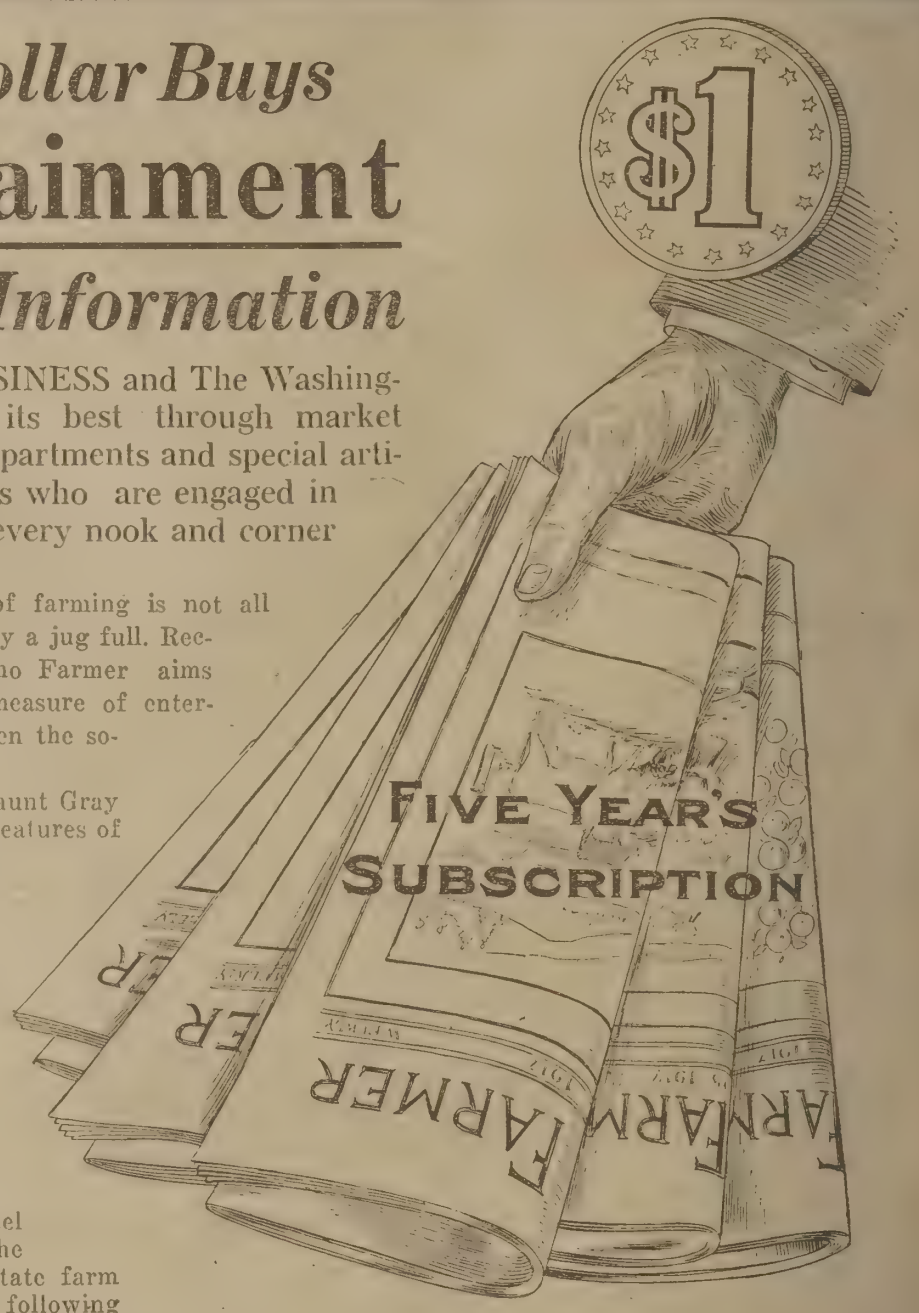
as Well as Information

FARMING is a BUSINESS and The Washington Farmer does its best through market quotations, regular departments and special articles to help its readers who are engaged in this vital business in every nook and corner of Washington.

However, the business of farming is not all there is to farm life. Not by a jug full. Recognizing this, The Idaho Farmer aims to give its readers full measure of entertainment, and to make even the soberest facts interesting.

Our new serial, "The Gaunt Gray Wolf," is just one of the features of an entertaining kind, none the less popular because it transports the reader into an environment beyond the range of his own daily life.

This story by an able writer, Dillon Wallace, is in its early chapters. You can easily pick up the threads with the instalment in this issue. If you do so, we feel sure you will enjoy the weekly visits of your state farm magazine even more for following the exciting developments of this story. Here is a story which in book form would cost you $1 or $1.50; yet is only one among a wealth of varied features in a magazine which costs you only $1 for five years.



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March 23, 1922.
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September, 1920. They have made 26 seven-day records. Every mature cow, except one that had her udder injured, produced over 25 pounds of butter, and four have exceeded 28 pounds.

JERSEY COMES FROM CONNECTICUT.

Sybil's Gamboge Pearl is a beautiful little Jersey heifer that journeyed all the way across the continent from Hartford, Conn., to Bellingham, Wash. She is probably the only daughter in the Pacific northwest of the noted $65,000 bull, Sybil's Gamboge. Pearl was purchased last summer at the Waulkley Bellows farm sale by Cyrus Gates, well-known financier and Jersey fancier of Bellingham. Mr. Gates left her to be bred and she made the long trip in November, arriving at her new home on the 10th. She was dropped August 15, 1920. She was bred to Sybil Gamboge 3d, said by Tom Dempsey and other good Jersey judges to be the best son of Sybil's Gamboge. Sybil's Gamboge, the sire of Mr. Gates' heifer, is not only the highest priced Jersey bull ever sold at auction, but he is by Imp. Royal Majesty and out of Gamboge Oxford Sybil, a great show and production cow.

NEW HOLSTEIN RECORDS.

Two new northwestern state leaders among Holsteins are reported. In Washington, Carnation stock farms, which only recently took the senior 3-year-old record from A. E. Smith of Sumas on Countess Matador Segis with 25.668 pounds of butterfat from 540.2 of milk in seven days, now brings out Highland Sylvia Segis Lady, which made 26.371 pounds in the same period from only six pounds more milk. In Oregon Henry McCall of Prineville wrests the junior 4-year-old 305-day championship from Berning Brothers of Mount Angel with a record by his Clothilde Hengerveld Soldene of 508.87 pounds of fat from 15,254.5 of milk. This animal displaces Model Segis Prilly Gelsche, which made 381.72 from 11,023.9.

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Big Type Poland Chinas
My herd boar won the past two years at state fair. 50 bred gilts, young boars, weaned pigs. Live and let-live prices. Satisfaction guaranteed.
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A few choice fall gilts and boars of Pathfinder and Great Wonder breeding. Priced to sell. Satisfaction guaranteed.
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you should also keep a careful record of your stock, milk records, breeding records, labor and feeding records, live stock accounts, general farm accounts and expense accounts for household and personal expenses. We will send you a record book covering all these matters, free. The supply is limited. Address
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Heart o' the Valley Ranch
GRAND CHAMPION HERD
OF THE
PACIFIC COAST, 1921
Won 24 firsts out of 28. Won 9 champions out of 12. Won 5 grand champions out of 6. Nehawaka Lad, Cherokee Lad and Gen. Tipton breeding.
Bred sows, open gilts, boars, young pigs one to a carload. Sow groups, with unrelated boar a specialty. Guaranteed breeders. Write for price list and catalog.
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White Bob
O. I. C. Herd Sire
Sire, Linwood, by King Senator; dam, White Jewel, by White Wonder. Fine individual, proven sire of exceptional quality. Kind, gentle disposition. In good breeding condition. Can use no longer, and rather than butcher will sell for $45. crated, f. o. b. Albany.
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Improve your stock. You get the breeding hog now; pay when you get the pork. Write for plan.
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Broadmead Aberdeen Angus
Ten bulls, ready for service, now offered at special prices and terms. Also a number of promising bull calves, some that should make show winners or high class herd headers. Can supply your needs for either sex.
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Twenty head cows and heifers, a majority by a grandson of the great Plymouth Lad. Other popular [illegible] and price [illegible]. Six are on C[illegible] test and two have finished. All are or will be bred to a son of St. Mawes Lad, sire of the world record senior yearling, St. Mawe's Lad's Lady, 828 pounds fat in a year, and out of high record dams. Write for full particulars or better still, call and see them.
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His dam has an official 7-day record of 29.10 pounds butter and is an all the year round producer.
His sire is a son of the famous "Bessie" bull and his seven nearest dams average 25 lbs. in 7 days.
He is 17 months old, well grown and a show bull in any company.
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Born Aug 7, 1921. His 2 nearest dams averaged for 365 days: Milk, 23,792 lbs.; butter, 982 lbs., one of them, as a 3-year-old. His two nearest dams, estimating on record that will soon be finished, have 5 yearly records, 3 in heifer classes, that average, [illegible] lbs.; butter, 948 lbs. Send for picture, pedigree, etc. Henry McCall.
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Arrorok Shorthorns Herd headed by True Baron. 1st premium Idaho state fair, 1918-1920. A superb collection of Scotch breeding matrons. Write your wants in range and herd bulls.
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30 head of the best bulls we have ever offered. For further information write C. Bruce Requa, Sec., Kimberly, Idaho.
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Many with calves at side now and rebred. Others bred to our good herd bulls for spring calving. Cows sired by Beau Mischievous 7th, by Beau Mischief, by Beau President; Carlos 85th, by Beau Carlos 2nd, by Beau Carlos; Beau Gallatin 15th, a grandson of Beau President, and grand champion Idaho Start Fair for three years; Bonnie Lad, by Bonnie Brae 24th, out of Doncaster dam. These cows are bred to and their calves are by BEAU GALLATIN 15TH and CARLOS 85TH. The 60 bulls and 60 heifers are also by these bulls.

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Years of experience has taught us how to mix a feed with the same food values that the mother hen would scratch for her baby chicks on the open range. That's why SPERRY BABY CHICK SCRATCH is properly granulated and proportioned for fast-growing little bodies. Made of prime, re-cleaned seeds and cracked grains with a small percentage of high grade bone and charcoal—SPERRY BABY CHICK SCRATCH is the best feed-and-health insurance any poultryman can buy for his chicks. It gives them the sturdy start they need!

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THE WASHINGTON FARMER

ESTABLISHED 1894

SPOKANE. SEATTLE.



How Shall the Fruit of the Northwest Be Marketed?--Page 4

A Small Farm Home

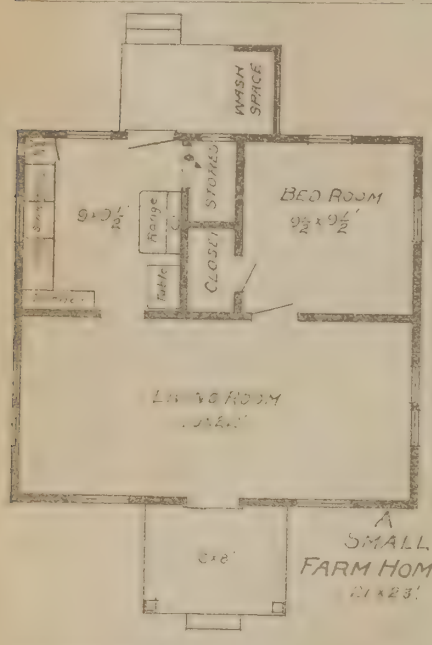
By L. J. SMITH, Head Farm Engineering Department, State College of Washington.

Most ranchers starting out for themselves on an undeveloped piece of land do not wish to build an expensive home. They want a compact, yet serviceable plan, without frills and unnecessary expense.

The plan here shown is an attempt to meet the above conditions and cut the cost to the minimum. It is only 21x23 feet. There is no waste hall space. Every square foot is utilized. Though the house is so small, yet it has a large, comfortable living room, one end of which may be used as a dining room.

The kitchen has been carefully planned and the fixtures so arranged that the work can be done with the minimum number of steps. It has what every farm kitchen should have, a space for stores.

The bedroom is not large, yet it is larger than many bedrooms in our city apartments and has good light and cross ventilation and a fair-sized closet.



A SMALL FARM HOME. 21x23.

The roof may be either of the hip type or the ordinary type. In either case the pitch or slope should not be greater than one-third, to look well.

In studying a plan such as this, one must remember that it is not possible to secure all the desirable points in so small a plan. The ideal farm home has yet to be built. Even in a seven or eight room house it is almost impossible to include all the desirable features. One good point often crowds out another. In the small farm home, therefore, we must be satisfied with fewer conveniences.

Canadian Thistle

By E. G. SCHAFER, Department of Farm Crops.

Can you tell me of any method to exterminate the Canadian thistle?

Blaine, Wash. S. N. F.

The Canadian thistle is difficult to destroy because of its extensive root system and its ability to store up a large quantity of food in its roots. I can not tell you of any easy manner in which this weed can be destroyed. The Canadian thistle, as well as certain other perennial weeds, is becoming firmly established in many parts of the northwest. The tendency is for the infested area to become larger unless vigorous means are used for their eradication. If the patches exist in comparatively small areas I would recommend thorough clean cultivation. If this method is to succeed all above ground parts must be removed continuously so that the plant will starve because of lack of food which is prepared in the leaves. This means that the land should be cultivated at frequent intervals and that the plants should be cut off underneath the surface of the ground tw oor three inches, so that it would never appear above the ground from early spring until late fall. It is desirable that the conditions for growth be made as favorable as possible but that the plants be not allowed to appear above the ground. This will cause them to use up the plant food in attempts to grow more rapidly than if the plants were in a semi-dormant condition.

This method may not be economical for application on a large scale, but when the possible danger of further spread of the thistle is considered, I believe it is a proper method to follow.

PLANS FOR LABOR SAVING.

One of the persistent buyers of good Holsteins at northwest sales of the last few months is C. M. Seeley of Seattle, who is establishing at Minterbrook farm, six miles from Port Orchard, in Kitsap county, a modern certified milk plant, the buildings and equipment of which have been planned most advantageously for labor saving. The farm is one of 140 acres of bottom land on Minter creek.

The herd, which is under federal supervision, is headed by a son of Carnation King Sylvia, recently purchased from Carnation stock farms. His dam, Beauty Pietertje Segis Walker, is a three-quarter sister to Segis Pietertje Prospect, the 37-[illegible] cow, and herself has a 2-year-old record of 308.3 pounds of butter from 19,298 pounds of milk. King Minterbrook Sylvia Matador, as the herd sire is known, was a year old December 19, 1921.

The Ignition System

Please tell me the difference between a clockwise ignition system and a counter-clockwise ignition system and the working system of each. How can one tell them apart? H. B. M.

Rupert, Idaho.

Ignition systems are classified clockwise or counterclockwise depending upon which way the magneto turns. Looking at the magneto from the coupling end, if the coupling turns in the direction of the hands of a clock or watch, it is clockwise, or "right." If the coupling turns in a direction opposite to the hands of the clock, the direction is called counter-clockwise.

The magneto is not essentially different except that it is run in two opposite directions to meet the various motor attachment requirements.—L. J. Smith, W. S. C.

Guernsey Breeders Meet

Organization and election of officers, completion of arrangements for a carload of purebred bulls and an interesting program occupied the attention of Guernsey breeders of Thurston county at Olympia March 2. C. H. Bergstrom, formerly county agricultural agent, was elected president and C. C. Aspinwall vice president of the Thurston County Guernsey Breeders' association, and there were short talks by County Agent E. B. Stookey, Superintendent W. A. Linklater of the western Washington experiment station, Cashier Earl McCroskey of the Olympia National bank, and E. L. Westover, western representative of the American Guernsey Cattle club. Adjourning to the city library, members of the crowd saw the three-reel moving picture, "Guernseys in America."

NORTHWESTERN WHEAT SHIPMENTS.

Europe and the orient have about equally divided the shipments of wheat and flour from the northwest for the present cereal year.

MARTIN C. STOCKERT, Toppenish, Wash. I'll say The Washington Farmer is a good paper and a booster for the farmer.



The Washington Farmer is welcomed just as much by the wives and daughters on the farm as it is by those who hold the plow handles or who drive the big reaper. It devotes articles, pages and departments in every issue to the special field of women. It aims to lighten the work of those who must perform the endless tasks in the farm home, and to carry a word of inspiration and cheer to those who keep the wheels in the farm household turning smoothly.

The "Family Circle," with its constant interchange of experiences, ideas, opinions and methods, becomes more and more popular as the weeks pass.

The friendly interest of our women readers makes them warm adherents of our cooperative plan for securing and renewing subscriptions. Here is the idea. Many publications charge a high subscription price because it costs so much to gather the subscription orders. We eliminate the expensive system of having a force of agents go from town to town and from farm to farm to secure and renew subscriptions. Instead, we ask our friends to send in their own orders at least sixty days in advance of the expiration date stamped on the wrapper of your paper, and to include the orders of friends and neighbors with your own.

You get the benefit of the money saved by this economical plan. You receive this big, entertaining farm and family magazine for five years for only $1.

Continued cooperation is necessary. We hope to make 1922 even more successful for cooperation than the past years have been. Please do your part.

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March 30, 1922.

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SUCCESSOR TO

Vol. 46. No. 13 THE RANCH PACIFIC DAIRYMAN HORN AND HOOF March 30, 1922

For Good Farming, Attractive Country Homes and Happy Country People

Poultry a Profitable Sideline in Yakima Valley

Keep 250 Hens in Place of 50 and Find Dividends Totaling $400 to $600 in a Year

By GEORGE N. ANGELL

"The farm bureau had everything to do with it. The real truth of the business is that the state association was not very enthusiastic about starting a branch in Yakima. The farm bureau called its attention to the possibilities here and finally secured its interest. Now the branch is a going concern."

I had expected, when I asked Manager A. S. Brown how much the county farm bureau had to do with the organization of the Yakima branch of the Washington Cooperative Egg and Poultry association that he would come back strong, for R. B. Coglon, then county agent, had "sicked" me onto him.

"What about the new poultry association branch?" I had asked Coglon.

"Go see Brown about that," he had replied, and had added, with a triumphant gleam: "Ask him what the farm bureau had to do with it."

So I had expected a strong come-back. I was not fully prepared for one of 1000 per cent, but it was a pleasure to witness it, nevertheless, for the mystery of why somebody hadn't bolstered up the poultry business in Yakima was one that had puzzled me for several years and to have the farm bureau come up to the mark of my desires in the fashion described by Brown was refreshing, to say the least. Moreover, it furnished another link in the chain of evidence which is being forged to prove that the farm bureau is some good after all.

Brown continued: "First, the bureau sent two representatives, Coglon and C. L. Smith, to the West Side to investigate. They went through King, Pierce, Lewis and Whatcom counties and came back very much enthused, but a request that the state board of directors set a minimum hen population for the establishment of a Yakima branch at first met a cool reception. Nothing daunted, they pursued the directors until it was agreed that 50,000 hens would suffice, and then they started after the hens. Several attempts were made through county and community poultry project leaders, but finally they asked for an association organizer for the job."

This is where Brown was injected into the situation, unquestionably for the situation's good. Brown was a poultryman at Yarrow, across Lake Washington from Seattle, who had "a little bunch of hens" and who, after 15 months' membership was thoroughly "sold" on the association. He was a salaried worker in Seattle when he started with 250 hens, but doubled the number when he found they would pay, and was devoting all his time to the small "ranch" when cooperation drafted him. He canvassed the entire territory of the prospective Yakima branch for nine weeks under the auspices of and in company with leaders of the farm bureau, and he did it for his modest expenses, though later he was allowed a small compensation. Ending just before Thanksgiving of last year, the campaign brought in the necessary 50,000 layers. As a result the branch was established; headquarters were opened in Yakima and the association is now accepted as part of the machinery of things on "produce row" at the county seat. If you don't believe it, read this quotation from a recent issue of a local daily:

> "Hens are going to work and eggs are going down in price. Yesterday's quotations at the Washington Cooperative Egg association branch office, located in the J. A. Sisler warehouse on Second avenue, were 34 cents a dozen for extra quality; 32 cents for firsts and 30 cents for pullets. Last week 154 cases of eggs were received at the association warehouse and the receipts are brisk this week, with over 100 cases received up to last evening."

The complacent reference to "extras," "firsts" and "pullets" is one that springs of knowledge recently acquired, for up to January 12 eggs were eggs in Yakima and grading applied only to apples and spuds. Now deft candlers sort receipts on the basis of weight and quality, and Yakima consumers know what to expect when they order a certain grade. Also, Yakima producers know what to expect when they deliver ditto. In this connection Brown chuckles at the recollection of four or five hens' nests, with from five to 12 eggs each cooking in the hot sun, in the orchard of a prospective association member he visited early last fall. "I told him he'd have to quit that, and he will if he gets anywhere with us."

"I didn't see how I possibly could take the management here, but they wanted me to do it, and we rented the ranch and here I am. Excuse me while I open the door and see what this fellow wants. It's Saturday afternoon and we're supposed to be closed, but we don't want to pass up any business."

Manager Brown impresses one as being that way, and one wonders whether the Sisler warehouse, even though it is 50x100 feet in size, will long remain too large for the association's requirements. Receipts increased from 79 cases of eggs the first week to 160 the second week in February, and would have increased much faster but for the fact that the larger poultry raisers were filling their incubators.

Two carloads of feed have already been handled and more will be unless valley dealers "listen to reason"; two expert candlers are kept constantly on the job; the membership campaign will be pushed right along, and it is the intention, as soon as demand warrants it, to establish a feeding and dressing station similar to those which have been so successful in western Washington. Two counties, Yakima and Benton, are included in the bailiwick of the association, with the Columbia river the southern boundary and the Yakima county line on the north.

From Prosser, Grandview and Sunnyside eggs come in and "empties" go back twice each week by truck, the shippers providing a central warehouse where they are stored for collection and distribution. A truckload arrived while I was waiting, and 44 cases were unloaded. The names of Outlook Supply company and Rufus Meyer of Outlook, and of O. G. Parfitt, H. C. Gest, M. B. Mitchell, E. C. Parfitt, F. A. Bridgeman & Son and Sol Kostenbader of Sunnyside were among those on the return tags attached.

Richland sends shipments by parcel post, Kennewick by express in individual shipments (truck service is planned here eventually), and producers from the valleys which are directly tributary to Yakima deliver their own eggs, for the most part at the Sisler warehouse. I talked with one of them from Moxee, who brought in two cases. He said that in his opinion the period in which the packers set their own prices for eggs has ended for keeps. Emphatically, the association is delivering tthe goods.

The Yakima market has proved a big help to this particular cooperative, for 90 per cent of the product is sold right in the county seat. Grocery men and hotels took readily to the idea of grading and have been doubling their original orders. All the first-class restaurants in the city are its customers and practically without solicitation. During the first month of business 125 cases were shipped out of the valley, 40 the first week to Seattle and 80 to Spokane, but "never again," says the manager. "They'll have to forget us until we're big enough to supply the home demand."

The government camp at Rimrock, a miniature city where a mountain gorge is being dammed for a new water supply, buys nearly all of its eggs from the association, its account running to $65 per week. The superintendent will increase his construction force shortly and wants 10 cases a day. He is well satisfied because the eggs meet government requirements as to grading and he will get the 10 cases.

The total hen population of the territory is 150,000 birds, mostly Leghorns, and it is estimated, from the interest taken in the business, that this population will increase at least 50 per cent in the next 12 months.



By express, by parcel post, by automobile truck and by henryford of the owner, eggs laid by 50,000 Yakima hens come in weekly increasing numbers to the local warehouse of the Washington Cooperative Egg and Poultry association, and a great awakening is taking place in the poultry industry. Forty-four cases came in this shipment from the "lower valley" and are being taken care of by J. E. Ballou, association candler and warehouseman, who is in the foreground. He was three years with Swift & Co. and has been five years with the Washington association, and he candles eggs so fast that you'd hardly believe it.

"My best argument to the farmers of Yakima has been poultry as a profitable side line," said Brown on his return from the warehouse. "I don't expect them to abandon fruit growing or hay raising for hens, but if they will modernize their plants and keep 250 hens where they now raise 50, with little more work they can be assured of weekly dividends totaling $400 to $600 in a year. This will pay the grocery bill in lean years and can be classed as 'velvet' in the fat ones, and no back bills to pay. While treating it as a side line, they must not give it secondary consideration, however. Hens must have care, and the plan that works best is for some members of the farm family to be held directly responsible for them."

Brown waxes enthusiastic over the possibilities of a dressing station. "It's perfectly apparent that all the money in geese and turkeys is in selling them dressed. You can't beat this climate for raising them—it's an impossibility on the Sound—and with an association dressing station in operation all the members would have to do would be to raise them to the fattening age. We would do the rest."

In regard to the handling of feed he asserts that the association is not in business as a feed concern, but has taken this step for the protection of its members. "If the feed concerns will supply us at the right price they'll not find us in competition with them. If local mills will prepare our mash at a Seattle price plus freight to Yakima, we will patronize home industry, and the same thing applies to grain. Considerable grain is grown in the valley; the association is composed of Yakima citizens, and it is right that they should spend their money at home. They have been robbed at home, however, and we intend to put an end to this."

Brown is a great booster for cooperation. "Stand by the association when it's right and right it when it's wrong," is his motto, developed from his observation that 90 per cent of the complaints about cooperation which he heard in the district are based on the fact that the faultfinder stayed at home and complained about some imaginary difficulty instead of attending the meetings and helping active members run the business.

Repeatedly during the campaign he proved his ability to draw and interest prospective members. On one occasion, which was typical, he started for an organization meeting at Naches Heights with D. J. Foster, community poultry project leader. Foster kept only 50 hens and was rather amused at being a project leader. Moreover, he made Brown no promises as to the number of people who would turn out. There were 40 people at the meeting, however, and they stayed until nearly midnight asking questions and offering objections which Brown answered and overcame. The next day two women came into the Yakima office to join the association, and one of them ordered an incubator. And he is generous. "C. L. Smith of Sunnyside spent 18 days with me riding over the hills, when he had to hire a man to take his place on the ranch," he said. "His work, not my canvassing, is responsible for the success of the organization campaign. All honor is due to Clyde Smith, and very properly he was elected a member of the board of directors for this district."

Locals of the association, clubs in which membership will be open to all interested in the poultry industry and through which the best practices in poultry husbandry will be disseminated, have been organized in Yakima, Sunnyside, Grandview, Prosser, Richland and Kennewick. "We are working right along farm bureau lines," said Manager Brown, "and incidentally we are doing all we can to promote its interests."

As previously stated, Manager Brown is batting farm bureau 1000 per cent.

Dairy Cow the Entering Wedge

In a recent address Professor E. G. Woodward, who is just now leaving the state college as head of the dairy department to enter private business in the east, declared that the dairy cow in numbers of from two or three to a dozen was becoming a necessity on the wheat farms of the Inland Empire. One of the reasons that he gave was that the gradual depletion of soil fertility from the continued production of wheat made the dairy cow essential as a fertility-restoring factor.

At this juncture a question was asked from the floor, "What appreciable effect would five milch cows have on the soil of a section of wheat land?"

Professor Woodward responded instantly that the cow herself probably would have comparatively little direct influence on the fertility of the soil, but that she was the entering wedge for the development of a better system of farming that would in itself maintain and build up soil fertility. Where the dairy cow is there must be pasture crops, such as clover or alfalfa, and silage crops, such as corn or sunflowers. Where the dairy cow is there must also be pigs and chickens to consume the skimmed milk. All these things tend to a diversity of interests and a rotation of crops that mean better soil conditions and better farming methods in general.

Mr. Woodward emphasized the value of a dairy herd on the Inland Empire farm as a means of providing labor the year round. He said that it was essential for the farmer to be employed 12 months of the year if his labor income was to be reasonably high.

He made it clear that he was not advocating the replacement of wheat farming with dairy farming in the Inland Empire, but that a few cows on every farm, together with the crop rotation necessary to their success, meant better wheat raising as the basic industry. He declared that there was not enough milk being produced in most sections of the wheat growing districts to satisfy local demands.

INTERSTATE FAIR HEADS.

President T. S. Griffith of the Spokane Interstate fair has announced the selection of John L. Smith of Spokane as superintendent of the live stock department for next fall's fair. Under Mr. Smith's supervision John Auld of Waikiki farm will have charge of the dairy division, John Napier of Hercules farm the beef division, B. A. Adams, Duroc swine breeder, the hog division, and John H. Roberts, formerly of the Spokane Union stockyards, the horse division. George S. Bulkley of Carnation farm, Seattle, will judge dairy stock. Other live stock judges have not yet been announced.

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Bedrock of Cooperation

Conviction is deepening in the minds of the fruit growers in the Wenatchee district that their fine industry will not be upon a sound footing until it is made completely cooperative for marketing as well as for production.

At the annual meeting of the Wenatchee District Cooperative association in Wenatchee last week a resolution was unanimously adopted favoring a selling organization owned and controlled by the growers, or the use of some selling organization in the east that would permit the growers' organization to control the sale of fruit at all times.

This significant resolution, it is understood, was prepared by a joint committee from the Skookum Packers' association and the Wenatchee District Cooperative association.

It should be apparent, after the experience of the past 20 years in the Pacific northwest, that there is urgent need for cooperative marketing as well as for cooperative production. So long as the cooperative production associations tie themselves up in contracts with private marketing agencies that are owned or controlled by distant eastern interests, they will see the great part of the benefits of cooperative production dissipated or passing to the pockets of the eastern marketing agencies.

California has pointed the way, has pioneered in the difficult field of cooperative marketing and made a brilliant success. Most of the staple products of the orchard and the garden in California, are cooperatively produced and cooperatively marketed. The objection is sometimes heard that it is easier for the growers of oranges and lemons to market their products cooperatively because the production of those fruits in the United States is confined to California and Florida. But the production of prunes is not confined to California and the prune growers there have a successful cooperative marketing association.

For that matter, if there are special difficulties in the way of marketing the apple and other fruit crops of the Pacific northwest, those difficulties must be faced by the private marketing agencies as well as by the cooperative marketing associations. The logical end of that objection would be a refusal of the growers to deal either with cooperative marketing associations or with private marketing agencies. The objection, therefore, is an absurdity.

It was a misfortune to the fruit growers of the Pacific northwest when the Crutchfield interests came into this field 10 or 12 years ago and undermined the producers' cooperative marketing organization, the old North Pacific Fruit Distributors. The result is that the orchard industry of the Pacific northwest is on the unstable foundations of 20 years ago, and it will remain upon those unstable foundations so long as it continues at the mercy of privately owned marketing agencies. These will continue in the future, as they have in the past, to play one district against another and one group of growers against other groups. They operate on the old Napoleonic maxim of "Divide and conquer."

It is conceivable that the cooperative producers and the private marketing agency might travel together harmoniously for a while, but it is inevitable that their roads will divide before long and then the private agency will look out for itself and leave the growers to struggle as best they can with bad markets and unprofitable prices.

Heartily Support Club Work

All over Washington boys and girls' calf club work is making rapid strides with the backing of organized adult breeders.

Cooperating with Holstein and Guernsey breeders of Yakima county, County Club Agent E. O. Scott is promoting several clubs on a 3-year basis, and Yakima banks have guaranteed financial backing to a total of $12,000 or $15,000. The Elk Boys and Girls' Dairy club of Spokane county is searching for a carload of registered Guernsey heifers for its members, and parents of members have organized a bull club and purchased from A. L. Gile of Chinook two fine sires by Langwater Traveler and out of tested dams.

The Whatcom County Guernsey Breeders' association is supporting club work wholeheartedly, and at one of its recent meetings the Hub Guernsey Calf club was present and competed for small prizes in a judging contest.

Nor are the Jerseys out of it entirely. In Pacific county the Naselle Calf club was organized with 11 members. This is an "exclusive" Jersey community, and nine of the members are to have grade or purebred calves of this breed. Francis O'Connor was elected president, Oscar Nasi vice president and Tauno Wiitala secretary. Those familiar with the district will recognize in this list the family names of established Jersey breeders who have been working for some time along herd improvement lines with County Agent Beck.

Value of Community Cooperation

As a practically 100 per cent perfect illustration of what a community can become as a breeding center, with the proper initiative and a little guidance, state live stock extension specialist C. M. Hubbard points to Kittitas county.

Here is a district that is becoming famous all over the country for its work with purebred Hampshire sheep. Where only a few short months ago there were not more than 40 ewes of this variety in the county, there are now 230, and where last fall Kittitas breeders consigned 50 rams to the annual sale at the Washington State fair, this fall they will consign 125.

There are two imported rams in the county, and through wholehearted cooperation, one foundation head of which is boys and girls' club work, Kittitas Hampshires are coming to be the synonym for the best that the breed has to offer.

A steady demand for well bred rams for range purposes is the solid foundation upon which the project is built.

Where Business Is Business

The president of the United Dairy association of Washington gives a lot of credit for the success that the united associations and the individual member associations have attained to the loyalty and hard work of their respective boards of directors. These directors in most cases are farmers who milk cows. Hence, they hold their meetings at night. When a directors' meeting is called it is like a good, old-fashioned country dance. It adjourns just in time for those attending to get home to milk the cows in the morning. At least, that is the reputation that President Scollard gives them, and he declares that whatever success the organization has attained is due to that spirit of determination, sacrifice and hard work.

State Farm News

Guernsey breeders of Thurston county formed an association, elected officers and laid plans for the purchase of a carload of cattle at a meeting recently held in Olympia.

The officers elected were: C. H. Bergstrom, president, and C. C. Aspinwall, vice president, both of Olympia.

The meeting was called by E. B. Stooky, county agent, and among the speakers were W. A. Linklater, superintendent of the western Washington experiment station at Puyallup; Earl McCroskey, cashier of the Olympia National bank, and E. L. Westover, Portland, Ore., western representative of the American Guernsey Cattle club.

* * *

W. T. Putnam, a Mason county farmer, who is the owner of Intermountain farm, near Lake Cushman, reports the purchase of a registered Jersey bull calf from a herd in the Willamette valley, Oregon.

* * *

During the month of January the output of butter at the Winlock cooperative creamery was 28,500 pounds. In January, 1920, the output was 19,000 pounds; in January, 1921, it was 22,000 pounds. Superintendent Andrew Anderson attributes the increase in a large measure to the better class of cows that dairymen about Winlock are keeping. Scrub stock is being rapidly replaced with purebreds and the result is making itself felt in a financial way.

* * *

County Agent Hupp is making arrangements for distribution of poisoned oats for the annual squirrel killing campaign in Pend Oreille county. A half mill levy was made last fall by the county commissioners for this purpose. Sixteen hundred ounces of strychnine alkaloid will be used and distribution of the poison to farmers will begin April 10.

* * *

Housewives of Pacific county are solidly back of County Agricultural Agent J. R. Beck, who with the help of Minerva Lawrence, home management specialist from the state college, is instituting a campaign to cut down housework. Mr. Beck is organizing testing circles in various towns, each circle consisting of six housewives. Then each circle is furnished with six labor-saving devices for housework. As each woman uses an article she passes it on to the next. If she likes the article she can arrange to get one.

* * *

Henry Huber has purchased the Sarah Burke place of 224 acres, just west of Vancouver city limits, for $25,000. The farm will be operated as a dairy farm by Mr. Huber.

* * *

Announcement was made in Seattle recently that the North Puyallup fruit cannery has been leased to Frank Collinson of the Starr-Collinson Packing company of Portland, Ore., and will be operated full time this season. The plant has an annual capacity of about 100,000 cases, and in the past has packed principally berries and rhubarb. It represents an investment of nearly $40,000, and is owned jointly by the Milwaukee and Union Pacific railroads, which financed its erection several years ago.

* * *

A meeting of farmers at Colfax has set the wage scale for common farm laborers at $1.50 a day and board; cooks, $25 a month and board; man and wife, $65 a month and board.

* * *

Boys and Girls' club week will be held from June 19 to 24, inclusive, at the Washington State college and will be attended by 145 boys and girls from the 29 counties doing club work in the state. The five club members representing each of the 29 counties will be selected by the state club leader in cooperation with the county club agent or county agricultural agent.

* * *

Almer McCurtain of Davenport reports that all winter wheat in that district which got a fair start in the fall, as a rule, is coming through in fine shape.

* * *

Coyote skins obtained by hunters employed by the state and federal government for the extermination of predatory animals have just been sold for $1640. A large proportion of the coyotes were captured in Adams, Grant, Franklin and Kittitas counties. The money reverts to the state's general funds.

* * *

The Skagit Canning company of Sedro-Woolley at its annual stockholders' meeting elected as trustees J. W. Norris and A. Larkin of Bellingham; F. A. Hegg, E. G. Ludwick and J. Newberg of Sedro-Woolley. F. A. Hegg was elected president and E. G. Ludwick secretary. The farmers are urged to put in a large acreage of beans for the cannery.

* * *

There is no retrenchment in hop acreage in the Moxee district this year, in fact a number of growers will increase their acreage and there even will be a hop house built this season, says a Yakima report.

* * *

Stanley Butchart of Sunnyside has associated himself with John L. Smith, veteran Holstein breeder of Spokane. Mr. Butchart has been breeding Holstein cattle in the Yakima valley for five years and during the last year was field secretary for the Washington State Holstein Breeders' association.

* * *

To determine the value of balanced ration in milk and butterfat production, eight cows belonging to the Christen brothers of Frances, Pacific county, are being tested. The cows are divided into groups of four each, one group being fed a balanced ration and the other a typical unbalanced one. At the end of the first month an increased production amounting to 900 pounds of milk and 45.7 pounds of butterfat was recorded in favor of four cows on the balanced feed. This increase amounted to $20.10, less extra cost for feed of $16.46, making a net gain for all four cows of $3.64.

Coming Events of Interest

The following schedule, in which the state college extension division and farm bureau are cooperating, has been arranged for squirrel poison mixing demonstrations Oakesdale; March 30, Tekoa; March 31, Farmington; April 3, Thornton; April 6, Rosalia; April 7, Pine City; April 10, Colton; April 11, Pullman; April 12, St. John; April 13, Steptoe; April 15, Fairbanks.

April 5—Pierce county poultry meet.
April 5-6.—Okanogan live stock meet-sale, Okanogan.
April 15—Stock show and mock sale, W. S. C., Pullman.
May 1-6, Tulip festival, Bellingham.
July 27-28, Whatcom co. Guernsey gallop, Bellingham.
April 16 - Easter.

FARM BUSINESS AND MARKETS OUTLOOK

The Farm Business Outlook

There is nothing resembling a boom on the horizon, but analysis of all the factors leads inevitably to the conclusion that a period of moderate expansion commonly known as "prosperity" is on the way.

Failure of prices on some farm products to maintain topmost levels is disappointing, but progress seldom continues long in one direction without temporary interruption.

Hogs and lambs were about as high as they could be expected to go and it is still too early for any dearth of wheat to exert its full effect on quotations. But even $10 hogs mean prosperity in the corn belt if costs are down and in spite of recent declines the entire agricultural price level is substantially higher than in December.

The index number of prices of farm products in February as prepared by the bureau of labor statistics was 126, compared with 113 in December, 1921, and the highest since February 1, 1921.

The general average of commodity prices has become relatively stable, with a slight upward trend. Dun's index number advanced nearly 7 per cent from July 1 to March 1 and Bradstreet's index, considered the most accurate forecaster of forthcoming changes in business conditions, has advanced 8.5 per cent from its low point last June.

Employment by manufacturers is on the increase, the March 1 totals as reported by the department of labor being slightly larger than on February 1. The iron and steel industries are operating at a rate about one-third larger than the average of last year. A number of auto companies report larger sales than a year ago. The building outlook is still very promising.

Car loadings, which usually decrease from December until this season of the year, have shown a rather steady increase in this period and are now larger than at this time last year or three years ago, indicating that a larger quantity of merchandise is moving through trade channels.

Bank clearings, which measure the purchasing activity of the nation as a whole, have increased until they are larger than at this time last year, the first time that this comparison has held good in a year and a half.

Prices of industrial and railroad stocks and bonds have advanced rather steadily since midsummer and stocks are nearly 25 per cent higher than at that time, thus furnishing an index of rising optimism in the future of industrial affairs and an increased supply of funds for investment.

Reserve ratios of banks have ceased to increase, indicating that the demand for money at current rates is growing and that business expansion has begun.

Foreign countries still have their troubles and exchange rates have passed through a sharp setback from which they are now recovering. There is less fear of a collapse abroad and more evidence of a return to sanity in handling their financial affairs than was the case last summer.

The coal strike threat is the bogy at the present time and opinions are widely at variance as to the danger from this source, but those who have been in close touch with the situation view it rather hopefully.

Cattle Market in Setback

The cattle market had a brief spell of indigestion recently when a moderate increase in supply appeared. The run at seven markets was the largest since the middle of January. About half of the gain in values during the last two months was lost, all classes participating in the retreat.

With the tax assessment date on the horizon, feed lots muddy, spring seeding operations about to begin and the fact that many cattle are nearly finished and show a profit on the outcome, the increased run was not especially surprising. A similar occurrence is not all uncommon at this season of the year.

Dressed beef prices declined 50 cents to $1 in eastern cities. Lent is a factor and the prospect of a larger supply pursuaded buyers to back away. Some cattle from eastern feed lots began to move, reducing shipper competition in the middle west and increasing the tonnage of beef. The general undertone of the market is healthy, otherwise such a prompt recovery as has taken place in the last few days would not have been possible.

A few prime yearlings are showing up and are selling at the top. Many half fat yearlings also are for sale, but these must compete with cheap light beef from other sources and such premature sales are disappointing.

The supply of beef usually declines from 5 to 10 per cent during the spring months when compared with receipts during February and March. This seasonal reduction may be more marked than usual this year, since the number of stockers and feeders taken to the country during the last five months has been below the average, they were lighter in weight than usual, the early spring supply of Texas beef promises to be small and cold storage holdings of frozen beef, which are generally put on the market during the spring, amounted to only 55,725,000 pounds on March 1, compared with a six-year average of 214,707,000 pounds.

Stockers and Feeders Cheaper

Stocker and feeder shipments have held consistently to about 50,000 head per week for some time, but when the fat cattle market weakened buying received a check and prices declined slightly, affording an opportunity for bargain hunters. Present signs are that all the thin cattle available will be wanted this year and there may not be enough to go around. Rains have greatly improved the pasture prospects in the big areas of Kansas and Oklahome, but little cattle trading has been done, operators balking at asking prices for both cattle and grass. Yearlings are priced as low as $27.50 in Texas, with 4-year-old steers, of which there are precious few, up to $60. The northwest range needs a lot of cattle, but lacks the money to buy and the courage to risk the outcome a year and a half hence.

Hog Markets Takes a Drop

Hog values ran into the first sharp break since late December during the last week, in which about $1 was lost. The market was topheavy and a moderate decline in demand for fresh pork, accompanied by a falling off in orders for hogs for eastern shipment, precipitated the break. The price-making function was left largely in the hands of big packers, whose orders always are to "buy them cheaper." Receipts of hogs have not been heavy. In fact, the run last week was the smallest since last November, but average weights have increased.

Pork consumption is not expected to fall off a great deal, although the higher level of prices probably was a factor in checking it to some extent. Weekly clearances of lard and meats for export are still outdistancing those of last year. Packers claim that these are to apply on old sales, but there is a general belief that when old sales are filled new ones will be made, so that clearances will continue.

Provision Stocks Below Average

Only a moderate quantity of hog meats and lard has been accumulated by packers thus far. March 1 holdings of various classes of hog meats in most cases were the smallest in six years, which is as far back as the records are complete, and lard stocks were the smallest with one exception in that period. Frozen pork, dry salt pork and pickled pork stocks aggregated 545,291,000 pounds, compared with an average during the preceding six years of 830,694,000 pounds. Lard holdings were only 61,258,000 pounds, compared with a six-year average of 103,465,000 pounds. With light runs of hogs the usual order during corn and oats seeding time, there will be little opportunity to pile up heavy stocks.

Lamb Market at Top

That lamb prices have passed the high point of the season is prevalent opinion in the trade, although the supply in sight for the next month is a light one and no great change in prices is expected. Warmer weather affects the demand for lamb and mutton, and southern California will begin to market her crop of January lambs before the movement from feed lots has entirely ceased. Heavy lambs are beginning to sell at a wider discount and the spread between shorn lambs and those still in the fleece is growing narrower.

Sentiment in the sheep industry is again enthusiastic and Colorado feeders are said to be contracting lambs for fall delivery at $11, which is twice as high as the initial prices last fall when the movement began.

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Horse Market Steady

Prices for horses held practically steady during the last week. The Chicago market was less active, but St. Louis reported the best week of the season. Farm trade is still the principal support, although purchases from dealers who handle horses from the large markets must be made with cash and farmers are able to supply their needs in most cases through local public sales where they can buy on credit. Chunks weighing 1250 to 1350 pounds are bringing $125 to $150 at Chicago, with 1400 to 1600 pound chunks at $140 to $190.

Wool Prices Mostly Firm

Although the wool market has become a slow affair, values are firm for the most part and especially so for high-class wools. The auction at London continues with prices steady and in Australia some sales show slight advances, although others are at slightly lower rates than a month ago. In the west business is at a standstill, due partly to uncertainty over the tariff outlook. Buyers, of course, are hoping for a lower duty, while producers realize that they are in a position to obtain the full benefit of whatever protection is given them. The probability of a duty of 33 cents per clean pound on all but carpet wools is fairly good. The southwestern wools, which usually are sent to market during March and April when supplies are low, are being held back.

The woolen goods market is rather uneven, but for the most part it remains dull. Since October the activity of mills has declined about 10 per cent.

The Boston market is quoted as follows: Wisconsin, Missouri and average New England—1-2 blood, 38@39c; 3-8 blood, 37@38c; 1-4 blood, 36@37c; common and braid, 25@26c; black, burry seedy cotts, 24@25c. Scoured basis: Oregon—Eastern No. 1 staple, $1.10@1.12; fine and fine medium combing, $1@1.15; eastern clothing, 85@90c; valley No. 1, 90@95c. Territory—Fine staple, choice, $1.10@1.15; 1-2 blood combing, $1; 3-8 blood combing, 75@80c; 1-2 blood combing, 65@70c.

Wheat Demand Revives

Conditions which caused the decline in wheat prices during the last two and one-half weeks are believed to be largely temporary. With liberal quantities arriving in Europe and large amounts on passage for European ports, some of it still unsold, European buyers took advantage of the situation and dropped out of the market and made an involuntary bargain day for their own benefit. A sharp decline in foreign exchange rates also was a factor.

Aside from the improvement in the winter wheat crop in the southwest as a result of generous rains, the situation shows no material change. Europe must have a lot of wheat before next harvest and will not be able to keep her needs concealed, although by purchasing sparingly at times she may prevent the market from advancing much for the present.

Stocks in store in the United kingdom on March 1 were unusually low and even though wheat afloat for British ports has increased, the total is not a large one when measured by the records of the past and is only sufficient to supply requirements for a short period of time. Germany has been the most conspicuous buyer during the last week and is already purchasing for shipment from the new crop because of the attractive discounts on the July and September deliveries. She is buying some wheat for immediate shipment also, and was reported to have absorbed all of the cheap Argentine wheat which has been pressing upon the market recently. France is expected to buy about 12,000,000 bushels, Italian needs have not been fully supplied and Greece is expected to be in the market again within two weeks. With the large United kingdom wants as well as other importing countries still to be provided for, it is impossible to show any sizeable margin in the world's supply over probable requirements.

Crop reports from the southwest are favorable for the most part, as they show vast improvement over conditions a month ago. But it is still too early to form views upon the outcome as a good deal of wheat has received a poor start in spite of rains. Northwestern Kansas also failed to receive much moisture.

The domestic flour trade is picking up a little and mills have been more active buyers at Chicago, Minneapolis and Kansas City.

Rye, Corn and Oats

As a result of heavy European crops of rye export demand for that cereal has been rather sluggish and clearances up to March 1 were only about 13,000,000 bushels out of an exportable surplus of about 23,000,000 bushels. Clearances in the same period of last year were more than twice as large. In the last few days, however, European demand has increased sharply and it is now expected that this buying will continue until the available supply is exhausted.

Primary receipts of corn have declined about as expected and are now running the lightest since early December, when the new crop first began to move freely.

The oats situation is growing stronger as primary arrivals are much smaller than a month ago, while shipments from primaries have increased until they are exceeding arrivals during the present week for the first time this season. The visible supply has not been cut down a great deal, but if receipts and shipments maintain their present ratio inroads would be made rather rapidly.

Seed and Feed

Clover seed prices are remaining near the high point of the season, with red clover especially strong. A survey made by the department of agriculture indicates an increased demand for clover, alfalfa and timothy seed as compared with the spring of 1921. Toledo, per bushel—Prime red clover, $16.15; prime alsike, $11.80; prime timothy, $3.15.

Feed markets, especially wheat feeds, have become weak because of a slack demand. Flour mills are forcing bran and middlings on the market for 30-day shipment at lower prices and supplies seem to be accumulating in the east. Gluten feed and hominy feed did not advance as far as wheat feeds and demand has sufficed to maintain quotations. Cottonseed meal and linseed meal prices are steady, as available supplies are not large.

Prices per ton in carlots: Chicago—Bran, $26; standard middlings, $28.50; flour middlings, $31.50; cottonseed meal, 36 per cent, $46.50; 43 per cent, $52; hominy feed, $22; gluten feed, $32.65; old process oil meal, $54.50; tankage, $60.

Hay Receipts Remain Light

Receipts of hay at the leading distributing markets are still light, but are adequate to supply the trade at most points. Demand for better grades of timothy and alfalfa is satisfactory, but other grades are difficult to move.

Latest quotations: Chicago—Eggs—Miscellaneous, 22 1-2@22 3-4c; dirties, 20@21c; checks, 19@20c; fresh firsts, 22 1-2@23 1-4c; ordinary firsts, 21@22c. Live poultry—Hens, 26c; springers, 17c; roosters, 10c; ducks, 29c; geese, 16@18c; turkeys, 30c.

Egg Market Is Stable

Egg prices have held within a narrow range during the last week and sentiment is developing that the spring decline is about over. Prices for future delivery are now about the same as they were a few weeks ago. About 15 or 20 per cent of the receipts at the four leading cities is going into cold storage.

Receipts of dressed poultry at the four largest cities since January 1 have been 45,406,000 pounds, compared with 43,695,000 pounds in the same period of last year.

Prices per ton in carlots: Chicago—No. 1 timothy, $22@24; No. 2, $19@20; No. 3, $14@17; No. 1 light clover mixed, $21@22; No. 1 clover, $17@20; No. 1 clover mixed, $18@20; No. 1 alfalfa, $15@26; upland prairie, $11@15; midland prairie, $10@13; rye straw, $14.50@15.50; oat and wheat straw, $10.50@13.50.

Butter and Cheese

Consuming demand for butter has enlarged recently and prices have advanced at the leading markets. The improved demand was not confined to the large cities, but seemed to be general all over the United States. The larger manufacturers report an increase in the make of butter, but many creameries are shipping less to the central markets as local needs are taking a large share of the product.

Besides absorbing liberal receipts of fresh butter, large quantities are being withdrawn from cold storage. It is probable that prices have advanced nearly the limit, but as long as butter disappears at the present rate the market will be on a fairly solid footing.

Cheese markets have become sluggish, with the supply in excess of the demand, especially on daisies and to a lesser degree on twins. Longhorns are comparatively scarce, but prices have been inclined to lag even on this style.

(Continued on page twenty.)

What and How Shall Lambs Be Fed?

State College Experiment Station at Prosser Would Make Feeding of Sheep a Practical Science

By HOWARD HACKEDORN, Head of the Animal Husbandry Department, State College of Washington

Sheepmen of Washington have many good feeds from which to choose their feeding rations, some home-grown and some shipped in from other states. With a view to determining just which of these feeds is most economical in the fattening and finishing of lambs, an elaborate series of feeding experiments was recently completed at the Washington State college branch experiment station at Prosser, under the supervision of R. B. Bean, superintendent of the station, assisted by representatives of the animal husbandry department of the state college. The series of experiments culminated in the station's first annual feeders' day, March 7, when about 125 persons interested in feeding sheep and a number of others keenly alive to the importance of the general feeding problem, spent the day as the guests of Superintendent Bean and the commercial club of Prosser.

A feature of the day, in addition to a speaking program and a noon luncheon, was the auction sale of 1627 lambs fed at the station. Frye & Co. of Seattle were the successful bidders, taking the entire lot at $12.50 per 100 pounds, station weight, with a 4 per cent shrink.

The experiments covered such points as (1) the relative value of first, second and third cuttings of alfalfa hay and sweet clover hay; (2) the comparative results from liberal and limited grain feeding; (3) the value of beet molasses in the ration; (4) the value of silage, and (5) the value of cottonseed meal.

To carry out the feeding projects 1640 lambs were purchased from local breeders by Superintendent Bean, taking the "cut-back" lot of lambs from several bands. From this number 700 uniform lambs were selected for 14 experimental lots. The experimental lambs were sired by Hampshire rams and out of a class of ewes known as half-blood ewes, that is, a cross-bred ewe, sired by a mutton ram and out of a fine-wool base. All lambs were purchased in November and pastured on alfalfa until the last of December. Some hay was fed during the time the snow covered the pasture. The experimental lots of lambs were cut out and the lambs were started on their various feeds by January 1. The test officially began January 4. Three individual weights were taken at the beginning and the end of the experiment. All lots consisted of 50 lambs, selected as uniformly as to quality, condition and size as was practical.

The feed prices per ton used in this discussion are: First cutting alfalfa hay, $5 in stack; shelled corn, Eastern Yellow, No. 3, $27.40; cottonseed meal, $55; beet molasses, $14.80; corn silage, $2.50.

The Hay Comparison Tests.

The first block of four lots were devoted to the testing of the feeding value of the first, second and third cuttings of alfalfa and a first cutting of sweet clover hay. A summary of the results follows:

CUTTINGS OF ALFALFA HAY; SWEET CLOVER VERSUS ALFALFA HAY.

	Cuttings of Alfalfa Hay.			Sweet Clover Hay.
	First cutting.	Second cutting.	Third cutting.	First cutting.
Lot No.	I.	II.	III.	IV.
Initial weight	65.64	62.59	65.44	62.91
Final weight	80.97	75.46	79.55	80.55
Total gain	15.33	12.87	14.12	17.64
Daily gain	.255	.214	.235	.294
Daily ration—				
Grain	.745	.745	.745	.745
Hay—				
Fed	2.646	2.444	2.685	2.173
Refused	.419	.388	.455	.952
Feed per hundredweight gain—				
Corn (shelled)	292.19	348.14	317.14	253.37
Hay—				
Consumed	873.43	960.77	949.29	755.02
Refused	163.97	181.18	193.29	228.81
Appraised value per 100 pounds	$12.00	$11.80	$12.00	$12.00

The difference in feeding value of the first and third cutting is not marked, the first cutting ranking a little higher. If the price of $5 is placed on the first cutting, and $27.40 on grain, the third cutting would be worth $3.934 on the basis of feed fed. A little more hay was refused by the lambs receiving the third cutting. On the basis of feed consumed the difference would not be so marked. On the same basis as above, the fine leafy, very attractive appearing second cutting hay proved to have a value of only $2.87 per ton. All the hay was fed liberally and the lambs were not required to clean up the hay to the same degree that one would strive for with high-priced hays.

The sweet clover hay is of interest, as it may at times fit into a cropping system better than alfalfa. However, as a hay crop for a series of years, alfalfa has the advantage of being perennial. The sweet clover hay was of good quality. It had a pleasing odor and was relished by the lambs. The refused hay was higher with the sweet clover hay because of the coarse stems. Again basing the value of the hay on first cutting alfalfa hay at $5, this hay was worth $5.77 per ton.

The proportion of hay produced in the state of Washington is large compared to the grains other than wheat. So the hay as a rule will be relatively the cheaper feed. The lamb feeder is interested in utilizing a maximum amount of hay, in so far as he can get a satisfactory gain and finish on his lambs. The data accruing from four test lots of lambs receiving one-fourth, one-half, three-fourths and one and one-half pounds of shelled corn and all the first cutting alfalfa hay they would eat are presented in the succeeding table:

LIBERAL VERSUS LIMITED QUANTITIES OF GRAIN.

	Corn 1 1-2 lb.	Corn 1 lb.	Corn 3-4 lb.	Corn 1-2 lb.	Corn 1-4 lb.
Lot No.	V.	VI.	VII.	VIII.	XIII.
Initial weight	63.04	63.28	65.59	63.35	63.61
Final weight	84.14	81.24	79.79	76.14	76.79
Total gain	21.10	17.96	14.20	12.79	13.18
Daily gain	.352	.299	.237	.218	.220
Daily ration—					
Grain	1.354	.960	.745	.500	.277
Hay—					
Fed	2.428	2.374	2.528	2.625	2.789
Refused	.595	.455	.600	.415	.377
Feed per hundredweight gain—					
Corn (shelled)	383.67	321.02	314.32	229.35	135.90
Hay (consumed)	521.04	641.71	813.42	1013.73	1096.71
Refused	169.10	152.17	253.52	190.09	171.47
Feed cost per hundredweight gain—					
Basis feed fed	$ 7.001	$ 6.379	$ 6.985	$ 6.142	$ 4.904
Appraised value per hundredweight	12.50	12.25	12.00	11.35	11.25

This year's results with the prevailing feed prices show an advantage of profit (exclusive of rent and labor) with heavy grain-fed lots. At a cost of 7 cents per pound, the profit per head for the lot receiving one and one-half pounds of grain was $1.63; for the lot receiving one pound, $1.37; the lot receiving three-fourths pound of corn, $3.99, and $3.15 and $3.31 for the lots receiving one-half and one-fourth, respectively. With other prices remaining the same, but calculating the hay at $10 and grain at $30 per ton, the profit per lamb would rank in the same order, the difference in profit with the first two lots being only a few cents.

In sections where alfalfa is such an important crop as in Washington the economy of silage as a fattening ration for lambs is somewhat of a question. However, as hay prices advance the feeder is on the lookout for cheaper roughages. Four lots were fed silage. Two lots receiving cottonseed meal and two without it, and the grain was fed at the rate of one and one-half pounds per head daily and three-fourths pound per head daily. These lots can be compared with the hay and corn lots 5 and 7 receiving one and one-half and three-fourths pounds of corn, respectively. The silage was fed in the morning, after the lambs had eaten their grain. The hay was fed after the silage had been cleaned up. The silage was fed in the morning only, because this was more convenient.

VALUE OF SILAGE AND COTTONSEED MEAL.

	Corn 1 Hay	1-2 lbs. Hay Silage	Corn Hay	3-4 lb. Hay Silage	Corn 1 1-2 lbs. Hay and	7-CSM 1. 3-4 lb. Silage
Lot. No.	V.	IX.	VII.	X.	XI.	XII.
Initial weight	63.04	62.91	65.59	62.50	63.73	63.84
Final weight	84.14	87.18	79.79	82.41	87.24	80.52
Total gain	21.10	24.27	14.20	19.91	23.51	16.68
Daily gain	.352	.404	.237	.332	.392	.278
Daily ration—						
Grain	1.354	1.354	.745	.745	1.354	.745
Hay—						
Fed	2.428	1.408	1.928	1.870	1.260	1.801
Refused	.595	.706	.600	.568	.746	.628
Silage (Corn)	.....	1.355	.....	1.355	1.355	1.355
Feed per hundredweight gain—						
Corn	383.67	335.12	314.32	224.39	302.29	234.52
CSM	.....	.....	.....	.....	43.11	33.45
Hay—						
Consumed	521.04	348.48	813.42	563.24	321.43	647.82
Refused	169.10	174.53	253.52	170.98	190.22	225.90
Silage	.....	335.36	.....	408.13	345.66	487.39
Feed cost per hundredweight gain—						
Basis feed fed	$ 7.001	$ 6.313	$ 6.985	$ 5.423	$ 7.042	$ 6.929
Appraised value per hundredweight	12.50	12.50	12.00	11.90	12.50	11.70

With silage in the ration the gains were greater than in corresponding lots receiving hay and identical grain rations. The cost of gains with hay at $5 and silage at $2.50 per ton was decreased by 69 cents per hundredweight in the lot receiving the more liberal grain feeding and by 44 cents with the lower grain feed. Since the appraised values of silage fed lots are practically the same as those fed straight hay, a greater profit from the silage-fed lambs was realized in this instance. With silage in the ration the lambs receiving greater quanities of corn made better gains and were in better condition than those whose grain feeding was limited.

By comparing the feed requirements per hundredweight gain of lots 5 and 9, in the foregoing table, with corn and hay valued at $27.40 and $5 per ton, respectively, silage is worth $6.44 per ton. This value may be largely attributed to the low grain requirement of the silage-fed lot. In the two preceding lots 1.354 pounds of grain were fed daily per lamb. In lots 7 and 10 only .745 pounds corn was fed. A similar comparison with these lots shows the silage to be worth $6.66 after making a correction for differences in appraised values. In connection with the limited grain feeding the silage valuation is $.22 per ton higher than with liberal grain feeding. This succulent roughage produced results above that due to its actual energy content.

Lots 11 and 12 were fed 1.354 pounds and .745 pounds of a seven to one mixture of corn and choice cottonseed meal in addition to alfalfa hay and corn silage.

In both of these particular test lots the addition of cottonseed meal to the grain ration in the proportion of seven parts shelled corn to one part cottonseed meal by weight produced negative results. The lots receiving the cottonseed meal did not gain as rapidly nor was their finish appraised any higher. At the cost of $55 per ton it increased the cost of 100 pounds gain by $0.72, comparing liberal grain-fed lots and $1.50 in the case of the lots receiving three-fourths pounds of grain. The extra good quality of hay, along with the fact that the lambs received a liberal supply of it, and were not forced to eat the stemmy parts partially explains the negative results with cottonseed meal.



The feeding pens and other equipment used at the Prosser station during the lamb feeding experiments were not different from those than any sheepman would use. These pictures were taken during the experiments.

Beet molasses is available at the beet sugar factories in the Yakima valley. In many instances the relative prices of molasses and grain are such that the former may be used economically to replace at least a part of the grain. During the recent feeding test this byproduct of sugar industries was valued at $14.80 per ton with corn at $27.40. Considering its content of 1.1 pounds of digestible protein and 57.1 therms of net energy per 100 pounds, as compared with 7.5 pounds protein and 85.5 therms for corn, this feed at the prices quoted has a place in a fattening ration. Other feeding results indicated that from one-third to two-thirds of of a pound could be safely fed. Its bitter taste and comparatively large quantities of free potassium and magnesium salts exert a strong purgative action on animals when fed in liberal quantities.

The lambs in lot 14 of the table below received molasses twice daily on top of the corn feed. The molasses was diluted with about three volumes of water to make it flow easily. Feeding molasses on hay was not as satisfactory, since the lambs in reaching for the leafy portions of hay at the bottom of troughs became covered with the sticky feed. In the quantities used during this test no digestive disorders were detected. The summary below shows the results of the trial. It shows strikingly the economy of producing gains by molasses feeding. However, in this case the gains made on the sweet feed are not as valuable from the butcher's standpoint.

BEET MOLASSES COMPARED WITH CORN.

	Corn	Corn and molasses
Lot No.	V.	XIV.
Initial weight	63.04	61.95
Final weight	84.14	83.37
Total gain	21.10	21.42
Daily ration:		
Daily gain	.352	.357
Grain	1.354	C .960 M .483
Hay—		
Fed	2.428	2.364
Refused	.595	.738
Feed per hundredweight gain—		
Corn (shelled)	383.67	267.78
Molasses (beet)	.....	135.44
Hay—		
Consumed	521.04	455.44
Refused	169.10	206.82
Feed cost per hundredweight gain—		
Basis feed fed	$ 7.00	$ 6.325
Appraised value per hundredweight	12.50	12.25

From these figures of feed requirements per hundredweight gain it is evident that on the basis of hay fed 135.29 pounds of beet molasses were equal in feeding value to 115.89 pounds of corn, plus 65.60 pounds of alfalfa hay. If corn and alfalfa hay are valued at $27.40 and $5 per ton, respectively, then beet molasses, on the basis of the foregoing figures and the difference in the appraised value per 100 pounds, is worth $20.80 per ton.

A more complete report of these tests can be secured in a short time by addressing Washington agricultural experiment station, Pullman, Washington.

Wheat Growers Divide

Disagreement Seen at Chicago; Poolers Make Progress

A year ago at the conclusion of a stormy session in Chicago the directors of the United States Grain Growers, Inc., buried the hatchet and dramatically held up their hands in solemn oath to banish personal interests in the conduct of the organization's business.

Last week the same board met in session probably no less stormy, according to reports from Chicago, and adjourned without the pledge of loyalty that marked the conclusion of the previous meeting.

It is apparent from reports of the meeting last week that there is a wide split in the United States Grain Growers, Inc. While it is difficult at this distance and this early to judge finally the cause and probable extent of the disagreement, it appears that the trouble has arisen over the optional pooling feature of the organization's contract. The direct sales plan and the pooling plan, both of which are provided under options in the contract, apparently have not worked out without some friction. It is also apparent that the methods followed and the ambitions displayed by some of the long-established farmers' stock companies of the middle west have not met with the approval of the more progressive growers who favor pooling, even to the extent of making it compulsory. The latter have sometimes claimed that some of the farmers' organizations who have affiliated with the Grain Growers have been looking toward their own profit as organizations rather than to the profit of the growers of the country as a whole.

Whatever may be the actual source of the trouble, a strong minority of the board of directors broke away from the meeting last week and held a meeting of its own, in which it threatened to participate no further in the movement "until such time as the injustice done" in the election of the new board of directors be undone. The election resulted in the selection of a board favorable to the administration of President C. H. Gustafson, who was later reelected. The minority that withdrew issued a statement in which it said that "no cooperative enterprise can succeed under caucus rule and that the unfair action of the board of directors must be fully corrected if the United States Grain Growers, Inc., is to succeed."

Pooling Movement Gains.

While this unfortunate friction is manifesting itself in the United States Grain Growers, it is apparent that the 100 per cent pooling movement is making progress. At the recent meeting in Denver steps were taken for the formation of an organization to be known as the American Wheat Growers, Associated. This organization would combine in one control the marketing activities of all the 100 per cent pooling organizations of the country, including the four northwest state associations, which pioneered the pooling movement and led in the formation of the new marketing organization.

This new organization is expected to have well toward 100,000,000 bushels of wheat pooled for orderly marketing during the coming season. The associations represented by it are reported to have a total of 60,000,000 bushels already signed up, of which about half is in the four northwestern states.

While no official information is available, it is not a far stretch of the imagination to see danger ahead for the parent organization in the withdrawal of the pooling faction in the United States Grain Growers, Inc., and the probable casting of their lot with the 100 per cent poolers.

Announcement came last week of the resignation of Aaron Sapiro as attorney for the so-called American Wheat Growers' association, the name of the pooling organization, with headquarters at Salina, Kan. This organization is one of those joining in the new American Grain Growers, Associated. The significance of Sapiro's resignation is not announced.

The Sore Shoulder

Handicap to the Farm Work Horse

By E. E. WEGNER.

The first indication that the shoulder has been injured is to be noticed soon after the collar has been removed. At this time the portion that has been bruised does not dry off as it should, but remains as a moist, cold spot, usually varying from a small spot to as large as your hand. This spot begins to raise as soon as the pressure of the collar is removed and within a few hours it has the appearance of a rounded swelling which fluctuates when the hand is pressed against it. It gives the impression of having fluid, within which is the true condition. The small vessels under the skin have been so injured that the fluids in them have been passed out under the skin and raised it up.

This rounded swelling remains until pressure is again applied, when it may be again forced out into the general circulation, but it returns as soon as the pressure is removed. Occasionally these fluid swellings can be successfully treated by light pressure and moist heat applied to the injured part if the treatment is applied early, but in the majority of cases draining them at the lowest point, and below the collar bed, is the best treatment. These drains must be kept open until the part is quite completely healed or the fluid will collect again. The opening for drainage should be low enough so that the scar is not where the collar will cover it.

If these fluid swellings are not treated the cavity of fluid remains for a long time and is finally absorbed, but in the meantime new tissues has formed within it and in place of the fluid there is a growth of new tissue which remains permanently as a thickening under the skin. This thickened place has to take most of the pressure when the collar is again applied and the result is that the skin is broken over it and a sore results, as the skin is rubbed off the elevated spot. Under most sores on the shoulder there is found this thickened area, which is responsible for most of the damage, and the thickening resulted from the original bruise. Many times these sore places heal normally when the animal is allowed to rest, only to occur again when it is again put to work. One may at times prevent the second injury by so arranging the padding in collar or collar pad so that this excessive pressure is removed. It means taking out some padding over the elevated area. Many times these sores can be healed while the animal is working by covering them with a protective dressing as is contained in some of the collar gall cures and particularly if the collar padding has been properly arranged. This method, however, may be only temporary, as care must be used permanently to see that this spot is not again injured.

Some of these swellings on the shoulders appear to go away during the season of rest, only to appear again as soon as the animal is put to work. It is not uncommon for an owner to watch the animal's shoulder and decide that the trouble has disappeared altogether after a rather long rest and be surprised to find it there again a few days after the animal is put to work. The only permanent cure is to have the animal treated during the season of rest, while the animal has no work to do for at least two months. It is then necessary to operate and remove the offending extra tissue; this can be done without making large wound, as a general thing, and probably is the best solution of the injured shoulder problem when they have reached a stage of thickening under the skin.

Yakima Dairymen's League

The owners of 1550 cows have signed up will the Yakima Dairymen's association, according to the report of W. R. McKenna, secretary. During the last two or three weeks signatures have been turned in at the rate of 40 cows per day, says Mr. McKenna, and he expects it will be but two or three weeks until "we shall have reached the 2000 mark." The secretary adds: "Without exception other dairy associations in the state have pledged their support and agreed to work with us in every way possible to make things a success here. According to the present plan our capitalization will be sufficient to finance the thing. Later on if we find it necessary to broaden out, we are assured it will be comparatively easy to increase our capitalization. Without doubt in the near future we will either have some of the officers of the United Dairymen's association to assist in working out details of our operations or else somebody from here will visit their plant in western Washington and get first-hand information on the manner in which they are meeting conditions similar to ours."

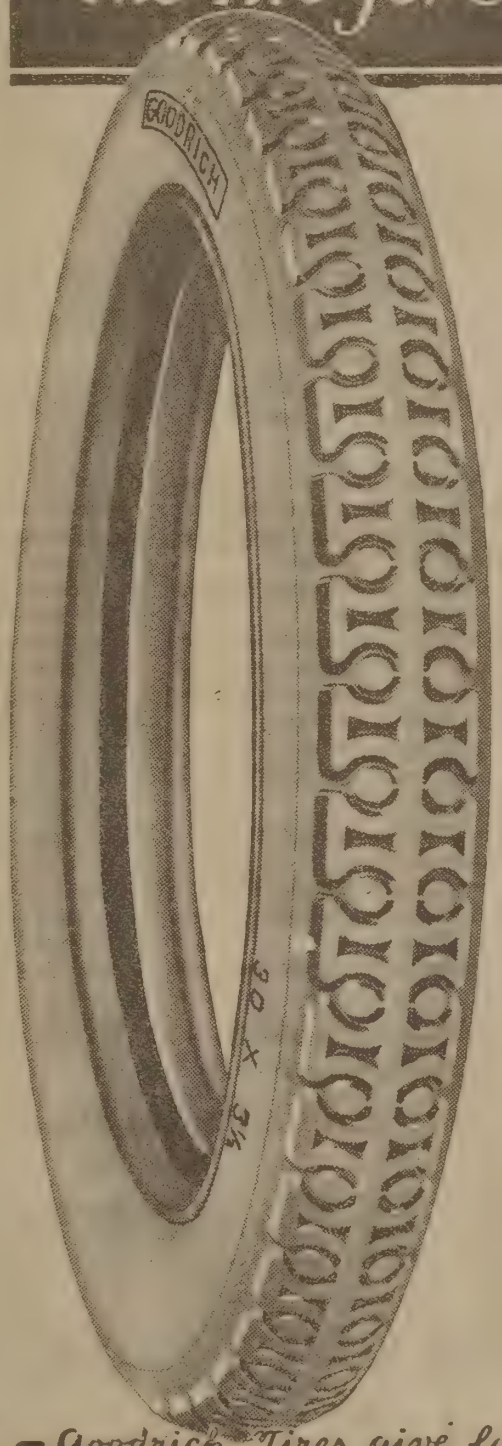
FIXING AROUND THE HOUSE.

There is still time to do some fixing around the house before the spring work begins in the field.

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Fruit Marketing

System Built Up Piecemeal

The present system of marketing fruit in the United States has been likened by Manager Charles H. Swigart of the Yakima Valley Fruit Growers' association to a dwelling that has been added to and "improved upon" as the family grew up through the years, with a lean-to here and a lean-to there, and here a wing and there a wing, until mother and the girls have come to regard it with loathing and despair, and even the old man, deep down in his heart, would like to touch a match to it and build a new one.

"That is about what we have in this machine for distribution," says Swigart. "It has been built up by evolution, as a matter of circumstance, not on any definite plan. It's a mighty inconvenient system and one that wastes money. We pass that over in good seasons, but in poor ones lost motion and extravagance cause growers to consider the problem. We would like to burn the old house and build a new one, but we can't do that. For some years to come we'll have the retailer, the broker and the distributor, and it's our job to figure out how to correct some of the existing evils. I say it's our job as producers, for the consumer has the remedy of not buying, as do the retailer and the carlot distributor, in turn.

"We have two opposing factors in the fruit marketing game. Some of us are sold on cooperation, but another set of men believe in the individual, competitive method. We have also four general steps in the progress of fruit from the producer's orchard to the consumer's kitchen. First, from producer to shipper, which may be a cooperative organization, an independent buyer or a consignment man. Second, to the carlot distributor, who may be a wholesaler or a jobber, but who is at the other end of the marketing chain. Third, to the retailer—the fruit stand vendor or the local grocer. Fourth, to the consumer. In these steps is tremendous opportunity for wastage, and it is a fact that 20 to 25 per cent of the fruit loaded on cars in this country is lost, chiefly from decay, before it reaches the ultimate consumer. Poor packing, poor refrigeration and storage, waste in markets from glutting—these are only some of the reasons for it—and a great deal of it is preventable and must be prevented

"On the other hand, over 105,000 carloads of apples are distributed in the United States, and what with these and the citrus fruits, the total to be distributed by an unorganized system is an enormous one. With no method, it is a wonder we do not lose a half instead of a quarter of our product. Considering the circumstances, the system has done wonderful work, but it should and can be made more efficient.

"Standardization of grade and pack is one of the first things to undertake. Extra fancy must mean the same whether the apples are from Hood River or Wenatchee. To accomplish this we need not wait for national action—a little cooperation between state legislatures would accomplish a great deal. We must, however, have national inspection service to back it up. For this better support of the United States bureau of markets is demanded, and the bureau is the logical agency for the collection of information regarding population, consumption, etc., which we need so badly and which cooperative organizations have done something to obtain. But what organization in the entire country is strong enough to gather all that we require?

"I see no way to effect further savings until we become big enough, wise enough, to sink our petty jealousies in local organizations and see that they join others in control of distribution to markets where our stuff is needed. The apple growing industry is highly specialized. It is more like a manufacturing industry than any other of an agricultural nature. If its backers would get together in a large organization, they could cut out items of waste, secure such storage as they need, and obtain plenty of capital. We have talked about these things for years, but have never got any further. It is up to the growers to see that their organizations get together."

The present fruit marketing situation, into which the growers of this state were thrown recently by the resignation of officers of the Northwestern exchange and the threat of the local units of the Skookum Packers' association to get out from under Crutchfield control, shows little change. It is not finally known yet whether these Skookum units will complete their membership cancellation before May 1, the last date on which cancellation may be completed.

It is interesting to note the competitive activities of various fruit marketing organizations seeking tonnage of Washington apples for the 1922 season. The Di Giorgio Fruit corporation is the latest to enter the field. The appearance in the state of C. J. Brand, vice president of the American Fruit Growers, Inc., the producing and marketing organization of the Crutchfield, is being studied by growers as a significant feature of the situation. The American Fruit Growers' concern is the producer and seller of he Blue Goose brand of apples.

TREES FOR DISTRIBUTION.

In order to encourage the planting of trees on the farm for the production of wood and for windbreak and shelterbelt purposes, the forestry department of the State College of Washington, Pullman, is making available to the people of the state, at a price just equaling the cost of production, a limited number of trees of the species best suited for the purposes. A few of the species available are also suitable for street, roadside and ornamental planting.

Prices range from 2 cents each for black locust seedlings, 12 to 18 inches high, to 60 cents each for some of the finer and larger specimens of other species.

If interested a postal card request will bring you a list of those species available, together with a few hints on what to choose for particular localities and situations.

Dairy Industry

Watches Association in This State

A. J. Glover, editor of Hoard's Dairyman, made an extended trip to the Pacific coast a year ago, paying special attention to cooperative organizations in the dairy industry.

Knowing that Mr. Glover was greatly interested in this subject, a marked copy of The Washington Farmer of March 2, containing the outstanding article by J. A. Scollard, president of the United Dairy Association of Washington, was sent him.

In reply Mr. Glover writes:

"I wish to thank you for sending me a copy of The Washington Farmer containing an article by Mr. Scollard. It pleases me very much to learn that Mr. Scollard is developing a successful cooperative marketing company. I fully appreciate the tremendous task and difficulties under which he took up this work. The failure of the Oregon Dairyman's league caused me to wonder if the United Dairy Association of Washington would make a success in its cooperative effort. With the success it has had the last year or more it would indicate that there is little doubt but that it's cooperative marketing company will continue to prove a very useful institution for the dairy farmers of western Washington. I appreciate very much your calling my attention to Mr. Scollard's article."

C. E. Arney, western immigration and industrial agent of the Northern Pacific railway, becoming interested in Mr. Scollard's article, sent a copy to H. W. Byerly, the general immigration agent of the railroad at St. Paul, and has received the following reply from Mr. Byerly:

"I have yours of the 6th, enclosing copy of The Washington Farmer of March 2 and calling to my attention the article, 'Successful Marketing of Dairy Products,' by J. A. Scollard. I am very glad you called my attention to this article, which is both very interesting and instructive and shows in a comprehensive way the results Mr. Scollard has so successfully accomplished. This shows wonderful improvement over the conditions as I found them a year ago, in the particular districts in which the association is operating."

With regard to the same article, John Thompson, editor of the Iowa Homestead, writes:

"I wish to thank you most cordially for calling my attention to the Scollard article entitled, 'Successful Cooperative Marketing of Dairy Products,' which appeared in The Washington Farmer of March 2. I have read this article and it seems as though the United Dairy Association of Washington is one of the best organized cooperative institutions that I know of. If it is as successful in the future as it was in 1921 it will certainly be worth while copying after by a great many farmers' organizations."

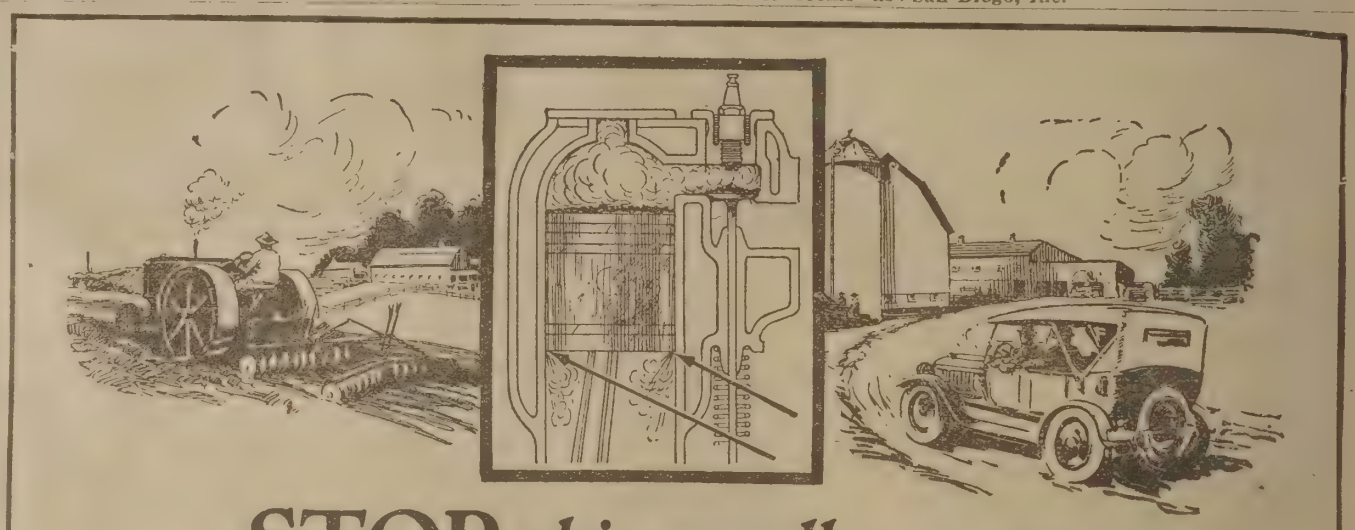
D. J. Carter of the Dairyman's League News of Utica, N. Y., writes:

"We very much appreciate your sending us a marked copy of your paper of March 2, containing the unusual story of the cooperative movement. Although we are separated by a continent, we shall be very glad to cooperate with you in any way possible in matters concerning this great movement."

T. A. Leadley, managing editor of the Nebraska Farmer, is much interested: "I am in receipt of a marked copy of the recent issue of The Washington Farmer containing the article of the United Dairy association. I am having this summarized for publication in the Nebraska Farmer, as I think it would be of interest to our readers who are taking a keener interest in dairying."

Sell Eggs Cooperatively

Announcement is made of the formation of a central egg marketing organization, with headquarters in San Francisco, to market all the "organized" eggs of the Pacific coast. The new organization will be called the Pacific Egg Producers, and is intended to market eggs for the Washington Cooperative Egg and Poultry association of Seattle, the Pacific Cooperative Poultry Producers of Portland, the Poultry Producers of Central California, Inc.; the Poultry Producers of Southern California, Inc., and the Poultry Producers of San Diego, Inc.



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The Legume and How to Grow It

W. I. NIGHTINGALE,
Bacteriologist, W. S. C.

The legumes include those plants whose fruits are borne in a pod. They include such common cultivated crops as the clover, alfalfa, sweet clover, vetches, beans, peas, soy beans, cow peas, sweet peas, etc., and a great many wild weeds, bushes and trees, such as the beggarweed, wild peas and vetches and the locust tree. Many wild legumes are found scattered throughout the state of Washington in isolated regions, and most cultivated varieties will make an abundant, healthy growth wherever they are introduced properly.

The cultivated legumes are prized by all animal husbandmen for two special reasons. They are an excellent forage for all classes of live stock, and, secondly, these plants have the faculty of building up the fertility of the soil on which they are grown when they are inoculated. The most important element in the legume contributing to its value is the nitrogen, which goes to make up the protein constituent of the plant. Next in importance is its lime content. Much larger amounts of these two elements are assimilated in the legumes than in the nonlegumes. This difference makes the increased value of the legumes for stock feeding. All growing animals, and especially those which are pregnant or giving milk, require large amounts of these two elements.

Comparative Values.

The following table shows the fertility elements and the feeding value of legumes as compared to nonlegumes:

Forage	Fertilizing constituent in one ton. Pounds of nitrogen.	Digestible nutrients in one ton. Pounds of crude protein.
Legumes		
Alfalfa hay	47.6	212
Red clover hay	41.0	152
White sweet clover hay	46.4	218
Common vetch hay	55.4	232
Hairy vetch hay	63.6	314
Field pea hay	48.4	244
Soy bean hay	51.2	234
Nonlegumes		
Timothy hay	19.8	60
Oat hay	24.6	90
Wheat hay	19.8	80
Kentucky bluegrass hay	26.6	94
Corn fodder	21.4	60

This table shows the legumes to contain about twice as much nitrogen and about four times as much crude protein as the nonlegumes.

Some of the legumes yield two to four or more harvests a year, as compared to only one from the nonlegume crops. Multiplying the amount of nitrogen gained in one crop in growing a legume instead of a nonlegume by the number of harvests secured will show the great value of the legume as a provider of this expensive element.

Demands From the Soil.

It is to be expected that plants storing up so much nitrogen and calcium in their tissues will draw heavily upon the soil where they grow. This is true of the legumes. Most soils must be supplied with calcium in some form of lime before the legumes will grow well. Acid soils in general are low in lime supply. Both the acidity of the soil and the lack of lime are factors which will cause failure of the crop to thrive. Two tons of lime carbonate per acre for a mild acid soil, put on several months before a legume crop is to be planted, is a good general recommendation. A healthy condition for maximum production can then be maintained by spreading lime over the field at this same rate about once in four years thereafter. It may be applied in the spring or after the first or second crop has been removed.

The soil may or may not be well supplied with nitrogen. The continuous cropping method followed in most systems of farming is bound to deplete it unless the supply is replenished from time to time. It is usually depleted much faster than the lime.

Nitrogen From the Air.

Tons of nitrogen are in the air above every acre of land. When the legume plants are grown with the proper bacteria nitrogen is taken from the air and used in the growing plant. The "nitrogen-gathering" bacteria, as they are called, infect the roots of the plant and modules are formed. When these bacteria are so attached to the plant they can take nitrogen from the air and supply it to the plant, where it is built up into protein substance. If these bacteria are not present the legume will draw on the soil for its nitrogen supply, the same as a nonlegume. The soil, however, will be depleted much more rapidly, since the legume requires more nitrogen, and the yield will be poor.

Inoculation Increases Yield.

Most soils are not well enough supplied with nitrogen to permit a legume crop to make the highest yield. The growth will be retarded under those conditions as it is when there is a deficiency in lime. This is where the bacteria play their part. A crop which is well inoculated, although grown on nitrogen-poor soil, will yield 25 per cent, 50 per cent and sometimes even 200 per cent higher than the same crop if uninoculated. Many cases have been reported where such results have been obtained. Besides the increase in yield there is also an increase in the protein content of the inoculated plants. This increases the feeding value of the crop for live stock and increases the fertilizing value of the crop if it is turned under for green manuring. Growing inoculated legumes on a poor soil will build up the nitrogen in the soil to some extent, even though a crop is not turned under. Whenever a stubble or green crop is turned under much larger amounts of nitrogen are added to the soil. From 50 to 200 pounds per acre is commonly gained.

Inoculation Culture.

Acid soils, soils of low fertility and dry soils in the semi-arid regions in general need inoculation when legumes are planted. The expense of inoculating is very small. It will pay every farmer, who has not already done so, to try it out and see if the legumes will not be improved on his soil. The process is simple. The bacteria is simply spread on the seed and the seed sown in the usual way.

The bacteriology laboratory at the State College of Washington can furnish inoculation cultures for all the common legumes. The nitrogen-gathering bacteria are grown and prepared in one-acre and five-acre size packages. A one-acre size package contains enough bacteria to inoculate the seed for one acre. Different legumes require different strains of bacteria to produce modules. Therefore, in buying inoculation culture the name of the crop for which it is to be used must always be specified.

To secure inoculation cultures from the state college write to the department of farm crops, State College of Washington, Pullman, Wash. State the number of acres and the name of the legume to be planted. The price is 25 cents per acre to farmers in Washington and 40 cents per acre to those outside the state. The cultures are sent by parcel post prepaid. Any amount can be supplied. Orders should be sent to the college at least 10 days or two weeks in advance of planting time. Pay for the cultures in advance by check or money order, made out to the State College of Washington. Full directions for use are supplied with every culture.

Apple Trees

Transplanting Eight-Year-Olds

O. T. Clawsen of Wenatchee is trying out an experiment with 8-year-old apple trees, which are being moved to other parts in the same orchard. In place of thinning a number of trees that were originally set out for fillers, Mr. Clawsen is digging out the entire tree, which he will move by means of a small derrick and tackle mounted on runners.

"I figure that I can save from four to six years by resetting the trees, provided the experiment will work," said Mr. Clawsen. "I am doing the digging during the dormant season and in cold weather, so as to get the benefit of snow which covers the ground and makes the moving easier. I will need some help with the work when it comes to the moving process, but as far as the digging goes I can get that done alone."

The trees are being set out where the original trees have died or where new rows are desired. Even some of the ornamental trees on the farm are being moved in the same way.

NEEDS WHOLESOME FEED.

A hog is not a four-legged septic tank.



Cletrac Is At Home Among The Trees



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TANK-TYPE TRACTOR

CLETRAC is low-set and smooth-bodied. It slips in and out among the trees with short quick turns — comes about at the end of the row in less space than a team requires. Standing only 13 hands high—with no projecting lugs to catch low-hanging branches or scrape and bruise the bark—Cletrac is the ideal "orchard tractor."

With a Cletrac to turn under your cover crop, you can work right up close to the trees. This tractor leaves no patches of unplowed ground that so often make orchard plowing a half-power, half-horse job.

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LIVESTOCK AND DAIRY

Cleanliness First

William Campbell of Richmond Highlands, King county, Wash., is operating a small certified dairy on his 10 acres of stumpland pasture. Although he keeps only 10 cows at present, he hopes to be able to add a few more good milkers to the herd as soon as the spring pasture comes on.

The dairy barn and milk houses are not elaborate structures but upon stepping inside the visitor finds the entire interior of any of these buildings is as clean as that of any model farm home. All floors are of concrete and the walls have been painted so that any dirt that may accumulate can be easily noticed and removed.

The two Campbell boys do the milking and attend to all the heavy work about the barns since the father prefers to look after other details. The cows' udders are washed shortly before milking and they are allowed to dry from their own heat. Each milker has a clean suit of milking clothes daily, but they are not required, by the city regulation, to be entirely white, and blue and white striped suits answering the purpose very well and are easily washed.

One of the main points in securing the low bacteria count is the fact that all utensils used in the milking operation must be run through the sterilizer before they can be used for the next milking. This, of course, calls for steam twice a day and requires additional work in keeping up the fire, which is not always necessary in other dairies. The bottle cases, milk pails, cooler cans, strainer cloths and wash rags are all placed in the large sheet iron cabinet, which is then filled with steam. Such a practice is needed in order to keep the count below 10,000, which is the highest number of bacteria allowed in certified milk.

The city regulations call for a 3.5 butterfat test, but with such a small herd, Mr. Campbell has not found it practical to standardize the milk before bottling. Since there are a few exceptionally good milkers in the herd, the test usually runs between 4.0 and 4.5, which is slightly high for the city milk trade.

There is not enough cultivated land on the farm to allow for raising the feed for the herd, and all hay and grain is purchased, and the land used for pasture both in summer and winter.

"There is a lot of hard work to the certified milk business," said Mrs. Campbell, who also helps with the work about the bottling room. "There are so many ways that the bottles can get dirty that I have made it a point to look over every bottle myself before they are put in the sterilizer. At one time we had a number of complaints which indicated that there was something wrong with the bottling. We tried our best to find the trouble but could not do so for some time. Soon after this, however, we found that one of the rubber washers in the bottle filler was crumbling and made small deposits in the bottom. We bought a set of new rubbers and there was no more trouble of this kind.

"It is a lot more work to sell certified milk, but the extra price makes up for it. It is not only the labor, however, but we use up a lot of fuel for steaming the cans and bottles. If any one contemplates going into the certified milk business they should be sure of their market in the first place because the demand is none too great even in as large a city as Seattle."

ALFALFA PASTURE FOR HOGS.

Alfalfa excels all other forage crops for grazing in the development of swine breeding stock, according to C. C. Culbertson, animal husbandry section of the Iowa experiment station, Iowa State college. That statement is based on repeated tests and ranks above blue grass and rape, according to results shown in the experiments mentioned, Mr. Culbertson said. "One had only go look at the breeding gilts on the various forages last summer to see the difference," Mr. Culbertson said. "The splendid nutritional values of alfalfa were shown plainly. Gilts on alfalfa pasture averaged 200 pounds when 7 months old."

LIFE PRESERVERS FOR LIVE STOCK

By DR. E. E. WEGNER, W. S. C.

INFECTIOUS DISEASE—ARTICLE IV.

Influenza.

Influenza of horses, more commonly known as "pink eye" or "mountain fever" and by several other names common in different localities, is known all over the world where horses are raised. It raises its head to take its toll in all the marketing places, on the railroads, in sale stables, on board ship and in private stables, respecting no locality where horses are bred and kept. But its greatest loss is felt when animals are to be transported or when subject to the weakening effects of overwork or change of living habits. Young animals taken from the country to the city sale stable are frequent sufferers, especially when they are housed in dark, damp quarters with animals from many sources or when these quarters are overcrowded.

In many respects this disease resembles human influenza in its method of spread, its kind of attack and its after effects. We do not know the organism that is responsible for its losses, but every evidence points to it as an infectious disease. We do know that anything that tends to weaken an animal's power of resistance has a tendency to cause it to become a sufferer, any exposure to cold or damp, bad air, or crowding, overheating in cars and all such influences are predisposing ones to influenza.

Spreads Rapidly.

It spreads very rapidly through a group of horses and especially to the young or newly acquired ones in the sale barn. It may take down a great number when the animals are working in groups as in the harvest fields, especially where the housing facilities are not the best at night and the animals become chilled after a hard day's work in the dust and heat. All such debilitating influences are active factotrs in connection with influenza.

The disease uncomplicated runs quite a regular course and the percentage of loss from it is not particularly great, but the great danger is from the complications, which are many and dangerous. The chief symptoms are rapid rise of temperature, very great weakness that comes on suddenly, loss of appetite, rapid pulse and rapid breathing, chills in the early stages. The animals usually stand with their heads down, noticing nothing that goes on about them, the eyes may be swollen and reddened or not visibly affected. The above has given this disease the name of "pink eye." The eyes may water even if they do not swell and get red.

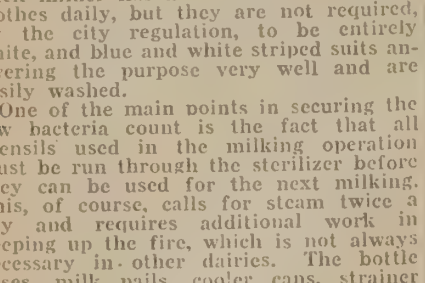
Between careful nursing and administration of drugs for the treatment of this disease there is only one choice to make, and that is the careful nursing, because without it all other treatment is likely to be disappointing. Affected animals should be placed by themselves in a roomy stall where there is plenty of fresh air and light, free from drafts and warm. They should be blanketed warmly and the legs wrapped in woolen bandages as high as the knees and hocks, if they are chilling it is well to place packs of heated salt or other suitable material under the blankets to help warm the animal. The above treatment will go a long way toward preventing the many complications that so frequently follow influenza. It is sometimes very difficult to get a man to understand the necessity for careful nursing, but it is nevertheless very important.

Uncomplicated, this disease is likely to run its course in ten days or two weeks and the animals feel quite well again, and soon after be able to take up their work, so that it pays well to care for all animals so affected.

Stimulants Are Helpful.

Treatment is not specific and most of the home remedies are not worth the time and expense necessary to give them. If they are to be given the stimulants are the best, and since the exit of the popular alcoholic ones, coffee probably is next best, given very warm, as it has the right tonic effect and stimulating action that is really quite beneficial.

Most of the attention should be directed toward preventing exposure, and if this can be accomplished and the disease caused to run a straight and narrow course



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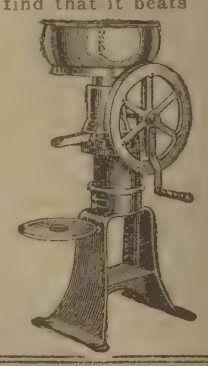


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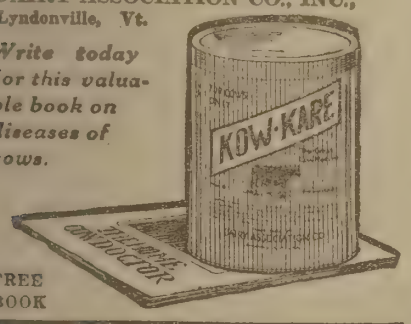
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VETERINARY

By DR. S. B. NELSON.

Black Leg.—What are the symptoms of black leg? W. A. W.
Almira, Wash.

The symptoms of black leg are: Lameness in one or more legs, a swelling on some part of the body and a crackling sensation on the skin when the hand is rubbed over it.

Cut Down Feed.—Some of my sheep get a swelling under their chin about one month before lambing. I opened one and there was a thick, yellow liquid in it. They die a few days before lambing. I am feeding alfalfa hay and bran. N. A. M.
Sumner, Wash.

Cut down your alfalfa hay. Feed your sheep a little oats instead of bran and give them exercise. That may help them.

Ring Bone.—I have a horse that has ring bone; has been lame for about a year. The lameness passes off after he travels a way. The blemish is on the front foot. R. D.
Bearmouth, Mont.

There is probably only one treatment that would give results in eliminating the ring bone, and that is to have your animal fired and blistered and given several months' rest. You will need the services of a competent veterinarian for this.

Milk Has Odor.—I had a cow freshen the middle of November and she did not pass the afterbirth. The veterinarian took it from her and said she was clean, but ever since the milk and butter look all right, but the buttermilk has a rank smell and looks muddy. J. E. H.
Junction City, Ore.

No, I do not know whether or not the cow is all right, but the chances are that the temporary retention of the afterbirth has nothing to do with the condition of the buttermilk. How long do you let your cream stand before you churn it? The sooner you churn the cream the less likelihood of having this trouble.

Growth on Eyelid.—I have a dog that has a growth about the size of a pea on the inside of the upper eyelid just back of the eyelashes that causes this eye to water. The growth is the color of the lid, dark. The eye is not inflamed. Can this be removed? J. A. Y.
Troutdale, Ore.

The eye should be anesthetized, the eyelid turned back and the tumor removed. I am wondering if the tumor is in the inside angle of the eye. It may be that the tumor is a part of the nictitating membrane and that it could be snipped off, later treating with an astringent composed of one grain of zinc sulphate to an ounce of water.

Udder Trouble.—I have a cow just coming fresh that is a heavy milker and I have had to milk her before she calves. One of her teats is swollen and seems to be feverish, but gives a good flow of milk. The udder is not hard. Kindly inform me as to treatment. I am feeding grain, roots and alfalfa. G. W.
Inchelium, Wash.

Wash the affected part of the udder in hot salt water two or three times daily and rub dry with some massage. Decrease the feed that you are giving one-half to two-thirds for a little while, so as to stop this milk forming food that you are giving. Give her the driest feed that you have and administer a handful of epsom salts once daily so that her digestion may not be disturbed.

Wire Cut.—I have a horse that was badly wire cut about four weeks ago. The cut is about 10 inches above the hock on the inside of the hind leg. It is healing nicely, but will leave a large scar or knot. Can this be removed? I also have a horse 13 years old that has had a continual looseness of the bowels for eight months. Had his teeth dressed down and have been feeding stock tonic, but it does not help. He does not digest his food and is getting thin. E. J. T.
Ferdinand, Idaho.

If the wire cut is 10 inches above the hock on the inside of the hind leg, where the thigh is rather meaty, the chances are the lump will be absorbed, so that in a few months' time you can hardly see where the lump was. For the second horse I would suggest that you give him a teaspoonful of listerine on his feed three times daily. I would also suggest that you cut down the feed from one-third to one-half and later gradually increase it.

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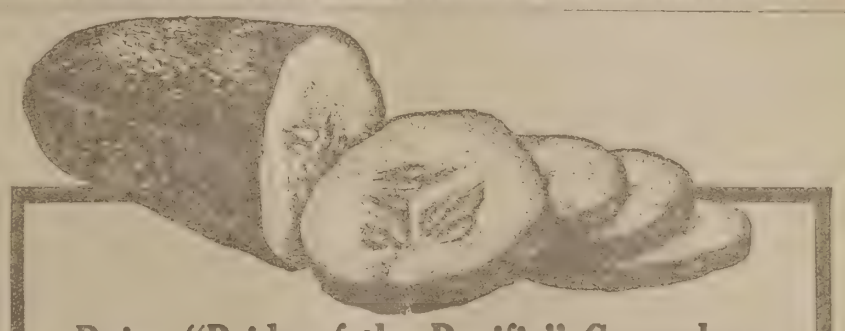
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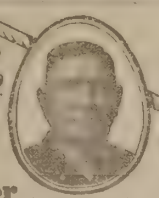
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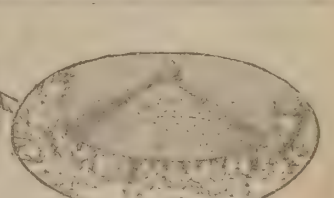
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POULTRY AND RABBITS

Turkey Diseases

By W. T. JOHNSON, Veterinarian, Western Washington Experiment Station.

Turkey Hen Has Cold.

What is the trouble with my turkey hen? She has swellings under the eyes on the bill. One nostril seems to be dried up. The swellings are soft. She eats and seems all right except a wheezing noise when she breathes. Has been this way for nearly two weeks. Is there anything that will help her? MRS. J. A. F.

Mount Vernon, Wash.

Your turkey is very likely affected with a cold in the nasal passages, together with bronchitis.

The swellings of the head have undoubtedly been brought about by collections of nasal secretions in the suborbital sinuses of the head. This condition is best treated by massaging the swollen parts as soon as they are noted to be developing, thus forcing the secretions out the nostrils and cleft in the roof of the mouth.

The "wheezing" sound, when the turkey breathes, is very likely brought about because of bronchitis. This condition is much more difficult to relieve. I would suggest in such cases that you place a drop of spirits of camphor in the mouth daily, when the symptoms are first noted.

It is barely possible that the "wheezing" sound is a result of a collection of cheesy material in the entrance to the windpipe. It is, therefore, advisable for you to examine the windpipe for the presence of this material. Should this be found, it should be removed and the affected area swabbed with a piece of cotton, saturated with tincture of iodine.

Treatment for Head Swellings.

Some of my young turkeys have roup, I think. A soft swelling appears on one side of the head and there is a discharge from the nose. They eat well and there seems to be nothing wrong with them otherwise. Would it be advisable to lance the swelling? A SUBSCRIBER.

Your turkeys undoubtedly first developed a cold and which is now extending to the suborbital sinuses of the head. These sinuses, which are located just in front, and below the eyes, have a direct connection with the nasal passageways, so that in severe cases of colds the nasal secretions fill up these cavities, which results in a bulging, or swelling of the face.

The best time to relieve this condition is when the swelling is first noted, as at this time the contents of the cavities are more or less fluid-like. Later on this material turns to a rather firm, cheesy-like substance, at which time, it is more difficult to remove. When in the fluid state the material can be quite readily removed by massaging the swollen parts of the head and forcing the secretions out the cleft in the roof of the mouth and the nostrils. In severe cases massaging should be applied daily at first. Where the swellings have been present for some time, and the contents have become firm, I would suggest making an incision over the swelling, cutting in the direction from the eye to the end of the beak, then remove as much of the contents of the cavity as possible and plug the cavity with a small pledget of cotton, which has been saturated with tincture of iodine. This is to keep the skin incision from healing before infection is destroyed in the bottom of the cavity. This treatment should be carried out daily at first and the cavities scraped, to remove more of the cheesy material, until the infection is all destroyed in the bottom of the cavity, then the cotton pack should be left out and the cavity permitted to heal naturally.

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Questions Answered

By W. T. JOHNSON, Veterinarian, Western Washington Experiment Station.

I would like to know the cause of diarrhea in baby chickens, in grown chickens and what is best cure or remedy for the disease in each case. A. K.

Chinook, Wash.

The causes of diarrhea in chicks and grown fowls are very numerous. Anything which upsets the digestive organs tends to produce this condition in either chicks or grown fowls.

The most common causes of diarrhea in chicks are improper feeding and brooding, or other factors which produce a chick which is naturally weak at the time of hatching. We also have a contagious disease, which results in diarrhea of chicks, which is known as "bacillary white diarrhea," but this disease is not at all common in western Washington flocks.

The cause for diarrhea in the case of grown fowls is most often excessive feeding of concentrated foods, which result in an irritation of the intestinal tract. The remedy here is to lessen the amount of this type of food supplied the fowls.

My chickens' eyes swell up and also around the bill. Could you please tell us what causes it and give us a remedy? P. B.

Oak Harbor, Wash.

As a general rule, when the eyes of chickens swell and swelling is also noted around the bill, as you describe, they have previously been or are at the time, affected with a cold. Severe cases of colds generally result in an excessive amount of secretion, together with a stoppage of the nasal passages, so that the eye cavity and the suborbital sinus of the face become filled with the secretions, thus showing as distinct swellings externally. I would suggest that you look over the housing conditions thoroughly, in an effort to eliminate any such conditions as dampness, overcrowding on the roosts and improper ventilation—either too much or not enough,—as these are the common causes of colds.

I would suggest that you remove the cause of the condition and permit the fowls affected with simple colds, to overcome the disease themselves. Fowls affected with simple colds, if given the right kind of quarters, will overcome the condition themselves, in a reasonable length of time and continue to give normal, or average egg production during this period, while, if removed for treatment, very often the egg production decreases. It would be well for you to watch them closely to detect the development of swellings of the face and eyes. Whenever such cases develop, it would be advisable to take them out of the flocks, and treat them by massaging the affected parts and removing the secretion.

Recently I got a sack of meat scraps, commercial product, which I fed to my chickens. Now I have about 15 chickens, mostly laying hens, that are sick. They began by standing in a stupid manner, then hanging their heads, and their necks seemed very limber. They had a slight bowel trouble and soon became helpless and lay flat on the ground until they died. I fed only small quantities of the meat scrap. Could the hens have been poisoned by the meat scraps? MRS. L. J.

Wilbur, Wash.

The symptoms which you describe are rather characteristic of so-called "limber neck," or botulinus poisoning. Botulinus poisoning is generally brought about by the feeding of spoiled foods, in which the germ bacillus botulinus has produced a poison.

It may be that this poison was supplied the fowls in the meat scrap, but it also may have been supplied in some other food. Botulinus poisoning has been produced by the feeding of spoiled canned foods, such as beans, peas, salmon and various other canned foods.

The treatment for this disease is of no avail, unless applied shortly after spoiled food has been consumed. When observing the disease during the first stages, I would suggest that you wash out the crop or cut the crop open, and remove the poisonous material.

I have a S. C. White Leghorn that has a gurgle in its throat at times, especially when frightened. No water comes from the eyes or nose. Eats well and is spry. Has been this way for three weeks. Can you tell me what is the matter?

Yakima, Wash. F. L. K.

Your fowl which emits gurgle from the throat is very likely affected with chronic bronchitis. This very often is brought about by the fowl roosting in a draft.

Where this condition is noted when first developing, and the fowl is in a good state of flesh, I would suggest that you place a drop of spirits of camphor in the mouth, once daily, until marked improvement is shown. If marked improvement is not shown in a week's time, I would advise that you dispose of such a fowl, as it is generally not advisable to keep a fowl which has developed a chronic condition of this kind, as very often the egg production is seriously affected and they finally die of the disease after a long period of illness.

The combs of my Rhode Island White roosters turn dark blue and then they die after a few days. I have had them locked up for some time on account of snow and cold weather. Can you tell me why they get that way and what to do for them?

Hay, Wash. J. A.

The development of a blue comb is not indicative of any one particular disease. A wide variety of diseases may result in the development of such a comb.

I would suggest that you cut open any fowls dying with this condition, in an effort to locate the cause of the trouble.

I have a White Leghorn hen that looks and seems healthy, but is weak in the knees and not able to stand. I am feeding sprouted oats, wheat and a little corn with wheat at night. Would you kindly tell me the cause of this and how to stop it and is the disease contagious?

Spokane, Wash. H. F. E.

We very often encounter a disease at this time of the year, with which fowls become paralyzed in the limbs. Very often when this condition is found to develop in a fowl that is laying at the time, the disease is usually overcome in a few hours, to a few days, without any medication. We find that a good many flocks which are fed and managed for high production, show this trouble during his time of the year.

In case this fowl was not laying at the time of developing the trouble, and continues to remain this way for a number of days, I would suggest that you kill her, as such cases rarely recover.

I have a hen and a rooster that have lost their feathers around the neck and would like to know what to do. G. B.

Chinook, Wash.

The cause of fowls losing their feathers around the neck and head is not definitely known. By some, this condition is attributed to the irritation produced by ammonia coming from the litter and by others, to a mite called a "dupluming mite." Personally, I do not believe that the ammonia from the litter is responsible for this condition. Also, I do not believe that the dupluming mite is responsible for the majority of cases in our western Washington flocks, as upon examination a number of such fowls coming from western Washington flocks, I have not yet observed the dupluming mite.

In case your fowls are producing well and apparently are in good health otherwise, than the loss of the feathers, I would suggest that you let them take their natural course. Ordinarily, these fowls over-

The Belgian Hare

Among the true rabbits, the Belgian hare most closely approaches in build the speed lines of the English hare. Its standard weight is but eight pounds or less. The Belgian hare is more nervous, and therefore less a meat-accumulating breed, than the larger Flemish Giant and similar rabbits, and Belgian hares' pelts do not command so good a price. For grace, cleverness and splendid resistence to cold, however, the Belgian hare is paramount. The young are not as resistant to disease as those of varieties not so long inbred.

THE BREEDING STOCK.

The best birds for breeding are picked from among the sturdy yearling hens in the fall, namely those that are laying latest, or still laying after October 1. They will have bleached beak and shanks, bright red combs, only normal shrinkage of flesh for this period and every sign of vigor.

THE EARLY CHICK.

If you receive young chicks before your brooder is ready keep them in a warm room and feed them at intervals of three hours.

GENERAL ADVERTISING.

White Diarrhea

Remarkable Experience of Mrs. C. M. Bradshaw in Preventing White Diarrhea.

The following letter will no doubt be of utmost interest to poultry raisers who have had serious losses from White Diarrhea. We will let Mrs. Bradshaw tell of her experience in her own words:

"Gentlemen: I see reports of so many losing their little chicks with White Diarrhea, so thought I would tell my experience. I used to lose a great many from this cause, tried many remedies and was about discouraged. As a last resort I sent to the Walker Remedy Co., Dept. 547, Waterloo, Iowa, for their Walko White Diarrhea Remedy. I used two 50c packages, raised 300 White Wyandottes and never lost one or had one sick after giving the medicine and my chickens are larger and healthier than ever before. I have found this company thoroughly reliable and always get the remedy by return mail.—Mrs. C. M. Bradshaw, Beaconsfield, Iowa."

CAUSE OF WHITE DIARRHEA

White Diarrhea is caused by the Bacillus Bacterium Pullorum. This germ is transmitted to the baby chick through the yolk of the newly hatched egg. Readers are warned to beware of White Diarrhea. Don't wait until it kills half your chicks. Take the "stitch in time that saves nine." Remember, there is scarcely a hatch without some infected chicks. Don't let these few infect your entire flock. Prevent it. Give Walko in all drinking water for the first two weeks and you won't lose one chick where you lost hundreds before. These letters prove it:

NEVER LOST A SINGLE CHICK

Mrs. L. L. Tam, Burnetts Creek, Ind., writes: "I have lost my share of chicks from White Diarrhea. Finally I sent for two packages of Walko. I raised over 500 chicks and I never lost a single chick from White Diarrhea. Walko not only prevents White Diarrhea, but it gives the chicks strength and vigor; they develop quicker and feather earlier."

NEVER LOST ONE AFTER FIRST DOSE

Mrs. Ethel Rhoades, Shenandoah, Iowa, writes: "My first incubator chicks, when but a few days old, began to die by the dozens with White Diarrhea. I tried different remedies and was about discouraged with the chicken business. Finally, I sent to the Walker Remedy Co., Waterloo, Iowa, for a box of their Walko White Diarrhea Remedy. It's just the only thing for this terrible disease. We raised 700 thrifty, healthy chicks and never lost a single chick after the first dose."

YOU RUN NO RISK

We will send Walko White Diarrhea Remedy entirely at our risk—postage prepaid—so you can see for yourself what a wonder-working remedy it is for White Diarrhea in baby chicks. So you can prove—as thousands have proven—that it will stop your losses and double, treble, even quadruple your profits. Send 50c for package of Walko—give it in all drinking water for the first two weeks and watch results. You'll find you won't lose one chick where you lost hundreds before. It's a positive fact. We guarantee it. The Leavitt & Johnson National Bank, the oldest and strongest bank in Waterloo, Iowa, stands back of this guarantee. You run no risk. If you don't find it the greatest little chick saver you ever used, your money will be instantly refunded.

WALKER REMEDY CO., Dept. 547,
Waterloo, Iowa.

Send me the ( ) 50c regular size (or ( ) $1 economical large size) package of Walko White Diarrhea Remedy to try at your risk. Send it on your positive guarantee to instantly refund my money if not satisfied in every way. I am enclosing 50c (or $1). (P. O. money order, check or currency acceptable.)

Name .....
Town .....
State ..... R. F. D. .....
Mark (X) in square indicating size package wanted. Large package contains more than three times as much as small. No war tax. Adv.

ORCHARD AND GARDEN

Plants in Line

Heavy Wire Acts as a Guide

Fruit growers in attendance at the western Washington horticultural convention were much interested in the informal paper given by Charles Baxter of Anacortes, in which he set forth many practical ideas in strawberry culture, which were the result of several years in the business. One of his original ideas was his method of lining out the field.

"It is not sufficient to plow furrows and drop the plants by hand,' 'explained Mr. Baxter. In order to get the plants exactly in line I always mark out my patch with a short line across the width at each end, while a heavy wire is stretched lengthwise. Short pieces of string are tied onto the wire at the proper distance for the hills, and the plant is set with a Land dibble beside every mark.

"In some cases I mark the field crosswise with a small wheel cultivator, since it is much easier to make the holes for each plant in this way. I find that it is much better, especially with nursery plants, to have the plants in a large milk pan, which can be pushed directly ahead of the operator. A very small amount of water should be placed in the bottom of the pan. If the plants are taken out and dropped by hand in front of the one who is planting, the roots are apt to dry out. Before setting out, the plants should be trimmed of all long roots, and all leaves except a few young ones at the center. Set the soil firmly at the bottom of the roots. When a man understands the work, he should be able to plant from 2000 to 3000 plants per day.

The Cultivation Plan.

"I find it a good plan to use a light garden rake to level the ground between the rows as soon as the plants have been set out. Cultivation should begin as soon as possible after this in order to hold the moisture. When the rows have been set for cross cultivation, the cultivator will take out most of the weeds up close to the plant, and a very little hoeing will be necessary.

"Never allow new plants to grow in the row unless you are setting your new field with nursery plants, and expect to fill in with runner sets. This is a cheaper way of setting, but it takes longer for the field to come into bearing. Strawberries can be set in the fall in western Washington. September is a good month if the soil is in shape. I have been able to get as many as six crops from one patch without replanting.

"The berries should never be picked when wet. Give each picker a number, and require her to mark each row that she has picked with a small peg. In this way it is easy to keep tab on the poor pickers.

A Good Idea.

"I have found it better to employ girls during the picking season, but if it is necessary to employ both girls and boys, the boys should be put to work on a separate patch or the opposite side of the field."

Combating Insects.

Mr. Baxter explained his plan of getting rid of insect pests. When they are bad after the picking is over he uses a mower, cutting all the foliage and raking it in a long row to the center, between the rows. The first time there is a wind blowing with the rows, the leaves are burned.

When the centers of the rows become weedy, Mr. Baxter considers it a good plan to plow furrows from the rows, then run a potato digger under this ridge, which brings all weeds to the surface where they will easily dry out. The patch is then in fine shape for cultivation.

"I believe in scattering straw over the patch in the fall, but I am careful to keep it clear of the plants and to use straw free from weed seed," concluded Mr. Baxter. "When entirely covered the plants seem to smother, since the weather is not cold enough to justify heavy covering. In the spring the entire patch is raked with a hay rake, dumping the windrows between the rows of plants. I go over the entire patch and fork these rows into shape for burning. The plants will not be injured if the wind is blowing in line with the rows."

How to Produce Celery

By J. L. STAHL, Horticulturist, Western Washington Experiment Station.

I want to raise celery and would like to hear from some one who has raised celery in western Washington. .I. W. B.

Yelm, Wash.

Celery is usually grown on muck land, where the soil is rich in decayed plant growth. However, it may be grown on fertile, sandy loam soil. In the southern part of the state, Golden self-blanching, is a popular variety. The local markets in this and the northern parts of the state prefer the White Plume variety. Plants are commonly grown in hot beds or cold frames and reset to the field after danger of spring frosts is past. At this station the practice has been to seed early celery about March 1, transplant to the field about May 20, blanch with boards or dirt August 1, and harvest in early September. Several later seedings and transplantings are made three or four weeks apart, to have a continuous harvesting until after Thanksgiving.

Where blanching is done with boards, the plants are set five or six inches apart, with rows 30 inches apart. When blanching is done with dirt the rows are placed 40 inches apart.

Shallow Frames for the Bees

By GEORGE W. YORK.

Usually the beginner with bees decides to produce comb honey in the little square 4 1-4x4 1-4 inch sections or boxes commonly found for sale in grocery stores.

Sometimes it is not easy to get the bees to go up into the super holding the empty sections, which are placed immediately over the brood-chamber. At times it is almost necessary to force the bees to go up and store honey there.

In recent years I have been advising those beginners who wish to produce honey for home consumption entirely, to use the shallow-frame super rather than the section super referred to above.

For the eight-brood-frame hive the super would contain eight shallow frames the same length as the brood frames, but only about 5 1-2 inches deep. These shallow frames should have fastened in them full sheets of thin comb foundation, which would induce the bees to build the completed combs straight. It seems, too, that bees prefer to work in super combs somewhat similar to the ones used in the brood-chamber below, rather than in such small combs as in the 4 1-4x4 1-4 sections.

It is true that the queen-bee is more likely to go up and rear brood in the shallow frames than she would in the small sections, but this is easily prevented by keeping the queen below in the brood-chamber, by the use of a queen-excluding honey board, which is inserted between the brood-chamber and the shallow super. This queen-excluder permits the passage of the worker bees through it, but the queen and drones can not pass.

When these shallow frames are full of honey, they can be removed, the honey cut out of the frames, and eaten on the dining table just as if it had been stored in the little square sections. It will be just as sweet and good to eat, only it will not be in quite as tempting and convenient form as when put up by the bees in the sections.'

As bees seem to prefer to work in the shallow frames rather than in the sections, they usually will store more honey in shallow frames.

Another advantage of shallow frames is that they can be put into a honey extractor or separator and the honey removed from the combs. Then the empty combs can be replaced in the super and put on the hive again, when the bees will refill them.

Moles and Mice

Much of the damage that has been laid to the work of moles has really been done by field mice, according to L. K. Couch of the bureau of biological survey at Olympia. The field mice will inhabit the mole runways and eat root crops, gnaw the roots of trees and occasionally girdle the bark from the trunks of fruit trees. Field mice are also death on bulb patches.

"The moles do not make their diet on roots or such growths, but eat largely of earth worms, said Mr. Couch. Since the field mice depend on the moles for their burrows, it is first necessary to eliminate the moles in order that the mice may be successfully poisoned. Trapping has been found the best method of getting rid of moles. The regular mole traps, such as are sold by dealers, will give best results. Poisoning is very unsatisfactory.

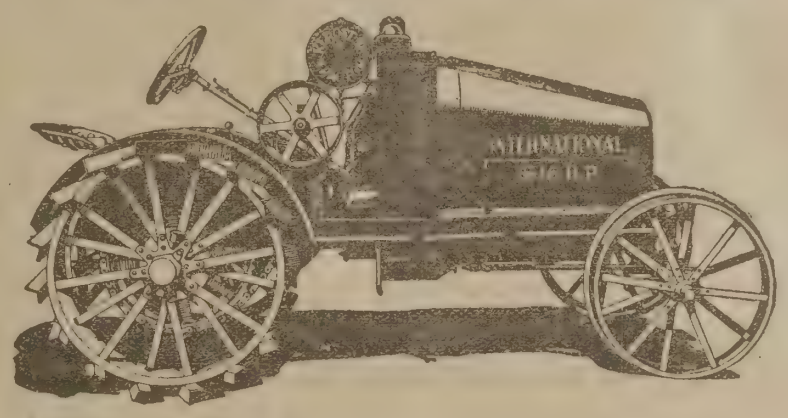
"A campaign has been started in Whatcom county to eradicate the moles and then poison the field mice," said Mr. Couch, since they have caused much damage to the bulb crops at the government bulb farm near Bellingham. A similar campaign has been put on in Clallam county. Field mice have also done some damage to the cranberry crops in southwestern Washington.

The field mouse has been a big problem in Wenatchee this winter and the county extension workers have given some valuable assistance in the campaign, in which a large quantity of strychnine was used.

International 8-16 Cut $230

Now $670 f. o. b. Chicago

and a P&O 2-furrow Plow FREE



Harvester Company's Exceptional Offer

Effective Feb. 3 to May 1, 1922

The Harvester Company makes this special offer to apply on all new International 8-16 and Titan 10-20 tractors purchased by its dealers on 1922 account. Each farmer purchasing one of these International 8-16 tractors, for delivery on or before May 1 next, will be given by the Company ***absolutely free,*** f. o. b. Chicago, a 2-furrow P & O plow. On the same terms, each farmer who purchases a Titan tractor will be given a 3-furrow P & O plow.

The International 8-16 is not a stripped tractor pared down to make a price, but complete with all essential equipment — ***belt pulley, fenders, platform, throttle governor, adjustable drawbar, angle lugs, brakes.*** This equipment, worth more than $100 and necessary on any tractor to make it serviceable and safe, is included in the new $670 price. ***No extras to buy.***

Titan Price Now $700 f. o. b. Chicago

This new Titan price is sure to interest any man who wants a real 3-plow tractor, with belt power in proportion. Remember that 3-plow capacity cuts the labor cost on every field operation. Note that until May 1, 1922, every farmer purchasing a Titan tractor covered by the Special Offer will be given a P & O 3-furrow plow free. If the purchaser now owns a suitable plow we will substitute a tractor disk harrow.

Greatest farm power values ever offered. Neither horses nor any other tractor can equal them.



Special Offer Expires May 1st. See the McCormick-Deering Dealer Now!

INTERNATIONAL HARVESTER COMPANY
OF AMERICA (INCORPORATED)
CHICAGO U S A

Columbia Basin

Widespread Interest in Project

To the Editor of The Washington Farmer: What is your opinion in regard to the Columbia basin project becoming an established fact? Do you think that the great Panama engineer's verdict, if finally favorable, will wield enough influence to help the project along to the point of certainty?

If the project passes, about how much per acre can we homesteaders expect for partially improved land?

In the next place, I am looking for a sort of combination farm where I can have a small tract of natural growth of timber and a running stream or lake; the rest of the farm must be tillable land suitable to the rearing of hogs as a specialty. I am a naturalist by taste and I want a small tract of natural growth of vegetation and trees, so that I can cultivate the friendship of the birds. This farm can be from 80 to 160 acres, but must be where there is sufficient rainfall to insure good crops. Have you any idea in what part of the west one could find such a place? I do not care to be miles away from a settlement.

What is your opinion of the hog in the northwest? I have great faith in the hog as a money maker. As I could not pay cash for such a place I believe that I could pay for it by laying special emphasis on the hog proposition. What is your opinion?

McKenna, Wash. CARL L. KAPP.

A favorable report by General Goethals would command respectful consideration in congress and from the nation. With his favorable report and the safeguarding of the water supply, we think the realization of the project would be only a question of time, as the country is increasing rapidly in population, the supply of new lands is about exhausted, and there will be a growing need of opportunities for the sons and daughters of American farmers who will naturally want to open up new homes for themselves, just as their fathers and mothers and their grandparents did before them.

Land prices under the project are problematical. We strongly advise, though, against any speculative buying at this time.

We agree with you that there is a great future for hog raising in Washington, along the lines indicated in our recent articles on that subject. Most of the counties of this state, or of Oregon or Idaho, can meet your requirements. For fuller information write to the secretary of state at Olympia, Salem or Boise.—Editor.

Watering Cups for Cows

An interesting story of farm economy comes from Elmer E. Heg & Sons, Holstein breeders, of East Stanwood, Snohomish county, Washington.

Late last fall Dr. Heg suggested putting automatic watering cups in the main milking barn. While talking it over with one of the boys the plan was considered a rather unnecessary expense, which had better be laid aside until the firm could better afford new equipment.

"I began to figure with one of our local dealers, who told me the equipment could be installed for approximately $100," said Dr. Heg. "He offered to sell me what I needed on a monthly payment plan, with only a small initial payment. I decided to give it a trial.

"Within a short time we began to notice a big difference in the flow of milk and as soon as we could estimate a general average we noticed that we were getting an extra can of milk a day. At this rate we were able to pay for the equipment with the increased milk alone and still had the usual supply to depend on for general expenses.

"It taught me a lesson," said Dr. Heg, "and in the future when I am quite sure some kind of an improvement is going to save money in the long run I will look after it immediately and not wait until it is paying for itself."

FARMERS' WANT ADS

This is the farmers' "want," "sale" and "exchange" department for small advertisements of farmers, including live stock and poultry.

Advertising rates for ads running 1 to 3 times, 10c per word per insertion, with a special rate to Farmer subscribers, as follows: Ads running 4 to 12 times, 9c per word per insertion; ads running 13 times or more, 8c per word per insertion.

All commercial and land advertising 10 cents per word each insertion. Open also to nonsubscribers.

In using these columns advertisers must observe: (1) No advertisements will be inserted for less than $1.00. (2) Every word, number and initial, including name and address, must be paid for. (3) New advertisements, changes of copy or cancellations must reach general office, Spokane, Wash., 10 days in advance of publication date. (4) Cash must accompany order.

Above rates include insertion in The Washington Farmer, The Idaho Farmer and The Oregon Farmer, which constitute the Pacific Northwest Farm Trio, 46 Review Building, Spokane, Wash.

HELP WANTED—Female 1

GOOD HOME, LIGHT WORK, FOR RESPECTable woman; references. Box 5, Alameda, Wash.

AGENTS WANTED 9

$21 DAILY AVERAGE IS WHAT OUR salesmen are clearing, selling Easy Pump Equalizers. They make hardest working pumps work easy; windmills turn in slightest wind; pumping engines go with less than half the gas or steam. Fit all pumps. Warranted five years. Needed everywhere. Consolidated Steel & Iron Co., Minneapolis, Minn.

EDUCATIONAL 45

EARN MONEY QUICKLY—THERE'S NO LIMit to one's earning capacity in business. And this great business college, after training you thoroughly, places you in a paying position. Courses include banking, stenography, accounting, private secretarial. Write for free catalogue. Behnke Walker Business College, Portland, Ore.

FRESH FOOD PRODUCTS 51-1

HONEY BRAND HONEY, PURE, LIGHT, thick and good flavored, from alfalfa and sweet clover. One 60-lb. can, $7.50; two for $14.50. Write for circular and prices in pails. Salesmen wanted. Oliver Sires, Wapato, Wash.

WHITE ALFALFA, SWEET CLOVER honey; 1 60-lb. can, $7.50; 2 60-lb. cans, $14.50; six 10-lb. cans, $8.50; three No. 10 pails, prepaid third zone, $5.50. Wells D. Rose, Sunnyside, Wash.

FRESH SMELT, 50-LB. BOX, ONLY $1.50, Kelso. Good smoked, canned, salted. Recipes. Send check Cowlitz Smelt Co., Kelso, Wash.

FRESH FOOD PRODUCTS (Continued) 51-1

HONEY.—FINE QUALITY ALFALFA SWEET clover; 60-lb. can, $7.50; 2 cans, $14.50; three 10-lb. pails prepaid, second zone, $5. Harry Fisher, Prosser, Wash.

SMOKED SALMON, 5-POUND BOX, $1.25; salt salmon bellies, 5 pounds, $1.25, delivered by mail. Coffin Fish Co., Seattle, Wash.

HONEY—LIGHT AMBER HONEY, LIQUID form; one sixty-pound can, $7; two cans, $13.50. A. L. Traner, Touchet, Wash.

WORLD'S BEST CLOVER HONEY, 60 pounds, $6.15; two 60s, $12. Browne, Box 499, Twin Falls, Idaho.

HONEY, BEST QUALITY; 1 60-LB. CAN, $7.50, discount on large quantities. E. Sires, Wapato, Wash.

MISCELLANEOUS—FOR SALE 60

SASH AND DOORS—O. B. WILLIAMS CO., 1943 First ave., So. Seattle. Chicken house sash, 20" wide by 25" high, 80c; a dozen different sizes in stock for immediate shipment. Skylights for chicken houses, 30"x10" price, glazed, $2. This is the size recommended by the Western Washington experiment station. We carry them in stock for immediate shipment. Sash and doors for all purposes at lowest prices. All orders receive prompt attention. Our large illustrated catalogue No. 35, showing full line of building material and built-in fixtures for the home, free on request. O. B. Williams Co. Established 1899.

TOBACCO, NATURAL LEAF—SWEET AND mellow hand-picked chewing or smoking, 5 lbs., $1.50; 10 lbs., $2.50; smoking, 10 lbs., $2. Furnish free recipe for preparing. Quality and delivery guaranteed. Farmers' Tobacco Exchange, Sedalia, Ky.

WALL BOARD—WRITE FOR SAMPLE OF Washington plaster wall board; won't warp, won't burn. Manufactured by Washington Building Products company, 6501 E. Marginal Way, Seattle, Wash.

PIPE — NEW AND SECOND-HAND, ANY size; low price; standard grade roofing paper at a big saving; belting, all plies, all sizes, cheap. Write Alaska Junk Co., 8120 Adams st., Spokane, Wash.

E. Z. BUILT SILO, ERECTED IN SECTIONS; has double walls with 6-inch air space; freeze proof; built of fir lumber; strong, durable and low priced. J. F. Jacobson Lumber Co., Tacoma, Wash.

WE ABSOLUTELY SAVE YOU MONEY ON groceries and general merchandise; prompt and careful service. Write today for our free catalog. Jordan-Lawler Co. Box 615T, Spokane.

HOMESPUN CHEWING AND SMOKING TObacco 5 lbs., $1.50; 10 lbs., $2.50; valuable formula smoking, 5 lbs., $1. Pigeon Roast, Sedalia, Ky.

CEDAR CHESTS DIRECT FROM FACTORY to your home; Tennessee cedar, solid copper trimmings. Write for catalogue. J. W. Higgins & Sons, 1912 Gilsan st., Portland, Ore.

SHERWIN-WILLIAMS PAINT $1.80 GALLON; $[illegible] 4 h. p. Goss engine, $65; $42.50 Colt's automatic, $25; $65 Krisky brooder, $40; all like new. Beverly Egg Ranch, Leona, Ore.

TOBACCO, NATURAL LEAF, FOR MILD SMOking; 10 lbs., $1.50; 20 lbs., $2.75; will furnish free recipe for preparing. Leaf Tobacco Exchange, Mayfield, Ky., Star Route.

HOMESPUN CHEWING OR SMOKING TObacco, collect on delivery; 5 pounds, $1.50; 10 pounds, $2.50; 20 pounds, $4. Farmers' association, Paducah Ky.

HOMESPUN TOBACCO, 5 POUNDS, $1.25; 15 pounds, $3. Send no money, pay when received. Farmers' Association, Jonesboro, Ark.

CEDAR POSTS, POLES, PILING AND STUBS; lengths and sizes to order. Marsden Red Cedar company, Calder, Idaho.

TOBACCO — KENTUCKY'S PRIDE; RICH, mellow chewing, 10 lbs., $3.25; smoking, 10 lbs., $2.50. Farmers' Club, Mayfield, Ky.

JOHNSON'S PACKAGE BEES, QUEENS. Write for remarkable prices. 165 Raymond ave., San Jose, Cal.

FREE SMOKING TOBACCO—SMOKE ON US. Write for free sample. Hawesville Tobacco Co., Hawesville, Ky.

MISCELLANEOUS. 61

FACTORY CLOSING OUT LESS THAN wholesale prices. Straw forks, manure forks, hay forks, spading forks, dirt shovels, round pointed long handle shovels, spades, long post-hole digging spades; 8, your selection, only $6. Rush your order. Process Tool Co., Salina, Kas.

MACHINERY—For Sale 93

SUGAR BEET SEEDS CAN BE DROPPED three to the foot or more if you wish by using a Wright planter, a new machine just being introduced. Free illustrated booklet. Geo. H. Wright, 1925 Pacific avenue, Spokane.

STOVE REPAIRING. 128

WRITE MYER RUBENS, SPOKANE, ABOUT stove repairs, welding broken parts, nickle plating.

FUR-BEARING ANIMALS 170

SILVER AND CROSS FOXES FOR SALE. William Rambo, 407 Sprague, Spokane.

PETS—Dogs, Birds, Etc. 171

REGISTERED AIREDALE PUPS, ALL FEmales, $10 each; send today. This ad will not appear again; all papers furnished. Cermer Airedales, Pasco, Wash.

THOROUGHBRED SHEPHERD PUPPIES; father and mother both good heelers; male, $7 each. Address C. A. Newton, Clagstone, Idaho.

REGISTERED AIREDALE PUPPIES—MALES, $25; females, $15. Wildwood Heights Farm, Spirit Lake, Idaho.

RABBITS and HARES 173

PEDIGREED FLEMISH AND CHECKERED Giants. Prices not fancy. Brookside Rabbitry, Hubbard, Ore.

POULTRY (Baby Chicks) 174

ANCONA BABY CHICKS, SHEPPARD STOCK; hatching eggs, $2 per 15; $10 per 100, delivered. R. P. Irwin, Tonasket, Wash.

WHITE LEGHORN BABY CHIX, $16 PER 100; eggs, $6. Mrs. Arp, St. John, Wash.

POULTRY—Baby Chicks (Continued) 174

YESTERLAID EGG RANCH, KENT, WASH.—Dear Sir: Am more satisfied every day with the chicks received the 17th. They are certainly husky and while Feb. chicks may be supposed to lack vigor, it is certain yours lack nothing. May I increase my order 150 chicks to be delivered with my March 22d order. Irving Kunz, Hoquiam, Wash. Dear Sir: The chicks I got from you the 20th of May are fine. Please let me know your prices for 1922, as I am in the market again for a good order. A. E. Rackow, Hollister, Idaho. Dear Sir: Please let me know the date my 1000 chicks will be delivered. The chicks you sent me in 1921 are just wonderful. Got 70 per cent lay all winter. H. H. Coffey, Chehalis, Wash. We hatch 12,000 of these kind of White Leghorn chicks every 5 days from our own eggs. All sold out until May 1st. Orders for hatching eggs can be filled any time. Largest, most modern and up-to-date trap nest poultry ranch in the world. Yesterlaid Egg Ranch, Kent, Wash.

400,000 BABY CHICKS—OUR WHITE LEGhorns are bred to lay; priced at $15 per 100. We hatch from some of the best flocks of R. I. Reds, Barred Rocks, Anconas and Minorcas to be found in the northwest. Chicks are priced at $22.50 per 100. Send $1 deposit per 100 with your order, paying the balance on inspection of chicks. Safe arrival guaranteed. We have a few standard makes of incubators and brooders at greatly reduced prices. Send for our circular offer. Seattle Hatchery, 1906 Pike place, Seattle.

"FRESHLAID" WHITE LEGHORN CHICKS have the qualities you want; vigor and scientific breeding for the heaviest egg production; every "Freshlaid" male is from a high record hen. Freshlaid Farms is one of largest and oldest chick plants in the Inland Empire. There is a real demand for "Freshlaid" chicks, especially from our old customers. We are sold out until May 1. Write at once if you wish May chicks. May chicks make ideal winter layers. Catalog. Freshlaid Farm, Colfax, Wash.

FOR SALE—WHITE LEGHORN BABY chicks from free range selected hens mated with pedigreed cockerels from 200-287 egg trap nest records. May and June prices $3.50 per 25; $6.50 per 50; $12 per 100. Special prices 500 and 1000 lots. Safe arrival guaranteed. You pay only for chix received alive and in good condition. No money in advance, pay on delivery. Order now. Established 1898. Must Hatch Incubator Co., 445 Seventh st., Petaluma, Cal.

EBORALL'S STRAIN WHITE LEGHORNS. Our hatch of 2300 chicks per week is now booked for Feb., March and April, principally to old customers. Your inspection is invited at all times. We are now booking chicks for May at $14 per 100. Write for circular. Crystal White Poultry Farm, McMinnville, Ore. Box 33.

TRY OUR PARCEL POST PACKAGE—KEEP the old hen busy. We will ship you first-class baby chicks, postpaid to your door, direct from the hatchery and guaranteed all alive. Price, $4.50 per 25; $8 per 50. For delivery April, May or June. Order now. The White Hatchery, Petaluma, Cal.

UNION DISTRICT HATCHERY IS NOW booking orders for the best thoroughbred baby chicks at the right price. White, Buff and Brown Leghorns, Rhode Island Reds, Black Minorcas, Anconas and Barred Plymouth Rocks. F. & L. Downing, Los Gatos, Cal.

BABY CHICKS, HATCHING EGGS—FROM Hoganized hens, well mated. White and Brown Leghorns, R. I. Reds, Barred Rocks. Safe arrival guaranteed. Order early. Write for circular. Stubbe Poultry Ranch & Hatchery, Box 67J, Palo Alto, Cal.

BABY CHICKS FROM TANCRED AND HOLlywood strain; heavy laying White Leghorns, mated to cockerels from W. W. experiment station hens, 265-314 egg record, $19 per 100; hatching eggs, $7 per 100. Wax's Poultry Farm, Kent, Wash.

WHITE LEGHORN CHICKS (TANCRED strain), from selected two-year-old hens mated to cockerels from 251 to 286 egg trap nested dams. March and April, $18 per 100, after April 22, $15 per 100. Bona Terra Ranch, Drain, Ore.

WHITE ROCK BABY CHICKS, "DANIEL'S IDEALS," from our own trapnested stock entirely. Write for prices and dates, also eggs for hatching. Free catalog. Ideal Poultry Yards, Hoquiam, Wash. Star Route No. 25.

BABY CHICKS — REDUCED PRICES ON White Leghorns, Reds, Barred Rocks, White Rocks, Minorcas, and Anconas; booking orders now; postal secures free catalog. Write today. C. N. Needham, Salem, Ore.

BABY CHICKS FROM TRAPNESTED WHITE Leghorns of superior quality; 14 years breeding for egg production. $18 per hundred. Chas. L. Perkins, 1337 Burrage, Portland, Ore.

BABY CHICKS — WE GUARANTEE OUR chicks to be from the highest producing hens in Petaluma. Write for further information. The White Hatchery, Petaluma, Cal.

WHITE LEGHORN CHIX, FROM OUR FREE range selected heavy laying breeders; after May 3d, $12.50 per 100. Chandler Poultry Farms, Lebanon, Ore.

TANCRED STRAIN WHITE LEGHORN BABY chicks, $18 per 100; eleventh season; incubator capacity, 18,000 eggs. D. A. Gillette, R. 4, Yakima, Wash.

WHITE LEGHORNS AND WHITE ROCKS; trap nested strains; chix and eggs, contest pen, $5 per 15. Palouse Falls Ranch, Palouse Falls, Wash.

S. C. ENGLISH WHITE LEGHORN CHIX, Hollywood strain, 15c; Barred Rock chix, 20c. Bertha Jorgensen, R. 1, Hillsboro, Ore.

O. A. C. STRAIN WHITE LEGHORN BABY chicks; none better; $14 100; May delivery. Rosedale Poultry Yards, Shedd, Ore.

WHITE LEGHORN BABY CHICKS. CIRCULAR on request. San Jose Poultry Yards, San Jose, Cal.

Leghorns.

PUREBRED S. C. WHITE LEGHORNS; ALL breeding hens of trap nested strain, carefully selected for vitality and standard requirements; baby chicks, $18 100; safe delivery guaranteed, eggs, $1.50 for 15; $8 100. Frank Volland, Rt. 1, Kennewick, Wash.

HOGANIZED WHITE LEGHORN HATCHing eggs, $5 per hundred. The Idle Hour Poultry Farm, F. F. Smith, Mgr., Mc[illegible] Ore.

POULTRY—Leghorns (Continued) 174

"HENACRES'" 8 WEEKS' OLD PULLETS; March or May hatched; big, healthy, vigorous bred to lay. Booking orders now. 6000 to sell, $1.50 each or 500 for $700. Satisfaction guaranteed or money back. Baby chicks for February, March and April all sold to old customers. May chicks, $22 per 100; $200 per 1000. June, $18 per 100; $140 per 1000. Safe delivery guaranteed. Hatching eggs, $2 per 15; $9 per 100; $80 per 1000. "HENACRES" Leghorns are known all over the northwest. Ask your neighbor. Illustrated catalog and booklet on poultry management free. "HENACRES," Box A, Prosser, Wash.

SINGLE COMB WHITE LEGHORNS (TANcred strain); selected heavy laying second and third year hens mated to cockerels from 250 to 275 egg trap nested dams; hatching eggs, $1.50 per 15; $7.50 per hundred; chicks, $18 per hundred, safe delivery guaranteed. Oaklawn Poultry Farm, Hillsboro, Ore.

TRAPNESTED WHITE LEGHORN BREEDING stock and setting eggs; famous Carnation high record stock; pedigreed breeding for heavy winter layers. Improve your flock by adding Carnation stock. Ernest W. Raush, Carnation Poultry Farm, Kent, Wash.

SINGLE COMB BROWN LEGHORN EGGS, from vigorous stock, hatched and raised by hens; heavy layers; unlimited range; $15 eggs, $1.50; 30, $2.75; 100, $7; charges prepaid. Incubator lot a specialty. L. Smitcher, Boise, Idaho.

WHITE LEGHORN EGGS FROM HEAVY laying hens and Tancred royal males; 15 for $1.50; from exhibition laying matings, 15 for $3; small mating strictly Tancred royal, $8 for 13. L. M. Patterson, E2517 First ave., Spokane.

WORLD-FAMOUS EGG PRODUCERS; O. A. C. White Leghorns; vigorous, free range stock baby chicks and eggs; special low price for immediate grade chicks for May delivery. Write for circular. Corvallis Poultry Farm, Corvallis, Ore.

OREGON AGRICULTURAL COLLEGE WHITE Leghorns. May and June chicks, $14 per 100; eggs, $2 per setting; $8 per 100. Russell Poultry Farm, Corvallis, Ore.

FORD'S BRED-TO-LAY S. C. WHITE LEGhorns. Hatching eggs, $2 per setting; $5 per 100; special matings on request. W. A. Ford, Umatilla, Oregon.

HATCHING EGGS, TANCRED STRAIN, S. C. White Leghorns from Hoganized flock; $1 per 15; $3 per 50, $5 per 100. Fred Oberg, Redmond, Ore.

S. C. WHITE LEGHORN BABY CHIX FROM trap nested, Hoganized hens; also cocks and cockerels. J. Panck, Sherwood, Ore. R. 1.

WHITE LEGHORNS, TRAP NESTED STRAIN, hatching eggs, baby chicks. Write us. Washington Poultry Farm, Hartford, Wash.

S. C. W. LEGHORN HATCHING EGGS, HOLlywood strain; six dollars per hundred. Mrs. Rominger, Underwood, Wash.

POSTPAID—13 TORMOHLEN "EVERLAY strain" S. C. Brown Leghorn eggs, $1.50. R. J. Davis, Cambridge, Idaho.

SINGLE COMB WHITE LEGHORN COCKERels; O. A. C. strain, $2.50 each. Ralph Butler, LaGrande, Ore.

BROWN AND BLACK LEGHORN SPECIAList; contest and show winners. Clifton Dickerson, Silverton, Ore.

BROWN LEGHORN EGGS, THE VERY BEST quality; free mating list. E. H. Rosenkranz, Colfax, Wash.

SINGLE COMB WHITE LEGHORN HATCHing eggs, $1.50 per 15. Edw. W. Meyer, Pullman, Wash.

PRIZE BUFF LEGHORNS; EGGS 15c EACH, postpaid. C. E. Cleveland, Stanfield, Ore.

Barred Rocks.

BARRED PLYMOUTH ROCK COCKERELS for sale—You will find no better on the Pacific coast; $6 each, f. o. b. Hubbard, Ore. If not as represented, send them back and get your money. We guarantee them. Dimick & Waldron, Hubbard, Ore., Route 2.

FREE MATING LIST, DESCRIBING OUR ideal Barred Rocks; 337 pts. 10 specials for 1921. High egg record, 303 eggs; average egg record 229 eggs. Jacobson's Poultry Yards, 5396 Tacoma ave., Tacoma, Wash.

HATCHING EGGS, OREGON AGRICULTURAL college Barred Rocks; choice pen, $2 per 15; utility stock, $1.50; great layers. J. M. Steen, Lebanon, Ore.

QUALITY BARRED ROCKS, WINNERS, LAYers, eggs, setting, 3 and 5 dollars. Robt. L. Burkhart, Albany, Ore.

PURE BARRED ROCK HATCHING EGGS $2 and $3 per fifteen. Mrs. A. Nafziger, Route 7, Box 151, Salem, Ore.

PURE O. A. C. BARRED ROCK EGGS, $1.50 per fifteen; $7 per hundred. Mabel Currin, Monroe, Ore.

O. A. C. STRAIN BARRED ROCKS; EGGS, $6 hundred; chicks, $25 hundred. The Idle Hour Poultry Farm, McCoy, Ore.

HIGHEST QUALITY BARRED ROCK HATCHing eggs. J. E. Horton, 2408 Altamont, Spokane.

HUNT'S FINE BARRED ROCKS. WRITE for circular on eggs. W. A. Hunt, Lebanon, Ore.

BARRED ROCK CHICKS, HEAVY LAYING O. A. C. strain. Mrs. E. Hodge, Waterloo, Ore.

Miscellaneous Poultry.

EGGS FROM PRIZE-WINNING MAMMOTH Toulouse geese, the kind that hatch; 50c each, $45 per 100. Imperial white Pekin duck eggs, $2.50 per 15, $14 per 100. Goslings, ducklings. R. E. Baumgardner, Wenatchee, Wash.

PARAMOUNT WHITE WYANDOTTES "BRING home the bacon." Trap nested, pedigreed. Instructive catalog free. No baby chicks. Bayard H. Moul, 1226 Washington blvd., Seattle.

EGGS, MAMMOTH TOULOUSE AND WHITE Chinese geese; Mammoth Pekin ducks, pearl guineas, Single Comb Reds. C. O. Johnson, R. 1, Medical Lake, Wash.

WHITE WYANDOTTE COCKERELS, HOGANized; heavy laying strain; average eight lbs., $5 prepaid; hatching eggs, $2 per 15. Adams, Warren, Ore.

HATCHING EGGS FROM RHODE ISLAND Reds and O. A. C. strain Barred Rocks, $2 15; $7 100. Mrs. Roy Watkins, Olex, Ore.

EGGS—PURE REGAL WHITE WYANDOTTES Three special matings; also Partridge Wyandottes. Eugene Boyk, Rocklyn, Wash.

MAMMOTH PEKIN EGGS FROM DUCKS that take the prizes. Drakes for sale. Mrs. E. A. Bennett, Salem, Ore.

GOLDEN CAMPINES, HOGANIZED; EGGS, $2.50 per 15. Mrs. J. M. Harrison, Box 6, Rieth, Ore.

SILVER SPANGLED HAMBURG HATCHING eggs, $1.50. Mrs. J. N. York, Milton, Ore.

ANCONAS—CHICKS AND HATCHING EGGS. Oscar Dunlap, Junction City, Ore.

MAMMOTH PEKIN DUCK EGGS, $2 PER 10, postpaid. Art Moore, Persist, Ore.

WHITE MINORCA HATCHING EGGS, $2 PER 15. N[illegible]

(Continued on the following page.)

FARMERS' WANT ADS

This is the farmers' "want," "sale" and "exchange" department for small advertisements of farmers, including live stock and poultry.

Advertising rates for ads running 1 to 3 times, 10c per word per insertion, with a special rate to Farmer subscribers, as follows: Ads running 4 to 12 times, 9c per word per insertion; ads running 13 times or more, 8c per word per insertion.

All commercial and land advertising 10 cents per word each insertion. Open also to nonsubscribers.

In using these columns advertisers must observe: (1) No advertisements will be inserted for less than $1.00. (2) Every word, number and initial, including name and address, must be paid for. (3) New advertisements, changes of copy or cancellations must reach general office, Spokane, Wash., 10 days in advance of publication date. (4) Cash must accompany order.

Above rates include insertion in The Washington Farmer, The Idaho Farmer and The Oregon Farmer, which constitute the Pacific Northwest Farm Trio, 46 Review Building, Spokane, Wash.

POULTRY—Miscellaneous (Continued) 171

SUMMER SALE—MAY AND JUNE BARGAIN prices. We want to put a flock of Butler Farm White Leghorns or Black Rose Barred Rocks on every farm in the northwest because they are the kind that will add to the farm income. If you want some of these high producers at bargain prices, write today for special prices and May and June eggs and chicks. Butler Poultry Farm, Jennings Lodge, Ore.

WE ARE HATCHING HOLLYWOOD AND Tancred strain of White Leghorns every Monday, Wednesday and Friday. Prices at $20 per 100; $195 per 1000. Commercial strain mated with 250-egg cockerels at $15 per 100. R. I. Red, Barred Rocks, Black Minorca and Ancona chicks are priced at $25 per 100. Send for free catalog and prices on incubators, brooders and pullets. Queen Hatchery, Seattle.

FOR SALE—SINGLE COMB BROWN LEGhorns, Rhode Island Reds, Mammoth White Pekin ducks, male birds, hatching eggs, baby chicks. Write for mating list. The Up-to-Date Poultry Farm. Established 1907. Arthur W. Wade, Marysville, Wash.

EGGS! EGGS! EGGS! "SNOWFLAKE" WHITE Orpingtons, establish highest official Orpington pen record western Washington laying contest. Average 204 eggs; free mating list; hatching eggs, $3, $5, $10 per fifteen. W. T. Thompson, Bozeman, Mont.

THE PROGRESSIVE HATCHERY—PUREbred S. C. R. I. Red and S. C. White Leghorn baby chicks from vigorous trap nested or selected range bred stock; safe delivery guaranteed. Send for circular. 1534 Northeast 12th, Portland, Ore.

S. C. RHODE ISLAND REDS—OUR FLOCK IS one of the best in the Willamette valley, and we have hatching eggs from our best matings to deliver to our customers after March first. All baby chicks for 1922 are sold. G. B. Dimick, Oregon City, Ore.

LAYCO NICELY MARKED ROUEN DUCKS, $2 each; $10 trio; eggs, 11, $2; 100, $15; heavy laying, prize winning strain White Wyandottes, eggs, 15, $2; 100, $10. P. H. Tomlinson, College Place, Wash.

STOP, LOOK, LISTEN—CHIX AND EGGS from Cecil Sheppard's high grade laying strain of Anconas. Inquiries promptly and courteously answered. W. G. Pearmine, Cona Villa, R. R. 8, Salem, Ore.

MAMMOTH PEKIN DUCKS, "AMERICA'S finest." New blood this year direct from C. C. Shoemaker; eggs, $2 per setting, $12 per 100. Crystal White Poultry Farm, McMinnville, Ore. Box 33.

SETTINGS FROM BROOKS HAVEN SINGLE Comb Reds; Redwing strain (Hogan-ized); bred for color, type, capacity, range raised. Chas. S. Brooks, Underwood, Wash.

WHITE ROCKS AND RHODE ISLAND REDS; eggs, utility stock, $1.50 per fifteen; $8 per hundred. Few cockerels, $4. Mrs. F. D. Terpening, Clatskanie, Ore.

COCKERELS AND EGGS; BARRED ROCKS, Buff Orpingtons, White Leghorns, Dark Cornish, Toulouse geese, Bronze turkeys. E. A. Rose, Roseburg, Ore.

SINGLE COMB RHODE ISLAND RED COCKerels; hen hatched, range raised; hatching eggs $3 setting (Owen strain). Joe Brunsell, Mt. Vernon, Wash.

FOR SALE ROSE COMB RHODE ISLAND Whites; twelve hens, one cockerel; fine layers. Eggs, $2.50 setting. Harold Price, Monmouth, Ore.

PURE BRED S. C. RHODE ISLAND RED EGGS for hatching from non-setting, non-fading stock, $3, $5 and $10 per fifteen. Mrs. L. White, Double Diamond Ranch, Omak, Wash.

VIGOROUS, HEAVY-LAYING WHITE ROCK breeding stock; pure Fishel strain; hens, pullets $2, $3; cockerels, $3, $5, $10; prices on quantities. J. B. Axtell, Hood River, Ore.

S. S. HAMBURGS, COCK AND COCKERELS; prize stock, $5; old hens, $3.50; 15 eggs, $3.50; pullets, $3.50. E. E. Enos, W1908 Montgomery, Spokane, Wash.

COCKERELS—BROWN AND BUFF LEGhorns, Black Minorcas, Blue Andalusians. Boone Avenue Poultry Yards, E1601 Boone ave., Spokane.

DEPENDABLE ANCONA COCKERELS AND hatching eggs from 330-egg strain; eggs, $2.50 per setting. Smith's Ancona Farm, Nampa, Idaho.

BLUE ANDALUSIANS; EGGS FOR HATCHing, $2 per setting; heavy layers from beautiful prize winning stock. Mrs. Wm. Rommel, Leary, Wash.

POULTRY RAISERS, SEND FOR FREE BOOKlet on poultry advertising. The Pacific Northwest Farm Trio, Dept. P, Review bldg., Spokane, Wash.

DOLLARS FOR YOUR EGGS—WE PAY THE top market prices for your eggs and poultry. Daily cash remittances. Western Produce Co., Spokane.

S. C. ANCONAS, SHEPPARD'S SELECT AND Kulp egg strains; eggs, $2 per 15; chicks, $20 per hundred. A. B. Larson, Warren, Ore.

BABY CHICKS, COCKERELS, SINGLE COMB White Leghorn; heavy laying strain. Grape Lane Poultry Farm, Turner, Ore.

S. C. RHODE ISLAND RED HATCHING EGGS, heavy laying strain; $1.50, 15; $7 hundred. Geo. Silvers, Zillah, Wash.

SHIP YOUR LIVE POULTRY AND EGGS TO us. Highest prices paid; daily remittance. Inland Poultry House, Spokane, Wash.

TRAP NESTED WHITE LEGHORN AND Barred Rock eggs and chicks; records, 200 to 311. Mrs. W. M. Roberts, Elmira, Oregon.

GIANT STRAIN PURE BRED MAMMOTH Bronze turkeys, from prize-winning stock. Mrs. C. R. Lowery, Route 4, Boise, Idaho.

ALLEN'S PRIZE BARRED ROCKS AND White Leghorns are wonderful layers. Write D. W. Allen, LaConner, Wash.

RANGE RAISED WHITE WYANDOTTE eggs, $1.50 setting; $8 hundred, prepaid. A. Krueger, Colfax, Wash.

BLUE ANDALUSIAN AND WHITE ROCK hatching eggs, $2 per 15. Mrs. C. W. Armstrong, Freewater, Ore.

ANCONA HATCHING EGGS SHEPPARD'S laying strain, $3 per 15. Georgiana Kee, Grooms, Wash.

SINGLE COMB REDS, CHICKS, 20c EACH; eggs fifteen for three dollars. A. L. Bosworth, Chuck, Wash.

BRED TO LAY ANCONAS: HATCHING EGGS. Price list free. Yew Lane Farm, Sherwood, Oregon.

2949 COCKERELS, HATCHING EGGS, 49 VArieties; free book. Aye Bros., Box 14, Blair, Neb.

EGGS—BLACK MINORCA, WHITE MINORCA, 260-egg strain. Mrs. Frank Winnard, Heppner, Ore.

BUFF ROCKS, BUFF MINORCAS, COCKERels, eggs. Mrs. Day Woodruff, Bow, Wash.

S. C. BLACK MINORCA HATCHING EGGS, $7.50 per 15. John Zack, Kalama, Wash.

LOCAL BEAUMA EGGS $2 PER 15. DALTON Poultry Farm, Coeur d'Alene, Idaho.

POULTRY—Miscellaneous (Continued) 174

BABY CHICKS FROM PETALUMA ELECtric incubator have "pep" that surprises customers. Electricity is life. Modern poultrymen are rapidly adopting our system with splendid results. Save efficient, economically better chicks. Hatch for yourself or get chicks from hatcheries using Petaluma incubators. Write for our free catalog. Petaluma Electric Incubator Co., Petaluma, Cal.

PARKS BRED-TO-LAY BARRED ROCKS, dark strain; big ones; great layers; well barred; Barron English White Leghorns, big ones, headed by descendants of Keystone Maid, record 306 eggs, large combed combs, beauties. All eggs, $2 per 15, prepaid. Fay Davis, Cambridge, Idaho.

GRIFFIN'S FAMOUS WHITE WYANDOTTES, the best for market and egg production; eggs for hatching from best mated pens in northwest; your opportunity to get started with my famous stock. Send for catalog. J. A. Griffin, Box 457, Eugene, Ore.

BABY CHICKS—PRICES REDUCED AFTER May 15th. S. C. R. I. Reds, $20 per 100; S. C. W. Leghorns, $15 per 100; April chicks all sold. Maple Brook Poultry Farm, Southworth, Wash.

SINGLE COMB RHODE ISLAND WHITES; heavy egg producers; eggs, $2.50, $3.50 per 15; $12.50 per 100. Van K. Lawson, McMinnville, Ore.

CHICKS FROM LEGHORN HENS, 228-EGG average; reduced price. Acme Poultry Farm, Cottage Grove, Ore.

LIVE STOCK 177

SEND FOR FREE BOOKLET, "SOME SUGgestions to Live Stock Advertisers," outlining the practices of successful men of long experience. Helps in determining how much to spend, the mediums to select, preparing advertisements, handling inquiries, the use of photographs, etc. Write today. The Pacific Northwest Farm Trio, Dept. W, Spokane, Wash.

LARGE, HEAVY PRODUCING HOLSTEINS for sale at all times in car lots; tuberculin tested; 150 to 200 head always on hand; well marked heifer calves from registered sires and heavy producing dams; crated for shipment anywhere, $25 f. o. b. Levinson & Balmelli, Yakima, Wash.

FOR SALE—HOLSTEIN BULLS, SERVICEable age; sired by son of King of the Sadie Vales. Sire's dam, 30.62 lbs., 2-year-old daughter of Korndyke Abbikerk, son of Pontiac Korndyke. Prices reasonable. D. F. Nugent, Granger, Wash.

SHIP US YOUR POULTRY AND LIVE STOCK. We pay the top market prices. Light veal, fat, fancy, 17c; dressed block hogs, 14½c; hens, heavy, 25c; light, 20c. Prompt returns. John Lewis & Co., Spokane, Wash.

WE PAY TOP PRICES FOR YOUR LIVE OR dressed veal, hogs and poultry. Your check by return mail. Shipping tags on request. M. & J. Packing Co., Spokane.

REGISTERED SHORTHORN BULLS, ONE yearling, one four-year-old. Carl T. Beyer, Norwood, Idaho.

220 HEREFORD COWS, HEIFERS, BULLS must be sold. Purebreds pay best. Start now. L. L. Young & Sons, Nampa, Idaho.

TILLAMOOK CALVES—SEASON NOW OPEN. Price lists ready; strictly dairy stock. Smith, the Calf Man, Tillamook, Ore.

IMPORTED PERCHERON STALLION FOR sale or will trade for jack. Also some registered Shorthorn bulls left over. E. B. Coulson, Aberdeen, Idaho.

PERCHERON RANGE HORSES FOR SALE—Some broke for saddle and work. Ralph Davis, Wymer, Wash.

REGISTERED PERCHERON STALLIONS and mares. Priced to sell. Adams & Son, Yakima, Wash.

WHITLA & GOULD, MICA, IDAHO, OFFER for sale purebred Hampshire boar pigs.

BIG TYPE POLAND CHINA GILTS, BOARS. Collins, Underwood, Wash.

HARNESS and SADDLERY 189

SEND FOR FREE HARNESS AND SADDLE catalog today; cut out the middleman, buy direct from the manufacturer. Lowest prices in the west; satisfaction guaranteed. Established 1881. Write Pierce Harness Co., dept. T, Spokane, Wash.

HAY FOR SALE. 200

ALFALFA HAY, GUARANTEED QUALITY; prompt shipment; buy direct and save money. Prices upon application. Ernest T. Freepons, Walla Walla, Wash.

JOB PRINTING 372

GUARANTEED BETTER BUTTER WRAPpers; 100, 60c; 250, $1.50; 500, $2.50; 1000, $4.25; printed to order. Home Specialty Co., Middleton, Idaho.

TANNING 425

WE WILL TAN YOUR COW OR HORSE HIDES into robes or coats at the right prices and guarantee our work as we are custom tanners and manufacturers. We also buy hides, furs, wools and pelts, or will exchange harness and sole leather for same. Write for prices. Spokane Fur Tanning Co., 7 Pine st., Spokane.

KODAK FILM DEVELOPING 472

SPECIAL OFFER—BEAUTIFUL 7X11 OR 8X10 enlargement, colored in oil, from kodak film for a dollar bill. Roberts Photo shop, 716 Selling bldg., Portland, Ore.

MONUMENTS 510

COMPLETE STOCK, RIGHT PRICES. CORrespondence solicited. J. W. Harding, Inland Monument Co., N1001 Monroe, Spokane.

PERSONAL 537

BACHELOR WITH COUNTRY HOME, WOULD like to hear from lady, 27 to 35, object matrimony. D 7, Idaho Farmer, Spokane.

BUILDING MATERIAL 588

NO WASTE, LESS LABOR. BUILD WITH ready cut houses and barns and save money. Attractive new plan book sent free. 4c postage. Prices quoted on material list. Write today. Price advance certain to come soon. Lewis Keystone Lbr. Co., 3000 Sprague, Tacoma, Wash.

SEEDS 620

ALFALFA SEED, CLOVER SEED, SEED corn—We are located in the heart of the largest and best alfalfa and clover seed district in the west and can give you both quality and price. Get our samples and quotations before buying. Our seed corn is of the finest acclimated strains. Garden and flower seeds of all kinds. Send for our catalog. Darrow Bros. Seed & Supply Co., Twin Falls, Idaho.

FORAGE PEAS BUILD UP SOIL, FATTEN hogs and mutton, for hay, or maturing for crop. Price, per ton, $65, including bags; 1000 lbs. at one rate, f. o. b. St. Anthony, Idaho Farms; cash with order, or draft with bill lading. Samples mailed promptly on application. Write for prices, larger quantities. The Everett B. Clark Seed Co., St. Anthony, Idaho.

ALFALFA SEED 99 PER CENT PLUS PURE; state test, 22c pound. Red clover seed, same test, 22c pound. Comb honey, choice, $5 per case, you pay postage. Farmers' Service, Box 472, Twin Falls, Idaho.

CHOICE MANGEL SEED, 35C LB., POSTPAID. Send ten farmers' names, including 5c, and receive five packages seed and catalog free. Warren Cook, La Conner, Wash.

STATE TESTED SEEDS—NO. 1 ALFALFA, $17.50 per cwt.; No 1 red clover, $24 per cwt, f. o. b. Jerome, Idaho. Purity Seed Farms, Box 188, Jerome, Idaho.

CERTIFIED LITTLE MARVEL GARDEN peas, hand picked, $7 hundred pounds; small lots, 10c pound. All net. W. A. Bower, Avon, Idaho.

HUBAM CLOVER, CERTIFIED SEED OF THE earliest strain; Idaho grown. DeKalb County Agricultural association, DeKalb, Ill.

SEEDS—FARM AND GARDEN; ALL STATE tested. Write for catalog. Washburn & Wilson Seed Co., Moscow, Idaho.

SWEDISH SELECT CERTIFIED SEED OATS, ton lots, 2½ cts., less quantity, 3 cts. J. A. Bushong, Klamath Falls, Ore.

ALFALFA SEED, POSTPAID, ORENBERG, ounce, 25c; registered Cossack, pound, 75c. W. W. Perkins, Camas, Mont.

CHOICE RECLEANED ALSIKE CLOVER, 100-pound lots or more, 16 cents. George H. Brown, New Era, Ore.

COSSACK ALFALFA SEED—SEND FOR samples. S. H. Hillman, Box 5, Thompson Falls, Mont.

EARLY OHIO AND RURAL NEW YORKER seed potatoes. C. J. Hagerman, Chewelah, Wash.

NURSERY STOCK 621

EVERBEARING STRAWBERRY PLANTS—All orders received to date, and after, until further notice, will be entitled free, to 1 St. Regis everbearing raspberry, 1 red raspberry, 1 blackberry, 1 Lucretia dewberry, and 1 purple lilac. My Superb and Progressive everbearing strawberry plants are guaranteed and prepaid at 100, $1.40; 500, $6; 1000, $11. Orders for 1000 get 2 lots free; 2000, 4 lots. Dewberry plants, 75c doz; $4 per 100. Model Fruit Farm, R. 1, Emmett, Idaho. N. B. Manhiessen, prop.

BLACKBERRIES — CORY'S THORNLESS; largest berry; Macatawa large, splendid flavor; best shipper; everbearer. Alton improved raspberry, delicious flavor, large, twice as productive as Cuthbert. John Lammiman, Route 1, Palo Alto, Cal.

RELIABLE NURSERY STOCK—ITALIAN AND Petite, 4-6 ft. and 3-4 ft.; Concord, Worden and Moore's Early grapes; grafted Franquette walnut, all sizes. Send for catalog and price list. Villa Nurseries, Route 1, Portland, Ore.

GROW GRAPES FOR PROFIT—SPECIAL LOW prices; grape vines, berries, asparagus, for commercial planting; peaches, cherries, apricots, apples; satisfaction guaranteed. Write today. Home Nursery Co., Richland, Wash.

CLARK SEEDLING, THE STRAWBERRY that made Hood River famous. Write for list of other varieties and prices. Plant nurseries at Hood River and Prosser. Wash. W. R. Gibson & Son, Hood River, Ore.

CORY THORNLESS MAMMOTH BLACKBERry, guarantced true plants from Cory ranch, where first discovered and propagated; 3, $1; 12, $3, postpaid. G. S. Wills, Jamestown, Cal.

STRAWBERRY PLANTS—IMPR. NEW OREgon, Ettersburg 121; large, vigorous and healthy, guaranteed free from root weevil. 80c 100, $5, 1000. Christian Arneson, Canby, Ore.

PROGRESSIVE EVERBEARING STRAWBERry plants at $1.25 per 100, or $9 per 1000, postpaid; inspected, guaranteed. O. W. Zurcher, S104 17th street, Boise, Idaho.

CORY THORNLESS BLACKBERRY—DELIcious, very large and early. You get strong, well rooted plants, true to name, from pioneer grower. Wm. Mortensen, Route 1, Lodi, Calif.

CHOICE LOGANBERRY TIPS, $25 PER THOUsand; personally inspected by our county fruit inspector before they are shipped. I pay express. G. W. Johnson Jr., Salem, Ore. Route 4.

NURSERY STOCK, ITALIAN PRUNE TREES and trees of all kinds. Berries and small fruits of all varieties. Buy direct and save 50 per cent. Brooks Nursery, Lafayette, Ore.

SEND FOR OUR NEW PRICE LIST ON FRUIT trees, berry bushes, shade trees and roses on their own roots. Krause Nursery, Spokane, Wash.

90,000 CHOICE LOGANBERRY PLANTS. SElected, inspected, hardy, well rooted; unusual low price. Harry Lamun, R. 4, Salem, Ore.

GENUINE SUPERB EVERBEARING STRAWberry plants, inspected, $1.25 hundred, $10 thousand. H. H. Skagen, Kent, Wash.

GRAPES—1 AND 2 YEAR OLD CONCORD, 6 and 8 cents, any variety grape scions, 2c, prepaid. E. L. Capps, Grandview, Wash.

LOGANBERRY PLANTS, 6, $1; TIPS, 18, $1; Cuthbert raspberries, 75, $1; 1000, $10, prepaid. Alvin Myers, Doehay, Wash.

CHOICE LOGANBERRY PLANTS, $20 PER thousand, prepaid. Ward K. Richardson, 2393 Front, Salem, Ore.

CURRANT BUSHES, PERFECTION AND London Market, $3.50 and $5 per 100. D. R. Ruble, Salem, Ore.

LOGANBERRY PLANTS FURNISHED BY the grower. Grape Lane Farm, Turner, Ore.

STRAWBERRY PLANTS, $5 PER 1000. Briggs, Plant Nursery, Olympia, Wash.

FARM LANDS FOR SALE. 651

$3500—$1000 CASH; 80 ACRES BOTTOM LAND, all subirrigated; Bonner county, Idaho; 50 acres timothy, clover, balance easily cleared; trout creek, fine springs above new house and barn. Crop producing soil, no rock, plenty fuel, fencing, splendid dairy country, free range. Unequaled for grain, vegetables, fruit, berries; school 1 mile; town 3 miles; good roads; furniture, etc., for sale. Also 80-acre relinquishment pasture land adjoining. Also 320 acres wheat land, Adams county, Wash., under cultivation. (No trades.) Lawrence H. O'Neil, N4023 Madison, Spokane.

A SUBURBAN PRODUCING HOME AT SUMmit View Farms, between Puyallup and Tacoma, with one acre cleared on each five-acre farm. City water, paved road, phone, lights and only short distance from the state experimental station at Puyallup; berries and poultry for income with city conveniences; good berry land and excellent view property. Write us today for map and full details. You deal direct with the loggers. We have no agents. Electric Logging Co., Inc., 216 Marion st., Seattle, Wash. A. E. Todd, Mgr.

80 ACRES, WHATCOM COUNTY, WASH., ON paved highway, near Ferndale and Lynden, 40 in cultivation, balance excellent pasturage; large house and barn, chicken house, cattle sheds, concrete stave silo, farm lighting plant, all farm implements, 18 cows, 10 registered swine, 1 registered bull and 2 horses. A money maker; best of market facilities. Some cash and reasonable terms. Carl W. Bryant, 208 Columbia street, Seattle, Wash.

WE SELL FORECLOSED LANDS FOR A loan company for one-third cash, balance easy terms. When writing tell us what you want, where preferred, how much you will invest; kind of farming you contemplate, as we have no list and must write special description in each case. No trades. Hartford Land company, 601 Paulsen building, Spokane, Wash.

SNOHOMISH COUNTY, WASH.—6000 ACRES of the finest dairy, berry or general high-grade farm lands in the northwest, rapidly improving section; no drouths; bumper crops; tracts 1 to 80 acres; 10 yearly payments. This is your opportunity. Send for literature. Brownell Land Co., Birmingham, Wash.

CENTRALIA, 2 MILES FROM TOWN; PAcific highway; 5-acre ranch; 7-room house, bath; new, modern, 75-ft. chicken house; hot water brooding system; 1 acre strawberries, 1 acre loganberries, $5500; terms. J. G. Button, Route 1, Box 92, Centralia, Wash.

480 ACRES FINE CUTOVER LAND; 100 ACRES bottom; fine creek, springs, abundance tame grass; would subdivide at $15 to $25 per acre; great stock or dairy proposition. Owner would furnish stock on shares. Chas. D. Edwards, Centralia, Wash.

STOCK RANCH, WITH 500 CATTLE, 200 range horses, 920 acres land; a modern ranch, fully equipped; in heart of good range; 5-year grazing permit, Lemly reserve. Right dates back to 1883. Any one interested, address J. D. Ellis & Co., Idaho Falls, Idaho.

WE WANT TO TELL YOU MORE ABOUT the famous Deschutes valley in central Oregon; a dairy, potato and stockman's paradise; a card brings full particulars. Redmond Land & Loan Co., Inc., Redmond, Oregon. (King Murphy's capitol.)

GOOD 160 ACRES IN STEVENS COUNTY, Washington; 11 miles west of Addy; small house and barn, well watered; 60 acres plow land, balance pasture and timber; high school; daily mail. Owner, Charles Justis, Madrid, Neb.

TEN ACRES AT RICHLAND, LOWER YAKIma valley; 4-room house, good outbuildings; team, machinery, tools, level land, deep soil, early district; terms. Briscoe Realty Co., Lindelle Bldg., Spokane.

40 ACRES LOAM SOIL, CLAY SUBSOIL; $1150 cash; $600 five years' time; berries, chickens, horses, wagon, everything goes. Write J. H. Van Iderstine, Rt. 4, Arlington, Snohomish county, Wash.

FORTY ACRES, WELL IMPROVED; 100 fruit trees; fenced with 5-foot wire fence; a good home, only two miles from school, for sale very cheap. J. U. Harrison, Churchill, Idaho.

60-ACRE FARM, WITH STOCK FOR SALE —21 miles south of Tacoma; on paved highway; stores, school and church close. $5000. George Jensen, Box 145, Eatonville, Wash.

SELL YOUR PROPERTY QUICKLY FOR cash; no matter where located. Particulars free. Real Estate Salesman company, 501 Brownell, Lincoln, Neb.

80 ACRES; 35 CULTIVATED; 25 ALFALFA; orchard, house, barn, creek; 7 milch cows, 3 horses, tools, $4000; terms. F. A. Hunter, Route 1, Boyds, Wash.

TEN ACRES BEAUTIFUL LEWISTON ORchard; on paved road; priced reasonable; easy terms. Henry Olander, owner, Route 3, Lewiston, Idaho.

FOR SALE—TWENTY ACRES, IMPROVED farm, three miles from Olympia; easy terms. John Aarts, R. 4, Olympia, Wash.

FARM LANDS—Wanted 654

LET ME HELP SELL YOUR FARM. WM. R. Hughes, Middle Granville, N. Y.

FARM LANDS FOR RENT 657

BOISE VALLEY FARMS; ON ELECTRIC street car line; for lease. 219 acres grain, hay, fruit, and pasture. Parties to take over farm, dairy, stock equipment at reasonable price; five miles from Caldwell, 1 mile from Middleton. For sublease, in Middleton, cash only; 16 acres orchard and small fruits, house suitable for boarding and roomers, or light housekeeping. Would also lease, with above, 20 acres alfalfa, 20 of wheat, 13 acres pasture. Parties must take some equipment and stock. Must have references. M. L. Ward, Middleton, Idaho.

IRRIGATED LANDS—For Sale 663

NO CASH DOWN—ACREAGE RICH IRRIgated land on highway; close town, $160 acre up, nothing down, ten years to pay, no snow; ranches all sizes; plenty work; good markets. G. E. Oaks, Redding, Shasta county, Cal.

CITY PROPERTY FOR SALE 690

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FOR SALE OR EXCHANGE 702

FOR SALE OR EXCHANGE—1240-ACRE stock ranch, 12 miles from Council, 1¼ miles to railroad station, postoffice and school; all fenced and cross-fenced; 240 acres hog-tight; 400 acres tillable, balance grazing; free water; good buildings. Machinery and horses included. Mrs. L. E. Ferguson, Goodrich, Idaho.

20 ACRES FERTILE IRRIGATED LAND, California; large brick residence, Ogden; stock ranch, Wyoming; $7000 worth approved escrow securities, all or part for improved farm in northwest. Owner, E. L. Morris, 2329 Quincy ave., Ogden, Utah.

Is Putting "Pep" Into Business

Trout Lake Holstein Association Is on the Job

The Trout Lake Holstein-Friesian association of Klickitat county, which was organized in January, was very much in evidence at the Davis-Butchart sale early in February. One-third of its entire membership, including both the president and vice president, attended and bid on the offerings, and they took home not only 12 head of purebreds from this sale, but a carload or two of grades, which made their shipment one of the largest of dairy cattle that has ever come into the White Salmon river valley. Their purebred purchases totaled $3090.

Up to that time there were only two purebred cows and one purebred bull, owned by William Elmer, in the valley, but the "pep" which this organization has injected into the business since the January meeting indicates that there will soon be a good many more. There were 16 at the meeting and the association now has 16 members and had a representative at the state association meeting in Seattle March 7. On February 22 the association gave a banquet, entertainment and dance at Trout Lake, with the entire valley as its guest, just to show that the Holstein breeders there are at last alive, and a big breeders' banquet is being planned for May 6.

More than a year ago the late Fred S. Stimson, then president of the state association, made a visit to the Trout Lake district and returned with glowing accounts of its adaptability to dairying and of the field it furnished for Holstein extension work. Though the elevation is high, sunflowers, alfalfa and pasture grasses flouish there. Alfalfa has to be hauled 20 miles to a railroad, consequently the dairy cow supplies the best kind of a marketing medium. And of 75 cows in the valley only a few were purebreds.

Members of the association are William Elmer, president; Sanford Peterson, vice president; F. A. Schinick, secretary-treasurer; Frank Cory, James Childs, Will Coate, Charles Coate, George Rogers, C. A. Elmer, A. Elmer, John Scoggin, R. L. Bewley, John Phister, Louis Rasmussen and R. A. Wilson.



The purebred Holstein population of the Trout Lake district, in Klickitat county, was increased 600 per cent, or from 2 to 14, by the attendance at the Davis-Butchart dispersal sale of this group of breeder-enthusiasts. They took home also a number of grades, and they promise to keep things moving, as far as Holsteins are concerned, in the White Salmon river valley. Left to right, they are: C. A. Elmer, L. Rasmussen, W. A. Elmer (president), Frank Cory and Sanford Peterson (vice president).

Turns Under All His Stubble

"Never burn your stubble," is the advice of B. B. Gillespie of Ritzville. He gives the advice not only to farmers in the grain-growing sections having plentiful rainfall, but to those who live in the drier areas of the Big Bend country.

Mr. Gillespie makes it a special point to turn under completely every bit of stubble and other vegetation that there is on his wheat land. He begins by breaking up the stubble with a harrow or disk. When stubble is left standing until plowing time a great deal of it is either left sticking up through the plowed surface or is covered to a slight depth only. To insure complete turning under, Mr. Gillespie uses a jointer on his plow to turn down the upper portion so that the stubble and other vegetation will be placed well down in the bottom of the furrow.

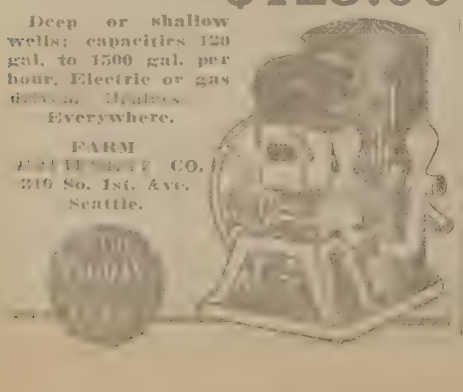
Mr. Gillespie is a believer in deep and early plowing. He recommends from six to eight inches for average Big Bend conditions. Where it can be practiced he favors disking in the fall, not only to break up the stubble, but to give the weed seed a chance to germinate with the first fall rain. This having been done, they will be destroyed by later cultivation or plowing. After plowing he uses a spike-toothed harrow, ordinarily, to settle the subsurface. He does not favor cultivating summer fallow when dry. The rotary rod weeder is his favorite weed-destroyer for summer fallow land. If there are weedy portions in his summer fallow when seeding time comes in the fall he goes onto it with a view to killing the weeds before seeding.

Fall seeding or cultivation should leave the land in a rough condition to prevent packing and washing, in the opinion of Mr. Gillespie. Partially for this purpose he uses the old-styled hoe drill in preference to the disk drill, because the hoe not only tends to destroy weeds, but leaves the land in this desirable rough condition.

On comparatively level land he uses press wheels behind his drill in order to give the soil in the seed rows a slight packing to retain the moisture for germinating the seed. He does not use the press wheels in spring seeding.

On his place near Ritzville Mr. Gillespie seeds Turkey red wheat in the fall at the rate of about one good bushel per acre.

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Poisoning Groundhogs

A report from Leo K. Couch, assistant director of the bureau of biological survey of the United States department of agriculture, tells of the work that is being done to fight the groundhogs, which are becoming very numerous in Okanogan and Chelan counties. Much credit is due to the county agents and other extension workers where this work has been taken up. The only method of eradication which has been successful are the poisoned baits which are given below, as recommended by Mr. Couch:

Poisoned Grain.

Mix one tablespoonful of gloss starch in one-half teacup of cold water and then stir this into one-half pint of boiling water to make a thin, clear paste. Now mix one ounce of strychnine (alkaloid) with one ounce of baking soda and stir with the starch into a creamy mass, beating it until it is free of lumps and thick. Add to this one-fourth pint of heavy corn sirup, one tablespoonful of glycerin and one teaspoonful of saccharine dissolved in a little warm water. Beat the starch mass again and then pour it over 12 quarts of oats in a tub or tight box and mix thoroughly—until there are no dry kernels. Four tablespoonfuls of salt added to the boiling water before making the starch increases the effectiveness of the poison during the crop-growing season. Only good, heavy, recleaned oats should be used for this bait.

In distributing the poisoned grain, place a handful in a place, on a clean, hard surface within close proximity to the den or burrow. The marmots pay no attention to scattered grain. Care must be observed to place out of reach of stock.

Poisoned Green Alfalfa.

A very satisfactory bait can be made with the use of green alfalfa. Mix dry, one ounce of powdered strychnine (alkaloid) with one-eighth ounce of powdered saccharine and place in a pepper box, properly labeled. Dust this mixture over about 20 pounds of freshly-cut alfalfa tops which have first been moistened with Karo water made of two parts corn sirup and one part water.

Place the baits (a handful to a place) near burrows, trails and lookout points.

Poisoned Salt.

Mix one ounce of strychnine (alkaloid) with 16 ounces of table salt. Place salt on clean, hard surfaces, a teaspoonful to a bait, or in jar lids spiked to the ground. The bait is best exposed in fields where groundhogs are feeding.

Caution: All poison containers and all utensils should be labeled plainly and kept out of reach of children, irresponsible persons or live stock.

Wheat Experiments

In discussing the results of a series of experiments on a plot of wheat land at the state college experiment station at Pullman, where a study of manure values, summer fallow methods, wheat rotation and depth of plowing has been under way, E. G. Schafer, head of the farm crops department of the state college, says:

"Manure applied in the spring each year before plowing at the rate of 10 tons per acre increased the average annual yield of spring wheat 2.2 bushels per acre. Manure applied in the fall each year before plowing at the rate of 10 tons per acre increased the average yield of winter wheat 14.2 bushels per acre. The use of manure for winter wheat produced an average annual increase of 12 bushels more than the use of manure for spring wheat. There was a variation in acre yield of 1.3 bushels for winter wheat grown alternately with summer fallow when manure was applied before plowing, as a top dressing after plowing and as a top dressing after seeding.

"Early-plowed, well-tilled summer fallow produced 11.8 bushels per acre more than summer fallow which was plowed late and left untilled. The average yields during the second 10 years of the period were greater than during the first 10 years for six of the seven plots when wheat was grown in rotation.

"Continuous cropping of both spring and winter wheat materially decreased the average yield during the second 10-year period. Spring plowing for spring wheat produced an average of 2.9 bushels more per acre than fall plowing for spring wheat. Usually it is desirable, however, to plow as much land in the fall as possible in order to insure early spring seeding. The depth of spring plowing has but little influence on the yield of spring wheat."

Prevents Apple Scald

Results during 1921 in preventing apple scald in stored apples by the use of oiled-paper wrappers have confirmed all previous reports that the trouble may be controlled in this way, if the wrappers carry a sufficiently high percentage of oil. The United States department of agriculture has recommended that the wrappers should carry 15 to 20 per cent of oil if they are to be effective in preventing the development of scald. When wrappers carrying a low proportion of oil, in some cases as low as 5 per cent, have been used poorer results have been obtained.

The demand for the right type of oiled wrappers for apples has been so great that many of the orders from growers have not been filled. About 80,000 boxes of apples were packed in oiled wrappers at Wenatchee last season, and a similar number at Yakima.

Scald is a transportation and storage disease that is produced by gases given off by the apples themselves. The disease is greatly favored by warm storage and by delays in reaching storage. It is particularly serious on the York Imperial, Grimes, Arkansas (Mammoth Black Twig), Rome Beauty, Rhode Island Greening, Stayman Winesap, Wagener and Baldwin varieties. In mild cases the apple is merely tinted with brown, but in more severe cases the entire skin layer is killed. The disease looks like an apple rot, but is rather a cause of rot. The gases which cause scald can be removed by ventilation or by absorbing them with oils. Apples scald far less in boxes, crates or ventilated barrels than in commercial barrels, but scald can be entirely prevented by storing the apples in oiled, not waxed, wrappers, the investigators say. This treatment has been

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Spring Bee Feeding

When Colonies Run Out of Stores

By GEORGE W. YORK.

Quite frequently in the spring some colonies in almost every beeyard will need to be fed. For various reasons some run out of stores of food while others may have plenty to carry them through until they can gather enough from the flowers.

Syrup for spring feeding is very easily made from two parts of granulated sugar thoroughly dissolved with one part of boiling water. This is then fed warm to the bees.

There are several ways of feeding this syrup to the bees. It is always best to give it to them in the evening just before dark, then they will store it in their combs during the night and thus avoid any danger of other colonies robbing the ones being fed. It would also be well to close the hive entrance down to about two inches in width by three-eighths or one-half inch in height.

To feed the sugar syrup, I prefer to put it into a feeder that can be set right on top of the brood-frames and then covered over warm with burlap, all within an empty super put on the brood-chamber. An Alexander bee feeder works well, as it will sit diagonally within a 10-frame super, and the same way in an eight-frame super by sawing off one-quarter to one-half inch at the corners of the feeder. It is made of a solid block of wood about 3x4 inches and about 20 inches long, on one side of which wide saw-kerfs have been made almost through the block, but leaving several strips sticking up so that the bees will not drown when getting the syrup out of the feeder. Four or five sticks of wood, about one inch square and five or six inches long, should be crossed on top of the feeder, and several inches apart, for the purpose of holding up the burlap packing above the feeder so that the bees can get at the feed in the feeder.

The syrup can very easily be poured in at one end of the feeder by raising the corner of the burlap. The hive cover is then replaced, when the bees will do the rest.

A shallow tin pan could be used instead of the Alexander feeder, putting cross-sticks just the same on top of the pan to hold the burlap up out of the syrup and to permit the bees to get it.

It is well to examine the bees the first day warm enough to open the hives in the spring so as to learn their exact condition in regard to food supply. They will usually need a good deal to carry them through the spring months, as they should rear considerable brood, which will require much food.

Just Folks

Young folks received their education 4000 years ago and young folks will receive their education 4000 years hence.

The five senses have been avenues of education in all ages. The inherent desires have prompted to education in all ages. Environment has molded education in all ages.

The invention of printing, the founding of universities, and the establishment of the common school system, are not the beginning and the end of education. They are the incidentals and not the fundamentals of education.

Education was as broad as humankind before the birth of Gutenberg and education will be as broad as humankind when the Rockefeller Foundation and the National Education association are no more.

This is not saying the Rockefeller Foundation and the National Education society are not types of great and widely prevalent agencies in the development of present-day education. It is simply saying that no matter what may be the artificial agencies adopted by men for education, the natural agencies ever remain supreme.

I was led to think of these things by a sentence from one of Dr. Frank Crane's recent editorials. The doctor says: "After all, the greatest thing in the world in any school is atmosphere."

Books and schools and teachers and foundations must lose themselves in that atmosphere if they would become most effective in education.

Our civilization demands and must have organized system in education, but what does it profit the boy or girl if he gain the whole world of systematized education and loses the soul of education.

The kind of a man or woman the child will make depends more upon his home than any other influence.

The community has the next largest influence upon the boy and girl.

All the schools can not take the place of the home or of the community in the development of the child.

It is only as the public school system allies itself with the home and the community that it can hope to do its best for the child.

Hence, community development, reaching into the homes of the community, should be a big part of the common school problem.

The best results of the schools are seen in pupils from the best homes and these best homes should receive a large part of the credit for success generally attributed to the schools, in the education of the boy or the girl.

The disappointing pupils are generally from the most disappointing homes and these disappointing homes are not limited to those having less money than their neighbors.

Hence, I believe that a portion of the school taxes can be spent nowhere more profitably than in the upbuilding of a healthy sentiment in the home and in the community as an integral part of school work, even at the expense of some of the special functions of education commonly regarded as strictly within the domain of the schools.

As far as the public school system is concerned that home and community development properly grows out of effort centering at the school plant. The enlarged use of the schoolhouse for public meetings and entertainment, the building of community halls on the school grounds by school taxation, the teachers' cottage, which should be a parish house in a peculiar sense, the picnic grounds with facilities and opportunities for rural sport, the agricultural experimental plats, the community library, etc., are to all intents and purposes part of the public school educational functions.

I believe that any school code which does not distinctly and positively provide for this community development is neglecting a fundamental part of the education of the boy or the girl. E. A. S.

Growing Rutabagas

By M. E. M'COLLOM, Agronomist, Western Washington Experiment Station.

Please give me information or where I can get information on growing rutabagas, and how they can be freed from worms. E. O.

Ferndale, Wash.

We know of no reliable method by which you can get rid of root maggots in rutabagas. Early spring seedlings of rutabagas are usually damaged much more extensively by roots maggot than later seedings. Seeding may be done as late as the first of August, but it is necessary in this case that you have a soil well supplied with moisture. Rutabagas are either seeded broadcast or in rows about 32 inches apart. These rows are later thinned out to a plant every 8 to 10 inches. It requires about four pounds of seed per acre.

The best varieties for western Washington are Monarch, American Purple Top Skirvings Purple Top and King of Swedes.

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Pure wool army riding breeches No. 1, sizes 28 to 38. Sale price $1.98

Khaki work shirts. Sizes 14½ to 17 ..... 98c

Medium heavy weight work shoes. All sizes $3.45

Pure wool U. S. army socks, gray or khaki. Extra quality. Sale price 39c

U. S. O. D. army blankets No. 1, extra large. Sale price $4.45

U. W. army trench shoes, with or without hobnails, all sizes. Sale price $4.95

Reclaimed O. D. cotton breeches, sizes 30 to 38 only. Sale price 95c

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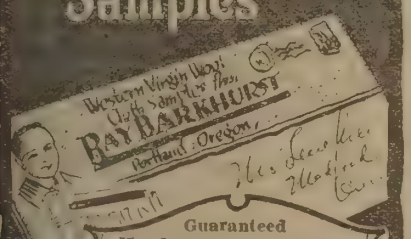
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The department editors of this paper are anxious to be of service to you. Do not fail to write to us if they can be of help to you.

The GAUNT GRAY WOLF

By DILLON WALLACE

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SYNOPSIS.

Shad Trowbridge, a New England lad of about 20 years, sails on a mail boat to Labrador, where he plans to spend a few weeks of summer hunting and fishing in the wilderness. Upon his arrival he meets two experienced fishermen and trappers, Dick Blake and Ed Matheson, who recommend to him a young lad of 17 known as Ungava Bob, as a guide for his hunting and fishing trip inland. Desiring to lose the least time possible in securing Ungava Bob's services and starting inland for his vacation, Shad starts across the bay in his canoe in the face of a threatening storm. In the darkness his canoe is capsized and he is plunged into the icy water. As he rises to the surface a rope is thrown to him and he hears a voice shouting to make it fast. He is soon drawn aboard a little sailboat which, unknown to him, had approached at the moment of his great need.

"I'm sure I owe my life to you," he said to the lad piloting the sailboat. "It was lucky for me you saw me."

"'Tweren't luck, sir," said the lad. "'Twere Providence. 'Twere the Lord who were takin' care of you."

To his surprise, Shad discovers that his new friend, the lad with the sailboat, is none other than Ungava Bob. Together, they make their way to Bob's home, where Shad enjoys the hospitality of the northland while they consider ways and means of making inland excursions. Shad decides to remain a month or more and make the first leg of a long winter of trapping planned by Bob, returning to the settlement in time to sail back home before college opens. To lay in additional supplies for the trip they cross the bay to the Hudson's Bay trading post, where Shad meets with other friends of Ungava Bob and his parents, including Mr. and Mrs. Black, whose daughter Bessie and Bob are great friends.

CHAPTER V.

In the Far Wilderness.

Presently Tom joined them and invited them to dinner in the crudely furnished but spotlessly clean living room of the cabin. Mrs. Black, a stout, motherly woman, had countless questions to ask of Douglas and Bob as to how th' folks t' home" fared, while she and her daughter Bessie served the meal.

Shad dined with Mr. McDonald, but directly after dinner joined Bob while they made their purchases in the shop and prepared for immediate departure to Wolf Bight. When all was ready, Bob left Shad waiting at the boat while he returned to the cabin to say goodby to Mrs. Black and Bessie.

Bessie followed him to the door, and when they were outside where none could see she drew from beneath her apron a buckskin cartridge pouch, upon which she had neatly worked in silk the word "Bob" in the center of a floral design, doubtless the result of many days' labor.

"Here, Bob," said she, "I were makin' it for you, an' when you carries it on th' trail remember we're all thinkin' of you down here, an' wishin' you luck in th' furrin' an' hopin' you're safe."

"Oh!—Bessie—'tis wonderful kind of you—I'll always be rememberin'," Bob stammered in acceptance, for a moment quite overcome with surprise and embarrassment.

"Now take care of yourself, Bob. We'll be missin' you th' winter—goodby, Bob."

"Goodby, Bessie."

Bob and Shad quickly hoisted sail, and as they drew away from shore Bob looked back to see Bessie still standing in the cabin door, waving her handkerchief to him, and he regretted that he had not shown more plainly his appreciation of her gift and her thoughtfulness.

The following Monday was the day set for the departure of the adventurers, and in accordance with a previous arrangement, late on Sunday afternoon Dick Blake, Ed Matheson and Bill Campbell, Ungava Bob's trapping companions, joined him and Shad at Wolf Bight, where they were to spend the night. Bill Campbell was a tall, awkward, bashful young man of 21, whose chief physical characteristic was a great shock of curly red hair.

Monday morning came all too soon. Breakfast was eaten by candle light, and with the first gray hints of coming dawn the boat and Shad's canoe were loaded for the start.

Shad's tent and camping equipment, less heavy and cumbersome than Bob's, together with a limited supply of provisions for daily use upon the journey to the plateau, were carried in the canoe. The bulk of the provisions and the heavier outfit for the trails, made up into easily portaged packs, were stowed in the boat. This arrangement of the outfit was made to avoid the necessity of unpacking and repacking at night camp, and with packs thus always ready for the carry, much time could be saved.

The family gathered at the shore to bid the travelers farewell. First, the boat with Dick Blake, Ed Matheson and Bill Campbell at the oars pulled off into the curtain of heavy morning mist that lay upon the waters. Then Bob kissed his mother and Emily, pressed his father's hand, took his place in the canoe with Shad, and a moment later they, too, were swallowed up by the fog.

The long journey, to be followed by a winter of hardship and adventure, was begun, and with heavy hearts the little family upon the shore turned back to their lowly cabin and weary months of misgiving and uncertainty.

Beyond the sheltered bight a good breeze was blowing and presently, as the sun arose and the mist lifted from the water, Shad and Bob, keeping close to shore, discovered the boat a half mile away with sails hoisted, bowling along at good speed.

"We'll be makin' rare time, now," said Bob. "We'll be passin' Rabbit island in an hour an' makin' the Traverspine t' boil th' kettle for dinner."

"No rapids today?" asked Shad.

"No, th' portage at Muskrat falls is th' first," answered Bob, adding uncertainly: "I'm 'feared you'll find th' work on th river wearisome, not bein' used t' un—th' portagin' an' trackin'. I finds un hard."

"That's a part of the game," said Shad. "I expect to do my share of the work, old man, and I don't think you'll find me a quitter."

"I were knowin', now, you were that kind, ever since I picks you out o' th' bay," exclaimed Bob. "You weren't losin' your head, an' by th' time I h'ists sail you was wringin' th' water outen your shirt, just as if 'tweren't nothin'. An', Mr. Trowbridge, I likes you ever since."

"Thank you, Bob, but if you want me to be your friend drop the handle from my name and call me 'Shad.' We're on an equal footing from this on."

"'Twill be wonderful hard Mr. Trow—"

"Shad!"

"'Twill be wonderful hard t' call you 'Shad'—it sounds kind of unrespectful, now."

"Not in the least," laughed Shad. "All the fellows call me Shad."

"I'll try t' think now t' do it, Mr.—I means Shad. But 'tis a rare queer name."

"Shadrach is the full name. It is pretty awful, isn't it? But doting parents cast it upon me, and I'll have to hold my head up under it."

"'Tis a Bible name, now. I remembers readin' about Shadrach somewhere in th' book o Daniel."

The canoe and boat had been gradually drawing together and now, within speaking distance, Bob called out:

"I'm thinkin' me an' Shad'll go on t' th' Traverspine or handy t' un, an' have th' kettle boiled when you comes up. We ought t' make clost t' th' Traverspine by noon."

"You an' who?" bawled Dick.

"Me an' Shad—Mr. Trowbridge."

"Oh, aye," answered Dick, "'twill save time."

"Bob's gettin' wonderful unrespectful, callin' Mr. Toobridge 'Shad!'" remarked Ed.

"'Tain't 'Toobridge,' Ed!" exclaimed Dick, in disgust. "Can't you remember, now? 'Tis Towbreg—T-o-w-b-r-e-g. You'll be callin' he wrong t' his face again."

"I'm thinkin' you be right this time, Dick," Ed reluctantly admitted.

The lighter and swifter canoe had already shot ahead and was out of hearing. Bob's mind filled with plans for the future, Shad enjoying the wide vista of water and wilderness, they paddled in silence.

The brilliant sunshine, the low, rocky shores, the spruce-clad hills rising above, with now and again a breath of the perfumed forest wafted to them upon the breeze, inspired and exhilarated the young voyagers. Shad was conscious of a new sense of freedom and power taking possession of him. The romance of the situation appealed to his imagination. Was he not one of an adventurous band of pioneers going into a vast wilderness, an untamed and unexplored land, to battle with nature and the elements?

For several hours they paddled, finally entering the wide river mouth. Here the first indication of a current was encountered, and the northern bank was followed closely that they might take advantage of counter eddies, and thus overcome the retarding effect of the midstream current.

"'Twill be noon when th' boat comes, an' we'll stop now t' boil th' kettle," Bob finnally suggested. "Th' Traverspine river is handy by. She comes into this river just above here a bit."

"Good!" exclaimed Shad. "I'm nearly famished, and I've been hoping for the last hour to hear you say that."

"Paddlin' do make for hunger," admitted Bob, as he stepped ashore on a sandy beach near the mouth of a rushing brook. "I'm a bit hungry myself. I'll be puttin' a fire on now, an' you brings up th' things from th' canoe."

In an incredibly short time the fire was lighted, and when Shad brought up a kettle of water from the river Bob had already cut a stiff pole about five feet in length. The butt end of this he sharpened and, jamming it into the ground, inclined it in such manner that the kettle, which he took from Shad and hung by its bail upon the other end of the pole, was suspended directly over the blaze.

Bob, who installed himself as cook, now sliced some fat pork to fry, while Shad gathered a quantity of large dry sticks which lay plentifully about and began piling them upon the fire.

"Oh, don't make such a big fire, now!" exclaimed Bob, when he discovered what Shad was about. "'Twill be too hot t' cook by. A small bit o' fire's enough," and he proceeded to pull out of the blaze the large wood which Shad had placed upon it.

"If there's nothing else for me to do I'll see if there are any trout in that brook," said Shad.

Shad made his first cast in a promising pool a little way from the fire, and the moment the fly touched the water, "zip!" went the reel. The result was a fine big trout. Within 20 minutes he had landed 18, and when presently the boat drew up a delicious odor of frying fish welcomed the three hungry men as they sprang ashore and made the painter fast.

"Shad got un," explained Bob, in response to an exclamation of pleasure from Ed.

"You means Mr. Trowbridge, Bob," corrected Dick, with dignity.

"No," broke in Shad, "Bob is right. Shad is my front name and I want you fellows to call me Shad; leave the handle off."



"Before I knows it a big trout swallows the little un."

"An' you wants, sir," agreed Dick. "'Tis a bit more friendly soundin'."

"Them trout makes me think," said Ed, as he cut some tobacco from a plug and filled his pipe after dinner, "of onct I were out huntin' pa'tridges. I gets plenty o' pa'tridges, but I finds myself wonderful hungry for trout, when I comes to a pool in a brook where I stops t' cook my dinner an' sees a big un jump.

"'Now,' says I, t' myself, 'Ed,' says I, 'you got t' get un somehow,' an' I goes through my pocket lookin' for tackle. All I finds is a piece o' salmon twine an' one fishhook. 'I'll try un, whatever,' says I, an' I cuts a pole an' ties th' salmon twine t' un, an' th' hook t' th' salmon twine, an' baitin' th' hook with a bit o' pa'tridge skin, throws in.

"Quicker'n a steel trap a trout takes un, but he's a little un, an' I'm so disgusted-like I don't pull he right in. Then before I knows it a big trout takes an' swallows th' little un.'"

Ed paused to lend effect to the climax, while he lighted his pipe and began puffing vigorously.

"Well?" asked Shad. "Did you land him?"

"Not very prompt," continued Ed. "I was so flustrated I just looks at un for a bit, skiddin' around in th' water. Then, while I lets un play, quicker'n I can say 'boo' an old whopper up an' grabs th' big un an' swallows he. Then I yanks, an' I lands th' three of un.

"Th' outside un were two foot and a half long an' a fraction over. I measures he. Th' next one were 19 3-4 inches long, an' th' little un were 10 inches long. Th' little un an' th' next weren't hurt much, an' not wantin' they I throws un back, an' th' big un does me for dinner an' supper an' breakfast th' next mornin', an' then I throws a big hunk that were left over away, because I don't want t' pack un any longer."

"Ed," said Dick solemnly, "you'll be struck dead some day for lyin' so."

"Who? Me lyin'?" asked Ed, with assumed indignation.

"Yes, you. You'm always yarnin', Ed. You never seen a trout moren't two foot long, no more'n I have," declared Dick.

"Oh, well," sighed Ed, while the others laughed, "they's no use tellin' you of happenin's, Dick, you always were a doubtin' o' me."

The following day at noon the Muskrat falls were reached, and here the real work and hardship of the journey began. Day after day the men were driven to toil with tracking lines up swift currents, more often than not immersed to their waists in the icy waters of the river, or for weary miles they staggered over portages with heavy loads upon their backs. To add to their difficulties a season of rain set in, and hardly a day passed without its hours of drizzle or downpour. But they could not permit rain or weather to retard their progress.

Always between sunrise and sunset they were tormented, too, by myriads of black flies and mosquitoes, the pests of the north. There was no protection against the attacks of the insects. The black flies were particularly vicious; not only was their bite poisonous, but a drop of blood appeared wherever one of them made a wound, and in consequence the faces, hands and wrists of the toiling voyagers were not alone constantly swollen, but were coated with a mixture of blood and sweat.

Shad, less toughened than his companions, suffered more than they. He was actually made ill for a day or two by the poison thus inoculated into his system, though with his characteristic determination, he still insisted, against the protests of the others, upon doing his full share of the work. Dick advised him, finally, to carry a fat pork rind in his pocket and to occasionally apply the greasy side of the rind to his face and hands. This he discovered offered some relief, though, as he remarked, grease, added to blood and sweat, gave him the appearance of a painted savage.

With the evening camp fire, however, came a respite to the weary travelers, and recompense for all the hardship and toil of the day. Here they would relax after supper, and with vast enjoyment smoke and chat or tell stories of wild adventure.

Shad contributed tales of college pranks, which never failed to bring forth uproarious laughter, while his vivid descriptions of battles on the gridiron or on the diamond, illustrated with diagrams drawn with a stick upon the ground, and minutely explained, held his hearers in suspense, until the final goal was kicked or the last inning played.

Dick and Ed described many stirring personal adventures, the latter embellishing his stories with so many fantastic flights of imagination that Shad would scarcely have known where fact ended and fiction began had Dick not made it a point to interject his warnings of the eternal vengeance that awaited Ed if he did not "have a care of his yarnin'."

One morning during the third week after leaving Wolf Bight a beautiful sheet of placid water opened before them in a far-reaching vista to the northwest. On either side of the narrow lake rose towering cliffs of granite, their dark faces lighted at intervals by brooklets tumbling in cascades from the heights above. A loon laughed weirdly in the distance, and from the hills above a wolf sounded a dismal howl. It was a scene of rugged, primeval grandeur, and Shad, taken completely by surprise, caught his breath.

"'Tis Lake Wanakapow," explained Ed. "There'll be no more trackin' or portagin'. 'Twill be straight sailin' an' paddlin' from this on. Th' first tilt o' th' Big Hill trail's handy, an' if th' wind holds fair we'll reach un by th' end o' th' week, whatever."

For the first time since their departure the voyagers were enabled to don dry clothing, with the assurance that they could remain dry and comfortable throughout the day. The evenings were becoming frosty and exhilarating. The black flies and mosquitoes had ceased to annoy. Wild geese and ducks upon the waters, and flocks of ptarmigans along the shores, gave promise of an abundance and variety of food.

With the changed conditions, in marked contrast to the toil and hardships of the preceding weeks, Shad's desire to remain throughout the winter grew. The lure of the wilderness had its power upon him.

The first tilt of the Big Hill trail was reached on Saturday, as Ed had predicted. Here camp was pitched, the boat finally unloaded, and preparation made for Dick and Bill to begin their return voyage on Monday morning.

When supper was eaten and they were gathered about the evening camp fire in blissful relaxation, silently watching the aurora borealis work its wild wonders in the sky, Shad suddenly asked:

"Are you certain, Bob, I'd not be a burden to you if I remained here all winter? You know, I'm a tenderfoot in the woods."

"Oh, no!" Bob assured enthusiastically. "You'd be no burden! An' when your feet gets tender you can bide in th' tilt an' rest un."

"I don't mean that my feet are tender in that way," laughed Shad, "but I'm a novice in woodcraft and I've never done any trapping. You'd have to teach me a great deal about these things, and I don't want to stay if I'll hinder your work in the least."

"Oh, you'd never be hinderin' th' work!

(Continued on page twenty-two.)

FAMILY CIRCLE

ALICE BARLAND
EDITORIAL CONTRIBUTOR

Dear Mrs. Barland: I enjoy the Family Circle and will be glad if I can be of help to any one as I have received so much myself.

Some time ago a subscriber from Idaho wrote of having trouble with her bread. I had the same experience when I first came to Idaho, but at last I have learned to make very good bread.

The evening before baking I put 1 yeast cake in a glass of water with 1-2 cup of sugar and set it to one side. I boil 3 or 4 potatoes and mash them fine and put them back in the water I boiled them in and just before going to bed I mix the glass of yeast with the potatoes and let stand over night in a warm place. If foamy in the morning it is ready to mix with flour into a fairly stiff sponge; add salt and lard and enough water to make the size baking desired. Allow to rise three or four inches, then mix stiff enough to knead and knead with a circular motion so as to work air into the dough and work 25 or 30 minutes. Let rise and when light push down once with the tips of fingers, let rise again and mold into loaves. I usually bake eight or 10 loaves at a baking. From this sponge before it is mixed stiff I take out a cupful for buns and make as follows: 1 cup of sponge, 1-2 cup of butter or lard, 1-2 cup of sugar, 1 pint of warm water, pinch of salt. Mix stiff and set away till next morning then mold out small pieces of dough the size of a large marble and place far apart into greased pans and set in a warm place to rise until very light. Bake in a quick oven to a golden brown. These are fine.

I have also a splendid recipe for sour cream cake if you have room.

Dear Sister: You have given me neither name nor address, but I shall be glad to have the cake recipe, as I have had a request for one, so send it on at your convenience. If you had given address I should have written you personally. Please every one send names and addresses.

A. W. B.

Dear Mrs. Barland: The flaps of advertising envelopes or others not having been used and the glue still on, make fine labels for fruit jars.

Carriage upholstering oilcloth is best for kitchen tables as it doesn't show knife cuts and hot dishes from the stove do not injure it and it will outwear four common oilcloths.

Table oilcloth makes good kitchen aprons, saves washing and heat doesn't affect it as it does the rubber ones.

The solder off old self sealing fruit jar lids will mend holes in dippers or wash pans and other things which do not come in contact with heat.

One and a half ounces of glycerin mixed with the juice of one lemon makes very fine hand lotion; shake well before using.

Sample wall paper books are nice for papering corner cupboards, boxes for children's clothes, etc. MRS. V. V. P.

To Clean Silverware: Put your silver into an aluminum kettle with hot water enough to cover the silver, into which put a tablespoon of common baking soda and let come to a boil. Take out and rinse and you will be pleased with the result.

MRS. C. E. C.

Dear Family Circle: Will some one please send me a recipe for making chili con carni such as is served in chili parlors?

MRS. M.

Dear Mrs. Barland: Mrs. E. K. complains of her cakes being coarse and drying out quickly. Certain grades of sugar and flour may be the cause. Use cane sugar as that is best for every thing.

MRS. A. C., Portland.

There have been several inquiries regarding home-made dress forms and as they are many women living too far from any place where they can attend a demonstration given by a government agent or a representative of an agricultural college, I will give you in a letter which follows the method followed by the writer.

Dear Mrs. Barland: The ladies of this farm bureau community met in the grange hall and a government demonstrator made a dress form of gummed paper and gave a lecture while doing it. I was elected home demonstration leader and with the help of a good capable neighbor we have since made five forms, all a success.

Full directions come with the paper which comes in three sizes, large, medium and small. The directions are so plain that any neat, capable women—it takes four, two to cut and wet the tape and two to put it on—by following directions can make the forms.

The directions do not include putting the form on a standard, but we manage that in this way: After the tape is on we use a yard stick measuring from the bottom of the form to the floor at five or six different points and this will be the required height of the standard which any man handy with tools can make. We fill our forms with excelsior after they are perfectly dry. A coat of shellac improves the whole. One short arm can be put on, but I prefer none.

Canby, Ore. MRS. JENNIE EVENS.

I think it a good plan, where women are not near enough to attend a demonstration, to club together and send some one in their neighborhood, who is capable, to the nearest place where such forms are made and then meet and have her show the rest how to make the forms.

ALICE W. BARLAND.

Requests. A sister from Oregon wants to know how to put up smelts with mustard quite like sardines which we buy. If it can be done I am sure some of you women know how to do it.

Please tell me how to make potato salad. M. E. M.

Los Angeles, Cal.

Potato Salad: Boil potatoes in salted water, taking care that they are not overdone, so as to be soft. Slice while warm and with them slice very fine a medium sized onion. Set away till you wish to serve. Just before serving stir into the potatoes any good salad dressing. I will give you here an excellent one.

Salad Dressing: Melt half cup butter or use any salad oil. Add 4 tablespoons flour, stirring smooth. Put in a double boiler and sift in 2 teaspoons dry mustard, 4 tablespoons sugar, 1 teaspoon salt and a dash of white pepper. Stir in 12 tablespoons vinegar, and 12 tablespoons of water and stir constantly until thick and smooth. Take from the fire and add yoke of 4 eggs and the juice of 2 lemons (vinegar can be used in place of lemons). Before using add half as much cream either sweet or sour. If your vinegar is very sour use more water and less vinegar. This makes quite a good deal and will keep for some time in a cool place.

A. W. BARLAND.

Dear Mrs. Barland: Mrs. L. H.'s letter in THE FARMER of January 12 with its many useful hints was just what I have been looking for. I hope Mrs. L. H. will let us hear from her again, and the letter of Mrs. B. M. L. certainly is fine also and right to the point. I heartily agree with her. I think it is kind of these wise and experienced women to share the riches of experience with the readers of our page.

MRS. E. S.

Dear Mothers: One of the sisters has sent me a list of books on child training; I will send list and address where to get to all who write and ask for it.

ALICE W. BARLAND.

Dear Mrs. Barland: As the home is the most important part of the farm I would like to see more of these letters which pertain to the better home making, housekeeping and easier methods of doing work.

Here is how I put away meat for summer use:

I can beef by sterilizing it three hours. I cut it into convenient pieces for serving and pack it into jars, adding 1 heaping teaspoon of salt to each quart of meat. I can a quarter or half a beef every winter. I cook sausage just as for the table, also back bones and ribs of the pork and pack in stone jars, then pour fresh hot lard over them and cover carefully to keep out dust, etc. This is fine in the spring and though it makes a little extra work at killing time I find it a saving as there are so many scraps to use up. Will some one send a recipe for making weinies, also will some one send directions for crocheted slippers such as we sew soles on that one can buy.

I am the mother of three small children and am interested in all letters from mothers, as our problems are similar.

This part of Idaho is devoted chiefly to wheat raising with a few cows, hops and chickens as side lines. Should any one wish to write to me Mrs. Barland has my address. MRS. E. G.

Idaho.

Home Helps

By MRS. C. B. SMITH.

When a room has an unpleasant odor of dampness burn a little powdered cinnamon on the stove to sweeten the air. An oil heater may be used in the absence of any other kind of stove.

If your cabinet or dresser drawer has an annoying way of sticking, take it out and rub the parts causing the friction with melted paraffin or prepared floor wax.

Nickel-plated trimming on stoves sometimes becomes flecked with rust. To remove it rub with a paste made by mixing common baking soda with ammonia. Polish with a sheep mitt or a piece of dry flannel.

When boiling a good-sized piece of meat there will be no danger of its weight causing it to burn to the bottom of the kettle if a lid to a tin pail is placed bottom side up under it. One belonging to a gallon sirup pail is best. It should be punched full of holes to allow for the free circulation of the water.

If new machine needles are dipped in light oil before transferring to the receptacles in the machine drawer they will stay bright indefinitely.

Mustard and spinach greens keep better when canned if three or four tablespoonfuls of vinegar is added to each quart before processing.

For frozen sink drains, pour in a small quantity of strong brine.

Before discarding a garment of particularly attractive design or fit, rip carefully apart and cut a pattern from it. With a little ingenuity one can fashion many variations from the same pattern.

Home-Made Fireless Cooker

The home-made fireless cooker is often made without the circular stones in the bottom, which are heated before being placed under the food, to hold the heat. Such stones can be made very easily from concrete, according to Mrs. D. J. Brink of Montesano, who reports her success to the extension service of the Washington State college. The following instructions can be followed and stones made at a cost of 5 cents each, with only a few minutes' time.

Use one part sand by volume to two parts cement mixed well and add 28 parts water to 10 0parts cement and sand by weight. Make a mold of a band of galvanized iron or other nonrustable metal and place on pane of glass, then pour the material into the mold, smoothing off the top.

If it is desired to reenforce the stone a piece of sand screen or long nails may be used, though it is not absolutely necessary. When it is reenforced pour the mold half full of the material, smooth, add screen or nails, fill mold, smooth and let stand till dry. It costs approximately 5 cents for an eight-inch stone, and one sack of cement will make 25 stones.

Paper Dress Forms

If a woman intends planning and fitting new garments for herself or for a member of the family away from home, to remodel old dresses or alter ready-to-wear clothes, she will find the paper dress form exceedingly useful in her sewing room, according to a circular of the United States department of agriculture.

So many requests for further information on the subject have reached the department that department circular 207, the paper dress form, has been prepared and may be had upon request to the department of agriculture, Washington, D. C.

Say "Nope"! to your Grocerman



if he tries to put over on you something "just as good as"

Red Cross Ball Blue

In the words of the immortal Josh Billings—"There aint no sich thing." There is positively nothing as good as, or equal to RED CROSS BALL BLUE for producing clothes of such white purity as bring a blush to new fallen snow.

Try It 5 Cents **Prove It Everywhere**

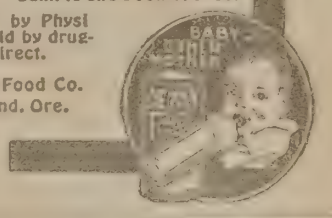
DIARRHOEA

KILLS MANY BABIES

Check it with Dennos. The Milk Modifier. Dennos usually checks diarrhoea in 24 hours. Sample and booklet Free.

Endorsed by Physicians. Sold by druggists or direct.

Dennos Food Co.
Portland, Ore.



LOST If you can't locate a thing, it might as well be lost. Maybe the very thing you want is offered on our "Want Ad" page in this issue.

Glance over the bargains on the "Want Ad" page.

Why Some Things Are Not Advertised

"Several business men in Chicago incorporated a company to manufacture and sell vacuum cleaning machines," writes a business expert in Collier's Weekly. "About $50,000 capital was subscribed, a large proportion of which was to be invested in advertising.



"To assure the success of the new venture, the president of the company wisely decided to determine for himself the efficiency of the vacuum cleaner they contemplated manufacturing and advertising; so he took home one of the machines, and without letting his family know that he was interested financially, had it tried on his own rugs and carpets.

"He found that the machine had several faults—that it had not been developed to a point of real efficiency where it would satisfy the average user. This was enough. The plans for the advertising campaign were given up. He knew that no permanent advertising success could be built on the foundation of an articlee that only partly performed what was claimed for it.

"Right here you have the real reason why thousands of manufacturers are not advertising. They may claim—most of them will —that their product is equal in quality to any that is sold. The claim of 'best goods at lowest prices' is the commonest and the most meaningless of any in the business world.

"But in their own minds they know only too well that what they assert to be the pure gold of their product will not stand the acid test of advertising. When a product is advertised there can be no retreat, no going back on the published statements. What is said of it must be lived up to. Unless the people who buy it keep coming back for more, the advertising investment is money thrown away."

With the above facts in mind, you can readily understand why The Washington Farmer strongly urges its readers to patronize its advertising columns.

High Points in News of the Week

By a vote of 67 to 27 the United States senate last week ratified the four-power treaty between this country, England, Japan and France looking toward the peaceable control of international affairs on the Pacific. Twelve democrats voted for the treaty and four republicans opposed it. All senators of Washington, Oregon and Idaho, with the exception of Senator Borah of Idaho, voted for the treaty. The other three republicans opposing it were Senators Johnson of California, LaFollette of Wisconsin and France of Maryland.

Several attempts were made to attach reservations to the treaty before ratification. The only reservation that was adopted, however, was one declaring that the United States "understands that under the statement in the preamble, or under the terms of this treaty, there is no commitment to armed force, no alliance, no obligation to join in any defense."

It is claimed by the friends of the treaty that all purely defensive relationship between the various nations are outside the scope of the treaty itself. Among such questions is that of Japanese immigration, which friends of the treaty claim is a matter for this country and Japan to handle alone without submission to a conference of the four nations. This is a point on which considerable controversy has been waged during the debate of the treaty.

There are still several treaties before the senate for ratification as the result of the work of the recent conference of the limitation of armaments. It is believed, however, that all others will have smoother sailing in the senate than did this most important one, the four-power treaty.

* * *

American ambassadors to Great Britain France, Italy, Belgium and Japan have presented official statements from Secretary of State Hughes to these governments making it clear that the United States expects to be paid the maintenance cost of its soldiers in the allied army of occupation in Germany. The note states that the American soldiers were sent into Germany with the understanding that this country should be paid the actual cost of maintenance out of the reparation funds secured from Germany. The amount due approximates $240,000,000.

* * *

Political interest in the country was centered last week in a congressional district in Maine, where John E. Nelson, a republican, was elected over his democratic opponent to fill a vacancy made by the resignation of the former congressman from that district. Nelson's majority was about 6000. The republican majority in the same district at the last election was about 19,000. Less than half as many votes were cast in the election last week as in the last previous election.

* * *

Up to this writing all efforts at settling the controversy in the coal mining industry have failed and it appears that a strike of approximately 600,000 miners on April 1 is inevitable. The strike has been called on the ground of the refusal of the mine owners to enter into a further agreement with the mine workers for wages and working conditions equivalent to those that have been in operation since the wartime agreement was prepared. The high cost of mining coal is reported to be the chief cause of trouble in the coal mining industry at the present time. The cost of mining is declared to average over 100 per cent higher today than in 1914. Wages are said to constitute about 70 per cent of the operating costs, having not been greatly reduced since the increase during the war.

* * *

The Northern Pacific Railway company announces its intention to spend $16,000,000 this year in railroad improvement and construction. Of this amount about $3,200,000 will be expended in the states of Oregon and Washington.

* * *

The lower house of congress last week passed the soldiers' bonus bill by the overwhelming vote of 333 to 70. Those voting for the bill included 242 republicans, 90 democrats and one socialist. Those opposing it included 42 republicans and 28 democrats. The only representative from the Pacific northwest voting against the measure was Congressman McArthur of Oregon. The measure provides for the payment to ex-service men of a sum estimated to approximated $4,000,000,000. It would give the exservice man four options to choose from as his method of receiving the cash payment or its equivalent. These options are:

(1) Adjusted service certificates, with provisions authorizing loans by banks in the first three years after next October 1 and by the government thereafter; the certificates to run for 20 years and to have a face value at maturity of the amount of the adjusted service credit at the rate of $1 a day for domestic service and $1.25 a day for foreign service, increased by 25 per cent plus interest at the rate of 4 1-2 per cent, compounded annually.

(2) Vocational training aid after January 1, 1923, at the rate of $1.75 a day, the total payments not to exceed, however, 140 per cent of the adjusted service credit.

(3) Farm and home aid under which veterans purchasing or improving farms or homes would be paid after July 1, 1923, a sum equal to their adjusted service credit increased by 25 per cent.

(4) Land settlement, under which lands would be reclaimed under the supervision of a special board and farm units established for sale to the veterans at a price fixed by the board, less the amount of the adjusted service credit due the purchasers.

DEPLETING YOUR FARM.

Failure to keep farm manure in the best method and return it to the soil is one method of depleting your farm.

Farm Business and Markets Outlook

(Continued from page five.)

FRUITS AND VEGETABLES.

Potato shipments from the producing sections were heavy again last week and the market declined. The movement is at the rate of about 5000 cars per week. Total shipments for the season to date have amounted to 191,786 cars, compared with 168,711 cars in the same period last year. The 18 leading states have shipped 139,536 cars, or 27,000 cars more than to this time a year ago and almost as much as they shipped in the entire season a year ago. Growers are receiving 70 to 80 cents per 100 pounds for sacked Rurals in wagonloads at Colorado and Idaho shipping points.

Cold storage holdings of apples on March 1 were 988,557 barrels and 6,209,275 boxes, or a total equivalent to 3,058,315 barrels, compared with 3,649,208 barrels on March 1, 1921. The five-year average is equal to 2,771,000 barrels, so that the remaining supply is above normal. The market is about steady. Much barreled stock is of poor quality. A-2 1-2 Baldwins are quoted at $7 to $8 per barrel and northwestern extra fancy Jonathans at $2.75 to $3.75 per box in consuming markets.

LATEST QUOTATIONS.

The Live Stock Market.

PORTLAND, March 25.—Cattle—Choice steers, $7.50@8; medium to good steers, $6.75@7.50; fair to medium steers, $6.25@6.75; common to fair steers, $5.75@6.25; choice feeders, $5@6; fair to good feeders, $4.50@5; choice cows and heifers, $6@6.50; medium to good cows and heifers, $5.25@6; fair to medium cows and heifers, $4.50@5.25; common cows, $3.50@4.50; canners, $2@3.50; bulls, $4@5; choice dairy calves, $10@10.50; prime light calves, $9@10; medium light calves, $6.50@9; heavy calves, $4.50@6.50.

Hogs—Prime light, $11.50@11.75; smooth heavy, 200 to 300 lbs., $10.25@11.25;; smooth heavy, 300 lbs. up, $9@10; rough heavy, $7.50@9.50; fat pigs, $11@11.50; feeder pigs, $11.50@11.75; stags, subject to dockage, $6@8.

Sheep—East-of-mountain lambs, $13@14.50; best valley lambs, $11@12; fair to good, $10@11; cull lambs, $6@8; eastern Oregon feeders, $9@10; light yearlings, $10@11; heavy yearlings, $9@10; light wethers, $9.50@10; heavy wethers, $9@9.50; ewes, $3@8.

SPOKANE, March 25.—Cattle—Prime steers, $6.50@7.50; good to choice steers, $5.75@6.50; medium to good steers, $5.25@5.75; fair to medium steers, $4.75@5.25; common to fair steers, $4.25@4.75; choice cows and heifers, $5@6; good to choice cows and heifers, $4@5; medium to good cows and heifers, $3.50@4; fair to medium cows and heifers, $3@3.50; canners, $2@3; bulls, $3@5.50; light veal calves, $8@10; heavy veal calves, $4@8; stockers and feeders, $4.50@5.

Hogs—Prime mixed, $11@11.25; medium, $10@11; heavies, $8@9; fat pigs, $9.50@10.50; stockers and feeders, $9.50@10.25.

Sheep—Prime lambs, $9@10; fair to medium, $8@9; yearlings, $6@8; wethers, $4.50@6; mutton ewes, $2@6; feeder lambs, $7@8.

The Grain Market.

PORTLAND, March 25.—Wheat—Hard white, hard winter, northern spring, $1.24; soft white, white club, $1.25; red Walla, $1.21.

Grain futures: Wheat—Hard white, hard winter, northern spring, March, April, May, $1.24; soft white, white club, March, April, May, $1.23; red Walla, March, April, May, $1.21.

Corn—No. 2 eastern yellow, shipment March, April, $26.50; May, $26; No. 3 eastern yellow, shipment March, April, $26.

SEATTLE, March 25.—Wheat—Hard white, $1.24; soft white, white club, soft red winter, northern spring, $1.25; hard red winter, $1.25; eastern red Walla, $1.21; Big Bend Bluestem, $1.45.

ODESSA, March 25.—Marquis, $1.42; Bluestem and Bart, $1.40; Turkey red, $1.30; Jones' Fife, $1.05.

RITZVILLE, March 25.—Bart, $1.43; red, $1.34; Fife, $1.05.

POMEROY, March 25.—Turkey red, $1.06; hybrid, $1.03.

DAYTON, March 25.—Club wheat, $1.05; red, $1.02.

PULLMAN, March 25.—Red wheat, 99c; white wheat, $1.02.

WALLA WALLA, March 25.—Club wheat, $1.07; Bluestem, Turkey red and Bart, $1.06.

Hay and Feed Grain.

PORTLAND, March 25.—Millfeed—Price f. o. b. mill: Millrun, ton lots, $29; mixed cars, $28; straight cars, $27 per ton; middlings, $43; rolled barley, $37@39; rolled oats, $42; scratch feed, $52 per ton.

Corn—White, $36; cracked, $38.

Hay—Buying price f. o. b. Portland: Alfalfa, $17.50@18 per ton; cheat, $12.50@13; oat and vetch, $15; clover, $13; valley timothy, $14@15; eastern Oregon timothy, $18.50@19.

SPOKANE, March 25.—Wheat—Feed wheat, $46 per ton.

Oats—$40 per ton; steam rolled, $42.

Corn—$36 per ton; cracked corn, $38 ton.

Barley—$40; steam rolled, $42 per ton.

Bran and shorts—$30 per ton.

General Produce.

PORTLAND, March 25.—Butter—Cubes, extras, 36c per lb.; parchment wrapped, box lots, 39c; cartons, 40c. Butterfat, buying prices: No. 1 grade, 38@42c, delivered Portland.

Eggs—Buying price, 19½c, case count; henneries, 22c; resales, 20@20½c doz.; jobbing prices, case count, 20c; candled ranch, 22c; association selects, 24c; association firsts, 22c; association pullets, 21c.

Cheese—Tillamook triplets, price to jobbers, f. o. b. Tillamook, 26c; young Americas, 27c lb. Poultry—Hens, 19@24c; ducks, nominal; geese, nominal; turkeys, live, nominal; dressed, 35@38c.

Pork—Fancy, 15c per lb.

Veal—Fancy, 14c lb.

SPOKANE, March 25.—Eggs—Fresh ranch eggs, $6.50; fresh pullet eggs, $5.50.

Live poultry—Hens, fat, 4 lbs. up, 23c lb.; 2 to 4 lbs., 19c lb.; old roosters, 11c lb.; rabbits, 12c lb.; ducks and geese, 15c lb.

Butterfat, 35c lb.

SEATTLE, March 25.—Eggs—Select local ranch, white shells, 23@24c; select local ranch, mixed colors, 21c; pullets, 19@20c.

Butter—City creamery cubes, 38c; bricks or prints, 39c.

Range of Live Stock Prices for the Week Ending March 22

	Chicago.	Spokane.	Portland.	N Salt Lake
CATTLE.				
Choice, prime heavy steers (1100 lb. up)	8.75@ 9.60	.....	.....	.....
Good heavy steers	8.00@ 9.00	.....	.....	.....
Medium heavy steers	7.25@ 8.40	.....	.....	.....
Common heavy steers	6.10@ 7.65	.....	.....	.....
Choice, prime light steers (1100 lb. d'n)	8.75@ 9.60	.....	.....	.....
Good light steers	7.90@ 9.00	.....	.....	.....
Medium light steers	7.15@ 8.30	6.25@ 7.50	6.25@ 7.50	6.00@ 6.75
Common light steers	6.25@ 7.50	4.75@ 6.25	5.25@ 6.50	4.50@ 6.25
Common to choice butcher heifers	4.75@ 8.25	3.50@ 6.25	4.00@ 6.50	3.75@ 5.75
Common to choice butcher cows	4.00@ 7.15	3.00@ 5.25	3.50@ 5.75	3.00@ 5.00
Bologna and beef bulls	3.75@ 6.35	3.00@ 5.50	3.50@ 5.25	2.00@ 3.50
Canners and cutters, cows and heifers	3.00@ 4.25	2.00@ 3.00	2.00@ 3.50	1.50@ 3.25
Canner steers	4.00@ 5.25	3.00@ 4.00	3.00@ 4.50	3.00@ 4.00
Medium to choice light veals	6.00@ 9.50	7.00@10.00	6.50@10.50	6.00@ 7.00
Common to choice heavy veals	4.00@ 6.75	4.00@ 7.00	4.50@ 6.50	.....
Common to choice feeders (1000 lb. up)	5.65@ 7.75	.....	.....	.....
Common to choice feeders (750-1000 lb.)	5.50@ 7.75	4.50@ 5.50	4.50@ 6.00	.....
Common to choice stocker steers	5.25@ 7.35	.....	.....	.....
Com. to choice stocker cows and heifers	4.00@ 5.65	.....	.....	.....
HOGS.				
Top of market	10.65	11.50	11.75	9.75
Bulk of sales	9.75@10.50	10.50@11.25	10.75@11.50	9.25@ 9.65
Heavy (250 lb. up)	9.80@10.25	9.00@10.00	9.25@10.25	8.50@ 9.00
Medium (200-250 lb.)	9.95@10.50	9.75@10.75	10.25@11.25	9.00@ 9.50
Light (150-200 lb.)	10.10@10.60	10.75@11.50	11.50@11.75	9.50@ 9.75
Light lights (130-150 lb.	9.50@10.40	10.75@11.50	11.50@11.75	9.50@ 9.75
Smooth packing sows (250 lb. up)	9.00@ 9.60	8.25@ 9.00	8.25@ 9.75	.....
Rough packing sows (200 lb. up)	8.75@ 9.25	7.75@ 8.50	7.50@ 8.50	.....
Medium to choice pigs (130 lb. down)	8.00@10.00	9.75@10.75	11.50@11.75	.....
Stock pigs	.....	9.50@10.75	11.50@11.75	8.50@ 9.25
SHEEP AND LAMBS.				
Medium to prime lambs (84 lb. down)	13.00@16.00	8.50@10.00	10.00@14.50	10.50@12.00
Culls and common lambs	10.25@13.25	7.00@ 8.50	6.00@10.00	7.00@10.50
Medium to prime yearling wethers	11.00@14.75	6.00@ 8.00	9.00@11.00	8.00@ 9.00
Medium to prime wethers	8.25@12.25	4.50@ 6.00	9.00@10.00	6.50@ 7.50
Medium to choice ewes	6.75@10.50	4.00@ 6.00	5.00@ 7.00	4.00@ 5.50
Culls and common ewes	3.50@ 7.00	2.00@ 4.00	3.00@ 5.00	2.00@ 4.00
Feeder lambs	11.50@13.75	7.00@ 8.00	9.00@10.00	.....

E. A. Stuart Elected President

E. A. Stuart, president of Carnation Farms, near Seattle, has been elected president of the Pacific International Live Stock exposition, succeeding F. S. Stimson, whose death occurred in Seattle last Thanksgiving. Mr. Stuart, who was absent in Philadelphia attending the Brentwood sales of Holsteins, wired Secretary-Manager Plummer that prices were running around $635. He also informed the board that the Holstein Breeders' National association has voted to make its contribution to the premium list of the Pacific International equal to the value of premiums to the National Dairy show.

T. T. Miller of Pacific Grove, Cal., has been elected to the board of directors to represent California interests at the Pacific International.

GENUINE GRIMM ALFALFA SEED

Certified-Guaranteed

A Wonderful Soil Improver, Orchard Covering and Pasture

The extensive branching root system of GENUINE GRIMM produces an abundance of nitration and humus and leaves the soil in excellent mechanical condition when plowed under.

It is unexcelled as a covering for orchards and pasturage.

Seeding cost practically as low as common alfalfa.

Insure your crop by purchasing in the original sealed and labeled bags.

Write for information and prices.

IDAHO GRIMM ALFALFA SEED GROWERS' ASSOCIATION

Blackfoot, Idaho.

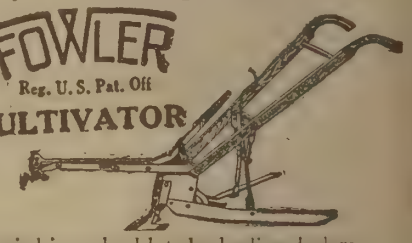
It Works Like a Hoe

The FOWLER Light Draft Cultivator makes ***bigger crops*** because it does not disturb plant roots. It puts the land in perfect condition to absorb rain, and makes a mulch of fine dust which conserves plant food and prevents the escape of moisture.

Covers 8 acres a day with one horse. One trip to the row. ***Cuts every weed.*** Does as good work as you can do with a hoe. ***Saves time and labor.*** Remove the plow foot, and you can cultivate astride the row.

The ideal cultivator for potatoes, corn, tobacco, beans, beets, tomatoes and truck crops. Can be adjusted to cultivate above or below the level, without disturbing the sides of the ridges.

FOWLER Reg. U. S. Pat. Off CULTIVATOR



Carried in carload lots by leading dealers.

Write for FREE descriptive folder.

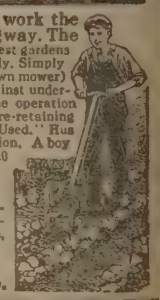
Distributors for Washington, POLSON IMPLEMENT CO. Seattle.

BETTER GARDENS EASY TO KILL WEEDS AND MULCH THE SOIL



BARKER WEEDER, MULCHER AND CULTIVATOR

Don't do garden work the slow, backbreaking way. The BARKER makes the finest gardens possible—quickly, easily. Simply push along rows (like lawn mower)—8 blades revolving against underground knife destroy the weeds and in same operation break the crust into a level, porous, moisture-retaining mulch. Aerate soil. "Best Weed Killer Ever Used." Has leaf guards, also shovels for deeper cultivation. A boy can run it—do more and better work than 10 men with hoes.



Write for FREE BOOK

Illustrated book, postpaid, gives prices delivered to your station, contains valuable information on gardening, letters from users, etc. A card brings it. Write today.

BARKER MFG. CO.
Box 46 David City, Neb.

WATER Where You Want It

HILL RAM



RUNNING constantly day and night, no labor or expense. A Hill ram enables your spring, stream or flowing well to pump itself.

Twelve sizes—home supply or irrigation units.

Write for complete **free** information and catalog. Ask for R-1, home sizes—R-2, irrigation. Seattle Machine Works, 127 W. Lander St., Seattle, Wash.

NO COST TO RUN

Glance over the bargains on the "Want Ad" page.

Your Health

By Royal S. Copeland, M. D., F. A. C. S.

It always makes me sad to see a boy or a girl with neglected teeth. When you grow older you will regret your failure to care for every one of your 32 teeth.



Dr. Copeland.

Nothing adds more to a face than a set of perfect teeth. But, no matter how ugly and irregular your teeth may be, every tooth is precious. You can not afford to lose a single tooth. Your health, your comfort and your length of life depend on good teeth.

Digestion is aided to a considerable degree by the thoroughness of chewing the food. You can not chew your food as you should if you lack teeth, or have decayed and painful teeth, or if your gums are inflamed and sore. In these days we talk a lot about "focal infection." "Pus absorption" is given as a possible cause of a lot of diseases. There is no question that a pocket of pus in some part of the body will be gradually absorbed and, in time, have pronounced effects upon distant and important organs.

No examination to find the cause of an obscure condition is considered complete unless the teeth and gums have been examined and the jaws X-rayed.

I must protest, however, against the treatment which sometimes follows such an examination. Teeth should not be sacrificed unless there is no other hope of dental relief. The doctor and the dentist and the X-ray expert should be agreed, if agreement is possible, before the tooth is extracted.

An old carpenter who has worked for me on many occasions, is a great philosopher. I like to talk with him about his work. Here is one of his rules and a fine one it is :

"Measure 10 times—cut once."

When it comes to losing a tooth, "measure 10 times—out once," is a procedure I recommend.

A prominent dentist, a long-time friend of mine, told me the other day that not 20 per cent of persons find the slightest improvement of remote ailments after tooth extraction.

Don't misunderstand me! If you have a tooth that is actually abscessed it must be given surgical treatment. But before you have it out, make sure there isn't some method of drainage or treatment which will enable you to save that tooth. If you are fully convinced to the contrary, then, of course, the tooth must be removed.

Latest High Class Patterns for the Home

Please order the patterns you desire at least two or three weeks before you wish to use them. Desiring to obtain the latest high-class patterns for its readers, THE FARMER has made arrangements to have them sent direct from the east, and under present mailing conditions it takes about that time for them to reach you.

3902. Lady's Dress. Cut in six sizes: 34, 36, 38, 40, 42, and 44 inches bust measure. The 38-inch size requires 3 1-4 yards for the slip of 44-inch material and 2 1-4 yards of 40-inch material for the bolero. The width at the foot is 2 1-2 yards. Price 10 cents.

3857. Misses' Dress. Cut in three sizes: 16, 18, and 20 years. An 18-year size will require 4 5-8 yards of 38-inch material. The width of the skirt at the foot is 2 yards. Price 10 cents.

3904-3513. **Lady's Costume.** Waist 3904 cut in six sizes: 34, 36, 38, 40, 42, and 44 inches bust measure. Skirt 3513 cut in six sizes: 24, 26, 28, 30, 32, and 34 inches waist measure. The width at the foot is 1 3-4 yards. To make the dress as illustrated, will require 6 1-8 yards of 36-inch material. Two separate patterns, 10 cents for each pattern.

3206. Child's Play Dress. Cut in four sizes: 2, 4, 6, and 8 years. A 4-year size will require 3 3-8 yards of 27-inch material. Price 10 cents.

3920. Child's Dress. Cut in four sizes: 2, 4, 6, and 8 years. A 6-year size requires 2 1-4 yards of 36-inch material for the dress and 1 3-8 yards for the gumpe. Price 10 cents.

3687. Girl's Apron. Cut in four sizes: 4, 6, 8, and 10 years. An 8 year size will require 1 5-8 yards of 27-inch material. Price 10 cents.

3918. Girl's Dress. Cut in four sizes: 8, 10, 12, and 14 years. A 10-year size requires 4 3-8 yards of 36-inch material. Price 10 cents.

3930. Girl's Dress. Cut in four sizes: 4, 6, 8, and 10 years. A 6-year size requires 3 1-4 yards of 32-inch material. Price 10 cents.

3578. An "Easy to Make" Apron. Cut in four sizes: Small, 34-36; medium, 38-40; large, 42-44; extra large, 46-48 inches bust measure. A medium size will require 4 5-8 yards of 27-inch material. Price 10 cents.

3909. Lady's Apron Dress. Cut in four sizes: Small, 34-36; medium, 38-40; large, 42-44; extra large, 46-48 inches bust measure. For a medium size it will require 4 1-8 yards of 36-inch material. Price 10 cents.



3902

3962. Lady's Blouse. Cut in seven sizes: 36, 38, 40, 42, 44, 46, and 48 inches bust measure. A 38-inch size requires 3 yards of 36-inch material. Collar and cuffs of contrasting material will require 1-2 yard. Price 10 cents.

3911. A New "Lingerie" Style. Cut in four sizes: Small, 34-36; medium, 38-40; large, 42-44; extra large, 46-48 inches bust measure. A medium size requires 3 yards of 36-inch material. Price 10 cents.

Catalogue Notice.

Send 12 cents in silver or stamps for our up-to-date spring and summer 1922 catalogue, showing color plates, and containing 500 designs of ladies', misses' and children's patterns, a concise and comprehensive article on dressmaking, also some points for the needle (illustrating 30 of the various, simple stitches), all valuable hints to the home dressmaker.

Please fill in this order and mail with remittance to:
PATTERN DEPT., PACIFIC NORTHWEST FARM TRIO, Spokane, Wash.

Enclosed find.....cents for which send me the following:

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Pattern No..... Size ..... Pattern No..... Size .....

Name .....

Postoffice..... State.....

R. F. D..... Box No. ..... St. No. .....

Be sure to give the pattern number and the correct size.

Bits of Fun for Everyone

Time to Check 'Em Up.

When General Pershing once inspected an artillery outfit of colored negro soldiers in France he was struck by the soldiery bearing of one particular dusky member of a gun team.

"What are you duties, soldier?" queried the commander in chief of the artilleryman, who stood like a statue beside the French Soixante Quinze.

"I'se de doah tender to de Swasohng Kans," the husky lad replied.

"And what is that?" General Pershing asked him.

"Why, I jus' opens de little doah in back o' de gun, and Rastus here throws a shell in and de corporal pull de lonyard Den the gun she has her little say?"

"Then what do you do?" the chief commanded.

"What do we do? Huh, we jes' drops back and say: 'Kaiser, count yo' soldiers.'"—Disabled Veteran Magazine.

Three Sweetest Words.

There are three words, the sweetest words
In all the human speech—
More sweet than all the songs of birds,
Or pages poets preach.
This life may be a vale of tears,
A sad and dreary thing—
Three words, and trouble disappears
And birds begin to sing.
Three words, and all the roses bloom,
The sun begins to shine;
Three words will dissipate the gloom
And water turn to wine.
Three words will cheer the saddest days—
"I love you!" Wrong, by heck!
It is another, sweeter phrase,
"Enclosed—find—check."

—Brown Jug.

Lem and Dave.

A set of twins, who looked exactly alike at birth, looked exactly alike in their boyhood, exactly alike as young men and exactly alike as old men. They dressed exactly alike and became one of the sights of the town, so to speak. When they were old, one of them lost all his teeth, but his cheeks were so plump that this did not alter his appearance. And a farmer, one day, explained that the only way you could tell the twins apart was to put your finger into Lem's mouth and if he did not bite you it was Dave.—Boston Globe.

She Did Her Best.

"Mary, were you entertaining a man in the kitcheon last night?" "That's for him to say, mum. I was doing my best with the materials I could find."—Liverpool Mercury.

Evident.

"You are charged with evading the law."
"If I had succeeded in evading it, your honor, I wouldn't be here."—Louisville Courier-Journal.

The Black Watch.

"The wrist watch has done much for our trade."
"Where is your trade?"
"It is mainly in Africa. Formerly we couldn't sell a native a watch because he didn't have a pocket to carry it in."

All of One Family.

The best proof that all human beings are alike is that each thinks himself a little different. New York Evening Post.

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be sure they're especially selected and adapted to northwestern conditions.

INLAND SEEDS

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The department editors of this paper are anxious to be of service to you. Do not fail to write to us if they can be of help to you.

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Come to Canada! cries opportunity. Here men can succeed.

Lands are reasonably priced—sufficient acreage to meet all needs—of virgin fertility—living conditions are good. Crop conditions are satisfactory.

If you are a tenant farmer, ambitious to own your own farm—or if you are farming under the handicap of drought, or overcrowded conditions—or if you are looking for an opportunity where your boy can own his farm—investigate Canada.

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Come from the place where men call for land to the place where land calls for men.

This department of the Canadian National Railways will help you locate just the kind of farm and locality best suited to you. Our services and all that we know about Canada are at your disposal free.

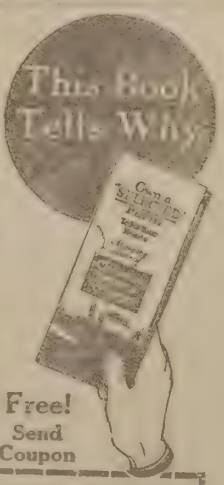
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Carson Lemke is a 9-year-old cousin whose home is near the Yakima river, in southern Washington. June 10 is his birthday. Carson is in the second reader at school.

We have a short letter from Muriel Hansen, who was 7 October 16, 1921. Muriel's home is also in Yakima valley, southern Washington.

Dick Willms of western Spokane county, Washington, lives on a farm where there are 19 head of cattle and 13 horses. Dot is his pet pony. Dick's birthday is January 10. He is 11 years old.

Louis Willms, an eastern Washington boy, was 9 years old March 15, 1922. Louis has five brothers and four sisters.

We are glad to hear from Gerald Stover, whose home is in southern Washington Gerald's birthday is September 13. He is 7 years old.

Arithmetic, spelling, reading, language, geography and writing are the studies Mildred Page has at school. Mildred likes arithmetic, spelling and geography the best. March 22, 1922, she was 11 years old She has six sisters and one brother. Their home is in central Washington, Chelan county. Mildred says she has good times at school.

Teddy is a puppy a month and a half old. He belongs to Clara Hykas, who lives in southwestern Washington at the mouth of the Columbia river. A nice, big cat is another pet. Clara's birthday is August 23. She is 11.

Roy W. Ellis, who was 11 years old December 31, 1921, writes his first note to Aunt Nellie. He lives in southern Washington, north of the Yakima Indian reservation. Write again, Roy.

"I am planning on having a very good time this summer," says Martha Lee, who lives near the Big Quilcene river, in northwestern Washington. Martha says they have a new play shed at school for bad weather. They are going to play basketball in it. One day recently they cleaned up the school yard. Every year they do that. Bill—I had a fight with a candle last night. John—Who won? Bill—I did I put it out with one blow. What is the cheapest part of your face? Your nostrils. Two for a cent (scent).

Maurice Gerritsen writes his first letter to the Corner. He says: "I live on a 20-acre farm. We have one cow, two horses, two pigs, about 17 chickens, four cats and a dog. One of our pigs has a turned-up nose." Maurice was 10 years old February 25, 1922. He lives in southern Washington, Yakima county.

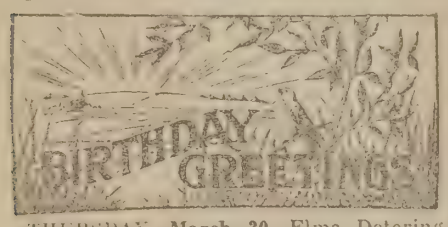
During his vacation last year Carl Gilmore went to Doty and picked berries while he was there. He picked about four gallons and had a good time. He had a nice, big cake for his birthday while he was there, too. Carl hopes the cousins and Aunt Nellie will have a happy Easter. He is a southwestern Washington boy and is 9 years old. His home is in Lewis county.

Lena Rayburn lives in a big two-story house, painted cream with white trimmings, in eastern Washington. She says: "We raise wheat and have hogs, chickens, cats, a dog, horses and mules." Lena is in the seventh grade at school and there are 20 pupils in her class. Twelve are boys. (The Junior Farmer comes out the first Thursday of every month, Lena.)

Mildred Gallagher says school will soon be out and they are already preparing for examinations. Mildred is going to send Aunt Nellie a picture of herself and her pet calf. Rose. Rose isn't a bit afraid of her. Mildred's home is near the Canadian border line in northeastern Washington.

One of Bessie Choufty's friends told her about The Junior Farmer and that is why she wrote to Aunt Nellie. October 24, 1922, she will be 11 years old. Bessie is a southwestern Washington girl and lives near the Cowlitz river, in Lewis county She has one sister and five brothers.

Bessie Smathers, who is 9 years old, is having a nice time with her grandma in Kittitas county, Washington. She goes to school and is in the third grade. Her daddy is in Yakima.



THURSDAY, March 30—Elma Detering, 10 years old; Hjordis Fjerlie, 10; Viola M. Robbins, 9; Viola Schoessler, 10; Edith Anderson, 11.

FRIDAY, March 31—Gladys Hammer, 9 years old; Katherine Martinson, 11; Sarah West, 10.

SUNDAY, April 2—Edwin Bushnell, 6 years old; George Lavos, 8; Hazel Prien, 10.

MONDAY, April 3—Jennie Druml, 10 years old; Lola Hollenshead, 10; Dorothy Hood, 11; Mary Adeline Seaton, 11; Johnnie Setala, 11.

TUESDAY, April 4—Ralph Bowers, 10 years old; Eunice Knight, 7; Julia Lundblad, 11; Lloyd Templin, 11.

WEDNESDAY, April 5—Dorothy Andreas, 11 years old; Nina Hoikka, 11; Frances Warwick, 7.

LETTERS WELCOMED BY AUNT NELLIE.

Among recent letters received by Aunt Nellie are those from cousins whose names follow. A few of these will be published each week in the regular edition of THE FARMER and others will appear from time to time in The Junior Farmer:

Beulah Day, Gareld Johnsen, Mamie Bay, Goldie M. Johnson, Bessie Choufty, Audrey Weeks, Arleigh Weeks, Alfreda Kelly, Nelle May Shephard, Margaret Jones, Maurice Rodney Hershey, Beatrice Bowman, Doris Hale, Ethel Hinderbrandt, Emma Jeske, Bernice Brace, Virginia Willson, Ellen Larson, Elsie Bonwell, Vernon Winterstien, Earl Fairlamb, Edrie Bradbury, Gladys Cook, Zeita Wood, Helen Smith, James Johnson, Jean MacKenzie, Bessie Smathers, Estella Wegner, Lloyd Patterson, Mildred Gallagher, Myrtle Dick, Gertrude Owens, Clayton Dick, Maurice Gerritsen.

Carson Lemke, Muriel Hansen, Dick and Louis Willms, Gerald Stover, Mildred Page, Clara Hykas, Roy W. Ellis, Martha Lee Max Fountain, Evelyn G. Claman, Ellen Laakso, Evelyn Shockley, Esta Rivers, Hilda Stark, Rena Rise, Sarah Wood, Elsie Stark, Mae Woody, Esther Jaskari, Dorothy Wagoner, Victoria Penhallick, Errol Wright, Otto Strom, Margaret Irwin, Nina Downing, Emil Radach, Gladys Page, Lawrence Blessing.

Linnea Good, Carl M. Smith, Thordis Jierlie, Eva M. Bingham, Bennie Miller, Ethel Boawn, Ernest Peterson, Evelyn Starr, Harriet Perkins, Jack Reid, Edith McIlroy, Lois Elaine Wright, Frances Dick, Henrietta Pinster, Lillian Cochrau, Ella Schrenk, Keith Jones, Evelyn Lucille McCoy, Viola Johnson, Grace Lilly Hornby, Ada Shockley, Alice Vance, Adelma Rosselli, Sarah Wilhalm.

BEDTIME STORIES

By THORNTON W. BURGESS.

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WHY FLITTER THE BAT CAN FLY.

The Merry Little Breezes of Old Mother West Wind did not let Grandfather Frog forget that he had promised them a story. One afternoon, when they had grown tired of romping on the Green Meadows, they danced over to the Smiling Pond and settled around the big green lily pad on which Grandfather Frog was dozing. All together they shouted:

"We know you're old;
We know you're wise;
And what you say
We dearly prize.
So tell a tale
Of olden days
And then, mayhap,
We'll go our ways."

"Chugarum! What shall it be about?" demanded Grandfather Frog.

"Tell us why Flitter the Bat can fly when none of the other animals can," cried one of the Merry Little Breezes.

Grandfather Frog cleared his throat several times and then he began. This is the story he told:

"Once upon a time, when the world was young, old Mr. Bat, the many times great-grandfather of Flitter, whom you all know, lived in a cave on the edge of the Green Forest. Old Mr. Bat was little, quite as little as Flitter is now. He didn't have any wings then. No, sir, old Mr. Bat had no wings.

"Now old Mr. Bat's teeth were small and not made for cracking hard seeds and things of that sort, so he lived mostly on insects. He used to hunt for them under sticks and stones. Sometimes he had hard work to find enough for a meal because, you know, so many other Green Forest people were hunting for them too.

"Now old Mr. Bat's eyes were very small, very, very small indeed. They were so tiny that the bright sun hurt them. So old Mr. Bat used to stay in his cave all day and hunt for his meals only after jolly Mr. Sun had gone down behind the Purple Hills. When he did come out most of the crawling bugs had gone to bed, and it was hard work finding them. So often Mr. Bat went hungry.

"One night old Mr. Bat noticed that at twilight a great many bugs fly about. He sat on a big stone at the mouth of his cave and watched. It seemed to him that the air was full of bugs. By and by a big fat fellow came so near that old Mr. Bat forgot where he was and jumped for him—jumped right off the top of the big stone! Of course he got a hard tumble, but he didn't mind it a bit, for he had caught the bug. After that old Mr. Bat used to spend most of the time he was awake jumping for bugs.

"One night he made a very long jump from a very high stone and got such a fall that all the breath was knocked out of his funny little body. When he had got his breath back he discovered that some one was looking down and smiling at him. It was Old Mother Nature.

"'Pretty hard work to get a dinner that way, isn't it, Mr. Bat?' asked Old Mother Nature.

"Mr. Bat allowed that it was.

"'How would you like to fly?' asked Old Mother Nature.

"Mr. Bat allowed that that would be very fine indeed, but was quite out of the question because, as you know, he hadn't any wings.

"Old Mother Nature said no more, but something seemed to be tickling her greatly as she left Mr. Bat. The next evening when old Mr. Bat awoke he really didn't know whether he was himself or not. His legs were much longer than they used to be and really of no use at all for walking. Between them was a queer, thin skin. He couldn't run. He couldn't even crawl very well.


Old Mr. Bat Found That He Could Fly.

"At last, after much work, he managed to get to the top of a big rock. He was very hungry, and when a big fat bug came along he forgot all about his troubles and tried to jump. But instead of jumping as he always had, he just tumbled off the big rock. As he fell he spread out his legs. What do you think happened? Why, old Mr. Bat found that he could fly.

"And ever since that time the bats have lived in dark caves and have been able to fly," concluded Grandfather Frog.

The Gaunt Gray Wolf

(Continued from page eighteen.)

An' you'd be a wonderful lot o' company, whatever! I hopes you'll stay, Shad!"

"Thank you, Bob. I'll stay. It will put me back a whole year in college, but I'll stay, anyhow. My experience with you will be worth the sacrifice of a year in college, I'm sure."

"Now that be grand!" exclaimed Bob, his face beaming pleasure.

"An' Shad stays, Ed, he'll give Bob a hand with th' tilts," suggested Dick. "Can't you go back, now, with me an' Bill, t' help us up with our outfits? 'Twill be a wonderful hard an' slow pull for just th' two of us."

"Be you thinkin', now, you can manage th' tilts?" asked Ed, turning to Bob.

"O' course me an' Shad can manage un," assured Bob.

"I'll go back, then, Dick," consented Ed. "'Twould be hard t' manage with just two on th' boat."

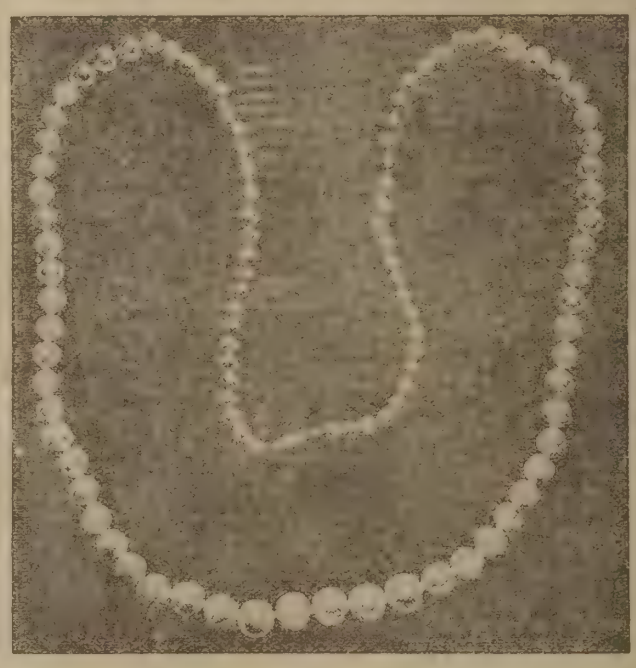
Arrangements were made for the three trappers to bring Shad some adequate winter clothing upon their return, letters were written home, and at daylight on Monday morning adieus were said. Bob and Shad stood upon the shore watching the boat bearing their friends away, until it turned a bend in the river below and was lost to view.

"We'll not see un again for five weeks," said Bob regretfully, as they retraced their steps to the embers of the camp fire over which breakfast had been cooked.

"And in the meantime," began Shad gaily, with a sweep of his arm, "we are monarchs of all——" Suddenly he stopped. His eyes, following the sweep of his arm, had fallen upon two Indians watching them from the shadows of the spruce trees beyond their camp.

(To be continued.)

Pearl Beads Our Newest Prize



Pearl beads are always in style and were never as popular as they are right now, and just think, only two 3-year new or renewal orders will win for you this dandy 24-inch string of graduated Pearl Beads. There is a string of these pretty beads waiting for you — get yours while the getting is good.

The beads described above will be awarded to you in return for your services in securing two 3-year subscription orders to your State Farm magazine at the regular rate of 50 cents each or $1.00 for the two subscriptions. Address The Pacific Northwest Farm Trio, Spokane, Wash.

Use This Blank to Send Your Orders In On

Two Subscriptions and $1.00 Must Accompany This Order.

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Send Pearl Beads to:

Name..... P. O. .....

R. F. D..... Box..... State.....

VARNUM BOYS RAISE LIVE STOCK.

Gerald and Harvey Varnum of Mabton, Wash., besides being members of the Hercules beef club, with two steers each, are members of a pig club, of which their father, George Varnum, is leader. The boys each have purebred Poland China gilts, purchased from T. S. Lister, of Sunnyside, Wash., and bred to C. B. Cox's herd boar, Big Sam. Gilts and the boar are of big type. Each of the boys now has six registered Poland Chinas and expects to become a regular breeder.

IN "100 PER CENT PURE" CLASS.

Through the fact that its only member with a grade bull at the head of his herd dropped association testing for the coming year, the Clallam County Cow Testing association was enabled to enter the list of those with 100 per cent purebred bulls. There are now 17 such associations in the west, of which one other, the Snoqualmie, is in Washington. Oregon has one, the Smith-Umpqua, and all those in Idaho, the Pioneer, Jerome, Gooding, Ada and Wieser-Payette, are in the "100 per cent pure" class.

BERKSHIRES AND SHORTHORNS.

Headed by Riverby Duke 7th, a son of Royal Dominator, J. Alva Bull of Ellensburg, Wash., has a little herd of Berkshires to be proud of. Mr. Bull has one good daughter of the great breeding boar, Laurel Champion, and others of Dominator and Laurel Champion strain. Mr. Bull also keeps a small herd of registered Shorthorns.

BUYS SEVEN WAIKIKI CALVES.

Seven head of purebred Jersey calves were purchased by A. F. Eacrett of Port Angeles from the Waikiki herd of Spokane. Mr. Eacrett is developing a herd of purebred Jerseys, according to a report from County Agent A. W. Holland.

NEW TESTING ASSOCIATION.

A cow testing association has been organized in Lewis county by County Agent B. G. Fowler with 373 cows. Cowlitz county will be included in the association and the tester will have 100 cows to look after in that county. E. A. Donaldson was elected president, H. B. Taylor vice president and A. T. Flagg secretary-treasurer.

We Buy and Sell
Grade and Pure Bred Dairy Cattle.
We can save you money whether you wish to buy or sell. One or a carload.
Graham Livestock Co.
E2605 Broadway, Spokane, Wash.
NEAR CARSTENS' PACKING PLANT.

Breeders' Dept.

Broadmead Aberdeen Angus
Ten bulls, ready for service, now offered at special prices and terms. Also a number of promising bull calves, some that should make show winners or high class herd headers. Can supply your needs for either sex.
J. A. SCOLLARD, Chehalis, Wash.

ABERDEEN-ANGUS
will mature your steers earlier, give you a heavy, thick and low set conformation, dehorn them and add to their quality so that they will top the market every time. We have a wonderful lot to select from, both range and herd bulls, at prices which will move them.
CONGDON & BATTLES.
P. O. BOX 276. YAKIMA, WASH.
Write for prices and literature.

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W. T. SHELDON. New Plymouth, Idaho.

Polands--The Big Wonder Herd
Of genuine big type Poland China hogs. Home of the grand champion sow of the northwest. Satisfaction guaranteed on all orders.
E. O. LOE. Silverton, Ore.

Big Type Polands
Special prices on choice Sept. boar pigs. A few extra good gilts bred to Biggest Buster. One 300 lb. March boar, a good buy at $50.
FRED D. ENTERMILLE. Baker, Ore.

River Banks Better Berkshires
Long, smooth, deep fall pigs. Either boars, sows or trios.
RIVER BANKS FARMS, Grants Pass, Ore.

Riverby Orchard Berkshires
Oldest established Berkshire herd in the northwest. Young pigs and bred sows for sale. Address
D. C. BUNN. Prosser, Wash.

EPOCHAL BERKSHIRES
Spring pigs from $20. Yearling boars now ready. Sire, the grand champion Porker's Sincerity. Herd boars from $75. Bred sows, from $75.
F. V. OREORD. Boise, Idaho.

Chester White Swine
Herd headed by Oregon Buster, grand champion Oregon State Fair and winner of 1st prize 1921. Fall pigs now offered.
CASS A. NICHOLS. Salem, Ore.

JERSEY HERD FOR SALE
Good Blood Lines
Reasonable Prices
Twenty head cows and heifers, a majority by a grandson of the great Plymouth Lad. Other popular blood lines; good producers. Six are on official test and two have finished. All are or will be bred to a son of St. Mawes Lad, sire of the world record senior yearling, St. Mawe's Lad's Lady, 828 pounds fat in a year, and out of high record dam. Write for full particulars or, better still, call and see them.
J. G. HOLT
SCIO, ORE.

OREGLOW JERSEYS
7 records finished in Oreglow herd last 5 months average over 600 lbs. fat; 4 of the records made by 2-year-olds.
IRON MINE FARM, Oswego, Ore.
W. M. LADD, Owner.
D. BROOKS HOGAN, Mgr.

Anoka Farm Jerseys
We have your wants in a bull calf dropped July 1. He is a beauty and his dam has a record of 504 lbs. fat. Priced to suit the most conservative buyer. Address
R. B. SEELY, Sherwood, Ore.
RY. STATION, WILSONVILLE, ORE. ELEC.

Jersey--Gold and Silver Medal Sire
Ashnook Farm offers a few heifers and young bulls, sired by the gold and silver medal sire, Silver Chimes, of S. B., sire of ex-world champion heifer, Silver Chimes Gwendola, and 20 register of merit daughters, and more qualifying.
DEL PERKINS, Carlton, Ore.

Register of Merit Jerseys
Young bulls out of dams with good official records and sired by Foxhall's Chief Engineer, combining the blood of the great Foxhall's Fern Lad and Golden Glow's Chief strains.
FOX BROS., Silverton, Ore.

Locust Lane Farm--Jerseys
Herd sires—Distinction's Noble Pioneer, R. of M. No. 1160. Sybils Noble Majesty, imported 1916. We offer for sale stock of both sexes.
L. S. DILLE & SON, R. 4, Caldwell, Idaho.

ST. MAWES JERSEY BULL.
Three nearest dams of sire average 841 lbs. fat. Dam on test, milking over 40 lbs. a day. Priced right.
J. C. BROWN & SONS, Shedd, Ore.

Weatherford Bros. Herefords
We have for sale a few choice herd bulls and bulls for the farm and range, at prices in keeping with the times. Herd headed by the great breeding bull, Beau Blanchard 59th, whose calves show great bone, size and quality.
WEATHERFORD BROS. Dayton, Wash.

Oaksdale Holstein Farm
OFFERS
MUTUAL PRINCESS
FOBES DEKOL
Born April 29, 1921.
A splendidly marked straight bull of excellent quality. Individually and in breeding one of our best. His sire's six nearest dams and his dam's sire's five nearest dams average 24.78 lbs butter in 7 days. Send for pedigree and description.
Registered, licensed and T. B. tested.
PRICE $150.
C. R. EVANS
Halsey, Ore.
(Under Federal Inspection)

A HOLSTEIN BULL
THAT NEEDS INVESTIGATION
Born Aug. 7, 1921. His 2 nearest dams averaged for 305 days: Milk, 23,792 lbs.; butter, 982 lbs. one of them, as a 3-year-old. His two nearest dams, estimating on record that will soon be finished, have 5 yearly records, 3 in heifer classes that average, milk, 23,063 lbs.; butter, 948 lbs. Send for picture, pedigree, etc. Henry McCall;
WESTERNWOLD FARM, Redmond, Ore.
FEDERAL ACCREDITED HERD

Two Holstein Bulls Cheap
Good individuals, by grandly bred sire. Dams on 305 day test. Federal accredited herd. Send for pedigree and full particulars.
OSCAR DUNLAP. Junction City, Ore.

Bull Calves From Tested Dams
Records up to 935 pounds butter. Sire, Sir Johanna Fayne Bonheur DeKol, backed by great production. Prices reasonable.
MAX ARP. Eugene, Ore.

Holstein Bulls sired by son of world record cow, from dams sired by brother to Segis Pietertje Prospect. Prices low.
H. R. BOOMER. Payette, Idaho.

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Read our "Want Ad" Page for good offers this week.

220 Registered Hereford Cattle
To be sold at private sale in lots to suit at prices never equaled for such high-class animals. The best blood of the Hereford world flows in the veins of these fine cows, heifers and bulls.
100 Cows From 3 to 5 Years Old
60 Splendid Heifers, Bred and Open
60 Splendid Bulls 10 to 16 Months Old
All in prime condition, guaranteed free of tuberculosis, cows and heifers from and bred to the best bulls of the Hereford breed. The bulls are from the best sires and best dams in the west. Cows have calves by side or will calve early this spring. Many heifers bred to our best herd bulls. The cream of 450 head to be sold at a sacrifice to reduce our herd to the limits of our pastures.
It Pays to Breed Purebreds
at any time, but especially now when the foundation stock can be bought at prices about equal to those paid for grades two years ago. The cattle industry is looking up. The demand is in excess of the supply and better prices are assured for several years to come.
Get Into the Purebred Game
while you can do so at such low initial cost. Raise herd and range bulls to sell at fancy prices in future years. One calf will more than pay for the cow. Write at once for information, stating your wants. This opportunity may never come again.
Great Midland Breeding Farms
L. L. YOUNG & SONS, PROPRIETORS
Mention The Farmer. Nampa, Idaho.

HOLSTEIN BULL FOR SALE
One of the Best Bred Bulls in the Northwest
Born Sept. 8, 1920
Sire, a 30-lb. son of the $50,000 bull, King Segis Pontiac Alcartra, a three-quarter brother to King Segis Pontiac Count, whose daughters have broken over 100 world's records.
The dam of this bull has to her credit two yearly records of over 946 lbs. She is by a son of the celebrated King Segis, sire of eleven 30-lb. cows and grandsire of Segis Pietertje Prospect, the world's champion yearly milk producer.
PRICE $500
We also have four registered Holstein females for sale at reasonable prices and will give terms to responsible parties.
Pure Bred Duroc Jersey Hogs for Sale
WAIKIKI FARM, Spokane, Wash. W. AULD, Manager.

GRANDLY BRED AYRSHIRE BULLS AT LOW PRICES
All sired by Oregon Peter Pan; he by a son of Beuchan Peter Pan, undefeated show bull in Scotland and America. His dam, Willowmoor Etta 3d, is world champion junior two-year-old, with 16,021 lbs. milk, and 666.06 lbs. fat.
Two are yearlings ready for active service and two only a little younger. Most of the dams have good official records, with big production records in their pedigrees.
These bulls are priced low enough to be in reach of every dairyman wishing to increase production and good enough to head high class pure bred herds. Write at once for pedigree, and full particulars to
Corvallis, DAIRY DEPT. OREGON AGRICULTURAL COLLEGE. Oregon.

Ayrshires
Outstanding bull calves, ready for light service; sired by grand champion Willowmoor Peter Pan 25th, and from high producing cows with show records.
E. W. VAN TASSELL, Wenatchee, Wash.

Send for Free Booklet
"Some Suggestions to Live Stock Advertisers," outlining the practices of successful men of long experience. Helps in determining how much to spend, the mediums to select, preparing advertisements, handling inquiries, the use of photographs, etc.
Write today.
THE PACIFIC NORTHWEST FARM TRIO
Dept. L. Spokane, Wash.

Read the "Want Ad" page this week for good offers of all kinds.

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EXPERIMENT STATION
URBANA ILL

Unequaled Bargains



Silk Embroidered Sleeveless Dress

$1.98

Absolutely the biggest hit of the season and a stupendous bargain at our special price. Sleeveless guimpe style dress, with rich silk embroidery in contrasting colors on pockets and around neck. Neat imitation patent leather belt. This model comes in choice of serviceable cotton gabardine or splendid all wool serge. Navy blue only. Misses' sizes, 16, 18, and 20. Women's sizes 34 to 44. Order cotton gabardine by No. 55E6240. Price, $1.98. Order all wool serge by No. 55E6241. Price, $3.98. Pay bargain price and postage on arrival. Money back if not satisfied. State size wanted.

Don't take our word for the fact you save big money on anything you buy from Sharood. See for yourself. Prove at our risk that, dollar for dollar, there is not a single offer in this advertisement that is equaled today anywhere else in America. No reason to hesitate. You are not obligated in any way. Just tell us which items to send and when the goods arrive, judge for yourself what amazing values they represent. Make any comparison you like and if you are not convinced of your saving, return the goods and you will not lose a penny.

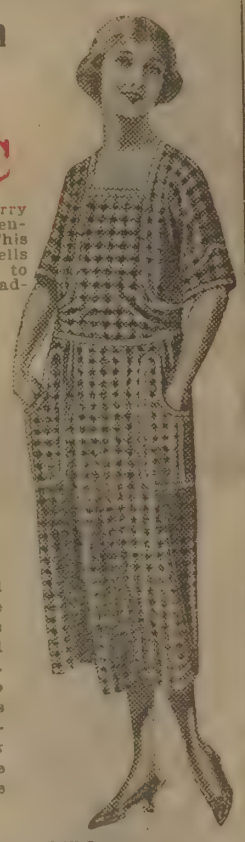
Send No Money With Order

Don't send one cent. Just letter or postcard brings any of these smashed price bargains. Absolutely no obligation and not the slightest risk to you. Merely give Name and Number of Each Article You Want. Also State Size and Write Your Name and Address Plainly to Avoid Delay. Pay nothing till goods arrive—then only the amazing bargain price and postage. Then examine your selection—try it on—show it to your family and friends. Then if you are not delighted with your bargain your money will be cheerfully refunded. ORDER NOW.

SHAROOD CO., Dept. 55 Minneapolis, Minn.

Ord r Several of These Fine Percale Apron Bargains

87c

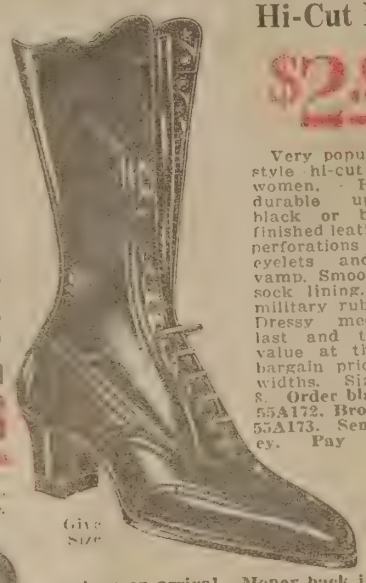


You will not be sorry you sent for these splendidly made aprons. This is a quality that sells regularly for $1.25 to $1.50. Better take advantage of our smashed bargain price and order several — each at only 87c.

New, attractive pattern in women's standard percale cloth aprons. Designed with sash tying in back and two practical side pockets. Cut in full length and sweep. Very serviceable and comfortable. Are furnished in sizes small, medium and large. **Order by No. 55E6500. Send no money. Pay 87 cents and postage on arrival. Money back if not satisfied. Be sure to state size wanted.**

Women's Wave Top Hi-Cut Boot

$2.98



Very popular spring style hi-cut boot for women. Has soft, durable uppers of black or brown kid finished leather. Fancy perforations on toe, up eyelets and around vamp. Smooth leather sock lining. Medium military rubber heels. Dressy medium toe last and tremendous value at this special bargain price. Wide widths. Sizes 2½ to 8. **Order black by No. 55A172. Brown by No. 55A173. Send no money. Pay $2.98 and postage on arrival. Money back if not satisfied. State size.**

Dressy Wing Tip Oxfords

$1.98

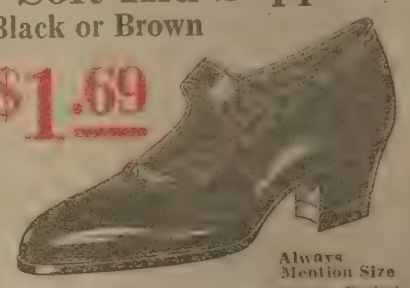


The neatest last any woman could wear for all-around service. Uppers of splendid soft kid finished leather with fancy perforated wing tip and vamp. Strong oak soles and medium rubber heels. A style that will always look dressy. Choice of black or brown. Sizes 2½ to 8. Wide widths. **Order black by No. 55A275. Order brown by No. 55A276. Send no money. Pay $1.98 and postage for either color on arrival. Money back if not satisfied. State size.**

Soft Kid Slipper

Black or Brown

$1.69



Always Mention Size

Beautiful soft kid leather slipper. Stylish strap model with two buttons. Medium round toe. Cushion insoles. Medium rubber heels. Solid oak leather soles. Black only. A bargain at our slashed price. Sizes 2½ to 8. Wide widths. **Order black by No. 55A228. Send no money. Pay $1.69 and postage on arrival.**



Ball Strap Model---Brown Kid Oxford

$2.48

Give size.

Amazing value in rich brown kid leather. Nothing newer or smarter shown. Pretty medallion tips; perforated vamps, uppers and heel foxings. Firm leather soles and military heels. Sizes 2½ to 8. Wide widths. **Order by No. 55A284. Send no money. Pay $2.48 and postage on arrival. Money back if not satisfied. State size.**

1 Doz. WORK GLOVES 99c



Regulation stout canvas work gloves with electric knitted wristlets. Generously sized.

Order by No. 55B1649. No money now. Pay 99c and postage for one dozen pairs on arrival.

Strong Comfort Work Shoe *for* Men

$1.99

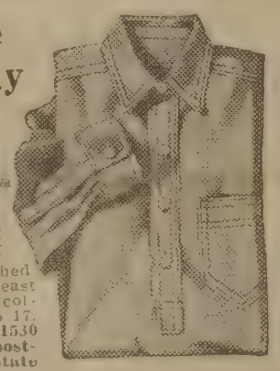


State Size

Order your [illegible] this bargain offer lasts. Wonderful work shoe for men. Has soft, strong uppers that resist barnyard acids. Solid leather insoles. All seams stitched with waxed thread. Strong leather soles. Wide widths. Sizes 6 to 11. Order by No. 55A758. Send no money. Pay $1.99 and postage on arrival. Order boys' sizes 1 to 5½ by No 55A554. Price $1.89 Order little gents' sizes 9 to 13½ by No. 55A555. Price $1.79 and postage on arrival. Mention size.

Durable Chambray Shirt

59c



Men's stout chambray work shirts. Every seam double stitched. Double yoke. Breast pocket. Turnover collar. Sizes 14½ to 17. **Order by No. 55B1530 Pay 59c and postage on arrival. State size.**

Men's shirts of serviceable khaki material made with stoutly sewed seams. Has large breast pocket and durable attached collar of self material. Sizes 14½ to 17. Khaki color only. **Order by No. 55B1531. Send no money. Pay 98c per shirt and postage on arrival. Give size.**

Brogue, Dress Shoe Goodyear Welt Brown Russian Calf

$3.98



Give Size

Most popular color men's dress shoe for spring. Dark mahogany brown Russian calf—new brogue style, with full vamp (not cut off), and fancy perforations on tip and vamp, as pictured. Extension Goodyear sewed soles; [illegible] gum rubber heels; leather insoles. Sizes 6 to 11. Wide widths. Order by No. [illegible]. Pay $3.98 and postage on arrival.

Hip Boot Bargains



Give Size.

Don't fail to make this big saving on men's pure gum hip boots; friction lined; heavy corrugated sole and heel; guaranteed first quality. Made of the very best rubber. Usually retailed at $5. Be sure to order your pair while this great saving offer lasts. Sizes 8 to 14. Wide widths. No half sizes.

$2.48

Order by No. 55A949. Send no money. Pay $2.48 and postage on arrival. State size wanted. Order similar style in knee boot, sizes 8 to 12, by No. 55A950. Send no money. Pay $2.48 and postage on arrival.

"Polly Prim" Percale Aprons



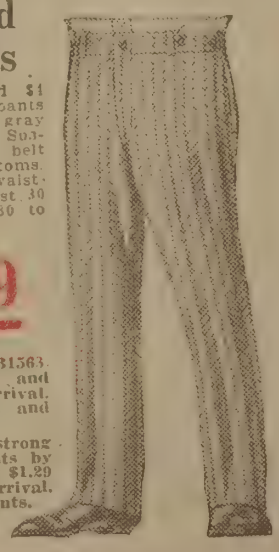
Every minute of the day these practical slip-over style "Polly Prim" aprons come in handy. No woman can afford to be without them—especially at this smashed bargain price.

2 for 99c

We offer an unusual bargain in these cunning percale aprons. Made in plaid and check patterns. Very useful, yet inexpensive. Two pockets, and rickrack trimming throughout. Comes one plaid and one check to a set of two.

Order by No. 55E6545. Send no money. Pay 99 cents and postage on arrival for 2 aprons. Money back if not satisfied.

Narrow Gray Striped Worsted Trousers



You have paid $4 for no better pants than this neat gray striped pattern. Suspender buttons, belt loops, plain bottoms. Stoutly sewed waistband. Sizes, waist 30 to 42. Inseam 30 to 35.

$1.49

Order by No. 55B1563. Pay only $1.49 and postage on arrival. Give your waist and inseam sizes.

Order men's strong khaki cloth pants by No. 55B1560. Pay $1.29 and postage on arrival. Give measurements.

Guaranteed 6000 Miles



Brand New TIRES

going at SMASHED PRICES. 30x3 size. now only

$6.49

Brand new, fresh stock (not retreaded.) Heavy nonskid tires of live rubber, generously oversize, 6000 miles guaranteed, but often give 8000 to 10,000. We will apply credit on the purchase of a new tire for mileage less than 6000 that you get from any tire selected. The world's greatest bargains in tires—30x3 size in ribbed tread. Others are nonskid. Pay only the bargain list price and postage on arrival.

No. 55D40—30x3	$6.49
No. 55D41—30x3½	$7.98
No. 55D42—32x3½	$10.98
No. 55D46—34x4	$15.18

Guaranteed Inner Tubes

Now is your chance to buy extra thick, live rubber inner tubes at a big saving. Don't wait for the tube prices to go up. How many shall we send? Give size wanted. No money now. Pay only bargain price and postage on arrival.

No. 55D20—30x3	$1.29
No. 55D21—30x3½	$1.19
No. 55D22—32x3½	$1.79
No. 55D26—34x4	$2.15

Be Sure to Give Sizes, Colors, Etc., and Send All Orders From This Page Direct to SHAROOD CO., Dept. 55 Minneapolis, Minn.

APRIL 6, 1922. Washington's Great Farm Magazine EVERY THURSDAY

THE WASHINGTON FARMER

ESTABLISHED 1894 SPOKANE. SEATTLE.



The Home of Washington's First Govenor

—See Page 3



Is the "30-10" School Tax Bill a Good One?—See Page 6

Farm Bureau Market Wireless

A daily radio agricultural news service has been established through the efforts of the American Farm Bureau federation, which will function for the American Farm Bureau federation, the Illinois Agricultural association, the National Live Stock Producers' association and the United States Grain Growers, Inc. Each evening at 6:30 agricultural and market news from these organizations and from the industry in general will be broadcasted to rural communities from the Westinghouse dispatching station in Chicago.

Receiving sets are already being used by many county farm bureau organizations; cooperative shipping associations and cooperative elevators are using receivers to get the latest market development and more and more individual farmers are installing the equipment.

"The service will serve farmers as the stock tickers serve the brokers," says Fred L. Petty, who is the new editor of the service, "and in addition to general agricultural news will contain news of the marketing centers and the latest developments of interest to rural communities."

It is apparent that the development of wireless communication is just beginning and that its possibilities are little short of boundless. Communications between elaborate sending and receiving stations have been practiced successfully for several years, but it is only recently that it has become possible to receive messages with simple and comparatively inexpensive instruments. While there are yet many problems only partially solved, it is not a wild guess to predict that in oly a few years a large percentage of the population of this country, both city and rural, will have provided themselves with receiving instruments by means of which they may be in touch with the rest of the world for all manner of informative and entertaining communications.

It has been recommended that the secretary of commerce be given adequate legal authority for the effective control of the establishment of all radio transmitting stations except amateur, experimental and government stations and of the operation of nongovernmental radio transmitting stations on the grounds that radio communication is a public utility, and as such should be regulated and controlled by the federal government and public interests.

The Fall Fair Dates

At its recent meeting the North Pacific Fair association arranged dates for the principal fairs of the northwest, as well as racing programs.

The fairs and their dates as agreed on are as follows: Multnomah county, Gresham, Ore., August 7-12; Skagit county, Burlington, Wash., August 14-19; Vancouver, B. C., August 19-27; Southwest Washington, Chehalis-Centralia, Wash., August 28-September 2; Grays Harbor, Elma, Wash., September 5-9; Interstate, Spokane, Wash., September 4-9; New Westminster, B. C., September 11-18; Walla Walla, Wash., September 11-18; Washington state fair, Yakima, Wash., September 18-23; Oregon state fair, Salem, Ore., September 25-30; Linn county, Albany, Ore., October 3-7; Sherman county, Moro, Ore., October 10-14.

A uniform race program was agreed on for four days of racing, those fairs holding more than four days to add such events as may suit them. The pacing races will consist of a free for all, a 2:12, 2:17 and 2:24. The trots will be a 2:10, 2:16 and 2:24. The entry fees for harness races are the most liberal in the history of these events, only 1 per cent being required to enter and 2 to start. A license fee of $10 will be charged, but the entire entrance fee will be added to the purse. Running races will be arranged by each fair. It was decided to entirely eliminate games of chance from all fairs in the circuit, but to give more encouragement to the breeding of both driving and running horses by more and larger purses.

C. E. Gates of Medford, Ore., is president for the 1922 season; Nels Nelson, New Westminster, B. C., vice president, and H. C. Browne of Portland, Ore., secretary-treasurer. Of the racing association, George R. Walker of Chehalis, Wash., is president; C. H. Palmer, Elma, Wash., vice president; R. R. Somerville, Centralia, Wash., treasurer, and H. C. Browne, secretary.

Grays Harbor Plans Jersey Tour

Jersey breeders of Grays Harbor are anticipating a Jersey tour some time this summer, which will probably be staged in conjunction with one of the nearby counties.

Members in attendance at the meeting held late in February voted to assist in the organization of calf clubs throughout the county in the absence of a county club leader. The Jersey breeders expect to have an unusually fine showing at the county fair at Elma this fall.

The following officers were elected for the year: J. R. Martin, Satsop, president; Parker Askew, Wynoochee, vice president; E. E. Hale, Montesano, secretary-treasurer; directors, E. L. Brewer, Satsop; J. H. Taylor, Wynootchee, and Merrit Twidwell, River.

News for Breeders

COUSINS BUYS HERD SIRE.

J. M. Cousins of Yakima recently purchased from Taranaki Holstein farm, near Prosser, a son of Pietertje Beauty Prospect, for use as a herd sire on his home ranch. The dam is Cascade Mary Korndyke, one of the six daughters of Sir Korndyke Ormsby Piebe which E. F. Benson purchased from William Todd & Sons a year or more ago. She herself has an enviable butter record: her sire ranked third highest in the United States last year, and the young bull's sire is a brother of Segis Pietertje Prospect, the 37,000-pound cow.

HARBOR HILL BREEDING.

Another bull of Harbor Hill breeding, to use in combination with the one which they purchased at the Yakima Valley Guernsey Breeders' association sale in the summer of 1920, has been secured by F. A. Majewski, Joe Vance, Ray N. West, E. W. Petzel and R. T. Peterson, members of the Yakima Guernsey Bull association. He is a yearling bull sired by a son of Imp. Masher's Galore and out of a daughter of King of Chilmark, the former being rated as one of the four best bulls of the Guernsey breed and the latter ranking third among all Guernsey bulls for butterfat production of their daughters. A half interest in the youngster was purchased for $700 from F. K. Babson of Four Pine farms, Chicago, Ill., who could not be induced to sell him outright.

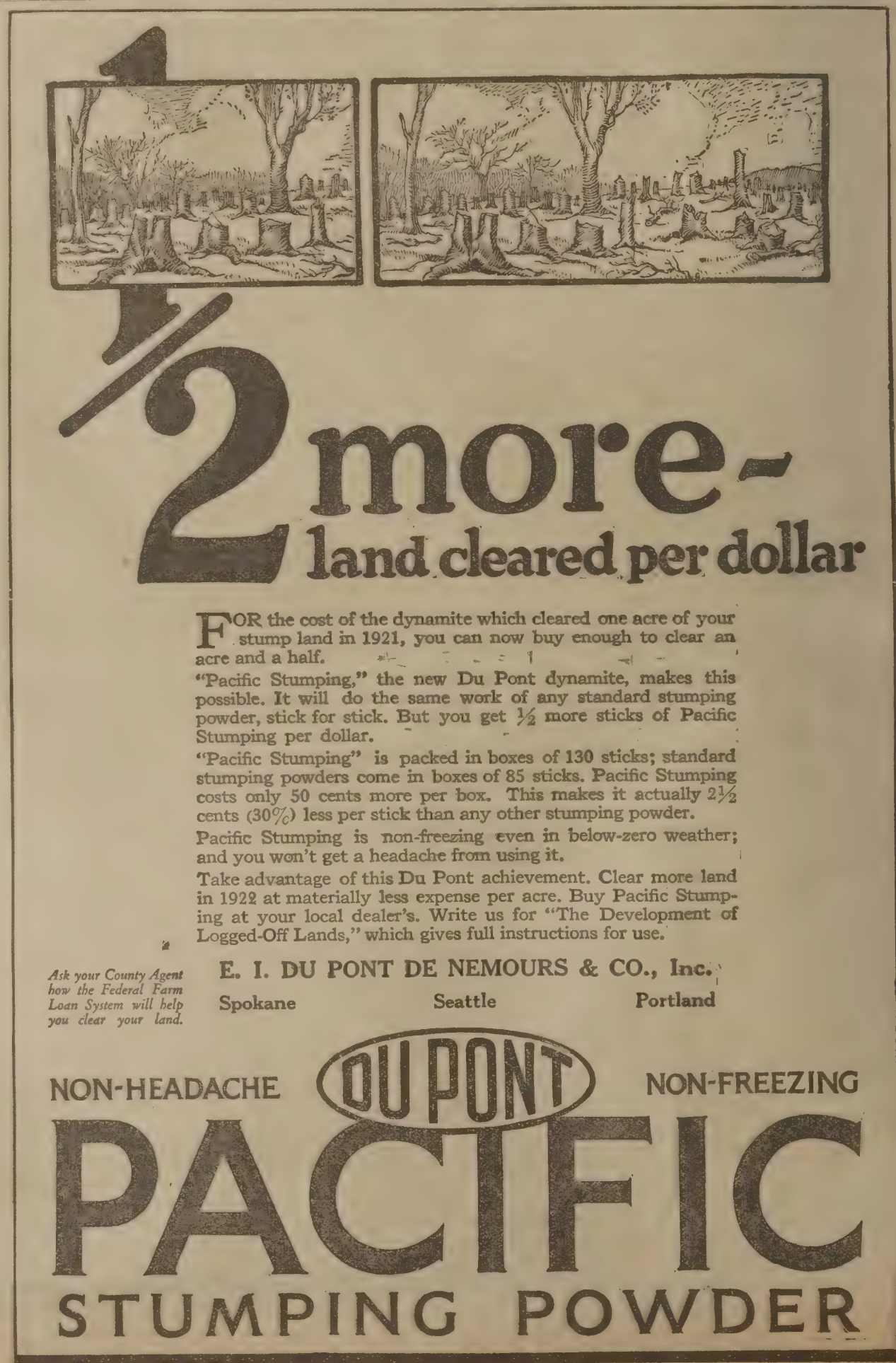
WASHINGTON'S AVERAGE HIGHER.

The average for the Shorthorns at the sale at Davis, Cal., during Stockmen's week was $160. There were about 75 cattle in the sale. The average in the California sale, therefore, was under that at the sale at Spokane, Wash., February 22 and away below that realized at the Rochrock sale February 23.

NEW CHAMPION FOR MILK.

By producing a strong bull calf on February 16 E. E. Heg & Sons' Tyee Hiske Fayne completed her 305-day record of 25,213.4 pounds of milk and 888.48 pounds of butter as a junior 4-year-old and became world champion Holstein of all ages for

(Continued on page twenty-seven.)





Auto Owners WANTED!

To introduce the best automobile tires in the world Made under our new and exclusive Internal Hydraulic Expansion Process that eliminates Blow-Out—Stone-Bruise—Rim-Cut and enables us to sell our tires under a

10,000 MILE GUARANTEE

We want **an agent** in every community to use and introduce these wonderful tires at our astonishingly low prices to all motor car owners.

Write for booklet fully describing this new process and explaining our amazing introductory offer to owner agents.

Hydro-United Tire Co.
Dept. 138 Chicago, San Francisco, Pottstown, Pa.

THE WASHINGTON FARMER

SUCCESSOR TO

Vol. 46. No. 14 THE RANCH PACIFIC DAIRYMAN HORN AND HOOF April 6, 1922

For Good Farming, Attractive Country Homes and Happy Country People

State Grange Seeks to Double Membership

Cooperation, Education and High Standard of Rural Life Are Among Its Fundamental Principles

By W. W. DEAL, Idaho State Grange Master

"I find the present executive officers of the state grange, with Mr. Fred Nelson of Seattle as leader, a strong body of successful, progressive farmers, and those who may be depended upon to do all that can be done to make Washington a leading agricultural state of the nation."

So declares W. W. Deal, state grange master of Idaho, in the accompanying article written especially for The Washington Farmer. Master Deal has been in this state for several weeks addressing grange meetings and advising with grange officials, both local and state. THE FARMER feels fortunate in securing from him the statement of grange principles and aims presented herewith.

The foundation of the grange was laid in the earlier history of our national development by O. H. Kelly, who visited the south atrequest of the secretary of agriculture to assist in reconstruction, at the close of the Civil war. He reported to the department of agriculture that the farmers should form themselves into groups, since in this way they could receive more benef it from the government in needed assistance. Mr. Kelly was called upon to draw up the ritual of the body that is now the grange. Later it was decided to make a few changes and among them was a clause that admitted women on an equal basis with men. This was one of the first movements in the direction of equality, which was later adopted as a national issue.

One of the most important principles upon which the grange stands is that of cooperation. We have never carried this out in such a way as to kill any existing business organizations, but rather with the view of promoting better interests among the rural population demanding a square deal from firms with whom we do business. We have always made it our policy to encourage and develop the spirit of working with each other and buying our goods in common whenever it is practical.

Stands for High Principles.

We should, however, look toward the higher principles for which the grange stands. Better ideals, better living and better citizenship. We believe that education will promote such ideals. A man with a good education is better able to deal intelligently with his associates and build up a happy home for his family.

It was through the helpof grangers that the rural free delivery service was established. There were many who could not see the value of the plan, but congress finally decided to give it a trial and it has now developed to such an extent that it serves about one-fourth of our population and has been the means of better cooperation, and more conveniences in our farm homes. By adopting a well planned legislative policy, we can secure even greater results in the future.

It was another long fight to get the idea of agricultural colleges and experiment stations started, but today they are recognized as a necessary part of our civilization. The grange has always been a strong advocate of better education for the young people of the farms in order to give them an opportunity to become useful citizens. It has stood for the development of high ideals and has continually emphasized the fact that brain power is more valuable than muscle.

Need Business in Farming.

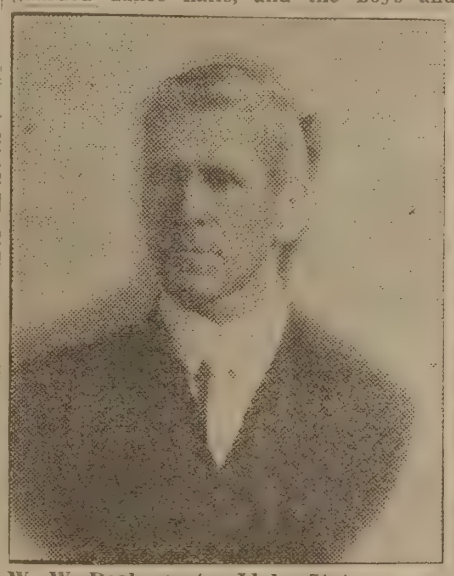
The farmer of the future is the one who can operate his farm in accordance with business principles. The grange has foreseen such conditions for many years and has endeavored to get the younger generation to prepare for the problems that will comfront them. There is a "ball and chain" of ignorance attached to a large part of our population because of inadequate educational systems.

The financial side of an education is alone a big argument in its favor, and the salary of the average young man is usually in proportion to his education. The wage of the average man who has only received an eighth grade education is estimated at $600 a year. That of a man who has finished high school is approximately $1900 a year, while the average college graduate is getting from $2000 to $3000 a year.

The social side of the grange has always endeavored to make an appeal to the boys and girls. Many of our farmers are failing to make their boys and girls want to stay on the farm. There are too many that look toward the city as a better life. They want more leisure time, finer clothes and greater pleasures. The farm homes should be, and are becoming more attractive to all the family. The farm boys are showing a stronger desire to attend college and it means that our farms are being taken up by men that have a more thorough knowledge of the scientific principles of agriculture.

Ever since its organization, the grange had given a part of the regular meetings over to entertainment of some kind. It should be the duty of each lecturer to arrange the program so as to make it as interesting and attractive as possible with the talent available. Such a plan will not only help to keep the boys and girls interested in the meetings, but it will also make life more cheerful for the grown folks.

Many do not realize that the people of the farms have a greater social problem than do some of those who live in the cities. There is a great danger in the unguarded dance halls, and the boys and girls who are raised without an opportunity for a certain amount of amusement occasionally are more apt to be led astray. The social life of the grange can be made to serve a great purpose by asking every one to take some part in the entertainments.



W. W. Deal, master Idaho State grange.

Marketing Problems.

There is another phase of work that the grange is taking up—the marketing question. The farmer has never been able to set his own price for what he produces, but has been too willing to leave that to some one else. It behooves the producers to work together with a view of making the distance between the producer and the consumer as short as possible and thereby create a better price for their products and yet not keep it too high for the consumer.

The point was clearly brought out several years ago in my own case. We had just got settled on our little farm in southern Idaho. We had started to make butter and had some to spare, so I took a few pounds to the store where we traded. Before accepting the butter the merchant weighed each print carefully to see if they were full pounds. We had traded with him for many years, had never questioned his weights and measures and we had always paid our bills promptly. But just because we were now in the producing class our products must be watched more closely and the buyer must put his own price on it.

The incident made a deep impression on me and I made up my mind that I would do all in my power to set the farmer on a firmer foundation, where he could have more to say about the marketing of his products and not be branded as a cheat by those who buy from him. It was soon after this that I joined the grange and I have never lost an opportunity to make the farmers' place in the world a more pleasant one and I shall continue to do so as long as I am able.

The grange in Washington is growing rapidly, is more and more becoming a recognized force in the permanent upbuilding of the state and is the sane and safe advocate of things better for both producer and consumer. I find the present executive officers of the state grange, with Fred Nelson of Seattle as leader, a strong body of successful, progressive farmers, and those who may be depended upon to do all that can be done to make Washington a leading agricultural state of the nation. The program now is to double the Washington grange membership by 1925, and the advancement noted all along indicates it will easily reach this goal.

Home of Our First Governor

Will the People of Washington Allow It to Be Razed?

On the cover of this week's FARMER is a picture of the old home of Isaac I. Stevens, the first territorial governor of Washington, which stands on one of the most sightly spots in the capital city of Olympia. It is today in danger of being torn down to make room for a modern governor's mansion, for the land now belongs to the state and plans for its removal are said to be perfected. This old residence, rich as it is in historic interest, may thus be lost to the state and its citizens, for in these modern times history, tradition and romance have little chance against immediate needs or wants. The Margaret Hazard Stevens tent of Daughters of Veterans has started a movement to save by petition to state authorities this old landmark, and if that fails, then by private subscription to save it as a memorial house and museum. Other patriotic and pioneer societies have joined in the movement, but so far they seem to have made little headway with those who will probably formulate the policy which will save or wreck the building.

As stated, the old Governor Stevens home stands on one of the most enticing spots in the city of Olympia. On a slight elevation it overlooks the bay and has a fine view of the surrounding country. Governor Stevens built the house in 1856, or 66 years ago. He bought the land that year on account of its sightliness, and, while it was then in native forest of giant trees, thickly set, it must be said he chose well. The house is in a perfect state of preservation. In 1918 General Hazard Stevens, the governor's only son, had it entirely renovated. Its color is still white, as was the fashion in the old days. While it is not modern in its style of architecture, there are many newer buildings not as pleasing to the eye.

Governor Stevens was not only the first territorial governor of Washington. He was the head of the first surveying party for the Northern Pacific railway. He published reports that have been used as the foundation of reports on this country to this day. He was, also, before he was governor, superintendent of Indian affairs. In that capacity he made treaties with over 40,000 Indians, and those treaties still stand. They are recognized as fair to the Indians and safeguarding the interests of the United States in a farseeing manner. Indians came before the last legislature in full regalia and pleaded for fishing rights under one of these treaties. Their plea was, "Governor Stevens promised this."

Governor Stevens was appointed to the office at the head of territorial affairs in 1853. He served eight years. He had been governor three years when the house, then a model of architecture, was erected. It is on the opposite side of the open space of ground which lies in front of the new capitol building, now occupied by the governor and some of the other state officers.

The same year that he built the "mansion" Governor Stevens purchased 360 acres on the edge of what is now Olympia, but then quite out of town and covered with a dense forest of big fir trees and some cedar. General Hazard Stevens, the son, equipped and started it as a modern dairy in 1914, when he came out from the east.

This farm, with its modern, conveniently erected and arranged buildings, is today considered one of the models of southwest Washington. The herd is mainly grade Holsteins, with some Jerseys, but a purebred Holstein herd is now being built up. For a time the farm was owned by the Stevens heirs, General Hazard Stevens, Mrs. Eskridge and Mrs. Bates. Mr. and Mrs. Bates have acquired the interest of the other heirs and are retailing milk in Olympia.

The question of saving the house which commemorates the able man who was the first governor and had a greater part in shaping the early policies of the state is one that interests all the people of the state. The expense of preserving the house, either on its present site or somewhere else in a good location, would not be great. Is there sentiment enough in the state to save it?

Cooperation

Record of Six Years' Success

After six years of successful operation as a creamery and milk distributing plant the Port Angeles Cooperative creamery in western Washington is ready to equip a new plant which will consolidate both units and put them under one roof.

The history of the organization dates back to 1916, when O. T. McWhorter was county agent of Clallam and Jefferson counties and Ashur B. Hobson was at the head of the department of farm markets at the state college.

The original plant was purchased from the Glendale Creamery company by the members who levied a membership fee of $5 each and an assessment of $5 for every cow owned by each member. Notes were given by each member for his assessment valuation and used as collateral by one of the local banks which loaned enough money to make the payments. The entire payment was made, however, in a year's time from its purchase in 1916.

In addition to this the members have been getting a premium of 2 cents above the market price of butterfat instead of the cube price, which had formerly been necessary. The local market is now being supplied by the home plant. In other words, the dairymen are getting print butter prices instead of cube prices, since the plant went into the management of the new operators. The two plants are now capitalized for $5000.

During the last four months the 128 patrons have been bringing in an average of 350 gallons of milk daily and about 500 pounds of butterfat, or from 15,000 to 20,000 pounds a month. The milk is bottled, pasteurized and delivered to city customers and all sweet cream is sold on the same market. All sour cream, however, is made into butter and sold under the brand of "Angeles butter."

There is a small amount of outside butter used, but the home brand is used by the great majority of the townspeople and restaurants. A small placard is provided for each eating house which uses it, bearing the words, "We use Angeles butter exclusively." The same brand is used for ice cream.

"There is a good demand for creamery buttermilk," remarked George Usler, manager of the creamery and milk plant. "We charge only 10 cents a gallon for it, fresh from the churn, and so far there is no call for bottled buttermilk. We expect to put in some new equipment this spring and have a more sanitary plant. All improvements will be made from the present finances of the company and we will not have to go in debt."

The delivering of both milk and cream is all done by the members of the company, since it is more convenient to buy the milk, delivered at the creamery, at a specified price. Another reason for this is the fact that there are a few small producers in the county as yet. Those that do ship in small amounts can either deliver their own product or arrange with their neighbors to handle it for them.

The officers of the company are as follows: A. F. Eacrett, president; John Winters, secretary-treasurer: Frank Fisher, R. H. Kidd and William McFall, directors. George Usler is now acting as manager for both plants.

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A Farmer on the Reserve Board?

President Harding permits a pretty wide play of individual opinion among the members of his cabinet, and the team work of his administration is probably not so good as it was in the administrations of Presidents Wilson and Roosevelt. For instance, widely differing opinions as to the need and desirability of pending legislation to put a "dirt farmer" on the federal reserve board were voiced last week before the house committee on banking and currency by Secretary of the Treasury Mellon and Secretary of Agriculure Wallace.

Secretary Mellon said that while he had no objection to the insertion in the present law of a provision that agriculture should be represented on the present board, he did object to the proposal to increase the membership from seven to eight.

On the other hand, Secretary Wallace said that he favored appointing to the board one man from each of the 12 federal reserve districts.

Representative Strong of the committee informed Secretary Mellon that there is a feeling of antagonism against the federal reserve board in the western sections where agriculture is the chief industry. Mr. Mellon replied that the conditions complained of are passing phases. The decline in commodity prices came naturally, he said, and there will be a natural recovery. He thought that the appointment of a so-called "dirt farmer" as a member of the federal reserve board would be of no advantage or benefit to agriculture. "If every member of the board was a dirt farmer," he said, "nothing more could be done for the agricultural needs than is being done now, because the members of the board have no latitude in the matter. You in congress will have to legislate to grant longer credits to agricultural regions." The secretary of the treasury thought that all the members of the board should have a general knowledge of trade, commerce, banking and agriculture.

Notwithstanding the belief of the secretary of the treasury, there is a widespread feeling among the farmers of this country that if there had been a "dirt farmer" on the federal reserve board when the country entered upon its ordeal of readjustment, agriculture would have been given a quicker hearing and more sympathetic consideration, with resulting benefit to the American people.

In the light of succeeding events and the testimony of authorities before committees of congress, THE FARMER still can see no reason to alter its opinion, repeatedly expressed in these columns, that the federal reserve board would have shown better judgment if it had put on the brakes earlier, and against the country's extravagance in non-essentials, instead of allowing the banks to permit increasing inflation and then, at a critical juncture, put the brakes abruptly on agriculture. The fact that the farmer, of necessity, has only one turnover a year, while merchants and manufacturers have several, should have led the banking system of the country to begin the deflating and readjustment process with non-essential industries that were turning out luxuries and extravagances, and to have set the screws last of all against the farmers.

Does This Mean Anything?

Figures compiled by the extension service of the state college show that the people of this state are consuming more than two and a half times as much pork and pork products as are being produced in the state at this time.

Corresponding figures show that there is a slightly greater consumption of beef than the amount produced in the state.

On the other hand, it is shown that the consumption of lamb and mutton is only about 60 per cent of the amount produced in the state.

These figures afford food for thought. In the case of hogs they mean that there is a wonderful opportunity for the farmers of this state to raise hogs and supply the local markets that are now supplied by hogs from the corn belt. This state should have pork and pork products to export. It is ridiculous that we should be importing pork into a state as ideally suited to hog production as is our own.

There are likewise great beef-producing possibilities in Washington. While the importation of beef, apparently, is small at the present time, there should be no importation at all, but, on the other hand, a healthy exportation. The beef cattle business can safely be developed to a much greater degree than at present.

The figures concerning lamb and mutton are especially interesting. One would naturally expect a large exportation of these products from a producing state, since sheep production on a large scale is less widely distributed than many other lines of production. But is there not a great opportunity here for the sheepmen to conduct a campaign of education among the people of our own state looking toward a greater local consumption than is shown by the figures? Increased consumption and not decreased production is the solution of the sheep problem.

Good Roads and Bekeeeping

No one would think that good roads could have anything to do with beekeeping. During 1921 there were 11,930 miles of roads constructed in the United States, under joint direction of the federal and state governments. There were 31,228 miles of roads projected, which more than equals the circumference of the earth.

The advantage of improved roads to beekeepers is that they often open up new territory where bees can be kept in out-apiaries. With the use of the automobile good roads make possible the location and conducting many more beeyards, and thus the production of honey is increased. So more good roads help to sweeten the public indirectly, or through the increase of the honey product, which, if it were not for keeping more bees, would only go to waste—evaporate.

G. W. Y.

Meat Imports

Interesting figures come to light in the report of the exports of meat and meat products during 1921 as compared with 1920. While the exports of 1921 showed an increase of 3 per cent in quantity the value decreased 36 per cent.

In 1921, 1,946,000,000 pounds were exported at a value of $297,155,000 as compared with 1,883,000.000 pounds in 1920 worth $463,000,000.

There was a great increase in the amount of lard shipped to other countries in 1921, also an increase of about 24 per cent in hams and shoulders, but decreased $3,000,000 in value.

Bacon exports decreased both in quantity and value. Exports of fresh beef during 1921 were the lightest since 1913.

State Farm News

Secretary Floyd Foster of the Tieton Waterusers' association says that he has received water right applications for all but two of the tracts purchased on the "school section" at the sale made about the first of the year and expects that the other purchasers will make application before the end of the 90 days specified in the contract of sale. This will bring an additional 370 acres under cultivation this year and all of the 32,000 acres on the Tieton project will have applied for water right. This does not mean that all of it will be in crop this year, but that every acre will be paying its proportionate share of the operation and maintenance charges. Not only will they be paying it for the coming irrigation season, but they will have paid up all back charges which have been accumulating against the land since operation began. These must be paid up in full before water is turned on new acreage.

* * *

Whatcom county's annual fair will be held the week of September 25. Whatcom has built up a reputation of having one of the best county fairs in the state, and no effort will be spared to maintain this record. C. B. Bay is secretary this year.

* * *

Three hundred berry growers attended the adjourned meeting of the Puyallup and Sumner Fruit Growers' association at Puyallup March 21. The growers unanimously adopted a resolution creating an advisory committee of six and limiting the membership in the association to those who delivered berries to the association during 1921. President Paulhamus considers the berry outlook for the coming season promising, he told the growers. Mr. Paulhamus announced that Seattle and Tacoma banks had promised to help finance the Puyallup and Sumner canning plants during the coming season.

* * *

Operation of the Younglove cannery at Sunnyside was begun a short time ago, and the plant is turning out between 300 and 400 cases of apples daily. The company expects to run a month or six weeks, because of the amount of apples in storage.

* * *

The Washington Farmer was pleased to receive recently a call from A. G. Woodward of Fairbanks, Whitman county. Mr. Fairbanks says that examination of the winter wheat fields in his vicinity shows the grain in fine condition. He says farmers in his section are coming back to the 50-50 plan of summer fallow. During the war they cropped larger proportions each year, but are getting back to what they believe the best normal condition.

* * *

Members of the farm bureau in the Colfax district pooled their orders for the purchase of 130,000 grain sacks at 8 3-4 cents.

* * *

W. M. Cox of Elma was reelected president of the Peninsula Bee Keepers' association at the annual meeting of that body, held at Puyallup. F. A. Ross of Puyallup, former president of the Pierce County Honey Producers' association, was chosen vice president; Miss H. A. Sater, Potlatch, secretary-treasurer, and Mrs. Earl Sprago, Puyallup, president of the Pierce County Honey Producers' association, assistant secretary.

* * *

The $30,000 school bond issue was carried by a vote of 123 to 42 at the special election at Endicott March 25. The funds will be used to erect a gymnasium and auditorium addition to the present school building.

* * *

Unique among warehouses in the Pacific northwest the new $200,000 addition to the Richey & Gilbert warehouse in Yakima, which will be completed this spring, will have space for 25 offices, where it is expected much of the fruit handling business of the "row" will be centralized. The addition will give the company 210 feet greater frontage on First avenue and will increase its cold storage capacity to 500 carloads.

* * *

Things are moving right along with the Zillah farm bureau, according to C. H. Furman, chairman. Out of 63 growers in the district 53 are members of the bureau. Orders for lime-sulphur spray in amount of 600 barrels have been pooled by the membership, the spray being delivered to the growers and the company sending trucks later to bring back the empty barrels.

* * *

The Port Angeles Commercial club has started a campaign to raise sufficient funds to operate the Clallam cannery this year. George Cross, cannery man of Utah, will manage the cannery if the present plans materialize.

* * *

An unprecedented bean pack will be put up by Whatcom county canneries this season. W. H. Pride & Co. of Bellingham are seeking contracts with growers for from 100 to 150 acres of Kentucky Wonder beans and will have 25 acres themselves. If they can get enough of that variety they will pack from 25,000 to 35,000 cases this year, says President C. K. McMillin.

* * *

The Washington Cooperative Egg and Poultry association has installed new processing machines in their Lynden and Bellingham plants. The machines are strictly modern and the only ones of their kind in the northwest. The process is a dip that seals the eggs for storage.

* * *

The Taranaki Holstein company of Benton county has recently imported from the John B. Irwin herd of Minneapolis Sir Ormsby Hengeweld Aakkanamer, a 7-month-old registered bull. This calf will be exhibited at the fairs this fall.

Coming Events of Interest

The following revised schedule of squirrel poisoning demonstration dates has been announced for Whitman county by the farm bureau and state college: Pine City, April 7; Colfax, April 8; Colton, April 10; Pullman, April 11; St. John, April 12; Steptoe, April 13; Endicott, April 14; Fairbanks, April 15; Garfield, April 17; Palouse, April 18; Oakesdale, April 19; Tekoa, April 20; Farmington, April 21; Thornton, April 24; Rosalia, April 27.

April 7—Northwest canners' meeting, Seattle.
April 15—All-Ag club show and sale, Pullman.
April 16—Easter.
April 18—Guernsey Sale, Fawndale Farm, Sunnyside.
April 24-29—"Be Kind to Animals" week.
May 4-6—Tulip festival, Bellingham.
May 12—National hospital day.
June 5—Northwest Guernsey breeders' sale, Portland.
June 20-22—Lincoln-Adams pioneer picnic, Keystone.
July 27-28—Whatcom co. Guernsey gallop, Bellingham.

FARM BUSINESS AND MARKETS OUTLOOK

The Farmer's Business Outlook

Last week was not a period of unalloyed improvement in the farmer's business. Live stock and grain markets were unsettled and lost ground on the whole. The official figures upon exports of farm products in February were not entirely gratifying and the nose dive taken by the German mark to a new low record does not give a pleasant sensation.

But there is a side that can be polished up to look bright. Such periods of hesitation appear in all price movements and in spite of the decline farm products are selling enough higher than in December to make great improvement in the farmer's position. The advances which have already occurred have done much to lift out of the mire those who were not hopelessly embarrassed. One big bank with numerous Iowa correspondent banks, for example, reports that the latter owe it 40 per cent less than at this time last year.

The export trade in farm products in general is much better than expected a year ago and agriculture is in a better position in that respect than any other industry.

Industrial operations are gradually expanding. Although February is a short month, steel ingot production was the largest in 12 months, building contracts awarded were 7 per cent larger than in January and the greatest increase was in construction for business purposes. Gasoline production in January was the largest in eight months. Statistics upon total employment in manufactures show a 10 per cent increase compared with February a year ago.

The decline in German marks is the logical result of paper money inflation. The invariable history of such a financial policy has been that the depreciated currency is replaced by a new form of money on a sounder basis as soon as the old one nears the zero point in value. To that extent, the decline in German exchange is not distressing.

Consumers have been buying coal ahead in anticipation of trouble and stocks are sufficient to prevent any shortage for a month or two. The chief danger in the situation as far as farmers are concerned is the possibility that the strike may extend to other industries. There is a disposition on the part of both industrial and labor leaders to obtain a test of strength. Both sides appear to be determined, but there are a few signs that labor leaders are recognizing that labor can not retain its "wartime gains" when prices upon commodities have lost most of their advances during the war years. Farm products, in particular, have lost over 80 per cent of such gains.

Cattle and Hog Markets

Cattle values have been wabbling about more or less, without going far in either direction. Supply has been unevenly distributed and has been the chief cause of the uncertain trend. Although demand for beef is not entirely reliable, prices for dressed beef have not declined sharply.

Fat cows and heifers have fluctuated with steers, but they are seasonably scarce and prices mount whenever the supply shrinks. Cutters and canners also are scarce, as usual during the spring months, and are selling well. Packers report the canned meat trade as the best since the war. The decline in the veal calf market has practically run its course, but little or no lasting improvement in prices can be expected for another month.

For two months the flow of stocker and feeder cattle countryward from the 12 leading markets has held close to 50,000 head per week. The beginning of spring has not caused any marked increase, as prices are so high compared with fat steer values that strong inducement to take hold is lacking. Cheap grain rather than cheap, thin cattle, is the main attraction. Some fleshy steers are going out, but buyers of the opposite kind are assuming much less risk.

Although hog prices worked a little lower last week, the market has become more stable and a turning point may be near. Average weights have increased slightly, but receipts have declined according to schedule, the total for last week at the 20 leading markets being the smallest since early in October and considerably below the 10-year-average. Fresh pork prices declined a week ago, but are again back to the high point of the season. In spite of these conditions orders for eastern shipment have declined sharply. During December, January and February 41 per cent of receipts at Chicago were shipped out for slaughter elsewhere, but during the last two weeks less than 25 per cent of the limited arrivals have been taken by outside packers. Just why they hvae reduced their operations is not clear. Absence of competition from this source has given the larger packers the upper hand in the market and they have not been slow to take advantage. Shipping orders have been taking occasional spurts, but such increases have not continued long.

Even if meat consumption should decline slightly during the spring months there is little likelihood that stocks of hog meat and lard large enough to be burdensome later on can be accumulated. Cold storage holdings of frozen pork, dry sale pork and pickled pork on March 1 were only 545,000,000 pounds, compared with a six-year average of 831,000,000 pounds. Lard holdings amounted to 61,000,000 pounds, compared with an average of 103,000,000 pounds. The increase in meat holdings during February was only 6 per cent as large as the average increase during that month, while the increase in lard amounted to only 56,000 pounds, compared with an average increase of 10,500,000 pounds.

Since late last fall a deluge of reports have come forward indicating that hog production was being increased rapidly. In the last fe wweeks, however, reports of severe losses among spring pigs have been numerous. Inclement weather, excessive feeding of breeding stock upon corn and actual disease appear to be the principal causes. Fewer precautions have been taken than when hog prices were high. It is possible that these losses will prevent an excessive supply of hogs to be marketed next winter and spring.

Lambs Again at Sixteen Dollars

The lamb market again crossed the $16 line at Chicago last week. Receipts are maintaining about the same total from week to week, so that fluctuations in price have been small compared with the usual behavior of this market. Prices are already so high that they could easily tumble if the supply expanded temporarily, but the number of lambs still on feed is so small that a brief period of still greater scarcity may show up before the new crop begins to move. About 15,000 head of lambs are being taken out each week from the 12 leading markets for further feeding, but the period is becoming short in which this operation can be completed. With the market likely to become unstable at any time, purchases for this purpose are not especially attractive.

Although the demand for farm chunks is not up to the average for this season of the year, it is about as brisk as it is likely to be this spring. Late in April demand for horses of this character almost invariably tapers off. Prices are holding to about the same level. Bulk of the 1250 to 1550 pound chunks, sound and from 5 to 8 years old, are selling at a range of $130 to $185 at Chicago. Unsound stock is hard to dispose of, even at big concessions. A few choice heavy drafters are sold from time to time at $250 or higher. The extent to which trade has declined is shown by the fact that February receipts at all the leading markets were only 39 per cent of the five-year average for that month.

The finance committee in the United States senate has finally agreed upon a duty of 33 cents per scoured pound on wools, except those of carpet grade, which are to be duty free. The measure has some distance to go before final enactment, but it has a good chance to go through. The duty on scoured wool in the emergency tariff is 45 cents. The wool market has been relatively quiet. Activity of the woolen and worsted mills has slowed down about 10 per cent in the last three months, nevertheless, mills are obliged to buy raw wool and prices are practically unchanged. At the London auction of colonial wools values have been hardening steadily. The demand for cloth is slow and many mills are considering the necessity of reducing wages in order to cut costs of production.

Will Wheat Scarcity Arrive?

The wheat market has been fluctuating in a rather erratic manner, apparently waiting to determine whether actual scarcity will arrive before the new crop is ready. Statistical analyses continue to show a close adjustment of supply to demand for the rest of the crop year, both at home and abroad. This fact is neutralized, however,

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by the existence of large commercial stocks in this country and by large stocks on passage to Europe. Supplies to these positions are so plentiful that buyers are indifferent and it is their failure to provide for distant requirements which is chiefly responsible for the market's behavior. Speculative sentiment, which has something to do with the course of the cash market, is disposed to the bearish side as long as these commercial stocks show no sign of rapid reduction.

Nevertheless, the situation contains numerous elements which are likely to restore an upward trend within the next few weeks. Primary receipts last week, although above the average for this season of the year, were the lightest in two months and 25 per cent less than a month ago. While the visible supply is larger than a year ago, it is about 20 per cent less than the 10-year average at this season and only twice in the last 10 years has it been smaller on April 1 than it is at present.

Mills report a dull flour demand most of the time. Nevertheless, they continue to operate on a considerably larger scale than a year ago. Stocns of flour decreased during February. They are believed to be light at the present time and distribution of flour into consumptive channels continues steadily.

Total world shipments of wheat have averaged from 14,000,000 to 17,000,000 bushels per week recently, while the world's disappearance of export wheat since the beginning of the crop year has averaged about 13,500,000 bushels per week. Stocks have not increased a great deal in European ports, but there has been a big increase in the quantity afloat. About 26,000,000 bushels of this wheat is being sent on consignment and if it arrives when the market is dull and is pressed for sale, it might have considerable effect temporarily. The large shipments are coming from Australia and the Argentine primarily and if continued until July 1 will practically clean up the surplus in those countries, making it necessary for Europe to draw upon the United States at the rate of around 12,000,000 bushels per week as soon as the new crop begins to move. It should be noted, also, that the total quantity on ocean passage is only equal to about five weeks' supply for Europe and that stocks on hand in importing countries are small.

Foreign financial conditions have some bearing on the situation, of course. Germany has been a big buyer recently for shipment from the new crop and was credited also with the purchase of a lot of distressed Argentine wheat on passage in nearby positions so that the decline in the value of the mark to a new low level received considerable attention in the grain trade.

With the coming of spring the wheat crop is showing up favorable in most sections. Some reports of damage are being made, however, and it will be a departure from practically all past history if a crop scare does not arrive later on. There are numerous reports of green bugs in Texas and Oklahoma, while some acreage has been plowed up in Kansas and adjacent states and a marked demand for oats to seed abandoned wheat acreage has appeared in certain parts of Kansas in the last few days. Foreign crop reports are mixed, but on the whole do not indicate an abundant harvest so far as Europe is concerned. Russia will not be an exporter next year if present signs are indicative, the Danubian countries have a small acreage and the condition of the French wheat crop is considerably below the average.

Corn and Oats

Both the domestic and the export demand for corn have subsided in the last few weeks, offsetting the decline in primary receipts, which are now the lightest since the last week in November. Corn industries are reducing their grind and the new Argentine crop will soon be ready for the export trade. Stocks at terminals are large and some of this corn, accumulated during the winter, is being pressed upon the market.

The oats market has been more or less laggard for months, but shows some signs of gaining strength. Primary receipts have dropped down to the smallest level since early in January, while primary shipments have increased and in the last 10 days actually exceeded arrivals by a substantial amount. Some normal surplus sections have disposed of their supply and are abliged to go outside to purchase seed. Export demand has broadened and clearances are running close to 1,000,000 bushels per week. Wet weather is delaying seeding operations in a wide area and it is possible that anxiety over the new crop may have some effect on the market before long.

Cash Grain Market

The range of cash grain prices for the week ending March 29 was:

CHICAGO—Wheat, No. 2 hard, $1.31 1-2@1.32 3-4. Corn, No. 2 mixed, 54 1-2@57 1-4c; No. 3, 53 1-2@56c; No. 4, 52 3-4@55c; No. 2 yellow, 55 1-4@58 3-4c; No. 3, 53 1-2@56 1-4c; No. 4, 52 3-4@55 1-2c; No. 2 white, 56@59 1-4c; No. 3, 53 1-2@58 1-4c; No. 4, 52 3-4@56c. Oats: No. 2, 36@38 3-4c; No. 3, 34 1-4@37 1-2c; No. 4, 33@35 1-4c. Rye, 99c@$1.02; barley, 53@69c.

Severe Break in Clover Seed

Red clover seed prices slumped sharply in the last few days as wet weather unexpectedly has curtailed demand. Alsike clover has declined during the last few weeks and timothy seed is about 10 per cent lower than at the high point of the season, although these seeds were not especially affected by the break in red clover. Demand for clover seed will subside within the next 30 days. During the latter part of April the market begins to ease off.

Toledo, per bushel—Prime red clover, $14.90; prime alsike, $11.70; prime timothy, $2.95

Chicago, per 100 lbs.—Clover, $15@25; timothy, $4.75@6.25.

The spring demand from hog producers for middlings has made a strong market on this product, but buyers are indifferent to other kinds. Wheat feed prices for later shipment are $1 to $2 below those for prompt shipment. Stocks of cottonseed cake and meal are larger than those of last year, but they are not being forced upon the market and prices are firm at the highest level of the year. The linseed meal market has weakened temporarily, due to liberal offerings out of second hands, especially at Buffalo. Production of corn feeds is heavy.

Prices per ton (100-pound bags) in carlots—Chicago—Bran, $24.75; standard middlings, $27.50; flour middlings, $31; cottonseed meal, 36 per cent, $48; 43 per cent, $52; hominy feed, $21; gluten feed, $2.65; old process oil meal, $55; tankage, $60.

Hay Markets Generally Firm

Light receipts are maintaining a firm hay market. At Kansas City, for example, receipts from January 1 to March 24 have been 5798 cars, compared with 8380 cars in the same period last year and 18,073 cars in the same period two years ago. Prices upon timothy and prairie hay are substantially lower than at this time last year, but alfalfa hay is higher. Ordinarily some new crop alfalfa hay is moved out of the far southwest by this time, but cold weather is delaying the first cutting this year and some observers predict that it will not be available until the latter part of May. As a result, Texas has been buying to a limited extent in northern markets.

Prices per ton in carlots—Chicago—No. 1 timothy, $22@24; No. 2, $19@20; No. 3, $16@18; No. 1 light clover mixed, $21@22; No. 1 clover, $17@20; No. 1 clover mixed, $18@20; No. 1 alfalfa, $15@26; upland prairie, $14@18; midland prairie, $12@15; rye straw, $15@16; oat and wheat straw, $12@14.50.

Eggs, Butter and Cheese

Although receipts of eggs are not as heavy as they were at this time last year, the movement into storage is fairly generous. Receipts at the four leading cities since January 1 total 3,226,479 cases, compared with 3,527,515 cases in the same period of last year. Cold storage holdings at these four points have increased to 232,778 cases, compared with 618,592 cases at the same time in 1921.

Cold storage holdings of frozen poultry in the United States on March 1 were 88,708,000 pounds. Stocks decreased nearly 15,000,000 pounds during February, compared with a decrease of only 2,000,000 pounds in the same month last year.

The butter market eased off rather sharply in the middle of last week, but developed strength later. The principal cause was an accumulation of fancy butter at eastern markets, especially New York. Consumptive demand continues broad and undergrades especially have been more popular than usual, but receipts are running above the average for this season of the year and an enormous quantity of storage butter is being put on the market. There is no speculative buying to absorb a surplus when it appears as lower prices are expected within the next 30 days. Stocks of cold storage butter at the four leading cities on March 27 were 7,407,645 pounds, compared with 10,871,462 pounds on the corresponding day last year.

(Continued on page twenty-four.)

"30-10" By RALPH W. SWETMAN

One of the most vital issues now before the people of this state is the so-called "30-10" school tax plan. This plan is being strongly urged throughout the state by its proponents and almost as strongly opposed by those who disapprove its provisions. Every voter should study it until thoroughly convinced either that it should be adopted or that it should be defeated when it comes before the people at the next election as an initiative bill. To aid the farmers of this state and their families to become familiar with the terms of this bill. The Washington Farmer will from time to time publish discussions of it from all points of view by persons qualified to speak. The article given herewith, which is the first of the series, is by Ralph W. Swetman of the normal school at Ellensburg, who is actively working in favor of the bill.—Editor.

Initiative measure No. 43 is entitled "An act providing for the current state school fund sufficient to produce $30 for each child of school age; for the distribution of state and county school funds to school districts upon the equal basis of attendance and teachers employed, and fixing the maximum annual tax levy of school districts, except for bonded indebtedness, at 1.7 per cent of the assessed value of the taxable property thereof."

The "30-10" is a step toward equalizing school taxes over the entire state. It is not a radical step, but in line with an evolution that has been going on in Washington for 25 years, beginning with the enactment of the "barefoot school boy law" in 1895, under the leadership of Governor Rogers. It is a professed desire of the people of Washington to do for all the children of the state what they would want done for their own children. It is a translation of the Golden Rule into a working educational program.

One of the two outstanding features of "30-10" is the transfer from local school districts to the state of a greater share of the responsibility for public school support. This is called the collection phase of the subject. Under "20-10" about one-third of the cost of education in the common schools is being borne by the state as a unit, while over one-half of the total budget is collected on the inequitable local district basis. "30-10" would increase state support of education to the extent of one-half of the budget and decrease the local districts' share to about one-third.

The second outstanding feature is the new method of distribution, which would apportion the state and county school funds to the local districts according to costs of education and would eliminate bonuses. This would insure rural districts obtaining a fairer share of state and county school funds than they now receive.

The aim of "30-10" is to collect money for school support wherever wealth is and distribute it where the children are.

COLLECTION.

The "30-10" means that there shall be collected into the state treasury $30 for every child of school age in the state. This is known as the state school fund. About $3 comes from the income from the permanent school fund and does not cost any one anything in taxes. The other $27 would come from taxation. At present $20 per child is collected on a state basis, $3 from the permanent school fund income and $17 from taxation.

The "10" means that there shall be collected into each county treasury $10 for each child of school age in the county. This is the present law. This money is known as the county school fund and is returned to the districts within the county.

After estimating the amount of money it will receive from the state school fund each school district by a local tax raises a sum of money which when added to its share of the state and county school funds will meet the needs of the children in the district.

That is, the local district meets the needs of its children if it is financially able. If the district is poor, then the children are denied the educational opportunities that are rightfully theirs. If education were a luxury no harm would be done. Each parent would buy for his children what he could afford. But education is a necessity. It is the very foundation of good citizenship and the nation itself. Any system of financing education on the "luxury" rather than a "necessity" basis is undemocratic and intolerable. Education is more than a family or local responsibility. It is a state responsibility.

The undemocratic obstacle to providing equal opportunities for all of our boys and girls is the collection of more than half of our school revenues on the small, unequal school district units of taxation. One district will have great wealth and few children to be educated, while another will have little wealth and many children. Consequently the last district even with heavy tax burdens can come nowhere near giving its children the advantages enjoyed by the children of the first district with light tax burdens.

"Thirty-ten" by collecting less money on the district plan and more on the state as a unit will equalize tax tax burdens and equalize advantage for the children. It would reduce the part of the total educational budget raised in the districts from 53 per cent to 37 per cent, while the part raised on the state basis would increase from 31 per cent to 47 per cent. The part raised by the counties would remain the same, 16 per cent.

EQUALIZATION THE ISSUE.

The equalizing effect of "30-10" may be shown by comparing the amounts of money paid into and drawn out of the state school fund by each district.

Rich districts pay to the fund more than they receive through apportionment, while poor districts receive more than they pay.

A survey of all the districts in the state is being conducted by the Washington Education association to show the exact effect of "30-10" on each separate district. The following illustrations are taken from one-room rural schools in Snohomish county:

District number.	Pupils in average daily attendance.	Assessed valuation of district.	District pays to state.	District receives from state.
33	18	$ 38,780	$ 336	$930
83	13	42,935	372	829
36	13	46,221	401	808
60	12	48,715	422	782
79	19	159,779	1385	928
90	18	175,660	1523	937
312	13	275,900	2392	803
67	13	448,107	3885	806

The apportionments from the state vary from $782 to $937, depending upon the combination of $530 on the basis of one teacher and the amount for attendance at 12 1-4 cents per day. Comparatively speaking these apportionments are nearly equal because the number of children in each district is about the same.

On the other hand, the amounts paid to the state fund by each district vary a great deal; from $336 to $3885. This is because the state tax levy is uniform. Consequently each district pays according to its wealth. The four poor districts receive more from the state than they pay, while the four rich districts pay more to the state than they receive. This is an excellent concrete illustration of "collecting money where wealth is and distributing it where the children are."

COMMON SCHOOL FUND.

The general fund operating the expenses (this does not include money raised from bonds) of the common schools of Washington is $24,000,000.

Collection on the present $20 per child basis:

State, 31 per cent	$ 7,519,120
39 counties, 16 per cent	3,759,560
2500 districts, 53 per cent	12,721,320
	$24,000,000

Collection on the proposed $30 per child basis:

State, 47 per cent	$11,278,680
39 counties, 16 per cent	3,759,560
2500 districts, 37 per cent	8,961,860
	$24,000,000

DISTRIBUTION.

Collect school revenues where wealth is

(Continued on page seventeen.)

Overland

now $550

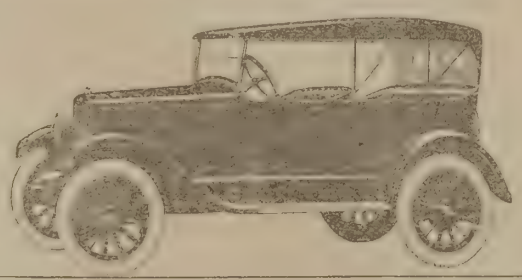
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THIS new fame-making price clearly proves that the Overland is the greatest automobile value your dollars can buy.

It's a car so faithful, so powerful and enduring you can enjoy it for years. The all-steel chassis resists wear. Triplex Springs protect the car and cut down upkeep. The 27-brake h. p. motor travels more miles at less cost than any other car. Owners average 25 and more miles a gallon.

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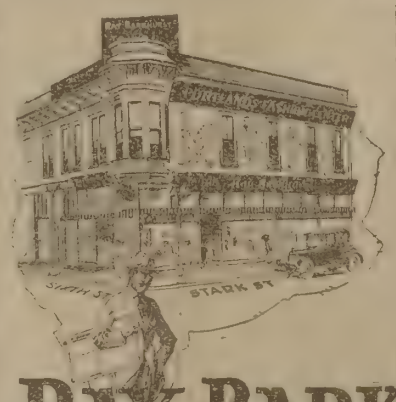
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My guarantee to fit you and please you to your entire satisfaction—is your protection. My system of selling clothes by mail is just as satisfactory as though you bought here in person. Today, my customers are numbered in thousands throughout the northwest. Your suit will be strictly hand tailored and will give you longer service, look better and cost you LESS than a cheaply made factory suit.

FREE

Send for tape measure, self-measuring blank, style folder and cloth samples.

CLIP AND MAIL COUPON NOW.



Ray Barkhurst, (Dept. 2) Portland, Ore.
Largest custom tailor to men in the northwest.

Dear Sir: Please send me your FREE sample packet, including Virgin Wool cloth samples, self-measuring blank, style folder, tape measure, and instructions for ordering by mail.

Yours very truly,

Name .....

Address .....

Owing to the fact I carry the largest selection of woolens in the northwest, I want to send you exactly what you want. Give me a hint—mark (x) opposite the suggestions below.

( ) Western Virgin Wool Samples, assorted colors.
( ) Light and dark gray worsteds in stripes and colors.
( ) Black and white silk mixed worsteds.
( ) Blue serges.
( ) Overcoat samples.

RAY BARKHURST

Largest Tailor to Men in the Northwest

Portland, Oregon, Dept. (2).

Virgin wool cloth is made from 100 per cent pure, new wool and is absolutely free from cotton, shoddy and wool substitutes.

Stands for Full Cooperation

Fruit Growers Must Turn From Private Marketing Agencies to Cooperative Organizations

The Washington Farmer is greatly pleased to receive from a member of the Methow-Pateros Growers, Inc., a unit of the Skookum Packers' association, a vigorous letter touching upon what he aptly terms "the Skookum-Crutchfield mixup." To make clear to all of its readers the position it takes and the principles on which it stands THE FARMER publishes herewith the letter above referred to and a statement of its own attitude.

The Grower's Letter.

To the Editor of The Washington Farmer: I admire the way The Washington Farmer comes out in the open and states the facts in controversies affecting farmers. I do not, however, like the way you are treating the Skookum-Crutchfield mixup. I do not believe you have thoroughly investigated the whole deal. If you had, it seems to me that in line with your usual policy you would give the farmers the weight of your support, for it is the same old story of speculation against cooperation. You people appear to have sufficient nerve to tell the truth and a firm stand on your part would help us farmers in this deal at a time when we need help.

I am a member of the Methow-Pateros Growers, Inc. We own our own warehouse and packing equipment and elect our own officers. I. H. Logue, who is head of our local, is a real farmer and when I saw him yesterday was the color of an Indian from exposure to the sun while pruning his orchard.

We have a year-to-year contract with the Skookum Packers' association to handle our output. This contract may be canceled 60 days previous to May 1 each year without cause. Skookum Packers own the Skookum brand. Considering Mr. Crutchfield's promises which he made us last year, together with other things that do not look good to us, we refuse to sell through him this year.

Skookum Packers must sell to him because of its contract. Methow-Pateros growers and other units do not have to sell to Skookum Packers, however. Therefore, Mr. Crutchfield's contract with Skookum Packers is not of much value to him if the locals quit. We expect to ship one car through Skookum Packers so as to retain our interest in the brand, which we consider to be very valuable. The brand is our own. We originated it and we have paid the money to advertise it. We are not going to let loose of it without a rumpus. Neither are we going to market through Mr. Crutchfield after what has happened. We expect a long fight before we are clear of the woods. I am enclosing a bulletin from the packers' meeting March 18.

I am writing all this on my own initiative to endeavor to interest you sufficiently to look into the affair and give us any support you may see fit.

STANLEY T. ARNOLD.

Pateros, Wash.

The Position THE FARMER Takes.

The Washington Farmer has always given its support to cooperative production and marketing, and will continue to support that principle. It is in sympathy with the growers in "the Skookum-Crutchfield mixup." It believes that the fruit growers of the Pacific northwest made a grievous mistake when they allowed their former big cooperative marketing organization, the North Pacific Fruit Distributors, to be undermined by the Crutchfield interests. The Washington Farmer has no fight to make personally upon Mr. Crutchfield or his assistants. They have a right to come into this territory and to offer to market the fruit of individual growers or organizations of growers.

But the fruit industry of the Pacific northwest will not be on a firm footing until at least a majority of the commercial growers of fruit in this region turn definitely from private marketing agencies and handle their own marketing on the lines of the California cooperative marketing organizations.

It has been about 10 years since Mr. Crutchfield came into this field and persuaded many of the growers to abandon cooperative marketing and entrust their product to him. Other growers have dealt with other private marketing organizations. The result is that these various private marketing agencies are competing with each other in the eastern markets and using the products of one community to hammer down the prices received by all the fruit growers.

The remedy for that condition must be applied by the growers themselves. We have gone backard here in cooperative marketing in the last 10 or 12 years, and the same disappointing conditions will have to be registered 10 years from now, or 20 years from now, if existing methods of private marketing are continued.

These are the convictions of The Washington Farmer. First, last and all the time, it stands for full cooperation—cooperative marketing as well as cooperative production.

HOLSTEINS FOR FREEMAN CLUB.

The Freeman dairy club of Spokane county, organized through the efforts of County Club Agent W. J. Green is using Holsteins. Two of the boys purchased high grade cows costing $150 each, while a third paid $140 for a three-year-old. Mr. Green also reports that the Elk dairy club is pleased with the two registered Guernsey bulls which they purchased from A. L. Gile of Chinook. The Elk bank financed the purchase.

ALWAYS A CLUB BOOSTER.

I shall always be a booster for the pig clubs and better blood.

Mountain Beaver

Cause Much Damage to Crops

Mountain beavers are becoming very numerous in some sections of western Washington and have already caused much damage to crops. They are short, chubby little animals with short tails, which live in the underbrush of logged-over lands and seem to prefer to burrow into the hillsides.

"They do their damage by eating the limbs from the young saplings and injure truck and berry crops," said L. K. Couch of the biological survey. "They will burrow under roads and cause them to cave in under heavy travel. As new land is cleared the beavers will recede, but will come out and feed from the newly planted area. Mountain beavers are most numerous on the Olympic peninsula, but are getting thick in other parts of western Washington.

"About the only redeeming feature they have is that they are very easily trapped," said Mr. Couch. "We have tried it out and found that one beaver was caught in the same trap more than a dozen times. A No. 1 steel trap has been found to be very successful and they will take almost any kind of bait, green vegetables, however, being preferred."

Protect Home Fats

Leaders of four national farm organizations met at Washington, D. C., recently and formulated plans to fight the so-called "soap lobbying." The organizations participating in the call are the National Milk Producers' federation, national grange, American Farm Bureau federation and the National Dairy union.

The farmers charge that the soap makers plan to discriminate against homegrown fats and oils in favor of soy beans, coconut and other vegetable oils produced by cheap labor of China, Japan, Manchuria, Ceylon, Java and India, if their plea to the senate finance committee for duty free vegetable oils is granted.

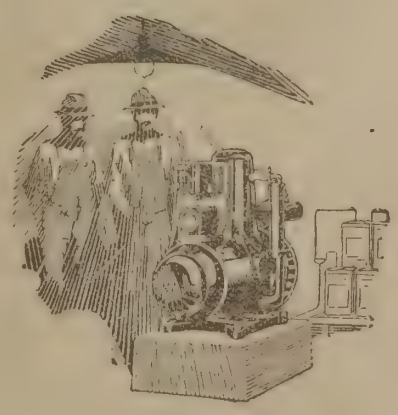
"This soap lobbying," said Charles W. Holman, executive secretary of the National Milk Producers' federation, "is the newest and wealthiest member of the National club. It has spent almost a year buttonholing our congressmen and instigating a flood of letters to senators from laundries all over the country. They have spent a small fortune in money.

"I am told that some have sent small gifts of soap to congressmen to demonstrate the virtues of their plan. This plan simply is to prosper themselves and the yellow and brown producers of these oils instead of the American farmer.

"America produces nearly 7,000,000,000 pounds of fats and oils annually and as the world's greatest reservoir for these products has heretofore dominated world markets. But if the orient is to be made the preferred source of supply then our farmers must stop producing so much corn and cotton seed, flax and hogs. There is a surplus already which needs to be taken care of before we stimulate the oriental industry."







And This is Only a Part of What Delco-Light Does"

BESIDES giving you more light, better light, and cheaper light than you have ever had before, Delco-Light will supply your farm with plenty of smooth, quiet electric power to do much of the work that must now be done by hand.

You will never have to pump water, for Delco-Light will furnish the power to provide water under pressure anywhere in the house or barn. It will furnish the power to run the separator, the churn, the washing machine, and will save you much of the time now used in doing chores. It makes farm life more attractive and increases farm profits.

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We want to tell you more about the new, low Delco-Light prices and our easy-payment plan. If you have not had a recent estimate you will be surprised to see how little it will cost you today.

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Advertise the Northwest Apple

Growers of apples are asked to contribute 1 cent per box this season toward a fund to be expended for the advertising, far and near, of the northwestern apple.

At the horticultural convention in Spokane, Wash., last December, at which Oregon, Washington and Idaho producers were represented, a committee to work on the advertising of the northwestern apple was appointed as follows: Chairman, C. I. Lewis, Salem, Ore.; Charles Swigart, Yakima, Wash.; D. L. Oliver, Wenatchee, Wash.; P. J. Gray, Nampa, Idaho; A. W. Stone, Hood River, Ore., and Paul V. Weyrauch, Walla Walla, Wash.

The foregoing committee met at Portland last week and decided to inaugurate the advertising campaign so as to become effective for the 1922 crop.

"If the northwest will enter into a program of this kind enthusiastically a sufficient fund can be secured to conduct a creditable campaign," said a statement following the meeting. "It was voted to put this matter squarely up to each fruit section of the northwest, to ask them to have meetings to discuss the question, to elect local committees that can work with the general committee in putting this program across. From the various local committees, representative committees can be chosen to handle the details of the advertising campaign. It would probably be advisable to choose some efficient manager to conduct the campaign and work in conjunction with some advertising agency or agencies, as the growers might choose to handle this account."

The committee will meet again on April 17, when it is hoped that a sufficient report can be secured to determine whether or not the northwest will take the opportunity at this time to begin the comprehensive publicity campaign in behalf of the northwestern apple industry. If it is decided to go ahead the committee will then map out a tentative program which can be submitted to the fruit growers.

"We do not believe that we should discard our brand advertising," said the committee. "In fact, we would urge that more and more of that be done. Neither is the committee opposed to district advertising, but it believes that the Pacific northwest, as a unit, should conduct a campaign on the northwest boxed apple.

"The committee is asking for the support of every apple grower of the Pacific northwest. This is a northwest problem, not a local problem."

The attempt to secure unity of action on the part of fruit shippers of Washington, Oregon and Idaho was renewed on the day following the meeting of the publicity committee, this time by A. W. Stone, manager of the Hood River Apple Growers' association, who succeeded in getting together 20 representatives of private, corporate and cooperative shippers of the three states to discuss their common needs. A permanent organization was formed, with Mr. Stone as chairman and Dr. H. L. Geary of Underwood, Wash., as secretary, and another meeting will be held at Portland April 17.

Three propositions were presented for discussion by the Hood River man, who sought to unite the shippers only on those points on which there could be no serious difference. They were the cooperative buying of supplies in large quantities, the need of cold storage facilities on the docks at Portland and the necessity of a common terminal for rail and water shipments in large markets on the eastern seaboard.

Even on these seemingly fundamental matters difference of opinion existed. There was objection by some to blanket cooperative buying, because of a commendable desire to patronize local merchants in communities where the buyer operates, but it was conceded that it would effect a saving and possibly could be done without local reaction in the case of paper, box shocks, nails and spraying materials. A start in this direction probably will be made with paper. The prevailing sentiment in regard to cold storage facilities on the Portland docks seemed to be that their establishment would be a great convenience and that undoubtedly they would be used increasingly, but that the dock commission ought not to require advance guarantees of the amount of space shippers would require. Among the benefits of cold storage would be ability thereby to regulate boat shipments to the eastern seaboard and to Europe, and hence to prevent market gluts.

There appeared to be unanimity of opinion as to the need for common terminals in the east, but discussion at the meeting centered around the other matters. Represented at the gathering were the Underwood (Wash.) Fruit and Warehouse company, Yakima (Wash.) Fruit Growers' association, Spokane Valley (Wash.) Growers' union, Mosier (Ore.) Fruit Growers' association, Hood River (Ore.) Apple Growers' association, Oregon Apple company, Dan Wuille & Co. of Hood River, the agricultural committee of the Portland Chamber of Commerce and several individual fruit growers, including one from Nampa, Idaho.

VETERINARY

By DR. S. B. NELSON.

Iodine May Help.—We have a young cow, seemingly in good health, but just as soon as we begin to milk her she begins trying to urinate. Can this be cured?
Hartline, Wash. SUBSCRIBER.

Try giving your cow a teaspoonful of tincture of iodine in a little water once daily for a few days.

Hot Poultice.—I have a big work horse that hurt his knee in some way and it is swollen up to his body and he can not walk on it. C. E. S.
Portage, Wash.

It will be well if you can keep a hot poultice around the swollen leg for two or three days. That would help to relieve the soreness, and if it is due to an injury and pus is forming, it will hasten the formation of the pus, so that the place can be lanced to allow the escape of the pus and the wound washed out with any good disinfectant.

Abnormal Milk.—Is it injurious at all to use the milk from a cow that has two spoiled teats? N. B. M.
Bickleton, Wash.

If the cow is giving abnormal milk from the teats I would judge it not advisable to use the milk. If, however, the teats are spoiled and dried up, then I can not see any reason why the milk should not be used from the other two.

Hog Coughs.—I have a hog about 5 months old that is in good shape, but has had a terrible cough since a pig. Is there a remedy? W. F. W.
Arlington, Wash.

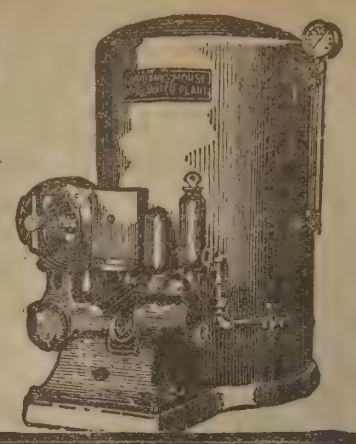
The cough is only a symptom of some specific trouble and since it is a symptom and I do not know what the touble is, I regret I can not give you a remedy for it.

Worms.—Can you tell me a remedy for worms in hogs? I butchered five last week and the two small ones had a great many white worms about six inches long in the small intestines. I have several more hogs that are not doing well and they must have worms. R. M.
Elma, Wash.

Use the following prescription for worms in hogs: Santonin, eight grains;

(Continued on page twenty-one.)

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For the Whole Family
2c A DAY



FAIRBANKS-MORSE HOME WATER PLANT

This assures home water service from shallow well, cistern or spring at the lowest possible cost. It is wonderfully compact — specially designed and constructed to SATISFY the great demand for an outfit that puts water "at the turn of a faucet" just where you need it every day.

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Every user becomes a Red-Top booster

OUR Southern District Manager writes: "We sell our dealers on the Red-Top idea and they in turn sell their customers. After that the tires sell themselves; every user becomes a Red-Top booster and an endless chain of Red-Top salesmen is constantly being made."

The extra-heavy and extra-tough red tread, the extra ply of fabric, the extra size—these make the Fisk Red-Top a wonderful tire for small cars and on country roads.

These free booklets on Farm Sanitation

tell you how to prevent disease among livestock and poultry and describe in detail the many uses of

KRESO DIP No. 1

(STANDARDIZED)

Parasiticide and Disinfectant

No. 151—**FARM SANITATION.** Describes and tells how to prevent diseases common to livestock.

No. 157—**DOG BOOKLET.** Tells how to rid the dog of fleas and to help prevent disease.

No. 160—**HOG BOOKLET.** Covers the common hog diseases.

No. 185—**HOG WALLOWS.** Gives complete directions for the construction of a concrete hog wallow.

No. 163—**POULTRY.** How to get rid of lice and mites, also to prevent disease.

Write for these booklets.

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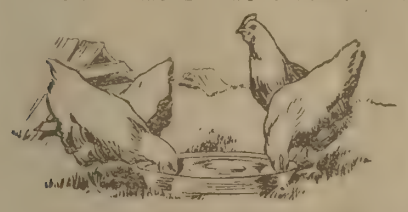
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Any poultry raiser can easily rid his flock of lice and mites, make chickens grow faster and increase their egg yield by simply adding minerals to the fowls' drinking water. This does away with all bother, such as dusting, greasing, dipping and spraying. The necessary minerals can now be obtained in convenient tablets, known as Paratabs. Soon after the fowls drink the mineralized water, all lice



and mites leave them. The tablets also act as a tonic conditioner. The health of the fowls quickly improves, they grow faster and the egg yield frequently is doubled. Little chicks that drink freely of the water never will be bothered by mites or lice.

The method is especially recommended for raisers of purebred stock, as there is no risk of soiling the plumage. The tablets are warranted to impart no flavor or odor to the eggs and meat. This remarkable conditioner, egg tonic and lice remedy costs only a trifle and is sold under an absolute guarantee. The tablets are scientifically prepared, perfectly safe, and dissolve readily in water.

Any reader of this paper may try them without risk. The laboratories producing Paratabs are so confident of good results that to introduce them to every poultry raiser they offer two big $1 packages for only $1. Send no money, just your name and address—a card will do—to the Paratab Laboratories, Dept. S78, 1100 Coca Cola Bldg., Kansas City, Mo., and the two $1 packages, enough for 100 gallons of water, will be mailed. Pay the postman $1 and postage on delivery, and if you are not delighted with results in 10 days—if your chickens are not healthier, laying more eggs and entirely free from lice and mites—your money will be promptly refunded. Don't hesitate to accept this trial offer as you are fully protected by this guarantee.—Adv.

Read the "Want Ad" page this week for good offers of all kinds.

Unify Egg Selling

One Central Agency Is Established

As previously announced, the five commercial egg producers' associations of the Pacific coast have arranged to market their eggs through one central agency, which will be known as the Pacific Egg Producers' association. It will supplant the five different agencies which have been necessary heretofore.

The five associations, all of whom market their eggs and poultry on the New York market, are: The Poultry Producers of Central California, the Poultry Producers of Southern California, the Poultry Producers of San Diego, the Pacific Coaperative Poultry Producers of Oregon (with branches in Idaho) and the Washington Egg and Poultry association. The plan of the affiliation is to form pools of all eggs according to quality and sell them as the market demands, in order that each association may be able to receive the same price for the same quality of product. The agency will be formed and governed by trustees representing the associations, but incorporation papers will not be taken out. Other producing organizations working on a similar basis will be allowed to join the new organization. The term of the new agency shall extend through the main egg season, but it will allow each association to complete their present contracts.

All eggs of each association which are to be exported from their own particular territory shall be sold through the central agency. This, however, does not apply to markets in their own districts, since each association withholds the right to sell locally, any or all of the eggs that do not go to the eastern market.

As a matter of standardization, each association agrees to follow the standards established by the central agency which is expected to prove a great help in establishing the high quality egg on the eastern markets. As a check on the selling house, the egg sales will be made only upon the instruction of the trustees who represent the different associations.

How It Affects Washington Producers.

"As a matter of fact the new organization will not affect the Washington Egg and Poultry association this year," said H. E. Wills, secretary and general manager of the association. "We have contracts that will demand every egg we can get until next November. We feel, however, that the agency will be a great benefit to us after that time, as it will tend to stabilize the price and prevent any price cutting, such as has been the case with the agencies in the past. They have, in reality, been working much the same as separate producers and the buyers have been able to work one against another and obtain a better price. This can not be done under the new plan.

As for the possibility of the poultry business being overdone in the Pacific coast states, Mr. Wills stated that there were 1,500,000 more cases of eggs used in New Work last year than there were the year previous. He gives as the explanation that the people have responded to the higher quality of the pack and have been eating more eggs than they have ever done before.

"We are selling the egg that the market wants," he said. "The consumer gets a good egg with his ham for breakfast and he naturally comes back after more the next time. The grades are the main thing when it comes to selling eggs. We have never had a question about our eggs and we have never had a car turned down.

"There is also the increased population. The egg business should increase in proportion, but is making even better gains. The people are beginning to find out that good eggs are much cheaper than meat and they are taking advantage of the fact and are eating more of them."

Concentrate Powder Orders

Concentration of small retail orders into large wholesale ones reduced the actual cost of stumping powder to the consumer in Wisconsin 44 per cent, according to Dean H. L. Russell of the agricultural college of that state. He was discussing logged-off land operations in western Washington, and some one asked about the feasibility of a state powder factory. "Farmers want cheap powder, there is no doubt about that," he said, "but by concentrating orders you would save many times the amount of money that could be saved through state manufacture. Another way is to substitute 40 per cent powder for 50 or 60 per cent. We have made big savings in Wisconsin through both these methods."

OLD MOXEE COMPANY.

Alexander Graham Bell was one of the organizers and one of the largest stockholders in the old Moxee company, which is about to break up into 10-acre sale tracts its ranch near Yakima. Its big holdings formerly were used for stock-raising. Then they became one of the large hop ranches of the state, and recently the Utah-Idaho Sugar company has had them under lease. The death several years ago of H. B. Scudder, who was one of the incorporators in 1891, and more recently of George Kerr, hastened the sale of the property. Each was president at time of death.

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The Wizard 4-Pull is the only tractor having a rigid 4-wheel drive. This delivery of power to all 4 wheels gives the Wizard all the traction of a track machine—and under some conditions more—but without prohibitive upkeep costs of track tractors.

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After delivering normal pull, the Wizard 4-Pull has 35 per cent reserve power. It is built with over-strong parts throughout to support maximum performance. There isn't a single oil or grease cup on the Wizard—the only tractor that is automatically oiled throughout. A great time saver. Every working part except wheels and fans is enclosed and absolutely protected against dust and dirt.

The Wizard is the result of 30 years of experience and development by practical tractor men. It is a perfect tractor.

Keep These Two Points Clearly in Mind

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DEPENDABILITY

DURABILITY

QUALITY

Inland Association Grows

Railsback Succeeds Newbery as Milk Producers' Manager

Following the recent resignation of A. A. Newbery as manager of the Inland Empire Dairy Producers' association, G. D. Railsback of Medical Lake, Wash., a member of the board of directors of the association, has been appointed to the vacancy. Charles Waggoner of Post Falls, Idaho, has retired as superintendent of the byproducts plant in Spokane, but will continue as a member of the executive committee. President H. S. Findley of Cheney, Wash., made the following statement regarding the resignations of Mr. Newbery and Mr. Waggoner:

"Mr. Newbery, on account of ill health, asked to be released at the annual election, but the directors declined to consider it. Afterward he renewed his request and the board accepted it March 7. Mr. Waggoner is retiring because of the illness of his wife and in order to give more time to his work on the farm. The board of directors is standing solidly behind Mr. Railsback, who succeeds Mr. Newbery as manager for the association."

That there is some criticism among the members of the association of the conduct of the association's affairs is indicated in the recent filing of a petition by 10 members asking that a meeting of the association be called to consider various phases of the association's management. The petition was submitted by H. J. Upham, a member of the association living on Peone prairie, near Spokane, who, with nine other members, signed it. The petition is understood to charge that the business conducted at the last annual meeting of the association was not done in accordance with the association's rules.

"The books of the association are open to its members at all times, said G. D. Railsback, the new manager, commenting upon the filing of the petition. "We will call another general meeting of the stockholders whenever a proper petition is presented, and are sending the other petition back with the request that it be properly dated.

"The affairs of the association are in good shape and we are rapidly getting on our feet. While we have a lot of milk now coming in, between 6000 and 7000 gallons a day, we are not requiring members to accept a reduced price for their surplus of milk, as we had to do a year ago at this time."

The Inland Empire Dairy association has increased its membership by over 100 per cent since it was determined, about 10 months ago, to put a byproducts plant into operation in Spokane with a view to exercising a degree of control over the marketing of the association's product. It now has a membership of more than 700 producers of milk in the territory of eastern Washington and northern Idaho tributary to Spokane.

Following the opening of the byproducts plant last August the association cut the price of retail milk from 13 cents a quart to 12 cents and later from 12 cents to 10 cents. All the private distributing companies serving the city met this reduction for several months, during which several attempts were made between the producers' association and the distributing companies to agree upon a higher price for retail milk and a fixed price at which the private companies would purchase practically all of their milk supply from the producers' association. This agreement was not reached until a few weeks ago, when all but one of the large distributing companies agreed to purchase milk from the association's plant at a price of $2.85 per hundred net for milk testing 3.8 per cent butterfat. This was considered a marked victory for the producers' association. Following this agreement the retail price of milk was returned to the original figure of 13 cents per quart. This price is being paid at the present time by most of the consumers in the city of Spokane, though a number of small independent distributing companies are retailing milk at from 10 to 11 cents a quart.

CAN HAVE IRRIGATION WATER.

L. M. Holt, supervising engineer for the Wapato project on the Yakima reservation, announces that he has received from Charles H. Burke, Indian commissioner, a ruling to the effect that he would not be compelled to withhold water from the lands of settlers who have not yet been able to pay their construction charges. In case of such settlers, the Indian service is to have a first lien on their crop to assure payment of delinquent charges. The ruling is a step in a series of differences between the project residents and the authorities, as the farmers claim in some instances that they are unable to pay the construction charges of $5 an acre at this time. They were threatened with not getting any water for the season's crops.

The Piston Ring

Wherever power is produced by pressure exerted on a moving piston, whatever the type of engine, motor or compressor, its effectiveness is largely determined by the piston rings.

Upon the piston rings depends whether all of the force that is put into the cylinder (gasoline in the case of automobile motors, steam in steam engines, air in air compressors, etc.) is used to create power, or whether part of it escapes and is wasted. Upon the piston rings also depends control of cylinder lubrication; whether or not more oil than is needed to properly lubricate works up the cylinder walls to form carbon and, in gasoline engines, to foul spark plugs and make smoke.

All pistons are necessarily made slightly smaller than the cylinders in which they operate. They must be enough smaller so that when they become heated in service they will not bind in the cylinder.

Piston rings are light, springy bands of iron that are fitted into groves in the piston. It is their function to close and guard this space between the piston and cylinder; to spring out against the cylinder wall with a definite, firm contact, equal at all points of their circle, so that there can be no escape between piston and cylinder wall for the power that drives the piston. So that no excess lubricating oil can creep up the cylinder walls to make trouble. Upon the equality of their tension against the cylinder wall at all points depends not only the maintaining of compression and restraining of excess oil, but also maintainance of round and true cylinders. Rings of imperfect tension, that bear more heavily at one point than another, mean unequal wear on the cylinder walls and out-of-round cylinders eventually.

Each ring should form a complete and concentric circle in perfect adjustment and conformity to the bore of the cylinder.

Not only is there waste of power where poorly fitting or worn rings permit gas to escape past them, but their gas condenses in the lower part of the cylinder, working then down into the crank case, where it mixes with the lubricating oil. Gasoline is not a lubricant. It deteriorates the lubricating oil and the result is unnecessary wear in the motor because of ineffective lubricant.

Equal tension—uniform pressure outward from the ring's center against the cylinder wall at every point of its circumference, is the basic requirement for a piston ring properly designed and made to develop and maintain maximum compression and maximum fuel economy.

Wider Irrigation Policy

Development of the state's policy of reclamation and land settlement to the "ultimate end that all available irrigable lands of the state may be intensively cultivated," and indorsement of the Smith-McNary bill were embodied in resolutions passed by the state chamber of commerce at its session in Olympia.

N. B. Coffman of Chehalis was elected president for the coming year; Colonel Paul Weyrauch of Walla Walla, vice president for the east side of the state; State Treasurer C. L. Babcock of Olympia, vice president for the West Side; F. D. Case of Wenatchee, treasurer.

ELIAS W. KIRKLAND.—Shelton, Wash. —I need no urging to renew my subscription to The Washington Farmer. I want to thank you for the interest you are taking. I can well afford to take such a paper.



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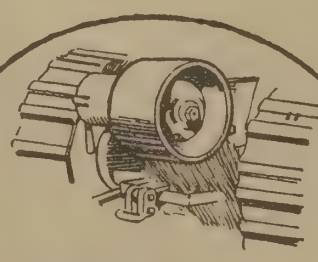
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Highest grade materials are used—nickel steel, chrome nickel steel, chrome vanadium steel, saw steel—there is not a carbon steel gear or shaft in the entire tractor. All bearings—except, of course, in the motor—are anti-friction: ball, roller or tapered roller. Perfect lubrication and complete enclosure from dust and dirt further insure long life.

Many of the first "Caterpillar" Tractors built are still doing daily duty. Model T-35 possesses, in a highly developed degree, the same qualities that have made that record possible. That means that it will do your work dependably and economically. A Pacific Coast factory and service organization mean that you get real service—quickly. Write at once for complete catalog.

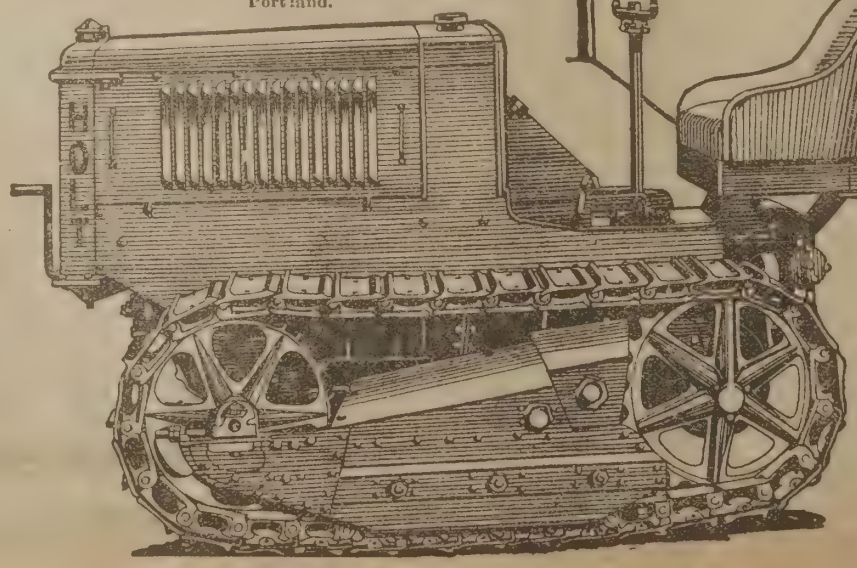
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T-35 tractor



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The belt pulley unit gives the T-35 Tractor a vast field of usefulness for stationary work in addition to the innumerable tractive jobs it will handle. With it you can pump, grind, saw and do other belt jobs easily and quickly. The belt pulley operates at 3,000 feet per minute belt speed.



There's only one Caterpillar Holt builds it

Sanitary Farm Water Supply

New Utility Room Is Figured Out for Modern Farm Home

A good water supply, a complete sewage disposal plant, and effective heating and lighting systems constitute the four prime utilities of the farm home, the foundations of safe, comfortable living, says George M. Warren in Farmers' Bulletin 941 of the United States department of agriculture, "Water Systems for Farm Homes." To secure these ends in greatest measure, thought and planning are necessary. If the procedure is haphazard, if the parts are not correlated, there is neither economy in the construction nor satisfaction in the operation of the plant. To illustrate: When locating the well, the direction of surface and underground drainage should be considered, to the end that the water supply may not be contaminated by the sink drain, cesspool, or other sources of filth. The unused water from a spring or flowing well may be made valuable if brought to a watering trough, cooling tank, fish pond, or swimming pool, or harvested as ice. A saving may be effected by laying two lines of pipe in one trench. The engine which drives the pump may operate other useful appliances, such as a dynamo, saw, washing machine, cream separator, or churn. The accompanying cut suggests a utility room built as an addition to a farmhouse having few improvements and no cellar. Attention is directed to the convenience of a laundry and a lavatory and a warm, dry room just off the main part of the house where farm hands can wash, and in stormy weather deposit their wet coats, boots and shoes. A notable example of home-planning utilities is found upon a farm in northern Utah. By personnal planning and hard work the owner of this farm gradually has equipped his house with a pressure water system, a laundry containing a power washing machine, wringer, mangle, and drying machine, a heating plant, electric lights, electric range, electric heaters for emergency use in chambers, and a vacuum cleaning system.

Observation indicates that on the average three out of four farm wells are located within 75 feet of the back door of the house and in the direction of the barn. That convenience and first cost—not safety—have been the deciding factors in the thousands of such locations is a fact made evident by the proximity of barnyards, pig pens, pastures, fertilized fields, sink drains, privies, cesspools, and house yards rendered insanitary by chickens, slops, garbage, and other filth. Too frequently the leach from these or other sources of filth, after joining the ground water, moves with greater or less directness to wells and springs, seriously impairing the water supply by organic impurity or grossly poisoning it with human sewage.

Among other ways by which surface waters and open or poorly covered wells and springs are contaminated or receive noxious substances are: Surface wash from roads, ranges, or the other sources of filth above-mentioned; bodily entry of stock and poultry or their droppings; filth from the shoes of careless farm hands and children; drippings from the dipper or bucket handled by carriers of diseas; dust and leaves from the air; and entry of worms, bugs, spiders, toads, frogs, mice, snakes, cats or other animal life, which through death and decomposition may impart to the water disagreeable odor and taste and perhaps more serious characteristics.

Lambs Make Big Gain

Ernest Wilson of Ellensburg, Wash., reports that four of his purebred Hampshire lambs averaged 59.8 pounds in weight at an average age of 58 days (March 9), the heaviest ram lamb weighing 73 pounds at 65 days. Ernest says he has a 140 per cent lamb crop saved to date on his own ewes and 130 per cent on the imported Hampshire ewes which he is leasing from Robert Blastock of Filer, Idaho. The lambs are consuming somewhat over 25 pounds of grain mixture daily fed them in their lamb creep.

These lambs are all sired by a very choice imported ram brought over by Bob Blastock three years ago.

Home Grounds

Beautiful home grounds are an asset to any farm and will not only make the home life more attractive, but will often add to the value of the property.

"Convenience is one of the first considerations to emphasize when planning the home grounds," said A. M. Doerner, landscape architect of the state college, while giving a series of lectures to the community farm bureaus in King county. "The proper arrangement of buildings, fences and gates will help to lighten the daily tasks about the house and barnyard and will also make a great difference in the looks of the place.

"When planting shrubs or flowers arrange them so they will be at the border or next to the buildings in order to give the lawn a more even appearance. A flower bed in the center of a lawn makes it inconvenient when mowing. Flowers along the border are not so noticeable after dying down in the winter. The dead leaves will cover the ground and if necessary the beds can be left until spring, whereas if they were in a more conspicuous place they would need attention.

"The decorative effect of shrubs next to a building or along a fence serves to blend the colors of the house and the lawn. Almost any kind of shrubs can be used to advantage if properly placed. If one thinks of his place as a picture and plants his tall trees so that they will give the effect of the frame on a picture he will get better results than if he plants the shrubs promiscuously. It is a common custom to get the shrub first and then look for a place to plant it. We are working for an improvement in effect, and should have the plan in mind before beginning to plant.

"It is not necessary to purchase expensive shrubs in order to have a beautiful house yard. Nursery shrubs are good when one can afford them, but one can often find native shrubs that can be worked in to great advantage. It is often advisable to buy young shrubs, plant them where they will be most effective, and wait for them to grow. Such shrubs increase in value as they increase in size, and one may secure several valuable young shrubs for the price of one large one. It is much better to start in this way than to put off beautifying the grounds until one is able to buy mature shrubs.

In answer to a question as to whether a lawn should be planted when no one has time to attend to it, Mr. Doerner explained that it is better to have a lawn and mow it once or twice with a team rather than to have a bare yard where weeds are sure to grow. In many cases sheep can be used to keep the grass down and it makes a neater appearance than tall grass or none at all. A small lawn well cared for is better than a large one that is allowed to run down. It is also easier to take care of a good lawn than one that is choppy or cut up with flower beds.



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3 To maintain repairmen of broad experience, judgment, and mechanical and electrical ability, upon whom owners of all makes of batteries can depend for accurate reports and sound advice as to the condition of their batteries, as well as expert repair service when needed.

4 To remember that good-will is the most precious of commercial assets to each one of us; and that the battery owner who comes in for testing and water is as welcome and as fully entitled to prompt, cheerful, expert service as the owner who is in need of work that creates revenue.

5 To manifest at all times, and to all visitors and customers, the same courtesy, interest, helpfulness, and good-will that we would like to receive if the position were reversed.

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LIVESTOCK AND DAIRY

Dairying Without Pasture

By E. G. Woodward.

Dairying is not generally practiced where pasture is not available, except in the immediate vicinity of large cities where the demand for market milk is very good. This does not mean, however, that dairying in some outlying districts is impracticable, even though pasture is not available.

Pasture is considered a perfect food for the dairy cow; whereas dry feeding, no matter how scientifically followed, may in the long run lead to unsatisfactory results. In other words, pasture for a few months during the year serves as a safeguard against improper feeding during the remaining portion of the year when the cow is on dry feed.

I would suggest that where there is no pasture available, but alfalfa is grown, the cow be fed at least a part of the summer on green alfalfa direct from the field. Where alfalfa is used as a soiling crop in this way it will answer the purpose of pasture. In winter silage or roots in the ration will do much to maintain the herd in proper condition.

Epidemic of Rabies

Referring to a dispatch from Washington, D. C., that an outbreak of rabies is raging in eastern Washington, Dr. Paul H. Turner, state director of health, says that this epidemic has been "pretty well brought under control."

"There was some alarm," Dr. Turner said, "when it was recently reported that rabid coyotes had crossed the Columbia river eastward into Whitman county. Hunters are rapidly slaughtering the coyotes, however, and there seems to be little danger of the epidemic's spreading."

During the six months, he said, three persons were bitten by rabid animals, but they were given the Pasteur treatment promptly and there were no deaths. The state directors of health and agriculture are working with the federal department of agriculture to stamp out the epidemic.

TWO BIG SHOWS.

September 25 to October 1, 1922, are the dates of the 13th annual Dairy Cattle congress at Waterloo, Iowa, the show's permanent home. The management reports that arrangements for this year's show are being made under very encouraging conditions.

During the same week the fourth annual International Belgian horse show will be held at Waterloo. This exposition is unique in that it is the only single breed horse show held in America. Last year there were more than 250 Belgian horses exhibited.

Did This Change Pay?

In a certain herd there were 12 common grade cows and one inferior grade bull. These cows averaged to produce about 3200 pounds of milk a year. The bull was finally disposed of and in his place was used a good, purebred dairy bull. His seven daughters, during their first year of milk production, averaged practically 5600 pounds each. This was an increase of 2400 pounds from each of the seven, or 16,800 pounds, for the year over their dams. Figuring this milk at $2.50 per 100 pounds we find the increased value of the milk worth $420.

The Feed of a Champion

Here is a statement of the feeding of Beauty of Chicona, the 4-year-old Guernsey cow in the herd of A. L. Gile, Chinook, Wash., that recently became state champion in her class by producing 13,563.7 pounds of milk with 742.69 pounds of butterfat:

Dec.—16 lbs. daily of the following mixture: 300 lbs. each corn meal and ground barley, 200 lbs. ground oats, 50 lbs. each cottonseed meal and soy bean meal, 35 lbs, roots, silage, 10 lbs. mixed hay.

Jan.—18 lbs. daily same mixture as December; 3 lbs. beet pulp, 25 lbs. silage, 10 lbs. mixed hay.

Feb.—Same ration as given in January.

Mar.—15 lbs. daily same mixture as December; 1 pt. molasses, 3 lbs. beet pulp, 25 lbs. silage, 10 lbs. mixed hay.

Apr.—Same grain ration as March; 3 lbs. beet pulp, 15 lbs. turnips, 20 lbs. alfalfa.

May—Same grain ration as March; 3 lbs. beet pulp, 15 lbs. roots, 20 lbs. alfalfa to the 16th, pasture.

June—14 lbs. daily same mixture as December, pasture.

July—12 lbs. daily same mixture as December, pasture.

Aug.—11 lbs. daily same mixture as December, pasture.

Sept.—11 lbs. daily of the following mixture: 100 lbs. bran, 300 lbs. corn meal, 200 lbs. each ground oats and ground barley, 50 lbs. each cottonseed meal and oil meal, 1 pt. molasses, 3 lbs. beet pulp to the 15th, pasture.

Oct.—9 lbs. daily of the following mixture: 100 lbs. bran, 200 lbs. each corn meal, ground oats and ground barley, 50 lbs. each cottonseed meal and oil meal, 1 pt. molasses, 3 lbs. beet pulp, 20 lbs. roots to the 15th, pasture.

Nov.—7 lbs. daily same mixture as October, except soy bean meal in place of oil meal, 1 pt. molasses, 3 lbs. beet pulp, 20 lbs. each roots and mixed hay.

Wool Under U. S. Warehouse Act

The United States bureau of markets is convinced that thousands of woolgrowers have been benfited by the United States warehouse act. In fact, during the last year, about one-sixth of all the wool produced in this country was handled by warehouse men operating under the United States warehouse act.

Many of these growers shipped their wool from the farm or ranch to a licensed warehouse in a marketing center. Others gathered their wool by pools and stored it in a local licensed warehouse to be made up into car lots and then sent to a concentrated center or place of sale.

In the first method the warehouse receipt is the same after your wool is stored at the marketing center.

In the second plan a bonded warehouse receipt for ungraded wool is issued as soon as it is stored in the local licensed warehouse. By this means an opportunity is given of being financed continuously from the time the receipt is taken to the bank until the wool is sold at the concentration or marketing center.

Growers who have had experience under this act know that their wool is generally safer when placed in a warehouse licensed by the federal government and that it is properly handled because of the government inspection and supervision. From the grading of the wool on a commercial basis in such warehouses, valuable information is obtained concerning the wool the grower is producing, which frequently indicates how the wool and the flocks or band may be improved to produce the most profitable quality.

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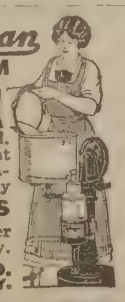
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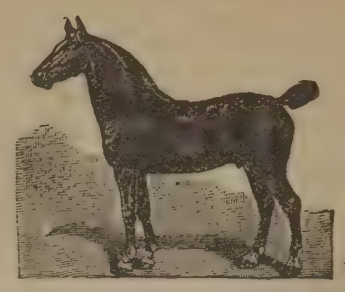
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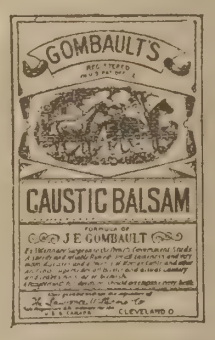
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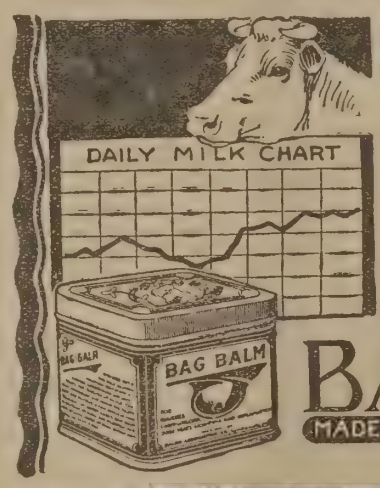
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Imported Mowing Blades

Raise Beef on Wheat Farms

By C. M. HUBBARD, Live Stock Extension Especialist, W. S. C.

Wheat farmers of the Palouse section are again turning toward more live stock. A careful perusal of the sale lists of Shorthorns sold in February by Day & Rothrock at their Sprague ranch and the Shorthorn consignment sale at Spokane the previous day shows that 58.9 per cent of the Shorthorns sold were purchased by Whitman and Columbia county farmers and ranchers. Nine of the 16 bulls and 24 of the 28 females sold by Rothrock were purchased by buyers from Whitman and Columbia counties; 6 out of 15 bulls and 7 out of 19 females in the consignment sale were shipped to Whitman county.

These purchases indicate that the beef cattlemen of this section are founding new herds or are building up their present herds in order to take advantage of a reviving interest along cattle lines, because they realize that with cheaper concentrates and roughages, with a lower price for wheat, history will repeat itself and good cattle will again pay dividends and be in demand.

As time passes, the fields of the Palouse are being seeded to an increasing amount of alfalfa, sweet clover and field peas; this from the standpoint of increasing the humus content of the soil in order to prevent the ever increasing amount of soil eroson, and also in order to maintain fertility and to furnish a certain amount of pasture for live stock. Peas and corn are finding a larger field of usefulness on land formerly allowed to lie fallow, it being found more profitable than allowing the land to remain idle.

Thus a larger amount of roughage and an increasing acreage of legume pasture become available from year to year. The proper utilization of these feeds calls for a certain amount of cattle to fatten for market, for a certain number of grade herds to furnish at least a part of these cattle, and, in turn, for purebred herds to furnish high-class sires for use on the grade herds.

Consequently, in the purchase of high-class herd bulls, bred females and heifers at the recent sales, a determination is shown on the part of leading Palouse farmers to make their best cattle better, to increase the size of their herds, and prepare for a greater general interest in beef cattle in order to supply a larger demand for meritorious sires.



The above are the Shorthorn steers with which the State College of Washington won first and second and grand championship over all breeds at the 1920 Western Royal Live Stock show. The college also won the Shornhorn championship at both the Western Royal and the Pacific International last November.

MORE WHEAT; LESS MONEY.

Notwithstanding the fact that there were nearly 50,000,000 bushels more wheat and wheat products exported during the year 1921 than during the year 1920, the value of the exports of 1920 was more than $160,000,000 greater than that of 1921.

Farmers Live Stock Committee

The Producers' Live Stock Commission association opened for business at the national stockyards, East St. Louis, Ill., January 2. At the close of its eighth week it reports doing more business than any of the other 55 commission firms in that market. The association is the outgrowth of the cooperative marketing plan of the Farmers' live stock marketing committee of 15, appointed by President J. R. Howard of the American Farm Bureau federation.

The company doing business at East St. Louis is one of the chain of farmer owned and controlled live stock commission houses which will be joined together by the National Live Stock Producers' association.

Contrary to what usually happens, the new producers' company not only paid expenses the first week, but was able to put a sizable percentage of the commission collected into its earnings account. The second week it was able to put four times as much into its earnings account and it has increased correspondingly ever since.

As the company operates on a cost basis all earnings will be prorated back to the members. Prices which its members have received for their stock are said to have reached higher than the average that the packers have paid.

"We have repeatedly topped the market in all departments," says H. E. Fike. "We not only get new customers every day, but what is more important, we are getting the prices and our old customers are staying with us. The large packers are buying from us on the same basis as they buy from other commission firms."

A movement is already on foot to organize a producers' live stock cooperative marketing association on the Buffalo market.

President John D. Brown of the general association says that there is no question but that the cooperative commission companies can hire men of as good quality as can the old line firms. The majority of persons connected with the commission firms are on a salary basis and are willing to work where they can get the most money and where their opportunities are the greatest; in fact, "since we have started operations we have had scores of applications not only from paid employees, but even the owners of many old line commission firms have offered to sell to us and go to work for us."

Plans are made for opening offices in Chicago, Indianapolis, Buffalo, Pittsburgh, Cleveland, Cincinnati, Toledo and Detroit. According to President Brown, within 12 months companies of the National Live Stock Producers' association "should be operating in at least 12 markets. If conditions warrant and local stockmen demand it, an office will be established in any live stock market. The plan under which we work has the support of national and state agricultural and live stock organizations of the various county and state farm bureaus and of the American Farm Bureau federation."

Mr. Brown adds: "Every one connected with the marketing of live stock realizes the need for a better regulation of the flow of cattle, hogs and sheep for market and nothing short of a farmers' marketing organization working along national lines will ever be able to get results.

"The cooperative marketing plan of the National Live Stock Producers' association is built from the ground up. The individual live stock producers of the nation constitute the foundation. The producer is urged to join the local cooperative live stock shipping association. If he does not do so, however, he may still avail himself of the selling-at-cost features by shipping his stock direct to the farmer owned and controlled commission company."

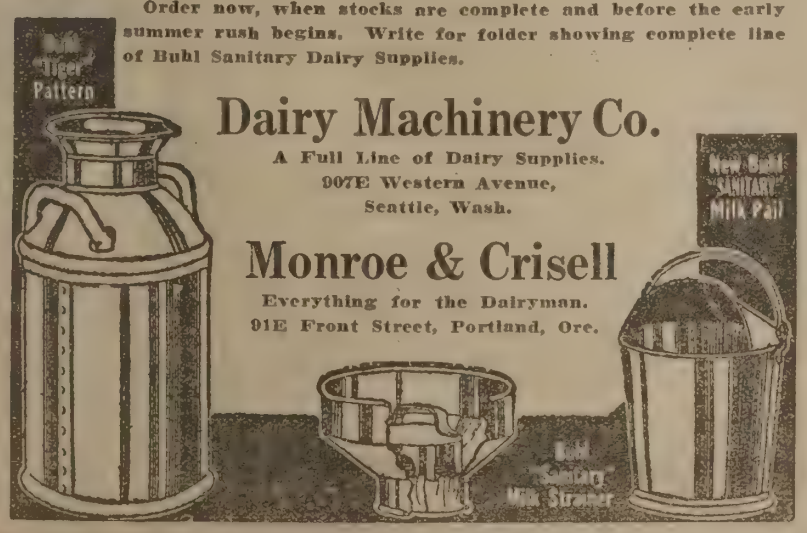
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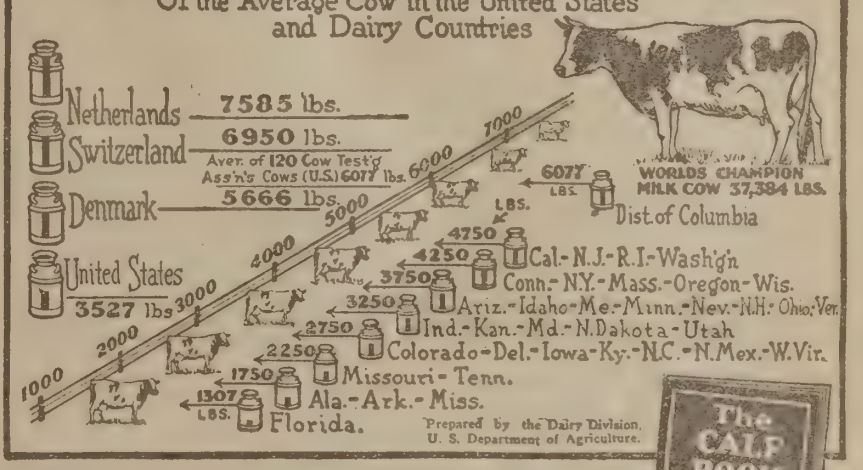
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PRODUCTION of MILK
Of the Average Cow in the United States and Dairy Countries



Prepared by the Dairy Division, U. S. Department of Agriculture.

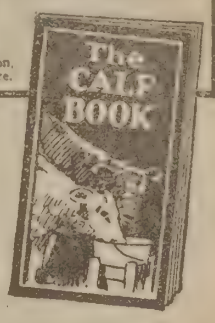
Not More Cows—But Better Cows

Compare the average yearly milk production in the United States, of 3,527 lbs. per cow, with that of other countries shown above. You will see at a glance that one of the greatest means of increasing dairy profits is in obtaining better cows.

The cheapest and best way of getting better cows is to raise them. Use a good bull, keep the best calves from your best cows and raise them on De Laval skim-milk, which is a splendid feed when properly fed. In this way you can improve your herd at very little cost.

A De Laval Separator is valued chiefly because it separates cream—a cash crop—better, quicker, cheaper and without waste. But of almost equal importance is the skim-milk it gives, which will replace your present cows with better cows; or as Pren Moore of the University of Idaho says, "when fed to laying hens will bring you as much money as the original butter-fat;" while it is without equal for growing pigs.

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Cream Separator and Milker

POULTRY AND RABBITS

Care of Pullets

If Raised for Breeding Purposes

By GEORGE R. SHOUP, Poultryman, Western Washington Experiment Station.

If pullets are to be used as breeders they must never be forced to lay past their powers of recuperation. Some flocks, notably those produced from the males from low-producing mothers, can not hold even a 60 per cent lay for any length of time.

In districts where trapnesting is practiced sufficiently to supply high dam record males there is little trouble of this kind, but chicks from dfstricts were trapnesting is not popular have generally inherited a much shorter cycle of lay, although the chicks are ofte nfully up to the standards in vigors and the mortality in the brooder quite low.

It is a lamentable fact that the lower the rate of productivity the greater is the fertility of the eggs and the vigor of the chick. But a flock of pullets may have every indication of health and vigor and have ancestors with laying records of only 100 eggs back of them. These birds can rarely be made to show a profit in the year's run. They make excellent breeders from the hatching man's standpoint, and many a flock is lauded to the skies because of the fertility of the eggs, but they often fail to produce. Had their owners used high-record males on these vigorous dams at least 50 per cent of the pullets might be expected to inherit the egg-laying propensity of their grandmothers on the male side, and the flock should show a handsome profit.

Manifestly the problem is how to prevent the pullet of great egg-laying inheritance on both sides from laying herself to death or ruining her constitution to such an extent that she is unfit for a breeder the second year. This is a very grave problem and we do not claim to have thoroughly solved it, but the following suggestions have been practiced on the station flocks and have resulted in reasonably fertile eggs and vigorous chicks.

Never Overstimulate.

Never allow the production to run over 65 per cent and try and hold it down to 60. Never use condiments, such as pepper, mustard or so-called tonics. The only medicine which has ever benefited a chicken internally is a physic, and epsom salts costs only 10 or 15 cents a pound. Use only 12 hours of lighting if morning light alone is used, and 14 hours if evening light is used.

The amount of protein concentrate is an important factor in the feed. We believe that the dry mash compound of the various ground mill feeds with the concentrates added should be so proportioned that the concentrates, such as fish meal, beef scraps, soy bean meal and oil meal, do not comprise more than one-tenth part of the total bulk of the mash. These concentrates are the most difficult part of the ration for the chicken to digest and are a frequent cause of indigestion.

The soy bean meal should be a bright yellow color, not brown, thus indicating that it has been properly processed, and should be almost odorless, indicating no mold. The fish meal should be light and fluffy and free from pulverized particles, indicating that the fish offal was fresh and not decomposed. It is quite possible to show a pure fish meal product in a pulverized state, but it impossible to show the meat tissue and fluffy consistency if the fish were decomposed. The beef scraps should be free of horn, hoof, hide and wool and contain very little bone.

Whenever any of the mash ingredients have caked in the sacks it is advisable not to use them for poultry. This caking indicates moisture and has probably caused the feed to mold. Mold is like yeast in that it will spread through your entire mash mixture if one of the ingredients is moldy. Every poultryman should take great pains to see that the mash, whether bought prepared or mixed at home, is made from clean, wholesome products only.

Pullets intended to be used as breeders the second year should have a liberal supply of clabbered skimmed milk or buttermilk every day. This is the most digestible form of animal food for poultry and its benefit for a prospective breeder can hardly be overestimated.

The last and most necessary ingredient in the diet where artificial light is used to promote winter egg laying is the green food supply.

Lack Hatching Power

By W. D. BUCHANAN, Poultry Extension Specialist, Washington State College.

Why do so many chicks die in the shell? The question is being asked more frequently than ever. The last winter has been long and rather severe. The birds have been housed more than usual. Green food has been scarcer and so the birds are not in such fine condition.

Last year we had a mild winter. The birds were allowed to lay and were even coaxed to lay. When the hatching season came they were not layed out, but were laying eggs that lacked hatching power. The cause was different, but the condition was the same. The chickens were not in the pink of condition. Too many eggs failed to hatch.

The sooner the poultrymen realize that they must guard the vigor of their flock as carefully as they would guard their most valued treasures, the better off they will be. The hens must not be forced for eggs and they must be allowed to run out of doors, even if the weather is bad. They will not lay as many eggs, but they will lay eggs with a kick. It is better to get one egg that will hatch a good healthy chick than to get two eggs, one of which fails to hatch and the other hatches a chick which is no good.

Why do eggs hatch better in this state than they do in Iowa or Indiana? Because in those states the winter is still longer and harder than it is here. The birds are housed more and they have less green feed. Our big asset is our mild winters and our abundance of green feed, but it is an asset that we must use. We must not take advantage of it to get more eggs, but to get more vigor, and we must plan for the unusual weather and the possible shortness of green stuff. The birds should be educated to eat alfalfa leaves and blossoms, preferably soaked in tepid water. When kale does not winter the alfalfa should be supplemented with mangles or beets. The main thing is to be ready for an emergency and to use the out of doors.

Hares or Rabbits?

What's a hare, and what's a rabbit? Many confuse them.

In the first place, the hare never burrows. The young are born on the surface soil, generally by twos and more rarely even by fours or sixes at a litter. Their eyes are open from the first. A hare a week old can almost care for itself.

The rabbit litters in a burrow, dug by its own or previous maternal care, and from its own body plucks fur to line the nest and cover the young. They are blind, naked and helpless at birth, and their eyes may not open for 12 days. Litters include from six to 12. Only the wild cottontail, usually, is likely to nest in tall, tufted grass.

The mature hare is longer of ear and of body than the rabbit, and has more noticeably developed hind limbs.

Thus the Belgian hare, so-called, falls categorically into the rabbit group, along with the Flemish, Blue, New Zealand Red, the Giants and many others. So, also, do the Lops, the Himalayans and the Dutch. All these will burrow if allowed to do so. The Belgian hare, however, while retaining its true rabbit policies, has been bred to the hare type—body long and slim, ears and hind legs long, a racy breed essenitally.



William found a pocketbook but the string jerked it back

It looked like a happy discovery as it lay there on the sidewalk—until the discoverer reached to pick it up. Then the hidden string jerked it away. All William got was disappointment.

That's the way a good many people have found it to be with the comfort and cheer they thought they had secured in tea and coffee. When they came to depend on it—there was a hidden string, and nothing left but disappointment.

The drug, caffeine, in tea and coffee, is a nerve stimulant. Constant stimulation of the nerves often produces rebellion that takes the form of sleeplessness, headaches, irritability, high blood pressure. That's the string to tea and coffee.

Postum, that wholesome and delightful cereal beverage, is completely satisfying and there's no harmful quality whatsoever, to jerk away the comfort which you find in this splendid table drink. Any member of the family may enjoy Postum with any meal—and there will be no after-regrets.

Postum comes in two forms: Instant Postum (in tins) made instantly in the cup by the addition of boiling water. Postum Cereal (in packages of larger bulk, for those who prefer to make the drink while the meal is being prepared) made by boiling for 20 minutes. Sold by grocers.

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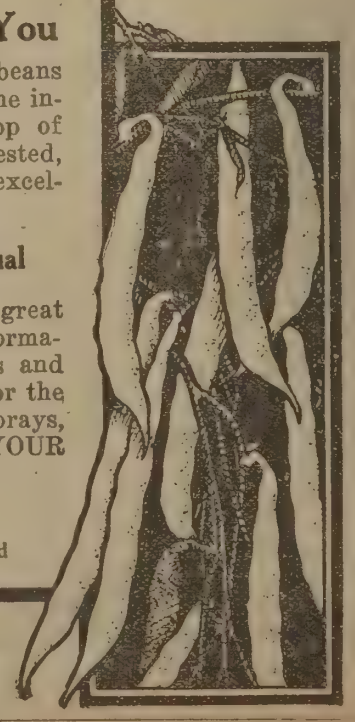
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Read the "Want Ad" page this week for good offers of all kinds.

ORCHARD AND GARDEN

Questions Answered

By O. M. MORRIS, Head of Horticulture, Washington State Colelge.

What shall I do for my Royal Ann cherry tree, 5 years old and in a sunny place? It is split open on the south side and the bark has rotted. Sap ran out last year. I cleaned sore and filled with cement, but it bursted off and is worse than ever. MRS. G. B.
Stevenson, Wash.

There is little that you can do to your Royal Anne cherry tree except to carve out the rotted wood and refill with cement. If you will drive a few nails part way into the wood in the cavity, this will make a tying hold for your cement when it is used to fill the base.

After carving it out, however, it would be a good plan for you to paint the cavity with some disinfectant like corrosive sublimate solution of water, made by dissolving one tablet in about four or five pints of water. Lime sulphur can be used for this same purpose, but is less commonly used for it.

It is very difficult to bind up the wood of a young tree in that form. If your tree is old and has developed a large enough volume of solid wood to make a support, the oldest wood then can rot away without seriously affecting the vitality of the tree, but this is hardly possible with young trees. Under such conditions it is often wise to remove the tree and start a new one.

GROWING CUCUMBERS.

I have heard of raising cucumbers around a barrel filled or partly filled with manure. Can you give me any information about how this is prepared?
Palouse, Wash. MRS. A. A.

You can grow good cucumbers or almost any kind of crop by setting a barrel about half its length in the soil. Fill the barrel half or two-thirds full of manure. See that it has plenty of openings in the bottom and lower part of the sides, so that the water can pass out. Then as often as the soil conditions require pour enough water in the barrel to form a good irrigation of the soil.

Plant your cucumbers or tomato vines about 8 to 14 inches from the edge of the barrel and you will have started the fundamental requirements for a splendid crop. One of the most vivid memories of my boyhood is connected with the part I played in producing a most wonderful crop of cucumbers by this method. I did not enthuse over the cucumbers, but I do remember of having to carry water at least every other morning to fill that barrel and it seemed to me then that the barrel certainly held a great deal more water with the manure in it than it ever could have held had it been entirely empty.

PREPARING SOIL FOR A LAWN.

What is the best way to prepare soil for a good lawn? MRS. E. P. C.
Richland, Wash.

One of the best ways to prepare soil for a lawn is to plow it and then disk into the surface soil a good heavy dressing of well rotted barnyard manure, harrow and drag to a level surface and then roll down firmly.

The soil should be pulverized to a depth of six or eight inches and then given a repacking, not to make it hard, but firm so that when the ground settles, as it will with frequent watering, it will retain a uniform level and condition throughout.

CROSS-POLLENATION OF CHERRY.

I have about 30 splendid cherry trees. They are about 15 years old and are composed of Bings, Royal Annes and Lamberts. In the spring the trees are covered with blossoms, but most of them fall off after the bloom. I do not get over one-fourth of a crop. The fruit I get is of a splendid type. Could you tell me what to do for them to make the blossoms stay and get a good crop? W. F. M.
Asotin, Wash.

The trouble in your cherry orchard is that the Bings, Royal Anne and Lambert varieties are all practically self-sterile and equally intersterile. You will be forced to introduce another variety, preferably Black Republican, Tartarian or Waterhouse, and have this other variety come into blossom so that cross-pollenation can take place before your trees will fruit satisfactorily. You may top graft about one tree in 12 with one of the varieties suggested. This will hasten the production of the desired variety of flowers.

If you are in doubt about the value of the suggestion made here it will pay you to look about and find some orchard where you can secure the privilege of cutting some large branches of one of the varieties desired while these branches are in full bloom. Take a branch four or five feet long, if possible just as it opens into full blossom, set the butt end of it in a pail of water and fasten that in top of one of your trees, or do so in several trees and watch results. If it increases your crop you will have at hand, I think, a reasonable evidence as to the cause of your crop failure in the past. It will pay you to do this for three or four years until your top-grafted trees come into blossom.

CAMPBELL EARLY GRAPES.

Would grapes and cherries do any good in the Blue Creek section? Ours is not bottom land, but what they call here the first bench of the hills. Our neighbors raise peaches, plums, prunes, etc. Do you think plums would do any good for fruit and shade for poultry? MRS. C. G.
Blue Creek (Stevens county), Wash.

It is rather doubtful whether you could succeed with any varieties of grapes in your district. In all probability an early variety like the Campbell Early might give you fairly satisfactory results if planted on a south slope.

Peaches, plums and prunes should do well and the plums especially would make good plants to grow in your poultry yard. However, this plant responds well to cultivation the same as cherries and peaches. There is no reason that I could see that poultry should not be permitted to have full range under all of the fruit trees on the ordinary farm.

ROSES STARTED FROM SLIPS.

Will a slip taken from the peasant rose bush and set out and started bloom? If not, how do florists propagate their plants? R. L.
Davenport, Wash.

The slips taken from the peasant rose bush will blossom. All of rose bushes commonly handled in our nurseries are grown from cuttings just as this practice indicates. Some of the most tender varieties are budded or grafted upon more hardy stocks. The Manetti rose stock is most commonly used as a stock. Its blossoms are small and of little consequence, although it will produce blossoms.

Powdery Mildew in Orchards

According to D. F. Fisher of Wenatchee, plant pathologist of the United States department of agriculture, powdery mildew is becoming a serious disease in the orchards of the state of Washington. The first really bad infection of the disease was in 1915 and since then it has been more or less prevalent, though varying according to the season. Last year was a bad mildew year. The mildew is carried over the winter in the buds on the trees, but it is not practical to spray for it until the buds have swelled in the spring. However, in the winter the affected twigs can be pruned away, as the twigs carrying the mildew are readily recognizable because of their whitish appearance Mr. Fisher explains that no pains need be taken to burn or destroy these twigs, as the mildew can not be spread from them However, twigs removed in summer would be likely to contain spores, by means of which the pest might be spread. The first spray applied for mildew is when the buds are in the pink. Lime-sulphur spray at the rate of 1 to 50 is applied at this time as an extra spray. Again when the calyx spray is applied the lime-sulphur is added. Another extra application of the mildew spray is made half way between the calyx spray and the first cover spray, and the lime-sulphur is added to the first cover spray. These four sprays for mildew should be sufficient and only in cases where the infection is very bad is there need of more applications. In order to avoid the danger of spray burn it is not safe to apply the lime-sulphur later than the time of the first cover spray.

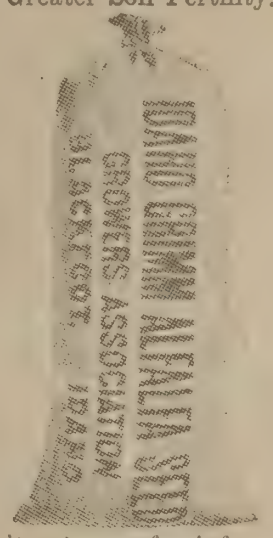
Of all spraying operations none need to be any more thorough than the mildew spray, for the foliage and the tree as a whole needs to be covered thoroughly. Both the under sides of the leaves as well as the upper sides must be covered if a thorough job is to be done.

CERTIFIED. GENUINE.

GRIMM ALFALFA SEED

Insures You
Hardiness, Drouth Resistance, Increased Production and Greater Soil Fertility.

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Write at once for information and prices.

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BLACKFOOT, IDAHO.

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Then there's power economy. The working parts of a Case Thresher are few, simple and well balanced, making for light weight, easy running and saving in power.

Next comes their durability. Most of the Case Steel-Built Threshers sold eighteen years ago are still in use. The machines we build today are even more durable.

Due to their simplicity and dependability, Case Threshers work from morning to night, requiring few adjustments and little attention. Their light weight and rugged strength make it easy to move them from one location to another. Their efficient work keeps teams and pitchers steadily busy. There are seven sizes—20x28, 22x36, 26x46, 28x50, 32x54, 36x58 and 40x62, and there is a Case Tractor to operate each size.

The Case dealer will tell you all about Case Threshers, Kerosene Tractors, Silo Fillers, Baling Presses, Road Machines, Grand Detour Plows, and Disk Harrows. See him, or address a post card to

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NOTE: Our plows and harrows are NOT the Case plows and harrows made by the J. I. Case Plow Works Co.

GRAND DETOUR PLOWS 1837

The U. S. Grain Growers, Inc.

Fifty-four Per Cent Control Convention for Old Liners

As stated in a previous article in THE FARCER, the first annual convention of the United States Grain Growers, Inc., held in Chicago week before last, resulted in a wide split between the purely cooperative element and the so-called farmers' elevator element. Just how serious this split is may be better understood when it is known that a minority of the delegates at the convention, representing 18,941 farmer members of the United States Grain Growers, or 46 per cent of the total membership, were completely routed in their attempt to maintain the principle of cooperation in the organization, while the delegates representing 22,844 growers, or 54 per cent of the total membership, controlled the convention and succeeded in keeping the control of the United States Grain Growers in the hands of the so-called old-line farmers' elevators.

"It is simply a question of whether the United States Grain Growers are to market their grain cooperatively, or whether they are to sell through farmers' elevators by way of speculative channels, as some 5000 of these elevators have been doing for years," says the Chicago representative of THE FARMER.

The defeated minority, in favor of genuine cooperative marketing of grain, represented the producers of the states of Illinois, Oklahoma, North Dakota, Kansas and Michigan. Following the convention they met at the offices of the American Farm Bureau federation to discuss the problems that had arisen. In a signed statement, they declared, that if it were possible they would continue to market their grain through the sales agency of the United States Grain Growers, Inc., but that if it were not found possible to restore the United States to democratic control of its membership, then these states would take immediate steps to create other agencies for the marketing of their grain.

Liabilities Exceed Assets.

From figures submitted by Treasurer William G. Eckhardt it appeared that the liabilities of the United States Grain Growers exceed the assets of the concern by about $118,000. Total liabilities are given as about $336,000. The greater part of the liabilities is made up of loans from state farm bureaus and state associations. The largest of these single loans is $157,000, due the Illinois Agricultural association, which association was represented in the minority at the recent convention.

A significant situation developed at the convention when President Leonard of the Illinois association called President C. H. Gustafson of the United States Grain Growers and leaders of the majority in control to a private conference and declared to him that if caucus rule continued to dominate the convention he would wire the field men of the United States Growers in Illinois to stop organization work. He threatened that the Illinois Agricultural association would demand payment of its $157,000 loan to the United States Grain Growers, and request that the United States Growers be thrown into receivership if payment were not made. Whether or not this threat is likely to be carried out, following the ruthless defeat of the minority in the convention in the election of the board of directors and the transaction of other business is problematic at this writing.

Farm Bureau Talks Plainly.

The Grain Grower, the official organ of the United States Grain Growers, Inc., in its published report of the convention, makes no mention of the gravity of the split that developed, but would leave the impression to the uninformed reader that the convention was a constructive and harmonious one. On the other hand, the American Farm Bureau Federation Weekly News Letter, the mouthpiece of the American farm bureau, declares in no uncertain terms that the convention was a farce so far as the cooperative marketing of grain was concerned. The published statement of the American Farm Bureau federation suggests strongly that the farm bureau may disinherit the United States Grain Growers, Inc., unless it live up to the original ideas of the bureau in bringing about improved marketing conditions.

"During the two days of the convention the delegates heard little about the cooperative marketing of grain," says the official statement of the American Farm Bureau federation. "Most of the time was consumed by jockeying back and forth to secure control of the convention for one side or the other. The idea of sinking personal ambitions and the advantages of leadership in a magnanimous effort to render a real economic service to the cooperative marketing of grain did not engage the attention of the leaders. It was a political convention, and not a business meeting.

"The farm bureau has pledged itself to see that its members get improved methods of marketing. The farm bureau has sponsored, fostered and financed the United States Grain Growers, Inc., in an effort to secure harmony in the various grain marketing organizations. Whatever happens to the United States Grain Growers, the farm bureau will continue its earnest efforts to secure a more efficient system for marketing grain."

It will be remembered that the United States Grain Growers, Inc., is the organization formed upon the recommendation of the committee of 17, appointed some two years ago by President Howard of the American Farm Bureau federation, at the request of grain growers throughout the United States. The present controversy is apparently, in no small degree, due to the attempt to mix pooling, or pure cooperation, and direct sales through so-called farmers' elevators, or speculative marketing.

As stated in a previous article, it is not a far stretch of the imagination to see the strong minority of 46 per cent of the membership of the United States Grain Growers taking steps that will lead them to affiliate with the 100 per cent pooling organizations that are now being coordinated into recently formed American Grain Growers, Associated.

WILLIAM S. FIX, Washougal, Wash.—I can't farm without The Washington Farmer.

Clover Seed

Growing Yakima Valley Industry

The clover seed industry in the Yakima valley promises to be one of the leading cash crops in the near future, according to J. E. Currey, the state seed inspector, who is working under the department of agriculture in the state house at Olympia. Last year there were from six to seven carloads of red clover seed shipped out of the valley and some of it sold as high as 16 cents a pound. This, of course, was seed that tested high, but for inferior quality seed the dealers paid as low as 3 cents a pound.



Green Foxtail.

"The main trouble with the seed industry at the present time," said Mr. Currey, "is the fact that a number of unscrupulous growers allowed weed seed to get a start in their fields. They were able to get good prices for almost any kind of seed and they did not pay much attention to getting the weeds out. As a result, many new seedings have been planted with inferior seed and it is now almost impossible to obtain clean seed.

"Although dodder is getting a start in some localities of Washington, it has not yet attained a degree where it is doing much harm. The worst weed pest we have in the Yakima valley is the green foxtail. Clover fields that have any of this weed scattered through should be carefully rogued over, and all patches where the weed shows up should be mowed close to the ground and burned. This weed and hay growth can be fed if it is carried from the patch without dropping any seed and if fed immediately.

"If the growers would put out a good quality product that could be depended on the local seed houses would handle every pound of seed that could be produced. There is a big demand for clover seed, but no dealer can afford to buy without some assurance that he is getting pure seed. In fact, it is difficult to obtain seed that will comply with the state seed law.



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Kitchen work is made much easier, laundry work takes much less time. Your wife has more time to give to the children and to sewing and recreation.

Have a bathroom—it's a joy and a benefit. Have *hot* running water—it's cheap. You owe yourself a Milwaukee Air Power Water System to make chores in the barn and around the house easier and more quickly done. You owe yourself *and your family* a Milwaukee System *in the house*—to make life worth while. The water is always *direct from the well.*

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Get All the Power You Pay For

You can't get all the power that's in the gasoline you buy if your piston rings are worn and leaky. McQuay-Norris Piston Rings stop this waste. They increase power—save gas and oil and reduce carbon trouble. Whatever the make or model of passenger car, truck, tractor or stationary engine, you will find the McQuay-Norris line is complete for every need. Through the addition of McQuay-Norris Wainwright Pistons and Piston Pins to the McQuay-Norris Piston Ring line, you can now secure for your gas engines complete McQuay-Norris-made Pistons, Piston Pins and Piston Ring equipment.



McQUAY-NORRIS WAINWRIGHT PISTONS & PINS

Send for Free Booklet—a valuable explanation of the relation of piston rings to gas engine operation. Address Dept. BD.

McQuay-Norris Manufacturing Co., St. Louis, U. S. A.

Canadian Factory: McQuay-Norris Mfg. Co., of Canada, Ltd., Toronto.

LEAK-PROOF — an exclusive two-piece design, preventing loss of gas and compression. Gives equal pressure at all points on cylinder walls. For all piston grooves except top, which should have Supercyl. Each ring packed in a parchment container. Price per ring—

$1.25

In Canada, $1.50

Supercyl — Keeps lubricating oil out of combustion chamber. Collects excess oil on each down stroke of piston and empties on each up stroke, which ordinary grooved rings cannot do. Each ring packed in a parchment container. Price per ring—

$1.00

In Canada, $1.25

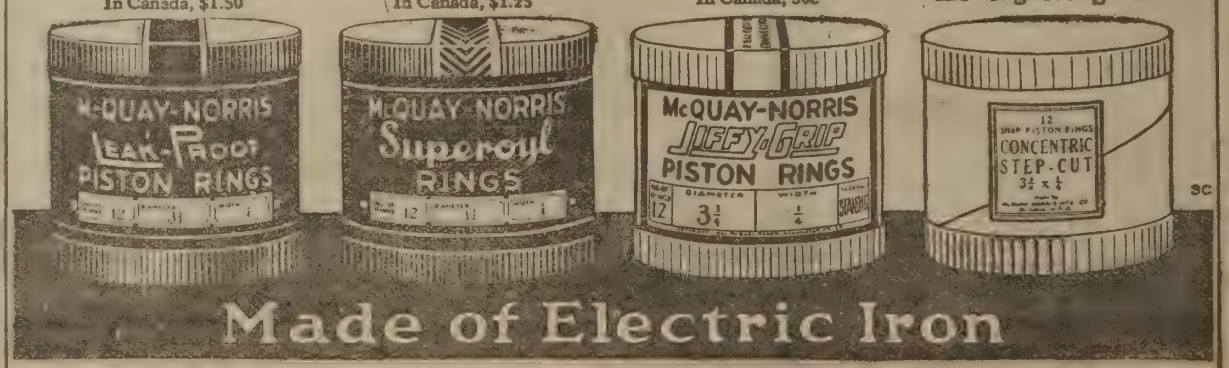
JIFFY-GRIP — a one-piece ring. Non-butting joint which can be fitted closer than ordinary step cut—velvet finish—quick seating. "Seats in a jiffy." To keep them clean and free from rust, each ring is packed in an individual glassine envelope. Price per ring—

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Snap Rings—of the highest grade. Raised above the average by McQuay-Norris manufacturing methods. Their use insures all the satisfaction possible for you to get from a plain snap ring. They are packed twelve rings to the carton and rolled in waxed paper,

And Snap Rings of the highest grade



Made of Electric Iron

"30-10"

(Continued from page six.)

and expend them where the children are. "Where the children are" is synonymous with costs of education. To measure these costs some clearly defined and easily understood unit should be chosen. Experience has indicated two: The actual days' attendance of the children and the number of teachers.

The attendance unit is an excellent measure of costs in city schools, but fails in comparing rural schools with each other and in comparing rural schools with city schools. For example: One rural school may have but 25 pupils, while another has but five. It is manifestly unfair to consider the first as costing five times as much as the second. The actual maintenance charges of the two schools are practically equal.

The teacher unit is excellent from the standpoint of cost accounting, for 67 per cent of current school expenditures is charged to teachers' salaries. It follows that a large part of the money should be distributed according to the main item in the expenditures. The teacher as a unit of cost is fair also where the attendance breaks down, namely, in the comparison of rural schools and in the comparison of rural and city schools. The two units, actual days' attendance, and number of teachers, supplement each other. Investigations have shown that the fairest combination of the two is to apportion one-half of the funds on attendance and one-half on the number of teachers, the method chosen is "30-10."

Experience has shown that there are a few special districts in every state that can not be helped materially by any system of apportionment applicable to the entire state. The only remedy is to put into a special equalization fund a definite amount of money to be distributed to the especially needy districts by an administrator with discretionary powers. The "30-10" measure makes provision that an amount not to exceed $60,000 shall be apportioned by the state superintendent of public instruction acting under the direction of the state board of education.

In further defining the actual days' attendance of children the fact that high school instruction costs over one and one-half times as much as elementary school instruction for the same number of pupils is taken into consideration by counting high school attendance as one and one-half times actual attendance. Extra costs in parental schools and schools for defectives are placed at the ratio of three and five to one. Night schools, part-time schools and kindergartens are recognized as integral parts of our public school system. Provision is also made that districts should not lose their attendance when schools are closed on account of circumstances beyond the control of the board of education, such as epidemics, etc.

All bonuses for items not representing actual school costs are discontinued. This includes attendance in private schools and extra attendance given to consolidated districts. The apportionment of both state and county moneys is put on the same basis.

All school districts are required to hold 160 days of school. No district of any class may draw state and county money for more than 190 days.

Under this method of apportionment each district would receive from the state fund about 12 1-4 cents for every day each pupil is in school and $530 for each teacher employed. The apportionment from the county fund would be approximately one-third of that from the state fund.

Seed Potatoes

There are three methods of selecting seed potatoes, namely, gathering up the small potatoes which have gone through the sorter when harvesting, taking those left over in the cellar after the best cooking tubers have been picked out, and selecting the hills in the field before the crop is dug. The latter method is by far the best and is recommended by O. W. Eckman of Mount Vernon, who gave a paper on the subject at the Western Washington Horticultural convention.

"It is a very good plan to grow your own seed if you are prepared for it and can take care of a small seed plot which is separate from the main field. In any case the patch should be rogued in order to get out the poor hills and the ones that are not true to type. In rogueing out a patch one should always take the tubers out with the plant since the digger will get them and there will be no result of rogueing.

"In my mind there is no such a term as the seed 'running out.' The condition is caused merely by the use of poor seed. It is the grower himself that has 'run out' and not the seed. He has been using seed from poor hills and expecting to produce good yields.

"When putting potatoes into storage," continued Mr. Eckman, be sure to store only good tubers; those that have no breaks in the skins. A bruised potato will rot much quicker than one that is sound and the whole lot should be sorted over to insure perfect storage. Keep the temperature of the cellar from 34 to 40 degrees, since warmer storage will lower the vitality of the seed.

"In treating seed with corrosive sublimate, I find it best to use 5 ounces of poison to 35 gallons of water instead of the usual mixture of 4 ounces to 30 gallons. The stronger mix covers the sack better and is more effective. The corrosive sublimate will mix much better if it is dissolved in hot water instead of cold water. After seven dippings the mixture should be renewed. A wooden vessel should be used for the solution. Although corrosive sublimate is a deadly poison it is harmless to the skin and there is no danger from handling the sacks.

"One should never delay treating seed until planting time as there are apt to be some sprouts which will be injured.

"The seed pieces should be cut so that there is enough plant food present to start the new plant. Cut the seed so that there will be two eyes to the piece. A blocky appearance is best, getting them as near two ounces as possible. Many prefer to use lime or other powder to dry the cut surfaces, but I have found that by spreading the whole pile out on a dry floor they will soon coat over and dry. After the seed have been cut, they should not be kept longer than 48 hours, as they have a tendency to generate heat if kept too long in a pile."



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Through the years, the endurance and accuracy of Stevens guns have remained unsurpassed. When you pay more than the price of a Stevens gun, you don't get more gun quality — you are paying for frills and ornaments.

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Here's the test for a full choke: on a piece of paper draw a circle 30 inches in diameter; measure off 40 yards and fire into it. Your Stevens will throw an even pattern of 70% of the pellets into that circle.

A Stevens modified choke will throw an even pattern of 50%. And a Stevens cylinder bore will throw an even pattern of 40%. Try it. Only a perfectly bored gun will meet this test.

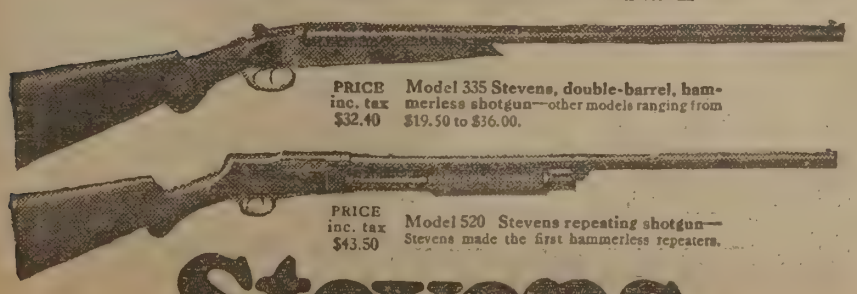
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PRICE inc. tax $32.40 — Model 335 Stevens, double-barrel, hammerless shotgun—other models ranging from $19.50 to $36.00.

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Cheap Power Is No Longer a Problem

In the OilPull the problem of producing cheapest power for farm work has been solved, by combining the Four Vital Factors. These are: (1) Lowest Fuel Cost. (2) Lowest Upkeep Expense. (3) Longest Life. (4) Reasonable Price.

As proof, the OilPull has the following records to its credit: (1) Holder of all National Fuel Economy records for 10 years. (2) Investigations show upkeep cost of only 50% of the Government's national average. (3) OilPulls average 10 years and more of service. (4) Reasonable Price.

In no other tractor will you find these four combined.

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"The Cheapest Farm Power"

OilPull success is due to many things, but of chief importance is TRIPLE HEAT CONTROL—a perfected system of oil burning that positively gets the power out of cheap kerosene. Controls motor temperatures. Never too hot. Never too cold.

Makes possible our unqualified guarantee to burn kerosene successfully under all conditions and at all loads up to its full rated brake horse power.

See the Advance-Rumely dealer for demonstration. Mail coupon for copy of our special booklet on TRIPLE HEAT CONTROL.

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A gallon of cheap kerosene contains more actual power than a gallon of expensive gasoline. The problem is to get the hidden power *out* of cheap kerosene.

Triple Heat Control is a scientific system of oil burning that positively *DOES get the power out.*

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Please send free copy of booklet on Triple Heat Control.

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ADVANCE-RUMELY

Too Many Scrubs

Gradual Improvement Must Come

More than 80 per cent of all the farmers in the United States are directly engaged in the raising, feeding and care of dairy cattle. The report of the United States census for 1920 shows that there are over 31,000,000 cattle classed as dairy cattle, or, to be exact, 31,386,378. Of this number 916,602, or less than 3 per cent, are pure-breds, and the rest, or 30,469,776, are either grades or scrubs.

The purebred cattle are divided among the five dairy breeds as follows: 528,261 Holstein-Friesians, 231,834 Jerseys, 79,445 Guernseys, 30,494 Ayrshires and 8130 Brown Swiss. This leaves about 38,000, which are divided among the less common breeds. Of the total number of purebred cattle 71 per cent, or 724,116, are cows and 21 per cent, or 192,486, are bulls.

The grade and scrub dairy cattle total 30,469,776 head, and represent over 97 per cent of all our dairy cattle. Of these grades there are 29,903,923, or 98.1 per cent of them, cows, and 565,853, or 1.9 per cent bulls. As the total number of dairy bulls is only 758,339, we find that the above half million and more of these inferior grade bulls represent 75 per cent of the total number of bulls, while the total number of the purebred bulls is only 25 per cent of all the males. Among the female dairy cattle the purebred cows fare even worse. Here the grand total number of cows reach 30,628,039, of which 29,903,923, or 97.6 per cent, are grades or scrubs, and only 724,116, or 2.4 per cent are purebred.

From a study of the above figures it is evident that there is a wonderful opportunity for improvement in the type of dairy cattle which go to make up the great majority of the foundation animals of our great dairy industry. There is surely plenty of room, and in fact a great need, for a larger and faster development of the purebred dairy cattle business. This is particularly so as it refers to the increased use of purebred bulls in the grade herds.

It is, of course, impractical to do away with our grade cows, provided they are of the desirable kind. We should however, take more active steps in eliminating from our herds all inferior grades and all of the scrub cattle, both males and females. The grade bull must also go, because with his continued use there will never be made the progress in dairy herd improvement and in efficiency in the production of milk which it is possible to make, and which should be made.

It is possible, through cooperation and concerted action, to accomplish the desired results along lines of dairy cattle improvement and to rid the country of the grade and scrub bull.

The increased efficiency in milk production of our future dairy cows would add millions of dollars to the incomes of dairy farmers.

Cowlitz County Fair

The Cowlitz county fair is one of the first of the smaller fairs to announce its dates for the coming season, which are September 27 to 30, at Woodland. The county commissioners appointed C. C. Ruckles of Kalama, Mrs. P. A. Parker of Castle Rock, Mrs. Adkin of Kelso and Mrs. R. W. Mills of Woodland to assist in preparing premiums and exhibits. Superintendent Gardner of the county schools has charge of that department and Miss Nora Kelly, county club agent, and Miss Bess Lawler, county nurse, of the boys and girls' club work.

FARMERS' WANT ADS

This is the farmers' "want," "sale" and "exchange" department for small advertisements of farmers, including live stock and poultry.

Advertising rates for ads running 1 to 3 times, 10c per word per insertion, with a special rate to Farmer subscribers, as follows: Ads running 4 to 12 times, 9c per word per insertion; ads running 13 times or more, 8c per word per insertion.

All commercial and land advertising 10 cents per word each insertion. Open also to nonsubscribers.

In using these columns advertisers must observe: (1) No advertisements will be inserted for less than $1.00. (2) Every word, number and initial, including name and address, must be paid for. (3) New advertisements, changes of copy or cancellations must reach general office, Spokane, Wash., 10 days in advance of publication date. (4) Cash must accompany order.

Above rates include insertion in The Washington Farmer, The Idaho Farmer and The Oregon Farmer, which constitute the Pacific Northwest Farm Trio, 46 Review Building, Spokane, Wash.

HELP WANTED—Female 1

GOOD HOME, LIGHT WORK, FOR RESPECTable woman; references. Box 5, Alameda, Wash.

HELP WANTED—Male 3

RAILWAY MAIL AND GOV'T CLERKS—carriers needed; experience unnecessary. Write immediately, Mokane institute, A28, Denver, Col.

AGENTS WANTED 9

AGENTS—MASON SOLD 18 SPRAYERS AND auto washers one Saturday; profits $2.50 each. Square deal. Particulars free. Rusler Co. Johnstown, Ohio.

EDUCATIONAL 45

EARN MONEY QUICKLY—THERE'S NO LIMit to one's earning capacity in business. And this great business college, after training you thoroughly, places you in a paying position. Courses include banking, stenography, accounting, private secretarial. Write for free catalogue. Belnke Walker Business College, Portland, Ore.

FRESH FOOD PRODUCTS 51-1

SOMETHING NEW—TO EAT—A TIME SAver. Mrs. Shepard's pure fruit flakes; only 3 minutes to make. Anything an apple makes you can make with apple flakes. Children love to eat orange-apple flakes from package like candy. Apple flakes, 25c (large size); orange-apple, 15c. Order now from factory, postage paid. Shepard Fruit Products Co., Wenatchee, Wash.

HONEY,—FINE QUALITY ALFALFA SWEET clover; 60-lb. can, $7.50; 2 cans, $14.50; three 10-lb. pails prepaid, second zone, $5. Harry Fisher, Prosser, Wash.

ALPINE SWISS CREAM BRICK CHEESE, BY parcel post, at 25c per pound, and postage; a postcard will bring it. Stanfield Cheese factory, Stanfield, Ore.

3-POUND BOX ABSOLUTELY BONELESS codfish, fine white, new catch fish, delivered by mail, $1. Coffin Fish Co., Seattle, Wash.

HONEY—LIGHT AMBER HONEY, LIQUID form; one sixty-pound can, $7; two cans, $13.50. A. L. Traner, Touchet, Wash.

WORLD'S BEST CLOVER HONEY, 60 pounds, $6.15; two 60s, $12. Browne, Box 499, Twin Falls, Idaho.

FRESH FOOD PRODUCTS (Continued) 51-1

HONEY BRAND HONEY, PURE, LIGHT, thick and good flavored, from alfalfa and sweet clover. One 60-lb. can, $7.50; two for $14.50. Write for circular and prices in pails. Salesmen wanted. Oliver Sires, Wapato, Wash.

WHITE ALFALFA, SWEET CLOVER honey; 1 60-lb. can, $7.50; 2 60-lb. cans, $14.50; six 10-lb. cans, $8.50; three No. 10 pails, prepaid third zone, $5.50. Wells D. Rose, Sunnyside, Wash.

HONEY, BEST QUALITY; 1 60-LB. CAN, $7.50, discount on large quantities. E. Sires, Wapato, Wash.

MISCELLANEOUS—FOR SALE 60

SASH AND DOORS—O. B. WILLIAMS CO., 1943 First ave., So. Seattle. Chicken house sash, 20" wide by 25" high, 80c; a dozen different sizes in stock for immediate shipment. Skylights for chicken houses, 36"x40" price, glazed, $2. This is the size recommended by the Western Washington experiment station. We carry them in stock for immediate shipment. Sash and doors for all purposes at lowest prices. All orders receive prompt attention. Our large illustrated catalogue No. 35, showing full line of building material and built-in fixtures for the home, free on request. O. B. Williams Co. Established 1899.

TOBACCO, NATURAL LEAF—SWEET AND mellow hand-picked chewing or smoking, 5 lbs., $1.50; 10 lbs., $2.50; smoking, 10 lbs., $2. Furnish free recipe for preparing. Quality and delivery guaranteed. Farmers' Tobacco Exchange, Sedalia, Ky.

WALL BOARD—WRITE FOR SAMPLE OF Washington plaster wall board; won't warp, won't burn. Manufactured by Washington Building Products company, 6851 E. Marginal Way, Seattle, Wash.

PIPE — NEW AND SECOND-HAND, ANY size; low price; standard grade roofing paper at a big saving; belting, all plies, all sizes, cheap. Write Alaska Junk Co., 8120 Adams st., Spokane, Wash.

E. Z. BUILT SILO, ERECTED IN SECTIONS; has double walls with 6-inch air space; freeze proof; built of fir lumber; strong, durable and low priced. J. F. Jacobson Lumber Co., Tacoma, Wash.

WE ABSOLUTELY SAVE YOU MONEY ON groceries and general merchandise; prompt and careful service. Write today for our free catalog. Jordan-Lawler Co. Box 615T, Spokane.

HOMESPUN CHEWING AND SMOKING TObacco 5 lbs., $1.50; 10 lbs., $2.50; valuable formula smoking, 5 lbs., $1. Pigeon Roast, Sedalia, Ky.

CEDAR CHESTS DIRECT FROM FACTORY to your home; Tennessee cedar, solid copper trimmings. Write for catalogue. J. W. Higgins & Sons, 1912 Gilsan st., Portland, Ore.

SHERWIN-WILLIAMS PAINT $1.50 GALLON; $125 3 h. p. Goss engine, $65; $42.50 Colt's automatic, $25; $65 Krisky brooder, $40; all like new. Beverly Egg Ranch, Leona, Ore.

TOBACCO, NATURAL LEAF FOR MILD SMOking; 10 lbs., $1.50; 20 lbs., $2.75; will furnish free recipe for preparing. Leaf Tobacco Exchange, Mayfield, Ky., Star Route.

HOMESPUN CHEWING OR SMOKING TObacco, collect on delivery; 5 pounds, $1.50; 10 pounds, $2.50; 20 pounds, $4. Farmers' association, Paducah Ky.

HOMESPUN TOBACCO, 5 POUNDS, $1.25; 15 pounds, $3. Send no money, pay when received. Farmers' Association, Jonesboro, Ark.

CEDAR POSTS, POLES, PILING AND STUBS; lengths and sizes to order. Marsden Red Cedar company, Calder, Idaho.

TOBACCO — KENTUCKY'S PRIDE; RICH, mellow chewing, 10 lbs., $3.25; smoking, 10 lbs., $2.50. Farmers' Club, Mayfield, Ky.

JOHNSON'S PACKAGE BEES, QUEENS. Write for remarkable prices. 105 Raymond ave., San Jose, Cal.

FREE SMOKING TOBACCO—SMOKE ON US. Write for free sample. Hawesville Tobacco Co., Hawesville, Ky.

MISCELLANEOUS—Wanted 63

WANTED—SET OF TEAM BELLS FOR USE on top of hames. Albert R. Miller, Sand Springs, Mont.

MACHINERY—For Sale 93

FOUR DISK DEERE, SELF LIFT ENGINE plow; nearly new, $175. C. J. Oberst, Farmington, Wash.

STOVE REPAIRING. 128

WRITE MYER RUBENS, SPOKANE, ABOUT stove repairs, welding broken parts, nickle plating.

FUR-BEARING ANIMALS 170

SILVER AND CROSS FOXES FOR SALE. William Rambo, 407 Sprague, Spokane.

PETS—Dogs, Birds, Etc. 171

THOROUGHBRED SHEPHERD PUPPIES; father and mother both good heelers; male, $7 each. Address C. A. Newton, Clagstone, Idaho.

FIVE YOUNG, WELL TRAINED FOX hounds for sale. E. L. Buck, Pomeroy, Wash.

POULTRY (Baby Chicks) 174

HENACRES BABY CHICKS FOR JUNE ARE only $16 per 100; $140 per 1000; best quality chicks at common chick price. Special instructions for winter layers of June chicks free. We have a few May chicks left at $22 per 100. Safe delivery guaranteed; plenty of hatching eggs at $2 per 15; $9 per 100; 90 per cent fertility guaranteed. Eight weeks old pullets $1.50 each, satisfaction or money back. We sell the famous Sol Hot brooders at $10.50 to $23.50. Prompt shipment. Our illustrated catalog and booklet on poultry management is free. Henacres, Box A, Prosser, Wash.

PERKINS' TRAP NESTED WHITE LEGHORN chicks, April, $18 100; May, $15. Send 10 per cent with order. Chas. L. Perkins, 1337 Burrage, Portland, Ore.

TANCRED STRAIN WHITE LEGHORN BABY chicks, May delivery, $15 per 100. Incubator capacity, 18,000 eggs. D. A. Gillette, R. 4, Yakima, Wash.

ANCONA BABY CHICKS, SHEPPARD STOCK; hatching eggs, $2 per 15; $10 per 100, delivered. R. P. Irwin, Tonasket, Wash.

POULTRY—Baby Chicks (Continued) 174

YESTERLAID EGG RANCH, KENT, WASH.—Dear Sir: Am more satisfied every day with the chicks received the 17th. They are certainly husky and while Feb. chicks may be supposed to lack vigor, it is certain yours lack nothing. May I increase my order 150 chicks to be delivered with my March 22d order. Irving Kunz, Hoquiam, Wash. Dear Sir: The chicks I got from you the 20th of May are fine. Please let me know your prices for 1922, as I am in the market again for a good order. A. E. Rackow, Hollister, Idaho. Dear Sir: Please let me know the date my 1000 chicks will be delivered. The chicks you sent me in 1921 are just wonderful. Got 70 per cent lay all winter. H. H. Coffey, Chehalis, Wash. We hatch 12,000 of these kind of White Leghorn chicks every 5 days from our own eggs. All sold out until May 1st. Orders for hatching eggs can be filled any time. Largest, most modern and up-to-date trap nest poultry ranch in the world. Yesterlaid Egg Ranch, Kent, Wash.

400,000 BABY CHICKS—OUR WHITE LEGhorns are bred to lay; priced at $15 per 100. We hatch from some of the best flocks of R. I. Reds, Barred Rocks, Anconas and Minorcas to be found in the northwest. Chicks are priced at $22.50 per 100. Send $1 deposit per 100 with your order, paying the balance on inspection of chicks. Safe arrival guaranteed. We have a few standard makes of incubators and brooders at greatly reduced prices. Send for our circular offer. Seattle Hatchery, 1906 Pike place, Seattle.

"FRESHLAID" WHITE LEGHORN CHICKS have the qualities you want; vigor and scientific breeding for the heaviest egg production; every "Freshlaid" male is from a high record hen. Freshlaid Farms is one of largest and oldest chick plants in the Inland Empire. There is a real demand for "Freshlaid" chicks, especially from our old customers. We are sold out until May 1. Write at once if you wish May chicks. May chicks make ideal winter layers. Catalog. Freshlaid Farm, Colfax, Wash.

FOR SALE—WHITE LEGHORN BABY chicks from free range selected hens mated with pedigreed cockerels from 200-287 egg trap nest records. May and June prices $3.50 per 25; $6.50 per 50; $12 per 100. Special prices 500 and 1000 lots. Safe arrival guaranteed. You pay only for chix received alive and in good condition. No money in advance, pay on delivery. Order now. Established 1898. Must Hatch Incubator Co., 445 Seventh st., Petaluma, Cal.

EBORALL'S STRAIN WHITE LEGHORNS. Our hatch of 2300 chicks per week is now booked for Feb., March and April, principally to old customers. Your inspection is invited at all times. We are now booking chicks for May at $14 per 100. Write for circular. Crystal White Poultry Farm, McMinnville, Ore. Box. 33.

TRY OUR PARCEL POST PACKAGE—KEEP the old hen busy. We will ship you first-class baby chicks, postpaid to your door, direct from the hatchery and guaranteed all alive. Price, $4.50 per 25; $8 per 50. For delivery April, May or June. Order now. The White Hatchery, Petaluma, Cal.

BABY CHICKS FOR MAY AND JUNE ONLY—4000 every 4 days of the famous O. A. C. strain S. C. W. L.; raised and run on free range. They have the vim. Prices, first half of May, $17, last half of May, $15; June, $12. Moorhead Poultry Farms, Granger, Wash.

BABY CHIX FROM TANCRED AND HOLLYwood strain heavy laying White Leghorns, mated to cockerels from W. W. experiment station; hens, 265-314 egg record; early May chix, $18 per 100; hatching eggs, $7 per 100. Wax's Poultry Farm, Kent, Wash.

UNION DISTRICT HATCHERY IS NOW booking orders for the best thoroughbred baby chicks at the right price. White, Buff and Brown Leghorns, Rhode Island Reds, Black Minorcas, Anconas and Barred Plymouth Rocks. F. & L. Downing, Los Gatos, Cal.

THE PROGRESSIVE HATCHERY—PUREbred S. C. R. I. Red and S. C. White Leghorn baby chicks from vigorous trap nested or selected range bred stock; safe delivery guaranteed. Send for circular. 1534 Northeast 12th, Portland, Ore.

WHITE LEGHORN CHICKS (TANCRED strain), from selected two-year-old hens mated to cockerels from 251 to 286 egg trap nested dams. March and April, $18 per 100, after April 22, $15 per 100. Bona Terra Ranch, Drain, Ore.

MANY PRIZE WINNING LAYERS WERE May hatched. White Leghorn chicks from Corvallis famous layers. Prices 15c to 500; to 1000, 14c. We pay express. Order now. Oregon-Corvallis Hatchery, Corvallis, Ore.

WHITE ROCK BABY CHICKS, "DANIEL'S IDEALS," from our own trapnested stock entirely. Write for prices and dates, also eggs for hatching. Free catalog. Ideal Poultry Yards, Hoquiam, Wash. Star Route No. 25.

BABY CHICKS — REDUCED PRICES ON White Leghorns, Reds, Barred Rocks, White Rocks, Minorcas, and Anconas; booking orders now; postal secures free catalog. Write today. C. N. Needham, Salem, Ore.

BABY CHICKS, WELL HATCHED ARE HALF raised. Petaluma incubators produce that kind. They have lots of "pep." We supply chicks. Catalog free. Petaluma Electric Incubator Co., Petaluma, Cal.

BABY CHICKS — WE GUARANTEE OUR chicks to be from the highest producing hens in Petaluma. Write for further information. The White Hatchery, Petaluma, Cal.

WHITE LEGHORNS AND WHITE ROCKS; trap nested strains; chix and eggs, contest pen, $5 per 15. Palouse Falls Ranch, Palouse Falls, Wash.

S. C. ENGLISH WHITE LEGHORN CHIX, Hollywood strain, 15c; Barred Rock chix, 20c. Bertha Jorgensen, R. 1, Hillsboro, Ore.

O. A. C. STRAIN WHITE LEGHORN BABY chicks; none better; $14 100; May delivery. Rosedale Poultry Yards, Shedd, Ore.

WHITE LEGHORN BABY CHICKS. CIRCULAR on request. San Jose Poultry Yards, San Jose, Cal.

WHITE LEGHORN CHICKS FOR MAY, $16 per 100; eggs, $6. Mrs. Arp, St. John, Wash.

Leghorns.

HOGANIZED WHITE LEGHORN HATCHing eggs, $5 per hundred. The Idle Hour Poultry Farm, F. F. Smith, Mgr., McCoy, Ore.

POULTRY—Leghorns (Continued) 174

SINGLE COMB WHITE LEGHORNS (TANcred strain); selected heavy laying second and third year hens mated to cockerels from 250 to 275 egg trap nested dams; hatching eggs, $1.50 per 15; $7.50 per hundred; chicks, $18 per hundred, safe delivery guaranteed. Oaklawn Poultry Farm, Hillsboro, Ore.

CHICKS, EGGS, PULLETS — CARNATION White Leghorns, trap nested stock; bred and selected for vigor and heavy laying qualities; breeding pens from 240 to 304 egg records; 300 Feb. 12th, hatched pullets. Ernest W. Raush, Carnation Poultry Farm, Kent, Wash.

LEGHORN PULLETS, 5000 FEBRUARY, 3000 April and May hatched. These birds are Hollywood-Tancred strain, are unconditionally guaranteed on a money back basis. Price $1.15 each, at 8 weeks. White Cloud Farm, Route 2, Box 188, Kirkland, Wash.

PUREBRED S. C. WHITE LEGHORNS; ALL breeding hens of trap nested strain, carefully selected for vitality and standard requirements; baby chicks, $18 100; safe delivery guaranteed. eggs, $1.50 for 15; $8 100. Frank Volland, Rt. 1, Kennewick, Wash.

SINGLE COMB BROWN LEGHORN EGGS, from vigorous stock, hatched and raised by hens; heavy layers; unlimited range; $15 eggs, $1.50; 30, $2.75; 100, $7; charges prepaid. Incubator lot a specialty. L. Smitchger, Boise, Idaho.

WHITE LEGHORN EGGS FROM HEAVY laying hens and Tancred royal males; 15 for $1.50; from exhibition laying matings, 15 for $3; small mating strictly Tancred royal, $3 for 13. L. M. Patterson, E2517 First ave., Spokane.

WORLD-FAMOUS EGG PRODUCERS; O. A. C. White Leghorns; vigorous, free range stock; baby chicks and eggs; special low price for high-grade chicks for May delivery. Write for circular. Corvallis Poultry Farm, Corvallis, Ore.

BUFF LEGHORNS EXCLUSIVELY; EGGS, chicks, cockerels; proven and acknowledged leaders of their kind for laying and exhibition. Mating list free. R. Stromquist, Tigard, Ore.

OREGON AGRICULTURAL COLLEGE WHITE Leghorns. May and June chicks, $14 per 100; eggs, $2 per setting; $8 per 100. Russell Poultry Farm, Corvallis Ore.

FORD'S BRED-TO-LAY S. C. WHITE LEGhorns. Hatching eggs, $2 per setting; $8 per 100; special matings on request W. A. Ford, Umatilla, Oregon.

HATCHING EGGS, TANCRED STRAIN, S. C. White Leghorns from Hoganized flock; $1 per 15; $3 per 50; $5 per 100. Fred Oberg, Redmond, Ore.

S. C. WHITE LEGHORN BABY CHIX FROM trap nested, Hoganized hens; also cocks and cockerels. J. Panek, Sherwood, Ore. R 1.

WHITE LEGHORNS, TRAP NESTED STRAIN, hatching eggs, baby chicks. Write us. Washington Poultry Farm, Hartford, Wash.

S. C. W. LEGHORN HATCHING EGGS. HOLlywood strain; six dollars per hundred. Mrs. Rominger, Underwood, Wash.

POSTPAID—13 TORMOHLEN "EVERLAY strain" S. C. Brown Leghorn eggs, $1.50. E. J. Davis, Cambridge, Idaho.

S. C. BROWN LEGHORNS, SHOW BIRDS; eggs and cockerels; reasonable prices. Harvey Bean, New Plymouth, Idaho.

BROWN AND BLACK LEGHORN SPECIAList; contest and show winners. Clifton Dickerson, Silverton, Ore.

BROWN LEGHORN EGGS, THE VERY BEST quality; free mating list. E. H. Rosenkranz, Colfax, Wash.

SINGLE COMB WHITE LEGHORN HATCHing eggs, $1.75 per 15, prepaid. M. A. Podaak, Elk, Wash.

PRIZE BUFF LEGHORNS; EGGS 15C EACH, postpaid. C. E. Cleveland, Stanfield, Ore.

Miscellaneous Poultry.

EGGS FROM PRIZE-WINNING MAMMOTH Toulouse geese, the kind that hatch; 50c each, $45 per 100. Imperial white Pekin duck eggs, $2.50 per 15, $14 per 100. Goslings, ducklings. R. E. Baumgardner, Wenatchee, Wash.

ANCONA EGGS AND CHIX—HEAVY WINTER layers; eggs, best pen, $2.50; second, $1.50; flock, $1 fifteen; $10 and $7 hundred; chix, $18 hundred. Order now. J. R. Hall, Hansen, Idaho.

ENGLISH STRAIN ANCONAS; PRIZE WINning stock; baby chix, 20c; eggs, $1.25 setting; $6 hundred lots. Faun Runner duck eggs, $1.25 setting. Karl Broeder, Sherwood, Ore.

PARAMOUNT WHITE WYANDOTTES "BRING home the bacon." Trap nested, pedigreed. Instructive catalog free. No baby chicks. Bayard H. Moul, 1226 Washington blvd., Seattle.

WHITE WYANDOTTE COCKERELS, HOGANized; heavy laying strain; average eight lbs.; $5 prepaid; hatching eggs, $2 per 15. Adams, Warren, Ore.

BLACK JERSEY GIANTS, WEIGHT 14 LBS. The greatest meat producers; fast growers; Eggs, $10 per 15. P. W. Harries, R. 1, Edmonds, Wash.

HATCHING EGGS FROM RHODE ISLAND Reds and O. A. C. strain Barred Rocks, $2 15; $7 100. Mrs. Roy Watkins, Olex, Ore.

EGGS—PURE REGAL WHITE WYANDOTTES. Three special matings; also Partridge Wyandottes. Eugene Boyk, Rocklyn, Wash.

WHITE WYANDOTTE HATCHING EGGS, Regal strain, setting, $2.50; 100 eggs, $14. Harvey Norris, Goldendale, Wash.

MAMMOTH PEKIN EGGS FROM DUCKS that take the prizes. Drakes for sale. Mrs. E. A. Bennett, Salem, Ore.

BARRED ROCK COCKERELS, CHOICE, $3.50; 15 selected eggs, $1.25, postpaid. L. E. Layman, Goldendale, Wash.

GOLDEN CAMPINES, HOGANIZED; EGGS, $2.50 per 15. Mrs. J. M. Harrison, Box 6, Rieth, Ore.

QUALITY BARRED ROCKS, WINNERS, LAYers, eggs, setting, 3 and 5 dollars. Robt. L. Burkhart, Albany, Ore.

PURE BARRED ROCK HATCHING EGGS, $2 and $3 per fifteen. Mrs. A. Nafziger, Route 7, Box 151, Salem, Ore.

PURE O. A. C. BARRED ROCK EGGS, $1.50 per fifteen; $7 per hundred. Mabel Currin, Monroe, Ore.

HIGHEST QUALITY BARRED ROCK HATCHing eggs. J. E. Horton, 2408 Altamont, Spokane.

HUNT'S FINE BARRED ROCKS. WRITE for circular on eggs. W. A. Hunt, Lebanon, Ore.

BARRED ROCK CHICKS, HEAVY LAYING O. A. C. strain. Mrs. E. Hodge, Waterloo, Ore.

S. C. BUFF ORPINGTONS, STOCK AND EGGS. L. M. Varney, E417 17th ave., Spokane.

ANCONAS—CHICKS AND HATCHING EGGS Oscar Dunlap, Junction City, Ore.

BLUE ANDALUSIAN HATCHING EGGS, SETting, $1.50. Mrs. McPhail, Ione, Wash.

MAMMOTH PEKIN DUCK EGGS, $2 PER 10, postpaid. Art Moore, Persist, Ore.

(Continued on the following page.)

FARMERS' WANT ADS

This is the farmers' "want," "sale" and "exchange" department for small advertisements of farmers, including live stock and poultry.

Advertising rates for ads running 1 to 3 times, 10c per word per insertion, with a special rate to Farmer subscribers, as follows: Ads running 4 to 12 times, 9c per word per insertion; ads running 13 times or more, 8c per word per insertion.

All commercial and land advertising 10 cents per word each insertion. Open also to nonsubscribers.

In using these columns advertisers must observe: (1) No advertisements will be inserted for less than $1.00. (2) Every word, number and initial, including name and address, must be paid for. (3) New advertisements, changes of copy or cancellations must reach general office, Spokane, Wash., 10 days in advance of publication date. (4) Cash must accompany order.

Above rates include insertion in The Washington Farmer, The Idaho Farmer and The Oregon Farmer, which constitute the Pacific Northwest Farm Trio, 46 Review Building, Spokane, Wash.

POULTRY—Miscellaneous (Continued) 174

SUMMER SALE—MAY AND JUNE BARGAIN prices. We want to put a flock of Butler Farm White Leghorns or Ill-a-lee Barred Rocks on every farm in the northwest because they are the kind that will add to the farm income. If you want some of these high producers at bargain prices, write today for special prices and May and June eggs and chicks. Butler Poultry Farm, Jennings Lodge Ore.

WE ARE HATCHING HOLLYWOOD AND Tancred strain of White Leghorns every Monday, Wednesday and Friday. Prices at $20 per 100; $195 per 1000. Commercial strain mated with 260-egg cockerels at $18 per 100. R. I. Red, Barred Rocks, Black Minorca and Ancona chicks are priced at $25 per 100. Send for free catalog and prices on incubators, brooders and pullets. Queen Hatchery, Seattle.

EGGS! EGGS! EGGS! "SNOWFLAKE" WHITE Orpingtons, establish highest official Orpington pen record western Washington laying contest. Average 204 eggs; free mating list; hatching eggs, $3, $5, $10 per fifteen. W. T. Thompson, Bozeman, Mont.

LARGE, NICELY MARKED ROUEN DUCKS, $4 each; $10 trio; eggs, 11, $2; 100, $15; heavy laying, prize winning strain White Wyandottes; eggs, 15, $2; 100, $10. P. H. Tomlinson, College Place, Wash.

STOP, LOOK, LISTEN—CHIX AND EGGS from Cecil Sheppard's high grade laying strain of Anconas. Inquiries promptly and courteously answered. W. G. Pearmine, Cona Villa, R. R. 8, Salem, Ore.

BABY CHICKS—PRICES REDUCED AFTER May 15th. S. C. R. I. Reds, $20 per 100; S. C. W. Leghorns, $15 per 100; April chicks all sold. Maple Brook Poultry Farm, Southworth, Wash.

MAMMOTH PEKIN DUCKS. "AMERICA'S finest." New blood this year direct from C. C. Shoemaker; eggs, $2 per setting, $12 per 100. Crystal White Poultry Farm, McMinnville, Ore. Box 33.

SETTINGS FROM BROOKS HAVEN SINGLE Comb Reds; Redwing strain (Hoganized); bred for color, type, capacity, range raised. Chas. S. Brooks, Underwood, Wash.

WHITE ROCKS AND RHODE ISLAND REDS; eggs, utility stock, $1.50 per fifteen; $8 per hundred. Few cockerels, $4. Mrs. F. D. Terpening, Clatskanie, Ore.

COCKERELS AND EGGS; BARRED ROCKS, Buff Orpingtons, White Leghorns, Dark Cornish, Toulouse geese, Bronze turkeys. E. A. Kruse, Roseburg, Ore.

SINGLE COMB RHODE ISLAND RED COCKerels; hen hatched, range raised; hatching eggs $3 setting (Owen strain). Joe Brunsell, Mt. Vernon, Wash.

FOR SALE—ROSE COMB RHODE ISLAND Whites; twelve hens, one cockerel; fine layers. Eggs, $2.50 setting. Harold Price, Monmouth, Ore.

PURE BRED S. C. RHODE ISLAND RED EGGS for hatching from non-setting, non-fading strain, $3, $5 and $10 per fifteen. Mrs. L. Wham, Double Diamond Ranch, Omak, Wash.

EGGS, MAMMOTH TOULOUSE AND WHITE Chinese geese, Mammoth Pekin ducks, pearl guineas, Single Comb Reds. C. O. Johnson, R. 1, Medical Lake, Wash.

MAMMOTH BRONZE TURKEYS, GOLD NUGget prize stock; fertile eggs from 20-lb. hens mated to 40-lb. toms, 50c egg. Inglewood Poultry Co., Inglewood, Cal.

S. S. HAMBURGS, COCK AND COCKERELS; prize stock, $5; old hens, $3.50; 15 eggs, $3.50; pullets, $3.50. E. E. Enos, W1908 Montgomery, Spokane, Wash.

COCKERELS—BROWN AND BUFF LEGhorns, Black Minorcas, Blue Andalusians. Boone Avenue Poultry Yards, E1601 Boone ave., Spokane.

PEDIGREED ANCONA COCKERELS AND hatching eggs from 330-egg strain; eggs, $2.50 per setting. Smith's Ancona Farm, Nampa, Idaho.

POULTRY RAISERS, SEND FOR FREE BOOKlet on poultry advertising. The Pacific Northwest Farm Trio, Dept. P, Review bldg., Spokane, Wash.

DOLLARS FOR YOUR EGGS—WE PAY THE top market prices for your eggs and poultry. Daily cash remittances. Western Produce Co., Spokane.

SINGLE COMB RHODE ISLAND WHITES; heavy egg producers; eggs, $2.50, $3.50 per 15; $12.50 per 100. Van K. Lawson, McMinnville, Ore.

S. C. ANCONAS, SHEPPARD'S SELECT AND 331 egg strains; eggs, $2 per 15; chicks, $20 per hundred. A. B. Larson, Warren, Ore.

BABY CHICKS, COCKERELS, SINGLE COMB White Leghorn; heavy laying strain. Grape Lane Poultry Farm, Turner, Ore.

S. C. RHODE ISLAND RED HATCHING EGGS; heavy laying strain; $1.50, 15; $7 hundred. Geo. Silvers, Zillah, Wash.

SHIP YOUR LIVE POULTRY AND EGGS TO us. Highest prices paid; daily remittance. Inland Poultry House, Spokane, Wash.

TRAP NESTED WHITE LEGHORN AND Barred Rock eggs and chicks; records, 200 to 311. Mrs. W. M. Roberts, Elmira, Oregon.

GIANT STRAIN PURE BRED MAMMOTH Bronze turkeys, from prize-winning stock. Mrs. C. R. Lowery, Route 4, Boise, Idaho.

S. C. R. I. RED EGGS, $2 PER 15; $10 FOR 100; special matings, $5 per 15. B. F. Kammerzell & Sons, Colfax, Wash., R. 5.

PURE BLOOD BRAHMAS, WHITE ROCK, R. I. Red eggs for setting; $1.50 for 15. Mrs. Mary Insel, Shelton, Wash.

S. C. R. I. RED HATCHING EGGS. FIRST pen, $2; second pen, $1.50. Mrs. L. W. Alexander, Sunnyside, Wash.

RANGE RAISED WHITE WYANDOTTE eggs, $1.50 setting; $8 hundred, prepaid. A. Krueger, Colfax, Wash.

BLUE ANDALUSIAN AND WHITE ROCK hatching eggs, $2 per 15. Mrs. C. W. Armstrong, Freewater, Ore.

CHICKS FROM LEGHORN HENS, 228-EGG average; reduced price. Acme Poultry Farm, Cottage Grove, Ore.

ANCONA HATCHING EGGS. SHEPPARD'S laying strain, $3 per 15. Georgiana Kee, Greenacres, Wash.

BRED TO LAY ANCONAS: HATCHING EGGS. Price list free. Yew Lane Farm, Sherwood, Oregon.

BUFF ROCKS, BUFF MINORCAS, COCKERels, eggs. Mrs. Day Woodruff, Bow, Wash.

S. C. BLACK MINORCA HATCHING EGGS, $1.50 per 15. John Zack, Kalama, Wash.

SINGLE COMB REDS, EGGS, $3 PER 15; $5 per 30. A. E. Bosworth, Omak, Wash.

LIGHT BRAHMA EGGS, $2 PER 15. DALTON Poultry Farm, Coeur d'Alene, Idaho.

BIG REDUCTION MINORCA EGGS. MRS. Frank Winnard, Heppner, Ore.

LIVE STOCK 177

WHITLA & GOULD, MICA, IDAHO, OFFER for sale purebred Hampshire boar pigs.

I AM IN THE MARKET FOR REGISTERED Holstein bull with following qualifications. He must have a good list of daughters that have made creditable official or semi-official records; he must be a show bull with a show ring record; his dam must be a good individual with a good record; a large percentage of his get must be exhibited and proven to be animals of high class conformation and type. Do not waste your time if your bull can not qualify. If he can, get busy. Send pedigree, price and all other essential data. Bank references furnished. G 1, Oregon Farmer, Spokane.

SHIP US YOUR POULTRY AND LIVE STOCK —We pay the top market prices. Light veal, fat, fancy, 14c to 16c; dressed block hogs, 13½c to 14½c; hens, heavy, 23c; light, 18c. Prompt returns. John Lewis & Co., Spokane, Wash.

SEND FOR FREE BOOKLET, "SOME SUGgestions to Live Stock Advertisers," outlining the practices of successful men of long experience. Helps in determining how much to spend, the mediums to select, preparing advertisements, handling inquiries, the use of photographs, etc. Write today. The Pacific Northwest Farm Trio, Dept. W, Spokane, Wash.

FOR SALE—REGISTERED GUERNSEY BULL, May Rose and Glenwood breeding, four years; good individual. Davis A. R. record, 620 lbs. butterfat as six-year-old. Daybreak Farm, Battleground, Wash.

FRESH MILCH GOAT WITH DOE KID, BY thoroughbred Toggenburg buck, $25; a family pet, producing most wholesome milk; easy to feed; prolific. Westwold Farm, Edmonds, Wn.

WE PAY TOP PRICES FOR YOUR LIVE OR dressed veal, hogs and poultry. Your check by return mail. Shipping tags on request. M. & J. Packing Co., Spokane.

FOR SALE—REGISTERED SHORTHORN cows, beef and milk type; fresh soon. Clarence Schmidt, Route 5, Olympia, Wash.

TILLAMOOK CALVES—SEASON NOW OPEN. Price lists ready; strictly dairy stock. Smith, the Calf Man, Tillamook, Ore.

PERCHERON RANGE HORSES FOR SALE— Some broke for saddle and work. Ralph Davis, Wymer, Wash.

REGISTERED PERCHERON STALLIONS and mares. Priced to sell. Adams & Son, Yakima, Wash.

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The GAUNT GRAY WOLF



By DILLON WALLACE



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SYNOPSIS.

Shad' Trowbridge, a New England lad of about 20 years, sails on a mail boat to Labrador, where he plans to spend a few weeks of summer hunting and fishing in the wilderness. Upon his arrival he meets two experienced fishermen and trappers, Dick Blake and Ed Matheson, who recommend to him a young lad of 17 known as Ungava Bob, as a guide for his hunting and fishing trip inland. Desiring to lose the least time possible in securing Ungava Bob's services and starting inland for his vacation, Shad starts across the bay in his canoe in the face of a threatening storm. In the darkness his canoe is capsized and he is plunged into the icy water. As he rises to the surface a rope is thrown to him and he hears a voice shouting to make it fast. He is soon drawn aboard a little sailboat which, unknown to him had approached at the moment of his great need.

"I'm sure I owe my life to you," he said to the lad piloting the sailboat. "It was lucky for me you saw me."

"'Tweren't luck, sir," said the lad. "'Twere Providence. 'Twere the Lord who were takin' care of you."

To his surprise, Shad discovers that his new friend, the lad with the sailboat, is none other than Ungava Bob. Together, they make their way to Bob's home, where Shad enjoys the hospitality of the northland while they consider ways and means of making inland excursions. Shad decides to remain a month or more and make the first leg of a long winter of trapping planned by Bob, returning to the settlement in time to sail back home before college opens. To lay in additional supplies for the trip they cross the bay to the Hudson's Bay trading post, where Shad meets with other friends of Ungava Bob and his parents, including Mr. and Mrs. Black, whose daughter Bessie and Bob are great friends.

They leave for the wild trapping grounds and Shad is so delighted with the wilderness that he decides to remain with Bob on the trails all winter. The other members of the party start back home, leaving the two boys alone to start their long winter of adventure. But they are not alone! Hardly has the boat carried their friends around the bend of the river before Bob and Shad see two Indians watching them from the shadows of the forest trees.

CHAPTER VI.

Old Friends.

"Sishetakushin and Mookoomahn!" exclaimed Bob.

The moment they were recognized the two Indians strode forward, laughing, and grasped Bob's hand in a manner that left no doubt of their pleasure at meeting him, while both voiced their feeling in a torrent of tumultuous words.

They were tall, lithe, sinewey fellows, clad in buckskin shirt, tight-fitting buckskin leggings and moccasins. They wore no hats, but a band of buckskin, decorated in colors, passing around the forehead, held in subjection the long black hair, which fell nearly to their shoulders. In the hollow of his left arm each carried a long, muzzle-loading trade gun, and Mookoomahn, the younger of the two, also carried at his back a bow and a quiver of arrows.

"These be th' Indians I were tellin' you of," Bob finally introduced, when and opportunity offered. "Shake hands with un, Shad. This un is Sishetakushin, an' this un is his son, Mookoomahn. I've been tellin' they you're my friend."

In their attitude toward Shad they were dignified and reserved. Neither could speak English, and Bob, who had a fair mastery of the Indian tongue, interpreted.

"We are glad to meet the friend of White Brother of the Snow," said Sishetakushin, acting as spokesman. "We welcome him to our country. White Brother of the Snow tells us he will remain for many moons. He will visit our lodge with the White Brother of the Snow and eat our meat. He will be welcome."

"I thank you," responded Shad. "White Brother of the Snow has told me how kind you were to him when he was in trouble, and it is a great pleasure to meet you. I will certainly visit your lodge with him and eat your meat."

The ceermony of introduction completed, Bob renewed the fire and brewed a kettle of tea for his visitors. They drank it greedily, and at a temperature that would have scalded a white man's throat.

"They's wonderful fond o' tea, and tobacco, too," explained Bob, "an' they only gets un when they goes t' Ungava onct or twict a year."

Upon Bob's suggestion that, should they meet Indians, it would prove an acceptable gift, Shad had purchased at the post and brought with him a bountiful supply of black plug tobacco, such as the natives used, and with this hint from Bob he gave each of the Indians a half-dozen plugs. The swarthy faces and black eyes of the visitors lighted with pleasure, and from that moment much of the reserve that they had hitherto maintained toward him vanished.

"The friend of White Brother of the Snow is generous," said Sishetakushin, in accepting the tobacco. "For four moons we have had nothing to smoke but dried leaves and the bark of the red willow."

Each Indian carried at his belt a pipe, the bowl fashioned from soft, red pipe stone, the stem a hollow spruce stock. Squatting upon their haunches before the fire, they at once filled their pipes with tobacco, lighted them with coals from the fire and blissfully puffed in silence for several minutes.

"How are Manikawan and her mother?" Bob presently inquired.

"The mother is well, but the maiden has grieved long because White Brother of the Snow never returns," answered Sishetakushin. "She watches for him when the Spirit of the Wind speaks in the treetops. She watches when the moon is bright and the shadow spirits are abroad. She watches when the evil spirits of the storm are raging in fury through the forest. She watches always, and is sad. Young men have sought her hand to wife, but she has denied them. White Brother of the Snow will return. He will come again to our lodge, and the maiden will be joyful."

Shad was unable to understand a word of this, but Bob's face told him plainly that something not altogether pleasant to the lad had been said.

"I can not go now," said Bob, speaking in the Indian tongue. "We must build



A warning was shouted that they must not attempt to land.

our lodges and lay our trails. Winter will soon be upon us and we must have the lodges built before the Frost Spirit freezes the earth."

"Sishetakushin's lodge is always open to White Brother of the Snow. It is pitched upon the shores of the Great Lake, two days' journey to the northward. The trail is plain. It lies through two lakes and along water running to the Great Lake. The maiden is waiting for White Brother of the Snow. He was made one of our people. He is welcome."

The Indians had risen to go, and Bob presented them with a package of tea as a parting gift, which they accepted.

"White Brother of the Snow will come to our lodge soon and bring with him his friend," said Sishetakushin, in accepting the tea, and he and Mookoomahn, like shadows disappeared into the forest.

"Injuns be queer folk, but they were good friends t' me when I were needin' friends," said Bob, when the Indians were gone.

CHAPTER VII.

Where the Evil Spirits Dwell.

From the river tilt, as they called it, where their camp was pitched, the Big Hill trail led to the northwest for 15 miles, then 15 miles to the westward, where it took a sharp turn to the northward, in which direction it continued for nearly 30 miles, then again swung to the westward for 15 miles, where it terminated on the shores of a small lake. This was the trail previously hunted by Bob.

Douglas Campbell had visited the Big Hill trail the preceding winter, but had not remained to hunt, and it had therefore been unoccupied during the winter. For the season at hand it had been transferred to Dick Blake, while Dick's own trail, farther down the river, was to remain untenanted, and the animals given an opportunity to increase. Directly below the Big Hill trail and adjoining it was Bill Campbell's trail.

Bob had been informed by Mountaineer Indians who camped during a portion of each summer near the Eskimo Bay post, that by following a stream flowing into the river a short distance above the river tilt of the Big Hill trail and taking a west-northwesterly direction, he would find a series of lakes running almost parallel with the river and lying between the river and the Big Hill trail.

Tradition said that this stream and series of lakes had at one time been an Indian portage route around the Great Falls of the Grand river, but for many years it had been generally avoided by Indians because of its proximity to the falls, which were supposed to be the abode of evil spirits, a superstition doubtless arising form the fact that Indian canoes may have been caught in the current above the falls and carried to destruction below; and because of the impression and awful aspect of the falls themselves, whose thunderous roar may be hear for many miles, echoing through the solitudes.

From the fact that this region had but rarely been traversed, and had certainly not been hunted by Indians for many generations, and that the animals within the considerable territory which it embraced had therefore been permitted to increase unidsturbed by man, Bob argued that it must of necessity prove a rich trapping ground for the first who ventured to invade it. It was here, then, that he purposed establishing his first trapping trail.

The first step to be taken was to make a survey of the region, and with a quantity of steel traps, a limited supply of provisions, and Shad's light tent, the two young adventurers set forward in the canoe upon their scouting journey within the hour after Sishetakushin and Mookoomahn had left them.

A long portage and the ascent of a stream for several miles carried them that evening to the first of the series of lakes, where Bob's trained eye soon discovered unquestionable signs of an abundance of fur-bearing animals, sustaining his hope that the ground would be found virgin and profitable territory.

Their camp was pitched by the lake shore. At their back lay the dark forest, before them spread the shimmering lake, and to the westward a high hill lifted its barren peak of weather-beaten, storm-scoured rocks.

The atmosphere became cool as evening approached, and when supper was disposed of the fire was renewed, and, weary with their day's work, they reclined before its genial blaze to watch the sun go down in an effulgence of glory and color.

Neither spoke until the colors were well nigh faded, and the first stars twinkled faintly above.

"The most glorious sunset I ever beheld," remarked Shad finally, breaking the silence.

"'Twere fine!" admitted Bob. "We sees un often in here, this time o' year. They makes me think o' what the Bible says th' holy place in th' temple was t' be like—'A veil o' blue an' purple an' scarlet.' I'm wonderin', now, if th' Lord weren't makin' these sunsets just t' show what th' holy place be like, an' t' keep us from forgettin' un. I'm wonderin' if 'tisn't a bit o' th' holy place in th' temple o' Heaven, th' Lard's showin' us in them sunsets."

"I don't know," said Shad; "I don't remember it. I must confess I never read my Bible very much."

"I'll read un to you from my Bible when day comes," promised Bob.

Presently the aurora borealis flashed up upon the sky with the effect of a thousand powerful searchlights, the long fingers of light rising from the northern horizon to the zenith and flashing from east to west in a maze of every-changing color—now white—now red—now yellow. It was a scene not only beautiful but weird and awe-inspiring.

"I'm thinkin', now, o' th' northern lights," remarked Bob, when they had watched them for some time, "that they's flashes o' light from heaven. I'm thinkin' th' Lard send un t' give us promise o' th' glories we'll have when we dies."

"That is a cheerful thought, at least," admitted Shad.

"Yes, 'tis cheerin'. Leastways, they always cheers me when I see un," declared Bob.

"Whenever I see them after this," said Shad, "I shall remember your suggestion—that they are the reflected glory of heaven, sent to inspire the dwellers upon earth."

As they arose to retire to their tent the dead silence of the wilderness was startled by the uncanny cry of a loon. Bob stood for a moment and listened. Then, turning to the tent, he remarked:

"'Tis a bad sign, when a loon laughs at night like that!"

"In what way?" asked Shad.

"'Tis said t' be a warnin' o' danger an' trouble."

In a series of portages from lake to lake they passed the next day through six lakes of varying size, caching traps now and again at convenient points for future use.

All the afternoon a low, rumbling sound was to be heard. Time and again they halted to listen. It was a changeless, sullen, muffled roar. Finally, when they reached the sixth lake, later in the afternoon, their curiosity got the better of them and they climbed a barren eminence to investigate. As they neared the summit the roar increased in volume and when they reached the top and looked to the southward they beheld a cloud of vapor.

"'Tis th' Great Falls o' th' Injuns!" exclaimed Bob.

"Where th' evil spirits dwell."

Around them lay a rugged scene of subarctic grandeur. To the eastward the country was dotted with a network of small lakes similar to those through which they had been traveling, while to the northward a much larger lake appeared. The shores of these lakes supported a forest of black spruce, but every rise of ground was destitute of other growth than the gray caribou lichen which everywhere carpets the Labrador forest.

"There's a grand chance t' lay th' trails," said Bob. "We'll be makin' our trails along th' s'uth'ard lakes an' up t' that big lake, an' Ed's among th' lakes t' th' n'uth'ard."

"I'd like to see those falls," suggested Shad. "Can't we take the morning off to visit them?"

"An' you wants," agreed Bob. "We'll be buildin' a tilt down where th' canoe is, an' another on th' first lake, an' I'm thinkin' another on th' big lake above."

Accordingly the following morning, leaving their camp pitched and their canoe on the lake shore, they turned southward upon an exploring expedition. Their tramp carried them across a series of ridges and bogs and finally into a forest. With every step the roar increased, and at length they could plainly feel the earth tremble beneath their feet.

Suddenly they emerged from the forest to behold a scene of wild and sublime grandeur. They stood at the very brink of a mighty chasm. From far above them the river rushed down, a stupendous torrent of foam-crested billows and swirling whirlpools, impatient to make its leap into the depths at their feet where it was presently to be swallowed up in a bank of mist, which shimmered beneath the two adventurers like a giant opal lighted by all the colors of the rainbow. Below the rainbow-colored mist the river again appeared, rushing in fearful power past beetling, frowning cliffs, which directly hid it from view. The very rocks upon which they stood trembled, and a reverberating roar rose from the canyon at their feet, so loud that conversation was well-nigh impossible.

For half an hour they stood enthralled by the scene, then they turned up the river, walking along its bank.

"'Tis an awful place down there," remarked Bob. "I'm not wonderin', now, th' Injuns things 'tis possessed by evil spirits."

"It is the most sublime scene I ever beheld," declared Shad. "One glimpse of it is worth all the trouble we've had in getting here."

The river gradually widened, but always with a strong current, even above the heavy white rapids; until some five miles above the falls it expanded into a large island-dotted lake. At the extreme end of this lake the old Indian portage trail was discovered, and following it the explorers late in the day reached their camp.

The following weeks were devoted to the erection of tilts—small log cabins to be used in winter as shelter. One was established well up the shores of the large lake expansion above the falls, another upon the shores of the lake from which they had made their excursion to the falls, and still another upon the first lake above the river tilt of the Big Hill trail, while

(Continued on page twenty-six.)

Floors and Walls

By MRS. C. W. SHUMAKER.

It is a laudable desire and purpose of every homemaker to have the interior of all rooms finished and furnished as attractively as taste dictates and means will permit, yet at the same time express our wishes in a permanent, substantial way.

As one of the means to this end I find it more practical and desirable to use rugs instead of carpets in all rooms except kitchen and bathroom, where linoleum or paint are used to protect the floors, with rugs and runners where there is much wear. Every one has discovered what a task it is to lift, clean and replace a carpet, so it is only taken up about twice a year, which does not insure a very clean floor covering at the best. Then, too, it is difficult to keep the corners free of dust if the room is carpeted, while with rugs one can use the dust mop over the entire surface when the rugs are taken out for a frequent beating and airing. In bedrooms use only small rugs on floors that are varnished, stained or painted, while in living and dining rooms large rugs in the center, with smaller ones at doors or other spots of travel make an attractive floor. In the kitchen I prefer runners of cocoa matting—like that used in public buildings. It is porous so the dust and dirt sifts right through, does not soil easily and lies perfectly flat as long as it is used. Should a rug get the habit of curling at the end or corner sew a strip of pasteboard on the under side and it will keep straight.

Light Colored Walls.

Finish kitchen and bathroom woodwork with white paint. While it soils, it is easily washed and does not show dust as quickly as a darker color, while it at the same time makes the room lighter. Also finish all bedroom woodwork in white, making them more dainty and attractive. Other rooms may be finished as the owner's taste dictates.

Paint the kitchen walls white or put on a washable paper. It is much nicer and means less work than the old-fashioned whitewash and makes the room look much nicer. The same wall covering could be used in the bathroom to advantage. Tint the walls of all other rooms. It does not fade like wall paper, is more sanitary and lasting, is less trouble and expense to put on and harmonizes better with the other furnishings. In bedrooms use delicate tints with white ceilings. In living and dining rooms tans and browns, with cream or white ceilings are pretty and form a good background for pictures and furniture.

Not Too Many Pictures.

The next step is to curb one's desire to have too many pictures, knicknacks and ornaments scattered about. They are dust catchers and give any room a cluttered look—as if they were trying to crowd out the human inhabitants, a few good pictures on the walls, with photos tucked away in the drawer, but handy to be brought out when desired, are much to be preferred to an indiscriminate display of scenery, photos, animals, etc., in a variety of frames more or less gaudy. I never gave picture framing very serious thought until I found a store that really does artistic work in that line. They choose a molding that has some tint or color found in the picture, narrow and plain, so that it adds to rather than detracts from the scene it surrounds—the one blending in and harmonizing with the other.

Curtains at the windows should be of washable material, of course. I like marquisette myself, as it is substantial, can be plain hemstitched or trimmed with a narrow edge and always looks so dainty and trim whe nlaundered. The less drapery at windows and about the room the easier it is to be kept clean and more wholesome and sanitary the home.

Field Pea Seed

Field peas have been raised to a very limited extent in Thurston county, but A. S. Caton of Olympia finds that they will yield as high as two tons to the acre under favorable weather conditions. Last year he had four acres of Blue Bell field peas which were certified by the state seed inspector during the growing season. After the crop had been harvested and threshed Mr. Caton ran the whole lot over a screen and hand-picked the seed in order to get out all foreign matter and imperfect seed.

"The process of hand picking or screening the seed is what takes so much of the time," said Mr. Caton, "and as far as money is concerned, I never hope to get paid for the time it takes to clean them thoroughly. I have been roguing the fields for the last eight years and have at last succeeded in getting all the odd varieties weeded out. The Blue Bell pea has a white blossom and for that reason it is an easy matter to pick out all others, which have purple or yellow blooms. I have at last obtained a seed which will produce 100 per cent pure peas. They have sold for as high as $200 a ton.

"The Blue Bell makes a fine table pea if taken when it is tender. We like to go over the vines at the side of the patch and get a few of the best pods for eating and find that they are very delicious. The dry peas are excellent for pea soup and we keep out the ones that are split in threshing for this purpose."

Mr. Caton explained that he was not trying to promote the raising of field peas for the Puget sound district, but it was more for the purpose of improving his soil that he kept raising them. Last year he had more pea straw than he could feed to his cow and two horses, so he bought up two extra cows to feed through the winter. The returns come partly from the sale of the cows in the spring and partly from the increased value of the straw when in the form of manure. In this way he is able to increase the fertility of his soil both with the growing crop and with the manure.

Next year Mr. Caton contemplates seeding seven acres of field peas on land which has been in orchard.

Veterinary

(Continued from page eight.)

calomel, five grains. This is sufficient for a 100-pound animal. Increase or decrease in accordance with the size of the animals to be treated. It should be well mixed with the feed and two doses given—one each succeeding day. You could repeat in a week or 10 days if necessary.

Ear Trouble.—My dog has had ear trouble for many months and it seems that there is some matter forming in his ear. He scratches it until it bleeds. He also has a swelling between his toes on his front foot, which breaks and heals up, but comes back again in two or three weeks? What shall I do for him?

Woodinville, Wash. N. F.

Drop some peroxide of hydrogen into the dog's ear or ears. Follow this by a small quantity of methyl alcohol. If you are not of age, get your father to get this and do this for you. Immediately after, you fill the ear with boracic acid and put on a bandage made by sewing together two rather long pieces of cloth which will cover the ears well and keep the animal from flopping the ears until they get sore. This can be removed after a little while. Give this treatment daily for some time.

For the trouble between the toes you probably need to wash the wound out with peroxide of hydrogen and when thoroughly foaming treat it with a little tincture of iodine.

Caked Udder.—What should be done when a heifer's bag badly cakes before she freshens? MRS. C. F. K.

Odessa, Wash.

Wash the udder morning and evening with hot salt water and massage carefully. Lessen the amount of grain given the heifer until after she calves.

Milk.—I have a mare 13 years old, bred about five months ago, and she has some milk now. What is the cause of this? Is there any remedy? J. R. A.

Winthrop, Wash.

It sometimes occurs that pregnant animals come into milk before they give birth to their young when the milk is necessary for the nourishment of the young. I do not know any way to stop it.

Bloat.—I lost a 3-year-old cow, fresh about three months and in good health apparently until the night she died. She ate well when put in her stall that evening. When I went to milk her an hour later the cow was lying on her back bloated so badly that two of her legs stuck up in the air. The bloating continued until it extended to her neck and shoulders and by the next morning she had more than doubled her life size. Could anything have been done to save her? MRS. C. T. J.

Pasco, Wash.

I have seen many cases of straight bloat from indigestion. I think the cow should have been tapped, so that the gas might have escaped and you possibly might have saved her. The best thing to tap a cow with, of course, is a trocar in canula, which means a solid, round knife, and the canula left in the animal for the gas to escape through. The place to tap the animal is on the left side a hand's spread below the back bone and half way between the hip and the last rib. After the animal has been tapped, one ounce of creolin in an ounce of water should be given and an hour or two later a pound and a half of epsom salts in three quarts of water.

Ulcer on Eyelid.—I have a horse which has a bad eye. It appears that the inside of the lower lid is partly gone. There is matter running out occasionally. Is it catching to other horses? A. C. R.

Edwall, Wash.

From your description one might possibly make a diagnosis that the animal is suffering from an ulcer on the inside of the eyelid. It is not possible to tell whether this is catching to other horses, although I would be of the opinion that it is not. Possibly you might get very good results by dropping into the eye 2 per cent solution of argyrol in water. Do this three or four times daily. It is generally best to put the drops into the outside angle of the eyelid and allow the medicine to run down over the eye by simply pulling the lower eyelid slightly down.



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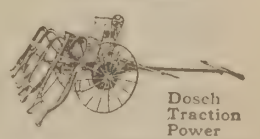
Dosch Dusts are recommended for the control of Aphis on Peas, on Sweet Peas and for other insects and also for fungous diseases on various crops.

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FAMILY CIRCLE

ALICE BARLAND
EDITORIAL CONTRIBUTOR

Dear Mrs. Barland: I want to express my appreciation of the Family Circle. We think a great deal of THE FARMER and consider the Family Circle by far the best of the letter clubs in any of the magazines we have ever read.

I have a dear little girl and I enjoy the ideas and experiences on bringing up children. Keep on writing about the children.

We are new farmers, having started the venture a year ago. We have our first heifer calf, which we are raising, and I am sure many of the sisters have had experience raising calves and I would like to benefit by their experience.

Our calf is six weeks old, gets about three gallons of separated milk a day in three feeds, all the alfalfa hay she will eat and a few whole oats, but she doesn't seem to thrive or grow as she should.

I have tried numbers of the recipes with success and I can not express how much the helpful letters have smoothed the rough places.

I also want to add three cheers for Mrs. Barland for making the "help one another club" the interesting corner it is.

MRS. PAUL H.

If Mrs. A. B. of Salt Lake will take equal parts of pine tar and unsalted butter it will cure her hands. Be sure it is pine tar. MRS. C.

Moscow, Idaho.

I have just read Mrs. A. B.'s request for a simple home remedy for eczema. Take unsalted butter and work in sulphur until bright yellow. Apply to parts affected. Keep hands out of water as much as possible. MRS. H. CARAWAY.

Coeur d'Alene, Idaho.

Dear Mrs. Barland: Please tell me how to make soap out of cracklings and meat rinds and such things. The soap recipes I have call for a certain number of pounds of lard or grease. Some make soap out of cracklings and I would like to know how.

Please tell me how to set color in goods and how to shrink goods.

In making cream puffs, should they be made without soda, baking powder or salt? I made some and put in a teaspoon of soda and they were green in the center and did not rise at all. Please explain this to me.

A READER OF THE CIRCLE.

Dear Reader: Why didn't you give name and address? It makes it easier for me to help when all of you do.

When soap is made out of cracklings you must use enough to equal the amount of grease named in the recipe. It is impossible to tell you how much to use as that will depend on how much fat is left in the cracklings. I think one would have to experiment and add till the grease and lye were soap.

Before washing your goods, soak in a strong solution of salt water for an hour or two. To shrink goods put them in a tub of very hot water, to make sure that they are shrunken as much as possible, dry the goods and soak again in hot water. Cold water will not make a good job of shrinking.

The eggs in the cream puffs are supposed to cause them to rise. Should you add baking powder or soda you will spoil the delicateness of them. You should follow directions carefully in making them and the recipe which appeared a few weeks ago is fine, only use it according to the correction which was given later, namely, use but one-half cup of butter instead of one cup.

ALICE W. BARLAND.

Dear Mrs. Barland: In return for the many helps I get in the Family Circle I am going to add my mite.

During the winter months the cream is hard to churn and even when temperature is right, about 62 degrees, it will sometimes get thick and then thin and foam to double its size and seem to be separating, but doesn't.

I have found a method which works so well that I will tell you about it, as it may help others. I take a perfectly sterilized flour sack which has been sewed strongly with the machine and pour the cream into it. It may run through at first; pour it back and place a dish under to catch the cream and hang it up and allow to remain over night. You will be surprised to see how quickly it will separate into butter in the morning and most of the bitterness will be gone. I wasted several nice big churns full of cream, as some of it was too bitter to cook with, before I hit upon this plan.

We live on a small ranch of 35 acres and are making a 3-year residence on a 640-acre homestead. This is our second year and I have a mile walk between the two ranches, so I have plenty to do and am never lonesome, though neighbors are not close. I help with much of the outside work in summer, raising a large garden and a good many chickens. I try to get my sewing done during the winter months, together with some crocheting and reading a few good books. At present I am making quilts. I have only one child, a little girl of 5 years.

Like others, I use flour sacks for many things and have been able to get along without buying bed spreads or sheets during this period while they have been so high. I find that flour sacks answer well for poor people.

I get many useful helps from the Circle and your good advice, Mrs. Barland.

MRS. A. F. R.

Oregon.

Your Health

By Royal S. Copeland, M. D., F. A. C. S.

A few days ago an organization of parents discussed the question of how long the school lunch period should be.



Dr. Copeland.

When I taught school in the country teacher and pupils had a gay time during the lunch hour. We used to sit around the big box stove, telling stories and cracking jokes. Then when everybody's hunger was satisfied we adjourned to the skating and sliding pond and had a snowball battle or played "pom-pom-pull-away."

But country children have a lot of fun that city children know nothing about. It works the other way, too—city children have advantages denied their country cousins.

One of my professional colleagues says the modern school child "lives too fast and too much." He gets up early, does his chores, hurries through his cleanup and dressing, and takes his breakfast on the run.

The same hurry characterizes the lunch hour, and it seems as if the child is panting for breath half the time.

What about heart and digestion? Can the growing child prosper under such pressure?

I always feel uncomfortable when I see young people hurrying their meals, running to get to school or business, and suffering from fatigue much of the time. An older person endures a life of this sort with less serious effect upon his health. Life is a good deal like a mass of concrete. Until it "sets" it is soft and malleable. When it hardens it becomes like flint.

Children should be watched. Their wonderful energy must be controlled and properly directed. They need regular meals and well-chosen food. They should not play or work too hard.

The matter of the school lunch is important. The child needs real food—not "all-day suckers," pickles or sodawater. He should take time to eat his lunch deliberately. Otherwise he will suffer from indigestion, constipation and malnutrition.

A child who bolts his food will suffer exactly as does a grown person who practices this bad habit. Haste makes waste, and hurry is deadly to health.

There is no greater social crime than lack of punctuality, but to be obsessed with the fear of being late and spending a life-time hurrying—this is the way to hurry the undertaker.

Give yourself enough leisure for your meals, and add years to your life.

To Eradicate Ants

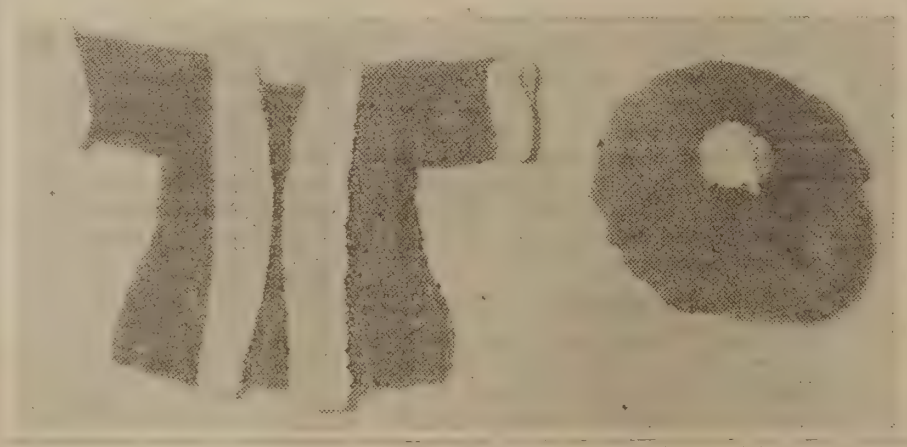
One method: Where the colony lives in the ground or any other place where they can be somewhat confined; use carbon bisulphide. Carbon bisulphide is a liquid that turns to gas, heavier than air when exposed to the air. Two tablespoonfuls of it should be sufficient to destroy a large ant colony. Pour it into the opening of the colony and cover the opening with earth or other covering and the ants will soon suffocate.

Second method: Take about three grains (by weight as bought from the druggist) of tartar emetic. Mix thoroughly with four tablespoonfuls of syrup. Smear the mixture on wood and place about the ant runs or habitations. They will eat it or take it to their dens for the others to eat. It acts as a slow poison and is effective if the ants can be coaxed to eat it. It is only slightly poisonous in such quantities to human beings and animals, but should be handled cautiously.

Simple Gift for a Little Girl

By JEANETTE BELL.

One can not please a small girl more than by giving her something new for her doll. The knitted tam and tuxedo sweater to match are the miniature of her own in every detail, made of the same yarn, or it may be made of any leftovers one may have about the house, providing the colors are attractive. One of the mistakes one is apt to make when working for a doll is to use any old color which is handy. The first consideration is to have the color pleasing. Quality is entirely overshadowed by color. The model was of old rose with white trimmings, but many other colors and combinations could be used. The size should be measured on the doll. Use bone sock needles, or for a larger doll, fine bone knitting needles for the sweater. Allow 5 sts to the inch, for the model size, cast on 32 sts, or any number divisible by 8,



1st row: k plain.

2d row: * k 4, p 4, repeat *, for this row, then repeat for the next 3 rows, making k over k, and p over p, then shift the stitches to form the block, make 3 rows of blocks, 12 rows in all, then k plain for 24 rows, or to the underarm.

Next row: * cast on 3 sts, k across, repeat *, until you have the required length of sleeves, then k across straight, until you have the length to the back of the neck.

Next row: k to 3 sts before the center, bind off 6 sts, k across, slip the first set of sts onto a knitting pin, and k across the one sleeve and shoulder, k straight for one inch, then increase 1 st on each turn at the front side and k straight at sleeve side until you have completed the sleeve, then bind off as you increased, 3 sts on each row, then k both sides straight to the blocks, then repeat the border and bind off. Slip the sts from knitting pin to needle, and repeat for the opposite side. Sew up the seams.

For the collar of white cast on 8 sts, k plain for the length required. It is good judgment not to bind off until you have sewed the collar to the sweater, as it takes up around the neck.

For the cuffs, cast on 6 sts, k plain for the length required, bind off, sew together and sew to edge of sleeve.

For the tam, measure the size of the head, use a set of sock needles, cast on the required sts to fit, onto 3 needles, knit plain for 1 inch deep for a small doll, 1 1-2 inches for a larger doll, forming the band.

Next row: * k 1, increase 1, repeat *, for this row.

Next row: k plain.

Next row: * k 2, increase 1, repeat *.

Next row: k plain for 3 rows (this should be large enough, if not, then increase every 4th st, then k plain for 3 rows).

Next row: Divide your sts into 7 equal parts, * k 2 together k across to next division, repeat *, 6 times.

Next row: k plain, for 2 rows, then decrease as before, 1 st for each division, and continue in this manner, until you have but 7 sts, bind off.

For the pompon, cut a piece of cardboard and over this wind the white yarn, cut through and tie, sew over the opening at the top.

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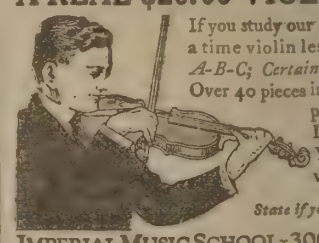


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In the Heart of the City.



"Where do you live in the city—close in?" "Fairly so—35 minutes on foot, 15 by motor car, 25 by street car and 45 by telephone."—Kansas City Star.

She Had Hers Parked.

A young woman reports that she was traveling on a train recently when a girl, evidently on her first trip, entered and occupied the other half of her seat. The conductor came through calling for tickets and after some embarrassed fumbling the girl handled hers over.

A few minutes later a train boy came down the aisle behind her crying "Chewing gum."

"Mercy!" said the girl to her seat companion, "do we have to give up our chewing gum, too?"—Boston Transcript.

Some Speed.

Rastus from Boston was trying to impress his southern cousin with the superior speed of northern trains.

"When dat ole Montreal express goes to hummin', Mose," he asservated solemnly, "de telegraph posts looks like slats on a chicken fence."

"Humpf!" sniffed Mose. "When de Southern express steps out fo' Noo Orleans, it nacherally makes de mileposts look closer'n strings on a banjo."

Latest High Class Patterns for the Home

Please order the patterns you desire at least two or three weeks before you wish to use them. Desiring to obtain the latest high-class patterns for its readers, THE FARMER has made arrangements to have them sent direct from the east, and under present mailing conditions it takes about that time for them to reach you.

3316. Girl's Dress. Cut in four sizes: 6, 8, 10 and 12 years. A 10-year size requires four yards of 40-inch material. Price 10 cents.

3914. Girl's Dress. Cut in four sizes: 6, 8, 10 and 12 years. A 10-year size requires four yards of 32-inch material. Price 10 cents.

3926. Misses' Dress. Cut in three sizes: 16, 18 and 20 years. To make the dress for an 18 year size requires four yards of 44-inch material. The width at the foot is about 2 1-8 yards. Price 10 cents.

3304-3294-3759. Lady's Costume. Bolero 3304 and vest 3294 are cut in four sizes: Small, 32-34; medium, 36-38; large, 40-42; extra large, 44-46 inches bust measure. The bolero requires three yards of 30-inch material. The vest requires 1 5-8 yards of 36-inch material. Skirt 3759 cut in six sizes: 24, 26, 28, 30, 32 and 34 inches waist measure. It requires 2 1-2 yards of 54-inch material for a medium size. The width of the skirt at the foot is 2 5-8 yards. Three separates patterns, 10 cents for each pattern.

3392-3727. A Stylish Gown. Waist 3392 cut in seven sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. Skirt 3727 cut in six sizes, 24, 26, 28, 30, 32 and 34 inches waist measure. The width of the skirt at the foot is 2 1-4 yards. To make this model for a medium size will require 6 1-2 yards of 32-inch material for waist with long sleeves and for the tunic, and 3 1-4 yards for the skirt. Two separate patterns, 10 cents for each pattern.

3613. Girl's Dress. Cut in four sizes: 4, 6, 8 and 10 years. A 6-year size requires 1 3-4 yards of 36-inch material. Price 10 cents.

3922. Child's Romper. Cut in four sizes: 1, 2, 3, and 4 years. A 2-year size will require 2 1-8 yards of 36-inch material. Price 10 cents.

3502. Lady's House Dress. Cut in seven sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. A 38-inch size will require 6 3-4 yards of 36-inch material. The width of the skirt at the foot with plaits extended is about 2 1-8 yards. Price 10 cents.

3692. Lady's Apron. Cut in four sizes: Small, medium, large and extra large. A medium size requires 3 3-4 yards of 36-inch material. Price 10 cents.

3646. Girl's Dress. Cut in four sizes: 4, 6, 8, and 10 years. An 8-year size requires 3 1-4 yards of 27-inch material. Price 10 cents.

3915. Girl's Bath Robe. Cut in four sizes: 6, 8, 10 and 12 years. It requires 3 1-8 yards of 32 inch material for a 10-year size. Price 10 cents.



3937. Girl's Undergarment. Cut in six sizes: 1, 2, 4, 6, 8 and 10 years. Size 6 requires 1 5-8 yards of 36-inch material. Price 10 cents.

Catalogue Notice.

Send 12 cents in silver or stamps for our up-to-date spring and summer 1922 catalogue, showing color plates, and containing 500 designs of ladies', misses' and children's patterns, a concise and comprehensive article on dressmaking, also some points for the needle (illustrating 30 of the various, simple stitches), all valuable hints to the home dressmaker.

Please fill in this order and mail with remittance to:
PATTERN DEPT., PACIFIC NORTHWEST FARM TRIO, Spokane, Wash.

Enclosed find.....cents for which send me the following:

Pattern No..... Size..... Pattern No..... Size.....

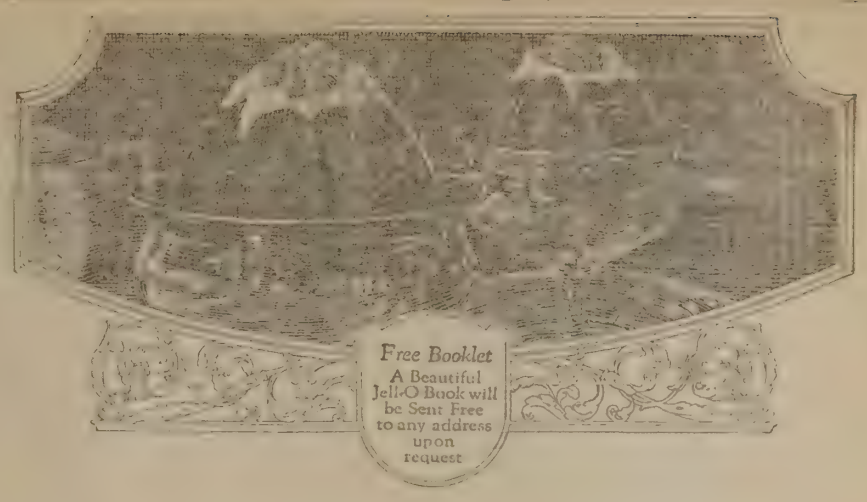
Pattern No..... Size..... Pattern No..... Size.....

Name .....

Postoffice..... State.....

R. F. D..... Box No..... St. No. .....

Be sure to give the pattern number and the correct size.



JELL-O for children! Children know what pleases them and they enjoy pretty desserts that taste good just as much as the grown-ups do.

It is a real boon to a busy mother to find a dessert that her children like and ask for and which she knows is good for them. That is why Jell-O is such a great family dish,—they all like it.

JELL-O

America's Most Famous Dessert

The American Offices and Factory of the Genesee Pure Food Company are at Le Roy, New York, in the famous Genesee Valley Country.



The Offices and Factory of The Genesee Pure Food Company of Canada, Ltd., are at Bridgeburg, Ontario, on the Niagara River.

GENERAL ADVERTISING.

THE CAUSE OF WHITE DIARRHEA

White Diarrhea is caused by the bacillus Bacterium Pullorum transmitted through the yolk. There is scarcely a hatch without some infected chicks. The germs multiply very rapidly and one infected chick may infect the entire brood. The germs can be killed by the use of preventives. Intestinal Antiseptics to kill the germs should be given as soon as the chicks are out of the shell. It is much easier to prevent than it is to cure.

HOW TO PREVENT WHITE DIARRHEA

Dear Sir: I have raised poultry for years and have lost my share of little chicks from White Diarrhea. Finally I learned of Walker's Walko Remedy for this disease, so sent for two 50c packages to the Walker Remedy Co., Dept 546, Waterloo, Iowa. I raised over 500 chicks and never lost a single one from White Diarrhea. Walko not only prevents White Diarrhea, but it gives the chicks strength and vigor—they develop quicker and feather earlier. I have found this company thoroughly reliable and always get the remedy by return mail. Mrs. L. L. Tam, Burnetts Creek, Ind.

DON'T WAIT

Don't wait until White Diarrhea gets half or two-thirds your chicks. Don't let it get started. Be prepared. Write today. Let us prove to you that Walko will prevent White Diarrhea. Send 50c for box on our guarantee—money back if not satisfied. **Walker Remedy Co., Dept 546, Waterloo, Iowa.**

TREES AND SHRUBS



Fruit trees budded from bearing orchards. Apple, Pear, Cherry, Peach, Plum, Prune, Apricot, Quince, Grape Vines, Shrubbery, Plants, Raspberries, Blackberries, Logans, Dewberries, Asparagus, Rhubarb, Flowering Shrubs, Roses, Vines, Hedge, Nut and Shade Trees. Carriage paid. Satisfaction guaranteed.

WASHINGTON NURSERY CO.
Toppenish, Washington.
Salesmen everywhere. More wanted.

Queen Incubator

70 TO 1600-EGG CAPACITY.

Insure big hatches of strong, healthy chicks that live and grow. The Queen is the best incubator buy in America. It has years of history back of it—is built right and for long service. Don't gamble on an unknown incubator. Get one with a record.

Queen Incubator Catalogue Free.

Also Our 160-Page Annual Catalogue of [illegible]



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ROUTLEDGE SEED AND FLORAL CO.
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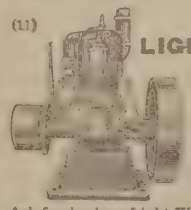
New 1½ H.P. CUSHMAN

For Light Jobs

A little wonder—regular Cushman quality, but at a very low price. Horizontal design, hopper-cooled, fewer moving parts. A real no-trouble engine for pumping, etc.



(11)



LIGHT WEIGHT 4 H.P.

For all power jobs up to 5 H. P. Weighs only 190 lbs. May be attached to binder and other machines to save a team. This engine is a necessity on every farm. Improved Throttling Governor insures very steady running and less gasoline used.

Ask for book on Light Weight Engines. If interested in Electric Lighting Plants, write for free book.

CUSHMAN MOTOR WORKS
415 E. Ash Street. Portland, Ore.

LOOK AT THE GOOD FARM BARGAINS THAT ARE OFFERED ON THE FARMERS' "WANT AD" PAGE THIS WEEK.

High Points in News of the Week

Except for certain industrial relations in the United States, last week was one of seeming great advance in the cause of peace.



In this country the United States senate completed ratification of the seven treaties submitted to it by President Harding, following the conference at Washington on the limitation of armaments. Having previously ratified the so-called four-power treaty, providing for the peaceable settlement of problems that may arise on the Pacific ocean between the United States, Great Britain, France and Japan, the senate ratified all other treaties with comparatively little opposition. The treaty declaring a "10-year naval holiday," with a great reduction in naval armaments, was adopted by a vote of 74 to 1, Senator France of Maryland casting the only negative vote. The treaty placing limitations upon the use of submarines and poison gases in international warfare was passed unanimously by a vote of 72 to nothing. The Far Eastern treaty, looking to the guarantee of the integrity of China, was ratified by 66 to nothing.

The other outstanding peace accomplishment of the week was the signing of a pact between North Ireland, South Ireland and the imperial government of Great Britain. Winston Spencer Churchill, imperial secretary for the colonies of Great Britain, declared that the treaty was the most important one in the history of his country. It provides for the establishment and maintenance of permanent peace in Ireland, with the leaders of all factions and that the British government cooperate in every way in their power to restore peaceful conditions in the unsettled area.

* * *

The industrial event that had little of the element of peace in it is the nation-wide coal strike that went into effect at midnight March 31. It is estimated that approximately 600,000 coal miners have quit, closing about 6000 out of the 7500 mines that have been in operation recently. Mines in 20 states are affected by the strike, including, in the Pacific northwest, the state of Washington and British Columbia, where a total of about 5000 miners are striking. Some of the mines, it is believed, will operate on a limited scale with nonunion workmen.

It is apparent that both the mine owners and the mine workers are determined to carry on the strike until one side or the other is exhausted. The strike is over the demands of the miners for a continuation of the war-time agreement as to working conditions and wages, which the mine owners have refused to grant.

There is claimed to be a surplus of about 10,000,000 tons of hard coal and 65,000,000 tons of soft coal on hand in the country at the present time. This is estimated to be enough to supply the general public, the railroads and industrial plants for approximately two months.

President Harding and Secretary of Labor Davis, who have endeavored in vain to get the mine owners and the mine workers together in agreement to avoid the strike, have now taken the position that the government should take no hand in the matter unless an emergency situation arises, in which the public welfare is menaced. With the present supply of coal on hand, the government considers that no such situation exists at the present time.

* * *

An important wage hearing is in progress at the present time between the railroad owners and representatives of the engineers and firemen. Conferences are also being held with the organized conductors' and trainmen's' brotherhoods.

* * *

Senator Gooding of Idaho, chairman of the "agricultural-Paris bloc," in a published interview, announces the success of the farm bloc in its tariff activities, saying: "Every rate asked by the farm bloc will be in the bill when it is reported out of the senate finance committee. For the first time, the producers of farm products have received everything they asked and what they were entitled to receive, because their senators effected an organization which was able to go out and demand what was right." While the tariff measure is about ready to be submitted to the senate for consideration, there will undoubtedly be lengthy debates on some of its provisions, with probable changes in schedules as existing in the original draft.

* * *

Representative Moore of Virginia last week introduced a resolution in the lower house of congress, looking toward the granting of independence to the Philippine islands. The resolution provides that before independence is granted the United States secure from the other nations interested in islands or mainlands of the Pacific ocean promises that they will officially recognize the Philippines as an independent nation.

* * *

Marshal Joffre, under whose leadership the French army stopped the first advance of the German army at the River Marne in its march toward Paris in 1914, is a guest of the United States this week. He entered the United States last week at Blaine, Wash., passing through the international peace portal erected there commemorating the more than 100 years of peace without fortifications between Canada and the United States.

* * *

With the arrival last week of the last ship bearing American soldier dead from France, a total of about 45,000 bodies have been brought back to their homes. Only those remain on European soil whose relatives desired that their bodies remain where they had fallen in the service of civilization.

* * *

It is understood that President Harding is soon to issue a proclamation naming April 22 as national arbor day.

* * *

Former Emperor Charles of Austria-Hungary died last week in exile, to which he had been sent by the allies, following his recent attempt to regain the throne of either Austria or Hungary, from which he was required to step down at the conclusion of the recent war.

Protest Wheat Dockage

The Northwest Wheat Growers, Associated, the organization coordinating the cooperative associations of the four Pacific northwestern states, is leading in a campaign for a reduction in the discount rate and dockage on wheat because of the presence of smut. A series of hearings is being arranged by the organization. The present charges, which determine the discount rate on smutty wheat, are 60 cents a ton where the proportion of smut does not exceed 3 per cent, 75 cents where it does not exceed 7 per cent and $1 where it does not exceed 15 per cent. The grain growers claim that the charge should be changed to not exceed 15 cents a ton where the percentage of smut does not exceed 1-2 of 1 per cent, 30 cents a ton for smut above 1-2 of 1 per cent and under 1 1-2 per cent, 50 cents a ton where it runs from 2 to 4 per cent and 75 cents a ton for anything above 4 per cent.

OTTO KOEHLER, South Tacoma, Wash. —For my part I must say The Washington Farmer is O. K.

Farm Business and Markets Outlook

(Continued from page five.)

Prices on 92 score fresh butter on March 29 were:

Chicago, 37c; New York, 36c; Boston, 31 1-2c; Philadelphia, 36 1-2c; San Francisco exchange quotation, 33c.

The cheese market has been weak on all grades and especially so on daisies. Longhorns and square prints were nearly steady.

Prices for No. 1 American cheese on March 29 were:

CHICAGO.—Twins, 18 1-4@18 1-2c; single daisies, double daisies, 18 1-8 1-4c; longhorns, 19 1-2@20 1-2c; square prints, 21 1-2c.

POTATO STOCKS APPEAR LIBERAL.

Stocks of potatoes in the 15 leading potato states on March 1 were estimated at 90,946,000 bushels, of which 73,486,000 bushels were held by farmers and 17,460,000 bushels by local dealers. Only 31,000,000 bushels of the farm stocks will be sold, so that total stocks available for commercial channels are about 48,000,000 bushels.

The apple market is dull, with the movement into consumptive channels rather slow. Baldwins, Starks and Northern Spies are quoted at $7.50 to $8.50 per barrel and northwestern extra fancy medium to large Winesaps at $2.75 to $3.25 per box wholesale in leading eastern and middle western markets.

LATEST QUOTATIONS.

The Live Stock Market.

PORTLAND, April 1.—Cattle—Choice steers, $7.50@8.25; medium to good steers, $6.75@7.50; fair to medium steers, $6.25@6.75; common to fair steers, $5.75@6.25; choice feeders, $5@6; fair to good feeders, $4.50@5; choice cows and heifers, $6@6.50; medium to good cows and heifers, $5.25@6; fair to medium cows and heifers, $4.50@5.25; common cows, $3.50@4.50; canners, $2@3.50; bulls, $4@5; choice dairy calves, $9.50@10; prime light calves, 9@9.50; medium to light calves, $6.50@9; heavy calves, $4.50@6.

Hogs—Prime light, $11.75@12; smooth heavy, 200 to 300 lbs., $10.50@11.50; smooth heavy, 300 lbs. up, $9.50@10.50; rough heavy, $8@10; fat pigs, $11.50@11.75; feeder pigs, $11.50@11.75; stags, subject to dockage, $6@8.

Sheep—East-of-mountain lambs, $12@14; best valley lambs, $11@13; fair to good, $10@11; cull lambs, $6@8; eastern Oregon feeders, $9@10; light yearlings, $10@11; heavy yearlings, $9@10; light wethers, $9.50@10; heavy wethers, $9@9.50; ewes, $3@8.

SPOKANE, April 1.—Cattle—Prime steers, $6.50@7.50; good to choice steers, $5.75@6.50; medium to good steers, $5.25@5.75; fair to medium steers, $4.75@5.25; common to fair steers, $4.25@4.75; choice cows and heifers, $4@5; medium to good cows and heifers, $3.50@4; fair to medium cows and heifers, $3@3.50; canners, $2@3; bulls, $3@5.50; light veal calves, $8@10; heavy veal calves, $4@8; stockers and feeders, $4.50@5.

Hogs—Prime mixed, $11@11.25; medium, $10@11; heavies, $8@9; fat pigs, $9.50@10.50; stockers and feeders, $9.50@10.25.

Sheep—Prime lambs, $9@10; fair to medium, $8@9; yearlings, $6@8; wethers, $4.50@6; mutton ewes, $2@6; feeder lambs, $7@8.

The Grain Market.

PORTLAND, Ore., April 1.—Wheat—Hard white, hard winter, northern spring, $1.25; soft white, white club, $1.24; red Walla, $1.22.

Grain futures: Wheat—Hard white, hard winter, northern spring, April, May, $1.25; soft white, white club, April, May, $1.24; red Walla, April, May, $1.22.

Oats—No. 2 white feed, April, $34; May, $34.50; No. 2 gray, April, May, $33.50.

Corn—No. 2 eastern yellow, shipment April, May, $27.

LEWISTON, Idaho, April 1.—Fortyfold, Club, hard winter, $1.04 to $1.06.

Hay and Grain Feed.

PORTLAND, April 1.—Millfeed—Price f. o. b. mill: Millrun, ton lots, $29; mixed cars, $28; straight cars, $27 per ton; middling, $43; rolled barley, $37@39; rolled oats, $42; scratch feed, $52 per ton.

Corn—White, $36; cracked $38.

Hay—Buying price, f. o. b. Portland: Alfalfa, $17.50@18 per ton; cheat, $12.50@13; oat and vetch, $15; clover, $14; valley timothy, $14@15; eastern Oregon timothy, $18.50@19.

SPOKANE, April 1.—Wheat—Feed wheat, $46 per ton.

Oats—$40 per ton; steam rolled, $42.

Corn—$36 per ton; cracked corn, $38 ton.

Barley—$40; steam rolled, $42 per ton.

Bran and shorts—$30 per ton.

Alfalfa, $20 ton; timothy, $20 ton; mixed hay, $18 ton.

General Produce.

PORTLAND, April 1.—Butter—Cubes, extras, 35c per lb.; parchment wrapped, box lots, 39c; cartons, 40c. Butterfat, buying prices: No. 1 grade, 38@42c, delivered Portland.

Eggs—Buying prices, 20c, case count; henneries, 22c; jobbing prices, case count, 21c; candled ranch, 23c.

Cheese—Tillamook triplets, price to jobbers, f. o. b Tillamook, 26c; young Americas, 27c lb.

Poultry—Hens, 20@24c; ducks, nominal; geese, nominal; turkeys, live, nominal; dressed, 35@38c.

Pork—Fancy, 15½c lb.

Veal—Fancy, 14½c lb.

SPOKANE, April 1.—Eggs—Fresh ranch eggs, $7; fresh pullet eggs, $6.50.

Live poultry—Hens, fat, 4 lbs. up, 23c lb.; 2 to 4 lbs., 19c lb; old roosters, 11c lb.; rabbits, 12c lb.; ducks and geese, 15c lb.

Butterfat—35c lb.

Range of Live Stock Prices for the Week Ending March 29

CATTLE.	Chicago.	Spokane.	Portland.	N Salt Lake
Choice, prime heavy steers (1100 lb. up)	8.50@ 9.50	.....	.....	.....
Good heavy steers	7.85@ 8.90	.....	.....	.....
Medium heavy steers	7.00@ 8.25	.....	.....	.....
Common heavy steers	6.35@ 7.40	.....	.....	.....
Choice, prime light steers (1100 lb. d'n)	8.65@ 9.50	.....	.....	.....
Good light steers	7.85@ 8.90	.....	.....	.....
Medium light steers	7.00@ 8.25	6.20@ 7.50	6.50@ 8.00	5.50@ 6.75
Common light steers	6.25@ 7.25	4.75@ 6.50	5.25@ 7.00	4.00@ 5.50
Common to choice butcher heifers	5.00@ 8.25	3.50@ 6.00	4.00@ 6.50	3.50@ 5.25
Common to choice butcher cows	4.25@ 7.15	3.00@ 5.00	3.50@ 5.25	3.00@ 4.75
Bologna and beef bulls	4.00@ 6.35	3.00@ 5.50	3.50@ 5.25	2.00@ 3.50
Canners and cutters, cows and heifers	3.15@ 4.25	2.00@ 3.50	2.00@ 3.50	1.50@ 3.25
Canner steers	4.25@ 5.25	2.50@ 4.00	3.00@ 4.25	3.00@ 4.00
Medium to choice light veals	6.00@ 9.25	7.50@10.00	7.00@10.00	.....
Common to choice heavy veals	4.00@ 6.75	4.00@ 8.00	4.50@ 7.50	5.00@ 7.00
Com. to choice feeders (1000 lb up)	5.50@ 7.50	.....	.....	.....
Com. to choice feeders (750-1000 lb.)	5.40@ 7.50	4.50@ 5.00	4.50@ 6.00	.....
Common to choice stocker steers	5.15@ 7.25	.....	.....	.....
Com. to choice stocker cows, heifers	4.00@ 5.50	.....	.....	.....
HOGS.				
Top of market	10.50	11.50	11.75	9.80
Bulk of sales	9.75@10.40	10.50@11.00	11.50@11.75	9.35@ 9.75
Heavy (250 lb. up)	9.80@10.10	8.50@ 9.50	9.00@10.00	.....
Medium (200-250 lb.)	9.90@10.40	10.00@11.00	10.25@11.25	9.00@ 9.60
Light (150-200 lb.)	10.10@10.45	10.00@11.50	11.25@11.75	9.35@ 9.80
Light lights (130-150 lb.)	9.50@10.45	10.00@11.50	11.25@11.75	9.35@ 9.75
Smooth packing sows (250 lb. up)	9.00@ 9.40	8.00@ 8.75	8.25@ 9.00	.....
Rough packing sows (200 lb. up)	8.75@ 9.15	7.50@ 8.25	7.50@ 8.25	.....
Medium to choice pigs (130 lb. down)	8.50@10.25	9.50@10.50	11.00@11.50	.....
Stock pigs	.....	9.50@10.50	11.00@11.75	8.50@ 9.25
SHEEP AND LAMBS.				
Medium to prime lambs (84 lb. down)	13.10@16.10	8.00@10.00	10.00@14.50	10.00@12.00
Culls and common lambs	10.40@13.50	6.00@ 8.00	6.00@10.00	8.00@10.00
Medium to prime yearling wethers	11.25@14.75	6.00@ 8.00	9.00@11.00	8.00@ 9.00
Medium to prime wethers	8.50@12.25	4.50@ 6.00	9.00@10.00	6.50@ 7.50
Medium to choice ewes	7.00@10.50	4.00@ 6.00	5.00@ 7.00	4.50@ 5.50
Culls and common ewes	3.50@ 7.00	2.00@ 4.00	3.00@ 5.00	3.00@ 4.50
Feeder lambs	11.75@13.75	7.00@ 8.00	9.00@10.00	.....

ALBATROSS BRANDS

Prevent

the "blotch" or "burn" of the spray on fruit

Observe this study in contrasts. The apple at the left was sprayed with Arsenate of Lead—a wonderfully good spray. But the user neglected to mix "Spray Spread" with it. Below is a similar apple—sprayed with the same kind of spray—but Albatross Spray Spread was mixed with the spray. Note the difference—the "lead" dried on the FIRST apple in spots or blotches. The second apple received an equal amount of protective spray—but it spread over the apple in a thin film. Appearance and marketing appeal of the apple is thus retained. The pictures tell why Government experts are so enthused over "Spray Spread"—why experienced horticulturists say it has NO equal for spreading an "arsenate of lead" spray.



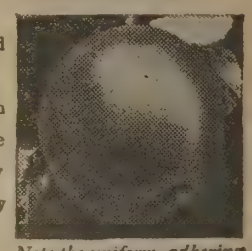
Note the "blotch" or "burn" of the lead on this apple

ALBATROSS "SPRAY SPREAD"

(Calcium Caseinate Compound)

The Original and Genuine Spray Spreader

Quality Features:
1. Very finely ground—always uniform.
2. Quickly Soluble.
3. No lost time.
4. Protects fruit with uniform coating.
5. Does not injure foliage.
6. Recommended by experts.
7. Guaranteed by manufacturers.



Directions sent with each order

Note the uniform, adhering film on this apple

PACKAGES AND PRICES

200 lb. Bbl.	Boxes	1 lb. Pkgs.
20c lb.	22c lb.	25c lb.

Freight prepaid to Northwest points.

NOTE: If you use Casein, specify ALBATROSS Superfine. Also call for Albatross Dry Bordeaux.

General Basic Products Co., *Sole Manufacturers*, 4796 E. Marginal Way, Seattle, U. S. A. **Dealers:** Address us for attractive sales proposition.

If you have a Spring



Stream or Flowing Well

on your farm, a Hill Ram will pump your water *with no cost for operation.*

No fuel or lubrication required—operated by water.

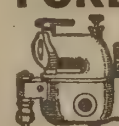
If you now pump with a gas engine or electric power it will pay you to investigate this powerful water-engine.

Twelve sizes—home supply to irrigation units. All wonderfully efficient.

Write today for free catalog—R-1 home sizes, R-2 irrigation sizes—and directions how to measure flow and determine installation costs.

SEATTLE MACHINE WORKS
128 W. Lander Street, Seattle, Wash.

FORDS run 34 Miles on Gallon of Gasoline



Wonderful new carburetor. Guaranteed to reduce gasoline bills from one-half to one-third and increase power of motors from 30 to 50%. Start easy in coldest weather.

Sent on 30 DAYS' TRIAL

Fits any car. Attach yourself. Fords make as high as 34 miles to gallon. Other cars show proportionate saving. Send make of car and take advantage of our special 30-day trial offer. **Agents Wanted.**

AIR FRICTION CARBURETOR CO.
3377 Madison Street Dayton, Ohio

WRITE OUR ADVERTISERS

It will pay you to write for free booklets and information offered in the advertising columns; and when you do write, please mention THE WASHINGTON FARMER.—Adv.



Idella Bernice Johnson's papa takes 10 children to school every morning in an automobile and brings them home again at night. Idella Bernice is one of them. There are three brothers and two sisters in the Johnson home and Idella says they have much fun. They live on a farm on Whidby island, in northwestern Washington, and have horses, cows, pigs, calves, chickens, kittens and a dog named Pete. Idella was 8 years old December 20, 1921.

Vera Louise Kinsey heard that Aunt Nellie likes to get letters from the girls and boys and that is why she wrote. Vera Louise was 9 October 20, 1921. She is a fourth grade student and thinks going to school is fine. Last year she had a good teacher and she has a good one this year. Vera's home is in northwestern Washington, almost on the Canadian border line.

Brown-eyed Elsie Schilbeff, who is 7 years old, writes that her mother has been ill, but she is much better now. Elsie is a second grade pupil and lives near the schoolhouse. She has three sisters. There are two horses, a cat and some chickens at the Schilbeff home, near the Wenatchee river in central Washington. Elsie has brown hair.

When spring comes and flowers are in bloom Stella Cade will be glad. She says there are a few flowers coming up now. She went out to see one day and found an Easter lily almost in bloom. October 6, 1922, Stella will be 9 years old. She lives near the Wenatchee river in central Washington. Her little niece, Edith Laver, came to visit her. Edith is learning to walk. She likes to pet Bobby, the dog.

"We are going to move to Canada," says Vernon Albee, who now lives near Stevens lake, in Snohomish county, Washington. How can you get up in the morning and see Europe and get back right away? Get up and go to the looking glass and you will see Europe (you're up). (Aunt Nellie will be glad to get the story you spoke of, Vernon.)

There are 48 children in the room where Annie Schilbeff attends school. Teacher's name is Miss Hafterson. Annie has three sisters. One of them is a baby, 2 years old. Annie is 9. She says she has light brown hair, blue eyes and fair complexion

"I should like to join the Corner," writes Irene Cresswell from northern Spokane county, Washington. "I am 11 years old and my birthday is June 24." Leonard and Vincent are Irene's brothers. Irene and Leonard go to the same school. Here are some jokes: Dusty—I fell down hill with 10 bottles of beer and did not break one of them. Lazy Mike—How did you accomplish such a wonderful feat? Dusty—I had them inside of me. Teacher—Jane, can you tell me who succeeded Edward VI.? Jane—Mary. Teacher—Now, Lucy, who followed Mary? Lucy—(absentmindedly)—Her little lamb.

Why is a prosperous farmer like a well-fed hen? Because he has a full crop. What part of a turkey is carried by the soldiers? The drumstick. Nine-year-old Clayton Dick decided to write to the cousins and Aunt Nellie. His birthday is August 15. Clayton is a Washington boy and lives near the Columbia river, in Okanogan county.

Ruby May Schrag, 8 years old, is a new cousin in western Adams county, Washington. Her birthday is November 26. She hasn't any brother or sister. Her teacher, Miss Wallace, boards at her home. Ruby May has a dog and three little pigs.

"We have seven baby calves. Two of them are red, one is black, three are black and white and one is brindle," says Harriette Mathis, who lives near Kettle river, in Ferry county, Washington. Harriette and her brother, William, each have a pony and a cat. June 9, 1922, Harriette will be 9.

Velzia Stevens lives on a big farm of 100 acres, near Bellingham bay, in northwestern Washington. She is one of our new cousins and will be 11 May 14, 1922. The Stevenses have pigs and rabbits. There are some little rabbits, too, but Velzie doesn't know how many, because they are too little to come out. We are glad to welcome Velzia to the corner.

Birthday Greetings

THURSDAY, April 6—Leona Evelyn Higginbotham, 10 years old; Dorothy Wiese, 10; Audrey Weeks, 9.

FRIDAY, April 7—Vera Ferch, 9 years old; Lillian Hattemer, 10; Alvena Matson, 10; Ella Napier; Helen Lasti, 9.

SATURDAY, April 8—Arvo Ahonen, 10 years old; Ellen Crank, 10; Henry Greenwalt, 11; La Vira Rothrock, 9.

SUNDAY, April 9—George Blackburn, 11 years old; Etoile Cook, 10; Fred Lewis Jenkins, 11.

MONDAY, April 10—Agnes Hurbi, 8 years old; Edward Leppaner, 9; Dorothy McDonald, 10; Lois Rankin, 11.

TUESDAY, April 11—Edna Canfield, 11 years old; Olive Kraus, 11; Marian Mulkey, 9; Mary Plummer, 11; May Plummer, 11.

WEDNESDAY, April 12—Freda Chace, 11 years old; Ruth Kimpel, 9.

LETTERS WELCOMED BY AUNT NELLIE.

Among recent letters received by Aunt Nellie are those from cousins whose names follow. A few of these will be published each week in the regular edition of THE FARMER, and others will appear from time to time in The Junior Farmer:

Eugene Gerenzia, Thelma Barchus, Cecilia E. Stuhr, Margaret Gullixson, Marian Hanson, Ruth Wagner, Marie Proctor, Martha Kopp, Bobby Baumgart, Elizabeth Anderson, Dorothy Graham, Eva Lee, Annis Demko, Viola Laabs, Lois Lane, Maxine Graham, Bertha B. Brown, Lawrence Chenoweth, Cora E. Brown, Viola Spangenberg, Lucille Thwing, Thelma Phillips, Pearl House, Alvena Scheurman, Victor Knight, Martin Cerenzia, Jessie Manis, Dilla Fisher, Marian Meyers, Carl Osborn, Esther Alm, Esther Doering, Elsie Anderson, Eva Cade, Preston Palston, Vernon Albee, Linnie Gammon, John Otter, Annie Schilbeff, Idella Bernice Johnson, Stella Cade, Ruby May Schrag, Harriette Mathis, Elsie Schilbeff, Vera Louise Kinsey, Helen Hoard.

Olive Peterson, Matilda French, Kenneth Farnsworth, Lois Turner, Edna and Theodore Peper, Winfield Snyder, May Dickenson, Owen Ware, Margaret Cerenzia, Thelma Ensley, Martha Keelner, Alvira Case, Glen Hay, Margaret Stevenson, Nettie Knox, Helen Brooking, Joy Caldwell, Dorothy Hart, Helen Grube, Elizabeth Coby, Clarence Brittain, Martha Deife, Mabel D. Hayes, Marie Brunink, Zelma Graham, Millie Le Bret, Louis Chabre, Elmer A. Trefry, Annie Phillips, Johnny Finkbeiner, Annye Glenn, Ora Schafer, Alice Crockett, Hazel Farley, Gladys McCutchen, Mildred Medley, Louise Gentry, Hazel Schafer, Grace Stewart, Marvin Lum, Jennie Jensen, Alice Brunnik.

BEDTIME STORIES

By THORNTON W. BURGESS.

Copyright, 1919, T. W. B.

GRANDFATHER FROG FALLS ASLEEP.

Grandfather Frog, sitting on his big, green lily pad, was feeling very good, very good, indeed. He couldn't remember when he had felt better. You know, there is nothing like a full stomach to make one feel good, and Grandfather Frog's stomach was full. You see, the Merry Little Breezes of Old Mother West Wind had danced over to the Smiling Pool very early that morning, and they had blown foolish green flies over to Grandfather Frog so fast that he would hardly get one tucked out of sight inside his white and yellow waistcoat before another would be right in front of his nose.

So Grandfather Frog had eaten foolish green flies until he just couldn't find room for another one. Indeed, the legs of the last one were still sticking out of one corner of his great mouth when the Merry Little Breezes bade him goodby and raced away across the Green Meadows to do a good turn for somebody else. He had not forgotten to thank them. Of course not. Grandfather Frog never forgets to be polite, for he is very old and very wise, and long ago he learned that good manners cost nothing, while at the same time they make a great many friends.



Grandfather Frog, sitting on his big green lily pad, was feeling very good.

Mr. Redwing sat on the very top of the tallest bulrush and sang the sweetest songs to Mrs. Redwing sitting on four wonderful eggs in the nest which they had so carefully hidden in a great clump of cattails. Grandfather Frog sat listening, his hands folded across the white and yellow waistcoat. He is very fond of Mr. Redwing's song and never tires of it.

"Tra-la-la-la-lee! Tra-la-la-la-lee!
Never was there any one happier than me!
My mate is on the nest,
And you can guess the rest—
Just why it is I sing all day this little song to thee,
Tra-la-la-la-lee! Tra-la-la-la-lee!"

So sang Mr. Redwing, and it seemed as if he would split his throat in his efforts to pour out his happiness. Grandfather Frog nodded his head in approval. He is a great believer in happiness, is Grandfather Frog. Presently, as he listened, he began to dream of the days when the world was young. It was a very pleasant dream. He still nodded his head, but he didn't know it. Jolly, round, red Mr. Sun, looking down, smiled and poured his warmest rays on Grandfather Frog's broad back. His eyes closed, opened again, closed, and stayed closed. Grandfather Frog was asleep.

Now, some one else had been watching Grandfather Frog and had chuckled to himself as he watched him nod and nod. When he saw that Grandfather Frog was really asleep he crept out of his hiding place on the edge of the Smiling Pool and he was grinning broadly. It was Billy Mink.

"Grandfather Frog may be wise, as everybody says, but even the wise are foolish sometimes," said Billy to himself. "Now, Grandfather Frog ought to know better than to go to sleep right out in plain sight. Yes, sir, he certainly ought to. He is very fond of giving advice to other people and teaching them lessons, and now I think it is my duty to teach him one. I really do."

Billy Mink's eyes twinkled with mischief as he started off to hunt up Little Joe Otter. The truth is, Billy Mink hadn't forgotten how Grandfather Frog had once made him the laughing stock of all the little people of the Smiling Pool and the Green Meadows, and now he saw a chance to get even.

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Cabbage Seed

Million Dollars' Worth Produced in Skagit County

By ALFRED CHRISTIANSON.

A large part of the cabbage seed of the United States is grown in Skagit county. The industry has produced returns that have reached the million-dollar mark and the quality of seed is preferred to that shipped from Europe, as was done during the war.

There are now more than 1,250,000 pounds of beet seed being produced in the Puget sound district. The eastern seed houses are recognizing western-grown seed as being free from diseases that are prevalent in other parts of the United States.

To obtain good seed it is essential to select the most desired type. Good breeding must then follow, as is the case with poultry or live stock, if the high producing qualities are to be perpetuated. Chance breeding has no place in seed production. The grower must also work for a seed with high vitality and one that is best suited to the local climatic conditions.

A test with purebred oat seed that was carried on under my supervision produced 42 bushels more to the acre than the other plot which was classed as "ordinary" seed.

There is an opportunity for a greater profit in the seed industry than in almost any other branch of agriculture because of the smaller acreage needed, which requires less labor and equipment, although the best of land is necessary.

The Gaunt Gray Wolf

(Continued from page twenty.)

to the northward near other lakes four other tilts were erected, at convenient distances apart, for Ed's use.

These tilts were all constructed upon the same general plan. They were on an average about eight by ten feet in size, with a slightly sloping roof so low in the rear Bob could scarcely stand erect.

The chinks between the logs were filled with caribou moss. The roof logs were covered with boughs, over which was spread first a blanket of moss and then a coating of six inches of earth. Each was provided with a doorway about four feet in height and two and a half feet wide, which was fitted with a door constructed of lashed saplings covered with bark.

Within, a platform of flat stones was arranged to accommodate the sheet-iron stove, with a stove-pipe hole through the roof directly over it.

Long, springy saplings were utilized in erecting bunks at the rear and along the side of the tilt opposite the stove. These were later to be covered with spruce boughs, and would serve both as beds and seats, and were elevated some 18 inches above the earth floor.

"They'll be warn an' snug," said Bob. "When frosty weather an' winter comes th' snow soon banks un up an' covers un up, roof and all, and makes un good an' tight."

"But how do you get air enough to breathe?" asked Shad.

"Th' stove-pipe hole is made plenty big," explained Bob, "an' that lets th' bad air out, an' we mostly has a snow tunnel leadin' t' th' door so th' wind won't strike in, an' leavin' th' door off, th' good air comes in."

Nearly four weeks had been consumed in this work, and without waiting for the reappearance of their friends they began at once the distribution of supplies among the tilts, for September was nearly spent and winter would be upon them by mid-October, when ice in the lakes would render the canoe useless.

Therefore, with all haste they proceeded with their first canoeload of provisions to the farthest tilt, built upon the shores of the lake expansion above the falls.

It was mid-forenoon of a beautiful, transparent September day when they reached the tilt. The supplies were quickly stowed beneath the bunks, the tent stove erected, and, halting only long enough to make tea, they launched their canoe for the return.

"We'll be makin' th' river tilt before we sleeps," said Bob. "The's a moon, an' we'll finish by moonlight, an' to morrow we'll be gettin' out with th' next load If we travels fast we can make th' river tilt before midnight, whatever!"

The portage trail left the river at a point some 10 miles below the tilt, and as previously stated, at the lower end of the lake, where the current began to gather strength for its final tumultuous rush toward the falls.

They had paddled the distance in two hours, and were congratulating themselves upon their good progress as they turned the canoe toward the portage landing, when suddenly they were startled by a burst of wild, blood-curdling whoops, and a half-dozen strange Indians, guns leveled, rose upon the shore.

"Mingens!" exclaimed Bob.

A warning in the Indian tongue was shouted at them that they must not attempt to land. A shot was fired over their heads to emphasize the fact that the savages were in earnest, and with no alternative, and taken wholly by surprise, Shad at the steerman's paddle astern, swung the canoe out into the stream, still continuing down the river.

"Upstream! Upstream! Turn about!" shouted Bob.

In the excitement and confusion that followed the first few moments after the attack, much valuable time had been lost in ineffectual maneuvers, and when the canoe was finally turned about they were far out into the stream, and it was found that the insidious current had caught them. Bob was the first to recognize the danger, and in a sharp, tense voice he commanded:

"Quick! Work for your life! If th' rapid gets us, 'twill carry us over th' falls!"

Then they paddled—paddled as none had ever paddled before. But already the powerful current had them in its grip. Slowly—slowly—but with increasing speed they were drifting toward the awful cataract.

They would have braved the Indians now, and attempted a landing, but from a point directly below the portage trail and extending to the white water of the heavy rapids the river bank rose in a perpendicular rampart of smooth-scoured rock, a full 10 feet in height, offering no possible foothold.

For a little while they hoped, as they worked like madmen. Then the full import of their position dawned upon them—that they were hopelessly drifting toward the brink of the awful cataract.

Beads of cold perspiration broke out upon their foreheads. A sickening numbness came into their hearts, and as in a dream they heard the derisive, exultant yells of the savages upon the shore.

(To be continued.)

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April 6, 1922.

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News for Breeders

(Continued from page two.)

milk in the 10 months' division. She displaces Bess Johanna Ormsby, a Delaware cow which had a record of 21,380.5 pounds. By the same token she becomes Washington state champion for milk, displacing De Kol Butter Boy Belle 3d, which made a record of 21,567.4 pounds in the herd of A. E. Smith of Sumas.

HAS FIVE A. R. DAUGHTERS.



Duenota, a Guernsey cow, now 17 years old, owned by H. B. Douglas of Ferndale, Washington, is entitled to be classed as one of the greatest brood cows—dam of A. R. daughters in America. Duenota has five A. R. daughters and the sixth is on test. There are just 23 Guernsey cows in the United States having five A. R. daughters and one with six. Of these, Duenota stands in sixth place for average production of her daughters.

G. T. MOROCCO DUCHESS.

G. T. Morocco Duchess, 374381, is the new title holder of the junior 4-year-old Jersey championship of Washington. She started test at 4 years 4 months of age and produced 16,123 pounds of milk, 813.10 pounds of butterfat. During this test she was milked three times per day, and milked as high as 60 pounds in one day. The first day of her test she milked 31.6 pounds, while on her last day 33.5 pounds. She has a previous record at 3 years 2 months of age of 12,549 pounds of milk and 698.28 pounds of butterfat. On this record she won an A. J. C. C. silver medal.

G. T. Morocco Duchess is owned by Waikiki farm, Spokane, Wash., of which J. P. Graves is the owner.

PLAN ANNUAL HOLSTEIN SALE.

The Whatcom County Holstein Breeders' association is contemplating putting on annual sales of purebred cattle. The first one will be held in April at the county fair at Lynden, where 75 or 80 head of animals will go under the hammer. The sale will be made up of consignments from such herds as P. P. Lee's, H. J. Evans' Piet Bergma's, the Milky Way farm and others who are well known to the black and white breeders. Plans are not as yet complete and the sales committee hopes to get other consigners. E. J. Tyrrell is secretary of the sale.

SELL GUERNSEYS APRIL 18.

A shipment of 27 head of Guernsey females from Wisconsin was made by the Wallace & Fordyce farm of Sunnyside early in February. The present plans are to hold an auction sale on April 18, which will include these animals as well as five females and one bull which have been consigned by Yakima valley breeders. The sale will be held on the Fawndale farm, the home of the Wallace & Fordyce herd of Guernseys.

A. J. KRAY, Chehalis, Wash.: It never pays to lose a good friend like The Washington Farmer.

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Mutual Fobes Carissima De Kol
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Thirty-five head, 15 cows, heifers, some fresh, others heavy springers, 20 bulls, most of them ready for service, all from the best blood lines and excellent individuals. Frakes herd, also a few consigned by John Farr. Sale will be held under the auspices of the Oregon Holstein Cattle club, O. L. Dunlap, sec. Catalog gives details of breeding, ages, etc. Send for one.

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W--O--N

At the State fair, Salem, Ore., Sept. 27, 1921: 1, 2, 3, aged cow; 2, 3, three-year-old. 1st, senior yearling; 2d, senior heifer calf. 1st, senior bull calf. 2d, junior bull calf. 1st, dairy herd. 1st and 2d, get of sire. 1st, produce of cow. We entered 12 head. Grand champion cow. 129 Jerseys competing. Nuf said.

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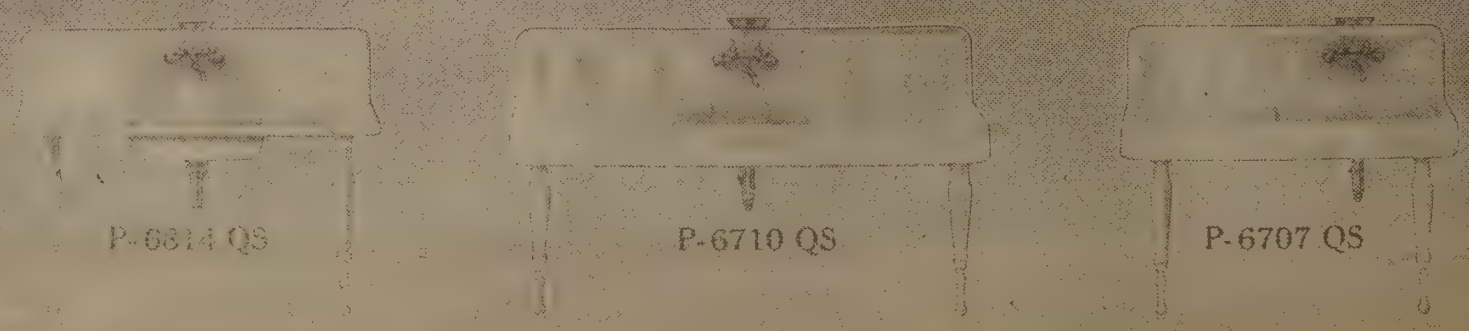


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APRIL 13, 1922. Washington's Great Farm Magazine EVERY THURSDAY

THE WASHINGTON FARMER

ESTABLISHED 1894

SPOKANE. SEATTLE.





A Pioneer Grower of Washington Grapes

SEE PAGE 6.



Community Fairs and How to Put Them on Successfully—Page 9

Bee Keepers

Annual Meeting at Puyallup

With its object firmly in mind, namely, "the promotion of progressive apiculture," members of the Peninsular Beekeepers' association held their annual meeting and election of officers at Puyallup recently.

The meeting did not take place until after the customary chicken dinner, which was brought by the ladies and served in genuine family style to all members and visitors attending.

The election of officers resulted in the reelection of W. L. Cox of Elma as president, while Frank A. Ross of Puyallup was chosen as vice president. Miss S. A. Sater of Potlatch was reelected secretary-treasurer, with Mrs. Earl Spargo appointed to act as assistant secretary in the absence of Miss Sater, who is now visiting relatives in the middle west.

An entertainment committee was appointed to look after getting Dr. E. F. Phillips of Washington, D. C., and George Demuth of Ohio, to visit prominent apiaries of the state when they are in the territory this summer.

The association went on record as favoring a donation to the Dr. Miller memorial fund and requested other beekeepers to make similar donations in order to show their respect for one who has done much to promote the welfare of the industry.

In order to learn more about the necessary steps to be taken in getting an established brand for their product, the association asked R. P. Milne of the Botsford-Constantine company to give them a talk on the benefits of a trademark.

"Any trademark should be well advertised," said Mr. Milne, "in order that the consumers may know the value of the product in its relation to the home. If Washington honey can be sold under such a trademark as Tillamook cheese is sold on the market today the producers would have a better opportunity to tell the housewife just why honey should be used in the household. There are few women, aside from the beekeepers themselves, who know that honey is one of our most delicate sweets and that it has a distinct value in the canning and preserving of fruits.

"Any brand of goods should represent the growers who are raising the product and the brand of honey should represent the producers the same as if they were members of a manufacturing plant. The brand should be properly advertised and sold through the proper agencies in order to secure the greatest returns. There are many points to take into consideration, but the first in importance is to establish a good trademark and register it, then place it before the people."

By a vote of the members present it was decided to secure further details of such an undertaking and mail a copy to each member in order that they might decide as to the advisability of establishing a uniform trade name for honey produced by members of the association and invite the cooperation of all honey producers of the state.

A Douglas County Pioneer

"How wonderful the change has been!" writes J. W. Bonwell of Kiona, who says that he has lived in Douglas county since 1884. "Everything was in a wild state then," he says. The little picture herewith shows Mr. Bonwell with an armload of Netted Gem potatoes that he grew on his farm at the foot of Badger mountain. They grow large and yield well in the soil of that section, he reports, and those in his arm indicate the correctness of the first statement, at least. Mr. Bonwell has a farm of 1600 acres, on which he grows wheat, potatoes, vegetables, fruit, corn, hogs and cattle.



Eradicating Predatory Animals

Government hunters have been getting some good results eradicating predatory animals in many counties of the state. Twenty-two of these hunters have been working through the winter months and have bagged 1170 coyotes, one cougar, 66 bobcats and 10 stock-killing bears since last July, according to Dr. Glenn R. Bach, predatory animal inspector of the bureau of biological survey.

"All hunters have been working on a salary basis and are required to turn in all skins of animals killed," said Dr. Bach "These are sold and the proceeds turned over to the treasury department of the United States. In other cases, however, the proceeds have been turned to the state treasury when the men are employed by the state. In some counties the men are employed by the county game clubs in order to prevent the game birds from being destroyed by coyotes and other predatory animals. It has been estimated that this work is costing approximately $2 each for coyotes. When a man is sent into a district he is required to stay until he has cleaned it up. Government-paid hunters have given better results in rabies-infested counties, since bounty hunters will not work, due to the scarcity of animals."

Dr. Bach stated that there are other counties that are calling for assistance, but that the funds were inadequate.

AND THE PROFIT IS GREATER.

It doesn't take any more to feed a registered hog than it does a scrub.

Lolo Pass Road

Congressman John W. Summers telegraphs that he has assurances of $350,000 being made available for the Lolo Pass road this year. The total cost of this road is estimated at $1,000,000. The road will give a choice of routes west from Missoula, Mont., by way of Wallace and Spokane, or by way of Lewiston and Walla Walla, making trips to the Coast. It will shorten the road to Portland from the east by more than 150 miles.

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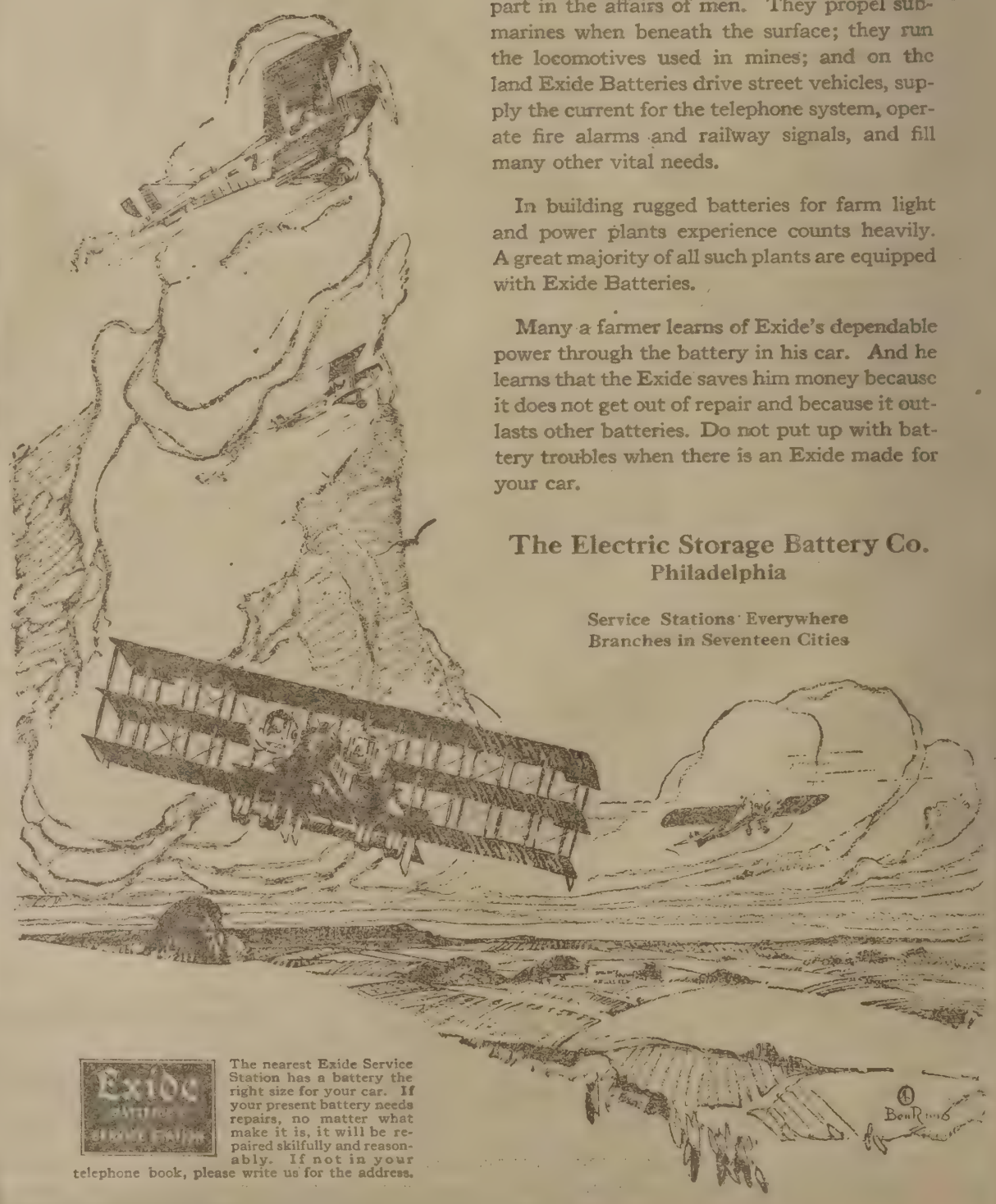
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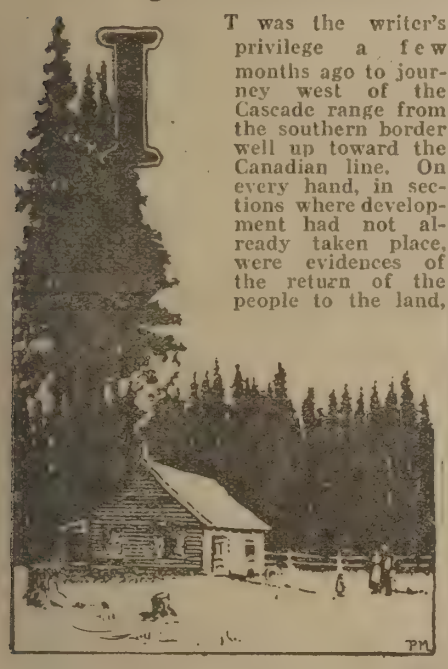
Vol. 46. No. 15 THE RANCH PACIFIC DAIRYMAN HORN AND HOOF April 13, 1922

For Good Farming, Attractive Country Homes and Happy Country People

Real Job of Home Making in the Open

Tiny Farmsteads Are Being Carved Out of the Timbered Lands of Western Washington

By LOU E. WENHAM



It was the writer's privilege a few months ago to journey west of the Cascade range from the southern border well up toward the Canadian line. On every hand, in sections where development had not already taken place, were evidences of the return of the people to the land, or rather a desire on their part to build new homes. Dotted here and there along the road were the tiny "shacks" of the new settlers. Sometimes they were meager indeed, but nevertheless a home in its fullest term. These tiny farmsteads are being carved out of the timbered lands, many times on clearings scarcely larger than the house itself. Ninety times out of a hundred, new as these home are, there is a flock of White Leghorns skirmishing about the place, and more often than not a Holstein cow is to be sighted within a short distance of the home.

But the writer's more intimate knowledge is of a section in King county rightly named the Evergreen valley. This little valley is 30 miles southeast of Seattle, seven miles in the same direction from Kent and eight and one-half miles northeast of the thriving little city of Auburn. The Seattle-Spokane line of the Northern Pacific passes through this valley. The locality is served by a rural mail route operating out of Kent.

CAPITAL FROM NOTHING TO FEW HUNDRED DOLLARS.

This part of the country was logged off some 20 or 30 years ago. During the time intervening little has been done toward settling up the land. Farmers began from the city limits of Kent and have gradually worked eastward until all of the hill lands between the town and the valley have been transformed from stump patches into thriving dairy and poultry ranches. Many of these homes were established by the men who logged off the land. Their capital ranged from nothing up to a few hundred dollars. Despite these handicaps, they have lived to see their section thriving and prosperous.

Two years ago a land company, which held certain water rights on a beautiful stream in the Evergreen valley, secured a body of land and opened a portion as an irrigated district. This is being exploited as especially adapted to the production of loganberries. Not only has a considerable portion of the company's lands been sold and settled, but a great deal of that adjoining which was held by individuals has been in great demand and dozens of prospective home makers have bought tracts and started homes.

In one year's time it is estimated that 180 families located within a radius of two or three miles of Covington, the railway station for this valley. Now instead of all the trains whistling majestically through this station as of yore, all but four limited trains stop for pasengers, and it is indeed a dull day when there are not from three to a dozen people taken on or discharged from each train.

In the last year as a result of the increased number of settlers in this locality a townsite has been platted a mile south of Covington and christened Berrydale. Here are located a small saw and planing mill, a store and a postoffice.

The great majority of the settlers in the Evergreen valley and immediate vicinity are people of small means. Coming, as they do, into the land with barely enough money with which to build a temporary house and a few outbuildings, it is soon necessary for the head of the family to seek employment, either in the near-by mills, as a wood cutter or go to one of the larger towns or cities. For this reason the development of the section is necessarily slow. So slow, indeed, is this that occasionally one of these home makers will abandon the effort and seek employment elsewhere. However, these cases are rare, and in the struggle to build a home under these trying circumstances that the owner may be his own employer and possess independence real heroism is brought to the surface.

WOMEN OF SECTION PLAY IMPORTANT PART.

Not only are heroes developed, but heroines as well, for the women of this section play an important part in the development of the home, as they have in every pioneer movement from the beginning of all time.

These women wield a hammer on the new buildings, pick up and burn brush in the clearings, pick up rock, follow the horse on the plow and harrow in a few instances and assist in all outdoor work within their strength.

The writer has in mind one young woman who left her husband in South America to fulfill his mission there, bringing her 3-month-old baby and coming to the Evergreen valley to start a home. She bought the land, erected the house with some assistance, and by the time the husband was enabled to rejoin his little family the home was an assured fact.

Another plucky little lady carries on the outdoor work while her husband is employed in town. In addition to this and to the care of her baby she finds time to manufacture leather art goods for a city wholesale house.

The employment followed by the men in their efforts to provide cash for development expenses is varied. On the rim of the valley are two men (partners) who are laboring to make a home. In the summer they leave the place to take positions as government forest rangers. In the fall they return and spend the winter grubbing out an alder bottom. Their ultimate goal is a cleared space sufficiently large to raise White Leghorn chickens and Airedale dogs on a commercial scale.

Another man is a plumber, employed in the city and home only over Sunday. But his wife seems to have the work well in hand, for not long ago she proudly boasted that she had removed seven stumps that week—an average of one a day.

ADDS TO THE FAMILY INCOME BY HUNTING.

Another home builder adds to the family income by hunting. In the autumn season he makes for the mountains and very frequently brings home a Ford load of coyotes, with now and then a bear.

Still another is a brick layer, away from home all week. Among others who seek employment away from home are a carpenter, a real estate salesman, a printer and a principal of a rural high school.

In another instance a man and his wife, both expert fruit workers, leave their home during the summer months to work in the fruit houses in the Snake river valley, at Yakima and Wenachee. He is a superintendent and she an expert packer, thus commanding the best of wages. The development of their home tract is more rapid because of their highly paid work.

A remarkable instance is that of an old gentleman 72 years of age. He settled on a small tract two years ago. The first year he worked on the railway section, but despite this has cleared a good sized tract with the aid of a hand stump puller and has erected several well-built outbuildings. He keeps the "home pot boiling" by caring for a loganberry field near by, owned by a young woman who is employed in a Seattle railway office, who plans to move onto her tract next season.

Directly opposite to the before mentioned instances is that of a woman being the bread winner while hubby stays on the home place and wrestles with the many problems. She is a barber and works in town, arriving home Saturday night of each week.

Then there are cases where the home maker cuts wood, not only from his own place, but from adjoining lands. This is frequently shipped to the Yakima valley and traded to farmers of that section for alfalfa hay, apples or potatoes. These products are then peddled out to the recipient's neighbors, the hay being sold in from one bale to 10-ton lots.

The shipping of Christmas trees during the early part of December of each year provides money for Christmas shopping to not a few of the residents of the valley.



Women assist in outdoor work.

Each year buyers from various localities enter the field and pay on an average of 10 cents for evergreen trees, delivered at the car. These trees are shipped as far east as Council Bluffs, Iowa, and as far south as Los Angeles, Cal. As a car holds on an average of 5000 trees it may be seen that, when from five to eight cars are shipped each season, no inconsiderable sum of money is distributed about the community at that season of the year.

The goal of each and every one of these home makers is a patch of raspberries and loganberries, a few strawerries, a flock of White Leghorn hens and a cow. That on from 5 to 10 acres of land means freedom from the necessity of seeking employment away from home and provides an income for the average sized family.

That the district is admirably adapted to berry growing has been thoroughly demonstrated. Irrigation for the West Side may seem unnecessary, but it has been demonstrated that the application of water to ripening berries has been highly profitable. One expert who specializes on loganberries proclaims that as high as 34 tons per acre can be produced with irrigation and gives figures to prove it. But the average berry grower will be well pleased with the addition of a few extra hundred pounds per acre under irrigation, which, added to the four to six tons per acre, as is the average, will make a highly profitable enterprise.

PROBLEM OF GETTING LAND INTO BEARING.

The problem of getting the land into bearing is one that confronts the entire western portion of the state. As already mentioned, many, or better said, the reat majority of the people starting these homes are without adequate means with which to carry on the work. Few have even a horse for the heavy work. More are so cramped financially that they are unable to buy the necessary powder to loosen the stumps. The writer has in mind two men who are clearing a tract in the valley.

Not being able to afford a horse or even a hand stump puller they burrow under each stump and with a jackscrew placed under the roots lift it out. The work is slow and laborious, albeit effective.

The real benefactor of the cut-over sections of the state is yet to appear with a practical solution of the land clearing problem. It has been suggested that either government or state aid be offered the settler to enable him to get his land into bearing quickly. This might be effected by the organization of districts, as in the reclamation of arid lands or in

(Continued on page twenty-two.)

Ranching Near the Snow Line

"Madgeland ranch"—doesn't that have a particularly romantic sound, as though the place were named after the owner's wife, or former sweetheart, or somebody? Yet H. S. Coffin of Yakima, though admitting that he and Mrs. Coffin spent their honeymoon there, and that on a recent visit they found initials (hearts and arrows, too, we'll wager) carved in the tree-trunks years before, denies that there is anything romantic about the name, as far as he is concerned, at least, and says that he bought it with the ranch.

This is somewhat disappointing, but Mr. Coffin fully meets expectations when it comes to pride in the place, as any owner might who has been in the stock business as long as he has. It is one of 250 acres on the very bosom of Mount Adams, in Klickitat county, and 24 miles up the White Salmon river, near Trout lake.

The big barn has stanchions for 50 head of cattle, and there are 65 or 70 cows on the ranch. Water under pressure everywhere about the buildings, and electric lights and power for a multitude of purposes are among the listed advantages of the farm, but truth to tell, the one Mr. Coffin remembers best is that blackcaps, strawberries and huckleberries can be picked there "by the bucketful," and that the fishing—but this is not an outing magazine story. Suffice it to say that it is only 10 or 12 miles to the snow line.

Madgeland is run by Frank S. Cory, one of the delegation of five from the Trout Lake Holstein-Friesian association which attended the Davis-Butchart sale early in February and took back 12 head of purebreds and a large shipment of grades. His own purchase, a 3-year-old, which cost him $375, is a double granddaughter of Mutual Fobes Longfield De Kol, and is due to calve in May by the Bessie bull.

The ranch is devoted largely to the production of alfalfa, timothy and clover and to its consumption by the cows, and the product is sold in the form of cream—a practice which it is the main object of the district Holstein association to encourage.



Madgeland ranch, owned by H. S. Coffin and run by F. S. Cory.

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Irrigation Has First Right

A hearing of far-reaching importance to agriculture in the Pacific northwest was held by the Columbia river board of engineers at Spokane recently. This board was appointed by the federal power commission at Washington to make a study of the Columbia river and its tributaries above Pasco and recommend to the federal commission a broad scheme for the fullest use of these water resources in the public interest. The board is to consider irrigation, power, navigation and domestic use of water for towns and cities, for the future guidance of the federal power commission, when applicants come before the commission asking for permission under the law to appropriate any part of these waters.

The federal power commission consists of the secretary of war, the secretary of agriculture and the secretary of the interior.

United States representatives on the Columbia river board are: Colonel J. B. Cavanaugh, representing the war department, who is chairman: Fred F. Henshaw, water resources division of the United States geological survey, of Tacoma; and D. C. Henney, United States reclamation service, Portland. Idaho was represented on the board by George B. Archibald, assistant commissioner of reclamation. Washington's representative is Marvin Chase, who appeared for D. A. Scott, director of the state department of conservation and development. C. S. Heidel, state engineer of Montana, represented that state.

At the Spokane hearing Chairman Cavanaugh made the important and gratifying announcement that the board had agreed to recognize the superior claim of irrigation over water power development. That is a sound principle and in accord with the public interest and welfare. Our limitation in the Pacific northwest is irrigable land, not water power. In the three states of Washington, Oregon and Idaho, as reported by the United States geological survey, we have 20,000,000 horse power of undeveloped hydro-electric energy. Washington has 8,647,000 horse power; Oregon, 6,613,000, and Idaho, 5,067,000.

Of developed power Washington has 454,356 horse power; Oregon, 185,215, and Idaho, 224,363. In other words, only 4¼ per cent of our water power is now developed, and at that rate we have undeveloped water power sufficient for a population nearly 25 times greater than is now in this region. We have water power for the next century, and the greater need is for land, for more opportunities for the sons and daughters of our farm families to acquire farms and orchards and make homes for the future.

An Unwarranted Criticism

Recently President Howard of the American Farm Bureau federation and a few other agricultural leaders participated in a meeting of representatives of so-called big business, including a number of railroad men. His attendance at this meeting, it seems, was seized upon by certain enemies of the great organization of which he is head as grounds upon which to attack his integrity and sincerity of purpose.

Commenting upon the unwarranted criticism, a resolution unanimously adopted at the recent annual meeting of the Wisconsin State Farm bureau said that it was "passing strange that an organization which had done something besides talk should be branded by those who merely talk as unfaithful to the farm interests." We are inclined to believe that this statement fairly well sums up the entire situation. The American Farm bureau federation under the leadership of President Howard has been an organization that accomplishes desired purposes rather than one that merely talks about what should be done. As the Wisconsin resolution says, the federation was in considerable degree responsible for recent reductions on freight rates in agricultural products, along with other accomplishments, but it did not secure these betterments by soap box oratory. On the other hand, its representatives, led by President Howard, went directly to the head offices of the railroad companies, to the head offices of the interstate commerce commission and to other sources of power and there presented ably and convincingly the arguments of organized agriculture.

It is no offense for the head of a farm organization to sit in on the conferences of industry. It becomes offensive only when such participation takes the form of connivance with the enemies of agriculture.

The Washington Farmer joins the Wisconsin Farm bureau and the rank and file of farmers throughout the United States in expressing its faith and confidence in the ability and integrity of President Howard and in the worthy purposes that he is endeavoring to serve as head of the American Farm Bureau federation.

Wages and Unemployment

The United States department of agriculture calculates that farm wages in this country fell about 35 per cent in the calendar year 1921. According to the same authority, however, farm wages still stand from 40 per cent to 50 per cent above those prevailing prior to the war.

But if we turn to a recent estimate by Secretary of Commerce Hoover, we find that wages in other lines of industry have not come down proportionately to the fall in farm labor. Mr. Hoover says that workers in the textile industries are receiving 110 per cent more money than they did in 1913; those in the metal trades, 118 per cent more; those in the building industry, 90 per cent more; those in the coal mines, 73 per cent more, and those on the railways 100 per cent more. Wages on the farms more nearly compare with rates of pay in the iron and steel industry, which stand about 50 per cent above pre-war schedules.

On the whole, however, wage-earners on the farm are better off than the wage earners in the great industrial centers, for the latter are largely out of employment, and the high wages that his more fortunate brother is receiving do not help the unemployed worker who is seeking a job and can not find it.

As a matter of fact, the leaders of organized labor are showing more consideration for the men who have jobs than they are manifesting for their members who are out of employment. If other industries had taken their readjustment as promptly as the farmers took theirs, and organized laborers in the industrial centers had accepted those readjustments, we would have been on the high road of prosperity long ago and there would be no unemployment problem in this country today.

State Farm News

Organization of the King County Fair association, capitalized at $50,000, was perfected at a meeting in Tolt March 23, participated in by the commercial clubs of Tolt, Duvall, Stillwater, Snoqualmie, North Bend and Fall City. Cooperation of Seattle through the chamber of commerce was pledged by President Frank Waterhouse, after the chamber's state development and tourist and conventions' bureaus had outlined plans whereby Seattle could give assistance in advertising and promoting the Snoqualmie valley enterprise.

A fair, featuring the agricultural, horticultural and live stock resources of the entire county, but particularly of that section of the Snoqualmie valley between North Bend and Monroe, is to be held at Tolt early in October. Three options on sites for fairgrounds are under consideration.

A 20-acre site will be secured upon which will be constructed a half-mile race track, grandstand, fine arts building, stables and exhibit buildings.

* * *

Boy and girl club members of Yakima consigned six head of purebred Duroc Jersey hogs to the Duroc Jersey association sale at Sunnyside, which was held in March. All of the hogs brought good prices and one topped the sale.

* * *

E. A. Skidmore, county project leader, has been elected president of the new Stevens County Potato Growers' association; John Kruse, secretary; Charles H. Dotts, W. L. Biggar, John H. Kruse, Otto Meyer and E. A. Skidmore, directors, and Dan Knauss, Otto Meyer and John H. Kruse were appointed to prepare a constitution and bylaws.

Every effort will be made by the association to encourage planting pure seed and proper cultivation. Greater care will be taken in grading the potatoes to obtain a proper grade and ready sale.

A committee has been appointed to draw up an organization contract and marketing agreement. The sale of the 1922 crop will be in the hands of the Stevens county farm bureau, through F. A. Savage, its manager. The farm bureau got excellent prices for the potatoes it marketed last year.

* * *

The United States land office at Waterville has over 300,000 acres open for homestead entry within its jurisdiction, according to E. K. Fritts, receiver. He has commenced to check the vacant lands and has already listed 234,085 acres. The occasion for this check was reports that the average was 60,000 and, therefore, below the required limit of the interior department and fear was entertained that the Waterville office might be discontinued.

* * *

The highest producing cranberry bog in Pacific county, that known as the Richardson bog, near Oysterville, this year sustained its reputation of never yielding less than 200 barrels of berries. This is the fifth season of production at that rate. Pacific coast bogs produced over 25,000,000 boxes in 1921, and the season was a profitable one.

* * *

Uncle Tom Fife of Wild Goose prairie, Bumping river, has disposed of 80 acres of his homestead of 150 acres, says a Yakima report. He has decided to retain for himself 50 acres. J. H. Nelson, Oscar Mueller, J. O. Cull and Frank Mullins are buyers in addition to the Copper Mining company and another tract previously sold. Uncle Tom has made arrangements for the construction of an irrigation canal from the Bumping river, which will irrigate his entire tract so that the purchasers will be able, if they so desire, to do gardening at their summer homes. Reuben Root, president of the Copper Mining company, will, as soon as convenient, erect his sawmill on the ground and cut up timber for his own halfway house and for such of the new settlers as will build the coming season. Wild Goose prairie is on its way toward becoming a settled section.

* * *

More than $300 was paid one day recently to the Grays Harbor county auditor by truck owners who were found to be overloading their trucks, in a recent check made here by agents of the state highway department.

* * *

A new electric sawmill will be built immediately in the south end of Kalama by the Oregon-Kalama Lumber company, which was incorporated recently. The company has a capital stock of $500,000. It has leased 2500 feet of water front from the Kalama port commissioners and will erect a 100,000-foot capacity mill as soon as a spur can be put in from the railroad main line, so that material can be delivered.

The Veness brothers own and operate a mill at Winlock, but it is expected that some of the machinery will be moved to Kalama. The new company has purchased a large tract of timber across the river from Kalama in Oregon. The timber will be logged and delivered to the mill at Kalama. It is said a shingle mill will be built later in the summer.

* * *

A potato survey of Grays Harbor county shows that there are 28 varieties being grown extensively there. County Agent Robert Cowan is warning the farmers that if more united efforts to specialize on one or two varieties is not made the potato industry in that county will never amount to very much. Chief among the varieties are Burbank, Pride of Multnomah, Netted Gem and North River Red. Efforts will be made by the farm bureau during the next year to plant either the Burbank or Netted Gem exclusively.

* * *

A graduate of the State College of Washington, Miss Elmina White, has taken the position of assistant state club leader, formerly held by Miss Ruth Cresswell, and will handle girls' cooking, canning and sewing clubs in Washington this year. Miss White has been home demonstration agent in Pierce county since October, 1917, except for six months in 1919, and before that she taught home economics in Everett and Tacoma, besides doing dietary work at St. Luke's hospital for nearly a year.

Coming Events of Interest

April 16—Easter.
April 18—Guernsey Sale, Fawndale Farm
April 21—Grays Harbor county spelling contest.
April 24-29—"Be Kind to Animals" week.
April 26-28—Kittitas county milk, nutrition campaign.
May 4-6—Tulip festival, Bellingham.
May 12—National hospital day.
June 19-24—Boys and girls' club week, Pullman.
June 20-22—Lincoln-Adams pioneer picnic, Keystone.
July 27-28—Whatcom co. Guernsey gallop, Bellingham.

FARM BUSINESS AND MARKETS OUTLOOK

Cattle Market Lacks Trend

The cattle market has shown no definite trend for two weeks. The supply at the seven leading markets has dropped to the lowest level in two months, but the appetite for beef has shrunk likewise and dressed beef prices have been faltering. Receipts have not been as evenly distributed from day to day as in the previous month and a few bad breaks have occurred, damage being repaired shortly after. Besides contraction of the demand for beef, stocker and feeder purchases have fallen off temporarily, leaving more of the receipts to find the packing house outlet.

Less Cattle in Feed Lots

The available evidence points to a decrease of 15 to 20 per cent in the supply of cattle in feed lots compared with a year ago, especially when tonnage is considered. The remaining steers are more strongly held than 60 days back and will not be shipped in freely on declines. Texas still reports a slim prospect for grass beef to arrive during the spring months.

Female cattle are going through their spring depreciation in value and are selling unusually close to the price of medium and good steers. This situation usually lasts till June. There is a broad interest in breeding cattle, which is helping the cow and heifer market materially.

The veal calf market is becoming more stable and is slightly higher than a week ago, with the movement from dairy districts at or very near its zenith. Many light veals are arriving and are selling at extremely low prices.

Stockers and Feeders

Transactions involved in moving steers to Oklahoma and Kansas pastures are gradually getting past the conversation stage and some deals are being closed right along. The price of grass seems to be the chief bone of contention and some pasture owners are buying cattle instead of leasing their grazing areas. How heavy the total movement will be is problematcal and estimates are far apart, although available grass probably will be nearly all used. Advance orders for cars are said to forecast a movement of about 7000 carloads. This is 1500 cars less than last year.

The northwestern range country also is in the market for grazing cattle and one observer estimates that war finance corporation funds will make possible the movement of about 150,000 head in that direction. Without this money such purchases would be small indeed.

In the middle west the movement of stockers and feeders has slowed down slightly since the fat cattle market became steady, but the 12 leading markets are still sending nearly 50,000 head countryward each week and interest appears to be broadening again. Yearlings suitable for grazing through until grass is ready have the preference.

Hog Slump Checked

The slump in hog prices appears to have been checked for the time being at least. The range of fluctuations has been narrow recently and the market is higher than a week ago. The fresh pork market has scored a smart advance.

Hog receipts at the 11 leading markets have been running below the 10-year average, although during March they exceeded arrivals of last year, which indicates that hogs were held back to some extent. This is confirmed by the weights of hogs being marketed, which at Chicago are running about 10 pounds above the 10-year average.

The shipping outlet, which declined from about 90,000 head per week at Chicago to 35,000 head or less and bears chief responsibility for the slump in prices, widens out occasionally, but thus far has shown no marked improvement.

Prices on lard and salted and pickled meats remain too low to make the packing of these products a profitable enterprise, so that fresh meat trade is the only support and the packers are closing their purses whenever more hogs arrive than are needed to supply the latter demand.

Heavy Loss of Spring Pigs

The most important development at the present time bearing on the future of the market is the reported heavy loss of spring pigs. These advices are not unanimous in character, but the great majority indicate that there will be only a small increase in the number of hogs raised compared with a year ago.

Coloradoes Dominate Lamb Market

Colorado lamb feeders practically have the market to themselves at present and are keeping it well under control. Prices have advanced into new high ground and are now highest since July, 1920. Fluctuations are relatively small.

The approach of Easter is creating a special demand for light lambs, so that the discount on weighty offerings is widening. The decline in wool values has narrowed the difference between shorn offerings and those in the fleece. A few spring lambs are arriving from the southeast. They are quoted at a range of $13 to $20 at Chicago and Cincinnati. A few California lambs are scheduled to arrive in April, but they will not come freely until May.

Eastern Farms After Horses

Another heavy run of horses was cleared at Chicago, mostly to dealers catering to the eastern farm trade. Good chunks weighing 1300 to 1600 pounds sold at $125 to $200 per head and a few choice drafters sold for $250 or higher. Wet weather is delaying spring seeding operations and may cause a rush for extra horses later on. It has had the opposite effect on southern buying, however, and prices at St. Louis, the principal gateway for the southern trade, were $10 to $15 lower on both horses and mules. Coal mine labor troubles also were a factor in the mule market.

Wool Prices Quoted Lower

Wool markets are extremely quiet, but there is a small amount of buying, part of it speculative and part of it by mills which are piecing out orders.

The sales made show a decline of 5 to 10 per cent, or 3 to 5 cents per pound from the recent high point.

Foreign markets are mixed. The London auction closed relatively strong, due primarily to British and continental buying, while the last Australian auction was weak. The cloth market is dragging, although some mills have sufficient orders to keep them busy for several months. The strike of cotton mill workers threatens to spread through the woolen mills which are endeavoring to reduce wages. The leading factor in the industry has not yet been affected.

Boston wool prices are quoted as follows:

Wisconsin, Missouri and average New England—Half-blood, 36@37c; 3-8 blood, 35c; quarter blood, 34c.

Scoured basis:

Territory—Fine staple, choice, $1.05@1.10; 1-2 blood combing, 95c@$1; 3-8 blood combing, 75c; quarter blood combing, 62@63c.

Wheat Statistics and Market

The outlook for the wheat market remains strong, although prices have been weak most of the time during the last month. Statistical compilations show a close adjustment between probable supply and probable demand for the rest of the crop year, but this fact is obscured by the presence of ample stocks in commercial channels for which there is only an apathetic demand at the present time. Furthermore, statistical calculations have frequently gone awry during the last year and the grain trade is waiting to see whether they will be discredited again.

A dull flour trade and congestion of Canadian wheat at Fort William and Port Arthur, as well as along railroads leading to those points, have been the principal depressing factors recently. The Canadian situation can hardly be relieved before the opening of navigation, which is expected in about three weeks. The domestic flour trade has an occasional spurt, however, and mills are distributing a fairly large quantity all the time, even when they report that trade is dull. It is estimated, for example, that flour disappearance since July 1 has run 12,000,000 barrels ahead of the corresponding period a year ago and throughout March mills were operating at a higher percentage of capacity than they were last year. In spite of these conditions stocks of flour are believed to be light. It is chiefly by comparison with the best record during the war years that the flour trade can be considered dull.

Europe Buying Little Wheat

Europe is buying a little wheat from North America, chiefly Manitobas, and on a recent day England, France, Germany and Italy all were in the market and Greece is expected to place a large order soon. Clearances from the United States are running around 2,000,000 to 2,500,000 bushels per week, a rate sufficient to absorb more than our estimated surplus before July 1.

World's shipments have fallen off sharply in the last two weeks, due to a decline in clearances from Australia and the Argentine. Argentine has shipped 51,000,000 bushels since January 1, or nearly half of her estimated surplus. In the same period last year she cleared only 18,688,000 bushels. There is still enough wheat in the southern hemisphere to maintain a heavy movement for three months if all of it is to be disposed of in that time. This is not likely to occur, however, and Europe will be obliged to resort to North America for a larger fraction of her supply and will probably do so as soon as lake navigation opens.

With smaller world shipments there has been no difficulty in the last 10 days in absorbing the wheat on arrival at European ports, even though about 40 per cent of the quantity afloat was sent abroad on consignment.

Cash markets for wheat have been laggard recently, especially at Kansas City and St. Louis.

New Wheat Condition Improves

Unofficial reports upon the condition of the winter wheat crop range from 78.7 to 79.6 per cent, compared with 76 per cent on December 1; on April 1 last year it was 91 per cent, and the 10-year average for that date is 84.3 per cent. There has not been enough growing weather over most of the winter wheat area to estimate the probable abandonment with any degree of accuracy, but assuming that it is equal to the average of around 10 per cent, these unofficial reports point to a yield of 550,000,000 to 580,000,000 bushels, compared with an average final yield during the last 10 years of 570,000,000 bushels. Green bugs are reported to be numerous in Oklahoma and unfavorable reports from Kansas deserve attention. With the world outlook indicating that a large quantity of wheat will be needed for export from the United States during the next year, the market will undoubtedly respond promptly to reports upon the progress of the crop.

Corn and Oats

Primary receipts of corn are still decreasing and with three or four exceptions were the lightest last week since early August. Much of this grain is at lake ports waiting for lake traffic to begin. Corn buying is less urgent than a month ago.

The oats market is laboring under a heavy burden of supplies at terminals and lake ports. The demand for oats is disappointing, although in the last two weeks shipments from primary markets have exceeded arrivals. The oats seeding season has been delayed by wet weather and is one or two weeks late in many sections. Apprehension over the crop may give the market support later on.

Cash Grain Markets

The range of cash grain prices for the week ending April 5 was as follows:

CHICAGO—Corn: No. 2 mixed, 55 1-4@57 3-4c; No. 3, 53 3-4@57c; No. 4, 53@55 3-4c; No. 2 yellow, 56@58 1-4c; No. 3, 53 3-4@56 3-4c; No. 4, 53 1-2@55 1-2c; No. 2 white, 57@58 1-4c; No. 3, 54 1-2@57 1-4c; No. 4, 53 1-4@55 1-4c.

Oats—No. 2 white, 37@40 1-2c; No. 3, 35@38 1-2c; No. 4, 33 1-2@36 1-4c.

Rye—98 1-4c@$1.00 3-4.

Barley—54@68c.

Wet Weather Depresses Seed Market

Wet weather in practically all sections of the country has affected the demand for seeds and caused a sharp slump in prices recently, but the market has become steady on a lower level. Red clover especially has been depressed.

Toledo, per bushel—Prime red clover, $14.50; prime alsike, $11.50; prime timothy, $2.95.

Feedstuffs Decline Sharply

Influenced by the weakness in the bran market, wheat feeds have declined sharply in the last two weeks. Hominy feed and linseed meal weakened also. Thus far cottonseed meal and gluten feed prices have held. Feed jobbers are well stocked up in most sections and have been shading prices below those quoted by mills in order to make a clearance. With the arrival of spring feeders and dairymen are buying as little as possible.

Prices per ton (100-pound bags) in carlots—Chicago: Bran, $22; standard middlings, $23; flour middlings, $29; cottonseed meal, 36 per cent, $48; 43 per cent, $52; hominy feed, $20.50; gluten feed, $32.65; old process oil meal, $53; tankage, $60.

Hay Market Higher

Hay markets have advanced slightly in the last week or two, due primarily to light receipts, as the demand is narrow and limited mostly to local buyers. Unseasonable weather is delaying the progress of the new crop in the southwest, but it is probable that lower prices will be seen after another month or two, when pasture becomes generally available.

Prices per ton in carlots—Chicago: No. 1 timothy, $24@26; No. 2, $22@24; No. 3, $17@20; No. 1 light clover mixed, $23@24; No. 1 clover $19@20; No. 1 clover mixed, $20@21.50; alfalfa, $17@28; upland prairie, $17@19; midland prairie, $14@17; rye straw, $16@17; oat and wheat straw, $14@16.

Egg Slump Is Over

The egg market has been fluctuating over a limited range and the slump in prices appears to be practically over. Receipts are increasing rather steadily and are now about 30 per cent larger than two weeks ago. They usually reach high water mark around the middle of April. With prices comparatively stable speculative buying has broadened and the movement into cold storage has expanded rapidly, although holdings at the four leading cities are much less than at this time last year, when the storing season began a week or two earlier. Country dealers in eggs have become bullish on the market and in some cases prices at country points have been above those in the larger cities. A similar situation developed last year at about the time the egg market reached bottom.

Butter Supply Becoming Excessive

Although the demand for butter has expanded recently, the supply has increased rather steadily during the last two weeks and the four leading cities are now receiving much more butter than usual at this season of the year. Buyers are taking less storage butter and are turning to fresh butter, particularly of the medium and undergrades, so that the effect of the liberal supply has been more noticeable on the fancy scores. The supply of cold storage butter is considerably below the average for this season, but it is not as small as it usually becomes before the storing season begins. Ordinarily storage stocks do not begin to increase until the latter part of April or the first part of May. The California market particularly has been weak recently, as the season is earlier in that state than in the middle west, and California butter has been offered for shipment to the east. The decline in prices is of a seasonal character and probably has not yet run its course. The high point in receipts of butter generally arrives in June.

Prices for 92-score fresh butter on April 5 are as follows:

Chicago, 34c; New York, 35c; Boston, 36c; Philadelphia, 36c.

Cheese Market in Distress

The cheese market has been extremely weak recently, due to offerings from producing sections in excess of the needs of the trade. With prices working lower, dealers have been unwilling to buy a bit more than necessary and have been making concessions whenever required to clean up stocks. Daisies, especially, have been abundant and it has not been possible to dispose of all of this style. The market for held cheese, however, is firm and more could be sold than is available. White cheese is scarce and commands a premium of 1-2 to 1 1-2 cents per pound over colored cheese.

Prices for No. 1 American cheese on April 5 were: Chicago: Flats, 17 1-2@18c; twins, 17@17 1-2c; S. daisies, 17@17 1-2c; D. daisies, 16 1-2@17c; longhorns, 18@18 1-2c; square prints 18@18 1-2c.

Potato Shipments Remain Large

The potato market has been slow, dull and slightly lower, with the supply of old potatoes arriving at distributing centers about 50 per cent greater than last year and considerably above the average for this season. New potatoes also are coming forward more rapidly than usual at this time of the year and the acreage in the early and intermediate states is 18 per cent larger than a year ago. Round whites are quoted at $1.50 to $1.65 per 100 pound

(Continued on page twenty.)

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Statement on "30-10" Plan

By JOSEPHINE CORLISS PRESTON, State School Superintendent

This department is receiving many inquiries concerning the 30-10 plan for the support of schools. These inquiries seek information of two kinds: First, statistical, and second, the attitude of the department toward the measure.

We have thus far listened to a number of talks in important meetings throughout the state regarding the proposed 30-10 bill.

The presentation to date has been based largely upon the argument that the rich districts should take care of the poor districts—in other words, the necessity of using the wealth of the state of Washington for the benefit of all of the children in the state.

In the different presentations the speakers have failed to recognize the fact that nearly 27 years ago the state of Washington adopted the principle of equalizing the educational opportunity of the child in both city and country by providing that the wealth of the state should be taxed for the education of all of the children in the state.

This principle of state support was adopted in 1895 when the famous "barefoot boy school law" was passed, providing for $6 per census child. In 1899 this was increased to $8 per census child; in 1901 to $10. In 1909 our state aid of $10 per census child was supplemented by a county fund of $10 per census child, thus doubling the income for the support of the public school over and above local or district taxation and giving us the 10-10 plan; thus, for nearly 27 years the state of Washington has adhered by direct taxation to this principle to give equality of educational opportunity.

In the extraordinary session of the legislature held in March, 1920, the state department of education inaugurated a campaign for an increase of the state support from $10 to $20 per census child. We felt justified in the determined stand that we took because of the crisis in education which we were then facing. This increase in state support was secured primarily to provide better salaries for teachers. As superintendent of public instruction I have felt deeply gratefuly to the members of the legislature in the special session assembled in 1920 for the passage of the 20-10 law.

The annual increase under the 20-10 law is approximately $3,750,000.

The state and county fund as provided in the 20-10 law gives the schools approximately $11,000,000 annually over and above the money raised by local district taxes.

The proposed 30-10 bill will mean, according to the best estimate and information of the state department of education another increase of $3,750,000 in state tax annually.

Since the 30-10 measure is being initiated rather then presented through the regular channels of legislative action, we feel that the question of increased state school tax is an issue strictly for the people of the state to decide.

As a state department of education we are prepared to give detailed information as to the collection and distribution of school funds for any county or district under our present law or under the proposed new plan.

We are presenting some statistical tables herewith dealing with the cost of public school education in Washington. The figures are for the school year ended June 30, 1921:

GENERAL FUND.

I. General Control.

1. Clerk or secretary.
2. Election and census.
3. Other expenses.
4. Supervision.

Total, $895,773.

II. Instruction.

1. Teachers' salaries, $15,147,225.
2. Text books.
3. Supplies.
4. Other expenses.

Total, $1,326,211.

III. Operation School Plant.

1. Janitors' employees.
2. Fuel.
3. Water.
4. Light and power.
5. Janitors' expenses.

Total, $2,443,610.

IV. Maintenance School Plant.

1. Repairs buildings; upkeep grounds.
2. Repairs, replacement equipment.
3. Insurance.
4. Other expenses.

Total, $1,330,543.

V. Auxiliary Agencies.

1. Libraries.
2. Promotion of health.
3. Transportation.

Total, $954,765.

VI. Miscellaneous.

1. Rent.
2. Other expenses.

Total, $462,418.

Total current expenses, $22,560,545.

VII. Outlays (Acquisition—Construction).

1. Land.
2. New buildings.
3. Addition to old buildings.
4. Equipment, new buildings, grounds.
5. Equipment, old buildings, grounds.

Total, $1,499,989.

BUILDING FUND (BOND ISSUES.)

1. Land.
2. New buildings.
3. Additions to old buildings.
4. Equipment, new buildings, grounds.
5. Equipment, old buildings, grounds.

Total, $3,187,845.

INTEREST.

1. Warrants, $376,032.
2. Bonds, $928,922.

Total for outlays and interest, $5,992,788.

Total expenditures, $28,553,333.

Pupils in average daily attendance, 230,555.

Current expenses: Cost per pupil in average daily attendance, $97.85.

Total expenditures: Cost per pupil in average daily attendance, $123.85.

The Cover Page

On the cover page of this week's issue is a picture of a pioneer in the horticultural industry of the state of Washington. The old man behind the grape arbor is the late Lambert B. Evans of Stretch Island, Mason county, and the arbor is a part of his original planting of grapes, which were destined to play a great part in the grape-growing industry of the Pacific northwest. Mr. Evans came to Washington 40 years ago, homesteading 160 acres in what is now Mason county. Grapes did so well that he increased his plantings from year to year, giving them careful attention and scientific improvement.

In 1899 Adam Eckert, a tourist on his way to California in search of a climate suitable for commercial grape production, saw the Evans vineyard. He was so impressed that he purchased a part of the place and began there the development of a strain of fruit so distinct that it is today known as a separate variety, the Island Belle.

In an early issue of The Washington Farmer will appear a discussion of the Island Belle grape and grape culture in Washington by Mr. Eckert, the originator of the variety.

Guernseys for Boys and Girls

A carload of purebred Guernsey heifers 12 to 20 months old will be purchased in the middle west for boys and girls of Yakima county Guernsey calf clubs by H. E. Angel, president, and Ray N. West, secretary, of the Yakima Valley Guernsey Breeders' association, who left early in April on the mission. Already 22 boys in the county have made definite arrangements for club membership, and there are enough more who have shown interest to convince County Club Agent E. C. Scott that four standard clubs can be formed

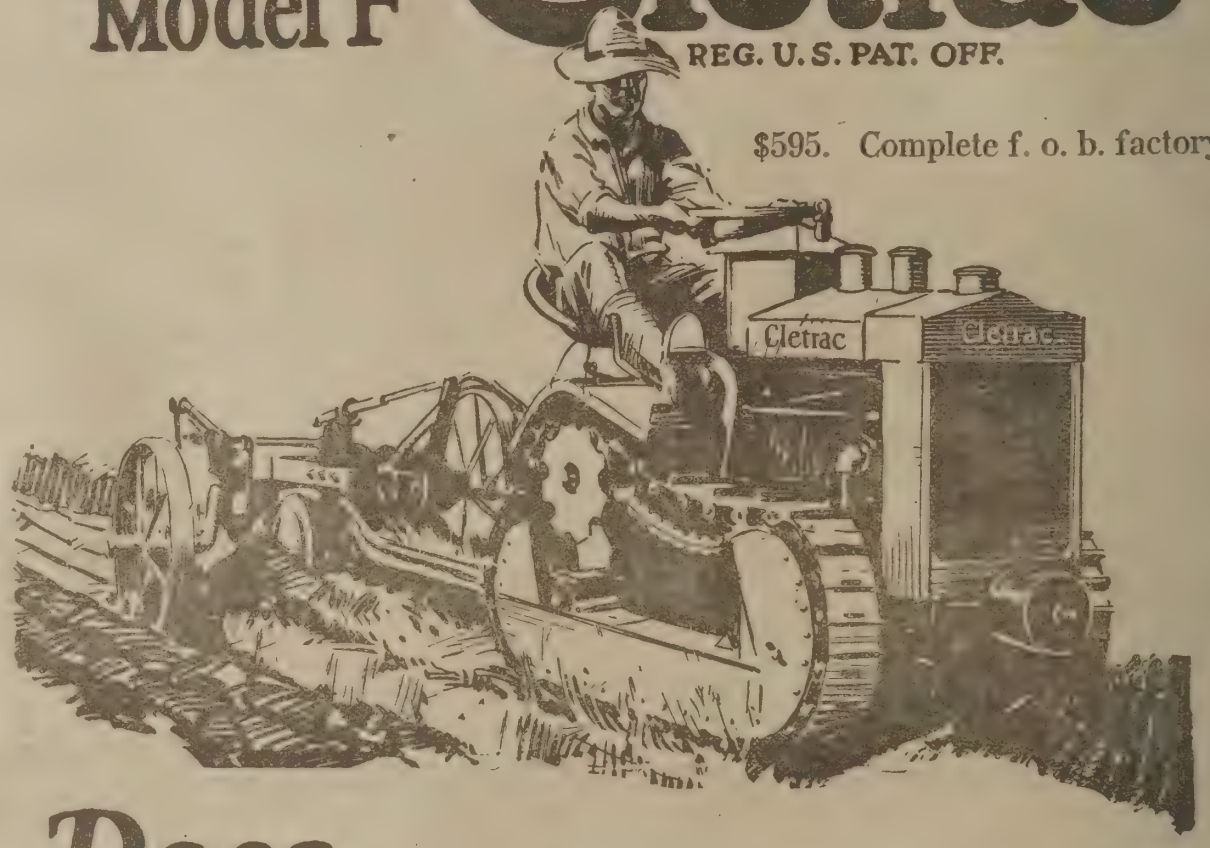
General Goethals' Report

The builder of the Panama canal last week filed the report of his survey of the Columbia basin irrigation project. He finds the proposed plan of watering 1,753,000 acres of land in the great Columbia basin feasible. He is as enthusiastic over the proposed project as are others who have studied it and the remarkable possibilities of creation of wealth that it possesses.

On page 20 of this issue of THE FARMER is a brief summary of his report. A comprehensive report of his findings and of the plans for putting this vast area under irrigation will be contained in next week's issue.

The New Model "F" Cletrac

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$595. Complete f. o. b. factory.

Does All Farm Work

HERE is a tractor so far in advance of any tractor you have seen that it will make you figure power farming all over again.

Until we actually *saw* Cletrac F at work and learned its price, we did not believe it was possible to build a crawler-type tractor with chrome steel for every part subject to severe wear and sell it for so low a price.

Cletrac F is *the* value of the hour. Its power is ample to pull two 12 inch bottoms—to turn under 6 to 8 acres a day. In the same proportion it speeds up all other farm work—discing, seeding, haying, harvesting, hauling, belt work.

Lays its own tracks anywhere and everywhere you want it to go—automatically lubricated—all working parts accessible—handles any job on the farm—and its low price will meet your means today.

Remember this—here is a tractor against which old methods of farming cannot compete. We'll be glad to put it through any test or demonstration—without obligation to you—and stake our reputation on the result.

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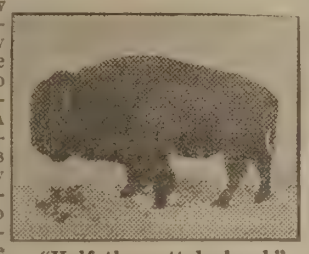
PACIFIC COAST FACTORY BRANCHES

Los Angeles, Cal. San Francisco, Cal. Spokane, Wash.

Will This Improve Our Beef?

Cattalo steaks are a delicacy which may soon find a place on the menu of all first-class hotels and restaurants if experiments which have been carried on for some time in western Canada prove ultimately successful, says Robert J. C. Stead, Canadian department of immigration.

These experiments involve an attempt to produce a new breed of animals by crossing the wild buffalo with the domestic cow. A favorable opportunity was afforded by the 100,000-acre buffalo park at Wainwright, where range cattle were allowed to roam the prairies along with the buffalo. The result produced a certain number of hybrids, but no systematic efforts were made to segregate these hybrids or to develop a mixed type until the late Mosson Boyd, a Canadian cattle breeder with advanced ideas, interested himself and suceeded where so many had failed.



"Half the cattalo herd."

He began his experiments several years ago by crossing a pure buffalo bull from the Canadian government herd upon a variety of domestic cows. Shortly before his death in 1913 Mr. Boyd furnished the parks branch of the Canadian department of the interior with a detailed report of this experiment. The following year, in order to continue the experiments, the Canadian departments of the interior and agriculture bought 20 of these developed hybrids, which Mr. Boyd had named cattaloes, the name by which they are now registered.

The first stage in cross breeding between species is always a difficult one, and it was not until the third or fourth generation that the heavy mortality in calving was reduced. A yak element has been imported with good results, so that there are really three continents as godparents to the cattalo.

So far the looks of the cattalo are against him. He shows up as a rather gloomy and unusual type of bovine, with a bigger head, a distrustful eye and a circumferential shagginess. He has, however, a hide which possesses thickness, color and luster, and this pelt of his, it is said by experts, is worth more than ordinary cattle hides.

So far he has proved to be free from infection and disease. He is equal to facing storms, thriving on poor or indifferent pastures and grazing through snow, so that, like the caribou, he bids fair to flourish in the northern regions and "rustle" for himself through a trying winter.

Moreover, the cattalo cuts up well, for his flesh is a palatable blend of domestic beef and buffalo, and his tissues are rich enough to yield along the back a roast nine inches deep, for the buffalo's hump, which the cattalo inherits, is not fat, as generally supposed, but good edible flesh.

Recently samples of cattalo meat were sent to 25 householders, and the following is a summary of their opinions: Twelve declared in favor of the texture of the cattalo meat as compared with domestic beef, six declared in favor of the palatability of cattalo meat as compared with domestic beef and 16 preferred the cattalo meat to a prime cut of the domestic product. The samples were not from a young cattalo steer, but from a fully matured bull.

If the continued experiments are successful another important source of meat supply may result and a new branch of animal husbandry will have had its birth in the Canadian west.

Cool Shoulders Gradually

To the Editor of The Washington Farmer: I would like to give my experience on how to prevent sore shoulders on horses. I am a firm believer in collar pads, as they hold the collar close to the neck, which prevents the collar from working back and forth and causing irritation. The main thing is to never allow cold air to get under the collar, especially when the horse is warm. I have seen the whole shoulder peel clear from the top of the neck down as far as the collar touched it. That is caused by removing the collar while the horse is warm. My practice has been, since I handled horses, and that is about 40 years, never to remove the harness or the collars from the horses when they come in warm. Wait until they are thoroughly cooled off. If you practice this method you will never have sore shoulders on your horses, provided the collar fits anywhere near right

Bossburg, Wash. P. A. RASMUSSEN.

To Poison Gophers

I would like to know how to get rid of gophers, as they are a great pest on my farm. W. E. P.

Chehalis, Wash.

David E. Lantz, in his bulletin, "Use of Poisons for Destroying Noxious Mammals," issued by the United States department of agriculture, tells of having excellent success in destroying pocket gophers with various baits in the late fall and early winter, and reasonably good results at other seasons. Crystals of strychnine may be inserted into pieces of potato, carrot or sweet potato, or in raisins, and the baits placed in the tunnels several feet from the fresh mounds. If placed in the laterals near the mounds they are likely to be pushed out by the animals in bringing out soil and so not be found. An instrument consisting of a spade handle shod with metal point and having a metal bar for the foot about 15 inches from the point is admirably adapted to making openings into the tunnels into which the baits may be dropped. The holes need not be closed.

With the instrument described it is possible for one man in a day to distribute gopher poison on 30 to 40 acres of badly infested meadow or alfalfa land. A sharp-pointed stick may be substituted for the spade handle, but it can not be operated successfully in any but loose soils.

Corn soaked in strychnine sirup is an excellent bait for pocket gophers. A few kernels are dropped into holes made in runways as described above. The strychnine sirup is prepared as follows:

For one gallon poisoned sirup use four ounces of powdered strychnia sulphate, four ounces of potassium cyanid, four ounces of green coffee, six ounces of alcohol, four eggs (whites only), one-half gallon thick sugar sirup.

To prepare, mix the coffee and whites of eggs and let the mixture stand over night. Dissolve the cyanid of potassium in a little less than a quart of hot water and let it cool before using. Prepare the sugar sirup previously, so that it is not hot when used. Pour the cyanid of potassium solution over the coffee and egg mixture, stir, and then strain into the mixing vessel through a sieve fine enough to hold the coffee, which is rejected. Add the sugar sirup and stir thoroughly. Dissolve the strychnia in a little less than a quart of boiling water. Pour the alcohol into this solution and stir. Then add the mixture of strychnine, alcohol and water to the contents of the mixing vessel and stir thoroughly.

DIRECT STEAMER TO MANCHESTER.

Announcement is made of a direct steamer service to Manchester, England, to be inaugurated with the Howick Hall loading at Portland the latter part of May or early in June. The latter part of the voyage to Manchester is made via the famed Manchester ship canal.

WHEAT EXPORTS MAKE RECORD.

More wheat was exported during last year than in any preceding year of our history, according to an analysis made by the United States department of agriculture. For the first time the export value of wheat and wheat flour exceeded the value of cotton exports.

NOW That Coupon is Worth $2 on a Famous New Butterfly

More than 200,000 New Butterfly Cream Separators Now in Use.

—But You Must Act NOW!

We will accept the coupon below the same as cash for full payment of $2 on any 1922 model New Butterfly Cream Separator. Don't send a single penny in advance. Just fill out the coupon telling us which size machine you want (see list below) and we will ship it for you to try 30 days in your own home. Then you can find out for yourself just how much a New Butterfly Cream Separator will save and make for you. You can see for yourself before you pay a cent how easily this great labor-saving money-making machine will save enough extra cream to meet all the monthly payments before they are due.

In this way you won't feel the cost at all. You will have the Separator to use on your farm and your money in your pocket.

If at the end of 30 days' trial, you are not pleased just send the machine back at our expense. We will pay the freight both ways. You don't risk a single penny.

(9)

Send No Money Just The Coupon Save $2.00

How the COUPON Saves You $2

By ordering direct from this advertisement you save all expense of catalogs, postage, letters and time. And we give you the benefit of this saving if you send the coupon now. Furthermore, isn't it better to have one of these big money-making machines to *use* instead of a catalog to *read?* Wouldn't you like to compare the New Butterfly with other Separators in your neighborhood regardless of price? Wouldn't you like to see just how much more cream you would save if you owned a Separator? We believe you would, so we send you a machine from our factory to try 30 days. Then if you decide you want to keep it the coupon counts the same as a $2 payment. You take that much right off from our factory price on any size Separator you select. For example, if you choose a *$44* machine you have only *$42* left to pay in 12 easy payments of only *$3.50* a mo. If you select the *$50* machine you will have only *$48* left to pay in 12 easy payments of only *$4* a mo.—and so on.

The Coupon Makes First Payment
And the Separator Itself Pays the Rest

You get the benefit of the great saving in time and work while the Separator is paying for itself. After that the profit is all yours, and you own one of the best Separators made—a steady profit producer the year 'round—a machine guaranteed a lifetime against all defects in material and workmanship, and you won't feel the cost at all. If you decide to keep the Separator we send you, you can pay by the month, or you can pay in full at any time and get a discount for cash. The coupon will count as $2 just the same. The important thing to do now is to *send the coupon,* whether you want to buy for cash or on the easy payment plan. We have shipped thousands of New Butterfly Cream Separators direct from our factory to other farmers in your State on this liberal plan.

No Discs to Clean

The New Butterfly is the easiest cleaned of all Cream Separators. It uses no discs—there are only 3 parts inside the bowl, all easy to wash. It is also very light running with bearings continually bathed in oil. Free circular tells all about these and many other improved features.

Pick Out Size You Need

Order from this Advertisement on 30 Days' Trial. Use Coupon

You take no risk whatever. You have 30 days in which to try the New Butterfly we send you before you decide to keep it. Every machine we build carries a written Lifetime Guarantee against defects in material and workmanship.

No. 2½—Machine illustrated at left. Capacity up to 275 lbs. or 125 qts. of milk per hour. Price, $44.00

TERMS: Free $2.00 coupon with order. Balance, $3.50 a month for 12 months.

No. 3½—Machine shown at left. Capacity up to 375 lbs. or 185 qts. of milk per hour. Price, $50.00

TERMS: Free $2.00 coupon with order. Balance $4.00 a month for twelve months.

No. 4—Machine shown here. Capacity up to 425 lbs. or 210 qts. of milk per hour. Price $62.00

Terms: Free $2 coupon with order. Balance $5.00 a month for 12 months.

No. 4½—Machine shown here. Capacity 475 lbs. or 235 qts. of milk per hour. Price $65.60

Terms: Free $2.00 coupon with order. Balance $5.30 a month for 12 months.

No. 5½—Machine shown here. Capacity up to 600 lbs. or 300 qts. of milk per hour. Price, $69.20

Terms: Free $2.00 coupon with order. Balance $5.60 a month for 12 months.

It Is Always Best—

to select a larger machine than you need. Later on you may want to keep more cows. Another thing also, remember, the larger capacity the less time it will take to do the work.

ALBAUGH-DOVER CO., MANUFACTURERS 2350 Marshall Blvd., Chicago

FREE FIRST PAYMENT COUPON

ALBAUGH-DOVER CO., 2350 Marshall Blvd., Chicago, Illinois

Gentlemen:—Please ship me on 30 days' free trial, in accordance with your offer in

one New Butterfly Cream Separator, size..... If I find the machine satisfactory and as represented by you, I will keep it and you are to accept this coupon as $2 first cash payment for same. If I am not pleased, you agree to accept the return of the machine without any expense to me, and I will be under no obligation to you.

I keep.....cows.

I wish to buy on.....terms.
(Cash or easy payment)

Name.....

Shipping Point.....

State.....Post Office.....

Name of my Bank.....

Limitations of Cooperation

Are Producers Cutting Each Other's Throats?

A new kink in dairy warfare is reported from New York. Heretofore the conflicts have been between the producers, on one side, and the distributors or condenseries on the other. Now a big fight is on in the New York territory, with some of the producers and some of the distributors lined up on one side and other producers and other distributors lined up on the other.

This peculiar development is the outgrowth of an ultimatum from the Dairymen's Cooperative association demanding that the large milk distributors in New York line up definitely, either with the association or with the independent producers. This action of the Dairymen's Cooperative association, which takes the place of the old dairymen's league, which ceased to exist on April 1, is expected to be a long war among the 75,000 to 90,000 dairymen in New York and near-by states who serve the metropolitan district.

The old dairymen's league maintained friendly relations with all producers. The new association has decided that it will secure a favored position for its members, and the agreement to be signed by those who purpose to purchase milk from them does this in a direct manner. It contains a clause requiring that milk from association members shall be granted the highest classification and paid for at correspondingly high prices. Milk from independent producers, it is stipulated, shall be classified as of lower grade and shall be used only after all offered by the cooperative association has been absorbed.

There are about 125 distributors in that region, but the big business is done by the Borden company and the Sheffield company. The Borden company has lined up with the Dairymen's Cooperative association, but the Sheffield company and the Empire State Dairy company, third in size, will throw in their lot with the independent producers. The secretary of the conference board of the associated distributors believes that most of its members have gone over to the independent and will buy without reference to the price-fixing instituted by the cooperative association.

While the distributors are divided in their lineup, it seems that they have divided in a friendly way, and it looks as if the real warfare will be between the two classes of producers. When the proposition was put up to the distributors their conference board reported to its 125 members that it could not safely recommend acceptance of the agreement as submitted to it. It pointed out to them that the price clause, according to legal opinion, might bring on serious litigation and make them subject to paying triple damages. The individual distributors were advised to act as they thought best with these facts in view.

Notwithstanding the Borden company is on one side and the Sheffield Farms company on the other, the two have announced a reduction of 1 cent in the price for bottled milk of all grades and corresponding drops in the prices of specialties, such as cream, buttermilk and condensed milk. Other distributors are expected to follow suit.

Here we have another striking illustration of the unfortunate limitations that are put upon cooperative farm organizations by the refusal of so many of the producers to enter into cooperation. In this instance it looks as if 75,000 or 80,000 producers in the New York territory are in danger of cutting each others' throats, and as if the distributors, through their closely-knit conference board, are getting ready to play one side of the producers against the other side and reap the big benefits.

N. W. D.

West Tops Big Sale

Dairymen of the northwest may well be proud of the showing that their Holsteins made at the Brentwood sale in Philadelphia, March 20. There were 32 animals entered from Washington and California was represented by the Bridgeford herd of Patterson. The consignments from the two western states took 75 per cent of the sale money as well as winning first and second prizes in the show which took place the first day.

The largest consignment was sent from the Carnation stock farms of Tolt, Wash., which sent 21 head and their average was higher than any other herd. Carnation Pietertje Colantha, a son of Carnation Pietertje, topped the sale at $5000, while Carnation Sylvia sold for $3575. Carnation Matador Pontiac, a junior 2-year-old daughter of Matador Segis Walker, won the $1000 grand prize of the show and sold for $4200. She was junior champion at the Pacific International Live Stock expositon last fall.

The second highest sale was made by a cow in the Bridgeford herd of California, which sold for $4300. Alec Todd & Sons of Yakima, consigned a 3-year-old, Cascade Pietertje, who sold for $3325 and won first prize of milk producers in the 3-year class. Thomas J. Owens of Kirkland entered two individuals, the new world's record 2-year-old and her dam, Leona Gerben Bracelet, both of which he sold to Fred Field of Brockton, Mass., for $7500. Hollywood farms of Seattle sold three head, one of which was a daughter of Judge Segis, their well-known herd sire. Ralph Tuttle of Walla Walla sent five head to the sale, for which good prices were received.

The sale as a whole averaged $800 per head lower than the event last year and the bidding was said to be less keen. This year marks the third annual sale of the Brentwood Holstein exposition, which was held in the Commercial museum in Philadelphia. The fact that the herds of the northwest can take such a large percentage of the sale prices demonstrates that western dairymen are beginning to rank high in the production of purebred Holsteins.

S. D. GRIFFITH, Ephrata, Wash.—Your paper is a dandy—one of the necessities for a man on a ranch.

Will Sell Guernseys

To aid in meeting the demand for Guernseys in this state A. L. Wallace and Mr. Herron of Sunnyside, Wash., went east in January and purchased 27 head of females and shipped them to the Wallace & Fordyce farm, near Sunnyside, for dispersion. They will be sold at auction at the farm next Tuesday, April 18. In the lot are several granddaughters of Ne Plus Ultra, one of the leading sires of the Guernsey breed. He has 78 registered daughters and 59 sons.

There will also be several daughters in the sale by Lizette's Topsy Boy, a grandson of Yeksa's Tops Gold's Fanny, a cow with a record of 19,794.9 pounds of milk and 981.53 pounds of fat.

In the lot are seven cows 2 years old and over, 10 heifers 12 to 18 months old and 10 calves 3 to 6 months old. Several of the open heifers are being bred to Chicona Lover Bold, the herd sire owned by Wallace & Fordyce. This animal was grand champion at many fairs last year. He is by Langwater Traveler, the senior herd sire at Chicona farm, owned by A. L. Gile.

An important factor in hog raising is the pen.

Farm Engineering Information

Professor L. J. Smith, with whom we have made arrangements to handle agricultural engineering problems for readers of The Washington Farmer, is one of the pioneers in engineering for the farm. In 1906 he organized the department of farm mechanics at the Michigan Agricultural college. After that work was well established he was called to the Manitoba Agricultural college at Winnipeg to develop a similar department for northwestern Canada. For the last two years he has been head of the department of agricultural engineering at the State College of Washington.



Professor Smith.

Professor Smith has written a number of bulletins relating to the mechanical side of farm life. His department is engaged in an investigation of the methods of clearing logged-off lands, one of the greatest problems of the northwest. Under his instigation last spring the state college conducted a statewide competition of plans for better farm homes, the prize plans of which will appear in bulletin form this month. This bulletin will present the best ideas of the farm women of the state of Washington as to what is the ideal farm home for the Pacific northwest.

Almost every issue of The Washington Farmer contains an article of practical interest to readers, or answers to questions on all manner of farm engineering, mechanical and building problems. His writings comprise another of those features that would prove of inestimable value if clipped each week as they appear and pasted into a well-arranged and indexed scrapbook.



This Truck Builds Profits—*and*

Adds to the Pleasure in Farming

TO MAKE large savings in the time and cost of farm hauling, a motor truck must be ready for use right when it is needed. From the first step in design and manufacture, ***International Motor Trucks*** are built with this requirement in mind. They are sturdy and dependable in every part, from the four-cylinder, block-cast engine to the hub caps.

But our interest in your International truck goes still further. When some part needs replacement or adjustment, the unequaled International after-sale service is at your command. You can always depend on your International being ready for work.

There is a size and style for your requirements. Capacities range from the 1,500-pound Speed Truck to the 10,000-pound truck for heavy duty. Body types include grain-tight boxes, hay racks, stock racks, panel delivery bodies and many others.

Ask the International Motor Truck dealer nearest you for complete information, or write us.

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Branch Houses in 92 Principal Cities. Dealers Everywhere

Community and County Fairs

Plans Already Being Made in All Parts of the State

Believing that the basic idea of a fair is educational and that it must be made to teach the visitors the type and variety of products to grow in their locality and the market demand for the same, the Washington state college extension service has placed Mrs. Winnie Braden in the field to demonstrate to different communities how to put on a community or county fair.



Mrs. Winnie Braden.

In an interview with a representative of The Washington Farmer Mrs. Braden said she works through the county agents, boys and girls' club leaders, home demonstration agents, farm bureau leaders and heads of the fair departments. Her first trip to each place is for a sort of survey to determine what each county needs and to form committees. She returns later to help the workers plan the program, put on demonstration and give any assistance needed.

Already Mrs. Braden has visited Chehalis, Olympia, Seattle, Everett, Ellensburg, Yakima, Pasco, Kennewick, Walla Walla and Spokane. In many of these places county agents from adjoining counties were present at her meeting.

Lewis county already has planned for community fairs at Randall, Toledo, Mossy Rock and Winlock. Cowlitz county has planned five, at Kelso, Stockport, Kalama, Eufaula, Bunker Hill and a county fair at Woodland September 28, 29 and 30.

The community fair in Thurston county will be largely exhibits of boys and girls' club work and will be held at Spurgeon Creek, Yelm, Tenino, South Bay, Schneider's prairie. A large potato show is also being planned at Olympia. King county is planning to hold community fairs at Tolt, Bothell and Newaukum.

Pierce county is putting most of its effort into a display at the western Washington fair at Puyallup. Mrs. Braden will go to Tacoma later in the season to put on a one-day school for exhibitors and department heads.

Agent W. L. Davis of Kittitas county is puting most of his efforts for fair work into their county fair, as he is able to reach the majority of the people in that way.

Besides several community fairs, Yakima county is planning a potato and corn show, to be held after the state fair. The object of this potato show is to demonstrate to the potato and corn growers the value of properly selected seed. The potato show is to be divided into two distinct classes. One class will be for the displays of local growers, as this community is growing mostly market potatoes. The other department will be for the displays of seed growers, seed associations, etc. The question of selecting seed is a vital one to them because they do not produce their own seed, but purchase it every year from outside points. This year the growers are planting potatoes from tested seed from the different seed-growing localities to determine where they can secure seed which will produce the best results with their soil and climatic conditions.

Pasco, Franklin county, is putting all its efforts toward creating greater interest in the county fair at Connell. Up to this year, Pasco has held an industrial fair of its own. Benton county is also putting its efforts into a good display at the county fair at Prosser.

County Agent N. C. Donaldson of Adams county, contemplates creating more interest in their county fair, and may decide later to have two or three community fairs. Mrs. Braden plans to return to that county June 3, to remain two days.

In Walla Walla county, Agent W. H. Talley, cooperating with the farm bureau leaders in the various communities, is planning to have an agricultural fair in Walla Walla which will be representative of the entire county. Mrs. Braden is to be there May 19, 20 and 21, to assist in planning the general exhibit.

County Club Leader W. J. Green and Agent O. V. Patton of Spokane county are planning to assist at community fairs at Sunset, Deep Creek, Cheney and Latah, as well as having a big display at the Spokane Interstate fair, showing the different projects which have been carried on.

Any community which wants to put on a fair this fall may secure this assistance by writing to the county agent.

Crop Insurance

Eight principles as fundamental to a sound plan for crop insurance are laid down in department bulletin 1043, crop insurance, risks, losses and principles of protection, prepared by V. N. Valgren and recently issued by the United States department of agriculture.

The insurance must cover only such crop damage as will result in serious financial loss to the farmer. This means that only a reasonable amount of insurance an acre must be written. For establishing such reasonable amount the average yield and price for a series of past years is perhaps the best basis. The total loss of crop on one or a few acres out of a hundred is not a serious loss if the acreage as a whole gives average returns or a substantial part of such average.

The insurance must cover any and all hazards which are beyond the farmer's control. Insurance which protects against certain hazards and leaves the insured exposed to total loss from other hazards beyond his control is not real crop insurance.

In no case must the insurance protect against loss from carelessness or negligence on the part of the insured.

The premium, or cost of insurance, must bear a reasonable relationship to the value of the protection that it purchases.

The method of adjusting loss must be such that the insured will receive indemnity for crop damage in the amount or on the basis that he is led to expect from the figures indicating the amount of insurance an acre. The company should not profit by a calamity to the farmer in the form of reduced prices for his product.

An early adjustment should be provided for in case of total failure of an insured crop, or such an approximation to failure that it would not pay to mature and harvest the crop.

All adjustments involving only partial damage should, so far as possible, be left until after the crop has been harvested and put into marketable form so that quantity and grade can be determined.

There must be a certain degree of understanding between the farmer and the company or agency offering the insurance if protection is to be available on truly favorable terms. Crop insurance must be bought on the same principle as fire insurance, merely as a guaranty against serious loss and not with the expectation of securing an idemnity every two or three years.

Copies of the bulletin may be had free upon application to the department at Washington, D. C.

Oleomargarine

Materials Used in Manufacture

According to the report of the commissioner of internal revenue, nearly 342,000,000 pounds of materials were used in the manufacture of oleomargarine in this country during the fiscal year ended June 30, 1921. The manufactured oleomargarine made nearly 315,000,000 pounds, the difference of some 60-odd million pounds manufactured and the amount of material used is chiefly accounted for by the expulsion from the finished oleomargarine of the moisture content of the milk consumed.

It will be noticed in the following table that coconut oil furnished about one-third of all the materials used in the manufacture of oleomargarine. Eighty million pounds of milk, 50,000,000 pounds of oleo oil, 29,000,000 pounds of neutral oil, 19,000,000 pounds of cottonseed oil and 15,000,000 pounds of peanut oil formed the large bulk of the remainder of materials used outside of coconut oil.

Kind of Material.	Amount Pounds.	Kind of Material.	Amount Pounds.
Coconut oil	103,111,916	Butter	1,498,625
Milk	79,715,584	Corn oil.....	921,[illegible]
Oleo oil....	49,675,749	Soy bean oil	461,[illegible]
Neutral oil..	29,261,960	Edible tallow	233,227
Salt	25,365,499	Mst. seed oil	109,748
Cot'nseed oil	18,532,860	Coloring	25,915
Peanut oil..	16,332,498	Miscellaneous	3,216,742
V'gtable oil	6,559,034		
Oleo stearine	4,857,972	Total 314,955,683	
Oleo stock..	2,065,231		

As a side light the United States department of commerce gives the exports of oleomargarine during January, 1922, Canada taking 118,990 pounds; Panama 20,550 pounds; British West Indies, 16,401 pounds; England, 8400 pounds; Jamaica, 7580 pounds; Bermuda, 5270 pounds.

State Fairgrounds

Erection of additional cattle barns with stalls for 300 animals, removal of racing stables to make room for another general entrance on the north side of the grounds, interior alteration of the horticultural building to provide additional exhibit space and reconstruction of the irrigation system are among the improvements which will be made at the state fair grounds at Yakima this season, it is announced by Secretary H. P. Vermilye. Commissioner of Agriculture E. L. French recently visited the grounds and authorized the expenditure of about $10,000.



The Hood Service Man speaks:

SOONER or later the motorist reaches a point where experimentation in tires ceases to be a novelty.

It's like the puppy chasing his tail—fine exercise and lots of fun. But try to get the wise old dog interested—he just remembers it was a lot of work which did not get him anywhere.

A seasoned motorist really appreciates the true value of a good tire—a uniformly good tire. He knows its economy, and its safety and its dependability.

Hood Tires are made for the men who do not want to be obliged to talk or think anything about their tires, excepting, when between long intervals a new tire is needed.

Hood Rubber Products Co. Inc. HOOD Watertown, Mass.

At the Sign of the HOOD Service Man

HOOD CORDS

LIVESTOCK AND DAIRY

Feeding Dairy Calf

By A. B. NYSTROM.

How much milk should a dairy calf bet fed and how long fresh milk, also how long skimmed milk? C. F. K.
Odessa, Wash.

The most common method of feeding a dairy calf is to take it away from its mother at once, but give it fresh colostrum milk for four or five days. After that any whole milk fresh from the cow will do. Feed from two to three pounds three times a day for the first week, changing to twice a day feeding the second week. When two weeks old a gradual change of skim milk may be started. The change period should take about a week or 10 days gradually increasing the amount of skim milk and decreasing the amount of whole milk. When four weeks old, the calf may be fed skim milk alone. Do not feed more skim milk than you would whole milk. Be sure that the milk is warm and fed in clean pails.

Some dairymen prefer to give whole milk for the first three or four weeks, claiming that if the calf gets a good start, it is easier to keep it growing on skim milk when the change is made. A good deal of judgment must be used in this connection. If whole milk is cheap, and you are raising a valuable calf, do not be stingy with it. Weak calves should be given whole milk longer than strong ones. Skim milk may be fed five or six months or longer if it is cheap and the animal valuable. Many breeders of purebred dairy cattle feed their calves skim milk up to eight or nine months of age. However, the average dairyman who must make the most out of the milk, usually stops feeding milk to calves at four months of age.

The Pig Creep

By PAUL C. ADAMS.

In articles dealing with the raising of young pigs we frequently come to the statement that "a creep should be made when the pigs are 2 weeks old, so they may eat from a self-feeder away from the sow." This advice has caused more sway-backed hogs for feeders and breeders than any one other suggestion or practice.

The idea of the self-feeder is not the cause of the injury, because the pigs have been on a "self-feeder" since birth and should be given access to a continuous supply of bone and muscle-making feeds, especially skimmed milk. It is the method of making the creep that causes the damage. Nine out of 10 farmers will think of an opening under a fence when they read about the "creep." Any pen separation made in this way causes the young pigs to "hollow out" or sway their backs in going to and from the self-feeder, and this contortion inflicted on young, gristly bones, many times each day during the time their bodies are most susceptible to frame injury, causes a large percentage of the "hand-wide" hollows just back of the shoulders, and the resulting weak backs, so common among mature hogs. "As the twig is bent, etc."

By constructing the opening in the way shown below this hazard is entirely eliminated. The crosses shown represent posts set in the manner of cattle guards often seen at the entrances to country school yards. It is the same idea on a smaller scale.

O O O O O O O
O O O O O O

These posts are either set in the ground, if used outdoors, or are nailed to pieces across a corner of the pen so high the pigs will not notice them. If firmly set they will allow the small pigs to go between the upright posts, but will stop any hog not able to force its body through the first row.

Another cause of deformed backs is the usual V-shaped trough used to feed small pigs. It takes but little longer to construct a frame of 2x4-inch or 2x2-inch stuff as long as desired and 13 or 14 inches wide, and nail a piece of one-inch board 12 or 14 inches wide and the length of the trough on one side. This will make a flat, low trough that will be easy and safe for the youngest pigs to eat from. A few pieces may be nailed across to prevent crowding.

Give the young porker a chance to develop a rainbow back.

VETERINARY

By DR. S. B. NELSON.

Cough—I have a small mare that has a cough when eating or after a hard pull or fast run; had been fed dusty hay before I got her. No other signs of heaves except above. What can be done to relieve her?—P. B., Arlington, Wash.

Give the mare one ounce of Fowler's solution of arsenic on her feed once daily for some time.

Sow Is Weak.—I have a sow 5 months old. Two months ago she would stiffen out and fall over when first starting to eat. She was that way for a month, then she got so she could not get up on her front feet. She has a good appetite and I feed her shorts in slop and soaked wheat. She can hardly stand up now.
Proctor, Mont. V. V. W.

Give the hog two ounces of castor oil, lesson the feed one-half, give sloppy material like bran mash, but take away the grain. If you can get them, give her alfalfa hay and roots. On the second day after you begin this treatment, give her 10 grains of potassium iodide once daily for a few days in her slop.

Inflamed Kidneys.—I butchered an old sow recently that dressed about 300 pounds and seemed in good health, but upon cutting her up I found her kidneys hard and full of hard, white lumps. The liver and heart were all right, but the meat was two different colors, light and dark. Is the meat fit to use? M. L.
Hamilton.

Apparently the sow had a chronic inflammation of the kidneys, which prevented them from performing their full physiological action of eliminating the excretory salts from the body. Without seeing the meat I would be unable to state whether or not it was fit for human consumption.

Warbles.—My cows have numerous warbles or grubs. How do they get on the cows and is there any treatment to kill them? O. L. D.
Troy, Idaho.

Warbles or grubs are the adult larva of the gad fly or ox warble fly. This fly flies the latter part of June, July and early part of August. It deposits its eggs on the hair of the animal generally around the forepart of the animal. The larva gains entrance into the body and there spends the time until the spring months. The best treatment is a preventive treatment of applying an oily substance to the hair during the time that the fly may lay its eggs. This substance might be composed of raw linseed oil and fish oil with a little tar added to them. Some use linseed oil and tar and some fish oil and tar. Now if the warbles that are present are allowed to escape and fall on the ground they will bury themselves and come out another fly to cause trouble next summer. Squeeze them out and destroy them.

Rough Teats.—We have a cow with rough teats. They crack and bleed every time she is milked. What can be done for her? MRS. E. M'K.
Ellensburg, Wash.

Apply a little mercuric oxide ointment to the teats after each milking.

Hair Comes Off.—I have a mare and the hair is coming off of her neck in spots. Will it grow again? G. S. K.
Lowden, Wash.

Yes, the hair will grow out again. You may get very good results by giving the mare one or two treatments of sulphur mixed with petroleum. Mix it to the consistency of a medium soup and apply. You may repeat in five or six days, if necessary.

Fresh Ripe Strawberries
Have Some This Summer.
Plant the Americus everbearing and get a big crop first year. We have Superb and Progressive also.
Plants healthy, inspected, well packed..
Send for prices and book on care of strawberries.
Canyon Home Nursery
F. L. MOFFET. Ellensburg, Wash.

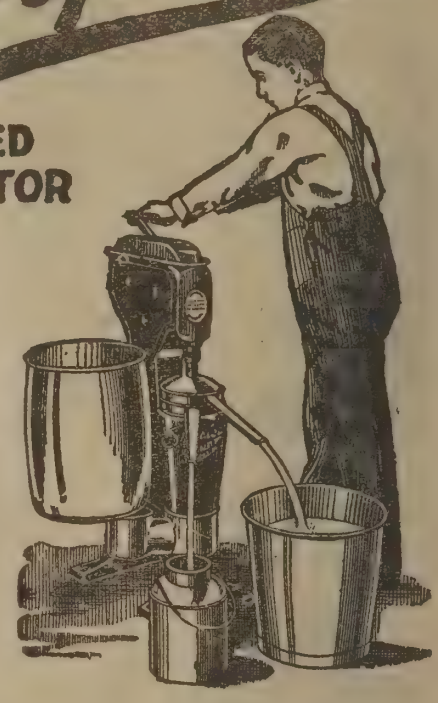
TREES AND SHRUBS

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Whatever the speed, the cream will be of even quality—not thin today and thick tomorrow. Other separators vary the density of the cream when the speed is varied.



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The Bull Association

The cooperative bull association is designed for a particular purpose, just as a machine is designed to do a particular kind of work, says the United States department of agriculture.

Owning a good dairy bull jointly with a number of your neighbors does not give you the full benefits of a bull association, because you have efficient bull service for about two years only.

A bull association is made up of three or more blocks, all united in an organization which provides at a low cost for the cooperative ownership, use, and exchange of superior bulls, and many other advantages not obtained by members of single independent blocks.

The bull association gives each member bull service for six or more years for his share of the initial cost of one good bull.

All the members together make the rules (the constitution and bylaws) and elect the officers, including a board of directors.

One member from each block is elected director.

The business of the association is handled by the directors. They select and buy bulls, arrange for a man in each block as keeper, provide a safe and satisfactory place for keeping the bull in each block, and are responsible for keeping the bulls in vigorous breeding condition.

All the bulls belong to the association as a whole and not to any separate block. The directors may sell any bull that becomes unsatisfactory and replace him with a satisfactory one.

All bulls must be of the same breed, uniform in type and conformation, and descended from ancestors with average butterfat records of at least 400 pounds a year.

The bull association:

(1) Gives you an exchange of three or more bulls for the first small investment.

(2) Offers an opportunity to try bulls, and retain the best.

(3) Makes the dairy cattle in a community uniform, helps to sell them, and may also assist in buying.

(4) Provides good purebred bulls for the farmer with a small herd, even down to one cow.

(5) Is useful to all breeders of dairy stock, but most useful to the one with so few cows that he alone can not afford to buy a good bull.

(6) Helps the ambitious dairyman, strengthens his hopes and arouses his enthusiasm.

(7) Permanently establishes in a community one breed of cattle, and a systematic means of continuous dairy herd improvement by making the maximum use of prepotent sires and by reducing losses caused by undesirable bulls.

A bull association does not necessarily contribute to the spread of abortion or tuberculosis.

When you want a bull association, plan a block with your neighbors (or be a whole block by yourself if you have no neighbors); then go to your county agent and arrange for two or more other communities to form blocks. When they become interested call a general meeting and organize. Get your state dairy extension man to be present at this meeting to assist.

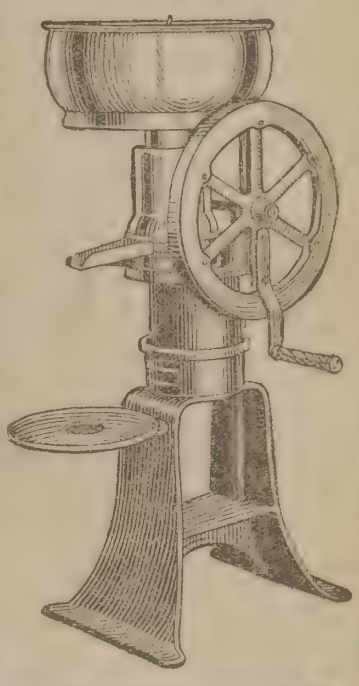
Farmers' bulletin 993, published by the United States department of agriculture, Washington, D. C., gives constitution and bylaws and detailed information about organizing cooperative bull associations.



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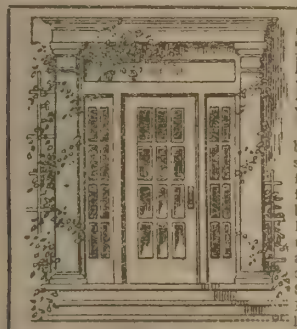
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Inspection Tour

A considerable number of breeders in western Washington are making a success of Shorthorn cattle. Recently a number of farmers of the Kamilchie community, Mason county, made a tour of inspection to the farms of a number of milking Shorthorn breeders in Thurston, Lewis and Grays Harbor counties. Members of the party were H. E. Drew, county agent of Mason county; L. H. Jacobs, Dave Ellison and Jim Frazer, the latter three being breeders of milking Shorthorns of Kamilchie.

At Centralia other breeders met the party and R. G. Fowler, county agent of Lewis county, took them to the herd of C. E. Truesdale & Son, which is only a short distance from town. This herd is made up entirely of registered milking Shorthorns, including a number of young heifers from the old herd sire. The new herd bull is an animal which has recently been secured from a New York herd.

The visitors next stopped at the Bert Furrer farm, southwest of Chehalis, where a registered milking Shorthorn sire heads a herd of grade cows, all of which are descended from an old cow which is still in the herd.

The Frank Glenn herd of Brady, Grays Harbor county, was the main stop in that county, while on the return trip the visitors visited the J. D. McGuire herd of beef Shorthorns at Tenino, Thurston county.

GRAZING FEE RULING.

Easier conditions for stockmen are provided in a ruling just issued by the secretary of agriculture to the effect that only half of the annual grazing fee need be paid at the beginning of the season for stock on the range.

POULTRY AND RABBITS

Hatching Eggs
Should Be Selected Carefully

By W. D. BUCHANAN.
Poultry Extension Specialist, State College.

Hatching eggs should be gathered several times a day. A fertile egg starts germinating at 67 degrees F. If left in the nest all day, under one hen or another, development begins and the chick dies unless incubating temperature is maintained without interruption. To keep hatching eggs in good condition they should be placed in clean containers and kept at a temperature of 45 degrees to 65 degrees.

Not every fertile egg is fit to set. Discard eggs that are too round or too long, bumpy, rough or porous shelled. Do not set small eggs. The size of the egg determines the relative size of the chick. A small chick is a sure indication of a chick hatched from a pullet, or a hen that lays a small egg. In either case it is not desirable. If it is from a pullet egg it will likely be lacking in vigor and will be hard to raise. If it is from a hen that lays a small egg it will be likely to develop into a pullet that lays a small egg and small eggs bring less on the market.

Another thing which breeders of hens producing white shelled eggs must guard with great care is the color of the shell. Chalk white shelled eggs bring from 3 to 12 cents a dozen more on the New York market than tinted or mixed white and tinted shells. The food value is no greater, but it is up to the producer to give the public what it wants and is willing to pay for.

Finally, if you have a chance to select eggs from hens confined to the house, or from hens running out of doors, be sure to select the latter. They will not only hatch more chicks, but, what is of more importance, they will hatch better chicks. This winter has put the final verdict on this problem. It has been severe, the birds have been housed more, the eggs have not hatched so well and the chicks are harder to raise.

Poultry Problems

By W. D. BUCHANAN, Poultry Extension Specialist, Washington State College.

GEESE AND DUCKS.

I would like to get a book or pamphlet of some kind that gives correct information on geese raising, also duck raising. Can a person make a fair profit by raising geese on a big scale, say from 400 to 500? I. W. S.
Chewelah, Wash.

Farmers' bulletin 697 on duck raising and Farmers' bulletin 767 on goose raising, which may be had by writing to the state college at Pullman, are good. Both geese and ducks can be grown profitably on a big scale if you know how, but it would be better to start small. The market in the west is somewhat limited.

ROOSTS ARE TOO HIGH.

I recently lost two fine chickens. I feed wheat, some bran-shorts and now I am going to use egg mash. Do you think it is in the roosts? The roost is about four or five feet high and so are the nests. Will you tell me if Hamburg chickens are hard to raise around Spokane county, Washington, as we are thinking of going there?
Portland, Ore. MRS. T.

We can not tell the cause of death without knowing more of the symptoms. Roosts are too high. Two and one-half feet is better. If necessary to have high roosts, place a lighting board midway between floor and platform. Hamburgs should do well in Spokane county, as elsewhere.

TROUBLE WITH TURKEYS.

What is the matter with my turkeys? They stand around the barnyard, drooping and sick and will not eat. In a few days they die. I opened one turkey and looked at the liver and it seemed all right.
Buckeye, Wash. P. E. Mc.

Blackhead is a common cause of loss among turkeys. Droppings are greenish-yellow and watery, head has dark appearance, which suggests the name; live enlarged and spotted. Are you sure your turkeys are getting only clean food and water? If you have examined the livers and they are all right, it might be well to examine the food for source of poisoning, examine the turkeys for lice and the roosting quarters for mites.

EXCEPTIONAL TURKEY HEN.

I would like to find out if there is anything exceptional about my turkey hens. One of them laid about a dozen eggs this spring, then tried to hatch them, but they were not fertile. After a week she laid another batch and wanted to sit on them, but we broke her up. This was in the latter part of June. Then after a few days she started laying again and never missed a day until October 18.
Forks, Wash. T. R. H. S.

Turkey hens usually lay a first clutch of from 15 to 20 eggs. If broken up they will generally lay another clutch, but it is exceptional if they lay in late summer and early fall.

HATCHING DUCK EGGS.

Will duck eggs hatch in an incubator? How long after placing a male bird in the flock are the eggs fertile? MRS. H. S.
Touchet, Wash.

Duck eggs are successfully hatched in incubators. Eggs should be fertile a week after service.

NOT A SURE SIGN.

What would be good to give my chickens? I believe they have cholera. They are fat and many are laying, but they take suddenly sick and their manure is thin and white. What is the difference between a guinea hen and rooster?
Quincy, Wash. J. B. M.

If you have any reason to suspect that your chickens have cholera it would be wise to consult a veterinarian at once. The fact that they have thin white diarrhea is not a sure sign of cholera, but if they are dying you should find the cause and remove it. There is very little difference between male and female guinea fowl in appearance. The female says "buckwheat" and the male just "wheat."

BLOOD SPOTS IN EGGS.

Please tell me what causes blood spots to come in the eggs. L. E. K.
Palouse, Wash.

Blood spots in eggs are usually indication that the birds are slightly out of condition. The egg yolks in the ovary are surrounded by a thin membrane called the follicle. When the birds are in normal condition this follicle breaks on a line which is free from blood vessels. When the birds are out of condition from any cause this follicle sometimes breaks at one side of this line, rupturing a blood vessel. The drop of blood thus formed drops into the oviduct with the yolk, and is included in the egg.

Pelt Is Valuable

By dressing one's rabbits before marketing them one receives much more for the meat and retains, beside, a pelt worth often from 30 cents to 75 cents. The White Flemish Giant's fur, well produced, often brings $1. Pelts will vary in value with breed, of course, a factor to consider in selecting the variety and strain to raise. Those yielding fur of reliable solid color are much in demand. "Electric seal" and "near seal" are artificially made from rabbit fur. From the utility standpoint, including fecundity, size and meat-yielding value, hardiness and beauty of fur, the practical breeds of rabbit are the Flemish Giant, Belgian hare and New Zealand Red.

When Will There Be A Disarmament Of Dining Tables?

Suppose everybody would recognize the fact that there's no gain but much loss in keeping up hostilities with the stomach!

Suppose the ancient aggravation of improper food on indignant digestive organs should be settled with guarantees of sensible diet and tranquil digestion!

The saving would be beyond all possibility of counting.

Yet millions go on declaring war on the stomach and accepting war in return—loading up on starchy, heavy, unbalanced and highly-seasoned food at breakfast or lunch—and wondering why comfort and happiness and efficiency are out of reach.

Grape-Nuts makes a friend of the taste and an ally of the stomach.

There's a charm and satisfaction to this delicious food which prompts appetite to say, "There's a meal!" and digestion to answer, "Thank goodness, here's peace at last!"

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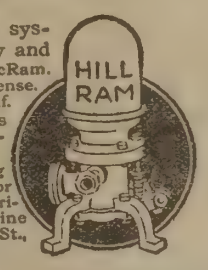
Free—Conkey's Poultry Book
180 pages chock full of information about the feeding and rearing of chicks, culling of hens, etc. Tells how to keep chickens healthy and how to make them pay. Whether a beginner or a professional, Conkey's Book is worth dollars to you. Sent for 6 cents in stamps to pay postage.
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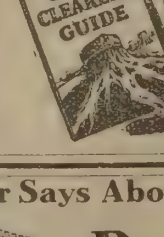
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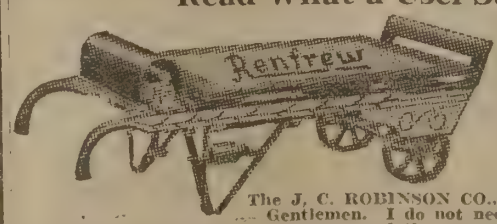
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Gentlemen. I do not need this scale one month to use to tell you my opinion about it. I have used the same machine in Canada for several years. When I came to the U. S. about three years ago I have been looking always for it until I saw your advertisement, and you know I ordered it right away.
This letter proves to you plenty that the Renfrew Weighing Scale is of entire satisfaction to me. (Signed) J. M. JANSSEN, R. 1, Box 35, Bend, Ore.
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ORCHARD AND GARDEN

Questions Answered

By O. M. MORRIS,
Head Horticultural Department, State College.

SHAPING PRUNE TREES.

I planted one acre of standard prune trees a year ago that were then 2 years old. They were cut down to about three feet, leaving three or more buds. These trees have grown profusely. Will you kindly give me instructions regarding pruning them? S. C. L.
Yakima, Wash.

In pruning your prune trees simply remove enough limbs to give a reasonable opportunity for those that are to form your main frame work to develop side branches. This also means that you will do relatively little pruning and be benefited thereby.

RASPBERRY PLANTS.

How many raspberries does it take to set out one acre? How far apart should the rows be, and what is the best variety? What is the most profitable strawberry to set out, or would it be best to have two or three different kinds? W. D. G.
Stella (Cowlitz county), Wash.

You should use some 2000 or 3000 plants of raspberries per acre. The very common spacing is to set them about two feet apart in rows about eight feet apart. This will require 2722 plants per acre. You can set them a little further apart in your rows if you desire and permit them to fill in the space as they grow older. Three feet apart in the row, with rows seven feet apart, is also a very common spacing. This will give you 2074 plants per acre.

The Cuthbert is at present one of the most popular varieties. It is a large fruited kind and is especially desirable for the canneries and the fresh fruit market. The Antwerp is another red variety which is more resistant to winter injury and fruits a little heavier than the Cuthbert, but is not quite as good a berry.

In your district you will find the Marshall, Gold Dollar and Clark Seedling among the most popular varieties of strawberries. Any of these varieties will give you entire satisfaction when planted alone. The Gold Dollar is an early mid-season variety. The Marshall is distinctly one of the later-season varieties.

CURRANTS NEED PRUNING.

Will you please tell me what is the matter with my currant bushes? They are 2 years old, four feet high and all matted and mixed up. Is it all right to cut them down and thin them out? My gooseberries are in the same condition.
J. R. H.
Kirkland (King county), Wash.

There is nothing in your statement about your gooseberries and currants to cause me to believe that there is anything the matter with them. They have simply grown very rapidly and very vigorously. About all you need to do is to remove enough of the stock so that those remaining will have an opportunity to produce side branches and produce a normal crop of fruit.

If you will do this they will probably give you very satisfactory results.

GRAPE CUTTINGS.

When should one get the limb cutting of grapes for planting, before the sap raises or after? A. L. W.
Grandview, Wash.

You will have a great deal better success with the grape cuttings if you make them from the plants before any evidences of growth are apparent or in other words they should be entirely dormant.

If the sap has started so that the vine bleeds when the branch is removed, your probabilities of success are clearly reduced.

Orchard Problems

By C. C. VINCENT.

Why do our prune trees that have plenty of manure, water and such care put on plenty of prunes and when almost ready to ripen fall off? F. C. S.

Our prune growers have had considerable trouble the last two or three years from prunes dropping from time to time throughout the summer. This trouble appears to be more or less prevalent throughout the prune growing sections here in the northwest. Of course, you understand that it is a tendency of the prune trees to shed a considerable portion of their crop. Under normal conditions enough fruit remains on the trees to give one a fairly good crop. If this trouble is excessive in your case I might suggest that you apply a little nitrate of soda this year to each tree, say, at the rate of two to three pounds per tree, sometime during the middle of April, for I am under the impression that this might strengthen the blossoms considerably.

BIRDS THAT DESTROY MICE.

I would like to know the names of 10 birds of prey useful for the destruction of rats and mice. Also 10 species of birds useful in protecting the trunks of trees from borers, bark lice and scale insect.
W. N.

Herrick in his book entitled "Insects of Economic Importance" has the following to say concerning birds:

"Protecting Birds.—Birds should be protected and encouraged to make their homes on the farm and about the orchards. They help to hold the balance of nature and certainly aid greatly in holding insects in check.

"One hawk after a chicken condemns the whole bird tribe; the great horned owl is a friend of man wherever mice and rabbits abound, but where these are scarce, as in thickly populated districts, the owl is driven to other food; the sharp-shinned and copper's hawk are enemies to wild birds and chickens and should be killed; other hawks and owls feed mostly on mice and insects; many species of birds are known to live almost wholly upon insects.

"Insects constitute 65 per cent of the annual food supply of the downy woodpecker, a very large per cent of the food of warblers, 95 per cent of the food of the house wren, and 95 per cent of the food of the flycatchers. Three hundred to 500 insects have been found in the stomach of one bird.

"The mobility of birds makes them very efficient. Forbes showed that in orchards where cankerworms were abundant birds became abnormally plentiful.

"Flycatchers and swallows live upon flying insects, while robins and meadowlarks catch ground insects. Cuckoos, orioles, warblers and vireos devour leaf-eating insects, while nuthatches, titmice and creepers explore trunks of trees for small insects."

For more detailed information on this subject I would refer you to an article by H. W. Henshaw, entitled "Does It Pay the Farmer to Protect Birds?" appearing in the 1907 Year Book, page 165. Another article by F. E. L. Beal on "The Relation Between Birds and Insects," appearing in the 1908 Year Book, page 343, might also be of interest to you.

Brussels Sprouts Under Glass

"If we were to emphasize any one truck garden crop it would certainly be Brussels sprouts," remarked L. T. Hass of Bellevue, King county, Wash., who has specialized in the raising of vegetables under glass. "We raised a few plants for our own use last season and we have had sprouts practically all winter. I am telling this to show how hardy a plant they are even during one of the most severe winters we have ever had. In fact, the flavor seems to be improved by a frost and even a freeze will not stop their growing when the weather opens up again."

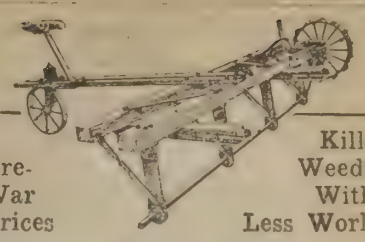
The plants can be grown outside in the same manner as kale, but they will get a much better start if the young plants are grown under glass and transplanted into the garden when the proper size.

BRIDGE GRAFTING DEMONSTRATION.

A bridge grafting and top-working demonstration will be held at the I. Anderson ranch, two miles west of Wiley City, on April 7 at 2 p. m. E. G. Wood, extension horticulturist of the Washington State college extension service, will conduct the demonstration.

DIPPING POTATOES.

Potatoes dipped for one to one and one-half hours in corrosive sublimate will help control rhizoctonia.



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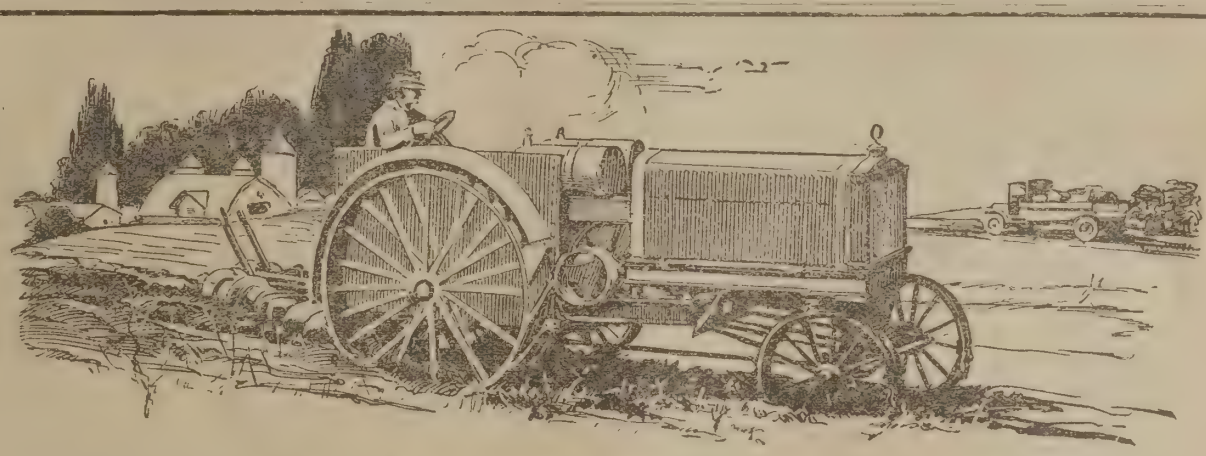
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Marketing California Grain

The California farm bureau has completed arrangements to market a third of the California grain crop for 1922, mostly barley, by the grain farmers themselves directly to England and other foreign markets. The value of the crops to be marketed in this manner is estimated at $9,000,000. From 50,000 to 100,000 tons already have been contracted for from the farmers by the state marketing exchange, the central organization, which buys and sells products for the county farm bureaus which make up the California state farm bureau.

COLD STORAGE WAREHOUSES.

A recent check on the states of Washington, Oregon and Idaho develops the fact that there are 74 cold storage warehouses in the Pacific northwest, with a total of 17,284,000 cubic feet of refrigerated space.

FARMERS' WANT ADS

This is the farmers' "want," "sale" and "exchange" department for small advertisements of farmers, including live stock and poultry.

Advertising rates for ads running 1 to 3 times, 10c per word per insertion, with a special rate to Farmer subscribers, as follows: Ads running 4 to 12 times, 9c per word per insertion; ads running 13 times or more, 8c per word per insertion.

All commercial and land advertising 10 cents per word each insertion. Open also to nonsubscribers.

In using these columns advertisers must observe: (1) No advertisements will be inserted for less than $1.00. (2) Every word, number and initial, including name and address, must be paid for. (3) New advertisements, changes of copy or cancellations must reach general office, Spokane, Wash., 10 days in advance of publication date. (4) Cash must accompany order.

Above rates include insertion in The Washington Farmer, The Idaho Farmer and The Oregon Farmer, which constitute the Pacific Northwest Farm Trio, 46 Review Building, Spokane, Wash.

HELP WANTED—Male 3

RAILWAY MAIL AND GOV'T CLERKS—carriers needed; experience unnecessary. Write immediately. Mokane institute, A28, Denver, Col.

EDUCATIONAL 45

EARN MONEY QUICKLY—THERE'S NO LIMIT to one's earning capacity in business. And this great business college, after training you thoroughly, places you in a paying position. Courses include banking, stenography, accounting, private secretarial. Write for free catalogue. Behnke Walker Business College, Portland, Ore.

FRESH FOOD PRODUCTS 51-1

HONEY BRAND HONEY, PURE, LIGHT, thick and good flavored, from alfalfa and sweet clover. One 60-lb. can, $7.50; two for $14.50. Write for circular and prices in pails. Salesmen wanted. Oliver Sires, Wapato, Wash.

WHITE ALFALFA, SWEET CLOVER honey; 1 60-lb. can, $7.50; 2 60-lb. cans, $14.50; six 10-lb. cans, $8.50; three No. 10 pails, prepaid third zone, $5.50. Wells D. Rose, Sunnyside, Wash.

HONEY,—FINE QUALITY ALFALFA SWEET clover; 60-lb. can, $7.50; 2 cans, $14.50; three 10-lb. pails prepaid, second zone, $5. Harry Fisher, Prosser, Wash.

SMOKED SALMON, 5-POUND BOX, $1.25; salt salmon bellies, 5 pounds, $1.25, delivered by mail. Coffin Fish Co., Seattle, Wash.

WORLD'S BEST CLOVER HONEY, 60 pounds, $6.15; two 60s, $12. Browne, Box 499, Twin Falls, Idaho.

MISCELLANEOUS—FOR SALE 60

SASH AND DOORS—O. B. WILLIAMS CO., 1943 First ave., So. Seattle. Chicken house sash, 20" wide by 25" high, 80c; a dozen different sizes in stock for immediate shipment. Skylights for chicken houses, 36"x40" price, glazed, $2. This is the size recommended by the Western Washington experiment station. We carry them in stock for immediate shipment. Sash and doors for all purposes at lowest prices. All orders receive prompt attention. Our large illustrated catalogue No. 35, showing full line of building material and built-in fixtures for the home, free on request. O. B. Williams Co. Established 1899.

TOBACCO, NATURAL LEAF—SWEET AND mellow hand-picked chewing or smoking, 5 lbs., $1.50; 10 lbs., $2.50; smoking, 10 lbs., $2. Furnish free recipe for preparing. Quality and delivery guaranteed. Farmers' Tobacco Exchange, Sedalia, Ky.

JERUSALEM ARTICHOKES ARE ECONOMical feed for hogs and other stock; tops good fodder for cattle and horses. Plant and cultivate same as potatoes. Tubers, $1 per grain sack full here. G. G. Fullerton, Dayton, Wash.

KENTUCKY TOBACCO—DON'T SEND ONE penny, pay for tobacco and postage on arrival. Extra fine quality leaf, 3 years old, nature cured. Chewing, 10 lbs., $3; smoking, 10 lbs., $2.50. Farmers' Union, D119, Hawesville, Ky.

WALL BOARD—WRITE FOR SAMPLE OF Washington plaster wall board; won't warp, won't burn. Manufactured by Washington Building Products company, 6851 E. Marginal Way, Seattle, Wash.

PIPE — NEW AND SECOND-HAND, ANY size; low price; standard grade roofing paper at a big saving; belting, all plies, all sizes, cheap. Write Alaska Junk Co., S120 Adams st., Spokane, Wash.

E. Z. BUILT SILO, ERECTED IN SECTIONS; has double walls with 6-inch air space; freeze proof; built of fir lumber; strong, durable and low priced. J. F. Jacobson Lumber Co., Tacoma, Wash.

CEDAR CHESTS DIRECT FROM FACTORY to your home; Tennessee cedar, solid copper trimmings. Write for catalogue. J. W. Higgins & Sons, 1912 Gilsan st., Portland, Ore.

SHERWIN-WILLIAMS PAINT $1.80 GALLON; $125 3 h. p. Goss engine, $65; $42.50 Colt's automatic, $25; $65 Krisky brooder, $40; all like new. Beverly Egg Ranch, Leona, Ore.

TOBACCO, NATURAL LEAF, FOR MILD SMOking; 10 lbs., $1.50; 20 lbs., $2.75; will furnish free recipe for preparing. Leaf Tobacco Exchange, Mayfield, Ky., Star Route.

HOMESPUN CHEWING OR SMOKING TObacco, collect on delivery; 5 pounds, $1.50; 10 pounds, $2.50; 20 pounds, $4. Farmers' association, Paducah, Ky.

TOBACCO — HOMESPUN, EXTRA FINE chewing, 10 lbs., $3; smoking, 10 lbs., $2; 20 lbs., $3.50. Producers' Exchange, Mayfield, Ky.

HOMESPUN TOBACCO, 5 POUNDS, $1.25; 15 pounds, $3. Send no money, pay when received. Farmers' Association, Jonesboro, Ark.

TOBACCO — KENTUCKY'S PRIDE: RICH, mellow chewing, 10 lbs., $3.25; smoking, 10 lbs., $2.50. Farmers' Club, Mayfield, Ky.

CEDAR POSTS, POLES, PILING AND STUBS; lengths and sizes to order. Marsden Red Cedar company, Calder, Idaho.

JOHNSON'S PACKAGE BEES, QUEENS. Write for remarkable prices. 165 Raymond ave., San Jose, Cal.

FREE SMOKING TOBACCO—SMOKE ON US. Write for free sample. Hawesville Tobacco Co., Hawesville, Ky.

MACHINERY—For Sale 93

SIMPLEX CREAM SEPARATOR, SIZE 7, ALmost new. Wm. Haupert, Tualatin, Ore.

STOVE REPAIRING. 128

WRITE MYER RUBENS, SPOKANE, ABOUT stove repairs, welding broken parts, nickle plating.

FUR-BEARING ANIMALS 170

SILVER AND CROSS FOXES FOR SALE. William Rambo, 407 Sprague, Spokane.

PETS—Dogs, Birds, Etc. 171

FIVE YOUNG, WELL TRAINED FOX hounds for sale. E. L. Buck, Pomeroy, Wash.

RABBITS and HARES 173

PEDIGREED FLEMISH AND CHECKERED Giants. Prices not fancy. Brookside Rabbitry, Hubbard, Ore.

POULTRY (Baby Chicks) 174

THE LARGEST LEGHORN BREEDING ESTablishment and hatchery in the northwest, and on the Pacific coast, has a housing capacity of 12,000 breeders; brooding capacity for 15,000 chicks; incubator capacity for 142,200 chicks at one time. It was started 16 years ago, by its present owner, without capital or poultry experience, on a barren ten-acre tract of land. The White Leghorns produced there have made possible its growth. It is the Oak Heights Poultry Farm, Capt. A. Waldwick, proprietor. Route 3, Box T67, Tacoma, Wash. This is the place where real good baby chicks come from. They are bred for eggs, vigor, size. The price is low. No order too large or too small. Prompt delivery and safe arrival guaranteed. Free book on "Raising the Chicks." Write us now.

HENACRES BABY CHICKS FOR JUNE ARE only $16 per 100; $140 per 1000; best quality chicks at common chick price. Special instructions for winter layers of June chicks free. We have a few May chicks left at $22 per 100. Safe delivery guaranteed; plenty of hatching eggs at $2 per 15; $9 per 100; 90 per cent fertility guaranteed. Eight weeks old pullets $1.50 each, satisfaction or money back. We sell the famous Sol Hot brooders at $10.50 to $23.50. Prompt shipment. Our illustrated catalog and booklet on poultry management is free. Henacres, Box A, Prosser, Wash.

400,000 BABY CHICKS—OUR WHITE LEGhorns are bred to lay; priced at $15 per 100. We hatch from some of the best flocks of R. I. Reds, Barred Rocks, Anconas and Minorcas to be found in the northwest. Chicks are priced at $22.50 per 100. Send $1 deposit per 100 with your order, paying the balance on inspection of chicks. Safe arrival guaranteed. We have a few standard makes of incubators and brooders at greatly reduced prices. Send for our circular offer. Seattle Hatchery, 1906 Pike place, Seattle.

"FRESHLAID" WHITE LEGHORN CHICKS have the qualities you want; vigor and scientific breeding for the heaviest egg production; every "Freshlaid" male is from a high record hen. Freshlaid Farms is one of largest and oldest chick plants in the Inland Empire. There is a real demand for "Freshlaid" chicks, especially from our old customers. We are sold out until May 1. Write at once if you wish May chicks. May chicks make ideal winter layers. Catalog. Freshlaid Farm, Colfax, Wash.

BABY CHIX—WHITE LEGHORNS ONLY; May delivery, $13 per 100; June delivery, $12 per 100; order now as the supply is limited and these are not just baby chix, but are chix from stock that has been bred for 20 years for vigor and vitality; mated to male birds from hens with records up to 298 eggs in pullet year; hatched by the oldest established hatchery in the northwest. Lakeside Poultry Farm, Roy, Wash.

FOR SALE—WHITE LEGHORN BABY chicks from free range selected hens mated with pedigreed cockerels from 200-287 egg trap nest records. May and June prices $3.50 per 25; $6.50 per 50; $12 per 100. Special prices 500 and 1000 lots. Safe arrival guaranteed. You pay only for chix received alive and in good condition. No money in advance, pay on delivery. Order now. Established 1898. Must Hatch Incubator Co., 445 Seventh st., Petaluma, Cal.

SUMMER SALE OF BUTLER POULTRY Farm White Leghorn and Barred Rock chicks. May and June chicks are profitable and easy to raise when you know how. Write us for circular how we do it. All stock trap nested and pedigreed for years. Discount prices on all late chicks and eggs. Butler Poultry Farm, Jennings Lodge, Ore.

TRY OUR PARCEL POST PACKAGE—KEEP the old hen busy. We will ship you first-class baby chicks, postpaid to your door, direct from the hatchery and guaranteed all alive. Price, $4.50 per 25; $8 per 50. For delivery April, May or June. Order now. The White Hatchery, Petaluma, Cal.

WHITE LEGHORN BABY CHIX FOR MAY and June delivery at $12 per 100; $115 per 1000, from flocks inspected and accredited by the Sonoma county farm bureau. Safe arrival of full count, live, strong chix guaranteed. The Pioneer Hatchery, 422 Sixth street, Petaluma, Cal.

BABY CHICKS FOR MAY AND JUNE ONLY—4000 every 4 days of the famous O. A. C. strain S. C. W. L.; raised and run on free range. They have the vim. Prices, first half of May, $17, last half of May, $15; June, $12. Moorhead Poultry Farms, Granger, Wash.

UNION DISTRICT HATCHERY IS NOW booking orders for the best thoroughbred baby chicks at the right price. White, Buff and Brown Leghorns, Rhode Island Reds, Black Minorcas, Anconas and Barred Plymouth Rocks. F. & L. Downing, Los Gatos, Cal.

MAY WHITE LEGHORN CHICKS WILL LAY in September; from hens in third year; 210 egg average; 100, $13; 228 egg average, 100, $17. Some eight-week-old pullets left. Acme Poultry Farm, Cottage Grove, Ore.

WHITE LEGHORN CHICKS (TANCRED strain), from selected two-year-old hens mated to cockerels from 251 to 286 egg trap nested dams; 1500 each Wednesday in May, $15 per 100. Bona Terra Ranch, Drain, Ore.

PRICES REDUCED ON MAY AND JUNE chicks; late chicks of vigorous stock, well raised, pay; easily raised; good winter layers; Tancred Leghorns, also Barred Rocks. D. C. Yoder, Hubbard, Ore.

PERKINS' TRAP NESTED WHITE LEGHORN chicks, April, $18 100; May, $15. Send 10 per cent with order. Chas. L. Perkins, 1337 Burrage, Portland, Ore.

TANCRED STRAIN WHITE LEGHORN BABY chicks, May delivery, $15 per 100. Incubator capacity, 18,000 eggs. D. A. Gillette, R. 4, Yakima, Wash.

MARCH 30TH ADV. SHOULD HAVE READ, May chix, $16 100. Mrs. Arp, St. John, Wash.

POULTRY—Baby Chicks (Continued) 174

YESTERLAID EGG RANCH, KENT, WASH.—Dear Sir: Am more satisfied every day with the chicks received the 17th. They are certainly husky and while Feb. chicks may be supposed to lack vigor, it is certain yours lack nothing. May I increase my order 150 chicks to be delivered with my March 22d order. Irving Kunz, Hoquiam, Wash. Dear Sir: The chicks I got from you the 20th of May are fine. Please let me know your prices for 1922, as I am in the market again for a good order. A. E. Rackow, Hollister, Idaho. Dear Sir: Please let me know the date my 1000 chicks will be delivered. The chicks you sent me in 1921 are just wonderful. Got 70 per cent lay all winter. H. H. Coffey, Chehalis, Wash. We hatch 12,000 of these kind of White Leghorn chicks every 5 days from our own eggs. All sold out until May 1st. Orders for hatching eggs can be filled any time. Largest, most modern and up-to-date trap nest poultry ranch in the world. Yesterlaid Egg Ranch, Kent, Wash.

EBORALL'S STRAIN WHITE LEGHORNS. Our hatch of 2300 chicks per week is now booked for Feb., March and April, principally to old customers. Your inspection is invited at all times. We are now booking chicks for May at $14 per 100. Write for circular. Crystal White Poultry Farm, McMinnville, Ore. Box. 33.

BABY CHICKS HATCHED IN PETALUMA INcubators are a superior class; strong, vigorous, sturdy, grow rapidly, lay early. Buy chicks from hatcheries using Petaluma incubators. You will find one near you. If not, write us. Catalog free. Petaluma Electric Incubator Co., Petaluma, Cal.

BABY CHIX FROM TANCRED AND HOLLYwood strain heavy laying White Leghorns, mated to cockerels from W. W. experiment station; hens, 265-314 egg record; early May chix, $18 per 100; hatching eggs, $7 per 100. Wax's Poultry Farm, Kent, Wash.

MANY PRIZE WINNING LAYERS WERE May hatched. White Leghorn chicks from Corvallis famous layers. Prices 15c to 500; to 1000, 14c. We pay express. Order now. Oregon-Corvallis Hatchery, Corvallis, Ore.

WHITE ROCK BABY CHICKS, "DANIEL'S IDEALS," from our own trapnested stock entirely. Write for prices and dates, also eggs for hatching. Free catalog. Ideal Poultry Yards, Hoquiam, Wash. Star Route No. 25.

BABY CHICKS — REDUCED PRICES ON White Leghorns, Reds, Barred Rocks, White Rocks, Minorcas, and Anconas; booking orders now; postal secures free catalog. Write today. C. N. Needham, Salem, Ore.

BABY CHICKS — WE GUARANTEE OUR chicks to be from the highest producing hens in Petaluma. Write for further information. The White Hatchery, Petaluma, Cal.

WHITE LEGHORNS AND WHITE ROCKS; trap nested strains; chix and eggs, contest pen, $5 per 15. Palouse Falls Ranch, Palouse Falls, Wash.

S. C. ENGLISH WHITE LEGHORN CHIX, Hollywood strain, 15c; Barred Rock chix, 20c. Bertha Jorgensen, R. 1, Hillsboro, Ore.

WHITE LEGHORN BABY CHICKS. CIRCULAR on request. San Jose Poultry Yards, San Jose, Cal.

Leghorns.

CHICKS, EGGS, PULLETS — CARNATION White Leghorns, trap nested stock; bred and selected for vigor and heavy laying qualities; breeding pens from 240 to 304 egg records; 300 Feb. 12th, hatched pullets. Ernest W. Raush, Carnation Poultry Farm, Kent, Wash.

LEGHORN PULLETS, 5000 FEBRUARY, 3000 April and May hatched. These birds are Hollywood-Tancred strain, are unconditionally guaranteed on a money back basis. Price $1.15 each, at 8 weeks. White Cloud Farm, Route 2, Box 188, Kirkland, Wash.

PUREBRED S. C. WHITE LEGHORNS: ALL breeding hens of trap nested strain, carefully selected for vitality and standard requirements; baby chicks, $18 100; safe delivery guaranteed. eggs, $1.50 for 15; $8 100. Frank Volland, Rt. 1, Kennewick, Wash.

SINGLE COMB BROWN LEGHORN EGGS, from vigorous stock, hatched and raised by hens; heavy layers; unlimited range; $15 eggs, $1.50; 30, $2.75; 100, $7; charges prepaid. Incubator lot a specialty. L. Smitchger, Boise, Idaho.

WHITE LEGHORN EGGS FROM HEAVY laying hens and Tancred royal males; 15 for $1.50; from exhibition laying matings, 15 for $3; small mating strictly Tancred royal, $3 for 13. L. M. Patterson, E2517 First ave., Spokane.

WORLD-FAMOUS EGG PRODUCERS; O. A. C. White Leghorns; vigorous, free range stock; baby chicks and eggs; special low price for higrade chicks for May delivery. Write for circular. Corvallis Poultry Farm, Corvallis, Ore.

SINGLE COMB WHITE LEGHORN BREEDing cockerels, Emerson Martini, from trap nested hens; mated to males from 302 egg hens. L. Marsh, 152 East 20th South, Portland, Ore.

FORD'S BRED-TO-LAY S. C. WHITE LEGhorns, Hatching eggs, $2 per setting; $8 per 100; special matings on request. W. A. Ford, Umatilla, Oregon.

HATCHING EGGS, TANCRED STRAIN, S. C. White Leghorns from Hoganized flock; $1 per 15; $3 per 50; $5 per 100. Fred Oberg, Redmond, Ore.

HOGANIZED WHITE LEGHORN HATCHing eggs, $5 per hundred. The Idle Hour Poultry Farm, F. F. Smith, Mgr., McCoy, Ore.

WHITE LEGHORNS, TRAP NESTED STRAIN, hatching eggs, baby chicks. Write us. Washington Poultry Farm, Hartford, Wash.

S. C. BROWN LEGHORNS, SHOW BIRDS; eggs and cockerels; reasonable prices. Harvey Bean, New Plymouth, Idaho.

POSTPAID—13 TORMOHLEN "EVERLAY strain" S. C. Brown Leghorn eggs, $1.50. E. J. Davis, Cambridge, Idaho.

BROWN AND BLACK LEGHORN SPECIAList; contest and show winners. Clifton Dickerson, Silverton, Ore.

SINGLE COMB WHITE LEGHORN EGGS, finest stock, $1.25 per 13. Mrs. Nellie Woods, Pullman, Wash.

BROWN LEGHORN EGGS, THE VERY BEST quality; free mating list. E. H. Rosenkranz, Colfax, Wash.

POULTRY—Leghorns (Continued) 174

SINGLE COMB WHITE LEGHORNS (TANcred strain); selected heavy laying second and third year hens mated to cockerels from 250 to 275 egg trap nested dams; hatching eggs, $1.50 per 15; $7.50 per hundred; chicks, $18 per hundred, safe delivery guaranteed. Oaklawn Poultry Farm, Hillsboro, Ore.

SINGLE COMB WHITE LEGHORN HATCHing eggs, $1.75 per 15, prepaid. M. A. Podaak, Elk, Wash.

PRIZE BUFF LEGHORNS; EGGS 15C EACH, postpaid. C. E. Cleveland, Stanfield, Ore.

Turkeys, Ducks, Geese

TURKEYS—RED, BRONZE, WHITE; BRED hens, $7; eggs, 35c; white guineas, $2.50, either sex; eggs, $2 13. Muscovy (quackless) duck eggs, $1.50 dozen. Houdan, $1.50 dozen. All choice stock. Parcel post. 25c. Mrs. B. Hocking, 541 East 33d street, Los Angeles, Cal.

MAMMOTH PEKIN DUCKS, "AMERICA'S finest." New blood this year direct from C. C. Shoemaker; eggs, $2 per setting, $12 per 100. Crystal White Poultry Farm, McMinnville, Ore. Box 33.

EGGS, MAMMOTH TOULOUSE AND WHITE Chinese geese; Mammoth Pekin ducks, pearl guineas, Single Comb Reds. C. O. Johnson, R. 1, Medical Lake, Wash.

PRIZE WINNING MAMMOTH TOULOUSE geese eggs, 40c each; $35 100. East Larchmont Pet Stock Farm, R. 4, Box 49, Tacoma, Wash.

WONDERFUL LAYING RUNNER DUCKS; lay more eggs than Leghorn hens, $2 setting. John Pryor, Route 2, Box 45A, Vancouver, Wash.

INDIAN RUNNER DUCKLINGS, THOROUGHbred, 100 $33; doz., $4.30, delivered. C. A. Muths, Route 1, Salem, Ore.

MAMMOTH PEKIN EGGS FROM DUCKS that take the prizes. Drakes for sale. Mrs. E. A. Bennett, Salem, Ore.

BOOKING ORDERS FOR MAMMOTH PEKIN duck eggs and ducklings. J. O. Anderson, Drain, Ore.

MAMMOTH BRONZE TURKEY TOMS, $7 each. Daybreak Farms, Battleground, Wash.

MAMMOTH PEKIN DUCK EGGS, $2 PER 10, postpaid. Art Moore, Persist, Ore.

WHITE HOLLAND TURKEY EGGS, 40c each. Eva Woolford, Kalama, Wash.

Miscellaneous Poultry.

WE ARE HATCHING HOLLYWOOD AND Tancred strain of White Leghorns every Monday, Wednesday and Friday. Prices at $20 per 100; $195 per 1000. Commercial strain mated with 250-egg cockerels at $18 per 100. R. I. Red, Barred Rocks, Black Minorca and Ancona chicks are priced at $25 per 100. Send for free catalog and prices on incubators, brooders and pullets. Queen Hatchery, Seattle.

EGGS FOR HATCHING FROM TRAPNESTED stock B. Rock, S. C. White Leghorn and R. C. R. I. Reds, $2.50 per setting; 1 S. C. White Leghorn cockerel, also 3 R. C. R. I. Red cockerels, $5 each if taken at once. L. A. Hoge, R. 1, Prosser, Wash.

GRIFFIN'S FAMOUS WHITE WYANDOTTES, the best for market and egg production; eggs for hatching from best mated pens in northwest; your opportunity to get started with my famous stock. Send for catalog. J. A. Griffin, Box 457, Eugene, Ore.

EGGS! EGGS! EGGS! "SNOWFLAKE" WHITE Orpingtons, establish highest official Orpington pen record western Washington laying contest. Average 204 eggs; free mating list; hatching eggs, $3, $5, $10 per fifteen. W. T. Thompson, Bozeman, Mont.

CHICKS, EGGS—HOGANIZED WHITE LEGhorns, Brown Leghorns, Black Minorcas, Rhode Island Reds, Barred Rocks, Anconas, Blue Andalusians. Free circular. Order early. McDonald Poultry Ranch, King Road, San Jose, Cal.

LARGE, NICELY MARKED ROUEN DUCKS, $4 each; $10 trio; eggs, 11, $2; 100, $15; heavy laying, prize winning strain White Wyandottes; eggs, 15, $2; 100, $10. P. H. Tomlinson, College Place, Wash.

BABY CHICKS—PRICES REDUCED AFTER May 15th. S. C. R. I. Reds, $20 per 100; S. C. W. Leghorns, $15 per 100; April chicks all sold. Maple Brook Poultry Farm, Southworth, Wash.

ANCONA EGGS AND CHIX—HEAVY WINTER layers; eggs, best pen, $2.50; second, $1.50; flock, $1 fifteen; $10 and $7 hundred; chix, $18 hundred. Order now. J. R. Hall, Hansen, Idaho.

ENGLISH STRAIN ANCONAS; PRIZE WINning stock; baby chix, 20c; eggs, $1.25 setting; $6 hundred lots. Fawn Runner duck eggs, $1.25 setting. Karl Broeder, Sherwood, Ore.

PARAMOUNT WHITE WYANDOTTES "BRING home the bacon." Trap nested, pedigreed. Instructive catalog free. No baby chicks. Bayard H. Moul, 1226 Washington blvd., Seattle.

WHITE ROCKS AND RHODE ISLAND REDS; eggs, utility stock, $1.50 per fifteen; $8 per hundred. Few cockerels, $4. Mrs. F. D. Terpening, Clatskanie, Ore.

HATCHING EGGS, OREGON AGRICULTURAL college Barred Rocks; choice pen, $2 per 15; utility stock, $1.50; great layers. J. M. Steen, Lebanon, Ore.

WHITE WYANDOTTE COCKERELS, HOGANized; heavy laying strain; average eight lbs.; $5 prepaid; hatching eggs, $2 per 15. Adams, Warren, Ore.

BLACK JERSEY GIANTS, WEIGHT 14 LBS. The greatest meat producers; fast growers; Eggs, $10 per 15. P. W. Harries, R. 1, Edmonds, Wash.

SINGLE COMB RHODE ISLAND RED EGGS, $3 per setting, from prize winning stock (Owen strain). Joe Brunsell, Mt. Vernon, Wash.

EGGS—PURE REGAL WHITE WYANDOTTES. Three special matings; also Partridge Wyandottes. Eugene Boyk, Rocklyn, Wash.

ROSE COMB RED EGGS, DARK RED, LAYing strain; fifteen, $1.50; forty-five, $4, prepaid. W. C. White, Jerome, Idaho.

BARRED ROCK COCKERELS, CHOICE, $3.50; 15 selected eggs, $1.25, postpaid. L. E. Layman, Goldendale, Wash.

SICILIAN BUTTERCUP EGGS, $2.50 PER fifteen, postpaid. Charles Garland, Route 2, Saint Maries, Idaho.

GOLDEN CAMPINES, HOGANIZED; EGGS, $2.50 per 15. Mrs. J. M. Harrison, Box 6, Rieth, Ore.

PURE O. A. C. BARRED ROCK EGGS, $1.50 per fifteen; $7 per hundred. Mabel Currin, Monroe, Ore.

BARRED ROCK CHICKS, HEAVY LAYING O. A. C. strain. Mrs. E. Hodge, Waterloo, Ore.

S. C. BUFF ORPINGTONS, STOCK AND EGGS. L. M. Varney, E417 17th ave., Spokane.

ANCONAS—CHICKS AND HATCHING EGGS. Oscar Dunlap, Junction City, Ore.

(Continued on the following page.)

POULTRY—Miscellaneous (Continued) 171

ILL-A-HEE BARRED ROCK CHICKS—SUMmer sale of Barred Rock and White Leghorn chicks; May and June chicks are profitable and easy to raise when you know how. Write for our circular telling how we do it. All stock trap nested and pedigreed for years. Discount prices on all late chicks and eggs. Ill-A-Hee Poultry Farm, Jennings Lodge, Ore.

FREE MATING LIST, DESCRIBING OUR ideal Barred Rocks; 37 1sts, 10 specials for 1921. High egg record, 303 eggs; average egg record, 229 eggs. Jacobson's Poultry Yards, 3596 Tacoma ave., Tacoma, Wash.

PURE BRED S. C. RHODE ISLAND RED EGGS for hatching from non-setting, non-fading strain, $3, $5 and $10 per fifteen. Mrs. L. Wham, Double Diamond Ranch, Omak, Wash.

COCKERELS AND EGGS: BARRED ROCKS, Buff Orpingtons, White Leghorns, Dark Cornish, Toulouse geese, Bronze turkeys. E. A. Kruse, Roseburg, Ore.

ATTENTION, FARMER—WE WANT ALL THE poultry and fresh eggs you have. We pay the highest cash prices for same. Gooch Poultry Co., Butte, Mont.

PURITAN WHITE ROCKS, BLUE RIBBON males, with hens trapnested to 270 eggs; 15 eggs, $2.50; 100, $14. C. Gustafson, R. 1, Milwaukie, Ore.

S. S. HAMBURGS, COCK AND COCKERELS; prize stock, $5; old hens, $3.50; 15 eggs, $3.50; pullets, $3.50. E. E. Enos, W1908 Montgomery, Spokane, Wash.

BLUE ANDALUSIANS; EGGS FOR HATCHing, $2 per setting; heavy layers from beautiful prize winning stock. Mrs. Wm. Rommel, Leahy, Wash.

COCKERELS—BROWN AND BUFF LEGhorns, Black Minorcas, Blue Andalusians. Boone Avenue Poultry Yards, E1601 Boone ave., Spokane.

PEDIGREED ANCONA COCKERELS AND hatching eggs from 330-egg strain; eggs, $2.50 per setting. Smith's Ancona Farm, Nampa, Idaho.

POULTRY RAISERS, SEND FOR FREE BOOKlet on poultry advertising. The Pacific Northwest Farm Trio, Dept. P, Review bldg., Spokane, Wash.

DOLLARS FOR YOUR EGGS—WE PAY THE top market prices for your eggs and poultry. Daily cash remittances. Western Produce Co., Spokane.

SINGLE COMB RHODE ISLAND WHITES; heavy egg producers; eggs, $2.50, $3.50 per 15; $12.50 per 100. Van K. Lawson, McMinnville, Ore.

TRAP NESTED WHITE LEGHORN AND Barred Rock eggs and chicks; records, 200 to 311. Mrs. W. M. Roberts, Elmira, Oregon.

BABY CHICKS, COCKERELS, SINGLE COMB White Leghorn; heavy laying strain. Grape Lane Poultry Farm, Turner, Ore.

ANCONAS, SHEPPARD STRAIN; EGGS, $1.50 per 15; $7.50 100; day old chicks, $18 100. R. P. Irwin, Tonasket, Wash.

S. C. RHODE ISLAND RED HATCHING EGGS; heavy laying strain; $1.50, 15; $7 hundred. Geo. Silvers, Zillah, Wash.

SHIP YOUR LIVE POULTRY AND EGGS TO us. Highest prices paid; daily remittance. Inland Poultry House, Spokane, Wash.

BUFF ORPINGTON HATCHING EGGS FROM prize winning stock, $2 per setting. R. E. Baumgardner, Wenatchee, Wash.

PURE BLOOD BRAHMAS, WHITE ROCK, R. I. Red eggs for setting; $1.50 for 15. Mrs. Mary Insel, Shelton, Wash.

S. C. R. I. RED HATCHING EGGS. FIRST pen, $2; second pen, $1.50. Mrs. L. W. Alexander, Sunnyside, Wash.

RANGE RAISED WHITE WYANDOTTE eggs, $1.50 setting; $8 hundred, prepaid. A. Bonser, Colfax, Wash.

BLUE ANDALUSIAN AND WHITE ROCK hatching eggs, $2 per 15. Mrs. C. W. Armstrong, Firwater, Ore.

ANCONA HATCHING EGGS SHEPPARD'S laying strain, $3 per 15. Georgiana Kee, Greenacres, Wash.

LIGHT BRAHMAS, EGGS, $1.75 PER 15; Bronze turkey eggs, $3.50 for 10. Mrs. C. W. Laabs, Irby, Wash.

HUNT'S BARRED ROCK EGGS. PRICES REduced through April, May. W. A. Hunt, Lebanon, Ore.

THOROUGHBRED S. C. BLACK MINORCA hatching eggs, $1.50 15. J. E. McClung, Priest River, Idaho.

HIGHEST QUALITY BARRED ROCK HATCHing eggs, $2 15. J. E. Horton, 2408 Altamont, Spokane.

BLUE RIBBON SILVER SPANGLED HAMburg settings, $2.50. J. Stowell, 905 Fifth, Spokane.

BRED TO LAY ANCONAS: HATCHING EGGS. Price list free. Yew Lane Farm, Sherwood, Oregon.

BUFF ROCKS, BUFF MINORCAS, WINTER layers; eggs, $2. Mrs. Day Woodruff, Bow, Wash.

S. C. BLACK MINORCA HATCHING EGGS, $1.50 per 15. John Zack, Kalama, Wash.

SINGLE COMB REDS, EGGS, $3 PER 15; $5 per 30. A. E. Bosworth, Omak, Wash.

LIGHT BRAHMA EGGS, $2 PER 15. DALTON Poultry Farm, Coeur d'Alene, Idaho.

BIG REDUCTION MINORCA EGGS. MRS. Frank Winnard, Heppner, Ore.

LIVE STOCK 177

SEND FOR FREE BOOKLET, "SOME SUGgestions to Live Stock Advertisers," outlining the practices of successful men of long experience. Helps in determining how much to spend, the mediums to select, preparing advertisements, handling inquiries, the use of photographs, etc. Write today. The Pacific Northwest Farm Trio, Dept. W, Spokane, Wash.

LARGE, HEAVY PRODUCING HOLSTEINS for sale at all times in car lots; tuberculin tested; 150 to 200 head always on hand; well marked heifer calves from registered sires and heavy producing dams; crated for shipment anywhere, $25 f. o. b. Levinson & Balmelli, Yakima, Wash.

FRESH MILCH GOAT WITH DOE KID, BY thoroughbred Toggenburg buck, $25; a family pet, producing most wholesome milk; easy to feed; prolific. Westwold Farm, Edmonds, Wn.

WANTED—TWENTY-FIVE EACH, GELDINGS and mares, 1000 to 1100 pounds each; unbroken; four to six years old. Write G 3, Washington Farmer, Seattle, Wash.

WE PAY TOP PRICES FOR YOUR LIVE OR dressed veal, hogs and poultry. Your check by return mail. Shipping tags on request. M. & J. Packing Co., Spokane.

FOR SALE—TWO REGISTERED RED POLL bulls, ready for service; also two months old bull calf. A. L. Schwabel, Canby, Ore.

FOR SALE—REGISTERED SHORTHORN cows, beef and milk type; fresh soon. Clarence Schmidt, Route 5, Olympia, Wash.

FARMERS' WANT ADS

This is the farmers' "want," "sale" and "exchange" department for small advertisements of farmers, including live stock and poultry.

Advertising rates for ads running 1 to 3 times, 10c per word per insertion, with a special rate to Farmer subscribers, as follows: Ads running 4 to 12 times, 9c per word per insertion; ads running 13 times or more, 8c per word per insertion.

All commercial and land advertising 10 cents per word each insertion. Open also to nonsubscribers.

In using these columns advertisers must observe: (1) No advertisements will be inserted for less than $1.00. (2) Every word, number and initial, including name and address, must be paid for. (3) New advertisements, changes of copy or cancellations must reach general office, Spokane, Wash., 10 days in advance of publication date. (4) Cash must accompany order.

Above rates include insertion in The Washington Farmer, The Idaho Farmer and The Oregon Farmer, which constitute the Pacific Northwest Farm Trio, 46 Review Building, Spokane, Wash.

LIVE STOCK (Continued.) 177

SHIP US YOUR POULTRY AND LIVE STOCK. We pay the top market prices. Light veal, fat fancy, 16c; dressed block hogs, 14c; hens, heavy, 23c; light, 19c. Prompt returns. John Lewis & Co., Spokane, Wash.

TILLAMOOK CALVES—SEASON NOW OPEN. Price lists ready; strictly dairy stock. Smith, the Calf Man, Tillamook, Ore.

PERCHERON RANGE HORSES FOR SALE—Some broke for saddle and work. Ralph Davis, Wymer, Wash.

FOR SALE — REGISTERED BERKSHIRE boar, 2 years old; pedigree furnished. Box 398, Rainier, Ore.

REGISTERED PERCHERON STALLIONS and mares. Priced to sell. Adams & Son, Yakima, Wash.

FOR SALE—HEREFORD BULL, THREE years old; can be registered. Troy Morton, Mesa, Wash.

CHOICE HAMPSHIRE PIGS, $16; PARTRIDGE Wyandottes, $2 setting. Merryvale, Barlow, Ore.

WHITLA & GOULD, MICA, IDAHO, OFFER for sale purebred Hampshire boar pigs.

FOR SALE—MILCH GOATS. JOHN BROWN, Daisy, Wash.

HARNESS and SADDLERY 189

SEND FOR FREE HARNESS AND SADDLE catalog today; cut out the middleman, buy direct from the manufacturer. Lowest prices in the west; satisfaction guaranteed. Established 1881. Write Pierce Harness Co., dept. T, Spokane, Wash.

HAY FOR SALE. 200

ALFALFA HAY, GUARANTEED QUALITY; prompt shipment; buy direct and save money. Prices upon application. Ernest T. Freepons, Walla Walla, Wash.

JOB PRINTING 372

GUARANTEED BETTER BUTTER WRAPpers; 100, 60c; 250, $1.25; 500, $2; 1000, $4; printed to order. Home Specialty Co., Middleton, Idaho.

MONUMENTS 510

COMPLETE STOCK, RIGHT PRICES. CORrespondence solicited. J. W. Harding, Inland Monument Co., N1001 Monroe, Spokane.

BUSINESS OPPORTUNITIF 516

FOR SALE—VULCANIZING SHOP, COMplete; big business. If inexperienced, we will teach parties. Address G 2, Washington Farmer, Spokane, Wash.

PERSONAL 537

EASTERN LADY, CAPABLE, NEAT, ECOnomical, would like position as housekeeper on ranch; must have full charge. Box 778, Spokane.

SEEDS 620

ALFALFA SEED, CLOVER SEED, SEED corn—We are located in the heart of the largest and best alfalfa and clover seed district in the west and can give you both quality and price. Get our samples and quotations before buying. Our seed corn is of the finest acclimated strains. Garden and flower seeds of all kinds. Send for our catalog. Darrow Bros. Seed & Supply Co., Twin Falls, Idaho.

FORAGE PEAS BUILD UP SOIL, FATTEN hogs and mutton, for hay, or maturing for crop. Price, per ton, $65, including bags; 1000 lbs. at ton rate, f. o. b. St. Anthony, Idaho. Terms cash with order, or draft with bill lading. Samples mailed promptly on application. Write for prices, larger quantities. The Everett B Clark Seed Co., St. Anthony, Idaho.

CHOICE MANGEL SEED, 35C LB., POSTPAID. Send ten farmers' names, including 5c, and receive five packages seed and catalog free. Warren Cook, La Conner, Wash.

STATE TESTED SEEDS—NO. 1 ALFALFA, $17.50 per cwt.; No. 1 red clover, $24 per cwt, f. o. b. Jerome, Idaho. Purity Seed Farms, Box 188, Jerome, Idaho.

ALFALFA SEED, 99 PER CENT PLUS PURE. State test, 22c per pound. All kinds other seeds. Equal quality. Farmers' Service, Twin Falls, Idaho.

HUBAM CLOVER, CERTIFIED SEED OF THE earliest strain; Idaho grown. DeKalb County Agricultural association, DeKalb, Ill.

SEEDS—FARM AND GARDEN; ALL STATE tested. Write for catalog. Washburn & Wilson Seed Co., Moscow, Idaho.

SWEDISH SELECT CERTIFIED SEED OATS, ton lots, 2½ cts., less quantity, 3 cts. J. A. Bushong, Klamath Falls, Ore.

COSSACK ALFALFA, CERTIFIED SEED, Sample and booklet free. S. H. Hillman, Box 5, Lonepine, Mont.

DESCHUTES VALLEY NETTED GEM SEED potatoes; some certified. Geo. H. MacGregor, Terrebonne, Ore.

BROMUS SEED, 15C PER POUND. OLIVER Manis, McCall, Idaho.

NURSERY STOCK 621

EVERBEARING STRAWBERRY PLANTS—All orders received to date, and after, until further notice, will be entitled free, to 1 St. Regis everbearing raspberry, 1 red raspberry, 1 blackberry, 1 Lucretia dewberry, and 1 purple lilac. My Superb and Progressive everbearing strawberry plants are guaranteed and prepaid at 100, $1.40; 500, $6; 1000, $11. Orders for 1000 get 2 lots free; 2000, 4 lots. Dewberry plants, 75c doz; $4 per 100. Model Fruit Farm, R. 1, Emmett, Idaho. N. B. Manhiessen, prop.

LITTLE'S IMPROVED CORY'S THORNLESS blackberries; heaviest producers; largest berries, best flavored; good canners and shippers; large, well rooted plants at $100 per 1000; $12 per 100; $2.50 for 15. Write for pamphlet. C. A. Little, Rt. 4, Sebastopol, Cal.

BLACKBERRIES — CORY'S THORNLESS; largest berry; Magatawa large, splendid flavor; best shipper, everbearer. Alton improved raspberry, delicious flavor, large, twice as productive as Cuthbert. John Lammiman, Route 1, Palo Alto, Cal.

CORY THORNLESS BLACKBERRY—DELIcious, very large and early. You get strong, well rooted plants, true to name, from pioneer grower. Wm. Mortenson, Route 1, Lodi, Calif.

NURSERY STOCK. (Continued.) 621

GROW GRAPES FOR PROFIT—SPECIAL LOW prices; grape vines, berries, asparagus, for commercial planting; peaches, cherries, apricots, apples; satisfaction guaranteed. Write today. Home Nursery Co., Richland, Wash.

CLARK SEEDLING, THE STRAWBERRY that made Hood River famous. Write for list of other varieties and prices. Plant nurseries at Hood River and Prosser, Wash. W. R. Gibson & Son, Hood River, Ore.

GLADIOLA — BEAUTIFUL, MAGNIFICENT summer and fall blooming flowers that please all and are of easy culture. My stock is fine and prices right. Catalog free. Jungst Gladiola Farm, Ellensburg, Wash.

CHOICE LOGANBERRY TIPS, $25 PER THOUsand; personally inspected by our county fruit inspector before they are shipped. I pay express. G. W. Johnson Jr., Salem, Ore., Route 4.

STRAWBERRY PLANTS—IMPR. NEW OREgon, Ettersburg 121; large, vigorous and healthy; guaranteed free from root weevil. 80c 100; $5, 1000. Christian Arnesen, Canby, Ore.

NURSERY STOCK, ITALIAN PRUNE TREES and trees of all kinds. Berries and small fruits of all varieties. Buy direct and save 50 per cent. Brooks Nursery, Lafayette, Ore.

PROGRESSIVE EVERBEARING STRAWBERry plants at $1.25 per 100, or $9 per 1000, postpaid; inspected, guaranteed. O. W. Zurcher, S104 17th street, Boise, Idaho.

INSPECTED GOLD DOLLAR AND ETTERburg 121 strawberry plants, free from weevil, 75c per 100; $5 per 1000. F. A. Welch, Gresham, Ore.

SEND FOR OUR NEW PRICE LIST ON FRUIT trees, berry bushes, shade trees and roses on their own roots. Krause Nursery, Spokane, Wash.

90,000 CHOICE LOGANBERRY PLANTS, SEleted, inspected hardy, well rooted; unusual low price. Harry Lanum, R. 4, Salem, Ore.

GENUINE SUPERB EVERBEARING STRAWberry plants, inspected, $1.25 hundred; $10 thousand. H. H. Skagen, Kent, Wash.

GRAPES—1 AND 2 YEAR OLD CONCORD, 6 and 8 cents; any variety grape scions, 2c, prepaid. E. L. Capps, Grandview, Wash.

LOGANBERRY PLANTS, 6, $1; TIPS, 18, $1; Cuthbert raspberries, 75, $1; 1000, $10, prepaid. Alvin Myers, Doebay, Wash.

CHRYSANTHEMUM PLANTS, ASSORTED, fifty cents per dozen, postpaid. J. L. Russell, Corvallis, Ore.

LOGANBERRY PLANTS FURNISHED BY the grower. Grape Lane Farm, Turner, Ore.

STRAWBERRY PLANTS, $5 PER 1000. Briggs, Plant Nursery, Olympia, Wash.

FARM LANDS FOR SALE. 651

$3500—$1000 CASH; 80 ACRES BOTTOM LAND, all subirrigated! Bonner county, Idaho; 50 acres timothy, clover, balance easily cleared; trout creek, fine springs above new house and barn. Crop producing soil, no rock, plenty fuel, fencing, splendid dairy country, free range. Unequaled for grain, vegetables, fruit, berries; school 1 mile; town 3 miles; good roads; furniture, etc., for sale. Also 80-acre relinquishment pasture land adjoining. Also 320 acres wheat land. Adams county, Wash., under cultivation. (No trades.) Lawrence H. O'Neil, N4023 Madison, Spokane.

FOR SALE—IN CALIFORNIA, 8 ACRES OF land, improved; large barn, small house, with modern plumbing and electric lights; a good well for irrigation; equipped with an electric pumping plant. Some orchard and young vineyard and alfalfa. The place has excellent drainage and would make a splendid poultry farm; located about one mile from town and school and is on the main boulevard between Sacramento, the state capital, and Stockton, a thriving manufacturing center. For particulars write Pauline J. Sanford, P. O. Box 382, Sacramento, Cal.

A SUBURBAN PRODUCING HOME AT SUMmit View Farms, between Puyallup and Tacoma, with one acre cleared on each five-acre farm. City water, paved road, phone, lights and only short distance from the state experimental station at Puyallup; berries and poultry for income with city conveniences; good berry land and excellent view property. Write us today for map and full details. You deal direct with the loggers. We have no agents. Electric Logging Co., Inc., 216 Marion st., Seattle, Wash. A. R. Todd, Mgr.

YAKIMA VALLEY FARM LAND—WE HAVE a number of improved farms in the best districts. Each farm is producing good crops and priced low. We also have some of best land in the valley at $25 per acre, and up; easy terms; best deep soil; in good district; close to town; under approved government irrigation project. We have sold thousands of acres of this land to farmers. Western Lands, Inc., 918 Green bldg., Seattle.

1400 ACRES, 1300 CULTIVATION; 640; CROP; heavy volcanic ash soil, small house, large barn, well water; two miles to school, 14 to town, $23.50 acre, with ½ the crop; small payment down, take smaller property as part; this is a real investment. Wheat, stock and diversified farms, large and small. Tell us what you want. Hale & Hale, 1111 Paulsen bldg., Realtors, Spokane, Wash.

13¾ ACRES WATER FRONT, NEAR OLYMpia, Wash.; 9-year-old orchard; 7¼ acres choice winter pears; one acre sour cherries, balance uncleared; small house, good well, sandy beach; grand view. $7000; terms. Robert Hazen, 3714 N. 24th st., Tacoma, Wash.

543-ACRE RANCH, DOUGLAS COUNTY, ORE.; good buildings; 175 acres cultivable; fine buy; terms suitable. C. F. Kesterson, R. 1, Portland, Ore.

ALBERTA FARMS—160 ACRES, $4 ACRE; ANother, $8; another (with machinery), $22. Ask Surry (Alberta Farmer), 505 Trent ave., Spokane.

CHICKEN RANCH SALE—5 ACRES, GOOD buildings; near pavement and car line. Flora Martin, Route 3, Box 183, Puyallup, Wash.

20 ACRES, IMPROVED, 3 MILES FROM Olympia, Wash., easy terms; $2500. John Aarts, R. 4, Olympia, Wash.

147 ACRES; GOOD BUILDINGS; SPRING WAter; some timber. $1200; terms. Write F. T. Drumhiller, Granite, Idaho.

FARM LANDS FOR SALE (Continued) 651

CUTOVER LANDS, EASY TO CLEAR; $8 TO $20 per acre; 25 miles north of Spokane, on paved highway; Great Northern and Milwaukee railways; excellent opportunity for dairying and stock raising with Spokane markets and creamery near at hand. Will help the man who will live upon this land and agree to clear a part each year by giving lumber to help start his buildings, and a pure bred Jersey bull to groups of farmers. Interest and payments low. Write Milan Farms Development company, Dept. T, Old National Bank building, Spokane, Wash.

IRRIGATED ACRES, TWO MILES FROM CITY limits of Spokane; prices less than city lots. Soil especially adapted to vegetables, small fruits and poultry raising. Good graded school and college. Telephone, electric lights, domestic water and paved highway. Some beautiful homes built and others building. Locate your home where you can have city conveniences and enjoy country life. Write or call upon Country Homes Development company, Dept. T, Old National Bank bldg., Spokane, Wash.

RICHLAND—100 PER CENT TRUE TO ITS name. We can prove to your satisfaction that fruit of all kinds grown in this lower Yakima valley nets from $600 to $1000 an acre. Potatoes, corn, alfalfa, etc., also yield beautiful crops. Poultry, hogs, chickens and bees thrive in this ideal climate. Plenty of water, sunshine and rich soil can be yours with a small payment down, balance to suit. Write for descriptive information. Briscoe Realty Co., 414 Lindelle bldg., Spokane.

WE SELL FORECLOSED LANDS FOR A loan company for one-third cash, balance easy terms. When writing tell us what you want, where preferred, how much you will invest; kind of farming you contemplate, as we have no list and must write special description in each case. No trades. Hartford Land company, 601 Paulsen building, Spokane, Wash.

SNOHOMISH COUNTY, WASH.—6000 ACRES of the finest dairy, berry or general high-grade farm lands in the northwest, rapidly improving section; no drouths; bumper crops; tracts 1 to 80 acres; 10 yearly payments. This is your opportunity. Send for literature. Brownell Land Co., Birmingham, Wash.

WILL SACRIFICE ON ACCOUNT OF SICKness, chicken ranch, 21 hundred S. C. White Leghorns, hens and pullets; a modern ranch with electric light plant, running water; will pay you to look into this if you have a little money. R. 1, Box 106, Kennewick, Wash.

CENTRALIA, 2 MILES FROM TOWN; PAcific highway; 5-acre ranch; 7-room house, bath; new, modern, 75-ft. chicken house; hot water brooding system; 1 acre strawberries, 1 acre loganberries. $5500; terms. J. G. Button, Route 1, Box 92, Centralia, Wash.

STOCK RANCH, WITH 500 CATTLE, 200 range horses, 920 acres land; a modern ranch, fully equipped; in heart of good range; 5-year grazing permit, Lemly reserve. Right dates back to 1883. Any one interested, address J. D. Ellis & Co., Idaho Falls, Idaho.

WE WANT TO TELL YOU MORE ABOUT the famous Deschutes valley in central Oregon; a dairy, potato and stockman's paradise; a card brings full particulars. Redmond Land & Loan Co., Inc., Redmond, Oregon. (King Murphy's capitol.)

TWO GOOD STOCK AND GRAIN RANCHES, 1000 and 640 acres; 175 acres irrigated; 400 acres wheat land; will sell cheap; good terms. Lock Box 545, Heppner, Ore.

160 ACRES IN LEWIS COUNTY, WASHINGton; big bargain; everything, team, implements. Price $8000 cash. Address G 4, Washington Farmer, Spokane.

SELL YOUR PROPERTY QUICKLY FOR cash; no matter where located. Particulars free. Real Estate Salesman company, 501 Brownell, Lincoln, Neb.

80 ACRES; 35 CULTIVATED; 25 ALFALFA; orchard, house, barn, creek; 7 milch cows, 3 horses, tools, $4500; terms. F. A. Harris, Route 1, Boyds, Wash.

TWO-ACRE POULTRY RANCH, WITH 800 White Leghorns; good buildings; in Park Rose. Robert Vance, R. 4, Portland.

320 ACRES, DAIRY-HAY RANCH; TWO SETS buildings; reasonable terms. Write owner, Jack Patterson, Winthrop, Wash.

640 ACRES, ALBERTA, CANADA, FARM land for $10,000 cash. U. S. currency. D 7, Washington Farmer, Spokane.

FARM LANDS—Wanted 654

WANT TO HEAR FROM OWNER HAVING farm for sale. Give particulars and lowest price. John J. Black, 80th street, Chippewa Falls, Wis.

WANTED—TO HEAR FROM OWNER OF land for sale. O. K. Hawley, Baldwin, Wis.

IRRIGATED LANDS—For Sale 663

MUNICIPAL LANDS FOR SALE—A REAL OPportunity to get irrigated land, situated along the Columbia river, with the best railroad facilities and longest growing season in the northwest. Soil and climate especially adapted to gardening, chicken raising, bee culture, dairying, to growing grapes, strawberries and fruit in general. The main state highway passes through the project; our schools are the best; one accredited high school and two grade schools. Write for our most attractive terms and folder. The district, and not the agents is selling this land. There will be no commission to pay. We are interested in getting home builders on the project. Address Burbank Irrigation District No. 4, Burbank, Wash.

CITY PROPERTY FOR SALE 690

ASHLAND REALTY COMPANY HAVE RESIdences, ranches and business places for sale. Write fully what you want, your expectations and send addressed, stamped envelope. Ashland Realty Company, Ashland, Ore.

FOR SALE OR EXCHANGE 702

FOR SALE OR EXCHANGE—1210-ACRE stock ranch, 12 miles from Council, 1¼ miles to railroad station, postoffice and school; all fenced and cross-fenced; 240 acres hog-tight; 400 acres tillable, balance grazing; free water; good buildings. Machinery and horses included. Mrs. L. E. Ferguson, Goodrich, Idaho.

160 ACRES, NEAR THE DALLES, OREGON; trade for Alberta; price $4000. 15 acres near Langley, Whidby island, raw, trade for good car, horses, or what have you? $1500. 640 acres, Columbia basin, all cultivated, no buildings; Adams county, $30 acre; trade for coast. Box 897, Port Angeles, Wash.

STOCK-DAIRY RANCH FOR SALE OR trade; 50 head stock. Box 256, Prairie City, Ore.

OKLAHOMA LAND, TRADE, SELL. EARL Boyd, Kettle Falls, Wash.

TO EXCHANGE—Real Estate 705

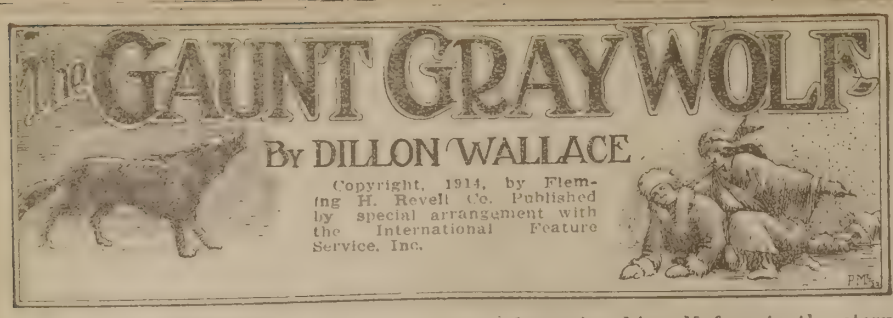
I SPECIALIZE IN EXCHANGING ALBERTA farms for Washington, Oregon and Idaho farms. Send me full particulars of your place at once. I can help you. F. E. Dunn, 213 Leeson-Lineham block, Calgary, Alberta.

COUNTRY STORE, IN GOOD LOCATION, TO exchange for farm, dairy or stock ranch. Box 26, Sodaville, Oregon.

The GAUNT GRAY WOLF

By DILLON WALLACE

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SYNOPSIS.

Shad Trowbridge, a New England lad of about 20 years, sails on a mail boat to Labrador, where he plans to spend a few weeks of summer hunting and fishing in the wilderness. Upon his arrival he meets two experienced fishermen and trappers, Dick Blake and Ed Matheson, who recommend to him a young lad of 17 known as Ungava Bob, as a guide for his hunting and fishing trip inland. Desiring to lose the least time possible in securing Ungava Bob's services and starting inland for his vacation, Shad starts across the bay in his canoe in the face of a threatening storm. In the darkness his canoe is capsized and he is plunged into the icy water. As he rises to the surface a rope is thrown to him and he hears a voice shouting to make it fast. He is soon drawn aboard a little sailboat which, unknown to him had approached at the moment of his great need.

"I'm sure I owe my life to you," he said to the lad piloting the sailboat. "It was lucky for me you saw me."

"'Twercn't luck, sir," said the lad. "'Twere Providence. 'Twere the Lord who were takin' care of you."

To his surprise, Shad discovers that his new friend, the lad with the sailboat, is none other than Ungava Bob. Together, they make their way to Bob's home, where Shad enjoys the hospitality of the northland while they consider ways and means of making inland excursions. Shad decides to remain a month or more and make the first leg of a long winter of trapping planned by Bob, returning to the settlement in time to sail back home before college opens. To lay in additional supplies for the trip they cross the bay to the Hudson's Bay trading post, where Shad meets with other friends of Ungava Bob and his parents, including Mr. and Mrs. Black, whose daughter Bessie and Bob are great friends.

They leave for the wild trapping grounds and Shad is so delighted with the wilderness that he decides to remain with Bob on the trails all winter. The other members of the party start back home, leaving the two boys alone to start their long winter of adventure. But they are not alone! Hardly has the boat carried their friends around the bend of the river before Bob and Shad see two Indians watching them from the shadows of the forest trees.

The Indians proved to be old friends of Bob, but it was not many days until enemies appeared. A group of Mingen Indians, catching Bob and Shad out in their canoe on the river above the Great Falls of Labrador, fired upon them, compelling them to remain in the current and be dragged down to the rapids and seeming certain destruction.

CHAPTER VIII.

After the Indian Attack.

Below them rose the appalling roar of the hungry rapids and the dull, thunderous, monotonous undertone of the falls themselves.

Before their vision a vivid picture passed of the scene they had so recently beheld—the onrushing, white piled billows above the cataract, gathering strength for their mighty leap—the final plunge of the resistless torrent—the bank of rainbow-colored mist hovering in space over a dark abyss—and far below and beyond the mist-bank the murky chasm, where a white seething flood was beating its wild anger out against jagged rocks in its mad endeavor to fight its way to freedom between narrow canyon walls rising in frowning cliffs on either side.

Impotent to resist the power that was drawing them down, Shad Trowbridge and Ungava Bob were certain beyond a doubt that presently they were to be hurled into this awful chasm, and that in all human probability but a few minutes more of life remained to them.

Then suddenly there flashed upon Bob's memory the recollection of an island which he had observed when walking along the river bank from the falls to the portage trail.

He remembered that this island was of curious formation, with high polished cliffs rising on its upper end and on either side, like bulwarks to guard it from the rushing tide.

At its lower end a long, low, gravelly point reached downward, like a pencil point, among the swirling eddies. The gravel which formed this point, he had remarked at the time, had been deposited by the eddies created by the meeting of the waters where they rushed together from either side below the island.

With the recollection of the island came also a realization that here possibly lay a means of escape. A quick estimate of the distance they had already drifted below the portage trail satisfied him that they were still perhaps half a mile above the island, and probably not too far amidstream to enable them to swing in upon it before it was passed, in which case a landing might be made with comparative ease upon the gravelly point.

The canoe, as previously stated, was heading upstream, with Bob in the bow, Shad in the stern. It was necessary that they turn around and secure a view of the river in order to avoid possible reefs near the island shore and to properly pick an available landing place.

But to attempt to turn the canoe itself in the swift current would in all probability result in fatal delay. Therefore, acting upon the moment's instinct, Bob ceased paddling, arose, and himself quickly turned, seating himself face to the stern, shouting to Shad as he did so:

"Turn! I'll steer!"

Shad had no doubt Bob had become demented, but without question obeyed the command. In this position what had previously been the stern of the canoe now became the bow, Shad Trowbridge the bowman and Ungava Bob the steersman.

The moment paddling ceased the canoe shot forward in the current, heading toward the white waters of the rapids. The maneuver had not been made a moment too soon, for directly before them, a little to the left, lay the island.

With a quick, dexterous turn of the paddle Bob swung the canoe toward the island shore farthest from the mainland and, close under the cliffs, caught the retarding shore current. A few seconds later the bow of the little craft ground upon the gravelly point Shad sprang ashore, Bob at his heels, and the canoe was drawn after them to safety.

For a moment Bob and Shad looked at each other in silence, then Shad exclaimed simply:

"Thank God!"

"Aye," said Bob reverently, "thank th' Lard. He were watchin' an' guardin' us when we were thinkin' we was lost. 'Tis th' Lard's way, Shad."

"My God, Bob! Look at that!" exclaimed Shad, pointing toward the mad white waters below them. "If you hadn't thought of this island, Bob, we'd be in there now—in there—dead! My God, what an escape! And such a death!"

Shad sank upon a bowlder, white and trembling. He was no coward, but he was highly imaginative at times. During the trying period in the canoe he was cool and brave. He had done his part at the paddle equally as well as Bob. He would have gone to his death without a visible tremor. But now the reaction had come, and his imagination ran riot with his reason.

"Why, Shad, what's th' matter now?" asked Bob solicitously. "Were th' strain at th' paddle too much? You looks sick."

"No—I'm all right—just foolish. I'm afraid you'll think I'm not game, Bob."

"Oh, but I knows you is, Shad. I seen you turned over in th' bay, Shad—an, I knows you'm wonderful brave."

"Thank you, Bob. I hope I deserve your opinion."

"I were terrible scart first, when I finds th' canoe's slippin' back toward th' rapid



I knows you're wonderful brave.

an' I'm seein' no way t' land," said Bob. "Then I stops bein' scairt an' has a feelin' that I don't care——"

"Just as I felt," broke in Shad. "A sort of hopeless speculation on what was going to happen, but not much caring."

"Aye," continued Bob. "Then I thinks 'twill be sore hard on mother—my never goin' home—an' I prays th' Lard t' help us, an' soon's I says 'Amen' I thinks o' this island. 'Twere th' Lard puts un in my head, Shad."

"I think," said Shad, "it was your quick wit and resourcefulness, Bob."

"No," Bob insisted positively, "'twere th' Lard. An', Shad, we must be thankin' th' Lard now."

Then Ungava Bob and Shad Trowbridge knelt by the side of the boulder, the former reverently, the latter courteously, while Bob prayed aloud:

"Dear Lard, Shad and me is wonderful thankful that you p'inted out t' us th' landin' place on this island, an', Lard, we wants t' thank you. We knows, Lard, if you hadn't been p'intin' she out t' us we'd be dead in th' rapids now, or handy t' un. We'll never be forgettin.' An', Lard, keep clost t' Shad an' me always. Amen."

"That," said Shad, when they rose to their feet, "was the most honest, simple, straight-forward prayer I ever heard offered. Thank you, Bob, for including me. If the Lord hears prayers, Bob, he heard yours, for it was honest and from the heart and to the point."

"He hears un, Shad, an' he answers un."

There was a note of conviction in Bob's tone that left no room for doubt.

"We're here, because we're here, because we're here——" Shad began to sing. "Bob, I'm feeling all right now, and I guess I've got my nerve back again. Foolish, wasn't it, to get frightened after it was all over? Let's see, now, what the prospects are of getting away."

From an eminence in the center of the island they surveyed their surroundings. The mainland lay not more than a short stone's throw away, but between it and the island the water ran as swift as a mill race. Some 200 yards below the point on which they had landed the heavy white rapids began, and with but one exception the perpendicular wall of rock that formed the mainland shore extended to and beyond the white water.

This exception occurred about half-way between the island and the heavy rapids, where for a distance of some six or eight yards frost action had caused disintegration of the rock, and the wall sloped down toward the river at an angle of 45 degrees.

At the foot of this slope, and on a level with the water, a narrow platform had been formed by the dislodged portion of the rock. Under the most favorable conditions exceedingly expert canoemen might succeed in making a landing here, but it was plain that the foothold offered was so narrow and so unstable that any attempt to make a landing upon it would prove perilous and more than likely fatal.

The island itself was oblong in shape and contained an area of three or four acres. Its rocky surface sustained a scant growth of gnarled black spruce and stunted white birch, with here and there patches of brush.

From their vantage point no sign of the Indians who had caused their trouble could be seen, and it was evident they had not descended the river bank below the portage trail.

"Well, what do you think of it, Bob?" Shad asked.

"I'm thinkin', now, th' Injuns are headin' for th' tilt up th' river, an' that they'll be cleanin' un out an' burnin' un. Th' Injuns t' th' post tells me they never comes below th' portage. They's afraid o' th' evil spirits o' th' falls. But they goes back in th' country sometimes an' circles around by th' Big Hill trail."

"But what do you think of trying to cross, and make a landing down there where the rock slopes?" inquired Shad.

"We'd never make un, Shad," decided Bob. "I knows th' handlin' o' boats. I'm too uncertain in a canoe, an' so be you, Shad."

"What are we to do, then? We can't stay here," insisted Shad.

"I'm not knowin' yet. They'll be some way showin'," promised Bob, "but we'll have t' think un out first."

"What was the matter with those Indians, anyway? I thought all the Indians were friendly to white men," Shad asked, as they turned down again to the canoe.

"They's Mingen Injuns," explained Bob. "I were forgettin' t' tell you, Shad. When we was t' th' post Douglas Campbell tells me that last fall some Mingens comes t' th' last tilt o' th' Big Hill trail an' tells he they'd not let any white trapper hunt above th' Big Hill trail. They's likely seen our tilt up th' river, an' laid for us. I'm sorry, now, I were bringin' you here an' not tellin' you, Shad."

"Oh, don't worry about that, Bob. I'd have come just the same," assured Shad. "In fact, I'd have been all the more ready to come, with the prospect of a scrap with Indians in view. If I'd known, though, I'd have had my eyes open and my rifle ready, and dropped a bullet or two among them before we got caught in the current."

"Injuns were never givin' me trouble before, an' I weren't takin' their threatenin' t' Douglas in earnest, so I forgets all about un till I sees th' Injuns at th' portage trail," Bob explained.

"'Twouldn't have done t' kill any of un, Shad. If you had, th' rest would have laid in th' bushes an' killed us, for they's no knowin' how many they is of un. Then they'd gone back an' laid for Ed an' Dick an' Bill an' killed they before they'd be knowin' they was any trouble.

"Now 'tis more'n likely th' Injuns is thinkin' we be th' only white men about, an' when we thinks up a way o' gettin' out o' here we'll give warnin' t' Ed an' th' others, an' being on th' lookout one of us can hold off a hull passel o' Injuns, for we has Winchesters, an' all they has is muzzle-loadin' trade guns."

"But suppose we don't get off this island before the others come to look for us? What then?" asked Shad.

"If they misses us an' goes lookin' for us, they'll be knowin' we're missin' for some cause. Bill Campbell's been hearin' from his father what th' Mingens were sayin' last year, an' they'll suspicion 'tis th' Mingens an' be watchin' for un."

"But I don't understand yet what objection the Mingens have to our trapping here. I supposed this was the country of your Nascaupee friends."

"'Tis this way," Bob explained. "Th' Nascaupees hunts t' th' n'uth'ard, th' Bay Mountaineers t' th' east'ard, an' th' Mingens t' th' s'uth'ard, an' all of un comes in hereabouts t' get deer's meat, mostly th' Mingens, when deer's scarce t' th' s'uth'ard, an' they thinks if white trappers is about th' deer'll be drove out."

"Well, Bob, let's boil the kettle and try to figure out a plan of escape,' suggested Shad. "With the reaction from the morning's excitement, I'm developing a vast hunger."

"They's not a mouthful o' grub in th' bag, Shad," Bob announced sorrowfully, "only a bit o' tea with th' kettle an' our cups. I leaves un all in th' tilt, thinkin' we'd get back t' th' next tilt an' use th' grub that's there, an' I just leaves th' bit o' tea in th' bag."

"No grub!" exclaimed Shad. "Then we've got to try to make a landing down on that wall. We can't stay here and starve!"

"An' we can't make th' landin'. 'Twould be sure drownin' t' try."

"Then it is just a choice between drowning an dstarving? For my part, I'd rather drown and have it over with, than starve to death!"

"Th' Lard weren't showin' us here just t' have us die right off," said Bob quietly. "He were savin' us because he's wantin' us t' live, an' he'll be thinkin' if we tries t' make th' landin' knowin' we can't make un, that we're not wantin' t' live. If we takes time now t' plan un out, th' Lard'll show us how."



A picture of mingled horror and grief.

"I wish I had your faith, Bob, but I haven't, and I'm still in favor of making a try for the shore," insisted Shad. "However, let us make some tea and argue the matter out later."

"Aye, we'll boil th' kettle an' talk un over whatever," agreed Bob, rising from the rock upon which they had seated themselves, and turning into the scant growth to collect dry sticks for a fire.

But instead of collecting the sticks he returned to the canoe, secured Shad's double-barrelled shotgun, and a moment later Shad, who was dipping a kettle of water for their tea and had not noticed the movement, was startled by the report of the gun. Looking up, he saw Bob stoop, reach into a clump of bushes and bring forth a rabbit.

"Well, I'll be jiggered!" exclaimed Shad, as Bob held his game aloft for inspection. "I didn't suppose there was hide or hair or feather on this wind-blasted, forsaken island of desolation!"

"I sees th' signs," said Bob, "an' then I looks about an' sees th' rabbit. Where they's one they's like t' be quite a passel of un. They likely crosses over last winter on th' ice an' th' breakup catches un here an' they can't get off."

"That's some relief to the situation. But we've only about a dozen shells in the canoe," announced Shad, "and when they are gone we'll be as badly off as ever."

"We'll not be wastin' shells, now, on rabbits," said Bob. "They's other ways t' catch un. I uses that shell t' get our dinner. I'll get th' rabbit ready now whilst you puts a fire on."

"Very well," agreed Shad, collecting wood for a fire, "and when we've eaten I hope we can think of some way of escape."

CHAPTER IX.

The Indian Maiden at the River Tilt.

"Well," said Ed Matheson, as the boat rounded a bend in the river, "there's the river tilt, an' she looks good."

"That she do," agreed Dick Blake. "I hopes, now, Bob's there an' has a fire on. I'm wet t' th' last rag."

"So be I. This snow an' rain comin mixed always 'pears t' make a wetter wet'n just rain alone," observed Ed.

"Bob's there now," broke in Bill Campbell. "I sees smoke comin' from th' tilt pipe."

The voyagers were returning from Eskimo bay with their second cargo of winter supplies for the trails. Five weeks had elapsed since the morning Ungava Bob and Shad Trowbridge had watched them disappear around the river bend, and returning to camp had found Sishetakushin and

Mookoomahn awaiting them at the edge of the forest.

Since early morning there had been a steady drizzle of snow and rain, accompanied by a raw, searching, easterly wind, a condition of weather that renders wilderness travel most disheartening and disagreeable.

This was, however, the first break in a long series of delightfully cool, transparent days, characteristic of Labrador during the month of September, when nature pauses to take breath and assemble her forces preparatory to casting upon the land the smothering snows and withering blasts of a sub-Arctic winter.

Despite the pleasant weather, the whole journey from Eskimo bay had been one of tremendous effort. With but three, instead of five, as on the previous journey, to transport the boat and carry the loads over portages, the labor had been proportionately increased.

It was, then, with a feeling of intense satisfaction and relief that the voyagers hailed the end of their journey, with its promised rest, when they finally ran their boat to the landing below the river tilt of the Big Hill trail.

"I'll be tellin' Bob an' Shad we're here now, an' have un help us up with th' outfit," said Ed Matheson cheerily, stepping ashore and striding up the trail leading to the clearing a few yards above, in the center of which stood the trail.

But at the edge of the clearing he stopped in open-mouthed amazement. Before the open door of the tilt stood a tall, comely Indian maiden, perhaps 17 years of age. She was clad in fringed buckskin garments, decorated in colored designs. Her hair hung in two long black braids, while around her forehead she wore a band of dark red cloth ornamented with intricate beadwork. From her shoulder hung a quiver of arrows, and resting against the tilt at her side was a long bow.

She stood motionless as a statue, striking, picturesque and graceful, and for a full minute the usually collected and loquacious Ed gazed at her in speechless surprise.

"Good evenin'," said he finally, regaining his composure and his power of speech at the same time. "I weren't expectin' t' find any one here but Ungava Bob an' Shad Toobridge. Be they in th' tilt?"

With Ed's words she took a step forward, and in evident excitement launched upon him a torrent of Indian sentences spoken so rapidly and with such vehemence that, though he boasted a smattering of the language, he was unable to comprehend in the least what she was saying. It was evident, however, she was addressing him upon some subject of import.

"There now," he interrupted finally, forgetting even his smattering of Indian and addressing her in English, "just 'bide there a bit, lass, whilst I gets Dick Blake. He knows your lingo better'n me. I'll send he up."

And, hurrying down the trail, he called: "Dick, come up here. They's a Injun lass at th' tilt, firn' a lot o' lingo at me I can't fathom."

"A Injun lass!" exclaimed Dick. "What's she doin' there, now? An' where's Bob an' Shad?"

"Yes, a Injun lass," said Ed impatiently, "an' what she's doin' you'll have t' find out. It seems like she's achin' t' tell somethin'. I'm not seein' Bob an' Shad."

"They must be somethin' wrong, Ed. Come down an' help Bill get th' cargo ashore, an' I'll find out what 'tis," and Dick hurried up the trail past Ed, to meet Manikawan, for she it was.

She was still standing where Ed had left her, and Dick asked kindly in Indian:

"What message does the maiden bring to her white brothers?"

"Listen!" she commanded, in a clear, musical voice. "I am Manikawan, the daughter of Sishetakushin, whose lodge is pitched on the shores of tne Great lake, to the north. Yesterday some men of the south visited the lodge of my father."

"Mingens!" exclaimed Dick.

"They told him," she continued, not heeding the interruption, "that five suns back they had found a lodge built where the big river broadens. The lodge was newly made. It was a white man's lodge, for it was built of trees. The men of the south waited in hiding at the end of the portage that was once used by my people. It is above the place where evil spirits dwell."

"How many of the men of the south were there?" asked Dick, again interrupting.

"Six," she answered promptly. "While they waited two white men passed with a painted canoe and much provisions. Then, while they still waited, the white men returned with the canoe empty.

"They fired their guns at the white men. Then the evil spirits that dwell where the river falls reached up for the canoe and dragged it down to the place of thunder.

"I have come to tell you this, and to ask if White brother of the Snow and his friend are here. All night and all day have I traveled, for I am afraid for White Brother of the Snow. He has lived in the lodge of Sishetakushin, my father. He is one of my people, and I am afraid foi him."

Her rapid speech, her dramatic pose and gestures and her intensely earnest manner left no doubt in Dick Blake's mind that she spoke the truth. Neither had he any doubt that she referred to Ungava Bob and Shad Trowbridge as the two white men, for no other white men were in the region, or, he was sure, within several hundred miles of the place, at the time to which she referred.

"No," said he, after a moment's pause, "White Brother of the Snow and his friend are not with us."

"They are not here!" she wailed, lifting her arms in a gesture of despair. "Where is he? Tell me? It was not White Brother of the Snow sent to the torment of the evil spirits?"

"I'm afraid, Manikawan, it was. There were no other white men here than White Brother of the Snow and his friend."

Manikawan's hands dropped at her side, and for an instant she stood, a picture of mingled horror and grief. But it was for only an instant. Then her face grew hard and vengeful, and, in low, even tones she said:

"These men of the south killed White Brother of the Snow. They are no longer of my people. They must die."

"They must die," echoed Dick.

"Come!" she said laconically, reaching for her bow and slinging it on her back.

"No, we will rest tonight, and tomorrow at dawn we will go. Rest tonight and be strong for the chase tomorrow," Dick counseled, kindly, as she turned toward the portage trail leading around the rapids.

"I can not rest," she answered. "I go now," and like a shadow, and as silently, she melted into the darkening forest.

Big Dick Blake's heart was full of vengeance as he strode down the trail to rejoin his companions.

"What speech were th' Injun maid tryin' t' get rid of, now?" asked Ed Matheson, pausing in his work of unloading the canoe as Dick appeared.

"Bob an' Shad's dead!" announced Dick bluntly.

"Dead! Dead!" echoed Ed and Bill together.

"Aye, dead. Drove over th' falls by Mingen Injuns," continued Dick. "Five or six days ago, she's sayin'. They's six o' them Injuns down north o' here, huntin' deer, an' their camp's up th' river somewheres. I'm not knowin' rightly where, but we'll find un, an' we'll shoot them Injuns just like a passel o' wolves. If we don't, they'll sure be layin' for us an' shoot us."

"Be you sure, now, th' lads is dead?" insisted Ed.

"They's no doubtin' it. She tells th' story straight an' clean as a rifle shot," and Dick went on to repeat in detail the story he had heard from Manikawan.

"It looks bad, now, whatever," commented Ed. "But they's a chanct they gets ashore. I were caught onct in th' rapids above Muskrat falls, an' thinks it all up with me—right in th' middle o' th' rapids, too—an'——"

"Ed," broke in Dick, with vast impatience, "this be no time for yarnin'. You knows you never could be gettin' out o' them rapids an' not goin' over th' falls. An' these rapids is a wonderful sight worse."

"Maybe they be," admitted Ed. "Th' poor lad, now, bein' killed in that way. Dick," he continued, raising his tall,

(Continued on page twenty-one.)

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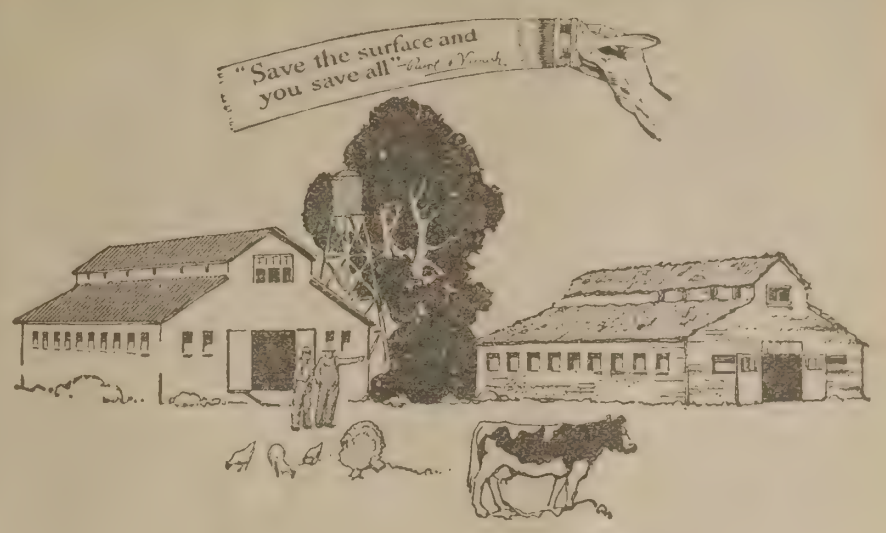
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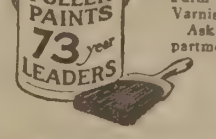
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Souls that are old and dead in sinning,
Hear this message, take heart again."

There are periods which are as milestones along life's pathway, where we may pause or come to a full stop and get our bearings; where we may look back over the road traveled and forward into the the untrodden way.

We have New Year's day with its good resolutions, Christmas day full of thoughts of loving remembrance, July Fourth when we pause in the daily routine to think gratefully of our country and all it means to us, and now we have added to these, Armistice day, which, let us hope, will stand for world's peace for evermore.

I come to you today with a greeting for the most important of all the milestones which mark the fleeting year, Easter, celebrated in every Christian country the world around.

The word Easter corresponds to a similar word from the French which means a goddess of light or spring and in another sense it stands for the dawn or the rising of the sun, the beginning of a new day.

And so it came about that the day kept in commemoration of Christ's resurrection is called Easter, signifying the rising from the dead into a new life. I said, it is the most important of all the days we keep because time is measured by this day. Every letter we date is a reminder of the beginning of a new era—Anno Domini (A. D.), the year of our lord 1922.

Let us think a little about Easter in the connection of the new life of all nature in spring. The winter has been long and hard and down under the snow and ice have lain little dead-looking seeds and roots, so shriveled and brown that it seemed there could be no life left there.

The rays of the sun grow warmer day by day and he comes out of the east earlier and remains with us longer as the days lengthen. Down beneath the dead leaves and even the mantle of snow and ice, those tiny dead-looking seeds begin to swell, and, bursting forth from the protecting shell, will come forth the sprout, which will go up and up while the roots will go down to get sustenance from mother earth. And here begins a new life for each tiny plant. Who placed the bit of a germ in the heart of those little plants? Who indeed but the great creator, God himself? Man has attained to great inventions, but all the accumulated wisdom of all the great minds who have achieved since the world began, can not put into the tiniest plant that wonderful something which will cause it to force its way upward in response to the rays of the sun, as it faithfully begins its new life year by year.

The little lambs frisk about on the hillsides while the meadowlark builds her nest amid the very grasses where they feed. Perhaps there was a tragic ending to her plans last year; maybe a snake invaded her nest and destroyed her family, but her song this year is just as sweet and her nest as carefully made and as softly lined as she can make it. She is willing to try again, to make another beginning.

Dear hearts, who read this, here is our lesson. Why all this beauty, why all these budding trees in which the sweet birds are building their nests and singing their love songs? Over us, far beyond our mortal ken there is a master hand controlling all. He made the world for us. Is it reasonable to believe that he will ever forget us for whom he took so much upon himself?

Never let us feel forlorn or bereft. Never let us forget that all nature makes a new beginning every Easter time. If we have made mistakes, if we have seemed to have made a muddle of things, let us not waste time or energy looking back, except to avoid repeating, but keep in mind that the beautiful world is ours, that happy people are always more useful than those despondent. Let us strive to keep the spirit of Easter in our hearts the year around.

Your friend,
ALICE W. BARLAND.

Dear Mrs. Barland: Child training is a hobby with my husband and me. We always work together in training our children and never contradict each other concerning what they should or should not do. If there is a difference of opinion it is talked over and an agreement reached when the children are not present.

Many people think a child's disposition is an inheritance and, of course, that is true to a certain extent; but observation and experience convince us that much may be done to keep children sweet and sunny and easily managed by seeing that they get plenty of sleep, with a nourishing diet without too great a proportion of meat or sweets. Many times a child is cross and unmanageable from having had too much candy, for instance, and shows no other sign of anything wrong.

It is easier to form good habits than to break bad ones. Some things tiny tots do seem very funny and cute but often lead to a habit that must be broken when the child is older. Such things shouldn't be laughed at and encouraged, but should be nipped in the bud to prevent trouble later.

We think that if from babyhood children are put to bed early and the light put out it helps to prevent fear of the dark and promotes the habit of early rising, which is a great help when they reach the school age.

Poking at tasks must be dealt with in various ways. Urging to hurry avails very little, I find, but whatever arouses interest has a good effect. Racing is a favorite with our children, but there is an understanding that unless the work is well done it must be done again. We try to cultivate pride in doing tasks quickly and well. We don't call them from play, but make it clear that their work must be done first and they may play undisturbed for a while.

To teach care of clothing we put up hooks in easy reach for them and teach them to hang up their own wraps from the time they are able to toddle. With a low bar in the closet they can put away their best clothes on hangers while quite young. Our little 3-year-old enjoys getting his own little suit when he is going to wear it and putting it away when he takes it off.

"Sauciness" has never given any trouble so far; we chum with the children, but they have always been taught to obey. We never "talk back" to each other and anything like sauciness from them is checked instantly.

Personal neatness is taught by having pockets in the clothing where handkerchiefs may be carried and by insisting that they wash hands and face before meals "like daddy."

Indeed, example comes first in all training, but must be accompanied by daily watchfulness and care. It may seem a great deal of trouble, but we feel that we are being well repaid as the children grow older.

MRS. E. W. W.
———, Wash.

Dear Sisters: I have received from one of our men readers of the Family Circle a very fine recipe for a preparation for cleaning rugs. I know that it cleans them wonderfully because I have stood by and seen about the dirtiest rug I ever saw, come out like a new one. I can not print this recipe, but any one sending for it with a 2-cent stamp enclosed shall have it in time for spring cleaning.

There seems to be some doubt about how to address me. Send all letters in care of THE FARMER.

Please send in your personal experiences on raising turkeys. Several sisters want to know about them. Also a sister says she has a large plant of wormwood and wishes to know if it has any special value as a medicine or what use it can be.

ALICE W. BARLAND.

One Had to Lose.

He—Why did she marry Dick? I thought she valued her freedom. She—She did. But she couldn't bear to think of Dick having any.—Detroit Saturday Night.

Rennet Desserts

To the Editor: One woman writes that she has trouble in making her rennet desserts. She speaks of new calves that they intend to butcher if they are not heifers, so I judge that her rennet is from very young calves. These are all right, only the rennet has very little strength and probably won't make a quart of good liquid rennet in 10 days. I should try a pint at first and perhaps leave it two weeks. Add salt enough to keep it well in a place that is not very cold; there should be all the salt that will dissolve and more does no harm; it will eventually become liquid. Don't start with less than a cupful.

I always test mine when I begin to use it by taking just a cup of warm milk and adding a little rennet at a time till I find just how much is required to "set" it. By that means only one cup of milk is wasted and the pigs will like that. Don't sweeten it.

MRS. E. M. ANDERSON.
Ashville, N. Y.

CARROT SALAD.

Put six carrots on to boil in plenty of water, when half done remove and turn out the water and finish cooking in fresh water; when done take out and cut into one-half inch dice. Make a dressing of one small cup of vinegar, four tablespoons of melted butter, the yolk of one hard-boiled egg with a little salt and pepper. Line a dish with crisp lettuce leaves, add two-thirds of the dressing, then the carrots diced, then the remainder of the dressing.

This makes a novel and ornamental dish.

E. E. S. M.
Oregon.

LEADS ALL EXPORTS.

Wheat headed the list of all American agricultural exports in 1921.

Your Health

By Royal S. Copeland, M. D., F. A. C. S.

Cause of Heartburn.

Heartburn is one of the most common of the human ailments. Lots of folks never eat a meal without suffering within an hour or two. There are pains in the stomach, belching of gas and sometimes vomiting of sour material.



Dr. Copeland.

All sorts of reasons are given for the trouble. Coffee, tea, pastry, lobster and various kinds of foodstuffs are pointed to as the things responsible for the acidity. Exercise after meals, heavy lifting, excessive smoking and a multitude of other things are apt to be regarded as causes of the symptom.

As a matter of fact, no one of these things is likely to be the real cause of the acidity of the stomach. Any one of them might contribute to the difficulty, and might aggravate it, but there must be found something more important than these.

Almost always there is failure of elimination of the body wastes. If the kidneys fail to function properly there will be dammed up in the body poisons which affect the whole system.

A more common cause is constipation. When the intestines fail to carry away, quickly and effectively, the waste substances there is sure to be trouble about digestion.

In short, acidity of the stomach is due to failure of the digestive and eliminative processes.

We must go back of the symptoms to see why kidney and intestinal function is delayed. Lowered vitality and improper eating are the chief causes.

Lowered vitality may come from loss of sleep, dissipation, excesses of every sort, worry, overwork, lack of exercise and fresh air, and shallow breathing. Muscular action is essential to proper stomach and intestinal function. Without tone in the muscles of these organs digestion is sure to be delayed or utterly to fail, and without right living the muscle power is sure to suffer.

Wrong eating is another factor, of course. If you eat candy, ice cream and pastry between meals your appetite for what may be called "normal foods" will suffer. Fermentation, gas formation and discomfort follow.

Without the right choice of food, after a long time the constipation becomes very difficult to overcome.

To overcome acidity, you should make sure you are in first-class condition. Have your teeth and tonsils examined to see if they are right.

Then proceed to select a diet which will meet your needs. This is a difficult problem and will require careful study.

Do not resort to drugs or to remedies which are purely palliative in their effects. Go to the bottom of the matter and find the underlying causes of your ill health.

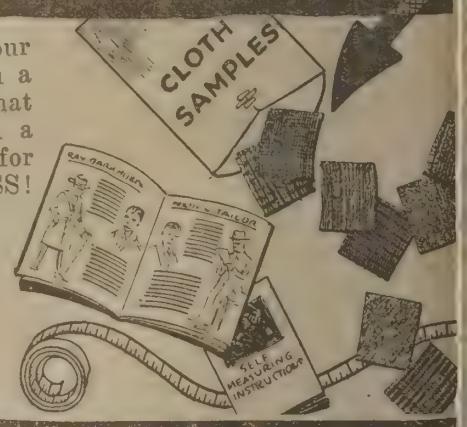
You can not afford to overlook this acidity. If neglected, you stand the chance of serious kidney trouble, of ulceration of the stomach, and of the undermining of your general health. Proper treatment and exercise will remedy the trouble.

I want every Man in the Northwest to have this FREE Sample Packet
-including Virgin Wool Cloth Samples - Tape Measure and Self-measuring Blank!



I can make a suit to your own measure, give you a better FIT and one that will wear longer than a factory made suit—for the same money or LESS!

Let's keep our western tailors busy.



Order a Guaranteed, Hand-Tailored,

Virgin Wool Suit
$34

My Guarantee is your Protection. You take no chances; if I don't make the best suit you ever had—your money back!

Save money on this unusual opportunity to buy a fine, hand-tailored suit.

FREE COUPON
Clip and Mail Now



RAY BARKHURST
(Dept. 2)
Largest custom tailor to men in the northwest.

Dear sir: Please send me your FREE sample packet, including virgin wool cloth samples, self-measuring blank, style folder, tape measure, and instructions for ordering by mail.

Yours very truly,

Owing to the fact I carry the largest selection of woolens in the northwest, I want to send you exactly what you want. Give me a hint—mark (x) opposite the suggestions below.

( ) Western Virgin Wool Samples, assorted colors.
( ) Light and dark gray worsteds in stripes and colors.
( ) Black and white silk mixed worsteds.
( ) Blue serges.
( ) Overcoat samples.

Name .....
Address .....

RAY BARKHURST PORTLAND, OREGON
Dept. 2
Largest Tailor to Men in the Northwest

Bits of Fun for Everyone

He Was Cured.

"I'm a pedestrian, sir, and I'm proud of it."

"Wouldn't own a motor car as a gift, eh?"

"No, sir, I wouldn't."

"You can't fool me. You've had one."

Wins First Prize.



The prize winner in the contest for absent-mindedness is said to be the fellow who left his office, with a note pinned on the door saying that he would be back at 4 o'clock. Upon returning at 3:30, half an hour earlier than he expected to, he read his own note and sat down to wait for himself.

How Could She Tell?



He—Where you come from are all the girls as pretty as you are? She—I don't know, sir—I only notice the boys.—Paris Sans-Gene.

There's a Difference, Though.

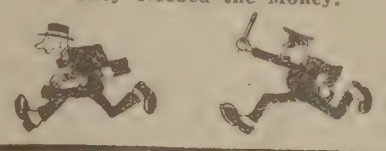
"That," said the lawyer, whose office boy had dropped a tack in his chair, "is a very interesting point."

And the Editor Left Town.

Somebody sent the editor of the Poketown Gazette a few bottles of home brew. The same day he received for publication a wedding announcement and a notice of an auction sale. Here are the results:

"William Smith and Miss Lucy Anderson were disposed of at public auction at my farm, one mile east of a beautiful cluster of roses on her breast and two white calves, before a background at farm implements too numerous to mention in the presence of about 70 guests, including two milch cows, six mules and one bobsled. The Rev. Jackson tied the nuptial knot with 200 feet of hay rope and the bridal couple left on one good gang plow for an extended trip with terms to suit purchasers. They will be at home to their friends with one good baby buggy and a few kitchen utensils after one year from date of sale to responsible parties and some 50 chickens."—Dry Goods Economist.

They Needed the Money.



Church—I see a visitor to Chicago was arrested the other day because he had $350 in his pocket.

Gotham—And it wasn't his own money?

"Oh, yes; it was proved in court that it was his own money."

"Why on earth did they arrest him, then?"

"He was trying to get out of town with it."—Yonkers Statesman.

Signs of Maturity.

Mother—Bobby behaved just like a man in church.

Father—Good! Sat up and listened to the sermon, eh?

Mother—No, he went to sleep!—Tit-Bits.

Those Sad Feelings.

Nite: "Have you ever seen a mosquito weep?"

Day: "No, but I've seen a moth ball."

Latest High Class Patterns for the Home

Please order the patterns you desire at least two or three weeks before you wish to use them. Desiring to obtain the latest high-class patterns for its readers, THE FARMER has made arrangements to have them sent direct from the east, and under present mailing conditions it takes about that time for them to reach you.



3518-3908. Ladies' costume. Waist 3518, cut in seven sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. Skirt 3908, cut in six sizes: 25, 27, 29, 31, 33 and 35 inches waist measure. To make this style for a medium size and of one material will require 6 3-8 yards of 40 inches wide. As illustrated vest, collar, cuffs and drapery will require 2 1-8 yards. The width at the foot is about 2 1-4 yards. Two separate patterns, 10 cents for each pattern.

3932. Girls' coat. Cut in four sizes: 4, 6, 8 and 10 years. A 10-year size requires 3 1-4 yards of 44-inch material. Price 10 cents.

3912. Ladies' coat dress. Cut in seven sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. A 38-inch size requires 4 1-2 yards of 44-inch material. The width of the dress at the foot is about two yards. Price 10 cents.

3717. Misses' dress. Cut in four sizes: 14, 16, 18 and 20 years. A 20-year size requires 5 1-8 yards of 36-inch material. The width of the skirt at the foot is two yards. Price 10 cents.

3719. Ladies' apron. Cut in four sizes: Small, 34-36; medium, 38-40; large, 42-44; extra large, 46-48 inches bust measure. A medium size requires 5 1-4 yards of 27-inch material. Price 10 cents.

3929. Ladies' house dress. Cut in seven sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. A 38-inch size requires 6 1-8 yards of 36-inch material. The width of the skirt at the foot is two yards. Price 10 cents.

3500. Girl's dress. Cut in four sizes: 4, 6, 8 and 10 years. A 6-year-old size will require 2 3-4 yards of 36-inch material. Price 10 cents.

3917. Girl's dress. Cut in four sizes: 8, 10, 12 and 14 years. A 12-year size will require three yards of 40-inch material. Price 10 cents.

3921. Child's play dress. Cut in four sizes: 1, 2, 3 and 4 years. A 2-year size requires 2 3-8 yards of 36-inch material. Price 10 cents.

3931. Girl's dress. Cut in four sizes: 4, 6, 8 and 10 years. A 6-year size requires 2 3-8 yards of 36-inch material. Price 10 cents.

3674. A comfortable corset substitute. Cut in four sizes: Small, 34-36; medium, 38-40; large, 42-44, and extra large, 46-48 inches bust measure. A medium size requires 1 1-2 yards of 32-inch material. Price 10 cents.

3925. A pretty negligee. Cut in four sizes: 34-36; medium, 38-40; large, 42-44; extra large, 46-48 inches bust measure. A medium size requires three yards of 40-inch material. Price 10 cents.

Catalogue Notice.

Send 12 cents in silver or stamps for our up-to-date spring and summer 1922 catalogue, showing color plates, and containing 500 designs of ladies', misses and children's patterns, a concise and comprehensive article on dressing, also some points for the needle (illustrating 30 of the various, simple stitches), all valuable hints to the home dressmaker.

Please fill in this order and mail with remittance to:
PATTERN DEPT., PACIFIC NORTHWEST FARM TRIO, Spokane, Wash.

Enclosed find.....cents for which send me the following:

Pattern No.....Size..... Pattern No.....Size.....

Pattern No.....Size..... Pattern No.....Size.....

Name .....

Postoffice..... State.....

R. F. D..... Box No..... St. No.....

Be sure to give the pattern number and the correct size.

Make The Laundress Happy



by making it possible for her to turn out beautiful, snowy white, clothes like new.

Red Cross Ball Blue

will enable the laundress to produce fine, fresh-looking pure white clothes instead of the greenish yellow usually obtained. RED CROSS BALL BLUE always pleases.

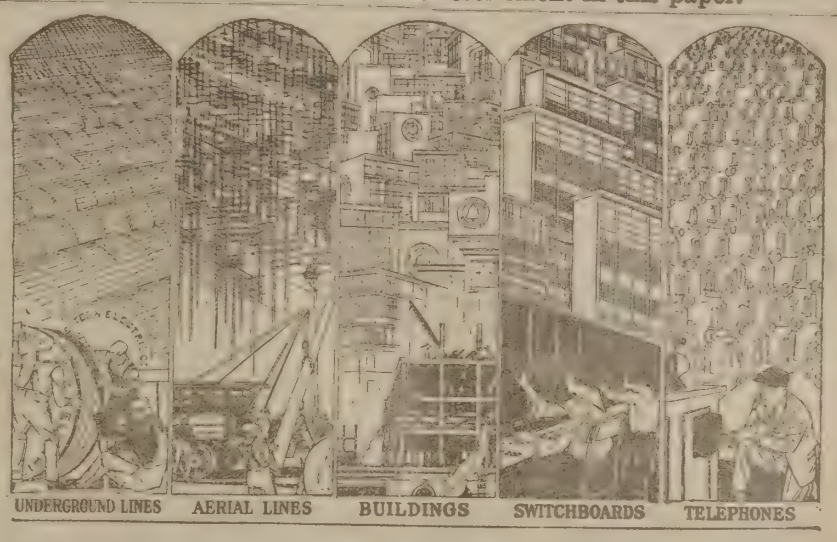
5 cents.

At all up-to-date grocers.



Battery, $16; Electric Light Plant, $156. Starting Battery for Fords, Buicks, etc., $16. Other sizes in proportion. Farm light plant, with battery, $156. Plant battery, $80. Radio batteries. Send for bulletin 10AF.
B-R ELECTRIC SALES CO.
208 North Wells Street. Chicago, Ill.

When you write to advertisers be sure to state that you saw their advertisement in this paper.



Breaking Construction Records

Since 1920, faced with the greatest demand for service in telephone history, the Bell System has surpassed all previous records for the installation of new telephone equipment. In the last two years more than 1,000,000 additional stations have been added to the system by construction. This is equal to the entire number of telephones in Great Britain.

In 1921 alone, 450,000 new poles were placed—enough to make a telephone line from New York to Hong Kong. The aerial wire put into service in the same year, 835,000 miles in all, is enough to string 60 wires on such a telephone line.

1,875,000 miles of wire, enclosed in 1,500 miles of cable, were added to underground and submarine lines in 1921. New underground duct totaling 11,000,000 feet was constructed, this representing approximately 300 miles of subway. 69 new central office buildings and important additions were completed or in progress, and new switchboards with a capacity of many thousands of connections were installed.

This equipment added to the Bell System, great though it is in volume and value, represents but a small part of the vast property which enables the telephone on your desk to give the service to which you are accustomed. And to meet the increasing demands for new service, the work of construction goes on.

"BELL SYSTEM"
AMERICAN TELEPHONE AND TELEGRAPH COMPANY
AND ASSOCIATED COMPANIES
One Policy, One System, Universal Service, and all directed toward Better Service

Goethals Approves Columbia Basin Plan

The report of General George W. Goethals, builder of the Panama canal, was made last week on his recent survey of the proposed Columbia basin irrigation project. He finds the project a feasible one and recommends that the gravity system from the Pend Oreille river be used in preference to a pumping system from a dam on the Columbia river. He declares that the development of the Columbia basin project would add more wealth to the United States than did either the Panama canal or the Alaska railroad and, therefore, urges it as a national enterprise rather than a Pacific northwest or state undertaking. "The work should be provided for and carried out as were these other two national projects—by direct appropriation," he said in his report.

The following is the language in which the famous engineer summarizes the lengthy and detailed report of his survey of the project:

"1—Of more than 3,000,000 acres embraced within the Columbia basin, lying between the Columbia and Snake rivers, 1,753,000 are irrigable by the Pend Oreille gravity project and 1,403,000 by the Columbia river pumping project.

"2.—The gravity project provides water by gravity flow from the Pend Oreille river and its tributaries above Newport, Wash.

"3.—The pumping project provides water from the Columbia river. A pool is formed by a dam, varying from 200 to 285 feet in height, with respective effective heads of 123 to 211 feet, across the gorge of the Columbia at the head of Grand coulee, from which water is pumped by hydro-electric units, each lifting 1000 second feet approximately 482 feet, or by direct connected units of equal capacity lifting approximately 450 feet, to an artificial lake, whence the water is carried to the land by gravity.

"4.—The estimated cost of the gravity project is $254,170,351, or $145.56 an acre.

"5.—The construction of the gravity system is feasible and offers no unusual difficulties.

"6.—The cost of operation and maintenance for the gravity project is estimated at $841,450 or 48 cents an acre each year.

"7.—Lowest estimated cost for the pumping project is $223,096,943, or $159.01 an acre. The difficulties attending the construction are unusual and the pumps proposed have never been built.

"8.—The cost of operation and maintenance for the pumping project is estimated from $2,610,275 to $2,192,605 a year, or from $1.86 to $1.51 an acre, depending on height of dam adopted.

"9.—The gravity project is recommended for adoption.

"10.—It is recommended that the entire project be undertaken with a view to completing it in its entirety rather than attempting it piecemeal or adopting temporary construction.

"11.—The estimated time for completion is six years.

"12.—The soils of the irrigable lands are fertile and abundant; being in all respects similar to Yakima and Wenatchee valleys; large production will result from water on the lands.

13.—A great variety of crops can be produced, and due to the excellent transportation facilities, can be carried to the markets of the world.

"14.—No apprehension need be felt about settlement of the lands after water has been placed thereon.

"15.—All things considered, the project is justified from an economic standpoint if the land can be made ready for planting at a cost ranging from $200 to $275 an acre; at the latter price a profitable return will be secured on the investment.

"16.—The project, because of the benefits that will accrue to the United States as a whole, is a national one and as such should be carried out by the federal government through direct appropriation.

"17.—Following the existing volicy of the government in its irrigation projects, the farmer or land holder should be taxed to amortize the cost of construction. The government should bear or absorb the interest charges, which will be more than repaid through the increase that will result to the natural wealth, affecting industries and products of all kinds over the entire country."

Five definite reasons are given by General Goethals for prefering the gravity system from the Pend Oreille river to the Columbia river pumping plans as follows:

1. It develops the largest acreage—1,753,000 acres under gravity system, as against 1,403,000 under pumping project.

2. The construction cost an acre will be lower—$145.56 under gravity, as against $159.01 to $172.12 an acre under the pumping project, the variant in the latter figures being due to the type of proposed dam construction.

3. The annual operating cost will be much lower—48 cents an acre under the gravity system, as against $1.86 to $1.56 under the pumping project.

4. The reliability and simplicity of a direct gravity flow of water are immeasurably superior to the complexity of operating a power and pumping plant with a large number of turbines and pumps which would be stressed higher than any existing equipment of equal capacity.

5. No treaty stipulations have to be solved, enabling construction work to start immediately funds become available.

Next week's issue of THE FARMER will contain a comprehensive report of the findings of General Goethals, and a discussion of the plans for carrying out the development program of the great Columbia basin.

* * *

E. A. Bryan, state commissioner of education for Idaho, and for many years a frequent contributor to the columns of THE FARMER, was last week elected president of the Inland Empire Teachers' association.

* * *

The coal strike continued throughout last week with increasing tieup of mines throughout the country. Practically all of the union miners are now idle, and it is declared by the union heads that of the 140,000 nonunion miners in the country about 75,000 have joined in the strike. Comparatively little disturbance was noted anywhere. In one or two state martial law, enforced by state troops, has been put into effect because of small riots in strike localities. The government continues to maintain its original policy of keeping its hands off unless the welfare of the general public becomes menaced.

Senator McCroskey

As The Washington Farmer goes to press comes word of the death at his home in Garfield of Robert C. McCroskey, one of the pioneer builders of the Pacific northwest. Death came as a result of a stroke of paralysis, induced in part, it is believed, by shock received in a train wreck at Pasco last winter. Senator McCroskey was 77 years old, was a large holder of Palouse wheat lands and exceptionally active in public affairs since his coming to Whitman county in 1877. He had served continuously as a regent of the State College of Washington since 1897, and has been active in national, state and local politics. He was a staunch friend of farm organizations, being for several years a member of the Farmers' union and being a familiar figure at farmers' conventions throughout the Inland Empire.

Farm Business and Markets Outlook

(Continued from page five.)

sacked in Chicago and $1.30 to $1.50 at north central shipping points. Sacked Brown Beauties, U. S. grade No. 1, at Chicago are quoted at $1.75; Rurals at $1.70 to $1.75 and Russets at $2 to $2.10.

LATEST QUOTATIONS.

The Live Stock Market.

PORTLAND, April 8.—Cattle—Choice steers, $7.50@8; medium to good steers, $6.50@7.50; fair to medium steers, $6@6.50; common to fair steers, $5@6; choice feeders, $5@6; fair to good feeders, $4.50@6.50; medium to good cows and heifers, $5.25@6; fair to medium cows and heifers, $4.50@5.25; common cows, $3.50@4.50; canners, $2@3.50; bulls, $3.50@4.50; choice dairy calves, $9.50@10; prime light calves, $9@9.50; medium to light calves, $6.50@9; heavy calves, $4.50@6.

Hogs—Prime light, $10.75@11; smooth heavy, 200 to 300 lbs., $10@10.50; smooth heavy, 300 lbs. up, $9@10; rough heavy, $7@9; fat pigs, $10.50@11; feeder pigs, $10.50@11; stags, subject to dockage, $5@7.

Sheep—Choice spring lambs, $14@15; medium spring lambs, $12@14; common spring lambs, $8@10; east-of-mountain lambs, $12@14; best valley lambs, $11@13; fair to good, $10@11; cull lambs, $6@8; eastern Oregon feeders, $9@10; light yearlings, $9@10; light wethers, $9.50@10; heavy wethers, $9@9.50; ewes, $3@8.

SPOKANE, April 8.—Cattle—Prime cows, $7@8; good to choice steers, $6@7; medium to good steers, $5.50@6.75; fair to medium steers, $4.75@5.50; common to fair steers, $4.25@4.75; choice cows and heifers, $5.50@6.50; good to choice cows and heifers, $4.50@5.50; medium to good cows and heifers, $4@4.50; fair to medium cows and heifers, $3@4; canners, $2@3; bulls, $3@5.50; light veal calves, $8@10; heavy veal calves, $4@8; stockers and feeders, $4.50@5.50.

Hogs—Prime mixed, $11@11.50; medium, $10@11; heavies, $8@9; fat pigs, $10@11; stockers and feeders, $10@11.

Sheep—Prime lambs, $9@10; fair to medium, $8@9; yearlings, $6@8; wethers, $4.50@6; mutton ewes, $2@6; feeder lambs, $7@8.

The Grain Market.

PORTLAND, April 8.—Wheat—Hard white, hard winter, northern spring, $1.25; red Walla, $1.22.

Grain futures—Wheat: Hard white, hard winter, northern spring, April and May, $1.25; soft white, white club, April, May, $1.24; red Walla, April, May, $1.22.

Oats—No. 2 white feed, April, May, $34; No. 2 gray, April, May, $34.

Barley—Brewing, April, May, $27.50; standard feed, April, May, $26.50.

Corn—No. 2 eastern yellow, shipment April, May, $27.50; No. 3, do, April, May, $26.50.

RITZVILLE, April 8.—Bart, $1.42; red, $1.32; Fife, $1.05.

POMEROY, April 8.—Wheat—Turkey red, $1.05; Hybrid, $1.02.

ODESSA, April 8.—Marquis, $1.44; Bart and Bluestem, $1.42; Turkey red, $1.30; Jones Fife, $1.05.

WALLA WALLA, April 8.—Club wheat, $1.06; Bluestem, Turkey red and Bart, $1.07.

PULLMAN, April 8.—Red wheat, $1; white wheat, $1.03.

DAVENPORT, April 8.—Marquis, $1.32; Bllestem, $1.30; Gold Coin, $1.02.

LEWISTON, Idaho, April 8.—Fortyfold, Club, hard winter, $1 to $1.08.

SEATTLE, April 8.—Wheat—Hard white, soft white, white club, soft red winter, northern spring, $1.24; hard red winter, $1.27; eastern red Walla, $1.21; Big Bend Bluestem, $1.50.

Hay and Grain Feed.

PORTLAND April 8.—Millfeed—Price f. o. b. mill: Millrun, ton lots, $29; mixed cars, $28; straight cars, $27 per ton; middlings, $43; rolled barley, $37@39; rolled oats, $42; scratch feed, $52 per ton.

Corn—White, $36; cracked, $38.

Hay—Buying price f. o. b. Portland: Alfalfa, $17.50@18 per ton; cheat, $12.50@13; oats and vetch, $15; clover, $14; valley timothy, $14@15; eastern Oregon timothy, $18.50@19.

SPOKANE, April 8.—Wheat—Feed wheat, $46 per ton.

Oats—$40 per ton; steam rolled, $42.

Corn—$36 per ton; cracked corn, $38 ton.

Barley—$40; steam rolled, $42.

Bran and shorts—$30 per ton.

Alfalfa, $22 ton; timothy, $2 ton; mixed hay, $18 ton.

General Produce.

PORTLAND, April 8.—Butter—Cubes, extras, 31c per pound; parchment wrapped, box lots, 35c; cartons, 36c. Butterfat, buying prices; No. 1 grade, 34c, delivered Portland.

Eggs—Buying prices, 20@21c doz., case count; henneries, 22c. Jobbing prices, case count, 21c; candled ranch, 23c; selects, 25c.

Cheese—Tillamook triplets, price to jobbers, f. o. b Tillamook, 26c; Young Americas, 27c pound.

Poultry—Hens, 22@26c; ducks, nominal; geese, nominal; turkeys, live, nominal; dressed, 35@38c.

Pork—Fancy, 15½c per pound.

Veal—Fancy, 14c per pound.

SPOKANE, April 8.—Eggs—Fresh ranch eggs, $6.50; fresh pullet eggs, $6.

Live poultry—Hens, fat 4 lbs. up, 20c lb; 2 to 4 lbs., 18c lb; old roosters, 10c lb; rabbits, 12c lb; ducks and geese, 15c lb.

Butterfat—33c lb.

Range of Live Stock Prices for the Week Ending April 5

CATTLE.	Chicago.	Spokane.	Portland.	N Salt Lake
Choice, prime heavy steers (1100 lb. up)	8.75@ 9.40	.....	.....	.....
Good heavy steers	8.10@ 8.75	.....	.....	.....
Medium heavy steers	7.25@ 8.10	.....	.....	.....
Common heavy steers	6.75@ 7.35	.....	.....	.....
Choice, prime light steers (1100 lb. d'n)	8.85@ 9.60	.....	.....	.....
Good light steers	8.00@ 8.85	.....	7.50@ 8.25	.....
Medium light steers	7.15@ 8.15	6.00@ 7.50	6.50@ 7.50	6.00@ 6.75
Common light steers	6.60@ 7.25	4.50@ 6.25	5.00@ 6.50	4.00@ 6.25
Common to choice butcher heifers	5.25@ 8.25	3.50@ 6.35	4.00@ 6.50	3.50@ 5.50
Common to choice butcher cows	4.35@ 7.25	3.00@ 5.50	3.50@ 5.75	3.00@ 4.75
Bologna and beef bulls	4.00@ 6.25	3.00@ 5.50	4.00@ 5.00	2.00@ 3.50
Canners and cutters, cows and heifers	3.25@ 4.35	2.00@ 3.00	2.00@ 3.50	2.00@ 3.00
Canner steers	4.25@ 5.25	2.50@ 4.00	3.00@ 4.25	2.50@ 3.50
Medium to choice light veals	6.00@ 9.00	8.00@10.00	6.50@10.00	6.00@ 7.00
Common to choice heavy veals	4.00@ 7.00	4.00@ 8.00	4.50@ 6.00	.....
Common to choice feeders (1000 lb. up)	5.50@ 7.35	.....	.....	.....
Common to choice feeders (750-1000 lb.)	5.40@ 7.35	4.50@ 5.00	4.50@ 6.00	.....
Common to choice stocker steers	5.15@ 7.25	.....	.....	.....
Com. to choice stocker cows, heifers	4.00@ 5.25	.....	.....	.....
HOGS.				
Top of market	10.75	11.25	12.00	10.00
Bulk of sales	9.75@10.65	10.25@11.15	10.50@11.75	9.25@ 9.80
Heavy (250 lb. up)	9.80@10.45	9.75@10.50	10.00@11.00	.....
Medium (200-250 lb.)	10.00@10.70	10.00@11.25	10.75@11.50	9.00@ 9.75
Light (150-200 lb.)	10.20@10.75	11.00@11.25	11.50@12.00	9.50@10.00
Light lights (130-150 lb.)	10.00@10.70	11.00@11.25	11.50@12.00	9.25@ 9.75
Smooth packing sows (250 lb. up)	9.00@ 9.75	9.00@ 9.75	9.00@10.00	.....
Rough packing sows (200 lb. up)	8.85@ 9.50	8.00@ 9.00	8.00@ 9.00	.....
Medium to choice pigs (130 lb. down)	8.75@10.50	9.50@10.50	11.50@11.75	8.75@ 9.50
Stock pigs	.....	9.50@10.25	11.50@11.75	8.50@ 9.25
SHEEP AND LAMBS.				
Medium to prime lambs (84 lb. down)	13.75@16.50	9.00@11.00	9.00@14.00	9.00@12.00
Culls and common lambs	10.50@13.75	7.00@ 9.00	6.00@ 9.00	6.00@ 9.00
Medium to prime yearling wethers	11.50@14.75	6.00@ 8.00	9.00@11.00	8.00@ 9.00
Medium to prime wethers	8.50@12.50	4.50@ 6.00	9.00@10.00	6.50@ 7.50
Medium to choice ewes	7.00@10.50	4.00@ 6.00	5.00@ 8.00	4.00@ 5.50
Culls and common ewes	3.50@ 7.00	2.00@ 4.00	3.00@ 5.00	2.00@ 4.00
Feeder lambs	11.75@13.75	7.00@ 8.00	9.00@10.00	.....

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F. O. B. Pittsburgh $70

Our Biggest and Best Log Saw

DIRECT To YOU

Look! See What You Get—Big Surplus Power 4-cycle engine—weight over axle (not on handles)—two wheel-truck—easy to move. Direct Geared (no chains or belt). Lever controlled clutch—Arm swing motion. We have only one Log Saw—our biggest and best (at advertised price). Why pay $50 more for any saw. Order direct from this ad. Lifetime Guarantee—Cash or Terms—Immediate Ship't. Tree Saw at small extra cost. Catalog Free.

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1927 Empire Building, PITTSBURGH, PA.

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Year's Wear Guaranteed



The Nu-Way Line

Nu-Way and Excello Suspenders—75¢ Guaranteed One Year

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Ladies-Misses-Children's Hose Supporters 25¢

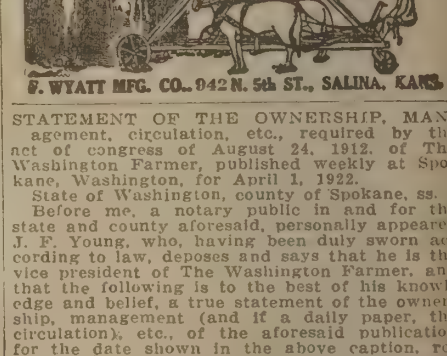
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Always comfortable. No rubber to rot. Phosphor Bronze Springs give the stretch. If your dealer doesn't carry NU-WAYS or EXCELLOS, send direct, giving dealer's name. Accept no substitute.

Nu-Way Strech Suspender Co., Mfrs., Adrian, Mich

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STATEMENT OF THE OWNERSHIP, MANagement, circulation, etc., required by the act of congress of August 24, 1912, of The Washington Farmer, published weekly at Spokane, Washington, for April 1, 1922.

State of Washington, county of Spokane, ss.

Before me, a notary public in and for the state and county aforesaid, personally appeared J. F. Young, who, having been duly sworn according to law, deposes and says that he is the vice president of The Washington Farmer, and that the following is to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the act of August 24, 1912, embodied in section 443, Postal Laws and Regulations, printed on the reverse side of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor and business managers are:

Publisher, Cowles Publishing Company, Spokane, Washington; editor, ——; managing editor, Edwan A. Smith, Spokane, Washington; business managers, none.

2. That the owners are: (Give names and addresses of individual owners, or if a corporation, give its name and the names and addresses of stockholders owning or holding 1 per cent or more of the total amount of stock.) Cowles Publishing Company (a corporation), Spokane, Washington; W. H. Cowles, Spokane, Washington; H. C. Cowles, Spokane, Washington; J. F. Young, Spokane, Washington; F. J. Whaley, Spokane, Washington.

3. That the known bondholders, mortgagees and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages or other securities are: (If there are none, so state.) none.

4. That the two paragraphs next above, giving the names of the owners, stockholders and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company, but also in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation; the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association or corporation has any interest, direct or indirect, in the said stock, bonds or other securities than as so stated by him.

COWLES PUBLISHING COMPANY.
By J. F. YOUNG, Vice Pres.

Sworn to and subscribed before me, this 27th day of March, 1922.

(Seal.) F. J. WHALEY.

(My commission expires Oct. 17, 1923.)

Please mention THE WASHINGTON FARMER when writing advertisers.



We are glad to hear from Lucille Thwing, Cowlitz county, Washington, girl. Lucille received nine "Es" and one "G" on her school report card. Aunt Nellie thinks that is very good. (Tell your friend to write to Aunt Nellie on some subject in which she is interested, Lucille, such as club work, sewing, a trip, or she may write a short original story. Personal letters from cousins over 12 years are not published.—Aunt Nellie.)

Pearl House, southwestern Cowlitz county, Washington, writes to tell Aunt Nellie she would like to receive "the paper she has heard so much about." She means The Junior Farmer. Pearl was 11 December 4, 1921. On her school report card, she got three "Es." That means from 95 to 100 per cent on a subject.

Thelma Phillips says the weather has been fine in Grant county, Washington, where she lives. Her home is near Soap Lake. She was 11 years old July 2, 1921. At school she gets along well. Sometimes Thelma gets lonesome. A sister 5 years old and a brother 2 are her little playmates.

Cora E. Brown, a 7-year-old cousin, north of the Colville Indian reservation, in northern Washington, has never written to the Corner before. She has brown hair and blue eyes. Her birthday is November 30. Tom and Rainbow are her pet cats.

Birthday Greetings

THURSDAY, April 13—Dollie Hundt, 9 years old; Lawrence Wade, 10.

FRIDAY, April 14—Ethel Gordon, 9 years old; Kathleen Prousce, 10.

SATURDAY, April 15—Calvin Edward Bates, 8 years old; Victor Knight, 10; Hellen Oleson, 10; Alice Sargant, 11.

SUNDAY, April 16—Myron Moran, 10 years old; Bayard Taylor Snell, 10; Lilly Bell Vernon, 10.

MONDAY, April 17—Estella Ellison, 11 years old; Ethel Gordon; Ina Huovinen, 11; Helena Schweikl, 11; Josie Smith, 11; Marie Thomas, 9; Marian Bridges, 11.

TUESDAY, April 18—Alice Lovos, 11 years old.

WEDNESDAY, April 19—Ruth Dow, 11 years old; Helen Kissler, 8.

LETTERS WELCOMED BY AUNT NELLIE.

Among recent letters received by Aunt Nellie are those from cousins whose names follow. A few of these will be published each week in the regular edition of THE FARMER, and others will appear from time to time in The Junior Farmer:

Martha Slikker, Kenneth Coleman, Mabel and Mina Hamilton, Dorothy Peterson, Lena Reinhart, Violet Main, Mary Salvadalena, Clarence Lemming, Bernice Tobin, Eva Charlotte Cole, Clara Mary Beardsley, Kathleen Prausce, Sigrid Kiya, Virgil Byford, Vennie Mae Beardsley, Louis Rostad, Jimmy Betz, George Foutch, Lois McAlvey, Viola Robbins, Emily Dowell, Dortha Malone, Violet Gossau, Sigrun Agnes Runolfson, Iris Bellingar, Faith Elm, Doris Decker, Frances Ruchert, Virginia Fife, Grace Warren, Emma Hochstatter, Jeannette Byford.

BEDTIME STORIES

By THORNTON W. BURGESS.

Copyright, 1919, T. W. B.

JERRY DECIDES TO HAVE SOME FUN.

Billy Mink ran around the edge of the Smiling Pool on his way to the Laughing Brook. His eyes twinkled with mischief, and he hurried as only Billy can. As he passed Jerry Muskrat's home Jerry saw him.

"Hi, Billy Mink! Where are you going in such a hurry this fine morning?" he called.

"To find Little Joe Otter. Have you seen anything of him?" replied Billy.

"No," said Jerry. "He's probably gone down to the Big River fishing. I heard him say last night that he was going."

"Thanks," said Billy Mink, and without waiting to say more he was off like a little brown flash.

Jerry watched him out of sight. "Humph!" exclaimed Jerry. "Billy Mink is in a terrible hurry this morning. Now I wonder why he is so anxious to find Little Joe Otter. When they get their heads together it is usually for some mischief."

Jerry climbed to the top of his house and looked over the Smiling Pool in the direction from which Billy Mink had just come. Almost at once he saw Grandfather Frog fast asleep on his big green lily pad. The legs of a foolish green fly were sticking out of one corner of his big mouth. Jerry couldn't help laughing, for Grandfather Frog certainly did look funny.

"He's had a good breakfast this morning, and his full stomach has made him sleepy," thought Jerry. "But he's getting careless in his old age. He certainly is getting careless. The idea of going to sleep right out in plain sight like that!"

Suddenly a new thought popped into his head. "Billy Mink saw him, and that is why he is so anxious to find Little Joe Otter. He is planning to play some trick on Grandfather Frog as sure as pollywogs have tails!" exclaimed Jerry. Then his eyes began to twinkle as he added: "I think I'll have some fun myself."

Without another word Jerry slipped down into the water and swam to the big green lily pad of Grandfather Frog. Then



"Have a nice nap?" inquired Jerry, with a broad grin.

he hit the water a smart blow with his tail. Grandfather Frog's big, goggly eyes flew open and he was just about to make a frightened plunge into the Smiling Pool when he saw Jerry.

"Have a nice nap?" inquired Jerry, with a broad grin.

"I wasn't asleep!" protested Grandfather Frog indignantly. "I was just thinking."

"Don't you think it a rather dangerous plan to think so long with your eyes closed?" asked Jerry.

"Well, maybe I did just doze off," admitted Grandfather Frog, sheepishly.

"Maybe you did," replied Jerry. "Now, listen." Then Jerry whispered in Grandfather Frog's ear, and both chuckled as if they were enjoying some joke, for they were great friends, you know. Afterward Jerry swam back to his house and Grandfather Frog closed his eyes so as to look just as he did when he was asleep.

Meanwhile, Billy Mink had hurried down the Laughing Brook. Half way to the Big River he met Little Joe Otter bringing home a big fish, for, you know, Little Joe is a great fisherman. Billy Mink hurried to tell him how Grandfather Frog had fallen fast asleep on his big green lily pad.

"It's a splendid chance to have some fun with Grandfather Frog and give him a great scare," concluded Billy. Little Joe Otter put his fish down and grinned. He likes to play pranks almost as well as he likes to go fishing.

"What can we do?" said he.

"I've thought of a plan," replied Billy. "Do you happen to know where we can find Longlegs the Blue Heron?"

"Yes," said Little Joe. "I saw him fishing not five minutes ago."

Then Billy told Little Joe his plan, and, laughing and giggling, the two little scamps hurried off to find Longlegs the Blue Heron.

(Copyright by J. G. Lloyd.)

The Gaunt Gray Wolf

(Continued from page seventeen.)

awkward figure to its full height and placing his hand on Dick's shoulder, "me an' you's stood by one 'nother for a good many years, an' in all sorts o' hard places, an' if it's fight Injuns with you now, Dick, it's fight un, an' Bill's with us."

"Aye," said Bill, "that I am."

The boat was unloaded, and with heavy hearts the men prepared and ate their evening meal. Then while they smoked their pipes, light packs were put up and all was made sung for an early start the following morning.

With the first blink of dawn the three determined men, armed with their rifles, swung out into the forest, and rapidly but cautiously filed up the old portage trail in the direction Manikawan had taken.

(To be continued.)

Veteran Goodyear users tell us that our tires today give more than twice the mileage they did ten years ago



The average decrease in the price of Goodyear Tires since the year 1910 is more than sixty per cent

QUALITY WAS NEVER SO HIGH
PRICES WERE NEVER SO LOW

It is a favorite practice nowadays to refer more or less sagely to the good values of "before the war."

So far as tires are concerned, any such reference is an illusion.

The plain fact is, pre-war tire values were only a pale shadow alongside those of today.

Every tire in the Goodyear line proves this to be true.

If you are a veteran Goodyear user you have probably noticed that our tires today give more than twice the mileage they did ten years ago.

If you have compared the prices of then and now you have seen that present Goodyear prices are less than half of what they were.

Just to make this clear, consider our 30 x 3½-inch Cross-Rib clincher.

In 1910, for example, you paid $33.90 for this size tire.

Today, for a vastly better tire of the same type, you pay $10.95!

All other Goodyear Tires show similarly important reductions, the average decrease in price since 1910 being more than sixty per cent.

Goodyear quality was never so high—Goodyear Tires are larger, heavier and more durable than ever before.

Goodyear prices were never so low—as the figures here listed will show.

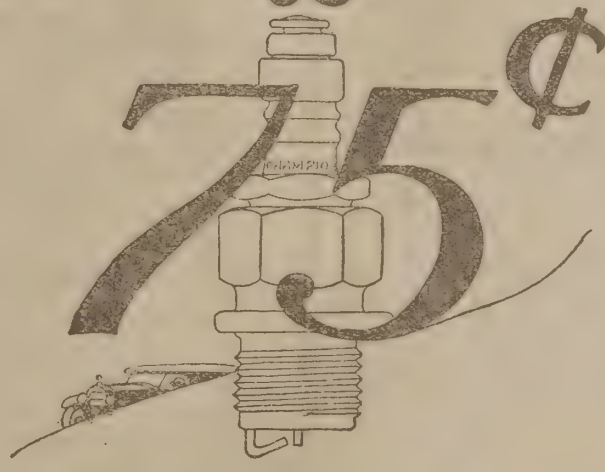
30 x 3½ Cross-Rib Fabric	$10.95		
30 x 3½ All-Weather Tread Fabric	$14.75	33 x 4 All-Weather Tread Cord	$33.40
30 x 3½ All-Weather Tread Cord	$18.00	33 x 4½ All-Weather Tread Cord	$42.85
32 x 3½ All-Weather Tread Cord	$25.50	34 x 4½ All-Weather Tread Cord	$43.90
32 x 4 All-Weather Tread Cord	$32.40	35 x 5 All-Weather Tread Cord	$54.75

Manufacturer's tax extra

GOODYEAR

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Champion X (Ford) now 60c.

Champion Spark Plug Co., Toledo, Ohio.

Sweet Cream Butter

By W. H. UNDERWOOD.

Some people would rather make butter from sweet cream than from sour or ripened cream. It takes less time to make sweet cream butter than it does to make the ripened cream product and if the proper control and attention to details are given to the process the amount of fat lost in the buttermilk is not any greater than that lost in the buttermilk by the usual methods of making ripened cream butter.

For making sweet cream butter cream should be skimmed that contains about 30 per cent of butterfat. Such cream will churn without difficulty at the required temperature. It also will be less likely to sour or to develop undesirable flavors if for any reason it can not be churned at the expected time and has to be held over for a time.

That the cream must be from clean, sweet milk is obvious. Stable or feed taints must in particular be guarded against. The cream is cooled as soon as possible after it has been separated. The temperature to which to cool will depend upon how soon churning is to take place. For immediate churning 40 to 45 degrees will give the best results, but if three or four hours must elapse before the churning can be commenced 48 to 50 degrees will be all right provided the cream is held at this temperature until churned. If it is held at too low a temperature for several hours the butterfat will become so hard that churning will be difficult or long delayed.

To give a more distinctive flavor and aroma to the butter a "starter" or sour buttermilk is added to the cream just before churning. The use of a starter is not necessary, but it will give a finer and more pleasing flavor to the butter, especially if the quality of the cream is not as good as it ought to be. The cold cream is placed in the churn and the starter added. As a rule 25 to 30 per cent of starter will be sufficient for winter use and 20 per cent for summer use. If desired a small amount of butter color may be added at this time.

The churning is then begun and continued until the butter granules are about half the size of grains of wheat or rice. This will require about 45 minutes of churning, according to the richness of the cream, the season of the year and the temperature. Care must be exercised not to overchurn the butter. If the granules are too large too much water and curd will be incorporated.

As soon as the churning is finished the buttermilk is drawn off through a strainer and the butter allowed to drain. In most cases draining it for 10 minutes will be sufficient, after which water at 50 or 52 degrees equal in volume to the cream used is added. After revolving the churn a few times the water is drawn off and the butter again drained. Excessive washing must be avoided, as it will remove the delicate flavor and aroma of the butter. The butter is salted to taste and worked in the same manner ar ordinary ripened cream butter.

The New Queen

In order to get the new queen to work in all the frames it is a good plan to place a brood comb in the top super, explained W. L. Cox of Elma, Wash., when talking of honey production. The queen often has a tendency to work on the lower super only, and allow this one to become too crowded. This condition can also be avoided by putting in a new super between the top and the bottom ones. In any case the bees should have plenty of room to make use of the honey flow and store it away in clean combs.

The super next to the comb is generally worked on most and if this is raised when nearly full and a new one slipped in it will be finished more carefully and it will also be cleaner.

When getting a new queen one should put in the order long enough before needed that the colony will not be held back for the lack of a queen. Never kill the old one before the new one arrives.

The new queen will sometimes leave the hive if she is not properly cared for. Let the workers gnaw her out of the shipping case. After she is placed in the hive it should never be opened before that time, as the workers are easily annoyed before their new queen has become established.

All bee furniture should be made up during the winter months, so that all will be in readiness when the good weather comes in the spring. As a general rule it is better to give the bees a solid foundation in the center of the frames, since they save much time in making the comb.

In sections where there are two main honey flows it is a good plan to make two extractions, since the first is usually of a clearer color. This is especially true in climates where the fire weed blooms in the early spring. The amber-colored honey is from such flowers as clover and alfalfa, which is a different quality than the early flowers. Where there is enough of the fire weed it will pay to make a separate extraction.

ON SEMI-OFFICIAL TEST.

D. F. Nugent of Granger, Wash., reports that he is putting all the cows in his dairy herd on semi-official test. The herd is headed by Allamuchy Sadie Vale Rose. Zillah Ragapple Fobes Segis Aaggie, a senior 4-year-old, recently completed a seven-day test in which she made a record of 476.3 pounds of milk and 25.23 pounds of butter. She had also just finished the first 30 days of her semi-official test with a record of 1905.5 pounds of milk and 101.65 pounds of butter.

SHIP BY WARREN FORMULA.

New York state dairymen who ships whole milk to the metropolis will hereafter be paid for their product on the basis of the Warren formula, originated by Professor G. F. Warren of the state agricultural college after a careful survey of production costs in various dairying sections of the country. Using this formula, class 1 milk will be sold at cost of production plus a fair profit. This action was taken only after many years' discussion, and only through the efforts of thousands of dairymen, united in the dairymen's league.

Real Job of Home Making

(Continued from page three.)

draining swamp lands: Buy sufficient powder to loosen the stumps; provide powerful steam or gasoline-propelled land-clearing machinery, and employ a few skilled men to direct the work. Unskilled labor is available in every community.

Payments for this improvement might be extended over a period of years. There is no question but that the majority of people thus aided would be able to repay the cost well within a five-year period.

Under present conditions, with many being compelled to work out the greater part of the year, it is a fortunate land owner who gets more than an acre or two cleared and into crop each year. It is a long, heart-breaking road to travel, this home making without means, but the woods are full of those sturdy men and women who seek independence from wage making in the fertile and pleasant lands of western Washington.

DRY AND SUNSHINY.

It is necessary to have a hog house which is dry and free from drafts. at the same time admitting sunshine.



Ditches Terraces

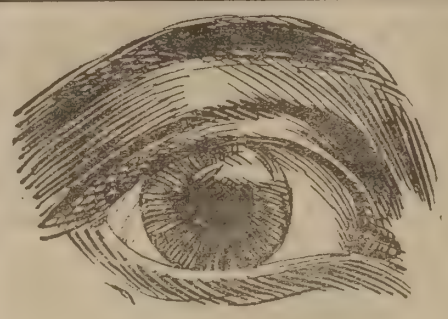
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The Great Farm Builder

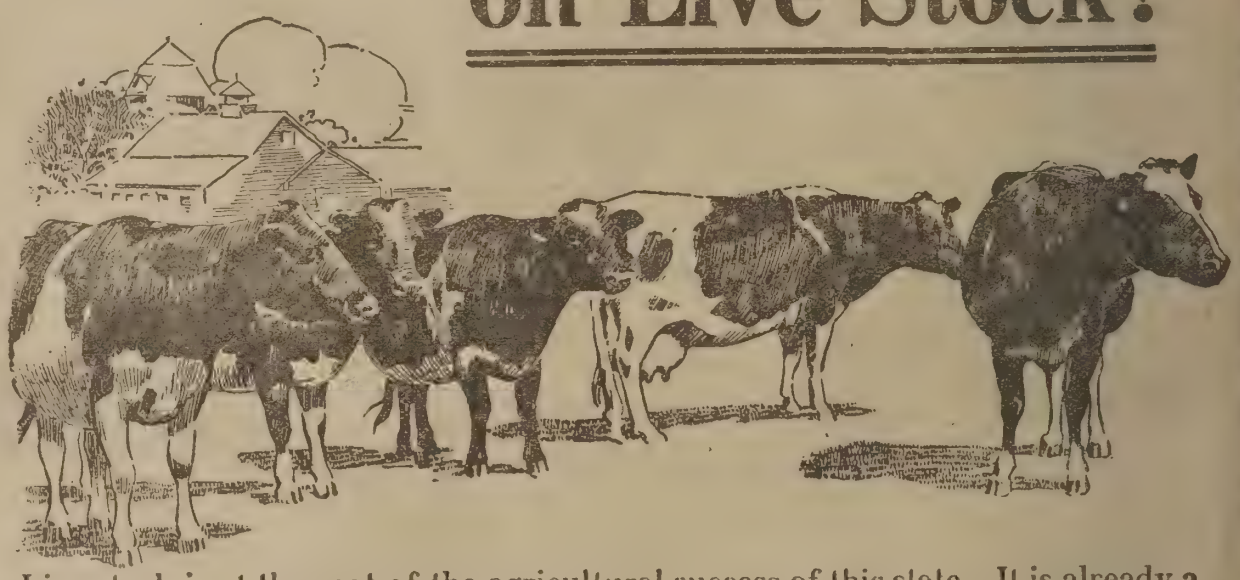
Works in any soil. Makes V-shaped drainage or irrigation ditch or cleans ditches down to four feet deep. Does labor of 100 men. Make every acre pay. All steel. Reversible. Adjustable. No cogs or levers to get out of fix. Write for free book and our proposition.

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Live stock is at the root of the agricultural success of this state. It is already a tremendous business and an asset to be watched and guarded. To this task your state farm weekly bends its efforts and lends its resources. Experienced veterinarians and authorities are in charge of its live stock department, and readers are given a great deal of practical and reliable information on the proper care of stock, treatment of sick animals, news of sales, market quotations, and reports of every important development in the live stock world.

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April 13, 1922.

HALF A CAN SAVED HIS COW

Trouble After Calving Quickly Cleared Up

So many cow ailments have their origin at the calving period simply because cows are left to shift for themselves during this critical time, when the simplest kind of medicinal care would insure health and safety. E. A. Hale of Chatham, Mass., writes us:

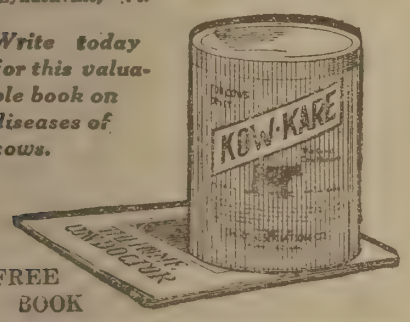
"Please send me a copy of 'The Home Cow Doctor.' I had one cow this spring that did not do well after calving. I tried everything and she grew worse all the time. Her milk about stopped. A friend of mine gave me about half of a small can of Kow-Kare. I gave her that and she began to pick up and eat before that half box was gone, and gave ten quarts a day. I got more Kow-Kare and now she is giving fifteen quarts a day, and is hungry as a wolf."

Kow-Kare has carried thousands of valuable cows safely through calving. The best plan is to use it for two weeks before and after. Barrenness, Abortion, Retained Afterbirth, Scouring, Bunches, Milk Fever, Loss of Appetite and all similar disorders that arise from weakened digestive or genital organs are quickly cleared up by Kow-Kare, because it is these organs that are toned up and strengthened by this great cow medicine.

General stores, feed dealers and druggists sell Kow-Kare at the new reduced prices, 65c and $1.25

DAIRY ASSOCIATION CO., INC., Lyndonville, Vt.

Write today for this valuable book on diseases of cows.



FREE BOOK

Write for [illegible] and information

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904-6-8 First Ave., Spokane, Wash.
DEALERS IN SUPPLIES FOR DAIRY, POULTRY, BEES AND ORCHARD.
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DR. HESS DIP and DISINFECTANT

Use the sprinkling can about your premises—the dipping tank where the occasion demands. For your hogs, a wallow is the most convenient, and quite effective. To every 70 to 100 gallons of water add one gallon of Dr. Hess Dip and Disinfectant. Then your premises—the cow barn, the stables, the pig pen, the poultry house, the sink, drains, closets, cesspools—everything, everywhere, will be pure and healthful.

You can dip, or you can spray or sprinkle, or apply with a sponge or brush, Dr. Hess Dip and Disinfectant to the animal body. There's scarcely an animal parasite, skin disease, or infection that Dr. Hess D. and D. will not remedy. *Guaranteed.*

DR. HESS & CLARK Ashland, Ohio

News for Breeders

TO BUY GUERNSEY STOCK.

Members of the Washington Guernsey Cattle club contemplate buying a shipment of breeding stock from middle western breeders with the view of holding in the near future one or more sales in western Washington. At present the plans are to hold one sale in some part of northern Washington, while the second sale will be held at either Puyallup or Chehalis. There is an unusual call for Guernsey heifers and milch cows in the entire western Washington district and it is the hope of the officers to bring a number of animals to the breeders, the great majority of whom do not have the time or means to go away to buy cattle of their own accord.

"We find that there is a good demand for breed heifers and for proven sires with tested daughters," said Leland J. Clark of Seattle, vice president of the club. "The local demand can not be supplied from Washington breeders and even the bull calves are by no means a drug on the market. There are, however, a few breeders who have a cow or heifer to sell and we plan on getting a few local animals consigned to the sale. This will give the buyers a better opportunity to fill their needs."

The Thurston County Guernsey association has taken up the matter of new stock with one of its local banks and plans are now under foot for the purchase of a carload of animals which will be disposed of in that county alone.

Officers of the state organization are J. E. Wrage, Arlington, president; Leland J. Clark, Seattle, vice president; H. B Douglas, Ferndale, secretary-treasurer. Additional members of the board are R. N West of Yakima and Mrs. S. P. Davis, Olga Orcas island.

GARRETSON BUYS TOP COW.



Chimacum Wayne Pontiac Burke 2d, by a son of the famous 33-pound Chimacum Wayne Boone and from a daughter of another son, was the top-priced cow at the Davis-Butchart dispersal sale at Granger early in February. She was bid in at $850 by Lloyd Garretson of Yakima, who thus obtained a 30-pound junior 4-year-old to add to his growing herd of purebreds at Painted Rocks ranch. She was consigned by Butchart Brother. Her picture is shown herewith.

BREAKS SEVEN-DAY MILK RECORD.

About the same time that word was received in Washington that the Todd bred Holstein, Cascade Pietertje, had topped the Brentwood sale at $3325, it was announced that Cascade Pauline Mercedes, another daughter of Sir Korndyke Ormsby Pieve bred by the Todds, had broken the American seven-day milk record for senior 4-year-olds with 849.2 pounds of milk and 33.5 of butter. She is owned by the Minnesota breeders who recently bought her sire, and who paid $10,000 a year or two ago for one of her sisters She is the new Minnesota state leader also for butter production in the 30-day division, senior 3-year-olds, with a 10 months' record of 869.61 pounds of butter from 21,507.5 of milk.

HOLSTEIN SALE AT ELMA.

Lewis and Thurston county Holstein breeders, as well as those of Grays Harbor county, are expected to participate in the sale of 50 to 75 heads which Jefferson county breeders are planning at the county fairgrounds, near Elma May 6. The Grays Harbor county farm bureau is cooperating to make the sale a success, and a committee, consisting of W. T. McBride, J. E. Ebinger and County Agent Robert Cowan inspected the cattle which will be sold.

HOLSTEIN SALE.

"The sale will be held at the Southwest Washington fairgrounds and it will be a dandy," says Secretary E. A. Donaldson regarding the cooperative consignment sale which the Lewis County Holstein club has set for May 24. Nathan Hamilton is dispersing his entire herd of 20 head, and the sale is to be made up entirely of cattle consigned by local club members. There will be about 50 head, of which over 40 will be females."

GUERNSEY SALE.

A date that is of considerable importance to Yakima valley Guernsey breeders, at least, is that of April 18, when 30 head of purebreds recently imported from Wisconsin will be auctioned off at Fawndale farms, owned by Wallace & Fordyce, near Sunnyside, Wash.

Breeders' Dept.

We Buy and Sell
Grade and Pure Bred Dairy Cattle.
We can save you money whether you wish to buy or sell. One or a carload.
Graham Livestock Co.
E2605 Broadway, Spokane, Wash.
NEAR CARSTENS' PACKING PLANT.

GENUINE SHOW PROSPECT
Born April 28, 1921.
MUTUAL FOBES BONNIE WAYNE.
A very handsome bull, blocky built, square butted and straight as a line. His dam is a daughter of Wit Duchess Lad, he out of a 24-lb. daughter of Johanna Rue 2d's Paul De Kol. His sire is Mutual Fobes Bonnie De Kol, whose six nearest dams average 26 lbs. of butter in seven days. Pedigree on application.
Registered, licensed and T. B. tested.
PRICE $200.
C. R. EVANS
Halsey, Ore.
(Under federal inspection.)

Bull Calves From Tested Dams
Records up to 935 pounds butter. Sire, Sir Johanna Fayne Bonheur DeKol, backed by great production. Prices reasonable.
MAX ARP, Eugene, Ore.

Holstein Bulls sired by son of world record cow. from dams sired by brother to Segis Pietertje Prospect. Prices low.
H. R. BOOMER, Payette, Idaho.

Two Holstein Bulls Cheap
Good individuals, by grandly bred sire. Dams or. 305 day test. Federal accredited herd. Send for pedigree and full particulars.
OSCAR DUNLAP. Junction City, Ore.

Northwood Herd Milking Shorthorns
Improve your herd with a Shorthorn bull of the milking strain. Getting milk as well as beef. We have some choice bull calves for sale at farmer's prices from high record cows.
NORTHWOOD FARMS, Redmond, Wash.

Arrorok Shorthorns Herd headed by True Baron. 1st premium Idaho state fair, 1918-1920. A superb collection of Scotch breeding matrons. Write your wants in range and herd bulls.
ARROROK HERD FARM. Boise, Idaho.

IDABOIS FARMS SHORTHORNS.
King Lavender, the bull that topped the Portland sale in 1920, heads a herd of superior Scotch breeding matrons. Write us for range and herd bulls. A great collection to choose from. O. O. HAGA. Boise, Idaho.

ABERDEEN-ANGUS
bulls will mature your steers earlier, give them a heavy, thick and low set conformation, dehorn them and add to their quality so that they will top the market every time. We have a wonderful lot to select from, both range and herd bulls, at prices which will move them.
CONGDON & BATTLES.
P. O. BOX 275. YAKIMA, WASH
Write for prices and literature.

ABERDEEN ANGUS cattle for sale. bulls 2 years and yearlings, also heifers. Prices right.
W. T. SHELDON. New Plymouth, Idaho.

Ayrshires
Outstanding bull calves, ready for light service; sired by grand champion Willowmoor Peter Pan 25th, and from high producing cows with show records.
E. W. VAN TASSELL, Wenatchee, Wash.

Ayrshires Cows bred to and heifers bred by Will Peter Pan 16th, also yearlings and calves. Only one bull calf left. Some blood of Lilly of Willowmoor's sire.
J. U. SMITH, R. 1, Newberg, Ore.

If You Keep Live Stock
you should also keep a careful record of your stock, milk records, breeding records, labor and feeding records, live stock accounts, general farm accounts and expense accounts for household and personal expenses. We will send you a record book covering all these matters, free. The supply is limited. Address
THE PACIFIC NORTHWEST FARM TRIO.
Dept. B., Review Bldg., Spokane, Wash.

Read the "Want Ad" page this week for good offers of all kinds.

Weatherford Bros. Herefords
We have for sale a few choice herd bulls and bulls for the farm and range, at prices in keeping with the times. Herd headed by the great breeding bull, Beau Blanchard 59th, whose calves show great bone, size and quality.
WEATHERFORD BROS. Dayton, Wash.

For Sale—Some choice bred
GUERNSEY FEMALES
Can give terms to responsible parties. Just a few bull calves left, better hurry.
FOSHAY FARM.
O. & M. L. VOGET. Hubbard, Ore.

OREGLOW JERSEYS
7 records finished in Oreglow herd last 5 months average over 600 lbs. fat; 4 of the records made by 2-year-olds.
IRON MINE FARM, Oswego, Ore.
W. M. LADD, Owner.
D. BROOKS HOGAN, Mgr.

Anoka Farm Jerseys
We have your wants in a bull calf dropped July 1. He is a beauty and his dam has a record of 504 lbs. fat. Priced to suit the most conservative buyer. Address
R. B. SEELY, Sherwood, Ore.
RY. STATION, WILSONVILLE, ORE. ELEC.

Jersey--Gold and Silver Medal Sire
Ashnook Farm offers a few heifers and young bulls, sired by the gold and silver medal sire, Silver Chimes, of S. B., sire of ex-world champion heifer, Silver Chimes Gwendola, and 20 register of merit daughters, and more qualifying.
DEL PERKINS, Carlton, Ore.

Register of Merit Jerseys
Young bulls out of dams with good official records and sired by Foxhall's Chief Engineer, combining the blood of the great Foxhall's Fern Lad and Golden Glow's Chief strains.
FOX BROS., Silverton, Ore.

Locust Lane Farm Jerseys
Sybil's Noble's, accredited and R. of M. Jerseys; type, size and production through our blood lines.
L. S. DILLE & SON, R. 4. Caldwell, Idaho.

ST. MAWES JERSEY BULL.
Three nearest dams of sire averge 841 lbs. fat. Dam on test, milking over 10 lbs. a day. Priced right.
J. C. BROWN & SONS, Shedd, Ore.

639 LBS. FAT AS JR. 2-YR.-OLD
is the record of the dam of a young Jersey bull, ready for light service, that we are offering. Write today for price and full particulars. J. J. VAN KLEEK & SONS.
BOX P, BEAVERTON, ORE.

DISPERSION SALE OF
GIANT BONED POLAND CHINA SOWS, BOARS AND PIGS.
Three fine boars, of best type and breeding a lot of fine pigs and ten sows to farrow or have farrowed in March and April. All registered. Prices reasonable.
B. F. BIRD, Box 594, Nampa, Idaho.

Polands--The Big Wonder Herd
of genuine big type Poland China hogs. Home of the grand champion sow of the northwest. Satisfaction guaranteed on all orders.
E. O. LOE. Silverton, Ore.

Big Type Polands
Special prices on choice Sept. boar pigs. A few extra good gilts bred to Biggest Buster. One 300 lb. March boar, a good buy at $50.
FRED D. ENTERMILLE. Baker, Ore.

River Banks Better Berkshires
Long, smooth, deep fall pigs. Either boars, gilts or trios.
RIVER BANKS FARMS. Grants Pass, Ore.

Riverby Orchard Berkshires
Oldest established Berkshire herd in the northwest. Young pigs and bred sows for sale. Address
D. C. BUNN, Prosser, Wash.

Great I Am 1st. Duroc-Jersey junior bear, Western Royal and Pacific International, 1921, at head of herd. Bred gilts and weaned pigs for sale.
CRESCENT STOCK FARM, Johnson, Wash.

Chester White Swine
Herd headed by Oregon Buster, grand champion Oregon State Fair and winter circuit, 1921. Fall gilts now offered.
CASS A. NICHOLS. Salem, Ore.

Send for Free Booklet
"Some Suggestions to Live Stock Advertisers," outlining the practices of successful men of long experience. Helps in determining how much to spend, the mediums to select, preparing advertisements, handling inquiries, the use of photographs, etc.
Write today.
THE PACIFIC NORTHWEST FARM TRIO
Dept. L. Spokane, Wash.

O. A. C. Dairy Husbandry Department
offers for sale at farmer's prices, four Holstein bulls, ready for service, sired by Sir Soldene De Kol Pietertje; a double grandson of Florence Idella Sharp, former state record cow with 27,236 lbs. milk and 1146 lbs. butter. All from record dams that are now on retest and increasing their former records by large margins. Also three young calves of the same breeding.
A few Ayrshires, ready for service, are still left and some calves of the Jersey and Guernsey breeds.
DAIRY DEPARTMENT, O. A. C. Corvallis, Ore.

COMP C O
EXPERIMENT STATION
URBANA ILL

Sensational Savings

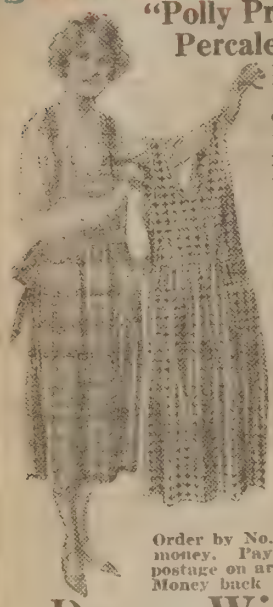
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Don't send one cent. Just letter or postcard brings any of these smashed price bargains. **Merely give Name and Number of Each Article You Want. Also State Size and Write Your Name and Address Plainly to Avoid Delay.** Pay nothing till goods arrive—then only the amazing bargain price and postage. Then examine your selection—try it on—show it to your family and friends. If you are not delighted with your bargain for any reason at all, simply return the goods and your money will be cheerfully refunded. ORDER NOW.

SHAROOD CO., Dept. 56 Minneapolis, Minn.

"Polly Prim" Percale Aprons



Every minute of the day these practical slip-over style "Polly Prim" aprons come in handy. No woman can afford to be without them—especially at this smashed bargain price.

2 for 99c

We offer an unusual bargain in these cunning percale aprons. Made in plaid and check patterns. Very useful, yet inexpensive. Two pockets, and rickrack trimming throughout. Comes one plaid and one check to a set of two.

Order by No. 56E6545. Send no money. Pay 99 cents and postage on arrival for 2 aprons. Money back if not satisfied.

Strong Comfort Work Shoe *for* Men



$1.99

State Size

Order your pair quick—while this bargain offer lasts. Wonderful work shoe for men. Has soft, strong uppers that resist barnyard acids. Solid leather insoles. All seams stitched with waxed thread. Strong leather soles. Wide widths. Sizes 6 to 11. Order by No. 56A758. Send no money. Pay $1.99 and postage on arrival. Order boys' sizes 1 to 5½ by No. 56A554. Price $1.89. Order little gents' sizes 9 to 13½ by No. 56A555. Price $1.79 and postage on arrival. Mention size. Sizes for men and boys.

Men's English Model



Smartest shape and best quality; regular $8.50 value. Selected black or brown calfskin. Extension soles. leather insoles. Solid leather heels. Sizes 6 to 11. Wide widths.

$1.99

Wide Widths

Order black by No. 56A657. Send no money. Pay $1.99 and postage on arrival. State size. Order same style as above in rich brown calf by No. 56A661. Send no money. Pay $2.99 and postage on arrival. State size wanted.

Stunning Style Dotted Voile

With Rich Organdy Collar, Cuffs, Sash.



This beautiful model in voile is a very striking design—right up to the moment in following fashion's dictates for spring and summer. It is also a mode that fortunately becomes every figure and a truly amazing bargain at our smashed price. Send today and judge for yourself.

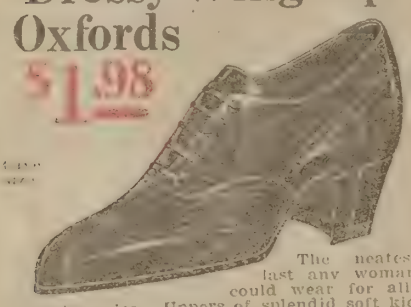
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Made of standard quality dotted voile with modish panel - trimmed overskirt. The neat Tuxedo front, wide, flowing sash and deep cuffs on sleeves, are of sheer white organdy. Make this unusual saving now. Order your size in choice of three colors below. Sizes 34 to 46.

Order Light Blue by No. 56E6354. Navy Blue No. 56E6355. Rose. No. 56E6356. Send no money. Pay $1.98 and postage on arrival for either color. Money back if not satisfied. Be sure to mention size when ordering.

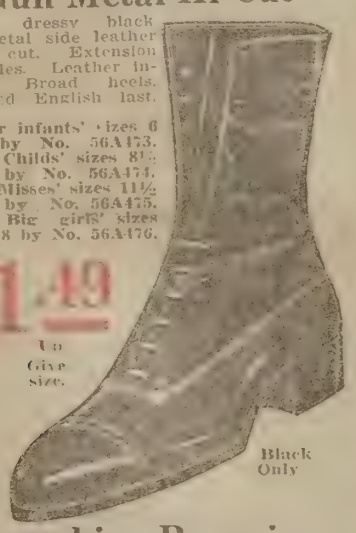
Dressy Wing Tip Oxfords

$1.98



The neatest last any woman could wear for all-around service. Uppers of splendid soft kid finished leather with fancy perforated wing tip and vamp. Strong oak soles and medium rubber heels. A style that will always look dressy. Choice of black or brown. Sizes 2½ to 8. Wide widths **Order black by No. 56A275. Order brown by No. 56A276. Send no money. Pay $1.98 and postage for either color on arrival. Money back if not satisfied. State size.**

Gun Metal Hi-Cut



Very dressy black gun metal side leather high cut. Extension oak soles. Leather insoles. Broad heels. Modified English last. Black.

Order infants' sizes 6 to 8 by No. 56A473. $1.19. Childs' sizes 8½ to 11 by No. 56A474. 1.79. Misses' sizes 11½ to 7 by No. 56A475. $1.89. Big girls' sizes 2½ to 8 by No. 56A476. $1.98.

$1.49

Up

Give size.

Black Only

Blue Denim Overall

Now Only

98c



Excellent wearing medium weight blue denim overall for men. Cut full and strongly sewed with heavy thread, reinforced at all strain points to prevent ripping. Roomy regulation pockets. Sizes 32 to 42 waist; 32 to 35 inseam. **Order by No. 56B1502. Pay only 98c and postage on arrival. Give measurement.**

Men's blue denim jacket; same material as overall; well made; fitted with regulation pockets. Breast measure 36 to 44. **Order by No. 56B1503. Pay only 98c and postage on arrival. Give size.**

BOY'S OVERALLS.

Medium weight blue denim overalls for boys. Cross back suspenders, large front and hip pockets. **Order ages 4 to 9 by No. 56B1512. Pay 49c and postage on arrival. Order 10 to 15 by No. 56B1514. Pay 59c and postage on arrival. State size.**

Sturdy Scout Shoe



Soft, brown, ooze leather uppers. Reliable oak leather soles stitched and standard screwed to prevent ripping, leather insoles; low, broad, leather heels. Sizes 6 to 11. Wide widths.

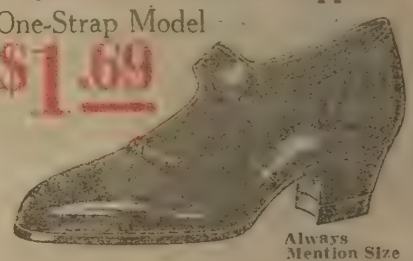
$1.79

Order by No. 56A740. Send no money. Pay $1.79 and postage on arrival. Order little boys' sizes 9 to 13½ by No. 56A567. Price $1.49. Order big boys' sizes 1 to 6 by No. 56A566. Price $1.59. Pay bargain price and postage on arrival. Give size.

Soft Kid Comfort Slipper

One-Strap Model

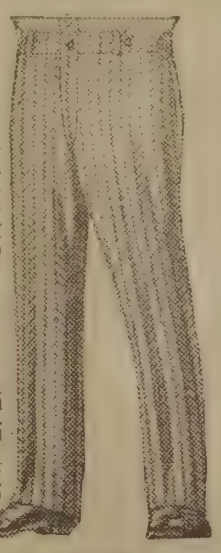
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Always Mention Size

Soft kid leather slipper. Stylish strap model with two buttons. Medium round toe. Cushion insoles. Medium rubber heels. Solid oak leather soles. A bargain at our slashed prices. Sizes 2½ to 8. Wide widths. **Order black by No. 56A228. Order brown by No. 56A229. Send no money. Pay $1.69 and postage on arrival.**

Narrow Gray Striped Worsted PANTS



Neat narrow gray stripe pattern of Thorndyke cotton worsted. Celebrated for its durability. Ideal material for work trousers. Suspender buttons. Belt loops, plain bottoms. Stoutly sewed waistband. Sizes, waist 30 to 42. Inseam 30 to 34.

$1.49

Order by No. 56B1563. Pay only $1.49 and postage on arrival. Give your waist and inseam sizes. Order men's strong khaki pants by No. 56B1560. Pay $1.29 and postage on arrival. Give measurement.

Blue Serge Pants Bargains.

This price is so amazingly low that there will surely be a flood of orders for this number. Fine blue serge of splendid weight material that assures good service. Made with 2 hip, 2 side and 1 watch pocket. Plain bottoms, can be made cuff style if desired. Belt loops and inside suspender buttons. 30 to 42 waist; 30 to 34 inch inseam. **Order by No. 56B1564. Send no money. Pay $2.69 and postage on arrival. Mention necessary sizes. Order men's trousers of genuine all-wool serge in same range of sizes by No. 56B1568. Send no money. Pay $3.59 and postage on arrival. State size.**

Guaranteed 6000 Miles



Brand New TIRES

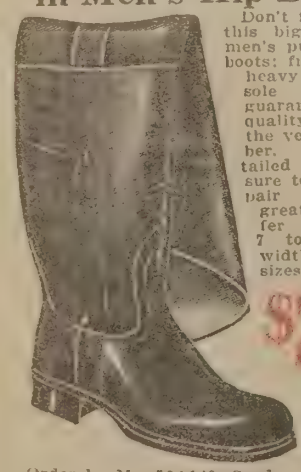
going at SMASHED PRICES. 30x3 size. now only

$6.49

Brand new, fresh stock (not retreaded.) Heavy nonskid tires of live rubber, generously oversize. 6000 miles guaranteed, but often give 8000 to 10,000. We will apply credit on the purchase of a new tire for mileage less than 6000 that you get from any tire selected. The world's greatest bargains in tires—30x3 size in ribbed tread. Others are nonskid. Pay only the bargain list price and postage on arrival.

No. 56D40—30x3	$6.49
No. 56D41—30x3½	$7.98
No. 56D42—32x3½	$10.98
No. 56D46—34x4	$15.48

Smashing Bargains in Men's Hip Boots



Don't fail to make this big saving on men's pure gum hip boots; friction lined; heavy corrugated sole and heel; guaranteed first quality. Made of the very best rubber. Usually retailed at $5. Be sure to order your pair while this great saving offer lasts. Sizes 7 to 13. Wide widths. No half sizes.

$2.48

Give Size.

Order by No. 56A949. Send no money. Pay $2.48 and postage on arrival. State size wanted. Order similar style in knee boot, sizes 7 to 12, by No. 56A950. Send no money. Pay $2.48 and postage on arrival.

Brogue Dress Shoe Goodyear Welt Brown Russian Calf

$3.98



Give Size

Most popular color men's dress shoe for spring. Dark mahogany brown Russian calf—new brogue style, with full vamp (not cut off), and fancy perforations on tip and vamp, as pictured. Extension Goodyear sewed soles; pure gum rubber heels; leather insoles. Sizes 6 to 11. Wide widths. Order by No. 56A635. Pay $3.98 and postage on arrival.

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THE WASHINGTON FARMER

ESTABLISHED 1894 SPOKANE. SEATTLE.

Is Big With Farm Prosperity

Columbia Basin Project Gives Pacific Northwest Its Greatest Agricultural Opportunity

Who is this man Goethals who deliberately reports, after due investigations, that the Columbia basin irrigation project, including 1,753,000 acres of land and providing 43,000 40-acre farms, has in its soil, in its water supply, in its transportation facilities, in its access to world markets, in its cost of the watered lands to settlers, in its engineering feasibility, the capacity of adding much more to the national wealth than either the Panama canal or the Alaska railroad; and that "this work should be provided for and carried out as were these other two national projects—by direct appropriation?"

General Goethals further recommends

That the entire project be undertaken with a view to complete it in its entirety, rather than in piecemeal or adopting temporary construction;

That the estimated time for completion be six years;

That no apprehension need be felt about settlement of the land after water has been placed thereon;

That the payment for land by the settler may extend over a long period of years.

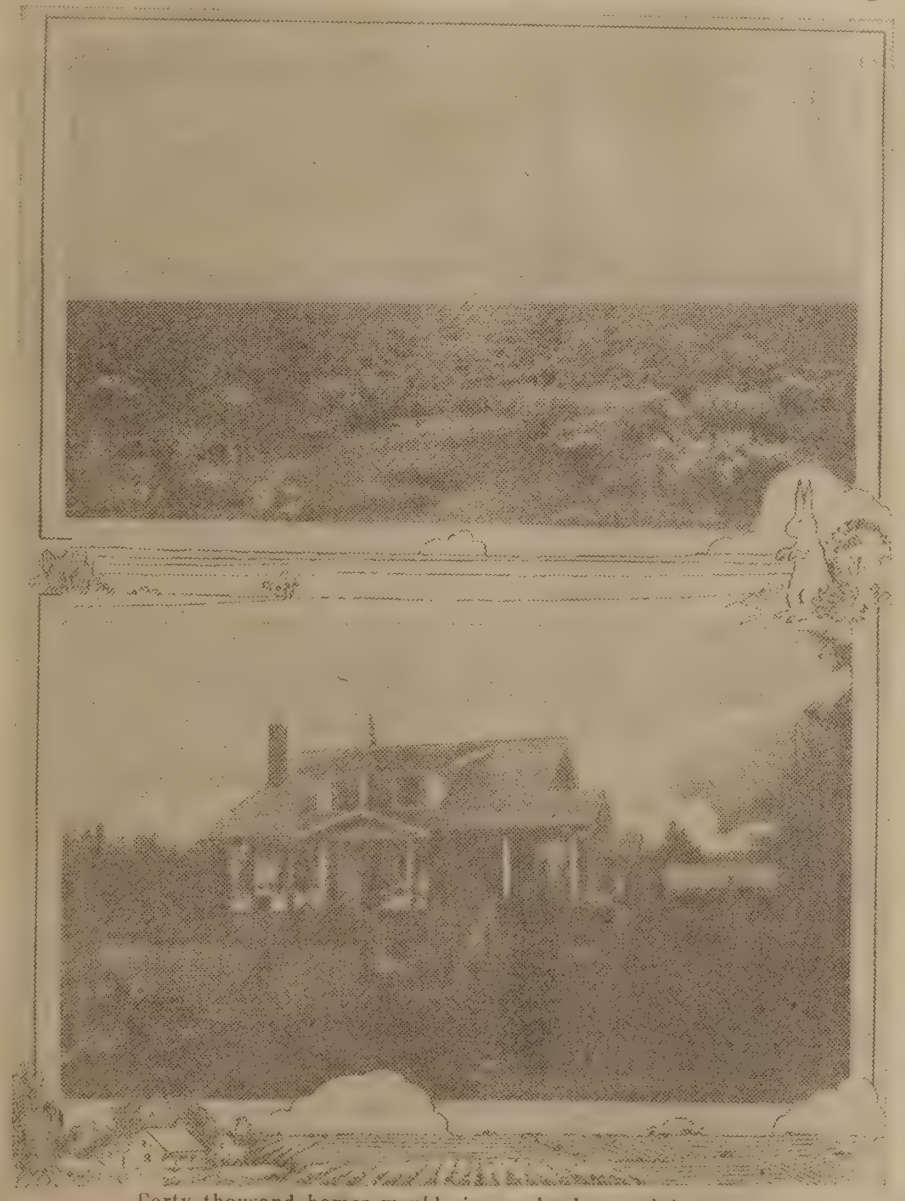
That the government should bear or absorb the interest charges, "which will be more than repaid through the increase that will result to the natural wealth affecting industries and products of all kinds over the entire country."

Most of us know that a man named Goethals built the Panama canal, and we naively surmise that it must have been rather a big job. Not so many of us realize that Major-General Goethals has done something vastly more tremendous, difficult and complex.

Dutch by descent, a

Greater Quality Production, Better Quantity Markets, More Neighbors, Better Schools, Churches and Social Privileges, Making Farm Life More Worth While to the Young Folks.

West Point man by training, and coming honestly by what became recognized as "Goethals' terrible tenacity" from a number of distinguished and likewise tenacious progenitors, George Washington Goethals has a decidedly forceful personality.



Forty thousand homes would rise on lands now lying waste.

After graduation from West Point he was for a number of years stationed in the Pacific northwest, a part of the time at old Fort Spokane on the Columbia river, but in 1898, when we went to war with Spain, became the chief engineer of the volunteer forces.

Later, he built the fortifications and harbor works of the city of Newport, R. I., and had charge of Muscle Shoals canal construction, and still later of all improvements of the Tennessee river below Chattanooga.

It was in 1907 that President Roosevelt saw in him the man for the big, thrice-attempted task to the southward, and appointed him chief engineer and chairman of the canal board.

The building of the Panama canal was a vast engineering feat, but it was a still more remarkable achievement in organization and administration. Goethals had been trained in a military career. It was confidently expected that administration of the great piece of work would be along militaristic lines: desirable places would fall, by natural reasons of accordant policy and fullest knowledge and trust, to military men. Desirable places did not. They fell to responsible men, indiscriminately, and administration took on at once a civilian aspect.

The success of the thing demanded the organization and maintenance of a complex little American state of 65,000 souls, with schools, courts, postal system, taxation and revenue-raising system, policing and all the rest of the problems of a state.

In addition it demanded the solution of problems of sanitation on a large scale;

Continued on page six.

What Are the Prospects for the Wool Man?—Page 6

The Tariff Bill

Should Protect All Industry Alike

The administration's tariff bill, laid before the senate last Monday, seems fair to agriculture. In framing the agricultural schedule the committee gave the republican agricultural bloc about the rates asked for. The bill includes most items of foodstuffs, many of which were on the free list in the Underwood bill passed by the democratic congress in President Wilson's first administration.

This proposed new tariff measure may be defective in certain particulars. It is yet too early to pass unreserved judgment upon it. It may be found that protection in some cases is too high and in others too low; it may develop that some of the big industries that ought to be able to stand alone by this time have been given too much protection.

But in its broad, general principles, this bill undeniably is fairer than the Underwood law, which it proposes to repeal. The Underwood law put most agricultural products on the free list and sharply reduced the protection that had been given to other farm products. At the same time continued protection to manufactured commodities.

We have always contended that if the country is to have protection it should be protection all round, without discrimination for or against any of our great, basic industries. On the other hand, if we are to have free trade or a tariff for revenue only it should be all-round free trade or tariff for revenue only.

The injustice of the Underwood bill lay in the fact that while it took protection away from the American farmers it compelled them to go on buying their merchandise in protected markets.

The old Payne-Aldrich republican tariff law was not perfect. It levied tariff duties that were too high for those times. But it at least had the merit of giving a square deal to agriculture, and the bill now brought forward by the Harding administration has that same virtue. The congressman who drafted it gave an attentive ear to the farmers of the United States and we are convinced that agriculture will have justice under it that it has long been denied under the Underwood law.

Comparisons of the proposed tariff on products of special interest to the farmer with those prevailing in the Fordney, Underwood and Payne-Aldrich bills follow:

Wheat—30 cents bushel; Fordney and Payne-Aldrich, 25 cents; Underwood, free.

Corn—Including cracked, 15 cents bushel; Fordney and Payne-Aldrich, same; Underwood, free.

Oats—15 cents bushel; Fordney, 10 cents; Payne-Aldrich, 15 cents; Underwood, 6 cents.

Barley—20 cents bushel; Fordney, 15 cents; Payne-Aldrich, 30 cents; Underwood, 5 cents.

Rye—15 cents bushel; Fordney and Payne-Aldrich, 10 cents; Underwood, free.

Cattle—1½ cents pound to 2 cents per pound; Fordney, 1 to 1¼ cents; Payne-Aldrich, $2 head to 27½ per cent; Underwood, free.

Fresh beef and veal, 3½ cents pound; Fordney, 2 cents; Payne-Aldrich, 1½ cents; Underwood, free.

Sheep and Goats—$2 head; Fordney, 1 cent pound; Payne-Aldrich, 75 cents head to 20 per cent; Underwood, free.

Mutton—2½ cents pound; Fordney, 1¼ cents; Payne-Aldrich, 1½ cents; Underwood, free.

Swine—½ cent pound; Fordney, same; Payne-Aldrich, $1.50 head; Underwood, free.

Fresh pork—¾ cent pound; Fordney, same; Payne-Aldrich 1½ cents; Underwood, free.

Bacon, hams and shoulders and other pork, prepared or preserved—2 cents pound; Fordney, 1¼ cents; Payne-Aldrich, 4 cents; Underwood, free.

Apples—30 cents bushel; Fordney and Payne-Aldrich, 25 cents; Underwood, 10 cents.

Peaches and pears—½ cent a pound; Fordney, same; Payne-Aldrich, 25 cents bushel; Underwood, 10 cents bushel. Dried or evaporated, 2 cents pound; Payne-Aldrich, same; Fordney and Underwood, each 1 cent.

Plums and prunes—½ cent pound; Fordney, same; Payne-Aldrich, 25 cents bushel; Underwood, 10 cents bushel; dried, ½ cent per pound; Fordney, same; Payne-Aldrich, 2 cents; Underwood, 1 cent.

Hides of cattle of bovine species—Green, 2 cents per pound; dried, 4 cents pound; Fordney, Payne-Aldrich and Underwood, free.

Earwig Comes Across

Certain parts of the United States are becoming infested with the European ear wig. This pest, which is very much like the cockroach, has for many years been known in European countries with climates similar to the northeastern and northwestern parts of the United States.

"The insect takes its name from its supposed habits of concealment," says W. D. Whitcombe of the United States bureau of entomology. "Traditions tell of its hiding in the ears of animal or, in some instances, of human beings. On the end of its abdomen are a pair of forceps similar to the instrument used in former times for the piercing of ear lobes for earrings.

"Ear wigs live on vegetation of almost any kind. They are very fond of concealing themselves behind clinging vines or close growing shrubs of any kind. They have the peculiar habit of feeding at night and hiding themselves during the day. Some of them have been known to climb to the tops of telephone poles, where they would hide in cracks of the pole or under the yard arms. They will also hide in strange places about the house, as, for instance, under a doormat or in unused rubbers about the porch. They are very quick when found and are hard to catch."

"The eggs are laid in the fall," says Mr. Whitcombe, "and both the male and female live over winter, the female protecting the young in the spring. The eggs are apt to hatch as early as February in case warm nights occur. It is during this hatching period, the first two weeks of their lives, that control methods are most successful. Poisoned bait has been found very effective if used in the early spring when the pest is first noticed. Sixteen parts of stale bread ground up thoroughly and mixed with one part paris green is recommended. It is important to apply this bait during the night. The insects are very fond of new grass or young leaves, but will eat this mixture in preference if it is spread before them.

"Spraying with arsenate of lead will kill the insect when they are feeding upon plants. This also should be applied early in order to thoroughly cover the young leaves.

"Later in the season, when the ear wig is well grown, an insect trap can be used to good advantage. A concealed flower pot, the top of which can be closed quickly, gets results. This pest is more easily trapped than other insects, due to its desire to hide in almost any thing

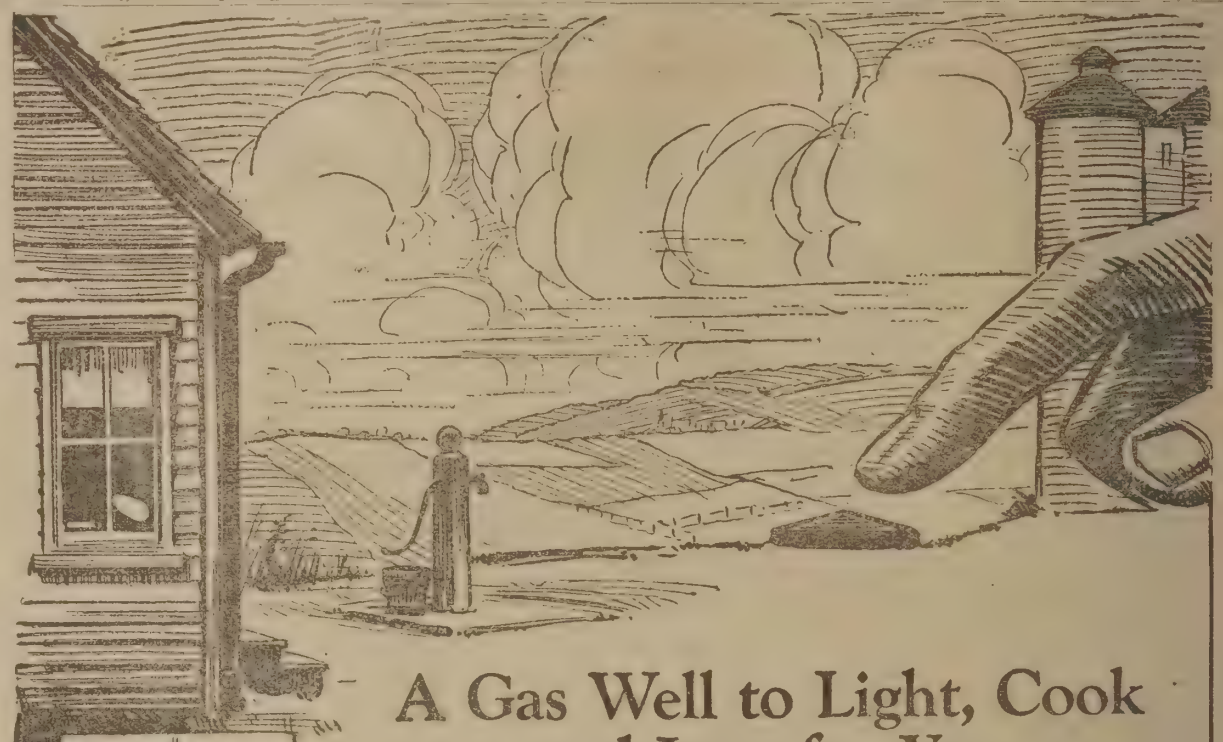
"A contact insecticide is also successful in killing the mature insect. This should be applied behind vines and bushes and upon the shrubbery itself. Black leaf 40 is best for this purpose.

The injury caused by the pest is mostly to the leaves of valuable shrubs and flowers about the lawn. Chrysanthemums and dahlia buds are its favorite diet. But in addition to this it is a great nusiance to the housewife because of the places in which it hides.

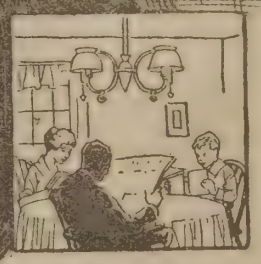
WHO BRED GREAT GUERNSEYS?

The questions of who bred the great Guernsey cows and where they were bred is answered in a recent number of the breed's official organ with a list of 212 men and women who have bred one or more Guernsey cows that on official test have produced 700 or more pounds of butterfat in one year. A total of 337 Guernseys are shown, the list being dated March 1. There are three Oregon and three Washington breeders in it: Fred Groner, D. H. Looney and Clarence True Wilson of Oregon and C. V. Lochridge, Albion L. Gile and Dr. Park Weed Willis of Washington. Each has bred one 700-pounder.

Needless to say, most of the great producing cows have been bred on the Isle of Guernsey and in eastern states. Forty-nine "island" breeders have produced 58 700-pound cows, and Massachusetts, New Jersey, New York, Pennsylvania and Wisconsin breeders have brought out more than half of the total of 337.



A Gas Well to Light, Cook and Iron for You



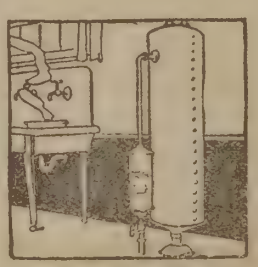
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THE WASHINGTON FARMER

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Vol. 46. No. 16 THE RANCH PACIFIC DAIRYMAN HORN AND HOOF April 20, 1922

For Good Farming, Attractive Country Homes and Happy Country People

Says Pooling Was Not the Issue

Washington Farmer Gets Interesting Letter From U. S. Grain Growers

Editor Washington Farmer: I have read your report of the first annual convention of the United States Grain Growers, Inc., as carried in the March 30 issue of The Washington Farmer, with considerable interest. Doubtless you have by this time received the copy of the Grain Growers' News, published by this department at the close of the convention. I am enclosing a copy in the event that same was not brought to your attention.

You should be advised that the issues in our convention were not concerned with the pooling features of the contract in any way, but had to do with much more fundamental problems and primarily that of administration. The administration of President Gustafson was charged with having been too slow in the development of the organization. On the other hand, it was apparent to men outside the organization—and I present their views rather than my own because mine would be subject to the charge of prejudice—that the organization was needlessly delayed throughout the year because of the factional differences on the board. Either one side or the other of those factions had to be given a majority in this convention if that situation was to be changed.

The majority favored the administration of C. H. Gustafson to that which they felt Mr. Eckhardt would give for reasons of economy and practicability. Mr. Gustafson has had a long experience in cooperative organization work which has been uniformly successful, notably the development of the farmers' cooperative live stock commission firm on the Omaha market. He is conservative, careful and does not take a step until he has given due consideration of all angles of the problem under consideration. He pleads guilty to the charge of slowness, if it be so called, but he has never been charged with carelessness or wasteful expenditure of farmers' money.

He favors an economical administration of the funds derived from this organization, whereas compromise measures which the administration was forced to accept last year in an effort to work with a contrary faction on the board, who apparently favored a program of mushroom growth, resulted in wasteful and unnecessary expenditures. Chief among these were the items of renting an entire floor at $25,000 a year, whereas an expenditure of $5000 to $7000 would have been ample; an expenditure of $65,000 for paid advertising before the organization was on its feet financially, which contributed to a serious financial crisis at one time last summer, and the employment of several men at salaries of $7500 and $6000 a year, when they had not heretofore drawn salaries of that grade, and which the organization was later forced to drop from the payroll, with the result that one man successfully made claim for half of the balance of his year's salary on the $7500 basis. These and other things in the administration of the treasury and the organization department under the direction of Mr. Eckhardt could not be kept within the office. They constituted a case that resulted in the reelection of certain men becoming an issue in the first annual convention. The minority, I am sure, did not understand what the real issues were as the majority understood them. Furthermore, the majority understood that it would be useless to try to argue the cases, for the minority representation had been forewarned that "lies" were being circulated about the "biggest men in the movement." They conceded that the case was before the jury—the evidence was in—and they were here to render a decision instead of presenting more evidence.

As to caucus rule, I wish only to present the facts to you. In the last board of directors' meeting there were 11 directors voting for a districting scheme, which is explained in the Grain Growers' News, enclosed herewith. If you will study this plan, whereby Minnesota nomination was dominated by the "minority" votes of North Dakota and the Colorado delegation dominated by the "minority" votes of Oklahoma and Kansas, and, furthermore, that the nomination for a "director at large" would have been controlled by the "minority" states, you will readily discover that had the voting for directors been restricted to the nomination by districts as they had been gerrymandered by Messrs. Hyde and Eckhardt and wished upon the convention by the old board of directors, the "minority" would have elected 11 or possibly 12 of the board. Further, the minority of the convention would have insured the reelection of certain members of the board whom for reasons above outlined they knew the majority of the states were convinced they could not support—not because of any issue as to pooling in any form, but for reasons of economy and businesslike administration of the organization.

This is a statement of the fact in the case. I might go into much more detail, but I do not wish to lay myself open to the charge of discussing the personalities involved. True friends of cooperation are not interested in farm organization results from the standpoint of personalities as much as they are in results. As a result of the decisive action of the majority of the delegates from the farms in the middle west, the new directorate of the United States Grain Growers, Inc., can go forward harmoniously and show results, and that is what the grain growers want most—dealt out in the form of dollars and cents saved through their marketing organization.

I am satisfied that the minute details of all the family dissensions in the United States Grain Growers, through which it passed last year in its first annual convention, might be presented to the grain producers' membership and prospective membership with considerable advantage to the majority element of that convention, but after it was all said, the grain grower would ask, somewhat wearily: "What has been done and what is going to be accomplished?" The answer that can be made to that question, in the last analysis will be the answer that must spell success or failure of the United States Grain Growers, Inc. It is with that in mind that the officers are spending more time in sawing wood than in presenting controvelsial answers to the varied charges of the minority in the convention.

Very truly yours, LEO C. MOSER,
Director, Department of Information.

But Pooling Was Involved.

An official statement issued by President C. H. Gustafson and the vice president and secretary of the United States Grain Growers refers to pooling as at least an indirect issue. The statement reads, in part, as follows:

"It is true that some radical changes were made in the board of directors. It should be remembered that the new board was selected by delegates representing the membership of the United States Grain Growers. Naturally, directors from grain states appointed last year from producing sections where organization work has not been conducted had to be supplanted by others. Among those appointed were those who favored a 100 per cent compulsory pooling system of marketing, whereas the committee of 17 plan supposedly committed the directors to the optional methods approved by the ratification conference. While the question of compulsory pooling was not a direct issue at the national convention, nevertheless, the time had come when the directorate of the United States Grain Growers had to be either whole-heartedly in favor of a pooling plan or in favor of the plan of the committee of 17. That question was decided by the 41,000 or more farmer members who are the United States Grain Growers, speaking through their delegates at the national convention. When it is considered that in the states of Indiana, Illinois, Iowa, Nebraska, Kansas, Missouri and South Dakota, with more than four-fifths of the total membership, less than 1 per cent of the members, have chosen the pooling option method in the United States Grain Growers' contract, it is not difficult to understand the results of this convention. It was but natural that the majority of delegates should return a board of directors who unmistakably reflected that viewpoint.

"We expect to follow the same policy this year as in the past with respect to our relationships with other organizations. We will continue to sell our own goods and let the other fellow sell his. We are anxious to cooperate and work in harmony with every other farmers' organization, but we are determined that the ideal of the farmers' marketing committee of 17 for a national program of cooperative grain marketing shall not be defeated. While we will attempt to make use of every existing farmers' terminal marketing organization, we will not do so at the expense of sacrificing the original plan of the 'committee of 17.' We are convinced that that plan is fundamentally sound and that it will succeed."

Protect the Home Dairyman

By J. A. SCOLLARD, President United Dairy Associations Washington

Just now the dairymen of the United States and particularly the dairymen of the northwest, are intensely interested in national legislation directly affecting, in a serious way, their business. Two bills now pending are of such immense importance that their failure to pass would cause a serious setback to the dairy industry and might actually imperil the existence of certain branches of it.

The two measures to which I refer particularly are the Voight bill and that part of the tariff measure covering the duties on importations of dairy products, substitutes for dairy products and vegetable oils.

Butter, butter substitutes and vegetable oils—these three items in the Fordney bill, are the ones that are causing the dairymen of the northwest the greatest anxiety, and every dairymen's association in the United States is, through the National Milk Producers' federation, doing everything possible to see that an adequate duty is laid on these products. It is true that evaporated milk, sweetened condensed milk, whole milk, cream, whole and skimmed milk powder, casein, sugar of milk and other items claim special attention from certain sections of the country, but the important items are the three first enumerated, for with an adequate import tax on these, the congress will hardly fail to put in proper ratio an import tax on other dairy products.

Result of Importations.

Every dairyman on the Pacific coast and adjacent states has lost heavily in reduced butterfat prices during the last year through New Zealand and Australian butter importations. A chart maintained by the Associated Dairymen of California at San Francisco, where practically all of these shipments make entry, shows that the drop in butter prices coincident with the arrival of these antipodean shipments averaged about 4 cents per pounds, and this in spite of the import duty of 6 cents per pound now imposed in the emergency tariff schedule.

If such shipments can be profitably disposed of with a duty of 6 cents per pound, and the natural butter quotations must be dropped 4 cents to compete with them, it must be apparent that a duty of less than 10 cents per pound would not adequately protect the American product.

Therefore, the milk producers' federation and every farm organization worthy the name is bending every effort toward having a duty of 10 cents per pound imposed on imported butter and butter substitutes. The dairymen of every section are writing and wiring their representatives in the congress to support an adequate duty on these two items. It is understood that the tentative schedule named 8 cents as the duty on butter and butter substitutes. The representatives of dairymen and farmer organizations in the national capitol are hopeful, however, that the bill as passed will impose a 10 per cent duty.

Protect Home Industry.

The dairymen of the United States were thrown into consternation by a recent report that vegetable oils were slated to be on the free list. No greater calamity could befall the dairy industry than this, and every dairy section of the country was aroused to immediate action, and the congress has been bombarded with letters and telegrams of protest. It now seems unlikely that this product will escape a tax that will to some extent at least protect the dairy industry from this menace to its existence. A powerful lobby composed of oleo and nut margerine manufacturers and soap manufacturers, assisted by the importers, were responsible for this effort to put vegetable oils on the free list.

Some idea of the calamity that free entry of vegetable oil would mean to the dairy industry can be gained in the knowledge that to a great extent it is used, pound for pound, to displace an equal amount of butterfat in butter and milk imitations. At present the price of coconut oil is less than 10 cents per pound. What dairyman can exist under such competition, with the imitation butter selling at half the price of the real article?

I wonder if the dairymen and the people of the communities dependent upon dairying have even a faint conception of the inroads nut margerines have made and are making upon their market? I do not wish to burden the reader with figures, but every one interested in dairying should consider and weigh the following facts, for they are alarming.

A Tremendous Increase.

In 1916 there was used in the United States in the manufacture of imitation butter 563,000 pounds of coconut oil.

In 1920 there was used in the manufacture of imitation butter 80,784,000 pounds of coconut oil—over 140 times as much as in 1916. And remember, this is but one variety of oil where many are used. Remember also, that these figures do not include the coconut oil used in imitation milk. And here is a bit of information that ought to hit you right between the eyes, Mr. Dairyman: One hundred and ninety-three thousand pounds of one brand of nut margerine, or imitation butter, was distributed by one Seattle house in the month of December, 1921. There are many different brands distributed in Seattle.

If a tariff is imposed upon vegetable oils we can thank the dairy associations, county, state and national, for their vigilance and for their energy and perseverance in fighting a strongly organized effort to put it on the free list. We hope that every dairyman in the northwest will assist in this effort by writing or wiring his congress representative to fight for an adequate duty on vegetable oils.

The foregoing is the first in a series of two articles by Mr. Scollard on vital matters to the dairymen of this state. His second article will discuss the Voight bill now before congress, designed to prohibit interstate traffic in filled milk.

Favors Reduced Wool Rate

Examiner W. A. Disque of the interstate commerce commission, who recently held hearings in the Pacific northwest on wool freight rates, has recommended to the commission that a reduction of 31.5 cents per 100 pounds on wool in the grease be made for Inland Empire wool men on shipments to Boston. The examiner, however, did not favor the request of the interior wool men for release from the discrimination against Inland Empire points in favor of Portland. This discrimination amounts to a difference of 92.5 cents per 100 pounds in wool shipments to Boston, in favor of Portland. The present wool rate from Portland to Boston is $1.66 1-2 per 100 pounds, while the rate from Spokane to Boston is $2.59, notwithstanding the fact that Spokane is over 300 miles nearer Boston than is Portland. The new rate as recommended by the examiner will be, if approved by the commission, $2.27 1-2 per 100 pounds for Inland Empire wool, using Spokane as the typical shipping point. The rate from Portland to Boston, as recommended, is $1.35 per 100 pounds.

Leads Jerseys of All Ages

A new world butterfat record for Jerseys of all ages was established by an Oregon cow recently when her year's record showed that she had produced 1047.94 pounds of butterfat. Her milk production was 18,320 pounds. The new champion is Lad's Iota, owned by S. J. McKee of Independence, Ore. The previous world record was held by Plain Mary, owned when the record was made by Airedale farm of Bangor, Maine. Plain Mary's production was 1040.08 pounds of fat, with a milk production of 15,256 pounds. Plain Mary had taken the world record from Vive La France, an Oregon cow owned by Pickard Brothers of Marion, Ore., that had a record of 1039.29 pounds of butterfat for a year.

COOPERATIVE SPIRIT GROWING.

Director E. L. French of the state department of agriculture, in a recent talk to the Seattle Milk Shippers' association, stated that the cooperative spirit was growing, as is shown by the large number of cooperative organizations that have been authorized by the department. During the last year 14 new associations have been filed and are now operating. "We expect even greater showings to be made in the future than have been made in the past," said Mr. French, "and we are better able to help them to become established."

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GUARANTEE OF ADVERTISEMENTS

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To Furnish Thousands of Good Farm Homes for Young Folks

Congress and the country will be favorably impressed by Major General Goethals' report on the Columbia basin irrigation project. The eminence of General Goethals, who built the Panama canal, and his unqualified indorsement of the project in its varying aspects of engineering, the soil, the water supply, transportation facilities, access to world markets and cost of the watered lands to settlers, give this great undertaking a standing before the American people that it has not had before.

THE FARMER is glad that General Goethals has reported favorably upon this fine project. We are for it and for all other meritorious reclamation projects in the Pacific northwest for the following reasons:

THE FARM MOTIVE

First, we want the young men and young women now growing up on the farms of this region to have an opportunity to get good farm homes for themselves, just as the fathers and mothers of so many of them had their opportunities when abundant good homestead land was yet to be taken. But good homestead lands are a thing of the past, and if the boys and girls of the future are to have a chance to make new farm homes it must come largely from the reclamation of the country's waste lands.

Second, the Pacific northwest is lagging behind the Pacific southwest in progress and development. That is because they are reclaiming more lands down in the southwest. Washington state, for instance, has under irrigation only about 530,000 acres as against California's 4,200,000 acres. But California is not content with that big irrigation acreage. It is working hard for the Colorado basin project, for which claims are made of the ultimate irrigation of more than 4,000,000 acres of now arid land. The Pacific southwest, holding out big inducements of large and continuing development, is getting the attention of homeseekers. It is reliably reported that 45,000 tourists are coming into southern California every month. Of course, most of these tourists return to their eastern homes, but many of them stay and make investments. They buy lands and help to build up communities. That means better schools, better roads, better mail service, bigger and better cooperative producing and marketing associations.

WOULD DRAW HOMESEEKERS

Third, once it became known throughout the United States that the federal government had approved the Columbia basin project and would soon start construction, the assurance of that big development would draw thousands of homeseekers into the Pacific northwest. They would find on arriving here that, while the great project could not be completed short of six or seven years, they need not wait in order to buy good irrigated land, because we have scores of smaller projects that need settlement and quick development. More than that, a great many of the newcomers would look over the country and decide that they would like to buy good, tillable farms not under irrigation.

That is what happened when we opened the Indian reservations in the Pacific northwest several years ago. Land seekers came out here by the thousands, but most of them, on looking over the field, decided that they did not care to take a homestead on an Indian reservation and go through the hardships of pioneering. Consequently, thousands of them bought deeded lands from farmers who had larger holdings than they cared to keep up.

FIGURES FROM HISTORY

Some fears have been expressed that there might be overproduction from the development of these new lands. We do not share that apprehension. After the Civil war there was deep complaint in the Mississippi, Missouri and Ohio valleys about overproduction. Agricultural products between 1865 and 1875 sold at ruinously low prices. At that time—for instance in 1866—the records of the agricultural department show that we produced only 152,000,000 bushels of wheat in the United States. We are now producing an annual crop of from 800,000,000 bushels to 1,000,000,000 bushels. At that time the corn crop was around a billion bushels a year; now it is about 3,500,000,000 bushels. In all the basic crops, we are producing now from three to eight times as much as we produced in 1866. If we had stopped our agricultural production in 1866, the growth of the nation would have been arrested and we could not have won the World war.

Secretary of Agriculture Wallace has shown in a recent statement that the increase of population in the United States is running ahead of the increase of agricultural production. He calculates that we shall have a population of 150,000,000 people by 1950, and that we shall need to add 243,000,000 acres of improved agricultural land if we maintain our present per capita acreage. Two hundred and forty-three million acres of land is equivalent to the total area of New York, Illinois, Iowa, Minnesota and Kansas.

General Goethals is right. The nation needs the Columbia basin project.

"Snooping Constables"

A citizen of Deer Lodge, Mont., was seen carrying a handbag from which the neck of a demijohn was protruding. He was arrested by a Deer Lodge officer. The lower court released the defendant, but ordered the liquor destroyed and the bag and the demijohn sold. An appeal was taken from this decision, claiming unlawful search and seizure. The action of the lower court was affirmed by the supreme court of the state.

The noticeable feature of this case, however, is the fact that Associate Justice Albert J. Galen of the supreme court filed a dissenting opinion, in which he said: "The passage of the prohibition amendment to the federal Constitution did not inaugurate a reign of legislative despotism to be carried out by snooping constables or peace officers."

This dissenting opinion will not be received with good grace by the farm folks in the country. Long years ago the grange, among farm organizations, took the lead in fighting for prohibition. Members of the order fought hard and long for this law. It was a long period from the time Neal Dow of Maine lived and died fighting for prohibition, until prohibition became established by Constitutional amendment as one of the fundamental laws of the land.

If a man smashes in the plate glass window of a jewelry store, snatches a case of diamonds, and runs around a corner, is caught by an officer who sees the end of the diamond case sticking out from under his coat, shall that officer be charged with being a "snooping constable"?

How else can any law be enforced than by arresting persons under reasonable suspicion of breaking them?

The petty thief may enter a shoe store, steal a pair of shoes, and hurry out of the store. The warning is given and an officer sees a man with a pair of shoes sticking out of his pocket. Shall he refrain from seizing this petty thief for fear of being called a "snooping constable"?

The usual methods of law enforcement must be applied to violators of the prohibition law, as well as to violators of the laws of burglary or murder.

State Farm News

The bid of M. R. Smith Lumber and Shingle company of Seattle was accepted by the Indian forest service at Taholah for the 305,000,000-foot Point Grenville Indian timber tract placed on the market three months ago.

The company's bid was: Cedar, $2.60 a thousand; spruce and fir, $2.25; white pine, $1.50, and hemlock, 60 cents, making a total of approximately $650,000.

The company will remove 15,000,000 feet by March 31, 1924, and must have the entire stand cut and removed by March 31, 1935. An initial installment of $15,000 was paid, and the remainder will be paid installments of $10,000 each during the time the timber is logged.

* * *

Jacob Koog, Holstein breeder of Elma, Grays Harbor county, has purchased the J. H. Galyean farm, three miles west of Montesano. Mr. Koog came to the county a few years ago from Tillamook, Ore., and is now president of the Grays Harbor Holstein association.

* * *

The North Pacific Cooperative Berry Growers have employed Frank L. Grossman of Seattle as sales manager for the association for the next two years. Mr. Grossman has for the last five years been sales manager for the Ollala Berry Growers' association and is considered a capable man for the handling of this work. The association plans on selling as much of the strawberry crop from the members as possible on a f. o. b. Seattle basis.

* * *

Mrs. Emma H. Symons, former owner of a fruit ranch in the Selah district, has purchased a 30-acre tract three miles west of Prosser, that formerly was known as the Tom Erwin place. It is an improved farm, with a large orchard.

* * *

Careful records kept by James Carstairs, a dairyman of the Satsop valley, in western Washington, have proved that the addition of a good purebred sire to his herd resulted in increasing milk production by 100 per cent. Carstairs has many young cows, daughters of this sire, that are producing 50 to 75 pounds of milk a day, whose mothers never gave more than 30 to 35 pounds a day.

* * *

Five registered Shorthorns were purchased at the recent live stock sale at Spokane by farmers of Pend Oreille county. One will be used to replace a scrub sire.

* * *

What is said to be the largest deal ever consummated in the timber business on Grays Harbor was completed at Hoquiam when William E. Boeing and associates of Seattle sold 600,000,000 feet of timber at the head of the Hoquiam river to H. J. Miller of the Miller Lumber and Logging company of Everett for $2,000,000, mostly cash. The timber is largely fir.

Miller purchased the tract for immediate logging and surveys have been completed for a railroad from the tract into Hoquiam, a distance of about eight miles.

* * *

Claude White of Grandview, county project leader in farm crops of the farm bureau, has returned from Bend, Ore., where he purchased five cars of seed potatoes to fill orders placed with the farm bureau.

* * *

Tenino citizens and residents of adjacent farming communities have made preliminary arrangements for the holding of a community fair next fall. An organization was perfected, with J. D. McGuire as president, A. G. Dempsey vice president, Ira Kelsey director and L. H. Hubbard secretary-treasurer.

* * *

Ten acres of pears have just been set out by D. A. McDonald at Donald, the varieties being Bartlett and Winter Nellis.

* * *

The Yakima valley will this year show a larger increase in strawberry production than any other district in the northwest. Both the Yakima district and the Kennewick district will double their production against last year. The Yakima valley produced last year about 17,000 crates and shippers conversant with the situation predict that the tonnage will be twice as large this season. Strawberry production in the Yakima valley, however, is small as compared with Hood River and western Washington. Estimates place the Hood River crop at 100,000 crates for this season against 85,000 crates produced in 1921. Production in western Washington will be 15 to 20 per cent less than that of last year, the estimate for this season being 400,000 crates. Reports from practically every strawberry production district in the United States indicate that there will be one of the biggest crops in history produced this year. The acreage in practically every district shows an increase and a good deal of planting coming in this spring for first and second crops. It is possible that weather conditions will change the present outlook.

Coming Events of Interest

April 22—Mock sale and show, state college.
April 24-29—"Be Kind to Animals" week.
April 26-28—Kittitas county nutrition campaign.
May 1-13—Dry kiln operation course, Hoquiam.
May 4-6—Tulip festival, Bellingham.
May 6—Jefferson county Holstein sale, Elma.
May 24—Lewis county Holstein sale, Chehalis, Centralia.
June 5—Northwest Guernsey breeders' sale, Portland.
June 7—Guernsey consignment sale, Chehalis.
June 20-22—Lincoln-Adams pioneer picnic, Keystone.
July 27-28—Whatcom co. Guernsey gallop, Bellingham.

FARM BUSINESS AND MARKETS OUTLOOK

The Business Outlook:

Something more than cold comfort for the farmer can be read in the following signs of an improved business and industrial situation:

Price index numbers were higher in March than in February although the month ended lower than it began. Bradstreet's index was higher on April 1 than on the same date last year, the first time such a comparison has held good since deflation started.

Industrial employment, according to reports from 65 cities, was 2.5 per cent larger at the end of March than at the end of February.

Building permits issued in the leading cities were twice as large in March as in the same month last year.

Steel companies are operating at about 65 per cent of capacity, which is twice the rate at the lowest point.

Pig iron production in March exceeded 2,000,000 tons for the first time since January, 1921, March showing a gain of nearly 13 per cent over February.

Railroads placed more orders for equipment in the last three months than in the whole of 1921.

Automobile sales in March were largest since August, 1920.

Bond prices have continued to advance. Some of the Liberty issues have reached the highest point since they were first sold on the open market and all of them are selling close to or above par.

Stocks have reached new high levels and the total volume of sales on a recent day reached the highest point since the boom in the spring of 1920.

Bank deposits in some of the strictly agricultural sections have increased.

Money rates hardened a little during February, but were shaded again in March.

Bank clearings, which measure the volume of buying and trade turnover, were 6 5-8 per cent larger in March than in March, 1921.

The business sky is seldom absolutely free from clouds. There are some now in the form of the coal strike, the textile wage dispute, and the uncertainty as to the tariff and freight rates. Foreign financial conditions still cast shadows across the water.

But the evidence of progress in industry and trade in this country can have but one conclusion drawn from it; we are moving toward a period of larger consumption and a better market for the food and raw materials for manufacture which the farm produces.

Beef Appetite Due to Return

The forecast of a lighter run of cattle during April has been abundantly fulfilled. Receipts last week at the seven leading markets dropped to about 135,000 head, compared with an average of around 170,000 head during the first quarter of the year. The dressed beef market, however, has made no equivalent response. Demand has been listless, due, apparently, to the influence of Lent, soggy weather, which dulled the appetite for beef and possibly to the influence of the coal strike. Since the second week in April marks the end of the lenten period as well as certain Hebrew holidays, when people of Jewish extraction abstain from eating red meat, the public's appetite for beef is expected to return.

Beef steer prices have shown no pronounced trend either way recently and in the last week ranged from a shade higher at some markets to slightly lower at others. Steers which have had greater or less acquaintance with corn comprise the bulk of receipts, while the latter have shown more strength than steers. They closed the week at most points slightly higher than a week ago. This situation usually lasts until the season for grass cattle is near at hand.

Yearling steers have gone to a slight premium, although it is smaller than usual at this season and does not apply to those grading less than "good," of which there are entirely too many.

The veal market, which had the support of Easter trade, has declined again. At least another month of heavy runs from dairy farms can be expected and prices can not advance much in that time. Extremely light calves are available in excessive numbers.

Cattle Feeders Not Eager

The muddy state of feedlots, the dullness of the fat cattle market and the backwardness of the spring season have repressed buying of stocker and feeder cattle. Purchases have not increased as they usually do at this season, but have remained uniform from week to week since the middle of January.

In the southwest the movement of cattle northward to be put on pasture will reach maximum about May 1, but the total will be 20 per cent less than last year. In 1921 there was a small decrease compared with 1920, while the number pastured in 1920 was estimated at 25 per cent less than in 1919.

Light Runs Boost Hog Values

Receipts of hogs at the 11 principal markets during March were heavier than those of last year, but they have been running consistently below the 10-year average by a wide margin ever since the first of the year.

During the last three weeks the usual spring bare spot in hog receipts has shown up. As a result fresh pork loins, smoked hams and bacon are selling at nearly the highest prices of the year. A good sized advance in mess pork and lard prices also has taken place recently. These advances, however, have not been as sharp as the small run of live hogs would have indicated. Some decrease in domestic consumption of pork has occurred recently and there has been a falling off in clearances for export.

The increase in stocks of hog meats at the leading packing points during March was the largest that has occurred during that month since 1921, another sign that pork consumers are less greedy than in midwinter. Lard holdings also increased over 15,000,000 pounds, but total holdings of both lard and meats are much below those of last year. Receipts of hogs usually pick up again during the latter part of April. If this performance is repeated this year the advance in hog prices during the last 10 days may not be fully maintained unless the outlet for pork broadens again.

The department of agriculture reports that an average of about 17 per cent more sows were bred during the period from September, 1921, to February, 1922, inclusive, on about 6000 sample farms than in the same period last year. This is in line with general expectancy. It will be necessary to wait for later reports to determine the extent to which the increase has been offset by losses among spring pigs. Such losses were exceptionally light last spring.

The department's reports also indicate that the number of hogs on farms decreased 16.3 per cent from January 1 to March 1. During the same period in 1921 they decreased 15.1 per cent, in 1920, 14.8 per cent and in 1919, 17.2 per cent. These reports do not indicate that more hogs than usual were held back this year to be marketed during the spring.

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Spring Lambs on Horizon

California lambs are scheduled to appear at middle western markets during the latter part of April, although the run from that state usually suffices only to replace the fading supply of fed lambs. When the southeastern crop begins to move in the latter part of May, however, readjustment in prices usually starts and by July 1 lower quotations are in order. This year the entire native crop is short as a result of liquidation which has been in progress for several years. With consumers ready, apparently, to eat lamb at a high level of prices, the summer decline may be much less than usual.

Most of the lambs arriving now are shorn. Wooled lambs sold up to $16.50 at Chicago last week, the highest price since July, 1920. A few fleshy, heavily fleeced lambs are going out for shearing and a brief period on feed at prices ranging from $14.00 to $14.75.

Horse Values Shrink

Horse buyers were less numerous last week and values at Chicago declined $10 to $15 a head. The revival in industrial activity thus far has not helped the horse market noticeably.

Wool Steady at Decline

Wool prices are holding steady at the decline of 3 to 5 cents a pound. Mills are buying in a very limited way and both mills and dealers are waiting the outcome of tariff legislation. In some sections speculators are anxious to buy new clip wool at the present price scale, but producers are sitting tight. One big lot of Arizona wool has been sold at a price said to equal 35 to 40 cents in the grease or about $1 clean at Boston. Foreign wool auctions have been strong because of European buying.

The woolen goods situation has not been improved and the wage dispute has become more acute.

Wool consumption by American mills is holding up better than expected. During February it amounted to 55,882,000 pounds, compared with 54,550,000 pounds in January.

Boston prices are as follows—Wisconsin, Missouri and average New England: Half blood, 36@37c; 3-8 blood, 35c; 1-4 blood, 34c.

Scoured basis—Oregon: Eastern No. 1 staple, $1.05@1.10; fine and fine medium combing, $1; eastern clothing, 85c; valley No. 1, 80c. Territory: Fine staple choice, $1.05@1.10; 1-2 blood combing, 95c@$1; 3-8 blood combing, 75c; quarter blood combing, 62@65c.

Wheat Owners on Anxious Seat

In spite of a statistical situation which forecasts a carryover at the end of the crop year considerably below the 10-year average most wheat buyers have been indifferent and wheat owners are anxious lest the demand fail to absorb the usual amount of wheat before harvest.

The course of cash wheat prices at this season is closely bound up with the behavior of the May option or contracts for May delivery at Chicago. Whether the holders of these contracts include enough exporters and millers who want wheat delivered to them to make that side victorious is an open question. Until this situation has worked itself out the trend of the market is anybody's guess.

Exporters have been buying three or four million bushels weekly from North America, mostly Manitobas, for shipment after navigation opens. A little durum has been sold abroad, but wheat for shipment via the gulf has been neglected, so that southwestern markets have been especially slow.

The latest report on the rate of flour production was lowest since early January and dropped very close to the corresponding week last year. Most recent weeks have shown an increase of 1 to 10 per cent over a year ago. Mills have been buying a little more wheat in the last two days, but it is still too early to determine whether the increase in demand will be lasting. It is noteworthy that in spite of widely advertised absence of demand prices have swung over a very narrow range for two weeks, usually a sign that the next move is upward.

Argentina and Australia are still putting a good deal of wheat afloat each week and total stocks in commercial storage in exporting countries or on passage are larger than at this time last year. There is reason for believing that the large available stocks are at the expense of interior holdings from which future supplies must be drawn.

Crop Estimate as Expected

The official estimate upon the winter wheat crop was in line with expectation. Condition was placed at 78.4 per cent, compared with 76 per cent last December, 91 last April and a 10-year April 1 average of 84.3 per cent.

This condition indicates a yield of 573,000,000 bushels of winter wheat provided later conditions are equal to the average. The yield last year was 587,000,000 bushels and the 10-year average is 570,000,000 bushels.

The condition of the rye crop was placed at 89 per cent, compared with a 10-year average of 88.5 per cent. The yield is forecasted at 69,667,000 bushels, compared with 57,918,000 bushels last year.

Corn Industries Closing Down

The extraordinary demand for corn which featured the market during the winter has departed. Corn industries, which have been conspicuous buyers for months, are curtailing operations and are now working at less than 50 per cent of capacity.

Oats Crop Getting Late Start

Wet weather has delayed oats seeding and the crop is now about two weeks late. Unofficial reports point to a decrease of about 5 per cent in acreage.

Cash demand is slow. Primary receipts have decreased nearly 50 per cent in the last 30 to 60 days, while primary shipments have exceeded receipts for three weeks. The visible supply was so large, however, that the decreases made still leave it larger than was ever known before at this season.

Cash Grain Markets

The range of cash grain prices for the week ending April 12 was:

CHICAGO—Wheat, No. 2 hard, $1.32 1-2@1.34 1-4; $1.28@1.30 1-2. Corn, No. 2 mixed, 56 1-2@58 3-4c; No. 3, 55@57 3-4c; No. 4, 54@56 3-4c; No. 2 yellow, 57@59 3-4c; No. 3, 55 1-2@58 1-2c; No. 4, 54@57 1-2c; No. 2 white, 57 1-2@59 3-4c; No. 3, 56 1-2@58 3-4c; No. 4, 53 1-2@56 1-4c. Oats, No. 2 white, 36 3-4@40c; No. 3, 35 1-2@39c; No. 4, 34 1-2@37 1-4c. Rye, 99 1-2c@$1.02 1-2c. Barley, 57@67c.

Clover Seed Markets

Unfavorable weather for spring seeding remained the dominant influence in the clover seed market last week. Prices declined a little further as the demand has been light. Alsike prices were unchanged. There is a scarcity of alfalfa seed and that market is showing strength.

Toledo, per bushel—Prime red clover, $14.60; prime alsike, $11.50; prime timothy, $2.90.

Chicago, per 100 lbs.—Clover, $15@22; timothy, $5.50@6.

Feed Market Turns Upward

The decline in feed markets seems to have run its course for the present, at least, and a small upturn occurred toward the close last week. Bran prices at the low point were off nearly 20 per cent. Production of wheat and corn feeds is decreasing and jobbers were more ready to take hold.

Prices per ton (100-pound bags) in carlots: Chicago—Bran, $23.75; standard middlings, $25; flour middlings, $27; cottonseed meal, 36 per cent, $47.50; 43 per cent, $52; hominy feed, $20.50; gluten feed, $32.65; old process oil meal, $52.50; tankage, $60.

Light Receipts Hold Hay Prices

Light receipts are given sole credit for a firm hay market, as the demand is limited. There is no buying ahead. Larger receipts are expected as soon as country roads improve and live stock is gradually being put on pasture.

Prices per ton in carlots: Chicago—No. 1 timothy, $25@28; No. 2, $23@25; No. 3, $17@20; No. 1 light clover mixed, $24@25; No. 1 clover, $20@21; No. 1 clover mixed, $21@23; No. 1 alfalfa, $17@28; upland prairie, $17@19; midland prairie, $14@17; rye straw, $16@17; oat and wheat straw, $14@16.

Egg Receipts Near Maximum

Values, especially upon choice eggs, have held up well in spite of receipts of near record proportions at the four leading cities. Speculative interest is increasing and about half of the arrivals are going into cold storage. The market is on a rather solid bottom. Receipts of eggs usually reach maximum anywhere from the second to the fourth

(Continued on page twenty.)

Looking Ahead With the Wool Grower

By GILBERT GUSLER

The outlook for marketing the wool clip at a good price this spring is better than it has been for two years.

For over a year the market was submerged under an avalanche of wool and tall columns of figures showing enormous stocks of wool held in various parts of the world were erected over the remains. But, as Mark Twain once said of a premature report of his death, "The story was greatly exaggerated." In the last six months stocks of wool have ceased to look huge and it now appears that they never were so excessive as the statistics made them seem to be.

The all-important fact that there is normally a large carryover of wool seems to have been forgotten when the bottom dropped out of the market in the spring of 1920.

Some of the chief wool producing countries are in the southern hemisphere, so that comparable statistics upon the quantities held in all parts of the world at any one time are hard to obtain. Only in the later years of the war and since have reports upon holdings been assembled in any comprehensive and consistant manner.

Competent observers state that in the United States we seldom have less than 400,000,000 pounds on hand. This is two-thirds of a year's supply.

In the last four years, since our government began to report holdings by dealers, manufacturers and the government, the total has never fallen below this figure. This does not take holdings by growers into account.

The large wool exporting countries, Australia, New Zealand, South Africa, Argentina and Uruguay, generally dispose of most of their old clips before the new one is ready, but in the prominent wool manufacturing countries of Europe generous stocks at all times from which manufacturers can select the kinds they want are the rule rather than the exception. Total holdings of 2,000,000,000 pounds of wool in all parts of the world at any one time are not unusual. This is equal to two-thirds of the entire world's clip for one year.

During the war the countries of Europe were unable, because of blockades and submarines and a shortage of shipping, to obtain all the wool they could have used from Australia, South Africa and Argentina, so that wool accumulated in those countries.

After the war was over European financial conditions caused a decline in consumption of wool and the accumulations continued, especially in Great Britain and her chief wool producing colonies. Wool piled up in the United States also after the "buyers'" strike" began. This situation gradually became more acute until a little over a year ago. Summaries of holdings made at that time, excluding the new clip in the northern hemisphere, showed about 3,250,000,000 pounds. This total is not so staggering, however, when the size of the normal carryover is considered and really only meant a surplus of about 1,250,000,000 pounds

The chart which accompanies this discussion shows the course of farm prices for wool for recent years as reported by the department of agriculture. The war caused a phenomenal rise in value, but wool was one of the first farm products to feel the effect of deflation.

The decline, starting from 53.3 cents per pound at the farm in January, 1920, continued almost without interruption until last summer. Prices then were but little more than 25 per cent of those paid when the market was at the extreme top four years ago. After remaining comparatively stable from June to October, an upturn began which brought an advance of nearly 50 per cent in the farm price. In the last few week the market has softened again.

Two factors were mainly responsible for the advance last fall and winter. First of these was the emergency tariff enacted last May, which carries a duty of 30 cents per pound on skirted wools, under which classification most of the Australian fleeces come. Barring carpet wools, which are now admitted free, imports of clothing and combing wools dropped from 90,477,000 pounds in March, 1921, to 342,000 pounds in September. They have risen since to several million pounds a month, but have been much less than our average import requirements.

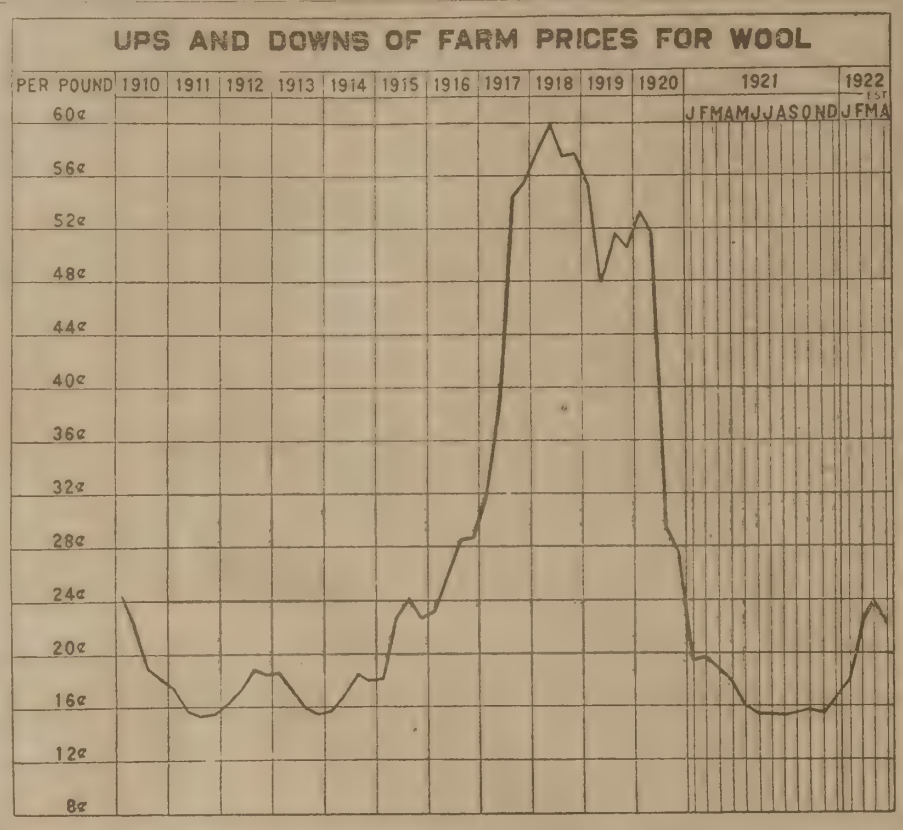
The other factor has been the increase in manufacturing operations.

Consumption by mills, which dropped down to the equivalent of 24,372,000 pounds of grease wool in December, 1920, gradually rose to 66,287,000 pounds in October, 1921, compared with 72,721,000 pounds in the best month of the post war boom.

During 1921 total consumption in terms of grease wool amounted to 650,000,000 pounds, compared with 579,000,000 pounds in 1920. The 1921 total is more than in any pre-war years, and about equal to the average of the war years. Naturally such a rate of manufacture made big holes in stocks in this country, since our own clip is only equal to about 45 per cent of the wool we consumed and only small quantities were coming in from the outside.

Prices in foreign primary markets and manufacturing countries have advanced also, although less rapidly than in the United States. The cessation of manufacturing operations during 1920, which allowed wool to pile up, did not put an end to the wearing out of clothes and retailers' shelves eventually became bare. Finally manufacturers began to receive large or-

(Continued on page twenty-two.)



The chart shows the course of farm prices for wool as reported by the department of agriculture on the 15th of the months of January, April, July and October for 11 years and monthly since January, 1921. The price line went up like a church steeple during the war. To the wool grower the decline in 1920 bore close resemblance to a steeplejack's bad dream. The pre-war level was reached during 1921, but a good-sized advance has occurred since.

Is Big With Farm Prosperity

(Continued from page one)

of efficiency and morale in a body of many thousands in a region to which they were unacclimated—always a serious matter; of keeping the administration necessarily autocratic and strongly centralized, yet popular, because effective, wholesome and acceptable. And that's what the canal administration was made. It was administration that stood the test of seven years unquestionad, save by deplorable relays of tourists of the congressional persuasion.

Three men had failed to make the thing go.

Goethals made it go forward and go smoothly—housing, sanitation, labor problems and all, infinitely complicated by the heterogeneous racial composition of that little state. It went ahead with an esprit de corps among the workers, rank and file, that entitles it to distinction among large achievements. No better proof could be cited than that the huge task was completed a year before the scheduled hour. It was an achievement famous for confidence to the end in its leader; for the fairness of his "Sunday morning courts"; for the indefatigable hours maintained by him—it was said that Goethals "took the canal to bed with him"—and for the fact that the men "on the ditch" believed in the ditch, "loved the ditch," in some one's phrase, and came home singing the reminiscences of days on the ditch in a way it is good to hear from men who have worked seven years together.

Though the great work carried forward in the canal zone was free from the attending atmosphere of caste that characterizes militarism, there were no town debates over orders once issued from headquarters.

It is related that, of the congressional delegations sent to the zone at various times, one member, observing a comfortable new house that was going up for one of the officials of the project, inquired: "The type of house that is constructed for an official on the project is about proportioned to the salary he is receiving?"

"Yes," replied the man responsible for matters in the canal zone.

"Then," said the congressman, "since I, now, am earning $7500 a year, I, if I were employed on this job, would have a house costing about——" and he named his estimate.

"No," was Goethals' rejoinder, "for if you were on this job you wouldn't be earning $7500 a year."

There are long lists of commissions, boards and other things of which G. W. Goethals has been chief, chairman and moving spirit, that one might go into. There are longer lists of appointments which he has had to decline.

What was the other task, greater and more complex than the cleaving in twain of the western hemisphere?

During the war 90,000 men were being sent overseas every week. Along with them went about four tons of freight per man. All the purchase of munitions and supplies, all their protection, all storage, refrigeration and transfer, all provision for the comfort of those 90,000 men till they reached Pershing's own area of responsibility, were in the hands of the director of purchase, storage and traffic. In April, 1918, Major General Goethals became that officer. The railroads and steamships of the country were largely at his direction. He was the biggest shipper the world has ever seen.

Things that move with the brand "U. S. A." upon them don't just move; they have to be transported under certain fixed rules. There must be certain reserves always at bases of shipment, certain percentages always in motion, certain order and precedence and ceremony and tape-winding. And, during a world war, there must also be dispatch, for the urgency is real.

G. W. Goethals, as acting quartermaster general, with the more specific title mentioned above, was the clearing house for everything that was moving or awaiting movement toward the European continent,



General Goethals.

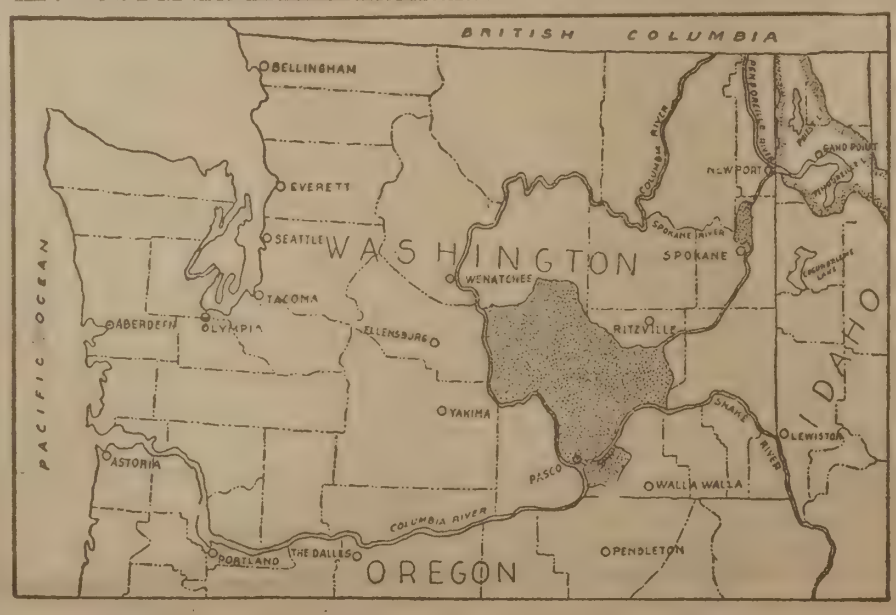
in those days, under the inclusive password, "U. S. A." "Somewhere in America" there was a storage depot that required an area of 50 miles square. From every minor center of industry where army contracts had been secured, and from every center where men were trained, the complexity of his problem had its beginnings. "Somewhere in America" there is railroad track enough to girdle the globe 10 times. Its McAdoos and the great powers of our systems of navigation were necessarily subject to the will of the director of purchase, storage and traffic for the army, who, in addition, held the office of assistant to the chief of staff.

It was during those days that Goethals' "cold fury" of work and drive became established. Short shrift was made of callers, of lunch and other irrelevant things.

As on the great canal, so in the titanic army task, there is a chief where he is in charge, and men know it.

On one occasion that dates from his younger services, he had an admiral's orders to construct temporary bridgework and had given the order that certain barges be sunk for a foundation. The plan brought him into conflict immediately with subordinate officers of the navy. He ignored them. The thing was reported back to the admiral himself, who put immediate injunction on the barge-sinking. Goethals ignored that, too. To sink those barges was the way to build that bridge, and the way to do it was the way that Goethals purposed to do and did it. The admiral threatened him with court-martial for a long time. The brushing aside of superiors' orders is a serious thing for an officer to be charged with. But the court-martial never was held.

Goethals not merely has drive; he is drive, it is said. "To the major general, an obstacle is a thing to go over, or through." When he was appointed chairman of the railway labor board to report on the Adamson eight-hour law the Independent predicted that the work of the board would be well done, for that was the only way Major General Goethals did things. "Goethals is a finisher," in the verdict of a widely ranging contemporary press. That "terrible, but open-eyed, intelligent tenacity" arrives.



The shaded portion shows the land to be irrigated, totaling over 1,750,000 acres. Note the line of the canal from near Newport on the Pend Oreille river.

Sees Only Indirect Relief

Farm Bureau Man Cites Case Against War Corporation

Simultaneously with the announcement in Portland, Spokane and other northwestern cities last week by Eugene Meyers Jr., head of the war finance corporation, that the corporation had loaned $320,000,000, largely for agriculture and that further assistance was planned for the Pacific northwest, President George A. Mansfield of the Oregon State Farm Bureau federation declared in an interview that in his opinion the corporation had brought little direct benefit to the farmers and stockmen. He said that indirect benefit had been received through stimulating exports and aiding the cotton, wool and grain pools, but that agricultural conditions now and in the last month have needed direct and immediate financial assistance to carry their obligations.

In explaining this point, Mr. Mansfield said: "In the vicinity of Klamath Falls Ore., live stock was being shipped out in large quantities and sold at a great sacrifice because the bankers could not help the situation through the war finance corporation. The live stock men were advised to visit Portland and consult the committee of the corporation as to how to proceed.

"They were advised to incorporate and the local committee gave them every assistance within its power. Four stockmen incorporated with a paid-in capital of $10,000, but were advised to raise this figure to $25,000, which was done after considerable trouble had been experienced. When this was done Carey V. Loosley, one of the four, received a letter in which he was told that if they put up $50,000 in a bank as a guarantee they could hope to secure some loans. Let me inquire how many farmers could expect benefit if they had to produce $12,500 as a guarantee?

"Things of this sort illustrate how very much harder it is for the farmer to get money from the war finance corporation than it would be from a bank. I know of no bank that requires a man to put up more than the amount he wants to borrow in cash in the bank as a prerequisite, or any considerable portion of it."

"The worst of the business depression has passed and I believe that the improvement in conditions practically everywhere is on a solid foundation," said Eugene Meyers Jr., managing director of the war finance corporation, in Spokane. Mr. Meyers continued: "When I made my trip through the country six months ago every one was discouraged. Today there is optimism. In Montana the sacrifice of breeding and young stock was staring them in the face. T. A. Marlow of Helena, chairman of the board, asked how far the corporation would support him and I told him. Since that time $10,500,000 has been lent in Montana and the breeding of young stock saved.

"In all the states I have been in—Iowa, Nebraska, Oklahoma, Kansas, Texas, Colorado, Wyoming, New Mexico, Arizona, California, Utah, Idaho and Oregon, I have found a marked change. There are better prices better markets, and bankers and farmers are going ahead.

"One of the most important developments of the last few months has been the organization of live stock loan companies in most of the live stock states, locally owned and managed. The capital of these new companies, all organized in the last three or four months, is more than the combined capital of all the live stock loan companies in business prior to 1921. Large advances to the companies have stabilized the live stock industry.

"The war finance corporation was created as an emergency institution and found it necessary to create its entire organization. Six months ago we had 25 or 30 in the office at Washington and today there are 325, while 33 agencies have been created in the field, in each of which there are 5 to 10 of the best of the local bankers serving gratis and rendering most efficient aid.

"Many loans have been made to cooperative marketing organizations. Between $5,000,000 and $6,000,000 were promised to the Washington Wheat Growers, but they found it necessary to borrow only $1,000,000.

"The corporation has loaned $320,000,000 in the last year. Of this $70,000,000 was for agricultural cooperative marketing organizations: $50,000,000 for exports, mostly agricultural, and $210,000,000 for banks and live stock loan companies. Of this $210,000,000 $70,000,000 was for strictly live stock loans as distinguished from the general agricultural paper.

"The law does not authorize dealing directly with individual farmers. Those who can borrow money from the war finance corporation are:

"Cooperative marketing organizations upon negotiable warehouse receipts representing staple agricultural marketing.

"Banking and financial institutions which have made or may make advances for agricultural purposes on which have been counted notes, drafts or other negotiable paper issued for such purposes. Proper security is, of course, desired.

"Application should be made on the form provided to the nearest agricultural loan agency of the corporation."

A Week at W. S. C.

Five club members from each of 29 counties in Washington, which are doing club work, making a total of 145 in all, will spend a whole week at Washington State college, June 19 to 24, attending classes in sewing, canning, cooking, dairying, live stock raising and other farm and home work under professors of the college and extension service specialists. They and their escorts will be given free lodging in campus dormitories and the program for the week includes various forms of entertainment, such as games, rallies, movies and tours of the college farm and experiment station plots. State Club Leader F. L. Audrain, cooperating with the county club leader or agricultural agent, will select those who are to represent the various counties, on the following basis:

Each member must be enrolled in club work for the year 1922, and will be rated for last year's work on accuracy of record, 30 points; attendance at club meetings, 20 points; activity in club work, 10; quality of work done, 20; value of the project, 10; and exhibits, 10.

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Loss of Pigs Leaves a Lesson

By C. M. HUBBARD, Live Stock Extension Specialist, W. S. C.

No amount of attention and care will bring the lost pig back to life. There is no use mourning the loss of the unusually large number of pigs that have failed to survive this spring. But another farrowing season is coming. Now, while the losses are fresh in our minds, let us look over the situation and see just what we, as individuals, did or did not do that is responsible for our losses this year and plan to do differently next spring. There is a valuable lesson in this spring's wide-spread losses of pigs. Read this article and then file it away for careful re-reading and study next winter and early spring.—Editor.

"What is causing the heavy loss of small pigs this spring?"

This question is being asked the state college extension service by stockmen and farmers quite frequently. Naturally this loss over the state as a whole is brought about by a variety of, or a combination of causes, among them the unusually cold weather. One factor may bring it about on this place and another be responsible elsewhere. In some instances hog men who are known to be old hands at the game, who use foresight and good judgment, have had a more or less heavy loss; in most instances, however, a greater or less degree of lack of knowledge or of carelessness may be found responsible. A little extra care and attention during the time the sow is pregnant usually means more pigs saved and more money, as well as satisfaction in the business. This means that the bred sow should be fed on the right type of ration, should have a very considerable amount of exercise daily and should have her farrowing quarters properly arranged as the time for the birth of her litter approaches. Again, the owner or his attendant certainly should be near at hand when the sow gives birth to her pigs.

Ration for the Sow.

The proper amount of the proper type of ration, together with a sufficiency of exercise, would eliminate about one-half of the losses at farrowing time, other things being equal. Sows should not approach the critical tme carrying too much fat. The ration should contain a reasonably heavy amount of muscle and bone building constituents. These nutrients are found in such feeds as shorts, millrun, peas, oats, skim milk, tankage and fishmeal, as well as in legume hays and pastures. On the other hand, such feeds as corn, barley, wheat and rye are essentially fattening in nature. Consequently, the proper type of ration for the pregnant sows, or for sows nursing pigs, will be within a variety of combinations of these two types of feeds, depending on whether one is handling purebreds or grade market swine, on the feeds grown in the locality and on the prices of these feeds.

In feeding purebred pregnant sows a ration consisting of ground barley, ground oats, shorts or millrun and tankage 3-3-3-1 parts each, respectively, by weight, will give splendid results. Naturally corn or wheat will substitute for barley, peas (to a certain extent), for shorts or millrun and skim milk should always replace tankage or fishmeal whenever it is available. In the latter case equal parts by weight of ground barley, ground oats and millrun would be furnished with the milk. Equal parts of oats and wheat, together with skim milk or 10 per cent tankage, makes another good ration which tends to put vitality as well as bone and stretch into the foetal pig.

For grade sows, barley, shorts and tankage, 6-3-1 parts each, respectively, by weight, form a very acceptable ration, the necessary substitutions being made as outlined above. Finely chopped alfalfa may be mixed into the grain ration, about 20 per cent of this roughage replacing a corresponding weight of grain mixture. This statement applies to both purebred and grades and an even greater amount of the cut alfalfa may be utilized if the brood sows have a tendency to become too fat. However, many hog men prefer to feed the hay whole in racks.

Exercise Is Important.

A lack of exercise, together with a heavy grain ration, makes the sow lazy and so clumsy that a heavy loss of little pigs is almost certain to occur. Again, under such conditions, the size of the pigs in the same litter varies greatly and the whole litter lacks in vigor and vitality.

Exercise, as noted above, is all important. The sows may be made to take a considerable amount through feed, the grain rations in one corner of the lot, placing the hayrack in a second, their house in a third and possibly watering them in a fourth. Small matters, are they not? Still, just such little items added together help spell success for the hog man, or failure in many instances, where they are lacking.

It is wise to have a sufficiency of room in the farrowing pen. It should be warm, dry under foot and not too deeply bedded. Experienced hog men place a 2x4 or other railing around the pen about 10 or 12 inches from the floor and the same distance from the walls. This lessens the danger of the sow crushing her pigs.

Feed for Farrowing Time.

Another point to remember is that the ration should be cut down shortly before farrowing, held down for a few days, and then gradually increased as the sow recovers and the little pigs demand more from her.

A weak slop at this time, using millrun or shorts, is highly satisfactory. Many a good sow has been killed by overfeeding immediately after the birth of her pigs.

The experienced hog man knows when his sows will farrow, has everything in readiness and he himself is "on the job." He knows that the old sow and pigs will not take any excuse for his absence. If his presence could have saved several pigs, then surely his absence has killed them and the year's profits, too, perhaps. Any attention given the farrowing sow should be done quietly so as not to disturb her. If all goes well, leave her entirely alone; if not, assist her with her work, taking care of the little pigs temporarily, so that they are not crushed or do not become chilled. After the farrowing is over return them immediately so that they may nurse. Immersion in a pail of water, hot as the hand will bear, will often save chilled pigs.

Why Are Pigs Eaten?

Constipation, if present at farrowing, may cause serious trouble. Sows in this condition are quite prone to eat their pigs at birth. A lack of animal byproduct in the ration will also make a sow carnivorous. Replacing the shorts or millrun in the ration with bran has a tendency toward promoting laxativeness. A small amount of epsom salts in the ration will also act as a corrective for constipation. If tankage or fishmeal form a part of the ration and the bowels are moved the sow will seldom consume her pigs.

Sunlight is one of the best known vitalizers of small pigs. It puts the vigor and the "jump" into them. All hog houses should face the south and be so constructed that sunlight flows into every farrowing pen. Again, as soon as the litter is old enough and the weather has warmed they should be out of doors on the sunny side of the shed, basking in the sunlight.

"Thumps" is one of the troubles to which small pigs are quite prone. It is caused by indigestion brought about by too much food and too little exercise. The symptoms are a sudden jerking movement or "thumping" of the flanks, somewhat resembling hiccoughs in man. More exercise and less feed immediately suggest themselves as the remedy.

Probably in no other class of live stock do these various small items mean so much as in the case of swine, mean so much in the way of saving pigs and garnering a profit if they are followed, or in causing heavy loss if ignored.

Wireless Grips Interest

It is doubtful if any single development of an industrial, entertainment or educational nature ever created such widespread interest as has the recent development of wireless correspondence.

The discovery of the possibility of sending messages by unseen waves in the ether that fills all space was astounding to most of us several years ago. For a long time it was made practical only for big, outstanding uses. A few powerful broadcasting stations were able to send messages successfully, and a few well-equipped receiving stations were capable of receiving the messages. Development was slow, however, until a few short months ago, when simpler equipment became possible and when there loomed on the horizon the possibility that some day almost anybody anywhere could receive messages from any one or from many of a multitude of broadcasting stations. The possibilities were recognized of central stations sending out public addresses, musical programs, market reports or anything else of general interest and thousands of people here, there and everywhere, in cities and in farming communities, listening in on these speeches, programs and market reports with their own simple receiving sets.

Is it all a wild dream? Hardly so. Undoubtedly the public mind is somewhat overwrought with the excitement incident to the great development, but wireless (commonly called radio) is undoubtedly destined to play an ever increasing part in our daily lives. Its possibilities are limited, it would seem, only by our imagination.

The secretary of state of New York announced the other day that since January 1 there had been more corporations formed for the purpose of manufacturing radio equipment than for any other single class of manufacture. He declared that millions of dollars were being invested in the business by the sanest business men of the country.

In order to meet the widespread desire for information on the general subject the United States government has published a book entitled "The Principles Underlying Radio Communication." This is but one of a multitude of books and pamphlets dealing with the subject, all of which indicate the widespread interest that is being manifest in this new development.

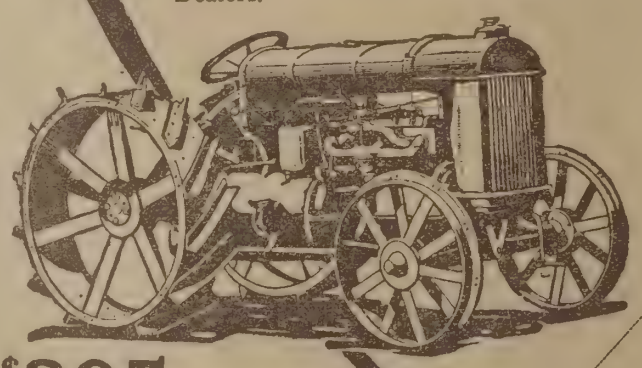
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Winter Wheat

Improvement in Crop Conditions

The April 1 crop report indicates for Washington an improvement in the condition of winter wheat over the December condition, while for the United States conditions point to a winter wheat crop about 14,000,000 bushels smaller than the 1921 crop.

Breeding sows, as stated in the report by G. S. Ray of the federal bureau of markets and crop estimates, show a decrease of 4 per cent in number in Washington as compared with last year, while for the United States as a whole there has been an increase of 11.1 per cent over last year.

Winter wheat in Washington on April 1 averaged 85 per cent of normal as compared with 100 per cent on April 1, 1921; 73 per cent on April 1, 1920, and 90 per cent, the average condition for the last 10 years on April 1. The crop shows an increase of 6 points from the December 1 condition of 79 per cent. Due to the dry fall in 1921, much of the winter wheat was not seeded until late and had made but little growth when winter came. On the whole, the winter months were quite favorable to the crop. Snow covered a large portion of the winter wheat territory continuously for a long period. The snow melted slowly this spring and most of the resulting moisture has soaked into the ground. Spring has been very late in all parts of the state and the growth of the wheat crop up to April 1 was slow. An estimate of the area of winter wheat abandoned will be made on May 1.

For the United States the average condition of winter wheat on April 1 was 78.4 per cent of a normal, against 91.0 on April 1, 1921; 75.6 on April 1, 1920, and 84.3, the average condition for the last 10 years on April 1.

Rye in Washington on April 1 averaged 90 per cent of normal against 98 per cent on April 1, 1921; 82 per cent on April 1, 1920, and 94 per cent, the average condition for the last 10 years on April 1.

The average condition of rye for the United States on April 1 was 89.0 per cent of a normal, against 90.3 on April 1, 1921.

The number of breeding sows in Washington on April 1 was estimated to be 96 per cent of the number one year ago, while the United States was estimated to have 111.1 per cent of the number last year.

Honey Production

The value of raising bees as an industry itself is shown by the results obtained by Fred Brittian of Humptulips, Grays Harbor county, Washington.

Mr. Brittian started wih a small farm of logged-loff land four years ago with only three hives of bees. A number of small farms have developed in his community and have afforded a variety of blossoms, making honey production profitable. Such crops as clover, orchard blossoms and other farm crops make a valuable combination with fire weed and other native blossoms which are abundant in this territory.

Since this part of the county is somewhat secluded it is a difficult matter to market ordinary farm crops, but honey has been found a very convenient crop to transport. Mr. Brittian now has 160 colonies of healthy bees and is introducing as many Black Italian bees as possible in order to guard against foul brood. He is a member of the Peninsula Bee Keepers' association and believes that better results are to be had by more thorough cooperative methods among farmers.

Treating Seed Potatoes

By F. D. HEALD, Plant Pathologist, State College of Washington.

How many potatoes will four ounces of corrosive sublimate to 30 gallons of water treat before it gets too weak? F. L. D. Amboy, Wash.

Thirty gallons of the solution can be used four times, dipping each time all the potatoes that will be immersed in the solution. For larger lots of seed a solution can be used for a longer time by adding more of the corrosive sublimate.

Seed stock to be disinfected should be as free as possible from dirt, preferably washed clean.

Dip in water, drain and allow them to stand in the moist sacks for 12 to 24 hours.

Using barrels or wooden vats, dip the whole tubers in corrosive sublimate, four ounces to 30 gallons of water, in open vats or crates and not in burlap sacks:

(a) For small lots of seed (one bushel or less) treat the first bushel 1 1-2 hours, the second 1 3-4 hours, the third two hours, the fourth 2 1-4 hours and then discard the solution.

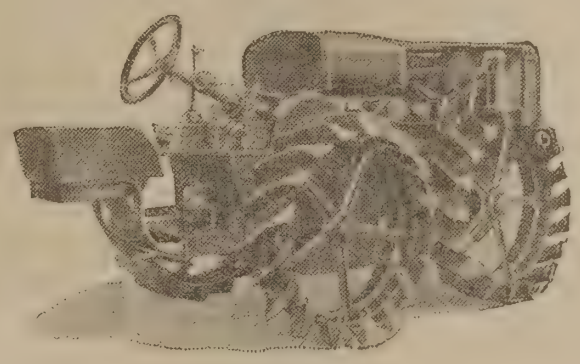
(b) For larger lots of seed, for each four bushels of clean stock treated by the standard formula, add one-half ounce of the chemical, corrosive sublimate, keeping the volume of the solution constant. Soak for 1 1-2 to 2 hours. Discard the solution entirely after making eight treatments.

Treat preferably before sprouting, but at least two weeks before planting and dry the seed immediately after treatment.

MRS. E. BORDEN, Darrington, Wash.—We like The Washington Farmer and enjoy the stories therein.

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DURABILITY
QUALITY

LIVESTOCK AND DAIRY

With the Dairyman
By RALPH ERSKINE

Speaking of the value of succulent feeds for dairy-cows, Bert Vandermeer of Tolt, in western Washington, said he felt that it paid better to raise mangles on well manured ground than to attempt to raise a crop for silage.

"It would be different if we could depend on a good crop of corn," said Mr. Vandermeer, "but there are years when the crops don't do so well and that cuts down the supply for the winter. It also takes a greater output for labor and it all must be done when the crop is ready.

"On the other hand, the root crops can be taken care of by the regular farm help and it does not have to be harvested at any specific time as long as they are not allowed to lie in the field too long. I find that the cows like the mangles as well as or better than silage and I doubt if there is any difference in the milk production."

Mr. Vandermeer said that he had raised as much as 85 tons of mangles to the acre where land had been heavily manured. The crop was stored in the root cellar and kept in fine condition until late winter. Next winter he expects to have a larger tonnage to feed from this season's planting.

SURPLUS MILK.

When confronted with the question of surplus milk for the early spring months, Robert Koostra of Tolt, Wash., stated emphatically that he would have nothing over the usual shipment to sell from his farm this year. He went on to say that there was no use of any trouble with this question in the spring of the year, but it should all be taken care of at home.

"I have realized as much at $3 per hundred for my surplus milk," said Mr. Koostra, "and I believe I can show better figures in the future by feeding pigs. If all of the dairy farmers would take this matter into their own hands they would come out better in the long run and the distributors would not have to fight the large amount of milk that is produced in the spring and it would not have the tendency to make a drop in the price at this time."

Mr. Koostra believes in feeding anything he can get hold of that will consume skimmed milk, with the addition of some kind of a grain to keep them growing. Pigs have been the main factor in this regard, but calves have proven very profitable feeders when properly cared for and it is an easy matter to dispose of the sweet cream at a good price.

LIFE PRESERVERS FOR LIVE STOCK
By DR. E. E. WEGNER, W. S. C.

INFECTIOUS DISEASES, ARTICLE V.

Lumpy Jaw.

Probably no disease is more commonly seen and recognized than the above. It



affects cattle usually, though hogs occasionally suffer from it. It confines itself to the head as a general thing, though it is occasionally met in other parts of the body. In the beginning it appears as an enlargement in the region of the throat or farther forward toward the jaw; first it may be no larger than a walnut or only large enough to be noticed, and at this time it is free in the tissues and not attached to the bone, as it may be later. In unusual cases it may attack the bone first, but these instances are rare.

The cause of this condition is a small fungus or kind of mold that thrives on the bearded grains usually and gets into the animal tissue directly from the grain, as the membrane of the mouth may easily be slightly injured by barley and other similar ones and this opening is sufficient for the passage of the organism. It then finds its way probably into the lymph stream and is taken downward toward the throat and there it is held up by the glands of that region. Being held here it begins at once to grow in the tissues and the above mentioned swelling results. Very infrequently it gets past the glands of the throat and gets farther down into the body and may at times become generalized over the body and grow in the lungs or other organs.

Attacks the Bone.

Since most cases are near the throat we may discuss it in this region to the best advantage. If the growth is not molested but allowed to advance it soon gets much larger and may attack the bone of the lower jaw. When such occurs the bone becomes invaded and in time is so diseased and honeycombed that the teeth are badly loosened in their sockets and the animal is quite unable to eat. When such a stage is reached the animal is quite useless, as the damaged condition of the jaw can not be repaired. After attaining considerable size the tumor-like growth becomes soft in several places in the center and these break together or to the outside and a discharge begins which persists until the destructive action of the disease causes death. These may heal up for a short time, but they break out in another place. If these tracts are explored it will be found that they run deeply into the center of the growth. The pus discharged from these places has a very characteristic appearance, as it contains small granules that are very readily recognized, and it may in this way be quite certainly distinguished from some other conditions.

Nontransferrable.

The discharge from this swelling is not capable of carrying the disease from one animal to another and when animals have been closely tied and closely associated the healthy ones have not contracted the disease from the diseased one. They get the infection from the grains and not from one another. It appears, however, that the life cycle of this fungus is not complete unless it grows in animal tissue, so that the spreading of pus from a diseased animal over a premises is only sowing the seed for a greater crop for the following year. For this reason animals should not be allowed to constantly spread this material.

Many times we are asked if the milk is fit for food when the animal has this disease. The milk is not affected in any way unless the disease has advanced to a point where the animal has some fever as a result. As long as they appear all right in other ways and keep up in flesh it is unlikely that there is any danger in using the milk, though one may not care to use it.

The Treatment.

The treatment of lumpy jaw is quite a success and in the early stages surgical treatment is probably the best if the growth is so located that it can be readily reached. In cases where the disease has extended to a stage where surgical treatment could not succeed then the medical treatment is to be used. Potassium iodide in teaspoonful doses night and morning until symptoms of poisoning result is probably the best and causes many positive cures. The milk should not be used during this treatment, as the drug has saturated the system.

Like many other diseases, the early treatment is best, as delay means prolonged treatment and some permanent damage to the tissues involved.

Okanogan Stock Sale

Thirty-three head of Hereford bulls, Shorthorn heifers and bulls brought an average of $125 at the second annual sale of Okanogan County Purebred Breeders' association April 6. Sales ranged from $80 to $175. Only two cows sold for less than $100. A Hereford bull topped the sale at $175.

Nine Hereford bulls were sold by the Methow Valley Live Stock company for $1195. Some of the string were exhibited at the Spokane, Lewiston and Portland live stock shows. Ten Shorthorn cows brought $1285.

The Okanogan County Live Stock association reelected E. F. Banker president and P. T. Harris secretary-treasurer. Okanogan County Federal Live Stock Loan association reelected E. F. Banker president and C. H. Yand secretary-treasurer.

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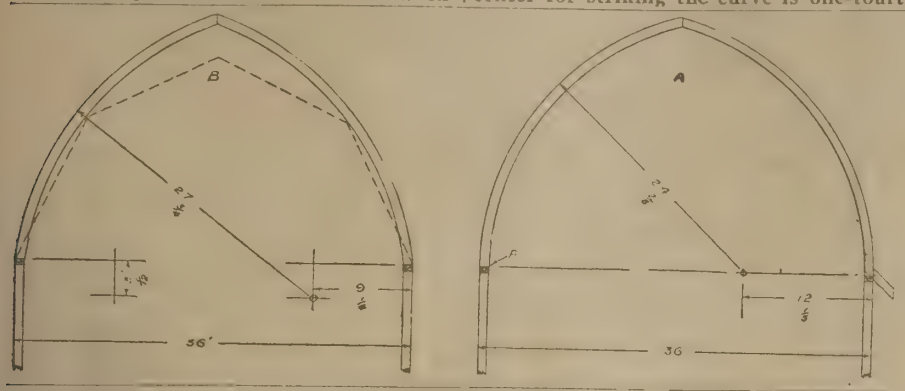
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Gothic Roof Gives More Room

By PROFESSOR L. J. SMITH, State College of Washington.

Ten years ago the gambrel roof barn was the last word in barn architecture. A new type, however, is slowly but surely rising to compete with this widely accepted two-pitch roof. It is not new except as applied to farm building for the Gothic arch has long been famous because of its wide use in the great European cathedrals, and is widely used in our modern churches.



In Gothic roof construction the rafters are made up of several layers of one-inch boards, the outer edges of which are cut to an arc of a true circle, or of layers of narrow one-inch boards bent to conform to such a curve and nailed together. The proportions of the Gothic roof are simple. The sketch lettered "A" is used on the narrow type barns, while "B" is used on the barns of greater width, say, beyond 36 feet.

In "A" the radius of the curve is two-thirds the width of the barn, and the center is on a horizontal line with the top of the plate "P."

In "B" the radius is slightly over three-quarters the width of the barn, and the center for striking the curve is one-fourth in from the side wall, and one-twelfth below the plate.

The dotted lines in "B" show a commonly used proportion for the gambrel roof barn, which will give the reader a comparative idea of the loft space under the two types of roofs. The Gothic roof gives considerably more space than the gambrel. The Gothic roof "A" has a slightly larger volume than when the proportions in "B" are used.

VETERINARY

By DR. S. B. NELSON.

Colds—I have a rat terrier dog that has had a cold nearly all winter. Is there a remedy? S. J.
Oak Harbor, Wash.

Try giving the dog one grain of quinine night and morning for some time. You can put it on a little piece of meat and throw it to him probably better than any other way.

Sores—We have an 8-month-old pig that has sores breaking out all over its body, forming scabs which peel off and new sores reappear in other places. S. H.
Bothell, Wash.

Try painting the sore spots with a one-half of one per cent solution of picric acid in water once daily. Use a small brush for the purpose.

Carrots for Feed—Are carrots good feed for horses and how much should be fed?
Ariel, Wash. M. E. B.

Carrots fed in limited quantity are good adjunct feed with hay and grain. They should be sliced lengthwise and horses can take from four to eight slices daily of good sized carrots. Some people like to feed them only three or four times a week, but horses can stand them daily.

Ticks—Can you give me a remedy for ticks? The horses in this neghborhood are fairly eaten alive by them. They seem to catch them off greasewood. S. P.
Plum, Wash.

If you have not too many horses, I believe that the curry comb is the best tick remover that we have. Of course, if you have a large number of horses, then they should be dipped in a solution of any of the standard sheep dips.

Lame Shoulder.—I have a cow that is to be fresh in May. I dried her up the first of February and since then she became lame in the left shoulder and is apparently paralyzed on the left side now. I can find no swelling nor sores from bruises of any kind. When walking about she can hardly bear any weight on the left side. She eats well. E. A.
Olympia, Wash.

Give your cow one ounce of sodium salicylate morning, noon and night for two or three days.

Slobbers—I have a work horse that slobbers when he eats his oats. I am feeding timothy hay and two quarts of oats night and morning, and he gets just enough work for exercise. A. W. M'C.
Spokane, Wash.

Have your horse's mouth and teeth examined to see if there is a foreign substance or sharpness of the teeth or an abraded surface in the mouth that causes a soreness which results in the slobbering. I think that the removal of the cause will stop the condition.

Has Dry Cough—I have a horse that wintered well the first part of the season, but lately she seems to have developed a dry cough. She seems lifeless, but eats quite well. I feed timothy hay with some straw in the night feed and a little bran with about a handful of oil meal once or twice a week.—A. W. L., Deer Park, Wash.

Stop giving your horse bran and replace it with good oats, for this reason, timothy hay and straw or bran is too wide a ration for a horse to live on and keep its liveliness. She needs some real feed like oats in order to do this.

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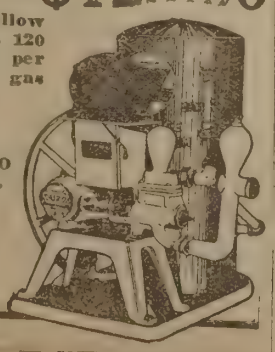
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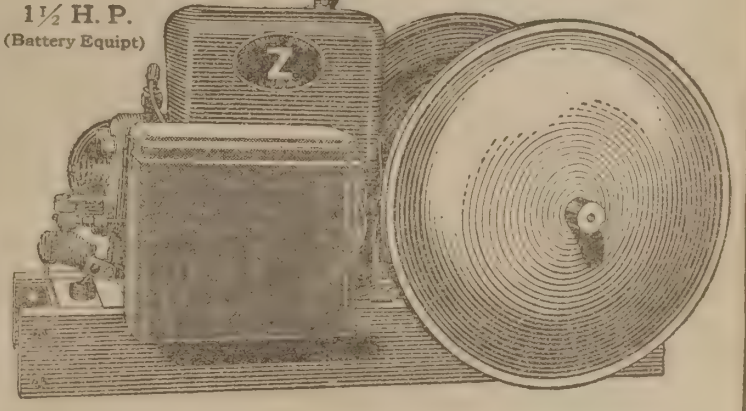
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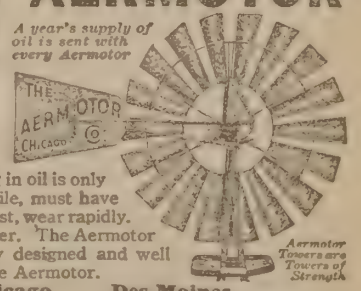
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POULTRY AND RABBITS

Poultry Problems

By W. D. BUCHANAN, Poultry Extension Specialist, Washington State College.

MATE UNRELATED BIRDS.

Is it good policy to use a gander from the same hatch as the goose for breeding purposes? What is the correct way to kill and dress a goose for market?
Olympia, Wash. MRS. O. M. L.

It is best to mate unrelated birds. Geese are generally killed by sticking in the mouth with a long-bladed knife and then stunned by a sharp blow on the head. This is necessary if they are to be dry picked.

LITTLE CHICK TROUBLES.

Will you tell me if sweet skimmed milk will injure baby chicks, and what is the best ration for incubator chicks where you must keep them penned up? What is wrong with baby chicks when they become lame and throw themselves backward and are affected with diarrhea?
Walla Walla, Wash. MRS. G. N. M.

Skimmed milk is good for baby chicks, but it must always be clean, wholesome and either sweet or sour. You can not switch from sweet to sour, neither can you feed milk that is just turning sour. It is seldom necessary to keep chicks penned up and it is difficult to raise them if you do.

A good ration would be two parts steel-cut wheat, one part steel-cut corn and one part steel-cut oats for scratch to be fed five or six times a day, and a mash composed of 16 parts bran (by measure), one part bone meal, one part sand and one part charcoal, kept before them after the fourth day. They must have unlimited green feed, exercise and fresh air. Above ration assumes that they have all the buttermilk or sour milk they will drink.

Leg weakness is sometimes caused by overfeeding and close confinement. Diarrhea may be due to same cause, to poison from tainted milk or animal protein, or it may be the contagious kind.

"Outbreeding"

By GEORGE R. SHOUP.

1. Wishing to start in a certain breed of poultry, would it be advisable to cross two different strains of the same breed as by buying a cockerel from one breeder and hens from another? 2. Which is considered the best general purpose fowl, the White Rock or the Rhode Island White?
Prosser, Wash. G. A. B.

In answer to your question No. 1, the method you suggest we term "outbreeding." This practice is meeting with much favor in recent years, as apparently it results in a more certain vigor and less weaklings in the baby chicks than when very close line breeding or inbreeding is practiced. There also seems to be a better average size to the pullets. One tendency of close breeding, apparently, is to gradually reduce the size and consequently the vigor of the offspring.

As to question No. 2, no one can answer it definitely. There are many fine strains and individual flocks of both breeds, also many poor ones. Much depends on the breeding back of them and the care taken in raising the pullets.

Poultry and Cows

When speaking of the relative value of grain crops and live stock on the prairie soils of the Spannaway district, in Pierce county, E. L. Bowers remarked that in his opinion poultry produced the biggest dividends for the amount of labor and expenditure required.

"The best I have done on the cows was about $33 per animal for the year's average," said Mr. Bowers. "This, of course, was from ordinary cows that would average about 255 pounds of fat. If a man can make his hens average $1 each for the year it will beat the cows, because there is not so much work needed in proportion to the amount of income realized.

"I believe, however, that the two should be worked together, because the milk is needed for feeding the hens. I have thought some of going into the poultry game on a larger scale, but I would not get so large a flock that it would hinder the other work on the farm, such as the raising of grains for feeding both the hens and the cows."

Mr. Bowers sells cream to the local market and keeps all his skimmed milk at home. Last fall he tried grinding some oats for feeding to the dairy cows and to the chickens, but found that it was not worth the time and expense of grinding, because the hens could consume it whole to a good advantage and for the cows it was not as good as mill run.

"The methods of modern times are constantly changing our farming operations," concluded Mr. Bowers, "and we are coming to a place where the farmer must adopt business methods, or he will not make his farm pay. If he can manage to feed his grain on the farm and not plan to sell any of it, he stands a better chance of making profit. We can not raise wheat in this district and sell it on a market to compete with the big producers in the wheat-growing sections, who operate their farms on a larger basis. We can, however, raise a few small patches which can be fed to our flocks to good advantage."

Rabbit Production

"I wouldn't keep a doe that didn't make $30 a year," said R. C. Spring of Tillamook, Ore., and he had 70 females when he said it, so there ought to be little difficulty in determining his income from rabbits. He sees many advantages in raising rabbits.

In the first place, he claims it costs almost nothing to keep a doe. The work of caring for them is less constant than that of caring for poultry, though not a whit less exacting. And his rabbits, for example, occupy only the room (16x50) that the hutch stands on. He buys all his feed, including hay, grain and green feed, as he has found this cheaper than hiring help to grow it.

Spring estimates that one man can take care of 3000 head and do it right. He has been in the business about three years, having started in a small way near Chicago before moving west. New Zealands and Flemish Giants are his favorites.

Cooperative Marketing

"There are but two things that cooperative marketing can do," according to W. D. Buchanan, poultry extension specialist of the Washington State college, "eliminate the waste which attends the industry when it is unorganized and prevent manipulation.

"Cooperation is not a cure for inefficiency in production, but it is rather a tool for those who have been successful in production to market their products in a more efficient manner. It is just as necessary for a member of a cooperative association to handle his flock properly as it is for one who sells to his own customers on an independent market. Cooperation, where it is being handled properly, is beginning to show some very promising results and promises to show even greater results in the future."

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The method is especially recommended for raisers of purebred stock, as there is no risk of soiling the plumage. The tablets are warranted to impart no flavor or odor to the eggs and meat. This remarkable conditioner, egg tonic and lice remedy costs only a trifle and is sold under an absolute guarantee. The tablets are scientifically prepared, perfectly safe, and dissolve readily in water.

Any reader of this paper may try them without risk. The laboratories producing Paratabs are so confident of good results that to introduce them to every poultry raiser they offer two big $1 packages for only $1. Send no money, just your name and address—a card will do—to the Paratab Laboratories, Dept. 878, 1100 Coca Cola Bldg., Kansas City, Mo., and the two $1 packages, enough for 100 gallons of water, will be mailed. Pay the postman $1 and postage on delivery, and if you are not delighted with results in 10 days—if your chickens are not healthier, laying more eggs and entirely free from lice and mites—your money will be promptly refunded. Don't hesitate to accept this trial offer as you are fully protected by this guarantee.—Adv.

The boy who started to town with $100.00



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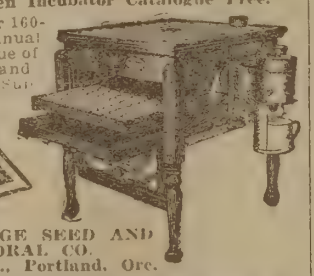
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Fruit trees budded from bearing orchards. Apple, Pear, Cherry, Peach, Plum, Prune, Apricot, Quince, Grape Vines, Shrubbery, Plants, Raspberries, Blackberries, Logans, Dewberries, Asparagus, Rhubarb, Flowering Shrubs, Roses, Vines, Hedge, Nut and Shade Trees. Carriage paid. Satisfaction guaranteed.

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Kills lice, mites, bed bugs, etc., affecting poultry. Spray or paint on roosts, etc. Gets body lice on chickens, too. Works while they sleep. No dusting, dipping, greasing or handling. Saves lot of unpleasant work. At most towns, at store handling Lee Poultry Supplies. Write for information and FREE Book.

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Science Discovers Greatest Lice Killer

Changes Old Methods. No Dusting or Spraying. Birds Delouse Themselves. Gives Lasting Relief.

A recent discovery promises to revolutionize all the methods accepted up to now for keeping poultry free from lice and mites. This wonderful lice killer keeps the birds always lice free without the poultry raiser doing any work. It is the simplest, easiest, surest and best method ever discovered.



Hick's Lice Kill, which is the name of this sensational lice killer, is added to the drinking water. The medicine taken into the system of the bird comes out through the pores and every louse or mite dies or leaves the body. It does not injure the hatchability or flavor of the eggs or meat; is harmless to chicks and does not affect the plumage. A few days treatment at the start and then a little in the drinking water each month.

A Trial Costs You Nothing

So confident is Mr. Hick that Hick's Lice Kill will kill every louse or mite, that he is making a special guaranteed offer of two regular full sized, double strength, $1.00 bottles and a regular $1.00 package of Hick's Egg-Lay Tablets all for $1.00. Use one bottle yourself and sell the other at one dollar, thus getting your own free. Send $1.00 today (currency, money order, check, etc.) to Chas. M. Hick & Co., Dept. 1093, 1018 S. Wabash ave., Chicago, Ill. If you prefer, send no money, just your name and address, and pay postman $1.00 and postage on delivery. If after two weeks' trial you are not absolutely satisfied, write Mr. Hick and your money will be refunded.—Adv.

ORCHARD AND GARDEN

Top Grafting

By O. M. MORRIS, Head Department of Horticulture, Washington State College.

A great many farmers and fruit growers find that they have trees in their orchards which are of little value. Some of these apple trees and pear trees can be very successfully grafted over to more satisfactory varieties. Some of them, however, are not worth grafting over.

Vigorous trees between the ages of 3 and 15 years, if resistant to winter injury and blight and well-formed in the main branches, may properly be top-grafted to better varieties. Unsatisfactory trees, like Wagener and Spitzenburg, are seldom worth top grafting.

Top grafting is a makeshift at its best, and is simply an effort to get out of a bad situation. Slow growing varieties should not be worked over to others. The top will outgrow the trunk and base of the tree and usually results in breaking down the new tree soon after it has come into fruit production. Trees that are easily winter killed or are subject to blight, like the Spitzenburg, are not worth top grafting, unless they happen to stand in a place in the home orchard where a vacant spot is not wanted, and no direct financial returns are involved. In the commercial orchard it is usually better to pull these trees and plant a new orchard, or devote the land to some other purpose.

There is not much difference between the trees as far as their ability to grow when top worked on other varieties. Almost any variety of apple will grow well when grafted upon any other apple. They can seldom be grafted successfully upon pears, nor the pears successfully grafted upon apples.

In top grafting work it is not worth while to graft where there is small opportunity for the parts to grow well and heal over the union. Exposed stubs and conditions of that kind usually cause heart rot of the trees so that the new top breaks and fails.

CLEFT GRAFTING.

Cleft grafting is the most common form of top grafting used. The tools needed for this work are a sharp, fine-toothed pruning saw, a sharp, thin-bladed knife with a straight edge, a cleft grafting knife, and a short club or mallet. If a great deal of work is to be done it is worth while to make a special cleft grafting knife. If but little work is to be done a common heavy, hawk-bill knife can be used for the purpose.

An ideal cleft grafting knife should have a chisel point and one edge of the knife should be curved concave, so that it can be placed across the stub to be grafted and used as a splitting knife by striking the back with a mallet. This curved edge will serve to draw in the bark as the stub is split. A straight-edged knife used in the same way will push the bark away from the edge of the split.

The stub for cleft grafting work is prepared by sawing off a limb, usually not more than 2.5 inches in diameter nor less than one inch, and smoothing the edge with a knife. The stub is then split about 2.5 to 3 inches down, running the split straight through the center of the stub. The knife is then removed and the chisel point inserted in the center of the split and driven down to open the cleft made by the former action of the knife. In this form it is ready to receive the scions.

The scions are prepared by making two long sloping cuts at the butt end of the scion. These cuts should be made on opposite sides of the twig and so that one side of the wedge made with sloping cuts is a little thicker than the other.

The thin side of the wedge should be placed nearest the heart of the stub when set. Push it down well into the cut and so that the line between the bark and the wood in the scion and the same line in the stub will meet. A scion should be placed in each side of the stub. Then lift out the chisel or wedge point of the knife and the stub will close against the scions and hold them firmly.

The entire stub then should be covered over with grafting wax or some similar material to prevent drying out. A good plan is to use melted grafting wax and apply this over the entire stub, filling the cleft and up the sides where the scions are set. No further work or attention is required.

The stubs usually should be three or four inches long, and of side branches from the main frame work. It is seldom advisable to set scions out on the end of long branches.

Cut away other branches that will interfere with the growth and development of these scions. They will grow and look like water sprouts for a year or two. The best method of handling them is not to prune them any more than is necessary. Cut away some of the interfering branches where they cross and rub each other. The less they are pruned the quicker they will come into fruit production. Do not head them back unless they are so long and whip-like they bend and droop.

Cleft grafting is most successful if done after the buds begin to swell rapidly and before they show leaves or blossoms.

GRAFTING WAX.

Good grafting wax is a necessity to successful top grafting work. It is used to exclude air and moisture and to keep out infections which cause rots, and should be prepared several days before the top grafting is done. The wax may be applied with the bare hands by having it in such condition that it will pull readily like taffy and can then be spread out over the wounds. Another common method of applying it is to melt and apply with a brush.

A good wax is made of one pound of tallow, two pounds of beeswax and four pounds of rosin. Beef tallow is best, and the beeswax may be crude material and need not be refined wax sold at the drug stores. This material should be melted together, and while hot poured into a vessel of cold water. After the mass has hardened sufficiently to handle with the hands it should be lifted out and pulled like taffy until it becomes tough and turns a light yellowish color and is free from grainy appearance. It may be then made into balls or rolls, wrapped in a greased paper and laid away for use at convenience. This may be applied by hand or melted and applied with a brush.

A wax which may be applied by hand in warmer weather than is common before the trees come into blossom is made by using one pound of tallow, one pound of beeswax and four pounds of rosin. This is made the same as the material referred to above.

Linseed oil may be substituted for tallow by using one pint of raw linseed oil, one pound of beeswax, two pounds of rosin. This will make a very soft wax and will require little heat to melt it so that it can be applied with a brush. It can be handled with the hands in quite cold weather.

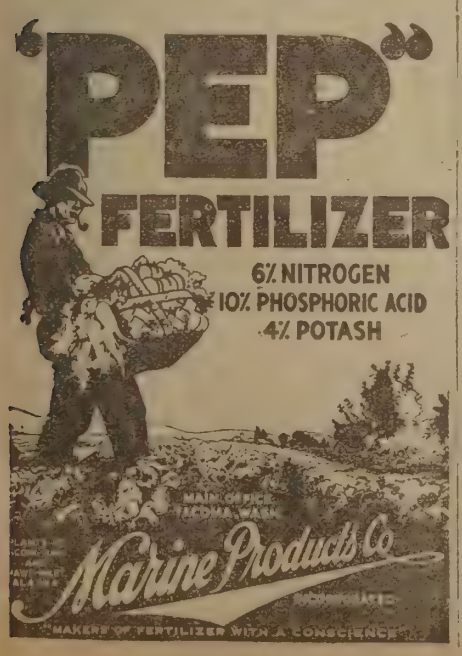
If beeswax is not available paraffin may be substituted in any of the above combinations. It will not make quite the same consistency of wax, but will serve the purpose well.

The "D" or hard asphalt can be melted and used for painting over wounds where the wood is dead. It should not be used on young, tender growing shoots or on wood less than three or four years old. It can be used sometimes in painting the stubs exposed in making cleft or other forms of top grafting work.

A substitute for grafting waxes to be used in covering wounds on trees can be made by dissolving coal tar or asphalt in creosote. Use proportions of each material so as to make a medium thick paint and apply with a brush. This material will kill live plant tissue and should be applied with care around the edges of the wounds. It is especially valuable in painting over winter killed areas on the trunks and large roots. Roof paints, common coal tar and asphalt paints offered on the market are seldom satisfactory for such purposes. They contain oil that is usually more destructive to plant tissue than is the creosote mentioned above, and do not have any better protective value.

SPREADS BEET NEMATODE.

Dirt from the beet dumps apparently is the most common means of spreading the sugar-beet nematode and should be the first to receive attention in planning control measures, according to Farmers' Bulletin 1248.



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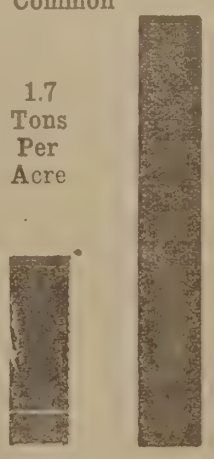
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How would you like to have a field of alfalfa that would yield from one to two tons more hay per acre? That is just what you will have if you seed GENUINE GRIMM.

The following figures, taken from a ten-year test at the Guelph, Ontario, experiment station, tell their own story:

TONS ALFALFA HAY PER ACRE

	Grimm.	Montana Common.	Common.
1910	3.21	2.35	2.31
1915	5.19	3.25	2.61
1916	4.71	2.48	0.85
1917	1.69	Nearly all winter killed.	
1918	2.63	A slight come back.	

Over a ten-year period the Grimm has averaged 3.6 tons per acre, as against 1.68 tons for Montana Common and 1.11 tons for common.

Can you afford to sow seed that will not give you the greatest return when the cost of seeding of either variety is practically the same?

Write for information and prices.

IDAHO GRIMM ALFALFA SEED GROWERS ASS'N.

Blackfoot, Idaho.

In writing advertisers, be sure to say you saw their advertisement in The Washington Farmer.

Your Health

By Royal S. Copeland, M. D., F. A. C. S.

It isn't nice to be sick. If you must be sick, go to a hospital, if possible. If you can not go to a hospital, then your sickroom at home should be converted into the nearest possible approach to a hospital room.



Dr. Copeland.

You will recall that hospital rooms and wards are bare of all adornment. There are no "gimcracks," rugs or other dust collectors.

The sickroom should be prepared by taking down the curtains and hangings. Remove the heavy furniture. Take all the knick-knacks off the dresser, and banish everything that interferes with cleaning and dusting.

Use a damp cloth for dusting, so that the air is kept clean and pure. The windows must be made to move up and down easily. The patient should be protected against direct draft. To this end, it may be well to provide a muslin screen for the window. This is made by stretching a piece of thin muslin over a frame which fits the window.

In fly time, it is needless to say, the window has mosquito netting to keep out insects. Over each window a dark shade is placed, so that the amount of light that enters may be controlled.

The bed should be so placed that the nurse or attendant can walk around both sides. It should be so placed in relation to the windows that the light does not shine into the eyes of the patient. Yet it is a joy to a sick person to be able to look out of the window. Views of the outside world assist his recovery.

The door should have the hinges oiled and be provided with a lock. In making the dressings and bathing the patient there are times when he demands privacy.

There may be limitations as to the amount of help in the household. One person may be nurse, cook, chambermaid and orderly all in one. Even so, the patient's tray should be daintily served.

Food is one of the most important items in the essentials of speedy recovery. A sick person has an appetite which must be coaxed. With no exercise and with the effects of the disease, there is no longing for mealtime. A limited number of pretty dishes, a clean napkin and a flower on the tray will add to the happiness and promote the recovery of the sick one.

When the patient is able to sit up he should have a comfortable chair, a pillow for the small of the back, and be so placed as to get a new view of the outer world. If possible, get him into another room on these occasions.

Don't let him sit up too long. Wrap his legs and knees in a blanket. A low stool will keep the feet off the drafty and cold floor.

Hot water bottles, extra pillows and a bed jacket will help amazingly in increased comfort.

Don't forget about the joys of a cool, palatable drink of some sort. A jaded appetite may be stimulated this way.

LIVE STOCK FREIGHT RATE.

Freight rates on shipments of live stock from the Inland Empire to Portland and Puget sound are to be attacked by the Northwestern Live Stock Shippers' Traffic league, according to decision reached at a recent meeting held in Portland. It is said that freight rates are far too high and that other conditions surrounding shipping are too exacting. Arthur M. Geary, attorney for the league, will present the request of the shippers to the railroads and to the interstate commerce commission, if necessary.

HELP WANTED—Male 3

FARM HELP ON STOCK FARM, $50 MONTHly; all year work. Pete Cosmo, Box M, Marcus, Wash.

FRESH FOOD PRODUCTS 51-1

COSY NOOK HONEY, PURE, EXTRA choice sweet clover; a beautiful white, fine flavored honey. You will want more. 10-lb. pail to fourth zone, $1.90; 5-lb., $1; 2½-lb., 65c; case of six 10-lb. pails, $7, f. o. b. Blackfoot, by freight or express; 60-lb. can, $6.25; two for $12. Special prices on larger quantities. 24 sections fancy comb honey, $4. Cosy Nook Apiaries, Blackfoot, Idaho.

HONEY BRAND HONEY, PURE, LIGHT, thick and good flavored, from alfalfa and sweet clover. One 60-lb. can, $7.50; two for $14.50. Write for circular and prices in pails. Salesmen wanted. Oliver Sires, Wapato, Wash.

WHITE ALFALFA, SWEET CLOVER honey; 1 60-lb. can, $7.50; 2 60-lb. cans, $14.50; six 10-lb. cans, $8.50; three No. 10 pails, prepaid third zone, $5.50. Wells D. Rose, Sunnyside, Wash.

HONEY,—FINE QUALITY ALFALFA SWEET clover; 60-lb. can, $7.50; 2 cans, $14.50; three 10-lb. pails prepaid, second zone, $5. Harry Fisher, Prosser, Wash.

3-POUND BOX ABSOLUTELY BONELESS codfish, fine white, new catch fish, delivered by mail, $1. Coffin Fish Co., Seattle, Wash.

WORLD'S BEST CLOVER HONEY, 60 pounds, $6.15; two 60s, $12. Browne, Box 499, Twin Falls, Idaho.

MISCELLANEOUS—FOR SALE 60

THREE-UNIT PERFECTION MILKER, COMplete; used three weeks. Ernest Loennig, Tillamook, Ore.

FARMERS' WANT ADS

This is the farmers' "want." "sale" and "exchange" department for small advertisements of farmers, including live stock and poultry.

Advertising rates for ads running 1 to 3 times, 10c per word per insertion, with a special rate to Farmer subscribers, as follows: Ads running 4 to 12 times, 9c per word per insertion; ads running 13 times or more, 8c per word per insertion.

All commercial and land advertising 10 cents per word each insertion. Open also to nonsubscribers.

In using these columns advertisers must observe: (1) No advertisements will be inserted for less than $1.00. (2) Every word, number and initial, including name and address, must be paid for. (3) New advertisements, changes of copy or cancellations must reach general office, Spokane, Wash., 10 days in advance of publication date. (4) Cash must accompany order.

Above rates include insertion in The Washington Farmer, The Idaho Farmer and The Oregon Farmer, which constitute the Pacific Northwest Farm Trio, 46 Review Building, Spokane, Wash.

MISCELLANEOUS—FOR SALE (Continued) 60

SASH AND DOORS—O. B. WILLIAMS CO., 1943 First ave., So. Seattle. Chicken house sash, 20" wide by 25" high, 80c; a dozen different sizes in stock for immediate shipment. Skylights for chicken houses, 36"x40" price, glazed, $2. This is the size recommended by the Western Washington experiment station. We carry them in stock for immediate shipment. Sash and doors for all purposes at lowest prices. All orders receive prompt attention. Our large illustrated catalogue No. 35, showing full line of building material and built-in fixtures for the home, free on request. O. B. Williams Co. Established 1899.

TOBACCO, NATURAL LEAF—SWEET AND mellow hand-picked chewing or smoking, 5 lbs., $1.50; 10 lbs., $2.50; smoking, 10 lbs., $2. Furnish free recipe for preparing. Quality and delivery guaranteed. Farmers' Tobacco Exchange, Sedalia, Ky.

JERUSALEM ARTICHOKES ARE ECONOMical feed for hogs and other stock; tops good fodder for cattle and horses. Plant and cultivate same as potatoes. Tubers, $1 per grain sack full here. G. G. Fullerton, Dayton, Wash.

KENTUCKY TOBACCO—DON'T SEND ONE penny, pay for tobacco and postage on arrival. Extra fine quality leaf, 3 years old, nature cured. Chewing, 10 lbs., $3; smoking, 10 lbs., $2.50. Farmers' Union, D119, Hawesville, Ky.

WALL BOARD—WRITE FOR SAMPLE OF Washington plaster wall board; won't warp, won't burn. Manufactured by Washington Building Products company, 6851 E. Marginal Way, Seattle, Wash.

PIPE — NEW AND SECOND-HAND, ANY size; low price; standard grade roofing paper at a big saving; belting, all plies, all sizes, cheap. Write Alaska Junk Co., S120 Adams st., Spokane, Wash.

CEDAR CHESTS DIRECT FROM FACTORY to your home; Tennessee cedar, solid copper trimmings. Write for catalogue. J. W. Higgins & Sons, 1912 Gilsan st., Portland, Ore.

TOBACCO, NATURAL LEAF, FOR MILD SMOking; 10 lbs., $1.50; 20 lbs., $2.75; will furnish free recipe for preparing. Leaf Tobacco Exchange, Mayfield, Ky., Star Route.

BRAND NEW 4-SECTION SPRING TOOTH harrow and American grain drill; make offer. Central Agency, Inc., Broadway and Pike, Seattle.

TOBACCO — HOMESPUN, EXTRA FINE chewing, 10 lbs., $3; smoking, 10 lbs., $2; 20 lbs., $3.50. Producers' Exchange, Mayfield, Ky.

HOMESPUN TOBACCO, 5 POUNDS, $1.25; 15 pounds, $3. Send no money, pay when received. Farmers' Association, Jonesboro, Ark.

CEDAR POSTS, POLES, PILING AND STUBS; lengths and sizes to order. Marsden Red Cedar company, Calder, Idaho.

JOHNSON'S PACKAGE BEES, QUEENS. Write for remarkable prices. 165 Raymond ave., San Jose, Cal.

MACHINERY—For Sale 93

FOR SALE—SAMSON MODEL M TRACTOR, or will trade for Twin City 12-20 tractor. Geo. Brockart, Hubbard, Ore.

FOR SALE, OR WILL TRADE FOR CATTLE —One Cleveland tractor, with plow. Ernest Johnson, Scappoose, Ore.

MACHINERY—Wanted 96

WANTED—SECOND-HAND IRON AGE POtato planter. W. L. Cadman, Dayton, Wash.

AUTO TRUCKS—For Sale 115

WE WILL ABSOLUTELY SAVE YOU FROM $500 to $1500 on the purchase price of a new truck. Creditors' sale of various standard makes; any size, 1 to 5 tons. Also a Holt 75 Caterpillar for $3500. Exceptionally easy terms. Write R. S. Phelps, 607 Empire State building, Spokane.

MOTORCYCLES AND BICYCLES. 127

REBUILT HARLEY-DAVIDSON MOTORcycles; guaranteed. A. P. Tyler, Boise, Idaho.

STOVE REPAIRING. 128

WRITE MYER RUBENS, SPOKANE, ABOUT stove repairs, welding broken parts, nickle plating.

FUR-BEARING ANIMALS 170

SILVER AND CROSS FOXES FOR SALE. William Rambo, 407 Sprague, Spokane.

PETS—Dogs, Birds, Etc. 171

SABLE AND WHITE TRI-COLORS AND pure white collie pups from the best stock in the country; all stock pedigreed. Princess Collie kennels, 4812-42 Southwest, Seattle, Wn.

FIVE YOUNG, WELL TRAINED FOX hounds for sale. E. L. Buck, Pomeroy, Wash.

POULTRY (Baby Chicks) 174

THE LARGEST LEGHORN BREEDING ESTablishment and hatchery in the northwest, and on the Pacific coast, has a housing capacity of 12,000 breeders; brooding capacity for 15,000 chicks; incubator capacity for 142,200 chicks at one time. It was started 16 years ago, by its present owner, without capital or poultry experience, on a barren ten-acre tract of land. The White Leghorns produced there have made possible its growth. It is the Oak Heights Poultry Farm, Capt. A. Waldwick, proprietor, Route 3, Box T67, Tacoma, Wash. This is the place where real good baby chicks come from. They are bred for eggs, vigor, size. The price is low. No order too large or too small. Prompt delivery and safe arrival guaranteed. Free book on "Raising the Chicks." Write us now.

400,000 BABY CHICKS—OUR WHITE LEGhorns are bred to lay; priced at $15 per 100. We hatch from some of the best flocks of R. I. Reds, Barred Rocks, Anconas and Minorcas to be found in the northwest. Chicks are priced at $22.50 per 100. Send $1 deposit per 100 with your order, paying the balance on inspection of chicks. Safe arrival guaranteed. We have a few standard makes of incubators and brooders at greatly reduced prices. Send for our circular offer. Seattle Hatchery, 1906 Pike place, Seattle.

POULTRY—Baby Chicks (Continued) 174

HENACRES BABY CHICKS FOR JUNE ARE only $16 per 100; $140 per 1000; best quality chicks at common chick price. Special instructions for winter layers of June chicks free. We have a few May chicks left at $22 per 100. Safe delivery guaranteed; plenty of hatching eggs at $2 per 15; $9 per 100; 90 per cent fertility guaranteed. Eight weeks old pullets $1.50 each, satisfaction or money back. We sell the famous Sol Hot brooders at $10.50 to $23.50. Prompt shipment. Our illustrated catalog and booklet on poultry management is free. Henacres, Box A, Prosser, Wash.

CERTIFIED S. C. WHITE LEGHORN BABY chicks from heaviest laying stock; safe delivery live vigorous chicks guaranteed. No money in advance; pay on delivery. Prices for May and June $3.50 per 25; $6.50 per 50; $12 per 100. Special prices 500 and 1000 lots. Largest electric hatchery in the world. Established 1898. Member Sonoma county farm bureau accredited hatchery list. Must Hatch Incubator Co., 445 Seventh st., Petaluma, Cal.

"FRESHLAID" WHITE LEGHORN CHICKS have the qualities you want; vigor and scientific breeding for the heaviest egg production; every "Freshlaid" male is from a high record hen. Freshlaid Farms is one of largest and oldest chick plants in the Inland Empire. There is a real demand for "Freshlaid" chicks, especially from our old customers. We are sold out until May 1. Write at once if you wish May chicks. May chicks make ideal winter layers. Catalog. Freshlaid Farm, Colfax, Wash.

BABY CHIX—WHITE LEGHORNS ONLY; May delivery, $13 per 100; June delivery, $12 per 100; order now as the supply is limited and these are not just baby chix, but are chix from stock that has been bred for 20 years for vigor and vitality; mated to male birds from hens with records up to 298 eggs in pullet year; hatched by the oldest established hatchery in the northwest. Lakeside Poultry Farm, Roy, Wash.

THE PROGRESSIVE HATCHERY ANnounces the following prices for May and June, 1922: Single Comb White Leghorn chicks (trap nested), $17 per 100; selected, $14 per 100. Reduced prices for large orders. R. I. Red chicks, trap nested or selected stock, $25 and $20 per 100. Terms, 20 per cent with order; safe delivery guaranteed. 1534 N. E. 12th st., Portland, Ore.

SUMMER SALE OF BUTLER POULTRY Farm White Leghorn and Barred Rock chicks. May and June chicks are profitable and easy to raise when you know how. Write us for circular how we do it. All stock trap nested and pedigreed for years. Discount prices on all late chicks and eggs. Butler Poultry Farm, Jennings Lodge, Ore.

EBORALL'S STRAIN WHITE LEGHORNS. Our hatch of 2300 chicks per week is now booked for Feb., March and April, principally to old customers. Your inspection is invited at all times. We are now booking chicks for May at $14 per 100. Write for circular. Crystal White Poultry Farm, McMinnville, Ore. Box. 33.

TRY OUR PARCEL POST PACKAGE—KEEP the old hen busy. We will ship you first-class baby chicks, postpaid to your door, direct from the hatchery and guaranteed all alive. Price, $4.50 per 25; $8 per 50. For delivery April, May or June. Order now. The White Hatchery, Petaluma, Cal.

WHITE LEGHORN BABY CHIX FOR MAY and June delivery at $12 per 100; $115 per 1000, from flocks inspected and accredited by the Sonoma county farm bureau. Safe arrival of full count, live, strong chix guaranteed. The Pioneer Hatchery, 422 Sixth street, Petaluma, Cal.

BABY CHICKS FOR MAY AND JUNE ONLY— 4000 every 4 days of the famous O. A. C. strain S. C. W. L.; raised and run on free range. They have the vim. Prices, first half of May, $17, last half of May, $15; June, $12. Moorhead Poultry Farms, Granger, Wash.

BABY CHIX FROM TANCRED AND HOLLYwood strain heavy laying White Leghorns, mated to cockerels from W. W. experiment station; hens, 265-314 egg record; early May chix, $18 per 100; hatching eggs, $7 per 100. Wax's Poultry Farm, Kent, Wash.

UNION DISTRICT HATCHERY IS NOW booking orders for the best thoroughbred baby chicks at the right price. White, Buff and Brown Leghorns, Rhode Island Reds, Black Minorcas, Anconas and Barred Plymouth Rocks. F. & L. Downing, Los Gatos, Cal.

MAY WHITE LEGHORN CHICKS WILL LAY in September; from hens in third year; 210 egg average; 100, $13; 228 egg average, 100, $17. Some eight-week-old pullets left. Acme Poultry Farm, Cottage Grove, Ore.

WHITE LEGHORN CHICKS (TANCRED strain), from selected two-year-old hens mated to cockerels from 251 to 286 egg trap nested dams; 1500 each Wednesday in May, $15 per 100. Bona Terra Ranch, Drain, Ore.

WHITE ROCK BABY CHICKS, "DANIEL'S IDEALS," from our own trapnested stock entirely. Write for prices and dates, also eggs for hatching. Free catalog. Ideal Poultry Yards, Hoquiam, Wash. Star Route No. 25.

BABY CHICKS — REDUCED PRICES ON White Leghorns, Reds, Barred Rocks, White Rocks, Minorcas, and Anconas; booking orders now; postal secures free catalog. Write today. C. N. Needham, Salem, Ore.

WHITE LEGHORN BABY CHICKS FROM best laying strain in the northwest, $20 per hundred from May 1st to May 15, after that date, $15 per hundred. Order early. Yesterlaid Egg Ranch, Kent, Wash.

PRICES REDUCED ON MAY AND JUNE chicks; late chicks of vigorous stock, well raised, pay; easily raised; good winter layers; Tancred Leghorns, also Barred Rocks. D. C. Yoder, Hubbard, Ore.

BABY CHICKS — WE GUARANTEE OUR chicks to be from the highest producing hens in Petaluma. Write for further information. The White Hatchery, Petaluma, Cal.

PERKINS' TRAP NESTED WHITE LEGHORN chicks, April, $18 100; May, $15. Send 10 per cent with order. Chas. L. Perkins, 1337 Burrage, Portland, Ore.

BABY CHICKS, WHITE LEGHORN, SElected heavy laying strain; kept on free range; May hatch, $11 per 100. Grape Lane Poultry Farm, Turner, Ore.

POULTRY (Baby Chicks) (Continued) 174

TANCRED STRAIN WHITE LEGHORN BABY chicks, May delivery, $15 per 100. Incubator capacity, 18,000 eggs. D. A. Gillette, R. 4, Yakima, Wash.

WHITE LEGHORNS AND WHITE ROCKS; trap nested strains; chix and eggs, contest pen, $5 per 15. Palouse Falls Ranch, Palouse Falls, Wash.

WHITE LEGHORN BABY CHICKS FROM bred to lay stock, $12 per hundred after May first. T. J. Robinson Hatchery, Dallas, Ore.

S. C. ENGLISH WHITE LEGHORN CHIX, Hollywood strain, 15c; Barred Rock chix, 20c. Bertha Jorgensen, R. 1, Hillsboro, Ore.

WHITE LEGHORN BABY CHICKS. CIRCULAR on request. San Jose Poultry Yards, San Jose, Cal.

Leghorns.

CHICKS, EGGS, PULLETS — CARNATION White Leghorns, trap nested stock; bred and selected for vigor and heavy laying qualities; breeding pens from 240 to 304 egg records; 300 Feb. 12th, hatched pullets. Ernest W. Raush, Carnation Poultry Farm, Kent, Wash.

LEGHORN PULLETS, 5000 FEBRUARY, 3000 April and May hatched. These birds are Hollywood-Tancred strain, are unconditionally guaranteed on a money back basis. Price $1.15 each, at 8 weeks. White Cloud Farm, Route 2, Box 188, Kirkland, Wash.

PUREBRED S. C. WHITE LEGHORNS; ALL breeding hens of trap nested strain, carefully selected for vitality and standard requirements; baby chicks, $18 100; safe delivery guaranteed. eggs, $1.50 for 15; $8 100. Frank Volland, Rt. 1, Kennewick, Wash.

WHITE LEGHORNS, TANCRED STRAIN, heavy laying second year hens, with males from 250 to 275 egg trap nested dams; hatching eggs, $6 per 100; baby chicks, $18 per hundred. Oaklawn Poultry Farm, Hillsboro, Ore.

WORLD-FAMOUS EGG PRODUCERS; O. A. C. White Leghorns; vigorous, free range stock; baby chicks and eggs; special low price for higrade chicks for May delivery. Write for circular. Corvallis Poultry Farm, Corvallis, Ore.

FORD'S BRED-TO-LAY S. C. WHITE LEGhorns. Hatching eggs, $2 per setting; $8 per 100; special matings on request. W. A. Ford, Umatilla, Oregon.

HOGANIZED WHITE LEGHORN HATCHing eggs, $5 per hundred. The Idle Hour Poultry Farm, F. F. Smith, Mgr., McCoy, Ore.

WHITE LEGHORNS, TRAP NESTED STRAIN, hatching eggs, baby chicks. Write us. Washington Poultry Farm, Hartford, Wash.

S. C. BROWN LEGHORNS, SHOW BIRDS; eggs and cockerels; reasonable prices. Harvey Bean, New Plymouth, Idaho.

SINGLE COMB WHITE LEGHORN EGGS, finest stock, $1.25 per 13. Mrs. Nellie Woods, Pullman, Wash.

BROWN LEGHORN EGGS, THE VERY BEST quality; free mating list. E. H. Rosenkranz, Colfax, Wash.

SINGLE COMB WHITE LEGHORN HATCHing eggs, $1.75 per 15, prepaid. M. A. Podaak, Elk, Wash.

PRIZE BUFF LEGHORNS; EGGS 15C EACH, postpaid. C. E. Cleveland, Stanfield, Ore.

Turkeys, Ducks, Geese

EGGS FROM PRIZE-WINNING MAMMOTH Toulouse geese, the kind that hatch; 50c each, $45 per 100. Imperial white Pekin duck eggs, $2.50 per 15, $14 per 100. Goslings, ducklings. R. E. Baumgardner, Wenatchee, Wash.

MAMMOTH PEKIN DUCKS, "AMERICA'S finest." New blood this year direct from C. C. Shoemaker; eggs, $2 per setting, $12 per 100. Crystal White Poultry Farm, McMinnville, Ore. Box 33.

EGGS, MAMMOTH TOULOUSE AND WHITE Chinese geese; Mammoth Pekin ducks, pearl guineas, Single Comb Reds. C. O. Johnson, R. 1, Medical Lake, Wash.

INDIAN RUNNER DUCKLINGS, THOROUGHbred, 100 $33; doz., $4.30, delivered. C. A. Muths, Route 1, Salem, Ore.

MAMMOTH PEKIN EGGS FROM DUCKS that take the prizes. Drakes for sale. Mrs. E. A. Bennett, Salem, Ore.

MAMMOTH BRONZE TURKEY EGGS, 50C each. Mrs. J. L. Townsley, Route 2, Post Falls, Idaho.

BOOKING ORDERS FOR MAMMOTH PEKIN duck eggs and ducklings. J. O. Anderson, Drain, Ore.

WHITE HOLLAND TURKEY EGGS, 40C each. Eva Woolford, Kalama, Wash.

MAMMOTH PEKIN DUCK EGGS, $2 PER 10, postpaid. Art Moore, Persist, Ore.

EGGS FROM PURE TOULOUSE GEESE. F. Borik, Corvallis, Ore.

Miscellaneous Poultry.

WE ARE HATCHING HOLLYWOOD AND Tancred strain of White Leghorns every Monday, Wednesday and Friday. Prices at $20 per 100; $195 per 1000. Commercial strain mated with 250-egg cockerels at $18 per 100. R. I. Red, Barred Rocks, Black Minorca and Ancona chicks are priced at $25 per 100. Send for free catalog and prices on incubators, brooders and pullets. Queen Hatchery, Seattle.

THREE FINE ROSE COMB RHODE ISLAND Red, one fine White Leghorn cockerel, $5 each if taken at once, from trap nested, Hoganized stock, also White Leghorn eggs, $2.50 per 15, from trap nested stock. L. A. Hoge, Prosser, Wash.

LARGE, NICELY MARKED ROUEN DUCKS, $4 each; $10 trio; eggs, 11, $2; 100, $15; heavy laying, prize winning strain White Wyandottes; eggs, 15, $2; 100, $10. P. H. Tomlinson, College Place, Wash.

BABY CHICKS—PRICES REDUCED AFTER May 15th. S. C. R. I. Reds, $20 per 100; S. C. W. Leghorns, $15 per 100; April chicks all sold. Maple Brook Poultry Farm, Southworth, Wash.

ANCONA EGGS AND CHIX—HEAVY WINTER layers; eggs, best pen, $2.50; second, $1.50; flock, $1 fifteen; $10 and $7 hundred; chix, $18 hundred. Order now. J. R. Hall, Hansen, Idaho.

ENGLISH STRAIN ANCONAS; PRIZE WINning stock; baby chix, 20c; eggs, $1.25 setting; $6 hundred lots. Faun Runner duck eggs, $1.25 setting. Karl Broeder, Sherwood, Ore.

PARAMOUNT WHITE WYANDOTTES "BRING home the bacon." Trap nested, pedigreed. Instructive catalog free. No baby chicks. Bayard H. Moul, 1226 Washington blvd., Seattle.

WHITE WYANDOTTE COCKERELS, HOGANized; heavy laying strain; average eight lbs.; $5 prepaid; hatching eggs, $2 per 15. Adams, Warren, Ore.

BLACK JERSEY GIANTS, WEIGHT 14 LBS. The greatest meat producers; fast growers; Eggs, $10 per 15. P. W. Harries, R. 1, Edmonds, Wash.

SINGLE COMB RHODE ISLAND RED EGGS, $3 per setting, from prize winning stock (Owen strain). Joe Brunsell, Mt. Vernon, Wash.

(Continued on the following page.)

POULTRY—Miscellaneous (Continued) 174

BABY CHICKS FROM PETALUMA ELECtric incubator have "pep" that surprises customers. Electricity is life. Modern poultrymen are rapidly adopting our system with splendid results. Safe, efficient, economically better chicks. Hatch for yourself or get chicks from hatcheries using Petaluma incubators. Write for our free catalog. Petaluma Electric Incubator Co., Petaluma, Cal.

ILL-A-HEE BARRED ROCK CHICKS—SUMmer sale of Barred Rock and White Leghorn chicks; May and June chicks are profitable and easy to raise when you know how. Write for our circular telling how we do it. All stock trap nested and pedigreed for years. Discount prices on all late chicks and eggs. Ill-A-Hee Poultry Farm, Jennings Lodge, Ore.

PARKS BRED-TO-LAY BARRED ROCKS, dark strain; big ones; great layers; well barred; Barron English White Leghorns, big ones, headed by descendants of Keystone Maid, record 306 eggs; large topped combs; beauties. All eggs, $2 per 15, prepaid. Fay Davis, Cambridge, Idaho.

EGGS FOR HATCHING FROM TRAPNESTED stock B. Rock, S. C. White Leghorn and R. C. R. I. Reds, $2.50 per setting; 1 S. C. White Leghorn cockerel, also 3 R. C. R. I. Red cockerels, $5 each if taken at once. L. A. Hoge, R. 1, Prosser, Wash.

EGGS! EGGS! EGGS! "SNOWFLAKE" WHITE Orpingtons, establish highest official Orpington pen record western Washington laying contest. Average 204 eggs; free mating list; hatching eggs, $3, $5, $10 per fifteen. W. T. Thompson, Bozeman, Mont.

CHICKS, EGGS—HOGANIZED WHITE LEGhorns, Brown Leghorns, Black Minorcas, Rhode Island Reds, Barred Rocks, Anconas, Blue Andalusians. Free circular. Order early. McDonald Poultry Ranch, King Road, San Jose, Cal.

FREE MATING LIST, DESCRIBING OUR ideal Barred Rocks; 37 1sts, 10 specials for 1921. High egg record, 303 eggs; average egg record, 229 eggs. Jacobson's Poultry Yards, 3596 Tacoma ave., Tacoma, Wash.

PURE BRED S. C. RHODE ISLAND RED EGGS for hatching from non-setting, non-fading strain, $3, $5 and $10 per fifteen. Mrs. L. Wham, Double Diamond Ranch, Omak, Wash.

BLUE ANDALUSIANS; EGGS FOR HATCHing, $2 per setting; heavy layers from beautiful prize winning stock. Mrs. Wm. Rommel, Leahy, Wash.

PEDIGREED ANCONA COCKERELS AND hatching eggs from 330-egg strain; eggs, $2.50 per setting. Smith's Ancona Farm, Nampa, Idaho.

POULTRY RAISERS, SEND FOR FREE BOOKlet on poultry advertising. The Pacific Northwest Farm Trio, Dept. P, Review bldg., Spokane, Wash.

DOLLARS FOR YOUR EGGS—WE PAY THE top market prices for your eggs and poultry. Daily cash remittances. Western Produce Co., Spokane.

SINGLE COMB RHODE ISLAND WHITES; heavy egg producers; eggs, $2.50, $3.50 per 15; $12.50 per 100. Van K. Lawson, McMinnville, Ore.

TRAP NESTED WHITE LEGHORN AND Barred Rock eggs and chicks; records, 200 to 311. Mrs. W. M. Roberts, Elmira, Oregon.

S. C. ANCONAS, SHEPPARD'S SELECT AND 331 egg strain; eggs, $2 per 15; chicks, $20 per hundred. A. B. Larson, Warren, Ore.

FOR SALE—ONE DOZEN THOROUGHBRED Buff Orpington pullets, laying. Mrs. Harmon Pennoyer, American Falls, Idaho.

EGGS—PURE REGAL WHITE WYANDOTTES. Three special matings; also Partridge Wyandottes. Eugene Boyk, Rocklyn, Wash.

SHIP YOUR LIVE POULTRY AND EGGS TO us. Highest prices paid; daily remittance. Inland Poultry House, Spokane, Wash.

BUFF ORPINGTON HATCHING EGGS FROM prize winning stock, $2 per setting. R. E. Baumgardner, Wenatchee, Wash.

ANCONAS, SHEPPARD STRAIN; EGGS, $1.50 per 15; $7.50 100; day old chicks, $18 100. R. P. Irwin, Tonasket, Wash.

S. C. R. I. RED EGGS, $2 PER 15; $10 FOR 100; special matings, $5 per 15. B. F. Kammerzell & Sons, Colfax, Wash., R. 5.

PURE BLOOD BRAHMAS, WHITE ROCK, R. I. Red eggs for setting; $1.50 for 15. Mrs. Mary Insel, Shelton, Wash.

S. C. RHODE ISLAND RED HATCHING EGGS; heavy laying strain; $1.50, 15; $7 hundred. Geo. Silvers, Zillah, Wash.

S. C. R. I. RED HATCHING EGGS, FIRST pen, $2; second pen, $1.50. Mrs. L. W. Alexander, Sunnyside, Wash.

"CONA VILLA" ANCONA CHIX, MAY AND June delivery, 2d, 3d pen, $18 per 100. W. G. Pearmine, Salem, Ore.

RANGE RAISED WHITE WYANDOTTE eggs, $1.50 setting; $8 hundred, prepaid. A. Krueger, Colfax, Wash.

BARRED ROCK COCKERELS, CHOICE, $3.50; 15 selected eggs, $1.25, postpaid. L. E. Layman, Goldendale, Wash.

BLUE ANDALUSIAN AND WHITE ROCK hatching eggs, $2 per 15. Mrs. C. W. Armstrong, Freewater, Ore.

SICILIAN BUTTERCUP EGGS, $2.50 PER fifteen, postpaid. Charles Garland, Route 2, Saint Maries, Idaho.

LIGHT BRAHMAS, EGGS, $1.75 PER 15; bronze turkey eggs, $3.50 for 10. Mrs. C. W. Lauds, Irby, Wash.

HUNT'S BARRED ROCK EGGS. PRICES REduced through April, May. W. A. Hunt, Lebanon, Ore.

PURE O. A. C. BARRED ROCK EGGS, $1.50 per fifteen; $7 per hundred. Mabel Currin, Monroe, Ore.

EGGS FROM SINGLE COMB BLACK MINorcas, $2 per 15; $8 per 100. Jacob Cherniak, Elk, Wash.

HIGHEST QUALITY BARRED ROCK HATCHing eggs, $2 15. J. E. Horton, 2408 Altamont, Spokane.

BLUE RIBBON SILVER SPANGLED HAMburg settings, $2.50. J. Stowell, 905 Fifth, Spokane.

BRED TO LAY ANCONAS; HATCHING EGGS. Price list free. Yew Lane Farm, Sherwood, Oregon.

GOLDEN CAMPINE EGGS, FIVE DOLLARS per fifteen. D. W. Martin, Glenns Ferry, Idaho.

BUFF ROCKS, BUFF MINORCAS, WINTER layers; eggs, $2. Mrs. Day Woodruff, Bow, Wash.

S. C. BLACK MINORCA HATCHING EGGS, $1.50 per 15. John Zack, Kalama, Wash.

BARRED ROCK CHICKS, HEAVY LAYING O. A. C. strain. Mrs. E. Hodge, Waterloo, Ore.

S. C. BUFF ORPINGTONS, STOCK AND EGGS. L. M. Varney, E417 17th ave., Spokane.

ANCONAS—CHICKS AND HATCHING EGGS. Oscar Dunlap, Junction City, Ore.

POULTRY—Miscellaneous (Continued) 174

SINGLE COMB REDS, EGGS, $3 PER 15; $5 per 30. A. E. Bosworth, Omak, Wash.

LIGHT BRAHMA EGGS, $2 PER 15. DALTON Poultry Farm, Coeur d'Alene, Idaho.

BIG REDUCTION MINORCA EGGS. MRS. Frank Winnard, Heppner, Ore.

LIVE STOCK 177

SEND FOR FREE BOOKLET, "SOME SUGgestions to Live Stock Advertisers," outlining the practices of successful men of long experience. Helps in determining how much to spend, the mediums to select, preparing advertisements, handling inquiries, the use of photographs, etc. Write today. The Pacific Northwest Farm Trio, Dept. W, Spokane, Wash.

LARGE, HEAVY PRODUCING HOLSTEINS for sale at all times in car lots; tuberculin tested; 150 to 200 head always on hand; well marked heifer calves from registered sires and heavy producing dams; crated for shipment anywhere, $25 f. o. b. Levinson & Balmelli, Yakima, Wash.

SHIP US YOUR POULTRY AND LIVE STOCK. We pay the top market prices. Light veal, fat, fancy, 16c; dressed block hogs, 11c; hens, light, 18c; heavy, 22c. Prompt returns. John Lewis & Co., Spokane, Wash.

EPOCHAL BERKSHIRES, 3 MONTHS' PIGS from $20. Yearling boars from $40. Sire, the grand champion Pork-maker's Sincerity. Herd boars from $75. Bred sows from $75. E. V. Orford, Boise, Idaho.

WE PAY TOP PRICES FOR YOUR LIVE OR dressed veal, hogs and poultry. Your check by return mail. Shipping tags on request. M. & J. Packing Co., Spokane.

FOR SALE—REGISTERED SHORTHORN cows, beef and milk type; fresh soon. Clarence Schmidt, Route 5, Olympia, Wash.

TILLAMOOK CALVES—SEASON NOW OPEN. Price lists ready; strictly dairy stock. Smith, the Calf Man, Tillamook, Ore.

HOLSTEIN BARGAIN—REGISTERED BULL calf, nicely marked. Write for price. Wm. Finlay, Jefferson, Ore.

FOR SALE — REGISTERED BERKSHIRE boar, 2 years old; pedigree furnished. Box 398, Rainier, Ore.

MILCH GOATS, HIGH GRADE NUBIAN DOE kids, bucks, cheap. Stamp, J. M. P. Reed, Ellensburg, Wash.

FOR SALE—HEREFORD BULL, THREE years old; can be registered. Troy Morton, Mesa, Wash.

REGISTERED TOGGENBURG GOATS. EDwin Pritchett, Route 1, Box 287, Long Beach, Cal.

REGISTERED HOLSTEINS AND BERKSHIRE pigs. Elmer Hanson, Mead, Wash.

FOR SALE—2 MILCH GOATS, FRESH. Alfred Werth, Willamina, Ore.

FOR SALE—MILCH GOATS. JOHN BROWN, Daisy, Wash.

HARNESS and SADDLERY 189

SEND FOR FREE HARNESS AND SADDLE catalog today; cut out the middleman, buy direct from the manufacturer. Lowest prices in the west; satisfaction guaranteed. Established 1881. Write Pierce Harness Co., dept. T, Spokane, Wash.

HAY FOR SALE. 200

ALFALFA HAY, GUARANTEED QUALITY; prompt shipment; buy direct and save money. Prices upon application. Ernest T. Freepons, Walla Walla, Wash.

JOB PRINTING 372

GUARANTEED BETTER BUTTER WRAPpers; 100, 60c; 250, $1.25; 500, $2; 1000, $4; printed to order. Home Specialty Co., Middleton, Idaho.

TANNING 425

LET US TAN YOUR HIDE—COW AND HORSE hides for fur coats and robes. Cow and steer hides into harness or sole leather. Catalog on request. The Crosby-Frisian Fur Co., Rochester, N. Y.

MONUMENTS 510

COMPLETE STOCK, RIGHT PRICES. CORrespondence solicited., J. W. Harding, Inland Monument Co., N1001 Monroe, Spokane.

BUSINESS OPPORTUNITIES 516

FOR SALE—VULCANIZING SHOP, COMplete; big business. If inexperienced, we will teach parties. Address G 2, Washington Farmer, Spokane, Wash.

BUILDING MATERIAL 588

LUMBER, BUILDING MATERIALS, READYcut houses and barns; no waste, less labor, money saved. Attractive new plan book sent free, 4c postage. Send material lists for prices. Write today. Prices now down to rock bottom. Local Keystone Lumber Co., 3000 Sprague, Tacoma, Wash.

SEEDS 620

ALFALFA SEED, CLOVER SEED, SEED corn—We are located in the heart of the largest and best alfalfa and clover seed district in the west and can give you both quality and price. Get our samples and quotations before buying. Our seed corn is of the finest acclimated strains. Garden and flower seeds of all kinds. Send for our catalog. Darrow Bros. Seed & Supply Co., Twin Falls, Idaho.

NETTED GEM SEED POTATOES GROWN from certified seed stock by the Foothill Seed Growers' association, Spokane county. This stock has passed two field inspections and is eligible for certification. Further information furnished by Spokane county farm bureau, courthouse, Spokane.

SUTTON'S EXCELSIOR, BEST EARLY GARden pea, 1 pound, 20c; 10 pounds, $1.50. Horseford's medium late canning pea, 1 pound, 20c; 10 pounds, $1.50, postage paid. Washburn & Wilson Seed Co., Moscow, Idaho.

STATE TESTED SEEDS—NO. 1 ALFALFA, $17.50 per cwt.; No. 1 red clover, $24 per cwt, f. o. b. Jerome, Idaho. Purity Seed Farms, Box 188, Jerome, Idaho.

ALFALFA SEED, 99 PER CENT PLUS PURE. State test. 22c per pound. All kinds other seeds. Equal quality. Farmers' Service, Twin Falls, Idaho.

VALLEY COUNTY WINS FIRST SEVEN world prizes. Timothy, 6c; timothy alsike, mixed, 9c. M. Meador, Norwood, Idaho.

CHOICE MANGEL SEED, 35C LB., POSTPAID, any variety. Catalog free. Order today. Warren Cook, La Conner, Wash.

ALFALFA SEED, POSTPAID, ORENBERG, ounce, 25c; registered Cossack, pound, 75c. W. W. Perkins, Camas, Mont.

COSSACK ALFALFA, CERTIFIED SEED. Sample and booklet free. S. H. Hillman, Box 5, Lonepine, Mont.

DESCHUTES VALLEY NETTED GEM SEED potatoes; some certified. Geo. H. MacGregor, Terrebonne, Ore.

BROMUS SEED, 15C PER POUND. OLIVER Manis, McCall, Idaho.

NURSERY STOCK. 621

EVERBEARING STRAWBERRY PLANTS—All orders received to date, and after, until further notice, will be entitled free, to 1 St. Regis everbearing raspberry, 1 red raspberry, 1 blackberry, 4 Lucretia dewberry, and 1 purple lilac. My Superb and Progressive everbearing strawberry plants are guaranteed and prepaid at 100, $1.40; 500, $6; 1000, $11. Orders for 1000 get 2 lots free. 2000, 4 lots. Dewberry plants, 75c doz.; $4 per 100; Concord rooted grapes, 1 year and St. Regis everbearing rasp., transplants, 10c each, $1 per doz.; $6 per 100, postpaid. Model Fruit Farm, R. 1, Emmett, Idaho. N. B. Manhiessen, prop.

LOGANBERRIES—10,000 SURPLUS; SELECT 2-year-olds, 3 for 35c, 12 for $1.25, postpaid. We grew too many and rather than destroy them give you a 35c plant for 12c. Every home owner has room for 3 or more. Finest berry for pies, jams, jelly and red "juice." Seed catalog and planters guide free. Routledge Seed & Floral Co., Portland, Ore.

LITTLE'S IMPROVED CORY'S THORNLESS blackberries; heaviest producers; largest berries, best flavored; good canners and shippers; large, well rooted plants at $100 per 1000, $12 per 100; $2.50 for 15. Write for pamphlet. C. A. Little, Rt. 1, Sebastopol, Cal.

GROW GRAPES FOR PROFIT—SPECIAL LOW prices; grape vines, berries, asparagus, for commercial planting; peaches, cherries, apricots, apples; satisfaction guaranteed. Write today. Home Nursery Co., Richland, Wash.

CLARK SEEDLING, THE STRAWBERRY that made Hood River famous. Write for list of other varieties and prices. Plant nurseries at Hood River and Prosser, Wash. W. R. Gibson & Son, Hood River, Ore.

GLADIOLA — BEAUTIFUL, MAGNIFICENT summer and fall blooming flowers that please all and are of easy culture. My stock is fine and prices right. Catalog free. Jungst Gladiola Farm, Ellensburg, Wash.

CHOICE LOGANBERRY TIPS, $25 PER THOUsand; personally inspected by our county fruit inspector before they are shipped. 1 pay express. G. W. Johnson Jr., Salem, Ore., Route 4.

PROGRESSIVE EVERBEARING STRAWBERry plants at $1.25 per 100, or $9 per 1000, postpaid; inspected, guaranteed. O. W. Zurcher, S104 17th street, Boise, Idaho.

INSPECTED GOLD DOLLAR AND ETTERburg 121 strawberry plants; free from weevil, 75c per 100; $5 per 1000. F. A. Welch, Gresham, Ore.

SEND FOR OUR NEW PRICE LIST ON FRUIT trees, berry bushes, shade trees and roses on their own roots. Krause Nursery, Spokane, Wash.

STRAWBERRY PLANTS—MARSHALL AND Gold Dollar, A1, none better; 100, 60c; 500, $2.75; 1000, $4.25. J. M. Carr, Monroe, Wash.

EVERBEARING STRAWBERRIES. SEND FOR free booklet giving lots of valuable information. P. R. Johnson, Granger, Wash.

GENUINE SUPERB EVERBEARING STRAWberry plants, inspected. $1.25 hundred; $10 thousand. H. H. Skagen, Kent, Wash.

LOGANBERRY PLANTS, 6, $1; TIPS, 18, $1; Cuthbert raspberries, 75, $1; 1000, $10, prepaid. Alvin Myers, Dodbay, Wash.

CHOICE LOGANBERRY PLANTS, $20 PER thousand, delivered; inspected. Ward K. Richardson, 2393 Front, Salem, Ore.

OREGON CHAMPION GOOSEBERRIES, BOSkoop Giant black currants, 5c each. G. A. Marshall, Yelm, Wash.

CHRYSANTHEMUM PLANTS, ASSORTED, fifty cents per dozen, postpaid. J. L. Russell, Corvallis, Ore.

STRAWBERRY PLANTS, $5 PER 1000. Briggs, Plant Nursery, Olympia, Wash.

CUMBERLAND BLACKCAPS, 3C. E. FENKES, Tonasket, Wash.

FARM LANDS FOR SALE. 651

VERY FINEST CRANBERRY PEAT LANDS, in center cranberry growing industry, subdivided, 1 to 5 acres, very reasonable prices, if desired, only 20 per cent down; no other payment for five years. By planting part of the holdings in cranberries, crops should meet future payments. Adjacent land produces 100 bbls. per acre. Last season cranberries returned the grower $15 per bbl. at wholesale. For money maker do you know of any other crop comparing with cranberry growing? Besides cranberries, can raise vegetables and chickens for tourist trade; fine dairy land; first class schools, roads; finest beach on coast within one mile. Write or visit us. Long Beach Land Co., Long Beach, Wash.

A SUBURBAN PRODUCING HOME AT SUMmit View Farms, between Puyallup and Tacoma, with one acre cleared on each five-acre farm. City water, paved road, phone, lights and only short distance from the state experimental station at Puyallup; berries and poultry for income with city conveniences; good berry land and excellent view property. Write us today for map and full details. You deal direct with the loggers. We have no agents. Electric Logging Co., Inc., 216 Marion st., Seattle, Wash. A. R. Todd, Mgr.

440-ACRE DAIRY RANCH; 180 CULTIVATED, balance good pasture, some timber; 40 acres winter wheat; 1 mile from town and high school; 8 from state normal; good terms; will consider 5 acres, well improved, as part payment. J. Hentges, Valley, Wash.

13¾ ACRES WATER FRONT, NEAR OLYMpia, Wash.; 9-year-old orchard; 7¾ acres choice winter pears; one acre sour cherries, balance uncleared; small house, good well, sandy beach; grand view. $7000; terms. Robert Hazen, 3714 N. 24th st., Tacoma, Wash.

LEAVING FOR EUROPE, SELL 160 ACRES fully equipped, chicken and dairy farm; 80 acres cultivated, balance pasture. $5000, $3000 cash, rest on terms, including all stock, machinery, furniture, etc. Henry Humoeller, owner, Lakeview, Ore.

FARM FOR SALE BY OWNER—120 ACRES bench land; 20 acres cleared; good fruit land, fair log buildings; dead cedar may pay for land in fence posts; personal property. $25 per acre; cash or terms. John Austin, Port Hill, Idaho.

FINE 160 ACRES STOCK AND DAIRY RANCH, 128 inches decreed water; 80 acres improved; pasture and timber. Write for price. J. S. Harper, Darlington, Idaho.

ALBERTA FARMS—160 ACRES, $4 ACRE; ANother, $8; another (with machinery), $22. Ask Surry (Alberta Farmer), 505 Trent ave., Spokane.

147 ACRES; GOOD BUILDINGS; SPRING WAter; some timber. $1200; terms. Write F. T. Drumhiller, Granite, Idaho.

FARM FOR SALE—160 ACRES, $26,500, HALF cash. Particulars, write Frank Marquardt, R. 2, Lebanon, Ore.

PRODUCTIVE FARM HOMES ALONG FLAThead lake. Preston Johnson, Rollins, Mont.

MUST SELL 80 ACRES; FAIR IMPROVEments. Box 65, Orin, Wash.

FARM LANDS FOR SALE (Continued) 651

CUTOVER LANDS, EASY TO CLEAR; $8 TO $20 per acre; 25 miles north of Spokane, on paved highway; Great Northern and Milwaukee railways; excellent opportunity for dairying and stock raising with Spokane markets and creamery near at hand. Will help the man who will live upon this land and agree to clear a part each year by giving lumber to help start his buildings, and a pure bred Jersey bull to groups of farmers. Interest and payments low. Write Milan Farms Development company, Dept. T, Old National Bank building, Spokane, Wash.

IRRIGATED ACRES, TWO MILES FROM CITY limits of Spokane; prices less than city lots. Soil especially adapted to vegetables, small fruits and poultry raising. Good graded school and college. Telephone, electric lights, domestic water and paved highway. Some beautiful homes built and others building. Locate your home where you can have city conveniences and enjoy country life. Write or call upon Country Homes Development company, Dept. T, Old National Bank bldg., Spokane, Wash.

LOGGED-OFF LAND IN STEVENS COUNTY, Washington, at greatly reduced prices. Most of land sells at from $5 to $20 per acre; thickly settled community; good schools, hard surfaced and paved roads to Spokane, best county in state for dairy and stock raising; most places water can be found at shallow depths. Write for folder. Phoenix Lumber company, dept. T, Spokane, Wash.

WE SELL FORECLOSED LANDS FOR A loan company for one-third cash, balance easy terms. When writing tell us what you want, where preferred, how much you will invest; kind of farming you contemplate, as we have no list and must write special description in each case. No trades. Hartford Land company, 601 Paulsen building, Spokane, Wash.

SNOHOMISH COUNTY, WASH.—6000 ACRES of the finest dairy, berry or general high-grade farm lands in the northwest, rapidly improving section; no drouths; bumper crops; tracts 1 to 80 acres; 10 yearly payments. This is your opportunity. Send for literature. Brownell Land Co., Birmingham, Wash.

STOCK RANCH, WITH 500 CATTLE, 200 range horses, 920 acres land; a modern ranch, fully equipped; in heart of good range; 5-year grazing permit. Lemly reserve. Right dates back to 1883. Any one interested, address J. D. Ellis & Co., Idaho Falls, Idaho.

WE WANT TO TELL YOU MORE ABOUT the famous Deschutes valley in central Oregon; a dairy, potato and stockman's paradise; a card brings full particulars. Redmond Land & Loan Co., Inc., Redmond, Oregon. (King Murphy's capitol.)

WILLAMETTE VALLEY DAIRY FARM, 257 acres, with stock and equipment; now paying $500 a month; good terms. Address owner, W. Hickey, 388 12th st., Portland, Ore.

IF YOU WANT TO BUY PROPERTY OF ANY description, large or small, tell us what you want. We have it. Hale & Hale, Realtors, 1111 Paulsen bldg., Spokane, Wash.

TWO GOOD STOCK AND GRAIN RANCHES, 1000 and 640 acres; 175 acres irrigated; 400 acres wheat land; will sell cheap; good terms. Lock Box 545, Heppner, Ore.

SELL YOUR PROPERTY QUICKLY FOR cash; no matter where located. Particulars free. Real Estate Salesman company, 501 Brownell, Lincoln, Neb.

SALE OR LEASE—CALIFORNIA DAIRY farm; conditions ideal; terms liberal. Write A. Gribble, F. & M. bldg., Stockton, Ore.

320 ACRES, DAIRY-HAY RANCH; TWO SETS buildings; reasonable terms. Write owner, Jack Patterson, Winthrop, Wash.

IRRIGATED LANDS—For Sale 663

MUNICIPAL LANDS FOR SALE—A REAL OPportunity to get irrigated land, situated along the Columbia river, with the best railroad facilities and longest growing season in the northwest. Soil and climate especially adapted to gardening, chicken raising, bee culture, dairying, to growing grapes, strawberries and fruit in general. The main state highway passes through the project; our schools are the best; one accredited high school and two grade schools. Write for our most attractive terms and folder. The district, and not the agents is selling this land. There will be no commission to pay. We are interested in getting home builders on the project. Address Burbank Irrigation District No. 4, Burbank, Wash.

5 TO 40 ACRE TRACTS, RICH, LEVEL, IRRIgated land; on paved highway; R. F. D., telephone and electricity available; adapted to alfalfa, fruits, grapes, garden; $50 to $150 per acre; your own terms; 10 years to pay. Dairy, stock and fruit ranches; all sizes. Mountain ranches and stock range, cheap; elevation 450 ft.; no snow. Write for list. G. E. Oaks, Redding, Shasta county, Cal.

RICHLAND IRRIGATED TRACTS PRODUCE from $600 to $1000 per acre. Briscoe Realty Co., 414 Lindelle bldg., Spokane.

EIGHTY ACRES FINE LAND, IRRIGATED; 4 miles from Wendell; terms; no buildings. White, Route 3, Seattle, Wash.

CITY PROPERTY FOR SALE 690

ASHLAND REALTY COMPANY HAVE RESIdences, ranches and business places for sale. Write fully what you want, your expectations and send addressed, stamped envelope. Ashland Realty Company, Ashland, Ore.

7-ROOM HOUSE, 3 LEVEL CORNER LOTS; IN heart of city; complete kitchen, bath, piano and furniture included. $4000 if taken soon. J. P. Rector, 11th and O, Anacortes, Wash.

FOR SALE OR EXCHANGE 702

80-ACRE RANCH, IN WHATCOM COUNTY; on paved highway; stocked with dairy cattle, chickens, good team and 10 head registered swine; silo, good house, large barn and cattle shed; half cleared, balance in good pasturage; near leading markets. Some cash, or clear property in trade. Write F. J. Pingry & Son, 813 3d avenue, Seattle, Wash.

FOR SALE OR EXCHANGE—1240-ACRE stock ranch, 12 miles from Council, 1¼ miles to railroad station, postoffice and school; all fenced and cross-fenced; 240 acres hog-tight; 400 acres tillable, balance grazing; free water; good buildings. Machinery and horses included. Mrs. L. E. Ferguson, Goodrich, Idaho.

FOR SALE OR TRADE—ONE OF THE BEST stock ranches in eastern Washington; modern, up to date buildings; unlimited range; an ideal dairy ranch, as it is close to a railroad station. Price reasonable. Will sell on terms or trade. McCrea & Merryweather, Box 184, Spokane.

480 ACRES BIG BEND WHEAT LAND; NEAR Almira; 320 acres cultivated; 160 acres in crop, rented third to owner; buildings; good water; 160 pasture; trade for coast property. Price $30 per acre. Box 897, Port Angeles.

QUARTER SECTION FOURTEEN MILES north of Goldendale; thirty acres cleared; fair improvements; free water right. Four thousand dollars. E. D. Clark, Route 2, Selah, Wash.

FOR SALE OR TRADE—5-YEAR LEASE OF ½ section; controls 3000 acres fine grazing land. G 5, Washington Farmer, Spokane.



SYNOPSIS.

Shad Trowbridge, a New England lad of about 20 years, sails on a mail boat to Labrador, where he plans to spend a few weeks of summer hunting and fishing in the wilderness. Upon his arrival he meets two experienced fishermen and trappers, Dick Blake and Ed Matheson, who recommend to him a young lad of 17 known as Ungava Bob, as a guide for his hunting and fishing trip inland. Desiring to lose the least time possible in securing Ungava Bob's services and starting inland for his vacation, Shad starts across the bay in his canoe in the face of a threatening storm. In the darkness his canoe is capsized and he is plunged into the icy water. As he rises to the surface a rope is thrown to him and he hears a voice shouting to make it fast. He is soon drawn aboard a little sailboat which, unknown to him, had approached at the moment of his great need.

"I'm sure I owe my life to you," he said to the lad piloting the sailboat. "It was lucky for me you saw me."

"'Tweren't luck, sir," said the lad. "'Twere Providence. 'Twere the Lord who were takin' care of you."

To his surprise, Shad discovers that his new friend, the lad with the sailboat, is none other than Ungava Bob. Together, they make their way to Bob's home, where Shad enjoys the hospitality of the northland while they consider ways and means of making inland excursions. Shad decides to remain a month or more and make the first leg of a long winter of trapping planned by Bob, returning to the settlement in time to sail back home before college opens. To lay in additional supplies for the trip they cross the bay to the Hudson's Bay trading post, where Shad meets with other friends of Ungava Bob and his parents, including Mr. and Mrs. Black, whose daughter Bessie and Bob are great friends.

They leave for the wild trapping grounds and Shad is so delighted with the wilderness that he decides to remain with Bob on the trails all winter. The other members of the party start back home, leaving the two boys alone to start their long winter of adventure. But they are not alone! Hardly has the boat carried their friends around the bend of the river before Bob and Shad see two Indians watching them from the shadows of the forest trees.

The Indians proved to be old friends of Bob, but it was not many days until enemies appeared. A group of Mingen Indians, catching Bob and Shad out in their canoe on the river above the Great Falls of Labrador, fired upon them, compelling them to remain in the current and be dragged down to the rapids and seeming certain destruction.

In the midst of their peril Bob remembers that in the rapids above the falls there is a small, rocky island, and he skillfully guides the canoe to a safe landing on it. In the meantime their friends, Ed. Matheson and Dick Blake, reach their tilts to find Bob and Shad gone. The Indian maiden, Manikawan, tells them of the supposed loss of Bob and Shad over the falls. She plans to leave at once to wreak vengeance on the enemy Indians who sent them to destruction.

CHAPTER X.

The Voices of the Spirits.

Heedless of drizzling rain and snow, of driving wind and gathering darkness, Manikawan ran forward on the trail. Hatred was in her heart. Vengeance was crying to her. Every subtle, cunning instinct of her savage race was aroused in her bosom.

She was determined that those who had sent her beloved White Brother of the Snow to destruction in the deadly place of evil spirits must die. How she should compass their death she did not yet know; this was a detail for circumstances to decide, but it must be done. White Brother of the Snow was of her tribe; the law of her savage nature told her his death must be avenged.

At the end of a mile or so she left the trail and turned sharply to the northward, winding her way deftly through moisture-laden underbrush which scarcely seemed to lessen her pace. Presently she broke out upon the shores of a lake and behind some willow bushes uncovered a small birch-bark canoe, which she had carefully concealed there on her journey to the river tilt.

Turning the canoe over her head, with the middle thwart resting upon her shoulders, she took a southwesterly direction until the old portage trail was again encountered, and resuming the trail she at length came upon the first lake of the chain through which the portage route passed.

The storm had ceased, and the stars were breaking through the clouds as Manikawan launched her canoe. It was a long, narrow lake, and paddling its length she had no difficulty in locating the the place where the stream entered, and not far away a blazed tree, now plainly visible in the light of the rising moon, told her where the trail led out.

Here, as she stepped ashore, she discovered the first of the series of tilts which Bob and Shad had built, and, immediately pushing aside the flimsy bark door, entered the tilt and struck a match. Its flare disclosed a half-burned candle on a shelf near the door, and lighting it she held it aloft for a survey of the interior of the tilt.

On the bunk at the side were two or three bags evidently containing clothing and other supplies, while on the bunk in the rear were some odds and ends of clothing, a folded tent, a coil of rope, doubtless used by the young adventures as a tracking line, to assist them in hauling their canoe up the swift stream which connected the lake with the river below, and a rifle in a sealskin case.

On beholding this last object, Manikawan gave a low exclamation of pleasure. Taking a chip from the floor she bent the candle over it, permitting some of the hot grease to flow upon it, and setting the candle firmly in the grease placed the improvised candlestick upon the tent stove.

Then, reaching for the rifle, she drew it from the case and examined it critically. The magazine proved to be fully charged. Returning the rifle to its case, she now examined the other contents of the tilt, and presently came upon a quantity of cartridges in one of the bags.

Several of these she appropriated, and dropping them into a leathern pouch at her belt, restored the remaining contents of the tilt to the position in which she had found them. Then taking the rifle in its case she blew out the candle and passed out of the tilt, carefully closing the door behind her.

The moon was now sufficiently clear to light the trail, and the blazes which Ungava Bob had made were so clear that Manikawan's progress was rapid.

Spectral shadows lay all about her, flitting here and there across her trail as she sped onward and onward through the dark forests that intervened between the lakes. In the distance she heard the voices of the evil spirits so dreaded by her people, speaking in dull, monotonous undertones, like ceaseless, rolling thunder far away, threatening destruction and death to all who fell within their reach. Even to her, whose home was the wilderness, the situation was weird and uncanny.

At length she passed another tilt near the end of a lake, but she did not pause to enter it. A little beyond the tilt the trail crossed a rise of ground, and upon reaching the summit she beheld in the distance a long, wide, silvery streak glistening in the moonlight. It was the river, and



Manikawan hid the rifle.

with a sense of relief she lowered the canoe from her shoulders and concealed it carefully amongst the underbrush.

She glanced at the stars and calculated the time until dawn. The region into which she had come was wholly unfamiliar to her, and she must have daylight to reconnoiter and locate the camp of her enemies.

There was still ample time for rest, for this was the season of lengthening nights and shortening days, and Manikawan was in much need of rest and food. For nearly 36 hours she had been exerting herself to the utmost of her strength. At the river tilt she had made a fire in the stove and brewed herself some tea, but she had eaten nothing. Now, with the moment's relaxation, a feeling of great fatigue came upon her, and for the first time she realized the length of her fast and the extent of her weariness.

Slowly she retraced her steps to the tilt which she had passed on the lake shore a little way back. Entering it she struck a match and lighted a candle, as she had done at the other tilt, and with its assistance found the flour, pork and tea, together with a frying pan and kettle which Ungava Bob had left there the day that he and Shad Trowbridge were attacked by the Indians.

She went to the lake for a kettle of water, and returning gathered a handful of birch bark. Using the bark for tinder and appropriating wood which she found split and neatly piled near the stove for ready use, she lighted a fire in the stove and set the kettle on to heat for tea. This done she cut several thick slices of fat pork, which she fried in the pan, and mixing a quantity of flour and water into dough, browned the dough in the pork grease.

It was with a keen appetite that she sat down to her long-deferred banquet, and with vast relief she drank the tea and ate the pork and dough cake. Then, wearied to the last degree, she fell back upon one of the bunks, the rifle by her side, and with the distant rumble of the falls in her ears, fell immediately asleep.

It was broad day when Manikawan opened her eyes. She seized the kettle, and hastening to the lake laved her face and head in the cooling water. Then, from a buckskin pouch at her belt, she drew a neat birch-bark case, decorated with porcupine quills, and from the case a rudely-fashioned comb, from which dangled by a buckskin thong a tuft of porcupine tail. The lake was her mirror, as she smoothed and rebraided her hair. This done, she ran the comb several times through the tuft of porcupine tail before returning it to its case.

Her simple toilet completed, Manikawan mounted a high pinnacle of rock and for several minutes stood silently contemplating the rising sun. The eastern sky was ablaze with red and purple and orange, and she beheld the glory of the scene with deep reverence.

Upon her pinnacle of rock she felt herself in the presence of the Mysterious Power which governed her destiny and the world in which she lived, and after the manner of her fathers she besought that Mysterious Presence in unspoken words to made her pure and noble and generous; to make her worthy to stand in its Presence—worthy to live in the beautiful world which surrounded her.

But Manikawan was not a Christian. She knew nothing of the white man's God or of Christ's lessons of forgiveness, and she descended from the rock morally strengthened, perhaps, in her savage way, but no less determined to wreak vengeance upon those whom she deemed her enemies.

While she slept she had heard constantly the voice of the evil spirits of the falls, and the spirits themselves had come to her in a dream, and whispering in her ear had urged her on to vengeance, and promised her immunity from their wrath. Manikawan, like all her people, was superstitious in the extreme. She believed absolutely in the supernatural, and her faith in dreams was unwavering.

The sun was hour high when she set forth again upon her mission. Mounting the semi-barren ridge where she had hidden her canoe, she crouched low behind the bushes, and cat-like and noiselessly descended to the forest on the other side. Here under cover of the trees she proceeded more rapidly to the end of the portage trail.

Peering out from her cover, she first studied every foot of the river and surrounding country that lay within the range of her vision; then moving silently forward she removed the rifle, which she still carried, from its sealskin case and laid the case on the ground behind a boulder and the weapon upon it, where it would be completely hidden from view, but still available for instant use.

This arranged to her satisfaction, she crossed the trail, and gliding as noiselessly as a shadow through the trees, ascended the river bank to reconnoiter for the Mingen camp. The Indians that visited her father's lodge had said that they were encamped near the river, and not far above the portage trail.

CHAPTER XI.

Manikawan's Vengeance.

Therefore, Manikawan in her quest advanced cautiously, at the same time making, as she advanced, a thorough study of the ground.

She had traveled perhaps two miles, when she discovered a thin curl of smoke rising over the trees a short distance in advance, and dropping upon her hands and knees she crawled stealthily forward until from behind a clump of willow bushes she was afforded a clear view of the fire and its surroundings.

A deerskin wigwam stood in the clearing, and near the smouldered embers of a fire two Indians were engaged in making snowshoe frames, but, so far as she could see, they were the only inhabitants of the camp. It was evident that the remainder of the party were absent, probably hunting caribou in the north.

As noiselessly as she had approached, Manikawan now retreated to a safe distance. With a full understanding of the conditions, she had quickly and cunningly formulated her plans, and when well out of view she arose to her feet and boldly approached the camp.

The Indians, with no sign of alarm or surprise, and not deigning either recognition or greeting, continued at their task, quite ignoring her presence as she approached. For a moment Manikawan stood before them in silence; then she spoke:

"I am Manikawan, the daughter of Sishetakushin, whose lodge the men of the south have visited. Manikawan has come to do honor to the men of the south. While they talked with Sishetakushin, her father, she heard how bravely they have guarded the hunting grounds of her people and theirs. They are brave men and she has come to do them honor.

"She heard how they drove the two white invaders of our country into the arms of the evil spirits, whose thunderous voices she hears even now. It was well. White men have come into our land and have made the spirits angry. When the spirits are made angry they drive away the caribou. Then the people of the south and Sishetakushin's people are hungry. The white men have built lodges of trees near the potagan (portage) of our fathers. They stored these lodges with much tea and tobacco, flour and pork. Without these things the white man can not live, for he is not like our people.

"Other white men are coming to our country. If these stores are left in the lodges near the potagan of our fathers the white men will stay. If they do not have these things, they will go away, for without them they will be hungry.

"The men of Sishetakushin's people and the men of the south can not remove them, for the evil spirits dwell there and would do them harm.

"But Manikawan is a maiden. The evil spirits will not harm her. She is too humble for their notice. Manikawan has gone to the lodges of the white men and has removed the things from the lodges, so that the white men will not find them when they come.

"The men of the south are brave. They have sent two of the white men into the arms of the evil spirits. They must be rewarded.

"Manikawan has carried much tobacco and tea and other stores to the place where the potagan reaches up from the river. These things are for the men of the south. Let them bring their canoe. Manikawan will show them the things and they will take them."

The Indians did not deign to reply at once, but presently one of them said:

"Let Manikawan bring the things to the lodge of the men of the south. She is a maiden, and it is a maiden's work. It is not the work of a hunter."

"Manikawan is not of the lodge of the men of the south, and she will not do this. She will wait at the place where the potagan rises from the river until the sun is there," and Manikawan pointed to the zenith. "If the men of the south do not come, she will go, for she will believe the men of the south do not need tea and tobacco."

'Let the maiden return to the place where the potagan rises from the river. Let her wait there. The men of the south will come," said the spokesman.

Manikawan turned away, down the river bank, by the route she had ascended. Her progress was dignified and unhurried so long as she might still be seen by the Indians, but was quickly changed to a run the moment she was beyond their view.

Glibly she had lied to them and her conscience was not troubled. She was not a Christian. The savage teaching upheld subterfuge in dealing with the enemy, and she deemed these Indians her enemies, for had they not destroyed White Brother of the Snow? And was he not of her people by adoption?

Immediately Manikawan arrived at the portage trail she looked sharply about to make certain she was not observed. Then she examined the rifle behind the bowlder and, quite satisfied with her inspection, returned it to its resting place and waited.

She knew that the two Indians, with due attention to their dignity, would make no haste in their coming, and would doubtless keep her waiting until the noonday hour which she had designated, but, nevertheless, her lookout up the river was never for a moment relinquished. She watched as a cat watches a hole—from which it expects the mouse to emerge—ready to pounce upon the unwary prey.

At last she was rewarded. A birch-bark canoe containing the two Indians came leisurely gliding down the river some hundred yards from shore. Manikawan, like a beautiful statue, stood tall and straight at the end of the portage trail. Two paces from her the rifle lay behind the bowlder.

The Indians, unsuspecting, turned the prow of the canoe toward the shore where she stood. Still she did not move. The cat waits for its victim until the victim beyond peradventure is within reach of its spring. Nearer and nearer drew the canoe. Still Manikanwan stood, a graven image. She was looking out and beyond her intended victims. The roar of the distant rapids, and the monotonous, thunderous undertone of the falls were in her ears, and they came to her as beautiful music. The canoe was now but a hundred feet from shore.

Suddenly Manikawan sprang, and the astonished Indians beheld the statue with a menacing rifle at its shoulder. Then came a flash and a report. The Indians ducked, and the blade of the steerman's paddle, poised in midair, was shattered by a bullet.

Manikawan spoke, her voice ringing out in clear, even tones:

"The men of the south sent White Brother of the Snow and his friend into the arms of the evil spirits. White Brother of the Snow was of Manikawan's people. The men of the south are enemies of Manikawan's people. They are cowards and they must die."

The Indian at the bow paddled desperately away from shore and the menacing rifle. The Indian at the stern made equally desperate but ineffectual attempts with his broken paddle.

Another shot rang out, and the bowman

(Continued on page twenty-one.)

Certificates of Recognition



On my desk I find a curiously interesting photograph. It is the picture of three substantial citizens of the state standing on the steps of one of the principal buildings of the state college at Pullman. Each of these three men is holding in his hand a roll of white parchment paper tied with a ribbon, which are certificates of recognition.

These substantial citizens evidently are as pleased with their parchment rolls as the kids who have just received their diplomas at the state college commencement.

At its last commencement week the state college made a feature of granting certificates of recognition to three practical Washington farmers. These are the three men pictured in the photograph.

The man standing on the left is Frank M. Rothrock of the Hercules stock farm at Sprague. For the last seven or eight years Mr. Rothrock has been specializing in purebred Shorthorn cattle and Hampshire sheep. The big Hercules farm is famed far and wide as a model of efficiency. As one of the leading spirits in the live stock shows of the northwest and for actual achievements in the cattle business, Mr. Rothrock has done much to raise the live stock business in this state to higher levels.

The man on the right in the picture is Alexander Todd of Yakima. Nearly 20 years ago Mr. Todd determined to build up a purebred Holstein herd and since has brought out two world champion cows.

The man in the center of the picture is A. A. Kelly of Spokane, who is a farmer of another kind. Starting in with small beginnings he has developed in Spokane a gardening and nursery business, marked not so much by magnitude as by perfection of organization and educational value to all who study the system he has used and the results he has attained.

The diplomas conferred upon college graduates are more or less things of promise. The certificates of recognition conferred upon the three men appearing in the picture are things of achievement.

It is a happy omen for the state college to inaugurate the practice of conferring these certificates of recognition on leading farmers of the state.

E A S

Drink More Milk

"The home demonstration leaders throughout the country are pleading for a greater consumption of milk, especially by the children of the schools," said Miss Mary E. Sutherland, the specialist of the state college, at a recent gathering of milk producers of western Washington.

"Too many of our children have the wrong habit of diet and we find that many of the absences in the schools can be traced to this improper nourishment," she continued. "Children that are properly fed are always more cheerful and do better work both at school and at home. It is for this reason that we are asking each child to drink at least a pint of milk each day and a quart if possible. They need it in order to have good health and they should do away with tea and coffee.

"In the different milk campaigns last year there were 1129 children out of the total of 2393 that did not drink milk, but after the campaign there were 2010 who used milk in their diet daily and 1053 of them had gained in weight. A large per cent of the children gave up tea and coffee. In most of the counties where these campaigns were carried on there was an increase in the consumption of milk as well as in the health of the children themselves.

"We are also advocating the use of milk dishes, since their food value adds many vitamines to the diet of the whole family."

JUST PLAIN CARELESSNESS.

A great many of our losses are the result of just plain carelessness.

Advertising in The Washington Farmer Reduces Cost of Selling Merchandise

"It is no longer a recommendation to intelligent buyers to be told that an article is not advertised. In fact, it is the reverse," so say N. W. Ayer & Son, the big advertising agency of Philadelphia and authorities on this subject. Thoughtful buyers will agree.

The cost of selling goods must be added to the final cost. The manufacturer or dealer who uses expensive methods of salesmanship must charge extra to make up for these expensive methods. That is why you will find that articles advertised in your state farm weekly are reasonable in price. More than that, they are reliable and trustworthy. The manufacturer stands back of the goods which he is willing to advertise, and the publisher of this paper stands back of the advertising which he is willing to accept. Note the guarantee on the editorial page. In doing business with our advertisers you have a double warranty of fair dealing.

When you write our advertisers, we would appreciate your mentioning the fact that you read about them in The Washington Farmer.

TAKE ADVANTAGE OF GUARANTEE mentioning THE WASHINGTON FARMER when writing to advertisers; you are doubly protected. See the guarantee on the editorial page.—Adv.



Score Cards

YOU know the score cards used by the agricultural college people for judging poultry, livestock, or home products.

Were you—or a group of dentists—to make a score card to help select the best tooth paste for the whole family, you probably would make one like the "Dentifrice Score Card" shown here. And when you compare the various tooth pastes you, like most dentists, would give the high score to Colgate's.

COLGATE'S

Cleans Teeth the Right Way

"Washes" and Polishes—
Doesn't Scratch or Scour

Here are some of the reasons why Colgate's stands first in the choice of farm people and dentists.

Non-Gritty—Colgate's is made of fine, specially prepared chalk—no grit. The U. S. Health Service says a dentifrice should not be gritty.

No Drugs—Colgate's has no drugs or chemicals which harm mouth or gum tissues.

Safe—Colgate's is *safe*—no harsh grit.

Cleans—Colgate's *loosens* clinging particles and *washes* them away.

Flavor—Colgate's has a delicious flavor which makes tooth brushing a pleasure. Use Colgate's after every meal.

Container—Colgate's comes out like a ribbon—lies flat on the brush.

Price—Colgate's costs only 25c for a LARGE tube. Why pay more?

More dentists recommend Colgate's than any other dentifrice. If your store doesn't have all the Colgate products mentioned in the coupon, check those desired and mail it to us as indicated.

COLGATE & CO.
Farm Household,
Dept. 258-W
199 Fulton Street,
New York, N.Y.

Please send me *samples* of the following articles. I enclose the amount of stamps shown for each one checked.

[ ] Face Powder 6c
[ ] Baby Talc 4c
[ ] Shaving Cream 4c
[ ] Ribbon Dental Cream, Free

Name.....
R. D.....Town.....State.....
Dealer's Name.....
Address.....

FAMILY CIRCLE

ALICE BARLAND
EDITORIAL CONTRIBUTOR

"Wait not till you are backed by numbers. Wait not until you are sure of an echo from a crowd. The fewer voices on the side of truth, the more distinct and strong must be your own." CHANNING.

Dear Mrs. Barland: I have long wanted to do my part for this page, but felt I had no special message nor any special need, though many of the letters have been a great help to me.

Mrs. Barland is a real friend and neighbor to us and her loving understanding has many times lifted me over a rough place.

The letters from all the sisters seem so personal and I read them through at once the same as I do my other letters. I enjoy the glimpses into other farm homes, especially the real pioneer homes, and the exchange of economical makeshifts.

I use the wrapping yarn from packages for mending my husband's socks and the finer yarn ravelled out of flour sacks for darning my own and little girl's stocking feet; being white it is easier to work with and wears better.

I make four or five pairs of bloomers at one time out of flour sacks for my little girl and then dye them all black. I make them with casing for elastic for waist and knees.

I use a wire hen's nest with a heavy wire hook fastened on one side to hook over the end of the boiler, for a clothes drainer.

Can some one give me directions for crocheted mittens, also tell me how and when to prepare pine needles for pillows?

——————, Wash. MRS. S. B. P.

Dear Family Circle: One of our sisters is about to move into a good old log house with walls that can be papered and some old furniture more or less in need of new dressing. She wants suggestions about colors, etc. Thinking this a subject of general interest, I will reply through the Circle.

In the main room of the house, which will be the living room next winter, I would choose for the woodwork a ground color of soft tan, then when thoroughly dry put on the light oak finish, which comes all prepared with the varnish in it.

For the floor I would use a light drab. There are other colors I like as well, but in the country where there is so much tracking in of dust the drab shows it the least.

This old house must be papered, the sister tells me. She didn't say how many windows there are in the living room, but as there are windows on three sides it must be a well lighted room, so I would choose a plain paper, where the prevailing color is coconut brown, but I should prefer it to be a little lighter than what is called coconut brown on the paint or calcimine cards. The paper used so much a few years ago, called oat meal paper, came in brown shades, and I had a couple of rooms papered with the medium shade of brown and it was the most pleasing color I have ever used. It didn't fade at all and the pictures look very well against this plain brown. I would not advise green wall paper, as it always fades and after a little while one can not move a bookcase or change the place of a picture without having the place where it was before show up in a conspicuous way.

The sister says there is a home-made table and some old chairs, good enough but in need of paint. She says: "I am puzzled what color to give these. With so many to choose from it seems as if one could choose another color than brown. On these stump ranches there are enough things brown already. There ought to be any number of colors prettier than brown." It would seem so, sister, but the fact remains, in my judgment, that the browns made in imitation of the natural woods are always best for furniture. I have seen other colors tried out; I have seen green chairs and drab chairs, but they always looked to me like some one had been trying to use up some paint left over from the floor or the porch. In a bedroom where all the furniture is old ivory painted the chairs look all right when painted the same color, but too soon the enamel gets chipped off; then the beauty is gone. If your chairs are hardwood and have never been painted I would not paint them now, but would get the varnish which has the stain in it and sandpaper off the old varnish and give them a coat or two of new. The table never having had any paint will have to have a coat and the same used for the wood work will do, then it could be varnished. But if the chairs are already painted you will have to paint them again, and I would choose either a dark or light oak paint.

Because you are surrounded by brown stumps is the reason why all these colors will look well and you can warm up the room with some pretty cretonne over drapes having some white muslin or marquisette curtains under. For the over drapes choose colors which will harmonize with the tones of the room, something with tan, brown and green in soft colors.

Hang your pictures low. So many rooms are spoiled, when other things are right, by the pictures being hung too high. They should be on a level with the eyes; that is, the center of the picture should be. Choose your pictures carefully. There are so many pretty ones now to secure. Some of the calendars are well worth a frame. Do not have too many, but a few real good ones. A perfectly beautiful room is one where no one object stands out to catch the notice, but all is so harmoniously blended that you feel the beauty as you enter. And one needn't have rich or expensive furniture to get this effect. Give thought to the arrangement of the furniture. Do not have all the heavy pieces of furniture on the same side of the room. I have seen a piano, a bookcase and a couch all at one end of a room and almost nothing at the other. Make your furniture balance up in the room.

To quote further from this letter from the sister: "There are two bedrooms, one on the north and the other on the south. One is dark and gloomy, the other sunny, and each has one window."

I would choose for the dark and gloomy room a tan paper with a small flower of pink. This will have the effect of sunshine in the room and will warm it up. Never choose a large flowered paper for a bedroom or one with any intricate pattern. If one is sick in the room it is apt to annoy. With but one window to the north, I wouldn't have over drapes unless narrow, but one can have a valance at the top, of a color to harmonize with the paper.

In the sunny room choose a paper with a dainty blue flower and have over drapes of a kind to match the blue. I would paint woodwork in both rooms white. Green is very restful for over drapes, but in that case the wall paper should be very quiet in color and no strong suggestion of blue. There is a shade of blue which goes with certain shades of green. To learn harmony in color, study the flowers in the woods and garden. This may not seem important to some, but when God took so much pains to make this world so beautiful it seems to me to be worth while to make ourselves and our homes as beautiful as we can. I must add that beauty of character is more important than any external surroundings, and we should cultivate this and not neglect the other.

ALICE W. BARLAND.

Spinach Recipes

Dandelions Are Also a Favorite

By MISS H. A. LYNAN.

Among green vegetables no two are more favorites than the spinach and dandelion. In combination with bacon or boiled eggs as a decoration they are most pleasing. Many prefer them simply boiled and seasoned with salt and pepper as a vegetable, but in a salad they are very nutritious and healthful. Then, again, when served with chicken, make a good dish. The following recipes are easily prepared:

Spinach Fritters—Take well cooked spinach and mince it. To each cupful take one-half cupful of bread crumbs, a teaspoonful of sugar and a dash of nutmeg. Add a cupful of cream, two eggs and as much flour as will make the mixture a consistent batter and stir in with the flour a teaspoonful of good baking powder. Drop into boiling hot fat and let fry till brown. Serve hot.

Dandelion Favorite—Boil two quarts of dandelions, seasoning same with pepper and salt. When tender arrange in a dish and sprinkle with a little vinegar. Then toss over all about one-half cupful of fried diced bacon. Arrange small olives around edges of dish and completely cover the dandelions with slices of hard boiled eggs. Very delicious.

Spinach With Drawn Butter—Pick over and wash a peck of spinach, drain and shake free of water. Put in a kettle, without water; set over a moderate fire and let steam for 25 minutes. Drain in a colander, chop fine, season with salt, pepper and melted butter. Mould the spinach by pressing tightly in small cups, turn out on slices of hot buttered toast, sprinkle the tops with chopped hard boiled eggs. Pour drawn butter around the toast and serve at once.

Dandelions on Toast—Wash well, cooking in salted boiling water. Drain and chop fine. Put a tablespoonful of butter into a saucepan with seasoning. Stir in the dandelions and heat smooth. When hot add a tablespoonful of cream or two of milk, pour upon buttered toast.

Spinach Croquettes—Boil three quarts of spinach until tender, seasoning with salt and pepper. Dip a tablespoonful at a time into beaten egg and bread crumbs, season with salt and pepper again and a pinch of butter. Fry to a light brown in plenty of hot fat.

Spinach and Baked Chicken—After baking chicken arrange thin slices of the meat on a large platter. Over it put the boiled spinach, freed from all water, and sprinkle with a little salt and pepper, then decorate with some pieces of the hot dressing and over all pour the hot gravy. Arrange some curls of cucumber pickle around the dish and eat hot.

Dandelion and Celery Salad—Boil dandelions until tender, then free from all water, arrange hot on a dish and toss pieces of celery stalk here and there about one cupful in all, and place slices of hard boiled eggs around the dandelions. Then completely cover with any favorite salad dressing.

Just Folks

A smile and a courageous word is worth all the advice in the world.

Every day the coming generation is taking up some of the work of the outgoing generation.

We sometimes complain of the irresponsibility of young folks. Are they to blame for this, or are we to blame for not throwing more responsibilities upon them?

With responsibilities come burdens, and with burdens come heartaches.

How shall the next generation be fitted to carry on the work of the world? While some of us are wondering how this shall be done, the next generation is already entering into the work and is doing it to our astonishment.

"As a man thinketh, so is he." This is an oft-quoted saying, yet when these words were hurled at me many years ago when I was entering upon one of the first jobs of my life, they opened up the realm of responsibility before me as it had never been opened up before.

Did my thoughts and my vision as a young man count? Was I the arbiter of my own fate? Was my own thought the supreme factor in my own success? What about the wisdom of my elders? What about the advice of those who had had long years of experience in life? What about the wisdom of ages past?

"As a man thinketh, so is he."

The moving thought of the young man is what counts, not where he lives, how he is clothed, with whom he associates or even what he has read.

It is true sympathy, the helpful word, the encouraging smile, the emboldening urge, is needed with the young more than counsel and admonition and all that.

The Roman empire fell, but the generations of men are not blotted out. Whether the Armada was destroyed or the Mayflower reached the new continent are incidents.

The one abiding fact is that the new generation is ever treading on the heels of the old generation, and somehow or other the world wags on just the same.

Experience comes by birth, not by adoption.

Something can be done for the young and that something is of importance. It is to provide helpful environment, as far as it may lie in our power to do so. An atmosphere of joyous help is the best antidote to the atmosphere of feverish pleasure. The atmosphere of worth-while work is the best preventive of noxious idleness.

Don't try to do the young folk's work for them, but help them as you can with conditions and environments in which they must work out their own salvation.

E A S

CRACKERJACK PUDDING.

One quart of milk, three eggs, one-third cup of sugar, one-fourth teaspoon of salt, eight soda crackers. Beat whites of eggs light, beat yolks and add sugar and salt. Roll crackers coarse. Bring the milk to near boiling, add the beaten yolks, sugar and salt, stir thoroughly, then add the crackers, stir one minute, then add beaten whites, stir thoroughly and pour into a serving dish and serve cold.MRS. V. M. C.

HOME-PREPARED MUSTARD.

Three tablespoons of mustard, one tablespoon of sugar, one tablespoon of cornstarch; mix well, then add one beaten egg and beat until smooth, add one cup of vinegar and cook in a double boiler till smooth and looks like cream, then add butter size of a walnut.

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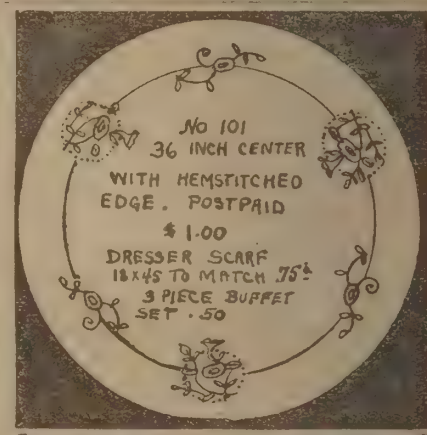
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Unto the End.

"How's this?" asked the lawyer. "You've named six bankers in your will to be pallbearers. Of course, it's all right, but wouldn't you rather choose some friends with whom you are on better terms?"

"No, judge, that's all right. Those fellows have carried me for so long they might as well finish the job."—The American Legion Weekly.

it's only when a horses breathes that he heaves."

"I getcha."

"Well, two doses o' that stuff plumb cured my horses of breathin'."

The Calf's Mess Caller.

Algernon (city cousin): "What has that cow got the bell strapped 'round her neck for?"

Bobby: "That's to call the calf when dinner's ready."—Life.

Home, Sweet Home.

"There's no place like home, thank heaven," sighed the hen-pecked man, as he locked his hotel room from the inside.

The Point of View.

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Please order the patterns you desire at least two or three weeks before you wish to use them. Desiring to obtain the latest high-class patterns for its readers, THE FARMER has made arrangements to have them sent direct from the east, and under present mailing conditions it takes about that time for them to reach you.



3964. Misses' Dress. Cut in three sizes: 16, 18, and 20 years. An 18-year size requires 5 yards of 40-inch material. The width of the skirt at the foot is 2 yards. Price 10 cents.

3973. Lady's Dress. Cut in six sizes: 34, 36, 38, 40, 42, and 44 inches bust measure. To make as illustrated requires 3 3-8 yards of figured material 38 inches wide and 2 3-8 yards of plain material 40 inches wide. The width at the foot is about 2 yards. Price 10 cents.

3972-3822. Lady's "Knicker" Suit. Skirt 3972 cut in six sizes: 25, 27, 29, 31, 33, and 35 inches waist measure. Blouse and knickers 3822 cut in seven sizes: 34, 36, 38, 40, 42, 44, and 46 inches bust measure. It will require 2 1-4 yards of 36-inch material for the blouse and 2 5-8 yards for the "knickers"; for the skirt 3 3-8 yards of 44-inch material will be required to make this "outfit" for a medium size. The width of the skirt is about 2 3-4 yards. Two separate patterns, 10 cents for each pattern.

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3961. Girl's Guimpe Dress. Cut in four sizes: 8, 10, 12, and 14 years. A 12-year size requires 1 7-8 yards of 27-inch material for the guimpe and 2 5-8 yards for skirt and overblouse. Price 10 cents.

3974. Morning Negligee. Cut in four sizes: Small, 34-36; medium, 38-40; large, 42-44; extra large, 46-48 inches bust measure. A medium size requires 3 7-8 yards of 40-inch material. The width at the foot is 2 1-8 yards. Price 10 cents.

3975. Lady's House Dress. Cut in seven sizes: 34, 36, 38, 40, 42, 44, and 46 inches bust measure. A 38-inch size requires 4 1-2 yards of 40-inch material. The width at the foot is 2 1-8 yards. Price 10 cents.

3968. Lady's Apron Dress. Cut in four sizes: Small, 34-36; medium, 38-40; large, 42-44; extra large, 46-48 inches bust measure. A medium size requires 4 yards of 36-inch material. Price 10 cents.

3953. Child's Dress. Cut in four sizes: 2, 4, 6, and 8 years. A 4-year size requires 3 1-4 yards of 27-inch material. Price 10 cents.

3285. A Simple Set of Hat and Apron. Cut in five sizes, 1, 2, 3, 4, and 5 years. A 4-year size will require 2 3-8 yards of 27-inch material for the apron and 1 yard for the hat. Price 10 cents.

3950. Lady's Blouse. Cut in six sizes, 34, 36, 38, 40, 42, and 44 inches bust measure. A 38-inch size requires 3 5-8 yards of 27-inch material. Price 10 cents.

3956. Girl's Middy Blouse. Cut in five sizes: 8, 10, 12, 14, and 16 years. A 14-year size requires 2 3-4 yards of 36-inch material. Price 10 cents.

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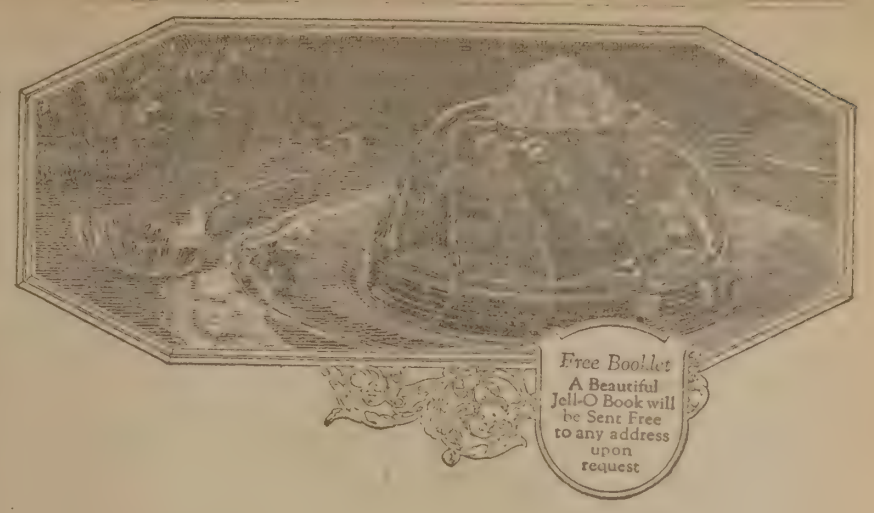
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(Issued January 2.)

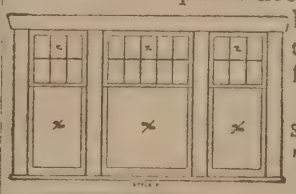
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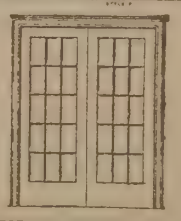


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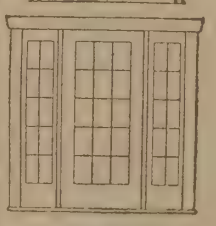
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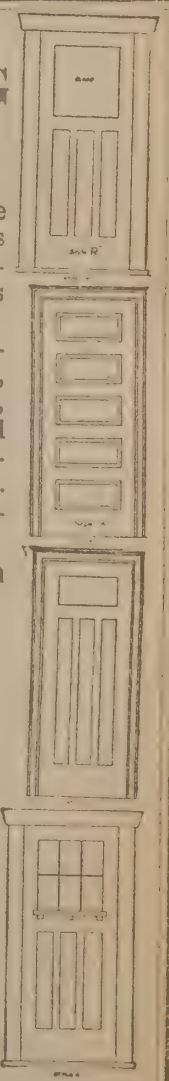


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High Points in News of the Week

The United States senate last week passed the agricultural appropriation bill to raise $37,250,000 for federal agricultural purposes during the ensuing fiscal year. The measure has already been passed by the house of representatives, but will now go to conference between the two houses to agree upon a few senate amendments.



Among the principal changes made in the measure by the senate were increases of $500,000 to the $1,000,000 appropriation for agricultural extension work through farm agents, and $300,000 to the $200,000 fund for eradication of the barberry bush, the wheat rust pest. An addition of $75,000 was made to the appropriation of $175,000 for fighting the white pine blister rust.

An attempt was made by Senator King, democrat, Utah, to add an amendment limiting farm bureau agents to the work of their departments and preventing them from what was described as interference with outside enterprises. After a verbal tilt with Senator McNary of Oregon, in charge of the bill, who said that if such limitation was to be placed on government officials it should be made to apply to senators and members of the house, Mr. King withdrew the attempt.

* * *

Examiner Disque of the interstate commerce commission, who held hearings throughout the northwestern territory recently, has recommended to the commission that the application of the railroads for lower rates to Pacific coast points than to interior points of the Pacific northwest be denied.

The railroads made their application for this discrimination last August. It would cover several hundred of the staple commodities and would virtually annul the long and short haul provision of the interstate commerce law.

* * *

The coal strike situation remained practically unchanged during the last week. Leaders in the strike declared that it was gaining strength, rather than losing. Indications are that the government is taking preliminary steps with a view to taking well-considered action should a serious situation develop as a result of the strike.

* * *

The allies are now in conference in Genoa, Italy, considering important financial problems of Europe. There is little definite information available as to the early success of the conference.

* * *

Easter time found Ireland in considerable uncertainty. Notwithstanding the many advances made during recent weeks toward peaceful settlement of the controversies that have harassed the country for years, many communities have been anything but peaceful. A belligerent message was published by former President De Valera last week, urging the Irish people to stand fast for the complete independence program—the program set aside by the recent agreement with the British government for the formation of the Irish Free State. It is evident that Irish insurgency under the leadership of De Valera still exists with considerable strength.

* * *

Clifford Thorne, attorney for the American Farm Bureau federation, last week announced himself a candidate for United States senator from Iowa. He has tendered his resignation as attorney for the bureau federation. He is also attorney for the United States Grain Growers, Inc., but whether he has resigned this position is not formally announced. Mr. Thorne is one of the most widely known attorneys for agricultural organizations in the country.

* * *

The federal land bank, with headquarters at Spokane for the four Pacific northwestern states, has announced its intention to erect a building in that city to be occupied by the bank alone. The building will not be in the expensive business center of the city, but will be out where building sites are cheaper. It is expected to prove a saving over the present high office rents that are being paid.

Farm Business and Markets Outlook

(Continued from page five.)

week in April. The decline in supply will sustain prices and eventually advance them. The high point in cold storage stocks in the last three years has been reached about the middle of July.

Receipts of dressed poultry begin to pick up toward the last of April as a rule. If history repeats here the market may weaken slightly before many weeks.

SEASONAL DECLINE IN BUTTER.

The seasonal decline in butter prices is under way although losses last week were not severe. Production has increased decidedly and receipts at the large cities are heavy compared with the average for this season of the year in spite of evidence of broad consuming demand at smaller points. Fancy butter especially has been abundant. Large quantities of butter are still being sold from cold storage, although receipts of fresh butter at the four leading cities last week were as large as they usually become when the storing season starts.

Until prices reach a level low enough to attract speculative buying the trend is apt to be downward. Last year 92-score butter reached low point on May 20, when 28 3-4 cents was the Chicago price. On the Chicago futures market fresh standards for May delivery are now quoted at 28 1-2 cents, which indicates the guess of the trade as to the low price this year.

Prices for 92-score fresh butter on April 12 were:

Chicago, 36c; New York, 38c; Boston, 37 1-4c; Philadelphia, 38c; San Francisco exchange quotation, 35c.

CHEESE PRODUCTION IS HEAVY.

The cheese market has been weak and unsettled as production has been heavy and receipts have been too large to be absorbed. Wisconsin country markets were lower and distributing markets followed suit. Small quantities have been placed in cold storage, although there is no real storing demand at the present price scale. The weakness of the situation is shown by the willingness of Wisconsin dealers to sell on the basis of the following week's Plymouth market. As in butter, the trend will be lower as the seansonal increase in production shows up, until cold storage operators are willing to enter the market on a broad scale.

White cheese continues scarce and held cheese is only available at prices far above the market upon the fresh article.

Prices on No. 1 American cheese on April 12 were:

CHICAGO—Twins, 15 3-4@16 1-2c; S. daisies, 16 1-2@17c; D. daisies, 16 1-4@16 3-4c; longhorns, 16 1-2@17c; square prints, 16 1-2@17c.

FRUITS AND VEGETABLES.

Over 4000 cars more of potatoes were shipped from producing sections for the season up to April 1 than were shipped in the entire season last year and arrivals are still running 50 per cent ahead of those a year ago. The supply is too large to be absorbed except at lower prices, although the decline in recent weeks has not been drastic. Sacked Rurals are quoted at 60 to 70 cents per 100 pounds in wagon loads at Idaho and Colorado shipping points.

LATEST QUOTATIONS.

The Live Stock Market.

PORTLAND, April 15.—Cattle—Choice steers, $7.50@8; medium to good steers, $6.50@7.50; fair to medium steers, $6@6.50; common to fair steers, $5@6; choice feeders, $5@6; fair to good feeders, $4.50@6.50; medium to good cows and heifers, $5.25@6; fair to medium cows and heifers, $4.50@5.25; common cows, $3.50@4.50; canners, $2@3.50; bulls, $3.50@5; choice dairy calves, $9.50@10; prime light calves, $9@9.50; medium to light calves, $6.50@9; heavy calves, $4.50@6.

Hogs—Prime light, $11@11.50; smooth heavy, 200 to 300 lbs., $10@11; smooth heavy, 300 lbs. up, $9@10; rough heavy, 7@9; fat pigs, $10.50@10.75; feeder pigs, $10.25@10.50; stags, subject to dockage, $5@7.

Sheep—Best spring lambs, $10@13; medium spring lambs, $7.50@10; common spring lambs, $5@7; cast-of-mountain lambs, $12@14; best valley lambs, $11@13; fair to good, $10@11; cull lambs, $6@8; eastern Oregon feeders, $9@10; light yearlings, $9@10; light wethers, $9.50@10; heavy wethers, $9@9.50, ewes, $3@7.50.

SPOKANE, April 15.—Cattle—Prime steers, $7@8; good to choice steers, $6@7; medium to good steers, $5.50@6.75; fair to medium steers, $4.75@5.50; common to fair steers, $4.25@4.75; choice cows and heifers, $5.50@6.50; good to choice cows and heifers, $4.50@5.50; medium to good cows and heifers, $4@4.50; fair to medium cows and heifers, $3@4; canners, $2@3; bulls, $3@5.50; light veal calves, $8@10; heavy veal calves, $4@8; stockers and feeders, $4.50@5.50.

Hogs—Prime mixed $11@11.50; medium, $10@11; heavies, $8@9; fat pigs, $10@11; stockers and feeders, $10@11.

Sheep—Prime lambs, $11@13; fair to medium, $10@11; yearlings, $10@11; wethers, $9.50@10; mutton ewes, $3@7.50; feeder lambs, $8@9.

The Grain Market.

PORTLAND, April 15.—Wheat—Holiday.

POMEROY, April 15.—Turkey red, $1.10; Hybrid, $1.07.

DAVENPORT, Wash., April 15.—Bluestem, $1.30; Gold Coin, $1.02.

PULLMAN, April 15.—Local grain buyers inactive in the face of 9-cent advance in wheat prices in Chicago.

ODESSA, April 15.—Marquis, $1.47; Bluestem and Bart, $1.45; Turkey red, $1.33; Jones Fife, $1.08.

WALLA WALLA, April 15.—Club wheat, $1.09; Bluestem, Turkey red and Bart, $1.10.

SEATTLE, April 15.—Wheat—Hard white, $1.28; soft white, white club, hard red winter, soft red winter, northern spring, $1.27; eastern red Walla, $1.24; Big Bend Bluestem, $1.20.

Hay and Grain Feed.

PORTLAND, April 15.—Millfeed—Price f. o. b. mill: Millrun, ton lots, $29; mixed cars, $28; straight cars, $27 per ton; middlings, $43; rolled barley, $37@39; rolled oats, $42; scratch feed, $52 per ton.

Corn—White, $36; cracked, $38.

Hay—Buying price f. o. b. Portland: Alfalfa, $20 per ton; cheat, $13.50@14; oats and vetch, $17; clover, $14; valley timothy, $16@17; eastern Oregon timothy, $20@21.

SPOKANE, April 15.—Wheat—Feed wheat, $46 per ton.

Oats—$40 per ton; steam rolled, $42.

Corn—$36 per ton; cracked corn, $38 ton.

Barley—$40; steam rolled, $42.

Bran and shorts—$30 per ton.

Alfalfa—$22 ton; timothy, $22 ton; mixed hay, $18 ton.

General Produce.

PORTLAND, April 15.—Butter—Cubes, extras, 30@31c per lb; parchment wrapped, box lots, 35c; cartons, 36c. Butterfat, buying prices: No. 1 grade, 35c, delivered Portland.

Eggs—Buying prices, 20@21c dozen, case count, henneries, 23c; jobbing prices, case count, 22c; candled ranch, 23@24c; selects, 25c.

Cheese—Tillamook triplets, price to jobbers, f. o. b. Tillamook, 26c; young Americas, 27c pound.

Poultry—Hens, 22@26c; ducks, nominal; geese, nominal; turkeys, live, nominal; dressed, 35@38c.

Pork—Fancy, 15½c per pound.

Veal—Fancy, 14c per pound.

SPOKANE, April 15.—The following quotations are retail prices:

Fresh ranch eggs—$7.50 case; no storage eggs; pullet eggs, $7.

Poultry—Heavy hens, 28c lb; light hens, 26c lb; roosters, 17c lb.

Creamery butter—Cartons, 40c lb; without cartons, 39c lb; in quarters, 40c lb; solid pack, 37@39c lb.

Chicago Wheat Pit Goes Mad

With shorts struggling desperately to cover contracts, a spectacular rise in May wheat Saturday precipitated one of the wildest scrambles seen on the Chicago board of trade since the days of the war markets.

The flurry, which sent May wheat up 8½ to 9 cents, resulted, according to reports, from a titanic struggle for control of millions of bushels of the grain.

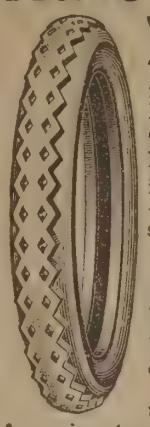
James A. Patten, the well-known operator in the wheat pit, attributed Saturday's rise to the purchase of 600,000 bushels of American wheat by England on Good Friday. This, he said, was taken as an indication that Europe was in dire need of grain.

Certain interests were said to have 1,300,000 bushels of wheat at Kansas City which they were trying to bring into Chicago. In addition vessel bottoms were said to have been chartered for the transportation of 1,000,000 bushels from Duluth to Chicago, which, it was said, might mean the moving of some Minneapolis wheat to this market.

Range of Live Stock Prices for the Week Ending April 12

CATTLE.	Chicago.	Spokane.	Portland.	N Salt Lake
Choice, prime heavy steers (1100 lb. up)	8.60@ 9.40	.....	.....	.....
Good heavy steers	8.00@ 8.75	.....	.....	.....
Medium heavy steers	7.25@ 8.10	.....	.....	.....
Common heavy steers	6.60@ 7.45	.....	.....	.....
Choice, prime light steers (1100 lb. d'n)	8.60@ 9.60	.....	.....	.....
Good light steers	7.90@ 8.85	.....	.....	.....
Medium light steers	7.15@ 8.15	5.75@ 7.50	6.50@ 8.00	5.50@ 7 00
Common light steers	6.30@ 7.35	4.25@ 6.00	5.00@ 6.50	4.00@ 5.50
Common to choice butcher heifers	5.25@ 8.25	3.50@ 6.00	4.00@ 6.50	3.50@ 5 25
Common to choice butcher cows	4.35@ 7.35	3.00@ 5.00	3.50@ 5.25	3.00@ 4.75
Bologna and beef bulls	4.00@ 6.25	3.00@ 5.50	3.50@ 4.50	2.00@ 3.50
Canners and cutters, cows and heifers	3.25@ 4 50	2.00@ 3.00	2.00@ 3.50	1.50@ 3.00
Canner steers	4.25@ 5.25	2.50@ 4.25	3.00@ 4.50	3.00@ 4.00
Medium to choice light veals	5.75@ 9.00	7.50@10.00	7.50@10.00	.....
Common to choice heavy veals	4.00@ 7.00	4.00@ 8.00	4.50@ 8.00	5.00@ 7.00
Common to choice feeders (1000 lb. up)	5.50@ 7.35	.....	.....	.....
Common to choice feeders (750-1000 lb.)	5.40@ 7.35	4.50@ 5.00	5.00@ 6.00	.....
Common to choice stocker steers	5.25@ 7.25	.....	.....	.....
Common to choice stocker cows, heifers	4.00@ 5.50	.....	.....	.....
HOGS.				
Top of market	11.00	11 50	.....	.....
Bulk of sales	10.15@10.95	11.00@11.50	10.75@11.25	9.25@ 9.85
Heavy (250 lb. up)	10.15@10.75	8.50@ 9.50	9.00@10.50	.....
Medium (200-250 lb.)	10.35@11.00	10.00@11.25	10.25@10.75	9.00@ 9.50
Light (150-200 lb.)	10.55@11.00	10.50@11.50	10.75@11.25	9.25@ 9.85
Light lights (130-150 lb.)	10.25@10.85	10.50@11.50	10.75@11.25	9.25@ 9.80
Smooth packing sows (250 lb. up)	9.40@10.10	8.00@ 9.00	8.00@ 9.00	.....
Rough packing sows (200 lb. up)	9.20@ 9.75	7.50@ 8.50	7.50@ 8.25	.....
Medium to choice pigs (130 lb. down)	9.35@10.65	9.50@10.50	10.50@ 11.25	.....
Stock pigs	.....	9.50@10.25	10.50@11.25	8.50@ 9.25
SHEEP AND LAMBS.				
Medium to prime lambs (84 lb. down)	12.00@16.50	8.00@10.00	12.00@15.00	10.00@12.50
Culls and common lambs	9.50@ 14.00	5.00@ 8.00	8.00@12.00	8.00@10.00
Medium to prime yearling wethers	10.50@14.75	6.00@ 8.00	9.00@11.00	8.00@ 9.00
Medium to prime wethers	8.00@12.50	4.50@ 6.00	9.00@10.00	6.50@ 7.50
Medium to choice ewes	6.75@10.75	4.00@ 6.00	5.00@ 8.00	4.40@ 5.50
Culls and common ewes	3.00@ 7.00	2.00@ 4.00	3.00@ 5.00	3.00@ 4.50
Feeder lambs	11.75@13.75	7.00@ 8.00	9.00@10.50	.....

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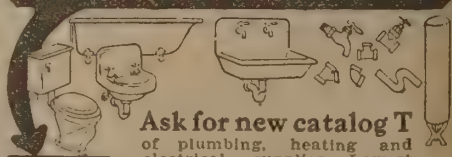
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Read the "Want Ad" page this week for good offers of all kinds.



Julia Kuchenreuther's friend at school is Jenny Johnson. Thelma Olsen is her teacher. Julia has three sisters and two brothers in high school. This spring she is going to plant some flowers and have a flower garden. She lives in western Whatcom county, Washington.

Alma Smith lives near the head of Moses Coulee in central Douglas county, Washington. Her home is five and a half miles from town. Alma is 11 years old. September 17, 1922, she will be 12. She rides a pony a mile and a half to school. This is Alma's first letter to Aunt Nellie.

Reta Houghton is a southwestern Washington cousin and lives near the Columbia river. She was 8 years old December 19, 1922. Her sister gets The Junior Farmer and Reta enjoys reading it very much.

Because he had the whooping cough, George Lovos has a vacation from school. His bunny ran away since he wrote to us before and now he hasn't any bunny. He has a little goat named Billy. What goes upstairs with four feet and comes down with eight? A cat, when she catches a rat. George is a western Washington boy and lives on Puget sound.

We have another letter from the Wertemberger home, in Grant county, Washington. This one is from Henry, who is 10 years old. September 9, 1922, he will be 11. He is in the fifth grade at school. Mrs. Zeyen is his teacher.

At school Florence Steinar and her brother are taking fourth grade work. Florence likes to go to school. One of her brothers is in the second grade and she has two brothers who do not go to school. Florence had to miss school on account of a bad cold. Her home is in southeastern Whitman county, Washington.

Pauline Wertemberger is an eastern Washington cousin and lives near the Adams county boundary line in Grant county. She was born in Russia in 1910 and is 11 years old. Her birthday is April 23. Pauline has two sisters and one brother. They are Leona, Dorothy and Henry.

On account of whooping cough Alice Lovos and her brother George had a vacation from school. Since Alice wrote to us the last time she and George have gotten a little goat and have named him Billy. He is dark gray with white stripes and is about the size of a little dog. Danny (to his mother—Were Adam and Eve the first people in the world, ma? Mother—Yes, Adam and Eve were the first people in the world. What a silly question to ask, Danny—Well, who was here before they were? Mother—Nobody, of course. Danny—Gee, that nobody must have been lonesome. Alice lives on Puget sound, Kitsap county, Washington.

Esta Rivers is going to keep all her copies of The Junior Farmer and sew them together in a big book. February 24, 1922, when Esta was 11 years old, she received several presents. Here they are:

Birthday Greetings

THURSDAY, April 20—Frances Mae Blevins, 10 years old; Helen Brooking, 11; Margaret Daniels, 11; Dora Duffey, 8; Donald Fry, 8; Molly Litt, 10; Ralph Stratton, 9.

FRIDAY, April 21—Edith Derigio, 11 years old; Andrew Litt, 8; Mildred Owens, 11; Gladys Packer, 10; Annie Phillips, 11.

SATURDAY, April 22—Okel Sperline, 11 years old; Billie Warwick, 4.

SUNDAY, April 23—W. H. Dick, 11 years old.

MONDAY, April 24—Juanita Arrington, 8 years old; Marie Felchlin, 11; Martha Kissler, 10; Orval Van Ausdle, 8; Lloyd Patterson, 6.

TUESDAY, April 25—Pauline Arrington, 10 years old; Elmer Eaton, 11; Arthur McKay, 11; Vera Park, 11; Vernon Peck, 9; Helen Prien, 7.

WEDNESDAY, April 26—Leda Ruby Harrell, 10 years old.

LETTERS WELCOMED BY AUNT NELLIE.

Among recent letters received by Aunt Nellie are those from cousins whose names follow. A few of these will be published each week in the regular edition of THE FARMER, and others will appear from time to time in The Junior Farmer:

Jean MacKenzie, Emilea Pflugrath, Mae Taylor, Hector Salvadalena, Madge Black, Thelma Heimen, Marie Louise Newmann, Arthur Radach, Everett Joseph Scott, Ellen Ludwig, Anna Julia Hendrickson, Dorothea Nelson, Julia Emma Rainbolt, Olive Marr, Edna P. Mosier, Matilda Schniendmiller, Josephine Jantz, Bessie Berglund, Ruth Fletcher, Reinhold Gord, Irene Owens, Esther Reimann, Hazel Mattie Anderson, Frances Felmley, Vivian Peterson, Dorothy Schidleman, Anna Halovanick, Rose Bartell, Eleanor Luther, Emma Hochstatter, Jane Frazier, Josie Smith, Lillian Kunz, Aubrey Randolph, Mary Wagner, Ray Scherman, Louis Rostad.

An ink tablet, a handkerchief box and three hankerchiefs, a Polly Prim apron, three packages of gum and three bars of candy. Esta's home is near Lookout mountain, in Okanogan county, Washington.

Hilda Stark, who lives in central Douglas county, Washington, writes her second letter to Aunt Nellie. There are nine children at school where she goes. She is in the fifth grade in everything but language.

Every Friday afternoon they sew where Rena Rise goes to school. Rena has learned how to make a sewing bag. She says it is pretty. When spring comes Rena will be glad. She thinks all the cousins will be glad, too. Most of the winter they have had hot lunches at school, but now, because it is getting warm, they are not going to much longer. Rena's home is near the Canadian border line, in north central Washington.

Sarah Wood lives on a farm in Whitman county, Washington. Sarah has three pets, a dog named Snip; Tommy, her cat, and a pony. Sarah likes to ride horseback. She was 11 years old January 3, 1922.

Elsie Stark is in the sixth grade in everything but history and geography and those are the studies she does not like. Here is a riddle: There are nine ears of corn in a box and every day a squirrel comes and takes three ears. It takes him nine days to carry them out. How is that? He takes his own ears with him each time and takes away one ear of corn. Elsie lives north of Moses Coulee, in Douglas county, Washington.

Max Fountain, a 7-year-old cousin, lives east of Bonaparte lake, in eastern Okanogan county, Washington. Max has two sisters, Gertrude and Gladys, and a baby brother, Freddy. Max says he has a pet dog and three cats. February 17 is his birthday.

Evelyn G. Claman went visiting and while she was gone her pony ran away. While the pony was away she got kicked and was lame for a long time, so Evelyn could not ride her. The pony is 27 years old. Evelyn is a southern Washington girl. Her home is in Yakima valley.

BEDTIME STORIES

By THORNTON W. BURGESS.

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LONGLEGS RECEIVES CALLERS.

Longlegs the Blue Heron felt decidedly out of sorts. It was a beautiful morning, too beautiful for any one to be feeling that way. Indeed, it was the same beautiful morning Grandfather Frog had caught so many foolish green flies that he had stuffed his white and yellow waistcoat until he couldn't get another one in, and had then gone to sleep right out in plain sight on his big green lily pad in the Smiling Pool. It was the very same morning that Little Joe Otter had gone down to the Big River fishing and had had such success that he was fairly bubbling over with good feeling.

Jolly, round, red Mr. Sun was smiling his broadest. The Merry Little Breezes of



The trouble with Longlegs was an empty stomach.

Old Mother West Wind were dancing happily here and there over the Green Meadows, looking for some good turn to do for others. The little feathered people to whom Old Mother Nature has given the great blessing of music in their throats were pouring out their sweetest songs. So it seemed as if there was no good reason why Longlegs should feel out of sorts. The fact is, the trouble with Longlegs was an empty stomach. Yes, sir, that is what ailed Longlegs the Blue Heron that sunshiny morning. You know, it is hard work to be hungry and happy at the same time.

So Longlegs stood on the edge of a shallow little pool in the Laughing Brook, grumbling to himself. Just a little while before he had seen Little Joe Otter carrying home a big fish, and this made him hungrier and more out or sorts than ever. In the first place, it made him envious, and envy, you know, always stirs up bad feelings. He knew perfectly well that Little Joe had caught that fish by boldly chasing it, for Little Joe can swim even faster than a fish. But Longlegs chose to try to make himself think that it was all luck. Moreover, he wanted to blame some one for his own lack of success, as most people who fail do. So when Little Joe had called out, "Hi, Longlegs, what luck this fine morning?" Longlegs just pretended not to hear. But when Little Joe was out of sight and hearing he began to grumble to himself.

"No wonder I have no luck with that fellow racing up and down the brook," said he. "He isn't content to catch what he wants himself, but frightens the rest of the fish so that an honest fisherman like me has no chance at all. I don't see what Old Mother Nature was thinking of when she gave him a liking for fish. He and Billy Mink are just two worthless little scamps, born to make trouble for other people."

He was still grumbling when these two same little scamps poked their heads out of the grass on the other side of the little pool. "You look happy, Longlegs. Must be that you have had a good breakfast," said Little Joe, nudging Billy Mink.

Longlegs snapped his great bill angrily. "What are you doing here spoiling my fishing?" he demanded. "Haven't you got the Big River and all the rest of the Laughing Brook to fool around in? This is my pool, and I'll thank you to keep away!"

Billy Mink chuckled so that Longlegs heard him, and that didn't improve his temper a bit. But before he could say anything more Little Joe Otter spoke.

"Oh!" said he, "we beg your pardon. Billy Mink just happened to see Grandfather Frog sound asleep, and we thought that if you hadn't had good luck this morning you might like to know about it. But as long as you think so ill of us we'll just run over and tell Blackcap the Night Heron."

Little Joe turned as if to start off in search of Blackcap at once. "Hold on a minute!" called Longlegs, and tried to make his voice sound pleasant, a very difficult thing to do, because, you know, his voice is very harsh and disagreeable. "The truth is, I haven't had a mouthful of breakfast, and to be hungry is apt to make me cross. Where did you say Grandfather Frog is?"

"I didn't say," replied Little Joe, "but if you really want to know, he is sitting on his big, green lily pad in the Smiling Pool, fast asleep right in plain sight."

"Thank you," said Longlegs. "I believe I have an errand up that way, now I think of it. I believe I'll just go over and have a look at him. I have never seen him asleep."

(Copyright by J. G. Lloyd.)

The Gaunt Gray Wolf

(Continued from page sixteen.)

ducked, and ceased paddling as a bullet sang past his head. Immediately the canoe began drifting, and a moment later the strengthening current caught it.

Then the Indians, alive to this new danger, disregarding bullets, rose to their feet and paddled desperately, the one in the stern seeming not to know that the broken stick he held was useless. They knew that the evil spirits had reached up for their canoe and were drawing them down—down—to something worse than death. Their faces became drawn and terror-stricken.

Faintly, and as a voice far away and unreal, they heard Manikawan's taunts as she ran down the high banks of the river, keeping pace with the doomed canoe and its occupants going headlong to destruction:

"The men of the south are cowards. They are afraid to die. The evil spirits are hungry, and soon they will be fed. Their voices are loud. They are crying with hunger The men of the south will feed them."

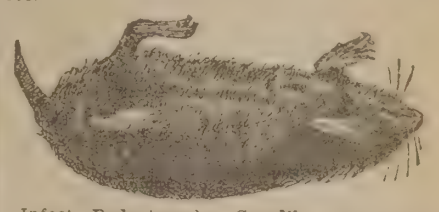
(To be continued.)

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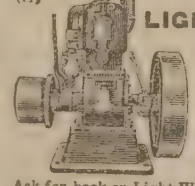
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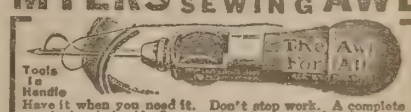
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Motor Questions

I wish to know how to remove an engine and where to disconnect it; whether at the flywheel or somewhere between transmission and flywheel? J. P.
Carrolls, Wash.

It would be preferable to overhaul your motor in the car unless you wish to get the cylinders ground or a bearing rebabbitted. You will save time and not have to remove so many parts if you leave the motor on the frame. In case you remove the motor, loosen it from the frame, remove all parts in front of it, and loosen at the clutch collar. It may be that you will have to loosen the bolts at the transmission a bit in order to give the motor a little play at that and while removing it. If you have no instruction book, get one frome your nearest dealer.—L. J. Smith, W. S. C.

ENGINE GETS TOO HOT

How much clearance should there be between the piston and the cylinder wall on a four-cylinder air-cooled engine, having two and one-half inch bore? When new rings are fitted, how wide a gap should there be at the ends? This motorcycle engine gets very hot sometimes in the summer, so that I have to let it cool off before it will run good. Even when there is no carbon in the engine it acts the same. What is the reason for this? R. W. B.
Perma, Mont.

It may be that your motor gets hot because of improper valve timing, spark adjustment or too rich fuel mixture Any of these cause a high-speed motor to overheat.

The gap for rings is .004 inch per inch diameter of piston, or .01 inch for your motor. If you put in new quick seating rings the gap should be a little less.

Regarding piston clearance, the skirt (part of piston below the three rings) should be 2 1-2 thousandths for your size pistons, assuming the pistons to be cast iron. The diameter between the rings gets smaller as you approach the top of the piston, the diameter at the upper end being about three-hundredths, since the piston is hottest at the top, or in other words, three one-hundredths less than the base of the cylinder.

For aluminum alloy pistons the clearance must be twice that of cast-iron piston.—L. J. Smith, W. S. C.

Looking Ahead With Wool Men

(Continued from page six.)

ders for cloth and mills were obliged to make up for lost time. As operations expanded the stocks of wool abroad begun to shrink and gradually were reduced to more normal size.

The world consumed much more wool than it produced last year and stocks have been reduced nearly 1,000,000,000 pounds from the highest peak.

The department of agriculture, which at one time was a purveyor of statistics showing enormous stocks, reports that on December 31, 1921, holdings in the United States were smallest of any time in the last 10 years. Stocks in Great Britain, France, Germany, the leading European textile countries, also are the lightest in 10 years.

Stocks in wool-exporting countries are above the average, but when the small supply in importing countries is taken into consideration, according to the department of agriculture, holdings of fine wools are smaller than at any time in recent years and the increase in medium and low wools is only a slight one.

The sheep population of the world is estimated at 10 per cent less than in 1913. Furthermore, wool production in the world in 1921 was only 2,608,445,000 pounds, which is 17 per cent less than the pre-war average of 3,151,888,000 pounds. The clip in the United States was the smallest since 1900, while wool consumption, broadly speaking, is increasing rather than decreasing from year to year, both in this country and abroad. It was inevitable, under the circumstances, that the accumulated stocks would disappear.

The present situation finds the United States with a supply below the average, a high tariff and a domestic clip only equal to about 45 per cent of our needs.

These conditions offer promise that the American wool grower will get the full benefit of tariff legislation in the price of future clips. The emergency duty is to stay on until the permanent tariff has been put through. The duty in the latter agreed upon by the senate finance committee is 33 cents per scoured pound, but the duty in the house bill is only 25 cents. Carpet wools are to be admitted free except where they are used in the manufacture of cloth.

At the present time, with the new clip being removed from the sheep's back and buyers of woolen goods asking for lower prices, mills are buying but little raw wool and prices are from 3 to 5 cents a pound lower than at the first of March. There may be some method in the mill's attitude, as they probably would relish an opportunity to accumulate at lower prices.

Consumption of wool by mills is closely related to the trend of business and industrial affairs and to periods of prosperity and depression.

There are some sound reasons for expecting gradual improvement in trade activity during the next 12 months.

The marked increase in the rate at which woolen mills were engaged toward the end of 1921 was one of the first instances of the revival of manufactures. This increase in production of woolen goods filled up some of the holes in channels of distribution, so that there has been some slackening again recently and consumption of wool in 1922 may fall below that of 1921, but there is no reason to expect it to go much, if any, below 600,000,000 pounds.

Stocks of wool in this country at present, based on reports six months ago and consumption and imports since that time, appear large enough when the new clip is added to last through most of the year. Some wool must be brought in from the outside, however, and prices must remain sufficiently high to make possible the payment of the import duty.

In spite of the weakness which developed recently in this country, most foreign auctions are showing strength.

Growers have taken courage from the advance which occurred during the early winter and realize that their position is a strong one. They were not disposed to sell new wool even when the market was at the top. Some of them may cut loose as soon as their clips have been removed, but it is quite probable that a great deal of wool will be held to try the market out further unless prices move upward again.

EXERCISE THE PIGS.

Plenty of exercise is a good conditioner for little pigs, and often prevents losses from so-called thumps.

WATER TANK CONSTRUCTION.

Cypress is perhaps the best wood for water tank construction, though cedar and redwood are often used. J. R. Adamson of Long Beach, Wash., has a 1000-gallon redwood tank which has given immense satisfaction in his house overlooking Shoalwater bay. When concrete is properly mixed and reenforced it makes a tank that should last hundreds of years. The top of the silo is as good a place as any to stow one away.

Many Community Blessings Dependent on Prosperity of Local Merchants

One of the big advantages which modern farm life has over rural existence 50 years ago is the fact that the town is not so far away. The automobile, truck, telephone, good roads, and improved railway service have all tended to bind the farm and trading center into a closer relation of mutual dependence. This, of course, has immeasurably increased the availability of church advantages, good schools, adequate shopping and marketing facilities, and similar benefits.

It should not be forgotten, however, that such advantages are to a large extent made possible and maintained by the business institutions of the home town of which the retail store is a dominant factor. Consequently, the prosperity of the local retail merchants has a decided effect upon these community blessings, and it becomes a matter of self-interest to patronize them, all things being equal.

—Helpful Exchange of Ideas and Experiences offered by —Your State Farm Weekly



The Washington Farmer is welcomed just as much by the wives and daughters on the farm as it is by those who hold the plow handles or who drive the big reaper. It devotes articles, pages and departments in every issue to the special field of women. It aims to lighten the work of those who must perform the endless tasks in the farm home, and to carry a word of inspiration and cheer to those who keep the wheels in the farm household turning smoothly.

The "Family Circle," with its constant interchange of experiences, ideas, opinions and methods, becomes more and more popular as the weeks pass.

The friendly interest of our women readers makes them warm adherents of our cooperative plan for securing and renewing subscriptions. Here is the idea. Many publications charge a high subscription price because it costs so much to gather the subscription orders. We eliminate the expensive system of having a force of agents go from town to town and from farm to farm to secure and renew subscriptions. Instead, we ask our friends to send in their own orders at least sixty days in advance of the expiration date stamped on the wrapper of your paper, and to include the orders of friends and neighbors with your own.

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Continued cooperation is necessary. We hope to make 1922 ever more successful for cooperation than the past years have been. Please do your part.

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April 20, 1922.

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A State Guernsey Champion

The new Washington state Guernsey champion in class BB (senior 4-year-old), Beauty of Chicona, bred and owned by A. L. Gile of Chinook, carries more than the usual distinction of a state champion. By virtue of a previous record she is also the best junior 3-year-old in the state, and is thus a double champion. Furthermore, she ranks second among all Guernseys in class BB and, therefore, becomes one of the 10 class leaders.

The record recently completed is one of 742.69 pounds of butterfat from 13,563.7 of milk. She carried a calf 270 days of her test, and the bull that was born two weeks after completing it is a splendid specimen, indicating that she did not attain personal glory at the expense of her offspring. Her previous calf was a heifer, dropped November 29, 1920, and sired, as was the bull, by Langwater Traveler, a son of one of the best daughters of Imp. King of the May. Her previous record was 508.94 pounds of fat from 8980 of milk in class E.

Beauty of Chicona is the 11th daughter of King of Medfield to qualify for the advanced register. King of Medfield represents a cross which has produced some of the best animals of the breed, being sired by Imp. King of the May and out of Imp. Hayes Rosie 3d.

As state "BB" champion she displaces Gladiola of Bralee, a cow to which R. A. Tillman of Ferndale gave a record of 660 pounds and subsequently sold in an eastern sale.

Still Feeding Stock

By L. K. COGSWELL, Chehalis, Wash.

It is now April 10 and stock are on full winter feed. We have been feeding since early in October, the longest full feed period I have known in the 39 years I have been in Lewis county. A few cars of wheat, oats and straw were shipped out in the fall and it was expected considerable hay might be sold in the spring, but many hundreds of cars of alfalfa have been shipped into this county and fed as fast as unloaded. Considerable straw has been shipped in from eastern Washington. Wheat, poultry and dairy feed and oats are also being shipped in.

Farmers seem determined to get in a big crop early, but weather conditions would not permit seeding and gardening has scarcely started. There are twice as many farm auctions as common and everything but extra choice fresh cows sell for below cost. Buds are swelling and grass shows a tinge of green now, but there are no blossoms in sight. This is a strong cow and hen county and milk is $1.60 per hundred and eggs 21 cents at your door. Eggs are gathered here for cold storage and to ship to California and the east. Many carloads of fancy snow-white standard eggs have gone to New York and untold thousands of chickens are being raised to supply pullets for next fall's laying. Cockerels are shipped to California as soon as they are large enough to eat.

ABERDEEN ANGUS AS RANGE CATTLE.

That a herd of from 800 to 1000 head of purebred Aberdeen Angus are running as beef cattle in the forest ranges surrounding the Kittitas valley, in Kittitas county, Wash., is known to few people. Still fewer realize that the entire herd is the progeny of 18 purebred Aberdeen Angus cows, originally imported from Scotland some 25 years ago by the then minister of agriculture of Canada. The facts are given by ex-Senator Smithson of Ellensburg, Wash., in a letter to Otto V. Battles of the firm of Congdon & Battles, Aberdeen Angus breeders of Yakima, Wash. Mr. Smithson, "an Englishman by birth but an American by choice," says his company "came into possession of the cows through a bad debt, for the sum of $1400 and interest, a fabulous price to pay in those days for any kind of 'critter.'" He says the Angus cattle were so much better than those he was running that he soon sold off everything but the Angus cows, used a registered bull and has followed that course ever since.

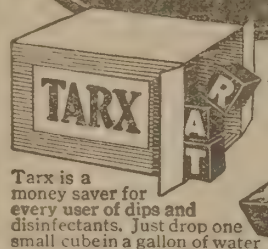
GUERNSEY CALF CLUBS.

Partly to "father" the Guernsey calf clubs which are being formed in the valley, and partly to protect prospective buyers against speculators, the Yakima Valley Guernsey Breeders' association decided to import from the east the stock which calf club members need and are unable to obtain locally. Accordingly President H. E. Angel of Mabton and Secretary R. N. West of Yakima were selected to make the trip, and left early in April for Ohio, New York and other eastern Guernsey centers. The association recently sponsored a sale near Outlook of adult females brought in by A. L. Wallace.

SELLS RED POLLED BULLS.

L. K. Cogswell of Chehalis recently shipped some young registered Red Polled bulls to Whitman county, Pacific county and to the boundary line in Whatcom county. He reports scrub and grade bulls very closely killed off and even registered bulls carefully culled over and a general determination to improve the quality of all the stock in the state.

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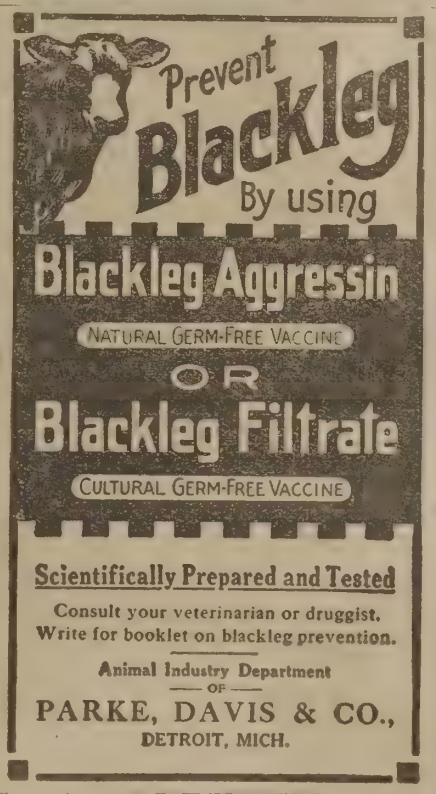
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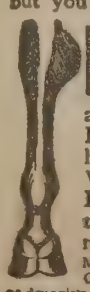


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Breeders' Department

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from the well-known P. A. Frakes herd—few consigned by John Farr. Proven cows, bred and open heifers; typy bulls. Sale under auspices of the Oregon Holstein Cattle club. O. L. Dunlap, Sec., Junction City, Ore.

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offers the mature Guernsey bull Cinderella's Glenwood Boy of Mound City, 25019, out of Cinderella Josephine 34500. AR milk 19,160 lbs., fat 909 lbs. He is sire of Etna of Mound City, AR 425 lbs. fat at 2 yrs. Two others now on test will make better than 425 lbs. at 2 yrs. One of these was first prize senior yearling heifer at Pacific International exposition in 1921.

Write at once for pedigree, picture and personal history.

We also have for sale a calf by the above bull and whose six nearest dams average over 628 lbs. fat.

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bulls will mature your steers earlier, give them a heavy, thick and low set conformation, dehorn them and add to their quality so that they will top the market every time. We have a wonderful lot to select from, both range and herd bulls, at prices which will move them.

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ABERDEEN ANGUS cattle for sale bulls 2 years and yearlings, also heifers. Prices right.
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Big Type Poland Weaned pigs, 10 weeks old, $15 each. A few sows bred for summer litters; best of breeding.
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See "For Sale or Exchange" ads on the "Want" Ad page this week.

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120 EGGS AND THE HEN IS JUST PAYING A PROFIT

but why stop with 30 EGGS



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The average hen under natural range conditions will produce only about 75 eggs a year. Yet *proper feeding and care* have developed commercial flocks that average 120 to 150 eggs a year per hen. Some flocks will range even higher.

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You know that Nature provides each hen with a certain number of embryonic ova. These are minute yolks which, under ordinary conditions, will take the hen a number of years to produce. But that isn't very profitable. So it is your job as a poultryman to secure the most eggs in the least time—and keep the hen in *good health* all the while.

SURELAY will give every hen in your flock an opportunity to pay not only her board bill but pay *you* a profit. This prime quality feed calls the "egg-making department" to order—makes it produce—and keeps the hen in "fine fettle" all the time.

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THE WASHINGTON FARMER

ESTABLISHED 1894

SPOKANE. SEATTLE.



Another Side-Line

The "Filled" Milk Bill Now Before Congress—Page 7

News for Breeders

BLOODED ABERDEEN ANGUS CATTLE.

Two carloads of blooded Aberdeen Angus cattle have just arrived at the Congdon & Battles ranch, in the Yakima valley. The shipment consisted of 35 females and 10 bulls, including Prizemere 9th, which expert judges declare to be one of the finest bulls of the breed in America. These cattle are the remainder of the famous Rosemere herd of Maquoketa, Iowa, owned by Otto V. Battles, for the last three years manager of the firm of Congdon & Battles of Yakima, Wash. In a comparatively short time this Iowa herd of Aberdeen Angus cattle has produced three grand champion bulls at the Chicago International, two grand champion cows and scores of first prize winners.

THE BULL HE PICKED.

"Knowing Alex. Todd's almost uncanny ability to pick successful sires, I am watching with a great deal of interest to see what bull will succeed Sir Korndyke Ormsby Piebe," said Editor M. S. Prescott of the Holstein-Friiesian World. The bull selected, is King Pietertje Ormsby Piebe 35th, bred by Hargrove & Arnold of Norwalk, Iowa, and sold in the Brentwood sale for $800. He is a son of "K. P. O. P.," first prize winner on get of sire for three consecutive years at the Dairy Cattle congress, and world-record bull for combined milk and butter average of his two nearest dams. The latter are the two highest producing daughters of Sir Pietertje Ormsby Mercedes, and it is here that Mr. Todd obtains the same blood that he had in the bull he sold, for Sir Korndyke Ormsby Piebe was out of a daughter of "Sir Piet." The calf himself is one of the highest yearly record bulls of the breed. His five nearest dams average 1150.45 pounds of butter and 23,846 of milk, all except one made under full age. His dam is now making her third consecutive yearly test, started as a 3-year-old.

NATIONAL HOLSTEIN ASSOCIATION.

Nominations for delegates to the annual convention of the Holstein-Friesian association of America at Kansas City, Mo., June 7, include the following: From Washington (entitled to three)—William Bishop, Harold Stimson, Guy McL. Richards, E. A. Stuart, John L. Smith, Alex. Todd, George A. Gue and T. J. Owens. From Oregon (entitled to two)—Oscar L. Dunlap, Henry McCall, F. R. Beals, W. K. Newell and Frank W. Connell. Oregon's quota for the third national cooperative sale which will be held in connection with the meeting is three head, Washington's six.

WORLD-RECORD HEIFER.

By making recently a new world record for fat production for heifers freshening at less than 24 months of age, Daisy Aaagie Ormsby 3d, a Wisconsin Holstein heifer, brings back to the Holstein breed the only championship performance heretoforefore credited to any other breed in the yearly division. In other words, she displaces St. Mawes Lad's Lady, an Oregon Jersey heifer, as world champion senior yearling. "Daisy" freshened at the age of 1 year 11 months and started off with a seven-day record of 23.48 pounds of butter. Her year's record was 22,151.2 pounds of milk and 870.63 of butterfat, which is a world record for combined milk and butter, as well as for butter alone. The record oif St. Mawes Lad's Lady was 11,756 pounds of milk and 829.09 of fat.

BUYS BULL.

J. H. Quick of Castle Rock, Wash., recently purchased from Ed Cary of Carlton, Ore., the young Jersey bull, Poppy's Maiden's Pogis. This youngster is by the gold medal bull, Pogis 75th of Hood Farm, and his dam, Poppy's Maiden, is a gold medal cow of Mr. Cary's St. Mawes-Rosaire's Olga Lad strain.

RESUMES AUCTION WORK.

After an illness of several weeks, which prevented his participation in the Brentwood sale of Holsteins at Philadelphia, a national event, Auctioneer George A. Gue of Yakima and Chehalis was back on the block early in April. His first large sale is that of Guernseys at Sunnyside April 18.

HOLSTEIN BREEDER RENTS FARM.

The large farm in the Ahtanum valley, near Yakima, Wash., which was taken up in 1871 by John Marks and was developed by his son, Elmer Marks, as a Holstein breeding establishment of note, has been rented by M. V. Poynor, who is one of the younger Holstein enthusiasts of the valley.

VEEDOL bids for your business on this business basis

Buy a trial 5-gallon can of the Veedol Oil designated for your tractor. Drain your crankcase, then refill it with Veedol. Immediately, you will notice a new power in your tractor, especially pronounced in the heavy going that has troubled you before. You will find yourself covering more ground—vital time saved.

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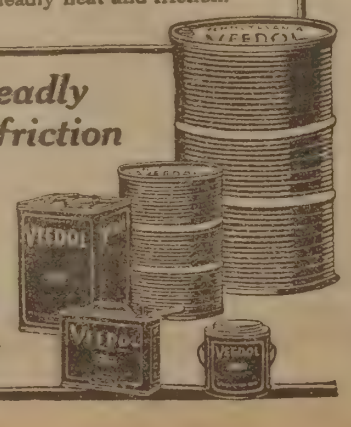
2. Fuel savings—Poor compression allows unburned fuel to seep into the crankcase to further weaken and dilute the oil. Veedol holds compression. Therefore, Veedol saves fuel.

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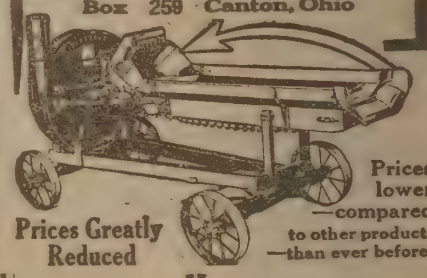
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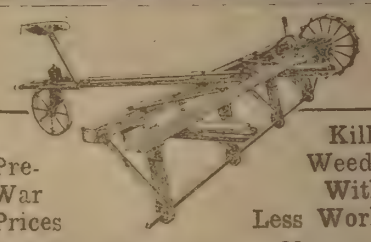
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Vol. 46. No. 17 THE RANCH PACIFIC DAIRYMAN HORN AND HOOF April 27, 1922

For Good Farming, Attractive Country Homes and Happy Country People

Land Bank Business Grows Steadily

Farmers Have Borrowed Nearly $500,000,000 at Reduced Interest Rates

The interest on $500,000,000 at the average rate charged by mortgage companies on loans to farmers would probably be somewhere between $35,000,000 and $40,000,000 per year. The federal land bank has loaned the farmers of the United States about $500,000,000 at interest rates of 5, 5 1-2 and 6 per cent, depending upon the condition of the bond market in which it sold the bonds by which it raised the money to lend. In other words, the land bank has furnished the farmers of the country this $500,000,000 at an average of about 2 per cent lower interest than they would otherwise have been required to pay, or at a saving of about $10,000,000 per year.

The northwestern branch of the federal land bank, with headquarters at Spokane, has loaned the farmers of Washington, Oregon, Idaho and Montana about $60,000,000. This estimated 2 per cent saving in the interest rate means a direct saving of $1,200,000 a year to the farmers of these four states.

In the face of these figures, a declaration of President D. G. O'Shea of the Spokane branch of the land bank is significant. President O'Shea says that he considers the indirect benefit of the land bank to the farmers much greater than the direct benefits. By this he means that whereas the land bank has saved those who have borrowed through it a large aggregate amount of money as above indicated, it has saved them and the much greater number of farmers who have not borrowed through it still greater amounts in the reduction of general interest rates by mortgage loan companies and in improved borrowing terms offered by these companies.

Just an illustration of this point:

The land bank makes loans on what is called the amortization plan. That is, it requires those who borrow of it to pay the interest and a small percentage (1 per cent) of the principal on each interest-paying date. Thus, at the end of the period for which a loan is to run it is entirely paid off, without any large principal sum remaining to be paid at one time, as in the case of an ordinary loan. The length of an amortization loan in the land bank may be anywhere from 5 to 35 years. The land bank board recommends the latter as the one least burdensome upon the borrower.

Until the land bank came into existence with this form of loan the amortization plan was seldom, if ever, offered by mortgage companies. However, as a result of the land bank's competition and the inauguration of this payment plan, private concerns have not only reduced their rates of interest on regular loans, but in some instances have actually adopted the amortization plan. One such private company recently sent out a printed circular showing how it would lend $1000 at 6 1-2 per cent interest, accepting a payment of $75 per year to cover both interest and amortization payment of the principal to wipe out the entire debt in a period of 32 years. Thus a payment equivalent to a straight 7 1-2 per cent interest rate on the loan would wipe out the loan completely in 32 years.

Seldom, if ever, prior to the coming of the land bank, could a farmer borrow money at any less than 7 1-2 per cent, much less wipe it out by a yearly payment of that percentage.

Is Making Progress.

The northwestern land bank is moving forward efficiently, though conservatively, according to President O'Shea. He summarized the situation for readers of THE FARMER the other day, substantially as follows:

"The land bank was tied up for about a year and a half, pending the settlement of litigation brought to contest the constitutionality of the law. The supreme court finally, a few months ago, sustained the law, thereby removing all doubt as to its validity. When the decision was handed down, however, financial conditions were very close. Liberty bonds were selling at as low as 84 or 85 cents on the dollar in some instances, and the general bond market was correspondingly depressed. Therefore, when the land bank began to resume business following the supreme court's decision, it had to build up a market for its bonds. This was done as expeditiously as could be, and bonds have been offered in as large volume as the market would absorb.

"Many farmers were awaiting loans from the land bank on account of the temporary stoppage of its business and the general financial condition. Naturally, many of them could not be reached with loans at one time, but the land banks have continued steadily to extend their operation and to expand their service until they are now handling much larger volumes of business than ever before."

President O'Shea emphasizes the point that the land bank is not lending government money. The government advanced the money with which to start making loans, with the understanding that as soon as the bank became established and could secure funds of its own through the sale of bonds issued against the mortgages that it holds as security for loans, this original advance would be paid back.

The last issue of land bank bonds totaled $75,000,000 for the entire system. The northwestern branch bank is now operating on funds secured through the sale of its share in this bond issue.

New Bank Buidling Planned.

At the present time the Spokane land bank is occupying offices on the fifth floor of one of the city's downtown business buildings. In order to secure more floor space at a lower cost and better suited to its particular purposes the bank board has decided to erect a building of its own several blocks from the business center where property is less expensive than closer to the heart of the city. The land bank does not handle money as does the common bank, but accumulates an ever-increasing quality of records that require large storage rooms readily accessible to officers and employees.

United Support

Washington, Idaho and Oregon for Columbia Basin Project

More than 500 representatives of Washington, Idaho and Oregon met in convention in Pasco, Wash., Friday, and formed "The Columbia Basin Irrigation league," for the purpose of gaining federal development of the Columbia basin project as recommended by General George W. Goethals. It proposes to lay before the nation by a $150,000 advertising campaign the feasibility of reclaiminng 1,753,000 acres of land lying within the bend of the Columbia river by a gravity flow irrigation system from the Pend Oreille river. It proposes to carry the campaign to the national congress and gain for the Pacific northwest a $250,000,000 federal appropriation for the construction of this great irrigation project.

The Pasco convention was remarkable for its representative character. Portland sent seven delegates, Seattle 12, Tacoma 4, Spokane 72. Pendleton and other towns of eastern Oregon had a dozen or more on hand. Kennewick motored over with 60, Othello sent 57, Linn 50, Ritzville 40, Walla Walla 35, Connell 40, and there were 30 from Grant county. Ellensburg and Yakima were well represented, as was Wenatchee.

John A. Gellatly of Wenatchee was made chairman, and among the speakers were R. A. Ward of Portland, Roy W. Ritner, Pendleton; President E. O. Holland of the state college; former Governor M. E. Hay of Washington; Colonel R. H. Hartley of Everett; E. C. Burlingame, Walla Walla; W. S. Gilbert of Spokane and Professor O. L. Waller of Pullman. W. J. Coates, Spokane labor leader, declared labor stood solidly behind the basin project

The resolutions declare approval of the administration plans for the reclamation of the waste lands of the nation; urge the speedy enactment of the Smith-McNary bill believing that the passage of this measure will expedite the reclamation of all meritorious and feasible lesser projects of the Pacific northwest and that they would naturally, and should, receive earliest recognition and benefit; unqualifiedly urge the speediest possible development of the Columbia basin project, recognizing in this great national undertaking a development that will turn the tide of immigration to the Pacific northwest; is in favor of the enactment by congress of a bill appointing a federal commission to complete the investigation of the Columbia basin project and of a separate appropriation for the construction of the project, at the same time not committing itself to the proposition that it shall be indefinitely excluded from participation in the funds of the Smith-McNary bill.

The Columbia Basin Irrigation league is composed of two trustees in each congressional district in the three states. In the First district of Washington Charles W. Stimson and D. E. Skinner of Seattle were the trustees; Third district, Charles B. Hurley and Frank M. McCandless of Tacoma; Fourth district, Peter McGregor, Hooper, and H. D. McMillan, Ephrata; Fifth district, Charles Hebberd and T. S. Lane, Spokane.

Judge S. A. Lowell and James H. Sturgis of Pendleton were named delegates of the Second district of Oregon.

J. H. Morrow of Coeur d'Alene and Earl B. Farmin of Sandpoint were named as Idaho trustees. Other districts will name their trustees later.

Boost the Apple

Would Unite on Advertising Plan for Entire Northwest

With somewhat incomplete returns from at least one important district (Wenatchee) upon which to work, the committee on advertising the northwest boxed apple, which was appointed at the Spokane meeting of fruit growers last fall, and of which C. I. Lewis of Salem was chairman, decided at its meeting in Portland April 27 to undertake an advertising campaign based on the payment of 1-2 cent per box. C. H. Swigart of Yakima, H. W. Stone of Hood River, H. L. Geary of White Salmon and M. L. Dean of Wenatchee were appointed on a subcommittee to win over Wenatchee sentiment to the undertaking. It is likely that the attitude of Wenatchee will finally determine what action shall be taken on the matter this season, and the committee adjourned to meet again at the call of the new chairman, Mr. Swigart, who was named to succeed Mr. Lewis upon the latter's departure for Chicago.

The most optimistic report of interest in the undertaking was made by J. P. Gray of Nampa, who had attended a number of meetings in southern Idaho and had received enthusiastic and almost universal indorsement of a 1-cent levy for the purpose.

Mr. Swigart reported having taken the question up with commercial clubs, granges, the traffic association and the farm bureau, from which canvass he was "pretty well satisfied" that Yakima would help finance a general advertising campaign on whatever basis might be adopted. Mr. Stone reported that the Hood River Apple Growers' association had definitely decided to continue its district advertising on about the same scope as heretofore, but that if a general campaign for northwest boxed apples were decided upon it would contribute 1-2 cent per box. Mr. Lewis said that the Oregon Growers could be counted upon for their share, but Mr. Dean was not sure what position the Wenatchee growers would take. With a terriflic fight on there for tonnage, a fight in which advertising agencies are taking an active part, it was difficult, he said, to interest them in a general advertising campaign.

It is estimated that 1-2 cent per box will yield $150,000 to $175,000 if all districts join, and while this is but a small fraction of the amount annually spent by California growers, it was regarded as a "fair starter." It was pointed out at the meeting that 44,000 carloads of apples rolled from the three northwest states last year, and not over 10,000 of them paid anything toward advertising. It can not be denied that the northwest boxed apple, quality and package considere, is a product superior to the eastern barreled apple, fet distance from market alone lays upon it a toll that must be counteracted if the industry is to survive in this section. It is stated that, while plantings in the northwest this season will total 700,000 trees, those in the Virginias alone, a district infinitely better located with respect to consuming markets, 7,000,000 trees will be set out this year.

POOL ORDERS FOR VETCH SEED.

Ninety fruit growers attended a cover crop auto tour last July which was conducted by the county agricultural agent in cooperation with the Spokane county farm bureau, and those present at the last orchard visited voted unanimously that every orchard in the valley should raise a cover crop. This conclusion was corroborated by the discussions at the state horticultural convention. This spring the growers are planting over 2000 acres to cover crops, hairy vetch being the favorite crop. Most of the growers are pooling their orders for seed through the farm bureau secretary, T. S. Brown. To offset the double drain upon the land in the first season a great many of the orchards are receiving an application of commercial nitrogenous fertilizer, principally sulphate of ammonia. Over a carload of these fertilizers were also purchased through the farm bureau.

Potato Demonstrations

Potato growers in many parts of the state are to have opportunities this spring and summer to learn from experts many essential points in high-grade potato production.

George L. Zundel, extension plant pathologist of the state college, and E. G. Wood and Professor Armstrong, extension specialist and assistant extension specialist in horticulture, respectively, will hold field demonstrations touching upon seed preparation and treatment and later on detecting and eliminating diseased plants in the field. Some of the later field work will demonstrate roguing for the elimination of plants not true to variety in seed plots.

The schedules as so far announced for these potato specialists are as follows:

George L. Zundel.

Spokane county, May 10-13; Skagit county, May 16-18; Whitman county, June 5-6, 12-15; Pierce county, June 19; Benton county, June 20-21; Franklin county, June 23-24.

Yakima county, July 11-20; Pend Oreille county, July 24-25; Stevens county, July 26-29; Spokane county, August 7-10; Columbia county, September 12-13; Walla Walla county, September 14; Kittitas county, September 15-16; King county, September 18-19; Grays Harbor county, September 20; Lewis county, September 21; Cowlitz county, September 22-23; Stevens county, October 9-10; Whatcom county, October 12-14; San Juan county, October 16-17.

E. G. Wood.

King county, July 1-3; Snohomish county, July 5-6; Whatcom county, July 7-8; Mason county, July 10; Thurston county, July 11-12; Clallam county, July 13-18; San Juan county, July 19-20; Walla Walla county, July 22-24.

Spokane county, October 9-14; Mason county, October 16; Thurston county, October 17; Grays Harbor county, October 18-19; King county, October 20-21; Pierce county, October 23-24; Cowlitz county, October 25-26; Wahkiakum county, October 27-28.

Mr. Armstrong.

Wahkiakum county, July 17-18; Stevens county, August 7-19; Cowlitz county, September 7-8; Lewis county, September 9-11.

Will Sell Grain

Arrangements for handling grain on the principal markets adjacent to territory in which 55,000 farmers already are under contract with the U. S. Grain Growers, Inc., will have been completed in 90 days, according to a statement released by executive offivers of the cooperative grain firm. First, sales offices will be set up in the Chicago, Omaha and Minneapolis markets and efforts will then be directed toward establishing selling agencies on the Indianapolis and Kansas City markets.

The U. S. Grain Growers Sales company, subsidiary of the marketing association, is undtr the direction of the executive officers of the U. S. Grain Growers, Inc., so that they may supervise the details of getting the machinery in working order without creating additional salaried positions. Employment of a high type executive of experience, who will be placed in charge of the actual operations of the company, and subexecutives for the branch agencies is being given attention at the present time. In this connection, it is pointed out that the volume of approximately 125,000,000 bushels to be handled in 1922 will exceed that of any other single grain firm in the world.

"The articles of incorporation of the sales company are broad enough to provide means of selling for export or ownership of warehousing facilities on the terminal markets," according to a statement made by President C. H. Gustafson. "Likewise, it will be able to finance movement of grain to the same extent as other grain firms in the markets do at the present time."

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Growth of the Farm Bureau as a Business Concern

The farm bureau is growing as a business institution as well as an educational institution.

Here is the business secretary of the Spokane county farm bureau reporting that he has just delivered three cars of seed potatoes to the Yakima farm bureau. Secretary T. S. Brown also says that an increased acreage of seed potatoes is indicated throughout Spokane county this year.

The announcement is also made that 43 growers at Valleyford, Mica and Freeman, in Spokane county, have pooled orders for a car of Idaho Rurals certified seed potatoes, while seed potato growers at Waverly, Fairfield, Plaza and Latah have pooled orders for a car of Irish Cobbler potatoes from the Dakotas. The seed is certified.

Fifteen carloads of spray oil have been shipped into Spokane county this year by the farm bureau under pooled orders, while County Agent Virgil Patton of Spokane county reports that a total of 3330 quarts of poisoned oats for squirrels have been distributed this year in the county, about twice the amount used last year.

Taking Care of Surplus Milk

A rather unique method of taking care of the surplus milk during the spring months has been adopted by the Seattle Milk Shippers' association.

Instead of paying regular prices for an eight-month average and the surplus going for a butterfat price, the association has succeeded in making an agreement with the Seattle distributors. The price is now based on a nine-month average, beginning July 1 and ending March 31. For all surplus milk the producers will get condensery prices and it is agreed that such milk will not be sold to the public at the regular retail prices unless the difference in price be turned over to the producer who sold the milk.

The association, however, is making an attempt to steer all surplus milk to other points in order to save freight to Seattle and to avoid an oversupply for city consumption.

Fundamentals Are Correct

"Under the old system of marketing his products, the grower does not and can not know the market," said Manager M. J. Newhouse of the Washington Growers' Cooperative association. "The grower loses control of his goods too soon, as well, and the result is speculation and high prices to the consumer. These are the real reasons for cooperative marketing, and although cooperative organizations may tumble down around us, nevertheless the fundamentals of cooperative marketing are correct, and you can't get around them."

Severest Penalties His Due

An instance of easy-going dealing with violators of the prohibition laws is reported from Prosser, Wash. After a sensational pursuit by a deputy sheriff and a fusillade of bullets, a suspected booze runner was stopped in his mad flight by running afoul of an irrigation flume.

The officers of the law found liquors valued at $900 in the tightly curtained automobile, and this was properly confiscated. But the officers seem to have been too lenient in permitting the captured suspect to drive off with his automobile on the deposit of $250 cash bonds with a justice of the peace. This action was taken on the comparatively minor charge that the arrested man had liquor in his possession. That provision of the law is aimed at individuals who may buy illicit liquor for their own consumption, and is not intended to cover the graver violation of law involved in booze-running or bootlegging.

Men who engage in the unlawful traffic will not be deterred by occasional penalties of that mild description. As the profits in the illicit business are large, they can well afford to pay an occasional fine of $250, since much more than that can be made in a single successful transaction. In this case the Yakima county sheriff believes that the captured car left Spokane heavily loaded and that much of the liquor was disposed of at Walla Walla and Pasco before the car reached Kennewick, from which city a telephone message notified the sheriff's office that several cases of booze that had been offered at $100 a case were being taken toward Prosser in an automobile. If the sheriff's surmise is correct, the profits on the illicit liquor sold between Spokane and Kennewick were probably several times the sum that the owner of the intercepted car deposited with the justice to obtain his liberty.

If the facts are as reported, in this case, the captured fugitive was caught in plain violation of the law and should have received its severest penalties.

Loans to Students

The Women's Relief Corps has recently contributed a fund of $500 to the student loan fund of the State College of Washington. That fund is one available to worthy self-supporting students who would otherwise be obliged to abandon their studies.

Such funds are available in a limited way in many institutions, are admirably administered and are doing a very great service. It is stated that the failure of a recipient of student loan money to fully reimburse the fund from which he receives it is one of the rarest moral failures that ever finds its expression in finances. Money loaned to students as a cold matter of investment is declared to be employed in one of the best of risks, and disinterested loans are as strictly held in honor.

Perhaps "disinterested" is a poor and colorless word for the bequests made to institutions with this admirable purpose. Obviously, the donors have an active, helpful, big-brotherly interest in the beneficiaries.

These endowed student loan funds, being made available to the student usually in only such amounts as imminent needs determine, are made to do a great amount of duty. A student for whom they have made it possible to continue an otherwise broken college year could rarely fail to appreciate the fine spirit in which they are given.

Moving the Mountain to Mahomet

Jefferson county Holstein breeders believe in moving the mountain to Mahomet, if necessary to get the business. They desiring to get some of the good money which Grays Harbor county bankers have agreed to loan Grays Harbor county Holstein breeders for stocking up with purebreds, the Jeffersonians decided to take their cattle to Elma and hold a sale there early in May. The Grays Harbor district has heretofore been largely a Jersey district.

State Farm News

R. W. McKenna was elected manager of the Yakima Dairymen's association at a meeting of the board of directors. Mr. McKenna has been with the association for the last three months and has served as secretary and organizer. He will continue to have charge of further organization work and when the product of the membership is called for and the association begins to function will serve as its manager. The product of 2000 cows is now assured and Mr. McKenna and the officers of the association are actively engaged in laying plans for the future of the association. Mr. McKenna is a graduate of the dairy department of the Washington State college and has experience as county agent and dairy organizer in western Washington.

* * *

Experimental work on cover crops has been started by Professor O. M. Morris of the State College of Washington in several Yakima orchards. These orchards are all of matured trees and it is expected they will give results showing the influence on tree growth and fruit production of different cover crops and methods.

* * *

R. I. Fromme, Olympic district forest supervisor, has announced that establishment of the 6574 acres in the Quinault lake district as a recreation unit or park has been authorized.

The area extends from the top of the range of mountains on the north side of the lake to from one to two miles south of the lake, and from the Quinault Indian reservation at the west end of the body of water to about one mile above the east end, covering all national forest lands in the area and excepting only the homesteads.

Under the order the timber will be preserved.

* * *

The Puyallup Packing company has just been incorporated with a capitalization of $50,000. Frank Collinson of Portland, Ore., and B. F. Emery of Puyallup are the incorporators. This marks the entry of another fruit packing concern into the Puyallup valley.

* * *

The Skagit county farm bureau perfected its organization at a meeting in Mount Vernon. Two hundred farmers attended the meeting. Constitution and bylaws were adopted.

Will E. Jennings was elected president, with H. L. Willis as vice president. The office of treasurer fell to J. M. Shields. Five trustees were elected as follows: Charles Newburg, Peter Omdal, James H. Hulbert, H. S. Ruley and C. A. Nelson.

* * *

A dam at McLouglin's canyon developing power for the irrigation of 3300 acres is the plan that is being outlined at Riverside. The dam, which will be 26 feet high, will develop 2500 horsepower. The lands along the river to be irrigated extend south of McLoughlin's canyon for a stretch of 14 miles.

* * *

For road and trail work in the Columbia national forest in Skamania county the federal appropriation this year is $50,560.

* * *

C. O. Kelley, who has a small place on the Parker bottom, Donald, has set out 1200 Concord grape scions this spring. He has two bee yards and one of these, on low ground, was flooded during high water last December and he had to elevate the stands above the water. As a consequence of the dampness resulting from the flooding of the ground he lost half of the colonies in that yard.

* * *

The price of fluid milk for the month of April to dairymen selling to the Seattle milk trade has been allowed to stand the same as for March, $2.50 per hundredweight. This, of course, is on a basis of a 3.6 butterfat test. The price to the consumers has been cut 1 cent a quart, which is 10 cents at the stores and 12 cents delivered.

* * *

A new extension bulletin has just been issued by the state college on women's household exhibits at county and community fairs. Directors are given as to the arrangement of exhibits, entry, entry tags, methods of judging or scoring, score cards and particulars as to food and clothing exhibits, the art and handicraft exhibits, suggested lists for the culinary department, needlework, table linen, art and handicraft. This bulletin is sent free on request within the state of Washington.

* * *

Dr. Paul Cooper of Yakima has purchased the old Scheuller ranch property at the foot of the grade on the Naches road at a figure understood to be approximately $10,000. The tract contains 110 acres. Dr. Cooper is expecting to restock the ranch and build it up generally. He will go in for purebred stock, probably Guernseys.

* * *

According to a survey which has been completed by the extension department of the state college at Pullman, there are 333 purebred females and 178 purebred sires among the dairy cattle of Grays Harbor county. There are many more Holsteins than all other breeds combined, with Jerseys next in line. Several other breeds are represented by a few animals each. Most of the purebreds are owned by dairymen living in the east end of the county.

* * *

Contract for a new apple packing house has been let by the Olive Apple Company, Inc., of Chelan to J. E. Hughes of Cashmere, Wash. The concrete basement is now completed, 56x196 feet, and work will begin at once on the upper structure. Cost when completed and fully equipped will be close to $20,000.

The incorporators of the Olive company are H. J. Olive of Cashmere; his two sons, Walter M. Olive, manager for the Chelan Orchards, Inc., of Manson, and Leonard Olive, vice president of the Wenatchee Beebe Orchard Company, Inc., of Chelan, and C. C. Ward and H. E. Blair, orchardists at Manson. H. J. Olive is president and Mr. Ward secretary.

The Olive Apple company owns about 200 acres of commercial bearing orchard on Lake Chelan and expects to have more than 100,000 boxes of its own apples this fall.

Coming Events of Interest

April 26-28—Kittitas county nutrition campaign.
May 1-13—Dry kiln operation course, Hoquiam.
May 4-6—Tulip festival, Bellingham.
May 6—Jefferson county Holstein sale, Elma.
May 24—Lewis county Holstein sale, Chehalis, Centralia.
June 5—Northwest Guernsey breeders' sale, Portland.
June 7—Guernsey consignment sale, Chehalis.
June 20-22—Lincoln-Adams pioneer picnic, Keystone.
July 27-28—Whatcom co. Guernsey gallop, Bellingham.

FARM BUSINESS AND MARKETS OUTLOOK

Farm Prices Have Best Comeback

Although farm prices led the tumble downhill when deflation started, they are showing most speed on the return. They were so much below other groups when the turning point was reached, however, that, with few exceptions, they are still in the rear.

According to the index numbers of wholesale prices for March, issued by the bureau of labor statistics, farm products in that month were slightly higher than in March, 1921, while all other groups of commodities were lower this year than they were a year ago.

This advantage to the farmer is partly offset by a decline of 8 per cent in prices in the "foods" group, which includes many farm products such as butter, eggs, potatoes and apples, which are sold to the consumer without an intervening process of manufacture.

The biggest declines in other groups occurred in fuel and lighting, metals and metal products and house furnishing goods. The following table gives the actual index numbers, using the 1913 level as 100:

	Mar. 1922.	Mar. 1921.	Feb. 1922.
Farm products	128	125	126
Food, etc.	138	150	138
Cloths and clothing	182	192	183
Fuel and lighting	183	207	183
Metals and metal products	114	139	115
Building materials	202	208	202
Chemicals and drugs	159	171	159
House furnishing goods	213	275	213
Miscellaneous	153	167	150
All commodities	152	162	151

Compared with February, 1922, March prices were slightly higher, while the foods group was unchanged. Most of the others showed little or no change and the general average for all commodities was only .6 per cent higher than in February.

There is still a marked lack of adjustment among the group index numbers. On the one hand are metals and metal products 14 per cent and farm products 28 per cent higher than in 1913 and on the other are house furnishing goods 113 per cent and building materials 102 per cent higher than in the last prewar year. Such a lack of balance is an obstacle to business progress and a lot of it must be eliminated before real prosperity will arrive.

Rental for Money Reduced

A significant event in the commercial world last week was the evidence of lower rates for money. Treasury certificates in the amount of $150,000,000 were issued bearing only 3 1-2 per cent interest. In spite of the low rate more than twice the amount issued was subscribed for. This is the lowest rate since September, 1917, and compares with 6 per cent on an issue late in 1920 when money was tightest.

There are other signs that borrowers are to have easier times. Country banks in some sections are reported to be trying to place their surplus funds instead of being themselves borrowers from the banks in large cities. Apparently local debts are being liquidated. The demand for money to finance spring operations in both city and country has caused no strain and war finance corporation offices in various states report that applications for funds are falling off.

The east is again developing an appetite for good farm mortgages and the farm loan market is returning. Industrial concerns which have had to obtain new funds from bonds are now finding it possible to sell new issues of stocks, both common and preferred.

Finally, in spite of the demand for money abroad, the Bank of England has reduced its rediscount rate to 4 per cent.

With cheaper money Liberty bonds have become more attractive. All issues sold at new high levels last week and a level above par is expected for all of them before long. These issues were at their lowest point about 15 months ago, since which time they have advanced 5 to 16 per cent.

Cheap money is one of the signs of a return of business expansion, of prosperity, so that these events have an importance much greater than the extent to which they reduce the cost of money to the individual borrower.

Trend of Cattle Supply

Since the course of prices upon the rank and file of cattle depends more upon the supply from week to week than changes in the demand, the following table, which shows an eight-year average of receipts by weeks at the seven leading markets, is highly significant in its bearing on the future of the market.

Week Ending:	Receipts.	Week Ending:	Receipts.
April 1	154,000	July 1	152,000
April 8	142,000	July 8	141,000
April 15	147,500	July 15	149,000
April 22	151,000	July 22	179,000
April 29	158,000	July 29	182,000
May 6	147,000	August 5	183,000
May 13	148,000	August 12	176,000
May 20	142,000	August 19	192,000
May 27	150,000	August 26	216,000
June 3	141,000	September 2	237,000
June 10	144,000	September 9	224,000
June 17	147,000	September 16	249,000
June 24	164,000	September 23	289,000

This table shows that relatively light runs are the usual order during May and June, but beginning about the middle of July the runs increase rapidly, reaching maximum about the middle of October. The actual supply of beef, however, does not increase as much as these figures indicate. Cattle arriving in late summer and fall average lighter in weight than those arriving in the first half of the year. Also shipments of stocker and feeder cattle, which must be deducted from the total receipts, reach largest volume in the fall months.

The market invariably becomes a two-sided affair during the late summer, when grain-fed cattle advance in prices while grassers, which compose the bulk of receipts, are apt to decline.

The outlook for the beef cattle market during the next 60 days shows but little change. Light receipts were offset for a time by a decline in the appetite for beef, due partly to religious holidays, but this influence is past and a stronger undertone is manifest. Exporters have filled some good sized orders at Chicago which have helped that market.

The seasonal scarcity of cows and heifers usually continues until along in June. Cutters and canners have been selling well except the "dairymaids," which show evidence of disease and probable condemnation. These are severely discriminated against.

The veal market continues slumpy, with prices the lowest in more than a decade. Receipts have been unusually large for over six weeks, with more than the usual grist of undesirable light "bob" or "deacon" veals selling at prices from $5 per 100 pounds down. This movement should begin to subside within another week or two, although May also brings a rather heavy run as a rule. It is probable that prices have seen bottom for this spring.

Want More Feeders Than Year Ago

With the grazing season at hand light stockers have been popular property. Due to discouraging weather the total movement of feeders has fallen off slightly in the last few weeks, although it is running consistently ahead of that of last year.

The movement into Texas and Oklahoma from Texas is near floodtide. A probable reduction of freight rates on such shipments is a stimulating factor. Nebraska has been absorbing a lot of thin cattle recently and Kansas City reports a generous movement of thin cows to the northwestern range states.

Heavier Hog Run on Horizon

A 10-day advance in the hog market restored the $11 quotation at Chicago, but the event was short lived. Receipts of hogs have increased and it is probable that the lightest run of the spring season is behind us. Usually there is a gradual increase during May, reaching maximum in June after corn planting is over. A sharp decrease then follows in late summer. Prices on the average will follow the course indicated by these changes in receipts.

Besides the increased supply at the larger markets in the middle west, the east has had access to more hogs recently and shipping orders at Chicago last week reached the smallest volume of the year, leaving the market to the tender mercies of the large packers. Fresh pork prices also have not been maintained.

In spite of low prices for lard and salted meats, compared with fresh pork, hams and bacon, hogs are selling within a narrow range. This spread will widen undoubtedly during the summer when sows become more abundant.

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Easter Lambs at Record Price

Only a few spring lambs were available for the Easter trade and selected lots sold up to $26 at Chicago, the highest price on record. No California lambs have arrived in the middle west as yet, but one trainload is on the way. The new crop appears to be a little late in all sections.

In spite of a smaller decrease in the run and Easter demand for light lambs in the specialty class dressed lamb prices have declined sharply and prices on the rank and file on the hoof have slumped to the lowest level in six weeks, with heavy shorn lambs 50 to 75 cents cheaper at Chicago. Only about 10 per cent of arrivals are in the fleece and these are as much as $1 lower. At this season discrimination against wooled lambs is not uncommon.

The market may be somewhat erratic during the spring months as readjustment is made to the new crop, but all signs point to a rather high basis, barring occasional periods of over-supply.

Buyers Name Horse Prices

Buyers have had the advantage in the horse market much of the time recently, although competition at this season usually is hot. Most of the 1250 to 1550 pound chunks are bringing $100 to $150 at Chicago.

Wool Buying Revives

Buying of wool increased slightly during both of the last two weeks, with woolen mills more active than worsted concerns. Another purchase of Arizona wool at around 35 cents per pound at Boston has been reported. The amount of the new clip offered thus far has been small or trading probably would be still more general. Foreign wool markets still show strength, much to the surprise of the trade in this country.

In spite of the advance of nearly 40 per cent in the price of wool, cloth prices remained unchanged until last week, when the American Woolen company announced an advance of 10 to 45 cents per yard for woolen cloth. Worsteds have not yet been changed.

With mills consuming more than twice as much wool as is grown in this country, with business conditions generally on the upgrade and foreign wool markets strong, conditions are shaping up to favor a recovery of the loss in wool values which occurred during March.

Wheat Demand Revives

The long contest between the "bulls" and "bears" in May wheat, with its attendant effects upon the cash market, seems to be turning in favor of the bulls, as the statistical position of wheat has indicated that it would. For a time the quantity of May wheat being held by exporters and millers who wished to take delivery was in doubt, but at present the belief prevails that this exceeds the ability of shorts to make delivery, so that the latter are due to be "pinched."

Revival of demand from both mills and exporters was the deciding factor in turning the market. It has made several false starts in the last five weeks, but the present performance bears more evidence of enduring character. If it lasts the wheat in storage which has been trying to find a buyer will be placed without any difficulty.

Renewal of export buying has made the most impressive showing. Both old and new crop wheat have been bought from North America and France and Italy have bought some southern hemisphere wheat on passage. The poor outlook for new winter wheat abroad is a source of alarm and has stimulated the purchase of wheat for July and August shipment. Greece is expected to buy 1,500,000 bushels in another week or two and to need nearly that much each month.

Furthermore, large shipments from the southern hemisphere finally ceased to depress the European market. Instead, world's shipments have now fallen below the weekly disappearance of imported wheat and the last report showed a sharp drop in the amount on ocean passage. Broomhall's last report stated that consumption in the present crop year would take care of all the wheat produced during the year and a large part of the carryover in exporting countries.

Milling demand has improved and flour buyers are showing more activity in some sections, although demand is not as robust as could be desired.

Receipts of wheat have dwindled, but are about equal to the 10-year average for this season of the year, although much lighter than last year.

The new crop is making progress, although the effect of unfavorable conditions last fall and winter is still seen in the character of the reports from the southwest. Abandoned acreage in Kansas has been estimated officially as high as 35 per cent. Much wheat in that state did not germinate until March. All sections need dry, warm weather, especially the spring wheat region, where planting is being delayed.

Corn and Oats.

Although the demand for corn has fallen off sharply, receipts have dwindled to such small volume that the market has strength.

Delay in seeding oats promises to throw more acreage into corn, although the supply of old corn does not indicate that such an increase is desirable.

Oat prices closely follow fluctuations in other grains.

Cash Grain Markets

The range of cash grain prices for the week ended April 19 was:

No. 4, 56 1-2@59c; No. 2 yellow, 58 3-4@61 1-2c; No. 3, 3, $1.30 1-2@1.38 1-2.

Corn—No. 2 mixed, 58 1-2@60 3-4c; No. 3, 57 1-4@60c; 57 3-4@60c; No. 4, 57@59 1-2c; No. 2 white, 59@61 1-2c; No. 4, 57@59 1-2c; No. 2 white, 59@61 1-2c; No. 3, 58 1-4@ No. 3, 58 1-4@61c; No. 4, 58 1-4@60c.

Oats—No. 2 white, 38 1-2@42 1-2c; No. 3, 36 1-2@39 1-2c; No. 4, 35@38 1-4c.

Rye—$1.01 1-2@1.06.

Barley—60@68c.

Seed and Feed

The spring demand for clover and grass seed is nearly over, although wet weather has delayed oats seeding. Prices are about 10 per cent lower than the high point of the season and have changed but little in the last two weeks.

Demand for millfeeds is indifferent, while holders are not crowding, so that the market is quiet. Production is fairly large and stocks in no case are small, with the exception of linseed meal.

More Hay Expected Soon

Heavier receipts of hay are expected as soon as country roads improve. Demand has not broadened at distributing markets, but is limited to local needs. The total quantity of hay, especially clover and alfalfa needed, will decline as the pasture season arrives. Thus far prices have held well.

Prices per ton in carlots: Chicago—No. 1 timothy, $25 @28; No. 1 light clover mixed, $24@25; alfalfa, $17@28.

Egg Receipts at Maximum

Receipts of eggs at the four leading cities are practically at a record level, but it is probable that they are now at or near the maximum. Prices are low enough to induce cold storage operators to take about 60 per cent of the supply. A further decline in values is improbable unless the extremely heavy receipts hold up longer than they usually do.

Receipts since January are but little behind the record movement of last year, while there is a substantial shortage in storage holdings at the four cities compared with a year ago, indicating that consumption is unusually large.

Butter and Cheese

Butter buyers who have been following a hand-to-mouth policy for several weeks in the expectation that prices would decline rather steadily were confronted last week with a small decrease in receipts of fresh butter and by light cold storage holdings. As a result the market turned suddenly and staged a sharp advance. Such behavior is not uncommon at this season of the year, when readjustment is being made to the spring increase in production.

The upturn undoubtedly will prove short-lived, as maximum receipts have not yet been seen and prices are not down to a spring basis.

The cheese market still shows a distinct downward trend.

Potato Shipments Setting Record

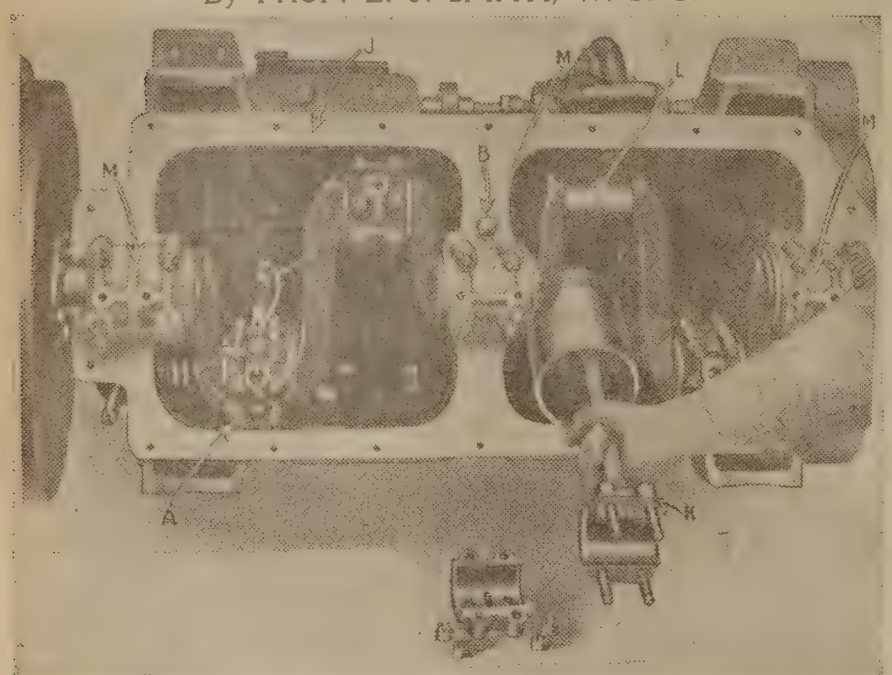
Shipments of potatoes from producing states since April 1 have set a new record. The movement is about one-third larger than the average at this season of the year and the season's total is about 30,000 cars larger than at this date last year.

Demand has been limited and prices weak. Northern sacked round whites are quoted at $1.60 to $1.75 in the Chicago carlot market, while Rurals are bringing $1.60 to $1.70.

(Continued on page sixteen.)

Tightening Motor Bearings

By PROF. L. J. SMITH, W. S. C.



The bearings of your motor are of vital importance. Never allow them to get loose and pound. A 4-cylinder motor has seven bearings which need taking up each season—the bearings at the lower end of each connecting rod, and the three main bearings of the crank shaft.

First, drain off the oil in the crank case; then remove the oil pan underneath the motor, which allows you to get at all the bearings.

Many motors are so designed that the pistons and connecting rods may be pulled out through the lower part of the motor past the crank shaft, as in the accompanying illustration. This saves removing the cylinder head. The next step is to scrape the surface "J" which holds the pan gasket, so it is perfectly clean, and wipe all parts of the crank case clean with an old cloth, preferably cotton. Never use waste.

One can now test the lower connecting rod or crank pin bearing "L" for looseness be moving the cap back and forth endwise. The crank pin is made a little longer than the width of the cap for this express purpose. If the bearing is tight, you can scarcely move the cap laterally. Now remove the cotter pins "A" from the nuts "H" of the connecting rod in cylinder No. 2 (the one nearest the radiator) and unscrew nuts with a socket wrench. Except in the Ford motor, there are usually a number of shims or lines between the cap and connecting rod. Be very careful not to lose any.

Many make a practice of scraping and refitting the babbitted surfaces of the bearings each season. This is scarcely necessary if the motor has not been overheated or the oil allowed to get too low; so if the crank pin is smooth and shiny, I would remove a single very thin shim from each side, replace the cap the same side to (see marks) and tighten the cap nuts evenly and solidly. Now see if there is any end play on the crank pin. If there is, take out another pair of shims. Sometimes one on one side is all you can remove. If now the bearing has no lateral motion, turn the crank shaft slightly back and forth by hand (with the piston on either dead center). If you can not do this easily, the bearing is too tight, and you will need to put back a shim.

Having adjusted crank pin bearing No. 1 to your satisfaction loosen the cap nuts a half turn and adjust the next crank pin; and continue until all four are adjusted. Then tighten all four caps, and turn crank shaft to see if they make it hard to turn shaft. If O. K., loosen all caps and tighten the three crank shaft bearings "M" as described for crank pin bearings. These bearings do not loosen as quickly as the crank pin bearings and are sometimes tightened every other season. When all five bearings are adjusted, and set up tight, you should be able to crank the motor by hand, though possibly with some effort. Sometimes the bearings have been set up a little too tightly, in which case it may be very hard to turn the crank a complete revolution by hand. These tests should be made with all bearings well oiled with thin oil.

If you find the bearings are a little snug, use a light oil in the crank case, and run the motor a few minutes at a time until the bearings are a little looser and the motor cranks easier; then run the motor idle, stopping it frequently and in a few hours you will have a splendid set of snug bearings.

Skookum Contract

Restraining Injunction Is Asked

An injunction restraining W. F. Gwin, A. R. Rule, A. A. Prince, D. H. White, J. A. Warman, P. R. Parks, the North American Fruit Exchange of the Pacific Coast and the North American Fruit Exchange from soliciting the units of the Skookum Packers' association to cancel their contracts with the Northwestern Fruit Exchange, has been asked for in a suit filed in the Chelan county superior court by the Northwestern Fruit Exchange. Damages in the sum of $100,000 are also asked for in the complaint, which are alleged to have been sustained by the plaintiff.

The filing of the suit followed the action of the Peshastin Fruit Growers' association which had voted to sign up its tonnage with the North American Fruit Exchange of the Pacific coast.

The complaint recites the history of the break between the Northwestern Fruit Exchange, representing the Crutchfield interests, and the North American Fruit Exchange of the Pacific Coast, composed of W. F. Gwin A. R. Rule, A. A. Prince, D. H. White, P. R. Parks and others.

LEGUME INOCULATION.

Growers planting legume crops this spring, such as vetch, red clover, sweet clover, peas and alfalfa, may secure their inoculation direct from the State College of Washington by writing to the farm crops department, Pullman, Wash., and enclosing 25 cents for each acre they wish to inoculate. Each one so ordering should name the crop, give acreage, and approximate date of seeding. The material with direction for putting it on the seed, will be sent them by parcel post in time to use.

Sell 30 Guernseys

Cows and Heifers Average $282

A crowd of over 200 people attended the sale of Guernseys at Fawndale farm of Wallace & Fordyce at Sunnyside, Wash., April 18. There was brisk bidding at all times and the consignors were well pleased with the results.

The sale averaged $282 per head. A large part of the animals were calves. The top animal, a beautiful and typey heifer, was bid off for $700 by Dr. Paul F. Cooper of Yakima. She was a popular senior 3-year-old and for a time it was doubtful whether she would go to Walla Walla with the herd of J. L. Shannon or to Dr. Cooper of Yakima, but the latter succeeded in getting her.

There were 30 head in the entire sale, two-thirds of which were heifers under 2 years, some having been bred to Chicona Lover Bold, the champion herd sire of the Fawndale farm. The first sale made was Fairview's Golden Irene. She was bid in by J. L. Shannon of Walla Walla for $365.

At the beginning of the sale A. L. Wallace of Fawndale farms announced that he would pay half the purchase price of any cow for her first heifer calf by his herd sire, Chicona Lover Bold. It was understood that the calf should be 2 months old. No purchaser accepted the offer. The sale was made up of cattle shipped in by Mr. Wallace and E. T. Hearron, both of Sunnyside, who made a trip recently to the Guernsey sections of Wisconsin and purchased 27 head of females. A few local animals were added to the number. There has been a strong demand for Guernseys in the Yakima valley and the consignors hoped to supply at least a part of the demand and help establish the breed in the valley.

Colonel George Gue of Yakima conducted the sale.

Following is a list of the purchasers:

Dr. Paul F. Cooper, Yakima; D. W. Barclay, Walla Walla; J. L. Shannon, Walla Walla; William Hitchcock, Sunnyside; G. W. Osborn, Granger; Fred C. Drake, Ellensburg; Paul Moritz, Granger; Jacob Kallew, Sunnyside; Jacob Kollen, Sunnyside; R. G. Peterson, Yakima; William Hitchcock, Sunnyside; H. C. Bohlke, Grandview; Royal Wetmore, Sunnyside; Philip Kays, Parker; W. H. Cline, Sunnyside; Philip Hitchcock, Sunnyside.



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The Voight "Filled" Milk Bill

By J. A. SCOLLARD, President United Dairy Associations

In a recent article in The Washington Farmer President Scollard discussed the question of an adequate tariff on fats and oils imported to compete with American butterfat. The article following treats of another important phase of the same general dairy problem.—Editor.

There is now before congress a measure of vital interest to the dairymen of Washington and of the country at large. It is known as the Vioght bill (H. R. 8086). This measure prohibits the shipment from state to state or to any of the possessions of the United States of imitation or so-called "filled" milk. This would include mixtures which are produced by extracting the butterfat from whole milk and replacing it with coconut oil. The passage of the Voight bill would result in so limiting the manufacture of these products as to make their detrimental effect upon the dairy industry almost negligible and would open to pure evaporated milk the markets in which these imitations have displaced it. Every person who has studied the subject from an unbiased standpoint knows that practically every can of imitation or "oiled" milk displaces a can of the pure product on the market, thus making a market for coconut oil in a popular disguise, for the reason that for every pound of vegetable oil in each can sold, a pound of real butterfat has been deprived of its natural place within that can.

Effect in This State.

A little consideration of the probable effect of the law in the state of Washington might be enlightening. At present there are four condensing plants in the state in which imitation or "filled" milk is manufactured. All are owned by the same company. Some of these plants are given over exclusively to the manufacture of imitation milk. Some of them manufacture it only at intervals, but the total yearly output is enormous, practically all of it is exported from the state; indeed until recent years no attempt was made to sell it within the state. The amount now marketed in Washington would not keep one of these plants in operation four days a month and the enactment of the Voight bill into law would probably result in the complete abandonment of its manufacture in the state and the plants would be used in the manufacture of pure evaporated milk, as they were prior to advent of imitation, or "oiled" milk.

Some persons with limited experience with the product and lacking knowledge of the method of its manufacture, advance the theory that under the Voight bill condensed skimmed milk could be shipped into the state in which it is to be marketed and the coconut oil emulsified with it at the place of sale. Men with practical experience in condensing and handling the finished product state that the idea is an impractical one, as the expense in connection with such a system would make impossible the introduction of this practice.

Tax Would Not Control.

Although practically all of the dairymen's associations, organized farm bodies and farm publications are strongly behind the Voight bill and have full faith in its effectiveness if passed, a few favor a tax measure as a remedy for restricting the sales of imitation milk and are dividing the strength of the great body of dairymen by supporting the Fordney bill, which proposes a per pound tax—a tax as yet undetermined. Since the Fordney bill is strictly a revenue measure, it seems very probable that any tax imposed would be fixed at a figure which would make it possible to manufacture and sell at a profit, else the very object of the measure, namely, to produce revenue, would be defeated.

Another strong point in favor of the Voight bill is its advanced position. It has been favorably reported out by the house committee on agriculture by a vote of 14 to 4 and is thus advanced considerably over the Fordney bill, which is in the hands of the ways and means committee, known to be unfriendly towards legislation intended to benefit the agricultural industry.

To the writer there seems no reason to doubt the effectiveness of the Voight bill. The dairymen of the districts where the "oiled" milk is made are for it unqualifiedly. The dairymen's associations of every district in the state are for it and the vast majority of the dairymen of the east and middle west are for it and deplore the slight division in their ranks occasioned by those who seem to be unwittingly aiding the manufacturers of spurious milk. It is a significant fact that the manufacturers of "oiled" milk are willing to submit to a tax measure if the tax is not made too high, and those who are in a position to know think that the Fordney revenue measure will never carry a tax over 1 cent per pound on "oiled" milk. This would not retard its sale even to a slight degree.

Why compromise? From the standpoint of the dairymen, its manufacture should be prohibited, so that his industry may survive and not die to make prosperous the South Sea islander, the importer and the corporations engaged in its manufacture. Public welfare and the health and strength of this and future generations demand its abolition, so why compromise by taxing it?

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Wheat Farm Tillage

"The Silt Loam Soils of Eastern Washington and Their Management" is the title of a bulletin just published by the agricultural experiment station of the state college. Professor F. J. Sievers, head of the department of soils, and H. F. Holtz of the division of soils of the experiment station are the authors.

The bulletin deals with soil tillage and the utilization of straw and manure as applied to silt loam soils of eastern Washington receiving more than 15 inches of precipitation per annum and in its conclusions pertaining to conditions of cropping and the growing of legumes apply only to the areas receiving more than 18 inches.

The bulletin is the result of experimental work over a series of years, is 62 pages in length and contains 25 illustrations. Some of the conclusions in this bulletin are:

"The most effective summer fallow tillage is that which keeps the highest amount of moisture in the surface foot of soil for the greatest length of time during the summer fallow year.

"Corn or any other intertilled crop when substituted for summer fallow does not materially reduce the yield of the succeeding grain crop.

"The rate of seeding winter grain should be influenced by the nitrate content of the soil and the time available for tilling, high nitrate content and early seeding requiring a lesser rate.

"Lodging and 'burning' of winter wheat can in part be controlled by a lighter rate of seeding.

"During 39 years of cropping 22.1 per cent of the nitrogen and 34.5 per cent of the organic matter have been lost from the soil.

"Legume crops tend to maintain the soil nitrogen and organic matter.

"Alfalfa, red clover and sweet clover, peas and vetch are legumes that can be grown successfully.

"Summer fallow is unnecessary where the annual rainfall is 18 inches or above, provided legumes or intertilled crops are grown in rotation.

"No continuous cropping system can be recommended for that portion of the area where the annual precipitation is less than 18 inches."

SHEEP SHEARERS STRIKE.

In the midst of shearing 300,000 sheep Yakima valley sheepmen are experiencing a shearers' strike. The prevailing wage has been 10 cents a head and is said to be the equivalent of about $7.50 a day for the average shearer. The men are demanding 12 1-2 cents a head. Independent crews are being obtained as rapidly as possible. Most of the work is done by professional shearers who travel from south to north as the season advances.

THE LARGER TASK.

Getting at the little job is sometimes a greater task than doing the job itself.

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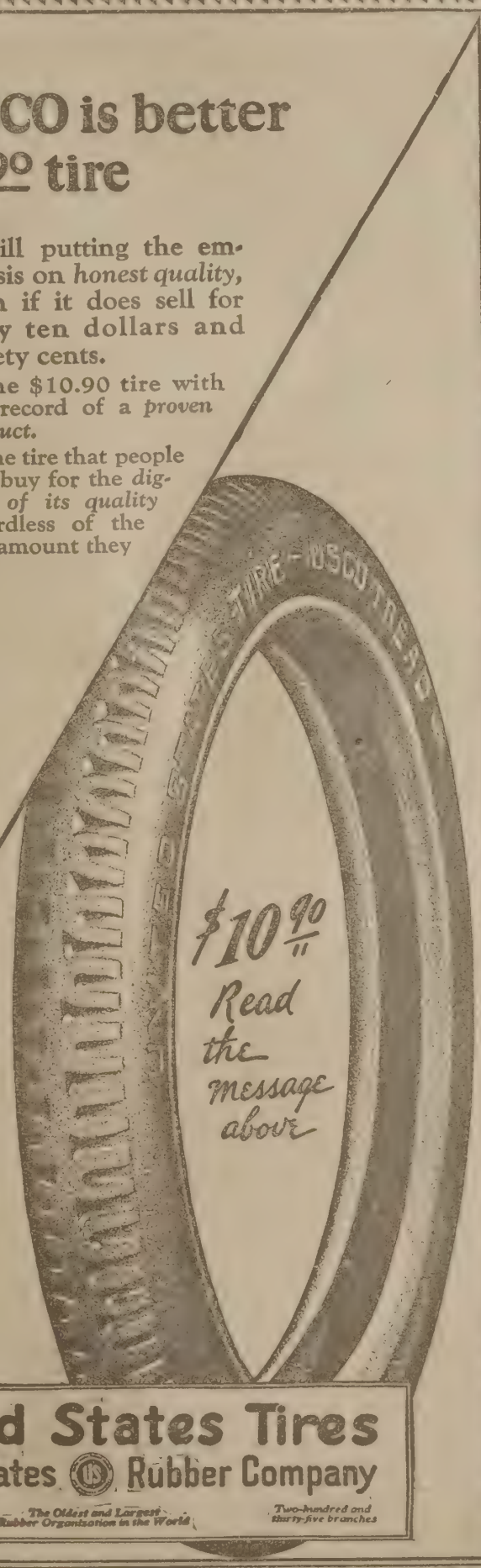
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LIVESTOCK AND DAIRY

Feeding Skim Milk

By R. E. GONGWER, Assistant Professor of Animal Husbandry, W. S. C.

I would like to know something of the feed value of separator milk. Could I, who own the land, afford to go equal partners with a man who is in the creamery business, he to furnish the milk and I to furnish the alfalfa pasture? Would pigs on such ration need any grain for rapid growing? About how much milk would I have to figure on per head, striking an average of big and little? W. I.
Dayton, Wash.

There is no experimental work dealing with the value of skim milk fed to pigs grazing on alfalfa pasture, as two things make such a ration an inadvisable one. The hog is adapted to the consumption of concentrated feeds, i. e., the grains, and although he can use bulky feeds as part of his ration, he must have some grain for even ordinary growth. Alfalfa pasture contains from 74-80 per cent of water, skim milk is 90 per cent water, and in order to support life and make reasonable growth on these two feeds alone, the pig is required to eat more pounds of feed than his stomach and intestines will hold. In the second place, alfalfa pasture contains one pound of protein for every two and a half pounds of carbohydrates and fat, and skim milk contains one pound of protein for every one and a half pounds of carbohydrates and fat. These feed nutrients are decidedly out of proportion as a pig requires from five to six pounds of carbohydrates for every pound of protein. Where the latter is in such an excess, it is necessary to add grain (which is high in carbohydrates) in order to obtain a balanced ration and only by feeding a balanced ration can we hope to get profitable pork production.

Pigs on alfalfa pasture should receive from two to three pounds of grain a day for every hundred pounds of pig. Skim milk may be substituted for about one-fifth of this grain without bad results, using five pounds of skim milk for every pound of grain replaced. Old sows, bred for fall pigs, may be carried through the summer on alfalfa pasture plus five to six pounds of milk daily per hundred pounds of weight. It is the writer's experience that on such a ration the sows will gain from 10 to 30 pounds a head from weaning time until fall.

In the winter you can use quantities of skim milk, but it decreases in value for fattening pigs as the proportion of skim milk to grain exceeds three to one. Old sows averaging 400 pounds in weight may be carried through the winter on alfalfa hay, all they will eat, plus two to three pounds of corn, barley or wheat, and 20 to 30 pounds of skim milk per head daily.

Skim milk is usually valued at one-fourth the price of grain when fed with barley, wheat or corn in proper proportion. When fed alone or with very little grain, skim milk is worth only one-sixth to one-tenth the value of grain.

As to your agreement with the creamery man, I would suggest the following as a basis: If you maintain a breeding herd, furnish the equipment, pasture and labor, the creamery man should furnish a daily supply of milk equal to from 5 to 10 pounds per head, sows, shoats, pigs and all, and at least one-half of the grain. The larger supply of milk should come in the winter time. On this basis, an equal share in all of the pigs produced would be about right.

LIFE PRESERVERS FOR LIVE STOCK

By DR. E. E. WEGNER, W. S. C.

CONTAGIOUS DISEASES. ARTICLE 6.

Glanders.

One of the most dreaded diseases of horses and mules is glanders, since a cure is impossible after the animals are once diseased. It has been responsible for the destruction of many animals and is still far from eradicated. During the time that many animals were being assembled for war purposes and brought together in the various camps many tests were made to determine the existence of this disease and we found that it was very much more prevalent than was generally supposed; in fact, many animals were killed on account of this disease, and quite a number that showed no visible signs.



This disease is infectious and is spread from one animal to another in various ways; no doubt it is spread by contamination of an animal by the nasal discharges of another. The nasal discharges is a very common symptom and one diseased animal can easily contaminate hitching posts, watering troughs, public or private feed racks, mangers, harness, bedding and feeds of all kinds, so it is not hard to understand how a single animal can spread infection to a great many more. Probably the most common way by which it is spread is by the contaminated feeds, one animal nosing about over a manger full of hay and another coming along and feeding from the same place. This takes the infection directly into the digestive tract, from which it may spread to the other organs of the body. The nasal discharges may also be sneezed out and blown for quite a distance in every direction, and in this way may be thrown into the faces of other animals.

Glanders is also transmissible to man and possible this is the most serious aspect of all. It is true that men have worked horses that have glanders for years and the men have not contracted the disease, but the fact remains that the danger is there just the same and when man does get this infection into his system it is very rarely, if ever, cured. For this reason every one should be very careful not to protect the animal that is harboring this disease, as the sooner it is disposed of the better for humanity.

The Common Symptom.

The most common outward symptom is that of the nasal discharge and is the one that is most commonly known to the average man, but the internal changes are very considerable, too, though not so conspicuous.

Animals suffering from this disease may live for several years and work some of this time, while others die in a few months. The average course, however, is several years in length.

Sometimes when the skin is affected the disease is known as "farcy," under the impression that it is not glanders. This is just as truly glanders as any other form, and it should not be distinguished from the disease just because the skin form is encountered, as it usually has all the other symptoms as well.

When this disease is suspected a veterinarian should be called to make a positive diagnosis. The examination of the animal may not reveal even to the trained man whether it is really glanders or not

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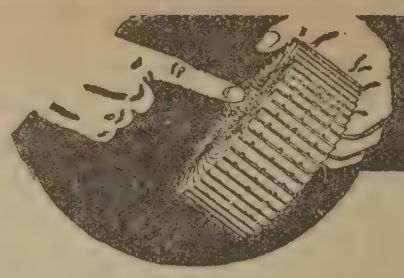
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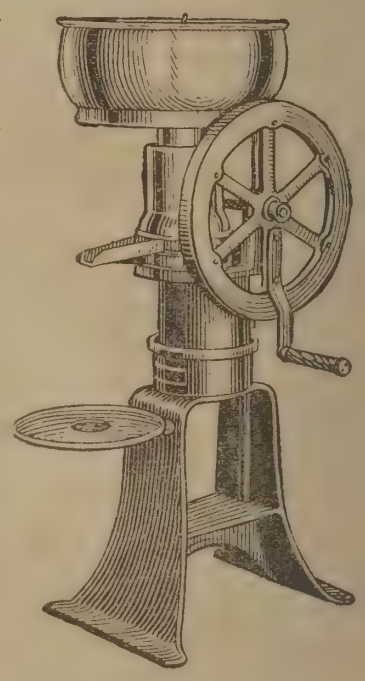
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LOOK AT THE GOOD FARM BARGAINS THAT ARE OFFERED ON THE FARMERS' "WANT AD" PAGE THIS WEEK.

and in all such cases the test is applied to determine for certain what the condition is. This test is very reliable when conducted by men who are accustomed to such work and know what to expect in cases of disease, but in the hands of untrained men it may not be reliable enough to base a diagnosis upon.

All contagious diseases are to be controlled by the state officials for that purpose and would probably be reported to them by local veterinarians.

VETERINARY

By DR. S. B. NELSON.

Breeding Problems—I have a young cow which freshened three months ago and she has not been in heat since. Is there anything I can do to encourage it?—A. K., Bellingham, Wash.

Give the cow three-fourths grains of yohimbin twice daily for a few days.

Coughing.—I have a cow that coughs at irregular intervals during the day. The cow seems in good health. Is this serious?
Burton, Wash. J. E. B.

As coughing is only a symptom, I can not tell you what the trouble is, but animals that are heavy eaters like cows frequently have coughs which are not indicative of any serious trouble.

Goiter.—I have a 2 1-2-month-old calf that began to get a large neck about a month ago. It looks like a goiter to me. Can they be cured? MRS. L. H. L.
Tacoma, Wash.

Paint the goiter with tincture of iodine daily, and you might also give the calf two grains of potassium iodide in a little water once daily for a little while.

Tender Feet—I have a 13-year-old mare and the inside of her feet seem to get soft and crumbly, but the outer shell is hard and the frog seems all right, but they seem very tender when she works a while. I keep shoes on her all the time.
Granite Falls, Wash.

A little tar applied to the sole sometimes has a tendency to toughen the mealy condition of the foot.

Butter Is Bitter—We have a cow that freshened two weeks ago and the butter has a bitter taste after it stands two days. We feed alfalfa hay and mill feed and keep the milk in a room with open windows.
Sunnyside, Wash. P. G.

Give the cow one and one-half pounds of Epsom salts in three quarts of water. Wash the stall with a five per cent crude carbolic acid solution. Wash it thoroughly, floor and all, and before milking, wash the udder in a two per cent solution of Lysol in water.

Foundered—I have a fine big horse that was foundered in some way some time ago and now rests first on one foot and then on the other. Could this condition be cured or relieved?—J. M. R., Colton, Wash.

The conditions can probably be relieved, but possibly not cured. Relief may be obtained by thinning the hoof and applying the following ointment night and morning at the hair line: Pine tar, one part; lard, one part. Heat the lard and pour in the tar. Stir until cool. You may also get some benefit by having the horse shod with broad bar shoes which will protect the bottom of the foot.

Leaches—I had a steer that died with leaches. He was sick about six months. He fed last spring on swampy land. I now have another one that is sick the same way. I have moved them on high land, but it don't seem to do any good. They eat heartily until they die.—O. S., Ethel, Wash.

There is no cure against leaches after the animal gets them. The disease comes from the animals pasturing on the low, wet, swampy lands. You have done the right thing when you have moved them on to high, dry land. Keep them there and I think you will have no further trouble to speak of.

Warbles.—I have a cow that has large lumps on her back and a yellow substance runs out of these. M. L. R.
Dixie, Wash.

Your cow is affected with warbles. The abscesses on the back contain larvae of the ox gad fly. The larvae will come out in a few days and will bury itself in the ground, pupate and then come out as a fly later in the season. Squeeze the lumps and destroy the larvae first and then I would suggest that next June, July or August you mix an oily mixture of fish oil and a little tar and rub the hair about the neck and shoulders and front legs and that will keep the eggs from being attached to the hair.

Cribbing.—Please tell me the cause and cure for a horse that is a cribber. My horse is 5 years old; he bites his teeth over wood and rolls his stomach and grunts. He does not eat the wood.
Outlook, Wash. C. W. G.

There are a number of reasons for a horse performing the act known as cribbing. Half the time it is absolutely habit without any cause. It is a most difficult habit to stop. You may overcome it somewhat by having the animal's teeth looked after and by sawing between the front teeth with a small, fine saw. Another means of somewhat checking this bad habit is to fasten a strap rather tightly about the neck of the animal when in the stable and not at work.

Bloody Milk.—I have a cow that freshened three weeks ago that gives bloody milk. G. E. G.
Blaine, Wash.

Give your cow a teaspoonful of sodium hyposulphite in a pint of water once daily for a few days.

Lumps in Udder.—I have a cow that freshened the last of January. There are lumps on both sides in the back of her udder. W. E. M.
Chewelah, Wash.

Paint the lumps with tincture of iodine after each milking for some time.

Lung Worms.—I have a heifer calf 1 month old that coughs before and after feeding. I think it has lung worms.
Arlington, Wash. H. C. F.

A simple treatment for lung worms in calves and which is very good is to put the calf in a small, tight place by itself; in the center of the room put a tub with two inches of water in it and in the center put bricks; on the bricks place a pan of sulphur; burn the sulphur and let the calf breathe the fumes for some time. Repetition of this treatment every four or five days, not to exceed two times, sometimes has to be resorted to.

Treating Cut—I have a 4-year-old colt that cut the cord in her leg half way below her right knee. I have been treating her with peroxide and washing the wound with blue rock. Is there anything else I can do to help?—P. S., Graham, Wash.

You do not state how long ago your colt was wounded. Your treatment is very good as far as it goes. Do not use the blue rock solution too strong. You may find at this time that the use of the following wash may be of value: Zinc sulphate, one ounce; lead acetate, one ounce; water, one quart. Shake well and apply to the wound two or three times daily.

Stringy Milk.—I have a cow that is giving stringy milk out of three teats. She also has grubs in her back. F. S.
Wauconda, Wash.

I would suggest that you lessen the feed that you are giving your cow and milk her three or four times a day for a while. Paint the udder with a liniment composed of tincture of iodine, three ounces, and soap liniment, five ounces, using this liniment after each milking. Put on a little and gently massage.

Regarding the grub worms in the back, squeeze them out and destroy them. Then next July and August keep the forepart of the body of the cow fairly well covered with fish oil to which has been added a little tar.

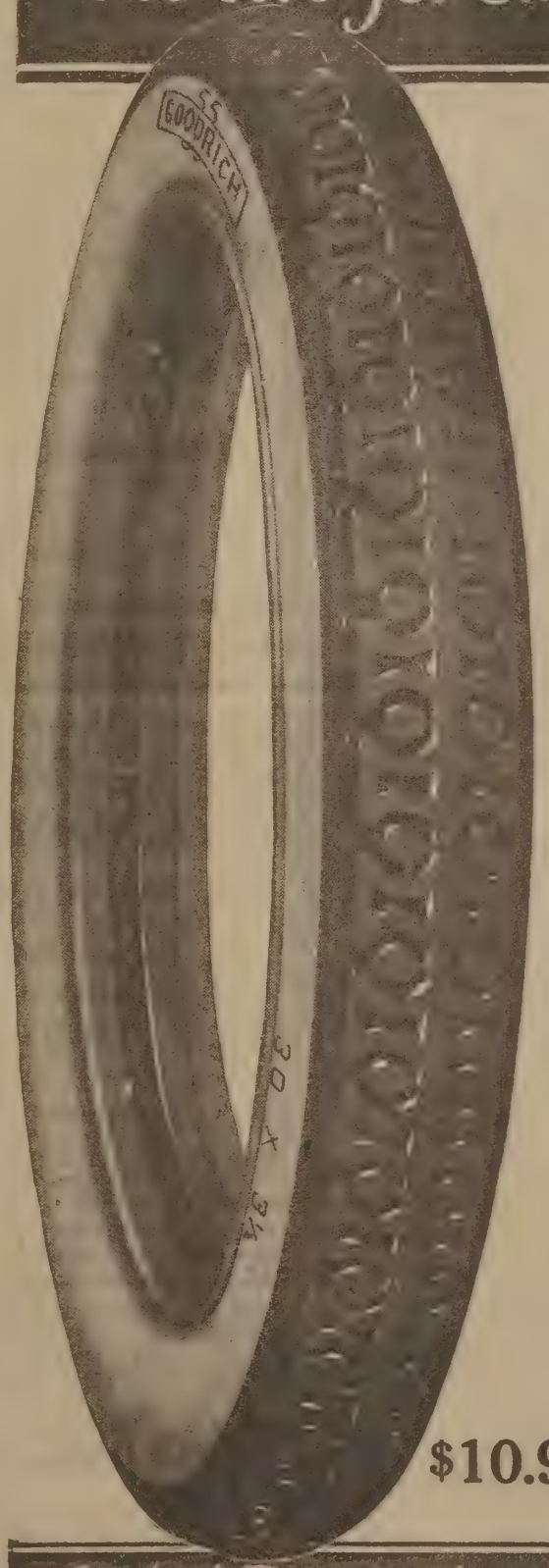
Bog Spavin.—I have a horse that has a bog spavin. Is there a cure for this?
Snake River, Wash. C. J. J.

Possibly the best remedy for the bog spavin, unless it is too old a one, is to have the animal thoroughly fired and then give her two or three months' rest.

Leaky Teat.—I have a cow coming fresh soon and her teat leaks badly. Is there anything that will help this? E. J.
Hobart, Wash.

A very safe way of stopping the teat from leaking would be to place a piece of adhesive tape around the end of the teat just tight enough to keep it from leaking and yet not sufficient to cut off circulation.

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POULTRY AND RABBITS

Heating Brooder

With Water Pipes From Furnace

H. M. Ferguson of Sunnydale, King county, has a small three-section brooder house, heated by water pipes from an outside furnace. Both the building and the heating equipment is a home-made arrangement. The latter, including material, is estimated to have cost but $80.

The pipes are arranged so as to run full length of the house, three of which are placed about 10 inches from the floor, while the return pipes come back under the floor. The overhead pipes are covered with three 12-inch boards, from which burlap is hung on either side to complete the hover arrangement. Mr. Ferguson finds that much time can be saved in cleaning the hovers by merely spreading papers over the floor, which are taken up when cleaning. There are now 860 chicks in the house, which are making a rapid growth for their age.

The furnace is constructed of ordinary brick closed tightly over the top, the draft being arranged below the door. The heat coils extend on all three sides of the fire box. Mr. Ferguson finds that he can burn almost any kind of wood as soon as he gets the fire started. The temperature of the water varies from 60 to 95 degrees and when the water is once hot will hold the temperature for several hours.

The farm has a combination of poultry and berries, the latter containing a large variety. Blackcaps, however, predominate and being one-eighth of an acre planted, from which Mr. Ferguson says he harvested 600 crates last year.

The soil is largely shot clay, which is well drained. Last year the berries received an application of barnyard manure, to which was added some phosphoric acid to increase its value as a fertilizer. This is evidently what the soil needs, because the berries thus treated have grown large canes and promise to produce a good crop this season.

New Zealand Reds

This breed of rabbit is more compact than either Belgian hare or Flemish Giant. Buck and doe of typical size weight, respectively, 10 pounds and nine, and when well conditioned the "friers" are in demand at 12 weeks, weighing 4 1-2 pounds. The New Zealand is a somewhat less nervous rabbit than the Belgian hare, and with its better size and compact build is usually considered productive of meat. The flesh is more fine grained than that of the large Flemish breeds. Perhaps the New Zealands are somewhat more subject to ear canker, however. The does make good mothers.

Will Use Trap Nest

After being in the poultry business in the Summit district of Tacoma for the last 10 years, M. S. Rau finds that there is an increasing demand for breeding stock and he is laying more emphasis on the baby chick business. His incubator cellar is located under the main dwelling house and has a capacity of 3200 eggs. The incubator is one of the larger type and is heated with hot water by semi-anthracite coal, a Washington product. It is built in sections and more can be added later as the plant is enlarged. The heating stove is capable of handling double the capacity that it now operates.

When later sections are to be installed Mr. Rau intends to build them himself during the winter. He feels confident that he can build the machine and get it to operate as well as the factory-made article except that the latter is made from hard wood. A good grade of native wood, however, will make the sections air tight.

"When we first bought the incubator," said Mr. Rau, "we used the automatic egg-turner to save so much hand labor. That was one of the features of the machine, but we soon discarded it because we found that, although it would turn every egg perfectly, the eggs would not change their relative positions. It seems to produce a better hatch to turn the eggs by hand because there are none that are left in the center of the trays to become too warm and those along the edge are worked toward the center, thus giving them all a more even incubation.

"I have been keeping track of the coal we are burning and find that the large incubator is much cheaper to operate and does not require as much attention as do any one of the six oil burners that we are running. We are going to equip the plant with a single unit heater as soon as we can do so."

The 500-hen capacity laying house is built on the Shoup plan and used entirely for breeders. The birds are allowed to roam at will. No trap nests are used at present, but later on Mr. Rau expects to have a larger number of birds and handle them all on a trap nest basis.

It was only recently that electric lights have been installed on the farm and they will soon be put into the poultry house to supplant the oil-burning lanterns. Even with this type of lighting, Mr. Rau was able to get a 55 per cent lay during the winter months by using the lamps from 5 a. m. until daylight. He expects to be able to show even greater results next season.

As to Color of Eggs

By MRS. GEORGE R. SHOUP.

Which breeds of hens, both large and small, lay white eggs? Which lay colored eggs? Which breeds when dressed for market have yellow skin? Which have white? MRS. J. S. H.

Washtucna, Wash.

All of the Mediterranean class, including such breeds as the Leghorns, Minorcas and Anconas, lay white eggs.

The American class birds, including such breeds as Rhode Islands, Wyandottes, Rocks, etc., lay colored eggs and also have the yellow skin and yellow legs when dressed.

Any of the English class birds, such as the Orpingtons, are white skinned and white shanked when dressed, though they lay colored eggs.

Oil Tins for Nest Boxes

J. H. Whitten, a poultry breeder of Tacoma, Wash., has a novel plan of making his nest boxes for the laying house. He takes a number of five-gallon oil tins and cuts off the end and part of the side so that it makes the opening from the top as well as the end. This leaves a boxed effect which protects the hen as well as keeps the straw from being scratched out.

Such a nest can easily be removed from its shelf and cleaned, putting in new straw when necessary. The whole tin may be washed or scalded and all vermin killed. There is very little room where lice or mites may hide in such a tin nest, and they are said to be very satisfactory.

WHITE DIARRHEA.

The dread scourge of white diarrhea in poultry might be averted just as tuberculosis is averted in cattle if funds were available for the work, for birds can be tested the same as cattle, and the "spreaders" detected. In spite of the large amount of money invested in poultry, however, very little progress is being made along this line.

Sick Baby Chicks? GERMOZONE is a positive remedy for roup, colds, bowel trouble and such costly ailments. Preventive as well as curative. A wonder worker for poultry. On market over 20 years. Endorsed by many thousand users. Don't lose your baby chicks. Get GERMOZONE TODAY. At drug and seed stores. If no dealer, order by card. 75c and $1.50 sizes. Postman will collect. No extra charge.
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WITTE ENGINE WORKS,
1927 Oakland Avenue, KANSAS CITY, MO.
1927 Empire Building, PITTSBURGH, PA.



Mr. Jenkins Took a Cracked Club To Tame Lions

The exhibition ended rather badly. It very nearly was a big day for the lions and a sad day for Mr. Jenkins—all for want of proper care in getting ready.

Many a man who has business to do and a living to make and a job to fill is as careless how he feeds his body as Mr. Jenkins was in picking out a club. And an improperly nourished body often fails under a hard test.

Some foods are too heavy, some are too starchy, many lack necessary elements and so starve the body—and many load the system down with fermentation and auto-intoxication.

Grape-Nuts helps build health and strength. It contains the full richness of wheat and malted barley, including the vital mineral elements, without which the body cannot be fully sustained. Grape-Nuts digests quickly and wholesomely. Served with cream or good milk, it is a complete food—crisp and delicious.

Grape-Nuts is just the food for those who care to meet life's situations well prepared in health. Order Grape-Nuts from your grocer today. Try it with cream or milk for breakfast or lunch, or made into a delightful pudding for dinner.

Grape-Nuts—the Body Builder
"There's a Reason"
Made by Postum Cereal Co., Inc., Battle Creek, Michigan

Perfection Plaster Wallboard
WESTERN WALL BOARD CO. TRADE PERFECTION MARK SEATTLE, WASH U.S.A.
"To Patch a Hole or Build a Home"
A real time and money saver for busy builders. Fireproof, water proof, vermin proof. All you need is a hammer and a saw—nailed on like lumber—takes paint, calsomine or wallpaper. A perfect plaster job without the cost, work or mess.
ASK YOUR DEALER FOR A SAMPLE AND ESTIMATE or write for booklet and full particulars to the makers.
Western Wallboard Company
4527 9th Ave. So., Seattle, Wash.

GENUINE GRIMM ALFALFA SEED
Certified-Guaranteed
The extensive branching root system of GENUINE GRIMM produces an abundance of nitration and humus and leaves the soil in excellent mechanical condition when plowed under.
It is unexcelled as a covering for orchards and pasturage.
A ten-year test by the Experiment Station at Guelph, Ontario, has shown that GENUINE GRIMM produces from one to two tons more hay per acre than common.
Seeding cost practically as low as common alfalfa.
Insure your crop by purchasing in the original sealed and labeled bags.
Write for information and prices.
IDAHO GRIMM ALFALFA SEED GROWERS' ASSOCIATION
Blackfoot, Idaho.

Read the "Want Ad" page this week for good offers of all kinds.

ORCHARD AND GARDEN

Issues Warning
Against Quack Tree Powders

A warning has been issued by C. L. Robinson, supervisor of horticulture of the state department of agriculture at Olympia, against so-called "quack" tree powders. A number of these "remedies" have been reported from different parts of Washington. The men who are selling them claim they will destroy any insect pest, or fungus diseases that are common on fruit trees.

"While this is by no means new in the horticultural field the method resorted to this year is different than has been found in the past," said Mr. Robinson. "We have not been able to secure any mixture in its original package, the men being wise enough to treat the trees while on the place instead of selling the powder to be used as needed. Trees have been found which have been treated by boring a hole in the lower part of the trunk and inserting some powder, then closing the hole. The claim is made that the ingredients contain substances which, after mixing with the sap, will immunize a tree from all diseases.

"Analysis of one of these powders was made at the Oregon experiment station last year and found to contain flowers of sulphur, 54.3 per cent; baking soda, 9.1 per cent; brick dust, 63.6 per cent. None of these, however, have contained enough borax to affect the sap in any way.

"Experiments have proven that no substance can be mixed with the sap which would be strong enough to kill any disease and yet not kill the tree itself.

"What labels we have found in the past years," said Mr. Robinson, "indicate that the compound contained calomel, borax and other similar ingredients, but they have not been found true to label upon chemical analysis. Borax, however, is known to be injurious to plant life even when used as a fertilizer."

Berry Pruning

By O. M. MORRIS, Head Department of Horticulture, W. S. C.

I would like the detailed methods used in pruning raspberries and blackberries the first year they were planted and the method used the second year. My bushes are now 2 years old and have not been pruned as yet. Would also like to know how to prune some dewberries.

Yakima, Wash. I. C. H.

The most common attention given to pruning raspberries is to simply cut out the dead canes during the fall and early part of the winter. The work is often delayed until spring. Other than this no pruning is absolutely necessary. Sometimes you will have a little better results if you cut the tops back to about four feet in height. The plants will then stand more erect and be able to support more than their own load of fruit. If the vines are six or seven feet high as they often grow in the best berry districts, you will find it easiest to handle them by fastening the vines on a trellis. This can be done by simply tying them in groups to a wire stretched about five feet above the ground and fixed to posts which are set about 30 feet apart. If you are growing raspberries upon a commercial scale, it would probably be worth your while to put in a regular berry trellis.

Blackberries are pruned just the same as the raspberries. The dewberries are ordinarily pruned by taking out the dead vines and trimming back some of the runners that are still alive. They are then ordinarily fastened on a low trellis that is about two or three feet above the ground. One common method is to drive one or two sticks by each hill, and tie all of the plants to these sticks, using it about two or two and a half feet above the ground. If your vines are eight feet or longer, it is easiest to form a trellis of two parallel wires stretched in a horizontal plane, about two and a half feet above the ground. Use cross sticks about every two or three feet, placing one to carry the vines above the wire, the next to bend the vines and tie them below the sticks below the wires. In this wig-wag form the fruiting can be well cared for. The young vines can be permitted to grow and spread in any direction on the ground below. The well fruited canes at the close of the fruiting season can be cut away, and the following winter the new vines placed on the trellis.

GREEN APHIS.

I have several sugar plum trees and soon after they leaf out some insect seems to work on the leaves, which soon curl and some almost destroyed. What spray should be used and should the trees be sprayed before leafing? G. A. M.

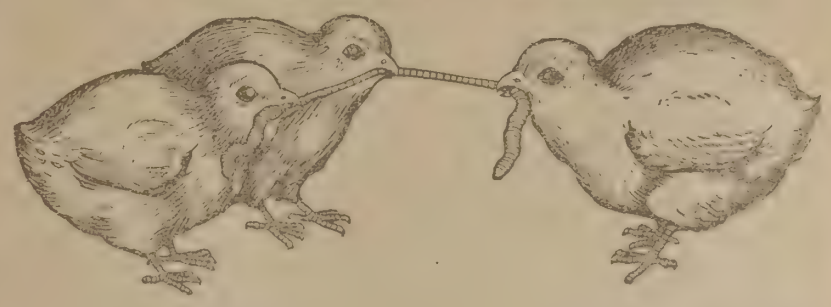
Hatton, Wash.

The brief description you give of your plum tree troubles indicates that your tree foliage is attacked by the green aphis, a common louse that is very prevalent during the summer months. Your best method of combatting this pest would be to spray the trees just as the buds are opening. Use nicotine sulphate, commonly called black leaf forty, at the rate of one part of material to one thousand parts of water. Later sprays will help to accomplish the same thing, but your spray just as the buds are opening will be much the most effective.

Orchard Management

Professor O. M. Morris of the State College of Washington has just finished supervision of the planting at the Prosser irrigation branch experiment station in Benton county of a new six-acre orchard, for the study of the use of water in orchards, the production of cover crops, the use of fertilizers and general orchard management. All of the trees were hand-selected by Professor Morris and are of four varieties—Delicious, Red Rome, Winesap and Jonathan.

Poultrymen, Attention!



The largest hatchery in the world offers special low prices on S. C. White Leghorn baby chicks, from heavy egg-laying strain, during the months of May and June, 1922. We pay all express charges on shipments for these months.

THE BIHN HATCHERY—PETALUMA, CALIF.

A LITTLE "WANT AD" FREQUENTLY OFFERS A BIG BARGAIN. MAKE IT A PRACTICE TO READ OUR "WANT ADS"

Chicks of Quality

TRAP-NEST records show that May hatched chicks are not only the heaviest layers, but also lay the largest percentage of standard eggs. May hatched chicks, if given proper care for the first three months, allowed to develop bone and muscle until five months of age, then put into the laying house and fed egg producing foods, will come into heavy laying at about six months. They will lay for about 11 or 13 months. Their eggs, being all standard size, will bring the highest price, thus giving high returns at the end of their laying year. May chicks are the cheapest to buy, easiest to raise and have the largest percentage of pullets.

Hollywood or Tancred Chix

HOLLYWOOD and Tancred Farms are conceded to be the best in the west if not in the world. We offer Hollywood or Tancred strains of White Leghorn chicks, for immediate delivery after May 1, at $17.50 per 100.

Commercial Strain W. Leghorns

W. L. CHICKS from commercial flocks, mated with high-grade cockerels of 250-egg strain, are priced, for delivery after May 1, at $15.00 per 100.

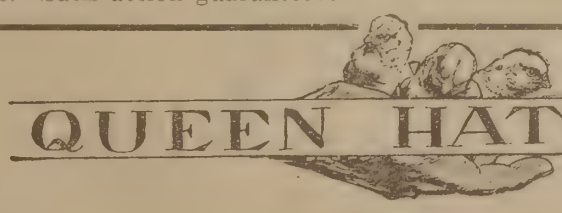
White Leghorn Pullets

WE offer April and May hatched Hollywood or Tancred White Leghorn pullets, when three months of age, at $1.65 each. Commercial strains, $1.40 each. Guaranteed to weigh 1¾ lbs. each when shipped. Return in 3 days if unsatisfactory.

Heavy Breeds

OUR R. I. Red and Barred Rock chicks are hatched from the best commercial flocks in western Washington. They have vigor, size and egg-laying qualities bred into them. Per 100 after May 10 ..... $22.50

WHEN ordering, send deposit of 25% with coupon and we will ship C. O. D. for balance, with instructions to express agent to deduct for all dead or crippled chicks. All prices are f. o. b. Seattle. Satisfaction guaranteed.



QUEEN HATCHERY

Queen City Market. Elliott 2054. Seattle, U. S. A.

FILL OUT and MAIL TODAY

(Note: Denote item by checking squares.)

Date.....1922.

Queen Hatchery,
Queen City Market,
Seattle, U. S. A.

Please ship me ..... Queen Quality Chicks ( ) Pullets ( )

Enclosed is { Check ( ) / Money ( ) / Draft ( ) } For ..... Dollars (deposit)
C. O. D. $..... (balance)

Express ( )
Parcel Post ( )

Name .....

Shipping Date ..... 1922.

Address .....

ALBATROSS BRANDS

No oil for these paints

You Save 75%

The General Basic Products Company of Seattle has perfected a series of coatings for inside use, which require no oil. They come in powdered form—all you have to do is mix them in water as the different varieties require—and apply. The result is a beautiful quickly applied, economical finish—and you save about three-fourths over the cost of paints which require oil. The principle is that of cement—and you know how lasting a cement finish is. Varieties are:

Albatross Cold Water Paint

A standard modern day product—apply to wood, stone, brick, concrete, iron, etc. Made in white only for interior use in warehouses, cellars, barns, poultry houses, etc. Highly sanitary. Very fire retarding. Applied with brush or spray.

For Interior Decorating of Walls and Ceilings

Those beautiful, restful, pleasing and sanitary finishes which are now so popular are obtained through use of

Albatross Wall Finish

A superior quality cold water finish for interiors—walls and ceilings. Comes in a pleasing range of tints and white, or

Albatross Velatone

The very highest quality finish for inside walls and ceilings—to be mixed with hot water. Comes in eighteen beautiful tints and white.

Specialties

Dry putty and wall size are specialties required in conection with practically all interior finishing, refinishing and decorating. If you specify Albatross brand, you'll get the best.

Albatross Wall Size

Economical and easy to apply—stops suction—kills alkali—makes a perfect foundation upon which to paper, paint or calcimine.

Albatross Dry Putty (Rock Hard Putty)

For patching holes in plaster, filling cracks and nail holes in hardwood floors, mending bric-a-brac, etc.

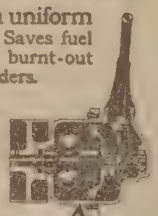
Address us for free color cards and name of nearest dealer. * * * General Basic Products Co., Sole Manufacturers, 4796 E. Marginal Way, Seattle, U. S. A. Dealers: Address us for attractive sales proposition.

Reduce Your FORDSON operating costs with a Pierce Governor

Holds the engine at a uniform speed, regardless of load. Saves fuel and oil. Helps prevent burnt-out bearings and scored cylinders.

Pays For Itself

A Pierce Governor can be installed in 20 minutes without removing carburetor, radiator, timer or fan and will save its cost in two weeks. Tractor performs better under all conditions. Saves one man's time on all belt work. Instantly adjusted for different speeds. Sold on money-back guarantee.



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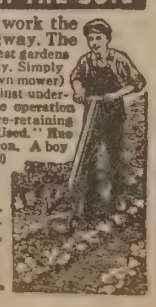
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"World's Largest Governor Builders"
Anderson, Ind.
U.S.A.

BETTER GARDENS EASY TO KILL WEEDS AND MULCH THE SOIL



BARKER WEEDER-MULCHER AND CULTIVATOR

Don't do garden work the slow, backbreaking way. The BARKER makes the finest gardens possible—quickly, easily. Simply push along rows (like lawn mower)—8 blades revolving against underground knife destroy the weeds and in same operation break the crust into a level, porous, moisture-retaining mulch. Aerates soil. "Best Weed Killer Ever Used." Rue leaf guards, also shovels for deeper cultivation. A boy can run it—do more and better work than 10 men with hoes.



Write for FREE BOOK

Illustrated book, postpaid, gives prices delivered to your station, contains valuable information on gardening, letters from users, etc. A card brings it. Write today.

BARKER MFG. CO.
Box 46 David City, Neb.

FARMERS' WANT ADS

This is the farmers' "want," "sale" and "exchange" department for small advertisements of farmers, including live stock and poultry

Advertising rates for ads running 1 to 3 times, 10c per word per insertion, with a special rate to Farmer subscribers, as follows: Ads running 4 to 12 times, 9c per word per insertion; ads running 13 times or more, 8c per word per insertion.

All commercial and land advertising 10 cents per word each insertion. Open also to nonsubscribers.

In using these columns advertisers must observe: (1) No advertisements will be inserted for less than $1.00. (2) Every word, number and initial, including name and address, must be paid for. (3) New advertisements, changes of copy or cancellations must reach general office, Spokane, Wash., 10 days in advance of publication date. (4) Cash must accompany order.

Above rates include insertion in The Washington Farmer, The Idaho Farmer and The Oregon Farmer, which constitute the Pacific Northwest Farm Trio, 46 Review Building, Spokane, Wash.

HELP WANTED GENERAL 5

WANT PARTIES TO PEDDLE MEDICINE, salve and liniment; good pay. P. H. Medicine Co., N1220 Wall st., Spokane.

EDUCATIONAL 45

EARN MONEY QUICKLY—THERE'S NO LIMIT to one's earning capacity in business. And this great business college after training you thoroughly, places you in a paying position. Courses include banking, stenography, accounting, private secretarial. Write for free catalogue. Behnke Walker Business College, Portland, Ore.

FRESH FOOD PRODUCTS 51-1

HONEY BRAND HONEY, PURE, LIGHT, thick and good flavored, from alfalfa and sweet clover. One 60-lb. can, $7.50; two for $14.50. Write for circular and prices in pails. Salesmen wanted. Oliver Sires, Wapato, Wash.

WHITE ALFALFA, SWEET CLOVER honey; 1 60-lb. can, $7.50; 2 60-lb. cans, $14.50; six 10-lb. cans, $3.50; three No. 10 pails, prepaid third zone, $5.50. Wells D. Rose, Sunnyside, Wash.

HONEY,—FINE QUALITY ALFALFA SWEET clover; 60-lb. can, $7.50; 2 cans, $14.50; three 10-lb. pails prepaid, second zone, $5. Harry Fisher, Prosser, Wash.

SMOKED SALMON, 5-POUND BOX, $1.25; salt salmon bellies, 5 pounds, $1.25, delivered by mail. Coffin Fish Co., Seattle, Wash.

WORLD'S BEST CLOVER HONEY, 60 pounds, $6.15; two 60s, $12. Browne, Box 499, Twin Falls, Idaho.

MISCELLANEOUS—FOR SALE 60

SASH AND DOORS—O. B. WILLIAMS CO., 1943 First ave., So. Seattle. Chicken house sash, 29" wide by 25" high, 80c; a dozen different sizes in stock for immediate shipment. Skylights for chicken houses, 36"x40" price, glazed, $2. This is the size recommended by the Western Washington experiment station. We carry them in stock for immediate shipment. Sash and doors for all purposes at lowest prices. All orders receive prompt attention. Our large illustrated catalogue No. 35, showing full line of building material and built-in fixtures for the home, free on request. O. B. Williams Co. Established 1899.

JERUSALEM ARTICHOKES ARE ECONOMICAL feed for hogs and other stock; tops good fodder for cattle and horses. Plant and cultivate same as potatoes. Tubers, $1 per grain sack full here. G. G. Fullerton, Dayton, Wash.

KENTUCKY TOBACCO—DON'T SEND ONE penny, pay for tobacco and postage on arrival. Extra fine quality leaf, 3 years old, nature cured. Chewing, 10 lbs., $3; smoking, 10 lbs., $2.50. Farmers' Union, D119, Hawesville, Ky.

WALL BOARD—WRITE FOR SAMPLE OF Washington plaster wall board; won't warp, won't burn. Manufactured by Washington Building Products company, 6851 E. Marginal Way, Seattle, Wash.

PIPE — NEW AND SECOND-HAND, ANY size; low price; standard grade roofing paper at a big saving; belting, all piles, all sizes, cheap. Write Alaska Junk Co., S120 Adams st., Spokane, Wash.

NATURAL LEAF TOBACCO, CHEWING, 5 pounds, $1.50; 10 pounds, $2.50; smoking, 5 pounds, $1.25; 10 pounds, $2. Send no money. Pay when received. Tobacco Growers Union, Paducah, Ky.

CEDAR CHESTS DIRECT FROM FACTORY to your home; Tennessee cedar, solid copper trimmings. Write for catalogue. J. W. Higgins & Sons, 1912 Gilsan st., Portland, Ore.

TOBACCO, NATURAL LEAF, FOR MILD SMOking; 10 lbs., $1.50; 20 lbs., $2.75; will furnish free recipe for preparing. Leaf Tobacco Exchange, Mayfield, Ky., Star Route.

BRAND NEW 4-SECTION SPRING TOOTH harrow and American grain drill; make offer. Central Agency, Inc., Broadway and Pike, Seattle.

TOBACCO — HOMESPUN, EXTRA FINE chewing, 10 lbs., $3; smoking, 10 lbs., $2; 20 lbs., $3.50. Producers' Exchange, Mayfield, Ky.

FOR SALE—ONE QUARTER-TON BRUNSwick ice machine, in good order; capacity 500 pounds ice. Langley Meat Market, Langley, Wn.

HOMESPUN TOBACCO, 5 POUNDS, $1.25; 15 pounds, $3. Send no money, pay when received. Farmers' Association, Jonesboro, Ark.

PORTABLE SAWMILL, COMPLETE, STEAM power; good as new; bargain. Write Wm. Kickbusch, Lakeview, Idaho.

JOHNSON'S PACKAGE BEES, QUEENS. Write for remarkable prices. 165 Raymond ave., San Jose, Cal.

THREE-UNIT PERFECTION MILKER, COMplete; used three weeks. Ernest Loennig, Tillamook, Ore.

MISCELLANEOUS—Wanted 63

WANTED—GALVANIZED WATER TANK from owner. Paul Abendroth, Worley, Idaho.

MACHINERY—For Sale 93

ADVANCE-RUMLEY 8-16 TRACTOR, WITH two plows; snap, $350. Terms given to responsible party. March-Strickle Motor Co., 1126 Second, Spokane.

FOR SALE—DURO WATER SYSTEM, MOTOR, pump and tank. R. H. Masters, R. F. D. 6, Seattle, Wash.

AUTO TRUCKS—For Sale 115

WE WILL ABSOLUTELY SAVE YOU FROM $500 to $1500 on the purchase price of a new truck. Creditors' sale of various standard makes; any size, 1 to 5 tons. Also a Holt 75 Caterpillar for $3500. Exceptionally easy terms. Write R. S. Phelps, 607 Empire State building, Spokane.

MOTORCYCLES AND BICYCLES. 127

REBUILT HARLEY-DAVIDSON MOTORcycles; guaranteed. A. P. Tyler, Boise, Idaho.

STOVE REPAIRING. 128

WRITE MYER RUBENS, SPOKANE, ABOUT stove repairs, welding broken parts, nickle plating.

FUR-BEARING ANIMALS 170

SILVER AND CROSS FOXES FOR SALE. William Rambo, 407 Sprague, Spokane.

RABBITS and HARES 173

PEDIGREED FLEMISH AND CHECKERED Giants. Prices not fancy. Brookside Rabbitry, Hubbard, Ore.

POULTRY (Baby Chicks) 174

THE LARGEST LEGHORN BREEDING ESTablishment and hatchery in the northwest, and on the Pacific coast, has a housing capacity of 12,000 breeders; brooding capacity for 15,000 chicks; incubator capacity for 142,200 chicks at one time. It was started 16 years ago, by its present owner, without capital or poultry experience, on a barren ten-acre tract of land. The White Leghorns produced there have made possible its growth. It is the Oak Heights Poultry Farm, Capt. A. Waldwick, proprietor. Route 3, Box T67, Tacoma, Wash. This is the place where real good baby chicks come from. They are bred for eggs, vigor, size. The price is low. No order too large or too small. Prompt delivery and safe arrival guaranteed. Free book on "Raising the Chicks." Write us now.

HENACRES BABY CHICKS FOR JUNE ARE only $16 per 100; $140 per 1000; best quality chicks at common chick price. Special instructions for winter layers of June chicks free. We have a few May chicks left at $22 per 100. Safe delivery guaranteed; plenty of hatching eggs at $2 per 15; $9 per 100; 90 per cent fertility guaranteed. Eight weeks old pullets $1.50 each, satisfaction or money back. We sell the famous Sol Hot brooders at $10.50 to $23.50. Prompt shipment. Our illustrated catalog and booklet on poultry management is free. Henacres, Box A, Prosser, Wash.

400,000 BABY CHICKS—OUR WHITE LEGhorns are bred to lay; priced at $15 per 100. We hatch from some of the best flocks of R. I. Reds, Barred Rocks, Anconas and Minorcas to be found in the northwest. Chicks are priced at $22.50 per 100. Send $1 deposit per 100 with your order, paying the balance on inspection of chicks. Safe arrival guaranteed. We have a few standard makes of incubators and brooders at greatly reduced prices. Send for our circular offer. Seattle Hatchery, 1906 Pike place, Seattle.

THE PROGRESSIVE HATCHERY ANnounces the following prices for May and June, 1922: Single Comb White Leghorn chicks (trap nested), $17 per 100; selected, $14 per 100. Reduced prices for large orders. R. I. Red chicks, trap nested or selected stock, $25 and $20 per 100. Terms, 20 per cent with order; safe delivery guaranteed. 1534 N. E. 12th st., Portland, Ore.

SUMMER SALE OF BUTLER POULTRY Farm White Leghorn and Barred Rock chicks. May and June chicks are profitable and easy to raise when you know how. Write us for circular how we do it. All stock trap nested and pedigreed for years. Discount prices on all late chicks and eggs. Butler Poultry Farm, Jennings Lodge, Ore.

TRY OUR PARCEL POST PACKAGE—KEEP the old hen busy. We will ship you first-class baby chicks, postpaid to your door, direct from the hatchery and guaranteed all alive. Price, $4.50 per 25; $8 per 50. For delivery April, May or June. Order now. The White Hatchery, Petaluma, Cal.

WHITE LEGHORN BABY CHIX FOR MAY and June delivery at $12 per 100; $115 per 1000, from flocks inspected and accredited by the Sonoma county farm bureau. Safe arrival of full count, live, strong chix guaranteed. The Pioneer Hatchery, 422 Sixth street, Petaluma, Cal.

BABY CHICKS FOR MAY AND JUNE ONLY—4000 every 4 days of the famous O. A. C. strain S. C. W. L.; raised and run on free range. They have the vim. Prices, first half of May, $17, last half of May, $15; June, $12. Moorhead Poultry Farms, Granger, Wash.

UNION DISTRICT HATCHERY IS NOW booking orders for the best thoroughbred baby chicks at the right price. White, Buff and Brown Leghorns, Rhode Island Reds, Black Minorcas, Anconas and Barred Plymouth Rocks. F. & L. Downing, Los Gatos, Cal.

WHITE LEGHORN CHICKS (TANCRED strain), from selected two-year-old hens mated to cockerels from 251 to 286 egg trap nested dams; 1500 each Wednesday in May, $15 per 100. Bona Terra Ranch, Drain, Ore.

WHITE ROCK BABY CHICKS, "DANIEL'S IDEALS," from our own trapnested stock entirely. Write for prices and dates, also eggs for hatching. Free catalog. Ideal Poultry Yards, Iloquiam, Wash. Star Route No. 25.

BABY CHICKS — REDUCED PRICES ON White Leghorns, Reds, Barred Rocks, White Rocks, Minorcas, and Anconas; booking orders now; postal secures free catalog. Write today. C. N. Needham, Salem, Ore.

BABY CHICKS, WELL HATCHED ARE HALF raised. Petaluma incubators produce that kind. They have lots of "pep." We supply chicks. Catalog free. Petaluma Electric Incubator Co., Petaluma, Cal.

WHITE LEGHORN BABY CHICKS FROM best laying strain in the northwest, $20 per hundred from May 1st to May 15, after that date, $15 per hundred. Order early. Yesterlaid Egg Ranch, Kent, Wash.

PRICES REDUCED ON MAY AND JUNE chicks; late chicks of vigorous stock, well raised, pay; easily raised; good winter layers; Tancred Leghorns, also Barred Rocks. D. C. Yoder, Hubbard, Ore.

BABY CHICKS — WE GUARANTEE OUR chicks to be from the highest producing hens in Petaluma. Write for further information. The White Hatchery, Petaluma, Cal.

PERKINS' TRAP NESTED WHITE LEGHORN chicks, April, $18 100; May, $15. Send 10 per cent with order. Chas. L. Perkins, 1337 Burrage, Portland, Ore.

POULTRY (Baby Chicks) (Continued) 174

SINGLE COMB WHITE LEGHORN CHIX—You are not too late to get May chix. A very few yet for last of April. Get yours at once, others will charge you from 25 to 50 cents per chick for no better. Chicks from hens with trap records of 200 to 290 eggs for eleven months, mated to cockerels in the 300-egg class. Capacity all sold so far without a line of advertising. June chicks go this year at $14. $7.50 for 50 chicks. 3-C Egg Ranch, either Kennewick or Hover, Wash.

CERTIFIED S. C. WHITE LEGHORN BABY chicks from heaviest laying stock; safe delivery live vigorous chicks guaranteed. No money in advance; pay on delivery. Prices for May and June $3.50 per 25; $6.50 per 50; $12 per 100. Special prices 500 and 1000 lots. Largest electric hatchery in the world. Established 1898. Member Sonoma county farm bureau accredited hatchery list. Must Hatch Incubator Co., 445 Seventh st., Petaluma, Cal.

"FRESHLAID" WHITE LEGHORN CHICKS have the qualities you want; vigor and scientific breeding for the heaviest egg production; every "Freshlaid" male is from a high record hen. Freshlaid Farms is one of largest and oldest chick plants in the Inland Empire. There is a real demand for "Freshlaid" chicks, especially from our old customers. We are sold out until May 1. Write at once if you wish May chicks. May chicks make ideal winter layers. Catalog. Freshlaid Farm, Colfax, Wash.

BABY CHIX—WHITE LEGHORNS ONLY; May delivery, $13 per 100; June delivery, $12 per 100; order now as the supply is limited and these are not just baby chix, but are chix from stock that has been bred for 20 years for vigor and vitality; mated to male birds from hens with records up to 298 eggs in pullet year; hatched by the oldest established hatchery in the northwest. Lakeside Poultry Farm, Roy, Wash.

EBORALL'S STRAIN WHITE LEGHORNS. Our hatch of 2300 chicks per week is now booked for Feb., March and April, principally to old customers. Your insp ection is invited at all times. We are now booking chicks for May at $14 per 100. Write for circular. Crystal White Poultry Farm, McMinnville, Ore. Box. 33.

TANCRED STRAIN WHITE LEGHORN BABY chicks, May delivery, $15 per 100. Incubator capacity, 18,000 eggs. D. A. Gillette, R. 4, Yakima, Wash.

WHITE LEGHORNS AND WHITE ROCKS; trap nested strains; chix and eggs, contest pen, $5 per 15. Palouse Falls Ranch, Palouse Falls, Wash.

S. C. ENGLISH WHITE LEGHORN CHIX, Hollywood strain, 15c; Barred Rock chix, 20c. Bertha Jorgensen, R. 1, Hillsboro, Ore.

WHITE LEGHORN BABY CHICKS. CIRCULAR on request. San Jose Poultry Yards, San Jose, Cal.

Leghorns.

CHICKS, EGGS, PULLETS — CARNATION White Leghorns, trap nested stock; bred and selected for vigor and heavy laying qualities; breeding pens from 240 to 304 egg records; 300 Feb. 12th, hatched pullets. Ernest W. Raush, Carnation Poultry Farm, Kent, Wash.

LEGHORN PULLETS, 5000 FEBRUARY, 3000 April and May hatched. These birds are Hollywood-Tancred strain, are unconditionally guaranteed on a money back basis. Price $1.15 each, at 8 weeks. White Cloud Farm, Route 2, Box 188, Kirkland, Wash.

PUREBRED S. C. WHITE LEGHORNS: ALL breeding hens of trap nested strain, carefully selected for vitality and standard requirements; baby chicks, $15 100; sale delivery guaranteed. eggs, $1.50 for 15; $8 100. Frank Volland, Rt. 1, Kennewick, Wash.

WHITE LEGHORNS, TANCRED STRAIN, heavy laying second year hens, with males from 250 to 275 egg trap nested dams; hatching eggs, $6 per 100; baby chicks, $15 per hundred. Oaklawn Poultry Farm, Hillsboro, Ore.

OREGON AGRICULTURAL COLLEGE, WHITE Leghorns. Eggs, $1.50 per setting; $6 per 100, prepaid. Late May and June chicks, $12.50 per 100. Russell Poultry Yards, Route 3, Corvallis, Ore.

FORD'S BRED-TO-LAY S. C. WHITE LEGhorns. Hatching eggs, $2 per setting; $8 per 100; special matings on request. W. A. Ford, Umatilla, Oregon.

WHITE LEGHORNS, TRAP NESTED STRAIN, hatching eggs, baby chicks. Write us. Washington Poultry Farm, Hartford, Wash.

SINGLE COMB DARK BROWN LEGHORNS; superior quality mating list free. Harvey Bean, New Plymouth, Idaho.

SINGLE COMB WHITE LEGHORN EGGS, finest stock, $1.25 per 15. Mrs. Nellie Woods, Pullman, Wash.

BROWN LEGHORN EGGS, THE VERY BEST quality; free mating list. E. H. Rosenkranz, Colfax, Wash.

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PRIZE BUFF LEGHORNS; EGGS 15C EACH, postpaid. C. E. Cleveland, Stanfield, Ore.

Turkeys, Ducks, Geese

EGGS FROM PRIZE-WINNING MAMMOTH Toulouse geese, the kind that hatch; 50c each, $45 per 100. Imperial white Pekin duck eggs, $2.50 per 15, $14 per 100. Goslings, ducklings. R. E. Baumgardner, Wenatchee, Wash.

MAMMOTH PEKIN DUCKS, "AMERICA'S finest." New blood this year direct from C. C. Shoemaker; eggs, $2 per setting, $12 per 100. Crystal White Poultry Farm, McMinnville, Ore. Box 33.

EGGS, MAMMOTH TOULOUSE AND WHITE Chinese geese; Mammoth Pekin ducks, pearl guineas, Single Comb Reds. C. O. Johnson, R. 1, Medical Lake, Wash.

INDIAN RUNNER DUCKLINGS, THOROUGHbred, 100 $33; doz., $4.50, delivered. C. A. Muths, Route 1, Salem, Ore.

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MAMMOTH BRONZE TURKEY EGGS, 50C each. Mrs. J. L. Townsley, Route 2, Post Falls, Idaho.

Miscellaneous Poultry.

BABY CHICKS—PRICES REDUCED AFTER May 15th. S. C. R. I. Reds, $20 per 100; S. C. W. Leghorns, $15 per 100; April chicks all sold. Maple Brook Poultry Farm, Southworth, Wash.

ENGLISH STRAIN ANCONAS; PRIZE WINning stock; baby chix, 20c; eggs, $1.25 setting; $6 hundred lots. Faun Runner duck eggs, $1.25 setting. Karl Broeder, Sherwood, Ore.

PARAMOUNT WHITE WYANDOTTES "BRING home the bacon." Trap nested, pedigreed. Instructive catalog free. No baby chicks. Bayard H. Moul, 1226 Washington blvd., Seattle.

DOLLARS FOR YOUR EGGS—WE PAY THE top market prices for your eggs and poultry. Daily cash remittances. Western Produce Co., Spokane.

(Continued on the following page.)

Mention THE WASHINGTON FARMER when writing advertisers.

POULTRY—Miscellaneous (Continued) 174

WE ARE HATCHING HOLLYWOOD AND Tancred strain of White Leghorns every Monday, Wednesday and Friday. Prices at $20 per 100; $195 per 1000. Commercial strain mated with 250-egg cockerels at $15 per 100. R. I. Red, Barred Rocks, Black Minorca and Ancona chicks are priced at $25 per 100. Send for free catalog and prices on incubators, brooders and pullets. Queen Hatchery, Seattle.

ILL-A-HEE BARRED ROCK CHICKS—SUMmer sale of Barred Rock and White Leghorn chicks; May and June chicks are profitable and easy to raise when you know how. Write for our circular telling how we do it. All stock trap nested and pedigreed for years. Discount prices on all late chicks and eggs. Ill-A-Hee Poultry Farm, Jennings Lodge, Ore.

EGGS FOR HATCHING FROM TRAPNESTED stock B. Rock, S. C. White Leghorn and R. C. R. I. Reds, $2.50 per setting; 1 S. C. White Leghorn cockerel, also 3 R. C. R. I. Red cockerels, $5 each if taken at once. L. A. Hoge, R. 1, Prosser, Wash.

EGGS! EGGS! EGGS! "SNOWFLAKE" WHITE Orpingtons, establish highest official Orpington pen record western Washington laying contest. Average 204 eggs; free mating list; hatching eggs, $3, $5, $10 per fifteen. W. T. Thompson, Bozeman, Mont.

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THREE FINE ROSE COMB RHODE ISLAND Red, one fine White Leghorn cockerel, $5 each if taken at once, from trap nested, Hoganized stock, also White Leghorn eggs, $2.50 per 15, from trap nested stock. L. A. Hoge, Prosser, Wash.

LARGE, NICELY MARKED ROUEN DUCKS. Eggs, 11, $2; 100, $15; heavy laying, prize winning strain White Wyandottes; eggs, 15, $2; 100, $10. P. H. Tomlinson, College Place, Wash.

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BLUE ANDALUSIANS; EGGS FOR HATCHing, $2 per setting; heavy layers from beautiful prize winning stock. Mrs. Wm. Rommel, Leahy, Wash.

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SINGLE COMB RHODE ISLAND RED EGGS, $3 per setting, from prize winning stock (Owen strain). Joe Brunsell, Mt. Vernon, Wash.

TRAP NESTED WHITE LEGHORN AND Barred Rock eggs and chicks; records, 200 to 311. Mrs. W. M. Roberts, Elmira, Oregon.

S. C. ANCONAS, SHEPPARD'S SELECT AND 331 egg strain; eggs, $2 per 15; chicks, $20 per hundred. A. B. Larson, Warren, Ore.

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FANCY WHITE WYANDOTTE COCKERELS, $2.50; hatching eggs, two dollars setting. H. L. Lamon, American Falls, Idaho.

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ANCONAS—CHICKS AND HATCHING EGGS. Oscar Dunlap, Junction City, Ore.

POULTRY—Miscellaneous (Continued) 174

LIGHT BRAHMA EGGS, $2 PER 15. DALTON Poultry Farm, Coeur d'Alene, Idaho.

BIG REDUCTION MINORCA EGGS. MRS. Frank Winnard, Heppner, Ore.

LIVE STOCK 177

SEND FOR FREE BOOKLET, "SOME SUGgestions to Live Stock Advertisers," outlining the practices of successful men of long experience. Helps in determining how much to spend, the mediums to select, preparing advertisements, handling inquiries, the use of photographs, etc. Write today. The Pacific Northwest Farm Trio, Dept. W, Spokane, Wash.

LARGE, HEAVY PRODUCING HOLSTEINS for sale at all times in car lots; tuberculin tested; 150 to 200 head always on hand; well marked heifer calves from registered sires and heavy producing dams; crated for shipment anywhere, $25 f. o. b. Levinson & Balmelli, Yakima, Wash.

SHIP US YOUR POULTRY AND LIVE STOCK. We pay the top market prices. Light veal, fat, fancy, 16c; dressed block hogs, 14c; hens, light, 18c; heavy, 22c. Prompt returns. John Lewis & Co., Spokane, Wash.

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WE PAY TOP PRICES FOR YOUR LIVE OR dressed veal, hogs and poultry. Your check by return mail. Shipping tags on request. M. & J. Packing Co., Spokane.

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JOB PRINTING 372

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MONUMENTS 510

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PERSONAL 537

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SEEDS 620

ALFALFA SEED, CLOVER SEED, SEED corn—We are located in the heart of the largest and best alfalfa and clover seed district in the west and can give you both quality and price. Get our samples and quotations before buying. Our seed corn is of the finest acclimated strains. Garden and flower seeds of all kinds. Send for our catalog. Darrow Bros. Seed & Supply Co., Twin Falls, Idaho.

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NURSERY STOCK. (Continued.) 621

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FARM LANDS FOR SALE (Continued) 651

FULLY EQUIPPED STOCK AND DAIRY farm; 465 acres, in beautiful Arcadia valley, only two miles from splendid growing city, Deer Park, Wash., 24 miles north of Spokane; farm is furnishing milk for Deer Park at this time; 100 acres winter wheat, looking fine; 35 alfalfa, under irrigation (perpetual water right); 35 acres ready for spring planting, balance easily cleared; some timber; farm is well improved; seven-room concrete house, basement, 9 feet high; modern dairy and horse barn, with loft for 100 tons hay; two 12x35 concrete silos, capacity 100 tons each; large feed room connects with barn; straw shed, capacity 100 tons; large feeding shed, machinery building and shed; blacksmith and machine shop, ice house, holding 25 tons, completely filled; modern milk house, fully equipped; 77-foot drilled well, with an inflow of 7 feet 6 inches per minute; piped to house, barn, milk house and yard. Complete equipment farm machinery; eight head good work horses and selected herd of 30 purebred registered Holsteins. For price and terms write F. E. Parks, Deer Park, Wash.

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WE WANT TO TELL YOU MORE ABOUT the famous Deschutes valley in central Oregon; a dairy, potato and stockman's paradise; a card brings full particulars. Redmond Land & Loan Co., Inc., Redmond, Oregon. (King Murphy's capitol.)

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TWO GOOD STOCK AND GRAIN RANCHES, 1000 and 640 acres; 175 acres irrigated; 400 acres wheat land; will sell cheap; good terms. Lock Box 545, Heppner, Ore.

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WANT TO HEAR FROM OWNER HAVING farm for sale. Give particulars and lowest price. John J. Black, 80th street, Chippewa Falls, Wis.

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MUNICIPAL LANDS FOR SALE—A REAL OPportunity to get irrigated land, situated along the Columbia river, with the best railroad facilities and longest growing season in the northwest. Soil and climate especially adapted to gardening, chicken raising, bee culture, dairying, to growing grapes, strawberries and fruit in general. The main state highway passes through the project; our schools are the best; one accredited high school and two grade schools. Write for our most attractive terms and folder. The district, and not the agents is selling this land. There will be no commission to pay. We are interested in getting home builders on the project. Address Burbank Irrigation District No. 4, Burbank, Wash.

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CHEAP RAW LAND AT $25 TO $35 PER acre; under irrigation system now in operation; ample water; proven suitable soil and climate for apples and small fruits; alfalfa makes 3 crops. Desirable community. A list of opportunities may be procured from secretary of Community Commercial Club, Kettle Falls, Wn.

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RICH IRRIGATED AGRICULTURAL LAND, on Indian reservation, just opened up, $30 per acre, including fully paid water right. Terms. Browning Development Co., Browning, Mont., 227 Hutton bldg., Spokane, Wash.

EIGHTY ACRES FINE LAND, IRRIGATED; 4 miles from Wendell; terms; no buildings. White, Route 3, Seattle, Wash.

CITY PROPERTY FOR SALE 690

ASHLAND REALTY COMPANY HAVE RESIdences, ranches and business places for sale. Write fully what you want, your expectations and send addressed, stamped envelope. Ashland Realty Company, Ashland, Ore.

FOR SALE OR EXCHANGE 702

480 ACRES WHEAT LAND, NEAR ALMIRA, Wash.; 320 cultivated; 160 in crop, rented; buildings, water; clear; trade for equipment of large ranch, business, or coast ranch, $5500 first mortgage, well secured; 7 per cent interest, due in 7 months, to trade for stock and lease of Palouse ranch; must be good. Box 897, Port Angeles.

QUARTER SECTION FOURTEEN MILES north of Goldendale; thirty acres cleared; fair improvements; free water right. Four thousand dollars. E. D. Clark, Route 2, Selah, Wash.

46 ACRES FINE LEVEL ALL TILLABLE POtato ground; near Valleyford, Wash.; small orchard, no buildings; at $125. Terms. W. Manley, Box 2167, Spokane.



SYNOPSIS.

Shad Trowbridge, a New England lad of about 20 years, sails on a mail boat to Labrador, where he plans to spend a few weeks of summer hunting and fishing in the wilderness. Upon his arrival he meets two experienced fishermen and trappers, Dick Blake and Ed Matheson, who recommend to him a young lad of 17 known as Ungava Bob, as a guide for his hunting and fishing trip inland. Desiring to lose the least time possible in securing Ungava Bob's services and starting inland for his vacation, Shad starts across the bay in his canoe in the face of a threatening storm. In the darkness his canoe is capsized and he is plunged into the icy water. As he rises to the surface a rope is thrown to him and he hears a voice shouting to make it fast. He is soon drawn aboard a little sailboat which, unknown to him had approached at the moment of his great need.

To his surprise, Shad discovers that his new friend, the lad with the sailboat, is none other than Ungava Bob. Together, they make their way to Bob's home, where Shad enjoys the hospitality of the northland while they consider ways and means of making inland excursions. Shad decides to remain a month or more and make the first leg of a long winter of trapping planned by Bob, returning to the settlement in time to sail back home before college opens.

They leave for the wild trapping grounds and Shad is so delighted with the wilderness that he decides to remain with Bob on the trails all winter. The other members of the party start back home, leaving the two boys alone to start their long winter of adventure. But they are not alone! Hardly has the boat carried their friends around the bend of the river before Bob and Shad see two Indians watching them from the shadows of the forest trees.

The Indians proved to be old friends of Bob, but it was not many days until enemies appeared. A group of Mingen Indians, catching Bob and Shad out in their canoe on the river above the Great Falls of Labrador, fired upon them, compelling them to remain in the current and be dragged down to the rapids and seeming certain destruction. In the midst of their peril Bob remembers that in the rapids above the falls there is a small, rocky island, and he skillfully guides the canoe to a safe landing on it. In the meantime their friends, Ed. Matheson and Dick Blake, reach their tilts to find Bob and Shad gone. The Indian maiden, Manikawan, tells them of the supposed loss of Bob and Shad over the falls. She plans to leave at once to wreak vengeance on the enemy Indians who sent them to destruction. Cunningly she entices them onto the river above the rapids and sends them to their deaths at the foot of the falls.

CHAPTER XII.

The Tragedy of the Rapids.

The two adventurers marooned on the island ate their first meal of rabbit, grilled over the coals, with keen relish, though they had neither salt to season it nor bread to accompany it.

"It might be worse," remarked Shad, when the meal was finished. "Rabbit is good, and," he continued, lolling back lazily and contentedly before the fire, "there's always some bright spot to light the darkest cloud—we've no dishes to wash. A rinse of the teal pail, a rinse of our cups, and, presto! the thing's done. I detest dishwashing."

"Aye," admitted Bob, "dishwashin' is a putterin' job."

"Yes, that's it; a puttering job," resumed Shad. "But now let's come to the important question of the day. Continued banqueting upon rabbit, I've been told, becomes monotonous, and under any conditions imprisonment is sure to become monotonous sooner or later. I have a hunch it will be sooner in our case. I'm beginning to chafe under bonds already. What are we going to do about it?"

"I'm not knowin' so soon," confessed Bob, "but I'm thinkin' before this day week Dick an' Ed an' Bill will be huntin' around for us, an' they's like t' find us, an' when they does they'll be finin' a way t' help us. They might build up th' place down there with stones, so's t' make a footin' t' land on, an' then 'twill be easy goin' ashore."

"But suppose they don't come around this way and don't find us?"

"Then I'm thinkin' we'll be bidin' here till ice forms."

"Till ice forms! And when will that be?"

"An' she comes on frosty, ice'll begin formin' th' middle of October on th' banks. But th' current's wonderful strong, an' I'll not be expectin' ice t' cross on till New Year, whatever."

"January first! October! November! December! Three months on this god-forsaken bit of rock! Great Jehoshaphat, man! That'll be an eternity! We can't endure it!"

"I'm not thinkin' we'll have to. I'm thinkin' they'll find us in a fortni't, whatever," reassured Bob, rising and picking up the axe. "We'll be needin a shelter, an' I'm thinkin' I'll build un now."

"And we have no blankets with us!" exclaimed Shad. "Oh, we're going to have a swell time!"

"We'll be fair snug with a shelter, now. I'll be cuttin' th' sticks, an' you breaks boughs."

"All right, Bob, I'll get the boughs," agreed Shad, languidly rising, and as he went to his task singing:

"'Old Noah, he did build an ark,
He made it out of hick'ry bark.

"'If you belong to Gideon's band,
Why here's my heart, and here's my hand,
Looking for a home.

"'He drove the animiles in two by two,
The elephant and the kangaroo.

"'And then he nailed the hatches down,
And told outsiders they might drown.

"'And when he found he had no sail,
He just ran up his own coat tail.

"'If you belong to Gideon's band,
Why here's my heart, and here's my hand,
Looking for a home.'"

A full stomach sometimes wholly changes one's outlook upon the world. Shad was beginning now to view his adventure from a whimsical standpoint, a result induced partially by his dinner, largely by Bob's philosophical attitude.

It was not anticipated the shelter would be required for long, and a comfortable lean-to under the lee of the hill, with back and ends enclosed, and closely thatched with boughs and moss, was considered sufficient. A thick, springy bed of spruce boughs was then arranged, and the temporary home was completed.

Then Bob proceeded to set deadfalls, utilizing flat stones and raising them on a figure 4, which he baited with tender birch boughs. Several rabbits were started in the course of the afternoon, giving assurance that the deadfalls would yield sufficient food for their needs, though no results could be expected from them until the following morning.

"Now for supper, Shad, we'll have t' be usin' some shells," he announced. "Supposin' you tries un. I were goin' t' make a bow an' arrows t' save th' shells, but they's nothin' t' feather th' arrows with, an' no string that'd be strong enough for th' bow."

"All right," agreed Shad. "I'll get them"; and within half an hour he returned with a bag of two fat young rabbits.

Their fire was built before the lean-to, and a very small blaze was found sufficient to heat it to a cozy warmth. Here they sat and ate their grilled rabbit and drank their tea, quite as comfortably as they would have done in their tent or tilt, though during the night one or the other found it necessary to rise several times to renew the fire.

Bivouacking in this manner was more or less of an ordinary circumstance in Ungava Bob's life. He looked upon it as the sort of thing to be expected, and as a matter of course. He felt indeed that they were very fortunately situated, and for the present he had small doubt that their imprisonment would prove but a temporary inconvenience.

The deadfalls yielded them the first night three rabbits; another was shot. They had quite enough to eat the next day and Shad took a brighter view of the matter.

"By Jove!" he laughed, after breakfast. "I wonder what the fellows at home would say if they should see me now, playing the part of Robinson Crusoe?" and then he began to sing:

"'Fare thee well, for I must leave thee.
Do not let the parting grieve thee,
And remember that the best of friends
must part, must part.
Adieu, adieu, kind friends, adieu, adieu,
adieu.
I can no longer stay with you, stay with
you.
I'll hang my harp on a weeping-willow
tree.
And may the world go well with thee.'"

But when another morning came, with no sugar remaining for the tea, and no other food than the now monotonous unsalted rabbit, Shad rebelled.

"See here, Bob!" he exclaimed irritably, "I can't eat any more rabbit! It nauseates me to even think of it! We've got to do something."

"We can't help un, now, Shad," answered Bob soothingly. "Rabbit ain't so bad."

"Not once or twice, or even three times in succession—but eternally and forever, I can't go it."

"It does get a bit wearisome, but 'tis a wonderful lot better'n no rabbit, when rabbit's all there is."

"Wearisome! Wearisome! Confound it, Bob, it's disgusting! Now we've got to do something to get ourselves out of here, and that quick."

"I'm not knowin', now, what t' do till th' others comes, an' I'm knowin' they will."

"Come, Bob, let's make a try for that wall down there. Even if the canoe does get away from us, we can make the wall—I know we can."

"No," and Bob shook his head ominously, "I'm ready t' take any fair chanct, Shad, but they wouldn't be even a fair chanct t' make un."

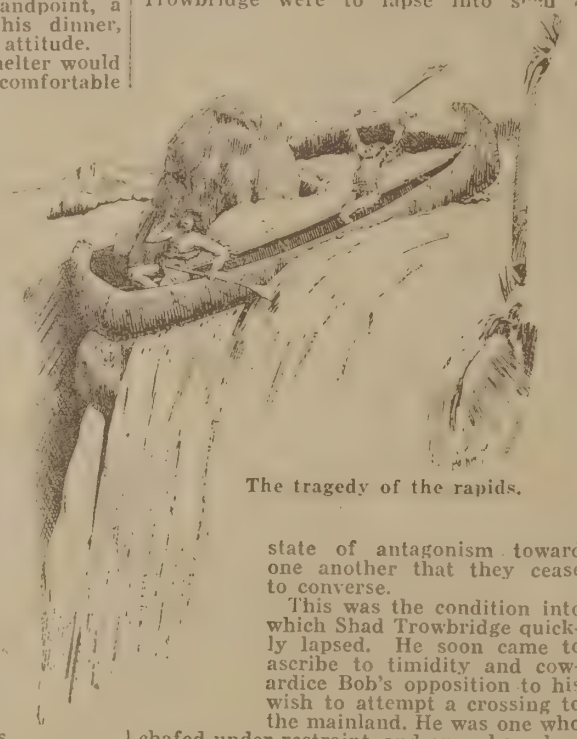
"Oh, bosh!" exclaimed Shad angrily. "I thought you had some nerve."

"'Tisn't a matter o' nerve, Shad; 'tis a matter o' what can be done an' what can't."

"Oh, yes, it can! Any one with two legs and two hands and two eyes and just a grain of grit can do it."

Bob, quiet and unruffled, grilled his rabbit, refusing to take offense or to be moved at Shad's remarks, evidently intended to goad him into what his experience told him would certainly prove a hopeless and foolhardy venture.

It is a psychological phenomenon that men, denied action and confined to limited and solitary surroundings, become highly irascible. They find cause for offense in every word and every action of their companions, and it is not unusual for men situated as Ungava Bob and Shad Trowbridge were to lapse into such a



The tragedy of the rapids.

state of antagonism toward one another that they cease to converse.

This was the condition into which Shad Trowbridge quickly lapsed. He soon came to ascribe to timidity and cowardice Bob's opposition to his wish to attempt a crossing to the mainland. He was one who chafed under restraint, and one who, when he had once decided upon a course of action, could not brook opposition from another; and though at heart he knew that Bob was fearless and brave, and that his arguments were sound, yet he would not now admit this, even to himself.

Normally Shad was a good fellow, and he would endure hardships cheerfully if the hardships were accompanied by physical activity; but the condition of monotonous existence, accompanied by idleness and inactivity, which they were now experiencing, was too great for him to withstand, and he was prepared to take the most desperate chance to escape from it. When at length the tea and his tobacco were gone, and nothing but the daily ration of unseasoned rabbit remained, the thought of thus continuing indefinitely became unendurable to him.

Ungava Bob, on the contrary, had been accustomed to wilderness solitude all his life. This, and a naturally even disposition, coupled with a philosophical temperament, rendered him capable of overlooking Shad's slurs, and when finally Shad ceased to speak to him, or when spoken to by Bob ceased to acknowledge that he heard, Bob permitted the slight to pass unnoticed.

At length, one day, when Shad had nursed his supposed grievance to a point where he could no longer endure it, he blurted out brutally:

"See here, I've stood this devilish cowardice of yours as long as I'm going to. Do you see where the sun is? It's noon. Now I'll give you until that sun drops halfway to the horizon to decide whether or not you're going across with me. If you say 'No,' I'm going without you, that's all, and you can stay here and eat rabbit, and rot, if you choose."

"Now, Shad," Bob placated, "I knows how you feels, an' it's your judgment ag'in mine. But I'm havin' experience with places like that, an' I knows we can't make th' crossin' an' land. Now don't try un, Shad."

"Don't 'Shad' me—— My God, Bob! Look there!" he suddenly broke off.

Shooting past them, half standing in their birch canoe, paddling with the desperation of man facing doom, one with his sound paddle, the other with his broken one, were the Indians that Manikawan had sent adrift.

They were very near the island—so near that every outline of their drawn, terror-stricken faces was visible—but too far away to reach the gravelly point upon which Bob and Shad had found refuge. Indeed, they seemed not to see it, or to see anything but the horrible spectral phantom of the evil spirit that they believed had them in its control.

On—on—on—they sped, ever faster—faster toward the pounding rapids—impotently, though still desperately, wielding their paddles. Bob and Shad stood spellbound and horror-stricken. The Indians were nearing the first white foam! In a moment their canoe would strike it! It was in the foam! It rose for an instant upon a white crest, the Indians' paddles still working—then was swallowed up in the swirling tumult of waves and whirlpools, never to reappear.

Ungava Bob and Shad Trowbridge stood for a moment in awe-stricken horror. Then they sat down upon the rock on which Shad had sunk when overcome with shock on the day of their escape upon the island.

"Bob," said Shad, at last, "that was the most terrible thing I ever beheld!"

"'Twere awful!" assented Bob.

"It shows us, Bob, what you and I escaped. Bob, I've been very disagreeable lately. Take my hand and forgive me, won't you?"

"'Twere th' rabbit meat, Shad," said Bob, taking Shad's hand. "Rabbit meat be wonderful tryin' t' eat steady. I were knowin', now, you'd be all right again, Shad."

"I think I've been demented, Bob—I'm sure I have—anyway, believe it, and don't hold it against me."

"I'll not be holdin' un ag'in you, Shad. 'Twere natural, and——" Bob ceased speaking and sat staring at the high bank of the mainland. "Manikawan!" he exclaimed, spring up and crossing the island point at a bound.

There she stood, joy, wonder, incredulity, written upon her face. She had believed White Brother of the Snow dead, but here she saw him in flesh and alive, and he had spoken her name.

"White Brother of the Snow! Oh, White Brother of the Snow! The evil spirits did not devour you, but like hungry wolves they have devoured your enemies."

Very quickly Bob explained their predicament, and she listened silently. Then she went to the sloping rock, descended its dangerous angle to the water's edge, and returned.

"White Brother of the Snow and his friend would find no lodgment there," said she. "It is a place of deceit. But White Brother of the Snow knows how to be patient. Let him and his friend wait. The evil spirits can not reach up for them where they are. When the sun returns again to the high point in the heavens Manikawan will stand here. Wait."

The next instant she was gone.

"What did she say?" asked Shad.

"She were sayin'," explained Bob, "that if we has patience an' waits she'll be back by noon tomorrow, or thereabouts. An' she says if we waits here we'll be safe, but we couldn't be makin' a footin' on th' rock. She's thinkin' o' some way o' gettin' us off, but I'm not knowin' what 'tis, now."

(To be continued.)

Bits of Fun for Everyone

Poultry Yard Scandal.

She—You promised to love me always.

He—Yes, and you promised to keep yourself neat and attractive. Here it is only three months after I marry you, and you're molting.

A Rough Rider.

Waiter (on the dining coach)—Boss, we can't serve your order of fried eggs. The road is so rough through here that every time the cook puts your eggs in the pan they scramble.

Two of a Kind.

Two women were talking together in the Union station in Chicago.

"My sister and me," said one, "we ain't no more alike than if we wasn't us. Yes, ma'am, she's just as different as I be, only the other way."—Life.

Had to Fit His Shirt.

"What's the matter with Smith? Got lumbago or spinal curvature or something?"

"No; he has to walk that way to fit some shirts his wife made for him."—Richmond Times-Dispatch.

Removed the Cause.

"How about that new heaves medicine you tried?"

"Well, you know that feller said it cured by gettin' at the cause."

"Yep, I remember."

"I figured it out since that he was right. Breathin' is the cause of heaves—that is, a crittur has to breathe if he's goin' to heave. Well, my horse quit breathin' after I tried that medicine."

FAMILY CIRCLE

ALICE BARLAND
EDITORIAL CONTRIBUTOR

Experience Letters

From Our Family Circle Women

Dear Mrs. Barland: Your department is the most interesting part of the paper to me, and especially the articles in regard to rearing children. Perhaps there would be more articles if it were not true that not many mothers have found their attempts to train their children so completely successful that they feel capable of offering advice.

Regardless of how hard we try to do the right thing we see our mistakes and the faults in the children we have as yet been unable to control, which make us feel so humble that we don't like to set ourselves up as authority on the subject.

I will not attempt to give advice, but wish to recount a mistake I made with my child, in the hope that some other mother may profit by it.

My child is a healthy boy of 8, active and good natured and the school nurse pronounced him normal in every respect, but he was very disappointing in one way. He wouldn't study, kindergarten games didn't seem to interest him, and all my efforts to teach him to read met with failure. He would wrinkle his brow and seem to be making a desperate effort to remember the words, and then he'd make excuses and plead with me to let him go or maybe cry and say he didn't want to learn to read, didn't care what the story said, had a stomachache or itched all over or felt awfully tired. He would say, "Please, mother, can't I rest just a little while?" But I noticed that he didn't get tired when he was playing out of doors or going after the cows, so I finally concluded that he must be backward and it would be best to let him develop a little more before putting him to any sort of mental exertion. So I waited and watched, but time showed no improvement. He didn't care about drawing pictures or making things with his hands or even playing with his toys.

He never took them apart to see how they were made and, although delighted with them at first, he soon abandoned them and went out of doors to dig or tramp or chop wood or something of that sort. He could sing very well, but wouldn't try to play, could do sums in his head surprisingly well, but said he didn't like to do them at the board.

After watching him awhile I was convinced he was mentally capable, but merely lazy, so I sent him to school and talked to him about being industrious and honorable about doing his work well, and he seemed impressed and said he would try. But it did no good; the teacher complained of her inability to hold his attention on his books and said he seemed perfectly able to do the work, but just wouldn't.

She thought it was mostly laziness and the rest either shyness or stubbornness, so we cooperated and compelled him to work, because we thought it a bad thing to allow him to form the habit of getting out of unpleasant tasks by making excuses.

He made plenty of them and I lectured him about that, too, but one day when the excuses were more numerous even than usual and he complained of dizziness it occurred to me to wonder if his eyes could be at fault. He had always seemed to have particularly good vision and could see distant objects better than the rest of us.

I took him to a specialist that afternoon and the riddle was explained. The poor little fellow is so far-sighted that he can not see near objects clearly without great strain. The effort to do so had resulted in the "stomachache" and all the "queer feelings" he spoke of having, which I thought were excuses for laziness. Can you imagine my feelings when I thought of the injustices I had done my boy and the unintentional cruelties I had imposed upon him, in my efforts to break his fault?

Since he has his glasses there are no more excuses and he is progressing satisfactorily, not only in his studies, but in everything that requires close vision. No one would ever accuse him of laziness now.

This has taught me a lesson I hope I shall never forget and that is to be sure I am right before I go ahead. But that is a very difficult thing to be sure of always, isn't it? RUTH L. LONG.

Dear Happy Housewife of Chewelah, Wash.: I wish you had signed your name. I wish every one would. Thank you for the recipe, which will appear in the near future. Will you please write and tell me for the Circle how to make the pine needle baskets? They sound interesting and we have plenty of the material about everywhere on this coast. We are glad to know that white spots may be removed from furniture by lightly touching the spot with chloroform; do not rub the spot.

All bulbs should be taken up after blooming and carefully dried, then stored in some dry place till time to plant again. You can use the ground again as you desire.

Don't fail to tell us about the pine needle baskets. A. W. BARLAND.

Dear Mrs. Barland: Although I live in the city I am a faithful reader of THE FARMER, especially the Family Circle.

My husband and I were raised on a farm and we are very glad we were; we like farm life and hope to return to it ere long.

I want to tell the sisters how I managed to use four pairs of too short sheets which I found I had when I was first married.

I sewed together with felled seams five 100-pound floursacks, then cut this strip in two and hemmed the edges, making two strips long enough to tuck over the mattress well when put over it crosswise. This I put on under the sheet, drawing it up far enough at the top and tucking it in on each side, so the mattress is well protected. Having two of them I can change when I change the sheet. I like this much better than to piece all the sheets. MRS. GOLDINA LOFLIN,
1017 South Adams, Tacoma, Wash.

Dear Mrs. Barland: I have a few helpful hints to pass on. Many people find it hard to use up stale, left-over bread. I use one-third cup of bread crumbs to one cup of flour for hot cakes. This uses up all my stale bread.

On wash days I add two tablespoons of turpentine to the water in which I boil my towels, then with a very little rubbing they are as white as snow.

MRS. JOHN HOULE.
Toppenish, Wash.

Plant Plenty

One finds all the food charts agreeing with the Scriptures of old that peas are one of the most valuable of foods. In the protein and energy supplying group they occupy a place of honor; in the iron-supplying list they stand well toward the top; among the lime-containing group they have mention. They also furnish phosphate and iodine and increase the alkali reserve. They contribute to the supply of the anti-scorbutic vitamine in some degree. Scarcely a food, except milk and milk products, offers a more valuable contribution to the list of essential elements of nutrition.

Daniel and his strong young companions, it will be remembered, requested the privilege of a trial of strength, on their diet of peas, or pulse, with the flesh-eating young men of Egypt, and easily came out ahead.

Green-leafed foods—chard, spinach and lettuce—are as generous in the mineral elements needful to the system, but have not, in addition, the energy-supplying content. Neither group, peas nor the greens, are often found present in the diet to the extent to which it would profit by them. Most of us plant plenty of lettuce, but find our provision of the others running short, or not well distributed through the season.

With the increased popularity of vegetable-drying, with the simplifying of home canning processes and the growing knowledge of the value of these foods, little of them is in danger of going to waste when they are generously planted by the thrifty family. Peas, especially, admit of preparation and preservation in a multitude of ways. Why not plan to have them all year for the salad and the soup, serve them deliciously creamed, and have them in season with new potatoes and the other vegetables with which they combine so well?

Just Folks

Many matters of life take care of themselves. One does not have to meddle with them.

To know what to leave alone is one of the high arts of life.

Do you want to reform the world? Most of us find our hands full in reforming ourselves.

You will never get to the mountain top by trying to get all your acquaintances to climb with you.

A program in life means a program for yourself, not for your neighbors.

Even leaders lead more by example than by precept.

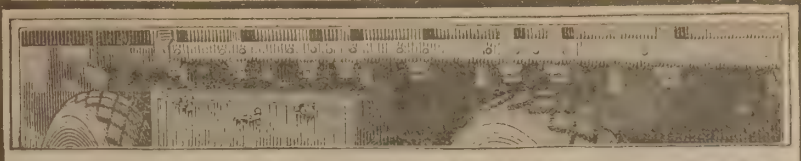
To free oneself from unnecessary encumbrances is the work of peace as well as the work of war.

Whether horses need them or not, men certainly need blinders to shut out side attractions.

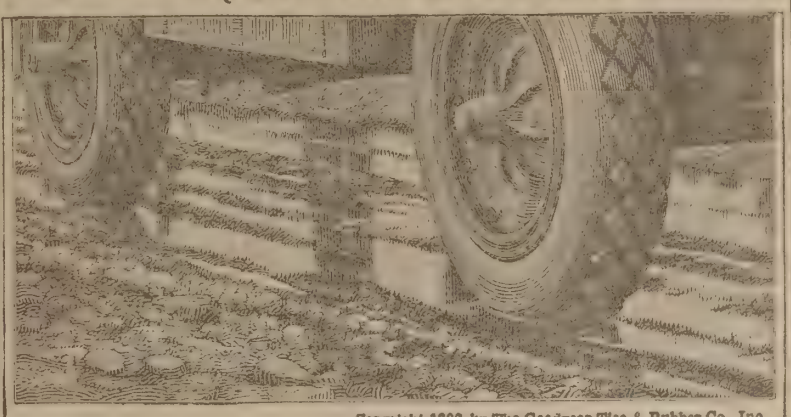
Listening unduly to wees is as bad as being captivated by sideshows.

To do is to largely forget the other fellow.

Obsession may be on the borderland of the madhouse, but you must go as near to the danger line as possible to accomplish your own supreme purpose.



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High Points in News of the Week

Freight rates must be revised in favor of the farmer if normalcy is to be restored. This is the outstanding feature of the report of the congressional commission appointed some time ago to investigate freight rates from the standpoint of their effects on agriculture. The report was made to congress last week by Chairman Anderson. It declared that the commission considered it necessary to readjust freight rates to the relationship existing before the important changes of 1918.

Effects of freight rates are emphasized, it was said, because on perishables "they amount normally to one-third of the selling price, and frequently two-thirds" and "purchasers and farmers are dependent in a marked degree upon transportation charges" in prices. The general result of increased railroad rates and depressed commodity prices was to bring railroad rates on farm products in October, 1921, to an index average of 169, or roughly 69 per cent above pre-war levels, while farm products stood at 102, or barely 2 per cent above prewar.

The commission advanced three specific proposals to better transportation service for farmers, the first being the enlargement of "competition avenues of distribution through which the largest number of consumers can reasonably be reached"; the second was the extension of through rates on grain "to points of consumption through two or more competitive primary markets," and the third the extension of the principle that coarse grains, such as corn, should take lower charges than breadstuffs.

Further, the commission found that "livestock shows marked fluctuations in shipment volume" and that railroads, stockyards and shippers should cooperate to even out the supply at market points, thus preventing price and charge impositions, while hay, as the bulkiest farm commodity, required "a reduction in both freight and sales margin before there can be resumption of normal shipments."

On dairy products and on cotton the commission concluded that freight charges had not had so serious an effect upon some other farm stuffs, and as to wool, Mr. Anderson remarked that its price "to the producer has been depressed somewhat by freight rates, but primarily by disorderly and unscientific marketing."

Moving to the study of indirect freight costs affecting farmers, as they enhance prices of things farmers buy, Chairman Anderson said that "fertilizer prices were found to be close to pre-war basis except for freight rates." Factory prices of farm implements, it was concluded, are now rapidly receding to a lower price level, but freight rates now accumulate to the point of being 15 per cent of the price farmers pay for machinery, while before the war the freight charge constituted but 11 per cent.

* * *

Secretary of Agriculture Wallace delivered an address last week by general wireless, reaching, it is believed, the largest number of persons who ever heard a single speech. He spoke on Arbor day, urging that the American people adopt a policy of treee protection and production.

* * *

Reports from Washington indicate that the likelihood of the soldiers' bonus bill passing within the near future is increasing. It is declared that the senate leaders and President Harding have about agreed upon ways of meeting the cost, and that the measure will be acted upon within a few weeks. The house of representatives has already passed the measure without providing any means of paying the cost, which is estimated at around $4,000,000,000.

* * *

The war department is considering the abandonment of Camp Lewis, Wash., the largest Pacific northwest army camp. If it is abandoned the soldiers now stationed there will be scattered to smaller posts.

* * *

Will H. Hays, superintendent of the American Motion Picture association, has ruled that films in which Roscoe (Fatty) Arbuckle appears shall not be shown. Arbuckle was recently acquitted of a manslaughter charge in connection with the death of Virginia Rappe, a motion picture actress, but the affair has not been blotted out as a black scandal in the moving picture business.

* * *

The house of representatives has adopted the senate amendment to the naval bill making the enlisted personnel of the navy 86,000 men instead of 67,000, as in the bill which it originally passed.

* * *

Peter Foley of Boston, aged 70 years, a former long distance runner of repute, ran 25 miles in a recent meet in 3 hours 48 minutes.

* * *

The international finance conference at Genoa, Italy, continues to struggle with world finance. The conference was startled last week when the German and Russian delegates met separately and entered into a treaty reestablishing diplomatic and industrial relations between the two countries. As a result of this action, the main conference barred German delegates from sitting in on the consideration of the Russian problems involved in the discussions.

* * *

A quarter of a million men will be in military training in camps during the coming summer, if the plans of the war department are carried out. This does not include the regular army forces, but national guard units and organizations made up of civilians who wish to avail themselves of the opportunity of a short period of military training. The camps will continue for periods of from two to six weeks.

* * *

Famine conditions are much improved in Russia through the efforts of the American relief commission, it is reported. Most districts within reach are said to be protected now until the coming harvest makes local food supplies available.

* * *

President Harding has appointed a commission of men whose duties are to devise ways and means of collecting the $11,000,000,000 owed to this country by foreign nations.

* * *

Chicago and other middle western districts were visited by a severe windstorm last week, doing some damage and taking a few lives.

* * *

Former President Wilson's physicians announced last week that his health was the best it has been since his breakdown in 1919. He is said to be able to walk about his home without the aid of a cane. He is said to be as active mentally as ever.

* * *

Governor Edwards of New Jersey has announced himself a candidate for the United States senate. He is recognized as in sympathy with the anti-prohibition movement.

* * *

The United States department of labor announces that there has been a reduction of about 20 per cent in the cost of what the farmer buys sinc eFebruary, 1921. The reductions are greatest in machinery and tools.

* * *

Spokesmen for the present administration at Washington declare that the government is now being run at a reduction of about $4,000,000 from the recent high costs. The total cost for the fiscal year ending June 30, 1922, is expected to be slightly under $4,000,000,000.

* * *

The federal comptroller of the currency urged upon American bankers recently that they exert their full influence to keep their patrons from making unwise investments. He declared that there were sufficient opportunities for investment in legitimate, safe industrial and government securities without taking chances on wildcat stocks.

* * *

The two most prominent measures now before congress are the tariff and bonus bills. President Harding has made it clear to members of congress that he considers the tariff of more importance for immediate consideration than the bonus bill. It is believed that the senate will postpone definite action on the latter, though hearings are to be in progress this week.

Farm Business and Markets Outlook

(Continued from page five.)

LATEST QUOTATIONS.

The Live Stock Market.

PORTLAND, April 22.—Cattle—Choice steers, $8@8.50; medium to good steers, $7.25@8.50; fair to medium steers, $6.50@7.25; common to fair steers, $5@6.50; choice feeders $5@6; fair to good feeders, $4.50@6.50; choice cows and heifers, $6.25@6.75; medium to good cows and heifers, $5.50@6.25; fair to medium cows and heifers, $4.50@5.50; common cows, $3.75@4.75; calves, $2.25@2.75; bulls, $3.50@5; choice dairy calves, $9.50@10; prime light calves, $9@9.50; medium to light calves, $8.50@9; heavy calves, $4.50@6.50.

Hogs—Prime light, $11.50@11.75; smooth heavy, 200 to 300 lbs., $10@11.25; smooth heavy, 300 lbs. up, $9@10; rough heavy, $7@9.75; fat pigs, $10.25@11; feeder pigs, $11@11.50; stags, subject to dockage, $5@8.

Sheep—Best spring lambs, $10@13; medium spring lambs, $7.50@10; common spring lambs, $5@7; east-of-mountain lambs, $13@14; best valley lambs, $12@13; fair to good, $10@11; cull lambs, $6@8; eastern Oregon feeders, $9@10; light yearlings, $10@11; heavy yearlings, $9@10.50; light wethers, $9.50@10; heavy wethers, $9@9.50; ewes, $3@7.50.

SPOKANE, April 22.—Cattle—Prime steers, $1@8; good to choice steers, $6@7; medium to good steers, $5.50@6.75; fair to medium steers, $4.75@5.50; common to fair steers, $4.25@4.75; choice cows and heifers, $5.50@6.50; good to choice cows and heifers, 4.50@5.50; medium to good cows and heifers, $4@4.50; fair to medium cows and heifers, $3@4; canners, $2@3; bulls, $3@5.50; light veal calves, $8@10; heavy veal calves, $4@8; stockers and feeders, $4.50@5.50.

Hogs—Prime mixed, $11@11.50; medium, $10@11; heavies, $8@9; fat pigs, $10@11; stockers and feeders, $10@11.

Sheep—Prime lambs, $11@13; fair to medium, $10@11; yearlings, $10@11; wethers, $9.50@10; mutton ewes, $3@7.50; feeder lambs, $8@9.

The Grain Market.

PORTLAND, April 22.—Wheat—Hard white, $1.31; soft white, white club, hard winter, northern spring, $1.30; red Walla, $1.27.

Grain futures: Wheat—Hard white, April, May, June, $1.31; soft white, white club, hard winter, northern spring, Apil, May, June, $1.30; red Walla, April, May, June, $1.27.

Oats—No. 2 white feed, April, May, June, $35.50; No. 2 gray, April, May, June, $35.

Corn—No. 2 eastern yellow shipment, April, May, June, $28.50; No. 2 eastern yellow shipment, $28.

SEATTLE, April 22.—Wheat—Hard white, soft white, white club, soft red winter, northern spring, $1.30; hard red winter, $1.32; eastern red Walla Walla, $1.27; Big Bend Bluestem, $1.55.

RITZVILLE, April 22.—Bart, $1.47; red, $1.32; Fife, $1.05.

POMEROY, April 22.—Turkey red, $1.10; hybrid, $1.02.

WALLA WALLA, April 22.—Club wheat, $1.14; Bluestem, Turkey ed and Bart, $1.15.

PULLMAN, April 22.—Red wheat, $1.04; white wheat, $1.07.

ODESSA, April 22.—Marquis, $1.49; Bluestem and Bart, $1.47; Turkey red, $1.35; Jones Fife, $1.07.

Hay and Feed Grain.

PORTLAND, April 22.—Millfeed—Price f. o. b. mill: Millrun, ton lots, $30; mixed cars, $29; straight cars, $28 per ton; middlings, $44; rolled barley, $37@39; rolled oats, $42; scratch feed, $52 per ton.

Corn—White, $36; cracked, $38.

Hay—Buying price f. o. b. Portland: Alfalfa, $20 per ton; cheat, $13.50@14; oats and vetch, $17; clover, $14; valley timothy, $16@17; eastern Oregon timothy, $20@21.

SPOKANE, April 22.—Wheat—Feed wheat, $46 per ton.

Oats—$40 per ton; steam rolled, $42.

Corn—$36 per ton; cracked corn, $38 ton.

Barley—$40; steam rolled, $42.

Bran and shorts—$30 per ton.

Alfalfa, $22 ton; timothy, $22 ton; mixed hay, $18 ton.

General Produce.

PORTLAND, Ore., April 22.—Butter—Cubes, extras, 33@34c per lb; parchment wrapped, box lots, 38c; cartons, 39c. Butterfat, buying price: No. 1 grade, 37c, delivered Portland.

Eggs—Buying prices, 19c dozen, case count; henneries, 21@22c; jobbing prices, case count, 21c; candled ranch, 21@22c; selects, 25c.

Cheese—Tillamook triplets, price to jobbers, f. o. b. Tillamook, 23c; young Americas, 24c lb.

Poultry—Hens, 23@27c; ducks, nominal; geese, nominal; turkeys, live, nominal; dressed, 35@38c.

Pork—Fancy, 15½c pound.

Veal—Fancy, 12½c@13c pound.

SPOKANE, April 22.—Fresh ranch eggs—$7.50 case; no storage eggs; pullet eggs, $7.

Poultry—Fat hens, 23c lb; light hens, 20c lb; roosters, 10c lb.

Butterfat—36c pound.

Range of Live Stock Prices for the Week Ending April 19

CATTLE.	Chicago.	Spokane.	Portland.	N Salt Lake
Choice, prime heavy steers (1100 lb. up)	8.75@ 9.50	.....	.....	.....
Good heavy steers	8.25@ 8.85	.....	.....	.....
Medium heavy steers	7.40@ 8.40	.....	.....	.....
Common heavy steers	6.75@ 7.60	.....	.....	.....
Choice, prime light steers (1100 lb. d'n)	8.75@ 9.50	.....	.....	.....
Good light steers	8.15@ 8.85	.....	7.25@ 8.00	.....
Medium light steers	7.30@ 8.40	6.50@ 8.00	6.50@ 7.50	6.50@ 7.25
Common light steers	6.60@ 7.50	4.75@ 6.50	5.00@ 6.50	4.00@ 6.50
Common to choice butcher heifers	5.35@ 8.60	4.00@ 6.50	4.50@ 6.50	4.00@ 5.50
Common to choice butcher cows	4.35@ 7.35	3.00@ 5.50	3.50@ 5.75	3.50@ 5.00
Bologna and beef bulls	4.10@ 6.50	3.00@ 5.50	3.50@ 4.50	2.00@ 3.50
Canners and cutters, cows and heifers	3.25@ 4.50	2.00@ 3.50	2.00@ 3.50	2.00@ 3.00
Canner steers	4.25@ 5.25	3.00@ 4.50	3.00@ 4.50	3.00@ 4.00
Medium to choice light veals	5.50@ 7.75	8.00@10.00	7.00@10.00	6.00@ 8.00
Common to choice heavy veals	4.00@ 7.00	4.50@ 8.00	4.50@ 7.00	.....
Common to choice feeders (1000 lb. up)	5.50@ 7.50	.....	.....	.....
Common to choice feeders (750-1000 lb.)	5.40@ 7.50	4.50@ 5.50	4.50@ 6.50	.....
Common to choice stocker steers	5.25@ 7.40	.....	.....	.....
Com. to choice stocker cows, heifers	4.00@ 5.50	.....	.....	.....
HOGS.				
Top of market	10.85	11.60	11.60	10.45
Bulk of sales	9.75@10.75	11.00@11.50	11.00@11.50	9.75@10.25
Heavy (250 lb. up)	9.90@10.55	10.00@11.00	10.00@10.75	.....
Medium (200-250 lb.)	10.10@10.75	10.50@11.25	10.50@11.25	9.50@10.00
Light (150-200 lb.)	10.25@10.75	11.00@11.50	11.00@11.60	9.45@10.45
Light lights (130-150 lb.)	9.75@10.75	11.00@11.50	11.00@11.60	9.75@10.45
Smooth packing sows (250 lb. up)	9.00@10.00	9.00@10.00	9.00@10.00	.....
Rough packing sows (200 lb. up)	8.75@ 9.60	8.00@ 9.00	7.00@ 9.00	.....
Medium to choice pigs (130 lb. down)	8.75@10.50	10.00@11.00	10.50@11.00	9.00@10.00
Stock pigs	.....	10.00@11.00	10.50@11.00	8.50@ 9.25
SHEEP AND LAMBS.				
Medium to prime lambs (84 lb. down)	11.25@14.50	9.00@13.00	9.00@14.00	9.00@11.75
Culls and common lambs	9.00@11.75	8.00@ 9.50	5.00@ 9.00	5.50@ 9.00
Medium to prime yearling wethers	9.75@13.50	6.00@ 9.00	9.00@10.00	8.00@ 9.00
Medium to prime wethers	7.25@10.50	4.50@ 6.00	9.00@10.00	6.50@ 7.50
Medium to choice ewes	6.50@ 9.50	4.50@ 7.50	4.50@ 7.50	4.00@ 5.50
Culls and common ewes	3.00@ 6.50	2.50@ 4.50	3.00@ 5.00	2.50@ 4.00
Feeder lambs	.....	7.00@ 9.00	8.50@10.00	.....

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Your Health

By Royal S. Copeland, M. D., F. A. C. S.

A few weeks ago I prepared an article on canned goods. It excited so many questions I am convinced it will be a good thing to say a little more on the subject.



Dr. Copeland.

No one of us wishes to eat any damaged or harmful food. One of the promising signs of the time is the aparent anxiety of the public to find out all it can about foods. There is really a desire to know two things—how to avoid bad food and how to select good food.

What happens to fruit or vegetables after canning depends largely on the temperature of the storage room. Every good housewife demands a refrigerator or a cool cellar. The perfect preservation of canned goods is determined by the adequacy of the cooling system.

When good material is properly prepared and canned there is no reason why it should not keep indefinitely. When a can of well-canned fruit or vegetables is taken into the hand it is found clear. The label is unstained by fluids which have escaped under the cap or from some other leak.

On opening the can there is a sweet, fruity or vegetable odor. If there is an unnatural or offensive smell something is wrong.

The juices or fluids of the can or jar of perfectly preserved fruit or vegetables are clear and sparkling. They are not turbid and cloudy.

Food poisonings are not so common as they were five or six years ago. Demand for pure food and better knowledge of foods have improved conditions.

Nausea, vomiting and purging are indicative of food poisoning. These symptoms are nature's way of getting rid of the poison. The vomiting should be encouraged. This is the first indication for treatment.

Then the patient should be put to bed and kept warm with hot water bottles and blankets. Send for the doctor at once.

Latest High Class Patterns for the Home

Please order the patterns you desire at least two or three weeks before you wish to use them. Desiring to obtain the latest high-class patterns for its readers, THE FARMER has made arrangements to have them sent direct from the east, and under present mailing conditions it takes about that time for them to reach you.



3846-3787-3946. Lady's Sports Suit. Blouse 3787 and guimpe 3846 are cut in seven sizes: 34, 36, 38, 40, 42, 44, and 46 inches bust measure. Skirt 3946 cut in six sizes: 25, 27, 29, 31, 33, and 35 inches waist measure. The skirt requires 3 5-8 yards of 44-inch material. Its width at the foot is about 3 3-8 yards. The guimpe requires 3 1-2 yards of 27-inch material and the blouse 2 1-4 yards of 36-inch material, for a medium size. Three separate patterns, 10 cents for each pattern.

3530. Misses' Dress. Cut in three sizes: 16, 18, and 20 years. An 18-year size will require 6 1-4 yards of 40-inch material. The width of the skirt at the foot is 2 yards. Price 10 cents.

3591. Lady's Dress. Cut in seven sizes: 34, 36, 38, 40, 42, 44, and 46 inches bust measure. A 38-inch size will require 3 3-8 yards of 54-inch material. The width of the skirt at the foot is 2 yards. Price 10 cents.

3971. Lady's Apron Dress. Cut in four sizes: Small, 34-36; medium, 38-40; large, 42-44; extra large, 46-48 inches bust measure. A medium size requires 4 yards of 36-inch material. The width at the foot is about 2 yards. Price 10 cents.

3736. Lady's House Dress. Cut in six sizes: 34, 36, 38, 40, 42, and 44 inches bust measure. A 38-inch size will require 5 1-4 yards of 38-inch material. Price 10 cents.

3532. Child's Play Suit. Cut in four sizes: 2, 4, 6, and 8 years. A 4-year size will require 2 1-4 yards of 36-inch material. Price 10 cents.

3957. Girl's Dress. Cut in four sizes: 4, 6, 8, and 10 years. A 6-year size requires 1 5-8 yards of 27-inch material for the guimpe, and 1 1-2 yards of 40-inch material for the "dress." Price 10 cents.

3436. Boy's Blouse and Trousers. Cut in five sizes: 6, 8, 10, 12, and 14 years. A 10-year size requires 1 7-8 yards of 36-inch material for the blouse and 1 3-8 yards for the knickerbockers. Price 10 cents.

3967. Lady's Night Dress. Cut in four sizes: Small, 34-36; medium, 38-40; large, 42-44; extra large, 46-48 inches bust measure. A medium size requires 4 1-2 yards of 32-inch material. Price 10 cents.

3045. Lady's Envelope Chemise. Cut in four sizes: Small, 32-34; medium, 36-38; large, 40-42; and extra large, 44-46 inches bust measure. Size medium requires 2 5-8 yards of 36-inch material. Price 10 cents.

3781. Girl's Jumper Dress. Cut in four sizes: 8, 10, 12, and 14 years. A 12-year size will require 4 1-2 yards of 40-inch material. Price 10 cents.

3954. Child's Romper. Cut in five sizes: 1, 2, 3, 4, and 5 years. A 2-year size requires 2 3-8 yards of 27-inch material. Price 10 cents.

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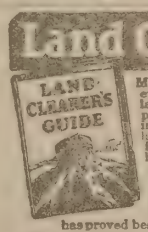
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LOOK AT THE GOOD FARM BARGAINS THAT ARE OFFERED ON THE FARMERS' "WANT AD" PAGE THIS WEEK.



Jessie Manis, 9 years old February 15, 1922, writes: "We have a pretty place. There are many mountains all around us, a long way off, but they look close. Our house is on the left-hand side of the road." Jessie likes to turn the separator for her mother. Her home is on the boundary between Walla Walla and Columbia counties, in southeastern Washington. She says sister has a little brown colt with a white star in her forehead.

For her birthday Dilla Fisher received a white dress for summer, a school cap, $2.50, a Sunday school bag, a hair ribbon and a birthday cake. February 8, 1922, she was 10. Dilla is another Spokane county (Washington) cousin. (Aunt Nellie will be glad to receive your picture, Dilla.)

Marion Meyers of southwest Washington, Clarke county, writes that their old schoolhouse burned down and now they have a new one. They have a gymnasium class at school and on St. Patrick's day they gave a party. Marion says some of their plants at school are in bloom.

Victor Knight, southern Chelan county, Washington, writes: "I am glad that spring is coming. The robins are singing along the creek and I saw a bluebird." Victor likes to climb the hills and pick flowers. He says when spring comes there will be a weiner roast down by the creek, with somersaults and other lively sports following.

We thank Alvena Scheurman for her story entitled "Treasure Hunting." Alvena is one of our Washington cousins. Her home is in the Palouse country.

BEDTIME STORIES

By THORNTON W. BURGESS.

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LONGLEGS VISITS SMILING POOL.

Longlegs the Blue Heron watched Billy Mink and Little Joe Otter disappear down the Laughing Brook. As long as they were in sight he sat without moving, his head drawn down between his shoulders just as if he had nothing more important to think about than a morning nap. But if you had been near enough to have seen his keen eyes you would never have suspected him of even thinking of a nap. Just as soon as he felt sure that the two little brown-coated scamps were out of sight he stretched his long neck up until he was almost twice as tall as he had been a minute before. He looked this way and that way to make sure that no danger was near, spread his great wings, flapped heavily up into the air, and then, with his head once more tucked back between his shoulders and his long legs straight out behind him, he flew out over the Green Meadows, and, making a big circle, headed straight for the Smiling Pool.

All this time Billy Mink and Little Joe Otter had not been so far away as Longlegs supposed. They had been hiding where they could watch him, and the instant he spread his wings they started back up the Laughing Brook toward the Smiling Pool to see what would happen there. You see, they had told Longlegs that Grandfather Frog was fast asleep on his big green lily pad and they knew perfectly well that Longlegs was flying up to the Smiling Pool in the hope that he would catch Grandfather Frog for his breakfast. They didn't really mean that any harm should come to Grandfather Frog, but they meant that he should have a great fright. You see, they were like a great many other people, so heedless and thoughtless that they thought it fun to frighten others.

"Of course, we'll waken Grandfather Frog in time for him to get away with nothing more than a great scare," said Little Joe Otter as they hurried along. "It will be such fun to see his big, goggly eyes pop out when he opens them and sees Longlegs just ready to gobble him up! And won't Longlegs be hopping mad when we cheat him out of the breakfast he will be so sure he is going to have!"

They reached the Smiling Pool before Longlegs, who had taken a roundabout way, and they hid among the bulrushes where they could see and not be seen.

"There's the old fellow just as I left him, fast asleep," whispered Billy Mink.

Sure enough, there in his big green lily pad sat Grandfather Frog with his eyes shut. At least they seemed to be shut. And over on top of his big house sat Jerry Muskrat. Jerry seemed to be too busy opening a fresh water clam to notice anything else, but the truth is he was watching all that was going on. You see, he had suspected that Billy Mink was up to some mischief that morning and he had guessed that he was going to play some trick on Grandfather Frog. So he had warned him. When he had seen Longlegs coming toward the Smiling Pool he had given Grandfather Frog another warning, and he knew that now he was only pretending to be asleep.

Straight up to the Smiling Pool came Longlegs the Blue Heron and on the very edge of it, among the bulrushes, he dropped his long legs and stood with his toes in the water, his long neck stretched up so that he could look all over the Smiling Pool. There, just as Little Joe Otter had said, sat Grandfather Frog on his big green lily pad fast asleep. At least he seemed to be fast asleep. The eyes of Longlegs sparkled with hunger and the



"There's the old fellow just as I left him, fast asleep," whispered Billy Mink.

thought of what a splendid breakfast Grandfather Frog would make. Very slowly, putting each foot down as carefully as he knew how, Longlegs began to walk along the shore so as to get opposite the big green lily pad where Grandfather Frog was sitting. And over in the bulrushes on the other side Little Joe Otter and Billy Mink nudged each other and clapped their hands over their mouths to keep from laughing aloud.

(Copyright by J. G. Lloyd.)

Birthday Greetings

THURSDAY, April 27—Floretta Herrick, 11 years old.

FRIDAY, April 28—Stella Ableman, 9 years old; Esther Westerback, 9.

SATURDAY, April 29—Alice Branscom, 10 years old; Elva Burleson, 11; Paulina Forsman, 6; Elenor Geneva Hagy, 11; Louise Hinrichs, 11; Achsak New, 10; Jessie Peckham, 8; Elaine Pierson, 10.

SUNDAY, April 30 Jennie Mae Beardslee, 10 years old.

MONDAY, May 1—Howard Belknap, 9 years old

TUESDAY, May 2—Leona Jane Meyer, 11 years old; Carol Wolverton, 9.

WEDNESDAY, May 3—Gladys Eagle, 9 years old; Orson Ellithorpe, 11; Violet Miller, 10; Welby Rew, 9; Vessie Shelton, 11.

LETTERS WELCOMED BY AUNT NELLIE.

Among recent letters received by Aunt Nellie are those from cousins whose names follow. A few of these will be published each week in the regular edition of THE FARMER, and others will appear from time to time in The Junior Farmer:

Hulda Schmauder, Mabel Habberstadt, Muriel Daugherty, Clara Breitmein, Helen Flork, Lucille Jackson, Maxine Chiles, Elmi Jackson, Hazel Heiman, Edith Aylward, Verna Rowell, Archie Hansen, Edna Yochum, Maude Stoney, Evelyn Glenn, Agnes Hassell, Fern Daugherty, Bella Harvey, Grace Jewell, Hilda Patterson, Lena Kantz, Elsie Richards, Frances Letford, Arnold Franz, Thordis Fierlie, Margaret Blake, Dorothy Wood, Walter Huck, Venita Steward, Mary Plummer, Jeannette Byford, Isabell and Blanche Bernard, Gladys Nead, Emma Rouber, George Johnson, Ruth Otterstedt, Viola Laabs, Dorothy Barry, Velma Davenport, Edna Clarke, Fred Lewis Jenkins, Galen Pobst, Marjorie Fike, Helen Stonerook, Virgil Shields, Kenneth Olson, Bennie Fromm, Gladys Lucile Barcelow, Vera Ferch.

Elsie Reifenberger, Esther Simill, Albert Edwards, Wayne Daggett, Thelma Miller, Ora Dufur, Inez Watson, Ione Anderson, Joseph Halsted, Grace Marlatt, Gladys Wise, Norman C. Wiese, Margueritte Hamilton, Gertrude Pinster, Violet Matson, Fred Chase, Viola Kakela, Evelyn Kiehn, Thelma Griggs, Lois C. Engleson, Dick Peters, Elvira Case, Agnes Erickson, Clarence Wagner, Catherine Williams, Esther Walter, Allan Lind, Madelyn Cummins.

Anna Schrenk, Ella Olsen, Thelma Weese, Rosie Prien, Alice Sanstrom, Wilma Butorac, Grace Warren, Edwin Snook, Almeda Foutch, Maurice Farmer, Annis Demko, Ruth Thorson, Lillie Puffert, Erna Battermann, Emma Rott, Richard Buddrins, Julia Buce, Phoebe Catherine Malone, Alma McCask, Bernice Wynecoop, Edith Davis, Forrest Glenn Moore, Dessie Holland, Lester Goldsley, Gertrude Armstrong, Marion Batcheldor, Lewis Abelman, Louise Hinrichs, Helen Besonen, Joe Flork, Wanda Knox, Gertrude Osterberg, Frances Fox, Thelma Smith, John Albert Malone, Doris Johnson.

Claire Kieffer, Frances Roloff, Mary Neiland, Alice Morehouse, Vivian Angel, Hugh Adams, Clyde Mulford, James Johnston, Archie Moe, Bertha Osborn, Esther Westerback, Selma Westerback, June Johnson, Tessie Allen, Leda Ruby Harrel, Edward Manus, Nellie Ware, Leslie David Parks, Harriet Ferch, Emily Dowell, Palma Johnson, Sarah Reed, Zelma Johnson, Lois Fisher, Clairinda Fagan, Walter E. Franz, Edward Harneit, Rose Christensen, Carrie Scott, Lydia Lenhart, Lenora Armstrong, Rose Hakala, Arthur Peterson, Ivan J. Putnam Jr., Helmie Manson, Alice Coons, Mary Goodge, Marie Austin, Aaron Wiley, Grace Sisler, Ida May Riley, Nellie Riley, Margaret Stevenson, Lucy Chrisman, Olive Belvea.

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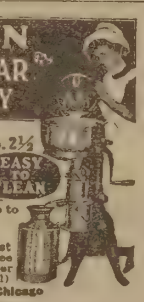
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Ashnook Farm offers a few heifers and young bulls, sired by the gold and silver medal sire, Silver Chimes, of S. B., sire of ex-world champion heifer, Silver Chimes Gwendola, and 20 register of merit daughters, and more qualifying.
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THE QUALITY GUARANTEE SALE

First Annual Sale of the Whatcom County Holstein-Friesian Breeders' Association

May 11, 1922

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65 HEAD OF THE COUNTY'S BEST HOLSTEINS

Complete Dispersal of the P. P. Lee herd of Bellingham, numbering 40 head, with **Consignments** from the herds of H. J. Evens, Claude Graham and Piet Bergma, Ferndale; N. P. Sorenson, Bellingham; A. Benson and A. Blankers, Lynden.

"QUALITY" is the slogan of this sale. Health, youth and good breeding. Animals carrying the blood of Chimacum Spring Farm King Pontiac, Paul Aaggie Oakhurst, Sir Korndyke Pietertje Hartog, Summer Boy Newman and King Pietertje Segis Belinda; Greenbank Johanna Pontiac, sired by King Korndyke Pietertje Pontiac, only son of King Pontiac in Washington; also Paul Segis Fayne; sires that have made Whatcom county famous as the breeding ground of world record Holsteins.

Certificate of Health goes with each animal over 6 months old.

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ELMA, WASHINGTON **MAY 6, 1922**

Sixty-Five Registered Holsteins

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Be on Hand at 10 A. M. **Don't Miss This Sale.**

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offers for sale at farmer's prices, four Holstein bulls, ready for service, sired by Sir Soldene De Kol Pietertje, a double grandson of Florence Idella Sharp, former state record cow with 27,236 lbs. milk and 1146 lbs. butter. All from record dams that are now on retest and increasing their former records by large margins. Also three young calves of the same breeding.

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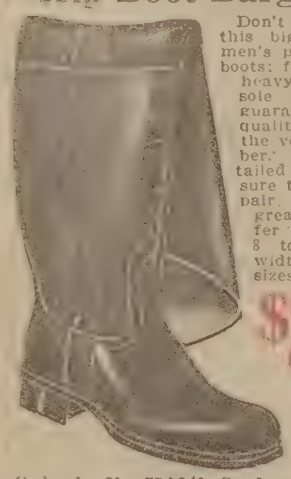
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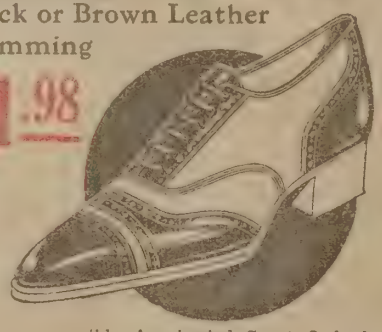
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White Canvas Sport Oxford

Black or Brown Leather Trimming

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Dressy, sensible, low-heeled Sport Oxford for women. Wonderful value at this low price. Has excellent grade white canvas uppers with choice of black or brown kid finished leather tip, ball strap, eyelet stays and heel foxing. Flexible white fiber rubber soles with white rubber heels. Wide widths. Sizes 2½ to 8. **Order brown leather trimming by No. 57A310. Black leather trimming by No. 57A311. Send no money. Pay $1.98 and postage on arrival. State size.**

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State Size

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Neat narrow stripe pattern of Thorndyke cotton worsted. Celebrated for its durability. Ideal material for work trousers. Suspender buttons. Belt loops, plain bottoms. Stoutly sewed waistband. Sizes, waist 30 to 42. Inseam 30 to 34.

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This price is so amazingly low that there will surely be a flood of orders for this number. Fine blue serge of splendid weight material that assures good service. Made with 2 hip, 2 side and 1 watch pocket. Plain bottoms, can be made cuff style if desired. Belt loops and inside suspender buttons. 30 to 42 waist; 30 to 34 inch inseam. **Order by No. 57B1564. Send no money. Pay $1.89 and postage on arrival. Mention necessary sizes.**

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Give Size



Classy stitchdown Oxford for women. Wonderfully comfortable and stylish. Uppers of dark mahogany leather. Smooth leather insoles. Flexible stitched down oak outsoles. Low rubber heels. Sizes 2½ to 8. Wide widths. **Order by No. 57A268. Send no money. Pay only $1.98 and postage on arrival.**

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One-Strap Model

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Beautiful soft kid leather comfort slipper. Stylish strap model with two buttons. Medium round toe. Cushion insoles. Medium rubber heels. Solid oak leather soles. Black only. Sizes 2½ to 8. Wide widths. **Order by No. 57A228. Send no money. Pay $1.69 and postage on arrival. State size.**

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Fetching style with twin buckled instep straps, fancy cut-outs on vamps and perforations around top as pictured. Made from excellent pliable patent leather. Firm but flexible soles. Cuban heels with comfortable rubber top lifts. Sizes 2½ to 8. Wide widths. **Order by No. 57A280. Send no money. Pay $2.98 and postage on arrival. Money back if not satisfied. State size.**

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Smartest shape and best quality; regular $8.50 value. Selected black or brown calfskin. Extension oak soles, leather insoles. Solid leather heels. Sizes 6 to 11.

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Made of standard quality dotted voile with modish panel trimmed overskirt. The neat Tuxedo front, wide, flowing sash and deep cuffs on sleeves, are of sheer white organdy. Make this unusual saving now. Order your size in choice of three colors below. Sizes 34 to 46. **Order Light Blue by No. 57E6354. Navy Blue No. 57E6355. Rose No. 57E6356. Send no money. Pay $1.98 and postage on arrival for either color. Money back if not satisfied. Be sure to mention size when ordering.**

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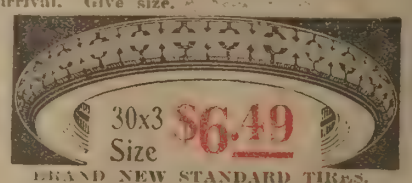
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THE WASHINGTON FARMER

ESTABLISHED 1894

SPOKANE. SEATTLE.



Foothill Pasture Lands

The Stockyards Act Protects Cooperative Shippers---Page 8

New York for Pure Milk

"Oiled" Milk Promoters Are Defeated in the Legislature

After a long and bitter battle with the "oiled" milk lobby, a pure milk bill was passed by the New York state legislature and became law April 1.

It amends the "farms and markets law" in relation to skimmed milk and products manufactured therefrom, so that it

a. Prohibits the sale of any milk to which strange oils or fats have been added in imitation of real milk;

b. Prohibits the sale of condensed or evaporated skim milk in small, retail packages or without its true contents being prominently described.

The measure was strongly supported by public health authorities, teachers and parents, scientific experts from the university laboratories, leaders of women's organizations and the dairymen's league.

This bill had failed to pass in one previous session of the legislature owing to the hot fight made upon it, and obstructionist tactics in this session very nearly brought about its defeat. Half a dozen different bills were proposed, all of them conflicting, all of them being introduced, and all tending towards a compromise result which would nullify the real value of the law.

The bill prohibits "oiled" milk as follows:

Section 64, paragraph 3:

"No person shall manufacture, sell or exchange, offer or expose for sale or exchange, or have in his possession with the intent to sell or exchange any condensed, evaporated, concentrated, powdered, dried or dessicated milk, cream or skimmed milk to which there has been added, or with which there has been mixed, blended or compounded any fats or oils, other than milk fat, so that the finished product shall be in imitation or semblance of condensed, evaporated, concentrated, powdered, dried or dessicated milk."

Protected Territory.

Nine states now are on the list of protected territory with regard to vitiminless milk.

New Jersey	3,155,900
Colorado	939,629
Utah	449,396
California	3,426,861
Oregon	783,389
Wisconsin	2,632,067
Ohio	5,759,394
Maryland	1,449,681
New York	10,384,829
Total population	28,981,146

Law Is Law.

In Ohio, when the state legislature prohibited the manufacture and sale of "oiled" milk, the case was taken to court, and later on to the United States supreme court, which upheld the new law by stating in its decision:

"If the character or effect of the article as intended to be used, be debatable, the legislature is entitled to its own judgment; and that judgment is not to be superseded by the verdict of a jury, or, we may add, by the personal opinion of judges upon the issue which the legislature has decided."

Can They Dodge Law?

Arguments are being advanced against the Voigt bill by one dairy journal. It argues that Voigt's bill, approved by the committee on agriculture, 14 to 4, will only prohibit interstate commerce. It claims, therefore, that the clever manufacturer can dodge the law by building himself a factory in each state and continue doing business.

This seems convincing to some minds for a little while, until they begin to ponder the cost of erecting factories for evaporating skim milk, for heating cocoanut oil, and all the complicated mixing and canning machinery, says the National Milk Producers' Federation.

As to whether this would be profitable or not, no less an authority in the business than R. R. Gockley, director of laboratories for the Dairymen's League Cooperative association at Utica, N. Y., writes:

"While this probably would be possible technically, we do not think it would be practical. We believe the condensed milk would have to be reheated in order that the vegetable oil could be properly incorporated in the condensed milk.

"This would incur not only extra labor, but would mean considerable loss of product in handling and would require additional equipment."

WILL COMPARE SOILS.

Dr. Curtis F. Marbut of the United States department of agriculture has sailed on a three-months soil-study trip to various countries of Europe. The main object of his trip is to correlate American soil work with that which has been done in European countries.

Dr. Marbut plans to meet a group of soil scientists in Prague and after that he will collect soil samples and talk with scientists in France, Germany, Szecho-Slovakia, Austria, Hungary, Rumania, Jugo-Slavia, Latvia, Spain, the British isles, Italy and Greece. In England he will visit the famous old experiment station at Rothamstead. In Italy and Greece he will study and take samples of those old soils that have been cultivated for 2000 years and that are said never to have been fertilized and never to have had the benefit of much live stock farming.

Pulled Wool

Little Journeys to the Markets

Pulled wool is wool which has been pulled from the fleeces of sheep and lambs slaughtered at the larger packing houses. The pelts are first soaked in cold water for 12 to 36 hours, depending upon whether they came direct from the killing floor or have been in salt for a time. After soaking, they are run through a scrubbing machine in which they are brushed vigorously while a stream of water is playing on them. They are then placed in centrifugal machines, the bowls of which are shaped something like a milk tester. Each bowl holds several pelts. These machines are rotated at a high rate of speed, which throws the water out quickly and the fleeces are made practically dry within a short time.

The pelts are then spread out, fleeces downward, usually on screens which permit the wool to dry out more thoroughly. Every inch of the skin side is then painted evenly with a mixture of sodium sulphide and slaked lime. This "depilatory" loosens the wool fibers so that they easily can be pulled out by hand within two to four hours after treatment.

Before pulling, the fleeces are sorted according to the kind and length of the wool on them. Lambs and sheep are slaughtered in every month of the year, so that pulled wool varies in length much more than sheared wool. In pulling, also, wool from each fleece is separated into several kinds, since the wool varies on different parts of the sheep's body. As a result, each lot of wool produced is quite uniform in character.

JACOB LANO, Wilkeson, Wash.—We must have The Washington Farmer so we can read Dr. Copeland's letters on health. These letters alone are worth the price of the paper.

Poultry Diseases

THE FARMER Gives High Class Information

The Washington Farmer is pleased to receive the following tribute to the high-class information which it seeks to give its readers. Dr. Nelson, who is at the head of the extension service of the State College of Washington, was for many years at the head of the veterinary department of the state college and knows whereof he speaks:

"To the Editor of The Washington Farmer: In your March 30 edition of The Washington Farmer on page 12 (304) I find several articles written by Dr. W. T. Johnson, veterinarian, western Washington experiment station, in reply to questions which have been asked him in regard to poultry diseases.

"I desire to call to the attention of the poultry people in the state of Washington the fact that Dr. Johnson is probably one of the three best equipped men in the western United States in the knowledge of poultry diseases. He is one of the two or three men in this entire west and northwest who give their entire time to the investigation and study of poultry diseases, and The Washington Farmer is certainly to be commended by giving, and the poultry people of Washington congratulated in having the opportunity of securing services of Dr. Johns[illegible]



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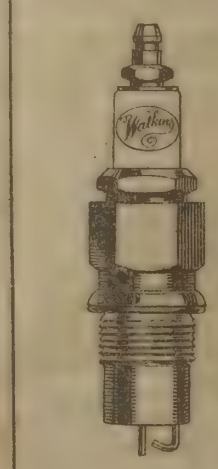
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THE WASHINGTON FARMER

Vol. 46. No. 18 THE RANCH SUCCESSOR TO PACIFIC DAIRYMAN HORN AND HOOF May 4, 1922

For Good Farming, Attractive Country Homes and Happy Country People

Noise of Shearing Abroad in the Land

Fleeces Are Falling From the Woolly Backs of 250,000 Sheep in the Valley of the Yakima

By GEORGE N. ANGELL

Simultaneously with the bleating of some 250,000 very new and very wobbly, wiggly, woolly lambs which have been arriving since early February, the noise of shearing is abroad in the land of the Yakima, and fleeces are falling from the backs of 250,000 patient mothers of the ovine tribe.

Almost as a corollary to the shearing, apparently, and tending to put the harassed wool grower entirely at his ease again, comes a strike of the shearers for higher wages. In spite of it the clip will come off and will go into storage or will be sold on a market far more eager, it seems to the hungry sheepman, than any he has dealt with in years. Feverish activity will prevail until lambing and shearing and docking and marking are completed; bands not already out of winter quarters or indeed well into the hills will be hustled out, the atmosphere of the permanent camp will be shaken off entirely, and the long summer season will be on when frisky lambkins have nothing more important to do than growing fat, when the sheep business means nothing to the outside world except an occasional dusty band in the road and when the lamb crop, the sheepman's life-saver, gets its real opportunity to develop. Sweet mountain grass and water form a wonderful inducement to appetites jaded by a long, hot trip by rail or a longer, hotter trip by trail, and dreamless naps on sunny hillsides are a great aid to lamb digestion. "Hothouse" lambs are ready for the market in July, and by the end of August another cycle of the business is completed.



At the Rothrock permanent camp near Sunnyside.

SHIPPED OVER 1000 CARLOADS OF LAMBS.

Yakima last year shipped 1061 carloads of lambs, of which 491 went to Chicago and 570 to Puget sound, and except that the number of breeding ewes in the valley had decreased somewhat, due to general conditions and the sheepman's inability to replenish his natural losses and those caused by muttoning old ewes, there was nothing early to indicate that the 1922 lamb crop would be less than that of a year ago. The splendid percentage of increase which prevailed in the valley all through the early season (one man lambed 1100 ewes and had 600 pairs of twins) and well into April gave ground for predicting that the shrinkage would be made up.

Early lambing, which is coming to be more and more popular in eastern Washington, begins February 1 to 15 and continues for about five weeks. Most of the early bands start after February 15 and are done by March 7, so that the business of getting 35,000 lambs into the world becomes a strenuous undertaking. Think of it! Ten thousand lambs a week, and each lamb the source of 10,000 worries for the caretaker. Well it is that not all fall on one man, though to hear the praises of some of the Scotch professionals sung by their employers would lead to the belief that any of them is equal to the task.

Early lambing means day and night work continuously for somebody, for no other domestic animal has had imposed upon it the unnatural conditions at birth which midsummer shipments demand.

In range lambing, which begins March 15 to April 1 and continues until May, scarcely any special attention is required by either ewe or lamb. By this time the weather is fairly warm and the youngsters, being able to care for themselves almost immediately upon arrival, are allowed to do so. Each morning the ewes which are expected to lamb within 24 hours are formed into a "drop" band and allowed to spend the day near camp. The caretaker has merely to see that the ewe suckles her young, or if she fails, to see that some other ewe adopts the infant, disguised under the tied-on hide and fleece of her own departed baby. The term "grafting" is applied to this and other low tricks resorted to in maintaining the balance of maturity in accordance with man-made regulations.

In the evening the band is moved slowly back to camp, the day's "drop" now gamboling unsteadily alongside. Care of the drop band often falls on the boy or girl; so also the bottle feeding of orphans for whom the cleverest artifice has failed to provide adoption—and thereby is laid the foundation of many a young sheepman's career.

EARLY LAMBING IS A DIFFERENT MATTER.

Early lambing is a different matter. Usually permanent covered sheds and open pens are provided, the sheds often being parallel, with quarters for the drop band between. The space within the enclosed sheds has been divided into many small pens, and these are occupied by mother and offspring until mutual relations are thoroughly established, usually for a day or two. From there they are moved to a slightly larger pen, and some sunshiny day the attendant emerges from the shed with a squirming lamb in each hand, held by the legs like a rooster, and an agitated ewe at each heel, to ensconce them in an open pen with others equally far along. Responsibility increases daily upon the animals and decreases daily upon the caretaker, during this series of moves covering 2 or 3 to 10 days each through a series of pens which grow larger and straggle wider with each move.

At last the band is united again in one great family and any new lamb in it can wander far from the maternal side, yet at a sign of danger, real or fancied, or at an adminishing "Baa-a-a" from the dam, can speed unerringly across the intervening space like an arrow to its mark, and register more irrepressible joy at the reunion than any other known creature except one with an identical tail.

Ellis Regan was boldest of the early operators this year. He had 9000 ewes in one camp near Union Gap, beginning to lamb early in February. For the most part, however, early operations are small, though Dunn Brothers had 2500 early ones, R. A. Jackson 3000, Prior & Son, Prior & Herron and Pete Agor 3500 each and the Yakima Sheep company 5000. The latter approximated 110 per cent of lambs, and this was about the average placed on all the early work, which was expected to be profitable because of the low price of feeds and the outlook for a good market.

Both ewes and wether lambs the country over have been sold close, and good prices early in the season cleaned things up so that $7 and $8 net per head is predicted as an average for summer sales. Last year the average was around $6 and the total mutton sales were more than $2,250,000. The estimates of breeding ewes in the valley vary from 200,000 to 250,000 and the number of lambs produced annually in about the same proportion.

The job of removing 2,000,000 pounds of malodorous wool from the backs of a quarter of a million sheep is one which, left to the administration of professional sheep shearers and with an average price of 25 cents per pound awaiting its removal, is one viewed not without pleasure by sheepmen, who have been wondering for years where their next meal was coming from. Without question the strike of the ungrateful shearers previously referred to proves a fly in their ointment of pleasure, but also without question the position of the Yakima wool grower is better than it has been for years. Nothing points more definitely to this than the fact that the Washington Wool Growers' Finance corporation, which when proposed was thought to be the only thing which would save operators from disaster, first dwindled from a $100,000 undertaking to a local one for valley growers, and when interest even in that flagged, was abandoned altogether. The late G. Harold Powell, the California wizard of cooperation, said that growers would get together only under pressure of dire necessity, and the failure of the wool growers' undertaking looks very much like further proof of his statement. Probably the fact that the war finance corporation announced its readiness to assist if necessary helped to restore morale, but increasingly optimistic reports as to markets also helped. What need of organizing have wool growers who refused to sell at 12 cents in February, 1921, and a year later received 23 cents for their product? With a possible $2,000,000 in sight for their lambs, and another $250,000 almost jingling in their pockets for wool, why worry?

Secretary J. F. Sears, however, warns them that they are making a serious mistake in not handling their own product. "It is not an expensive matter; there would be no risks; it would take very little capital, and with the largest city in the northwest not only willing but anxious to assist us, it is a disappointment that it is not received with more enthusiasm."

COOPERATIVE EFFORT FACES THE SHEEPMEN.

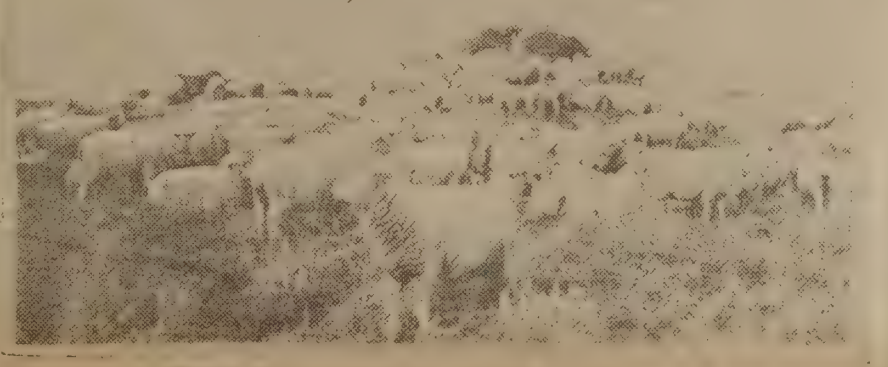
Your eastern Washington sheepman is not a cooperator. More than any other class of producers, perhaps, he is accustomed to borrowing large sums of money from the bank, using it well while it lasts and making no complaint when it is gone, and looking forward confidently to the relining of his purse when the lambs are shipped or the wool sold. His mode of living—most of them have come up through the ranks—has made him independent, sometimes shy, and the necessity of fighting for what he got has made pulling against rather than with his fellow-growers the natural thing.

The Washington association, however, has given practical demonstration of the value of cooperation, and probably in time other benefits will be realized. The proposal referred to by the secretary was for the establishment of a bonded warehouse in Seattle, but this fell through largely because of opposition by some of the larger shippers, who preferred to continue relations with Portland. A very large proportion of the Yakima clip goes through Portland, which is now second largest, with respect to wool handling, in the country; early in April wool buyers flocked to Yakima for the opening of the shearing season, which was delayed at least two weeks by backward weather, and the steamer Harry Luckenbach, which left Portland April 18 for Atlantic coast ports, had aboard the first consignment of 1921 wool, Yakima clips totaling 160 tons.

Sheepmen had a long period of feeding last winter—as long perhaps as any in the history of the business—and the cold weather, though making for a wool of lighter shrinkage, holds back both growth and oils and will somewhat reduce the clip. A few Yakima bands are sheared from March 1 to 20, before lambing, but most start about April 1 and continue until the middle of May. Practically all of the work is done with power outfits, and 200 men find employment in the shearing camps. The price agreed upon between growers and representatives of the shearers' union was 10 cents per head, the average equivalent of about $7.50 per day. Last year 12 1-2 cents was agreed upon and there was a strike for 15 cents. Some paid it, which is one reason the association has difficulty establishing a price. Scarcely had work begun this year when demand was made for 12 1-2 cents per head, and independent crews were started. Professional shearers follow the season from south to north, and they claim that all arguments based on the large number of sheep they can render coverless in a day pale before the expense to which professional shearers are put to live.

FIRST CARLOAD OF YAKIMA WOOL.

The first carload of Yakima wool in the 1922 clip to be marketed was sold by Tom Smith, who also was reported first to finish shearing. He obtained 26 cents per pound, top price to date, from a Portland buyer, who shipped it east, but this was on a contract made several weeks previous, and contracting ceased some time before the shearing was full on. To the uncertainties of the tariff situation was ascribed the fact that shearing corral sales were few and at low prices, in spite of the large number of attendant "buyers." Few cared to operate extensively under emergency tariff schedules, with the possibility that permanent schedules will be lower. Hence there was a difference of 5 to 10 cents between the most conservative buyer and the most optimistic producer. Twenty-five cents per pound is the average around which the 1922 clip from Yakima is expected to be sold.



Eating down an old hay stack in the valley.

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Seek National Plan for Cooperative Marketing of Fruit

A fruit growers' committee of 21, appointed by the American Farm Bureau federation, convened at Chicago last week to begin active work on a national plan for cooperative marketing and distribution of fruit. This timely effort will be followed with keen interest and hope by the fruit growers of the Pacific northwest, particularly of the state of Washington, where a break between the private marketing agency of the Crutchfield interests and cooperative associations in or affiliated with the Skookum growers constitutes a grave menace to the important orchard industry.

The situation is especially serious in the Spokane valley, where the failure of the Spokane Fruit Growers' company has left the growers destitute of cooperative benefits, both as to production and marketing. Even the privately owned and controlled marketing agencies prefer to deal with bodies of organized growers, and as matters now stand in the Spokane valley there is no organization to finance the unorganized growers in the purchase of spray materials, boxes, paper, nails and other supplies and for picking and packing expenses, as the Spokane Fruit Growers' company had done for the last seven years.

Many growers have complained of the high cost of cooperation, but they are now faced with the danger of the still higher cost of non-cooperation.

If the American Farm Bureau federation can devise a way of strengthening cooperative fruit growers it will render a very great service to the orchard industry.

The Great Factor Is Himself

It looks as if any young man from farm or town who has a spinal column and a year of himself at his own disposal may profit by the splendid opportunities at the state college at Pullman. A recent report by the graduate manager shows the records of 1224 men students at the college a year ago last fall. Of that number, one-half had earned every cent of their college expenses before coming into the college for the year; 13 per cent were earning all their expenses while there.

Last fall scholarship standards were somewhat raised, but notwithstanding that 13 per cent were found to be earning all their way as they went; 15 per cent were earning half their way, and 20 per cent one-third.

The graduate manager's figures further show that a year ago last fall 83 per cent of the men students had earned all or some part of their funds before they entered, and this year 55 per cent are earning all or a part of their way as they go. In other words, the young man who has loafed his way up to the doors of the institution and proposes to loaf his way through it is in an unpopular minority at our state college, and we are glad to hear it.

There is scarcely a more educational privilege connected with college life than that of measuring, as one goes, the economic assets he has to offer the world.

Men have gone through Harvard university who worked eight hours in a machine shop as they went; men can go through our state college doing some few hours of salubrious work as they go, and be the better for it. The determining factor in the success of the attempt is the young man.

Pays to Give More Attention to Seed Potatoes

There is a good deal of interest in seed potatoes at this time. Men who have certified seed potatoes for sale are preparing to furnish material that should receive a premium in the market.

It is impossible to select potatoes from the bin and secure the best material. The yield is of primary importance in measuring the value of seed potatoes. The smooth, well-formed potatoes are necessary for the best of seed, although all material that has that appearance is not necessarily good for seed.

The presence of disease on the skin of the potato or in the flesh of the potato can usually be detected. There are some forms of disease or degeneration which can not be detected by any examination that can be given the material in the bin. The presence of these forms of degeneracy can be detected only in the growing plants and if they exist in the plants they are sure to exist to a much greater extent in the next crop.

The size of the potatoes selected for planting work is of importance. Potatoes weighing less than an ounce and a half will produce, usually, small plants which may gain vigor as the season advances, but are sure to be of small stature and weak early in the season and only the most fertile soil will enable them to make a good crop. Potatoes weighing more than 12 ounces are objectionable for seed purposes. The large potatoes are inclined to be over-mature and do not produce plants that have as high yielding capacity as the small potatoes which are generally somewhat immature.

Good storage is a necessity for the keeping of seed potatoes. The first sprouts produced by a potato are the strongest sprouts that it will produce. Potatoes that are withered during the storage in the winter are weakened and are not capable of producing as good plant material as those that are kept plump and fresh.

The ideal seed potato should be just starting its first sprout when cut for planting. Any loss of vitality or vigor through the producing of sprouts, unfavorable storage, or disease of any kind is sure to reduce the crop of the following season. O. M. M.

Value of County Agent's Aid

Pacific county cranberry growers have troubles of their own.

A certain fungous disease, as well as the fire worm, is seriously affecting the crop. They are also desirous of learning better cultural practices.

The cranberry growers took their troubles up to County Agent J. R. Beck, who, in turn, took the matter up with the state experiment station

Evidently County Agent Beck intends to get what he goes after. It is now announced that Dr. F. D. Heald, pathologist of the experiment station, and M. D. Armstrong, extension specialist, have been in conference and have laid plans to carry on experimental and demonstrational work during the year.

Starting in June a small cranberry experiment station will be established on the peninsula with a man direct from the state college in charge of the field details. From time to time Dr. Heald and Mr. Armstrong will visit the district and check up on the work as it progresses.

Washington Gleanings

A new fruit packing concern will operate in Puyallup this summer at the North Puyallup canning plant, according to reports from Puyallup.

Articles for incorporation have been filed at Olympia for the Puyallup Packing company, with a capital stock of $50,000. Frank Collinson and B. F. Emery of Portland are the incorporators. Both men are experienced fruit packers and canners, it is reported. R. F. Weeks of Seattle, division freight and passenger agent for the Chicago, Milwaukee & St. Paul railway, reports that the canning plant building owned by the railway company has been leased and the machinery sold to the incorporators. The North Puyallup plant operated here two years ago under the direction of the A. Robinson company of Portland. It did not operate last season. From present indications all three canning plants of the valley will operate this summer.

* * *

Two registered bred gilts were purchased during the month of March for pig club members of Benton county. Money was loaned by the Kennewick banks for the purchases. Miss Mabel Green and C. M. Hubbard, extension live stock specialist, selected the stock.

* * *

One of the most modern prune driers in Clarke county is in course of construction on the ranch of Niels Futtrup, a successful farmer and prune grower in the Felida section, near Ridgefield. It will be completed this spring and will cost between $7000 and $8000.

The drier is 63 feet in length, 32 feet in width and has an addition 16 feet by 20 feet. The kiln floor is made of concrete, reenforced. There are three kilns which hold 1000 trays. The capacity of the drier is estimated at nine tons of green fruit every 24 hours. A patent spreader will be used in its operation.

The Futtrup prune orchard is comprised of 25 acres, of which 20 acres are in bearing. The orchard is situated along the Felida-Vancouver paved highway and is one of the best in the county.

* * *

A large crew of men is relining the canals of the Franklin irrigation district. The state is assisting with an appropriation of $25,000. It is estimated that 5000 additional acres will be watered this year as a result of these improvement.

* * *

H. C. Davis of Granger eight years ago predicted that the Yakima valley would grow 20 tons of silage per acre. Now he says that more than 20 tons can be grown.

"The farmer who can not grow 20 tons per acre is fooling away his time," says Mr. Davis. "It has to be good land, however, but there is plenty of land that will grow 20 tons of silage per acre. To find land that is good enough is the easiest part. The corn of course has to be thick enough on the ground and it is not every kind that will produce that much per acre."

On looking over the corn that he selected in the fall for seed, he finds that 90 per cent of the ears have 20 rows of kernels to the ear and in the crop that he grew last year it was easy to find ears that had 24 rows.

* * *

The report of the state college extension service on agriculture shows that dairying is the leading agricultural activity in Pacific county, its value last year totaling some third of a million dollars. Berries rank second in value, amounting to a quarter million. Hay and silage crops are third in value, being $132,000.

* * *

Crops of wheat and oats will be grown this season on the 2000 acres of land that was Mud lake last year and has not been cultivated for the last 10 years. The drain put in by the Indian reclamation service is so successful that the ground has already been plowed and is now being seeded. No irrigation will be needed for the first crops grown on the lake bottom. The soil is a rich black alluvial deposit and should produce a very heavy crop, says L. M. Holt of the Indian service.

* * *

The Washington reclamation and development board has tentatively set aside $60,000 this year toward financing the diking of diking district No. 16, Cowlitz county, which lies west of Kelso, and between Coal creek slough and the Columbia river. This district contains 1000 acres of exceedingly fertile river bottom land.

* * *

The manufacture of malted milk was started at Bellingham early in April by the Royal Dairy Products' company. It has installed $50,000 worth of equipment and plans to push the product throughout the country, says President Floyd H. Dillabough. It has already made shipments to Alaska, but no announcement of its plans has hitherto been made. The local plant has a capacity of two tons per day, which requires 22,000 pounds of milk. It is the only malted milk plant west of Golden, Col.

* * *

Water is now available for all laterals along the 65 miles of the Sunnyside canal, according to J. L. Lytel, project manager of the reclamation service.

* * *

W. B. Meyers, chief deputy potato inspector, who was in Yakima recently, states that there is being put in this season a larger acreage of potatoes than ever planted in the Yakima valley before. Mr. Meyers is himself planting some seed grown by himself in the Harrah district and he is again repeating the experiment in potato seed growing

* * *

The 1921 potato crop of the Yakima valley is still turning out tonnage, breaking all records or estimates. The railroads report that 3947 cars had been shipped up till April 1 and there were 400 to 500 cars still in storage. This will bring the total to at least 4300 cars, as against 2325 last year. Some dealers insist that the cleanup will show 4500 cars.

Coming Events of Interest

May 1-6—Pierce county milk campaign.
May 4-6—Tulip festival, Bellingham.
May 5-6—Apple Blossom festival, Wenatchee.
May 6—Holstein sale, Elma.
May 12-13—Electric celebration, Ephrata.
May 20—Dairy calf club ercursion, East Stanwood.
May 24—Lewis county Holstein sale, Chehalis, Centralia.
June 3—Snohomish Guernsey picnic, Lake Stevens.
June 5—Northwest Guernsey breeders' sale, Portland.
June 7—Guernsey consignment sale, Chehalis.
June 19-24—Industrial club week, W. S. C., Pullman.
June 20—S. W. Wash. beekeepers meet, Elma.
June 20-22—Lincoln-Adams pioneer picnic, Keystone.
July 17-22—Farmers' week, experiment sta., Puyallup.
July 27-28—Whatcom co. Guernsey gallop, Bellingham.
July 27-30—Apple Shippers' association, Seattle.

FARM BUSINESS AND MARKETS OUTLOOK

Cattle Market Looks Healthy

Cattle prices have remained fairly stable for more than a month, a performance which presages a moderate upturn within the next 30 days.

The dressed beef trade has absorbed receipts in recent weeks without a decline of any consequence and has scored an advance in the last few days. Barring the coal strike, industrial conditions are improving and should broaden the outlet for beef. Passing of religious holidays has had such an effect. While beef scarcity is not probable, there is evidence of an increase in the supply of cattle.

If these signs work out as expected the trend of cattle prices in the next two or three months should be favorable to producers.

Most of the Pennsylvania fed cattle have been marketed, so that shipping orders are again in evidence at Chicago. Texas reports are unanimous that there will be no early grass beef from that state. California continues to take beef cattle from the southwest. Exporters are still buying at Chicago and Missouri river markets. The constancy of this foreign competition is not assured, however, since steers fed in eastern Canada are now becoming available for the overseas trade.

There is but little competition this spring from beef carried through the winter in the frozen state as the supply of that article on April 1 was only 50,750,000 pounds compared with a six-year average of 178,861,000 pounds.

Thousands of the light feeders which were taken to the country last fall are now returning, but many of them fell short of the requisite finish to qualify for the yearling trade, although most of them are selling at substantial margins over first cost. Such cattle should give much larger returns if put in higher flesh and sold later on.

Veal calf prices appear to have scraped bottom. Markets have been badly glutted, but the supply is beginning to let up. At this stage holding back calves which are not of excessive weight until the market can recover looks advisable. Prices on different markets have been far apart, owing to the high percentage of light calves which are unsuitable for intermarket shipment.

Country Wants Cows

Most markets report more than the usual country inquiry for cows and heifers, indicating that producers, especially in the range country, are returning to the cattle breeding game. Recruiting of herds will result in a light run of beef from the range states this year unless drought intervenes.

Interest in stocker and feeder steers is active as the grass season is right at hand. It is a period when cattle gain well, weather is improving and the country generally is longer on grass and feed than it is on cattle. The supply of suitable cattle at market centers is not large and prices remain extremely close to the level of those on killing classes.

Hog Receipts Due to Enlarge

Hog receipts at the leading markets last week were the smallest of the year with one exception, but prices made little response in spite of an increase in shipping orders from the east.

Domestic consumers are not eating pork so greedily as they were.

Export demand for hog products also has declined and weekly clearances are now falling behind those of last year. Packers report, however, that foreigners are making inquiries and these may mean increased sales before long.

Receipts of hogs usually pick up toward the latter part of April and during May, but this year wet weather and floods in some sections have retarded shipments. The backwardness of farm work also has been a factor. These hogs will swell the movement later, however, although it may not pick up much until the end of May. Unless demand broadens prices will decline as receipts increase, as big packers are still on the war path.

The reduction in the demand for hog products is indicated by large increases in storage stocks of meats and lard during March in spite of the fact that receipts of hogs were below the average. Lard in storage increased 24,000,000 pounds during March, the largest increase that has occurred in that month in six years. The six-year average increase is less than 1,000,000 pounds. In spite of the increase, however, holdings on April 1 were only 85,445,000 pounds, compared with a six-year average of 104,391,000 pounds. Furthermore, holdings of hog meats, including frozen, cured and in process of cure, increased 42,000,000 pounds, compared with a six-year average increase of 18,000,000 pounds. Nevertheless, total holdings on April 1 were only 589,830,000 pounds, compared with a six-year average on that date of 848,519,000 pounds.

The number of brood sows on farms on April 1 as reported by the department of agriculture was 11.1 per cent larger than on the same date of 1921. This is a big increase to occur in one year, but if current reports of heavy losses of spring pigs can be credited there is no danger of an excessive pig crop.

California Lambs

The first new crop California lambs of the season to be sent eastward were due to arrive at Omaha or Chicago during the present week. Some shipments in carcass form have been sent overland to eastern cities. The supply of lambs in other sections is so small that prices are practically the highest of the year. Receipts during May are quite apt to be smaller than in April and a decidedly bare spot may develop before the Tennessee and Kentucky lambs show up freely. Receipts at the leading markets last week were the smallest of the season and not far from the smallest at any time in the last decade. Dressed lamb prices displayed marked strength and shipping orders have been numerous. A shipment of nearly 20,000 carcasses of frozen Argentine lamb in the east threw a scare into the trade, but there appears to be a sufficient outlet for it.

Dull Season in Horse Market

With the passing of the farm chunk trade the horse market promises to become a sleepy affair as city buying is not sufficient to maintain much life.

Mills After Wool

Mills began to buy wool freely again last week. The American Woolen company was said to be a heavy purchaser of three-eighths and quarter blood wools at both Boston and Philadelphia and the head of this company predicts much higher prices for cloth as well as wool. Other mills also are taking more interest, indicating that manufacturers' stocks are not large. Dealers have been buying and new sales of Arizona wool were reported. Prices were steady, but the renewal of activity forecasts higher prices later on.

Foreign wool auctions are strong and yard mills in Bradford, England, refuse to sell for delivery earlier than August.

"Little Journeys to the Markets" has been an exceedingly valuable and interesting feature of the special market service in THE FARMER. "Pulled wool" is the topic this week and will be found elsewhere in this issue.

Europe Anxious for Wheat

A profound change in the attitude of foreign buyers has taken place recently and enormous sales for export from the United States, Canada, Argentina and Australia have been made recently. The quantity of wheat afloat which was burdensome a month ago has decreased about 13,000,000 bushels in two weeks, in spite of world clearances of 22,500,000 bushels in that period. In spite of an apparent absorption by importing countries of over 35,000,000 bushels in two weeks, the foreign market has remained strong.

The crop outlook abroad is not flattering, the condition of French wheat being placed at 64 per cent, with the acreage smaller than a year ago. Italy and Rumania are sending unfavorable reports. This situation, together with a prospect that the surpluses of Argentine and Australia will be near exhaustion by midsummer has led already to purchases of 20,000,000 to 30,000,000 bushels new crop hard winter in the United States for July and August shipment at prices 15 to 25 cents lower than the spot market. This buying, which gives promise of continuing right along, forecasts heavy clearances as soon as the new crop begins to move. Besides purchases of this sort, Manitobas and durum wheat are being bought nearly every day for prompt shipment. Lake navigation has been opened and the Canadian surplus is moving out.

Broomhall estimates requirements of importing countries up to August 1 at 204,000,000 bushels. He calculates that Australia and Argentina can furnish 88,000,000 bushels, Canada 60,000,000 bushels and the United States 56,000,000 bushels. Exports from the new crop may run as high as 20,000,000 bushels, leaving 36,000,000 bushels to come from the old crop. Since the report on total holdings on March 1 indicated that after allowing for average domestic consumption and an average carry-over on July 1 there was but little wheat left for export from the United States, is will require a close cleanup to furnish the amount of wheat allotted in the analysis above. Exports of wheat and flour in March were 14,371,000 bushels and have averaged close to 2,000,000 bushels weekly during April.

Up to the end of April Argentina will have shipped about 75,000,000 bushels since January 1 out of her surplus, estimated by the trade at about 115,000,000 bushels. If this estimate is correct and clearances maintain the average of the last four months the Argentine surplus will be cleaned up by the middle of July, with her next harvest five months away.

Australia is shipping steadily with around 40,000,000 bushels left, but a drought in that country is checking seeding and she may be loath to dispose of all her present surplus before the outcome of the next crop is assured. The crop in India is estimated at 356,000,000 bushels, or about 100,000,000 bushels more than last year and 23,000,000 bushels more than the average. Her home requirements are about 320,000,000 bushels.

The weakest spot in the immediate situation is the small domestic demand for flour. Mill operations have dropped to the lowest level in a long while. In spite of inactive demand from this source primary arrivals have been so small that the cash market is fairly strong. There is but little prospect that receipts will increase as stocks in all positions are light. Supplies of flour are being depleted also and increased demand from mills must appear eventually.

The new crop prospect is only fair, although reports on the whole are more favorable. The wet spring has been too much for wheat in some sections and a dry spell in May or June can do a world of damage, as the plant is watery and not deeply rooted. A lot of the wheat in the southwest which sprouted late shows low vitality and is not stooling well. Acreage abandonment in Kansas is estimated at 28 per cent. The position of the market makes it extremely sensitive to adverse crop news.

Besides these natural conditions in the market there are abnormal influences, due to the speculative situation in May wheat at Chicago, with the possibility of a "corner" in that delivery. No one knows just how the matter will work out and radical fluctuations can be expected which will affect the cash market. In the last few days there has been heavy selling by the longs, but the big lines are believed to be intact, in which case the market will tighten up again.

Corn and Oats

Demand for corn, which declined sharply after the first of March, is picking up again. Corn planting in the southern states is behind time.

Private reports point to a decrease in the acreage of oats as a result of wet weather and the fact that the crop has been highly unprofitable during the last year or two. Prices are still weighed down by the millstone of a huge visible supply. If a crop scare develops later the market may be jarred out of the rut.

Cash grain markets—The range of cash grain prices for the week ending April 26 was: Chicago—Wheat, No. 2 red, $1.42 1-2@1.47 3-4; No. 2 hard, $1.40 1-4@1.47. Corn: No. 2 mixed, 60 1-4@62 1-4c; No. 3, 58 3-4@61 1-2c; No. 4, 57 3-4@60 1-4c; No. 2 yellow, 60 1-4@62 1-2c; No. 3, 58 1-2@61 3-4c; No. 4, 57 3-4@61 3-4c; No. 2 white, 61@63 3-4c; No. 3, 59 3-4@62 1-4c. Oats: No. 2 white, 39@44c; No. 3, 37 1-2@39 3-4c; No. 4, 36 3-4@38 3-4c. Rye: $1.05 1-4@1.10. Barley: 58@67c.

Spring Decline in Clover Seed

The usual decline in clover seed prices, which marks the passing of spring seeding requirements and occurs toward the end of April or early in May, has set in. Prices on red clover seed for the new crop or for October delivery are about $3 below the cash market.

Chicago, per 100 lbs.—Clover, $13.60; timothy, $3.

Toledo, per bushel—Prime red clover, $15@22; prime alsike, $11.50; prime timothy, $4.50@6.

Feed Markets Placid

Feed markets are quiet. Flour mills are operating at only a small per cent of capacity and are behind on orders for wheat feeds, but jobbers are selling freely, although at prices about $3 higher than at the bottom of tthe break a few weeks ago. Oil meals are neglected, but prices show little change. Feeders and dairymen are buying sparingly of all feeds and export demand is dull.

Prices per ton (100-pound bags) in carlots: Chicago—Bran, $26@26.50; standard middlings, $26.50@27; flour middlings, $28@29; cottonseed meal, 36 per cent, $49.50; 43 per cent, $53.50; hominy feed, $22; gluten feed, $32.65; old process oil meal, $54.50.

Hay Markets Firm

The hay market continues firm, due to light receipts and moderate local demand, coupled with shipping orders at some points. Legume hays are slightly less active, as these are most affected by the opening of the new pasture season. Cold weather is delaying the first cutting of alfalfa. Heavy spring rains point to a rather large hay crop and good pastures.

Prices per ton in carlots: Chicago No. 1 timothy, $25@28; No. 2, $23@25; No. 3, $17@20; No. 1 light clover mixed, $24@25; No. 1 clover, $20@21; No. 1 clover mixed, $21@23; Alfalfa, $17@28; upland prairie, $17@19; midland prairie, $14@17; rye straw, $16@17; oat and wheat straw, $14@16.

Egg Prices Have Stabilized

Egg prices have been about as stable for several weeks as this market ever is. Receipts during the first and second weeks in April were of record size at the five leading cities, New York, Chicago, Philadelphia, Boston and San Francisco, but the third week in the month showed a small decline and it is probable that the high point of the spring period of heavy production has been passed. Since receipts will be large enough to furnish a surplus over immediate consumptive needs to go into cold storage for three months yet, prices will not make much headway for a while, but a slight upward trend is probable.

Receipts of dressed poultry have been falling off, but they usually begin to pick up again early in May. Cold storage holdings of frozen poultry in the United States decreased 20,000,000 pounds during March. They are still about 10 per cent larger than last year.

Broad Demand Supports Butter

Butter markets scored fractional advances again last week, due primarily to the breadth of consumptive demand. The increase in receipts over the winter level has not been as rapid as expected and trade sentiment has been affected more or less by this fact.

Production is very large, however, and receipts of butter at the leading markets for weeks have been running ahead of the supply during the corresponding weeks in each of the three preceding years. Nevertheless, withdrawals from cold storage have exceeded the average. Since January 1, for example, receipts of butter at Chicago, New York, Boston and philadelphia total 2,022,525 tubs, compared with 1,583,000 tubs in the same period of 1921, while cold storage holdings on April 25 were only 2,303,000 pounds, compared with 5,507,000 pounds on the same date last year.

Usually receipts become heavy enough by the second or third week in May to necessitate placing some butter in cold storage. If events follow the normal course a readjustment in prices to a storing basis by that time will be natural. The market is highly sensitive and dealers on distributing markets are anxious to keep the supply on the move to avoid being caught with large stocks when the expected decline in prices takes place.

Prices for 92-score fresh butter on April 26 were: Chicago, 38c; New York, 39 1-2c; Boston, 39 1-2c; Philadelphia, 40c; San Francisco exchange quotation, 36c.

Cheese Prices Still Yielding

Cheese prices at country markets were lowered again last week and prices in distributing markets are gradu-

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Skookum Fruit Goes Two Ways

Some Units Cancel Contracts; Cooperatives Sell Their Own; Damage Suits Are Filed

As a result of the Skookum-Crutchfield controversy six of the original Skookum units have cancelled their contracts with the Northwestern Fruit exchange and have signed up with the North American Fruit exchange, controlled by Arthur R. Rule and W. F. Gwin. Three others have renewed their contracts with the Northwestern Fruit exchange and one unit has left it optional with its members to ship through either agency. Peshastin, Leavenworth, Entiat, Chelan, Pateros and Brewster have signed up with the North American. Wenatchee, Okanogan and Richland have renewed their contract with the Northwestern and Cashmere has signed with the North American, but left it optional with the growers to ship through the Northwestern, provided they make a decision within 10 days from May 1.

While the controversy has been raging as to the disposition of the Skookum crop between Crutchfield on the one side and Rule and Gwin on the other, the Wenatchee District Cooperative association has decided to establish its own marketing agency and sell its fruit direct to eastern wholesalers. Last year the association employed the North American to market its fruit. Both Crutchfield, representing the Northwestern Fruit exchange, and Rule and Gwin representing the North American Fruit exchange, sought to control the output of both the cooperative association and Skookum Packers' association units. As the matter now stands, both of them have lost the cooperations, while the North American has secured about two-thirds of the Skookum tonnage to one-third that has signed up with the Northwestern.

Another phase of the controversy is the institution of five damage suits in the Chelan county superior courts as follows: First, Crutchfield and the Northwestern Fruit exchange sued Gwin, Rule, J. A. Warman, A. A. Prince, D. H. White and the North American Fruit exchange jointly for $100,000 damages claimed to have been sustained through the alleged breaking of the five-year contract entered into March 8, 1921, between the Skookum Packers' association and the Northwestern Fruit exchange for the sale of the fruit grown by the association units. This contract has never been cancelled by the Skookum Packers' association, Skookum officials declare, but the various local units mentioned above have cancelled their contracts with the association, which leaves the latter without any fruit to deliver to the Northwestern exchange.

In the suit commenced by the Northwestern, the defendants were charged with conspiring to break the contract for the sale of Skookum fruit, and in answer to this suit four counter-suits have been commenced by the defendants. W. F. Gwin first sued for $100,000 damages, alleged to have been sustained by him through the publication of the complaint filed by the Northwestern in its original suit. This complaint was published in full as an advertisement in the Wenatchee Daily World, April 8. The day it was filed J. A. Warman, formerly president of the Skookum Packers' association, filed a suit for $100,000 upon the same grounds as those mentioned by Gwin, specifying the publication in the Daily World as one of the grounds for the suit asking that Crutchfield and the Northwestern Fruit exchange be adjudged to be in contempt of court for attempting to influence the decision of the jury by circulating a copy of their complaint through the press.

D. H. White, formerly treasurer of the Northwestern Fruit exchange, also has sued Crutchfield and the Northwestern for $100,000 damages alleged to have been sustained through the publication of the suit commenced by the latter. Finally the North American Fruit exchange, by A. R. Rule, sued the Northwestern Fruit exchange for $300,000 damages upon the same grounds. A letter written by H. G. Fletcher, sales manager for the Northwestern Fruit exchange, is also mentioned as one of the causes of action in all the suits.

One result of the controversy has been to convince the growers, shippers and business men of the entire district that they must get together upon some common ground for advertising and marketing the crop, and an advertising bureau is now being formed for the purpose of assessing each grower three cents per box to be expended in a national advertising campaign.

Berry Picking

Will Pay 40 Cents for Raspberries and 30 Cents for Strawberries

At a recent meeting of the trustees and members of the advisory board of the Puyallup & Sumner Fruit Growers' association plans for harvesting the crop of 1922 were made. It was decided to pay 40 cents a crate for picking red raspberries and 30 cents for strawberries, with a bonus of 10 cents a crate on raspberries for pickers remaining through the entire season, and rendering satisfactory service. No bonus is to be paid on strawberries. Prices for the picking of blackberries will be fixed later in the season.

Following a full discussion of the affairs of the association, W. H. Paulhamus was elected president; H. H. Elerding, vice president, and O. E. Shay, secretary-treasurer. The president and secretary-treasurer were instructed to furnish surety bonds of $10,000 each.

F. A. Streblow was appointed by the board to act as field inspector for the next 60 days, to call on the members and advise them of matters pertaining to the berry crop.

To Go Ahead

With Greater Wenatchee Project

The state department of conservation and development estimates that it will cost $7,137,738 or $166.77 per acre to put water upon 42,800 acres in the Greater Wenatchee irrigation project. If 50,000 acres of the Quincy land is included the cost will be $194.02 per acre and if 100,000 acres of Quincy land is irrigated Engineer Langloe of the department estimates the cost will be $179.73 per acre. While these figures are somewhat higher than the original estimate, the Greater Wenatchee committee feels that the project is entirely feasible, that it can be financed and that immediate steps should be taken to form a district and complete the project.

The preliminary survey made by Engineer Langloe contemplates the very best and most permanent construction possible, including concrete dams, steel-lined flumes, a concrete-lined canal and a steel bridge across the Columbia river which will carry two steel pipe lines supported by concrete abutments. The Columbia river crossing alone is estimated to cost $1,025,713.

Tunnel work on the project will cost $2,433,852 for the Greater Wenatchee project alone. If the Quincy acreage is included the tunnel work would cost $5,900,592.

After considering the report of Engineer Langloe for three days the Greater Wenatchee committee of 15 decided to go ahead with organization for the purpose of financing and completing the Greater Wenatchee project.

A committee of five was elected to study the survey and make recommendations regarding the time of construction and as to whether the Greater Wenatchee project or the combined project shall be adopted.

Cooperative Victory

Judge Frater of the superior court at seattle has decided all points in favor of the plaintiffs in the suit of the Washington Cooperative Egg and Poultry association against Frederick A. Taylor, a Bothell poultryman. The case charged that after agreeing to sell all his eggs, except hatching stock, through the association, the defendant had been using other agencies to market his eggs, and asked for 5c per dozen damage on all eggs so sold, as well as a restraining order preventing further sale of eggs except through the association. Judge Frater ruled that damages to the amount of $319.50 were due plaintiffs and issued an order restraining any further outside selling. It is announced that the case will be appealed to the state supreme court.

AN "ANNUAL" ANIMAL.

The hog comes on the farm in the spring and goes off in the fall, so you do not have to feed in the worst part of the year.



No Damage to Yakima Fruit Trees

The cold weather of the last winter did no damage to Yakima fruit trees; the 13,000-car apple crop of 1921 is being "cleaned up" as satisfactorily as any in its history; plantings are being increased considerably, and the prospects for 1922 are for a total of shipments just about equal to that of last season—larger if anything, for so far this spring weather conditions have been ideal. With 475 carloads rolled in March, apple shipments from the valley reached a total March 31 of 12,336 cars, and the holdings April 1 amounted to 713 cars, as compared with twice that number a year ago, according to figures furnished by the Yakima Valley Traffic & Credit association. The Yakima Herald, whose figures have been used by federal authorities, totals the value of the 1921 apple crop at $15,500,000, and of the entire fruit crop at $20,000,000.

"Under the same conditions as last year we would have practically the same crop," said District Horticultural Inspector W. L. Close to a representative of THE FARMER, "but with slightly more favorable frost conditions the cherry, pear and prune crops would increase materially, for you will recall that late April freeze in 1921. Under normal conditions, too, there will be a larger peach crop, for the wood has about recovered from the 1919 freeze. It showed great improvement in 1921 and should show still more this year. The cold weather of last winter came on too gradually and was not severe enough to do any damage. Temperatures of 10 to 20 degrees below zero are required for serious injury.

H. A. Glen, general agent of the Northern Pacific, is recognized as one of the most accurate estimators of crops in the Pacific northwest. Here is the way he sees prospects for the present year, and it is especially interesting in view of last year's production (the record up to that date) of 17,165:

Apples	13,155 cars
Cherries	154 cars
Peaches	1,533 cars
Pears	2,540 cars
Prunes, plums, etc.	334 cars
Grapes	67 cars
Melons and Cants	480 cars
Total 1922 fruit crop	18,263 cars

and 7 degrees below one night has been our lowest. The cold weather was long continued, but it came on gradually, giving the sap plenty of time to get into the roots, and there was heavy snow. This furnishes no excuse for letting down on spraying precautions, however. The growers seem to think that when we get zero weather the codling moth and the scale quit business for the season, and it so happened that after the freeze of 1919 little mildew appeared. Last year, however, it knocked down 20 per cent of the Jonathan crop.

"Planting this year seems to be stimulated somewhat. One of the big nurseries has booked by far the largest spring sale of any year in its history, and others report similar increases. The Delicious is one of the leading varieties, possibly on account of the high prices received late in the winter, and grapes are increasing remarkably. In 1920 only about 3000 plants, mostly Concords, were brought into the county. In 1921 43,125 were imported, in addition to more than 13,000 grown locally. They returned more than $400 per acre last year, and the crop can be contracted for a period of years at $50 per ton."

Inspector Close is deeply interested in the potato work of his department, and is cooperating with the county farm bureau in securing better types of seed potatoes to increase the yield. "Some exceptionally good yields prove that this can be done," said he, "and by eliminating disease and poor seed the 8 to 10 ton average of production in this valley can be raised considerably. The valley adopted the United States grade this year, and we have inspected and certified 1500 carloads—more than ever before. We have been particularly fortunate in that shipments carrying our certificate have experienced less than 1 per cent of rejections. The certificate seems to fill a long-felt want of shippers and growers, and it has a standing not attained before we cooperated with the federal bureau of markets."

The inspector estimated that the county's potato acreage last year was 20 per cent larger than any previous year since he has known of it, and it certainly will be increased in 1922. The 1921 crop totaled 4300 carloads.

The valley peach crop, which dropped from 2200 carloads in 1919 to 138 the season following the freeze, came back to 1332 in 1921 and is due to reach 1800 this year. Pears are expected to produce about the same total of 2400 cars.

The apples left in cold storage were expected to clean up quickly at good prices. Yakima and Wenatchee together had 500 cars fewer on April 1 than Yakima alone had a year ago.

Yakima Alfalfa

Large Orders From the Palouse

Notwithstanding that on February 1 only 7000 carloads of hay had been shipped out of the Yakima valley, as compared with 11,000 carloads on the same date the year before, with 4000 to 5000 carloads yet to be shipped and much of the crop spoiled by snow and rain; notwithstanding poor market, little demand and a low price at that time ($8@9, as compared with $13@14 in 1921), there is every indication today that the valley's hay crop, said to be the heaviest ever cut, will be moved out to the last ton at prices not thought possible two months ago.

The change is due to receipt of large orders for alfalfa to ship into the Palouse country, where farmers are calling for the hay to condition their work horses, which wintered on straw. One dealer early in April had orders for up to 2000 carloads of first and second class hay at $15 to $16 for one and $12.50 for the other, with good hay already getting scarce.

Thousands of tons of hay were permitted to spoil under winter snows, which discouraged farmers did not take the trouble to remove, but the shrinkage is small where stacks were covered or well built, and the general situation is most encouraging. To members of the Washington Cooperative Hay Growers' association who decided to assume their debts rather than go through bankruptcy, the upturn in the hay situation is particularly pleasing, and Receiver F. A. Schreiner is taking every advantage of it, in "saving the cooperative idea."

More Rabid Coyotes

Boundaries of the rabies quarantine district of eastern Washington have been extended by order of the state department of agriculture and the state health department to include all portions of six counties where rabid coyotes have been spreading the disease by biting dogs and other animals.

The counties now included are: Benton, Yakima, Kittitas, Klickitat, Franklin and Grant. The new quarantine order embodies a provision empowering state and federal hunters to enter upon private lands to trap and kill predatory animals.

PUREBRED HOLSTEIN CLUB.

A purebred Holstein club has been organized in the Grandview district of Yakima county by County Club Agent E. C. Scott. Five of the nine members have secured their heifers or cows. A purebred Guernsey dairy club, with 25 members, has also been organized and the Guernsey Breeders' association has completed arrangements for financing the purchase of a carload of heifers for the boys. The 25 members will be divided into four groups, and the banks of the county will furnish $10,000, charging 7 per cent interest for the money.

$600,000,000 FOR HIGHWAYS.

Expenditures for highways in the United States last year amounted to approximately $600,000,000, a sum that places road building among the big industries of the country and justifies a large expenditure for experiments to determine just how roads should be built to meet the needs of the ever-increasing traffic, according to the bureau of public roads, United States department of agriculture.

STOP THE LITTLE LEAKS.

The little losses destroy the profits.

Your Kind of Battery Needs Our Kind of Service

To get all the miles and months out of your battery it must have proper care from the very first day you put it in service.

That means having water put in at least twice a month, and seeing to it that the charge is kept up to the proper point.

Also to go straight to the nearest Battery Headquarters the minute you suspect your battery isn't up to the mark. Each one of the names listed below is Battery Headquarters in its community, equipped and organized to give battery service according to the Willard Standards.

It makes no difference what make of car you drive, or what make of battery is on it. Willard Standards of Service provide for exactly the same care and attention to all batteries regardless of make or any other consideration.

All the dealers listed below give the Willard Standard of Service on all makes of Batteries:

WASHINGTON

Aberdeen.....Aberdeen Battery Co.
Anacortes.....Dodson & Watkinson
Arlington.....McAlpin Garage
Auburn.....Valley Battery Co.
Bellingham.....J. M. Laube & Son
Bremerton.....Hendry Storage Battery Co.
Centralia.....Ray Hatch Co.
Chehalis.....Ray Hatch Co.
Cheney.....Cheney Garage
Colfax.....Colfax Battery Station
Columbia City.....Frank Rhodes Co., Inc.
Colville.....Johnson's Battery & Elect. Shop
Davenport.....Sandy's Garage
Dayton.....Dayton Storage Battery Co.
E. Stanwood.....Electric Supply Co.
Ellensburg...Ellensburg Electric Service Co.
Elma.....Elma Battery Co.
Enumelaw....Seibert & Erickson Motor Co.
Everett.....Harper-Megge, Inc.
Georgetown.....R. W. Nivison
Goldendale.....C. R. Ralston
Grandview.....Logan Motor Co.
Hoquiam.....Storage Battery Service Co.
Kelso.....Kelso Battery Co.
Kennewick.....Kennewick Battery Co.
Kent.....Highway Garage Co., Inc.
Kirkland.....Kirkland Storage Battery Co.
Marysville.....Iten Bros.
Mt. Vernon.....Skagit Battery Co.
Odessa.....Goodwin's Garage
Okanogan.....Oliver G. Corbin
Olympia.....Olympia Battery Co., Inc.
Pomeroy.....Hamilton Battery Station
Port Angeles..L. H. Thomas Battery Station
Poulsbo, Liberty Bay Electric & Storage Battery Service Station
Prosser.....C. B. Crawford & Son
Pullman.....Pullman Battery Sta.
Puyallup.....Valley Battery Co.
Raymond.....Raymond Service Station
Renton.....Frank Rhodes Co.
Ritzville.....Hubbard's Battery Station
Rosalia.....Rosalia Battery Station
Seattle.....Harper-McGee, Inc., (4 Service Stations in Seattle), 817 East Pike St.
Selah.....Harshberger Motor Co.
Spokane.....Inland Battery Co.
Sumas.....Highway Garage
Sunnyside.....Stevenson's Battery Sta.
Tacoma.....R. R. Matthews Co., Inc.
Toppenish....Toppenish Battery Service Co.
Vancouver.....Vancouver Battery Co.
Walla Walla.....The Johnston Auto Electric Co., Inc.
Wenatchee.....Electric Supply Co.
West Seattle.....Chas. S. Harper, Inc.
Wilbur.....Enterprise Garage
Woodland.....W. V. Sheltus
Yakima.....Wiseman-Jacklett, Inc.

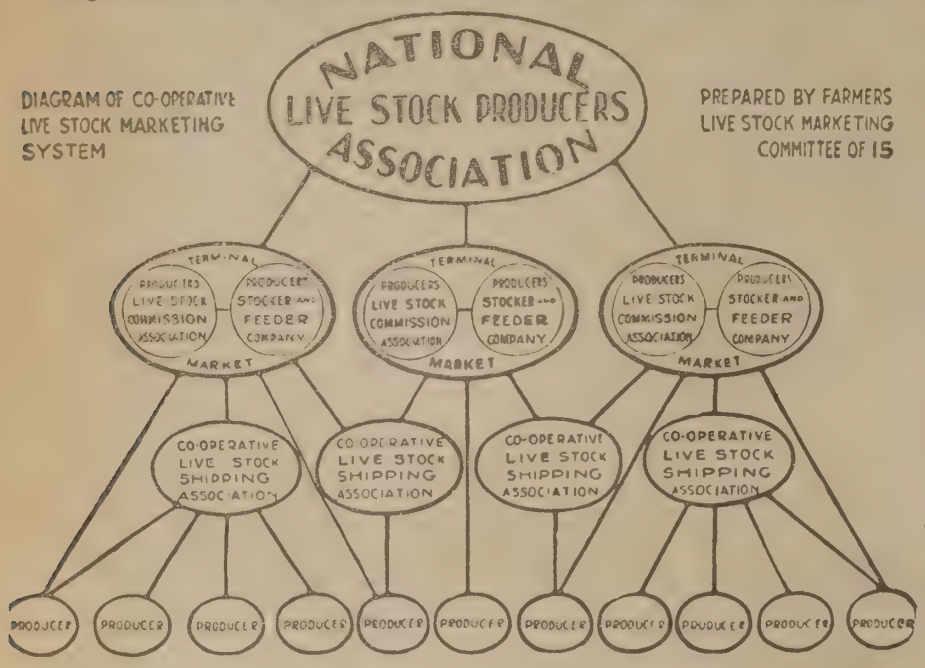
WILLARD STORAGE BATTERY COMPANY, Cleveland, Ohio

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THREADED RUBBER BATTERY
Willard

Stockyards Law Has Teeth

Boycott at St. Louis on Cooperative Shippers Is Broken



At the close of a recent hearing, 110 individual commission men representing 39 "old line" commission firms comprising the entire membership of the St. Louis live stock exchange pleaded guilty to the government's charge of instituting a boycott against cooperative commission firms at the St. Louis stockyards and consented to an open market.

This was the first formal complaint to be filed by the secretary of agriculture under the recently enacted packers' and stockyards' control law, and resulted in a complete victory for cooperative live stock marketing.

The principal charge in the complaint was restraint of trade through a boycott in that the 39 "old line" commission firms constituting the entire membership of the exchange, refused to do business with order buyers or traders, except the order buyers from the very large packing concerns who buy live stock from the Producers' Live Stock Commission association and the three other independent commission companies that are not members of the exchange. It was charged that at a meeting attended by some or all of the commission men who are members of the St. Louis Live Stock exchange, "it agreed upon and adopted as a policy to hamper, obstruct and prevent by coercion or intimidation" the order buyers and dealers fro making purchases from the independent commission concerns. The firms which are members of the exchange are bound by its rules which fix trading regulations. One of them is that members must not trade with nonmembers.

Handle Much Business.

The Producers' Live Stock Commission association at East St. Louis received 107 cars in one recent week, holding its lead in first place over all other commission firms.

The Central Cooperative Commission association, which is the live stock producers' commission firm established at St. Paul by the Minnesota State Farm bureau, the same week, handled 269 cars out of 1009 cars received at that market in the five market days. This was 26.8 per cent of the total commission business transacted on this market last week. The Central Cooperative Commission association did a business of $5,000,000 for its members during the first five months of its existence and saved these members $49,000 in commission charges or a saving of nearly 50 per cent of the charges made by "old line" commission firms.

Portland, Ore., is the most recent live stock market to be investigated by the National Live Stock Producers' association with a view to establishing a Producers' Live Stock Commission association there.

The Movement's History.

Live stock producers have felt for many years that they have given too little consideration to marketing their live stock. This conviction developed to a point where the president of the American Farm Bureau federation, as a result of numerous requests of live stock producers, farm and live stock organizations, called a national live stock conference in October, 1920. At that conference action crystallized in the authorization of the president of the American Farm Bureau federation to appoint a farmers' live stock marketing committee of 15. This committee was appointed in January, 1921, and submitted a report at the conference in November, 1921. The plan as submitted by the committee and adopted by the conference is built upon the cooperative marketing principle. To provide the required agencies for the effective handling of the live stock marketing problem and otherwise promote the best interests of live stock producers it is necessary for the producers themselves to have:

First: Producers' live stock commission associations established at the terminal markets to render service to individual producers and cooperative live stock shipping associations.

Second: Producers' stocker and feeder companies established in connection with terminal commission associations.

Third: A national organization of live stock producers.

Fourth: Cooperative live stock shipping associations established at shipping points where available business will justify and local sentiment approves.

Obviously no commission company, whether cooperative or otherwise, can operate successfully without giving due consideration to two things:

First: It is necessary to secure liberal patronage. If a commission company is not able to have a sufficient quantity of live stock consigned to them to sell it can not operate economically or successfully.

Second: It requires a conservative amount of money to establish an office and to furnish working capital with which to do business. This money is to be raised by memberships, fees for which are as follows:

a. The minimum membership for a cooperative live stock shipping association is $50. This membership is for an association doing a business of 50 cars or less annually. An association shipping more than 50 cars annually will pay 50 cents for each car in addition to the first 50 cars. The volume of business determining membership will be reckoned on the business of 1921.

b. The membership fee for individual live stock producers not members of cooperative shipping associations or members of cooperative live stock shipping associations who ship their own stock to market, is $10.

Payment of these fees entitles the holder to life membership.

The board of directors of the National Live Stock Producers' association must know, in order to answer the questions that have been asked:

First, whether or not you or the shipping association of which you are a member will patronize a producers' live stock commission association when it is organized on the market or markets to which you consign your live stock.

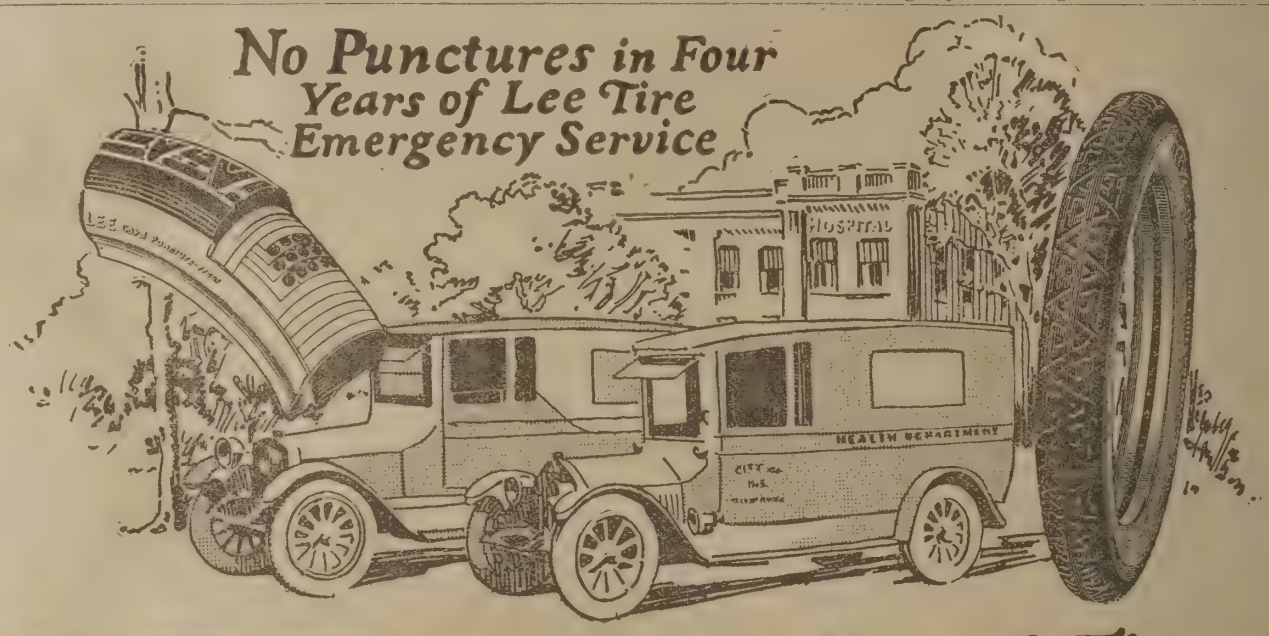
And second, are you ready to take out membership in a producers' live stock commission association?

It is necessary in order to secure the establishment of producers' live stock commission associations and producers' stocker and feeder companies on the markets which you patronize to have the assurance from you and others that there is sufficient patronage and sufficient memberships to finance the proposition, and no commission association will be established until there is assurance at hand with reference to these two points.

Further information may be obtained by addressing the National Live Stock Producers' association, 608 South Dearborn street, Chicago, Ill.

YAKIMA FRUIT YIELD.

The average yield of Yakima fruit trees, with exception of cherries, last year was far above the average for the eight-year period between 1914-1921 inclusive, according to figures compiled by W. L. Close, district horticultural inspector. Apples, 3.94 boxes per tree, against 3.34 boxes; pears, 2.14 boxes, against 1.86 boxes; peaches, 7.10 boxes per tree, a figure exceeded only three times in the period covered by the statistics; prunes and plums, 138.22 pounds per tree, against 95.59 pounds for the eight-year average. Cherries, 50.66 pounds; eight-year average was 67.8 pounds.



No Punctures in Four Years of Lee Tire Emergency Service

LEE *Puncture Proof Tires*

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From the Isolation Hospital, Milwaukee Board of Health, comes the following: "We have used Lee Puncture-proof tires for the past four years—used the first Puncture-proof Cords in Milwaukee. We have never been laid up on account of punctures and have always received exceptional mileage."

"EXCEPTIONAL mileage and no punctures." What a world of saving, in time, money and annoyance, Lee Puncture-proof Tires represent on the farm.

Equipped with Lee Puncture-proofs, your automotive equipment gives the maximum of non-stop service.

Nails, spikes, broken glass or metal have no menace for Lee Puncture-proof tires because into them are built three permanent layers of case-hardened steel discs that no metal can penetrate. Yet, Lee Puncture-proofs are as resilient—as easy riding—as ordinary pneumatics.

Because the Lee Puncture-proof is unlike any other tire, it is the only pneumatic carrying a cash-refund guarantee against puncture, in addition to the maker's standard guarantee covering Lee Regular Fabrics and Cords.

So, for your own protection—for safety and service and saving—let your next tires be Lee Puncture-proofs.

The Lee Line of Pneumatic Tires and Government Specification Grey Tubes is represented by responsible dealers, in every locality.

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Executive Offices — 245 West 55th Street

NEW YORK CITY

FACTORIES CONSHOHOCKEN PA.

"Cow Counties" Organize a Defense League

LONG ago a city political boss referred contemptuously to rural communities as "cow counties." There must be a large number of "cow" counties in Washington, for a conference in Spokane last week of 45 legislators and other representatives voted to form the "Cow County Defense league." The following resolution was unanimously adopted.

Resolved, That the Senator Palmer reapportionment initiative measure No. 45 is inequitable and not for the best interests of the state of Washington and that the same should be defeated. That a committee of four be appointed by the chair to join with counties west of the mountains in forming a statewide cow county defense league to defeat said measure, and that the chairman of this meeting be a member of said committee.

Senator L. L. Westfall of Spokane, chairman of the meeting, will name three other members from different sections of eastern Washington. The state meeting for the enlarged organization of the defense league is to be held in Olympia in about three weeks. Nearly every county east of the Columbia river was represented at the meeting.

Ever since Senator Palmer brought forward his initiative measure widespread alarm has been growing in other parts of the state. The confessed purpose of the measure is greatly to enlarge Seattle's proportionate representation in the legislature at the expense of greatly reduced representation in many other counties of the state.

THE FARMER sounded a note of warning when this measure was first proposed. It pointed out that under its provisions the representation of many farming counties, especially in the state senate, would be very materially reduced, with the result that a well-oiled political machine from King county (of which Seattle makes up most of the population) could dictate legislation at Olympia.

The advocates of the Palmer measure have been saying that the present legislative apportionment law is in violation of the state constitution and that the legislature is directed by the constitution to reapportion the legislature after the taking of each federal census. But the supreme court of this state, in a decision reported in the 92d Washington (court decisions), page 540, decided that the present apportionment law is valid and that the provision of the constitution advising the legislature to reapportion the state after the taking of each census is advisory and not mandatory. We quote from that decision.

"It is held by all of the courts that the legislature can not be compelled to redistrict the state, as directed by the constitution, and, as a corollary thereto, it must follow that our apportionment act, lawfully enacted, will continue in force until superseded by a subsequent valid act.

"It is axiomatic also that the constitution is a limitation of power, not a grant of power, and that, save for constitutional restriction, the legislature could apportion the state in any manner it deemed best, and the courts would be powerless to inquire into the validity of the act."

Under this decision the legislature is reasonably given its own discretion to determine the time it will take to sound out public sentiment and frame a just apportionment law that will be in the public interests.

The Washington Farmer hopes that the people will refuse to sign the Palmer initiative measure, and that if the measure should go upon the ballot they will vote it down. It is manifestly against sound public policy to permit a single great city in a state like Washington to obtain such ascendency in the legislature that rural interests will be at the mercy of a group of city politicians.

Better Farm Credit

Legislation to provide six permanent remedies for defects in the agricultural credit system of the country has been recommended by President Harding by Eugene Meyer Jr., managing director of the war finance corporation, in a report based upon his survey of conditions in the west.

As remedial measures he recommended:

"Enactment of legislation specifically authorizing the organization of institutions to rediscount the paper of live stock loan companies, and the establishment of a system for the more adequate supervision and inspection of the live stock which furnishes security for the paper.

"Frank recognition of the need for the orderly marketing of agricultural products in a more gradual way and over a longer period, and the adjustment of existing banking laws and regulations with this end in view.

"Establishment of a rediscount facility to make it possible at all times for cooperative marketing organizations to obtain adequate funds for their operations.

"Extension of the powers of the federal reserve banks to include the purchase in the open market of eligible paper secured by nonperishable agricultural commodities, properly warehoused.

"Encouragement of state nonmember banks to enter the federal reserve system and reduction of the minimum capital required for admission to the system—admission in such cases to be conditioned upon an undertaking to increase the capital to the present minimum of $25,000 within a definite time.

"Amendment of the national banking act to permit a limited amount of branch banking within a limited radius of the parent institution."

Pending the providing of these improvements to the national credit machinery, Mr. Meyer suggested extension to January 1, 1923, of the period during which the war finance corporation may make loans to (1) cooperative marketing organizations and live stock loan companies where it appears that they are unable to obtain adequate financing at reasonable rates through other channels, and (2) to banking institutions on agricultural and live stock paper in exceptional cases and where it appears that the public interest will be served by such action.

To Market American Fruit

The fruit marketing committee of 21, appointed by President J. R. Howard of the American Farm Bureau Federation, met in Chicago last week and took the preliminary steps for the formation of a national marketing organization. It is proposed to complete organization of what will be known as the Federated Fruit Growers, which would act as a national sales agency for the marketing of the products of all fruit growers who affiliate with the Federated Fruit Growers.

The temporary board of directors appointed include W. B. Armstrong of Yakima, Wash., and J. S. Edwards and S. W. Baker of California. Mr. Edwards is acting general manager and vice president. Other members of the board are:

C. E. Durst, Illinois; B. F. Moomaw, Virginia; N. R. Peet, New York, and C. E. Stewart, Florida.

Wool Prospects

The effect of the new proposed permanent tariff on wool, of the world shortage, and of the increased consumption of wool throughout America and Europe, will be to increase wool prices this fall and winter, in the opinion of Manager R. A. Ward of the Pacific Cooperative Wool Growers. He believes the present dullness in the market, coupled with the strike situation, is likely to bring about a free selling of wool at shearing time, at depressed prices. "Growers who market their wool in an orderly manner this year are likely to reap a harvest. Those who are induced to sell on a glutted and depressed market at shearing time will sell at lower prices than will prevail later in the season," Mr. Ward added.

THURSTON GUERNSEY CLUB.

C. H. Bergstrom has been elected president of the newly formed Thurston County Guernsey Cattle club, which was organized recently at Olympia. C. C. Aspinwall was elected vice president and Emery Chaplin secretary-treasurer. Plans are being made to bring in a carload of Guernseys from Wisconsin. E. B. Stookey, county agent, assisted E. L. Westover of the American Guernsey Cattle club in the organization.

ColumbiaBasinLeague

The Columbia Basin league, consisting of representatives of the three Pacific northwestern states, was formed at Spokane last week with the election of officers and the selection of Spokane as the league's headquarters. The activities of the league in behalf of the early development of the big project will be financed by a fund of $200,000, which it is planned shall be raised in four installments of $50,000 every six months for the ensuing two years.

Charles B. Hurley, Tacoma, was elected president of the league and the vice presidents are Reginald H. Parsons, Seattle; H. D. McMillan, Ephrata; C. Detering, Portland, and Earl D. Farmin, Sandpoint, Idaho.

The trustees were optimistic throughout the meeting, which lasted all day, and the sentiment favored an immediate campaign in Washington, D. C., and other parts of the east and delegated James A. Ford, secretary of the Spokane Chamber of Commerce, who was named secretary of the league, to leave this week for Washington, D. C., to prepare for the opening of an office and the campaign to secure the appointment of a federal commission to investigate the Columbia basin project.

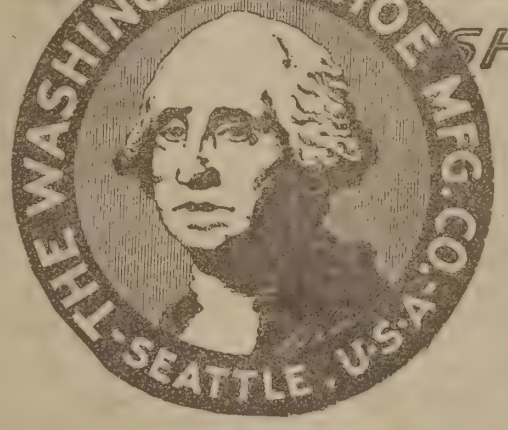
The educational campaign will include two reels of motion pictures, publicity in newspapers and magazines, lectures and distribution of literature. The motion pictures, which are to be taken soon, will tell the story of the Columbia basin.

A SOW ON EVERY FARM.

No farm is too small to keep at least one good brood sow.

Billy Buster

SHOES FOR BOYS



A Mark! — *and its meaning*

When you find shoes for men or boys that yield real satisfaction in comfort, appearance and quality—that return dividends in the shape of economy, durability and health—by all means wear those shoes and continue to patronize the man who makes them and the man who sells them. Men who put their utmost into their goods put their identification mark upon them. Why? To guide you in your first purchase? Perhaps! But mainly to guide you in your SECOND and following purchases. It is the makers' and the dealers' guarantee that you will get the same satisfaction out of second and following purchases you enjoyed through the first. Hundreds of thousands have made their first purchase of Washington Shoes and now regard the maker's mark—George Washington's head encircled by the words, "Washington Shoe Mfg. Co."—as their guide to healthful, comfortable, long-wearing, dry shoes for men and boys. You have a right to obtain this shoe service if it is not yours now. There is a dealer for your community ready to deliver it to you. Ask and learn who he is. Note the trade mark on both Washington Dry Sox Shoes for men and on Billy Buster Shoes for boys. That mark will guide you to the same complete satisfaction and economy in your subsequent purchases you shall obtain in your first. NOTE: "Washington" Shoes are sold only through dealers; but, if the dealer you inquire of hasn't them, address us, and we'll see that your demands receive attention.

Washington

Dry Sox

KLIMATICALLY KORRECT SHOES FOR MEN

LIVESTOCK AND DAIRY

Packing Butter

By A. H. RISHOR, Instructor in Dairy Manufacturers, Washington State College.

Kindly tell me how to put up butter. How much brine to use for every 10 pounds of butter and how to make the salt brine. What is the best month to put it up? MRS. M. M.

Nespelem, Wash.

In order to obtain satisfactory results from putting up butter or storing butter on the farm, as well as elsewhere, it is necessary that the entire process of manufacture and packing be performed with the utmost care. Butter made from sweet cream or from cream which is but slightly sour keeps longer and keeps better than butter made from cream which is quite sour. The first requirement then to obtain satisfactory results from putting up butter is to see to it that it is made from fresh sweet cream with a good flavor.

When you have enough cream for a churning it should be heated to 145 degrees F, and held there for 30 minutes. It is then cooled down to about 50 degrees and held at this temperature for at least three hours before it is churned. If the cream is not held this length of time, there is too much danger that the butter when it comes will be greasy and soft. The cream should probably not be over 52 degrees at the time of churning. The churning should be discontinued when the butter granules are about the size of a corn kernel. After draining off the buttermilk care should be taken in the washing of the butter, as when any buttermilk is left in the butter it does not keep well, so for this reason it might be well to wash the butter in two sets of good, pure water, which should be about the same temperature as the buttermilk.

Heavily salted butter does not keep as well as butter which is lightly salted, so for this reason care should be taken when putting up butter not to use too much salt. After thoroughly working in the salt the butter may be put up in one or two pounds prints and is then ready to be packed.

The brime is prepared by boiling the water first and then adding a sufficient amount of dairy salt to make a brine strong enough to float an egg. The brine is then put in a stone jar which is free from cracks or holes in the enamel and which has been thoroughly scalded with hot water. The butter may then be submerged in the salt solution, being careful that the brine at all times covers the butter; in order that the butter may be submerged in the brine continually it is well to place a plate or a wooden circle over the top of the butter and weight it down with a stone. The butter should then be stored at as low a temperature as you can find.

The best time to put up butter is probably during the month of May or June, as it is ordinarily considered that the butter produced during these two months is of superior quality when properly made.

VETERINARY

By DR. S. B. NELSON.

Cow Pox—If a cow has cow pox once and is cured by a doctor will it come back again? E. M.

Edmonds, Wash.

Generally it will not. Once in a while it might.

Cause of Bloat.—Will sweet clover that is now being used for pasture by many farmers bloat cattle when it is damp or wet, the same as alfalfa? O. H. V.

Thornton, Wash.

Under conditions of an animal eating more than it can digest, if hay is frosted, moldy or damp, it may result in indigestion, as evidenced by bloat. This holds true with sweet clover hay as well as any other type of hay.

Bloody Milk—I have a heifer that calved last September and commenced to give bloody milk from one teat and then it came out thick and stringy. What is the cause? N. W.

Challis, Idaho.

Give your heifer one tablespoonful of fluid extract of phytolacca in some water in the morning. Give her one teaspoonful of sodium hyposulphite in one pint of water at night. Do this for about one week or 10 days.

Sick Pigs.—I have two pigs that weigh 100 pounds each. They have been sick for three weeks. Their throats and heads swell and the eyes are inflamed. They seem to choke while drinking and have to stop and breathe through their mouths. They are losing flesh. I feed milk, ground oats, barley, wheat and cracked corn.

Yamhill, Ore. E. A. B.

Try putting a quarter of a teaspoonful of potassium iodide on the feed once daily and also painting the outside of the throat with tincture of iodine.

Hair Comes Off—One of our cows is losing her hair in spots. The skin is smooth and hard and there seems to be dandruff on some of the spots. The cow seems to be getting thin and does not enjoy her feed as before. E. McK.

Ellensburg, Wash.

There may be some slight parasitic trouble affecting the cow. I would suggest that the following treatment might be of value. Make a semi-liquid ointment of sulphur and petroleum and apply that liberally two or three times, four or five days apart.

Sore Eyes.—I have a mare that has trouble with her eyes. Her eyes water and at times she appears nearly crazy, with what appears to be intense itching. She rubs her eyes against anything within reach. A. S. F.

Ferndale, Wash.

You might try the following treatment for the eye trouble: Drop a few drops of a 2 per cent solution of argyrol in water, into the eyes night and morning. At noon also drop in a few drops of the following prescription: Zinc sulphate, one grain; boracic acid, 20 grains; water, one ounce.

Lead Poisoning—I have a cow that dropped a calf four weeks ago. She was in good shape until about 10 days ago when she got out for a short time and ate some hay from a stack that had been cut from the orchard where we sprayed last year. The hay also was mouldy. In the hour that she was out she also grazed on some green alfalfa. The next morning she would not eat and she gave less milk. For three days she breathed heavily and refused to drink and she wobbled when walking. About the third day I gave her some salts and she seemed to get some better, but still has very little appetite and still wobbles when walking. A. E. K.

Attalia, Wash.

The wobbling is a symptom of the arsenate of lead poisoning. I think you had a combination of both poisoning and indigestion due to a change of hay. At the present time it might be well for you to give the cow one ounce of compound tincture of gentian in a little water once daily. If in 10 days or two weeks, she does not quit wobbling, it might be well to give her one dram of potassium iodide in a little water once daily for seven or eight days. Three days afterward, give her one pound of epsom salts in three quarts of water.

These free booklets on Farm Sanitation

tell you how to prevent disease among livestock and poultry and describe in detail the many uses of

KRESO DIP No. 1

(STANDARDIZED)

Parasiticide and Disinfectant

No. 151—**FARM SANITATION.** Describes and tells how to prevent diseases common to livestock.

No. 157—**DOG BOOKLET.** Tells how to rid the dog of fleas and to help prevent disease.

No. 160—**HOG BOOKLET.** Covers the common hog diseases.

No. 185—**HOG WALLOWS.** Gives complete directions for the construction of a concrete hog wallow.

No. 163—**POULTRY.** How to get rid of lice and mites, also to prevent disease.

Write for these booklets.

Animal Industry Department

PARKE, DAVIS & CO.

DETROIT, MICHIGAN

KRESO DIP No. 2 IS SOLD IN ORIGINAL PACKAGES AT ALL DRUG STORES



Used by three generations —still 100% gun

THE sturdy Stevens shotgun made its first "kills" in the hands of our grandfathers. With it our fathers first experienced the joys of hunting.

And today young men treasure it, not only for its past, but because right today, the good old Stevens still maintains its unbroken record for hard and straight shooting.

In many cases we have found that identically the same gun has been handed down from grandfather to father to son.

You can buy a more expensive gun than a Stevens; but you cannot buy better shooting qualities.

It's easy to prove the accuracy of a Stevens

Here's the test for a full choke: on a piece of paper draw a circle 30 inches in diameter; measure off 40 yards and fire into it. Your Stevens will throw an even pattern of 70% of the pellets into that circle.

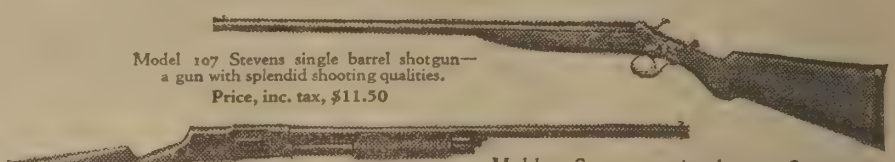
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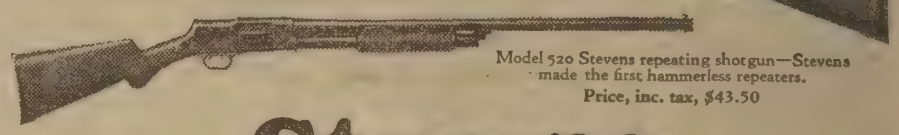
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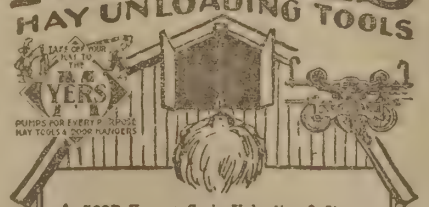
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We want **an agent** in every community to use and introduce these wonderful tires at our astonishingly low prices to all motor car owners.

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Farm Lands for Sale

Read our "Want Ad" Page for good offers this week.

Glance over the bargains on the "Want Ad" page.

The department editors of this paper are anxious to be of service to you. Do not fail to write to us if they can be of help to you.

LIFE PRESERVERS FOR LIVE STOCK

By DR. E. E. WEGNER, W. S. C.

INFECTIOUS DISEASES, ARTICLE VII.

Blackleg.

This disease is common in cattle and by no means unheard of in sheep, as in the latter it occasionally causes very considerable losses in the young animals. Other species of the domestic animals do not suffer from it, though there are other diseases that are hard to distinguish from it at times.



Blackleg is infectious, but not contagious. That is, the animals do not take it directly from one another, though after having had it and dying and lying out on the open ground, where other animals may pass over the place and lie on the ground where the one died, there is a good chance that other healthy animals may contract the disease by getting the organism into the system from the ground or feed, as the case may be. For that reason it is wise to burn or bury the carcasses of animals that have died from blackleg, and not allow them to remain on the open ground. If they are buried they should be limed well before the dirt is thrown onto the carcass, so that the whole thing will be well destroyed.

Blackleg runs a very rapidly fatal course and in many instances the owner does not know that anything is wrong until he finds an animal dead that was apparently healthy a few hours before. If, however, one should follow the cases carefully the first symptom would be seen to be a lameness in one of the limbs or a stiffness and swelling of some muscular part of the body, followed very soon by rise of temperature and general ill health. The animal refuses to feed and lie down and may be unable to get up, or only with difficulty, and then may be unable to use the diseased member. If an examination is made of the swelling it is found to be hot and painful at first, changing very soon to a cool, rounded one that crackles when the hand is passed over it. This sound is like that of crushing paper and is due to the accumulation of gasses under the skin.

Animals diseased may live for only a few hours or several days. Very few recover. The first cases are sometimes mistaken for injuries that might cause a swelling of the same proportions, but the progress of the cases distinguish it from them.

We do not know just how the infection reaches the place under the skin or between the muscles, where it starts its trouble. It may get in through the skin, though we do not ordinarily concede that disease germs get in that way. It may be absorbed from the digestive tract and be taken out with the blood, though we are not positive in either case. We do know, however, that the earth is well supplied with the organism and that there are few localities where the disease does not occur, so that the danger is a constant one in a great many places.

The danger is greatest in the spring and fall of the year and in animals that are between the ages of 3 months and 2 years. In the very young calves the danger is slight and in animals over 2 years of age that have been raised in a region where blackleg is common the disease also is uncommon. Animals, however, that have been raised in a blackleg-free region may take the disease if removd to a blackleg region, no matter what the age.

Vaccinate to Prevent.

The treatment for blackleg after the symptoms appear is quite useless. Though there are men who believe that certain procedures are of value, we have not been able to recommend any of them. The only method of combatting this disease is by vaccination as a preventive. This has been very successfully employed and has protected animals by the hundreds of thousands every year. There are several kinds of vaccines on the market, some made by private manufacturers in a powder form or in the liquid form and that prepared by the pathological department of the bureau of animal industry at Washington, D. C. This latter is distributed free of charge to stockmen for use in their herds. It is mixed according to directions supplied, with a given amount of water and a proportionate amount injected into each animal. The animals vaccinated show no ill effects as a general thing and are protected for a variable length of time. One vaccination is not sufficient for life protection as a general rule thing and we recommend that it be applied at the age of 3 months or thereabouts and again at 1 year. Some prefer to vaccinate three times between the ages of 3 months and 2 years and such a course is not ill advised.

Careful attention to vaccination will quite certainly insure against losses from blackleg and either the government vaccine or some other should be used wherever this disease has been known to exist.

Write to your state college for vaccine or information as to how to secure it.

Close Grazing by Pigs

"I learned something by experience about close grazing," said T. S. Lester of Sunnyside, Wash. "I always supposed that a sheep would eat a pasture down about as close as any animal, but some of my shoats got through the fence into a pasture with some late lambs, and presently I began wondering why the lambs were not doing well. The pigs just ate the feed away from them."

Lester was formerly well known in the Yakima valley as a breeder of Poland China hogs, but he closed out most of his animals in the sale of February, 1920, and since then has turned to dairy cattle and has been building up a herd of purebred Jerseys. "I like dairy cattle because they consume a greater amount of roughage and because they provide a steady income. If for any reason a sow fails to produce a litter she is a dead loss for the season, but a cow is producing 10 months in the year. I chose Jerseys because it is purely a butterfat proposition at Sunnyside and because I think they will produce more butterfat at a given cost than any other breed."

Here is one breeder who has been fortunate in securing heifer calves. He bought the small purebred herd (four cows and a calf) of Fred Sheaben of Mabton in March, 1920. There have been but two bull calves, and now the herd numbers 13, 11 of them females, from that beginning. His present herd sire, Gwendola Olga's Lad, a 4-year-old son of Gwendola Olga Chimes, has a double cross of Rosaire's Olga Lad, and his dam is a daughter of Silver Chimes of S. B. Both are gold medal bulls, and Gwendola Olga Chimes is in seventh place among senior 4-year-olds with 812.44 pounds of fat. At one time she held 10th place among 2-year-olds.

That Twin Calf Again

To the Editor: I noticed an article in the veterinary department of THE FARMER asking about a heifer calf that is a twin to a bull.

We raised a heifer that was a twin to a bull. She has dropped her second calf and is giving between five and six gallons of milk each day. Her test is 4.1 per cent.

Silverdale, Wash. G. H. F.



He lost enough cream every six months to pay for a DE LAVAL

"I had a cream separator that I had been using and thought was all right. I have five cows and had been selling cream and feeding skim-milk to hogs as fast as separated. A few days ago I sold the hogs and left the skimmed milk in the can. The next day I noticed cream on it. I was so surprised that I skimmed it off by hand, churned it and made one pound and six ounces of butter.

"It took little figuring to show how much cream I had been feeding my hogs each day. I figured I had paid the price of a No. 15 De Laval every six months."

This letter is typical of many letters we receive.

Perhaps this same thing is happening to you and you don't realize it. If you are using an old or partly worn-out separator, or are skimming by hand, undoubtedly you are wasting enough cream to pay for a De Laval in a short time. The waste of cream occurring every day is criminal—more than enough to pay for the entire output of the De Laval Factory.

Most any kind of cream separator will do fairly good work the first few months, when it is new. But if it is cheaply made, after the first few months your trouble will begin.

And the worst of your experience with such a machine will not be the fact that it wears out quickly or that it runs hard, or that you are piling up repair expenses, but that you are losing a lot of butter-fat.

Why take chances at all when you can get a De Laval, which has won hundreds of prizes, thousands of contests, and is used by millions. Experience has proved that it is the best cream separator that money can buy, and in the long run the cheapest.

Order your De Laval now and let it begin saving cream right away. See the local De Laval Agent, or if you don't know him, write to nearest office.

DE LAVAL PACIFIC COMPANY

61 Beale St., San Francisco, Cal.

Sooner or later you will use a

De Laval

Cream Separator and Milker

FISK RED-TOP

EXTRA PLY OF FABRIC HEAVY TREAD

These prices will help you compare:

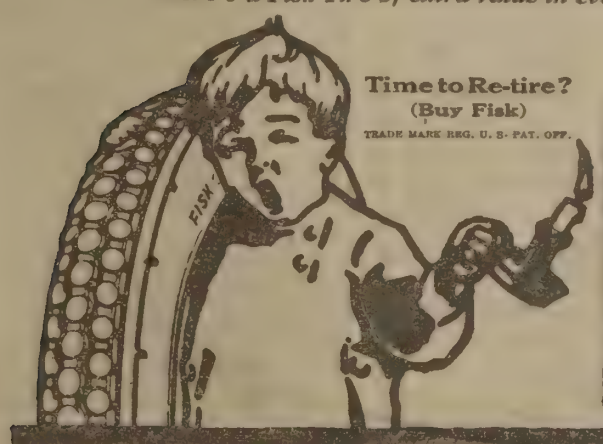
30 x 3½—Fisk Premier Tread .	$10.85
30 x 3½—Non-Skid Fabric . .	14.85
30 x 3½—Extra-Ply Red-Top .	17.85
30 x 3½—Six-Ply Non-Skid Clincher Cord . . .	17.85
30 x 3½—Six-Ply Non-Skid Cord Straight Side .	19.85
31 x 4 —Six-Ply Non-Skid Cord	27.00
32 x 4 —Non-Skid Cord . . .	30.50
32 x 4½—Non-Skid Cord . . .	39.00
34 x 4½—Non-Skid Cord . . .	41.00
35 x 5 —Non-Skid Cord . . .	51.50

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IF not you have something to learn about how good and how economical a tire can be on country roads. One of our dealers expresses the universal experience with these tires:

"We have yet to find the first Red-Top user who is dissatisfied. After once inducing a man to make the first trial nothing can jar him loose from the use of this tire afterwards. From that time he will demand them."

There's a Fisk Tire of extra value in every size, for car, truck or speed wagon.



Time to Re-tire?
(Buy Fisk)
TRADE MARK REG. U. S. PAT. OFF.

30 x 3½
FISK PREMIER TREAD
$10.85

POULTRY AND RABBITS

Half the Flock

By ALFRED G. LUNN.

"The male bird represents half the breeding flock." This statement has been repeated many times and is true. Some times he represents more than half the flock by stamping certain characteristics upon the offspring.

At any rate the male bird is a big factor and if he represents half the breeding flock and is mated to 15 hens he is as valuable as those 15 hens. He should be a vigorous fellow and this will be indicated by the way he looks after his flock. A good male will be continually searching for an extra grain and will call his hens to get it. Often he becomes thin and gets out of condition in his desire to care for the hens and he should be given an extra feed occasionally.

In selecting the male little can be determined of his breeding power from general appearances. One authority says he should be built like a high-producing female; with good width between the pelvic bones and great capacity in the abdomen as shown by the distance between the pelvic arch and tip of keel bone. In other words he should be broad at the tail end of the back and he should be deep, when viewed from the side, between the upper and lower line.

Another authority, however, says this is wrong. That when applied to the female such a system will procure the best hens, but the male bird should be selected on just the opposite lines. He cites examples of the dairy herd. He says, "If we want a good dairy cow we want one which is narrow through the shoulders both ways, and widening farther back till she is wide and deep through the hips, but in selecting a male to produce high producers we select the male which has a powerful neck and shoulders, but tapers back so he is narrow through the hips.

"Pedigree breeding is the only accurate means we know of that will tell us the breeding power o feither the male or female, and as it is not practical for every one to do this work the only recourse we have is to purchase such a male from a reliable breeder. The first cost may seem large, but remember, we are on the trail of the extra egg that will mean the difference between profit and loss.

"Don't be afraid of investing a little extra in the male if you feel that he will increase the average egg production of the flock."

The Dead Fowl

One Should Know How to Examine

"Every poultryman who looks after his own flock should know how to examine the occasional dead fowl in order to ascertain what caused its death. This is by no means a difficult matter and it would save much time for the breeder as well as for us. Then he would also know better how to care for and feed his flock," began Dr. W. T. Johnson, veterinarian for the western Washington experiment station at Puyallup, Wash., who gave a series of illustrative lectures on poultry diseases recently. "By knowing how to 'post' a bird poultrymen could save many fatalities each year, checking a disease before it gets a start in the flock.

"Grasp the dead bird by both legs and pull them straight sidewise until the skin breaks on one side. Then insert the fingers and tear the skin from the body and cut away the abdominal walls with a pair of scissors. The breast bone can be broken off with this piece at a point about half way up the body.

"The entire intestinal tract is now exposed and it can easily be examined for diseases. The gizzard can be removed and the crop and windpipe cut open in order to see if there are any parasites present. The same can be done to the intestine below the gizzard, which may be diseased, or again, there may be some form of intestinal worm present. Any trouble with the egg sac can be detected by feeling, although it may also be opened. It is a very good plan to know what these organs should look like when normal, since it is then a very simple matter to detect any trouble.

"As a general rule there are two classes of trouble in the flock, divided between the old birds and the young, growing stock. The former are susceptible to organic diseases and breakdowns, while the young stock are apt to contract contagious diseases. Both, however, lead to the devitalization of the stock and should be looked after before the trouble gets any worse.

"There are cases when the feed goes down the wrong passage and reaches the lungs instead of the crop. Such a case is caused by weak muscles in the throat and usually results in the death of the bird. Impaction below the crop can often be felt from the outside before the bird dies with the trouble. The crop should be emptied by the addition of a small amount of water with a syringe and holding the head down. The impaction can then be worked out by the same manner and the patient given a light diet until she regains her former strength.

"In case there is any fiber below the gizzard it means that there is either too much fiber in the ration or that the bird is not healthy enough to make use of what she is getting. When such a case occurs it causes irritation of the intestinal tract and allows disease to enter. It is usually the latter that is the cause of death.

"Tape worms are often found in the intestines, but these can easily be detected because of their size and peculiar jointed appearance. The large, round worms are also found in the small intestine. They are from one to two inches in length. There is another type known as the small, round worm, which is found in the large intestine. This, however, is much smaller, being only about a quarter of an inch long. The eggs of all these worms are ejected by the hen and they are picked up by other birds and the trouble spread. Young stock in particular is susceptible to the worms and it is for this reason that they should be kept in sanitary pens. Plowing and sunshine will destroy the eggs as well as the worms themselves, this being another argument for an intercropped yard.

"It is not always necessary to cut a hen open to find the cause of her death. In case of a prolapse, commonly called a 'blow out,' the organ can be seen protruding from the hen. It may be pushed back and the bird removed from the flock in order that she can be given a light diet until she can be fattened and killed. It has been found to be poor economy to treat birds that are troubled with blow outs. The condition is usually because they have been pushed too fast and their egg-laying

(Continued on the following page.)

Chickens Sick? Hens Not Laying

GERMOZONE will rid your chickens of roup, colds, canker, sore head, chicken pox, skin disorders, cholera, indigestion, bowel trouble and such ailments—and keep them healthy. For over 30 years the dependable remedy. Get Germozone, also famous Lee-FREE BOOKLETS, at drug or seed stores. If no dealer, order by card. Postman will collect. 75c and $1.50 sizes. No extra charge.

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GENERAL ADVERTISING.

MINERALIZED WATER ROUTS CHICKEN LICE

Tablets Dropped Into Drinking Founts Banish Vermin, Make Fowls Grow Faster and Increase Egg Yield.

Any poultry raiser can easily rid his flock of lice and mites, make chickens grow faster and increase their egg yield by simply adding minerals to the fowls' drinking water. This does away with all bother, such as dusting, greasing, dipping and spraying. The necessary minerals can now be obtained in convenient tablets, known as Paratabs. Soon after the fowls drink the mineralized water, all lice



and mites leave them. The tablets also act as a tonic conditioner. The health of the fowls quickly improves, they grow faster and the egg yield frequently is doubled. Little chicks that drink freely of the water never will be bothered by mites or lice.

The method is especially recommended for raisers of purebred stock, as there is no risk of soiling the plumage. The tablets are warranted to impart no flavor or odor to the eggs and meat. This remarkable conditioner, egg tonic and lice remedy costs only a trifle and is sold under an absolute guarantee. The tablets are scientifically prepared, perfectly safe, and dissolve readily in water.

Any reader of this paper may try them without risk. The laboratories producing Paratabs are so confident of good results that to introduce them to every poultry raiser they offer two big $1 packages for only $1. Send no money, just your name and address—a card will do—to the Paratab Laboratories, Dept. 878, 1100 Coca Cola Bldg., Kansas City, Mo., and the two $1 packages, enough for 100 gallons of water, will be mailed. Pay the postman $1 and postage on delivery, and if you are not delighted with results in 10 days—if your chickens are not healthier, laying more eggs and entirely free from lice and mites—your money will be promptly refunded. Don't hesitate to accept this trial offer as you are fully protected by this guarantee.—Adv.



At what age should you take needless risks with your health?

Is that a queer question?

Then many people are doing a queer thing—and often it turns out to be a serious thing.

The Federal Bureau of Education says in its rules for the health of school children that children should not drink coffee or tea. This rule is based on the well-known fact that the drug element in coffee and tea whips up the nerves, and that serious ills often follow.

If it's a good rule for children to keep away from the harm of nerve-stimulation, isn't it a good rule for everybody?

Think it over.

Granted that your body may *stand* more, can your judgment afford to *risk* more? Any doctor can tell you what coffee and tea often do to the health of adults as well as children.

There's no sacrifice in being safe. Postum is a delightful, satisfying mealtime beverage, wholesome and pleasant alike for adults and children. Postum has no age limits!

Your grocer has both forms of Postum: Instant Postum (in tins) made instantly in the cup by the addition of boiling water. Postum Cereal (in packages of larger bulk, for those who prefer to make the drink while the meal is being prepared) made by boiling for fully 20 minutes.

Postum *for* Health

"There's a Reason"

Made by Postum Cereal Co., Inc., Battle Creek, Mich.

A St. Helens Incubator sent for FREE TRIAL



You can get the very best results with a St. Helens Incubator—we are so positive of this that we want you to send for the size best suited to your requirements—and you

USE IT FOR TWO HATCHES—FREE

This unusual test will prove the simple operation, show the construction and the many superior points that have made the St. Helens Incubator the choice of thousands of successful poultrymen.

WRITE NOW FOR FREE CATALOGUE

Shows the many different sizes—details of the FREE TRIAL plan and Free Poultry Helps.

St. Helens Incubator Co.

A. R. Badger, Gen. Mgr. CENTRALIA, WASHINGTON

GENERAL ADVERTISING.

Wipe Out Every Rat and Gopher

Amazing New Discovery Quickly Kills Them All—Not a Poison.

Rats, Mice, Gophers—in fact all Rodents can now be wiped out easily and quickly. Imperial Virus will do it. This new discovery is a fluid, true Virus. Entirely harmless to humans, poultry, stock, pets, etc.



Infects Rodents only. Greedily eaten on bait. Sets up burning fever. The pests communicate it to others, and all die outside, hunting air and water. Imperial Virus is put up in sealed bottles, thus insuring full strength and potency. Only safe, sanitary method to overcome these pests. Protect your Poultry, especially Baby Chicks and Egg Hatches.

YOU CAN GET YOURS FREE

Here's how! Send $1.00 today (currency, M. O., Checks, etc.) and we will give you by return mail, postpaid, two regular, full sized (double strength) $1.00 bottles of Imperial Virus. Use one to rid your place of these pests, and sell the other to a neighbor, thus getting yours free. Special inducements to represent us.

If more convenient, send no money, just your name and address to Imperial Laboratories, Dept. 440, 2110 Grand Ave., Kansas City, Mo. Pay postman $1.00 and few cents postage when two bottles arrive. Guaranteed to do the work to your entire satisfaction within 30 days or your $1.00 will be cheerfully refunded.—Adv.

Read the "Want Ad" page this week for good offers of all kinds.

ORCHARD AND GARDEN

Tree Wounds

Treatment May Do Actual Damage

To the Editor of The Washington Farmer: Following the spring pruning each year many orchardists expend considerable labor and some money in treating the pruning wounds on their trees. While the orchardists' intentions are good, the amount of benefit which the trees receive from this treatment is questionable.

In the dry climate of eastern Washington, wood decaying fungi are not present to the extent that they are found in the more humid sections of the country. Furthermore, the dry atmosphere does not favor the start of these fungi on the cut tree surfaces.

Since a properly cut pruning scar starts healing itself during the next growing season following and will continue to heal each succeeding year by growing over with bark, the smaller wounds—those under approximately three inches in diameter—should heal without the need of any preservative treatment.

For the larger wounds one of several materials may be used. But it must be understood that any paint, preserving or disinfecting chemical which will preserve wood and destroy rot fungi will also kill the delicate cambium or growing tissue on which the tree is dependent for new bark growth and the permanent healing of the wound. This growing tissue is found on the wound at the line where the bark meets the sapwood.

It is in the dead or heartwood in the center of the wound that rot fungi start and where the protection is needed. Therefore, in treating the larger wounds it is recommended that the treatment be applied to the centers and not applied closer than one-half inch to the margins. In this way the growing tissue will be uninjured and may begin growing over and healing the wound.

Probably white lead paint is as good wound treatment material as anything. Its preserving and disinfecting qualities may be improved by dissolving one ounce of either cyanide of mercury or bichloride of mercury in a little turpentine and mixing thoroughly in one gallon of the paint. Coal tar and creosote, asphaltum and many other materials have merit for wound treatment, but none of them should be applied over the growing tissue. Bordeaux paste is a good treatment material, but it lacks the permanence of those named above and will require renewed applications from time to time.

Remember that the tree must heal its own wounds. No treatment by man can hasten this process, but improper treatment may permanently inhibit healing by the tree. The most any treatment can do is to prevent rot fungi entering the heartwood of the wound before the wound has time to naturally and permanently heal.

F. E. BAILEY,
District Horticultural Inspector.
Spokane, April 26.

Orchard Problems

By C. C. VINCENT.

My currant and gooseberry bushes last year had small worms on them. They ate the leaves off but did not bother the fruit. What are these worms called? Will they come back this year? MRS. C. S.H.

From your description would say that it is the imported currant worm that is doing this damage. The adult saw flies appear as soon as the gooseberries and currants leaf out in the spring. As soon as the leaves appear the females deposit their eggs in rows along the principal veins on the underside of the leaves. The eggs hatch in about a week or 10 days and the small larvae begin eating holes through the leaves, eventually consuming the entire leaf. As the worms increase in size they become more destructive and if very numerous are able to entirely strip a bush of its leaves in a few days. The worms feed upon the host plant for about three weeks. They can be very easily destroyed by spraying with arsenate of lead at about the rate of one pound to 50 gallons of water as soon as the worms begin feeding. If the fruit is nearing maturity, then fresh hellebore should be used at the rate of four ounces to two or three gallons of water.

BRIDGE GRAFTING.

What can I do for trees that the rabbits have barked? B. O.

If your trees are entirely girdled, then they can be saved by bridge grafting. Bridge grafting is a method used to save girdled trees and for the healing over of wounds that have been made by various cultivating implements. You should first clean out the wounded area and cut the bark back until it is smooth, then cut some scions wedge-shaped at both ends, which may be taken from the tops of the trees, and vary them in length according to the size to the wounded area. Ordinarily the scions are cut about an inch longer than the wound. These scions are pushed up firmly under the live bark above and below the wound. This carries the sap from the roots to the top of the tree and will keep it alive until the scions unite with the tree. The scions should be placed from about one inch to one and one-half inches apart around the wounded area. After inserting the scions cover over all of the exposed area with grafting wax, which is made by melting together four parts resin, two parts beeswax and one part beef tallow.

Control of Swarming

Honey production on an extensive scale makes it necessary sometimes to distribute the colonies of bees in several apiaries to avoid overstocking. Then comes the serious problem of controlling the swarm. Swarm control is less difficult in producing extracted honey than with comb honey. It is less troublesome in some locations than in others.

The reasons for these differences are important in devising measures for swarm prevention. These and other problems relating to swarming are discussed in farmers' bulletin 1198, issued recently by the United States department of agriculture. This bulletin may be had free upon request addressed to the division of publications.

Some strains of bees, the department of agriculture says, have a stronger tendency to swarm than others. So, to some extent, swarming may be reduced by careful selection in breeding.

Colonies having large brood chambers are less inclined to swarm than those in quarters too small. Strong colonies having good queens may need 60,000 to 70,000 cells for rearing of brood, during the period of extensive brood-rearing in the spring, in addition to the cells used for storing honey and pollen. Colonies having good combs throughout are less inclined to swarm than colonies having poor combs.

Inferior combs may greatly increase the swarming tendency, both by reducing the amount of available brood-rearing space and by acting as barriers in the way of a free expansion of the brood nest. The bulletin gives a dozen or more swarm preventive measures to be taken by bee owners

The Dead Fowl

(Continued from the preceding page)

capacity has grown so rapidly that they can not keep it up.

"Cases have come to the station where the entire oviduct has been torn out by the other hens in the flock leaving only a small part of the membrane to diagnose. If the owner knew what the normal organs should look like he could detect the trouble and feed accordingly. Broken eggs can also be detected from a close examination of the lower abdominal cavity. A case of this kind, of course, requires immediate attention if the bird is to be saved.

"It is not uncommon to find a hen that stands in an upright position and appears to be heavy in the abdomen. In such cases there is often a break in the abdominal organs. By a close examination one can tell if all the organs are in good condition, in which case she may recover. If she does not she should be killed.

"Some hens will get on the nest, but will not lay. This is often the result of the egg falling through a break in the oviduct and lodging in the lower abdominal cavity. The egg can sometimes be worked out the right passage, but when such cases are found the feed should be governed so as to regulate the functioning of these organs.

"One of the worst diseases prevalent among the young birds is white diarrhea. The life cycle of the organism which causes this disease has been traced and found to be held over in the mature hen which lays a diseased egg and produces an infected chick. One diseased chick in the flock will infect the other birds, thus causing much damage. The disease can be eliminated by clean yards and houses and by making blood tests of the breeding hens. This will locate the infection, which can be weeded out and there will then be no infected eggs hatched. This disease, however, is not troublesome in western Washington, and no poultryman should be alarmed at common diarrhea, since it is not the dangerous type.

"Mouth infection, a disease commonly known as canker, can easily be treated if the proper care is given to sanitation. Open the bird's mouth by pressure behind the ear and scrape away the yellowish substance which accumulates. The area is then touched with disinfectant. When treated in this way the bird should recover and go on producing eggs, but if let go she is apt to die.

"Any bird that can not be improved by some kind of treatment should be killed. Many poultrymen will not bother with a dopy hen, but believe their time is worth more than such a fowl.

"Chickenpox can easily be distinguished from other similar disorders by the grayish colored blisters which appear on the comb. The lesions are at first red, but soon take on a grayish-silver hue, which later turns to black. These can easily be distinguished from scabs caused by fighting by their shape, since those caused by chickenpox are always round. Chickenpox and a discharge at the mouth don't go together, although a bird with the above disease often has the yellowish substance in the mouth.

"Poultrymen are now getting good results by vaccinating for chickenpox and the station is prepared to send out the virus and the syringes at cost prices."

A WASTE OE EFFORT

It is a lot of time and work wasted to try to grow a crop from inferior seed.

ESSENTIAL TO PROSPERITY.

Optimism is necessary to good times.

SATISFACTION



BEFORE your grain can be marketed, it must be threshed, and nothing brings greater satisfaction than a threshing job well done. Good, clean, fast threshing, day after day, without loss or delay; and at low cost, requires certain important qualities in a machine. All these qualities are found in Case threshers. This is proved by their eighty year record in the hands of farmers and threshermen everywhere. Today, Case machines thresh more of the world's grain than any other make, because they excel in these qualities.

They Save The Grain—From the feeder to the windstacker all parts work as a unit in threshing and saving all the grain.

They Thresh All Grains and Seeds—There is not a seed or grain grown that cannot be threshed, cleaned and saved with a Case Thresher Everything necessary to handle any kind of grain can be furnished.

They Clean Thoroughly—The moment the grain leaves the cylinder Case separators begin the work of cleaning, and continue it until the grain is delivered in prime condition for marketing.

They Are Easy to Operate and Adjust—Changing a Case from one grain to another usually requires not more than three simple adjustments which can be made without stopping the machine.

They Are Durable—The average life of a Case Thresher is easily 20 years. Most of the first steel threshers we sold in 1904 are still in use and good for many more years. Our present machines are even more durable.

Because of these and other good qualities, Case Threshers give universal satisfaction to threshermen and farmers alike.

There are seven sizes of Case Threshers, 20x28, 22x36, 26x46, 28x50, 32x54, 36x58 and 40x62.

Interesting new booklets on the advantages and money making possibilities of Case Threshers are now ready. Write for your copy.



J. I. CASE THRESHING MACHINE COMPANY
(Established 1842)
DEPT. S56. RACINE WISCONSIN

Ingersoll Watches



The Utmost in Value

MORE than merely low price sets Ingersoll apart from every other watch. There are other low-priced watches.

Ingersoll watches are reliable, sturdy, honestly good-looking, as well as sold for so little money. Your dealer will show you the complete line.

Announcement

By an arrangement completed on March 31st, the Ingersoll assets were purchased by the Waterbury Clock Company. Thus Ingersolls are now marketed directly by the manufacturers, who have made Ingersolls from the beginning.

INGERSOLL WATCH CO., INC.,
New York Chicago San Francisco

GENUINE GRIMM ALFALFA SEED
Certified-Guaranteed

The extensive branching root system of GENUINE GRIMM produces an abundance of nitration and humus and leaves the soil in excellent mechanical condition when plowed under.

It is unexcelled as a covering for orchards and pasturage.

A ten-year test by the Experiment Station at Guelph, Ontario, has shown that GENUINE GRIMM produces from one to two tons more hay per acre than common.

Seeding cost practically as low as common alfalfa.

Insure your crop by purchasing in the original sealed and labeled bags.

Write for information and prices.

IDAHO GRIMM ALFALFA SEED GROWERS' ASSOCIATION

Blackfoot, Idaho.

LOST If you can't locate a thing, it might as well be lost. Maybe the very thing you want is offered on our "Want Ad" page in this issue.

Glance over the bargains on the "Want Ad" page.

A Benefactor to the Race

An old friend of mine back in Indiana, William McCord, many years ago pointed with pride to the farm on which he had been born and raised. "The thing of which I am proudest," said he, "is the fact that today that farm produces better crops than it did 50 years ago when I was a boy. Then we often had as low as 20 bushels of wheat to the acre, and sometimes lower. Now the crop is seldom below 40 bushels."

"How do you account for the crop growing better? Doesn't the crop deplete the soil?" said I. "Yes, of course," said he. "Clover did it, that is, clover and rotation. Of course, all the manure that could be made by as many animals as the farm could carry has been used. But after all, clover and rotation and good tillage and care in seed and seeding, have made the soil better and better. We haven't used artificial fertilizers and tile drainage has not been necessary. But year in and year out this soil has grown better and better."

The old man smiled with pride and satisfaction. And well he might. To have taken off the land a good, plain farmer living; to have raised on it a good family; and then to have left it capable of producing more and better crops for future generations was an achievement which might well cause a smile of satisfaction. What a contrast to the many who exploit the soil for what they can take off, who merely speculate in it, who have no thought for the future.

A. A. Bryan

THE THING TO DO.

The way to help the world get onto its industrial feet is to put our own individual business onto an efficient basis.

FARMERS' WANT ADS

This is the farmers' "want," "sale" and "exchange" department for small advertisements of farmers, including live stock and poultry.

Advertising rates for ads running 1 to 3 times, 10c per word per insertion, with a special rate to Farmer subscribers, as follows: Ads running 4 to 12 times, 9c per word per insertion; ads running 13 times or more, 8c per word per insertion.

All commercial and land advertising 10 cents per word each insertion. Open also to non-subscribers.

In using these columns advertisers must observe: (1) No advertisements will be inserted for less than $1.00. (2) Every word, number and initial, including name and address, must be paid for. (3) New advertisements, changes of copy or cancellations must reach general office, Spokane, Wash., 10 days in advance of publication date. (4) Cash must accompany order.

Above rates include insertion in The Washington Farmer, The Idaho Farmer and The Oregon Farmer, which constitute the Pacific Northwest Farm Trio, 46 Review Building, Spokane, Wash.

HELP WANTED—MALE 3

WANTED — SALESMAN WHO CAN SELL high-grade, dependable nursery stock; several counties in Oregon, Wash., Idaho and Montana now open for assignment. Our selling contract will interest you. Address Albany Nurseries, Inc., Albany, Ore.

HELP WANTED—GENERAL. 5

WANT PARTIES TO PEDDLE MEDICINE, salve and liniment; good pay. P. H. Medicine Co., N1220 Wall st., Spokane.

EDUCATIONAL 45

EARN MONEY QUICKLY—THERE'S NO LIMIT to one's earning capacity in business. And this great business college after training you thoroughly, places you in a paying position. Courses include baking, stenography, accounting, private secretarial. Write for free catalogue. Behnke Walker Business College, Portland, Ore.

FRESH FOOD PRODUCTS 51-1

COZY NOOK HONEY, PURE, EXTRA choice sweet clover; a beautiful white, fine, flavored honey. You will want more. 10-lb. pail to fourth zone, $1.90; 5-lb., $1; 2½-lb., 65c; case of six 10-lb. pails, $7. f. o. b. Blackfoot, by freight or express; 60-lb. can, $6.25; two for $12. Special prices on larger quantities. 24 sections fancy comb honey, $4. Cozy Nook Apiaries, Blackfoot, Idaho.

WHITE ALFALFA, SWEET CLOVER honey; 1 60-lb. can, $7.50; 2 60-lb. cans, $14.50; six 10-lb. cans, $8.50; three No. 10 pails, prepaid third zone, $5.50. Wells D. Rose, Sunnyside, Wash.

HONEY—FINE QUALITY ALFALFA, SWEET clover; 60-lb. can, $7.50; 2 cans, $14.50; three 10-lb. pails prepaid, second zone, $5. Harry Fisher, Prosser, Wash.

5-POUND BOX ABSOLUTELY BONELESS codfish, fine white, new catch fish, delivered by mail, $1. Coffin Fish Co., Seattle, Wash.

HONEY—FIRST-CLASS ALFALFA, SWEET clover honey; 1 60-lb. can, $7; two cans, $13.50. A. L. Traner, Touchet, Wash.

WORLD'S BEST CLOVER HONEY, 60 pounds, $6.15; two 60s, $12. Browne, Box 499, Twin Falls, Idaho.

MISCELLANEOUS—FOR SALE. 60

SASH AND DOORS—O. B. WILLIAMS CO., 1943 First ave., So. Seattle. Chicken house sash, 20" wide by 25" high, 80c; a dozen different sizes in stock for immediate shipment. Skylights for chicken houses, 36"x40" price, glazed, $2. This is the size recommended by the Western Washington experiment station. We carry them in stock for immediate shipment. Sash and doors for all purposes at lowest prices. All orders receive prompt attention. Our large illustrated catalogue No. 35, showing full line of building material and built-in fixtures for the home, free on request. O. B. Williams Co. Established 1899.

ELECTRIC PLANT FOR SALE—PERFECT condition; 32-volt, complete capacity, 50 lights, also pump and motor complete for pumping water; will install if required. Bargain for quick sale. Specially suited for farm or country place. Box 893, Seattle. Phone Kenwood 1192.

TOBACCO, NATURAL LEAF—SWEET AND mellow hand-picked chewing or smoking, 5 lbs., $1.50; 10 lbs., $2.50; smoking, 10 lbs., $2. Furnish free recipe for preparing. Quality and delivery guaranteed. Farmers' Tobacco Exchange, Sedalia, Ky.

KENTUCKY TOBACCO — DON'T SEND ONE penny, pay for tobacco and postage on arrival. Extra fine quality leaf, 3 years old, nature cured. Chewing, 10 lbs., $3; smoking, 10 lbs., $2.50. Farmers' Union, D119, Hawesville, Ky.

WALL BOARD—WRITE FOR SAMPLE OF Washington plaster wall board; won't warp, won't burn. Manufactured by Washington Building Products company, 6851 E. Marginal Way, Seattle, Wash.

PIPE — NEW AND SECOND-HAND, ANY size; low price; standard grade roofing paper at a big saving; belting, all plies, all sizes, cheap. Write Alaska Junk Co., S120 Adams st., Spokane, Wash.

NATURAL LEAF TOBACCO, CHEWING, 5 pounds, $1.50; 10 pounds, $2.50; smoking, 5 pounds, $1.25; 10 pounds, $2. Send no money. Pay when received. Tobacco Growers' Union, Paducah, Ky.

HOMESPUN SMOKING TOBACCO, MILD AND mellow; 10 lbs., $1.50; 20 lbs., $2.75; delivery guaranteed. We furnish free recipe for preparing. Smoking Tobacco Exchange, Sedalia, Ky.

THREE-UNIT PERFECTION MILKER, COMplete; used three weeks. Ernest Loennig, Tillamook, Ore.

MISCELLANEOUS—FOR SALE (Continued) 60

KENTUCKY HOMESPUN SMOKING TOBACco; aged in bulk; mellow and sweet; 10 lbs., $1.50; 20 lbs., $2.75. Tobacco Growers' Union, Lynnville, Ky.

TOBACCO — HOMESPUN, EXTRA FINE chewing, 10 lbs., $3; smoking, 10 lbs., $2; 20 lbs., $3.50. Producers' Exchange, Mayfield, Ky.

HOMESPUN TOBACCO, 5 POUNDS, $1.25; 15 pounds, $3. Send no money, pay when received. Farmers' Association, Jonesboro, Ark.

TOBACCO — KENTUCKY'S PRIDE, EXTRA fine chewing, 10 lbs., $3; smoking ten $2; 20 $3.50. Farmers' Club, Mayfield, Ky.

DOUBLE UNIT UNIVERSAL MILKING MAchine; vacuum tank and pump. H. Jensen, 126 Shaver, Portland, Ore.

JOHNSON'S PACKAGE BEES, QUEENS. Write for remarkable prices. 165 Raymond ave., San Jose, Cal.

MACHINERY—For Sale 93

BARGAIN IN 75 H. P. HOLT CATERPILLAR, seen less than 12 months' actual service; guaranteed in perfect mechanical and running condition. Price $2000, terms if desired. W. P. Leahy, 414 Jamieson bldg., Spokane.

MISCELLANEOUS. 61

WE SCOUR AND CARD WOOL TO ORDER for comforts or mattresses. Inclose stamp for information. Perfection Batt & Mattress Co., Stayton, Oregon.

MISCELLANEOUS—Wanted 63

HIDES—WE BUY HIDES OF ALL KINDS. Write for prices and tags. Hibbard-Stewart Co., Hibbard Bldg., Seattle.

WOOL—WE BUY WOOL AND PELTS. WRITE for prices and tags. Hibbard-Stewart Co., Hibbard bldg., Seattle.

AUTO TRUCKS—For Sale 115

WE WILL ABSOLUTELY SAVE YOU FROM $500 to $1500 on the purchase price of a new truck. Creditors' sale of various standard makes; any size, 1 to 5 tons. Also a Holt 75 Caterpillar for $3500. Exceptionally easy terms. Write R. S. Phelps, 607 Empire State building, Spokane.

MOTORCYCLES AND BICYCLES 127

REBUILT HARLEY-DAVIDSON MOTORcycles; guaranteed. A. P. Tyler, Boise, Idaho.

STOVE REPAIRING 128

WRITE MYER RUBENS, SPOKANE, ABOUT stove repairs, welding broken parts, nickle plating.

FUR-BEARING ANIMALS 170

SILVER AND CROSS FOXES FOR SALE. William Rambo, 407 Sprague, Spokane.

PETS—Dogs, Birds, Etc. 171

PEDIGREED COLLIE PUPS. WRITE US your wants. Princess Collie Kennels, 4812, 42, South West Seattle, Wash.

POULTRY (Baby Chicks) 174

UNION DISTRICT HATCHERY IS NOW booking orders for the best thoroughbred baby chicks at the right price. White, Buff and Brown Leghorns, Rhode Island Reds, Black Minorcas, Anconas and Barred Plymouth Rocks. F. & L. Downing, Los Gatos, Cal.

WHITE LEGHORN CHICKS (TANCRED strain), from selected two-year-old hens mated to cockerels from 251 to 286 egg trap nested dams; 1500 each Wednesday in May, $15 per 100. Bona Terra Ranch, Drain, Ore.

WHITE ROCK BABY CHICKS, "DANIEL'S IDEALS," from our own trapnested stock entirely. Write for prices and dates, also eggs for hatching. Free catalog. Ideal Poultry Yards, Hoquiam, Wash. Star Route No. 25.

BABY CHICKS — REDUCED PRICES ON White Leghorns, Reds, Barred Rocks, White Rocks, Minorcas and Anconas; booking orders now; postal secures free catalog. Write today. C. N. Needham, Salem, Ore.

WHITE LEGHORN BABY CHICKS FROM best laying strain in the northwest, $20 per hundred from May 1st to May 15, after that date, $15 per hundred. Order early. Yesterlaid Egg Ranch, Kent, Wash.

BABY CHICKS — WE GUARANTEE OUR chicks to be from the highest producing hens in Petaluma. Write for further information. The White Hatchery, Petaluma, Cal.

PERKINS' TRAP NESTED WHITE LEGHORN chicks, April, $18 100; May, $15. Send 10 per cent with order. Chas. L. Perkins, 1337 Burrage, Portland, Ore.

CHIX, 12C TO 25C; WHITE LEGHORNS AND White Rocks; trapnested strains; eggs, Palouse Falls Ranch, Palouse Falls, Wash.

POULTRY (Baby Chicks) (Continued) 174

THE LARGEST LEGHORN BREEDING ESTablishment and hatchery in the northwest, and on the Pacific coast, has a housing capacity of 12,000 breeders; brooding capacity for 15,000 chicks; incubator capacity for 142,200 chicks at one time. It was started 16 years ago, by its present owner, without capital or poultry experience, on a barren ten-acre tract of land. The White Leghorns produced there have made possible its growth. It is the Oak Heights Poultry Farm, Capt. A. Waldwick, proprietor, Route 3, Box T67, Tacoma, Wash. This is the place where real good baby chicks come from. They are bred for eggs, vigor, size. The price is low. No order too large or too small. Prompt delivery and safe arrival guaranteed. Free book on "Raising the Chicks." Write us now.

HENACRES BABY CHICKS FOR JUNE ARE only $16 per 100; $140 per 1000; best quality chicks at common chick price. Special instructions for winter layers of June chicks free. We have a few May chicks left at $22 per 100. Safe delivery guaranteed; plenty of hatching eggs at $2 per 15; $9 per 100; 90 per cent fertility guaranteed. Eight weeks old pullets $1.50 each, satisfaction or money back. We sell the famous Sol Hot brooders at $10.50 to $23.50. Prompt shipment. Our illustrated catalog and booklet on poultry management is free. Henacres, Box A, Prosser, Wash.

400,000 BABY CHICKS—OUR WHITE LEGhorns are bred to lay; priced at $15 per 100. We hatch from some of the best flocks of R. I. Reds, Barred Rocks, Anconas and Minorcas to be found in the northwest. Chicks are priced at $22.50 per 100. Send $1 deposit per 100 with your order, paying the balance on inspection of chicks. Safe arrival guaranteed. We have a few standard makes of incubators and brooders at greatly reduced prices. Send for our circular offer. Seattle Hatchery, 1906 Pike place, Seattle.

SINGLE COMB WHITE LEGHORN CHIX—You are not too late to get May chix. A very few yet for last of April. Get yours at once, others will charge you from 25 to 50 cents per chick for no better. Chicks from hens with trap records of 200 to 290 eggs for eleven months, mated to cockerels in the 300-egg class. Capacity all sold so far without a line of advertising. June chicks go this year at $14. $7.50 for 50 chicks. 3-C Egg Ranch, either Kennewick or Hover, Wash.

CERTIFIED S. C. WHITE LEGHORN BABY chicks from heaviest laying stock; safe delivery; live, vigorous chicks guaranteed. No money in advance; pay on delivery. Prices for May and June $3.50 per 25; $6.50 per 50; $12 per 100. Special prices 500 and 1000 lots. Largest electric hatchery in the world. Established 1898. Member Sonoma county farm bureau accredited hatchery list. Must Hatch Incubator Co., 445 Seventh st., Petaluma, Cal.

"FRESHLAID" WHITE LEGHORN CHICKS have the qualities you want; vigor and scientific breeding for the heaviest egg production; every "Freshlaid" male is from a high record hen. Freshlaid Farms is one of the largest and oldest chick plants in the Inland Empire. There is a real demand for "freshlaid" chicks, especially from our old customers. We are sold out until May 1. Write at once if you wish May chicks. May chicks make ideal winter layers. Catalog. Freshlaid Farm, Colfax, Wash.

BABY CHIX—WHITE LEGHORNS ONLY. May delivery, $13 per 100; June delivery, $12 per 100; order now as the supply is limited and these are not just baby chix, but are chix from stock that has been bred for 20 years for vigor and vitality; mated to male birds from hens with records up to 298 eggs in pullet year; hatched by the oldest established hatchery in the northwest. Lakeside Poultry Farm, Roy, Wash.

THE PROGRESSIVE HATCHERY ANnounces the following prices for May and June, 1922: Single Comb White Leghorn chicks (trap nested), $17 per 100; selected, $14 per 100. Reduced prices for large orders. R. I. Red chicks, trapnested or selected stock, $25 and $20 per 100. Terms, 20 per cent with order; safe delivery guaranteed. 1534 N. E. 12th st., Portland, Ore.

SUMMER SALE OF BUTLER POULTRY Farm White Leghorn and Barred Rock chicks. May and June chicks are profitable and easy to raise when you know how. Write us for circular how we do it. All stock trap nested and pedigreed for years. Discount prices on all late chicks and eggs. Butler Poultry Farm, Jennings Lodge, Ore.

250,000 MAY AND JUNE S. C. WHITE LEGhorn baby chicks (chicken made), May 15c; June, 10c; guaranteed to be the best chicks you can buy at any price, and you are to be the judge. Wire your order, will ship C. O. D., or get our 24th annual price list. Safe delivery guaranteed. Casey & Sons, R. No. 2, Attalia, Wash.

EBORALL'S STRAIN WHITE LEGHORNS. Our hatch of 2300 chicks per week is now booked for Feb., March and April, principally to old customers. Your inspection is invited at all times. We are now booking chicks for May at $14 per 100. Write for circular. Crystal White Poultry Farm, McMinnville, Ore. Box 53.

BABY CHICKS FROM TANCRED AND HOLlywood strain; heavy laying White Leghorns mated to cockerels from W. W. experiment station; hens, 265-314 egg records. Late May chix, $15 per 100; $145 1000. Early June, $13 per 100; $125 1000. Hatching eggs, $7 per 100. Wax's Poultry Farm, Kent, Wash.

TRY OUR PARCEL POST PACKAGE—KEEP the old hen busy. We will ship you first-class baby chicks, postpaid to your door, direct from the hatchery and guaranteed all alive. Price, $4.50 per 25; $8 per 50. For delivery April, May or June. Order now. The White Hatchery, Petaluma, Cal.

BABY CHICKS FOR MAY AND JUNE ONLY —4000 every 4 days of the famous O. A. C. strain S. C. W. L.; raised and run on free range. They have the vim. Prices, first half of May, $17, last half of May, $15; June, $12. Moorhead Poultry Farms, Granger, Wash.

$12 PER HUNDRED—WHITE LEGHORN baby chicks from Corvallis noted egg strains; electrically hatched. This low price on May 18 to 25 only. Order now. Oregon-Corvallis Hatchery, Corvallis, Ore.

ACME POULTRY FARM, COTTAGE GROVE, Ore. Breeders of Oregon Agricultural college White Leghorns; chicks after May 20th, first pen (100, $13); (25, $3.50); bred to lay, and they will do so.

TANCRED STRAIN WHITE LEGHORN BABY chicks, May delivery, $15 per 100. Incubator capacity 18,000 eggs. D. A. Gillette, R. 4, Yakima, Wash.

S. C. ENGLISH WHITE LEGHORN CHIX. Hollywood strain, 15c; Barred Rock chix, 20c. Bertha Jorgensen, R. 1, Hillsboro, Ore.

WHITE LEGHORN BABY CHICKS. CIRCULAR on request. San Jose Poultry Yards, San Jose, Cal.

Leghorns.

PRIZE BUFF LEGHORNS; EGGS, 15C EACH, postpaid. C. E. Cleveland, Stanfield, Ore.

(Continued on the following page.)

POULTRY—Leghorns (Continued) 174

CHICKS, EGGS, PULLETS — CARNATION White Leghorns, trapnested stock; bred and selected for vigor and heavy laying qualities; breeding pens from 240 to 304 egg records; 300 Feb. 12th, hatched pullets. Ernest W. Raush, Carnation Poultry Farm, Kent, Wash.

LEGHORN PULLETS, 5000 FEBRUARY, 3000 April and May hatched. These birds are Hollywood-Tancred strain, are unconditionally guaranteed on a money-back basis. Price $1.15 each, at 8 weeks. White Cloud Farm, Route 2, Box 188, Kirkland, Wash.

PUREBRED S. C. WHITE LEGHORNS; ALL breeding hens of trap nested strain, carefully selected for vitality and standard requirements; baby chicks, $18 100; safe delivery guaranteed; eggs, $1.50 for 15; $8 100. Frank Volland, Rt. 1, Kennewick, Wash.

WHITE LEGHORNS, TANCRED STRAIN, heavy laying second year hens, with males from 250 to 275 egg trap nested dams; hatching eggs, $6 per 100; baby chicks, $18 per hundred. Oaklawn Poultry Farm, Hillsboro, Ore.

OREGON AGRICULTURAL COLLEGE WHITE Leghorns. Eggs, $1.50 per setting, $6 per 100, prepaid. Late May and June chicks, $12.50 per 100. Russell Poultry Yards, Route 3, Corvallis, Ore.

FORD'S BRED-TO-LAY S. C. WHITE LEGhorns. Hatching eggs, $2 per setting; $8 per 100; special matings on request. W. A. Ford, Umatilla, Oregon.

SINGLE COMB DARK BROWN LEGHORNS; superior quality mating list free. Harvey Bean, New Plymouth, Idaho.

BUFF LEGHORN EGGS AND CHICKS FROM my champion exhibition and laying strains. R. Stromquist, Tigard, Ore.

SINGLE COMB WHITE LEGHORN EGGS, finest stock, $1.25 per 13. Mrs. Nellie Woods, Pullman, Wash.

BROWN LEGHORN EGGS, THE VERY BEST quality; free mating list. E. H. Rosenkranz, Colfax, Wash.

Turkeys, Ducks, Geese.

MAMMOTH BRONZE TURKEYS, PRIZE stock; 20-lb. hens, 40-lb. toms; fertile eggs, 50c each. We never lose a bird from blackhead or liver troubles. Try our capsules, 30 for $1. Inglewood Poultry Co., Inglewood, Cal.

EGGS FROM PRIZE-WINNING MAMMOTH Toulouse geese, the kind that hatch; 50c each, $45 per 100. Imperial white Pekin duck eggs, $2.50 per 15, $14 per 100. Goslings, ducklings. R. E. Baumgardner, Wenatchee, Wash.

MAMMOTH PEKIN DUCKS "AMERICA'S finest." New blood this year direct from C. C. Shoemaker; eggs, $2 per setting, $12 per 100. Crystal White Poultry Farm, McMinnville, Ore. Box 33.

EGGS, MAMMOTH TOULOUSE AND WHITE Chinese geese; Mammoth Pekin ducks, pearl guineas, Single Comb Reds. C. O. Johnson, R. 1, Medical Lake, Wash.

INDIAN RUNNER DUCKLINGS, THOROUGHbred, 100, $33; doz., $4.30, delivered. C. A. Muths, Route 1, Salem, Ore.

MAMMOTH PEKIN EGGS FROM DUCKS that take the prizes. Drakes for sale. Mrs. E. A. Bennett, Salem, Ore.

MAMMOTH BRONZE TURKEY EGGS, 50C each. Mrs. J. L. Townsley, Route 2, Post Falls, Idaho.

Miscellaneous Poultry.

WE ARE HATCHING HOLLYWOOD AND Tancred strain of White Leghorns every Monday, Wednesday and Friday. Prices at $20 per 100; $195 per 1000. Commercial strain mated with 250-egg cockerels at $18 per 100. R. I. Red, Barred Rocks, Black Minorca and Ancona chicks are priced at $25 per 100. Send for free catalog and prices on incubators, brooders and pullets. Queen Hatchery, Seattle.

ILL-A-HEE BARRED ROCK CHICKS—SUMmer sale of Barred Rock and White Leghorn chicks; May and June chicks are profitable and easy to raise when you know how. Write for our circular telling how we do it. All stock trap nested and pedigreed for years. Discount prices on all late chicks and eggs. Ill-A-Hee Poultry Farm, Jennings Lodge, Ore.

EGGS FOR HATCHING FROM TRAPNESTED stock B. Rock, S. C. White Leghorn and R. C. R. I. Reds, $2.50 per setting; 1 S. C. White Leghorn cockerel, also 3 R. C. R. I. Red cockerels, $5 each if taken at once. L. A. Hoge, R. 1, Prosser, Wash.

EGGS! EGGS! EGGS! "SNOWFLAKE" WHITE Orpingtons, establish highest official Orpington pen record western Washington laying contest. Average 204 eggs; free mating list; hatching eggs, $3, $5, $10 per fifteen. W. T. Thompson, Bozeman, Mont.

CHICKS, EGGS—HOGANIZED WHITE LEGhorns, Brown Leghorns, Black Minorcas, Rhode Island Reds, Barred Rocks, Anconas, Blue Andalusians. Free circular. Order early. McDonald Poultry Ranch, King Road, San Jose, Cal.

BABY CHICKS—PRICES REDUCED AFTER May 15th. S. C. R. I. Reds $20 per 100; S. C. W. Leghorns, $15 per 100; April chicks all sold. Maple Brook Poultry Farm, Southworth, Wash.

PARAMOUNT WHITE WYANDOTTES "BRING home the bacon." Trap nested, pedigreed, instructive catalog free. No baby chicks. Hayard H. Moul, 1226 Washington blvd., Seattle.

LARGE, NICELY MARKED ROUEN DUCKS. Eggs, $1, $2; 100, $5. heavy laying, prize winning strain White Wyandottes; eggs, $1, $2; 100, $10. P. H. Tomlinson, College Place, Wash.

PURE BRED S. C. RHODE ISLAND RED EGGS for hatching from non-setting non fading strain, $3, $5 and $10 per fifteen. Mrs. L. Wham, Double Diamond Ranch, Omak, Wash.

BLUE ANDALUSIANS; EGGS FOR HATCHing, $2 per setting; heavy layers from beautiful prize winning stock. Mrs. Wm. Rommel, Leahy, Wash.

POULTRY RAISERS, SEND FOR FREE BOOKlet on poultry advertising. The Pacific Northwest Farm Trio, Dept. P, Review bldg., Spokane, Wash.

DOLLARS FOR YOUR EGGS.—WE PAY THE top market prices for your eggs and poultry. Daily cash remittances. Western Produce Co., Spokane.

SINGLE COMB RHODE ISLAND RED EGGS, $3 per setting, from prize winning stock (Owen strain). Joe Brunsell, Mt. Vernon, Wash.

TRAP NESTED WHITE LEGHORN AND Barred Rock eggs and chicks; records, 200 to 311. Mrs. W. M. Roberts, Elmira, Oregon.

S. C. ANCONAS, SHEPPARD'S SELECT AND 331 egg strain; eggs, $2 per 15; chicks, $20 per hundred. A. B. Larson, Warren, Ore.

SHIP YOUR LIVE POULTRY AND EGGS TO us. Highest prices paid; daily remittance. Inland Poultry House, Spokane, Wash.

FANCY WHITE WYANDOTTE COCKERELS, $2.50; hatching eggs, two dollars setting. H. L. Lannon, American Falls, Idaho.

BARRED ROCK CHICKS, HEAVY LAYING O. A. C. strain. Mrs. E. Hodge, Waterloo, Ore.

POULTRY—Miscellaneous (Continued) 174

THOROUGHBRED BUFF LEGHORN SETTING eggs, $1.50 setting; $8 hundred. M. Magnussen, Regena Stage, Boise, Idaho.

ANCONAS, SHEPPARD STRAIN; EGGS, $1.50 per 15; $7.50 100; day old chicks, $18 100. R. P. Irwin, Tonasket, Wash.

"CONA VILLA" ANCONA CHIX, MAY AND June delivery, 2d, 3d pen, $18 per 100. W. G. Pearmine, Salem, Ore.

BLUE ANDALUSIAN AND WHITE ROCK hatching eggs, $2 per 15. Mrs. C. W. Armstrong, Freewater, Ore.

SICILIAN BUTTERCUP EGGS, $2.50 PER fifteen, postpaid. Charles Carland, Route 2, Saint Maries, Idaho.

LIGHT BRAHMAS, EGGS, $1.75 PER 15; Bronze turkey eggs, $3.50 for 10. Mrs. C. W. Laabs, Irby, Wash.

HUNT'S BARRED ROCK EGGS. PRICES REduced through April, May. W. A. Hunt, Lebanon, Ore.

EGGS FROM SINGLE COMB BLACK MINorcas, $2 per 15; $8 per 100. Jacob Cherniak, Elk, Wash.

BLUE RIBBON SILVER SPANGLED HAMburg settings, $2.50. J. Stowell, 905 Fifth, Spokane.

BRED TO LAY ANCONAS; HATCHING EGGS. Price list free. Yew Lane Farm, Sherwood, Oregon.

BUFF ROCKS, BUFF MINORCAS, WINTER layers; eggs, $2. Mrs. Day Woodruff, Bow, Wash.

S. C. BLACK MINORCA HATCHING EGGS, $1.50 per 15. John Zack, Kalama, Wash.

LIGHT BRAHMA EGGS, $2 PER 15. DALTON Poultry Farm, Coeur d'Alene, Idaho.

LIVE STOCK 177

SEND FOR FREE BOOKLET, "SOME SUGgestions to Live Stock Advertisers," outlining the practices of successful men of long experience. Helps in determining how much to spend, the mediums to select, preparing advertisements, handling inquiries, the use of photographs, etc. Write today. The Pacific Northwest Farm Trio, Dept. W, Spokane, Wash.

LARGE, HEAVY PRODUCING HOLSTEINS for sale at all times in car lots; tuberculin tested; 150 to 200 head always on hand; well marked heifer calves from registered sires and heavy producing dams, crated for shipment anywhere, $25 f. o. b. Levinson & Balmelli, Yakima, Wash.

SHIP US YOUR POULTRY AND LIVE STOCK. We pay the top market prices. Light veal, fat, fancy, 16c; dressed block hogs, 14c; hens, heavy, 23c; light, 20c. Prompt returns. Market price subject to change. John Lewis & Co., Spokane, Wash.

EPOCHAL BERKSHIRES, 3 MONTHS' PIGS from $20. Yearling boars from $40. Sire, the grand champion Pork-maker's Sincerity. Herd boars from $75. Bred sows from $75. E. V. Orford, Boise, Idaho.

REGISTERED JERSEY BULL, DROPPED March 2d, 1921; dehorned; solid color; for sale or trade for registered heifer. M. Christopher, Route 3, Deer Park, Wash.

WE PAY TOP PRICES FOR YOUR LIVE OR dressed veal, hogs and poultry. Your check by return mail. Shipping tags on request. M. & J. Packing Co., Spokane.

FOR SALE—THREE REGISTERED JACKS; one, two and three years old, and eight jennets. Write Wm. Hallam, Republic, Wash.

YEARLING JERSEY BULL, 6 MONTHS CALF, exceptionally well bred; extremely low price. W. H. Warrens, Sherwood, Ore.

FRESH MILCH GOATS AND KIDS FOR SALE; purebred Saanen buck, $50. Mamie Rand, E1021 Decatur, Spokane, Wash.

FOR SALE — REGISTERED SHORTHORN bulls. Roswell Park Stock Farm, Lowell and Willis, Parma, Idaho.

FOR SALE—HEREFORD BULL, THREE years old; can be registered. Troy Morton, Mesa, Wash.

CHOICE O. I. C. PIGS, CHEAP; PEDIGREES furnished. Otto Young, Route 2, Twin Falls, Idaho.

EXTRA FINE REGISTERED MEDIUM TYPE Poland Chinas. Roy Tomlinson, College Place, Wash.

REGISTERED HOLSTEINS AND BERKSHIRE pigs. Elmer Hanson, Mead, Wash.

HARNESS and SADDLERY 189

SEND FOR FREE HARNESS AND SADDLE catalog today; cut out the middleman, buy direct from the manufacturer. Lowest prices in the west; satisfaction guaranteed. Established 1881. Write Pierce Harness Co., dept. T, Spokane, Wash.

HAY FOR SALE. 200

ALFALFA HAY, GUARANTEED QUALITY; prompt shipment; buy direct and save money. Prices upon application. Ernest T. Freeborn, Walla Walla, Wash.

JOB PRINTING 372

GUARANTEED BETTER BUTTER WRAPpers; 100, 60c; 250, $1.25; 500, $2; 1000, $4; printed to order. Home Specialty Co., Middleton, Idaho.

TANNING 425

WE WILL TAN YOUR COW OR HORSE HIDES into robes or coats at the right prices and guarantee our work as we are custom tanners and manufacturers. We also buy hides, furs, wools and pelts, or will exchange harness and sole leather for same. Write for prices. Spokane Fur Tanning Co., 9 Pine st., Spokane.

LET US TAN YOUR HIDE—COW AND HORSE hides for fur coats and robes. Cow and steer hides into harness or sole leather. Catalog on request. The Crosby-Frisian Fur Co., Rochester, N. Y.

MONUMENTS 510

COMPLETE STOCK, RIGHT PRICES. CORrespondence solicited. J. W. Harding, Inland Monument Co., N1001 Monroe, Spokane.

PERSONAL 537

WOULD LIKE TO CORRESPOND WITH German speaking woman about 50; object matrimony. Address G-8, Washington Farmer, 617 Central Building, Seattle, Wash.

FARMER WOULD LIKE TO CORRESPOND with lady, 25 to 40, object matrimony. G 7, Idaho Farmer, Spokane.

BUILDING MATERIAL 588

LUMBER, BUILDING MATERIALS, READYcut houses and barns; no waste, less labor, money saved. Attractive new plan book sent free, 4c postage. Send material lists for prices. Write today. Prices now down to rock bottom. Local Keystone Lumber Co., 3000 Sprague, Tacoma, Wash.

SEEDS 620

CHOICE MANGEL SEED, 35c LB., POSTPAID, any variety. Catalog free. Order today. Warren Cook, La Conner, Wash.

SEEDS (Continued.) 620

ALFALFA SEED, POSTPAID, ORENBERG, ounce, 25c; registered Cossack, pound, 75c. W. W. Perkins, Camas, Mont.

COSSACK ALFALFA, CERTIFIED SEED, Sample and booklet free. S. H. Hillman, Box 5, Lonepine, Mont.

ALFALFA SEED, 10C AND 15C POUND; TIMothy, 8c. Johnston Land Co., Seward, Neb.

JERUSALEM SEED CORN, 5 CENTS POUND. Henry Keeney, Weiser, Idaho.

NURSERY STOCK. 621

EVERBEARING STRAWBERRY PLANTS— All orders received to date, and after, until further notice, will be entitled free, to 1 St. Regis everbearing raspberry, 1 red raspberry, 1 blackberry, 4 Lucretia dewberry, and 1 purple lilac. My Superb and Progressive everbearing strawberry plants are guaranteed and prepaid at 100, $1.40; 500, $6; 1000, $11. Orders for 1000 get 2 lots free, 2000, 4 lots. Dewberry plants, 75c doz.; $4 per 100; Concord rooted grapes, 1 year, and St. Regis everbearing rasp., transplants, 10c each, $1 per doz.; $6 per 100, postpaid. Model Fruit Farm, R. 1, Emmett, Idaho. N. E. Matthiessen, prop.

LITTLE'S IMPROVED CORY'S THORNLESS blackberries; heaviest producers; largest berries, best flavored; good canners and shippers; large, well rooted plants at $100 per 1000; $12 per 100; $2.50 for 15. Write for pamphlet. C. A. Little, Rt. 4, Sebastopol, Cal.

CORY THORNLESS BLACKBERRY — DELIcious, very large and early. You get strong, well rooted plants, true to name, from pioneer grower; 12 for $2, postpaid. Wm. Mortenson, Route 1, Lodi, Cal.

PROGRESSIVE EVERBEARING STRAWberry plants, $1.25 100; $9 1000, postpaid, inspected, guaranteed. O. W. Zurcher, 104 S. 17th street, Boise.

SEND FOR OUR NEW PRICE LIST ON FRUIT trees, berry bushes, shade trees and roses on their own roots. Krause Nursery, Spokane, Wash.

90,000 CHOICE LOGANBERRY PLANTS, SElected, inspected, hardy, well rooted; unusual low price. Harry Lanum, R. 4, Salem, Ore.

EVERBEARING STRAWBERRIES, SEND FOR free booklet giving lots of valuable information. P. R. Johnson, Granger, Wash.

GENUINE SUPERB EVERBEARING STRAWberry plants, inspected. $1.25 hundred; $10 thousand. H. H. Skagen, Kent, Wash.

CHOICE LOGANBERRY PLANTS, $20 PER thousand, delivered; inspected. Ward K. Richardson, 2393 Front, Salem, Ore.

OREGON CHAMPION GOOSEBERRIES, BOSkoop Giant black currants, 5c each. G. A. Marshall, Yelm, Wash.

FARM LANDS FOR SALE. 651

VERY FINEST CRANBERRY PEAT LANDS, in center cranberry growing industry, subdivided, 1 to 5 acres, very reasonable prices, if desired, only 20 per cent down; no other payment for five years. By planting part of the holdings in cranberries, crops should meet future payments. Adjacent land produces 100 bbls. per acre. Last season cranberries returned the grower $15 per bbl. at wholesale. For money maker do you know of any other crop comparing with cranberry growing? Besides cranberries, can raise vegetables and chickens for tourist trade; fine dairy land; first class schools, roads; finest beach on coast within one mile. Write or visit us. Long Beach Land Co., Long Beach, Wash.

CUTOVER LANDS, EASY TO CLEAR; $8 TO $20 per acre; 25 miles north of Spokane; on hard surfaced highway; Great Northern and Milwaukee railways; excellent opportunity for dairying and stock raising with Spokane markets and creamery near at hand. Will help the man who will live upon this land and agree to clear a part each year by giving lumber to help start his buildings, and a purebred Jersey bull to groups of farmers. Interest and payments low. Write Milan Farms Development company, Dept. T, Old National Bank bldg., Spokane, Wash.

A SUBURBAN PRODUCING HOME AT SUMmit View Farms, between Puyallup and Tacoma, with one acre cleared on each five-acre farm. City water, paved road, phone, lights and only short distance from the state experimental station at Puyallup; berries and poultry for income with city conveniences; good berry land and excellent view property. Write us today for map and full details. You deal direct with the loggers. We have no agents. Electric Logging Co., Inc., 216 Marion st., Seattle, Wash. A. R. Todd, Mgr.

BIG OPENING SALE OF YAKIMA VALLEY farm land, under an assessed state and government approved irrigation project; good, deep soil; close to town, railroads and state highway. We sell in tracts to suit purchaser at $25 per acre and up, on easy terms. Our many sales to farmers show that this land is a good investment. Western Lands, Inc., owners, 918 Green bldg., Seattle.

BITTER ROOT VALLEY, MONT., HAS A record of 50 years without a crop failure; its mild climate, abundant water and wide diversity of products make farming profitable. Get the facts about this unusually sheltered prosperous valley "where farming is different." Write for free bulletin No. 6. The Bartlett-Bolen Co., Hamilton, Mont.

FOR SALE—440-ACRE STOCK AND DAIRY farm, in Thurston county, near paved highway; 150 acres cleared, balance logged off; all seeded; fenced; good buildings; running water; 100 acres bottom land, 2 barns; $4000 will handle, balance easy terms. For particulars write J. M. Dellasey, owner, Adna, Wash.

40-ACRE FARM, THREE MILES FROM ORE City; highest state of cultivation; good buildings; acre of fruit, stocked, equipped, lighting and water system. Price $9000; $4000 will handle; interest, 6 per cent. P. Tanzer, Route 1, Box 82, Oregon City, Ore.

RICHLAND—TRUE TO NAME—10 ACRES alfalfa and berries; house, barn, chicken house; a real diversified tract; in heart of production. $3200, terms. Briscoe Realty Co., Lindale bldg., Spokane.

WE ARE HEADQUARTERS FOR WHEAT, stock and diversified farms, large and small; tell us what you want, we have it. Hale & Hale, 1111 Paulsen bldg., Spokane, Wash.

FOR SALE—160 ACRES GOOD SOIL; FAIR bldgs., fenced; some alfalfa, wheat, feed, stock, implements, all go at sacrifice by owner. George Wetzel, Rheberck, Wash.

FINE 160 ACRES STOCK AND DAIRY RANCH, 125 inches decreed water; 80 acres improved; pasture and timber. Write for price. I. S. Harper, Darlington, Idaho.

FOR SALE BY OWNER—WELL IMPROVED dairy farm, 80 acres; paid up water right; for $8000. Will give terms. C. E. Adams, Route 1, Emmett, Idaho.

SALE OR LEASE—CALIFORNIA DAIRY farm; conditions ideal; terms liberal. Write A. Gribble, F. & M. bldg., Stockton, Cal.

80 ACRES WITH WATER RIGHT, 8 ACRES alfalfa, good stock range; price $2800. Fitch Snyder, Gold Hill, Ore.

FARM LANDS FOR SALE (Continued) 651

FULLY EQUIPPED STOCK AND DAIRY farm; 465 acres, in beautiful Arcadia valley, only two miles from splendid growing city, Deer Park, Wash., 24 miles north of Spokane; farm is furnishing milk for Deer Park at this time; 100 acres winter wheat, looking fine; 35 alfalfa, under irrigation (perpetual water right); 35 acres ready for spring planting, balance easily cleared; some timber; farm is well improved; seven-room concrete house, basement, 9 feet high; modern dairy and horse barn, with loft for 100 tons hay; two 12x35 concrete silos, capacity 100 tons each; large feed room connects with barn; straw shed, capacity 100 tons; large feeding shed, machinery building and shed; blacksmith and machine shop, ice house, holding 25 tons, completely filled; modern milk house, fully equipped; 77-foot drilled well, with an inflow of 7 feet 6 inches per minute; piped to house, barn, milk house and yard. Complete equipment farm machinery; eight head good work horses and selected herd of 30 purebred registered Holsteins. For price and terms write F. E. Parks, Deer Park, Wash.

CATTLE RANCH FOR SALE.

One of the best in the state of Nevada. 3700 acres valley farm land, all under fence, sufficient water to insure crops; 3400 mountain range land, close to ranch; 900 head Shorthorn stock cattle; 75 head of work, saddle, stock horses; machinery, harness, buildings, etc. Apply J. R. Harvey Co., Paradise Valley, Humboldt county, Nevada.

LOGGED-OFF LAND IN STEVENS COUNTY, Washington, at greatly reduced prices. Most of land sells at from $5 to $20 per acre; thickly settled community; good schools, hard surfaced and paved roads to Spokane; best county in state for dairy and stock raising; most places water can be found at shallow depths. Write for folder. Phoenix Lumber company, dept. T, Spokane, Wash.

WE SELL FORECLOSED LANDS FOR A loan company for one-third cash, balance easy terms. When writing tell us what you want, where preferred, how much you will invest; kind of farming you contemplate, as we have no list and must write special description in each case. No trades. Hartford Land company, 601 Paulsen building, Spokane, Wash.

SNOHOMISH COUNTY, WASH.—5000 ACRES of the finest dairy, berry or general highgrade farm lands in the northwest, rapidly improving section; no drouths; bumper crops; tracts 1 to 80 acres; 10 yearly payments. This is your opportunity. Send for literature. Brownell Land Co., Birmingham, Wash.

640 ACRES, HIGHLY IMPROVED, 26 MILES east of Calgary; 375 acres irrigable; 400 in crop; 150 summerfallow for 1923; $75 cash. $10,000; or subdivide into two farms, $65 cash, $2000 and $75 cash $5000. Price includes crop. Frank Sugden, Cheadle, Alberta.

80 ACRES, 2½ MILES FROM LYLE, WN., ON gravel road, 16 acres apple orchard; 4 alfalfa, 25 easily cleared, rest pasture; team, 2 cows, sow, chickens, all farm tools; school and high; good water, fair buildings. $3250 cash. Owner, Albert Johnson, Lyle, Wn.

WE WANT TO TELL YOU MORE ABOUT the famous Deschutes valley in central Oregon; a dairy, potato and stockman's paradise; a card brings full particulars. Redmond Land & Loan Co., Inc., Redmond, Oregon. (King Murphy's capitol.)

136 ACRES, 70 CULTIVATED, BALANCE pasture and fine timber; 6-room house; fine barn; 25 milch cows, team horses, all farm tools; running water. Price $13,000, $5000 cash, balance easy. Wm. W. Garvin, Port Angeles, Wash.

RICH IRRIGATED AGRICULTURAL LAND, on Indian reservation, just opened up, $50 per acre, including fully paid water right. Terms. Browning Development Co., Browning, Mont., 227 Hutton bldg., Spokane, Wash.

70 ACRES, LOCATED IN THE FERTILE Nooksack river valley; all cleared; 15 minutes' walk from Lynden high school; 140 feet from the city limits, $21,000. Liberal terms. Wesley Brooks, Bellingham, Wash.

SELL YOUR PROPERTY QUICKLY FOR cash; no matter where located. Particulars free. Real Estate Salesman company, 501 Brownell, Lincoln, Neb.

46 ACRES FINE LEVEL ALL TILLABLE POtato ground, near Valleyford, Wash.; small orchard, no buildings, at $125. Terms. W. Manley, Box 2167, Spokane.

YAKIMA—40 ACRES DIVERSIFIED STOCK, implements, well improved. Snap, ask particulars. Cooper, 9½ 4th ave., Yakima, Wash.

CHICKEN RANCH SALE—5 ACRES; GOOD buildings, near pavement and car line. Flora Martin, Route 3, Box 183, Puyallup, Wash.

42 ACRES WILLAMETTE VALLEY, IMproved potato land. M. A. Goughnour, Albany, Oregon.

FARM LANDS—Wanted 654

FARMS WANTED—SELL YOURS QUICKLY for cash, no matter where. Particulars free. R. A. McNown, 319 Wilkinson block, Omaha, Neb.

IRRIGATED LANDS—For Sale 663

IRRIGATED ACRES, TWO MILES IN; DAIRY limits of Spokane; prices less than city lots. Soil especially adapted to vegetables, small fruits and poultry raising. Good graded school and college. Telephone, electric lights, domestic water and paved highway. Some beautiful homes built and others building. Locate your home where you can have city conveniences and enjoy country life. Write or call Greater City Homes Development company, Dept. T, Old National Bank bldg., Spokane, Wash.

5 TO 40 ACRE TRACTS, RIPE LEVEL, IRRIgated land, on paved highway, R. F. D., telephone and electricity available, ideal for alfalfa, fruits, grapes, garden; $50 to $150 per acre; your own terms; 10 years to pay. Dairy, stock and fruit ranches, all sizes. Mountain ranches and stock range, cheap; elevation 450 ft.; no snow. Write for list. G. E. Oaks, Redding, Shasta county, Cal.

LANDS UNDER GOVERNMENT IRRIGATION project shortened valley, modern town; 20 years to pay for water, without interest; mild climate, sandy loam soil; alfalfa yields 7 tons, early potatoes, berries, vegetables; cash egg market; good schools; farm and garden tracts, $60 acre up. Information free. Settlers Land Agency, King Hill, Idaho.

CHEAP RAW LAND AT $25 TO $35 PER acre, under irrigation system now in operation; ample water; proven suitable soil and climate for apples and small fruits; alfalfa makes 3 crops. Desirable community. A list of opportunities may be procured from secretary of Community Commercial Club, Kettle Falls, Wn.

EIGHTY ACRES FINE LAND, IRRIGATED; 4 miles from Wendell; terms; no buildings. White, Route 3, Seattle, Wash.

CITY PROPERTY FOR SALE 690

ASHLAND REALTY COMPANY HAVE RESIdences, ranches and business places for sale. Write fully what you want, your expectations and send addressed, stamped envelope. Ashland Realty Company, Ashland, Ore.



SYNOPSIS.

Shad Trowbridge, a New England lad of about 20 years, sails on a mail boat to Labrador, where he plans to spend a few weeks of summer hunting and fishing in the wilderness. Upon his arrival he meets two experienced fishermen and trappers, Dick Blake and Ed Matheson, who recommend to him a young lad of 17 known as Ungava Bob, as a guide for his hunting and fishing trip inland. Desiring to lose the least time possible in securing Ungava Bob's services and starting inland for his vacation, Shad starts across the bay in his canoe in the face of a threatening storm. In the darkness his canoe is capsized and he is plunged into the icy water. As he rises to the surface a rope is thrown to him and he hears a voice shouting to make it fast. He is soon drawn aboard a little sailboat which, unknown to him, had approached at the moment of his great need.

To his surprise, Shad discovers that his new friend, the lad with the sailboat, is none other than Ungava Bob. Together, they make their way to Bob's home, where Shad enjoys the hospitality of the northland while they consider ways and means of making inland excursions. Shad decides to remain a month or more and make the first leg of a long winter of trapping planned by Bob, returning to the settlement in time to sail back home before college opens.

They leave for the wild trapping grounds and Shad is so delighted with the wilderness that he decides to remain with Bob on the trails all winter. The other members of the party start back home, leaving the two boys alone to start their long winter of adventure. But they are not alone! Hardly has the boat carried their friends around the bend of the river before Bob and Shad see two Indians watching them from the shadows of the forest trees.

The Indians proved to be old friends of Bob, but it was not many days until enemies appeared. A group of Mingen Indians, catching Bob and Shad out in their canoe on the river above the Great Falls of Labrador, fired upon them, compelling them to remain in the current and be dragged down to the rapids and seeming certain destruction.

In the midst of their peril Bob remembers that in the rapids above the falls there is a small, rocky island, and he skillfully guides the canoe to a safe landing on it. In the meantime their friends, Ed. Matheson and Dick Blake, reach their tilts to find Bob and Shad gone. The Indian maiden, Manikawan, tells them of the supposed loss of Bob and Shad over the falls. She plans to leave at once to wreak vengeance on the enemy Indians who sent them to destruction. Cunningly she entices them onto the river above the rapids and sends them to their deaths at the foot of the falls. Bob and Shad, on their island prison, witnessed the tragic plunge. Suddenly Manikawan appears on the shore, discovers the boys on the island and tells them that she will be back when the sun is noon-high next day with help to get them off.

CHAPTER XIII.

On the Trail of the Indians.

None of the three trappers had ever penetrated the region lying between the Big Hill trail and the river. They knew that here, somewhere, Ungava Bob was to lay his new trails, but as to the route the trails were to take they had no information, for this was a circumstance that the local evidence of the existence of fur-bearing animals was to have decided for Bob when he entered the country to make his initial survey of conditions.

Among the Indians who traded at the Eskimo Bay post there was but one, an old man, who had any personal knowledge of the region. When a small boy this Indian had once traversed with his father the now long disused portage trail; and one day when Ungava Bob and Dick Blake met him at the post he had, at their earnest solicitation, described to them the country as he had seen it with the distorted vision of extreme youth, and as his memory, alloyed with the superstitious tales of nearly threescore years, recalled it.

It was, he said, a region of many lakes, over which flitted the phantom canoes of those who had perished in the near-by dwelling place of evil spirits. In the canoes were the ghostly forms of the victims, forever paddling their phantom crafts around the lakes, vainly striving to escape the torment of mocking, ghoulish spirits which pursued them. Surrounding the lakes were wild marshes and deep black forests, which were peopled by innumerable evil spirits forever searching for new victims to destroy. Their thunder voices were always to be heard, low and deep, in a terrible frenzy of unceasing anger, ever hungry for men to devour.

In analyzing this description Dick Blake eliminated the phantom canoes as the wild creation of imagination, and the thunder voices of evil spirits he set down as nothing more nor less than the roar of the great falls of whose existence the Indians had told.

With this elimination he accepted as fact the statement that the region was sprinkled with many lakes, and that without the assistance of a canoe these lakes and perhaps some wide marshes would have to be circumvented by him and his companions before they came upon the river above the falls, where it was expected the Mingen Indians would be encountered.

While Dick Blake was the first to declare that the Indians must be punished for causing the supposed death of Bob and Shad, he was no more thoroughly in earnest than were his companions.

Normally these trappers were quiet, peace-loving men, who would have shuddered at the thought of causing human bloodshed; but now, moved doubtless to a large extent by a natural desire to avenge an outrage committed upon their friends, they also felt it their plain duty to mete out punishment to the guilty ones, in order to insure themselves and other white trappers against further molestation. Unless this were done there was no guarantee against continued raids upon their tilts, and there would always be the danger, and even probability, that sooner or later they would themselves be attacked and shot from ambush by the emboldened savages.

The trail that Bob had made, leading up from the river tilt and along the creek which flowed from the first lake, was plainly marked; and they proceeded with the long, swinging stride characteristic of the woodsman, rapidly and without a halt, to the point where the trail entered the lake. Here a wide circuit around the lake shore was necessary, and it was nearly noon when they fell again into the trail at the farther end and came upon the first tilt.

"We may's well stop an' boil th' kettle," said Dick, throwing down the light pack of provisions he carried and mopping the perspiration from his forehead, for the mid-day sun was warm. "If we were only havin' a canoe, now, we'd be a rare piece farther. 'Twere a long cruise around the lake."

"Aye," agreed Ed, "a canoe'd ha' saved us a good two hours. We may's well put th' fire on outside; 'twill be warm in th' till."

"Now I'm wonderin' what th' Injun lass is up to," said Dick, as they sat down to their simple meal of fried pork and camp bread. "She's got a canoe. There's her footin' by th' lake, where she makes her landin'."

"They's no tellin' what an Injun's goin' t' do, but I'm not thinkin' 'twill be much harm t' th' Mingens with just a bow an' arrer, an' that's all she has in th' way o' weapons, so far's I makes out," declared Ed, adding: "She were a wonderful fine-lookin' lass; now, weren't she?"

"That she were," agreed Dick, "wonderful handsome—an' wonderful wild-lookin', too."

"Th' poor lad!" said Ed, after a pause. "He were buildin' th' tilt yonder, thinkin' o' th' good furrin' he were t' have th' winter, an' now he's gone. I'm not knowin', Dick, how t' tell his mother. You'll have t' tell she, Dick; I couldn't stand t' tell she."

"No," objected Dick, "you were goin' an' tellin' she th' time we thinks th' wolves gets Bob, an' you knows how. You'm a wonderful sight better breakin' bad news than me, Ed. I'd just be bawlin' with she, an' she cries; an' she sure will, for 'twill break her heart this time, an' Bob sure gone."

"Maybe none of us'll be havin' th' chanct," broke in Bill. "They may be a big passel o' Mingens, and whilst we catches some of un, th' others won't be sittin' quiet."

"Ed an' me's keepin' a watch for signs," assured Dick, as they arose to continue their journey. "They ain't been no signs so far, exceptin' signs o' th' poor lads an' th' Injun lass, an' she were passin' in th' night, by th' oldness o' her footin'."

"They ain't no danger o' findin' Injuns here, Bill," added Ed. "This is what they calls th' ha'nted country, an' they'd be too scairt o' ghosts an' th' devils they thinks is runnin' round loose here t' risk themselves."

The long detours made necessary without the assistance of a canoe so far delayed their progress that, though they had not slackened the rapid pace set in the morning, night found them upon the shores of one of the intermediate lakes, with little more than half the distance to the end of the portage trail behind them.

Here they erected a lean-to at the edge of the forest, as a reflector for their camp-fire, and as a protection against a light but chilling breeze that had sprung up with the setting sun; and, all made snug for the night, they cooked and ate their supper.

Then they lighted their pipes and lounged back upon the bed of spruce boughs under the lean-to, speculating upon the morrow, and the probability of an encounter with the Indians.

"What's that, now?" exclaimed Ed suddenly, and cautiously rising and taking a position beyond the glow of the fire, he stood for several minutes gazing intently out upon the waters of the wide lake not yet lighted by the belated moon.

"There 'tis again! Did you make un out, Dick?" he asked, as Dick and Bill, following Ed's example of cautious exit from the range of the fire's glow, joined him.

"No, I weren't makin' nothin' out," answered Dick.

"There were somethin' there on th' water," Ed stated positively, when they presently returned to the lean-to.

"What were it, now? What were it like?" asked Dick.

"I seen un twict, an' 'twere lookin' t' me like a canoe, though I'm not sayin' so for sure," explained Ed.

"I seen un," corroborated Bill, "but whether 'twere a canoe or no, I'm noways sure—'twere so far out."

"If 'twere a canoe, 'twere Injuns," declared Ed, "an' if 'twere Injuns they was seein' our fire, an' they'll be up t' some devilment, now, before day."

"Be you sartin', now, you seen something?" asked Dick, a note of skepticism in his voice.

"Sure an' sartin'," insisted Ed. 'Twere movin', an' I'm thinkin' 'twere a canoe, though I'm noways sure."

"'Twere just a loon or maybe a bunch o' geese," said Dick, still unwilling to believe.

"'Twere moyin', an' 'twere lookin' like a canoe t' me," said Bill. "'Twere certain no loon nor geese either. 'Twere too big."

"An' we better be gettin' out o' here, too," advised Ed. "If 'twere Injuns—an' I'm noways sure 'twere or 'tweren't—they seen th' fire, an' th' dirty devils'll be droppin' us off an' we stays here."

"Aye," agreed Dick, "we'll be movin' on. You an' Bill both seein' somethin', they must ha' been somethin' there, though I weren't seein' un."

Weary as they were, the three men hastily shouldered their light packs, and with rifles resting in the hollow of their arms, Ed in the lead, they stole noiselessly away into the forest.

Two hours of rapid traveling, in the light of the now rising moon brought them to the end of the lake. Here they paused to fall upon their knees and make a critical examination of the shore.

"Here's fresh footin'," Ed finally announced. "A canoe were launched here since sundown. Th' gravel's wet where th' water splashed up. They's one track o' a Injun moccasin, an' from th' smallness of un 'twere a woman."

"'Twere sure a woman," both Bill and Dick agreed.

"An' there's th' same footin' goin' t' other way, but 'tis an older track." Ed continued. "'Twere th' Injun lass we sees tonight goin' back."

"Now I'm wonderin'," said Dick, as they arose, "what she's goin' back for. Maybe now, she's lookin' t' meet us t' help her?"

"Maybe," Ed suggested, laughing, "she's finding a hull passel o' Injuns more'n she wants t' tackle wi' just her bow an' arrer. I were thinkin,' now, a bow an' arrer weren't much t' run up ag'in a band o' Injuns with, seein' they has guns."

"Whatever 'tis she's up to," suggested Bill, "'tisn't lookin' for us. She couldn't ha' missed seein' our fire back here on th' shore, an' she'd ha' known who 'twere an' come over if she's wantin' t' see us."

"You're right," agreed Dick. "She must have seen our fire, and if she'd wanted t' see us she'd ha' come over. Now I'm wonderin' why she didn't."

At mid-forenoon the following day the tilt on the last lake, where Manikawan had snatched a few hours' sleep, was reached, and mounting the ridge above, the river was discovered beyond.

At the end of the portage trail the three trappers held a hurried consultation. At length, carefully concealing their packs among the bushes, and with rifles held in position for instant use, they turned noiselessly up along the river bank, following the water closely, and taking almost exactly the course followed the previous morning by Manikawan.

They were aware that they were now beyond the bounds of the region avoided by the Indians, and they also had no doubt that the Indian camp was situated farther up the river, probably at some convenient landing place for canoes.

Finally Ed Matheson, who had the lead, halted and held up his hand.

"Smoke," he whispered, sniffing the air.

"Aye," whispered Dick, also sniffing.

Ed now sank to his hands and knees, pausing frequently in his advance to reconnoitre. Presently he ceased to move, his rifle extended before him, until Dick and Bill drew alongside.

"There's th' fire," he whispered, "an' there's where they was camped, but it's lookin' t' me as if they's gone."

The smouldering embers of a camp-fire in the center of the open spot where the wigwam had stood the previous day, lay directly in front of them. On a tree hung some unfinished snow-shoe frames, and there were many signs of a hurried departure.

"What you think?" Dick whispered.

"Th' devils may be hidin' back here," answered Ed. "You an' Bill stay now, an' watch, whilst I looks."

Very cautiously Ed stole away, and Dick Blake and Bill Campbell waited patiently for an hour, when they discovered him walking boldly down toward them.

"They's gone," he announced. "I seen their canoe makin' a landin' on th' other side where th' river widens, away up above here."

An examination of the camping ground confirmed their conclusion that the Indians had in some manner learned of their danger and had fled, evidently in great haste, leaving behind them the snow-shoe frames and some other trifles.

"That's explainin', now, what that sneakin' Injun lass was up to," declared Ed.

"What were she up to, now?" asked Dick.

"She were up to this," said Ed: "She were watchin' at th' river tilt for our comin', an' when we comes she up an' tells th' Injuns we're on their trail, an' they gets out quick. That's why she weren't stoppin' when she sees our fire last night, an' we'll never be seein' her again. She's a Nascaupee, an' it's lookin' now as if th' Nascaupees an' Mingens'll be workin' t'gether, an' if they be, they'll be layin' for us, now, an' we got t' look out."

"Aye," agreed Dick, "that's what they'll be doin', now, an' we got t' look out."

"Well," sighed Ed, as they turned to retrace their steps to the portage trail, "we may's well get back an' lay our plans. Them Injun females is worse'n wolverines; they's no trustin' any of un."

CHAPTER XIV.

The Matchi Manitu Is Cheated.

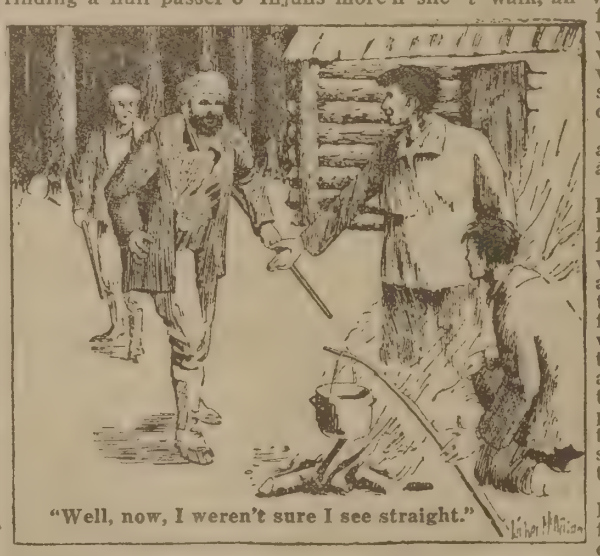
"Well," said Shad, at length, "there's the sun about as high as it will get today, and where's your pretty Indian girl?"

"I been thinkin', now," Bob explained, "she's sure havin' a canoe, an' could make un t' th' river tilt an' back, by travelin' all night. But Dick an' Ed an' Bill ain't havin' a canoe, an' if they comes they has t' walk, an' walkin' they can't make un before some time t'morrer, whatever. 'Tis like, now, she'll wait t' show un th' way t' where we be, an' doin' that she won't be comin' till they does t'morrer."

"Your logic is sound," Shad admitted, "but it's mighty disappointing."

"There she be!" exclaimed Bob, a moment later, as Manikawan, quite alone, emerged from the forest hastening toward them, carrying on her arm two coils of rope—one the coil Bob had left in the first tilt of the new trail, and which she had observed at the time she found and carried away Bob's rifle; the other a tracking line which the trappers had used on their last trip up the river, and which she had discovered in the river tilt.

"Is it well with White Brother of the Snow and his friend?" she asked, stepping eagerly forward to the river bank.


"Well, now, I weren't sure I see straight."

"It is, and they are glad to see Manikawan," answered Bob.

"They will do now as Manikawan directs, and they will soon again be free to hunt the atuk (caribou), the amishku (beaver), and the neejuk (otter)," she promised.

With this she tied the ropes securely together, end to end, and then producing a quantity of salmon twine, which she had appropriated for the purpose from one of the tilts, tied an end of this to one end of the connected ropes. She now proceeded to coil the twine carefully upon a smooth, flat rock at her feet, after which she drew from her quiver a long, blunt-nosed arrow, and directly above the feathered end of the arrow attached the loose end of the twine.

These preliminary arrangements completed, and her plan of rescue ready for the test, Manikawan stood erect, bow and arrow in position, and a moment later the arrow flew out across the water and fell upon the gravelly point.

Ungava Bob sprang forward, seized the twine, still fast tied to the arrow, and rapidly drew it and the end of the rope attached to the twine to him, while Manikawan played out the coil.

"Now," said she, "let White Brother of the Snow make the line which he has received fast and tight to the bow thwart of his canoe.

"White Brother of the Snow and his friend will then place their canoe into the

water with its bow facing the river as it comes down to meet them. They will paddle hard against the river, for the Matchi Manitu (bad spirit) beneath the waves will draw them backward toward the place where the water is white and angry.

"They need not fear. Manikawan holds one end of the rope in her hand. The other end will be fast to the canoe. Manikawan is strong and she will not let the Matchi Manitu draw White Brother of the Snow and his friend down.

"While White Brother of the Snow and his friend paddle, their canoe will move toward the place where Manikawan stands. Near the shore the spirits are weaker than where the water is deep.

"When their canoe is near the shore Manikawan will let it go backward very slowly to the place where the bank slopes."

Bob ran the end of rope under and around the bow thwart, as Manikawan directed, knotting it securely, leaving sufficient length to extend back to the center thwart, around which he again wrapped it and finally tied the end. This he did in order that the strain upon the canoe might be more evenly distributed.

With Shad's rifle and shotgun and their few other possessions in the canoe, they immediately placed it in the water. Bob held it while Shad took a kneeling position in the stern, then himself stepped lightly to his place in the bow, and in an instant they were afloat in the rushing water, paddling fast and hard in order to relieve the stress upon the long line, and to keep the canoe head on to the current.

A few moments later they found themselves close under the mainland bank, with Manikawan letting them slip slowly down to the sloping rock.

Though the treacherous footing on the steep, slippery incline rendered it a hazardous undertaking, the landing was safely accomplished, and the canoe brought ashore.

When Manikawan saw the young adventurers standing before her, her work of rescue completed and the excitement and uncertainty of the preceding days and nights at an end, she sank upon the ground, weak, dazed and overcome with fatigue.

During 60 hours her only sleep or refreshment had been that snatched the preceding morning in the tilt, and throughout the entire period she had been bending herself to almost superhuman effort.

After all, she was but a girl. Human emotions are pretty much the same the world over, irrespective of race, and Manikawan, the Indian maiden, was very human indeed in her emotions and the limit of her physical endurance.

She looked faint and weary, indeed, as Shad and Bob bent over her solicitously, but presently she indicated her desire to rise, and slowly, for Manikawan's exhaustion was still apparent, Bob led the way while the three took a direct course to the tilt on the first lake.

It was not far, and in the course of an hour, mounting a ridge, they saw the lake shimmering below them and the little tilt nestling among the trees on the shore.

"How good it looks. Almost homelike!" said Shad.

"Aye, almost homelike," echoed Bob.

At the tilt they made a fire under the trees, and Bob quickly brewed a kettle of strong tea and prepared food, and when Manikawan had taken nourishment she was sent into the tilt for the rest she so much needed.

Bob and Shad were still lingering over their meal when they looked up to find Dick Blake, Ed Matheson and Bill Campbell staring at them from the edge of the woods.

"Hello!" cried Shad, jumping up in pleasure to greet their friends.

"Evenin," said Bob; "set in an' have a drop o' tea an' a bite."

"Well, now, I weren't sure I see straight!" exclaimed Ed, and the three strode forward.

Here we was thinkin' never t' see you lads ag'in, an' arguin' who were goin' t' break th' news o' your death t' your folks, an' there you be, eatin'! Bob, I'm never goin' t' break th' news o' your death ag'in till I sees you dead. I were doin' it once, an' now I comes pretty nigh havin' to ag'in"; and Ed nearly shook Bob's arm off in his delight.

"Aye," Dick explained, while he and Bill followed Ed in the greeting, "th' Injun lass Manikawan comes an' tells us you lads was drove over th' falls by Mingens."

"An' we goes out huntin' Mingens," went on Bill, "tryin' t' kill un, an' would ha' killed un if we'd found un."

"Now, what devilment were she up to? That's what I wants t' know, tellin' us that. They's no knowin' what a Injun'll do, leastways a female," declared Ed.

"She was about right, now," said Bob, and he proceeded to relate the experiences of the preceding days, while Shad now and again interjected dramatic color.

"Th' lass were doin' rare fine!" Rare fine!" said Ed. "An' we was thinkin' she's up t' some devilment. But why weren't you shootin' at th' Injuns from th' canoe when they opens on you? Your repeatin' rifle would ha' scattered un, Bob."

"I left un in th' tilt by th' first lake above th' river. Shad were steerin', an' he weren't thinkin' t' use his'n," Bob explained.

"In th' first tilt above th' river?" Ed repeated. "We were in th' tilt, now, Dick, when we comes through, an' there weren't any rifle there. Rope an' tent an' other outfit, but no rifle."

"No, there weren't none there," corroborated Dick and Bill.

"Now, 'tis strange," said Bob. "I left un there, didn't I, Shad?"

"Yes, you certainly left it there, on the rear bunk," Shad affirmed positively.

This puzzled them long, and they were never to learn the truth, for Manikawan, on her return journey for the ropes, had replaced the rifle exactly as she had found it, and none but herself ever knew the part she had played in the river tragedy.

While Manikawan rested in the tilt, and Bill Campbell set out to hunt ptarmigans for supper, Dick Blake and Ed Matheson in Manikawan's canoe, and Bob and Shad in Shad's canoe, left upon a reconnoitering expedition to the tilt from which the two latter were returning on the day of the Indian attack.

They had no fear now of an Indian surprise, since Ed Matheson had observed the retreat of the savages to the southern shore, and they proceeded boldly to their destination.

As anticipated, the tilt had been rifled of its contents, chiefly flour and pork. The tilt itself, however, had not been burned, and was otherwise undisturbed.

"They was thinkin', now, t' have un an' t' use un theirselves when they comes here t' hunt, th' winter," declared Ed. "They thinks Bob an' Shad's done for. Unless they gets scairt out by th' ha'nts in th' water——"

"The what?" asked Shad.

"Th' ghosts or spirits they thinks is there. They's wonderful easy scairt, Injuns is. Oh, I knows th' Injuns; I been havin' trouble with un before."

"When was you havin' trouble with Injuns, now?" asked Dick skeptically.

"More'n once," said Ed. "There were th' time, now, I comes t' my tilt an' finds a hull passel o' Mountainteers—they wan't friendly in them days, th' Bay Mountaineers wan't—so many they eats up a hull barrel o' my flour t' one meal——"

"Now, Ed," broke in Dick, in evident disgust, "you been tellin' that yarn so many times you believes un yourself. Now, don't tell un ag'in."

"'Tis gospel truth——" Ed began.

"'Tis no kind o' truth."

"Well, an' you don't want t' hear un, I won't tell un," said Ed, with an air of injured innocence.

"What was it, Ed, that happened to you?" asked Shad, laughing, for he had learned to know the peculiarities of these two friends.

"Dick's not wantin' t' hear un, Shad. He gets all ruffled up when I tells o' some happenin' I been havin' that's bigger'n any he ever has. I won't tell un now; 'twould make him feel bad, an' I don't want t' make he feel bad, nohow," said Ed, with mock magnanimity. "But there were another time—Ill tell you o' this, Shad, an' Dick don't mind?"

"Oh, go ahead an' yarn, if you wants to! But th' Lard'll strike you dead some day, Ed, for lyin," and Dick turned toward the canoes in disgust.

"Now Dick's mad," Ed laughed, "but don't mind he, Shad; he'll get over un."

"As I was sayin', now, 'twas when I was layin' my trail t' th' nu'th'ard o' Wanokapow. I gets my tilt built an' all in shape an' stocked up, an' I goes out one mornin' lookin' t' kill a bit o' fresh meat. 'Tis early, an' too soon t' set up th' traps, for th' fur ain't prime.

"I gets a porcupine, which is all I wants, an' comin' down t' my second tilt about th' middle o' th' forenoon, finds un all afire an' a band o' 12 Injuns—I counts un, an' they's just a dozen—lookin' on, an' dividin' up my things, which they takes out o' th' tilt before they fires un.

"Now I were mad—too mad t' be scairt—an' I steps right down among th' Injuns, an' when they sees me lookin' fierce an' ready t' kill un all, they's too scairt t' do a thing or t' run, an' they just stands lookin' at me.

"Well, I keeps on lookin' wonderful fierce, an' jumps about a bit an' hollers. It makes me laugh now t' think how that passel o' Injuns stared! One of un tells me a couple o' years after that they thinks I gone crazy.

"'Tisn't long till I gets un all so scairt they thinks I'm goin' t' shoot un all up, an' they's afeared t' run, thinkin' if they does I'll start right in quick.

"Then I thinks it's time t' break th' news t' un, an' I tells un if they builds th' tilt up new for me I'll let un off. An' they starts right in t' build un, an' has all done before th' sun sets. Th' same tilt's standin' there yet——"

"Ed!" called Dick, from the canoe, "if you're through yarnin', come on now an' get started back. It'll be dark now before we gets t' th' tilt."

It was dark when they reached the tilt. Bill, sitting alone by the camp fire, had seen nothing of Manikawan while they were gone, and none of them ventured to enter the tilt or to disturb her.

But, when they arose from their bed of boughs in the lee of the tent the following morning they found that the fire at their feet had been renewed while they slept. Manikawan was not in the tilt, but presently they discovered her, standing upon the pinnacle of rock near the lake

(Continued on page twenty-two.)

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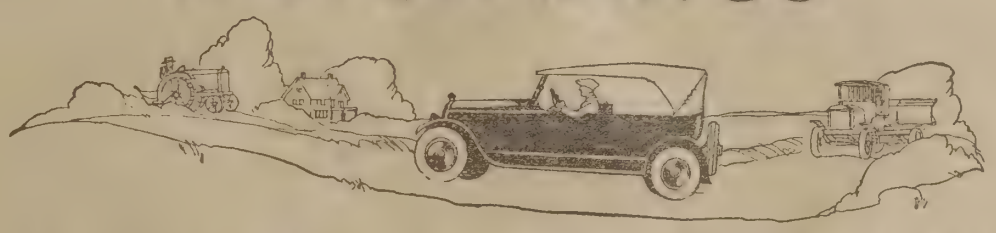
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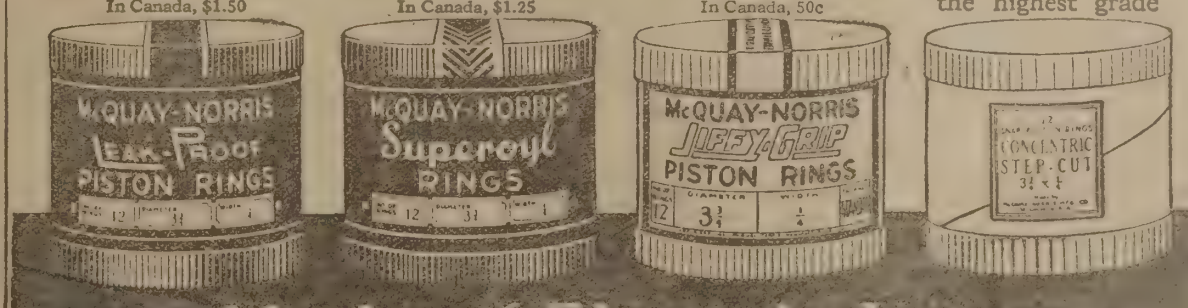
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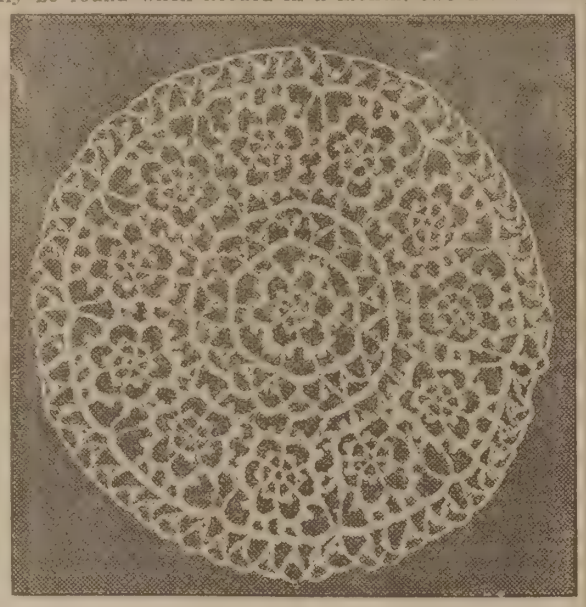
FAMILY CIRCLE

ALICE BARLAND
EDITORIAL CONTRIBUTOR

Doily, Medallions, Lace, Insertion

By JEANETTE BELL

There are many times when the crochet worker wishes to use the same motif in various ways. This article will be found most appropriate for such uses. It is advisable to keep it where it can easily be found when needed in a month, two months or maybe a year from now. The size thread used is a matter of choice, depending somewhat on the use for which it is intended. No. 50 to 80 Cordonnet crochet cotton are most popular sizes for lingerie, household linens, etc. For baby's wear No. 100 to 150 are best. The number of stitches used are the same, but the thread will make different sizes.



Make 5 ch sts, join forming a circle, 8 ch sts.

1st row: * catch back into the 4th st, forming 1 p, 1 ch st, 1 d c into circle, 5 ch sts, repeat *, 4 times, 5 ch sts, catch back into 4th st, 1 ch st, join to complete the row, 10 ch sts,

2nd row: * 1 d c into d c of previous row, 7 ch sts, repeat *, 4 times, join to complete the row.

3rd row: * 3 s c, 3 ch sts, form 1 p, repeat *, twice, 3 s c, all over loop, repeat for each loop, break thread. This motif forms the start of each piece illustrated here. On the last row of next motif, join by center p of two loops to the corresponding p of first motif, continue for the length required.

For the top edge, make a length of ch sts, the length of motifs allowing extra for taking up.

1st row: * catch back into the 4th st, forming 1 p, 9 ch sts, catch back into the 4th st, forming 1 p, 1 ch st, skip 4 sts, 1 s c, forming 1 p loop, 5 ch sts, repeat *, for this row.

2nd row: * 3 ch sts, 1 s c into center st of the 5 ch sts, repeat *, for each loop.

3rd row: * 3 s c, 1 t c into 1st p, next to connection of motif, 3 s c, all over 1st loop, 6 s c over next loop, 2 ch sts, skip 1 p, of motif, 1 s c into next p, 2 ch sts, 1 s c into s c, 6 s c over next loop, 3 s c, 1 t c into last p of this motif, repeat *, for each motif. you will observe that the t c come together at the top, but connect the first p of one motif and the last p of next motif, without any sts beween.

For the insertion, this edge is made in both sides.

For the small medallion, make the motif same as before.

1st row: Join thread between 1st and 2nd p, make 7 ch sts, * 1 d c between 2nd and 3rd p, 7 ch sts, skip 2 p, 1 d c, 3 ch sts, repeat *, for this row, join the 4th ch st, completing the row.

2nd row: * 6 s c over 3 ch sts, 13 s c over 7 ch sts, repeat *, for this row.

3rd row: * 5 ch sts, catch back into the 4th st, forming 1 p, 9 ch sts, catch back into 4th st, forming 1 p, 1 ch st, 1 s c, over d c of 1st row, repeat *, making next s c into 7th s c of long loop, repeat these p loops, for this row, turn, sl st back to center of loop.

4th row: * 5 ch sts, 1 s c into center st of loop, repeat *, for each loop.

5th row: 10 s c over each loop, break thread.

For the large size medallion, repeat small medallion, then make

6th row: Start motif, making 1st and 2nd rows, for the 3rd row: * 3 s c, 3 ch sts, form 1 p, 3 s c, 5 ch sts, 1 s c into center st of loop of medallion, 3 ch sts, 1 s c into 4th ch st, just made, 2 ch sts, 3 s c, 1 p, 3 s c, all over loop of motif, 4th sts, 1 s c between loops of medallion, 4 ch sts, forming center connection, repeat 1st connection and continue the motif. The next motif is only joined to medallion at the center, the sides being joined to first motif, repeat 1st and 2nd motifs alternately, for this medallion.

For the doily, make large medallion, then make

7th row: Join thread to 3rd p, * 1 s c into p, 3 ch sts, repeat *, twice, 1 s c into next p, 5 ch sts, skip 1 p, 1 t c, 1 ch st, 1 t c into first p of next motif, 5 ch sts, repeat for this row.

8th row: * 5 s c over each 3 ch sts, 9 s c over 5 ch sts, 2 s c over 1 ch st, 9 ch sts, repeat *, for this row.

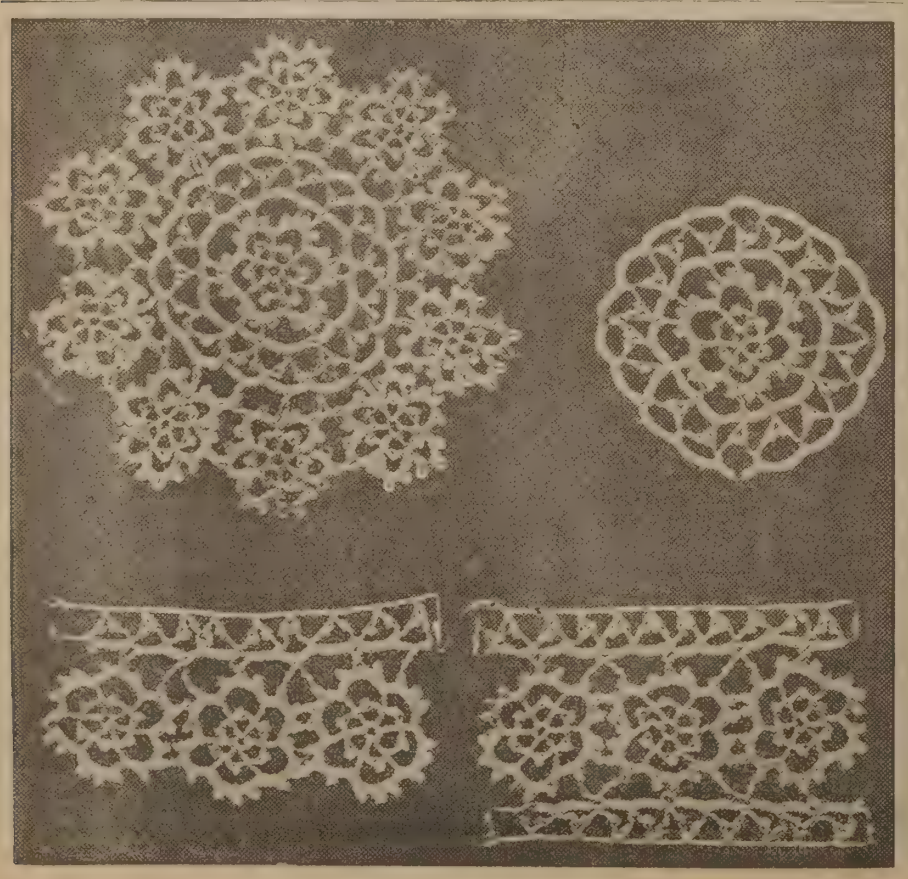
9th row: p loops, as before.

10th row: * 5 ch sts, 1 s c into center st of loop of previous row, repeat *, for this row.

Larger doilies may be made by repeating 5th, 6th, 7th, 8th, 9th and 10th rows, once for a plate doily, 2 or 3 times for the lace centerpiece to match.

The doily illustrated may be used as the back foundation for a baby cap; for this make the size required, omitting the 10th row, or rather altering this row, as follows: spread the p loops, making 2 loops where you made 3 for the circle, when you have made all but 2 motifs (3 if the thread is very fine), turn, continue leaving this space for the center back, repeat 5th, 6th, 7th, 8th, 9th, and 10th rows. Be careful not to increase the width of your work. To do this spread the motifs, so they lay flat, instead of circling the previous row. Continue the last 10th row around the back also. Finish the cap with 5th row around the entire edge.

Terms—ch st, chain stitch.
s c, single crochet.
d c, double crochet.
t c, treble crochet.
sl st, slip stitch.
p, picot.



Experience Letters

From Our Family Circle Women

Four things a man must learn to do,
"If he would make his record true;
To think without confusion clearly,
To act from honest motives purely,
To love his fellow men sincerely,
To trust in God and heaven securely."

Dear Friends: I heard a very brainy man preach a sermon on the above lines a short time ago and I said then, "I will pass them on to my dear Circle." Every line is full of things to think about and meditate upon. Let us think about them for a little time, line by line. What is a record, anyway? The dictionary says it is "the known facts in a person's life." Who among us is there who doesn't want our record to be true? Granted then that we all do, the first direction in the couplet is "to think without confusion clearly."

About the most profitable occupation I know of is clear thinking. There would be very many less mistakes made if all of us would do very much more clear thinking, without confusion. One step to clear thinking is to regard matters under consideration as being four square and looking at them from all sides. Then we should also look at them from the standpoint of others, get their viewpoint, too. This one thing will often straighten out troubles between people. Try it.

Second direction: "To act from honest motives purely." Do you know, dear friends, it is quite a job just to be plain honest? I like the dictionary, it is a good companion and it tells me that honest means, "Fair in dealing with others." Oh, how prone we all are to be unfair in our thoughts, if not in our dealings with others! I am only touching upon these thoughts and will leave them with you.

Third direction: "To love his fellowmen sincerely."

The same man who gave the message I have spoken of set the matter of love in a general sense toward all humanity in a new light. He said what we all know, that there are many people we can not love because so many things about them are not anyways lovable. But he said, too, that in the hearts of the lowest there is concealed some good, which will respond to a like goodness in our own heart and it is our business to seek for that chord and bring out the response. That is loving our fellowmen sincerely.

And last: "To trust in God and heaven securely."

Everybody must trust in God, and the farmers, it seems to me, live closer to him than any one else. All the world looks to the farmers and couldn't exist at all without them. The farmer sows his grain and trusts to God that the sun will shine and the rain will fall.

And as to the last clause, for others I can not speak, but if I thought that "It was all of life to live and all of death to die," to me life would not be worth living.

Let us strive to think clearly, act honestly, love or regard sincerely and having done this it will be easy to trust in God and heaven securely. Your friend.

ALICE W. BARLAND.

Home Recipes

Pickling smelts: Cut off heads, fins and tails of smelts. Arrange in steamer and steam for 10 minutes; place smoothly in a crock with a layer of raw onions sliced. Mix together vinegar and oil (sister doesn't say what proportion of each), a bay leaf, stick of cinnamon, a few whole cloves, a slice of lemon, pepper, salt and mustard. The spices, bay leaf and mustard may be omitted if desired. The smelts will keep a long time if carefully pickled.

MRS. PAUL KOPCHO.

Hood River, Ore.

Pickled or mustard smelts: Cut off heads, fins and tails of smelts and carefully wash; leave them in a medium salt brine over night. In the morning drain and wipe well, pack in jars tight and taking care to lay them straight. If care is taken they will not break up when opened. To one gallon of vinegar add eight heaping tablespoons of mustard, three-fourths

(Continued on page twenty-two.)

Your Health

By Royal S. Copeland, M. D., F. A. C. S.

During the reign of Charles II., in 1670, the English parliament passed this curious act:



Dr. Copeland.

"That all women, of whatever age, rank, profession or degree, whether virgins, maids or widows, that shall, from after the passing of this act, impose upon and betray into matrimony any of his majesty's male subjects, by scents, paints, cosmetics, washes, artificial teeth, false hair, Spanish wool, iron stays, hoops, high-hecled shoes or bolstered hips, shall incur the penalty of the laws now in force against witchcraft, sorcery and such like misdemeanors, and that the marriage, upon conviction, shall stand null and void."

When we listen to the railings against the "evil practices" of modern woman, we might suppose that her beauty devices are new. As a matter of fact, they are almost as old as creation. The desire to appear well seems almost to be instinctive.

Did you ever stop to think why artificial aids to beauty are employed? Glance over King Charles' list. Every single device is intended to hide a defect or to imitate vigorous health.

In and of itself there isn't an article or a procedure mentioned that is detrimental to the physical welfare of the one using it. It isn't, then, the use of the thing, but the necessity for its use that I would criticize.

Who would paint the lily? If the checks were rosy, the lips cherry, and the skin glowing from its perfect circulation, who would be so foolish as to soil them with pigment?

One would not venture to suggest that the modern woman uses scents to disguise natural odors, but take my word for it, the woman of 1670 needed powerful perfumes. Bathtubs and bathing were in their infancy then. We are glad the perfumes of our day are delicate suggestions of sweet flowers and not the odoriferous nuisances of two centuries ago. We have learned that daily baths, lots of soap, plenty of water inside and out, good digestion and free discharge of the wastes make for sweetness of body.

We have learned the value of dental care. By watching the growing child there are given the mineral salts necessary for the development of good teeth. The tooth brush and the dentist preserve our teeth.

The modern woman cares for her hair and scalp. She is taught how to keep her natural covering, and need not trust to the wig-maker's art to make her beautiful.

Our girls are taught to stand erect, and iron stays are no more needed than are plaster casts. I regret to note the bad posture and shuffling gait of many, but it is inexcusable to be without a good figure.

Intelligent physical and breathing exercises will give chest development and fine lines to any woman. Proper diet will keep her figure youthful. Excessive weight and undrweight may be avoided, and therefore artificial devices will not be needed to hide the one or stimulate the other.

The female of the species is far sweeter and lovelier than the male, but, I beg of you, have real health! Do not camouflage your face and form, pretending to be what you are not. On the contrary, by right living and proper physical care, have the beauty and grace you properly envy.

SHOULD ROLL THE LAWN.

"The lawn roller is an implement generally not used enough," declares the Missouri state board of agriculture, and experts in various quarters come to the support of the statement, explaining how rolling benefits the lawn. The roller firms the plants into the soil and makes water available. It is the foe of ants, grubs and moles. Rolling should not be confined to the sowing time, but practiced every spring. Winter freezing and thawing crack and heave the turf away from the subsoil, it is asserted. Rolling presses back the frost-heaved and the sun-baked soils alike, protecting the roots.

SEIZE THE OPPORTUNITY.

They say that opportunity comes only once. That is not true, but one should always be looking out for opportunity and seize it when it appears. Every hour there is a new opportunity or a repetition of the old. Every morning begins a new day fraught with great possibilities for accomplishment.

THANK HEAVEN FOR NOW!

Now is the time to begin. We let our wonderful opportunity of yesterday pass by unheeded. We made a great mistake. We did a great wrong to ourselves or our friends. Now is the time to repair the mistake or the wrong. Wipe the slate clean. Begin over. Don't make the mistake or do the wrong again today.

Bits of Fun FOR Everyone

Never Start Anything, Etc.

The Dear Old Lady—My poor man, how did you ever come to be in durance vile?

Second Story Sid—Well, I guess, ma'am, it was because de cop what was chasin' me had endurance viler.—The American Legion Weekly.

Positive Identification.

He was newly arrived in this country and was none too familiar with the use of the telephone. So he took down the receiver and demanded:

"Aye vant to talk to my vife."

Central's voice came back sweetly, "Number, please?"

"Oh," he replied, perfectly willing to help out, "she bane my second vun."—American Legion Weekly.

To the Rescue.

Bill Smith, country storekeeper, went to the city to buy goods. They were sent immediately and reached home before he did. When the boxes were delivered Mrs. Smith, who was keeping the store, uttered a scream, seized at hatchet, and began to open the largest one.

"What's the matter, Mandy?" said one of the bystanders who had watched her in amazement.

Pale and faint, Mrs. Smith pointed to an inscription on the box. It read, "Bill inside."—Chicago Tribune.

Scented Trouble.

They were at dinner—the first one the bride had prepared. The bridegroom choked, then gasped—"This lettuce—it's awful—did you wash it?"

"Of course I did," was the sweet reply, "and, my dear, I used perfumed soap, too!"

Dorothy Figures It Out.

A neighbor visiting us asked little Dorothy how old she was. "Three," said the child.

"When are you going to be 4?" asked the neighbor.

"Well, as soon as I get through bein' 3," thoughtfully replied Dorothy.—Capper's Farmer.

Latest High Class Patterns for the Home

Please order the patterns you desire at least two or three weeks before you wish to use them. Desiring to obtain the latest high-class patterns for its readers, THE FARMER has made arrangements to have them sent direct from the east, and under present mailing conditions it takes about that time for them to reach you.



3963. Junior's dress. Cut in three sizes: 12, 14 and 16 years. A 14-year size requires 3 3-4 yards of 27-inch material for the dress and 1 5-8 yards for the cape. Price 10 cents.

3958. Girl's dress. Cut in four sizes: 4, 6, 8 and 10 years. A 6-year size requires three yards of 36-inch material. Price 10 cents.

3655. Ladies' dress. Cut in six sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. A 38-inch size will require 5 1-8 yards of 40-inch material. The width of the skirt at the foot is about 2 1-8 yards. Price 10 cents.

3564. Girls' dress. Cut in four sizes: 6, 8, 10 and 12 years. A 10-year size will require 4 1-4 yards of 27-inch material. Price 10 cents.

3693. Child's romper. Cut in four sizes: 2, 4, 6 and 8 years. A 4-year size requires 2 1-4 yards of 27-inch material. Price 10 cents.

3960. Girls' dress. Cut in four sizes: 8, 10, 12 and 14 years. A 12-year size requires three yards of 38-inch material. Price 10 cents.

3969. Ladies' house dress. Cut in seven sizes: 36, 38, 40, 42, 44, 46 and 48 inches bust measure. A 38-inch size requires six yards of 36-inch material. Price 10 cents.

3622. House or porch dress. Cut in seven sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. A 38-inch size will require seven yards of 27-inch material. The width of the skirt at the foot is 2 1-2 yards. Price 10 cents.

3949-3947. Ladies' costume. Waist 3949, cut in six sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. A 38-inch size requires 2 3-4 yards of 36-inch material. Skirt 3947, cut in seven sizes: 25, 27, 29, 31, 33, 35 and 37 inches waist measure. The width at the foot with plaits extended is about 2 1-2 yards. A 29-inch size requires 2 3-4 yards of 54-inch material. Two separate patterns, 10 cents for each pattern.

3448. A pleasing apron. Cut in four sizes: Small, 32-34; medium, 36-38; large, 40-42; extra large, 44-46 inches bust measure. To make the design for a medium size will require 4 1-2 yards of 36-inch material. Price 10 cents.

3676. Boy's shirt. Cut in five sizes: 6, 8, 10, 12 and 14 years. A 12-year size requires 3 3-4 yards of 27-inch material. Price 10 cents.

3945. A smart top garment. Cut in six sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. A 38-inch size requires 3 1-8 yards of 44-inch material for the jacket and 7-8 yard for the cape. Price 10 cents.

CATALOGUE NOTICE.

Send 12 cents in silver or stamps for our up-to-date spring and summer 1922 catalogue, showing color plates and containing 500 designs of ladies', misses' and children's patterns, a concise and comprehensive article on dressmaking, also some points for the needle (illustrating 30 of the various, simple stitches), all valuable hints to the home dressmaker.

Please fill in this order and mail with remittance to:
PATTERN DEPT., PACIFIC NORTHWEST FARM TRIO, Spokane, Wash.

Enclosed find.....cents for which send me the following:

Pattern No.....Size..... Pattern No.....Size.....

Pattern No.....Size..... Pattern No.....Size.....

Name .....

Postoffice..... State.....

R. F. D..... Box No..... St. No.....

Be sure to give the pattern number and the correct size.



IF you are giving a party and you want to use a particular color scheme, plan on Jell-O for the dessert.

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JELL-O
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The LINK BLADE does it!



The link blades of the Simplex bowl are accepted throughout the world as the most efficient device for cream separators. They have never been excelled for close skimming.

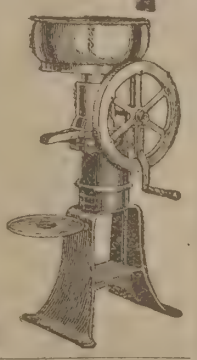
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TAKE ADVANTAGE OF GUARANTEE mentioning THE WASHINGTON FARMER when writing to advertisers; you are doubly protected. See the guarantee on the editorial page.—Adv.

High Points in News of the Week

Notwithstanding the difficult situation that the international finance conference was thrown into when Germany and Russia announced their entrance into a separate treaty for diplomatic and industrial relations between Germany and the soviet government, the conference has undertaken to work out a comprehensive program for the financial restoration of all Europe, including Russia. A plan is being worked out with a view to enlisting the financial aid of all countries of Europe, and probably of the United States, in restoring Russia. This movement is prompted by a two-fold motive, that of bringing relief to stricken Russia and that of relieving Europe of the menace of the present revolutionary condition in that country.

The executive council of the league of nations will meet at Geneva, the permanent headquarters of the league, on May 11. At that time it will take up any problems referred to it by the present financial conference at Genoa.

What steps will be taken by the allies to compel Germany to pay her regular installment of war reparations due this week is a problem facing the conference at Genoa. Should Germany again become delinquent in payment it is expected that a meeting of delegates of the allies to take action will be called immediately. The president of France recenty startled the world by declaring that if the allies as a group would not compel Germany to live up to her treaty agreement France would endeavor to do so independently.

Referring to the difficulties experienced at the Genoa conference by the allies following the German-Russian treaty and the war-like utterance of the French president, Premier Lloyd George of England declared in a public address that if the Genoa conference failed in its mission of reestablishing sound financial conditions throughout Europe, European nations and probably the world at large faced another war.

* * *

Indicating returning confidence in the general industry of the country, what is believed to be the largest week's business in bond sales since the flotation of government loans during the war was reported from New York last week. More than $250,000,000 worth of bonds were offered, finding a ready market.

The demand for lumber is declared to be the best since 1920, indicating increased activity in building throughout the country, in the opinion of the Weyerhaeuser company.

* * *

A bill is expected to be introduced in congress this week or very early providing for government regulation of wireless. The measure is intended to prevent the growth of any monopoly in transmitting messages of any kind through the air. As now drawn it places the regulation of this class of service in the department of commerce now presided over by Secretary Herbert Hoover.

* * *

As a direct result of the killing of one or two persons in a mysterious raid in Los Angeles last week, a grand jury investigation of the activities of the Ku Klux Klan has been called in Los Angeles county. It is reported to be the purpose of the investigation to uncover the truth about this mysterious organization, to learn its purposes, its methods of activity and its connection, if any, with a number of events of violence that have occurred in a number of localities. It is understood that Los Angeles is the headquarters of the Pacific coast states division of the Ku Klux Klan, including all the states of the Pacific slope.

* * *

China last week demonstrated to the world that she is neither asleep nor behind the times by staging the first battle of what is reported to be a civil war. The first battle occurred in the vicinity of Peking, while a report from Shanghai on the coast to the south reported the capture of the southern naval squadron by the forces of the south Chinese government. Aeroplanes figured largely in the capture of the naval squadron.

* * *

The packers and stockyards act of 1921 was declared constitutional early this week by the supreme court.

The court, in disposing of cases brought by James E. Burton and others representing Chicago traders, and Stafford Brothers in behalf of the Chicago commission merchants, declared that commission merchants, traders and dealers who buy and sell live stock after its arrival at Chicago stockyards are engaged in interstate commerce.

Chief Justice Taft in holding federal control of the stockyards of the country as directed in the packers and stockyards act to be constitutional declared the yards constituted a channel through which interstate shipments of live stock flowed and further were great national public utilities.

* * *

Secretary Wallace of the department of agriculture last week issued a statement declaring that railroad freight rates must be reduced to about pre-war levels or the prices of agricultural products increased to correspond to the present high freight rates. He named six undesirable effects of the continuation of the present high freight rates as follows:

First—To favor the farmers of South America and Australia at the expense of our own farmers. (Substantial decrease in ocean rates emphasized the disadvantage of the American farmer, he pointed out.)

Second—To keep prices on farm products in the large surplus-producing states at figures lower than are justified by the investment in land and equipment and cost of production.

Third—Prolong the period of dissatisfaction among farmers and encourage advocates of economy fallacies of all sorts.

Fourth—Improve the position of eastern truck and fruit growers, but add considerably to the cost of milk and dairy products because of the advanced prices of hay and coarse grains necessarily shipped in from the west.

Fifth—Gradually shift industrial enterprises westward nearer the surplus food producing territory.

Sixth—Promote sectional rather than national spirit and make more and more difficult national policies with respect to international affairs.

Farm Business and Markets Outlook

(Continued from page five.)

ally declining in an orderly manner. Receipts are above the average for this season of the year and cold storage operators have not yet entered the market.

FRUITS AND VEGETABLES.

Cold storage holdings of apples in the United States on April 1 consisted of 576,940 barrels and 4,062,913 boxes, making a total equivalent to 1,931,000 barrels. On April 1 last year total holdings were equal to 2,209,000 barrels, but the five-year average is only 1,638,000 barrels. During March holdings decreased about 35 per cent. If apples disappear at the same rate in April and May the entire stock will have been disposed of. Prices have changed but little for several weeks.

The movement of potatoes from producing states is decreasing, but it still maintains a big lead over the corresponding period a year ago. Maine and Minnesota are the biggest shippers, the excess from Maine alone accounting for most of the weekly increase over last year. Wisconsin, Pennsylvania, Long Island, New Jersey and the corn belt states are falling behind last year, so that the receipts are being placed without such a drastic decline in prices as that which occurred last spring. New potatoes now compose about 15 per cent of the supply. Prices upon old stock f. o. b. northern shipping points are about $1.30 to $1.40 per 100 pounds sacked, with consuming markets quoted at $1.40 to $1.90.

LATEST QUOTATIONS.

The Live Stock Market.

PORTLAND, April 29.—Cattle—Choice steers, $7.75@8.25; medium to good steers, $7@7.75; fair to medium steers, $6.25@7; choice feeders, $5@6; fair to good feeders, $4.50@6; choice cows and heifers, $6.25@7.75; medium to good cows and heifers, $6.50@6.75; fair to medium cows and heifers, $4.75@5.50; common cows, $3.75@4.75; canners, $2.25@2.75; bulls, $3.50@5; choice dairy cows, $9.50@10; prime light calves, $9@9.50; medium light calves, $8.50@9; heavy calves, $4.50@6.50.

Hogs—Prime light, $11.25@1135; smooth heavy, 200 to 300 lbs, $10@11.25; smooth heavy, 300 lbs up, $9@10; rough heavy, $7@11.50; fat pigs, $11@11.50; feeder pigs, $11@11.50; stags, subject to dockage, $5@8.50.

Sheep—Best spring lambs, $13@14; medium spring lambs, $10@13; common spring lambs, $6@10; east-of-mountain lambs, $13@14; best valley lambs, $12@13; fair to good, $10@11; cull lambs, $6@8; eastern Oregon feeders, $9@10; light yearlings, $9@10.50; heavy yearlings, $9@10.50; light wethers, $9.50@10; heavy wethers, $9@9.50.

SPOKANE, April 29.—Cattle—Prime steers, $7@8; good to choice steers, $6@7; medium to good steers, $5.50@6.75; fair to medium steers, $4.75@5.50; common to fair steers, $4.25@4.75; choice cows and heifers, $5.50@6.50; good to choice cows and heifers, $4.50@5.50; medium to good cows and heifers, $4@4.50; fair to medium cows and heifers, $3@4; canners, $2@3; bulls, $3@5.50; light veal calves, $8@10; heavy veal calves, $4@8; stockers and feeders, $4.50@5.50.

Hogs—Prime mixed, $11@11.50; medium, $10@11; heavies, $8@9; fat pigs, $10@11; stockers and feeders, $10@11.

Sheep—Prime lambs, $11@13; fair to medium, $10@11; yearlings, $10@11; wethers, $9.50@10; mutton ewes, $3@7.50; feeder lambs, $8@9.

The Grain Market.

PORTLAND, Ore., April 29.—Wheat—Hard white, $1.28; hard winter, $1.27; soft white, white club, $1.26.

Grain futures: Wheat—Hard white, May, June, $1.28; soft white, white club, May, June, $1.26; hard winter, May, June, $1.27.

Oats—No. 2 white feed, May, June, $35; No. 2 gray, May, June, $34.

Corn—No. 2 eastern yellow shipment, May, June, $28.25.

POMEROY, April 29.—Turkey Red, $1.05; Hybrid, 99c.

WALLA WALLA, April 29.—Club wheat, $1.15; Bluestem, Turkey Red and Bart, $1.16.

PULLMAN, April 29.—Red wheat, $1; white wheat, $1.03.

LEWISTON, Idaho, April 29.—Fortyfold, Club, hard winter, $1.06 to $1.10.

RITZVILLE, April 29.—Bart, $1.45; red, $1.30; Fife, $1.05.

DAVENPORT, April 29.—Marquis, $1.35; Bluestem, $1.35; Gold Coin, $1.04.

SEATTLE, April 29.—Wheat—Hard white, hard red winter, $1.28; soft white, white club, soft red winter, northern spring, $1.26; eastern red Walla, $1.23; Big Bend Bluestem, $1.50.

Hay and Feed Grain.

PORTLAND, April 29.—Millfeed—Price f. o. b. mill; Millrun, ton lots, $31; mixed cars, $30; straight cars, $29 per ton; middlings, $45; rolled barley, $37@39, rolled oats, $42; scratch feed, $52 per ton.

Corn—White, $36; cracked, $38.

Hay—Buying price f. o. b. Portland: Alfalfa, $20 per ton; cheat, $16; oats and vetch, $17, clover, $17; valley timothy, $20; eastern Oregon timothy, $21@22.

SPOKANE, April 29.—Wheat—Feed wheat, $46 per ton.

Oats—$40 per ton; steam rolled, $42.

Corn—$36 per ton; cracked corn, $32 ton.

Barley—$40; steam rolled, $42.

Bran and shorts—$30 per ton.

Alfalfa, $22 ton; timothy, $22 ton; mixed hay, $18 ton.

General Produce.

PORTLAND, April 29.—Butter—Cubes, extras, 33c per pound; parchment wrapped, box lots, 35c; cartons, 36c. Butterfat, buying price; No. 1 grade, 33c, delivered Portland.

Eggs—Buying prices, 19c per dozen, case count; henneries, 22c dozen; jobbing prices, case count, 21c; candled ranch, 22c; selects, 25c.

Cheese—Tillamook triplets, price to jobbers, f. o. b. Tillamook, 23c; young Americas, 24c pound.

Poultry—Hens, 23@27c; ducks, nominal; geese, nominal; turkeys, live, nominal; dressed, 40c.

Veal—Fancy, 13½c per pound.

Pork—Fancy, 15½c per pound.

SPOKANE, April 29.—Poultry—Fat hens, 23c lb; light hens, 20c lb; roosters, 10c lb.

Fresh ranch eggs—$6 case; no storage; pullet eggs, $5.50.

Butterfat—36c a pound.

Range of Live Stock Prices for the Week Ending April 26

CATTLE.	Chicago.	Spokane.	Portland.	N Salt Lake
Choice, prime heavy steers (1100 lb. up)	8.60@ 9.40	.....	.....	.....
Good heavy steers	8.10@ 8.75	.....	.....	.....
Medium heavy steers	7.50@ 8.35	.....	.....	.....
Common heavy steers	6.75@ 7.65	.....	.....	.....
Choice, prime light steers (1100 lb. d'n)	8.60@ 9.40	.....	.....	.....
Good light steers	8.10@ 8.75	7.50@ 8.00	8.00@ 8.50	.....
Medium light steers	7.40@ 8.35	6.75@ 7.75	7.00@ 8.00	6.50@ 7.25
Common light steers	6.60@ 7.50	4.50@ 6.75	5.00@ 7.00	4.50@ 6.50
Common to choice butcher heifers	5.50@ 8.50	4.50@ 6.75	5.00@ 7.00	4.00@ 5.50
Common to choice butcher cows	4.50@ 7.25	3.50@ 5.75	3.75@ 5.75	3.50@ 5.00
Bologna and beef bulls	4.00@ 6.50	3.00@ 5.50	3.50@ 5.00	3.00@ 4.50
Canners and cutters, cows and heifers	3.25@ 4.50	2.00@ 3.50	2.25@ 3.75	1.50@ 3.25
Canner steers	4.25@ 5.25	3.50@ 4.50	3.00@ 4.50	3.00@ 4.00
Medium to choice light veals	5.50@ 7.75	8.00@10.00	8.50@10.00	7.00@ 8.00
Common to choice heavy veals	4.00@ 7.00	4.00@ 8.00	4.50@ 6.50	.....
Common to choice feeders (1000 lb. up)	6.00@ 7.60	.....	.....	.....
Common to choice feeders (750-1000 lb.)	5.85@ 7.60	4.50@ 5.50	4.50@ 6.50	4.00@ 5.00
Common to choice stocker steers	5.75@ 7.50	.....	.....	.....
Com. to choice stocker cows and heifers	4.00@ 5.75	.....	.....	.....
HOGS.				
Top of market	10.70	11.50	11.75	10.25
Bulk of sales	9.85@10.65	10.50@11.25	10.75@11.50	9.50@10.00
Heavy (250 lb. up)	10.00@10.45	9.00@10.00	9.00@10.50	.....
Medium (200-250 lb.)	10.20@10.65	10.00@11.00	10.50@11.25	9.25@10.00
Light (150-200 lb.)	10.35@10.70	11.00@11.50	11.50@11.75	9.75@10.25
Light lights (130-150 lb.)	9.75@10.55	10.75@11.25	11.25@11.50	9.50@10.00
Smooth packing sows (250 lb. up)	9.10@ 9.85	8.50@ 9.00	8.00@ 9.00	.....
Rough packing sows (200 lb. up)	8.85@ 9.45	8.00@ 8.50	7.00@ 8.00	.....
Medium to choice pigs (130 lb. down)	8.75@10.30	10.00@11.00	10.25@11.00	9.00@10.00
Stock pigs	.....	10.00@11.00	11.00@11.50	8.50@ 9.25
SHEEP AND LAMBS.				
Medium to prime shorn lambs, 84 lb. d'n	11.50@14.75	11.00@13.00	10.50@14.00	10.00@11.75
Culls and common lambs	9.00@12.00	9.00@11.00	8.00@10.50	8.00@10.00
Medium to prime yearling wethers	9.75@13.00	9.00@11.00	9.00@11.00	7.50@ 8.00
Medium to prime wethers	7.25@10.25	9.50@10.00	9.00@10.00	6.00@ 7.50
Medium to choice ewes	6.50@ 9.50	6.00@ 7.50	6.00@ 7.50	4.00@ 5.00
Culls and common ewes	3.00@ 6.75	3.00@ 6.00	3.00@ 6.00	3.00@ 4.00
Feeder lambs	.....	8.00@ 9.00	9.00@10.00	.....



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—THE WALDORF-ASTORIA

HERE in the President's Suite of this famous hotel, our own Presidents, the Prince of Wales, the King of Belgium, General Pershing, have rested, and watched with interest the Avenue crowds. Everything in this suite is "the best." How natural, therefore, that the Shade Rollers and Shade Fabrics are of Hartshorn make! For expert buyers know that for faultless appearance and long dependable service the Hartshorn product is unrivaled.

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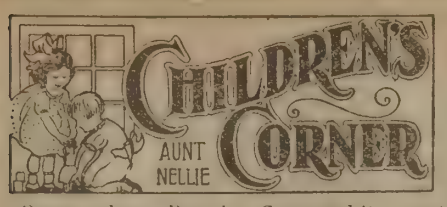
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DEPT. M. Spokane, Wash.

Glance over the bargains on the "Want Ad" page.



Once when Bennie Greenwaldt went driving with the sled it tipped over and every one fell out. Bennie likes his teacher very much. There is something higher than a house and higher than a tree; what can it be? A star. What goes round and round and never stops? The world. Bennie lives west of Big Swamp lake, in southeastern Washington.

Lauretta Schuman says there are many birds, including bluejays, where she lives near Puget sound, in Washington. She lost her dog, Tip, last winter. Now she hasn't any dog. Lauretta has missed many days at school. Reading, spelling, arithmetic, grammar, hygiene and geography are her studies.

Eva Cade writes that there was a band concert held recently in the school auditorium. She was there. Sometimes at school they sing in the auditorium. Eva likes reading, language and spelling better than her other studies. Eva's home is in southern Chelan county, Washington. She is 11. May 5 is her birthday. She has a pet dog named Bob.

Preston Polston likes the stories in The Junior Farmer very much. He has moved, but still lives in southeastern Whitman county, Washington. He says sometimes at night his dog barks.

"This is my first letter, will you let me in?" asks Myrtle Inez Hendrickson, of Washington. Indeed we will, Myrtle. We are glad to have you with us. Myrtle's birthday comes on St. Patrick's day. She is 10 years old. Her big sister was born on St. Patrick's day, too. Myrtle has six sisters and two brothers.

A handbag, two kinds of candy, 35 cents and some scissors are what Winifred Angle received on her birthday, which is January 27. Winifred has moved into Yakima county, Washington, since she wrote to us before. She says they have had great sport sliding on the ice in a ditch near their home. Winifred has three sisters.

Another new cousin writes to the Corner from Hillcrest farm, in central Washington. She is Margaret McKenzie. Margaret was 10 January 30, 1922. She has one sister and four brothers. She hasn't far to go to school because the school building is on their own ground. We are happy to hear from Margaret, aren't we?

A little girl in eastern Washington wants to become a cousin. She is Louise Gesler and she is 7 years old. I threw something up on the house white and it came down yellow. What is it? An egg. It was snowing where Louise lives when she wrote to us.

We have another new cousin on a 240-acre farm in Grays Harbor county, Washington. She is Dorothy Peterson, 11 years old November 8, 1921, and 4 feet 11 inches tall. She is the tallest and youngest girl in her class at school. We are very glad to hear from Dorothy.

Blue-eyed Helen Miller, who lives on the boundary line between Whitman and Adams county, in eastern Washington, wants to become a Corner cousin. Her cousin, Grace Gordon, told her about The Junior Farmer. Helen has light hair and fair complexion. July 20 is her birthday. She is 10 years old.

We have another new cousin in northeastern Okanogan county, Washington. This cousin is Lloyd Patterson. April 24, 1922, he will be 7. He goes to a rural school and is in the first grade. Lloyd lives eight miles from town. (Write another letter, Lloyd.)

Myrtle Dick, southern Okanogan county, Washington, has a dear little kitty named Muff. Some time Myrtle will send us a picture of herself and Muff. (Aunt Nellie will like that, Myrtle.) Myrtle was 8 December 6, 1921. At school she is in the third grade. Kenneth and Clayton are her brothers.

"I hope all the cousins enjoy The Junior Farmer like I do," says Gertrude Owens, who was 11 years old December 21, 1921. Thirty-one children go to school where Gertrude goes. She is in the sixth grade. Her home is on the boundary line between Whitman and Adams counties, in eastern Washington.

Some time, when the weather gets nice, Alice Knapp is going to have her picture taken. She will be standing on her pet horse. She and her sister haven't been late or absent at school this year. Last year they were not late once, or absent.

Alice told us about the good time they had at a party. It was a 10-mile drive and they got there at 6 o'clock and then played games. For lunch they had jello, cake, sandwiches and a delicious salad and coco. After lunch they played games again and started home a little after 9 o'clock. It was 12 o'clock when they got home. Alice is a Washington girl and lives in Lincoln county.

February 24, 1922, Linnie Gammon was 11 years old. Linnie lives near the Blue mountains, in Columbia county, Washington. She has two brothers, Lewis and Donald, but she hasn't any sisters. This is the first letter we have had from Linnie.

John Otter, who lives near the Canadian border in northeastern Washington, is 10 years old. His birthday is March 29. John is in the fourth grade at school. Wilhelmina and Gertrude are his sisters.

Martin Cerenzia, whose home is near the Spokane river, in northern Spokane county, Washington, is learning to play the organ. There are six children in the Cerenzia family, four boys and two girls. Martin is in the second grade at school. He says he has a pet calf named Jack.

This year at school Maxine Graham is taking painting lessons. Four children go to school where she goes, three boys and one girl. Maxine has five large dolls and some paper dolls. For good spelling she has won two pictures. Maxine lives southwest of Spokane city, in eastern Washington. Here are two of the books she has read: "Elsie Dinsmore" and "Little Prudy's Sister Susie." Maxine has a baby sister named Margaret.

"My studies at school are arithmetic, reading, geography, grammar and spelling," writes Mabel Habberstadt. "My favorite studies are reading, arithmetic and spelling." Mabel was 10 May 20, 1921. Last winter she had fun coasting and skating. She is a new cousin and lives in Spokane county, Washington.

Winfield Snyder, whose home is in the poultry district in Pierce county, Wash., writes, "I live on a poultry farm where there are about 450 chickens. We have two calves that came from cows with very high records." Winfield wants to be a cousin. We are glad to have him with us, aren't we? He is 11 years old. December 5 is his birthday.

BEDTIME STORIES

By THORNTON W. BURGESS.

Copyright, 1919, T. W. B.

THE PATIENCE OF LONGLEGS.

Patience often wins the day
When overhaste has lost the way.

If there is one virture which Longlegs the Heron possesses above another it is patience. Yes, sir, Longlegs certainly has got patience. He believes that if a thing is worth having it is worth waiting for, and that if he waits long enough he is sure to get it. Perhaps that is because he has been a fisherman all his life, and his father and his grandfather were fishermen. You know a fisherman without patience rarely catches anything. Of course, Billy Mink and Little Joe Otter laugh at this and say that it isn't so, but the truth is they sometimes go hungry when they wouldn't if they had a little of the patience of Longlegs.

Now Grandfather Frog is another who is very, very patient. He can sit still the longest time waiting for something to come to him. Indeed, he can sit perfectly still so long, and Longlegs can stand perfectly still so long, that Jerry Muskrat and Billy Mink and Little Joe Otter have had many long disputes as to which of the two can keep still the longest.

Longlegs had come over to the Smilling Pool because Little Joe Otter and Billy Mink had told him that Grandfather Frog was sitting on his big green lily pad fast asleep.

"He will make a splendid breakfast," thought Longlegs as very, very carefully he walked along the edge of the Smiling Pool so as to get right opposite Grandfather Frog. There he stopped and looked very hard at Grandfather Frog. Yes, he certainly must be asleep, for his eyes were closed. Longlegs chuckled to himself right down inside without making a sound, and got ready to wade out so as to get within reach.

Now, all the time Grandfather Frog was doing some quiet chuckling himself. You see, he wasn't asleep at all, for Jerry Muskrat had warned him. He was just pretending to be asleep, and all the time he was watching Longlegs out of the corner of one of his big, goggly eyes. Very, very slowly and carefully, so as not to make the teeniest, weeniest sound, Longlegs lifted one foot to wade out in the Smiling Pool. Grandfather Frog pretended to yawn and opened his big, goggly eyes. Longlegs stood on one foot without moving so much as a feather. Grandfather Frog yawned again, nodded as if he was too sleepy to keep awake, and half closed his eyes. Longlegs waited and waited. Then, little by little, so slowly that if you had been there you would hardly have seen him move, he started again.

"I guess I must wait until he falls sound asleep again," said Longlegs to himself.

But Grandfather Frog didn't go to sleep. He would nod and nod and then, just when Longlegs would make up his mind that this time he was really asleep, open would pop Grandfather Frog's eyes. So all the long morning Longlegs stood on one foot without moving, watching and waiting and growing hungrier and hungrier, and all the long morning Grandfather Frog sat on his big, green lily pad, pretending that he was oh, so sleepy, and all the time having such a comfortable sun bath and rest, for very early he had had such a good breakfast of foolish green flies.

Over in the bulrushes on the other side of the Smiling Pool two little scamps in



"He will make a splendid breakfast," thought Longlegs.

brown bathing suits had waited and watched for the great fight they had planned for Grandfather Frog when they had sent Longlegs to try to catch him. They were Billy Mink and Little Joe Otter. At first they laughed to themselves and nudged each other at the thought of the trick they had played. Then, as nothing happened, they began to grow tired and uneasy. You see, they do not possess patience. Finally they gave up in disgust and stole away to find some more exciting sport. Grandfather Frog saw them go and chuckled harder than ever to himself.

(Copyright by J. G. Lloyd.)

Birthday Greetings

THURSDAY, May 4—Edith Aylward, 10 years old; Charlotte Miles, 11; Florena Pattinson, 8; Hazel Shinkle, 11.

FRIDAY, May 5—Hazel Hilmo, 10 years old; Donald Whalen, 10.

SATURDAY, May 6—Eva Cade, 11 years old; Audrey Cook, 10.

SUNDAY, May 7—Melvin Maurer, 8 years old.

MONDAY, May 8—Esther Bakke, 10 years old; Ione Crain, 9; Merle Finch, 11; Mabel Hanson, 9; Albert Harper, 9; Vernice Maurer, 9; Leda Reische, 10.

TUESDAY, May 9—Margaret Jones, 11 years old.

WEDNESDAY, May 10—Dorothy Brown, 11 years old; Irene Kranz, 11.

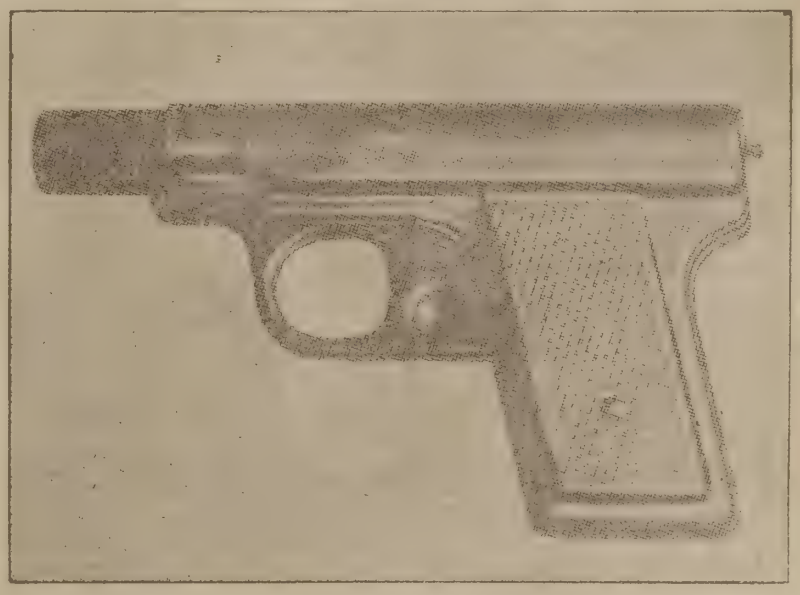
LETTERS WELCOMED BY AUNT NELLIE.

Among recent letters received by Aunt Nellie are those from cousins whose names follow. A few of these will be published each week in the regular edition of THE FARMER, and others will appear from time to time in The Junior Farmer:

Ethel Bowen, Inez Erickson, Esther Lobe, Karl Thomson, Frances Zumwalt, Laura Hoskin, Hjordis Fjerlie, Thelma Woodland, Marjorie Reed, Lemerl Birdsell, Itha Myrtle Bowen, Idaho and Edith Baker, Eva Paavalo, Lillian Watson, Frances Flanik, Marjorie Baker, Nora Johnson, Edric Bradbury, Mary Van Ausdale, Fannie Maricich, Loly Walker, Hugo H. Hakala, Quentin Harrington, Frances Flork, Elsie Kuest, Gladys Stone, Archie Moe, Bertha Osborn, Esther and Selma Westerback, June Johnson, Tessie Allen, Leda Ruby Harrel, Edward Manus, Nellie Ware.

Blanche Didra, Marjorie Rambo, Martina Yochum, Stella Ableman, Raymond Blankinship, Carol Wolgamott, Vera Neff, Chloe Lane, Mary Esther Williams, Inez Watson, Mildred Watson, Bertha Mae Holderby, Hubert Roloff, Helen Angevood, Grace Carlson, Selma Long, Denzel Parsons, Georgia Cram, Lois McAlvey, Delerah Buckner, Clyde Dowell, Christian Larsen, Grace Ione Mains, Myrtle Easton, Dorothy Peterson, Esta Rivers, Alice M. Rupp, Sennie Vandercreek, Marguerite Edlin, Dorothy Wagoner.

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Just Folks

This morning I was in a hardware store making a purchase. I have known the firm for 25 years. Two young men started a second-hand store and have gradually built themselves into a fine first-hand business. Of recent years I have had to go out of my way to trade with them, but I have done this occasionally, as much for the sake of meeting these men personally as of trading with them. They are always glad to see you. They have always treated me fairly, and have never tried to put anything over on me in the way of buying something that I did not need or want. I like to trade with them.

This morning, when I entered the store, I was a little disappointed seeing a young man coming up to wait upon me. Soon I got over my disappointment, for he was a likely young fellow. He was courteous and direct and informative. I thought I would try him out. I casually remarked that I did not suppose it made any difference to them what they thought of the article they sold me; it was all the same to them

"Yes, it does," said he, and he went on to say that several years of experience in selling the article which I was looking at had proved it to be the most satisfactory. They had other brands and he would be glad to show them to me. I made up my mind he was a chip of the old block.

Later when I asked one of the older members of the firm if that was a son I was trading with I found out that my suspicion was correct and that both of the men had sons growing up into the same business.

In spite of all that is said about vocational guidance and the necessity of a man finding what he is specially fitted for and following that vocation, I still think there is a good deal of rot about it all.

Once in a great while a genius comes along who must follow the bent of his mind from the earliest years, but generally the circumstances and the environment are quite as likely to make for success as adherence to bent of mind.

I shall watch with interest how this hardware firm goes along in breaking in the second generation into the same business. Perhaps, if more of this were done, there would be less young people going off on a tangent.

Perhaps the old biblical admonition is not so much out of date. It is not that you do with your might what you want to do most, but to do with your might what your hands find to do. Accepting the situation is more than half the battle of life.

E.A.S.

Home Recipes

(Continued from page eighteen.)

tablespoon of cayenne pepper, one tablespoon of mace, three tablespoons of whole cloves, three tablespoons of whole allspice. Put all the spices in the vinegar, let come to a boil, then pour over smelts. Put covers and rubbers on loose and sterilize for three hours. Tighten the lids, turn upside down for two days to test them.

These are very like the mustard sardines and will keep well; I have some two years old. If the vinegar is very sour add some water and use less vinegar and it is best to use pint jars for use in an ordinary family. MRS. S. C. NIDA.

Chitwood, Ore.

Potato cake: Two cups of sugar, one cup of butter or lard, four eggs, one-half cup of sweet milk, two and one-fourth cups of flour, two teaspoons of baking powder, one cup of mashed potato, one cup of ground chocolate or cocoa, one cup of raisins, one and one-half teaspoons of cinnamon, one teaspoon of allspice, one teaspoon of cloves.

Beat sugar and butter well together, stir in milk, then the flour with the baking powder sifted with it. Next add the cold mashed potatoes, stir in the chocolate and spices, then the nuts and raisins. Stir well together, then bake in a moderate oven. MRS. W. L. SHOOK.

Weiser, Idaho, Route 4.

Devil food cake: One half cup of butter or other shortening, one and one-half cups of sugar, three eggs, two squares of melted chocolate, one cup of milk, two teaspoons of baking powder, two cups of flour, raisins or nuts if desired. Cream the butter and sugar, add the beaten yolks of eggs and the melted chocolate, then add the beaten whites of eggs. Sift baking powder into the flour, add to the mixture and then add the milk the last thing.

MRS. W. U. M'NEIL.

The Gaunt Gray Wolf

(Continued from page seventeen.)

shore, looking toward the glowing east, immovable as a statue, picturesque and beautiful in her primitive Indian costume.

As the rim of the sun appeared above the horizon and the marvelous colorings of the morning melted into the fuller light of day, Manikawan extended her arms before her for a moment, then descended from her rock, and, observing that her friends were astir, she approached them, her face glowing with the health and freshness of youth, and bearing no trace of the ordeal through which she had passed.

"White Brother of the Snow, the matchi manitu has been cheated. You have escaped from his power, and you will live loug in the beautiful world," said she, for the first time adopting a more personal and affectionate form of address. "Manikawan's heart is as the rising sun, bright and full of light. It is as the earth, when the sun shines in summer, warm and happy. It soars like the gulls, no longer weighted with trouble."

"Manikawan is my good sister, and I am glad she is happy," responded Bob. "White Brother of the Snow and his friend will never forget that she outwitted the matchi manitu. They will never forget what she did."

Ungava Bob and Bill Campbell, sharing the canoe with Manikawan, Dick Blake and Ed Matheson the canoe with Shad Trowbridge, they reached the river tilt that evening. Manikawan was radiantly happy, but Bob, uncertain as to what course she might decide upon, and well aware that any attempt to send her back to her people would prove quite fruitless if she chose to remain with them, was much disturbed in mind. He sat long by the camp fire that night, before he joined his companions in the tent, still undetermined what he should do to rid himself of her.

When morning came Manikawan gave no hint of going until breakfast was eaten. Then with her customary promptness of action, standing before Ungava Bob, she announced:

"Manikawan will now return to the lodge of Sishetakushin, her father, and wait for White Brother of the Snow. He is safe from the matchi manitu. She will wait and be contented. She will know that he is in the country of her people. She will wait for him till the sun grows timid and afraid, till the spirit of the forest grows bold and strong. Then White Brother of the Snow will come to the lodge of Sishetakushin, and there he will rest. Manikawan will prepare for him his nabwe (stew) and make for him warm garments from the skin of the atuk."

Without further preliminary or adieu, she lifted her canoe upon her head and disappeared as unexpectedly as she had appeared.



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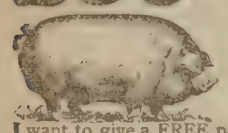
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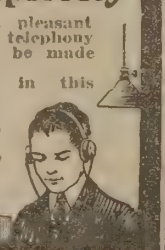
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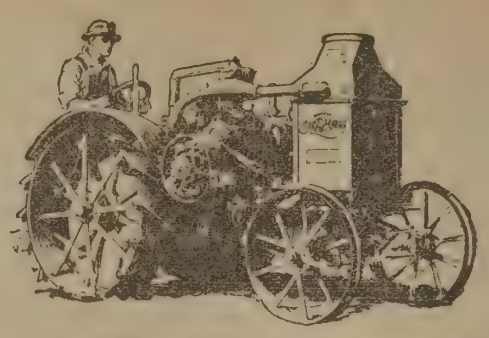
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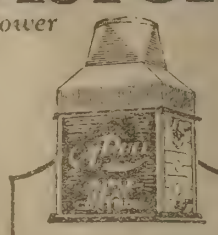
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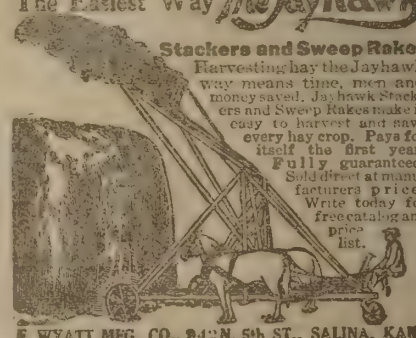
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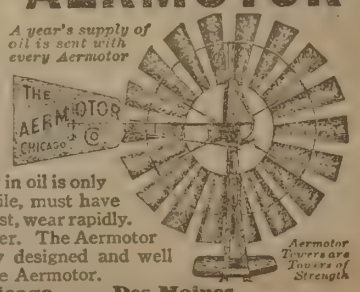
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Any windmill which does not have the gears running in oil is only half oiled. A modern windmill, like a modern automobile, must have its gears enclosed and run in oil. Dry gears, exposed to dust, wear rapidly. Dry bearings and dry gears cause friction and loss of power. The Aermotor pumps in the lightest breeze because it is correctly designed and well oiled. To get everlasting windmill satisfaction, buy the Aermotor.

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Aermotor Towers are Towers of Strength

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A LITTLE "WANT AD" FREQUENTLY OFFERS A BIG BARGAIN. MAKE IT A PRACTICE TO READ OUR "WANT ADS"

Hot Shots at Scrub Sires

By C. M. HUBBARD, Extension Live Stock Specialist, State College of Washington.

Missouri experiments put 56 pounds on grade lambs in 90 days, while scrub lambs, fed and handled the same way, took 122 days to make this same weight. Also the scrubs required 40 per cent more feed per 100 pounds gain and sold for $2.85 less per hundredweight.

* * *

Wisconsin exported in one year 35,888 head of dairy breeding stock to 36 different states, at remunerative prices. Why was Wisconsin able to do this? Because the dairy breeders of that state had high-class stock for sale. How did they develop them? By using high-class purebred sires carrying milk and butterfat records.

* * *

A Waupaca county, Wisconsin, herd, consisting of 12 native cows, produced a total income of $438.88 in one year. A high-class purebred sire was then purchased. Five years later the herd, consisting of 12 high grades, produced a total income of $1000. Increased returns due to use of purebred bulls, $561.22.

* * *

Jim McCroskey, noted Shorthorn breeder of Fishtrap, Wash., relates the following incident in his experience:

"A grade cattle raiser visited my ranch and stated that, if he could purchased some high grade females he would buy a bull from me. He stated that he considered the 'breeding up' process of using good bulls on inferior grades or scrub cattle was too slow for him. He wanted good ones to start with.

"I took him over to a neighbor who had used a high-class sire on half his ordinary females for one year, having 18 heifers sired by the registered bull and he immediately picked out these 18 head, asking my neighbor what prices he had on them. The neighbor asked him to set a figure on them if he desired them, which he did, suggesting $70 per head for the 18 head. He was pleased to be able to purchase these cattle, first cross of a good registered sire, at $70, when the remainder of the heifers of the same age, by an inferior bull, were selling at $40 to $50 per head."

Only one cross of a meritorious registered bull increased the value of these 18 head $20-$30 per head and the man paid this increase after stating that the "breeding up" process was too slow for him!

* * *

Two pigs were sired by the same purebred boar and fed in the same pen, from the same trough, says the Breeders Gazette. One of the pigs was farrowed by a purebred Berkshire sow and the other by an ordinary grade sow. The purebred pig weighed 304 pounds to the grade pig's 205 pounds. There were three days difference in their ages, in favor of the grade pig.

NEW GOLD MEDAL COW.

Brown Lad's Cowslip, a Jersey cow, owned by Grant Nichols and Gus Plunket, of Ellensburg, Wash., and shown in the picture herewith, recently completed an official test with 711 pounds of fat and 15,012 pounds of milk to her credit. When she calves in May she will be a gold medal cow, having carried her calf six months of her test year.

Cowslip is a daughter of Cowslip's Oxford, a bull whose parents were both imported and who has two good Register of Merit daughters already. One of them, Cowslip's Coquette, with 607 pounds of fat to her credit, is owned by Nichols & Plunket. Cowslip's dam, Brown Lad's Lady, has a record of 419.75 pounds of fat, on a test begun when only 20 months' old. She is by the Adam Stevens bull, Gertie's Brown Lad, that has several high testing daughters. Cowslip is a beautiful show cow, just 5 years old, and will no doubt



show her ability to do still greater things. Messrs. Nichols & Plunket have just six cows in milk and all are on official test.

Golden Prince of Yakima, the present herd sire, is out of a maternal granddaughter of Imp. Golden Maid's Prince, and is a show animal of fine dairy conformation. Messrs. Nichols & Plunket recently purchased Majesty's Cowslip's Noble, a bull bred by Charles M. Talmadge. He is a son of Cowslip's Oxford, making him a half brother to the gold medal cow. The bull is now 4 years old and has a lot of wonderfully typy and good producing heifers in a grade herd in Whatcom county.

Mr. Plunket, who superintends the farm, came to the work directly from a shoetore, where he had been employed for some years. His only milking experience was with three grade cows. Mr. Nichols has long been a barber in Ellensburg, and has always been a live stock fancier, with a leaning toward Jerseys.

DAIRY COWS IN DEMAND.

Twenty-seven grade Guernsey cows valued at $130 each, or a total of more than $3500, were recently shipped by Clatsop county dairymen of Astoria and vicinity to Los Angeles, Cal., where they will become part of the Ardour farm herd. This is one of about 600 cows, which supplies a large part of the milk trade of the southern metropolis. The Clatsop County Guernsey Cattle club, of which Miss Pearl Cole is secretary, sponsored the shipment.

Forty-three per cent of the orders for grade calves from association-tested cows, which have poured in upon dairymen of Tillamook county from eastern Oregon, Washington, Montana and Utah, are for Guernsey calves. Most dairymen of this district raise only the calves from their best cows, and last fall County Agent W. D. Pine conceived the idea of marketing those which heretofore had gone for veal. Several western papers carried advertisements of grade calves sired by purebred bulls and out of cows with cow testing association records of 300 to 700 pounds, at $11.50 each f. o. b. Tillamook. To date applications for more than 300 calves have been received.

DON'T BE SATISFIED.

You are a scrub yourself if you are satisfied with a scrub cow. No one should be content to get along with a cow giving only a gallon or two of milk a day. She should give five or more gallons.

NECESSARY TO VICTORY.

Confidence is essential to success.

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Market reports mailed on request.

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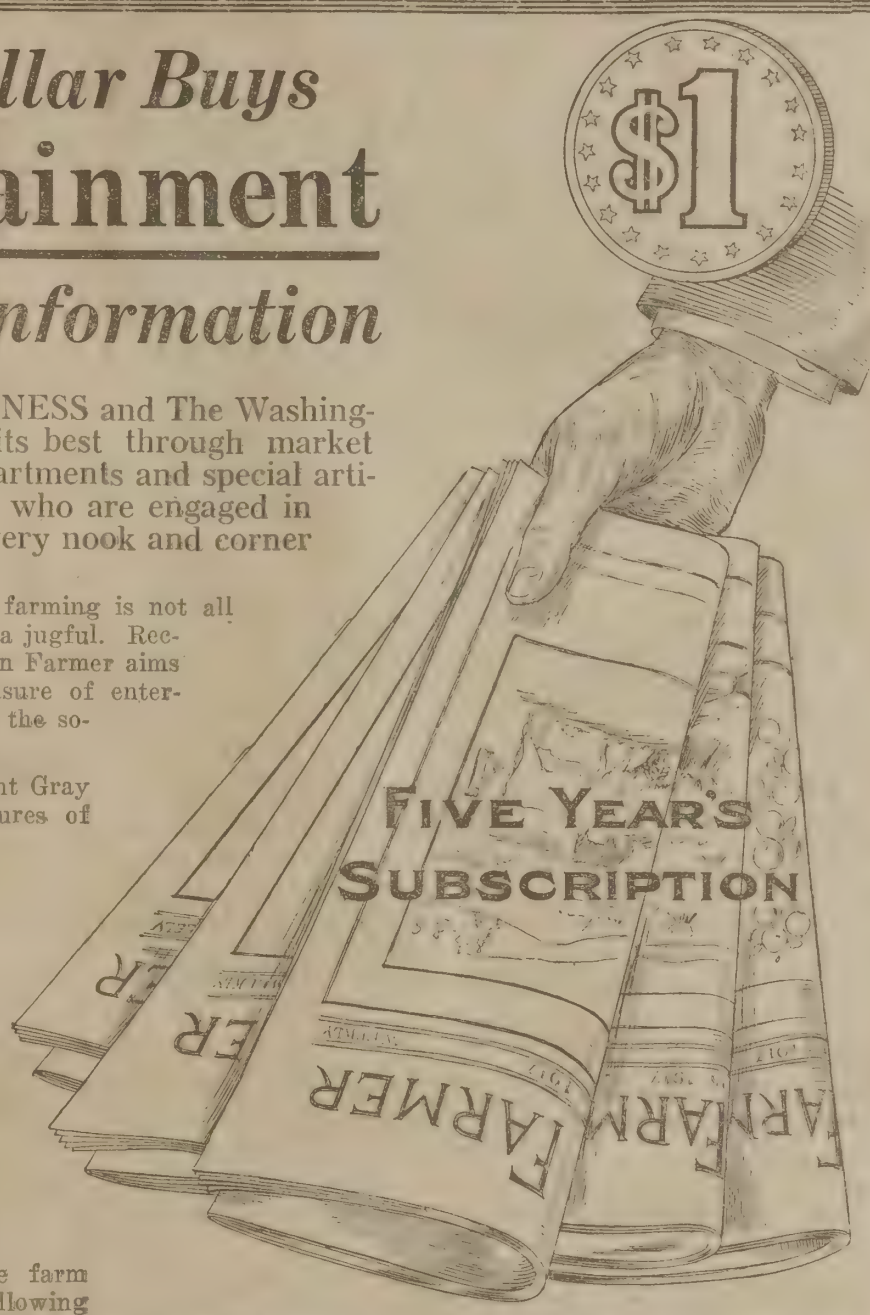
asWellasInformation

FARMING is a BUSINESS and The Washington Farmer does its best through market quotations, regular departments and special articles to help its readers who are engaged in this vital business in every nook and corner of Washington.

However, the business of farming is not all there is to farm life. Not by a jugful. Recognizing this, The Washington Farmer aims to give its readers full measure of entertainment, and to make even the soberest facts interesting.

Our new serial, "The Gaunt Gray Wolf," is just one of the features of an entertaining kind none the less popular because it transports the reader into an environment beyond the range of his own daily life.

This story by an able writer, Dillon Wallace, is in its early chapters. You can easily pick up the threads with the instalment in this issue. If you do so, we feel sure you will enjoy the weekly visits of your state farm magazine even more for following the exciting developments of this story. Here is a story which in book form would cost you $1 or $1.50; yet is only one among a wealth of varied features in a magazine which costs you only $1 for five years.



We say to our friends: "Send your subscription order direct. Get your neighbor to do the same. We will give you and your neighbor the benefit of every penny which would ordinarily go to the agent handling the subscription."

If you believe in cooperation, help us make our plan an even greater success during the coming year than it has been in the past. Send in your order if you have not already done so, and let as many neighbors as possible know about our money-saving plan.

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$1.00 for Five Years 25 Cents for 1 Year. 50 Cents for 3 Years.

In Canada add 1 cent a copy for extra postage.

May 4, 1922.
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Another reason for the popularity of Buhl cans is their smoothness and the ease with which they are washed. There are no cracks or corners in which dry particles can stick.

Buhl supplies are standard with dairymen of the Northwest. There is a large variety of styles in milk cans and milk pails from which you may choose. A full range of sizes.

Write for folder showing the complete Buhl line. Order now, when stocks are complete and before the early summer rush begins.



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Dairy Machinery Company
A Full Line of Dairy Supplies.
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ABSORBINE, JR., antiseptic liniment for mankind, reduces Strains, Painful, Knotted, Swollen Veins. Concentrated—only a few drops required at an application. Price $1.25 per bottle at dealers or delivered.
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NEVER HAS HURT A COW
Inexpensive Operation—Long Life
INVESTIGATE
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MALES AND FEMALES FOR SALE AT LOW PRICES

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We will also sell a few good young registered cows of good breeding—just the kind you want for foundation stock.

ALSO DUROC JERSEY HOGS

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100 Guernseys at Auction 100

NORTHWEST BREEDERS' SALE, at the Pacific International sale pavilion, **PORTLAND, OREGON, MONDAY, JUNE 5, 1922.**

Fifty selected Guernseys from the foremost herds of Washington, Idaho and Oregon.

WASHINGTON STATE GUERNSEY BREEDERS' ASSOCIATION SALE, at Southwest Washington Fairgrounds near **CHEHALIS, WASHINGTON, WEDNESDAY, JUNE 7, 1922.**

Fifty head consigned by prominent breeders of Wisconsin, supplemented by local consignments. Cows, bred and open heifers, as well as several choice bulls and bull calves make up the offering in these two great sales. The choicest offering of Guernsey cattle ever made in the northwest.

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Are Profit Producers

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Our Chester Whites Win

the purple at the biggest shows. Spring pigs for sale.

T. Brown, Yankton, Ore.

Lynden Jersey Farm

offers young bulls of the famous St. Mawes and Golden Glow's Chief breeding. Prices reasonable
P. MEENDERINCK, Lynden, Wash.

ASHBURN FARM

Premier breeders of medal winning cows for 1920. Write for our illustrated folder and further information.
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Wild Cherry Farm Jerseys

All tested 2 and 3 year olds, average over 400 lbs. fat. Young bulls close to 5 gold medal sires.
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Choice Jersey Heifers

And richly bred young bulls, out of register of merit cows with records of over 600 lbs. fat, with common herd care, or that are now on test. Sired by Kallonders Eminent or Oxford Raleigh Lad, both register of merit bulls.
B. C. CRABTREE, Lynden, Wash.

Fourth Gold Medal Jersey Bull

now in use in my herd. No other herd ever had so many. Young stock for sale.
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Jersey Bulls at Bargain Prices

Send today for our special sale list of registered Jersey bulls from R. of M. dams. Easy terms, liberal credit.
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AYRSHIRE BULL CALF

From advanced registry dam with record for last December 1830 lbs. milk, 71.18 lbs. butterfat. Priced very reasonable.
EARLCREST STOCK FARM,
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Orchard Hill Farm Guernseys

"Home of high class Guernseys."
DR. PARK WEED WILLIS, Owner.
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Breeders of Brown Swiss cattle, the farmers' dairy cow. Young stock for sale.
THEO BRUGGER, Route 3, Gresham, Ore.

Genuine Show Prospect

Born April 28, 1921

Mutual Fobes Bonnie Wayne

A very handsome bull. Blocky built, square butted and straight as a line. His sire is a son of Mutual Fobes Longfield De Kol, sire of two 30-lb. cows. He in turn is from a 30-lb. Sr. 3-yr.-old sister to the first 35½-lb. cow and by Fobes Tritomia Mutual De Kol, sire of a former world's champion. Send for pedigree and description.

Registered, licensed and T. B. tested.
Price $200.

C. R. EVANS, Halsey, Oregon.
(Under federal inspection.)

Holsteins

22,481 lbs. milk, 951 lbs. butter is the average of the two nearest dams of the bull calf, born in October, that we are offering.

Dam is a show cow that weighed 1900 pounds before last freshening. She also has 7-day record of just under 32 lbs.

Write for pictures, pedigree, etc.
WESTERNWOLD FARM, Redmond, Ore.
Federal accredited herd.

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Accredited herd headed by proven grandson of King of Pontiacs; 4 daughters ave. 421.2 lbs butter, 20,016 lbs. milk, official 7-day tests at 2 yrs. 3 mos. MAPLEROSE LANE HOMESTEAD
A. BENSON, PROP. LYNDEN, WASH.

Six Registered Shorthorn Bulls For Sale

One 14 months old. Three 18 months old. Bred from Scotch bulls. All strong, vigorous animals. Will also sell a limited number of pure bred Shorthorn heifers. Prices right.
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Shorthorns

Both milking and beef strains. Address DesChutes Valley Shorthorn association.
A. J. HARTER, Pres., Tumalo, Ore.

Ohio Improved Chester White

Swine of highest quality. Quick growth; strictly big type; large, smooth; large litters; easily fattened at all ages. Carry blood of best individuals to be found anywhere. Choice weaned pigs at reasonable prices; registered free in purchase's name; sent on approval. If you want good stuff, write us.
RINGGOLD FARM.
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Indian City Berkshires

Our herd headed by the undefeated Matchless Lee's Royal, junior champion and head of young herd at nine eastern shows, 1921. B. F. Watson, herdsman, Rockford, Wash.
Address communications to
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River Banks Better Berkshires

Long, smooth, deep fall pigs. Either boars, gilts or trios.
RIVER BANKS FARMS, Grants Pass, Ore.

Pay for Berkshires in Pork

Improve your stock. You get the breeding hog now; pay when you get the pork. Write for plan.
F. M. CURTISS, Fruitland, Wash.

Weaned Poland China Pigs

and bred gilts, sired by state fair winner. Satisfaction and safe delivery guaranteed. Buy young and save shipping costs.
H. J. STILLINGS, Hermiston, Ore.

Big Type Poland

Weaned pigs, 10 weeks old, $15 each. A few sows bred for summer litters; best of breeding.
B. F. KAMMERZELL & SONS, Colfax, Wash.
ROUTE 5.

Royal Ranch Durocs

Buy a fall boar of the right type. Let us hear from you. Spring pigs at weaning time. Phone 77R3.
ROY SHUTWELL, Route 3, Boise, Idaho.

REGISTERED DUROC JERSEY HOGS of quality. Booking orders for spring pigs, sired by Sensation Great Orion, grandson of world's twice champion boar, Great Orion Sensation. Write for prices.
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Mother's Day

The Second Sunday in May Each Year.

THE BRAVEST BATTLES

The bravest battle that was ever fought—
Shall I tell you where and when?
On the maps of the world you will find it not;
'Twas fought by the mothers of men.

Nay, not with cannon or battle-shot,
With sword or nobler pen;
Nay, not with eloquent word or thought
From mouths of wonderful men.

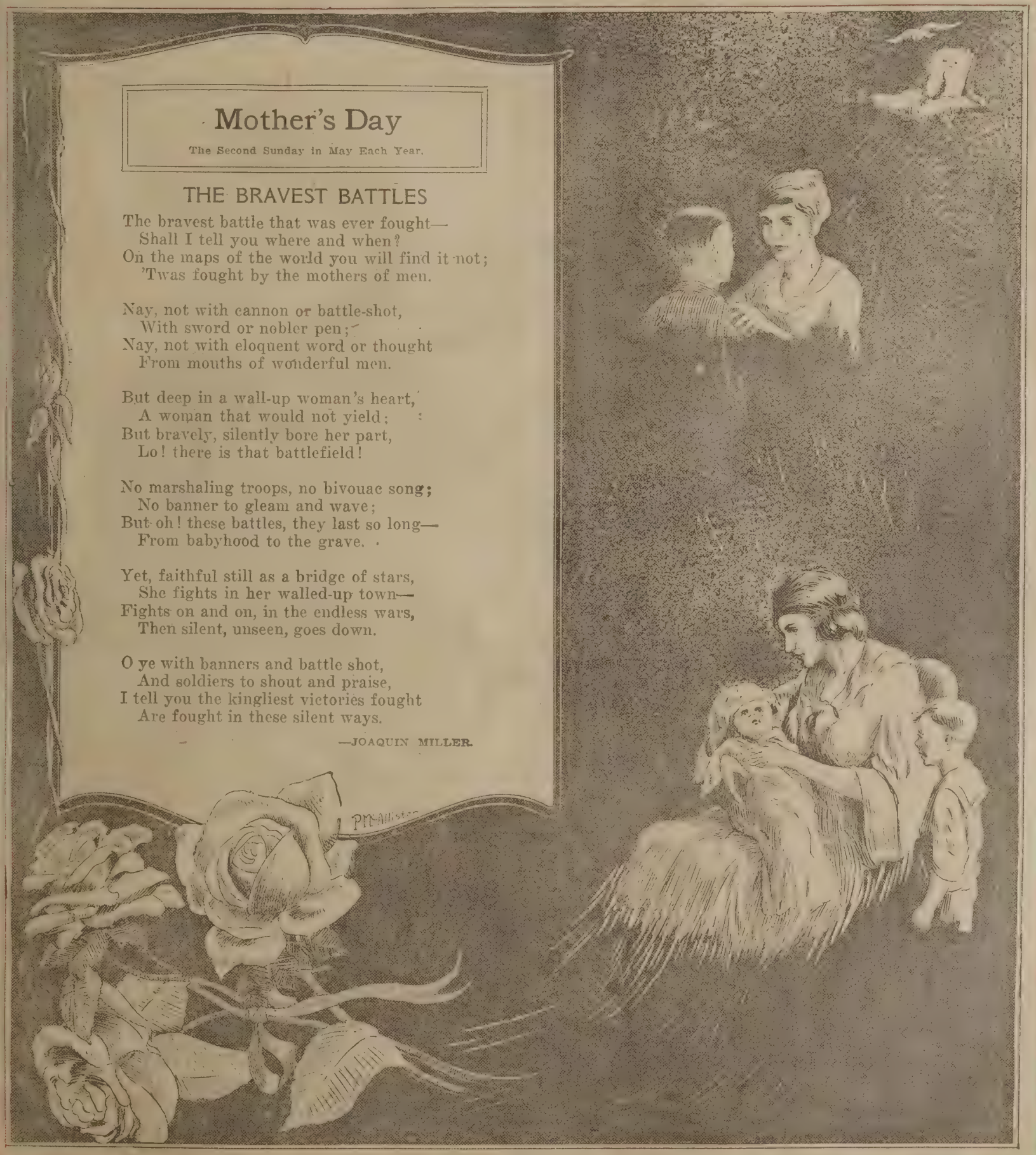
But deep in a wall-up woman's heart,
A woman that would not yield;
But bravely, silently bore her part,
Lo! there is that battlefield!

No marshaling troops, no bivouac song;
No banner to gleam and wave;
But oh! these battles, they last so long—
From babyhood to the grave.

Yet, faithful still as a bridge of stars,
She fights in her walled-up town—
Fights on and on, in the endless wars,
Then silent, unseen, goes down.

O ye with banners and battle shot,
And soldiers to shout and praise,
I tell you the kingliest victories fought
Are fought in these silent ways.

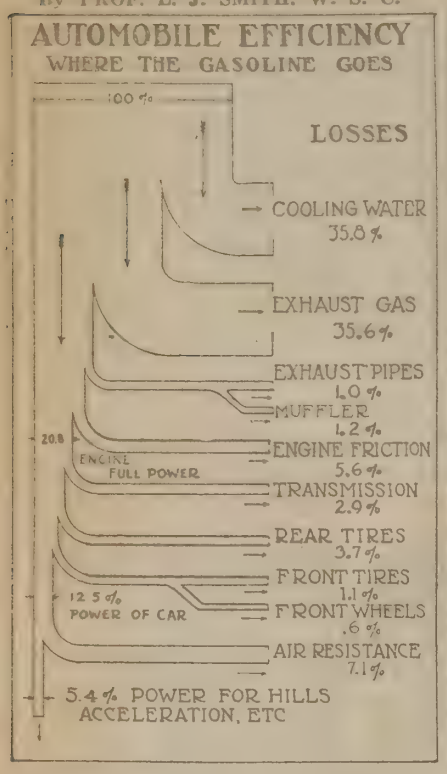
—JOAQUIN MILLER.



Follow the Trends of the Markets From Week to Week—Page 5

Efficiency of Motor

By PROF. L. J. SMITH. W. S. C.



Every one is interested in getting the most per gallon of fuel out of his car. This country loses annually enormous quantities of gasoline because of motors in poor condition and because of careless lubrication.

The accompanying figure shows where the gasoline goes in the form of heat energy. It applies to a high grade touring car moving at the rate of 40 miles per hour.

The motor, at full power, uses a little over 20 per cent of the heat of the gasoline. By the time the power gets to the rims of the rear wheels there is left but 12.5 per cent of the heat energy of the fuel.

It behooves every car user to keep his motor in good condition, and, above all, not to try to economize on lubrication.

Look over the efficiency chart carefully. It contains a lot of interesting data.

The Ship Subsidy

Favored as Emergency Measure

THE American Farm Bureau federation has adopted the following resolution in limited support of the proposed subsidy for the American merchant marine:

"While the American Farm Bureau federation is opposed to any subsidy in principle, we realize the necessity for development of the American merchant marine as a naval auxiliary and agent in development of foreign trade. We approve aid temporarily, until our flag can be established on the high seas, and no longer."

That, as we understand it, is in close accord with the policy of the administration at Washington. The American people, as we said when President Harding laid his message before congress asking for support for the merchant marine, do not take kindly to the subsidy idea. But it is a well-known axiom that "circumstances alter cases," and there is a good deal of justification in the circumstances of this case for a limited subsidy for American ships.

It has cost the American people nearly $4,000,000,000 to build and operate the wartime merchant marine. The greater part of that $4,000,000,000 is lost and never can be recovered. Government building of ships during the war was excessively costly. We were held up and plundered, on one hand by profiteering contractors and on the other by profiteering and striking labor in the shipyards. Materials of all kinds were outrageously high.

So the government suffered a heavy loss in building ships and it has been suffering a continuous loss in their upkeep and operations since the signing of the armistice. It is the declared policy of the United States shipping board to dispose of these ships as rapidly as they can be advantageously sold to private buyers. But buyers are scarce and bidding, when there is any on government ships, is disappointingly low. One purpose of the administration's subsidy measure is to encourage American shipping lines to buy these ships at better prices than can now be realized.

Another purpose, as the American Farm Bureau federation's resolution points out, is the necessity for development of the American merchant marine as an auxiliary for our fighting navy. A war navy is helpless without an auxiliary line of merchant ships, as we found to our recent heavy cost in the World war. All governments have found it necessary to encourage the building and maintenance of a privately-owned merchant marine that can be commandeered and called to the service of the nation in time of war.

For another important reason, that we have discussed from time to time, the American farmers are vitally interested in the maintenance of an American merchant marine. We must sell our surplus farm products abroad. If we should have no American ships, flying the American flag, to compete with foreign-owned ships, the foreign ship owners could charge us any outrageous prices that they might agree upon and we would be powerless to break the monopoly. With an American merchant marine competing with foreign ships, the tendency is to hold down the rates for transporting American food products to Europe and other parts of the world.

The Farm Bureau federation feels in this matter about as we have expressed ourselves. We don't like the word "subsidy," but it seems a choice of two evils, and the proposed limited subsidy is the lesser evil.

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FOR YOUR FARM LIGHTING PLANT.
160 ampere hour (glass jars), $230.
160 ampere hour (rubber jars), $205.
F. O. B. Spokane.
16-cell, 13 plates per cell.
Write for Descriptive Information.
SPOKANE BATTERY & IGNITION CO.
W1203 Sprague Ave., Spokane, Wash.

In writing advertisers, be sure to say you saw their advertisement in The Idaho Farmer.

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BATTERIES

The Lights of a Great City

Suddenly a black thunder-shower rolls up over the city. Although it is mid-afternoon, lights are switched on in thousands of offices until the towering city looks like an illuminated honeycomb. Huge Exide storage batteries, capable of delivering millions of candle-power, are called on to supply power through the emergency. More than ninety-five per cent of the central station batteries in America are Exides.

Exide Batteries are used in hundreds of ways—to drive the submarine beneath the waves; to supply the current for the vast network of telephone systems; to light trains; to propel mine locomotives and trucks. A large majority of all the farm light and power plants depend on the sure power of rugged Exide Batteries.

To get the full comfort out of your automobile and to run it with the greatest economy, buy an Exide when your present battery has to be replaced.

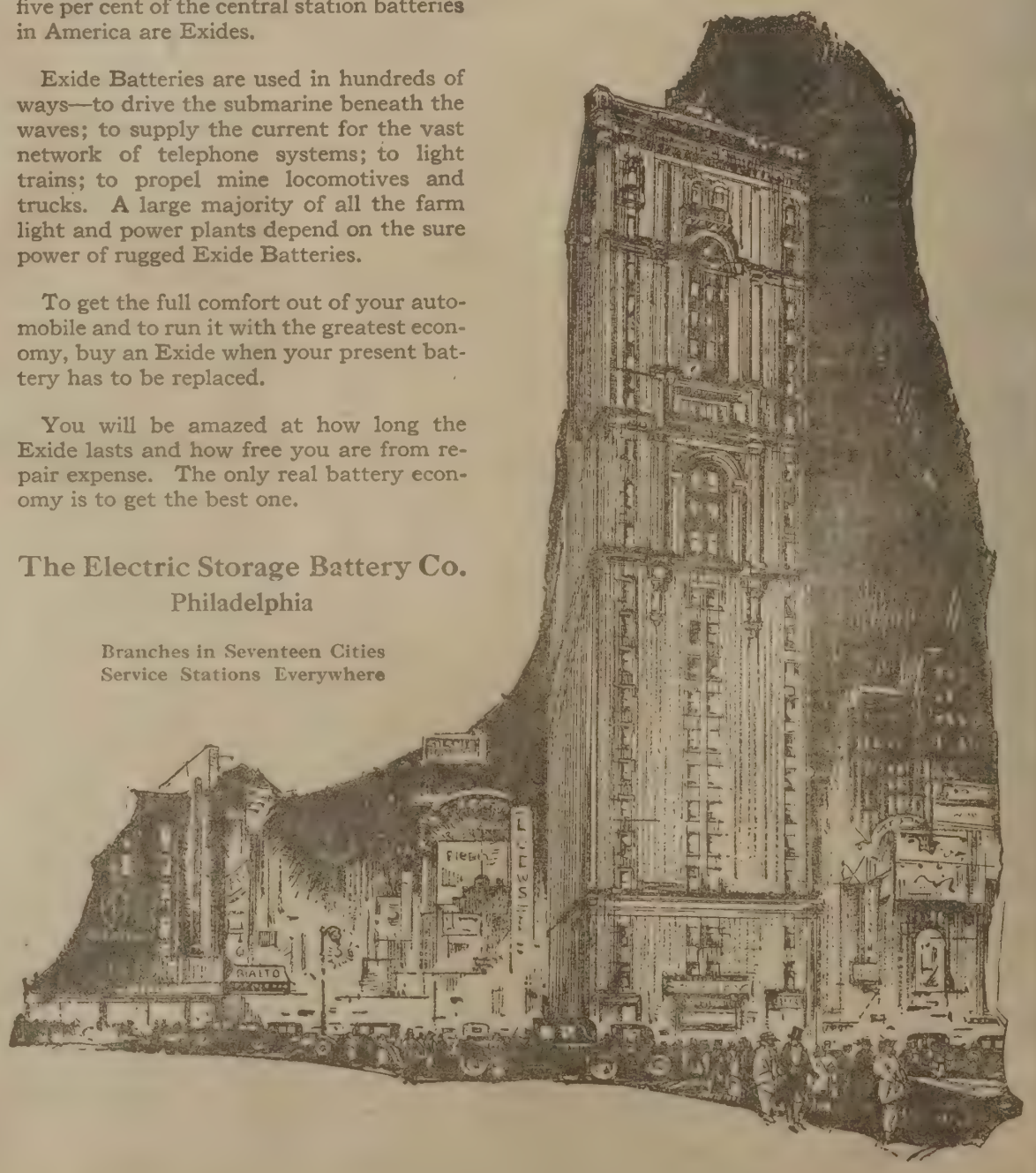
You will be amazed at how long the Exide lasts and how free you are from repair expense. The only real battery economy is to get the best one.

The Electric Storage Battery Co.
Philadelphia

Branches in Seventeen Cities
Service Stations Everywhere

Exide SERVICE STATION

The nearest Exide Service Station has a battery the right size for your car. If your present battery needs repairs, no matter what make it is, it will be repaired skilfully and reasonably. If not in your telephone book, please write us for address.



THE LONG-LIFE BATTERY FOR YOUR CAR

THE WASHINGTON FARMER

SUCCESSOR TO

Vol. 46. No. 19 THE RANCH PACIFIC DAIRYMAN HORN AND HOOF May 11, 1922

For Good Farming, Attractive Country Homes and Happy Country People

"Bang" Herd at Western State Hospital

Successful Management of the Highly Producing Cows at Fort Steilacoom

By RALPH ERSKINE

Only two reactors in six years' time among the offsprings of a herd of 20 cows, all of which have shown themselves to be tubercular animals, is the record of the "Bang" herd at the Western State hospital at Fort Steilacoom.

These animals are, of course, kept separate from the other cows, their milk thoroughly pasteurized and their attendants instructed to keep entirely away from the herd of nonreactors in the larger barn.

The idea of a separate herd of reactors is due to the fact that the trouble was found to be present in the herd in 1914, and since the cows were needed to furnish milk for the institution at that time they were kept and the milk pasteurized

In 1916 tuberculosis was found in the herd of Calvin Phillips of Greenbank, Wash., who offered 26 head of Holsteins to the hospital if they would repay him with a heifer calf from each cow. These cows had records of from 20 to 29 pounds of fat in seven days and with the reactors already mentioned, they made a good combination of milk and butter producers.

The results were so successful that in 1917 another bunch of reactors was secured from C. E. Peabody, owner of the Donnybrook farm at Bothel, Wash. The average production from the 12 head was from 20 to 25 pounds of butter.

In May, 1921, Governor Hart purchased seven head of tubercular cattle from William Bishop's herd at Chimacum, Wash., among which was his promising herd sire Chimacum King Korndyke Sady Vale, for which Mr. Bishop had an offer from the Canadian government for $10,000. This bull is now the senior herd sire of the Bang herd.

The dam of the bull has completed a 7-day record of 489.4 pounds milk and 29.6 of butter as a junior 4-year-old, in the Carnation herd. As a senior yearling, this heifer made a world record for age in 305 days, for combined milk and butter production, of 17,031 pounds milk and 705 of butter, and a few days later was made senior and grand champion Holstein female at the 1920 Pacific International.

S. V. H. Molly was another one of this shipment and she holds a record of 36 pounds of butter and 693.7 pounds of milk in seven days. While these two individuals were the most valuable the other five made some excellent records and the entire lot is considered one of the best purchases of reactors that has been made at the institution.

Two cows were secured last August from the Hollywood herd. Hope Dudly, who has a yearly record of 800 pounds of butter, and Hollywood Segis Lady Fayne, a daughter of Judge Segis. The latter made a record of 22 pounds as a two year old and was making a fine showing on official test when she was unfortunate enough to lose her calf.

The institution now owns 30 head of cows and heifers, all of which are daughters of the cows in the Bang herd. By keeping the premises thoroughly sanitary and feeding the calves on sterile milk the institution has for six years kept the calves healthy and there has been but one purebred calf to react to the tubercular test, a bull calf. The other reactor happened to a calf from a grade cow.

As the heifer calves reach maturity they are given a stall in the main milking barn and allowed to run with the milch cows during the day. Seven daughters of the reactors are now in the tubercular free herd and have been tested officially making very promising records. Steilacoom Prilly Pontiac, a 3-year-old, produced 410 pounds of milk and 18 pounds of butter in seven days. Steilacoom Inka Mechthilde, another one of these heifers, produced 310 pounds of milk and 16 pounds of butter as a 2-year-old. Other similar records could be mentioned to show that they are doing their part to uphold the honor of the herd. As can be seen from the above names the name "Steilacoom" has been adopted as the herd name to be used when registering each purebred calf in the future.

There are 30 purebred cows and 44 heifers in the nonreactor herd, all of which are kept in the large dairy barn. It is Governor Hart's intention to build up this herd as rapidly as possible both from calves raised at the institution and possibly a purchase now and then. This herd will be called the foundation herd for the state institutions. As cattle are needed at any of the other state schools or hospitals they can be secured from this institution. It will, however, be several years before this herd is large enough to draw upon to any great extent. At present the entire output from the 61 head of purebreds and grades, now being milked, is needed in the kitchens and wards at the hospital. As the milk supply is increased some of the grade cows can be sold to make room for the new members of the herd. These animals have been tested from time to time for butterfat and have been found to have records ranging from 7000 to 12,000 pounds of milk in the year.

"We do not hope to be able to spare any purebred cattle for several years," said B. W. Richards, live stock manager at the hospital farm. "We are adding to the herd constantly, however, and are determined to make as rapid an increase as possible. We feel that it will pay us much better to be spending our time with purebred animals than with grades. We hope to be able to fit up a show herd this fall, which will be a credit to the institution."

"We are particularly proud of our nonreactor herd," remarked Dr. William N. Keller, superintendent of the institution. "In 1918 we joined the Holstein-Friesian Association of America, and in December, 1919, we were able to have the herd placed on the accredited list, being free from tuberculosis. We are using every sanitary precaution possible, and feel sure that we will have no future trouble with a disease, even in the calf herd.

"The calves are kept in pens by themselves until six months, at which age they can be tested by the state veterinarian to ascertain if they have contracted tuberculosis. From this age on provided they are healthy, they are allowed to run with the other heifers, and later fed in the milking barn. We have a number of patients at the hospital who take a great pleasure in working with the cows, and aside from a paid herdsman and live stock manager, all work about the barns is done by "patient labor." On the entire dairy herd we were able to clear $15,000 in the past biennium, which includes the years 1919 and 1920. This figure includes all costs, such as feed, deterioration of buildings, and other details.

"When crops are taken from the farm to be used in the dairy barn their value is estimated and charged to the feed cost. The same, however, is true in all exchanges between the departments. The dairy, for instance, is credited with all milk which it furnishes to the institutions."

None of the milk from the tubercular cows is used for human consumption although there is no reason why it could not be used if it was needed. The milk from the "reactor barn" is placed in especially marked cans and taken direct to a separate milk house and pasteurized at a temperature of 170 degrees for 20 minutes, part of it is taken out for the young calves who require whole milk, and balance is separated, the cream being made into butter and the skim milk going back to the calves, poultry houses, and to the pig barns. None of the reactor cows are allowed out of their special pasture lot, which keeps them entirely away from the other cattle. The manure from this barn is used on plowed fields, which are not frequented by any of the animals.

Evidently, the "Bang" herd of dairy cattle at the Western State hospital at Fort Steilacoom was named after the Bang method of eradication of bovine tuberculosis, for Mr. Bang of Copenhagen, Denmark, made a scientific study of tuberculosis in cattle and its eradication, and was the originator of the "Bang method" of treatment. Professor Bang claims that the most essential point to keep in mind is that tuberculosis is spread only by contagion, and that the old theory that tuberculosis is hereditary is wrong. He also discards the theory that the germs of the disease are everywhere, pointing out that many whole herds are free from tuberculosis, although in a district where the disease is present.

The professor urged that susceptibility of cattle to the disease depends upon the number of tubercle bacilli present, and also on the opportunity of the cattle to take in the germs, principally through [illegible] cows is big practically [illegible] cows?"

"The immediate effects are fever, smaller quantities of milk and sometimes diarrhoea, but there are no lasting effects."

"In an incipient case will the test aggravate or make worse the disease?"

"I have thought that the disease was aggravated, but now believe that the aggravation was simply accidental, and due to other causes."

"Can the Bang method be carried out on physical examination alone?"

"I do not believe so. The disease must be highly developed in order to detect it by a physical examination. The new herd, at least, should be tested with tuberculin."

"How often should the tuberculin test be used?"

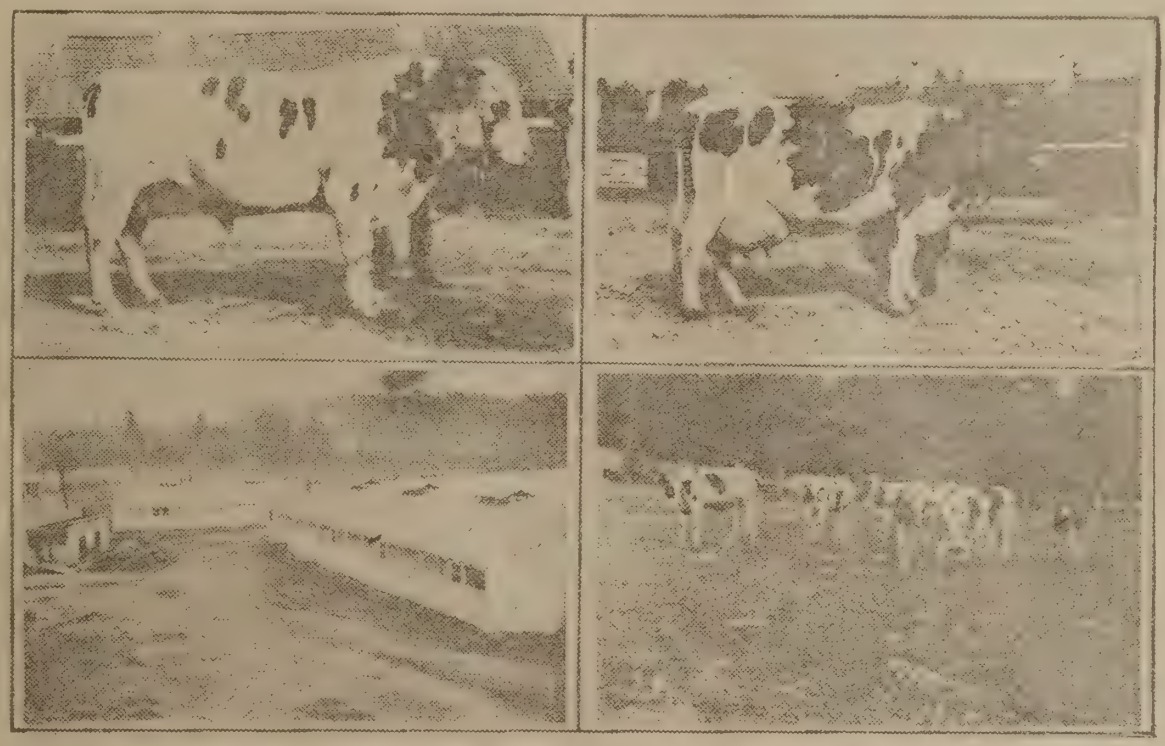
"At least wtice a year is best."

"Is the tuberculin test reliable?"

"Not absolutely; but it is very reliable."

"What would you do with reacting cows?"

"Keep them as long as apparently well and healthy and the milk is good, but keep them under supervision and away from healthy cows."



Chimacum King Korndyke Sady Vale, a son of S. V. H. Molly, is shown in the upper corner of this layout. S. V. H. Molly is at King's right, in the picture.

The lower left picture shows the tubercular barn where the "Bang" herd is kept at the hospital. The long barn in the foreground is the milking barn, while the one in the background is for housing the cows which are about to freshen and for the test cows in the herd. Healthy calves from reactor cows are shown in the lower right picture. Only one reactor has been found among the purebred calves in six years.

general ways are given by which cattle can be infected with tuberculosis—first, by living together with diseased animals, and, second, through milk. Farmers can have healthy cows and unhealthy calves. The professor found that on one farm in Denmark all the cows and calves were free from the disease, but all the 2-year-old heifers were diseased. This was laid to the milk being contaminated on which the animals were fed as calves. When milk is sent to the creamery or cheese factory, where the skimmed milk or whey is returned to the patrons, there is great danger of contagion. When the udder is affected the milk contains a great number of the bacilli.

In Denmark, all cattle affected by tuberculosis of the udder, as determined by examination of the milk, are killed and paid for by the government. Milk will not generally contain tubercle bacilli unless the udder is affected.

The principles on which the Bang method of tuberculosis eradication is founded are the tuberculin test and isolation. All the cows are tested with tuberculin and the healthy animals placed in a barn entirely separated from that in which the diseased ones are kept. All cows affected by the disease in the udder are killed, but calves from those cows that are well enough to keep may be raised. The calves are taken from the diseased cows immediately at birth and placed in the quarters with the healthy animals. They should be fed only on milk that has been [illegible].

This method has been used in Denmark and other European countries very successfully, the herd gradually becoming free from disease without the necessity of killing off all affected animals immediately.

There are those who doubht the practicability of this plan for the average dairy farm, as it requires much more labor and equipment.

A number of years ago, Professor Bangs made a visit to the United States and gave an address at a meeting of the New York State Veterinary college in Ithaca. In reply to direct questions, he answered in substance as follows:

"Do you believe that tuberculin will develop tuberculosis or any bad effects in healthy cows?"

"No. Absolutely impossible."

"Will tuberculin aggravate the disease in affected

TESTING IN [illegible] COUNTY.

The Mason County Cow Testing association has been formed by County Agent H. E. Drew, and 12 members, with 76 cows, were signed up. They agreed to eliminate all unprofitable cows at the end of the year. The organization was formed without cost to the members through the co-[illegible] of the local creamery.

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Sentiment Has Changed

In a report to President Harding, Eugene Meyer Jr., managing director of the War Finance corporation, recommends six sweeping remedial measures for the benefit of American agriculture. The first aims at the provision of fuller credit for the live stock industry.

The second recognizes the reason and justice of the contention of various farm organizations that there is need for the orderly marketing of agricultural products in a more gradual way and over a longer period.

The third has for its purpose the providing of enlarged credit facilities for cooperative marketing organizations.

The fourth would extend the powers of the federal reserve banks to include the purchase in the open market of eligible paper secured by nonperishable agricultural commodities properly warehoused.

The fifth recommendation is for the extending of additional inducement and opportunities to state banks to come into the federal reserve system, and the last suggestion proposes an amendment of the national banking act to permit a limited amount of branch banking within a limited radius of the parent institution.

The Farmer would not be surprised to find President Harding's administration adopting this report in full. In his survey of American farm conditions Mr. Meyer has shown a quick grasp of problems that affect the agricultural producers, a ready and intelligent sympathy for them, and a really remarkable capacity for finding safe and sensible remedies. Mr. Meyer's recommendations, however, would not have been regarded a few years ago as safe, sound and sensible. It is significant of the changed attitude that these recommendations will be generally accepted as reasonable by bankers and business men who 10 or 20 years ago would have sputtered in indignation that they were socialistic, populistic, and that their application would send the country to rack and ruin.

Profit in Feeding "Cut-Backs"

The low price of "cut-backs" last fall appears to have made them subject to all kinds of experimentation. It was on cut-backs, culls from last season's lambs, that Superintendent Roy P. Bean of the Prosser Branch Experiment station made enough in a feeding experiment last winter to keep the station in pin-money for several years.

Feeding cut-backs taught eastern Oregon farmers some pointed lessons about the value of live stock in marketing alfalfa, and they were cut-backs that H. Stanley Coffin of Yakima shipped to North Dakota and put on feed, with enough more purchased in Montana to make 20,000 head. This spring they were sold off at a profit which Mr. Coffin himself admitted averaged $3 per head, and which envious fellow-sheepmen rated still higher. At the time of this admission another lot of 4000 head which he bought in Oregon was on its way east to be sheared and marketed as soon as fat, and his operations totaled 30,000 head. Verily, the cut-back hath charms to soothe the savage sheepman's breast!

Crop Rotation

Desiring to get some idea of the farm management practices and results on Washington farms, the Extension Service of the state college last fall sent out a questionnaire as to whether or not crop rotation, cultivated crops, etc., were looked upon with favor by the majority of farmers.

In Walla Walla county only four out of nine practiced a definite system of crop rotation, but the majority found that a cultivated crop inserted for two or three years increased the quality and yield of alfalfa sufficiently to justify breaking up the old stand. Potatoes served this purpose best because of deeper cultivation. On irrigated land, potatoes, beets, corn and vegetables proved the most profitable rotation crops, and on dry land, wheat, corn, barley and rye. Replies were about evenly divided as to whether or not a campaign for crop rotation would benefit their section.

In Benton county 13 followed a definite system of crop rotation, 10 did not, and 3 raised all fruit. Seventeen out of 26 favored a cultivated crop to increase the yield of alfalfa; berries, potatoes, vetch, rye, corn and truck crops being used for this purpose. The majority favored a campaign to increase the rotation of crops and were willing to cooperate with the farm bureau toward this end.

In Kittitas county, six replies showed that all followed a definite system of crop rotation and potatoes was the favored crop for cultivation. The most profitable rotation crops were wheat, oats, barley, potatoes and sugar beets. Only two out of six favored a campaign to increase crop rotation.

In Yakima county 21 practiced a definite system of crop rotation, 31 did not, and 25 did not reply as to this fact. Potatoes, small grain, alfalfa, vetch and corn were the crops planted most extensively. Rotation crops favored to increase yields were barley, rutabagas, beans, onions, cowpeas, potatoes, corn, rye, wheat and beets. Over half were in favor of a campaign by the farm bureau to increase the practice of crop rotation.

In all four counties some live stock was kept on the farms and all reported a few crops that had been found unprofitable because of unfavorable growing conditions, pests or low market value.

If You Are Thirsty

Men and women smack their lips over the flavor of this or that prepared drink, but when it comes right down to "brass tacks" in satisfying thirst, there is nothing that will take the place of water.

The hasty swallow from the corner drinking fountain in the crowded city; the cooling sip from hand or hat in the tumbling mountain stream; or the long draught from the tin dipper brimming with clear, cold water from the deep well; nectar of the gods every one of them, if you're thirsty—and a thirsty crowd it was that Mrs. Kolback of the Naselle river district drew water for one sunny day last summer when the South Bend Commercial club went a-touring in Pacific county. The old oaken bucket had nothing on this one, the visitors all agreed, and as for the well—well, not many of them had seen anything exactly like it, but at least it's been efficient for these 30 or 40 years that the Kolbacks have been on the Naselle, and since it is an aid to such hospitality as Mrs. Kolback dispensed that day, no apologies of any kind need be offered for it.

State Farm News

Grain shipments from the Yakima valley this year totaled 1299 carloads, as compared with 849 last year, and those in touch with the situation look for a big increase in 1922, possibly to 2000 cars. There were larger plantings last fall than usual, and more hay is being plowed out this spring. Discouragement over prices of hay is as large a factor as any in the change, but gradually increasing diversification of crops has its influence. The long winter and late spring furnished ample moisture for dry farming, and all indications point to a bumper crop of grain.

* * *

The Dodge Valley drainage project has been completed, with more than 1000 acres of farm land near LaConner, Skagit county, being benefited by the work. A dam has been constructed across the slough on the T. N. Haller place, forming an impounding basin. Protecting dikes a half mile in length also have been constructed to keep out the salt water.

* * *

A movement is under way to organize a cooperative poultry producers' association in Stevens county. About 400 poultrymen would be eligible to membership.

There are more than 100,000 chickens in the county, valued at $30,000. W. A. Whitaker and W. D. Buchanan, extension poultry specialists of Washington State college, and County Agent H. J. Plumb have been working among the growers to get this movement launched.

* * *

William Belaire of Moxee is planting nine acres of hop yard this spring and there a number of others setting out yards of a few acres each.

* * *

Small herds of cattle may take advantage of assocition cow testing at smaller cost than those which require the tester's service one day each month under a plan to be tried in the recently reorganized Thurston County Cow Testing association. Small herd owners will take their own samples of milk and submit them to the tester. T. A. Rutledge of Little Rock was reelected president of the association and Chester Eells of Olympia secretary-treasurer. Ronald Kegley succeeded L. J. Kegley on the board of directors.

* * *

W. D. Walters, who returned to Yakima after finishing pruning the C. M. Cox orchard of 60 acres near Mabton, reports that there is a bumper crop in prospect in the Mabton district, particularly in Anjou pears. Apples and peaches are not so good. However, there will be a good crop of these fruits if not caught by late frost.

* * *

George A Franklin, fruit grower of the Tieton district, is making large use of cover crops in his orchard. He has tried hairy vetch, red clover and alfalfa with the idea of determining which will give the best results under the conditions obtaining on his ranch. Two years ago he plowed up some alfalfa in his orchard and has practiced clean cultivation since then, but this year he will seed that portion of his orchard back to alfalfa.

* * *

A. Kern, who has a five-acre tract adjoining the Unit school grounds of Selah, has planted three acres of spinach this season. Mr. Kern will set out 3000 strawberry plants this spring.

* * *

Berry growing is becoming quite an industry on tracts just south of Selah. F. W. Bidwell has for several years been growing strawberries on a small plot and two years ago O. D. Webb started in with berries as a specialty. Last year Mr. Webb greatly expanded his acreage in small fruits until he has more than he cares to handle alone this year. He has therefore rented a portion of his acreage to his brother-in-law, W. E. Lewtas.

* * *

An order was placed with the Pacific Lumber agency in Aberdeen recently for 500,000 feet of silo stock and is the first of its kind received there in two years. It is from a firm in the middle west. A few years ago demand for silo lumber for middle east and eastern markets was quite brisk, but it fell off during the war.

* * *

That business men are interested in increasing agricultural production is shown again by the fact that a merchant has offered a prize of 125 to the herd making the highest record next year in the Grays Harbor County Cow Testing association.

* * *

Seven Holstein heifers from the herd of the State College of Washington dairy department have been bought by the irrigation branch experiment station at Prosser, Benton county. They will form the foundation of a pure-bred dairy herd at the branch station for extensive foster study under irrigation conditions. The irrigated sections are becoming more and more interested in dairying, says Dean E. C. Johnson of the state college.

* * *

Dairymen of the North river district in Grays Harbor county have organized an association and filed articles of incorporation for the North River Dairymen's association. The capital stock of the association is $7500. Headquarters will be at Vesta. Incorporators are J. N. Howard, McKinley Wilson, C. J. Frank, Homer Blaine and Enoch Billard.

* * *

A weight gain of 5 3-4 pounds in 30 days was the record of one little girl in the second grade of the schools, who has been taking advantage of the milk drinking campaign inaugurated by the Neighborly Neighbors' club of Pullman. The child was 10 pounds under weight when the test began.

Of 142 pupils in the four lower grades in which the milk drinking campaign was attempted 94 availed themselves of the opportunity to drink a half pint of milk daily. Of these 56 were under normal weight. The gain per child ranged from one to three pounds.

Coming Events of Interest

May 12-13—Grant county jubilee, Ephrata.
May 14—Mother's day.
May 20—Farmers' market, Bremerton.
May 24—Lewis county Holstein sale, Chehalis, Centralia.
May 30—Decoration day.
June 5—Northwest Guernsey breeders' sale, Portland.
June 5-10—National Holstein meet, Kansas City.
June 7—Guernsey consignment sale, Chehalis.
June 10—Republican state convention, Chehalis.
June 14—Flag day.
June 20-22—Lincoln-Adams pioneer picnic, Keystone.
July 26-28—International apple shippers, Seattle.
July 27-28—Whatcom Guernsey gallop, Bellingham.

FARM BUSINESS AND MARKETS OUTLOOK

Meat Prices in Sharp Upturn

All classes of dressed meats advanced sharply at eastern markets in the last 10 days and furnished the principal motive in the trend of live stock prices. The post-Lenten appetite for meat is more keen and the effect of rather light slaughter in preceding weeks also was a factor. Dressed beef advanced 50 cents to $1; pork loins, $2 to $2.50; lamb, $1 to $3, and mutton, $4 to $5 per 100 pounds. Veal ranged from steady to $3 higher at various markets. The arrival of about 300,000 pounds of chilled and frozen beef from Argentina caused only a temporary flurry. Some frozen Argentine and New Zealand lambs are being offered in the east, but they do not suit the trade and are moving slowly.

Receipts of all classes of live stock at the 10 leading markets have increased, but the evidence of a more healthy dressed meat trade caused moderate advances in values on the hoof almost all along the line.

Healthy Tone in Cattle Trade

With beef trade channels open, local slaughterers and eastern shippers have been active competitors for a moderately larger supply of cattle on middle western markets. In addition, export orders have been filled at Chicago and Missouri river points so that a decidedly healthy undertone was manifest in the trade. Top figures did not advance as the percentage of well finished beeves is comparatively high, an invariable feature of the spring market. Yearlings showed more strength than mature cattle. There is a possibility of a moderate excess in the supply of weighty steers to come forward in the next six weeks, but it will be much less marked than usual this season because most feeders took out light steers last fall.

The number of steers on feed is not above normal, but it is large enough to prevent any sign of beef scarcity. An exceptional demand for beef in the next month or two can not be counted upon with certainty. Nevertheless, an advance of 50 cents per 100 pounds in prices on the hoof is quite possible and much more probable than a decline of an equal amount.

Cows and heifers staged a runaway market at Chicago last week because of scarcity and a marked increase in the demand. The bull market has benefited from export orders as well as from the opening of the summer sausage season. Calves were less abundant than they have been for several weeks and resumption of shipping orders at Chicago assisted in an upturn of 25 to 50 cents. The calf market should do better right along.

Broader interest in stocker and feeder cattle last week again made the scarcity of desirable kinds conspicuous. Prices were at the highest level of the year and perilously close to fat steer values on the better grades. The grass season is beginning in earnest, so that purchases of stockers increased, while the robust fat cattle market gave courage to the specialists who handle fleshy feeders.

The movement from Texas to Kansas and Oklahoma pastures is officially estimated at less than last year, making the third season in succession it has decreased. About all the pastures have been leased, however. Uncertain rail rates have been a factor and had a still larger part in retarding shipment to the northwestern range states.

Cows are scarce everywhere and the desire for them is almost equally universal as cattle breeding and rearing looks attractive once more. Low priced kinds are favored.

Hog Run Increases

The usual May increase in receipts of hogs is showing up and prices have been lowered slightly. The decline was not drastic, as shipping orders are fairly numerous from eastern points. Prices on far western markets are considerably above the level in the corn belt, storage stocks are below the average and demand for pork appears to be reviving. The run may increase 10 per cent more before the middle of June, but underlying conditions are sound enough to prevent prices from declining very much below the present level.

There is the keenest of competition for the small available supply of stock pigs. The opportunity to pick up suitable offerings may be a little better when the June run is under way.

Lambs and Wool

Lamb prices developed another burst of speed last week and sold at a new high on shorn stock and equaled the former high point on wooled lambs. The higher eastern dressed lamb trade was the chief influence. This sent shipping orders into the middle west, otherwise the advance of about 60 per cent in the run at 10 leading markets could not have been readily absorbed. Even then the full advance was not retained. California spring lambs are arriving right along and have sold at irregular prices ranging from $15.50 to $17.35 at Chicago. Receipts will be rather uncertain for the next 30 days, but there are not enough fed lambs and Californias to overdo the market before Kentucky and Tennessee lambs become abundant in June.

The wool market started upward last week. Action of the larger mills in raising cloth prices recently has indicated that their stocks of raw wool needed replenishing, former sales of cloth being from wools purchased when the market was materially lower. Sellers of wool ceased making concessions in the last 10 days and the Liverpool market made a couple of jumps upward in the classes of wools which American buyers prefer.

As the market got under way fairly large sales of bonded wools were made, some Texas wools were cleared at 35 cents and the pool of 800,000 pounds at Jericho, Utah, was sold, presumably to a manufacturer, at a reported price of 40 cents, equal to a clean cost of $1.15 at Boston. At the height of the previous upturn late in the winter the high bid on the pool was 36 1-8 cents. The tariff appears to be a long way from enactment, leaving the emergency duty in effect, and since foreign wool markets are enjoying a boom, manufacturers have but little opportunity to accumulate cheap wools. The speculative activity on the part of dealers which featured the winter market has been resumed.

City Demand for Horses Improves

The farm chunk trade has waxed and waned without developing the breadth hoped for in midwinter. City demand has been a disappointment, also, but has given signs of improvement recently and heavy horses were wanted to go to the oil fields. Horse markets usually become somnolent by July and the industrial revival is the only thing that can prevent them from lapsing into that state at a still earlier date this year. A few teams of drafters were sold at Chicago last week for $500 or more for the pair. Chunks weighing 1250 to 1500 pounds brought $115 to $165.

Europe Continues to Buy Wheat

Persistent buying of wheat in North America has been the dominant feature in the grain market recently. Continental countries have bought new crop winter wheat for July, August and September shipment via Montreal and the gulf. It is estimated that these sales now total 30,000,000 bushels, with every indication that they will continue right along and may amount to 75,000,000 bushels or more by the time new wheat begins to appear on the market.

Besides these sales, large quantities of old crop durum have been sold to Italy and hard winter stored at Montreal has been disposed of. Greece recently placed her periodical order for about 1,500,000 bushels of Manitobas and other European countries have been buying from the same source. The continuation of purchases of this sort is quite significant in view of the amount on ocean passage absorbed from week to week.

The domestic demand for wheat remains a disappointment. Flour trade is said to be about as dull as it can be, with buyers waiting until the future of the wheat market is better known. But flour stocks are low, so that buyers are compelled to take small amounts rather steadily. Eventually broader scale purchases will be necessary and it is only a question of time until mills will be more eager for wheat. Receipts have increased recently, but the milling demand, dull as it is, has absorbed all the choice wheat offered at large premiums.

Deliveries on May wheat contracts on the leading exchanges were only moderate, part of the grain going into the hands of exporters. An upward trend has been shown since the first delivery day. The big lines held by specu-

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lators, which have been expected to congest the market at Chicago, are still intact.

No actual scarcity of wheat has yet been detected, although the situation holds the possibility that the owners of the last 100,000,000 bushels or so needed for the world's trade will tighten their grip and not relinquish it except at a substantial advance. The world's carryover at the end of the crop year will be the smallest in three or four years. The European new crop outlook is decidedly spotted, with conditions in France especially unfavorable. The drought which checked planting in Australia has been only temporarily relieved. Even if pronounced scarcity does not become manifest before the new crop in North America begins to move freely, the world must increase its production in the next year in order to avoid a deficit a year hence. With crop conditions in this country and abroad as they are it is difficult to see where the increased production is to come from.

Crop reports from Kansas, Oklahoma and Texas are better, as rains have been heavy and enough moisture has fallen in the southwest to carry the plant well toward maturity. Conditions have favored the wheat which started late, but the outcome will be in doubt until harvest. Seeding of spring wheat is well under way, although not as near completion as it usually is. Private observations point to a small decrease in spring wheat acreage.

Winter wheat improved during April, according to unofficial observations. The May 1 condition is estimated at about 82 per cent, compared with 78.4 a month ago. Acreage abandonment is above the average, the estimates ranging from 11.6 to 15 per cent. These figures suggest a yield of 575,000,000 bushels, which is practically equal to the 10-year average.

Corn and Oats

A creeping bull movement is on in the corn market, with cash prices gaining rather steadily on the distant deliveries. Exporters are selling rather large amounts, especially to Germany, and domestic consumption appears to be heavy, although industries have not expanded operations a great deal. Receipts have enlarged moderately in the last 10 days, but a heavy run is not expected until after planting is completed. The visible supply has decreased about 30 per cent from the high point of the season.

In spite of the move to reduce corn acreage preliminary estimates indicate a slight increase in the states of large production, partly as a result of a late oats seeding season.

The visible supply of oats has decreased about 20 per cent from the high point of the season, but it is still 15 per cent larger than was ever known until the present year. Since new oats will begin to come to market within three months a rather large carry-over in commercial channels is probable. Present prices discount this situation, however, so that an advance is more probable than a decline, especially since the new crop has been reduced about 10 per cent, according to private estimates, and the unfavorable effects of late planting and excessively wet weather at planting time are apt to appear later on.

Cash Grain Markets

The range of cash grain prices for the week ending May 3 was:

CHICAGO—Wheat—No. 2 hard, $1.39 3-4@1.46. Corn—No. 2 mixed, 61@63 3-4c; No. 3, 60@63c; No. 4, 59@61 3-4c; No. 2 yellow, 61 1-4@64c; No. 3, 60 1-4@63 1-4c; No. 4, 58 1-4@61 1-4c; No. 2 white, 61 1-4@65c; No. 3, 62@63 1-2c; No. 4, 59 1-4@62 3-4c. Oats—No. 2 white, 39@44c; No. 3, 38@43c; No. 4, 36@40c. Rye—$1.08 1-2@1.09. Barley—60@72c.

Seed Markets Quiet

Clover seed markets are quieting down as the season of active demand is waning. Prices have held within a limited range recently, although a sharp advance in red clover at Toledo, due to speculative activities, was a feature last week.

Chicago, per 100 lbs.—Clover, $15@22; timothy, $4.50@6.

Toledo, per bushel—Prime red clover, $13.75; prime alfalfa, $11.50; prime timothy, $3.05.

The demand for by-product feeds of all kinds from feeders and dairymen is quite limited. Even middlings and tankage, which hog producers bought freely two months ago, have become dull. Exporters are out of the linseed and cottonseed meal markets. Production of wheat feeds is light, while production of corn feeds is up to normal.

Prices per ton (100-pound bags) in carlots—Chicago—Bran, $25.50; standard middlings, $26; flour middlings, $28.50; cottonseed meal, 36 per cent, $50; 43 per cent, $54; hominy feed, $21; gluten feed, $32.65; old process oil meal, $52; tankage, $55.

Hay markets are beginning to weaken in spite of light receipts. Demand has been limited right along and pastures are cutting more of a figure in the market. New crop alfalfa is offered for shipment from the southwest in another week or two at prices considerably lower than the spot market.

Prices per ton in carlots—Chicago—No. 1 timothy, $25@28; No. 2, $23@25; No. 3, $17@20; No. 1 light clover mixed, $24@25; No. 1 clover, $20@21; No. 1 clover mixed, $21@23; alfalfa, $17@28; upland prairie, $17@19; midland prairie, $14@17; rye straw, $16@17; oat and wheat straw, $14@16.

Egg Receipts Heavy

Receipts of eggs for three weeks have been extremely heavy, with the total at the four leading markets setting new records. Storage holdings at these points have accumulated rapidly in spite of a broad demand and are now ahead of the extremely large holdings on this date a year ago, when there was a record accumulation in the country as a whole. Prices have held well since the storing season started in earnest and they are not expected to sag much unless heavy receipts are maintained long enough to pile up larger storage stocks than operators think necessary for the winter market.

Receipts of frozen poultry at the leading cities have fallen off 50 per cent in the last three months, but they are above the average at this season of the year. Cold storage holdings are about equal to the average.

Butter Market Slumps

The butter market declined sharply in the last few days. Tension in speculative activities at Chicago was a factor in sustaining the market at that point during the last days of April. Passing of this situation allowed the market to sag. Combined receipts at the leading cities for the last two months have run heavier than in the corresponding period of any recent year, but demand is exceptionally broad, so that all fresh receipts have been absorbed and cold storage holdings have been steadily decreasing. The latter are down to less than 2,000,000 pounds at the four leading cities. Small quantities of butter showing traces of grass and weed flavors are arriving, showing that the pasture season is getting under way. Within another week or two it is probable that receipts will be large enough to take care of the demand without withdrawals from cold storage and shortly afterward the storing season will begin. On the Chicago futures market butter standards for May delivery are quoted about 5 cents below the spot market.

Prices for 92-score fresh butter on May 3 were:

Chicago, 35c; New York, 37c; Boston, 37 1-2c; Philadelphia, 37c; San Francisco exchange quotation, 35 1-2c.

Cheese Market More Stable

Although prices on some styles of cheese declined again last week, these revisions were less radical than those which have been taking place during the preceding three or four weeks. Country markets have begun to recover. Demand has improved and reports from country markets indicate that some diversion to butter production may take place as a result of high prices compared with cheese. Receipts have not increased materially for two weeks and it is possible that the slump has spent its force, although a slightly lower level may be reached when the season of heavy production arrives in June. The premiums upon held cheese and upon colored cheese continue.

Prices for No. 1 American cheese on May 3 were:

CHICAGO—Twins, 15 3-4@16 1-4c; S. Daisies, 16@16 1-2c; D. Daisies, 15 3-4@16 1-4c; Y. Americas, 17@17 1-2c; Longhorns, 16@16 1-2c; square prints, 17@17 1-2c.

Fruits and Vegetables

Potato prices have been recovering in the last few days, due largely to the fact that the remaining supply is in stronger hands. The movement of old stock is falling off, but new stock is increasing and now amounts to about 120 cars daily. Total shipments are unusually heavy for this time of the year, although they have decreased in the last few weeks. Northern sacked round whites are quoted at $1.35 to $1.50 f. o. b. northern shipping points, $1.85 to $2 in the Chicago carlot market and $1.80 to $2.10 in middle western cities.

Total shipments of apples for the season up to April 24 were 86,700 cars, compared with 106,758 cars in the same period last year. Prices have been practically

(Continued on page twenty.)

Columbia Basin Project Lands

Coming Farm Problems Are Already Being Solved at the Prosser Station

By EDWARD C. JOHNSON
Director Washington Agricultural Experiment Station, W. S. C.



Dean Johnson.

With the feasibility of irrigating the Columbia basin definitely established by the Columbia basin commission and confirmed and reenforced by General George W. Goethals, it is well to give thought now to the matter of planning how the settlers that will come when the project is in working order are to succeed. Are they to farm this valuable land under the same haphazard methods that, because of lack of information, it was necessary for the pioneers to use in former days or can they take up their work in the knowledge that there is a dependable source of information which they may use in making their farming operations a success? It is a matter of congratulation to the state of Washington that the former method is no longer necessary and that the latter may be employed.

The irrigation farmers of this and other states have had many experiences in the years in which they have practiced irrigation. Many of these have been published in bulletin form and through the farm press and are being made available through the extension service and in other ways. But more than that, the state has taken additional precautions that work shall be done in finding the solution of problems of irrigation farming that have not been solved to date and that the most up to date information may be available at all times. This has been made possible by the generosity of the state legislature and the wisdom of the administration and board of regents of the state college in establishing three years ago an irrigation experiment station at Prosser, in the Yakima valley, under conditions similar to and in many cases identical with large areas in the Columbia basin project. This station, consisting of 200 acres of sagebrush land, was cleared and put under the plow in 1919. Much of the land was in crop in 1920 and all of it in crop in 1921.

CROP PRODUCTION UNDER IRRIGATION.

Investigations already have been started on crop production under irrigation and questions such as these are being solved:

What varieties of forage, feed and grain crops should be grown and how shall they be handled under irrigation?

What should be the standard crop in a general diversified farming section under irrigation?

By what methods should the water be applied to these crops and what is the minimum as well as the maximum water requirement of the standard crops?

How can these crops best be marketed?

How can seed best be produced under irrigation conditions?

These and many other questions will be answered from year to year by the work of this station.

BEST TIME OF CUTTING ALFALFA.

Already some very interesting things have been learned. Last summer, for instance, in an experiment to determine the best time of cutting alfalfa hay it was found that alfalfa cut when three-fourths in full bloom yielded at the rate of eight tons to the acre, while alfalfa cut before one-fourth in bloom yielded six and eight-tenths tons per acre. These results are contradictory to the popular belief that alfalfa must be cut before the new growth is tall enough to be clipped by the mower and tend to show that the time of cutting should depend upon the stage of maturity at which the greatest amount of palatable hay can be obtained rather than upon the second growth. This experiment will be repeated several years in succession to see if the same results are secured year after year.

In an experiment with sunflowers to determine the distance between rows and spacing at which the greatest amount of silage can be obtained, it was found that the highest yield was obtained in the plots having the least distance between rows and plants. Thirty inches between the rows, with a spacing of 12 inches in the row, produced three and one-half tons more per acre than 36 inches between the rows and 18-inch spacing in the row.

FEEDING LAMBS IN THE VALLEY.

In experimental work to determine the best methods of feeding lambs in the valley 1627 lambs were fed at the station this winter. Comparisons were made between the feeding values of sweet clover and alfalfa hay, liberal versus limited grain ration, first, second and third cuttings of alfalfa hay, the value of beet molasses as compared with corn and the value of silage and cottonseed meal.

In these experiments, sweet clover gave a little better results than alfalfa, the first and third cuttings of alfalfa hay gave better results than the second cutting, the comparatively heavy grain ration was a little more profitable than the light grain ration and the ration with silage a little better than one without. It was found also that beet molasses makes a valuable feed. Some of the details of this experiment already have been reported in this paper.

Experiments of this kind with beef cattle and sheep will be continued and should be of large benefit to the settlers in a diversified section, such as the Columbia basin when irrigated.

This month the foundation for a pure-bred dairy herd was made by placing seven well bred heifers at the station. All are out of the senior herd sire Segis Pontiac Acme and five of them bred to Piebe Hero the junior herd sire. This herd will be used especially in pasture studies under irrigation. As out irrigated area develops and towns and cities increase in number, the need for dairy products increases and dairying will become one of the large industries in the irrigated sections. It is well to know how dairy products can be produced most economically by use of pasture properly handled and by proper feeding and breeding.

A demonstration poultry plant from the standpoint of determining the value of a commercial farm flock will be established on the station within the next year.

An experimental orchard of a little more than six acres has been planted this spring under the supervision of Professor O. M. Morris, head of the department of horticulture at the college, who hand-selected all the trees.

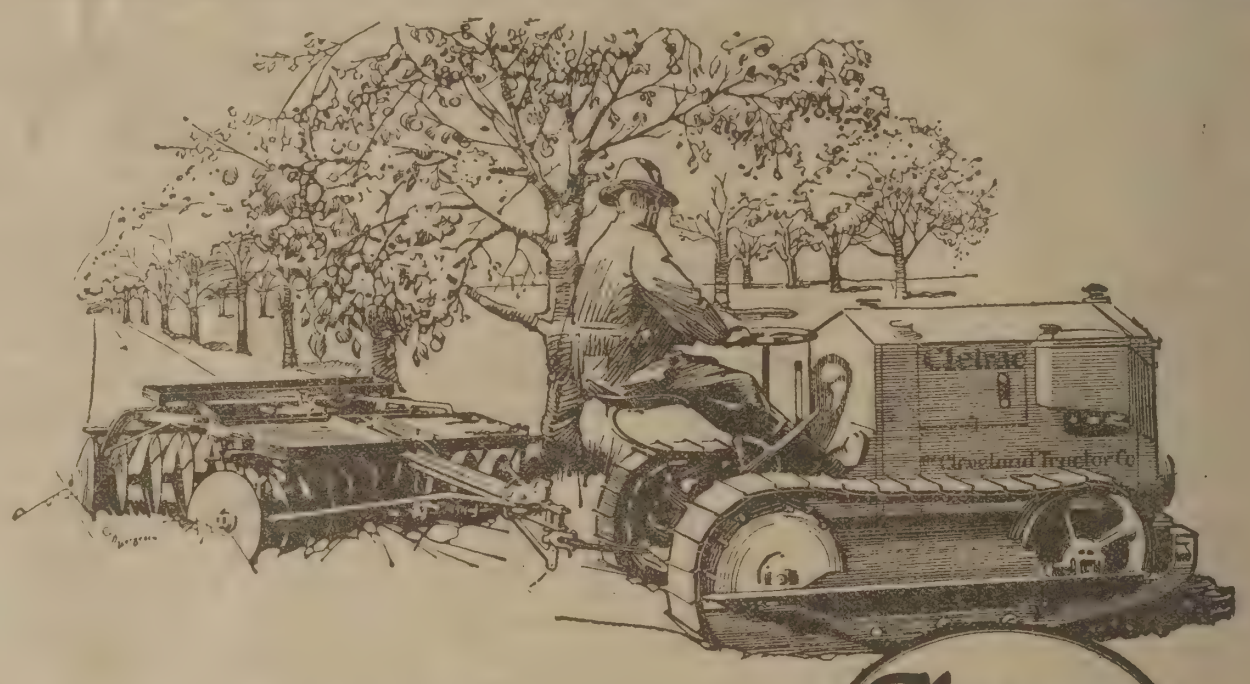
VARIOUS PROBLEMS OF WATER APPLICATION.

Irrigation studies in cooperation with the United States department of agriculture are under way and a representative of that department has been on the station for the last month and a half working with the superintendent, R. P. Bean, in placing the measuring devices and laying out the experimental areas for the irrigation work. It is expected that he will be placed permanently at the station beginning July 1 to study the various problems of water application and how it may be used economically and efficiently in growing crops. Until he arrives the irrigation experiments will be handled by Superintendent Bean.

All of the experiments at the irrigation station should be a very real help to those now farming in irrigation sections. In addition the new projects that will be developed should be helped substantially and by the time the Columbia basin project is in operation there should be an accumulation of data and information of great value to the settlers on this project.

BETTER COWS.

Fourteen good grade heifer calves were placed with dairymen in Wahkiakum county, who are either just starting in the dairy business or who have not yet graded up their herds to any great extent. These calves were all Jerseys from cows with records of at least 300 pounds of butterfat.



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Cletrac will speed up your orchard discing and harrowing. Strong, low-set and with power to spare, Cletrac cultivates under the branches and close to the trunks without harming the trees.

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Send for a copy of "Selecting Your Tractor"—it gives the whole interesting story. And talk it over with your local Cletrac dealer.



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Horsepower: 12 at drawbar, 20 at belt pulley.
Length: 96 inches.
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Center to Center of Tracks: 38 inches.
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Wool Market Shows Strength

"Buyers stand ready to take everything offered, whether shorn or on the sheep's back," reads a market report on the wool situation in the Pacific northwest. Certain it is that wool has come back with a strength that should prove highly encouraging to the sheep man. A Boston statement says:

"Manufacturers are getting anxious about supplies, not only because of the dependence upon the domestic clip owing to the tariff, but because of the outward movement of some of the foreign lots in bond. The sale of Cape wool for reshipment abroad has been followed by similar action on some lots of Australian merino in bond. The wool trade attaches considerable importance to the reports of such business. A steady accumulation of foreign wool in bond is evident, but the fear of re-exports and the necessity for these supplies are such that the opinion prevails that the bulk of the stocks will have been transferred to manufacturers' account before one permanent tariff becomes law. Naturally, it can be held in bond by the manufacturers, and taken out under any tariff conditions if warranted or absolutely essential."

One sale of significance occurred at Nyssa, Ore., last week—163,000 pounds of pooled wool belonging to five owners of Malheur county to a Boston firm f. o. b. Nyssa at 35 cents a pound. The same firm bought 70,000 pounds of coarse wool at the same point at 32 cents. One sale is reported from Shaniko, Ore., at 38 cents, and prices are ranging from 32 to 36 cents in most of the wool-producing sections of the northwest. As a natural result, higher prices for breeding sheep are expected to follow.

American Wheat

A Good Prospect Is Seen Ahead

Albert B. Dennis, former American commercial attache at Rome, who is now investigating European food conditions as special representative of the department of commerce, has arrived at Rome to attend a general meeting of the International Institute of Agriculture as American delegate.

"Despite the hard times and progressive decline in the currencies of central Europe," he said today, "there is no lessening in the purchases of overseas foodstuffs. Europe imported in eight months of the present year an excess of 40,000,000 bushels of wheat over the same period last year after an exceptionally fine native harvest. A good market for American wheat seems assured for at least a year, a cold, late spring increasing consumption and postponing maturity of the next harvest.

"Russia formerly sold abroad over 150,000,000 bushels of wheat annually, but now is an importing country. Overseas wheat will for some years continue necessary to fill this great vacuum in production.

"The subdivision of great estates among the peasants has seriously impaired the wheat exporting capacity of Rumania. Neither in acreage nor condition does the growing wheat crop promise a harvest equaling that of last year; it seems that the demand for imported wheat is bound to strengthen. Certainly there is nothing to warrant the belief that our foreign foodstuffs trade is likely to decline.

"Except for Poland, Czecho-Slovakia and Hungary, no great progress is taking place in the way of expansion of European agricultural resources. In all European countries where beet root is grown successfully, except England, Greece, Turkey and Norway, the recovery is unexpectedly slow. A year ago it was freely predicted that Germany, which before the war exported to England alone 1,000,000 tons of sugar annually, would recover during the present season almost her former export strength. It now looks as though Germany would be only able to supply her own needs.

Gunnysacks of Lady Bugs

District Horticulturist John B. Wuley and his assistant, W. P. Brown of Prosser have just returned from a trip into the wilds of Garfield and Columbia counties, on the Tucannon river with 1,500,000 ladybugs in gunnysacks to start a scientific fight against the aphis, which infests the fruit districts in Walla Walla and surrounding counties.



The Ladybug enlarged.

Wuley made his capture as result of report that more than a trillion of these were hibernating on the Wenaha national forest to the east of Walla Walla. He immediately contrived to capture a quantity of them to plant in the orchards of this section, the ladybug being a natural enemy of the aphis and San Jose scale pests.

The lady bird beetle or the ladybug is the common name for one of a group of small beetles. They are rounded on the back and flat below, and when young they are usually marked with spots. They are generally red or yellow, with black spots; or black with white, red or yellow spots. The eggs are yellow, often deposited in a colony of plant lice, upon which the larvae begin to feed as soon as hatched. Under favorable circumstances the beetle is developed from the egg in about a month. Ladybugs that feed upon scales are smaller than the other ladybugs, black in color and sometimes spotted with orange and red..

Shorthorn Men Organize

The Lincoln County Shorthorn Breeders' association was formed at a meeting of Shorthorn men at Davenport last week. Plans were laid for making a tour of the Shorthorn farms of the county some time in June and preliminary steps were taken for the organization of a Shorthorn baby beef club. The plans for this club will be worked out by a committee composed of F. W. Moe, Conrad Heid and N. Russell Hill. Arrangements for the excursion to Shorthorn farms will be in charge of D. C. Keith of Davenport. A. E. Lawson, representative of the American Shorthorn Breeders' association, was present and assisted in the formation of the Lincoln county association.

Officers elected were as follows: President, L. A. Cathcart, Davenport; vice president; C. A. Level, Davenport; secretary-treasurer, Conrad Heid, Davenport; additional directors, W. E. Shrader, Harrington, and Joseph McCroskey, Sprague.

Farm Products' Valuation

Figures of the census bureau give the total value of all farm products in Washington for the year 1919 as about $301,271,000. The various crops of the state made up about $227,000,000 of this amount, with live stock and live stock products making the balance. Oregon and Idaho farm products together totaled about $390,000,000, Oregon's products totaling about $209,000,000 and those of Idaho about $181,000,000.

The total farm products valuation for the entire United States during 1919 is given as $21,425,623,000. The state of Iowa led in crop valuation, with a total of $1,447,938,000, while Texas and Illinois followed closely for second and third places.

MAKE THE COLLAR FIT.

Unless you wear shoes that don't fit your feet, don't make your horses wear collars that don't fit their shoulders.

Freight on Fruit

Adds $160 an Acre to Apples

The increase in freight rates in the last four years has imposed an additional charge of $160.87 an acre on apples on the Pacific coast, and this capitalized at 7 per cent amounts to $2298.14, according to figures of Henry C. Wallace, secretary of agriculture, in a speech before the New York Academy of Political Science.

"This nation has been built up by a system of low railroad rates," he said, "designed to encourage the movement of our surplus agricultural crops long distances to manufacturing, industrial and business centers, with a corresponding return haul of manufactured products; and a sudden reversal of this theory of rate making results in great economic injustice and if persisted in will keen us in a state of confusion and agricultural and business uncertainty for a prolonged period."

SPRING WATER SUPPLY.

To be sure of an all summer supply of water from the spring, build a basin to a level higher than that of the spring in the driest weather. Find out that level and put the outlet pipe about one-half inch below it.



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Do you realize that your home, your farm, your family, can now have all the benefits of Delco-Light—the same benefits that are enjoyed by your neighbor—at very little cost? You can have power to pump the water—to run the separator and the churn, to do the milking, the washing, the ironing—all this in addition to the finest and most economical light in the world.

Delco-Light prices have been reduced. It will probably surprise you to find how little a plant will now cost you and on what easy terms you can now buy it.

If you will mail the coupon we will gladly send you, without obligation, a copy of the Delco-Light catalog and full details of our easy-payment plan.

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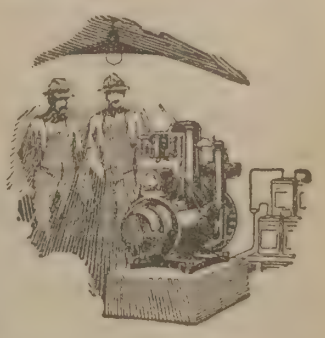
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The Possibilities of Wireless

Its Development Holds Much for the Family on the Farm

Wireless telephony, more commonly known as radio, has come into prominence with amazing speed in the last few months, though the development apparently is in its earliest stages. Its use, still under great limitations, seems destined to become of much importance to farmers. Over a million sets of instruments for receiving messages are already in use in the United States, the greater number of them, of course, being in towns and cities, though their use in the rural districts is rapidly increasing.

The information department of the American Farm Bureau federation is now supplying news to be sent out regularly from the Westinghouse broadcasting station in Chicago. It is the hope of the federation to have a central sending station of its own, with branch stations all over the country, from which news and information of special value to farmers may be sent broadcast.

Needs Strong Organization.

With a well-developed radio service as its aid, a national agricultural body, with the cooperation and confidence of producers, could direct the marketing of farm products in a way that would make decidedly for orderly marketing. For many years the marketing of citrus fruits has been directed by wire. Cars of fruit are sent out and, as the market changes, the destinations of the cars are changed. For instance, the cars leave the Pacific coast headed for Chicago. Careful trace of them is kept so that their position is known at all times. If, when the cars have reached a certain point, the offie htcat is directing the movement has word that the Chicago market has become glutted, but that St. Louis is low on the particular product, word is sent by wire for the fruit to go to St. Louis. In this way the fruit is put on the market where it is needed and where more advantageous prices may be obtained. In time the radio will probably be used instead of the telegraph for this class of work.

The same practice can be used in marketing perishable fruits and vegetables, grain and live stock. With a capable directive agency, an extensive radio system and growers who were willing to follow directions, produce could be put on the markets so that heavy receipts at any one terminal and dearth of receipts at others would be a thing of the past and more uniform prices would be inevitable.

In general, the value of a radio system of broadcasting market news will depend largely upon who sends it out and upon what use the farmers attempt to make of it. Any system, radio or otherwise, which hastens the accurate distribution of accurate, unbiased news of the world's agricultural markets is highly beneficial. Through the radio the sale of farm products can be put on the same basis as commercial business. What the farmer could get from his well-managed and honestly-controlled radio system would correspond quite accurately to the information the business man gets from his "ticker."

For instance, a farmer may have ordered a car for loading his hogs at the siding to be shipped on the following morning. The noon radio market reports bring news of an unpected down-turn in hog prices at the market for which his load was slated. If the farmer has been following the market news regularly and intelligently he can decide in his own mind whether the break is a temporary one due to heavy receipts, which will not last, or whether it is the beginning of a persistent price decline, and act accordingly. Without the radio service the news of the unexpected lower prices would not have reached the farmer until after his load had been shipped. This is but one example of how the radio would save money for the man out on the land who is not directly connected with the telegraph.

With the radio in general use it would no longer be possible for a buyer to slip into the country after the market has gone up and buy live stock or grain on the basis of old quotations.

Weather Reports by Radio.

Weather reports are now being broadcasted to farmers in many sections. The immediate receipt of such material is of immense value in the production and harvesting of crops when an hour's delay in the cutting of hay or the harvesting of grain may mean the loss of many dollars.

One of the big handicaps which the radio is now laboring under as an aid to better farm marketing is the continued broadcasting of board of trade quotations upon grains for future delivery. Members of the Chicago Board of Trade are sending out such speculative market quotations at intervals of 30 minutes.

The continued broadcasting of quotations upon grain futures at frequent intervals by wireless telephone will do much to stimulate the gambling spirit among people getting those reports and consequently tends to direct them to the wire houses where they can speculate on the market. It will also facilitate the establishment of "bucket shops" in all parts of the country. Reports of grain futures at intervals of 30 minutes are of absolutely no value to the farmer or any one else except as a basis for speculation.

The field of radio telephony is new and there are many of its problems still to be solved, though they certainly will be as time goes on. One of the first to be considered is whether or not the dissemination of news by wireless is to remain in the hands of the few large agencies who are at present practically able to dictate what news can be used. Until information can be sent out unrestrictedly by those who are interested in aiding the producer and in making him acquainted with the news of his trade, the farmer will not be served by the radio as advantageously as it is possible for him to be.

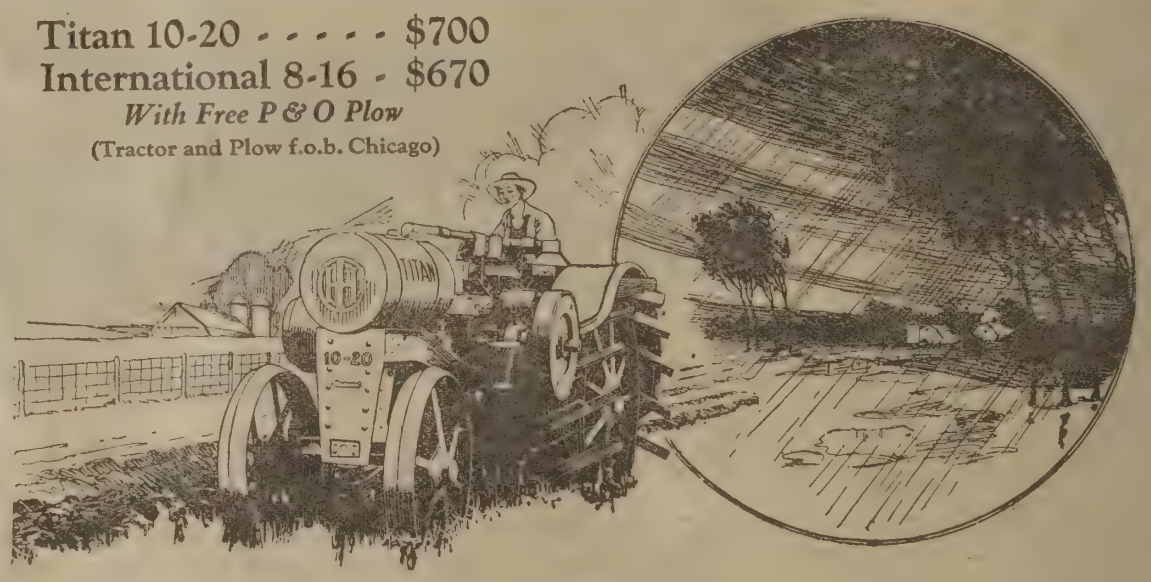
It is not expected that the radio will ever entirely supplant wire communication. But it will develop into an important supplementary service to the telegraph and telephone lines. Radio, unlike the telephone and telegraph, which afford immediate but personal contact generally only between individuals, covers an area. In radio, broadcasting is the means of immediate contact between numerous individuals. It will bring to the farmer out in the country news in a flash that up to this time has never been disseminated soon enough to escape being history instead of news.

The general use of the radio will do as much to relieve rural isolation as has the increasing use of the automobile and telephone. The city will no longer have a monopoly of comforts, luxuries and recreation. The radio will bring educational lectures, entertainments and the news of the world to the farmer and his family as they sit in their own living room. No matter where he lives, how far he is from town, how bad the roads are or how limited his immediate resources for pleasure, when radio is fully developed the farmer can adjust the receivers of his instrument and bring to himself many advantages of the city.



When wireless is developed a little further the farmer 5 or 25 miles from town need not be isolated.

Titan 10-20 - - - - - $700
International 8-16 - $670
With Free P & O Plow
(Tractor and Plow f.o.b. Chicago)



Free Plow Offer Good 20 Days Longer
to Offset Late Spring Season

In many sections heavy rains and a tardy spring have delayed tillage and planting beyond the point of safety. *Now* extra power and help must be put to work to make up for lost time. Hundreds of farmers who did not intend buying a tractor this spring will find in the Titan or International tractor plowing outfit the answer to their big problem.

Our original Free Plow Offer was advertised to close on May 1, as that is ordinarily the end of the heavy tillage season. But after weeks of delay thousands of acres remain untilled, and an unexpected need has developed for Titan and International tractor power.

To keep in line with the unusual season we have instructed the McCormick-Deering Dealer in your locality to extend our Free Plow Offer for 20 days. Until May 20 you can buy a Titan or International tractor at the present low prices, and receive a free plow or tractor disk harrow as outlined in our original Free Plow Offer announced February 3, 1922.

Unseasonable weather has created a real emergency that can best be met with good tractor power. Every hour saved now means dollars at harvest time. See the McCormick-Deering Dealer today.

INTERNATIONAL HARVESTER COMPANY
Chicago of America (Incorporated) U S A
92 Branch Houses and 15,000 Dealers in the United States

Facts About Contagious Abortion

By A. B. NYSTROM

Of all the abortions that occur in dairy herds it is safe to say that fully 75 per cent are caused by the organism known as bacillus abortus, discovered by Bang in 1897. This means that 75 per cent are contagious abortions. If the truth were known it is likely that the percentage is even higher than this.

Mode of Infection.

The fact that the disease is contagious and infectious, and at the same time slow to develop, makes it extremely difficult to eradicate from a herd. The bacilli causing the disease have been found in the following places: The uteruses of cows that have aborted; in the uterus and in the milk of some cows that have not aborted, but react to the abortion tests; also in the seminal fluid of bulls that are diseased.

Infection is mainly through the mouth. The discharges from any of the sources mentioned may fall on feed either in the barn or on pasture, and when this feed is eaten by a healthy cow she contracts the disease.

Dr. E. C. Schroeder of the bureau of animal industry, U. S. D. A., recently reported interesting results of the investigations on abortion. Some state experiment stations, notably Oregon, have done some excellent work along this line. These investigations have brought out some facts that are of considerable importance to the dairyman.

Not Spread by the Bull.

The supposition that the bull was a carrier of abortion from a diseased cow to a healthy one at the time of service has had the effect of preventing the widest use of good bulls. The investigations now show that the disease is not spread in this way. A clean bull was used on a cow that was known to have the disease and then subsequently used on a clean cow. In a large number of such trials the clean cow failed to get the disease. It is true that bulls that have the disease in their sexual organs can transmit it to healthy cows, but it has been proved without a doubt that healthy bulls will not transmit the disease from an unclean cow to a healthy one in the process of serving the cow.

Since bulls get the disease by eating contaminated feed, the same as the cows, it is important that bulls do not run with the herd. It is also important to isolate any cow that is known to have the disease. When a cow is to be served it should be done on ground that neither the bull nor the cows have access to.

Dr. Schroeder says: "The community or association bull evidently is harmless so far as infectious abortion is concerned, and he is so without elaborate and troublesome disinfection of the genital organs, provided the precautions already suggested, a bull pen, service on neutral ground, etc., are observed."

The test most commonly used by veterinarians is what is known as the agglutination test. By this test it is possible to determine with surprising accuracy whether or not a cow has the disease.

Dr. J. W. Kalkus of the veterinary department, State College of Washington, states in his recent bulletin, "Abortion Diseases of Cattle," that "The state college is now prepared to make blood tests for abortion disease. Full directions for obtaining the blood and shipping the samples for examination may be had by applying to the college of veterinary science, Pullman, Wash."

Treatment and Prevention.

Knowing that the disease is spread mainly through having healthy cows eat infected feed, it is fairly easy to prevent contamination, provided it is known which cows are healthy and which diseased. The following precautions should be observed in preventing the spread of the disease:

1. Keep the premises clean and free from rubbish at all times.
2. Isolate all animals known to harbor the disease.
3. Burn or bury deeply the aborted foetus and membrances.
4. Disinfect thoroughly the premises where the cow has aborted.
5. Disinfect thoroughly the barn tools used by the attendant in caring for the aborted cow.

The common practice of washing out the uterus with strong disinfectants after a cow has aborted is not a wise practice. The irritation caused by such irrigations tend to retard rather than hasten the healing of the wounds in the uterus. Cows that abort should be properly cleaned and the uterus then treated as any wound.

One might ask, "What effect has good feeding and care on the prevention of abortion?" There is no scientific data available to prove any contention along this line. However, the writer has noticed that the abortion disease is not so common in herds properly housed and fed. Cows are surely able to ward off disease the same as other animals and as man. It would not be reasonable to think that poor feeding would cause the disease, but it is reasonable to think that a well-nourished cow can ward off the attack of the organisms after infection occurs, much better than a cow poorly fed.

In summing up the points to be considered we have the following:

1. Nearly all abortions are of the contagious kind.
2. Infection is through the mouth.
3. The disease is not spread by a healthy bull.
4. Disinfecting the sheath of the bull after he serves a diseased cow is not necessary.
5. Cows should be bred on neutral ground.
6. The agglutination test is fairly accurate in determinating whether or not an animal has the disease.
7. Cleanliness is the best prevention.
8. Good feed and care will lessen the number of abortions.

May Wheat

Little Journeys to the Markets

May wheat refers to wheat for delivery in the month of May as traded in on such grain exchanges as Chicago, Minneapolis, Kansas City, St. Louis, Toledo, Winnipeg and Liverpool. Besides May wheat, contracts are made for delivery in July, September and December and occasionally for other months. Similar contracts are made for the other grains.

The practice of selling for future delivery was in use in a limited way more than a century ago, but it received its greatest impetus with the expansion of the grain belt in the middle west at a time when water was the main reliance for transportation. Chicago, then as now, was the leading market. Dealers would store wheat along the Illinois river or the canal and sell it to arrive in Chicago by a certain date. Much of the grain which accumulated at country points or at the Chicago terminal was sold for May delivery since it could be transported by water after lake navigation opened in the spring to the milling centers in the east in time to apply on these contracts. As a result the May "option" became extremely important.

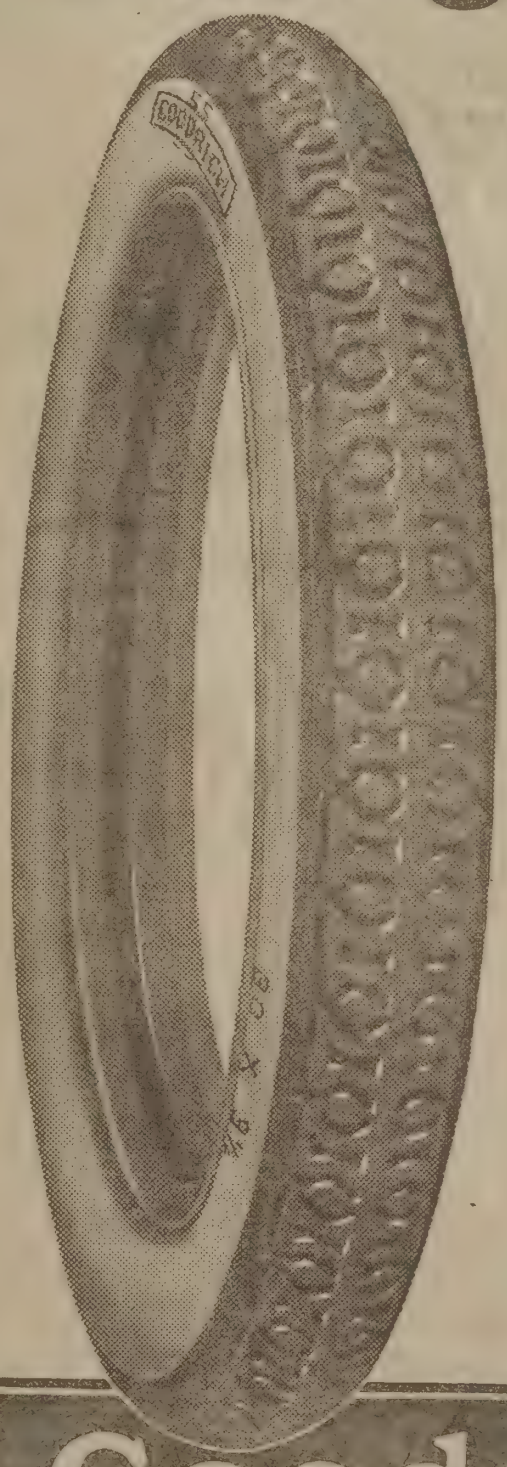
By this means dealers could "hedge" or protect themselves against risk of a decline in price during the winter when the grain could not be moved. Likewise, flour millers and exporters who needed wheat could protect themselves against an advance in price during the winter by buying these contracts for future delivery. Sometimes they were bought in the hope of realizing a speculative profit. Similar contracts for other months came into use at an early date.

At first these contracts were made only by those who had grain in their possession and expected to deliver it to the buyer, but later the trade developed the practice of selling "short," or selling grain which the seller did not possess, but expected to be able to buy later on at a lower price in time to apply on the contract.

Other refinements from the speculator's standpoint followed from time to time until today most of the sales are made by persons who have no grain to deliver and most purchases are made by those who would have no use for grain if it were to be delivered by them. The contracts are closed before delivery day arrives by making a purchase or sale of the amount originally sold or bought. While a certain percentage of actual grain business is carried on through the medium of these contracts, they are chiefly the diversion of doctors, lawyers, beggarmen and probably a few thieves and others who have a speculative itch, but who have no direct interest whatever in the production or merchandising of grain.

Of those who follow this form of indoor sport about 999 out of every 1000 lose money in the long run. A few large operators who make speculation their business and study underlying conditions which govern prices and have plenty of funds to back up their judgment are able to make money by it.

The Newest Goodrich Tire



30x3½ Clincher Fabric

$10.90

also made in 30x3 size

The latest addition to the Goodrich list of tires. It completes the line. It enables your dealer to give you full service under the Goodrich name and trademark.

It is great news for every user of 30x 3½ clincher fabric tires. It is an opportunity to secure Goodrich quality — with the advantage of a price which speaks for itself.

$10.90 will buy this Goodrich "55" — the new tire for the popular light cars. The splendid construction is made better yet by the thick anti-skid tread of scientific design, made of specially toughened rubber.

Your dealer is ready to supply you.

THE B. F. GOODRICH RUBBER COMPANY
Akron, Ohio
HOME OF THE SILVERTOWN CORD

Goodrich "55"
The Tire for Small Cars

LIVESTOCK AND DAIRY

Student Bidders Are Cautious

Mock Sale at State College Brings Out Vital Lessons

Students at the State College of Washington who are studying some phase of agriculture have banded themselves together in what they call, in college lingo, "the All-Ag club," the short abbreviation standing for agriculture. One of the club's annual star performances is a live stock show and sale, held this year April 22.

They call this a "mock" sale, but there is no mockery about it. It is an honest-to-goodness, serious event, except that the bidders pay no money and take home no newly purchased stock. They bid just as they would, however, if they were actually desirous of leaving their money and taking the animals, the sale being a contest in the art of judging of animal values. Prior to the sale a committee of expert stockmen appraise the animals that are to be "sold," and the student the total of whose bids most nearly coincides with the total valuation as estimated by the appraisers is declared winner. Hats off to C. L. Walmark of Spokane, this year's winner of the sweepstakes!



Miss Adah Proctor of Seattle, expert fitter of Jersey cattle and of hogs and good judge of sheep values.

The picture herewith is that of another prominent winner in a second division of the Ag day contest. In order to sell well, animals must be properly fitted for the ring that they may look their best. It takes an artistic eye and hand to do this, which probably accounts in part for the fact that Miss Adah Proctor of Seattle won first in fitting Jerseys and first in fitting hogs. That she had good judgment in the matter of values is indicated by the fact that she was adjudged the best bidder in the sheep division. For her Jersey fitting she was awarded the $25 silver cup given by Waikiki farm, Spokane, while for her art work on the hogs she now has on her mantlepiece the trophy offered by G. O. Swales, Duroc breeder of Johnson.

Bidders Are Cautious.

Conservative bidding, with few exceptions, characterized the mock sale. Remembering last year's mistakes, the bidders proceeded cautiously and only in a few instances did the sale price of the animal greatly exceed the appraised valuation. One animal even sold for less.

Among other winners than those above mentioned were the following in the bidding: D. J. Calhoun of Rosalia and L. G. Le Grant of Spokane won second and third and Oscar Mock of Yakima and E. L. Dennis of Rosalia took first places in the beef and dairy cattle, respectively.

Mr. Le Grant won the cup donated by H. C. Cranke, auctioneer, of Moscow, Idaho, for fitting beef cattle; J. A. Johnson of Illwaco won the trophy given by William

(Continued on page twenty-three.)

LIFE PRESERVERS FOR LIVE STOCK

By DR. E. E. WEGNER, W. S. C.

CONTAGIOUS DISEASES, ARTICLE 8.

Foot Rot



This disease is most common in cattle and sheep as it is quite impossible for the horse to suffer since the entire lower part of his limb is enclosed within the strong horny box known as the hoof. In order for the infection to enter it is essential for the skin or soft tissues to be injured in some way, as infections probably never enter through the unbroken skin. The injuries may be very slight, however, and still be sufficiently large to admit infection.

Predisposing factors include any factors that injure the soft skin between the toes or about the feet. Cattle frequently so injure themselves when their lots are filled with cinders or other material that is rough and liable to get lodged between the toes, where it creates an irritation that harms the skin. Sheep that are carelessly herded on short, stiff stubble pastures are liable to have the feet injured.

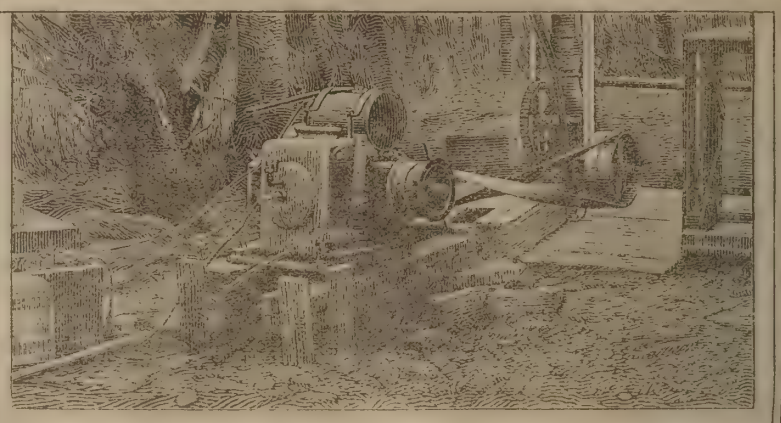
The organism that causes this trouble may also enter and cause sores about the mouth when the membrane has been injured by eating sharp or coarse feeds. This is especially dangerous to the tender mouths of young lambs. Dry barley pasture has been known to do such harm, as would any of the bearded grains.

The Way It Develops.

The trouble first shows itself as an inflammatory area about the injured part. Swelling begins and the injured area spreads and becomes larger, takes on a scab and continues to become more severe. If examined at this time and the scab removed the tissue beneath is seen to be very red like proud flesh. If it is allowed to continue the tissue beneath the scab starts to soften and ulcerate and the scab then loosens and drops off, this process of ulceration continues and the lesion becomes deeper and deeper until it involves the tissue high up between the toes. In other cases it works downward under the horn of the wall of the claw and loosens that part. The infection works slowly, but surely, and the animals become lame, gradually getting worse until they may be quite unable to place weight on the foot. In bad cases the horn of the claws may be entirely loosened or the infection may extend upward and open the joints of the toe above the claw, or still farther upward and open the higher joint or involve the cords at the back of the foot and weaken them so that they break and let the toes



SURE POWER—AND GOODYEAR BELTS



"My Goodyear Klingtite Belt operates smoothly and powerfully, under all weather conditions. A belt of another material that I had on the same pump jack was as useless as a piece of rope. This one is strong and close-gripping."
—ELMER THOMPSON, Farmer, Little Sauk, Minnesota

You can leave it out there alone, without a man to watch or tend it, and be sure your Goodyear Klingtite Belt is holding steadily to the pulleys and delivering full power every time the engine turns.

It goes right on working through winter snows, spring rains, and summer heat. Atmospheric changes do not affect it. It keeps a slipless grip on the pulleys.

For every farm power duty, there is a Goodyear Klingtite Belt, designed, built and tested specifically for farm service.

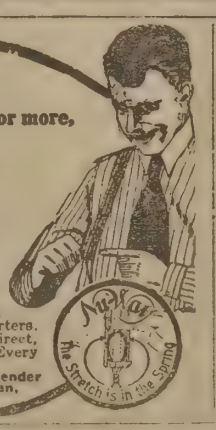
Your local dealer in hardware or implements has Goodyear Klingtite Belts for sale. For further information about their economical and trouble-free performance in farm service, write to Goodyear, Akron, Ohio, or Los Angeles, Calif.

GOODYEAR

KLINGTITE BELTS

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You'll Get A Year's Wear or more, when you buy Nu-Way or EXCELLO RUBBERLESS SUSPENDERS



No rubber to rot. Phosphor Bronze Springs give the stretch. Ask Your Dealer for Nu-Way Suspenders, Garters and Hose Supporters. If he hasn't them, send direct, giving dealer's name. Every pair guaranteed
Nu-Way Strech Suspender Co., Mfrs., Adrian, Mich.

Nu-Way the Stretch is in the Spring

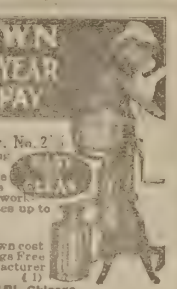
Stacked Over 5 Tons of Hay Per Hour says Thomas Carter, Bridgeport, Neb., about The "Jayhawk" HAY STACKER



Saves time, labor and money. Elevates full load of sweep rake 20 to 25 ft. Light, easy to operate—no ropes or pulleys. Wood or steel. Sent direct from maker to you! No middleman's profits to pay. Write for Catalogue and prices TODAY.

F. WYATT MFG. CO. 942 N. 5th St. Salina, Kan.

Only $2 DOWN ONE YEAR TO PAY



$44 Buys the New Butterfly Jr. No. 2 Light running, easy cleaning close skimming, durable.

NEW BUTTERFLY Separators are guaranteed a lifetime against defects in material and workmanship. Made also in four larger sizes up to No. 8 shown here; sold on

30 DAYS' FREE TRIAL

and on a plan whereby they earn their own cost and more by what they save. Postal brings Free Catalog Folder. Buy from the manufacturer and save money. (1)

ALBAUGH-DOVER CO., 2183 Marshall Bl. Chicago

TARX SOLIDIFIED DISINFECTANT

A Better Dip in a Handier, Cheaper Form

Comes in cube-marked cakes instead of cans. Solid like soap. You simply cut off and drop one of the handy Tarx cubes in a gallon of water and you have 1 gallon of the best dipping and disinfecting solution you ever used.

Each Cube Makes 1 Gallon

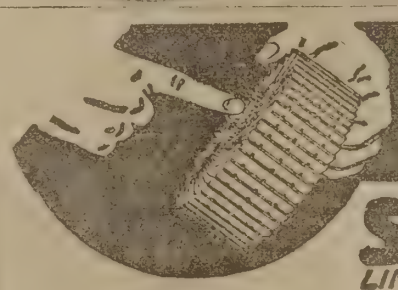
No guess work—no waste—no bother—no leakage—no breakage. You pay nothing for bottles, barrels or cans. No freight on factory water which you can just as well add at home. Easily shipped anywhere. Packs in small space. Keeps indefinitely.

Order Direct from This Ad

Send only $2.50 (check or M. O.) for 5-lb. package. Makes 150 gallons. Shipped prepaid. If you are not pleased your money will be refunded. You take no risk. Send today.

TARX CHEMICAL CO. (5)
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A 40 Lb. PACKAGE MAKES 1200 GALLONS

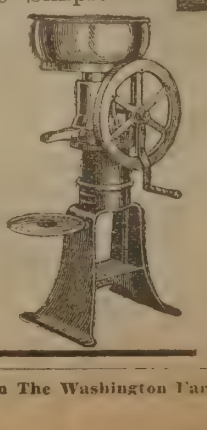


It's the LINK BLADE does it!

THE NEW SIMPLEX LINK BLADE SEPARATOR

GETS ALL THE CREAM!

A Simplex separator gets all the cream. The link blade—an exclusive feature—does it. The Simplex holds many close skimming records. A light running machine, sturdily constructed. Easy to wash and keep clean. Pays for itself in a very short time. Made for any kind of power. Ten days' free trial. Send today for catalogue and information.



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Everything for the Dairyman.
91E-93 Front Street, Portland, Oregon.

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A Full Line of Dairy Supplies.
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In writing advertisers, be sure to say you saw their advertisement in The Washington Farmer



"Listen to me son"

"YOU'LL soon have to earn your oats. But, before you feel the pinch of a girth, here's one bit of horse sense. "WHEN you get a good boss — work with all four feet and both ears. It's easy to tell a good boss. A good boss uses Gombault's Caustic Balsam.

"AND it's true! The greatest horse breeders, the finest trainers, the wisest owners all use"—

GOMBAULT'S CAUSTIC BALSAM

It does the work better than firing. Hair will positively grow back natural color.

A reliable remedy for Curb, Splint, Sweeny, Capped Hock, Strained Tendons, Founder, Windpuffs, Skin Diseases, Thrush, Spavin, Ringbone, Throat and Bronchial Troubles. Will not scar or blemish Supercedes all firing and cautery.

Sold by druggists, or sent by parcel post on receipt of price $1.50 per bottle.

AS A HUMAN LINIMENT

It is unsurpassed for muscular and inflammatory rheumatism, sprains, sore throat, burns, bruises, cuts, etc.

The LAWRENCE-WILLIAMS CO.
Cleveland, Ohio

GOMBAULT'S *Caustic* BALSAM



DR. HESS DIP *and* DISINFECTANT

Use the sprinkling can about your premises—the dipping tank where the occasion demands. For your hogs, a wallow is the most convenient, and quite effective. To every 70 to 100 gallons of water add one gallon of Dr. Hess Dip and Disinfectant. Then your premises—the cow barn, the stables, the pig pen, the poultry house, the sink, drains, closets, cesspools—everything, everywhere, will be pure and healthful.

You can dip, or you can spray or sprinkle, or apply with a sponge or brush, Dr. Hess Dip and Disinfectant to the animal body. There's scarcely an animal parasite, skin disease, or infection that Dr. Hess D. and D. will not remedy. *Guaranteed.*

DR. HESS & CLARK Ashland, Ohio

Glance over the bargains on the "Want Ad" page.

turn up in front when weight is placed upon the foot. Any and all of these difficulties are commonly encountered when the disease is allowed to run an unmolested course.

Prevention Is Best Policy.

In any disease a course that prevents is more valuable than one that cures and for that reason care should be taken to protect the feet of the two-toed animals. If they can be kept upon clean ground that is as free as possible from sharp objects that injure the feet the trouble will be greatly lessened. The danger is increased by having the animals in a muddy place, as the constant moisture softens the skin between the toes or causes chafing and irritation which is sufficient to admit the infection.

It is necessary in all such infections to use antiseptics liberally and to provide a way for them to reach the deepest parts of the diseased area. Antiseptics applied to the surface are of very little value after the infection has become deeply imbedded in the tissues, and in such cases to be of value the diseased parts must be exposed and the dressing applied directly to the deepest parts. The organism is not difficult to kill if antiseptics are applied directly to it, but it has a way of protecting itself by burying deeply in the tissues where it escapes the antiseptic altogether. Of course, when treatment has been started after severe damage has already been done there may be no chance of getting a recovery. Certainly not if the joints have been opened or the cords severed, but when treatment has been applied in time it usually meets with success.

The treatment may be best applied after the liberal surgical removal of the diseased tissue and this, especially in severe cases, should be left for the veterinarian who knows the location of the important nerves and blood vessels. In mild cases scraping and antiseptic dressings very frequently succeed.

VETERINARY

By DR. S. B. NELSON.

Dislocated Hip.—We have a young cow that is to freshen this month. About a month ago a train struck her and dislocated her left hip. Could it be put back in place? F. A. G.

Locke, Wash.

If it is at all possible to reduce a dislocation of the hip in the cow it would have to be done under choloroform, but you will find, I think, that the best thing to do is to let her go. She will always be lame, but nature will throw a healing pad around to somewhat protect her.

Paint Udder.—About two weeks before my cow freshened her bag was so full and hard that I milked it out every morning and evening and rubbed it with warm water and salt. Now the left side does not give more than a cupful at a milking and the right side is giving about a gallon at a milking, but the back teat on the left side gives lumpy milk. Before she was dried up she gave as much milk from one teat as from the others. J. M. B.

Orting, Wash.

Paint the affected parts of the udder with the following liniment: Tincture of iodine three ounces and soap liniment five ounces. Apply this after each milking.

Wash Out Cavity.—I have a cow that was dehorned early in October. One horn cured over, but left one still extends the white gelatine-looking substance.

Centralia, Wash. W. L. M'K.

There is probably a splintered piece of bone on the one side or an infection of the membrane. The cavity of the head should be washed out with a 2 per cent solution of lysol or a solution of potassium permanganate. You might use the latter first because you can wash it out, using a larger quantity of the solution. It should be just a fairly good purple and not too deep. The above treatment I think should be of value in this case.

Red Water.—I have a cow that passes bloody urine. She has been this way for nine months and seems to be getting worse. She seems to feel good and eats well. Can I do anything for her? L. S.

Vancouver, Wash.

Red water in cattle is a specified disease which affects animals particularly in the costal regions of this state and British Columbia. This disease is strictly a local affection of the bladder, not affecting the kidneys or any other organ in the body and as far as we know is not infectious and not hereditary. For this reason, as long as an animal affected with the disease is in good physical condition we consider the milk perfectly wholesome and also consider that such animals can be disposed of for beef. Frequently when an animal is bleeding very profusely a dose of epsom salts, about one pound, dissolved in a quart of warm water as a drench, will cause a temporary subsidence of the symptoms. It is also well to lessen the amount of drinking water the animal gets and feed dry feed for a few days instead of succulent feed. There is nothing I can recommend as a specific cure for this condition.



You'll Enjoy Working These Little Wonders In Your Home

IT'S surprising how much you can accomplish in beautifying your home with a little paint and work "that is really fun."

Floors, woodwork, furniture, bric-a-brac and other home things are very easy to do over when you know how. The reward in improved appearance is worth many times the cost and effort required.

We have a special "Home Service Paint Department" which devotes its time to telling women just how to refinish home things successfully.

Just write this department, describing what you want to paint, enamel, or varnish and how you want it to look and our experts will tell you exactly how to do it.

We make special paints, varnishes, enamels, wall finishes and stains for you to use. They are the finest materials of their kind that we know. We have been making these products for 73 years.

Fuller's Free Advice and Fuller's Products will be very helpful to you in beautifying your home. Take advantage of them now.

Free Advice

Write us now—a postcard—for Fuller's "Home Service" Paint Book, which tells you just what to buy for every kind of painting. Send full description and get our free advice on any kind of painting you want to do.

Decoret Varnish Stains for refinishing furniture and interior woodwork. They stain and varnish in one operation. Match the color of any natural wood. 8 colors.

Silkenwhite Enamel produces a rich, beautiful finish on woodwork and furniture. Flows out smoothly and does not show brush marks. Produces a mirror-smooth surface. Stays white and wears long. Gloss white, semi-gloss white and 8 colors.

Rubber Cement Floor Paint: A durable, sanitary, waterproof paint for floors of kitchens, closets, etc. Spreads easily, covers well. Dries hard over night. 12 colors.

Fullerwear: An all-purpose spar varnish which is unexcelled for all interior and exterior surfaces. Fine for linoleums, floors, woodwork, furniture, front doors and vestibules. Dries hard and glossy. Very durable.



Also makers of House Paint, Fifteen-for-Floors Varnish, Washable Wall Finish, Auto Enamel, Porch and Step Paint, PIONEER WHITE LEAD, Fuller's Hot Water Wall Finish (kalsomine), Silo Paint, Tractor Paint, Milk Can Enamel, Fuller's Oil Stain, Implement Paints, Barn and Roof Paint.

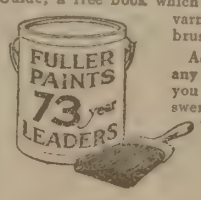
Fuller's SPECIFICATION "Home Service" Paints
Varnishes - Enamels - Stains

Manufactured by W. P. Fuller & Co., Dept. M-65, San Francisco

Pioneer Paint Manufacturers for 73 years. Established 1849.
Branches in 19 cities in the West. Dealers Everywhere.

Free Book—Send Coupon

Send coupon for Fuller's "Home Service" Paint Guide, a free book which tells you how to paint and varnish home things, what brushes to use, etc.



Ask our Service Department any question about paint which you would like to have answered—complete detailed advice is given free.

W. P. Fuller & Co.
Dept. M65, San Francisco.

Please send me without charge a copy of your "Home Service" Paint Guide.

Name.....

Address.....

City..... State.....

POULTRY AND RABBITS

Leg Weakness

By W. D. BUCHANAN, Poultry Extension Specialist, Washington State College.

Leg weakness is not a disease. It is usually the result of feeding too rich feed under too close confinement. Protein, which is usually fed in milk, eggs or mash, and sometimes in all three at the same time, can be utilized by the chick only when it has a change to exercise. If the exercise is limited, the protein must be limited. Under these conditions the chick will not grow so rapidly, but it is better to have slow, steady growth than rapid growth that ends in leg weakness.

In case your chicks have already developed leg weakness, I would suggest that you get them out of doors at once. Put one teaspoon of baking soda in each quart of drinking water for half a day. Give plenty of charcoal, grit and green feed, and slow up on grain and mash. If you are feeding a rich mash, cut it down by mixing in an equal portion of bran. Clean the house and feed the grain in a clean, fluffy litter. In extreme cases it is sometimes necessary to follow the soda and salts with one feed of a ration composed of two parts chick mash and one part charcoal, wet with sour milk.

Poultry Problems

By W. D. BUCHANAN, Poultry Extension Specialist, Washington State College.

Will you kindly give me a feeding schedule for turkeys during the laying and nesting period. I have 35 hens running together and there is no forage yet except grass and gravel. I am feeding wheat and fresh horse meat and would like to know the amount to feed daily and if there is danger of overfeeding or underfeeding. I would also like to know about Egyptian corn as to its feeding value for poultry. S. P.
Plum, Wash

Give your turkeys free range. Feed lightly twice a day equal parts of oats, wheat and corn. If hulled oats are used, I would recommend a mixture of one part wheat, one part corn and two parts oats. There is great danger of overfeeding, especially of the horse meat. Egyptian corn has almost the same feed value as our Indian corn, but is not so palatable. Turkeys should have plenty of green feed, mangles, beets, cabbage or growing grain, etc. If you have 35 hens you will need two good, vigorous toms, used on alternate days.

SCALEY LEGS.

I have some hens that have scabs on their feet and legs and some of them have swellings on their feet, usually accompanied by a swelling about the head.
Plum, Wash. S. P.

The scabs on the legs are probably due to "scaley legs," a condition produced by a small mite that works under the scales of the legs. To cure keep everything clean and bathe the legs in a solution of coaloil and lard or oil—about two-thirds coaloil. Do not get any in the feathers. The swelling on the head, if accompanied by a discharge at the nostril, is probably roup or an advanced stage of colds. Improve your ventilation.

LEE'S LICE KILLER

Kills lice, mites, bed bugs, etc., affecting poultry. Spray or paint on roosts, etc. Gets body lice on chickens, too. Works while they sleep. No dusting, dipping, greasing or handling. Saves lot of unpleasant work. At most towns, stores handling Lee Poultry Supplies. Write for information and FREE Book.

GEO. H. LEE CO., Dept. F-46 OMAHA, NEBR.

SPOKANE SEED CO., SPOKANE, WASH.
PORTLAND SEED CO., PORTLAND, ORE.
Pacific Northwest Distributors.

CREAM WANTED

Correct tests, honest weights, fair treatment guaranteed. Make a trial shipment and get results.

HAZELWOOD CO.
Spokane, Wash.

DURO

AN ELECTRIC-DRIVEN AUTOMATIC WATER PRESSURE SYSTEM.

All Sizes

Complete system. $123.00 and up.

A Fair Time Payment Plan

FARM EQUIPMENT CO.
310 So. 1st Ave.,
Seattle.



CAN'T TELL.

I have some hens that want to set. I would like to know if there is any way to tell before the eggs are hatched whether they will be hens or roosters. C. E. R.
Buena, Wash.

There are many plans offered, but I have never found any of them reliable.

HOME MADE BROODER.

Is a home-made brooder practical and is it necessary to have it heated? E. O. J.

A home-made brooder is practical if well made. A brooder for 100 chicks might be made of double wall construction, 30x30 inches, and eight inches high, ventilated and adjusted so that the hover could be raised as the chicks grow. This is the old fireless brooder. A heated brooder is better.

BROODY HENS.

What can I do to break up hens that want to set? C. W. M'C.
Oakesdale, Wash.

Make a wire cage with slatted or wire bottom. Set this cage up or hang it up where the broody hens can see the rest of the flock. Then give plenty of feed and water.

RAISING TURKEYS.

I would like to know something about raising turkeys. A. G. L.
Everett, Wash.

If you want valuable information on raising turkeys, write to the United States department of agriculture, Washington, D. C., for farmers' bulletin No. 791.

MATING GEESE.

I hatched some geese two years ago, a gander and two hens, from neighbor's eggs. They hatched well, getting four out of five eggs, but last year the eggs I set did not hatch or this year so far. What can be the cause? Should I change the ganders another year. They are in pretty good pasture and fed grain once a day and a mash of millrun and milk with a little salt and fine sand. I keep oyster shell and grit before them and plenty of water. J. I.
Napavine, Wash.

Your geese last year were too young to breed well, and they were and are too closely related to give you good hatching eggs. Are you sure that one of them is a gander? If so, it would be well to trade him for one not related to your geese.

Rabbit Income

Inquiries have come to the attention of A. D. Norris, in charge of the rabbitry at the experiment station at Puyallup, Wash., regarding the amount of money that can be made from one doe in a year's time. Mr. Norris quotes the following figures from records which have been kept at the station rabbitry during the last year.

From 28 does fed from May 1, 1921, to February 1, 1922, an average of $5.64 was cleared after paying for all feed. This, of course, was from the sale of dressed rabbits alone, since there were none of the animals sold as breeding stock.

Mr. Norris points out the fact that the local markets demand but a comparatively small amount of rabbit meat in the summer, due to the large amount of spring chickens which are thrown on the market at this time. In the winter, however, there is a greater demand for rabbits, since they can be produced in a uniform quality.

"This slump could be overcome by working up a special trade, such as many of the rabbitries do," said Mr. Norris. "And it seems to me that, although in some cases the production of one doe might exceed the above amount, it seems only fair to place her production at $5 per year as a general rule. This is based on a production of four litters a year, with five to the litter. More rabbits in the litter will result in smaller rabbits at the end of fattening period, and more litters to the year is apt to dividualize the doe."

FEED THE CHICK MILK.

Skimmed milk, buttermilk or sour milk should be before the little chick at all times, after he is 2 or 3 days old. Sweet milk may be fed if it is kept sweet, but it is not well to change from one to the other with them. Grit should be provided. Ground bone, if not fed in the mash, should be given twice a week in limited amounts, or cut bone if it is kept fresh and not overfed.

LET THEM ROOST HIGH.

A high roost in a shed open on the south side is desirable for the grown turkey.

The Thrifty Citizen Who Caught the Plugged Nickel



Mr. Brown had swallowed his lunch and had paid his bill. Cautiously he counted his change. "Here!" he said, sharply, "Take back this plugged nickel and give me a good one!"

Mr. Brown walked proudly out. They couldn't fool old Brown.

But old Brown had fooled himself.

Brown's day was heavy and dull. He lacked "pep." There was a mid-afternoon drowsy spell when he needed to be awake—the direct and natural result of heavy, starchy breakfasts and lunches, taken on faith and without question as to value—just because the food looked and tasted like food.

Thousands of shrewd business men who count their change, take their food for granted.

That's what builds up the sanitarium business, and puts the tired "all-done" feeling into the mid-afternoon of a business day.

Grape-Nuts is a scientific food whose delicious, appetizing flavor and crispness are an introduction to well-balanced nourishment—a nourishment easily and quickly assimilated, so that body, brain and nerves are well fed and kept free of the stored-up poisons left by so many ill-selected foods.

Served with cream or good milk, Grape-Nuts is a complete food, always ready, always a delight to the taste—and always a safe selection for the man who thinks his stomach is entitled to some of the same protection he gives to his pocket.

Grape-Nuts—the Body Builder

"There's a Reason"

Made by Postum Cereal Co., Inc., Battle Creek, Mich.

GENERAL ADVERTISING.

Sure Quick Death for Rats and Mice

Remarkable Triple Strength Virus Kills Every One—Not a Poison

You can now easily and quickly kill all rats, mice and gophers with Triple Strength Virus—the most powerful concentrated virus known—the sure, safe way to destroy rodents. Positively not a poison. Harmless to humans, pets, poultry, stock, etc.—affects only rodents.



RATS DIE OUTSIDE

Rats flee because they become infected with a plague that affects the heart, blood vessels and lungs, destroying the blood corpuscles and causing suffocation. Rats rush outside to get fresh air and water. When the diseased rats get outside, they never get back for the disease is then so far gone it kills them. No odor, no dead rats to handle, no live rats to kill.

SPECIAL INTRODUCTORY OFFER

To introduce this powerful Triple Strength Rat Virus, we will make every reader of this paper—for short time only—a special offer of a regular $2.50 bottle for only $1 postpaid. This $2.50 bottle Triple Strength Rat Virus is enough to clear a big poultry house, home, barn or yard of rats and mice. Send order today, sure. Give it according to directions—if after 30 days' trial you find any rats or mice—we will refund your money without question.

If not convenient to send money today—just send your name and address, a postal will do—pay postman on arrival. Remember, it costs you nothing if it does not do all we claim.

Agents Wanted in Every Community.

GOLD SEAL LABORATORIES
839 Roosevelt Road, Dept. 445, Chicago, Ill.

Glance over the bargains on the "Want Ad" page.

GENERAL ADVERTISING.

Wipe Out Every Rat and Gopher

Amazing New Discovery Quickly Kills Them All—Not a Poison.

Rats, Mice, Gophers—in fact all Rodents can now be wiped out easily and quickly. Imperial Virus will do it. This new discovery is a fluid, true Virus. Entirely harmless to humans, poultry, stock, pets, etc.



Infects Rodents only.. Greedily eaten on bait. Sets up burning fever. The pests communicate it to others, and all die outside, hunting air and water. Imperial Virus is put up in sealed bottles, thus insuring full strength and potency. Only safe, sanitary method to overcome these pests. Protect your Poultry, especially Baby Chicks and Egg Hatches.

YOU CAN GET YOURS FREE

Here's how! Send $1.00 today (currency, M. O., Checks, etc.) and we will give you by return mail, postpaid, two regular, full sized (double strength) $1.00 bottles of Imperial Virus. Use one to rid your place of these pests, and sell the other to a neighbor, thus getting yours free. Special inducements to represent us.

If more convenient, send no money, just your name and address to Imperial Laboratories, Dept. 440, 2110 Grand Ave., Kansas City, Mo. Pay postman $1.00 and few cents postage when two bottles arrive. Guaranteed to do the work to your entire satisfaction within 30 days or your $1.00 will be cheerfully refunded.—Adv.

Why pay cash for something when you can trade for it? See the "Want" ads this issue.

ORCHARD AND GARDEN

1921-22 Apples

Barrel Scarcity Is Offset by Larger Box Production

The main features of the 1921-22 apple season were the serious shortage in the barrel apple areas, the extremely active movement from the box apple states, chiefly Washington, and the steadiness of the markets.

The barrel apple territory comprises that part of the United States north of the Ohio river and east of the Mississippi, together with the northern half of Virginia and Maryland, and the mountain sections of Missouri and Arkansas. The leading section of this territory is western New York.

From October to December, 1921, shipments of boxed apples were 66 per cent greater than for the corresponding period in 1920, and shipments of barreled apples were 56 per cent less. This shift in source of supply resulted in a net decrease in total shipments because of the fact that normally the supply of barreled apples is much greater than that of boxed stock. From January 1 to March 25 the box apple movement was 24 per cent above that of the same period in 1921, whereas shipments of barrel stock were 66 per cent less.

This season to March 25 the shipments from box apple areas filled 53,981 cars, compared with 33,896 cars to the same date last season. Shipments from barrel areas were 29,518 cars, compared with 69,934. From the end of March until June only a few thousand carloads are usually shipped.

Heavy shipments from Washington, Oregon, and Idaho had a natural tendency to lower the price levels of boxed apples in consuming centers, but at shipping points sales have been made at prices almost the same as last season's. In the producing sections of Washington the range was $2 to $2.25 f. o. b. until March, when the average rose to $2.50 per box for extra fancy Winesaps, medium to large sizes.

There has been a tendency this year to ship more apples in bushel baskets. Many carloads, principally from New York state and Idaho, were packed in that kind of container, which is generally cheaper than the standard barrel or standard box.

The principal source of imported apples is Canada. British Columbia in the west and Nova Scotia in the east shipped many boxed and barreled apples, respectively, into this country during the past season. The total imports from September, 1921, to January, 1922, including boat shipments, from the eastern provinces, equalled at least 1500 carloads. This movement was caused partly by the shortage of apples in the eastern producing states and partly by the fact that exchange rates were unusually favorable to Canadian shippers.

Although the exports for the calendar year 1921 exceeded those for 1920 by 139,013 barrels, the exports for the present apple season have not been half so great as during the 1920-21 season. From September to January, inclusive, last season, total apple exports were 1,850,757 barrels, whereas during the same period this season the total was 705,046 barrels.

Soil Fertility in Orchards

"The problem of soil fertility is the most outstanding one in fruit production," said Clayton L. Long, horticultural extension specialist, in a recent talk on the subject. "There are four important steps in orchard management: Soil building and handling, pruning, pest control and thinning, and that which has to do with soils is the most fundamental and important of all."

"The orchard tree takes up from the soil seven elements without which no tree could thrive. Calcium, magnesium, iron and sulphur are there in abundance for years. Potash is abundant also, and phosphorus. But nitrogen, the one element that is lowest in all our soils, is a truly limiting factor. It comes from organic matter, the other six from mineral matter.

"Three other elements are just as important as these. They are carbon and oxygen, which the tree takes from the air, and hydrogen, which it obtains from moisture in the soil. Ninety-five per cent of all the tree's food materials come from the air, and only five per cent from the soil. The former are taken care of by proper thinning, while the latter are the ones which furnish our problem of soil fertility. The problem is how to produce materials in the quantities needed, and the ideal is to produce them in just the proportion that they are used up.

"On ordinary soils and under ordinary farm conditions from three to five times as much nitrogen as the crop uses is lost from the soil by leaching (principally) and oxydation. Through these losses, and with what the trees use, we can estimate the requirements per acre at 200 pounds of nitrogen, 20 pounds of phosphate and 75 of potash. These can be supplied, respectively, by applying 1250 pounds of nitrate of soda, 125 pounds of superphosphate and 150 pounds of sulphate, but growing an annual cover crop of vetch and plowing it under when a foot high will supply 120 to 250 pounds of nitrogen per acre, and one-third to two-thirds of it will be taken right out of the unlimited supply in the air. A cover crop not only supplies all the nitrogen required, but also prevents leaching and ozydation. Saving the leaves that blow from the orchard trees provides more than half of the 50 pounds of nitrogen required for tree food, and nothing is better than stable manure if it can be obtained, but the one thing we can all do to maintain soil fertility indefinitely is to grow an annual cover crop. It is about our only chance to keep our farms producing."

50,000 REFRIGERATOR CARS.

Fifty thousand refrigerator cars will be needed this year to transport the deciduous fruit crop of northern California to markets in the east and middle west, or about 10,000 cars more than were used last year.

J. B. HART, Walla Walla, Wash.—The Washington Farmer is a fine paper. I like it fine. Will show it to the neighbors. I get lots of good things out of it and am always glad when it comes.

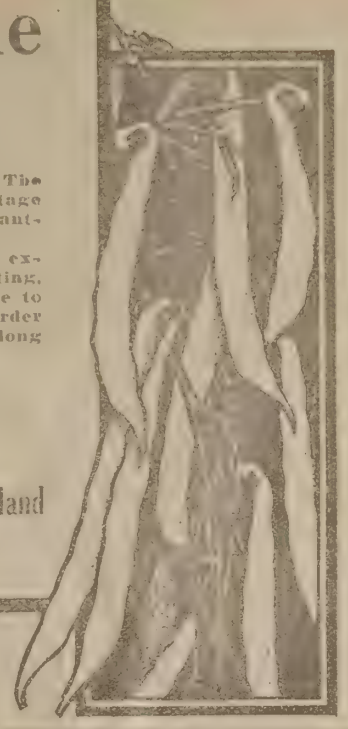
How late is the Season?

A good three weeks we should say. The experienced grower will take full advantage of conditions by getting more ground planted to late crops such as beans and corn.

Lilly's big 1922 catalog shows many excellent varieties good for extra late planting. Your dealer can supply you; if not, write to our nearest office and we'll give your order immediate attention. Our seeds have long since proved "Best for the West."

ASK YOUR DEALER OR WRITE

Seattle LILLY'S Portland



Read the "Want Ad" page this week for good offers of all kinds.

SO much has been written concerning tire construction and materials, that it *is* difficult for the car owner to determine values by any other method than that of actual performance.

But this is a long and costly procedure. There are more makes of tires than there are years in a man's life. A lifetime cannot be spent in experiment. The wise buyer quickly appreciates that he must limit experimentation, and advisedly turns to reputation as his guide.

This is exactly the route we hope you will take with Hoods. From the first, Hoods have maintained an enviable reputation, often to the point where this reputation has led to the belief that Hoods are higher in price. You can depend upon the Hood reputation for quality, and it is a simple matter to prove that Hoods are not higher in price.

At the sign of
The Hood Service Man



"There's often trouble under the hood, sir—but seldom over the -HOOD-"

-HOOD- CORDS

Attention, Farmers!

Here Is Positive Proof of the Quality of Inland Seeds

The following tests of the purity of Inland Seeds have recently been received from reliable and disinterested sources:

	Pct. Pure
Alfalfa	99.86
Med. Red Clover	99.60
Mam. Red Clover	99.72
Alsike	99.60
Yellow Blossom Sweet Clover	99.38
Wheat	98.70
Timothy	99.20
Red Top	96.53
Kentucky Blue Grass	93.65
Orchard Grass	97.06

Samples were taken at random from our stock. These percentages are not guaranteed, as no two analysts give exactly the same reports.

Ask for Inland Seeds. Their quality is unquestioned.

Inland Seed Co.

917 First Avenue.
Spokane, Wash.

Say "Nope"! to your Grocerman



if he tries to put over on you something "just as good as"

Red Cross Ball Blue

In the words of the immortal Josh Billings—"There aint no sich thing." There is positively nothing as good as, or equal to RED CROSS BALL BLUE for producing clothes of such white purity as bring a blush to new fallen snow.

Try It **5 Cents** ***Prove It*** **Everywhere**

Write US **Pelts** Ship US

WE ARE PAYING TOP PRICE.

Hibbard-Stewart Co.

Hibbard Building, Seattle.

LOST If you can't locate a thing, it might as well be lost. Maybe the very thing you want is offered on our "Want Ad" page in this issue.

Decentralization of Population

Howard Elliott, the widely known president of the Northern Pacific system, who always speaks with words of wisdom, recently made an address to his classmates of the class of 1881, Harvard university, in which he quaintly describes his class as "train 1881." In a list of things to do to keep the Harvard train number 1881 and all trains on the right track, he gives as one of a half-dozen rules to follow, "decentralization of population."

China is always thought of as having an overcrowded population—overcrowded to its own ruination. Yet that vast country has vast, boundless, unsettled and undeveloped tracts of land. Every great city has its congested quarters where human beings are crowded like rats in rat holes. The force of cohesion becomes so strong in such cases that once within its grasp the human being can not break away from it, but degenerates until he becomes "the man lowest down."

It is good that Mr. Elliott sees these tendencies in America afar off, and urges his classmates to combat them. It is another illustration of the decline of agriculture, the disturbance of the equilibrium of industry, and the national character of the problem which our statesmen, awakening slowly, look upon as exclusively a farmer problem. It is a farmer problem, but far more also is it a problem of the laborer, the city dweller, the "business man" in fact, the problem of all.

It is not a "class" problem. Remedial legislation will not be "class" legislation. "Doing for the farmer," "charity to the farmer," and such phrases creeping into the press, the utterances of those who have grown fat on an artificial system of industry, do not truly or rightly describe farm loans and remedial legislation, such as agricultural tariffs and freight reductions on farm products.

You can decentralize population by making farming on the whole profitable, and in no other way.

Taxing systems and tariff discriminations more and more make farming the victim of artificial and unfair discrimination. By all means, speed the cry "decentralize population."

W. J. Bryan

THIS YEAR'S WOOL CLIP.

The first consignment of the 1922 wool clip, totaling 160 tons, went east aboard the steamship Harry Luckenbach, which left Portland harbor April 18. The clip from the three northwestern states probably will total 50,000,000 pounds, and a good share of it will go through Portland to the eastern seaboard.

SEIZURE OF NARCOTIC DRUGS.

During the last six months federal and police narcotic agents have seized drugs valued at $144,000 at drug peddlers' prices. According to the report from Seattle, these drugs have been shipped to headquarters in San Francisco.

SUGAR MADE FROM BEETS.

Sugar from white beets was first produced in 1747. One-half of the sugar now consumed in France is made from beets.

FARMERS' WANT ADS

This is the farmers' "want," "sale" and "exchange" department for small advertisements of farmers, including live stock and poultry.

Advertising rates for ads running 1 to 3 times, 10c per word per insertion, with a special rate to Farmer subscribers, as follows: Ads running 4 to 12 times, 9c per word per insertion; ads running 13 times or more, 8c per word per insertion.

All commercial and land advertising 10 cents per word each insertion. Open also to nonsubscribers.

In using these columns advertisers must observe: (1) No advertisements will be inserted for less than $1.00. (2) Every word, number and initial, including name and address, must be paid for. (3) New advertisements, changes of copy or cancellations must reach general office, Spokane, Wash., 10 days in advance of publication date. (4) Cash must accompany order.

Above rates include insertion in The Washington Farmer, The Idaho Farmer and The Oregon Farmer, which constitute the Pacific Northwest Farm Trio, 46 Review Building, Spokane, Wash.

HELP WANTED—MALE 3

WANTED — SALESMAN WHO CAN SELL high-grade, dependable nursery stock; several counties in Oregon, Wash., Idaho and Montana now open for assignment. Our selling contract will interest you. Address Albany Nurseries, Inc., Albany, Ore.

EDUCATIONAL 45

EARN MONEY QUICKLY—THERE'S NO LIMit to one's earning capacity in business. And this great business college after training you thoroughly, places you in a paying position. Courses include baking, stenography, accounting, private secretarial. Write for free catalogue. Behnke Walker Business College, Portland, Ore.

FRESH FOOD PRODUCTS 51-1

WHITE ALFALFA. SWEET CLOVER honey; 1 60-lb. can, $7.50; 2 60-lb. cans, $14.50; six 10-lb. cans, $8.50; three No. 10 pails, prepaid third zone, $5.50. Wells D. Rose, Sunnyside, Wash.

HONEY—FINE QUALITY ALFALFA, SWEET clover; 60-lb. can, $7.50; 2 cans, $14.50; three 10-lb. pails prepaid, second zone, $5. Harry Fisher, Prosser, Wash.

SMOKED SALMON, 5-POUND BOX, $1.25; salt salmon bellies, 5 pounds, $1.25, delivered by mail. Coffin Fish Co., Seattle, Wash.

HONEY—FIRST-CLASS ALFALFA, SWEET clover honey; 1 60-lb. can, $7; two cans, $13.50. A. L. Traner, Touchet, Wash.

WORLD'S BEST CLOVER HONEY, 60 pounds, $6.15; two 60s, $12. Browne, Box 499, Twin Falls, Idaho.

MISCELLANEOUS—FOR SALE. 60

SASH AND DOORS—O. B. WILLIAMS CO., 1943 First ave., So. Seattle. Chicken house sash, 20" wide by 25" high, 80c; a dozen different sizes in stock for immediate shipment. Skylights for chicken houses, 36"x40" price, glazed, $2. This is the size recommended by the Western Washington experiment station. We carry them in stock for immediate shipment. Sash and doors for all purposes at lowest prices. All orders receive prompt attention. Our large illustrated catalogue No. 35, showing full line of building material and built-in fixtures for the home, free on request. O. B. Williams Co. Established 1899.

TOBACCO, NATURAL LEAF—SWEET AND mellow hand-picked chewing or smoking, 5 lbs., $1.50; 10 lbs., $2.50; smoking, 10 lbs., $2. Furnish free recipe for preparing. Quality and delivery guaranteed. Farmers' Tobacco Exchange, Sedalia, Ky.

PIPE — NEW AND SECOND-HAND, ANY size; low price; standard grade roofing paper at a big saving; belting, all plies, all sizes, cheap. Write Alaska Junk Co., 8120 Adams st., Spokane, Wash.

TOBACCO SPECIAL—SWEATED LEAF SElect chewing, 3 pounds, $1; ten, $3; chewing-smoking, ten, $2.50; good smoking, ten, $2; regular $1.50 guaranteed. Cooperators, Murray, Ky.

HOMESPUN SMOKING TOBACCO, MILD AND mellow; 10 lbs., $1.50; 20 lbs., $2.75; delivery guaranteed. We furnish free recipe for preparing. Smoking Tobacco Exchange, Sedalia, Ky.

FOR SALE—A CREAMERY IN OPERATion; enjoying a good business; makes butter and ice cream. Also consider good creamery man. Write G. W. Davis, Salmon, Idaho.

HOMESPUN SMOKING OR CHEWING TObacco, collect on delivery; 5 pounds, $1.50; 10 pounds, $2.50; 20 pounds, $4. Farmers' association, Paducah, Ky.

DOUBLE UNIT UNIVERSAL MILKING MAchine; vacuum tank and pump. H. Jensen, 126 Shaver, Portland, Ore.

JOHNSON'S PACKAGE BEES, QUEENS. Write for remarkable prices. 165 Raymond ave., San Jose, Cal.

MISCELLANEOUS—FOR SALE (Continued) 60

WALL BOARD—WRITE FOR SAMPLE OF Washington plaster wall board; won't warp, won't burn. Manufactured by Washington Building Products company, 6851 E. Marginal Way, Seattle, Wash.

NATURAL LEAF TOBACCO, CHEWING, 5 pounds, $1.50; 10 pounds, $2.50; smoking, 5 pounds, $1.25; 10 pounds, $2. Send no money. Pay when received. Tobacco Growers' Union, Paducah, Ky.

KENTUCKY HOMESPUN SMOKING TOBACco; aged in bulk; mellow and sweet; 10 lbs., $1.50; 20 lbs., $2.75. Tobacco Growers' Union, Lynnville, Ky.

TOBACCO — HOMESPUN, EXTRA FINE chewing, 10 lbs., $3; smoking, 10 lbs., $2; 20 lbs., $3.50. Producers' Exchange, Mayfield, Ky.

HOMESPUN TOBACCO, 5 POUNDS, $1.25; 15 pounds, $3. Send no money, pay when received. Farmers' Association, Jonesboro, Ark.

TOBACCO — KENTUCKY'S PRIDE, EXTRA fine chewing, 10 lbs., $3; smoking ten $2; 20 $3.50. Farmers' Club, Mayfield, Ky.

MACHINERY—For Sale 93

BARGAIN IN 75 H. P. HOLT CATERPILLAR, seen less than 12 months' actual service; guaranteed in perfect mechanical and running condition. Price $2000, terms if desired. W. P. Leahy, 414 Jamieson bldg., Spokane.

MISCELLANEOUS. 61

WE SCOUR AND CARD WOOL TO ORDER for comforts or mattresses. Inclose stamp for information. Perfection Batt & Mattress Co., Stayton, Oregon.

MISCELLANEOUS—Wanted 63

HIDES—WE BUY HIDES OF ALL KINDS. Write for prices and tags. Hibbard-Stewart Co., Hibbard Bldg., Seattle.

WOOL—WE BUY WOOL AND PELTS. WRITE for prices and tags. Hibbard-Stewart Co., Hibbard bldg., Seattle.

AUTO TRUCKS—For Sale 115

WE WILL ABSOLUTELY SAVE YOU FROM $500 to $1500 on the purchase price of a new truck. Creditors' sale of various standard makes; any size, 1 to 5 tons. Also a Holt 75 Caterpillar for $3500. Exceptionally easy terms. Write R. S. Phelps, 607 Empire State building, Spokane.

MOTORCYCLES AND BICYCLES 127

REBUILT HARLEY-DAVIDSON MOTORcycles; guaranteed. A. P. Tyler, Boise, Idaho.

STOVE REPAIRING 128

WRITE MYER RUBENS, SPOKANE, ABOUT stove repairs, welding broken parts, nickle plating.

FUR-BEARING ANIMALS 170

SILVER AND CROSS FOXES FOR SALE. William Rambo, 407 Sprague, Spokane.

PETS—Dogs, Birds, Etc. 171

PEDIGREED COLLIE PUPS. WRITE US your wants. Princess, Collie Kennels, 4812, 42, South West Seattle, Wash.

RABBITS and HARES 173

PEDIGREED FLEMISH AND CHECKERED Giants. Prices not fancy. Brookside Rabbitry, Hubbard, Ore.

POULTRY (Baby Chicks) 174

WHITE LEGHORN CHICKS (TANCRED strain), from selected two-year-old hens mated to cockerels from 251 to 286 egg trap nested dams; 1500 each Wednesday in May, $15 per 100. Bona Terra Ranch, Drain, Ore.

WHITE ROCK BABY CHICKS. "DANIEL'S IDEALS," from our own trapnested stock entirely. Write for prices and dates, also eggs for hatching. Free catalog. Ideal Poultry Yards, Hoquiam, Wash. Star Route No. 25.

POULTRY—Baby Chicks (Continued) 174

THE LARGEST LEGHORN BREEDING ESTablishment and hatchery in the northwest, and on the Pacific coast, has a housing capacity of 12,000 breeders; brooding capacity for 15,000 chicks; incubator capacity for 142,200 chicks at one time. It was started 16 years ago, by its present owner, without capital or poultry experience, on a barren ten-acre tract of land. The White Leghorns produced there have made possible its growth. It is the Oak Heights Poultry Farm, Capt. A. Waldwick, proprietor, Route 3, Box T67, Tacoma, Wash. This is the place where real good baby chicks come from. They are bred for eggs, vigor, size. The price is low. No order too large or too small. Prompt delivery and safe arrival guaranteed. Free book on "Raising the Chicks." Write us now.

30,000 HENACRES LEGHORN JUNE CHICKS. Our Leghorns mature quickly and these chicks should be laying in November and December. It pays to buy good stock and especially so in June. We furnish special instructions for feed and care with every June order. Safe delivery guaranteed by mail or express. Special price, $16 per 100; $140 per 1000. Eight weeks old pullets, $1.50 each; 500 for $700. Our free illustrated catalog describes our farm, gives feeding methods, formulas, etc. Henacres, Box A, Prosser, Wash.

FRESHLAID WHITE LEGHORN CHICKS have the qualities you want; vigor and scientific breeding for the heaviest egg production; every Freshlaid male is from a high record hen. Freshlaid Farm is one of the largest and oldest chick plants in the Inland Empire. There is a real demand for Freshlaid chicks, especially from our old customers. We are sold out until June. Freshlaid June chicks have been making good as winter layers for ten years. Free catalog. Freshlaid Farm, Colfax, Wash.

400,000 BABY CHICKS—OUR WHITE LEGhorns are bred to lay; priced at $15 per 100. We hatch from some of the best flocks of R. I. Reds, Barred Rocks, Anconas and Minorcas to be found in the northwest. Chicks are priced at $22.50 per 100. Send $1 deposit per 100 with your order, paying the balance on inspection of chicks. Safe arrival guaranteed. We have a few standard makes of incubators and brooders at greatly reduced prices. Send for our circular offer. Seattle Hatchery, 1906 Pike place, Seattle.

SINGLE COMB WHITE LEGHORN CHIX—You are not too late to get May chix. A very few yet for last of April. Get yours at once, others will charge you from 25 to 50 cents per chick for no better. Chicks from hens with trap records of 200 to 290 eggs for eleven months, mated to cockerels in the 300-egg class. Capacity all sold so far without a line of advertising. June chicks go this year at $14. $7.50 for 50 chicks. 3-C Egg Ranch, either Kennewick or Hover, Wash.

CERTIFIED S. C. WHITE LEGHORN BABY chicks from heaviest laying stock; safe delivery; live, vigorous chicks guaranteed. No money in advance; pay on delivery. Prices for May and June $3.50 per 25; $6.50 per 50; $12 per 100. Special prices 500 and 1000 lots. Largest electric hatchery in the world. Established 1898. Member Sonoma county farm bureau accredited hatchery list. Must Hatch Incubator Co., 445 Seventh st., Petaluma, Cal.

BABY CHIX—WHITE LEGHORNS ONLY. May delivery, $13 per 100; June delivery, $12 per 100; order now as the supply is limited and these are not just baby chix, but are chix from stock that has been bred for 20 years for vigor and vitality; mated to male birds from hens with records up to 298 eggs in pullet year; hatched by the oldest established hatchery in the northwest. Lakeside Poultry Farm, Roy, Wash.

THE PROGRESSIVE HATCHERY ANnounces the following prices for May and June, 1922: Single Comb White Leghorn chicks (trap nested), $15 per 100; selected, $14 per 100. Reduced prices for large orders. R. I. Red chicks, trapnested or selected stock, $25 and $20 per 100. Terms, 20 per cent with order; safe delivery guaranteed. 1534 N. E. 12th st., Portland, Ore.

SUMMER SALE OF BUTLER POULTRY Farm White Leghorn and Barred Rock chicks. May and June chicks are profitable and easy to raise when you know how. Write us for circular how we do it. All stock trap nested and pedigreed for years. Discount prices on all late chicks and eggs. Butler Poultry Farm, Jennings Lodge, Ore.

EBORALL'S STRAIN WHITE LEGHORNS Our hatch of 2300 chicks per week is now booked for Feb., March and April, principally to old customers. Your inspection is invited at all times. We are now booking chicks for May at $14 per 100. Write for circular. Crystal White Poultry Farm, McMinnville, Ore. Box 33.

BABY CHICKS FROM TANCRED AND HOLlywood strain; heavy laying White Leghorns mated to cockerels from W. W. experiment station; hens, 265-314 egg records. Late May chix, $15 per 100; $145 1000. Early June, $13 per 100; $125 1000. Hatching eggs, $7 per 100. Wax's Poultry Farm, Kent, Wash.

TRY OUR PARCEL POST PACKAGE—KEEP the old hen busy. We will ship you first-class baby chicks, postpaid to your door, direct from the hatchery and guaranteed all alive. Price, $4.50 per 25; $8 per 50. For delivery April, May or June. Order now. The White Hatchery, Petaluma, Cal.

WHITE LEGHORN BABY CHIX FOR MAY and June delivery at $12 per 100; $115 per 1000, from flocks inspected and accredited by the Sonoma county farm bureau. Safe arrival of full count, live, strong chix guaranteed. The Pioneer Hatchery, 422 Sixth street, Petaluma, Cal.

UNION DISTRICT HATCHERY IS NOW booking orders for the best thoroughbred baby chicks at the right price. White, Buff and Brown Leghorns, Rhode Island Reds, Black Minorcas, Anconas and Barred Plymouth Rocks. F. & L. Downing, Los Gatos, Cal.

BABY W. LEGHORN CHICKS FROM OUR wonderful laying strain; hatched in May and June, make splendid layers for this fall and winter. Now $15 per 100. After May 20th, $12 per 100, delivered. Yesterlaid Egg Ranch, Kent, Wash.

BABY CHICKS — REDUCED PRICES ON White Leghorns, Reds, Barred Rocks, White Rocks, Minorcas and Anconas; booking orders now; postal secures free catalog. Write today. C. N. Needham, Salem, Ore.

YESTERLAID W. LEGHORN BABY CHICKS, best laying strain in northwest, only $15 per 100. After May 20th, $12 per 100. We prepay delivery charges. F. A. Leonard, New York blk., Seattle, Wash.

BABY CHICKS—PRICES REDUCED AFTER May 15th. S. C. R. I. Reds, $20 per 100. S. C. W. Leghorns, $15 per 100; April chicks all sold. Maple Brook Poultry Farm, Southworth, Wash.

TANCRED STRAIN WHITE LEGHORN BABY chicks, May delivery, $15 per 100; from tested hens, $18 per 100; eggs, $7 per 100. A. A. Gilbert, R. 1, Yakima, Wash.

(Continued on the following page.)

POULTRY (Baby Chicks) (Continued) 174

BABY CHICKS FOR MAY AND JUNE ONLY 4000 every 4 days of the famous O. A. C. strain S. C. W. L. raised and run on free range. They have the vim. Prices, first half of May, $17, last half of May, $15; June, $12. Moorhead Poultry Farms, Granger, Wash.

$12 PER HUNDRED—WHITE LEGHORN baby chicks from Corvallis noted egg strains; electrically hatched. This low price on May 18 to 25 only. Order now. Oregon-Corvallis Hatchery, Corvallis, Ore.

ACME POULTRY FARM, COTTAGE GROVE, Ore. Breeders of Oregon Agricultural college White Leghorns; chicks after May 20th, first pen (100, $13); (25, $3.50); bred to lay, and they will do so.

BABY CHICKS — WE GUARANTEE OUR chicks to be from the highest producing hens in Petaluma. Write for further information. The White Hatchery, Petaluma, Cal.

CHIX, 12C TO 25C; WHITE LEGHORNS AND White Rocks; trapnested strains; eggs, Palouse Falls Ranch, Palouse Falls, Wash.

WHITE LEGHORN BABY CHICKS. CIRCULAR on request. San Jose Poultry Yards, San Jose, Cal.

Leghorns.

LEGHORN PULLETS, 5000 FEBRUARY, 3000 April and May hatched. These birds are Hollywood-Tancred strain, are unconditionally guaranteed on a money-back basis. Price $1.15 each, at 8 weeks. White Cloud Farm, Route 2, Box 188, Kirkland, Wash.

WHITE LEGHORNS, TANCRED STRAIN, heavy laying second year hens, with males from 250 to 275 egg trap nested dams; hatching eggs, $6 per 100; baby chicks, $18 per hundred. Oaklawn Poultry Farm, Hillsboro, Ore.

OREGON AGRICULTURAL COLLEGE WHITE Leghorns. Eggs, $1.50 per setting; $6 per 100, prepaid. Late May and June chicks, $12.50 per 100. Russell Poultry Yards, Route 3, Corvallis, Ore.

CARNATION WHITE LEGHORN PULLETS; April and May hatched pullets from my high record trap nested stock. E. W. Raush, Carnation Poultry Farm, Kent, Wash.

THOROUGHBRED BUFF LEGHORN SETTING eggs, $1.50 setting; $8 hundred. M. Magnussen, Regena Stage, Boise, Idaho.

BUFF LEGHORN EGGS AND CHICKS FROM my champion exhibition and laying strains. R. Stromquist, Tigard, Ore.

FORD'S BRED TO LAY S. C. WHITE LEGhorns; 2-year-old breeding hens, $1 each. W. A. Ford, Umatilla, Ore.

BROWN LEGHORN EGGS, THE VERY BEST quality; free mating list. E. H. Rosenkranz, Colfax, Wash.

PRIZE BUFF LEGHORNS; EGGS, 15C EACH, postpaid. C. E. Cleveland, Stanfield, Ore.

Turkeys, Ducks, Geese.

EGGS RFOM PRIZE-WINNING MAMMOTH Toulouse geese, the kind that hatch; 50c each, $45 per 100. Imperial white Pekin duck eggs, $2.50 per 15; $14 per 100. Goslings, ducklings. R. E. Baumgardner, Wenatchee, Wash.

MAMMOTH PEKIN DUCKS, "AMERICA'S finest." New blood this year direct from C. C. Shoemaker; eggs, $2 per setting, $12 per 100. Crystal White Poultry Farm, McMinnville, Ore. Box 33.

EGGS, MAMMOTH TOULOUSE AND WHITE Chinese geese; Mammoth Pekin ducks, pearl guineas. C. O. Johnson, R. 1, Medical Lake, Wn.

INDIAN RUNNER DUCKLINGS, THOROUGHbred, 100, $33; doz., $4.30, delivered. C. A. Muths, Route 1, Salem, Ore.

MAMMOTH PEKIN EGGS FROM DUCKS that take the prizes. Drakes for sale. Mrs. E. A. Bennett, Salem, Ore.

MAMMOTH BRONZE TRUKEY EGGS, 50C each. Mrs. J. L. Townsley, Route 2, Post Falls, Idaho.

Miscellaneous Poultry.

WE ARE HATCHING HOLLYWOOD AND Tancred strain of White Leghorns every Monday, Wednesday and Friday. Prices at $20 per 100; $195 per 1000. Commercial strain mated with 250-egg cockerels at $18 per 100. R. I. Red, Barred Rocks, Black Minorca and Ancona chicks are priced at $25 per 100. Send for free catalog and prices on incubators, brooders and pullets. Queen Hatchery, Seattle.

ILL-A-HEE BARRED ROCK CHICKS—SUMmer sale of Barred Rock and White Leghorn chicks. May and June chicks are profitable and easy to raise when you know how. Write for our circular telling how we do it. All stock trap nested and pedigreed for years. Discount prices on all late chicks and eggs. Ill-A-Hee Poultry Farm, Jennings Lodge, Ore.

POULTRYMEN—SEND EIGHT TWO-CENT stamps for special three months' trial for the best and oldest exclusive poultry journal in the west. The articles and advertisements are of special interest to the poultry breeders. Northwest Poultry Journal, 213 Commercial st., Salem, Ore.

EGGS! EGGS! EGGS! "SNOWFLAKE" WHITE Orpingtons, establish highest official Orpington pen record western Washington laying contest. Average 204 eggs; free mating list; hatching eggs, $3, $5, $10 per fifteen. W. T. Thompson, Bozeman, Mont.

CHICKS, EGGS—HOGANIZED WHITE LEGhorns, Brown Leghorns, Black Minorcas, Rhode Island Reds, Barred Rocks, Anconas, Blue Andalusians. Free circular. Order early. McDonald Poultry Ranch, King Road, San Jose, Cal.

PARAMOUNT WHITE WYANDOTTES "BRING home the bacon" Trap nested, pedigreed, instructive catalog free. No baby chicks. Barard H. Moul, 1226 Washington blvd., Seattle.

LARGE, NICELY MARKED ROUEN DUCKS. Eggs, 11, $2; 100, $15; heavy laying, prize winning strain White Wyandottes; eggs, 15, $2; 100, $10. P. H. Tomlinson, College Place, Wash.

PUREBRED S. C. RHODE ISLAND RED EGGS for hatching from non-setting, non-fading strain. $3, $5 and $10 per fifteen. Mrs. L. Wham, Double Diamond Ranch, Omak, Wash.

POULTRY RAISERS, SEND FOR FREE BOOKlet on poultry advertising. The Pacific Northwest Farm Trio, Dept. P, Review bldg., Spokane, Wash.

TRAP NESTED WHITE LEGHORN AND Barred Rock eggs and chicks; records, 200 to 311. Mrs. W. M. Roberts, Elmira, Oregon.

S. C. ANCONAS, SHEPPARD'S SELECT AND 331 egg strain; eggs, $2 per 15; chicks, $20 per hundred. A. B. Larson, Warren, Ore.

SHIP YOUR LIVE POULTRY AND EGGS TO us. Highest prices paid; daily remittances. Inland Poultry House, Spokane, Wash.

FANCY WHITE WYANDOTTE COCKERELS, $2.50; hatching eggs, two dollars setting. H. L. Lamon, American Falls, Idaho.

ANCONAS, SHEPPARD STRAIN; EGGS, $1.50 per 15; $7.50 100; day old chicks, $18 100. R. P. Irwin, Tonasket, Wash.

PEDIGREED ANCONA HATCHING EGGS; 330 egg strain; $2.50 setting. Smith's Ancona Farm, Nampa, Idaho.

POULTRY—Miscellaneous (Continued) 174

GRIFFIN'S FAMOUS WHITE WYANDOTTES, the best for market and egg production; eggs for hatching from best mated pens in northwest; your opportunity to get started with my famous stock. Send for catalog. J. A. Griffin, Box 457, Eugene, Ore.

DOLLARS FOR YOUR EGGS—WE PAY THE top market prices for your eggs and poultry. Daily cash remittances. Western Produce Co., Spokane.

BLUE ANDALUSIAN AND WHITE ROCK hatching eggs, $2 per 15. Mrs. C. W. Armstrong, Freewater, Ore.

SICILIAN BUTTERCUP EGGS, $2.50 PER fifteen, postpaid. Charles Carland, Route 2, Saint Maries, Idaho.

LIGHT BRAHMAS, EGGS, $1.75 PER 15; Bronze turkey eggs, $3.50 for 10. Mrs. C. W. Laabs, Irby, Wash.

HUNT'S BARRED ROCK EGGS, PRICES REduced through April, May. W. A. Hunt, Lebanon, Ore.

EGGS FROM SINGLE COMB BLACK MINorcas, $2 per 15; $8 per 100. Jacob Cherniak, Elk, Wash.

BARRED ROCK CHICKS, HEAVY LAYING O. A. C. strain. Mrs. E. Hodge, Waterloo, Ore.

S. C. BLACK MINORCA HATCHING EGGS, $1.50 per 15. John Zack, Kalama, Wash.

LIGHT BRAHMA EGGS, $2 PER 15. DALTON Poultry Farm, Coeur d'Alene, Idaho.

LIVE STOCK. 177

LARGE, HEAVY PRODUCING HOLSTEINS for sale at all times in car lots; tuberculin tested; 150 to 200 head always on hand; well marked heifer calves from registered sires and heavy producing dams; crated for shipment anywhere, $25 f. o. b. Levinson & Balmelli, Yakima, Wash.

SHIP US YOUR POULTRY AND LIVE STOCK. We pay the top market prices. Light veal, fat, fancy, 16c; dressed block hogs, 14c; hens, light, 20c; heavy, 23c. Prompt returns. John Lewis & Co., Spokane, Wash.

EPOCHAL BERKSHIRES, 3 MONTHS' PIGS from $20. Yearling boars from $40. Sire, the grand champion Pork-maker's Sincerity. Herd boars from $75. Bred sows from $75. E. V. Orford, Boise, Idaho.

REGISTERED JERSEY BULL, DROPPED March 2d, 1921; dehorned; solid color; for sale or trade for registered heifer. M. Christopher, Route 3, Deer Park, Wash.

WE PAY TOP PRICES FOR YOUR LIVE OR dressed veal, hogs and poultry. Your check by return mail. Shipping tags on request. M. & J. Packing Co., Spokane.

FOR SALE—THREE REGISTERED JACKS, one, two and three years old, and eight jennets. Write Wm. Hallam, Republic, Wash.

FOR SALE CHEAP—TWO PUREBRED REGistered Poll-Angus bulls, two years old. James Henry, Seattle, Wash. Phone Main 3870.

YEARLING JERSEY BULL, 6 MONTHS' CALF, exceptionally well bred; extremely low price. W. H. Warrens, Sherwood, Ore.

FOR SALE — REGISTERED SHORTHORN bulls, Roswell Park Stock Farm, Lowell and Willis, Parma, Idaho.

EXTRA FINE REGISTERED MEDIUM TYPE Poland Chinas. Roy Tomlinson, College Place, Wash.

REGISTERED HOLSTEINS AND BERKSHIRE pigs. Elmer Hanson, Mead, Wash.

HARNESS and SADDLERY 189

SEND FOR FREE HARNESS AND SADDLE catalog today; cut out the middleman, buy direct from the manufacturer. Lowest prices in the west; satisfaction guaranteed. Established 1881. Write Pierce Harness Co., Dept. T, Spokane, Wash.

HAY FOR SALE. 200

ALFALFA HAY, GUARANTEED QUALITY; prompt shipment; buy direct and save money. Prices upon application. Ernest T. Freepons, Walla Walla, Wash.

JOB PRINTING. 372

GUARANTEED BETTER BUTTER WRAPpers: 100, 60c; 250, $1.25; 500, $2.25; 1000, $4; printed to order. Home Specialty Co., Middleton, Idaho.

TANNING. 425

WE WILL TAN YOUR COW OR HORSE HIDES into robes or coats at the right prices and guarantee our work as we are custom tanners and manufacturers. We also buy hides, furs, wools and pelts, or will exchange harness and sole leather for same. Write for prices. Spokane Fur Tanning Co., 9 Pine st., Spokane.

MONUMENTS. 510

COMPLETE STOCK, RIGHT PRICES. CORrespondence solicited. J. W. Harding, Inland Monument Co., N1001 Monroe, Spokane.

PERSONAL 537

WOULD LIKE TO CORRESPOND WITH German speaking woman about 50; object matrimony. Address G 8, Washington Farmer, 617 Central Building, Seattle, Wash.

FARMER WOULD LIKE TO CORRESPOND with lady, 25 to 40; object matrimony. G 7, Idaho Farmer, Spokane.

SEEDS. 620

VALLEY COUNTY WINS FIRST SEVEN world prizes. Timothy, 6c; timothy alsike, mixed, 9c. M. Meador, Norwood, Idaho.

CHOICE MANGEL SEED, 35C LB., POSTPAID, any variety. Catalog free. Order today. Warren Cook, La Conner, Wash.

ALFALFA SEED, POSTPAID, ORENBERG, ounce, 25c; registered Cossack, pound, 75c. W. W. Perkins, Camas, Mont.

ALFALFA SEED, 10C AND 15C POUND; TIMothy, 8c. Johnston Land Co., Seward, Neb.

JERUSALEM SEED CORN, 5 CENTS POUND. Henry Keeney, Weiser, Idaho.

NURSERY STOCK. 621

EVERBEARING STRAWBERRY PLANTS— All orders received to date and after until further notice will be entitled free, to 1 St. Regis everbearing raspberry, 1 red raspberry, 1 blackberry, 4 Lucretia dewberry, and 1 purple lilac. My Superb and Progressive everbearing strawberry plants are guaranteed and prepaid at 100, $1.40; 500, $6; 1000, $11. Orders for 1000 get 2 lots free, 2000, 4 lots. Dewberry plants, 75c doz.; $4 per 100. Concord rooted grapes, 1 year, and St. Regis everbearing rasp. transplants, 10c each, $1 per doz.; $6 per 100, postpaid; Snider blackberry vines, fine, large, hardy, prolific, 75c per doz.; $5 per 100. Model Fruit Farm, R. 1, Emmett, Idaho. N. B. Matthiessen, prop.

GROW GRAPES FOR PROFIT—SPECIAL LOW prices; grape vines, berries, asparagus, for commercial planting; peaches, cherries, apricots, apples; satisfaction guaranteed. Write today. Home Nursery Co., Richland, Wash.

STRAWBERRY PLANTS FROM DELICIOUS everbearing plants, $5 per thousand. L. A. Hoge, Route 1, Prosser, Wash.

NURSERY STOCK. (Continued.) 621

SUPERB, PROGRESSIVE EVERBEARING strawberry plants 100, $1.25; 500, $5; everbearing raspberry, evergreen blackberry plants six for $1. Model Nursery, Route 6, Seattle, Wash.

CORY THORNLESS BLACKBERRY — DELIcious, very large and early. You get strong, well rooted plants, true to name, from pioneer grower; 12 for $2, postpaid. Wm. Mortenson, Route 1, Lodi, Cal.

PROGRESSIVE EVERBEARING STRAWberry plants, $1.25 100; $9 1000, postpaid, inspected, guaranteed. O. W. Zurcher, 104 S. 17th street, Boise.

SEND FOR OUR NEW PRICE LIST ON FRUIT trees, berry bushes, shade trees and roses on their own roots. Krause Nursery, Spokane, Wash.

90,000 CHOICE LOGANBERRY PLANTS, SElected, inspected, hardy, well rooted; unusual low price. Harry Lanum, R. 4, Salem, Ore.

EVERBEARING STRAWBERRIES, SEND FOR free booklet giving lots of valuable information. P. R. Johnson, Granger, Wash.

GENUINE SUPERB EVERBEARING STRAWberry plants, inspected, $1.25 hundred; $10 thousand. H. H. Skagen, Kent, Wash.

CHRYSANTHEMUM PLANTS, ASSORTED, fifty cents per dozen, postpaid. J. L. Russell, Corvallis, Ore.

FARM LANDS FOR SALE. 651

VERY FINEST CRANBERRY PEAT LANDS in center cranberry growing industry, subdivided, 1 to 5 acres, very reasonable prices, if desired, only 20 per cent down; no other payment for five years. By planting part of the holdings in cranberries, crops should meet future payments. Adjacent land produces 100 bbls. per acre. Last season cranberries returned the grower $15 per bbl. at wholesale. For money maker do you know of any other crop comparing with cranberry growing? Besides cranberries, can raise vegetables and chickens for tourist trade; fine dairy land; first class schools, roads, finest beach on coast within one mile. Write or visit us. Long Beach Land Co., Long Beach, Wash.

CUTOVER LANDS, EASY TO CLEAR; $8 TO $20 per acre; 25 miles north of Spokane; on hard surfaced highway; Great Northern and Milwaukee railways; excellent opportunity for dairying and stock raising with Spokane markets and creamery near at hand. Will help the man who will live upon this land and agree to clear a part each year by giving lumber to help start his buildings, and a purebred Jersey bull to groups of farmers. Interest and payments low. Write Milan Farms Development company, Dept. T, Old National Bank bldg., Spokane, Wash.

130 ACRES, 8 MILES FROM OLYMPIA, WASHington; on paved Pacific highway; 150 acres low rich soil, balance upland, including orchard, garden and pasture; 7-room house, bath, fireplace, running water; 2 barns, outhouses; water piped; windmill, gas pump, spring and creek on place; near good school. Would make one of best dairy farms in state; good location for store, oil and gas station; improvements worth $4000 to $5000; will sell land and all improvements for $60 per acre. $1000 down, long time on balance, low interest. Owner, C. J. Chamberlain, Olympia, Wash.

BARGAINS IN OKANOGAN LANDS—320 acres black loam soil; five miles from good town; 100 acres cultivation; 40 acres fall wheat, balance fall plowed for spring crops; good well and creek. Price includes good house, all furnished; barn; all kinds farm machinery; good shape; 11 head milch cows, 9 yearlings, 11 spring calves, 5 work horses, 4 young mules. Price $8000. Terms. We have many other bargains in Stevens and Okanogan counties in wheat, stock and dairy ranches. A. J. Chitty & Co., Spokane.

FOR SALE—60,000 ACRES OF GOOD WASHington range lands suitable for cattle or sheep, with large acreage adjoining lands leased at reasonable prices, and summer ranges which will be assigned to purchaser. Will be sold for one large operation or divided into units varying in size from 3000 to 25,000 acres to suit purchaser. In the safest and best cattle and sheep country in the west. Will sell at low prices on long time, with low rate of interest. For particulars write F. M. Rothrock, Spokane, Wash.

BIG OPENING SALE OF YAKIMA VALLEY farmland, under an assessed state and government approved irrigation project; good, deep soil; close to town, railroads and state highway. We sell in tracts to suit purchaser at $25 per acre and up, on easy terms. Our many sales to farmers show that this land is a good investment. Western Lands, Inc., owners, 918 Green bldg., Seattle.

THURSTON COUNTY—5000 ACRES, VERY fertile, level; fruit, berry and poultry lands; right at beautiful state capital. No extremes of temperature; no storms or floods, no irrigation; bumper crops; fine markets. 5 or 10 acre tracts; low prices and long term payments. Send for our valuable pictorial booklet. Norpia Realty Corporation, Olympia, Wash.

BITTER ROOT VALLEY, MONT., HAS A record of 50 years without a crop failure; its mild climate, abundant water and wide diversity of products make farming profitable. Get the facts about this unusually sheltered, prosperous valley "where farming is different." Write for free bulletin No. 6. The Bartlett-Bolen Co., Hamilton, Mont.

FOR SALE—440-ACRE STOCK AND DAIRY farm, in Thurston county, near paved highway; 150 acres cleared, balance logged off; all seeded; fenced; good buildings; running water; 100 acres bottom land; a bargain; $4000 will handle, balance easy terms. For particulars write J. M. Dempsey, owner, Auburn, Wash.

SACRIFICE 53 ACRES NEAR WHITE SALmon; perfect condition; 35 acres apples, strawberries, etc.; fully equipped; fine team horses, splendid house, modern plumbing; one mile from school. Will sell reasonable terms or exchange. Kline, 80 Front st., Portland, Ore.

30-ACRE FARM, THREE MILES FROM OREgon City; highest state of cultivation; good buildings; acre of fruit; stocked, equipped; lighting and water system. Price $9000; $4000 will handle; interest, 6 per cent. P. Tanzer, Route 1, Box 82, Oregon City, Ore.

RICHLAND—TRUE TO NAME — 10 ACRES alfalfa and berries; house, barn, chicken house; a real diversified tract; in heart of production. $2200; terms. Briscoe Realty Co., Lindelle bldg., Spokane.

HIGHLY IMPROVED EIGHT-ACRE RANCH; modern eight-room house; splendid community; three miles Seattle city limits; paved highway. E. Flateboe, Route 5, Seattle.

FINE 160 ACRES STOCK AND DAIRY RANCH, 128 inches decreed water; 80 acres improved; pasture and timber. Write for price. J. S. Harper, Darlington, Idaho.

FOR SALE BY OWNER—WELL IMPROVED dairy farm, 80 acres; paid up water right; for $8000. Will give terms. C. E. Adams, Route 1, Emmett, Idaho.

FARM LANDS FOR SALE (Continued) 651

FULLY EQUIPPED STOCK AND DAIRY farm; 465 acres, in beautiful Arcadia valley, only two miles from splendid growing city, Deer Park, Wash., 24 miles north of Spokane; farm is furnishing milk for Deer Park at this time; 100 acres winter wheat, looking fine; 36 alfalfa, under irrigation (perpetual water right); 35 acres ready for spring planting, balance easily cleared; some timber; farm is well improved; seven-room concrete house, basement, 9 feet high; modern dairy and horse barn, with loft for 100 tons hay; two 12x35 concrete silos, capacity 100 tons each; large feed room connects with barn; straw shed, capacity 100 tons; large feeding shed, machinery building and shed; blacksmith and machine shop, ice house, holding 25 tons, completely filled; modern milk house, fully equipped, 77 foot drilled well, with an inflow of 7 feet 6 inches per minute; piped to house, barn, milk house and yard. Complete equipment farm machinery; eight head good work horses and selected herd of 30 purebred registered Holsteins. For price and terms write F. E. Parks, Deer Park, Wash.

WE SELL FORECLOSED LANDS FOR A loan company for one-third cash, balance easy terms. When writing tell us what you want, where preferred, how much you will invest, kind of farming you contemplate, as we have no list and must write special description in each case. No trades. Hartford Land company, 601 Paulsen bldg., Spokane, Wash.

THE BERRY BELT OF THE UNITED STATES, western Washington, near Seattle, produces as high as $800 per acre; all crops contracted for. Over 30 cars shipped last year from one town; good chicken lands, good markets, paved highways, schools, daily mails, etc. You can buy this land without a cent down. Poncin Realty company, 716 3d ave., Seattle, Wash.

$17,000 STOCK RANCH—160 ACRES UNDER irrigation; near Chewelah; good buildings and silo; abundance outside range, including all necessary machinery; 4 horses, 55 head cattle, pigs, chickens, etc.; a money maker; ½ cash. We can supply you with stock or dairy farms any size; let us know your wants. The Big Bend Land company, Spokane, Wash.

STOCK RANCH, 560 ACRES DEEDED LAND, over 2000 acres range adjoining; 2,000,000 feet of lumber; will raise 150 tons of hay; abundance of water for irrigation; hunting and fishing unexcelled; 36 miles to Yakima; splendid road; fair improvements, orchard, etc. Liberal terms to right party. Z. H. Benton, Nile, Wash.

SNOHOMISH COUNTY, WASH—6000 ACRES of the finest dairy, berry or general high-grade farm lands in the northwest, rapidly improving section; no drouths, bumper crops; tracts 1 to 80 acres; 10 yearly payments. This is your opportunity. Send for literature. Brownell Land Co., Birmingham, Wash.

640 ACRES, HIGHLY IMPROVED, 26 MILES east of Calgary; 375 acres irrigable; 400 in crop; 150 summer fallow for 1923; $75 cash, $10,000; or subdivide into two farms, $65 cash, $2000 and $75 cash $5000. Price includes crop. Frank Sugden, Cheadle, Alberta.

80 ACRES, 2½ MILES FROM LYLE, WN., ON gravel road, 16 acres apple orchard; 4 alfalfa, 25 easily cleared, rest pasture; team, 2 cows, sow, chickens, all farm tools; school and high; good water, fair buildings. $3250 cash. Owner, Albert Johnson, Lyle, Wash.

FOR SALE—IN SOUTHERN OREGON, ON road to Caves; 248 acres; 65 in cultivation, balance timber; free water for irrigation; house, 3 barns, other buildings. Price $55 per acre; no trade. For further particulars write Box 32, R. 1, Kerby, Ore.

WE WANT TO TELL YOU MORE ABOUT the famous Deschutes valley in central Oregon; a dairy, potato and stockman's paradise; a card brings full particulars. Redmond Land & Loan Co., Inc., Redmond, Oregon. (King Murphy's Capitol.)

640 ACRES WELL IMPROVED WHEAT land; joining land produced 30 bushels last year. Price, $20 per acre; will guarantee this the best buy in eastern Washington, or pay expenses of investigation. F. J. George, Everett, Wash.

160 ACRES; 35 IN CULTIVATION. MORE can be plowed; fall crop in; 7-room house, good barn, young orchard; 1½ miles good school and store; all fenced. $6000. G. B. Taylor, owner, Mist, Ore.

BEST FARMS IN NORTHWEST. HAVE choice stock and grain farms, large, small; 40 well improved; 30 plowed; fine water; $1500; half cash. Smith-Nelson, Goldendale, Wash.

SELL YOUR PROPERTY QUICKLY FOR cash; no matter where located. Particulars free. Real Estate Salesman company, 501 Brownell, Lincoln, Neb.

YAKIMA—40 ACRES DIVERSIFIED, STOCK, implements, well improved. Snap, ask particulars. Cooper, 9½ 4th ave., Yakima, Wash.

CHICKEN RANCH SALE—5 ACRES; GOOD buildings, near pavement and car line. Flora Martin, Route 3, Box 183, Puyallup, Wash.

TEN ACRES, ON LAKE ROAD; NEAR CARVer line; ideal for poultry. Write Mrs. E. Rusk, R. 1, Milwaukie, Ore.

FARM LANDS—Wanted 654

WANT TO HEAR FROM OWNER HAVING farm for sale. Give particulars and lowest price. John J. Black, 80th street, Chippewa Falls, Wis.

IRRIGATED LANDS—For Sale 663

IRRIGATED ACRES, TWO MILES FROM CITY limits of Spokane; prices less than city lots. Soil especially adapted to vegetables, small fruits and poultry raising. Good graded school and college. Telephone, electric lights, domestic water and paved highway. Some beautiful homes built and others building. Locate your home where you can have city conveniences and enjoy country life. Write or call upon Country Homes Development company, Dept. T, Old National Bank bldg., Spokane, Wash.

5 TO 40 ACRE TRACTS, RICH, LEVEL IRRIgated land; on paved highway; R. F. D., telephone and electricity available; adapted to alfalfa, fruits, grapes, garden; $50 to $150 per acre; your own terms; 10 years to pay. Dairy, stock and fruit ranches; all sizes. Mountain ranches and stock range, cheap; elevation 450 ft.; no snow. Write for list. G. E. Oaks, Redding, Shasta county, Cal.

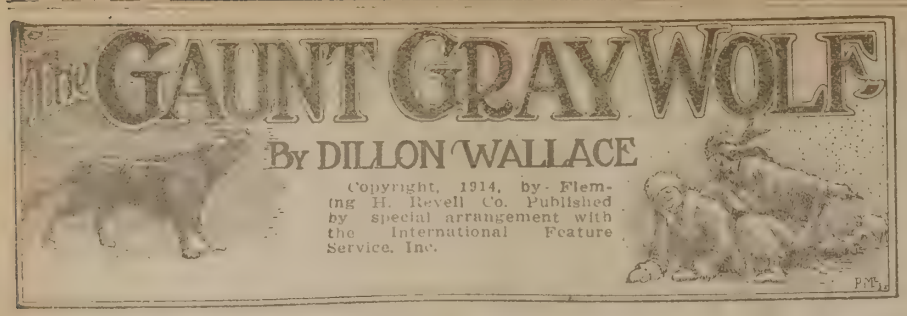
CITY PROPERTY FOR SALE. 690

ASHLAND REALTY COMPANY HAVE RESIdences, ranches and business places for sale. Write fully what you want, your expectations and send addressed, stamped envelope. Ashland Realty company, Ashland, Ore.

FOR SALE OR EXCHANGE 702

FOR SALE OR TRADE—ONE OF THE BEST stock ranches in eastern Washington; modern, up to date buildings; unlimited range; an ideal dairy ranch, as it is close to a railroad station. Price reasonable. Will sell on terms or trade. McCrea & Merryweather, Box 184, Spokane.

FOR SALE OR TRADE—240 ACRES, IN JOsephine county, Ore.; 100 acres cleared. Box 34, Holland, Ore.



SYNOPSIS.

Shad Trowbridge, a New England lad of about 20 years, sails on a mail boat to Labrador, where he plans to spend a few weeks of summer hunting and fishing in the wilderness. Upon his arrival he meets two experienced fishermen and trappers, Dick Blake and Ed Matheson, who recommend to him a young lad of 17 known as Ungava Bob, as a guide for his hunting and fishing trip inland. Desiring to lose the least time possible in securing Ungava Bob's services and starting inland for his vacation, Shad starts across the bay in his canoe in the face of a threatening storm. In the darkness his canoe is capsized and he is plunged into the icy water. As he rises to the surface a rope is thrown to him and he hears a voice shouting to make it fast. He is soon drawn aboard a little sailboat which, unknown to him had approached at the moment of his great need.

To his surprise, Shad discovers that his new friend, the lad with the sailboat, is none other than Ungava Bob. Together, they make their way to Bob's home, where Shad enjoys the hospitality of the northland while they consider ways and means of making inland excursions. Shad decides to remain a month or more and make the first leg of a long winter of trapping planned by Bob, returning to the settlement in time to sail back home before college opens.

They leave for the wild trapping grounds and Shad is so delighted with the wilderness that he decides to remain with Bob on the trails all winter. The other members of the party start back home, leaving the two boys alone to start their long winter of adventure. But they are not alone! Hardly has the boat carried their friends around the bend of the river before Bob and Shad see two Indians watching them from the shadows of the forest trees.

The Indians proved to be old friends of Bob, but it was not many days until enemies appeared. A group of Mingen Indians, catching Bob and Shad out in their canoe on the river above the Great Falls of Labrador, fired upon them, compelling them to remain in the current and be dragged down to the rapids and seeming certain destruction.

In the midst of their peril Bob remembers that in the rapids above the falls there is a small, rocky island, and he skillfully guides the canoe to a safe landing on it. In the meantime their friends, Ed. Matheson and Dick Blake, reach their tilts to find Bob and Shad gone. The Indian maiden, Manikawan, tells them of the supposed loss of Bob and Shad over the falls. She plans to leave at once to wreak vengeance on the enemy Indians who sent them to destruction. Cunningly she entices them onto the river above the rapids and sends them to their deaths at the foot of the falls. Bob and Shad, on their island prison, witnessed the tragic plunge. Suddenly Manikawan appears on the shore, discovers the boys on the island and tells them that she will be back when the sun is noon-high next day with help to get them off, which she does successfully.

CHAPTER XV.

The Passing of the Wild Things.

It was already too late in the season to attempt further distribution of supplies with the canoe. Therefore, the boat and canoe were carried to a safe distance above the river, and a shelter of logs erected over them, that they might not be crushed under the weight of snow presently to come.

Two days later the lakes were clogged with ice, and a week later the first fall of snow that was to remain throughout the winter fell to a depth of several inches.

Then came an interval of waiting, but not of idleness, for Ungava Bob or Ed Matheson. Their new tilts were unsupplied with stretching boards for furs and many other necessities, in the preparation of which they occupied themselves at the river tilt, while the others lent a hand; though nearly every day Dick Blake or Bill Campbell accompanied Shad on hunting expeditions which resulted in keeping the larder well supplied with geese, ducks —now in their southward flight—ptarmigans and an occasional porcupine.

The birds were all fat and in splendid condition. The ptarmigans, now changing their mottled brown-and-white coat for the pure white plumage of winter, were gathered into large flocks, and easily had. A considerable number were killed with the first blast of frosty weather, and, together with a few ducks and geese, stored where they would freeze and keep sweet for future use.

With the last week of October active trapping began, when fur, though not yet at its best, was in excellent condition.

With November winter fell upon the land in all its subarctic rigor. For a day and a night a blizzard raged, so terrific, and with the temperature so low that none dared venture out, and when the weather cleared, the snow, grown so deep that snowshoes were essential in travel, no longer melted under the midday sun.

Socks of heavy woolen duffel were now necessary to protect the feet, and buckskin moccasins, with knee-high leggings, took the place of sealskin boots.

In the final distribution of supplies among the titlts long, narrow Indian toboggans were brought into service, and the loads hauled upon the toboggans.

Martens and foxes were the animals chiefly sought at this season. There were two methods followed in setting the marten traps. Where a tree of sufficient diameter was available it was cut off as high as the trapper could wield his axe above the snow, and a notch about four inches deep and 14 inches high cut some distance below the top of the stump and several feet above the snow. The bottom of this notch was given a level surface with the axe, the trap set upon it, and the bait hung in the side of the notch a foot above the trap. At other times an enclosure was made with spruce boughs, and in a narrow opening the trap was set, with the bait within the enclosure.

Fox traps were set upon the marshes and baited with rabbits which had been hung in the tilt until they began to smell badly, or with other scraps of flesh. The trap securely fastened by its chain to a block of wood or the base of willow brush, was carefully concealed under a thin crust of snow.

The usual routine followed by Ungava Bob, after his trail was once in order and his traps set, was to leave the river tilt on Monday morning, and by a wide circuit around lake shores and marshes, embracing a distance of some 15 miles, reach his tilt at the far end of the first lake at night. On Tuesday another wide circle of traps around contiguous lakes brought him back again at night to the same title. On Wednesday his trail led him to the tilt on the last lake of the old Portage trail.

His original intention had been to continue from this tilt to the tilt which the Indians had robbed, and thence to the last tilt on Ed Matheson's trail, some 15 miles to the northeast. But after the appearance of the Indians it had been deemed unsafe and inadvisable to do this, and the tilt on the river above the portage trail was, therefore, temporarily abandoned.

With this modification, his Thursday circuit of traps was so arranged that it brought him back at night to the tilt on the last lake, and on Friday he proceeded to Ed Matheson's last tilt. This arrangement carried him during the five days over 75 miles of trail along which his traps were distributed.

Ed Matheson's trail was so arranged that he also arrived at his last tilt on Friday evening, and he and Bob thus shared the tilt each fortnight from Friday until Monday.

Saturdays were occupied in making repairs and in doing the thousand and one odd jobs always at hand, Sunday in rest, and on Monday the return journey began which brought them to the river tilt on the following Friday, unless by chance they were delayed by storms.

This was the point of fortnightly rendezvous for the four trappers—the junction point of all their trails. Dick Blake's and Bill Campbell's trails took them in opposite directions, and during their period of absence from the river tilt neither saw any of his companions.

The fortnightly reunion at the river tilt was naturally an occasion they all looked forward to. It gave an opportunity to compare notes upon their success, to recount experiences and to satisfy for a time the human craving for companionship.

Shad made the first outward journey with Bob, and returned with Ed Matheson. Then he made a round with Dick Blake, and finally a round with Bill Campbell.

Every feature of the work was new and interesting to Shad Trowbridge, and for a time he enjoyed it hugely. But presently it dropped into a dreary, monotonous routine. The vast, unbroken solitude, the endless tramping over endless snow, day after day, and the lack of adventure to which he had looked forward, served presently to make him moody and irritable.

Shad had hoped for sport with his rifle, but no big game had been seen—not so much as the track of a caribou. Long before this the last goose and duck had passed southward. Not a bird save the ever-present jay had been encountered in upward of three weeks. Even the rabbits, whose tracks had criss-crossed the early snow in every direction and packed it down along the willow brush, had unaccountably disappeared. The stock of fresh meat, save a pair of geese and three pairs of ptarmigans reserved for a Christmas feast, was exhausted.

These were extraordinary conditions. The men declared that never before in their experience had they observed so complete a disappearance of game. Caribou were usually rather numerous in November. In previous years ptarmigans and spruce grouse had been so plentiful that they were easily killed when needed. One year in every nine rabbits were said to vanish, but otherwise the total absence of game was inexplicable.

It was a condition, too, that caused uneasiness. The flour and pork brought into the country by the trappers was far from adequate to supply their needs. Sufficient wild game to at least double their provision supply was an absolute essential if they were to continue on the trails. Thus far the early game had supplied their requirements, but the prospects for the future were disquieting.

At the end of the first week in December Bill Campbell and Shad returned from their fortnight on the trail to find their friends already at the river tilt and discussing the situation.

"What you havin', this cruise, Bill?" asked Dick, when the greetings were over.

"Th' worst cruise I ever has," Bill replied, as he drew off his adicky. "One white fox—nothin' else, an' no footin' t' now t' speak of. Shad an' me never see a hair or feather barrin' th' fox I catches, an' he were a poor un."

"I gets one marten an' a red, up an' back," said Dick. "Ed gets nothin' an' Bob gets one marten. 'This a wonderful bad showin'."

"Aye, a wonderful bad showin', gettin' never a hair, an' that's what I gets," declared Ed, in disgust. "If th' next cruise don't show a wonderful lot better, I starts for th' bay th' mornin' after Christmas, an' I'll not be comin' back till th' middle o' February, whatever."

The dough bread, fried pork and tea, which Ed and Bob had been preparing, were ready, and, the meal disposed of, pipes lighted and the discussion of the all-important question was resumed.

"'Tisn't th' havin' a poor cruise now an' again's what's botherin' me," began Ed, "but they ain't no footin', and where they ain't no footin' they ain't nothin', an' where they ain't nothin, they ain't no use huntin' it."

"They ain't even a pa'tridge t' be killed for th' pot," complained Bill.

"No, an' we'll be seein' th' end of our grub, with nothin' t' help out, by th' end o' February, whatever," Ed dolefully prophesied.

"Isn't there danger of scurvy if we have nothing but salt pork to eat?" asked Shad.

"That they is, sure as shootin'," agreed Ed.

"If you'd like to go along with me, Shad," suggested Bob, who up to this time had said little, "we'll take a flat-sled with your tent an' a tent stove an' a couple weeks' grub, an' go down t' th' nu'th'ard an' see if we can't run onto some deer. Th' deer's somewheres, an' if they ain't here they must be t' th' nu'th'ard."

"Of course I'll go with you, Bob," said Shad, delighted with the prospect of individual action and new experiences.

"An' you may be runnin' into some o' th' mountaineers an' Nascaupees down north, an' let un know about th' tradin' next year," suggested Dick. "If you tells one Injun, th' hull passel o' tribes'll know about un. Things travels wonderful fast among th' Injuns."

The following day two toboggans were packed with the provisions and equipment sufficient for a two weeks' absence, together with a considerable quantity of tea in addition to their probable requirements, and some plug tobacco, designed as gifts for the Indians.

Long before daylight on Monday morning adieus were said and the two young adventurers turned into the frozen, silent wastes to the northward, Bob in the lead making a rapid pace, Shad following, and each hauling his toboggan.

CHAPTER XVI.

Alone With the Indians.

At the edge of every frozen marsh and lake Ungava Bob paused to reconnoitre for caribou, but always to be disappointed, and when he and Shad halted at sundown to pitch their night camp no living thing had they seen.

Shad's small wedge tent was stretched



The days that followed were equally disappointing.

between two trees, snow was banked around it on the outside, and a thick bed of boughs spread upon the snow within. Two short butts of logs were placed at proper distance apart near the entrance and inside the tent, the tent stove set upon them, and with an ample supply of wood cut and split, their night shelter, with a roaring fire in the stove, was warm and cozy.

The days that followed were equally as disappointing. The smooth, white surface of the snow was unmarred by track of beast or bird. No living creature stirred. No sound broke the silence. The frozen world was dead, and the silence was the silence of the sepulchre.

"It's so quiet you can hear it," Shad remarked once when they halted to make tea.

"Aye," said Bob, "'tis that, and they's no footin' of even rabbits. I can't make un out."

On the afternoon of the third day after leaving the river tilt they came upon the southern shore of the Great Lake of the Indians, and turning westward presently discovered Sishetakushin's wigwam.

The travelers received a warm welcome from the Indians. Sishetakushin and Mookoomahn were indeed noisy and effusive in their greeting. Manikawan radiated pleasure, but she and her mother, a large, fat woman, as became their status as women, remained in the background.

The Indians had killed some caribou early in the season, and jerked the meat. They had just killed a bear whose winter den they had discovered, and over the fire was a kettle of stewing beaver meat upon which they feasted their visitors.

At the proper time Bob presented them with tea, Shad gave them each some tobacco, and then Bob told them of his proposed trading project.

"My people will be glad," said Sishetakushin, "and you will have much trade."

It developed in the course of conversation that the Indians were preparing to move at once to the Lake of Willows (Petitsikapau), to the northwest, in the hope of meeting caribou, for none had been seen by them since those they had killed in early fall.

They were to cache some of their provisions near the Great lake, and when they had made a sufficient kill in the north to supply them with food, were to return to their cache near the Great lake to trap martens, for in the more northerly country, where wide barrens take the place of forests, martens are rarely to be found.

"Bob, here's a chance I've been hoping for," said Shad, when Bob interpreted to him the Indians' plan. "Do you think they would be willing to let me go with them until their return here, if I gave them some tobacco?"

"They's no tellin', Shad, how long they'll be away," suggested Bob.

"But I want to go if they'll let me go. Please ask them," insisted Shad.

"But they may not be findin' deer, an' if they don't find un they won't be comin' back here till th' end o' winter. You don't want t' be with un th' rest o' th' winter, Shad; 'twill be rougher cruisin' than with us," Bob warned.

"Ask them. I'm going if they'll have me along," and Shad displayed in his tone a suggestion of resentment that Bob should question the advisability of anything upon which he had determined.

The Indians discussed the matter at some length before finally giving Bob an affirmative decision.

"They says you can go, Shad, but they'll not promise t' be back here for two months, whatever, an' when they does they'll come t' th' river tilt with you," said Bob.

Good! It'll give me some change of experience and the chance to study their life and customs that I've wanted," and Shad was elated with the prospect.

Partly because of the earnest solicitation of his Indian friends, but chiefly in the hope of dissuading Shad from his determination, Bob remained in the Indian camp the remainder of the week. While they still maintained a degree of reserve toward Shad, Bob was treated in every respect as one of them.

Manikawan made him the object of her particular attention. She waited upon him as the Indian women wait upon their lords, anticipating his needs.

In expectation of his coming she had, after her return from the river tilt, made for him a beautiful coat of caribou skins. The hair, left on the skins, made a warm lining, while the outside of the coat, tanned as soft and white as chamois, was decorated with designs painted in colors. Attached to it was a hood of wolfskin.

Accompanying the coat was a pair of long, close-fitting buckskin leggings and a pair of buckskin moccasins, both decorated, and the whole comprising the typical winter suit of a Nascaupee hunter.

Manikawan's attentions were extremely irritating to Bob, but he could not well avoid them, and to have declined to accept the gift which she had made especially for him in anticipation of his coming, would have caused her keen disappointment. So he accepted them and donned them, to her evident delight.

"Shad," said Bob, on the Sunday evening after their arrival, "I has t' start back in th' mornin', an' you better be goin' with me."

"No," insisted Shad, "I'll stick to the Indians for a while."

The following morning Bob bade them adieu.

"Take care of yourself, old man," said Shad. "I'll see you in a month or so."

"I hopes so, Shad, an' you take care o' yourself, now. I'm fearin' t' leave you, Shad."

"Oh, I know how to look out for myself,"

declared Shad. "Don't worry about me."

Turning to Manikawan, who stood mutely waiting for the word of farewell that she hoped Bob would bestow upon her, he said, in the Indian tongue:

"White Brother of the Snow must go to his hunting grounds. He is leaving behind him his friend. Will Manikawan minister to his friend as she would to him? Will she see that no harm comes to him?"

"Manikawan will do as White Brother of the Snow directs," she answered. "She will minister to his friend's needs. She will make for his friend the nabwe. His friend will not be hungry. Manikawan will care for him until White Brother of the Snow is weary of hunting and comes again to Sishetakushin's lodge. She will do this because he is the friend of White Brother of the Snow."

Then Bob turned into the white, frigid waste to the southward, and Shad was alone with the Indians.

(To be continued.)

Your Health

By Royal S. Copeland, M. D., F. A. C. S.

Here is a sentence from one of the thousands of letters of inquiry that come to me each month. It requests me to write an article in reference to carbuncles. The writer asks:

"Is it possible to be afflicted with more than two carbuncles and live?"



Dr. Copeland.

Before saying anything about carbuncles it is necessary to speak about boils, because, in a sense, a carbuncle is simply a collection of boils. This statement is not entirely scientific, but it will serve for the present.

A boil is a localized inflammation of the skin, developing pus and a "core" or slough. It is due to a germ called the "staphylococcus."

In order for this germ to get a chance to do its work it must penetrate the tissues. For it simply to alight on the skin is not enough. It must be rubbed in, or otherwise thrust into the substance of the skin. For this reason boils are found in those parts which are played upon by the clothing. The rubbing of the collar upon the neck, or of the garments upon the buttocks, may give the staphylococcus just the right conditions to force it into the tissues.

The habit of scratching the ear canal with a hairpin or a toothpick may cause the entrance of the germ into the skin and result in one of those painful things, an aural boil.

A carbuncle is like a group of boils. Instead of discharging its contents through one opening as a boil does, it has several, perhaps many openings.

The skin becomes dark red, hard and it looks as if it had been varnished. In a week or 10 days the pus appears at the surface and breaks through the skin at several points.

The seriousness of a carbuncle depends on the age and the general condition of the victim. If he is young and vigorous he will come through without danger to his life. Old persons and rundown or ill persons may have serious results from carbuncles.

There are certain diseases, particularly diabetes, in which a carbuncle is a rather common complication. On this account every person who has a carbuncle or repeated boil formation should have the urine examined to make sure there is absence of sugar.

A bad carbuncle will last from four to six weeks and is, of course, very debilitating. A single carbuncle is bad enough, a second one is worse, but a strong person could weather several. Certainly there is no rule of nature saying that a pair is the limit.

Let me say this for your comfort:

There is almost no kind of suffering which can not be endured and successfully overcome. There are no stated rules which govern the outcome of any ailment. The natural tendency of disease is toward recovery. If it were not so almost the first sickness one had would have a fatal result. Serious as a carbuncle is, and terrible as might be the suffering caused by two or three, yet your body can resist such an assault if it is in reasonable repair at the start.

The surest guarantee against boils and carbuncles is likewise the surest of guarantee against every disease. Right living and eating and sleeping and breathing and right thinking will keep you well, and when you are well you are able to resist every germ.

PREPARING PEACHES FOR MARKET.

In a new publication, Farmers' Bulletin 1266, entitled "Preparation of Peaches for Market," just issued by the United States department of agriculture, H. W. Samson, specialist in standardiztion, describes the methods of preparing the peach crop for market which have been used successfully under various conditions.

Just Folks

Chauncey M. Depew recently celebrated his 88th birthday. He is in good health and attending to business as usual.

Mr. Depew attributes his long life in eliminating the things that he likes. In other words, a score or more years ago he found that smoking affected his heart. He liked smoking, but he quit it. He found that certain articles of food which he enjoyed extremely were not good for him. He eliminated those articles in his diet.

Mr. Depew has been one of the most noted of after-dinner speakers, but it is said of him that he never ate anything at a banquet which he attended.

It is a poor rule of life to do the things which we like to do just becouse we like to do them.

It is all right to do the things we like to do after we have learned to like the things which are good for us to do.

The satisfactions of life come largely from doing the things which you do not care to do at first.

At first hard work and attention to details are not exactly pleasurable occupations and yet out of this hard work and attention to details come the larger part of the satisfactions of life.

The joy of work is one of the best attainments in life, as achievement is of the highest satisfaction.

The joy of work means the cultivation of a habit for work that becomes enjoyable. Modern conveniences and modern machinery do not in and of themselves put joy into work.

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FAMILY CIRCLE

ALICE BARLAND
EDITORIAL CONTRIBUTOR

Experience Letters

From Our Family Circle Women

Dear Mrs. Barland: I just love these hard times; they surely put one on his mettle, and it keeps one's brain working to save the pennies, not only one's brain, but fingers as well.

My fancy work these days is placing patches and they are certainly a badge of honor around my neighborhood. It's a case of the more the merrier. One woman proudly proclaimed that she had mended her husband's gloves nine times and was not through yet.

I used to think floursacks were only good for dishtowels and now I never have enough of them to use for aprons, tablecloths and all sorts of things.

I don't know much about child training, as my little girl is only a few months old, but by the time I have put into practice all the theories advanced on the subject she will be either a perfect child or a nervous wreck.

I have two pairs of socks, a pair of overalls, one coat, four shirts and a suit of underwear to mend before supper and I must get at them. This may seem a queer letter, but I was lonesome and wanted to talk to some one.

"A PATCHES WIFE."
A. W. B.

Dear Mrs. Barland: Colored tafeta silk may be easily cleaned with mustard water. Use two tablespoons of mustard in one-half bucket of water and wash the silk by gently squeezing it till all spots and dirt are removed. Rinse in clear water and shake often while drying and press with a moderately hot iron before it is quite dry. Never put the iron directly on the silk, but use a cloth. This method of washing doesn't fade or shrink the goods.

In darning men's socks I use yarn one way and common sewing thread the other. I put in the yarn with a needle one way, then across and back with sewing thread. It is easier and wears longer than when yarn is used both ways.

One can make a cake without eggs by using one-half cup of mashed potato and adding one-half teaspoon more of baking powder than usually called for.

MRS. M. S. S.

Dear Mrs. Barland: I am sending a few helps to the Circle:

For keeping black flea beetles off young tomato plants, make little boxes about 6 inches square out of thin boards, tack house lining over the top, having the boxes about 5 inches high. Place these over the plant and brush up a little soil against the bottom.

Plants can be set out two weeks earlier in a normal season as these boxes will protect from frost. When the plants begin to grow so they push against the cloth, place a box without a cloth over the plant and replace the old box making it fast from blowing off with a couple of sticks at the side. These boxes can be used for covering late cabbage plants as well.

When the rubber soles of your shoes break a little, cut out a half sole from the inner tube of an automobile, have the soles of your shoe dry and clean, wash both parts to be mended in gasoline, apply rubber glue, hold a moment till the rubber begins to get sticky, then put both parts together and weight with a flat-iron. If any part doesn't stick well rough with a knife and apply more cement and place under the weight. Do not wear the shoes for several days. Hot water bags can be mended the same way, using the inner tube of a bicycle.

Keep a book for the addresses of your friends and those of certain advertisements you may wish to answer, the names of the magazines you take and when they will expire. MRS. EUGENIE TENNEY.

Dear Mrs. Barland: I want to tell the Family Circle about the pleasure derived from kindergarten at home. Course for the child under school age.

I am one of the busy ones doing much outdoor work as well as the housework, but am finding time to teach my little Don one hour a day and to lay the foundation for better work in school. Only in cities is it usual for children to receive this training, but when a mother can provide this at home it pays in the better understanding of the child's capacity to learn, and is a great pleasure both to the child and parent. Our boy begs for his lessons and will be ready for first year school work at 5 years of age.

We are too apt to neglect the little folks and leave all for the teachers, many of whom are poorly equipped to train those entrusted to their care.

Mothers living some distance from schools can provide the very best training for the little ones in this way. We take much pride in stock of various kinds as a nation, but we start our best farm "crop" to school without any preparation at all and often wonder why children don't make satisfactory progress. We owe more to our children than just feeding and clothing them.

I did quite a little in poultry last summer having raised 115 turkeys and over 300 chickens. I also cared for a garden and assisted with dairy work. I mention this so you may know I do not spend all my time teaching the child.

Should any mother be interested in the kindergarten work at home I shall be glad to help her. Mrs. Barland has my address.

MRS. G. B.

Dear Mrs. Barland: We are not old subscribers of THE FARMER, but we all enjoy it very much. We have lived in Washington about two years and are located on a stump farm, or it will be a farm some day.

I want to tell the Circle how I fixed my dining room walls. They were foot-wide boards and rough, so I got a roll of building paper and tacked it on in strips overhead and on the sides to 3 1-2 feet from the floor. I covered the tacks by pasting strips of the same paper over them. Next I ripped open gunny sacks and colored them and sewed them together on the machine and tacked them on the wall same as wainscoting, letting the sacking run up as high as the back of a chair. I finished at the top with a half-round molding and at the bottom with a mop board. The room looks very pretty and is durable as the sacking will not tear when anything is pushed against it. MRS. W. D. R.

Home Recipes

Chilli con carni No. 2: Mince three onions and put with three or four tablespoons of olive oil smoking hot in a frying pan and to this add three red peppers minced fine. Have about one and one-half pounds of lean beef, the bottom of a round will do, cut in dices and when the onions turn yellow add the meat gradually, stirring occasionally, so as to sear it. After cooking this way 5 to 10 minutes add a cup of hot water and cover and let simmer about two hours. In a separate kettle heat one or two cans of kidney beans, mix a tablespoon of flour with water for thickening and before adding pour a large tablespoon of table sauce over the meat; be sure to keep enough water in the mixture to prevent burning and cook 10 minutes; drain the beans and add and serve very hot. It should be very peppery.

This recipe was given by a chef who is famous for this dish. MRS. E. S. W.

Boiled spice cake: One cup of sugar, one-half package of raisins, one tablespoon of lard, pinch of salt, one teaspoon each of cinnamon, cloves and allspice and a sprinkle of nutmeg, one and one-half cups of coffee. Boil all this together and let get cold, then add one teaspoon of soda in a little water and enough flour to make stiff. Bake in a slow oven about one hour.

MRS. E. W. V.

Vinegar pie: In one pint of boiling water put enough vinegar to make it tart as one likes. Add two tablespoons of flour to one cup of sugar and stir well together, moisten with warm water, not hot, beat the yolks of two eggs very light and mix with the flour and sugar, then stir all into the boiling water and vinegar; let cook until thick, then put in a baked crust and use the beaten whites of two eggs for meringue made by being beaten stiff and adding a little sugar, place in the oven a moment or two till brown.

MRS. S. A. L.

Plain fritter batter: One cup of flour, two teaspoons of baking powder, one egg, one-half cup of milk, one-fourth teaspoon of salt. Add two tablespoons of sugar if sweet fritters are desired. Sift dry ingredients together, add beaten egg and milk, beat until smooth. To this batter add corn for corn fritters and drop from a spoon into deep, hot fat.

Peal, quarter and core apples, dip each quarter into the batter, then fry in the deep, hot fat, and you have apple fritters.

MRS. C. F. L.

Little Mother

By SHERIDAN MAX.

Very bright were Little Mother's eyes,
Very fair was Little Mother's brow,
As, long ago, her gaze was wont to ponder
The happy road that lay from Then to Now.

Little Mother's journey led her on,
On, through tangled woods of lofty grace.
Ah, the cruel undergrowth of briar,
How it scars a sweet, uplifted face!

Tender still, but not so bright, the eyes,
Braver, not so beautiful, the brow,
When my Little Mother's glances wander
Back along the road from Then to Now.

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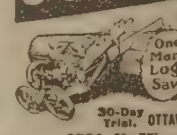
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Bits of Fun FOR Everyone

How the Row Began.

She (sentimentally)—What would you do, darling, if I were to die?

He (matter-of-fact)—I'm afraid I should have to bury you, darling.—Union Pacific Magazine.

Goodness, Is That All?

Jimmy (tearfully)—Father, the d-donkey kicked me!

Father—Have you been annoying it?

Jimmy—No, I was only t-trying to c-carve my name on it!

They're Bad 'Nuf Now.

"Do you ever oil your hogs?" asked a tourist.

"Oil 'em? Heck, no!" replied Gap Johnson of Rumpus Ridge. "It's hard enough to ketch 'em and hold 'em now, without slicking 'em up any."—Country Gentleman.

Playing "Put and Take."

Mrs. Worth had just learned that her colored workwoman, Aunt Dinah, had at the age of 70, married for the fourth time.

"Why, Aunt Dinah," she exclaimed, "you surely haven't married again!"

"Yassum, honey, I has," was Aunt Dinah's smiling reply. "Jes' as of'en as de Lawd takes 'em, so will I."—Ladies' Home Journal.

At Sea.

Neverwed—I hear you've signed up as skipper of the good ship Matrimony.

Just wed—No, my wife's the skipper. I married a widow. I'm her second mate.—Cleveland News.

We Hope So, Too.

Lament of an office boy in division commercial superintendent's office:

"The things that I should remember are
the things that I forget,
And the things that I have forgotten always cause me vain regret,
But by forgetting to remember, and remembering to forget,
I hope that there will come a time when I'll be happy yet."

—Pacific Telephone Mag.

Latest High Class Patterns for the Home

Please order the patterns you desire at least two or three weeks before you wish to use them. Desiring to obtain the latest high-class patterns for its readers, THE FARMER has made arrangements to have them sent direct from the east, and under present mailing conditions it takes about that time for them to reach you.



3970. Ladies' house dress. Cut in seven sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. A 38-inch size requires 4 3-8 yards of 40-inch material. The width at the foot is about two yards. Price 10 cents.

3753. Junior's dress. Cut in three sizes: 12, 14 and 16 years. A 14-year size requires 2 3-4 yards of 36-inch material for the dress, and 2 1-4 yards of 32-inch material for the guimpe. Price 10 cents.

3624. Ladies' dress. Cut in seven sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. A 38-inch size requires 5 3-4 yards of 44-inch material. The width of the skirt at the foot is two yards. Price 10 cents.

3965. Misses' dress. Cut in three sizes: 16, 18 and 20 years. An 18-year size requires 7 7-8 yards of 36-inch material. The width at the foot is about two yards. Price 10 cents.

3428. Girl's dress. Cut in four sizes: 2, 4, 6 and 8 years. A 4-year size will require 2 5-8 yards of 27-inch material. Price 10 cents.

3666-3962. Ladies' costume. Waist 3666, cut in six sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. Skirt 3962, cut in seven sizes: 27, 29, 31, 33, 35, 37 and 39 inches waist measure. To make the dress for a medium size will require 6 3-8 yards of 40-inch material. The width of the skirt at the foot is about two yards. Two separate patterns, 10 cents for each pattern.

3751. Ladies' apron. Cut in one size, medium, and requires 1 1-2 yards of 27-inch material. Price 10 cents.

3959. Girl's dress. Cut in four sizes: 6, 8, 10 and 12 years. A 10-year size requires 2 3-4 yards of 40-inch material. Price 10 cents.

3966. Girl's dress. Cut in four sizes: 6, 8, 10 and 12 years. A 10-year size requires two yards for the guimpe and 2 3-4 yards for the dress of material 27 inches wide. Price 10 cents.

3952. Child's dress. Cut in four sizes: 1, 2, 4 and 5 years. A 2-year size requires 2 3-4 yards of 27-inch material. Price 10 cents.

3117. A new corset cover. Cut in six sizes: 32, 34, 36, 38, 40 and 42 inches bust measure. It will require 1 3-8 yards of 36-inch material for a 38-inch size. Price 10 cents.

2607. Ladies' underskirt. Cut in seven sizes: 22, 24, 26, 28, 30, 32 and 34 inches waist measure. Size 24 requires 2 1-2 yards of 36-inch material without the flounce, or 3 5-8 yards of material with the flounce. Price 10 cents.

CATALOGUE NOTICE.

Send 12 cents in silver or stamps for our up-to-date spring and summer 1922 catalogue, showing color plates, and containing 500 designs of ladies', misses' and children's patterns, a concise and comprehensive article on dressmaking, also some points for the needle (illustrating 30 of the various, simple stitches), all valuable hints to the home dressmaker.

Please fill in this order and mail with remittance to:
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Enclosed find.....cents for which send me the following:

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Be sure to give the pattern number and the correct size.



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as you did from film on teeth

Pepsodent is largely for the coming generation. It brings to adults whiter teeth, new protection. But to children it means a new dental era.

Your teeth, perhaps, have always been film-coated, save right after dental cleaning. The luster has been dimmed by film. Film has caused decay, no doubt, despite your daily brushing.

Now dental authorities urge you to fight film. Above all, have your children fight it daily in this scientific way.

Makes teeth dingy

Modern science traces most tooth troubles to a film—to that viscous film you feel. It clings to teeth, enters crevices and stays.

It absorbs stains, making the teeth look dingy. Film is the basis of tartar. It holds food substance which ferments and forms acid. It holds the acid in contact with the teeth to cause decay.

Germs breed by millions in it. Pyorrhea, and many other serious troubles, are chiefly caused by those germs and by tartar.

Dental science has for years been seeking a way to daily combat that film. It is the teeth's great enemy.

Two ways now found

Two effective film combatants have been found. Able authorities have subjected them to many careful tests. Dental science now approves them, and leading dentists, here and abroad, urge their daily use.

A new-day tooth paste has been perfected, complying with modern requirements. It is called Pepsodent. And these two film-combating methods are embodied in it.

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Starch deposits also attack teeth. In fermenting they form acids.

Nature puts a starch digestant in the saliva. It puts alkalis there to neutralize the acids.

Pepsodent multiplies that starch digestant, also the alkalinity. Thus Nature's teeth-protecting forces are multiplied.

Thus twice a day, in all these ways, Pepsodent combats the enemies of teeth.

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Send the coupon for a ten-day test. Note how clean the teeth feel after using. Mark the absence of the viscous film. See how teeth whiten as the film-coats disappear.

The lasting benefits appear more slowly. But all who love clean, glistening teeth will see effects at once. And the book we send explains the reasons for them. Cut out the coupon now.

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TAKE ADVANTAGE OF GUARANTEE mentioning THE WASHINGTON FARMER when writing to advertisers; you are doubly protected. See the guarantee on the editorial page.—Adv.

High Points in News of the Week

Indications in financial and industrial centers are that a considerable improvement is going on in the general business of the country. At a recent meeting of the bank examiners of the 12 federal reserve districts the examiners reported to the federal authorities a general improvement in nearly all sections of the country. The degree of depression that still exists is due, in the opinion of one of these examiners, "to our western and southern agricultural situation, to taxation, to the still too high living cost and to labor cost."

The examiner for the St. Louis district is quoted as saying: "The morale of the farmer is slowly returning. The increase in prices of grain and live stock has renewed his hope. It is true that the grain reserves on the farm are relatively small and that the farmer has not received the full benefit of enhanced value. The increase, however, has given him courage. With the present prices for farm products, and the present prospects for crops, it would seem that the purchasing power of the farmer is in a fair way to be restored. When that is accomplished great momentum will be given the onward movement of business that is already beginning."

Secretary of Labor Davis declared last week that, taking the country as a whole, the employment situation was much improved. Greater demand for labor, he said, indicated that there is "a widespread industrial awakening extending from coast to coast." Even more optimistic than the reserve bank examiners, Mr. Davis said that "the entire country can be said to have come out of the depression."

* * *

Indications are that the civil war in a limited section of China is soon to be brought to an end by the victory of General Wu Pei Fu over the forces of General Chang Tso Lin.

The issues involved in the controversy are not well known by the outside public. General Wu declared last week that he was not seeking to place himself at the head of the government, but that he simply desired to devote his energies to the unification of China, creating political harmony in the north and south, abolishing militarism, reviving industry and winning the respect of foreign nations for his country. He said that he agreed with the opinion of the various nations at the recent conference at Washington on armament limitation when the conference declared that China must put her house in order, free herself from vast armies, apply her revenues to pay her debts and build railroads. It is reported also that the victory of General Wu would be a blow to further Japanese control in China.

* * *

There is little or no apparent change in the situation with reference to the nation-wide coal strike. The strike is unique in that after nearly two months' duration private and industrial needs have been so little affected that the general public is hardly aware of the fact that a strike of such proportions is on. About 600,000 miners are on strike, including practically all organized miners and a large percentage of the nonunion workers. The government has reiterated its intention of taking no action in the matter, preferring to let the coal mine owners and the workers reach an agreement if possible. Should the situation develop into a menacing one toward industry or the general public welfare the government will probably take immediate action. Both Secretary Hoover of the department of commerce and Secretary Davis of the department of labor are working upon the problems involved with a view to being ready for adequate and equitable action by the government should action be necessary.

* * *

William G. Eckhardt of Illinois, former treasurer of the United States Grain Growers, Inc., has filed in the Nebraska district federal court a libel suit for $70,000 against H. C. Filley of the Nebraska Agricultural college and the Nebraska Farm Bureau federation. The suit is brought on the ground of alleged libel in an article published in the weekly news letter of the Nebraska farm bureau and signed by Mr. Filley. The article was a report and discussion of the recent annual convention of the United States Grain Growers in Chicago, at which time a strong minority, of which Mr. Eckhardt was a member, was defeated for representation on the board of directors by the majority, supporting C. H. Gustafson, president of the organization. Mr. Eckhardt charges that the published statement was so written as to tend to bring him into disrepute and destroy his reputation and standing as an agricultural expert and a leader in cooperative marketing.

* * *

Whether Germany will be able to pay the reparation installment due to the allies May 31 is a question that is causing considerable concern in European diplomatic and financial circles. German statesmen are understood to have gone on record to the effect that their country could not meet the requirements. The French leaders have gone on record as determined that they shall meet the May 31 payment, or that the French army, alone if necessary, will occupy more German territory. Other nations of the allied group appear to be more lenient with Germany than is France.

* * *

With a view to the vigorous prosecution of wartime fraud cases, either civil or criminal, President Harding has requested congress to appropriate $500,000 to be used by the department of justice in investigating such cases and conducting prosecutions against alleged offenders. Attorney General Daugherty has appointed Representative Roscoe C. McCullouch of Ohio as special assistant attorney general to take charge of the government's investigation and subsequent prosecutions.

* * *

A report from the national capital indicates that the military affairs committee of the house of representatives, which has been considering the various bids for lease of the Muscle Shoals nitrate plants from the government, will recommend that none of the bids be accepted in their present condition. This includes the bid of Henry Ford.

* * *

Conforming to a custom of long standing, the second Sunday in May, falling this year on May 14, will be observed throughout the United States as Mothers' day.

* * *

Samuel Gompers, president of the American Federation of Labor, declared in a public address in New York last week that he and the federation that he represents "are in favor of beer and light wines and against any attempt to enforce sumptuary laws aimed at the personal liberties of our people." He denounced prohibition in vigorous terms.

* * *

Adopting a recommendation made by Eugene Meyer Jr. of the war finance corporation, the United States senate has passed a bill extending the war finance corporation's operations until July 1, 1923.

* * *

During the month of March exports from this country to Europe had a total valuation of $180,000,000, or about $19,000,000 less than in March a year ago. Imports from Europe during the month totaled $86,000,000, or about $9,000,000 more than in March a year ago.

* * *

Henry P. Davison, head of the financial work of the Red Cross during the war and one of New York's prominent financiers, died last week.

LIVE STOCK VALUATIONS.

The total valuation of live stock sold or slaughtered in the state of Washington in the year 1919 was $23,900,000, according to the census bureau. The value of live stock products for 1919 exceeded that of the stock itself, being about $44,000,000. This latter figure includes milk, butter, wool, hides and so on.

FOR THE BALANCED RATION.

Kindness to the pig is one of the greatest pork producers in his rations.

Farm Business and Markets Outlook

(Continued from page five.)

steady recently, with best New York barreled Baldwins at $7.50 to $8.50 and northwestern fancy boxed Winesaps at $2.75 to $3.50 in consuming cities.

LATEST QUOTATIONS.

The Live Stock Market.

PORTLAND, May 6.—Cattle—Choice steers, $8@8.50; good to medium steers, $7.50@8; fair to medium steers, 6.50@7.50; common to fair steers, $6@6.50; choice feeders, $5@6; fair to good feeders, $4.50@5; choice cows and heifers, $6.50@7; medium to good cows and heifers, $5.50@6.50; fair to medium cows and heifers, $4.75@5.50; common cows, $3.75@4.75; canners, $2.25@3.75; bulls, $3.50@5; choice dairy cows, $8@9; prime light calves, $7@8; medium light calves, $6.50@7; heavy calves, $4.50@6.50.

Hogs—Prime light, $11@11.50; smooth heavy, 200 to 300 lbs., $10@11; 300 lbs. up, $9@10; rough heavy, $7@11.50; fat pigs, $11@11.25; feeder pigs, $11@11.25; stags, subject to dockage, $5@7.50.

Sheep—Best spring lambs, $14@14.50; medium spring lambs $10@13; common spring lambs, $6@10; east of mountain lambs, $13@14; best valley lambs, $12@13; fair to good, $10@11; cull lambs, $6@8; eastern Oregon feeders, $9@10; light yearlings, $9@10.50; heavy yearlings, $9@10.50; light wethers, $9@10; heavy wethers, $9@9.50; ewes, $3@7.

SPOKANE, May 6.—Cattle—Prime steers, $7@8.25; good to choice steers, $6@7; medium to good steers, $5.50@6.75; fair to medium steers, $4.75@5.50; common to fair steers, $4.25@4.75; choice cows and heifers, $5.50@6.50; good to choice cows and heifers, $4.50@5.50; medium to good cows and heifers, $4@4.50; fair to medium cows and heifers, $3@4; canners, $2@3; bulls, $3@5.50; light veal calves, $8@10; heavy veal calves, $4@8; stockers and feeders, $4.50@5.50.

Hogs—Prime mixed, $11@11.50; medium, $10@11; heavies, $8@9; fat pigs, $10@11; stockers and feeders, $10@11.

Sheep—Prime lambs, $11@13; fair to medium, $10@11; yearlings, $10@11; wethers, $9.50@10; mutton ewes, $3@7.50; feeder lambs, $8@9.

The Grain Market.

PORTLAND, May 6.—Wheat—Hard white, $1.25; northern spring $1.23; soft white, white club, $1.22.

Grain futures: Wheat—Hard white, May, June, $1.26; soft white, white Club, May, June, $1.22; northern spring, May, June, $1.23.

Oats—No. 2 white feed, May, June, $35.50; No. 2 gray, May, June, $34.50.

SEATTLE, May 6.—Wheat—Hard white, soft white, white club, soft red winter, northern spring, $1.25; hard red winter, $1.27; eastern red Walla, $1.22; Big Bend Bluestem, $1.40.

PULLMAN, May 6.—Red wheat, 98c; white wheat, $1.01.

DAVENPORT, May 6.—Marquis, $1.35; Bluestem, $1.25; Gold Coin, $1.04.

WALLA WALLA, May 6.—Club wheat, $1.06; Bluestem, Turkey red and Bart, $1.10.

LEWISTON, Idaho, May 6.—Fortyfold, Club, winter, $1.07 to $1.09.

RITZVILLE, May 6.—Bart, $1.47; red, $1.32; Fife, $1.05.

POMEROY, May 6.—Turkey red, $1.05; hybrid, $1.03.

Hay and Grain Feed.

PORTLAND, May 6.—Millfeed—Price f. o. b. mill: Millrun, ton lots, $31; mixed cars, $30; straight cars, $29 per ton; middlings, $45; rolled barley, $37@39; rolled oats, $42; scratch feed, $47@51 per ton.

Corn—White, $36; cracked, $38.

Hay—Buying price f. o. b. Portland: Alfalfa, $20 per ton; cheat, $16; oats and vetch, $17; clover, $17; valley timothy, $20; eastern Oregon timothy, $21@22.

SPOKANE, May 6.—Wheat—Feed wheat, $46 per ton.

Oats—$40 per ton; steam rolled, $42.

Corn—$36 per ton; cracked corn, $32 ton.

Barley—$40; steam rolled, $42.

Bran and shorts—$30 per ton.

Alfalfa, $22 ton; timothy, $22 ton; mixed hay, $18 ton.

General Produce.

PORTLAND, May 6.—Butter—Cubes, extras, 31@32c per lb.; parchment wrapped, box lots, 35c; cartons, 36c. Butterfat, buying price, No. 1 grade, 33@34c delivered Portland.

Eggs—Buying prices, 19@20c doz.; case count; henneries, 23@24c dozen; jobbing prices, case count, 21c; candled ranch, 22c; selects, 25c.

Cheese—Tillamook triplets, price to jobbers, f. o. b. Tillamook, 23c; young Americas, 24c pound.

Poultry — Hens, 22@25c; ducks, nominal; geese, nominal; turkeys, live, nominal; dressed, 40c.

Veal—Fancy, 14c per pound.

Pork—Fancy, 15½c per pound.

SPOKANE, May 6.—Poultry—Fat hens, 23c lb.; light hens, 20c lb.; roosters, 10c lb.

Fresh ranch eggs—$6 case; no storage; pullet eggs, $5.50.

Butterfat—36c a pound.

Range of Live Stock Prices for the Week Ending May 3

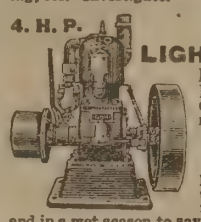
	Chicago.	Spokane.	Portland.	N Salt Lake
CATTLE.				
Choice, prime heavy steers (1100 lb. up)	8.65@ 9.25	.....	.....	.....
Good heavy steers	8.15@ 8.65	.....	.....	.....
Medium heavy steers	7.50@ 8.25	.....	.....	.....
Common heavy steers	6.90@ 7.65	.....	.....	.....
Choice, prime light steers (1100 lb. d'n)	8.75@ 9.35	.....	.....	.....
Good light steers	8.25@ 8.80	.....	.....	.....
Medium light steers	7.50@ 8.25	6.75@ 8.00	7.00@ 8.25	6.75@ 7.25
Common light steers	6.90@ 7.65	4.75@ 6.75	5.50@ 7.00	4.50@ 6.75
Common to choice butcher heifers	5.65@ 8.60	4.00@ 6.75	4.50@ 7.75	4.00@ 6.00
Common to choice butcher cows	4.65@ 7.35	3.00@ 5.75	3.75@ 6.25	3.50@ 5.25
Bologna and beef bulls	4.15@ 6.85	3.00@ 5.50	3.50@ 5.00	2.00@ 3.50
Canners and cutters, cows and heifers	3.50@ 4.75	2.00@ 3.00	2.25@ 2.75	1.50@ 3.25
Canner steers	4.25@ 5.75	3.00@ 4.00	3.00@ 4.50	2.50@ 3.50
Medium to choice light veals	6.00@ 8.50	8.00@10.00	8.50@10.00	7.00@ 8.00
Common to choice heavy veals	4.00@ 7.50	4.00@ 8.00	4.50@ 6.50	.....
Common to choice feeders (1000 lb. up)	6.00@ 7.75	.....	.....	.....
Common to choice feeders (750-1000 lb.)	6.00@ 7.75	.....	4.50@ 6.00	4.50@ 5.50
Common to choice stocker steers	5.75@ 7.65	.....	.....	.....
Com. to choice stocker cows and heifers	4.15@ 6.00	.....	.....	.....
HOGS.				
Top of market	10.70	11.50	11.75	10.25
Bulk of sales	9.90@10.65	10.50@11.25	11.00@11.50	9.50@10.00
Heavy (250 lb. up)	9.90@10.45	9.50@10.25	9.50@10.50	.....
Medium (200-250 lb.)	10.15@10.70	10.00@11.00	10.50@11.25	9.25@11.15
Light (150-200 lb.)	10.35@ 10.70	11.00@ 11.50	11.25@ 11.75	9.75@ 10.25
Light lights (130-150 lb.)	10.15@10.60	10.50@11.25	11.00@11.50	9.50@10.00
Smooth packing sows (250 lb. up)	9.35@10.00	8.50@ 9.00	8.50@ 9.50	.....
Rough packing sows (200 lb. up)	9.00@ 9.60	8.00@ 8.50	7.00@ 8.50	.....
Medium to choice pigs (130 lb. down)	9.25@10.50	10.00@11.00	11.00@11.50	.....
Stock pigs	.....	10.00@11.00	11.00@11.50	8.50@ 9.25
SHEEP AND LAMBS.				
Medium to prime lambs (84 lb. down)	12.25@15.00	11.00@13.00	11.00@14.00	10.75@12.50
Culls and common lambs	9.00@12.00	8.00@11.00	7.00@11.00	8.00@10.50
Medium to prime yearling wethers	9.50@13.00	9.50@11.00	9.00@10.50	8.00@ 9.00
Medium to prime wethers	7.75@10.50	9.00@10.00	9.00@10.00	6.00@ 7.50
Medium to choice ewes	7.00@ 9.75	6.00@ 7.50	.....	4.50@ 5.00
Culls and common ewes	3.25@ 7.00	3.00@ 6.00	.....	2.00@ 4.50
Feeder lambs	.....	8.00@ 9.00	9.00@10.00	.....
Spring lambs	14.00@16.75	.....	10.00@14.00	.....

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For Light Jobs



A little wonder—regular Cushman quality. Different, better, fewer moving parts. A real no-trouble engine for pumping, etc. Investigate.



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For all power jobs up to 5 H. P. Improved Throttling Governor insures very steady running and less gasoline used.

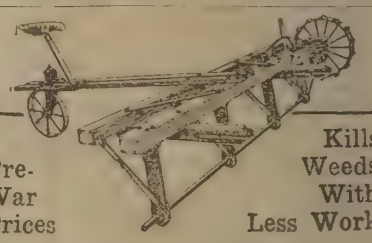
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Besides doing all regular jobs, this 4 H. P. may be mounted on rear of binder to save a team, and in a wet season to save the crop. We supply attachments. This engine is a necessity on every farm.

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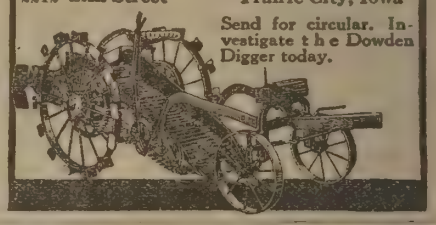
You harvest your ENTIRE CROP when you use the Dowden Digger. Does the work in half time and with half the help. Cuts labor costs in two.

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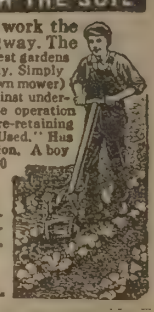


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A. J. Kirstin Co. Escanaba, Mich.



July 6, 1922, Olive Peterson will be 7 years old. She is in the first grade at school and says she likes to go to school. Olive's home is near the Columbia river, in northern Stevens county, Wash. She has never written to the Corner before.

Another Washington girl writes her first letter to the Corner. She is Matilda French of Yakima valley. Matilda is 10. August 5 is her birthday. She has five sisters and a brother. Nigger is her pony. Matilda has a dog and a cat, too.

For pets Kenneth Farmsworth has a horse named Tony, a dog named Jocky, a cow named Pansy and some chickens. One morning Kenneth decided to put out a trap. When he looked at his trap there was a squirrel in it. Kenneth's home is in southeastern Washington, in the Palouse country. October 17, 1921, he was 10 years old. He hasn't been tardy or absent this term.

Lois Turner, who is a brand new cousin, is 7 years old. May 25 is her birthday. She lives near Rock Creek, in southeastern Spokane county, Wash. Aunt Nellie was glad to hear from Lois.

Edna Peper and her brothers, Rudolph and Theodore, have ridden to school all winter in a cutter drawn by Bob and Shorty, two white horses. Twenty-three other children go to the same school. Edna has a baby sister 4 months old, named Wilma Dorothy. There are 23 head of horses, 18 Herefords and other stock at the Peper farm, near Clear lake, in Lincoln county, Wash. Edna was 10 June 6, 1921.

We have another letter from the Peper home, in Lincoln county, Wash. It is from Theodore, who is 8 years old. July 2, 1922, he will be 9. Theodore is in the second grade at school. He has a pet cat, an old mother rabbit and three little ones and a Shetland pony named Midget. He says baby sister is the dearest little girl he ever knew.

"I am going to make a riddle book," says May Dickenson, who lives near the Columbia river, in Klickitat county, Wash. May has two little lambs of her own, about two weeks old. There are 60 little lambs at her home, nine little chickens and 60 little pigs. May is in the sixth grade at school and is 11 years old. August 20 is her birthday.

Owen Ware, who lives in the Big Bend country, eastern Washington, says: "The bluebirds and meadow larks are back again." Owen likes to watch the bluebirds build their nests. He sends love to the cousins.

There was plenty of snow and water in eastern Washington, Spokane county, where Margaret Cerenzia lives. Margaret was 10 years old October 18, 1921. She is a fourth grade student and there are five pupils in her class. St. Patrick's day they celebrated. Bessie and Jack are the names of two little calves at the Cerenzia home.

Thelma Ensley says she likes the letters in The Junior Farmer best of all. September 10, 1921, she was 10 years old. Her home is on the Snake river, in southeastern Washington.

November 14 is Martha Keelmer's birthday. She is 10. Martha has two brothers, but no sisters and they live in northwestern Whitman county, Wash. Martha says her mother has about 200 chickens. Fannie is her brother's dog.

We were very glad to hear from a little cousin who lives near White river, in western Washington. Her name is Alvira Case.

Glen Hay writes to us from southeastern Mason county, Wash. He was 10 years old February 21, 1922. (Write another letter, Glen.)

Sport is a dog belonging to Nettie Knox. She has two cats, but her cats are not named. Nettie says she rides two miles to school every day and she likes to ride. June 5 is her birthday. She is 11 years old. Her home is near the Colville Indian reservation, in northern Washington.

"Little Women," "The Little Girl of Old New York" and "Pollyanna" are some of the books that Helen Grube has read. Helen's home is in Spokane valley, eastern Washington. She was 11 July 11, 1921. For Christmas she received a nice work basket, some crochet thread and a needle and now she is learning to crochet. She has made a cap with a tassel on it for her doll.

Joy Caldwell, who has lived in the city four years, says she likes country life much better than living in town. Joy has blue eyes, brown hair and is five feet five inches tall. Her home is not far from British Columbia, in northeastern Washington. She is a sixth grade student.

Ten-year-old Dorothy Hart, who lives near the Stilaguamish river, in northwestern Washington, becomes a Corner cousin. Dorothy's birthday is February 11. She has one sister and three brothers. She says they have a cat and some chickens.

We are glad to hear from Helen Brooking, a new cousin who lives in Okanogan county, Wash., near the Okanogan river. Several of Helen's friends get The Junior Farmer and she thinks she would like it, too.

Elizabeth Coby, a northern Pierce county (Wash.), cousin, has blue eyes and light brown hair. July 23, 1921, she was 9 years old. This is her first letter to Aunt Nellie.

Clarence Brittian writes that his dog, Prince, got kicked and he thinks Prince has a broken rib. At school on Valentine's day Clarence took part in a program and was in three dialogues and spoke a piece. December 11 he was 11 years old. His home is near the Humptulips river, in Grays Harbor county, Wash.

What makes more noise than a pig under a gate? Two pigs. Martha Deife, who will be 12 May 16, 1922, lives west of Crab lake, in eastern Washington. Teacher—If a farmer sells 350 bushels of wheat at 30 cents a bushel, what will he get? Willie—An automobile.

Maxine Chiles, one of our newest cousins, lives on a 200-acre farm in Okanogan county, Washington. She has one sister and three brothers. Maxine's birthday is August 30. She is 10. She says they own several head of horses and cattle, eight calves, some pigs, sheep and chickens. She is in the sixth grade at school. (We shall be glad to hear from Maxine again.)

We have another letter from Elmi Jackson, who is a northwestern Washington girl, 11 years old. October 7, 1922, she will be 12. Elmi wrote her letter in school. She is in the sixth grade and says she has a very nice teacher.

Birthday Greetings

THURSDAY, May 11—Frances Fox, 7 years old; Theron McGrew, 10; Donald Ritzschke, 10.

FRIDAY, May 12—William Heaton, 10 years old; Jeanette Kragt, 11; Eva Lee, 9; Margaret Morasch, 11.

SATURDAY, May 13—Kenneth Montaney, 11 years old; Helen Olds, 9.

SUNDAY, May 14.—Nina Downing, 11 years old; Agnes Sjodin, 10; Inez Watson, 10; Velzia Stevens, 11; Agatha Stuhr, 11; Cecila Stuhr, 11.

MONDAY, May 15—Elva Dyer, 11 years old; Hazel Enzler, 11; Helen Enzler, 11; Rosa Schlien, 10.

WEDNESDAY, May 17—Nelle Hill, 11 years old; Thelma Peterson, 11; Frank Yuskof, 8; Edith McIlroy, 11.

LETTERS WELCOMED BY AUNT NELLIE.

Among recent letters received by Aunt Nellie are those from cousins whose names follow. A few of these will be published each week in the regular edition of THE FARMER, and others will appear from time to time in The Junior Farmer:

Blanche Uribe, Pearl McHargue, Walter Guiberson, Ruth M. Carlin, Albert V. Ginnette, Dorothy Wagner, May Tamley, Alice Jane Herndon, Grace Jewell, Carrie Mildred Lattimer, Fern Stalcop, Marie Tamley, Ida Rompel, Hannah Wells, Impie Wilson, Robert Osborn, Jewel Field, Dorothy Timm, Clara Bernice Smith, Ivan Schafer, Olive M. Willard, Bruno Hannus, Gladys Main, Mayme Kynse, Dorothy Kimmel, Emory Kruchek, Sylvia Lampi, Sylvia M. Leikas, Della Bromley, Thelma McTavish.

Delma Hedington, Addie Moore, Verlan Osburn, Charlotte Moore, Hilma Hannus, Flossie Slemp, Ida May McAuley, Lucile Martha Hardung, Constance Washburn, Ida Long, James Joyce, Dorothy Wagoner, Ruby Brown, Edna Hepler, Emilie Ruth and William Albert Bennett, Helen Moilanen, Astrid Larsen, Florence Martin, Pauline Ottmar, Laila Anderson, Grace Anderson, Maurice Hershey, Phyllis Van Dyke, Bernice Ruth Bramlet, Albert Harper, Melva Underwood, Catherine Toycen, Anna Mae Tarter, Goldie May Johnson, David Slemp, Clarence Case, May Ahola.

BEDTIME STORIES

By THORNTON W. BURGESS.

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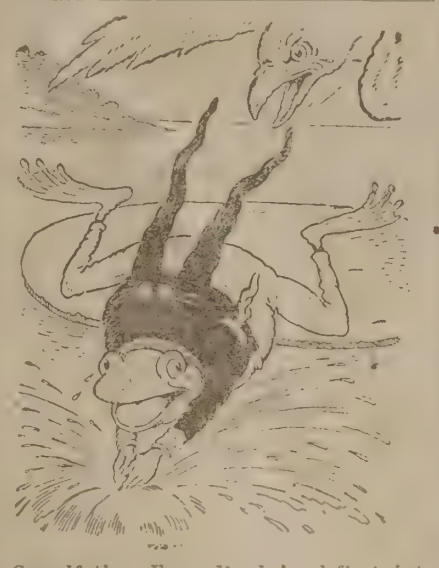
WHITETAIL IS HUNGRY, TOO.

Back and forth over the Green Meadows sailed Whitetail the Marshhawk. Like Longlegs the Blue Heron, he was hungry. His sharp eyes peered down among the grasses looking for something to eat. But some good fairy seemed to have warned the very little people who lived there that Whitetail was out hunting. Perhaps it was one of Old Mother West Wind's children, the Merry Little Breezes. You know, they are always flitting about trying to do some one a good turn.

They love to dance and romp and play
From dawn to dusk the livelong day,
But more than this they love to find
A chance to do some favor kind.

Aanyway, little Mr. Green Snake seemed to know that Whitetail was out hunting and managed to keep out of sight. Danny Meadow Mouse was not to be found. Only a few foolish grasshoppers rewarded his patient search, and these only served to make him feel hungrier than ever. But old Whitetail has a great deal of persistence, and in spite of his bad luck he kept at his hunting, back and forth, back and forth, until he had been all over the Green Meadows. At last he made up his mind that he was wasting time there.

"I'll just have a look over at the Smiling Pool and if there is nothing there I'll take a turn or two along the Big River," thought he, and straightway started for the Smiling Pool. Long before he reached it his keen eyes saw Longlegs the Blue Heron standing motionless on the edge of it, and he knew by the looks of Longlegs that he was watching something which he hoped to catch.



Grandfather Frog dived head-first into the Smiling Pool.

"If it's a fish," thought Whitetail, "it will do me no good, for I am no fisherman. But if it's a frog—well, frogs are not as good eating as fat meadow mice, but they are very filling."

With that he hurried a little faster, and then he saw what Longlegs was watching so intently. It was Grandfather Frog sitting on his big green lily pad. Old Whitetail gave a great sigh of satisfaction. Grandfather Frog certainly would be very filling, very filling, indeed.

Now, Longlegs the Blue Heron was so intently watching Grandfather Frog that he saw nothing else, and Grandfather Frog was so busy watching Longlegs that he quite forgot that there might be other dangers. Besides his back was to old Whitetail. Of course, Whitetail saw this, and it made him almost chuckle aloud. Ever so many times he had tried to catch Grandfather Frog, but always Grandfather Frog had seen him long before he could get near him.

Now, with all his keen sight old Whitetail had failed to see some one else who was sitting right in plain sight. He had failed because his mind was so full of Grandfather Frog and Longlegs that he forgot to look around, as he usually does. Just skimming the tops of the bulrushes he sailed swiftly out over the Smiling Pool and reached down with his great cruel claws to clutch Grandfather Frog. There he sat pretending to be asleep, but all the time watching Longlegs and all ready to jump the minute Longlegs tried to get nearer. Just a teeny, weeny second more and the Smiling Pool would never again see Grandfather Frog.

Slap. That was the tail of Jerry Muskrat hitting the water. Grandfather Frog knew what that meant—danger. He didn't wait to find out. There would be time enough for that later. When Jerry Muskrat slapped the water with his tail that way danger was very near, indeed. With a frightened "chugarum'" Grandfather Frog dived head-first into the Smiling Pool, and so close was old Whitetail that the water was splashed right in his face. He clutched frantically with his great claws, but all he got was a piece of the big green lily pad on which Grandfather Frog had been sitting, and, of course, this was of no use for an empty stomach.

With a scream of disappointment and anger he whirled in the air and made straight for Jerry Muskrat. But Jerry just laughed in the most provoking way and ducked under water.

(Copyright by J. G. Lloyd.)

Advertisements Bring You Information Regarding New Inventions

IT was only seventy-five years ago that a woman of the middle west wrote to her cousin in New York:

> "Last winter I was told of a curious new device for making fire. It consisted of small splinters of wood with tips of some substance that bursts into flame when rubbed on a rough surface. If you can procure some of them for me I shall be grateful."

Matches were in general use in Europe for years before they were seen in this country. There was no means for spreading such news rapidly. Today, the new invention that contributes to comfort or convenience is quickly known the country over. Advertising conveys the information. The farmer's wife in Texas or Idaho is as well posted on these things as the city woman of the east.

Don't overlook the advertisements. They are heralds of progress, with real news for you and your family. They save your time, lighten your work and enable you to obtain the utmost in value for the money you spend.

Time given to reading the advertisements is well spent.

To Eradicate Ants

By A. L. MELANDER, Entomologist, Washington Agricultural Experiment Station.

The ants destroyed the tender plants in my hotbed as fast as they came up, although I moved the beds to a different location. Could you give me a remedy to kill the ants and still not destroy the plants? J. L. P.
Harvey, Wash.

The first principle in fighting ants is to locate the nest, if possible, because the destruction of a few wandering ants will not greatly check such prolific insects as these.

We have had very good success in exterminating ants merely by pouring a weak (about 1 per cent) solution of sodium cyanide into holes punched in their nests, about a tablespoonful to a hole. This solution is extremely poisonous and generates a suffocating gas which almost instantly will kill the ants within reach. Inasmuch as the fumes must penetrate through the burrows and tunnels of the ant colony, the liquid should be distributed to best advantage. The holes may be punched by inserting a cane or a broom stick into the soil over the nest, at intervals of about two feet, then pouring in the poison liquid and immediately covering the opening, which may be done by kicking in some soil with the foot. Such fumigation has the advantage of reaching the queen mother in the center of the colony, whose destruction is necessary for the ultimate extermination of the pest. It is well also to carry on the fumigation on a cool morning when most of the ants are home. Such methods as using sweetened poisons placed near the nest will get rid of the foraging ants, and the queen mother will continue to reproduce the colony, so that the effect of the poisoning is thereby undone. After a few days sodium cyanide in the soil will have completely spent itself, when it is no longer dangerous.

Another common treatment for ants is to pour about one-half to three-fourths of an ounce of carbon disulphid into similar holes punched in the nest. The fumes from the carbon disulphid are much heavier than air and will sink down into the burrows; the fumes from the cyanide, however, are light, and while they diffuse horizontally they do not settle so quickly. For this reason the holes for the carbon disulphid treatment need by only a few inches deep. The disulphid liquid is extremely inflammable and the greatest care must be taken not to cause an explosion by having any lighted flame or spark nearby. The cyanide smell is fatally poisonous, and every care must be taken not to inhale it.

Fumigation, like either of the above, is preferable to using ashes, boiling water, salt, ill-smelling creosote compounds or baits poisoned by arsenicals.

Ants in houses can be trapped to a sponge moistened with sweetened water. When many ants congregate on the sponge they can be destroyed by a little boiling water from the teakettle. Another recommendation is to distribute, so that the ants can feed on it, a mixture of equal parts of dry plaster of paris and powdered sugar. When this is eaten the plaster sets and the ants die of acute constipation.

If ants crawl up fruit trees and destroy the blossoms of young shoots they can be prevented from such harm by fastening a band of fluffy cotton around the trunks. Ants will not walk over fluffy cotton unless they are very much excited. This is less harmful to the trees than smearing a ring of tanglefoot on the bark.

Changes in Wheat Grades

Various changes in wheat grades are announced by Secretary of Agriculture Wallace, as well as certain changes in the inspection rules.

Changes in the standards for white wheat will be made effective July 17, the classes "common white" and "white club" being combined into one class designated "white wheat," this new class to be subdivided into three subclasses—"hard white," "soft white" and "western white"—making the same application of the hard white and soft white subclasses as at present and designating as western wheat all white wheats or mixtures of white wheats containing more than 10 per cent Clubs or Sonora.

Soft red winter wheat, known by the subclass designation red Walla, will be designated by the term "western red."

Roads Big Problem to Settlers

To the Editor of The Washington Farmer: I would like to give you a little sidelight on the subject of home builders in western Washington. I came here 10 years ago with $1000 and bought 40 acres. My first tax was $4 and the statement I just received calls for $18.50. The tax man at least thinks I am a success.

I am sure the worst difficulty the home builder has is roads. I live three miles out of town. The county has not spent to exceed $300 on the road in the 10 years, while the people and the merchants in town have donated $400 at one time. Settlers on byroads (they should be called market roads and be built first) must build their own roads or travel a cow trail. There is an eighty adjoining me, all in brush, owned by a Seattle man. He bought this place when I came here for $800 and now that we have a road built by the side of it he wants to sell it for $2000. His tax this year is $14. A petition has been signed here by 25 settlers to open a road, but there are two damage claims of $200 each against the road and the county will not establish a road unless the right-of-way is clear. We can not raise the money to pay these damage claims. One of the men asking damages has an eighty a quarter of a mile from any trail, all in brush, and he could not find it without a surveyor, yet he wants $200 because it takes an acre of land and would give him a road to both forties. He lives in Portland.

What we want is a new road law to the effect that owners of all unimproved or vacant land, not occupied by actual settlers, within a half mile of any road to be opened up or improved by gravel or crushed rock, shall pay a special tax of from 50 cents to $1 per acre; if not paid, the state to furnish the funds, take over the land and open it for homesteads under a state homestead law similar to the Michigan law. MARTIN RICKETS.
Winlock, Wash.

Alfalfa Cultivation

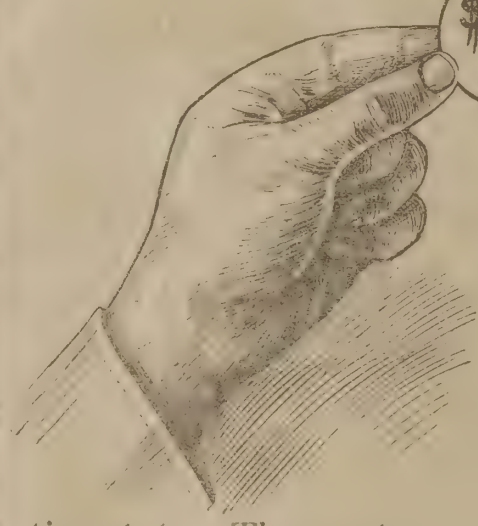
By E. G. SCHAFER, Head Farm Crops Department, Washington State College.

Should alfalfa be cultivated in the spring? Some claim that it is injurious to cultivate. Our soil is volcanic ash with some sand. Could we sow a cover crop with the alfalfa? We have plenty of water to irrigate with. S. G.
Nespelem, Wash.

The value of cultivating alfalfa depends in part upon the condition of the soil and the need of cultivation for wood destruction. If the soil is packed and crusted in the spring, cultivation at the proper time will serve to put it in better tilth. If the soil is too wet or too dry, cultivation may actually be a detriment. Often small weeds, especially certain kinds of winter annuals, may be destroyed by cultivation. This would be helpful to the alfalfa, since there would be less competition from weed growth and the crop would be of better quality. Unless the cultivation is very severe, little injury is likely to result from cultivation if it is conducted at the proper time, which is usually before much growth has been made. In a large manner the question of cultivation should be decided by the operator upon observing the character of work being done.

If by cover crop you mean a nurse crop or companion crop, its effect depends largely upon such factors as moisture supply. When there is plenty of moisture present there is much less danger from such a crop. Even in such cases, however, the nurse crop should be planted at considerable less than the usual rate. We suggest not over one-half the regular rate for the nurse crop that would be used if it were seeded alone.

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May 11, 1922.
THE WASHINGTON FARMER,
Review Building, Spokane, Wash.

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Student Bidders Are Cautious

(Continued from page ten.)

Bishop of Chimacum for fitting Holsteins; Charles Sumbardo of Seattle won a shield donated by E. W. Van Tassel of Wenatchee for fitting Ayrshires. Daryl Leonard was awarded the sheep fitting prize.

The mock sale was conducted by George Gochnour of Sunnyside and James McKay of Spokane. Appraisal of stock was made before the sale by a committee of visiting stockmen and the final score was determined by the least average amount of error in the bids from the values set by the committee.

The annual banquet, with Jack Dobbin, Associated Students' president, as toastmaster, followed the events of the day and prizes were awarded. Dr. E. O. Holland, president of the college, opened the program with a short talk on the relation and importance of science and agriculture today. Dean E. C. Johnson of the college of agriculture traced the growth of the college herd in quantity and quality in the last few years, and Rudie Oltman of Bellingham, president of the All-Ag club, thanked the committees and the manager of the show and mock sale, E. E. Mundy, of Ellensburg for the work done toward making the affair a success.

Others who spoke were E. E. Mundy, William B. Courtner, Walla Walla county club leader; A. E. Lawson, field secretary of the American Shorthorn Breeders' association; Herdsman Richard Hanna; Auctioneer James McKay, E. W. Van Tassel, Houston McCroskey of Garfield, president of the Western Royal Live Stock show, and Charles Maybury of Seattle.

Bull Club Organized

Another bull club was organized at San Juan county on April 22 in East Sound, according to W. W. Henry, county agricultural agent. This club purchased the Guernsey bull owned by Alfred Nelson. The animal is 9 years old and has several daughters in the county which show excellent dairy type and are promising individuals. His dam has a butterfat record of 520 pounds as a 4-year-old. He is a half brother to Samamish Topsy, the well-known Guernsey cow of Redlands, Wash. Members of the club are as follows: Harry Donohue, president; Jake Cramer, vice president; W. L. Sutherland, secretary-treasurer; Jesse M. Waldrip, Maurice Swanson, Kelly Templin, John Cramer, Jess Cramer, J. E. Moore and Jim Gibson.

SPOKANE COUNTY JERSEY BREEDERS.

A meeting of all Jersey breeders in Spokane county is called for Saturday, May 13, at the New Madison hotel building, Spokane, Wash., at 1:30 p. m. William Auld of Waikiki farms has issued the call for the meeting and states the meeting is for the purpose of forming a Spokane County Jersey Cattle club. He states that several counties in the state of Washington are being organized in this way.

We Buy and Sell
Grade and Pure Bred Dairy Cattle.
We can save you money whether you wish to buy or sell. One or a carload.
Graham Livestock Co.
E2605 Broadway, Spokane, Wash.
NEAR CARSTENS' PACKING PLANT.

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Polands--The Big Wonder Herd
of genuine big type Poland China hogs. Home of the grand champion sow of the northwest. Satisfaction guaranteed on all orders.
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Big Type Polands
Weaned pig time is here. Buy now and save on express. No boars after July first.
BUCK & McDONALD, Yamhill, Ore.

BIG TYPE POLANDS—Offering a nice lot of weaning pigs, either sex, at reasonable prices. We solicit club orders. Write us for information on gilts bred for Sept. farrow. Satisfaction guaranteed.
FRED D. ENTERMILLE, Baker, Ore.

River Banks Better Berkshires
Long, smooth, deep fall pigs. Either boars, gilts or trios.
RIVER BANKS FARMS, Grants Pass, Ore.

Riverby Orchard Berkshires
Oldest established Berkshire herd in the northwest. Young pigs and bred sows for sale. Address
D. C. BUNN, Prosser, Wash.

Ioka Farm Durocs Home of champions.
Choice weanling pigs, priced reasonable, shipped anywhere without a cent down. If they don't suit, return at my expense.
A. N. DOERFLER, Silverton, Ore.

Great I Am 1st. Duroc-Jersey junior boar. Western Royal and Pacific International, 1921, at head of herd. Bred gilts and weaned pigs for sale.
CRESCENT STOCK FARM, Johnson, Wash.

Chester White Swine
Herd headed by Oregon Buster, grand champion Oregon State Fair and winter circuit, 1921. Fall gilts now offered.
CASS A. NICHOLS, Salem, Ore.

Oreglow Jerseys
Last 6 months our Golden Glows on test have averaged 6.47 per cent; 7 in April averaged 7.16 per cent high test, economical production.
IRON MINE FARM, Oswego, Ore.
W. M. LADD, OWNER.
D. BROOKS HOGAN, MGR.

JERSEYS
Only one cow in herd without a record. Only one other in herd with a record under 400 lbs. She is a senior yearling with 345. A few bulls under a year. Type with production.
R. B. SEELY, Sherwood, Ore.
Shipping station Wilsonville, on O. E. R. R.

Jersey--Gold and Silver Medal Sire
Ashnook Farm offers a few heifers and young bulls, sired by the gold and silver medal sire, Silver Chimes, of S. B., sire of ex-world champion heifer, Silver Chimes Gwendola, and 20 register of merit daughters, and more qualifying.
DEL PERKINS, Carlton, Ore.

Register of Merit Jerseys
Young bulls out of dams with good official records and sired by Foxhall's Chief Engineer, combining the blood of the great Foxhall's Fern Lad and Golden Glow's Chief strains.
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Jerseys 797 lbs. of fat, the highest record 3-year-old tested in 1920 is dam of a high class young bull we have to offer.
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ST. MAWES JERSEY BULL.
Three nearest dams of sire averge 841 lbs. fat. Dam on test, milking over 40 lbs. a day. Priced right.
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Outstanding bull calves, ready for light service; sired by grand champion Willowmoor Peter Pan 25th, and from high producing cows with show records.
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We have for sale a few choice herd bulls and bulls for the farm and range, at prices in keeping with the times. Herd headed by the great breeding bull, Beau Blanchard 59th, whose calves show great bone, size and quality.
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Northwood Herd Milking Shorthorns
Improve your herd with a Shorthorn bull of the milking strain. Getting milk as well as beef. We have some choice bull calves for sale at farmer's prices from high record cows.
NORTHWOOD FARMS, Redmond, Wash.

Six Registered Shorthorn Bulls For Sale
One 14 months old. Three 18 months old. Bred from Scotch bulls. All strong, vigorous animals. Will also sell a limited number of pure bred Shorthorn heifers. Prices right.
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Dam is a show cow that weighed 1900 pounds before last freshening. She also has 7-day record of just under 32 lbs.
Write for pictures, pedigree, etc.
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Federal accredited herd.

Bull Calves From Tested Dams
Records up to 935 pounds butter. Sire, Sir Johanna Fayne Bonheur DeKol, backed by great production. Prices reasonable.
MAX ARP, Eugene, Ore.

Holstein Bulls sired by son of world record cow, from dams sired by brother to Segis Pietertje Prospect. Prices low.
H. R. BOOMER, Payette, Idaho.

For Sale—Some choice bred
GUERNSEY FEMALES
Can give terms to responsible parties. Just a few bull calves left, better hurry.
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O. & M. L. VOGET, Hubbard, Ore.

Guernseys For sale—Young registered Guernsey bulls, 7 months old, from official tested dams. May Rose breeding.
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Write today.
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Rogue's Heroine of Hawthorne No. 71328.

Cottonwood Farm Guernseys
Home of Janis of Sequoia No. 104315; Rex's Daisy of Tillamook No. 103731.

We offer for sale several pure bred Guernsey bull calves, the most promising of which is Crown Prince of Cottonwood Farm, dropped April 14th, 1922, by Rogue's Heroine of Hawthorne, who made 618.55 pounds of fat last year in Class BB, and is now milking 70 pounds per day. The sire of this calf is a son of Janis of Sequoia, who will finish on May 8th, 1922, with over 840 pounds fat in Class AA. We think this the best blooded Guernsey calf in the northwest. Write us for particulars.

Edmunds & Fitzpatrick
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First Annual Spring Sale of Registered Holsteins
Under the Management of
Lewis County Holstein-Friesian Club
at South West Washington Fair Grounds
Between Chehalis & Centralia.
Wednesday, May 24, 1922 10:00 A. M.

54 of the best registered cattle ever offered at public sale in Lewis county.

Sons and daughters of THE KING OF CHIMACUM, whose two near dams average 26,000 pounds milk and 1159 pounds butter in a year. Several cows and heifers in this sale bred to him.

OTSEGO HIGHLANDS BUTTERFLY, 812 pounds butter in a year, and her two daughters.

Three daughters and one son of HOLLYWOOD PALMYRA BURKE, a 1000-pound bull.

Four grandsons of MATADOR SEGIS WALKER, three of them from A. R. O. dams.

Several of the cattle to be sold have been prize winners at the leading fairs and exhibitions of the northwest, while many of the younger animals are very promising show ring prospects.

Health certificates and a T. B. guarantee, of course.

It contains the dispersal of Nathan Hamilton's herd of 22 head, and selections from the herds of 13 other Lewis county breeders.

Come and See This Offering From Lewis County

Autioneers, Gue & Payne — Write for — E. A. Donaldson, Sec'y.
Clerk, Geo. R. Walker — Catalogue. — Rt. 1, Chehalis, Wash.

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NORTHWEST BREEDERS' SALE
at Pacific International Pavilion
PORTLAND, OREGON, MONDAY, JUNE 5TH, 1922
53 head of cows, bred and open heifers, service bulls and bull calves the tops of the best herds in the northwest.
Washington State Sale at S. W. Washington Fair Grounds
Chehalis, Washington, Wednesday, June 7th, 1922
50 head of choice Wisconsin Guernseys, mostly bred and open heifers and a few choice young bulls.
For Catalog Giving Full Information, Address
CHAS. M. TALMADGE, Sale Manager, Box T, SALEM, ORE.

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offers for sale at farmer's prices, four Holstein bulls, ready for service, sired by Sir Soldene De Kol Pietertje, a double grandson of Florence Idella Sharp, former state record cow with 27,236 lbs. milk and 1146 lbs. butter. All from record dams that are now on retest and increasing their former records by large margins. Also three young calves of the same breeding.
A few Ayrshires, ready for service, are still left and some calves of the Jersey and Guernsey breeds.
DAIRY DEPARTMENT, O. A. C. Corvallis, Ore.

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Every minute of the day these practical slip-over style "Polly Prim" aprons come in handy. No woman can afford to be without them—especially at this smashed bargain price.

2 for 99c

We offer an unusual bargain in these cunning percale aprons. Made in plaid and check patterns. Very useful, yet inexpensive. Two pockets, and rickrack trimming throughout. Comes one plaid and one check to a set of two.

Order by No. 50E6545. Send no money. Pay 99 cents and postage on arrival for 2 aprons. Money back if not satisfied.

WHITE CANVAS SPORT OXFORD

Black or brown leather trimming.

$1.98



Dressy, sensible, low-heeled sport oxford for women. Wonderful value at this low price.

Has excellent grade white canvas uppers with choice of black or brown kid finished leather tip, ball strap, eyelet stays and heel foxing. Flexible white fiber rubber soles with white rubber heels. Wide widths. Sizes 2½ to 8. **Order brown leather trimming by No. 50A310. Black leather trimmings by No. 50A311. Send no money. Pay $1.98 and postage on arrival. State size.**

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Give Size



Classy stitchdown Oxford for women. Wonderfully comfortable and stylish. Uppers of dark mahogany leather. Smooth leather insoles. Flexible stitched-down oak outsoles. Low rubber heels. Sizes 2½ to 8. Wide widths. **Order by No. 50A268. Send no money. Pay only $1.98 and postage on arrival.**

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With Rich Organdy Collar, Cuffs, Sash.



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This popular, practical warm weather dress slipper is amazingly low priced, quality considered. Uppers of splendid grade black patent leather. Soles of genuine oak leather, flexible but strong. Pliable uppers, low heels, neat bow front. Comes in wide widths and all sizes from infants to big girls. **Order infants' sizes 3 to 8 by No. 50A364. Price $1.19. Child's sizes, 8½ to 11, by No. 50A365. Price $1.49. Misses' sizes, 11½ to 2, by No. 50A366. Price $1.59. Big girls' sizes, 2½ to 8, by No. 50A367. Price $1.79. Send no money. Pay bargain price and postage on arrival. State sizes.**

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Give size



The neatest last any woman could wear for all-around service. Uppers of splendid soft kid finished leather with fancy perforated wing tip and vamp. Strong oak soles and medium rubber heels. A style that will always look dressy. Choice of black or brown. Sizes 2½ to 8. Wide widths. **Order black by No. 50A275. Order brown by No. 50A276. Send no money. Pay $1.98 and postage for either color on arrival. Money back if not satisfied. State size.**

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Don't fail to make this big saving on men's pure gum hip boots: friction lined; heavy corrugated sole and heel; guaranteed first quality. Made of the very best rubber. Usually retailed at $5. Be sure to order your pair while this great saving offer lasts. Sizes 7 to 13. Wide widths. No half sizes.

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Give Size.

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Beautiful soft kid leather-comfort slipper. Stylish strap model with two buttons. Medium round toe. Cushion insoles. Medium rubber heels. Solid oak leather soles. Black only. Sizes 2½ to 8. Wide widths. **Order by No. 50A228. Send no money. Pay $1.69 and postage on arrival. State size.**

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Smartest shape and best quality; regular $3.50 value. Selected black or brown calfskin. Extension oak soles, leather insoles. Solid leather heels. Sizes 6 to 11.

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Sturdy Scout Shoe

Soft, brown, ooze leather uppers. Reliable oak leather soles stitched and standard screwed to prevent ripping, leather insoles; low, broad, leather heels. Sizes 6 to 11. Wide widths.

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Order by No. 50A740. Send no money. Pay $1.79 and postage on arrival. Order little boys' sizes 9 to 13½ by No. 50A567. Price $1.39. Order big boys' sizes 1 to 6 by No. 50A566. Price $1.59. Pay bargain price and postage on arrival. Give size.

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Neat narrow stripe pattern of Thorndyke cotton worsted. Celebrated for its durability. Ideal material for work trousers. Suspender buttons. Belt loops, plain bottoms. Stoutly sewed waistband. Sizes, waist 30 to 42. Inseam 30 to 34.

$1.49

Order by No. 50B1563. Pay only $1.49 and postage on arrival. Give your waist and inseam sizes. Order men's strong khaki pants by No. 50B1560. Pay $1.29 and postage on arrival. Give measurement.

Blue Serge Work Pants Bargains

This price is so amazingly low that there will surely be a flood of orders for this number. Fine blue serge of splendid weight material that assures good service. Made with 2 hip, 2 side and 1 watch pocket. Plain bottoms, can be made cuff style if desired. Belt loops and inside suspender buttons. 30 to 42 waist; 30 to 34 inch inseam. **Order by No. 50B1574. Send no money. Pay $1.79 and postage on arrival. Mention necessary sizes.**

Ooze Leather Work Shoe

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State Size



Splendid brown ooze leather work shoe.

Heavy, durable uppers; extra strong solid oak leather soles; leather insoles; low, broad leather heels; leather loop pull strap and reinforced leather back stay. Roomy last. Sizes 6 to 12. **Order by No. 50A759. Send no money. Pay $1.99 and postage on arrival. Order boys' split leather, sizes 1 to 5½ by No. 50A554. Price, $1.98. Order little gents' split leather, sizes 9 to 13½ by No. 50A555. Price, $1.79 and postage on arrival. Mention sizes.**

Chambray Work SHIRTS

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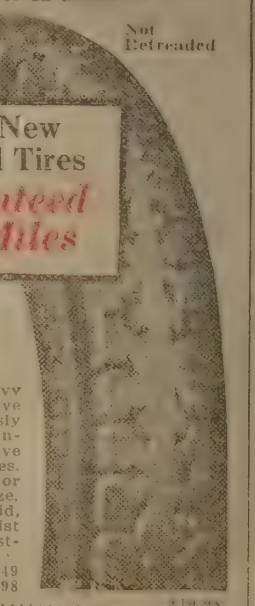


Men's stout chambray work shirts. Every seam double stitched. Double yoke. Breast pocket. Turnover collar. Sizes 14½ to 17. **Order by No. 50B1530. Pay 59c and postage on arrival. State size.**

Men's shirts of serviceable khaki material made with stoutly sewed seams. Has large breast pocket and durable attached collar of self material. Sizes 14½ to 17. Khaki color only. **Order by No. 50B1531. Send no money. Pay 98c per shirt and postage on arrival. Give size.**

Not Retreaded

Brand New Standard Tires *Guaranteed 6000 Miles*



30x3 size now only

$6.49

Fresh stock of heavy nonskid tires of live rubber. Generously oversize, 6000 guaranteed, but often give 8000 to 10,000 miles. Choice of nonskid or rib tread in 30x3 size. Others are nonskid, pay only bargain list price below and postage on arrival.

No. 50D40—30x3, $6.49
No. 50D41, 30x3½ $7.98
No. 50D42—32x3½ $10.98
No. 50D43—31x4 ..... $11.98
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No. 50D46—34x4 ..... $15.98

Now is your chance to buy extra tube rubber inner tubes at a big saving. Don't wait for tube prices to go up. How many shall we send? Give size wanted. No money now. Pay only bargain price and postage on arrival.

No. 50D20—30x3 ..... $1.98
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No. 50D22—32x3½ $1.79
No. 50D23—31x4 ..... $1.98
No. 50D24—32x4 ..... $1.98
No. 50D25—33x4 ..... $2.09
No. 50D26—34x4 ..... $2.19

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MAY 18, 1922. Washington's Great Farm Magazine EVERY THURSDAY

THE WASHINGTON FARMER

ESTABLISHED 1894 SPOKANE. SEATTLE.



Cooperative Marketing Gets Attention of Financiers—Page 2

Must Have Orderly Marketing of Farm Products

Returning from a trip extending to the Pacific coast, Eugene Meyer Jr., managing director, war finance corporation, reports to President Harding on the development of cooperative marketing. He says, in part:

COOPERATIVE ORGANIZATIONS.

While the war finance corporation during the last year has entered into agreements to lend approximately $63,000,000 to cooperative marketing associations in all parts of the country, to assist them in the orderly marketing of their products, in most cases only a small part of the credit authorized has actually been used, because the local banks have been able to take care of the needs to a greater extent than had been anticipated. This indicates that the cooperative marketing associations, when they are properly organized and soundly managed, are able, for the most part, to obtain the necessary funds from local banking sources. But it is generally agreed that a good deal of the willingness of the banks to finance the cooperatives in their sections has been based upon the ability of the cooperatives to obtain funds from the war finance corporation. This has involved, in part, the element of confidence and, in part, the funds themselves, for it is obviously easier for a local bank to furnish funds to a cooperative marketing organization when it knows that the funds can be borrowed from another source and repaid to the bank in case of need. There is, therefore, a feeling among the managers of the marketing cooperatives, and also to a great extent among their banks, that there should be a continuation of the assurance of a market for their paper outside of the local banks. It is recognized that, with improving financial and agricultural conditions, it will be easier for them to obtain funds during the coming season, but, on the other hand, their operations perhaps will be conducted on a more extended scale and, therefore, the aggregate of funds required will be correspondingly greater.

You desired me especially to report upon these organizations. While in the west I had the opportunity of meeting the directors and managers of many of them, and in some cases of visiting their working headquarters and their warehouses. California was the first state to take up cooperative marketing on a large scale in this country and there it has been carried on in its most highly developed form. In San Francisco I met the representatives of 26 of the leading cooperative marketing associations of the state and was enabled to get the benefit of their experience and views. These California associations, for the most part, are so well established that their banking credit is equal to that of the best privately owned and managed corporations, and, although they market products aggregating in value $250,000,000 annually, they have had occasion to avail themselves of the funds of the war finance corporation to the extent of only $1,500,000 during the last season. Their operations were financed almost entirely through their usual banking connections.

The more recently organized cooperative marketing associations in Oklahoma, Mississippi, Arkansas, Texas, Arizona and in the northwestern states, while not so firmly established as the California associations, appear to be organized upon sound principles and to be properly and capably managed.

Prior to the war the distribution of our agricultural products, in so far as our export trade was concerned, was financed in considerable part by European capital. But fluctuating exchange, added to the fact that European countries are no longer on a gold basis, or even on a stabilized exchange basis, has prevented the continuation of this practice. We must, therefore, adjust our own financing machinery to meet the new conditions.

Our financial system has apparently been based on the expectation that the farmer would sell his crops as soon as they matured. And the immediate sale of the season's product by the farmer contemplated its being carried by middlemen until distributed through manufacturers or retailers. As has been stated so often, the farmer's crop is harvested within a short period and consumed throughout the year. The processes of financing should adjust themselves to the natural processes of production and distribution rather than vice versa. We have reached the point where the right of the cooperative marketing organizations to carry the products of their members for orderly marketing, until the consumer is ready to take them, must be recognized and the necessary financing machinery provided.

I, therefore, recommend that the need for the orderly marketing of our agricultural products in a more gradual way and over a longer period of time be frankly recognized; that existing banking laws and regulations be adjusted with this end in view, and that a rediscount facility be established to make it possible at all times for cooperative marketing organizations to obtain adequate funds for their operations. I recommend also that the powers of the federal reserve banks be extended to include the purchase in the open markets of eligible paper secured by nonperishable agricultural commodities, properly warehoused.

John L. Smith

Honor to Whom Honor to Due

"Three times within the past 10 years herds from the Pacific northwest have come to the National Dairy show, and twice out of three times they have returned with the coveted banner of premier exhibitor. Without detracting in the slightest from the credit that is due such pioneers as P. A. (Dad) Frakes, William Bishop, David Munroe, Hollywood and Carnation farms and others, we believe the man most responsible for this, and for the attention that breeders of the Pacific northwest have given to type along with production, is John L. Smith of Spokane, Wash., owner of the Hazelwood herd."



John L. Smith.

The foregoing is the opinion of Editor M. S. Prescott of the Holstein-Friesian World, formed after a visit to Spokane last fall and expressed in a recent issue of the World. The article outlines the personal history of this pioneer breeder and the winnings of the Hazelwood herd under his development and direction, at local and state fairs, at the National Dairy show and the Pacific International Live Stock exposition, at the A.-Y.-P. exposition in 1909 and at the Panama-Pacific exposition in 1915, and it is profusely illustrated with pictures of Hazelwood Ormsby Posch, Bonnie Lass Pauline and other animals which have brought fame to the herd. Among his other honors, one which has never been duplicated, is that of winning first for get of sire at both the Pacific International and the National Dairy show.

"In breeding Holsteins as well as in a good many other things," writes Prescott, "a lot depends upon getting started right. It has always seemed to me, therefore, that a great deal of the success they have achieved up in the Pacific northwest in the breeding of Holsteins along the lines of type and production satisfactorily combined was due the pioneers who established such a high standard to start with, as a model for the breeders who came later and also in the foundation stock which they so widely disseminated from their herds. If specific reference is needed, we would point to the percentage of great milk records held by the Holsteins of the Pacific northwest, particularly in proportion to the number of cattle there, and also the showing which Pacific northwest Holsteins invariably make when brought into competition with cattle from other parts of the country at national shows. With Stanley Butchart now on the job as first assistant, the Hazelwood herd should be very much in evidence at the 1922 shows," Prescott adds.

Redwood Water Tank

To the Editor of The Washington Farmer: I read in a recent issue of The Washington Farmer that Mr. Adamson of Pacific county has a redwood water tank on a bluff overlooking Shoalwater bay. I also have one, a few miles north of where Mr. Adamson lives, overlooking the same bay. Mine has been in use now for more than 18 years and is still as good as new, although I have been compelled to have a new set of hoops. F. L. SARGANT.

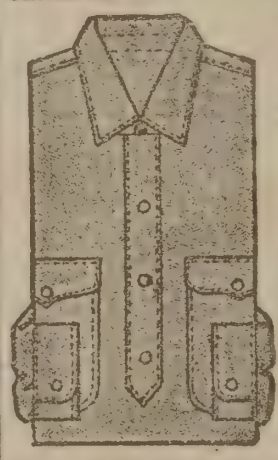
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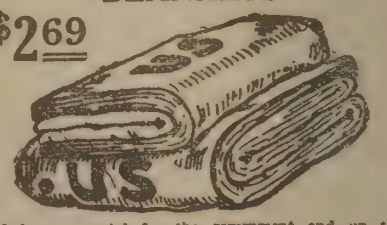
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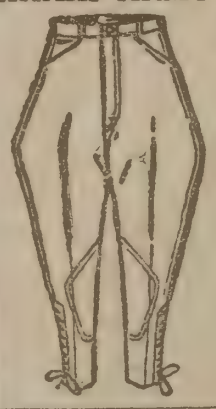
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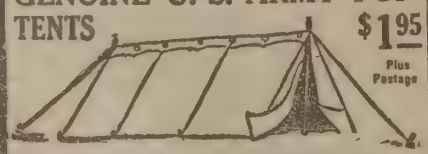
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For Good Farming, Attractive Country Homes and Happy Country People

The Stump Becomes Its Own Furnace

Device Designed to Take the Backache Out of Land Clearing Wins Friends in West Washington

By RALPH ERSKINE

Any one who has ever wrestled with a western Washington fir stump will welcome any new method of burning that promises to save both time and expense or, in fact, either. He will naturally be skeptical, however, when he hears that he can save not only half the time formerly required for burning a stump, but he can also save approximately three-fifths of the usual cost per acre and in addition can be assured of a 75 or, in some cases, an 80 per cent burn.

This has actually been done and is being done by the use of what is known as the Zysset stump and root burner, which is a modification of the old charpit method. The device was originated and developed by S. F. Zyssett of Scio, Ore. Like many another, he detested the idea of plowing around the stumps year after year, but, unlike many others, he used his head as well as his heels and devised a sure-firing furnace that anybody can handle and that makes starting a fire for the old reliable char-pitting process as simple as starting a fire in the kitchen stove. And that's all there is to the invention.

It is the big stumps from three to six feet across that are the real problem, especially with the small farmer. The average farmer is apt to feel much as did D. D. Aitken, formerly president of the Holstein-Friesian Association of America, when he was in Washington a year ago. Mr. Aitken was born and brought up in timber, and he never ceased to marvel at the size of the stumps on Washington and Oregon logged-off lands, and at the apparent hopelessness of the task of removing them. He stood one day in silent contemplation of one of those too numerous wildernesses of charred and blackened sticks, overgrown with brush and tangled berry vines, when some one asked him what he would do if he were set down in the middle of such a 40-acre lot and told to work his way out or starve.

"I'd give it up, and die there," he replied.

Which, of course, as everybody in this section knows, many a good man—and woman, too—has done on considerably less than 40 acres.

It was with the idea of overcoming such difficulties that the extension department of the state college offered to demonstrate the new burner, by the help of the county agricultural agents in western Washington.

The first appearance of the Zysset burner in Washington was on April 19 at Tolt, where three of the units were put into operation as a means of demonstration for farmers of the north end of King county. A larger demonstration was staged at C. E. Fisher's farm, two miles from Auburn on the east highway, April 29. The burners had been in operation for nearly two weeks in order to show each step in the process and also how completely the stumps could be burnt out. Most of the stumps that were worked on were large, but a few of the smaller ones were tried out to show that they could be handled in the same manner.

Convert Doubters.

Arrangements for the demonstration were in the hands of County Agent A. B. Nystrom.

Not only farmers, but many business men left their work to see how the new method worked out. There were plenty of doubting Thomases among the crowd before the burning, who declared that no stump could be burned out with its own fuel in so short a time, but they saw the worst kind of fir stumps banked and entirely consumed with all of the roots burned to a distance of 20 feet and more.

Although the soil at Thomas, between Kent and Auburn, was rather sandy, which caused the fires to die out before the roots were entirely consumed, the demonstration in King county was a success. Most of the stumps in the pasture were cut 10 years ago and were not in the best condition for burning, but all that were tried were burned down with comparative ease. A few stumps were blasted in a neighboring field in order to show the effectiveness of powder and they, too, found that this type of soil was hard to work.

One large windfall was burned completely out in slightly over two days' time. The fact that it rested on a small knoll did not prevent the burner from getting a foothold and the whole stump was finally consumed. This method of burning seemed to be particularly adapted to windfall stumps.

It seemed to be the consensus of opinion of those who saw the demonstration that even though one had to work in sandy soil it was better to use this method, which gets rid of the entire stump, including the heavy crown, and dig the roots or pull them as a separate undertaking.

"How do you start the fire?" "Where does your blast come from?" are questions that were most frequently asked by the men who come to see how the plan worked. For this reason several stumps were started with the furnace during the demonstration in order to show that there was nothing aside from the draft made by the fire itself that forced the hole through the stump.

The accompanying pictures tell the story about as well as it can be told in words. All the apparatus necessary is the castiron furnace and hood shown in the second photograph. These will last indefinitely and a varying number can be used, depending upon the time devoted to burning. the furnace, the larger of the two pieces is open at the back, as shown, and has a draft hole and a stovepipe shoulder, like any of its distant relatives in the stove family. The bark is peeled from one side of the doomed stump and the open side of the furnace is placed against it preferably between two roots and in such a position that a line passing straight through it would penetrate the thickest part of the stump and would emerge just above ground on the opposite side. A 10-foot iron pipe, which may be any cheap pipe, but which should not be less than two inches in diameter, is then laid in the door of the furnace headed in the general direction of this imaginary line. A fire is kindled, usually with bark; two joints of stovepipe are put on to give it draft, and the attendant can start banking up around the stump with dirt. This completed, the project would look about as in photograph No. 3.

This banking process is the hardest work there is to be done, and the largest stump destroyed required only an hour to cover, so those with only a few "big boys" to remove can take heart. For successful firing, a three-foot stump will require stoking with bark three of four times—enough in any case to start the stump wood burning briskly. The furnace opening may then be covered as shown in the fourth photograph, and all the draft, of course, will come through the pipe, the stove end of which should be kept at a distance of an inch or two from the stump. This, of course, forces a flame of fire against the wood; as the pipe is pushed in and the fire becomes hotter the flame becomes a vertiable blow-torch, eating its way through the stump, and eventually it will burn a hole a foot in diameter through to the other side.

During this period, which usually is from 20 to 25 hours, all the attention required is an occasional kick on the pipe to keep the inner end close to the unburned wood. Now a few moments will be required to set a new fire and to start this one on its charpitting career.

Self-Destroyed.

The furnace and 10-foot pipe are dragged away to a new stump, where the hot metal makes it easy to start another fire, and a two-foot length is laid in its stead and covered with earth. On the other side, where the fire burned through, the smaller metal piece shown in the second photograph is laid with its wider opening against the stump; two lengths of stovepipe are placed on it; the whole is covered with dirt, and with the two-foot length furnishing draft you have an air-tight stove furnishing its own fuel, as in the fifth picture. About 48 hours are required to get a bed of coals sufficiently large and hot to burn without artificial draft, and when this is accomplished the hood and two-foot length of pipe are removed and the thing is a charpit, to be handled just like any other charpit. It should be allowed to burn slowly for several days or weeks, depending on the size of the stump; above-ground roots should be carefully buried, and finally the ground should be leveled with a drag.

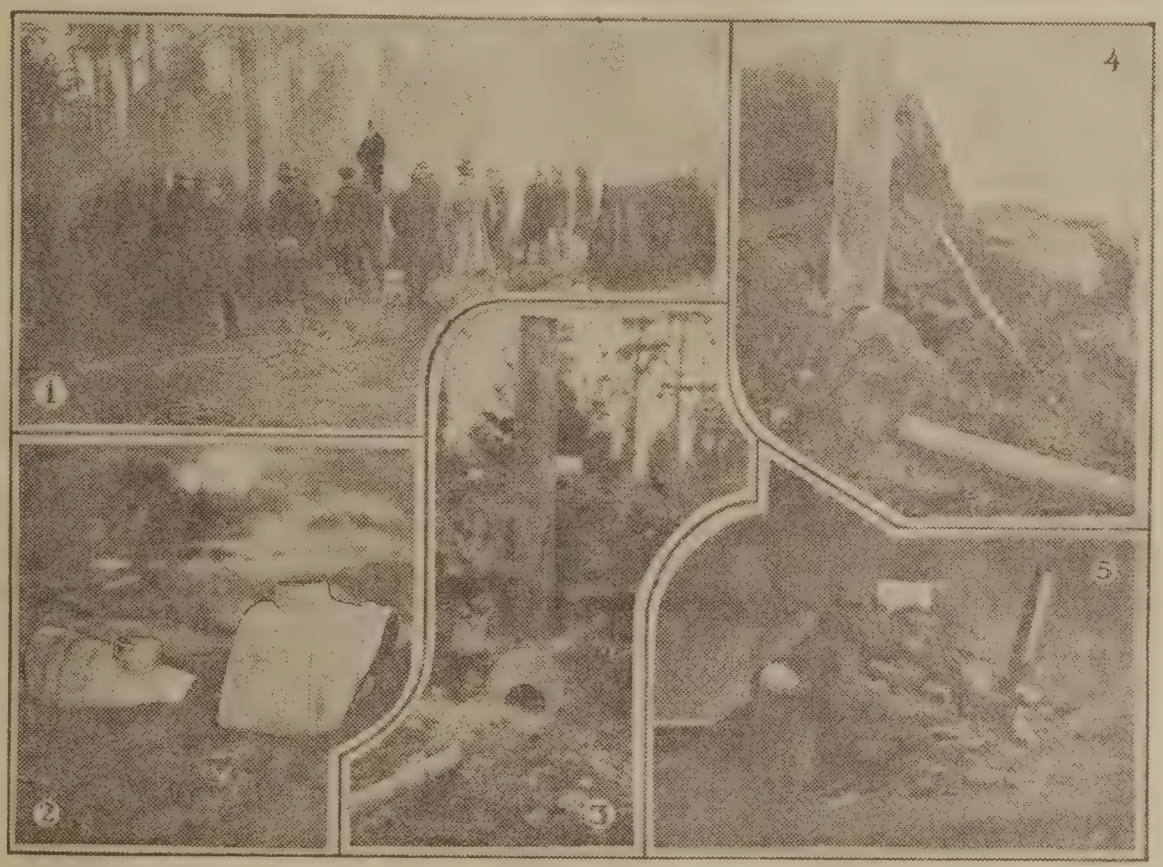
In the trials carried on at the Oregon experimental station it was found that such stumps as pine, oak and spruce can be removed by this burner. Even cedar snags will yield to the method, but white fir is said to be a stumbling block. All other kinds found in the northwest have been found to burn successfully, provided they are larger than can be economically handled with stump puller and a little powder. Freshly cut stumps do not burn out so readly.

Strange though it may seem, the biggest stumps burn best by the process. The ones whose cost of removal with powder or puller is highest are the kind on which the burner works best.

Difficult Soil Types.

There are some types of soil on which the burner will not work well. The loose sandy soils will not hold together, but

(Continued on page twenty.)



Picture No. 1 shows a demonstrator addressing those who have gathered for the stump burning demonstration. No. 2 shows the castiron furnace and hood; No. 3, the equipment all in place ready for the fire to be started and the stump covered with earth; No. 4, the outfit in operation with the stump covered and all the draft entering through the long pipe which serves practically as a blow torch to penetrate the stump with flame; No. 5, the last step in burning away the top with the draft passing through burning stump.

An Old Pioneer of Horticulture

On the cover page of this week's issue is a picture of the "granddaddy" of one of Washington's greatest industries. It is the old pioneer apple tree at Vancouver, Wash., that early this month celebrated its 96th anniversary by bursting into full, vigorous bloom. In response to proper cultivation, pruning and spraying, this old patriarch is showing splendid vitality and appears to have every prospect of many years more of life. Unfortunately, it was badly broken by a "silver thaw" several years ago, which accounts in part for the somewhat unusual shape that it shows.

This tree was planted in 1826 by some one connected with the Hudson's Bay company, whose western headquarters were on the natural terrace sloping up from the north bank of the Columbia river where now the city of Vancouver and the Vancouver barracks are situated. A number of interesting stories have associated themselves about this old tree. One of these has it that at a dinner party in London about 1825, given in honor of some young men in the employ of the Hudson's Bay company who were about to embark for this country and the Pacific northwest, seeds from the apples eaten were slipped by some of the young ladies into the waistcoat pockets of the young men. Upon their arrival at old Fort Vancouver they gave the seeds to the gardener of the fort, who planted them. The tree the picture of which is shown on the cover page this week is believed to be the product of one of those seeds.

The Western Washington Horticultural association has undertaken to guard carefully the historic tree. A. A. Quarnberg of Vancouver, S. J. Harmeling of Vashon and R. T. Reid of Seattle comprise a permanent committee of the association which has its preservation in charge. The gavel shown as an insert in the cover page picture is made from prunings of the tree and is wielded by the president at each annual meeting of the association. It was presented to the association in 1919 by Mr. Quarnberg.

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High Freights Benefit No One

Secretary Wallace, of the department of agriculture, in an address before the New York Academy of Political Sciences, stated an unanswerable truth with force and clearness when he said:

"The important point I am trying to make is this: That this nation has been built up by a system of low railroad rates designed to encourage the movement of our surplus agricultural crops long distances to manufacturing, industrial and business centers, with a corresponding return haul of manufactured products, and that a sudden reversal of this theory of rate-making results in great economic injustice and, if persisted in, will keep us in a state of confusion and agricultural and business uncertainty for a long time."

High freight rates, growing out of the war, Secretary Wallace reminds the public, are causing the fruit and truck growers of the far west and southwest to turn to water transportation, and the wheat growers of the west to use the shorter haul to water for export grains. He cited figures showing that wheat exports passing through gulf ports had increased from 24 per cent of the total in 1913 to 50 per cent in 1921.

This is a matter wherein the farmer's burden is a national loss. You can not put agriculture out of joint in this country without injuring all other interests—manufactures, transportation, labor and business. Wartime freight rates have put agriculture out of joint, and that is especially true in the agricultural regions west of the Rocky mountains.

It has now been nearly three and a half years since the war ended in the signing of the armistice. Freight rates on agricultural products are higher today than they were when the war ended. Things are kept out of joint because the railroads refuse to reduce freight rates on the contention that high wages to their employees and easy working conditions are against the desired reductions. Thus irresolution continues and the damage goes on.

Some one must take the first step, and if the railroad managers were wise they would take it. They refuse to recognize the fact that their high rates are used as an argument by their employees for the continuance of high wages.

If the railroad managers had courageously taken the plunge two years ago and had put down freight rates on agricultural products and other raw commodities, the resulting conditions would have forced a readjustment of wages and working conditions and everybody would be better off today. Prosperity would have been brought back to the farm, production would have increased, the railroads would have had increased traffic and there would be today fuller employment for railway workers.

The farmer came down to earth two years ago, but freight rates and railway wages are still skyrocketing, to the benefit of no one.

The Rural School Teacher

The National Congress of Mothers and Parent-Teacher associations was in annual convention at Tacoma last week and wisely devoted a considerable part of its time to a discussion of rural school problems. The opinion was expressed by speakers, and met with general approval, that the country schools of the nation should be in charge of the most experienced teachers, and that young educators, fresh from normal schools, should serve in city schools.

That accords with common sense. A big city school system can safely absorb a reasonable percentage of inexperienced teachers. The young teacher fresh from normal school can be put under supervision in the city systems and can make satisfactory progress there, where slow progress and unsatisfactory teaching would be the general result in country schools.

During the discussion at the Tacoma congress, Miss Mary Frazee of Seattle declared that a country school teacher should be able to take command of all community affairs if necessary and fill the requirements of a leader both for the children and the adults.

More and more the conviction is coming to educators everywhere in the United States that the big and outstanding problem of education is how to get better rural schools. It is not an easy problem. Most country districts labor under the constant limitation of insufficient funds. The problem is made still more difficult by the disinclination of too many teachers to go into country schools and a prevailing belief that life for the teacher will be more pleasant in a city school system.

There is reason to hope that that belief is losing ground. Many thoughtful teachers in the cities find that they are but a cog in a big machine. Many of them lead lonely and disappointing lives. Many of them are grieving over the lack of the wholesome, friendly associations that are so abundant in the country districts.

Society in the cities has an unfailing tendency to organize into cliques and social sets. There is not much contact or friendly association between teachers and parents. It is different out in the country, where the social life of the community often centers around the public school. The right sort of a teacher can easily become an important personage in a country district—looked up to and loved by her pupils and respected and admired by the parents of the community.

The conclusion reached by the Tacoma congress is sensible and sound. The big city school systems are the better places for apprentice work. It is the country that needs and is calling for strong, constructive teachers.

A Good Combination

C. M. Hubbard of the state college extension service, in discussing the value of a pedigree at the Northwest Live Stock conference, said that a pedigree without evidence of production on the part of the individual possessing it was of comparatively small value, but that such pedigree and such record of production made a combination hard to beat. The production, he said, might be meat, wool, milk or butterfat, depending upon the class of animal carrying the pedigree.

Reduction in Rates

The railroad committee of the Washington Woolgrowers' association, after several conferences with railroad officials, has secured a reduction in rates to and from summer grazing grounds which is approximately the rate in force last year. The reduction will save those who ship thousands of dollars. The large reduction in assessed valuations on sheep secured by the association's committee on taxation is another example of what a live organization can do for its members. This particular association asks of its members only one cent per head of sheep owned, to carry on its work.

State Farm News

More than $10,000,000 worth of highway work has been let by the state highway division during the present biennium and before the end of the summer contracts aggregating $13,133,000 will have been awarded. There is $2,293,000 worth of new work to be apportioned among contractors when bids are opened, May 16, June 1 and September 5.

Involved in the highway program of the present biennium are 147.13 miles of paving and 374.72 miles of grading, graveling and bridge construction.

Expense of the highway program is borne as follows: State, $9,142,000; federal aid, $1,866,000; forest reserve funds, $525,000; counties joining with the state or procuring federal aid, $1,575,000; railroads, $25,000; total, $13,133,000.

Some of the work that will be contracted this year can not be finished until 1923, and the next legislature will be obliged to reappropriate the funds called for by the work.

* * *

The Lewis County Cow Testing association has qualified for the 100 per cent purebred bull "honor list." This makes a total of 19 out of 42 active associations which have "fired the scrub bull," and the Lewis county association, which is one of the new ones, thereby sets an example for the older organizations.

* * *

Beekeepers of the Puyallup valley and Pierce county are completing plans for the official visit of B. A. Slocum, state bee specialist, for the week, June 9 to 14.

Mr. Slocum will inspect apiaries, explain methods of treatment for bee disease and will teach the art of transferring box hives to the modern movable frame hives now authorized by state law.

* * *

Further evidence of the world-wide popularity of northwest-made products was revealed May 2 when the Electric Heating company of Tacoma received an order for electric water heaters from the Indian Engineering company of Bombay.

* * *

There have been 983 cars of fruit shipped from Wapato, Yakima valley, from July 1, 1921, to April 1, 1922, and 628 cars of potatoes. Besides this there have been 448 cars of potatoes shipped from the five stations on the branch line west of Wapato.

* * *

Warren Lincoln, a Jersey breeder of Shelton, Mason county, Wash., has adopted the plan of trading his yearling bull calves for scrub bulls that are now in use about the county. Mr. Lincoln has been doing much constructive work for the good of the breed and has made several trades which are profitable for both parties. One of the purebred calves which is offered for trade is sired by Prosser Pogis, a full brother to Sophie's Agnes, who once held the world's record for butter production

* * *

A dairy club was organized recently in the Snoqualmie valley, with George R. Abbott local leader. The boys will buy cows that are milking or will soon freshen. They will meet once a month to test the milk, calculate the returns and figure rations. The club was organized by A. B. Nystrom, county agent of King county.

* * *

Approximately 25 berry farmers attended the organization meeting and election of the Whatcom County Berry Growers' association held recently at Bellingham.

A. Buttner, grower, from the Ferndale district, was elected president of the new association and Frank Mittelstadt of Bellingham secretary-treasurer. Alec Beverly and H. R. Clark of Sunset Avenue farms and F. J. Hill of Ferndale were elected as board of directors for the ensuing year.

Carl J. Kallgren, state organizer and representative of the state association, presided. He also addressed the berry men on the subject of state and county organization, emphasizing the value of such affiliation for the protection of berry farmers and the benefits to be derived from cooperative selling.

* * *

The Cowlitz, Chehalis & Cascade Railway company has ordered a new $15,000 gas car for delivery about August 1 to be used in the passenger and express services of the line between Chehalis and Onalaska. The new car will seat 41 persons. The car will be built by the Skagit Steel & Iron Works at Sedro-Woolley.

* * *

Scholarships of $75 and railway transportation both ways on the Union Pacific lines to the Washington College of Agriculture, school of agriculture or winter short course will be offered each of the top rank boys in 16 counties of the state by President Carl A. Gray of the Union Pacific, according to a letter received by President E. O. Holland of the state college.

* * *

There is more than one way of proving that a cow-testing association is a paying undertaking. C. A. Robinson, who has for the past year supervised the Clallam County Cow-Testing association, has entered into partnership with Ben Chambers, a dairyman, near Port Angeles. Mr. Robinson was very much pleased with dairying in Clallam county and watched for an opportunity of getting into business for himself. Shortly before the end of the year Mr. Chambers offered him a chance of working with him on a partnership basis, which Mr. Robinson accepted. The association has another tester and released Mr. Robinson the first of April to take up his new work. He is a thorough student of pedigrees and production records, and his many friends in the county feel certain that he will make a success of his new venture.

Coming Events of Interest

May 20—Farmers' market, Bremerton.
May 24—Lewis county Holstein sale, Chehalis, Centralia.
May 30—Decoration day.
June 5—Northwest Guernsey breeders' sale, Portland.
June 5-10—National Holstein meet, Kansas City.
June 7—Guernsey consignment sale, Chehalis.
June 10—Republican state convention, Chehalis.
June 14—Flag day.
June 20-22—Lincoln-Adams pioneer picnic, Keystone.
July 26-28—International apple shippers, Seattle.
July 27-28—Whatcom Guernsey gallop, Bellingham.

FARM BUSINESS AND MARKETS OUTLOOK

Most of the barometers by which the trend of business affairs is measured continue to move in the direction which will bring us back to a state of prosperity. The question is no longer whether conditions are improving, but how much betterment has taken place.

Agriculture, industry, construction, commerce, both foreign and domestic; mining, transportation, finance—in brief, all the major fields of productive endeavor show a balance of favorable conditions.

Although the season is a late one, most sections have an ample supply of moisture at the beginning of the growing period and the crop prospect is not far from the average. Costs of production will be lower than for either of the two preceding crops upon which, in most cases, heavy losses were sustained. The outlook for a price at harvest time which will yield a margin of profit to the farmer is brighter than it was last year and much better than two years ago.

The midwinter advance in farm prices has been maintained in the great majority of cases and the general level of quotations of agricultural commodities is 10 to 15 per cent higher than a year ago, when the trend was still downward.

Farm machinery sales are larger, the northwest reporting an increase of 100 per cent over last year. Shipments of stocker and feeder cattle back to the country are larger than in either of the last two years. Pessimism is less conspicuous in country districts. These are some of the signs that the farmer realizes that the road has turned and that his courage and spirit of enterprise are returning.

Industries have been hampered but little if any by the coal strike and the expansion of operations has been maintained or increased in the last month. Pig iron, steel, lumber, copper, zinc, tin and automobile manufacturing are some of the lines in which the trend toward greater activity is noted. Steel mill operations are at nearly 75 per cent of capacity, although the total capacity of the industry is 40 to 50 per cent larger than before the war.

Building operations have reached boom proportions and a long list of businesses feels the effect of the increased demand for construction materials.

Railroads are benefiting from returning prosperity in other lines which has increased freight traffic and enabled the roads to earn during March nearly 6 per cent on their tentative valuations for the first time since the war. They are placing orders for iron and steel for maintenance and equipment almost daily.

As railroad earnings are increasing, announcement that the 10 per cent cut on farm products will be made permanent and similar reductions to go into effect on coal and building materials is expected before July 1.

The strikes of coal miners and textile workers have increased the amount of artificial unemployment, but with manufacturing, mining and building operations on a broader scale and the demand for farm laborers a lot of the slack has been taken up. There is a threat of another rail strike, but there is an equally good chance that the coal strike will begin to break before long.

Money is gradually becoming easier. Spring seeding requirements were provided for without causing more than a ripple in banking affairs. Farmers apparently are going slow in borrowing. Requests for funds from the war finance corporation are 25 per cent lower than in the first quarter of the year, indicating that most of the special cases requiring loans of the character which that institution furnished have been provided for. It is probable, however, that the life of the corporation will be extended for another year from June 30 next.

Foreign affairs remain in turmoil. The economic conference at Genoa has not made much progress and the insistence upon heavy reparations payments may precipitate a crisis in Germany at the end of May. Conditions in Great Britain, however, are much better, with money easier, industries busier, foreign trade expanding and employment increasing. Sterling exchange has risen again to the highest level since 1919.

Beef Consumption Expands

In spite of a gradual increase in receipts of cattle at the seven leading markets from 136,000 head in the first week of April to about 183,000 head during the first week in May, prices have advanced again to the high point of the year. Evidently consumers are eating more beef than a month ago. Beef has been cheaper than pork or lamb recently and beef consumption holds up in hot weather better than other meats. The lower grades of steers have been helped by an increase in competition from buyers of stockers and feeders. A stronger hide market also has aided the cattle trade.

Although more light plain stockers and feeders went to the country last fall than usual, the lower grades of beef steers coming to market are scarce. The market is running true to form for this season of the year, with such steers selling at a narrow discount below choice and prime grades. But few steers suitable for carcass beef can be had on the Chicago market for less than $7.75, while the top of the market on yearlings and weighty steers hovers around $9.25. In view of the wide margin between common and choice feeder steers last fall, it is obvious that taking out the former was a more profitable venture. Since prices on common steers have advanced more than the best grades since the first of the year, the bulk of sales at the smaller markets, where choice and prime steers are seldom sent, show a more pronounced upturn than at the larger markets.

Cattle prices can not advance much further if the run enlarges, but since receipts at the seven leading markets last week were about 20 per cent above the eight-year average for this season of the year, a decrease is more probable. The principal feeding districts are winding up the marketing of their crop of winter-fed beef and as this process is completed the remaining supply will rest in stronger hands. If the demand for beef holds up, values should retain most of the recent advance and possibly reach higher ground.

A steady increase in the demand for stocker and feeder cattle has occurred in the last four weeks.

Decline in Hog Market Checked

Receipts of hogs increased sharply for two weeks until the total at the 11 leading markets began to run ahead of the 10-year average, whereas most of the time this year the supply has been less than normal. A sharp break in prices resulted, but the country shut off part of the supply again and the course of the market has been upward for the last week, reaching the highest point in two months. The demand for pork as well as beef seems to have increased as prices in eastern cities moved higher.

The behavior of the market shows that it is on a firm foundation. The regular June run is yet to be encountered, which means an increase in receipts of 10 to 20 per cent, but it is evident that the market will be well supported right along and the break in prices will not be drastic.

Reduced slaughter of hogs during most of April is reflected in the report of storage holdings of hog meats at the six leading western packing points on May 1.

Spring Lambs Becoming Numerous

Spring lambs are becoming more abundant each week. Chicago and Omaha have received several shipments from California, Kansas City reported the arrival of the first Arizonas, while the bulk of the receipts at St. Louis are spring lambs from Tennessee and Kentucky. Prices slumped sharply after working up to a new high level for the year. Heavy sheep and lambs are moving to the usual wide discount below light weights, which marks the arrival of warm weather. An erratic market is to be expected until prices are adjusted to a new crop basis, but a rather high level compared with hogs and cattle should be maintained right along. A limited demand for breeding ewes is noted. Prices upon thin fleshed shorn natives two to three years old range around $6 at Chicago.

Demand for Drafters Increases

Although the farm chunk trade has all but disappeared, leaving many medium weight horses without a satisfactory outlet, much more interest is being shown in drafters and delivery and truck horses than a month ago as the industrial revival is exerting its effect. Teaming concerns are after rugged workers and ice companies are preparing for summer trade. Choice drafters are being sought, also, for the Maine potato section.

CHICAGO—Good and choice drafters, $175@260; common and medium drafters, $140@175; farm chunks, $115@160; wagon horses, $100@175.

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Wool Market Working Higher

The wool market advanced again last week, with fine wools in the west selling at a range of 35 to 42 cents and quarter and three-eighths blood at 25 to 28 cents. Dealers have been anxious to bag the new clip as sentiment is quite general that further advances will occur, so that they have been buying as fast as growers would sell. Foreign auctions show a rising tendency, as the advance is world-wide. Some grades were 15 per cent higher at the last London auction and New Zealand sales are 5 to 10 per cent higher than a month ago. In spite of the quiet market in this country during March, imports in that month were 43,071,000 pounds, the largest since April, 1921, the month which preceded enactment of the emergency tariff. Consumption of wool by American mills in March totaled 62,385,000 pounds, including 7,170,000 pounds of scoured wool and 2,608,000 pounds of grease wool. This compares with 72,721,000 pounds consumed during January, 1920, when the post-war boom in wool manufacture was at flood tide.

With a prospect of higher prices for wool and for cloth, the demand for goods has improved. Woolens have been relatively more active than worsteds for several months, but the worsted market has responded noticeably in the last few days.

The Boston market is quoted as follows: Wisconsin, Missouri and average New England, 1-2 blood, 27@39c; 3-8 blood, 36@37c; 1-4 blood, 34@35c. Scoured basis: Oregon eastern No. 1, staple, $1.15@1.20; fine and combing, $1.10@1.51; eastern clothing, 90@95c; valley No. 1, 95c@$1. Territory: Fine staple, choice, $1.15@1.25; 1-2 blood combing, $1@1.05; 3-8 blood combing, 76@78c; 1-4 blood combing, 66@68c.

Wheat Situation Analyzed

The government's report upon total supplies of wheat in all positions on March 1 showed 244,978,000 bushels. March exports were 14,371,396 bushels. Weekly clearances during April indicate exports in that month of about 11,500,000 bushels or more, making a total with March of approximately 26,000,000 bushels. Spring seed requirements will have taken about 25,000,000 bushels by the time it is completed. Domestic disappearance of flour in March and April totaled about 13,172,000 barrels, equivalent to 59,270,000 bushels of wheat.

The foregoing items account for 110,000,000 bushels, which would leave about 135,000,000 bushels for consumption and export in the next two months and carry-over in all positions at the end of the crop year. The average carry-over on farms, in the visible supply and in country mills and elevators is about 75,000,000 bushels. If it is to be as large as the average only 60,000,000 bushels are yet to be disposed of. Domestic consumption alone should take care of fully that amount. Some wheat is sold for export and not yet shipped and small additional sales are being made from time to time, so that clearances in the next two months should reach a total of 15,000,000 bushels at least. Under the circumstances it is hard to escape the conclusion that the carry-over will be below the average. There is a possibility, of course, that the March 1 reserves were under-estimated. The crop has held out much better than expected, as exports since July 1 now amount to 250,000,000 bushels. Earlier in the season the maximum amount that could be spared was estimated at 200,000,000 bushels.

Although no important change has taken place in the amount of wheat which Europe will require in the coming months, the market abroad has shown less strength in the last few days and the buying of wheat for July, August and September shipment is much less conspicuous than a short time ago.

Fight On in May Wheat

The contest over May wheat at Chicago continues to be one of the principal influences in the cash markets as well as in the future deliveries. The leading "shorts" are making a supreme effort to bring enough wheat to Chicago to satisfy their contracts and a good deal has been bought at Missouri river markets for the purpose. The "longs," who are taking in this wheat, are reshipping it to eastern lake ports. In the last few days the market has been weak, with the "shorts" in the ascendency, although total deliveries in the first third of May were less than 3,000,000 bushels. With large intermarket shipments, the weekly reports upon receipts at primary markets naturally show a material increase because of numerous duplications. Because of large amounts of corn and oats at Chicago storage room has become scarce, so that the rules have been amended to permit delivery of carlots on track on May contracts.

Crop Reports Fairly Good

The condition of the winter wheat crop as given by the government was slightly higher than the unofficial returns. Average condition was 83.5 per cent, which compared with a 10-year average of 87.1 per cent. The crop has improved greatly since December, when condition was 76 per cent. It is believed that since May 1 further improvement has taken place, although some reports have been slightly less favorable in the last few days.

The acreage abandoned was estimated at 14.4 per cent, or 6,446,000 acres, compared with an average of 10.4 per cent. The forecasted yield assuming average conditions until harvest, is 584,793,000 bushels, or about the same as was harvested last year.

Based on a condition report of 91.7 per cent on May 1, the rye crop was estimated at 79,152,000 bushels, which compares with a 10-year average of 57,060,000 bushels. Only in 1918 and 1919 were larger crops harvested.

The lateness of the spring is shown by the fact that on May 1 only 63.5 per cent of the spring plowing had been completed, compared with a 10-year average of 70 per cent, and only 53.6 per cent of spring planting was finished, compared with an average of 57.8 per cent.

Corn Market Shows Strength

Although corn is not disappearing into consumptive channels as rapidly as in midwinter, the rate of export remains far above the average and domestic disappearance is quite satisfactory.

Exporters are still selling corn rather freely, as competition from Argentina corn has not become severe.

Cash Grain Markets

The cash grain prices for May 10 were:

CHICAGO—Wheat: No. 2 red, $1.37 3-4@1.45; No. 3, $1.30@1.41; No. 2 hard, $1.35 1-2@1.44 1-2. Corn: No. 2 mixed, 61 1-4@63 3-4c; No. 3, 60 1-4@63c; No. 4, 59 3-4@62 1-2c; No. 2 yellow, 61 3-4@64 1-4c; No. 3, 60 1-2@63 34c; No. 4, 59 1-2@62 3-4c; No. 2 white, 61 1-2@64 1-2c; No. 3, 60 1-2@63 3-4c. Oats: No. 2 white, 39 3-4@45c; No. 3, 37 3-4@42c; No. 4, 36 1-2@40c. Rye: No. 3, $1.03 1-4@1.06. Barley, 64@72c.

Seed and Feed

Although buying of clover seed has continued later in the spring than usual, it is rapidly fading away and prices have sagged.

Chicago, per 100 lbs.—Clover, $12@22; timothy, $4.50@6.

Country demand for all feeds is light, but prices are holding fairly steady as stocks are not large.

Prices per ton (100-pound bags) in carlots: Chicago—Bran, $25.50; standard middlings, $25.50; flour middlings, $28.50; cottonseed meal, 36 per cent, $50; 43 per cent, $54; hominy feed, $22; gluten feed, $32.65; old process oil meal, $53; tankage, $55.

Hay Holdings Below Average

Stocks of hay on farms on May 1, according to the government's estimate, were 10,792,000 tons, compared with 18,771,000 tons last year and a five-year average of 12,417,000 tons. The average condition of haylands on May 1 was 90.1 per cent, compared with a 10-year average of 89.8 per cent. The hay market has been unusually stable, receipts being light enough to offset the very limited demand. The premium on the better grades remains wider than usual.

Prices per ton in carlots: Chicago—No. 1 timothy, $25@27; No. 2, $23@25; No. 3, $17@20; No. 1 light clover mixed, $24@25; No. 1 clover, $20@21; No. 1 clover mixed, $21@23; Alfalfa, $17@28; upland prairie, $17@19; midland prairie, $14@17; rye straw, $16@17; oat wheat straw, $14@16.

Eggs in Storage Near Record

Cold storage holdings of eggs on May 1, according to the preliminary report, were 4,627,000 cases, compared with the record May 1 total of 4,909,000 cases held a year ago.

(Continued on page twenty.)

Most Profitable Size for Farm

Is Large or Small Acreage Better Suited to Highest Standard of Farm and General Living?

By GORDON KLEMGARD

The following article by Gordon Klemgard, a young Palouse farmer, is based upon a recent address given by him at the wheat convention in Spokane in January. Mr. Klemgard's address received the closest attention as he advanced his arguments in favor of "production per man," as against "production per acre." As a general rule, he contended, the larger farm afforded a better opportunity for the capable American farmer, while he saw in the small intensified farm a dangerous approach to old-world serfdom.

Even those who do not agree with Mr. Klemgard in his conclusion, will find his article extremely readable and his facts based on his personal experience in farming illuminating.

It has been said that a few acres spell economic independence; that it will solve the unemployment problem, and result in vast good.

Please remember that there was no economic growth in these United States until machinery made it possible for one family to feed itself and at least one other. Also that our rapid development has been due to no reason so great as the one pointed out by economists that national development depends largely upon the food supply.

Our progress was hand in hand with the progress made in the invention of modern farm machinery.

When one man can produce food for 100 others, then he releases 99 men to apply themselves to other lines of industry, creating different kinds of wealth, and the economic wealth of a nation makes possible its progress, in science, in art and in literature.

So I conclude that the size of a farm that will result in the most desirable conditions for our country's prosperity will depend directly upon the efficiency of machinery in agriculture, relative to the acres it can handle under one man's direction.

When you compare the modern combine harvester cutting a thousand acres of wheat under the direction and labor of five men, as against these five workers with the old cradle, and one man plowing in one season a section of land by himself with a big tractor, as against the man and his team, I think you will get the idea I wish to convey.

I cite the above in contention of the idea that efficiency in food production per man should be the national aim or that the national aim will, if adopted, be the best thing for the producer, or the farmer.

If I can prove to you that a condition that will result in a wealthier nation will also result in a more prosperous farming people, then you will agree with me that in so far as wealth is concerned, we are now moving in the right direction. If, however, you wish to have a peasant farmer class, nonprosperous, but perhaps contented and unambitious, then let us have the inefficient small farm.

If the day comes when the size of a farm business is limited by law or tradition, so that no man could hope to expand to any considerable extent, then the farm as a profession will no longer appeal to the man of ambition and ability to do big things in a big way. Such men, though their choice be the farm business, will by necessity turn to the other industries to find an outlet for their visions. Should that time come, the farm will have no appeal to me for I regard it as I would any other industry—an opportunity to follow a chosen profession with a view to profits.

It is said that a farmer makes his home on the farm and saves the most of his living cost by his activities, while he carries on the regular business of farming. Let me say that he does not often save this cost of living, but he does it before breakfast and after supper and does his regular 10 or 12 hours' work besides. Any city man can find a side-line if he has ability, that will profit him enough to offset a large part of his living cost. I mean that the farmer earns his living, even if he earns it as a side line and that if he did not, the average farmer's books would show a red balance at the end of the year. I again refer you to the charts showing the average income of the American on the average farm is only about $500.

My aim has been thus far to show that the small farm does not create the most desirable condition on the farm; that the larger farms, more efficient in every way result in a betterment, national and agricultural, and further that it is my personal view that the farm should not be regarded as any thing other than a business.

The farmers of all times have frequently been called upon to do something really splendid in behalf of national patriotism and sometimes they have been forced to comply by legislation, resulting in financial loss to them, but they usually make no great objection. The financial burdens of the nation rest to a large extent upon agriculture. Agriculture with a small representation in politics goes peacefully on Perhaps "the fool taxpayer" and the "fool farmer" are one and the same man. But he is beginning to waken and when he feels his full power, I, for one, hope that he will retain his present sense of humor, and not abuse this power.

I want the word to go out that the farmer has a right to regard his business as an asset; that he has a right to expect it to pay the cost of production and a profit proportionate to the size of the risk and the venture and the quality of the management applied.

The farmer will go a long way in this direction by fitting himself with a system of cost accounts, specialized for this particular job—not fussy and too complicated to be useful—but clear and distinct, showing the phases of his business and keeping trace of them as they evolve. In this way the profitless ventures will come to light and be eliminated and the profitable ones will be emphasized. Also at the end of the year one will have a clear-cut view of his activities for the year. It is a useful basis for the next year's estimates of cost and the desirability for expansion.

I am asked what I consider the correct size for a farm.

The correct size for a farm is directly relative to the size of the farmer.

There are one-man farms and those requiring many hired men. Our available farm statistics show that our farms are increasing in size, and the farmers who are really making more than wages have at least a half section of land. There are very few instances were big incomes are made on small areas under specialized conditions that will usually not apply to any considerable number of farms. I should say that a wheat farmer should have all the land he can use with any standard set of farm implements that are regarded as efficient sizes.

An eight-foot grain binder with a two weeks' cutting season should have 120 to 160 acres to cut, as it can do that much work easily. A plow unit, such as a two or three bottom gang plow, operated by one man will summer fallow an equal amount of ground for next year's crop.

If a man is of larger caliber, he can double these units indefinitely, up to the point of his managing ability, and the point where inefficiency would offset the added income. This would depend upon the man and his special problem.

You may say that the big farm means hired help rather than independent small farmers.

My answer is that many men prefer to work for others and they are often failures for themselves.

Only specialized men are making money in any industry. Why not specialized farmers for efficiency in food production? Do you advocate having your shoes made by your local shoe man rather than under factory methods? Do you think the shoemaker would make a profit or annual income greater than his wage in a factory? Do you think the price of the shoes would be larger or smaller?

Factory methods are applicable to the farm, as they are similar in many respects, and certainly farming calls for specialized knowledge if it is to show a profit.

My conclusions are that the size of farms should be flexible, with a high average size, say, 300 or 400 acres; that accounting can be adapted to your particular needs that will result in a better survey of your business at all times and result in greater profits, and that sentiment should be disregarded when used as propaganda to compel farmers to produce at less than wages.

By cost accounting I have arrived at the following figures for the production of grain for the owner and tenant, respectively. These figures are based on an average crop for rent. The upkeep of building, fences and insurance should be cut to 50 cents for farms larger than one section of land. No allowance is made for soil depletion.

The accompanying pictures show the large scale method I employ in wheat farming, also the quality of the product I grow. The grain pictures show 5 1-2 to 6 foot straw. The average yield of this 250-acre field was more than 40 bushels last year. Note the stubble in harvester picture, compared to the height of the man. In harvesting this field, grain poured from the sack spouts on the machine more than one sack every 20 seconds. The tractor plows a swath 12 feet wide and 9 inches deep.

Good tilling makes crops, such as are shown in these pictures.

Tractors can be used to advantage and profit even in our hilly Palouse country, but not every man is adapted to own or run one. The matter should be gone into carefully. There is a large saving in manpower and production per man on my 1500-acre tract, which I hold under lease. My average help per year is only two men, varying from one to seven men, according to the season. The average size team driven by one man on this place is seven or eight horses.

Generally speaking, I never do a day's work that does not go into production, directly, or indirectly. Extensive undertakings toward permanent improvement are a great risk unless one has a long-time lease. It is better from a return standpoint to omit the extensive improvements, only attempting to keep up the leasehold above the point where taken. However, good farming makes a real improvement for landlord and tenant and is the type of improvement to undertake.

Here is a table giving the cost of production summary for owner and tenant in grain farming in the Palouse country.

	Owner	Tenant
Land charge, 6% val. $75, 2 years	$ 9.00	.....
Rent, 10 bu. 80c	....	$ 8.00
Taxes	3.00	.....
Plowing	2.00	2.00
Cultivation	2.00	2.00
Seeding	.75	.75
Seed	1.25	1.25
Harvesting	5.00	5.00
Grain bags, twine	1.20	1.20
Hauling	1.00	1.00
Depreciation and overhead	1.50	1.50
Upkeep, buildings, fences, insurance	1.00	1.00
	$27.70	$23.00



Grain production on the Cloverdale farm.

Sulphur in Potato Seed Treatment

By F. D. HEALD, Plant Pathologist, Washington State College.

If I cut my seed potatoes and sprinkle sulphur over them will it be of any advantage to them as a fertilizer? Will the sulphur kill the scab? Will you please explain what has to be gone through to get potatoes certified? M. G. R.
Bossburg, Wash.

Sprinkling the seed potatoes with sulphur is an unsatisfactory method of applying the sulphur. There is some danger of causing seed injury and the value of the sulphur as a fertilizer if it should have any effect would be less than by the more generally accepted method of using this chemical.

Sulphur either used for its fertilizing value or for the prevention of scab can best be applied to the soil with a drill previous to planting. It may be used at the rate of 400 to 600 pounds per acre. Two forms of sulphur are available for soil disinfection: The common uninoculated sulphur and what is known as inoculated sulphur. The latter is more effective than the uninoculated, especially under certain soil conditions, and should be used if it can be obtained on the local market. Sulphur is recommended for potato scab only when the soil is so heavily contaminated with the scab bacteria that it is impossible to produce a satisfactory crop. The scab carried by the tubers can be prevented much better by treating the seed with the standard corrosive sublimate solution, following the directions given in the typed outline which I am including herewith.

You can obtain full information concerning the recommendations and regulations for the production of certified potatoes by applying to the seed inspector, J. W. Currey, department of agriculture, Olympia, Wash.

Uniform Exhibits for County Fairs

"Much of the constructive influence of the county fairs throughout the country is lost because of the difference of ideas among the people who are selecting exhibits," said Mrs. Winnie Braden, fair exhibit specialist of the state college, who is meeting with the fair committees in many of the counties in Washington during the spring and summer months. "The judges also have differences of opinions and it would be almost impossible to find two of them who would place the prize on the same exhibit if there was any noticeable competition."

In order to remedy this condition Mrs. Braden recommends that each fair accept a uniform standard for each class and variety of exhibits. The state college has issued a score card in the form of a bulletin, which can be had upon application to the extension department. This lays especial emphasis on the commercial varieties of all fruits and vegetables and advises exhibits to be made with such varieties rather than with new ones which are not so commonly used on the markets.

"All details, such as size, uniformity, color, etc., are explained," said Mrs. Braden, "and their comparative value indicated in order that the farmers will be able to know upon what basis their products will be judged. This is important, since it gives him a better knowledge of what to plant and how to plant in order that he might stand a better chance in competing for the awards. It is just as important that the exhibitor know upon what basis the classes are being judged as for the judge himself. By making a study of the new score card it is an easy matter to know how your community fair is going to be judged, and the reasons for all placings.

Placing of Awards.

"In the live stock division the reasons are given for the placings of the awards in order that the small exhibitor may know what to expect when he exhibits his animals, as well as does the larger breeder who attends the fair regularly. Instructions are given as to the filling in of entry blanks and the classification of different aged animals. In the poultry department the coop and leg band numbers are included in order to avoid complications.

"Sample sheets are sent out as suggestions for each fair community to work on, and mimeographed copies can be made of these sheets in order that those of different fairs can be made uniform. Such blanks can be easily used in communities where there is no fair organization."

Making Sheaves.

Mrs. Braden explained the process of making sheaves with grasses and grains. For grasses the stalks should be pulled at the pollen stage and kept in the barn over night to cure. By laying out a few stalks at a time on a table and arranging it in a small fan shape a flat sheave can be made, which will lay close to the wall after being bound at three different places. The sheaves should measure four inches at the center tie. This is much better than the customary round sheaves, since all of the heads are shown from the front side. By curing such sheaves in a dark room the natural color can be held.

For vegetable displays small trays are very convenient and make a uniform container. These should measure 18x11 1-2x2 inches and should hold approximately 20 pounds when filled level full. Such trays may be used for grains if desired.

Arranging Exhibits.

"In arranging an exhibit," continued Miss Braden, "it is preferable to use one eight-foot table in the center of the room rather than two four-foot tables with an isle between. This gives a better opportunity for everything to be seen by the visitors and it has a tendency of putting all exhibits of one kind together. Exhibits shown in collective displays should not be allowed to enter the single exhibits. This ruling will avoid any complication if carried out. In any exhibit an artistic arrangement should be worked for, since this will add an education value to the general effect. Color schemes should be studied, especially in commercial exhibits, in order to give more pleasing effects, which, of course, should give the people a much better impression."

Corner in Grain

For two months or more there have been intimations of a corner or attempted corner of May wheat at Chicago. Prices have fluctuated more or less with the shift in belief as to which of the two sides in the struggle would be victorious.

Corners are made possible by the practice of selling "short" or selling for future delivery grain which the seller does not have in his possession. He must either buy the actual grain before delivery date or else "buy back his contract" in the grain pit, taking a profit or a loss on the transaction. Using a market to hedge large quantities of grain at points too distant to permit actual delivery also creates favorable conditions for a corner. With such contracts being made a speculator or group of speculators can contract to buy more grain for future delivery than it is physically possible to deliver and then decline to sell back those contracts except at a handsome profit.

Corners cause extremely wide and rapid fluctuations in price. For example, the failure of a corner in wheat caused a break on May 18, 1867, from $2.85 to $2.16. In June, 1887, a corner by Cincinnati interests caused wheat prices to advance from about 81 cents up to 95 cents, but the corner collapsed and a decline to 68 cents followed. In September, 1888, in what is known as the Hutchinson corner, wheat advanced from 89 3-4 cents to $2 and closed at that figure. In 1898 an unsuccessful corner, engineered by Joseph Leiter, occurred and prices declined to $1.25 after being as high as $1.85. In September, 1909, prices advanced 14 cents on the last day of the month.

In May, 1921, a so-called "natural corner" occurred. Wheat prices had been on down grade all winter and spring till the middle of April. The May delivery remained consistently below the price of cash wheat. Europe wanted a lot of wheat and exporters made extensive contracts to ship large quantities during the first half of June. They bought the May wheat because it was cheaper than spot grain and held the contracts for delivery in order to fill their export contracts. Wheat became scarce and but little could be delivered to the exporters. This situation caused a sharp advance in prices in the closing days of May. Apparently there was no malicious intention to corner the market.

Corners have become less numerous in recent years, partly because of a growing belief that the practice is unethical and still more because of the development of special rules by the grain exchanges which make it very difficult to carry out a successful corner. Since members of these exchanges are the most extensive "short sellers," they are apt to be among those "cornered" and naturally make rules for their own protection.

They may make deliveries on track or afloat "regular" whereas the original contracts provide for delivery in regular terminal elevators. If measures to make delivery possible fail they may establish a settlement price which permits those who default on their contracts to get off easy.

Unfortunately no corresponding rules are ever made to protect the owner of grain against the price-depressing influence of the practice of over-selling.

Although a corner is an attempt to advance prices artificially, farmers obtain but little benefit from it as a rule. Fluctuations are so rapid that country grain dealers are afraid to purchase on the basis of the advance. If the corner collapses prices may then go lower than they would otherwise have gone. As a rule, also, there has been but little grain in farmers' hands when these corners occurred.

Listening In on the World

"Listening in" on a country telephone may have its thrills, but members of boys' and girls' clubs who "listen in" on the conversation of the world with their radio receiving sets have an interest which comes not from neighborhood gossip, but from getting the morning report of the markets, the weather forecast, and crop estimates for all parts of the country.

In a number of states club members within receiving distance of broadcasting stations located at the state college of agriculture or elsewhere are receiving information that takes some of the risks out of the business of farming. They post this information in conspicuous places so that neighbors may make use of it. The work demonstrates the usefulness of the radio as a piece of farm equipment.

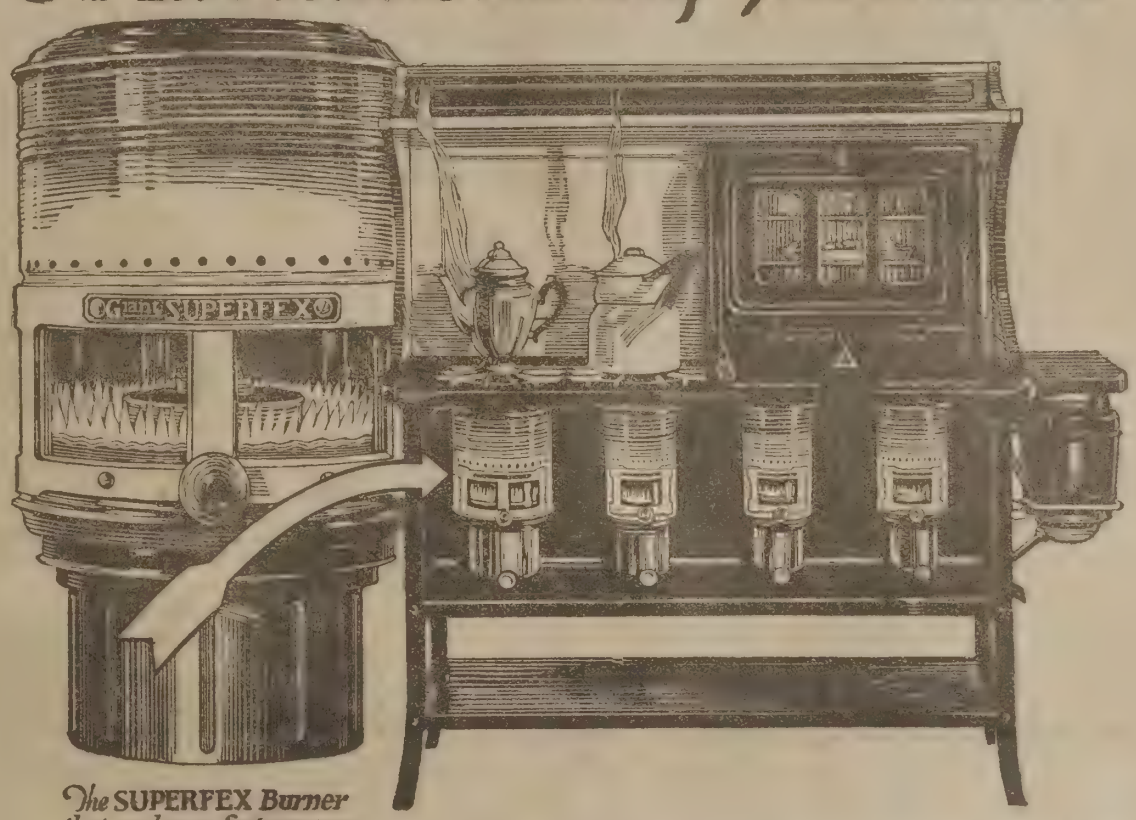
The department of agriculture is making special arrangements to assist boys and girls in securing small, simple receiving sets, with which to "listen in" on the nearby parts of the world.

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The Thirty-Ten School Taxation Measure

By STEPHEN B. L. PENROSE
President of Whitman College

The article herewith is one of a series being published in The Washington Farmer discussing the so-called 30-10 bill. These articles are intended to present all important phases of both sides of this vital question. The first article was by Professor Ralph Swetman of the Ellensburg normal school, and supported the bill. The following article by President Penrose opposes the measure. President Penrose has been an educator in Washington for more than a quarter of a century, having served for 27 years as president of Whitman college, Walla Walla. He is also a member of the state commission for the revision of taxation, and as such has been for several months making a study of taxation problems.

The 30-10 bill provides that there shall be levied a state tax to provide $30 for every school child and that the county shall levy a tax to raise $10 per child. The present state and county levies raise $20 and $10, respectively, per child.—Editor.

I have just been challenged by the Washington State Parent-Teachers' association to debate the 30-10 bill, technically known as the "school equalization initiative measure." I promptly and gladly accepted the challenge, replying that the bill was misnamed "equalization measure." I hope that the people who read this article will not allow themselves to be deceived by the plausible title. Ever since the adoption of the barefoot schoolboy law by the legislature of 1895 as introduced by John R. Rogers, then a member of the legislature, but later governor, the public expenditure for education has been equalized throughout the state. What "equalization" means is that the money which is raised for school purposes in the state shall be distributed equally throughout the state, so that every child receives an equal part of the total income, or, more strictly speaking, that every district receives an allotment from the state proportioned upon the number of scholars in the district. To introduce an initiative bill like the 30-10 under a deceitful title, which suggests that it is proposing a new and fair principle of educational distribution, may be smart politics, but is bad citizenship. Initiative measures should be made perfectly clear to the voters and should be disassociated from any suggestion of trickiness or deception.

As a member of the state commission for the revision of taxation, appointed by Governor Hart, it has been my duty during the last winter to attend hearings in all parts of the state at which citizens of every kind expressed their views upon the subject of taxation. The impression made upon my mind was simple and deep. Everywhere people were protesting against the heavy burden of taxation. Oftentimes they had no wise remedies to suggest, but always they exclaimed against the amount of taxes which are laid upon the people. The very fact that the legislature instructed the governor to appoint a commission to investigate the subject indicates the wide-spread feeling throughout the state, as indeed throughout the United States, that the cost of civilized life at the present time is oppressive and that the burden must be lifted or the poor man will be crushed in financial ruin. Yet at this very time, when all the people are crying against the present burden of taxation, the advocates of the so-called 30-10 plan coolly come forward and propose to add $3,750,000 a year to the present taxes. It would need to be an extraordinary emergency which could justify such an addition at the present time. If our schools were about to close and teachers were leaving the profession, starved and ragged, it might be justifiable to increase the state appropriation for public schools. Such a condition does not prevail; no emergency exists. The demand for an increase of state appropriation from $20 per child to $30 per child is not warranted by any crisis.

The advocates of the measure say that it will not increase taxes, or, rather, they ingeniously suggest that although state taxes may be increased $10 per child, district taxes will be decreased to a like extent. The experience of the state of Washington does not bear out this plausible argument. In 1895 the barefoot school law levied a state tax of $6 per school child. This was increased four years later to $8 and a second increase to $10 per school child was made in 1901. The average cost per pupil in the state, based on daily attendance, was in 1920 $79.75; in 1921, when the state had again increased its levy by $10 per child, the average cost per pupil was not $89.75, but $97.85. That is to say, the appropriation from local districts had increased almost as much as the state appropriation had increased. Instead of the district raising less money for their pupils when they received $10 more per pupil from the state, they increased their local levy to almost an equal amount. If, therefore, as the state department of education estimates, the proposed 30-10 bill will add $3,750,000 each year to the state's burden of taxation, it is not a wild guess to infer that an additional $3,000,000 at least will be levied by the local districts themselves. To add $6,750,000 to the tax burden of the state at a time when every effort ought to be directed to reducing taxation seems to me irrational and monstrous.

The so-called equalization initiative measure, popularly known as the 30-10 plan, not only adds an increased burden of $10 per school child to state taxation, but it introduces a new principle of distribution. Heretofore state taxation has been distributed equally and equitably on the basis of school attendance. Under the proposed measure the distribution will consider the number of teachers employed in the district as well as the number of scholars. I think that it might fairly be called "a measure to improve the condition of teachers" rather than to equalize the levy for students. The interest of the parent-teachers' association, made up largely of teachers, and the urging of this measure by elected and paid representatives of the state teachers' association, make the thoughtful citizen wonder whether the teachers may not have an "ax to grind," and whether their zeal for this bill is based so much upon the needs of country districts as on the hope that out of the more abundant funds which will be raised teachers' salaries may be advanced.

The advocates of the bill say that it will help the poor country districts. They say that if $10 more per child is given to the remote country district educational opportunities there will be greatly improved. It might be well to look at the facts: A school district which has 14 pupils and one teacher would get $140 a year more under the proposed measure. A school district of six children would get $60 a year more. In what respect will educational opportunities in such districts be improved? The teachers may perhaps absorb the increase in their salaries, but the school will remain the same poor country school. The teachers will not be better teachers, the schoolhouse will not be new, and educational opportunities will remain the same. What is needed in such cases is not the spending of a few more dollars on the isolated country school so much as the adoption of a wise plan of consolidation by which poorly attended and outlying schools may be brought together in some community center where better educational opportunities can be given to all the pupils. The proposed measure makes consolidation more difficult and unlikely. The increase in the state levy is based upon the number of teachers in the district as well as the number of scholars, and it will be to the interest of the teachers, and probably to some short-sighted members of the district it will seem advantageous to keep as many teachers employed as possible. The consolidation of school districts lessens the number of teachers and, therefore, under the proposed initiative measure the district would receive less state aid. But true economy in education will be found to come from the merging of small, weak districts in one strong district, and true equalization of state expenditure should be based upon the number of pupils in the newly organized joint districts rather than on the number of teachers employed. The problem of the country district can usually best be solved by consolidation, where one good building will take the place of half a dozen and three good teachers take the place of six or seven. In cases where consolidation is for geographical reasons not practicable the state superintendent or the state board of education should be allowed to make special grants to such schools on the basis of their need.

The 30-10 plan is a somewhat complicated measure, involving technical questions of tax rates and tax distribution. I am strongly opposed to submitting such measures to the people for their vote. I think that the initiative may be employed properly on questions involving great principles, moral issues and the likes, but it should never be employed for the settlement of technical questions which involve in any degree the judgment of experts. Initiative measures should be simple, definite, clear cut and readily understood by the voter. The so-called 30-10 plan, "school equalization initiative measure," meets none of these requirements in an initiative measure. It is not simple; it is not ingenuous; it is not readily intelligible.

A wise course for the voter to follow in the case of measures which he is not sure of is this: When in doubt, vote no. I urge the application of this principle in respect to the 30-10 bill. Those who understand it will certainly vote no; those who are in doubt about it ought to play safe and vote no.

Jersey Men Organize

T. S. Griffith of Glen Tana farm was elected president of the newly-formed Spokane County Jersey club at its organization meeting last week. William Auld of Waikiki farm was elected secretary-treasurer, with E. F. Fraser, T. B. Campbell and W. H. Haman completing the board of directors with the president and secretary. The activities of the club will be for the upbuilding of the dairy industry in Spokane county, with special reference to the development of Jersey herds.

COWSLIP'S COQUETTE.

To the Editor of The Washington Farmer: In your recent article on our gold medal cow, Brown Lad's Cowslip, you gave us credit for owning Cowslip's Coquette, which credit should go to P. A. Dunford of Cle Elum, Wash., as he gave this cow her record and still owns her. We have just purchased Brown Lad's Roiter, a Stake Pogis bull, to use with Majesty's Cowslip's Oxford, our island bred bull. GRANT NICHOLS.

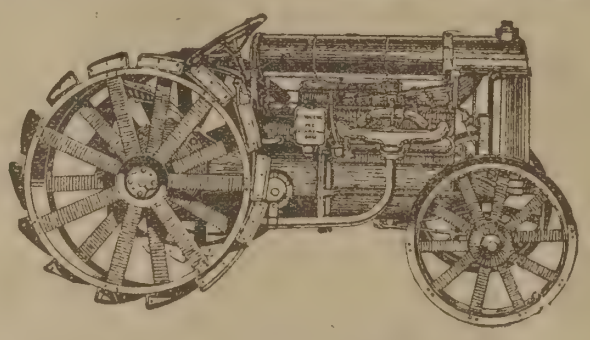
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Washington First in "Cukes" and Melons

In yield of cucumbers and cantaloupes Washington ranked first of all states listed in 1920 statistics of the United States government weather, crops and market report.

Dr. S. B. Nelson, director of agricultural extension at Washington state college, has compiled comparative figures from the report for 1920-1921, which show some extremely interesting things as to the standing of the state as compared with the rest of the country in the matter of acreage grown, yield per acre, and tons or cars of production of sven different crops; cucumbers, tomatoes, cabbage, onions, lettuce, cantaloupes, and strawberries.

In cucumbers, for example, out of the 16 states listed as producing in quantities, Washington was 15th in 1920, and end of the list in 1921, but in yield per acre stood first in 1920 and eighth in 1921; eighth in number of tons produced in 1920, 15th next year.

Out of 38 states raising tomatoes, this state was 29th in acreage in 1920, 28th in 1921; stood third in point of yield per acre both years; was 27th in tons of production in 1920, and 23d in 1921.

Twenty-five states were listed for cabbage production, Washington being 20th in 1920, and 21st in 1921; sixth in point of yield both years; 20th in number of cars in 1920, and 17th in 1921.

Out of two dozen states raising onions, Washington was 17th in the number of acres raised both years; 12th in yield per acre the first year and fifth the second; 16th in the number of acres in 1920 and 14th in 1921.

As to lettuce, the state was eighth out of 13 in acreage in 1920, and ninth in 1921; 11th in yield the first year and fourth the second; 10th in number of cars in 1920, ninth in 1921.

The cantaloupe record shows that out of 23 states Washington was 16th in acreage the first year, 21st the second; but at the top of the list in yield the first year, dropping to sixth the second; 14th in matter of cars in 1920, 18th in 1921.

Out of 27 states listed for strawberry culture we were 15th in acreage both years and in number of cars the first year, coming up to eighth the second year. In point of yield per acre we were fifth in 1920, and rose to second place last year.

Summarizing the result, Dr. Nelson said: "Our yield is evidently all right, the question seeming to be one of acreage. Whether it is that we haven't the acreage or the farmers and market gardeners haven't awakened to the possibilities of these crops might be questioned. I am inclined to believe that it is because the farmers do not yet realize what they might do along these lines."

WASHINGTON'S RANK IN THE PRODUCTION OF SEVEN CROPS.

Products.	No. of states listed.	Rank as to acreage 1920	Rank as to acreage 1921	Rank as to yield per acre 1920	Rank as to yield per acre 1921	Rank as to tons or cars produced 1920	Rank as to tons or cars produced 1921	
Cucumbers	16	15th	16th	1st	8th	8th	15th	Tons
Tomatoes	38	29th	28th	3d	3d	27th	23d	Tons
Cabbage	25	20th	21st	6th	6th	20th	17th	Cars
Onions	24	17th	17th	12th	5th	16th	14th	Cars
Lettuce	13	8th	9th	11th	4th	10th	9th	Cars
Cantaloupes	23	16th	21st		3d	27th	23d	Tons
Strawberries	27	15th	15th		2d	15th	8th	Cars

Club Work Grips

Kitsap county club members, 100 strong, met at the Bremerton building at the Burley fairgrounds on April 15 and demonstrated their enthusiasm for the coming year's work. Those who could not find transportation to the meeting by auto, wagons or on horseback, made the trip on foot.

The speakers were F. L. Audrain, state club leader; Leonard Hegnauer, soils specialist of the state college, and Celia Towne of Fernwood, who is referred to as the godmother of club work in Kitsap county. Miss Towne awarded the achievement pins for the work finished last year.

The young folks listened with much interest to the talks given and it was easy to see that each one determined to make a better showing for the next year's work.

The boys' and girls' clubs in this county have made rapid strides, since they have received much encouragement from the fair associations, granges, banks and commercial clubs as well as other business interests, who took it upon themselves to give the youngsters every encouragement to finish their year's work. The chamber of commerce at Bremerton entertained all the members at an all-day contest and a banquet, which it plans to repeat this year.

"So thoroughly has the spirit of club work gripped the people in many of the communities," writes G. N. Worden, the county agent, that every boy or girl of club age has enrolled. Two hundred and sixty-three boys and girls had signed up by April 17 and cover a total of 357 projects. They are as follows: Eleven garden clubs, with 146 members, three canning clubs with 118 members, five sewing clubs with 36 members, three poultry clubs with 22 members, while there are 15 members who are carrying miscellaneous work."

One Ton Silo

By PROF. L. J. SMITH, W. S. C.

Can I make silage out of lawn clippings such as blue grass and white clover? How should it be prepared? Please t ell me how to build a silo that will hold about one ton. W. J. T.

Elk, Wash.

A one-ton silo is a pretty small one to illustrate. Allowing 30 pounds per cubic foot capacity, a silo four feet in diameter would not have to be quite six feet high to hold a ton. One three and a half feet in diameter and seven feet high would hold a ton at 30 pounds per cubic foot, which I think would be a conservative figure for that depth of silage.

At the Manitoba Agricultural college we made some for experimental feeding of about this size of galvanized iron and a tight galvanized iron cover over the top. They worked very well.

The Yakima Beet Crop

Sugar beets in the Yakima valley last year averaged 8.8 tons per acre, according to J. W. Timpson. A total of 30,000 tons was produced on 3400 acres of land, and from this crop the farmers received approximately $180,000. The price received was $6 per ton.

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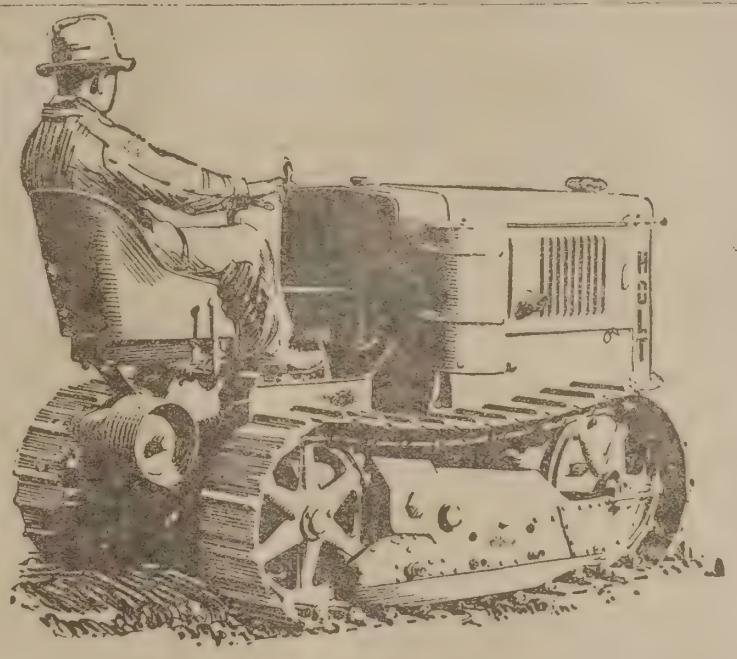
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LIVESTOCK AND DAIRY

Sour Milk Starter

By FRANK W. LOGAN,
Instructor, Department of Dairy Husbandry, W. S. C.

I would like to know how to make the starter to make skimmed milk sour.
R. D. P.

The first essential is to secure a good culture of lactic acid germs. This can be obtained by the natural souring of good, clean milk or a commercial culture can be purchased from a dairy supply house.

To prepare a natural starter, proceed as follows: Select whole milk that is clean, fresh, free from off odors or flavors and fill several pint jars that have been previously scalded; cover with lids also scalded, and set away at a temperature of 95-100 F. until the milk has clabbered, probably 12 to 15 hours. Inspect the curds, discarding those that appear gassy and whey off, and select those that are firm and of good flavor and odor. Satisfactory curds are then transformed to a quantity of pasteurized milk. This milk should also be selected for its cleanliness and may be either skimmed or whole and should be pasteurized at 180 degrees for one-half hour and then cooled to 72 degrees F. At this temperature the sour milk is added and then set away over night at 72 degrees F. When the starter has "come on," or clabbered, it is cooled down to below 50 degrees to prevent it becoming overripe. It is now ready for use.

The starter should be made up in sufficient quantities to sour the desired amount of skimmed milk. The amount of starter to use depends upon the setting temperature of the milk. With the skimmed milk at 72 degrees F., 2-4 per cent of starter is sufficient on a good curd over night. It would be well to transfer starter to fresh pasteurized milk daily if possible, but twice a week will keep it in good condition if it is held at a temperature below 50 degrees F. to prevent the development of too high acidity.

A good starter has a mildly acid flavor, pleasant to the taste, free from bitterness and peculiar flavors and odors, and on agitation should become creamy in consistency and free from lumps.

The "commercial" starter consists of a preparation of lactic acid organisms and can be obtained from any dairy supply house. Directions for use accompany the culture, but the same methods and precautions as mentioned above apply to its use. If the "commercial" culture is prepared in a dry media, several propagations are necessary before a desirable flavor and acidity are developed.

Seeks Medium Hog

What we are trying to turn out is a medium hog that finishes at 7 months around 190 or 200 pounds. I don't like the big ones. You can't get the finish on them. Yes, it certainly looks good for feeders now, but it has been pretty dark."

The speaker was R. D Lewis of Yakima, who is Philo Huxtable's active partner in the development of a 230-acre hog ranch within sight of the county seat. He was surveying a group of Duroc pigs, part of 300 head on the ranch in February, and was discussing production methods and market demands as noted in his seven years' experience feeding for pork. "There isn't anything quite like milk and grain to produce growth, in my estimation, and those 230 pigs are consuming 200 gallons of it per day, besides corn from self-feeders, and hay. Milk is about the best thing there is for sows in pig, too. We use lots of it on them when litters are arriving, and we have never lost but one. Exercise is another thing they must have. Yes, we hogged off about 40 acres last fall," he nodded, indicating the scarred remains of a near-by cornfield.

Lewis has been in the Yakima country 16 years. He formerly lived on the Tieton, and became interested in feeding experiments with Roy P. Bean, then project agriculturist and now superintendent of the Prosser branch experiment station.

One expensive lesson that he learned last year may be valuable to others. He built a house 24x150 feet in size, with capacity for 46 sows and at a cost of $3500, and found out the first season that it would not do. Farrowing starts in March, and at that early date the sun could get only on one side.

This spring he had eight acres seeded and proposed to use a number of portable A-type houses, costing $5 each, with portable fencing, for the sun-loving families.

Practically every pound of pork so far raised on the place has been disposed of locally.

Purebred Females

The campaign which is being pushed by the bureau of animal industry of the United States department of agriculture for purebred sires has resulted in a striking development of an increasing tendency to acquire purebred female stock as well. This campaign for purebred sires is growing. In the period from January 1 to March 31 of this year, 970 persons filed with the department signed enrollment blanks, indorsed by county agents, saying they used purebred sires exclusively for all classes of live stock kept. This number is an increase of 254 over the previous three months, and nearly three times as many as for the same period of 1921. As the campaign progresses, a gradual rise in the proportion of purebred female animals is reported. This includes cattle, horses, swine, sheep, goats and poultry. The proportion of purebreds to the total of female animals kept now exceeds 35 per cent.

The most active counties in the purebred sire campaign during the first three months of this year were Hancock and Greene counties in Ohio; Kittitas county in Washington; Oldham county in Kentucky; Boyd county in Nebraska, and another Ohio county.

Cooperative Wool Growers

The Pacific Cooperative Wool Growers was the first in the United States to adopt the orderly marketing system on the basis of average prices for graded pools of similar grades, quality and shrinkages. This plan has now been adopted by the Ohio association, one of the oldest in the United States, and will be put into effect this year.

The Pacific organization is now the largest wool marketing organization west of Chicago. During April it received contracts from new members covering over 100,000 pounds of wool. The organization handled about 2,000,000 pounds from its old membership last year, and is preparing to handle double that amount this year.

The association's membership is now close to 2000 and the results of its 1921 wool sales averaged slightly higher than the average price received outside the association by nonmembers. Its handling costs were slightly less than usual warehouse rates and the association was one of three associations having the lowest per pound handling cost of any of the cooperative wool marketing associations in the United States.

TWO BULL CLUBS ORGANIZED.

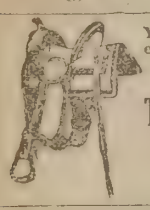
Two bull clubs have been organized on San Juan island during the month and both clubs purchased high-class purebred Guernsey bulls. W. W. Henry, county agent of San Juan county, leads the state in the number of purebred sires placed during the last three months. Seven purebred bulls were purchased in March, five of which were Guernseys and two Jerseys. In February two purebred bulls were purchased and in January six. This makes 15 purebred dairy sires in the three months. San Juan county is determined to eliminate the scrub and grade sire.

RECORD WEIGHT.

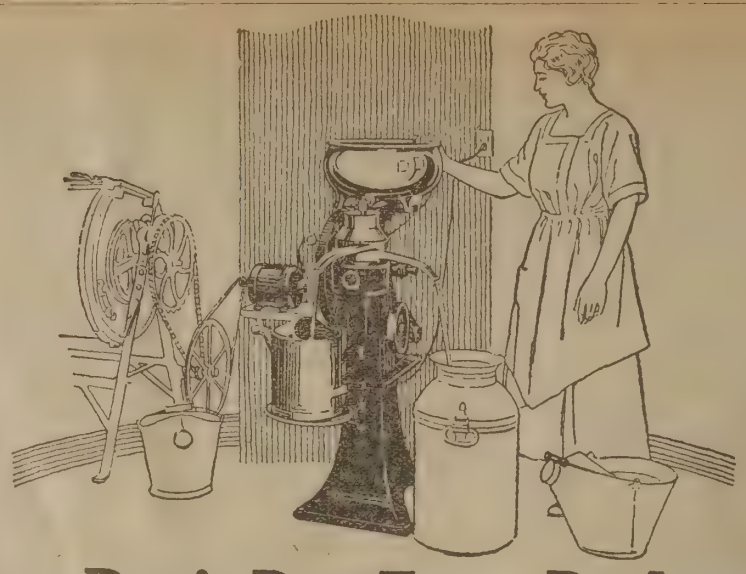
A registered Holstein cow, Mechthilde Duchess, owned by R. R. Preever of Scio, Ore., gave birth March 29 to a bull calf weighing 129 pounds. Mrs. Preever writes THE FARMER that the family believes this is almost a record weight. This certainly is "sum" calf, but the championship belt is already claimed by a Pennsylvania breeder who recently reported a Holstein calf weighing 166 pounds.

PROVIDES SUCCULENCE.

Actual nutritive value is only one feature of the usefulness of silage. Silage is a succulent feed that means much for the condition of the animal's digestive system.


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You Don't Pay For a De Laval
It Pays For Itself

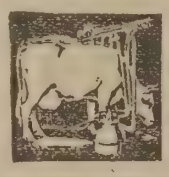
A truer statement was never made. Ask any one of the millions of De Laval users and they will invariably reply, "My De Laval doesn't owe me a cent. It paid for itself in less than a year, and ever since has been making me money."

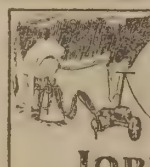
Why? Because the minute you start using a De Laval you get something to sell for cash—cream; and in addition you get skim-milk to grow into another crop of calves, pigs and chickens. Two sources of profit, and a steady cash income every day.

Even if you don't own a De Laval you are probably paying for one anyway—especially if you are using a cheap, inferior or badly worn separator, or are skimming by hand—in the cream that is being lost. No other method of separating cream from milk is so efficient, easy and economical in the long run as the De Laval.

There is a De Laval Separator just right for you, no matter if you have one or a thousand cows. Furnished with hand, power, electric or steam turbine drive. See your De Laval Agent now or write us about getting one.

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Cream Separator and Milker



SHARPLES
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NEVER HAS HURT A COW
Inexpensive Operation—Long Life
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SEND FOR CATALOG
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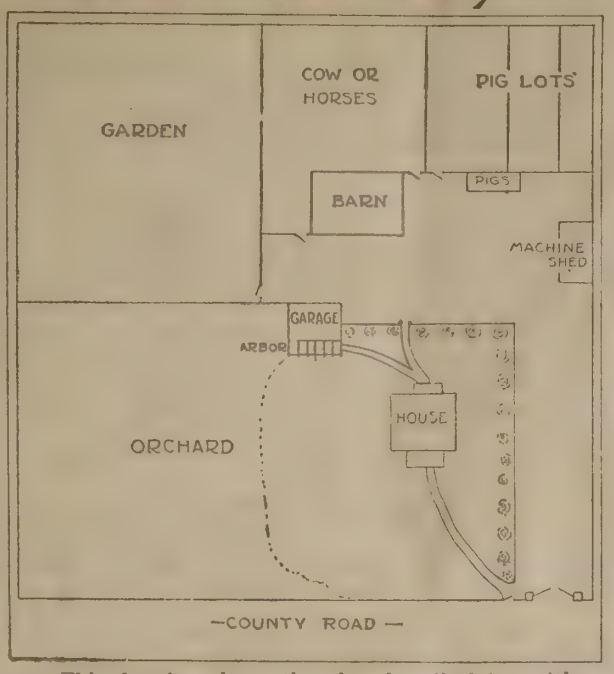
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The Name "Cutter's"
on Serums, Vaccines and Aggressins signifies, "Made by The Laboratory that Knows How." Twenty-five years of conscientious endeavor in one line count for something.
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NEW "Z" ENGINE
Those who want a thoroughly dependable engine at a comparatively small investment will select the new "Z." It is built to the same high standards as other "Z" Engines, and fully guaranteed. It delivers more than rated horsepower; operates on gasoline alone; has simple high-tension battery ignition; hit-and-miss governor; new type, safety flywheels; quiet-running, spiral-cut gears. Wonderfully simple—no complicated parts. Control lever gives six speed changes. Starts easily, runs steadily, requires little attendance, carburetor requires no adjusting. The high quality and low price are due to scientific study and large production facilities. One of the greatest values in years. Over 300,000 "Z" Engines in use. See your dealer. Or write us.
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With high-tension magneto and throttling governor
1½ H. P.....$ 67.00
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All f.o.b. factory—add freight to your town.
FAIRBANKS, MORSE & CO.
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Compact, Convenient Farmyard



This drawing shows the plan described herewith, as designed by A. M. Doerner, landscape gardener at the state college.

In the model farmyard, illustrated herewith, all buildings are the same general color and have a pleasing effect from the highway. There are no gates to open, except at the main entrance, and if there are no stock in the road this may be left open. The driveway leads direct to the farmyard, from which the auto may be run into the garage or the team watered and led to the stable without opening gates. All gates are built close to some of the buildings, which is a great advantage when driving stock through. All buildings are built in line with a fence, which makes the barnyard more compact and the animals can not run around any of the buildings when being driven. To enter any field only one gate need be opened.

The machine shed is handy to the barnlot and it is almost as easy to run a machine in the shed as to let it stand in the lot where it was unhitched. The gates are all within easy reach of the barn and they open direct into the fields. There is plenty of shade around the house and other buildings. The lawn is easy to cut, since all the flower beds and shrubs are at the borders instead of in the center, which not only lessens the work, but greatly improves the appearance of the place.

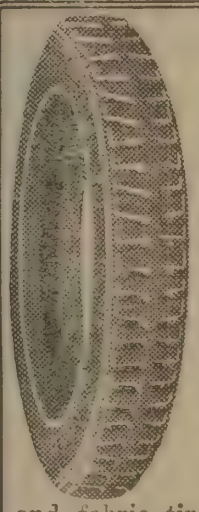
The result of the plan is an increased valuation of the farm because of its greater utility and improved beauty, consequently giving more pleasure to the entire family in all seasons of the year. Such an improvement does not require the expenditure of a large sum of money in every case, but it is largely the result of a careful study of the plan and the arrangement of the buildings and fences to give the most convenience and utility.

Piping Well Water

By. PROF. L. J. SMITH, W. S. C.

Is it practical to pipe well water from my neighbor, 2000 feet away? I was planning to use one-inch pipe. He carries about 35 pounds pressure and is 15 feet higher than I. C. M. K.
Zillah, Wash.

You do not state how much water you will want to move per hour. If you are going to use the water for domestic purposes only, a one-inch pipe will be feasible, but if you wish a considerable amount of water, use one and one-quarter-inch pipe. With an inch and a quarter pipe, at the indicated pressure, you could get a little over 250 gallons per hour and the 15-foot drop would care for the friction in the pipe. Be sure the ends of the pipe are not burred.



TIRES For Less

Our large purchasing power enables us to buy standard makes of tires and sell them direct to the consumer at less than the regular wholesale cost. The HALL cord and fabric tire listed below is one of the finest tires we have ever sold. A tough FLAT TOP tread combined with a strong over-size carcass is responsible for the mileage of 18,000, 20,000 and even 25,000 miles. A record of 1460 of this tire sold last year with five fabrics and no cords returned for adjustment is a record of which we are justly proud.

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Cords—10,000 Miles. Fabric—7000 Mi's. Size.	Fabric.	Cord.	Tube.
30x3	$ 9.25	.....	$1.60
30x3½	11.50	16.25	1.80
32x3½	15.50	19.60	2.00
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32x4	18.25	24.50	2.60
33x4	18.75	25.25	2.70
34x4	19.50	25.95	2.80
33x4½	.....	32.40	3.20
34x4½	.....	33.60	3.30
35x4½	.....	34.50	3.40
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1103 First Ave. Spokane, Washington.

VETERINARY

By DR. S. B. NELSON.

Warts.—I have a heifer that has a wart at the bottom of her hind foot. I have another cow that has a boil on her right hind flank next to the leg. She had a boil there a year ago and I opened it then and thought it had dried up for good. H. K.
Sumner, Wash.

Cut off the wart, if you can, with a pair of dull scissors, and then apply tannic acid to the stump once daily.

Cut the boil open and pack the wound with cotton soaked in tincture of iron; leave it 24 hours and remove dressing. Paint daily with tincture of iodine.

Colds.—I have two horses, age 6 and 10, that have been almost idle all winter. They have mixed hay and some oat hay with grain in it. They do not seem to be in as good flesh as they should be, especially the older one. The younger animal has a cold and cough. What can be done for the cold and is there a tonic that would be good for both of them?
Springdale, Wash. C. E. M'L.

One-half dram of quinine given to the horse once daily is good for a cold, and I think the cough will disappear with the cold. As a tonic you will find iron sulphate, one dram; nux vomica, five grains; gentian, four drams, and ginger, two drams, with four drams of fenugreek seed powdered, a very good one. Give this amount once daily to the horses.

Hairless Pigs.—I have a 4-year-old sow weighing 250 pounds that has farrowed two litters of hairless pigs. They were fully matured. She is an easy keeper and I can not feed her much, as she gets too fat. I have fed slop with a little shorts in it and a little corn. Is there anything lacking in her feed? Would like to keep her, as she farrowed 13 pigs last time, but of course they all died. C. D. M.
Yakima, Wash.

The condition of young pigs being born hairless is due to a lack of iodine in the feed fed the sow during the time that she is pregnant. Professor J. W. Kalkus of the State College of Washington veterinary science department and experiment station has done a great deal of experimental work on this and advises that the administering of a grain of potassium iodide in the feed from one to three times daily is a very beneficial treatment while she is carrying the pigs.

ANOTHER WAY TO WASTE.

If you have feed for five hogs and have only two, you are wasting feed.

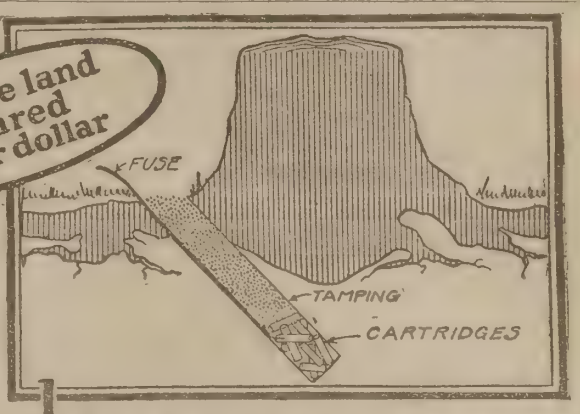
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"A manufacturer's advertised trademark name is to an article of merchandise what a signature is to a letter. It is his visible and definite assumption of responsibility for the product. It is a symbol with which he says: 'I made this article and I'm proud of it.' It is his pledge of satisfaction, put there for your guidance and protection."—Indianapolis Star.

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—with PACIFIC STUMPING POWDER Save still more by using the latest, cheapest blasting methods—



Making the Hole

IN blasting stumps, the first thing to do is to make the hole to receive the charge of dynamite.

When removing large stumps such as are common in the Northwest, the charge should be placed so that there will be 16 to 24 inches between it and the bottom and the center of the stump (See cut). The "shot" then lifts the stump clear with much of its roots, instead of merely splitting it.

To make the hole, loosen ground with crowbar and clean out with long-handled tilling spade.

The subsequent steps in stump blasting will be described in future issues of this paper.

For utmost economy use Pacific Stumping Powder—the new Du Pont Farm Dynamite. A 1¼ x 8 inch stick is equal in strength to a 1¾ x 8 inch stick of any standard stumping powder—and Pacific Stumping costs 30% less per stick. You get ½ more sticks for every dollar. Buy it from your local dealer.

Write for free copy of 125-page book "Development of Logged Off Lands," giving full instructions for use of explosives for land clearing, ditching and tree planting.

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PACIFIC
STUMPING POWDER

The department editors of this paper are anxious to be of service to you. Do not fail to write to us if they can be of help to you.

POULTRY AND RABBITS

The Ultimate Goal

"Since the poultryman is planning on eggs as the ultimate goal for an income he should develop the young pullets so as to be able to obtain a maximum production in the fall and winter months when the prices are at their best. The young stock should be developed from heavy laying strains, since this is the beginning of high production. The next step, then, is to develop the birds in their early period of growth and get them in shape for an even production when they are the proper age to begin laying."

So says W. D. Buchanan, poultry specialist of the state college, who is giving talks on egg production in the main poultry sections of the state in cooperation with the county agents.

"Proper care and treatment is necessary if the minimum losses are to be had in the brooder houses as every experienced poultryman knows, and the birds should have the feed that is most needed in the production of bone and muscle. Young, growing chicks should have granulated bone in a hopper before them constantly or it can be added to the mash and fed regularly. An addition of 5 per cent in the mash will help in digestion.

"The carbohydrates, such as wheat, corn and oats, are needed for supplying heat and energy to the growing birds, but proteins are also needed to aid in the growth of muscle. This is not sufficient, however, since a bird must have plenty of exercise to make the proper growth. If they are kept satisfied they will not take enough exercise and they can not use what feed they get to the best advantage. They should never be stinted, but should have just enough so they will be ever after that last grain of wheat that they can not find. One poultryman expressed it by saying that he kept his birds 'jumping after just a little more.'

"Good range and sunshine is always essential and it is a good plan to open the brooder house for a short time, even in bad weather, as there are few days in early spring when one can not find at least a half hour of weather that is mild enough to give the chicks a run in mid-afternoon. They can often be watched and driven in again when they have been out for a half to an hour. Too much exercise in the old air will make them need more feed to replace the lost heat. By hardening them off in this manner the chicks will be more self-dependent when they they are grown up.

"There are too many chicks that are fed for rapid growths and as a result they develop into prolaps or 'blow outs' when they come to heavy production. Such trouble can be avoided by good feed and care while the birds are young and the poultryman should think of the chicks in terms of health, strength and development.

"An early matured pullet is valuable in any flock, but they should never begin to lay before they are 5 1-2 months old, since they are more apt to run down before they are past the laying age. When the chick is 1 month old it needs more protein than any other time in its life. If this feed is fed heavily later on the pullets will begin to lay peewee eggs and have a tendency to drop off their production when the higher prices are on in the early spring months.

"The chief law of health, however, is plenty of exercise in the open. Give them a chance to catch insects and eat green feeds and they make rapid but steady gains and become the best layers."

Rabbit Meat

"As a general rule the public does not know that rabbit meat is as good as, and even better than, chicken," said A. D. Norris, who has charge of the rabbitry at the western Washington experiment station at Puyallup. "This is partly because they have cultivated the taste for chicken and have never tried rabbit. The young rabbit fattened at the age of 3 or 4 months and properly dressed is a real delicacy, and there is a great possibility for rabbit breeders to work up a special trade for rabbit meat in their own community. This is actually being done with some breeders with good success.

"At the station last fall a castration experiment was carried out on about 50 young males to ascertain if a better grade of meat could be secured. Cost accounts were kept and many of the rabbits fed all they would eat of both grain and hay, up to 5 months of age, when they were killed and dressed and were found to have slightly more fat on them and the quality was improved above that of the ordinary rabbit.

"The cost, however, for fattening a rabbit in this manner reached as high as 60 cents per pound. This was considered almost prohibitive, except for occasional instances where a special demand for high-class rabbit meat could be secured.

"For economical feed the young rabbits should be butchered at an approximate age of 3 1-2 months, giving them all the grain and hay they will clean up, up to this age. It is possible, however, that further experiments would show that feeding could be done on a definite basis, giving the animals only a certain amount daily. It is possible that a cheaper grade of hay, or alfalfa alone, could be fed to animals treated in the above manner. The station may carry on an experiment with this end in view during the coming year."

W. A. Linklater, superintendent of the experiment station, authorized the above experiment in order to satisfy a number of inquiries which had come to the station upon this subject. The operation, he thought, would keep the animals from fighting and allow them to fatten more economically. It was found, however, that, although the rabbits were quieter and had good appetites, they did not make as rapid gain as was hoped for. There is very little fighting in a bin of males below the age of 3 or 4 months, and they have good appetites.

The experiment, however, is considered a success inasmuch as it has proven which method is the most economical and most practical.

Experience With Turkeys

To the Editor: Here is a little information on turkey raising I have gained by experience:

The most important thing in turkey raising is to start the little ones right. I never feed my little turkeys for 48 hours after hatching. The first feed consists of hard boiled eggs, a little milk cheese squeezed real dry with a little pepper. I give them also lime water two or three times a week. A little turkey should be fed often and not much at a time. I do not feed any grain for at least two weeks, then only a little wheat ground fine.

At first my turkeys died of black head. I do not believe there is any known cure for it if left too long, but I have cured every one I have tried with this simple remedy: Take any real fat pork on hand, cut up a little in a saucer, one hard boiled egg and one small onion. Make this black with pepper and add three or four little grains of permanganate of potash. I cured a hen this week with it. She was laying, but would not eat a thing. I caught her and made her eat it all. She was so weak she could hardly get on the roost. She is now laying again and feeling fine.

I shall watch for information from others and hope all who raise turkeys will write their experience.

Ford, Wash. MRS. E. D. B.

ROUND WORMS.

For round worms in poultry, which vary from microscopic size up to several inches in length, the tobacco dust treatment has been found satisfactory by some. Round worms cause paralysis and "going light," or going in circles.

CREAM WANTED

Correct tests, honest weights, fair treatment guaranteed. Make a trial shipment and get results.

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Sick Baby Chicks? GERMOZONE is a positive remedy for roup, colds, bowel trouble and such costly ailments. Preventive as well as curative. A wonder worker for poultry. On market over 20 years. Endorsed by many thousand users. Don't lose your baby chicks. Get GERMOZONE TODAY. At drug and seed stores. If no dealer, order by card. 75c and $1.50 sizes. Postman will collect. No extra charge.

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Haying Time Cut in Half

Save time, labor and money by putting up this year's hay crop easily and quickly with

The "Jayhawk"

Stacker and Sweep Rakes

"Two boys and myself can put up more hay with the Jayhawk Stacker than 40 Mexicans," says A. Barter, Mercedes, Texas.

Light—easy to operate—a boy can run it. No ropes or pulleys—entirely automatic. Wood or steel. Elevates full load of sweep rake 20 to 25 feet and puts it exactly where wanted. Saves hay, teams and days. Prevents loss of crop after cutting.



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WIN $1000.00 SEND NO MONEY!



Get the Big Picture Puzzle FREE

Send at once for big clear copy of the small picture puzzle shown here. Complete instructions and full details will be sent at once by first class mail. Do not try to solve puzzle from the picture, but get a good clear copy to work from.

FIND THE MOST OBJECTS BEGINNING WITH "C"

You can find quite a few "C" objects in the above picture even though it is small. Get the big free picture and full details and if you intend to go in for the big prize, send no money but just use the coupon and make your answer eligible for the big prize at once.

FOLLOW THESE RULES

First prize will be given for the largest number of words which correctly name objects shown in the picture beginning with "C". Prizes will be awarded according to the prize list shown here and in case of ties the full amount of the prize will be awarded each tying contestant. Each object can be named only once. Webster's New International Dictionary will be used as authority for all words by the Judges, and one credit will be given for each correct word and one credit deducted for each incorrect word. Do not include obsolete, hyphenated or compound words. Winning lists will be based upon all the applicable words submitted and not from any master or predetermined list. Where the singular is used the plural cannot be used and vice-versa. Where several synonyms are equally applicable to any object, any one of such synonyms will be given credit. Answers must be mailed by June 24, 1922. The winning answer will be published and a copy sent to anyone sending in a self addressed stamped envelope.

The Prizes

Winning answers will receive prizes as follows:

	If No Laymore is Ordered	If $2 Worth of Laymore is Ordered
1st	$20.00	$1000.00
2nd	15.00	300.00
3rd	10.00	150.00
4th	5.00	75.00
5th	5.00	40.00
6th	3.00	30.00
7th	3.00	20.00
8th	3.00	20.00
9th	2.00	15.00
10 to 15	2.00	10.00

Laymore

"Makes the Lazy Hen Lay"

SEND NO MONEY

Thousands of poultry raisers are making big money by using Laymore. This scientific discovery acts on the laying organs of the hen with amazing results. In order to get more people acquainted with Laymore we are putting out this big booster picture puzzle campaign. If no Laymore is purchased 1st prize will be $20.00; but if you wish to try for the big $1000.00 prize fill out the coupon and the Laymore will be sent without your advancing one penny. Pay the postman $2.00 plus the small postage fee and your answer will be eligible for the $1000.00 prize. The Laymore will be sent at once, but your answer can be mailed any time up to June 24th. Mail the coupon now.

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Send me the big picture puzzle and full instructions FREE. Also send me 5 packages of Laymore for which I agree to pay the postman $2.00, plus postage, on arrival. This order makes the answer I will send in eligible for the big $1000.00 Prize.

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Perfection Plaster Wallboard

With this wonderful modern building material you can do just that. You do your own plaster work and you make a perfect job of it at a very small cost and with very little work. None of the mess, uncertainty or delay that goes with the old-fashioned plastering. "Perfection" is simply plaster in a portable form—all you need to fix walls or ceiling is a hammer and a saw. With paint, tint or calcimine you can make the most beautiful and artistic interiors. Just the thing for a score of jobs around farm and home.

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BLACK LEG 100% PROTECTION FOR LIFE from *one* vaccination with Cutter's Liquid or Solid Blackleg Aggressin. Absolutely safe. Cutter's Solid Aggressin Injectors work just like Blackleg Pill Injectors. If Cutter's Aggressin is unobtainable locally, write

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"The Laboratory that Knows How"

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N.B.—Old Style Powder and Pill Vaccines still made for those who prefer them.

Please mention THE WASHINGTON FARMER when writing advertisers.

GENERAL ADVERTISING.

MINERALIZED WATER ROUTS CHICKEN LICE

Tablets Dropped Into Drinking Founts Banish Vermin, Make Fowls Grow Faster and Increase Egg Yield.

Any poultry raiser can easily rid his flock of lice and mites, make chickens grow faster and increase their egg yield by simply adding minerals to the fowls' drinking water. This does away with all bother, such as dusting, greasing, dipping and spraying. The necessary minerals can now be obtained in convenient tablets, known as Paratabs. Soon after the fowls drink the mineralized water, all lice



and mites leave them. The tablets also act as a tonic conditioner. The health of the fowls quickly improves, they grow faster and the egg yield frequently is doubled. Little chicks that drink freely of the water never will be bothered by mites or lice.

The method is especially recommended for raisers of purebred stock, as there is no risk of soiling the plumage. The tablets are warranted to impart no flavor or odor to the eggs and meat. This remarkable conditioner, egg tonic and lice remedy costs only a trifle and is sold under an absolute guarantee. The tablets are scientifically prepared, perfectly safe, and dissolve readily in water.

Any reader of this paper may try them without risk. The laboratories producing Paratabs are so confident of good results that to introduce them to every poultry raiser they offer two big $1 packages for only $1. Send no money, just your name and address—a card will do—to the Paratab Laboratories, Dept. 878, 1100 Coca Cola Bldg., Kansas City, Mo., and the two $1 packages, enough for 100 gallons of water, will be mailed. Pay the postman $1 and postage on delivery, and if you are not delighted with results in 10 days—if your chickens are not healthier, laying more eggs and entirely free from lice and mites—your money will be promptly refunded. Don't hesitate to accept this trial offer as you are fully protected by this guarantee.—Adv.

Read the "Want Ad" page this week for good offers of all kinds.

ORCHARD AND GARDEN

Must Clean Up

War on Insect Pests and Weeds

The man who does not do his part toward keeping his farm, his garden and his orchard as free from disease, from insect pests and from noxious and dangerous weeds as it is possible for him to do, is a bad citizen, lacking in any pretense of decent regard for the rights of others; that is, in the instances where he neglects or refuses to do so, while others all around him are cleaning up and his own attention has been clearly directed to his duty in the premises, says E. L. French, director of the state department of agriculture. Of course, in the vast majority of instances, his neglect is sheer carelessness, recognition of the fact that others are doing the same as he is in the matter and getting by with it, and knowledge that it is little use to clean up himself while others neglect to do so.

The laws passed at the demand of farmers are designed to meet this condition and they are meeting it in part. In time they will meet it in full.

On the economic side the case for the laws is a strong one. As one minor instance: There are a million apple trees in western Washington. yet there are hardly enough commercial apples grown in that part of the state to make an appreciable figure in the market. The insect pests have taken the orchards. The man who has attempted to keep his own plate clean has been swamped with pests through the neglect of his neighbors. The loss in dollars and cents runs into millions of dollars annually. Now the department is insisting upon a clean-up of the infected orchards or that they shall be destroyed, no longer take up room that might be devoted to better crops and no longer be a center of infection to destroy the value of the fruit of those who desire to do something with their orchards.

Orchard Planting

Orchard planting is discussed at considerable length in the Chelan County Farm Bureau News by William Meikle, the county agent.

Mr. Meikle finds after making a careful survey of the planting plans that were used in the Wenatchee valley that but few orchards were laid out with any idea whatever regarding the economical working of the orchard.

Many orchards were planted 20x20 feet, with the rows running the same direction as the fences around the orchard, regardless of the slope of the land. When it comes time to remove the fillers in a 20x20 planting, if every other tree is removed from every row, the row still remains 20 feet apart one way, which is the way the rows run, and 28 feet apart diagonally across the track, which is usually not in the direction that the orchard is piped for running the water. If the wider spaces are used to drive through with the spray rig a constant crossing of and destroying of ditches results. Furthermore, this 20x20 plan when thinned usually leaves rows of trees not of the same variety, but alternating with various other varieties in the row. This mixed-up condition makes it difficult to spray, irrigate or harvest without great inconvenience on account of the mixing of varieties.

Planting plans with permanent trees 25x25 feet to 30x30 feet apart, with a filler in the center, makes an orchard that is almost impossible to manager economically when the trees are large enough to bear, says Mr. Meikle. Moreover, there are only a few orchards in the valley planted with the tree rows running on the contour of the land, or, in other words, with the tree rows running the way the water should be run.

As to the right of way of planting, first determine the direction that the water should flow to get the best results from irrigating. North and south is preferable to east and west, as the direction to run the irrigating water and the tree rows of the contour of the land will permit. The tree rows should then be spaced at least 30 feet apart and if fillers are to be used put the fillers in the tree rows and not in the center. At noon, when the sun is high, it will shine into the tree rows, although fillers may be in the rows.

There should not be over three varieties and in planting these three varieties they should never be mixed in the rows. The variety in the row straight through should be the same for both filler and on permanent trees. If fillers are used in the tree rows they will do more damage than good, if they are of a variety that must be sprayed and harvested earlier than the permanent trees.

A 30x30 is really too close for any filler, is the final judgment of Mr. Meikle, who adds that fillers have been used to a very good advantage by having the permanent trees about 32 feet apart or more, and the fillers in the rows, which makes the trees 16 feet or more apart in the rows. When the fillers begin to interfere with the permanent trees they can be cut back on the side next to the permanent trees and permitted to spread into the row. By doing this they may be left until about the 12th year, when the fillers should be removed, leaving the permanent trees well spaced for all future orchard operation.

The argument against the use of fillers is not against the proper use of fillers, but it is against the filler abuse, as in nearly all cases where fillers are used, the damage resulting from letting them remain too long is greater than the benefits derived from the use of the fillers. This condition has resulted in the following statement: "The time to remove fillers is the same year that they are planted."

Apple Shipments Increase

A total of 43,521 cars of apples were shipped from the four Pacific northwestern states in the period from July 1, 1921, to March 1, 1922. These figures show an increase of 18,246 cars over the previous year, when 25,275 cars were shipped.

The Wenatchee valley shows the largest shipment, with a total of 13,988 cars, an increase of more than 5000 cars over the previous year.

The Yakima valley is second with a total of 11,862, an increase of more than 4000 cars over the year previous.

The Idaho district shipped a total of 5830 cars, a gain of 3000 over last year.

The Hood River-White Salmon district is next with a total of 4046, a gain of nearly 2000 cars over the preceding year.

The Spokane district, which includes territory as far west as the Big Bend, north to the Canadian boundary and east to the Idaho line shipped 2887 cars, an increase of 659 over last year.

The district of eastern Oregon shipped 1653 cars, an increase of more than 1100.

Walla Walla district shipped 1443 cars, as against 319 the year previous.

The Rogue river district of Oregon shipped 985 cars, as compared with 368 last year.

Montana district shipped 672, as against 437, and the district of western Oregon shipped 524 cars, as compared with 322 the previous year.

STRAWBERRY PRODUCTION PROSPECTS

Strawberry production in early producing states is estimated at 3074 cars, as compared with 2240 cars harvested last year, according to the U. S. department of agriculture. The average condition of the crop April 1 is placed at 90 per cent of normal, as compared with a seven-year April 1 average of 87 per cent. The average condition of the cabbage crop April 1 is placed at 78 per cent of normal, as compared with a seven-year April 1 average of 72 per cent. The condition of truck crops generally range from 68 per cent on cantaloupes to 94 per cent on asparagus.

BROCCOLI CAME FROM ITALY.

Broccoli was brought to England from Italy in the 16th century.

AVOID SCRUB SEED.

Avoid poor and untrue seed as religiously as you would avoid the use of a scrub sire.

COLFAX DRAPERS
For All Kinds
HARVESTING MACHINERY
Special Drapers made to order on short notice. Largest Draper factory in the west.
WRITE FOR CATALOG and PRICES OR SEE OUR DEALER IN YOUR TOWN.
Spokane Mfg. Co.
Spokane, Wash.

MYERS
HONOR-BILT
COG-GEAR PUMPS

MYERS Pumps are *better* pumps because: Their cog-gear requires *one-third less power*—their double action gives a *continuous flow*—their larger air chamber gives a *steadier stream*—their glass valve seat CANNOT CORRODE OR WEAR. Ask your dealer to show our line of Hay Tools and Door Hangers Or Write us for free booklet.
1/3 Less Power to Operate
THE F. E. MYERS & BRO. CO.
493 Church St.
Ashland, O.
PUMPS

Here's Good Advice: Relieve Your Fatigue With Sleep. Avoid Stimulants

THERE is nothing in the world so reconstructive as sound, refreshing sleep. During sleep the system rids itself of the fatigue poisons that have accumulated during the day. The finished elements in the food are taken up by the various tissues that require rebuilding nutriment.

It is important that you get plenty of health-bringing sleep. Anything that interferes with your sleep hampers and hinders you—mentally and physically.

A common cause of physical weakness and mental depression is the reaction following over-stimulation caused by the drug, caffeine, and other elements found in both coffee and tea.

If you have an idea that coffee or tea drinking may be injurious to your health, why not stop it for a week or so, and drink delicious, fragrant Postum instead.

Postum is a rich, golden-brown, pure cereal beverage. It contains no harmful elements of any kind. You can drink Postum as many times a day as you or the children desire a grateful, refreshing beverage.

Your grocer sells both forms of Postum: Instant Postum (in tins) made instantly in the cup by the addition of boiling water. Postum Cereal (in packages of larger bulk, for those who prefer to make the drink while the meal is being prepared) made by boiling for fully twenty minutes.

Postum for Health
"There's a Reason"


Try 30 Days
One Man Saw
$64.50 and up
GET BIG OFFER
Our New and Improved Power Log Saws—
OTTAWA Limb Saw Guaranteed 10 Years Saw years. Cash or easy terms. Get Free book, sale prices.
F. o. b. factory. OTTAWA MFG CO.,
2592 E. Wood St., Ottawa, Kas.

In writing advertisers, be sure to say you saw their advertisement in The Washington Farmer.

LOST If you can't locate a thing, it might as well be lost. Maybe the very thing you want is offered on our "Want Ad" page in this issue.

Have Plenty of Good Corn

There's no more valuable crop. Plant our "Pride of the North," recommended by agricultural stations as one of the best Yellow Dents for Washington and Oregon; or our Minnesota 13, a grand large early Yellow Dent.



Ten lbs. will sow an acre in hills. At our current retail rate of $6.50 per 100 lbs. f. o. b. Seattle, 75c will seed an acre. Special quantity quotations given.

Can you beat it? Remember, our stocks are selected seed grown in right latitudes to insure proper maturing. We have all leading varieties. Big 1922 catalog free on request.

Ask Your Dealer or Write to

LILLY'S
Seattle
Portland

Have you glanced over the farm bargains on the "Want Ad" page?

Different Concrete Mixtures

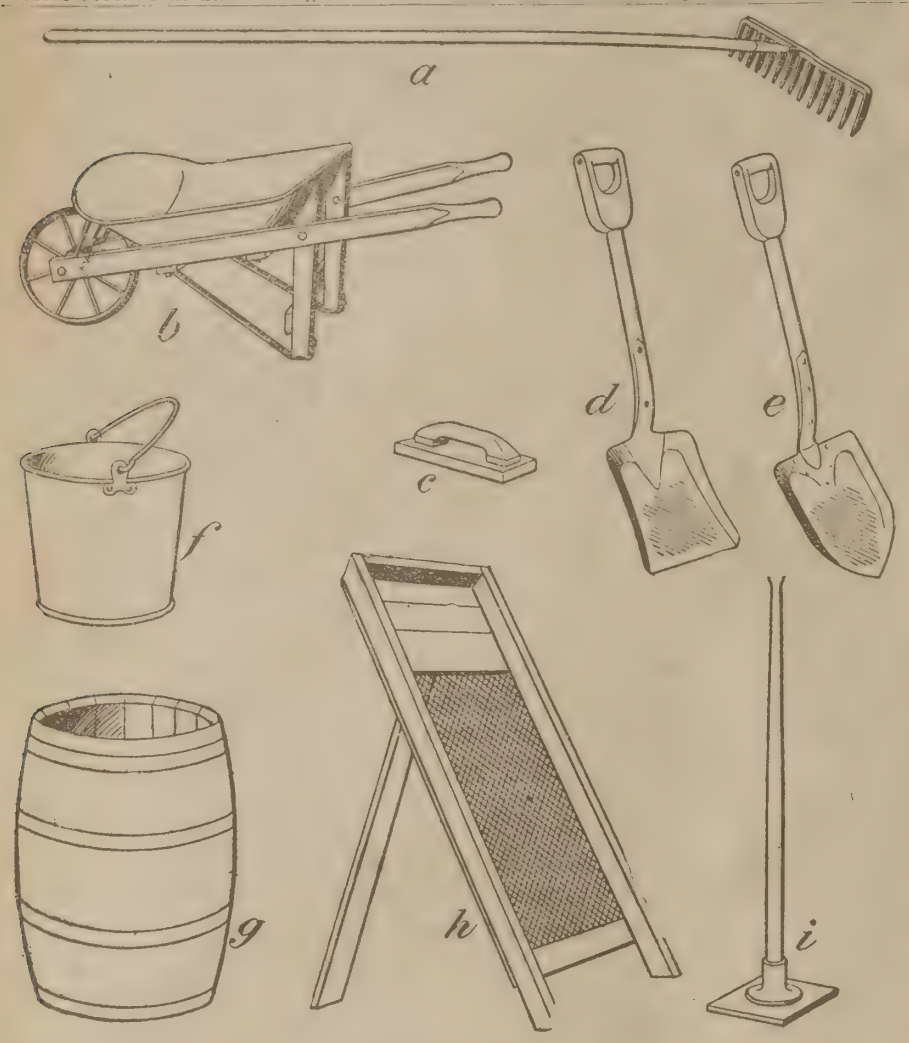
In general, a 1:2:4 concrete mixture is used on fine work and in reenforced concrete. In other constructions the mixtures run sometimes as weak as 1:3:7 on founda-tions, or 1:4:9 on tilling and subpave-ment. A farmers' bulletin of the United States department of agriculture says that a fairly rich mixture makes the best concrete floors. Mix bank-run gravel one to five, that is, one part of Portland cement to five parts of gravel by actual measure-ments. With screened gravel or crushed rock the materials should be mixed one to two and one-half to five—that is, one part Portland cement to two and one-half parts screened sand to five parts screened gravel or crushed rock.

In measuring the quantities, splitting of bags of cement may be avoided by bearing in mind the fact that a sack of cement (emptied loosely) practically fills a box holding one cubic foot. Therefore, make all measurements of sand, gravel and crushed rock in even cubic feet. Guage the wheelbarrows by using a bottomless box holding one cubic foot, or construct a shallow bottomless frame which, when set on the mixing board and filled, will con-tain thefull amountof sand or one-half the quantity of gravel or crushed rock re-quired for one batch of concrete.

Sand for concrete should be clean and should have grains grading in size from fine to coarse. Such material as drift sand, with all fine, light grains, makes very weak concrete. Sand which will con-siderably discolor the hands when a por-tion is rubbed between the palms should not be used unless well washed. With dirty sand no amount of cement will make strong concrete.

Bank-run gravel, just as dug from the pit or taken from the stream bed, seldom runs even and rarely has the right pro-portion of sand and pebbles for making the best concrete. The mixture most suit-able has one part sand to two parts gravel, measured by volume, in which all sizes passing through a quarter-inch screen are considered sand. As there is generally too much sand for the gravel, it is advisable to separate the sand from the gravel and later to remix them in the proper pro-portion. For concrete feeding floors no pebbles larger than one inch should be used. The larger stone will do for the foundation. Gravel should have no rotten stone and should be clean, that the cement may adhere to it tightly.

The best stone for crushed rock is one which is clean, hard, breaks with sharp angles, and to which mortar easily sticks. Trap, granite and hard limestone are among the best. The use of shale, slate and very soft limestones and sandstones should be avoided. The crushed rock should be screened only enough to remove the very fine dust. The small particles should be left in the stone and allowance made for them in proportioning the amount of sand.



Tools used in making concrete on the farm: A, rake; b, wheelbarrow; c, wooden float; d, square-nosed shovel; e, round-nosed shovel; f, bucket; g, water barrel;

Poison Engine Gas

By PROF. L. J. SMITH, W. S. C.

Carbon dioxide is the gas which results from the combustion of fuels. Ordinarily this gas is so widely mixed with the air that it is not dangerous, but when combus-tion occurs in a limited space, for example in a closed garage or a room where a coal stove leaks badly, the results may easily be fatal.

This gas is colorless and odorless in its pure form, though usually it is accom-panied by smoke. It is heavier than air. Once the lungs get full of the gas, the per-son affected loses consciousness without warning and will die as quickly as a case of drowning. Get the patient into fresh air, and start artificial respiration at once, in the same manner as if the victim had been under water.

Never run the engine of your car in a closed garage and at the same time try to make repairs on the car. If you must run the car in the garage, open the doors wide.

Never close the dampers of a coal stove too tightly.

Never go down into a well or any deep pit without first lowering a lighted can-dle or lantern, to learn if their is gas in it.

A GOOD IDEA!

"The first thing I did was to buy 480 rods of woven wire and fence for hogs."

Alfalfa Silage

As a silage crop alfalfa is not altogether a success, says the U. S. department of agriculture. Where other silage crops can be grown profitably it is seldom advisable to use alfalfa for this purpose.

Alfalfa is somewhat difficult to handle with ordinary silage machinery and is hard to pack properly in the silo. It often becomes moldy and slimy, as do various other legumes when put up in this way. The high percentage of protein in alfalfa causes it to putrefy instead of fer-ment when too much air is present in the silo.

There are times, however, when alfalfa may be made into silage; for instance, when weather conditions are unfavor-able the curing of hay. This silage may be made from partially wilted alfalfa if it is cut fine enough and well packed.

Experience has shown that a "washy" silage may result if freshly cut alfalfa is put up while wet with rain. Under rea-sonably favorable conditions alfalfa can be made into hay at less expense than into silage.

Alfalfa and corn mixed make good silage. The addition of crude molasses to alfalfa also increases the chances of producing a good quality of silage. Good silage can be made by mixing straw of any of the small grains with alfalfa if the mixing is done as the material passes through the cutter and water is added to make it pack well.

Taxes on Reclaimed Land

A decision of importance to settlers on reclamation projects who acquired lands by homestead entry is one just handed down by Chief Justice Taft. It reverses the United States district court of Ari-zona, which held that such lands are tax-able by state and local authorities from the date of completion of requirements of the old homestead act.

The Taft opinion declares that the local taxing power does not apply until the con-ditions of the reclamation act have also been met, including the residence and cul-tivation requirements of the act.

FARMERS' WANT ADS

This is the farmers' "want," "sale" and "exchange" department for small adver-tisements of farmers, including live stock and poultry.

Advertising rates for ads running 1 to 3 times, 10c per word per insertion, with a special rate to Farmer subscribers, as fol-lows: Ads running 4 to 12 times, 9c per word per insertion; ads running 13 times or more, 8c per word per insertion.

All commercial and land advertising 10 cents per word each insertion. Open also to nonsubscribers.

In using these columns advertisers must observe: (1) No advertisements will be in-serted for less than $1.00. (2) Every word, number and initial, including name and address, must be paid for. (3) New adver-tisements, changes of copy or cancellations must reach general office, Spokane, Wash., 10 days in advance of publication date. (4) Cash must accompany order.

Above rates include insertion in The Washington Farmer, The Idaho Farmer and The Oregon Farmer, which constitute the Pacific Northwest Farm Trio, 46 Review Building, Spokane, Wash.

HELP WANTED—MALE 3

WANTED — SALESMAN WHO CAN SELL high-grade, dependable nursery stock; sev-eral counties in Oregon, Wash., Idaho and Mon-tana now open for assignment. Our selling contract will interest you. Address Albany Nurseries, Inc., Albany, Ore.

FRESH FOOD PRODUCTS 51-1

WHITE ALFALFA, SWEET CLOVER honey; 1 60-lb. can, $7.50; 2 60-lb. cans, $14.50; six 10-lb. cans, $8.50; three No. 10 pails, prepaid third zone, $5.50. Wells D. Rose, Sunnyside, Wash.

HONEY—FINE QUALITY ALFALFA, SWEET clover; 60-lb. can, $7.50; 2 cans, $14.50; three 10-lb. pails prepaid, second zone, $5. Harry Fisher, Prosser, Wash.

3-POUND BOX ABSOLUTELY BONELESS codfish, fine white, new catch fish, delivered by mail, $1. Coffin Fish Co., Seattle, Wash.

HONEY—FIRST-CLASS ALFALFA, SWEET clover honey; 1 60-lb. can, $7; two cans, $13.50. A. L. Traner, Touchet, Wash.

WORLD'S BEST CLOVER HONEY, 60 pounds, $6.15; two 60s, $12. Browne, Box 499, Twin Falls, Idaho.

MISCELLANEOUS—FOR SALE. 60

SASH AND DOORS—O. B. WILLIAMS CO., 1943 First ave., So. Seattle. Chicken house sash, 20" wide by 25" high, 80c; a dozen dif-ferent sizes in stock for immediate shipment. Skylights for chicken houses, 36"x40" price, glazed, $2. This is the size recommended by the Western Washington experiment station. We carry them in stock for immediate ship-ment. Sash and doors for all purposes at low-est prices. All orders receive prompt atten-tion. Our large illustrated catalogue No. 35, showing full line of building material and built-in fixtures for the home, free on request. O. B. Williams Co. Established 1899.

HOMESPUN SMOKING TOBACCO, MILD AND mellow; 10 lbs., $1.50; 20 lbs., $2.75; delivery guaranteed. We furnish free recipe for pre-paring. Smoking Tobacco Exchange, Sedalia, Ky.

MISCELLANEOUS—FOR SALE (Continued) 60

FACTORY CLOSING OUT. LESS THAN wholesale prices. Straw forks, manure forks, hay forks, spading forks, dirt shovels, round pointed long handle shovels, spades, long post-hole digging spades; 8, your selection, only $6. Rush your order. Process Tool Co., Salina, Kansas.

PIPE — NEW AND SECOND-HAND, ANY size; low price; standard grade roofing pa-per at a big saving; belting, all plies, all sizes, cheap. Write Alaska Junk Co., S120 Adams st., Spokane, Wash.

WALL BOARD—WRITE FOR SAMPLE OF Washington plaster wall board; won't warp, won't burn. Manufactured by Washington Building Products company, 6851 E. Marginal Way, Seattle, Wash.

NATURAL LEAF TOBACCO, CHEWING, 5 pounds, $1.50; 10 pounds, $2.50; smoking, 5 pounds, $1.25; 10 pounds, $2. Send no money. Pay when received. Tobacco Growers' Union, Paducah, Ky.

FOR SALE—A CREAMERY IN OPERA-tion; enjoying a good business; makes butter and ice cream. Also consider good creamery man. Write G. W. Davis, Salmon, Idaho.

HOMESPUN SMOKING OR CHEWING TO-bacco, collect on delivery; 5 pounds, $1.50; 10 pounds, $2.50; 20 pounds, $4. Farmers' as-sociation, Paducah, Ky.

TOBACCO — HOMESPUN, EXTRA FINE chewing, 10 lbs., $3; smoking, 10 lbs., $2; 20 lbs., $3.50. Producers' Exchange, Mayfield, Ky.

HOMESPUN TOBACCO, 5 POUNDS, $1.25; 15 pounds, $3. Send no money, pay when re-ceived. Farmers' Association, Jonesboro, Ark.

TOBACCO — KENTUCKY'S PRIDE, EXTRA fine chewing, 10 lbs., $3; smoking ten $2; 20 $3.50. Farmers' Club, Mayfield, Ky.

OLD HOME TANNED SOLE AND HARNESS leather. Send for free sample and prices. E. S. Evans, Algona, Wash.

JOHNSON'S PACKAGE BEES, QUEENS. Write for remarkable prices. 165 Raymond ave., San Jose, Cal.

MISCELLANEOUS—FOR SALE (Continued) 60

TOBACCO, NATURAL LEAF—SWEET AND mellow hand-picked chewing or smoking, 5 lbs., $1.50; 10 lbs., $2.50; smoking, 10 lbs., $2. Furnish free recipe for preparing. Quality and delivery guaranteed. Farmers' Tobacco Ex-change, Sedalia, Ky.

MISCELLANEOUS. 61

WE SCOUR AND CARD WOOL TO ORDER for comforts or mattresses. Inclose stamp for information. Perfection Batt & Mattress Co., Stayton, Oregon.

MISCELLANEOUS—Wanted 63

WANTED—STOGIE SMOKERS TO BUY DI-rect from manufacturer at mfg. price. "Bo-lon's Panetella stogie," guaranteed old stock tobacco, packed 100 in box, for $2.20. C. W. Bolon, Bethesda, Ohio.

HIDES—WE BUY HIDES OF ALL KINDS. Write for prices and tags. Hibbard-Stewart Co., Hibbard Bldg., Seattle.

WOOL—WE BUY WOOL AND PELTS. WRITE for prices and tags. Hibbard-Stewart Co., Hibbard bldg., Seattle.

AUTO TRUCKS—For Sale 115

WE WILL ABSOLUTELY SAVE YOU FROM $500 to $1500 on the purchase price of a new truck. Creditors' sale of various stand-ard makes; any size, 1 to 5 tons. Also a Holt 75 Caterpillar for $3500. Exceptionally easy terms. Write R. S. Phelps, 607 Empire State building, Spokane.

MOTORCYCLES AND BICYCLES 127

REBUILT HARLEY-DAVIDSON MOTOR-cycles; guaranteed. A. P. Tyler, Boise, Idaho.

STOVE REPAIRING 128

WRITE MYER RUBENS, SPOKANE, ABOUT stove repairs, welding broken parts, nickle plating.

FUR-BEARING ANIMALS 170

SILVER AND CROSS FOXES FOR SALE. William Rambo, 407 Sprague, Spokane.

PETS—Dogs, Birds, Etc. 171

WALKER FOX HOUNDS, ONE AND TWO years; fine hunters. Kentucky champion stock. M. L. Gottwald, Molalla, Ore.

RABBITS and HARES 173

VERY SPECIAL — ONE RABBIT GIVEN free with each trio of 4-mo. New Zealands from prize winning stock. East Larchmont Pet Stock Farm, R. 4, Box 49, Tacoma, Wash.

POULTRY (Baby Chicks) 174

30,000 HENACRES LEGHORN JUNE CHICKS. Our Leghorns mature quickly and these chicks should be laying in November and De-cember. It pays to buy good stock and espec-ially so in June. We furnish special in-structions for feed and care with every June order. Safe delivery guaranteed by mail or express. Special price, $16 per 100; $140 per 1000. Eight weeks old pullets, $1.50 each; 500 for $700. Our free illustrated catalog de-scribes our farm, gives feeding methods, for-mulas, etc. Henacres, Box A, Prosser, Wash.

FRESHLAID WHITE LEGHORN CHICKS have the qualities you want; vigor and scien-tific breeding for the heaviest egg production; every Freshlaid male is from a high record hen. Freshlaid Farm is one of the largest and oldest chick plants in the Inland Empire. There is a real demand for Freshlaid chicks, especially from our old customers. We are sold out until June. Freshlaid June chicks have been making good as winter layers for ten years. Free catalog. Freshlaid Farm, Col-fax, Wash.

CERTIFIED S. C. WHITE LEGHORN BABY chicks from heaviest laying stock; safe de-livery; live, vigorous chicks guaranteed. No money in advance; pay on delivery. Prices for May and June $3.50 per 25; $6.50 per 50; $12 per 100. Special prices 500 and 1000 lots. Largest electric hatchery in the world. Estab-lished 1898. Member Sonoma county farm bu-reau accredited hatchery list. Must Hatch Incubator Co., 445 Seventh st., Petaluma, Cal.

BABY CHIX—WHITE LEGHORNS ONLY. May delivery, $13 per 100; June delivery, $12 per 100; order now as the supply is lim-ited and these are not just baby chix, but are chix from stock that has been bred for 20 years for vigor and vitality; mated to male birds from hens with records up to 298 eggs in pullet year; hatched by the oldest established hatchery in the northwest. Lakeside Poultry Farm, Roy, Wash.

SUMMER SALE OF BUTLER POULTRY Farm White Leghorn and Barred Rock chicks. May and June chicks are profitable and easy to raise when you know how. Write us for circular how we do it. All stock trap nested and pedigreed for years. Discount prices on all late chicks and eggs. Butler Poul-try Farm, Jennings Lodge, Ore.

EBORALL'S STRAIN WHITE LEGHORNS. Our hatch of 2300 chicks per week is now booked for Feb., March and April, principally to old customers. Your inspection is invited at all times. We are now booking chicks for May at $14 per 100. Write for circular. Crystal White Poultry Farm, McMinnville, Ore. Box 33.

BABY CHICKS FROM TANCRED AND HOL-lywood strain; heavy laying White Leghorns mated to cockerels from W. W. experiment station; hens, 265-314 egg records. Late May chix, $15 per 100; $145 1000. Early June, $13 per 100; $125 1000. Hatching eggs, $7 per 100. Wax's Poultry Farm, Kent, Wash.

TRY OUR PARCEL POST PACKAGE—KEEP the old hen busy. We will ship you first-class baby chicks, postpaid to your door, direct from the hatchery and guaranteed all alive. Price, $4.50 per 25; $8 per 50. For delivery April, May or June. Order now. The White Hatchery, Petaluma, Cal.

WHITE LEGHORN BABY CHIX FOR MAY and June delivery at $12 per 100; $115 per 1000, from flocks inspected and accredited by the Sonoma county farm bureau. Safe arrival of full count, live, strong chix guaranteed. The Pioneer Hatchery, 422 Sixth street, Peta-luma, Cal.

UNION DISTRICT HATCHERY IS NOW booking orders for the best thoroughbred baby chicks at the right price. White, Buff and Brown Leghorns, Rhode Island Reds, Black Minorcas, Anconas and Barred Plymouth Rocks. F. & L. Downing, Los Gatos, Cal.

WHITE ROCK BABY CHICKS, "DANIEL'S IDEALS," from our own trapnested stock en-tirely. Write for prices and dates, also eggs for hatching. Free catalog. Ideal Poultry Yards, Hoquiam, Wash. Star Route No. 25.

BABY CHICKS — REDUCED PRICES ON White Leghorns, Reds, Barred Rocks, White Rocks, Minorcas and Anconas; booking orders now; postal secures free catalog. Write today. C. N. Needham, Salem, Ore.

BABY CHICKS—PRICES REDUCED AFTER May 15th. S. C. R. I. Reds, $20 per 100; S. C. W. Leghorns, $15 per 100; April chicks all sold. Maple Brook Poultry Farm, South-wood, Wash.

(Continued on the following page.)

POULTRY (Baby Chicks) (Continued) 171

400,000 BABY CHICKS—OUR WHITE LEGhorns are bred to lay; priced at $15 per 100. We hatch from some of the best flocks of R. I. Reds, Barred Rocks, Anconas and Minorcas to be found in the northwest. Chicks are priced at $22.50 per 100. Send $1 deposit per 100 with your order, paying the balance on inspection of chicks. Safe arrival guaranteed. We have a few standard makes of incubators and brooders at greatly reduced prices. Send for our circular offer. Seattle Hatchery, 1906 Pike place, Seattle.

BABY CHICKS FOR MAY AND JUNE ONLY —4000 every 4 days of the famous O. A. C. strain S. C. W. L.; raised and run on free range. They have the vim. Prices, first half of May, $17, last half of May, $15; June, $12. Moorhead Poultry Farms, Granger, Wash.

$12 PER HUNDRED—WHITE LEGHORN baby chicks from Corvallis noted egg strains; electrically hatched. This low price on May 18 to 25 only. Order now. Oregon-Corvallis Hatchery, Corvallis, Ore.

ACME POULTRY FARM, COTTAGE GROVE, Ore. Breeders of Oregon Agricultural college White Leghorns; chicks after May 20th, first pen (100, $13); (25, $3.50); bred to lay, and they will do so.

BABY CHICKS — WE GUARANTEE OUR chicks to be from the highest producing hens in Petaluma. Write for further information. The White Hatchery, Petaluma, Cal.

TANCRED STRAIN WHITE LEGHORN BABY chicks, May delivery, $15 per 100. Incubator capacity 18,000 eggs. D. A. Gillette, R. 4, Yakima, Wash.

CHIX, 12C TO 25C; WHITE LEGHORNS AND White Rocks; trapnested strains; eggs, Palouse Falls Ranch, Palouse Falls, Wash.

WHITE LEGHORN BABY CHICKS. CIRCULAR on request. San Jose Poultry Yards, San Jose, Cal.

Leghorns.

SPECIAL SALE OF PACIFIC NORTHWEST trap nested White Leghorns. One and two year old hens, cocks and growing cockerels from Kent, Wash., the home of the world's highest egg record Leghorns, the famous Yesterlaid Egg Ranch strain; 2000 one and two year old hens, free range raised, now one-half price. We must dispose of these to make room for our pullets. Cockerels from 200 to 225 dams, sire's dam 225 to 280 eggs; 8 weeks old, $1.75; 12 weeks old, $2.50; mature, $7.50 each; 225 to 259 dams, sire's dam, 225 to 280, 8 weeks old, $2; 12 weeks old, $3.50; mature, $10 each. Cockerels from 225 to 250 dams, sire's dam, 316, 8 weeks old, $4; 12 weeks old, $6; mature, $12 each. Cockerels from 250 to 300 dam, sire's dam, 316 and 333, 8 weeks old, $7.50; 12 weeks, $10; mature $15 each. Individual pedigreed cockerels (wing banded), 12 weeks and mature at from $5 to $50 and up. Don't miss this opportunity to get breeding stock from one of the largest trap nest ranches on the Pacific coast. Our strain is a blend of the choicest Tancred and Hollywood farms. Our prices are the lowest. We have 8000 hens, 3500 trap nested pullets, 12,000 growing chicks on free range. Baby chicks, $12 per 100. Yesterlaid Egg Ranch, Kent, Wash.

LEGHORN PULLETS, 5000 FEBRUARY, 3000 April and May hatched. These birds are Hollywood-Tancred strain, are unconditionally guaranteed on a money-back basis. Price $1.15 each, at 8 weeks. White Cloud Farm, Route 2, Box 188, Kirkland, Wash.

OREGON AGRICULTURAL COLLEGE WHITE Leghorns. Eggs, $1.50 per setting; $6 per 100, prepaid. Late May and June chicks, $12.50 per 100. Russell Poultry Yards, Route 3, Corvallis, Ore.

CARNATION WHITE LEGHORN PULLETS, April and May hatched pullets from my high record trap nested stock. E. W. Raush, Carnation Poultry Farm, Kent, Wash.

THOROUGHBRED BUFF LEGHORN SETTING eggs, $1.50 setting; $8 hundred. M. Magnussen, Regena Stage, Boise, Idaho.

BUFF LEGHORN EGGS AND CHICKS FROM my champion exhibition and laying strains. R. Stromquist, Tigard, Ore.

FORD'S BRED TO LAY S. C. WHITE LEGhorns; 2-year-old breeding hens, $1 each. W. A. Ford, Umatilla, Ore.

BROWN LEGHORN EGGS, THE VERY BEST quality; free mating list. E. H. Rosenkranz, Colfax, Wash.

PRIZE BUFF LEGHORNS; EGGS, 15C EACH, postpaid. C. E. Cleveland, Stanfield, Ore.

Miscellaneous Poultry.

WE ARE HATCHING HOLLYWOOD AND Tancred strain of White Leghorns every Monday, Wednesday and Friday. Prices at $20 per 100; $195 per 1000. Commercial strain mated with 250-egg cockerels at $18 per 100. R. I. Red, Barred Rocks, Black Minorca and Ancona chicks are priced at $25 per 100. Send for free catalog and prices on incubators, brooders and pullets. Queen Hatchery, Seattle.

ILL-A-HEE BARRED ROCK CHICKS—SUMmer sale of Barred Rock and White Leghorn chicks. May and June chicks are profitable and easy to raise when you know how. Write for our circular telling how we do it. All stock trap nested and pedigreed for years. Discount prices on all late chicks and eggs. Ill-A-Hee Poultry Farm, Jennings Lodge, Ore.

POULTRYMEN—SEND EIGHT TWO-CENT stamps for special three months' trial for the best and oldest exclusive poultry journal in the west. The articles and advertisements are of special interest to the poultry breeders. Northwest Poultry Journal, 213 Commercial st., Salem, Ore.

EGGS! EGGS! EGGS! "SNOWFLAKE" WHITE Orpingtons, establish highest official Orpington pen record western Washington laying contest. Average 204 eggs; free mating list; hatching eggs, $3, $5, $10 per fifteen. W. T. Thompson, Bozeman, Mont.

CHICKS, EGGS—HOGANIZED WHITE LEGhorns, Brown Leghorns, Black Minorcas, Rhode Island Reds, Barred Rocks, Anconas, Blue Andalusians. Free circular. Order early. McDonald Poultry Ranch, King Road, San Jose, Cal.

MAMMOTH BRONZE TURKEY EGGS FROM choice stock; safe arrival by express guaranteed; seventeen years' experience; $5 for 10; $9.75 for 20; $14.50 for 30. Effie Shepardson, Kelso, Wash.

MAMMOTH PEKIN DUCKS. "AMERICA'S finest." New blood this year direct from C. C. Shoemaker; eggs, $2 per setting, $12 per 100. Crystal White Poultry Farm, McMinnville, Ore. Box 33.

LARGE, NICELY MARKED ROUEN DUCKS. Eggs, 11, $2; 100, $15; heavy laying, prize winning strain White Wyandottes; eggs, 15, $2; 100, $10. P. H. Tomlinson, College Place, Wash.

S. S. HAMBURGS; CLEAN UP SALE OLD prize hens, $2; pullets, $2.50; cock, $3.50; cockerels, $3.50; eggs, bal. season, 15, $2. E. E. Enos, W1908 Montgomery, Spokane, Wash.

PUREBRED S. C. RHODE ISLAND RED EGGS for hatching from non-setting, non-fading strain. $3, $5 and $10 per fifteen. Mrs. L. Wham, Double Diamond Ranch, Omak, Wash.

POULTRY—Miscellaneous (Continued) 174

EGGS RFOM PRIZE-WINNING MAMMOTH Toulouse geese, the kind that hatch; 50c each, $45 per 100. Imperial white Pekin duck eggs, $2.50 per 15; $14 per 100. Goslings, ducklings. R. E. Baumgardner, Wenatchee, Wash.

POULTRY RAISERS, SEND FOR FREE BOOKlet on poultry advertising. The Pacific Northwest Farm Trio, Dept. P, Review bldg., Spokane, Wash.

DOLLARS FOR YOUR EGGS—WE PAY THE top market prices for your eggs and poultry. Daily cash remittances. Western Produce Co., Spokane.

EGGS, MAMMOTH TOULOUSE AND WHITE Chinese geese; Mammoth Pekin ducks, pearl guineas. C. O. Johnson, R. 1, Medical Lake, Wn.

S. C. ANCONAS, SHEPPARD'S SELECT AND 331 egg strain; eggs, $2 per 15; chicks, $20 per hundred. A. B. Larson, Warren, Ore.

SHIP YOUR LIVE POULTRY AND EGGS TO us. Highest prices paid; daily remittances. Inland Poultry House, Spokane, Wash.

FANCY WHITE WYANDOTTE COCKERELS, $2.50; hatching eggs, two dollars setting. H. L. Lamon, American Falls, Idaho.

ANCONAS, SHEPPARD STRAIN; EGGS, $1.50 per 15; $7.50 100; day old chicks, $18 100. R. P. Irwin, Tonasket, Wash.

INDIAN RUNNER DUCKLINGS, THOROUGHbred, 100, $33; doz., $4.30, delivered. C. A. Muths, Route 1, Salem, Ore.

PEDIGREED ANCONA HATCHING EGGS; 330-egg strain; $2.50 setting. Smith's Ancona Farm, Nampa, Idaho.

MAMMOTH PEKIN EGGS FROM DUCKS that take the prizes. Drakes for sale. Mrs. E. A. Bennett, Salem, Ore.

ROSE COMB RED EGGS; LARGE, HEAVY laying strain, 15 $1.50; 45, $4, prepaid. W. C. White, Jerome, Idaho.

BLUE ANDALUSIAN AND WHITE ROCK hatching eggs, $2 per 15. Mrs. C. W. Armstrong, Freewater, Ore.

SICILIAN BUTTERCUP EGGS, $2.50 PER fifteen, postpaid. Charles Carland, Route 2, Saint Maries, Idaho.

LIGHT BRAHMAS, EGGS, $1.75 PER 15; Bronze turkey eggs, $3.50 for 10. Mrs. C. W. Laahs, Irby, Wash.

HUNT'S BARRED ROCK EGGS, PRICES REduced through April, May. W. A. Hunt, Lebanon, Ore.

EGGS FROM SINGLE COMB BLACK MINorcas, $2 per 15; $8 per 100. Jacob Cherniak, Elk, Wash.

BARRED ROCK CHICKS. HEAVY LAYING O. A. C. strain. Mrs. E. Hodge, Waterloo, Ore.

S. C. BLACK MINORCA HATCHING EGGS, $1.50 per 15. John Zack, Kalama, Wash.

LIGHT BRAHMA EGGS, $2 PER 15. DALTON Poultry Farm, Coeur d'Alene, Idaho.

LIVE STOCK. 177

LARGE, HEAVY PRODUCING HOLSTEINS for sale at all times in car lots; tuberculin tested; 150 to 200 head always on hand; well marked heifer calves from registered sires and heavy producing dams; crated for shipment anywhere, $25 f. o. b. Levinson & Balmelli, Yakima, Wash.

SHIP US YOUR POULTRY AND LIVE STOCK. We pay the top market prices. Light veal, fat, fancy, 14c; dressed block hogs, 14c; hens, light, 20c; heavy, 23c; prompt returns. John Lewis & Co., Spokane, Wash.

EPOCHAL BERKSHIRES, 3 MONTHS' PIGS from $20. Yearling boars from $40. Sire, the grand champion Pork-maker's Sincerity. Herd boars from $75. Bred sows from $75. E. V. Orford, Boise, Idaho.

REGISTERED JERSEY BULL, DROPPED March 2d, 1921; dehorned; solid color; for sale or trade for registered heifer. M. Christopher, Route 3, Deer Park, Wash.

WE PAY TOP PRICES FOR YOUR LIVE OR dressed veal, hogs and poultry. Your check by return mail. Shipping tags on request. M. & J. Packing Co., Spokane.

FOR SALE—THREE REGISTERED JACKS, one, two and three years old, and eight jennets. Write Wm. Hallam, Republic, Wash.

POLLED HEREFORDS; BREED THE HORNS off; for sale, two good polled bulls, ready for service. Willis R. Phillips, Union, Ore.

FOR SALE CHEAP—TWO PUREBRED REGistered Poll-Angus bulls, two years old. James Henry, Seattle, Wash. Phone Main 3870.

FOR SALE — REGISTERED SHORTHORN bulls, Roswell Park Stock Farm, Lowell and Willis, Parma, Idaho.

REGISTERED BERKSHIRE PIGS, 8 WEEKS old, $15, with papers. Bertha Jorgensen, Hillsboro, Ore. R. 1.

EXTRA FINE REGISTERED MEDIUM TYPE Poland Chinas. Roy Tomlinson, College Place, Wash.

SELLING OUT YOUNG MILCH GOATS cheap. M. Copeland, Pablo, Mont.

HARNESS and SADDLERY 189

SEND FOR FREE HARNESS AND SADDLE catalog today; cut out the middleman, buy direct from the manufacturer. Lowest prices in the west; satisfaction guaranteed. Established 1881. Write Pierce Harness Co., Dept. T, Spokane, Wash.

JOB PRINTING. 372

GUARANTEED BETTER BUTTER WRAPpers: 100, 60c; 250, $1.25; 500, $2.25; 1000, $4; printed to order. Home Specialty Co., Middleton, Idaho.

TANNING. 425

WE WILL TAN YOUR COW OR HORSE HIDES into robes or coats at the right prices and guarantee our work as we are custom tanners and manufacturers. We also buy hides, furs, wools and pelts, or will exchange harness and sole leather for same. Write for prices. Spokane Fur Tanning Co., 9 Pine st., Spokane.

LET US TAN YOUR HIDE—COW AND HORSE hides for fur coats and robes. Cow and steer hides into harness or sole leather. Catalog on request. The Crosby-Frisian Fur Co., Rochester, N. Y.

MONUMENTS. 510

COMPLETE STOCK, RIGHT PRICES. CORrespondence solicited. J. W. Harding, Inland Monument Co., N1001 Monroe, Spokane.

SEEDS. 620

CHOICE MANGEL SEED, 35C LB. POSTpaid; Danish gludstrup, gate post, yellow tankard. Warren Cook, LaConner, Wash.

ALFALFA SEED 10C AND 15C POUND; TIMothy, 8c. Johnston Land Co., Seward, Neb.

NURSERY STOCK. 621

PROGRESSIVE EVERBEARING STRAWberry plants, $1.25 100; $9 1000, postpaid, inspected, guaranteed. O. W. Zurcher, 104 S. 17th street, Boise.

CHRYSANTHEMUM PLANTS, ASSORTED, fifty cents per dozen, postpaid. J. L. Russell, Corvallis, Ore.

NURSERY STOCK. (Continued.) 621

EVERBEARING STRAWBERRY PLANTS— All orders received to date and after until further notice will be entitled free, to 1 St. Regis everbearing raspberry, 1 red raspberry, 1 blackberry, 4 Lucretia dewberry, and 1 purple lilac. My Superb and Progressive everbearing strawberry plants are guaranteed and prepaid at 100, $1.40; 500, $6; 1000, $11. Orders for 1000 get 2 lots free, 2000, 4 lots. Dewberry plants, 75c doz.; $4 per 100. Concord rooted grapes, 1 year, and St. Regis everbearing rasp: transplants, 10c each, $1 per doz.; $6 per 100, postpaid; Snider blackberry vines, fine, large, hardy, prolific, 75c per doz.; $5 per 100. Model Fruit Farm, R. 1, Emmett, Idaho. N. B. Matthiessen, prop.

GROW GRAPES FOR PROFIT—SPECIAL LOW prices; grape vines, berries, asparagus, for commercial planting; peaches, cherries, apricots, apples; satisfaction guaranteed. Write today. Home Nursery Co., Richland, Wash.

SUPERB, PROGRESSIVE EVERBEARING strawberry plants, 100, $1.25; 500, $5; everbearing raspberry, evergreen blackberry, loganberry plants six for $1. Apple Blossom Nursery, Route 6, Seattle, Wash.

FARM LANDS FOR SALE. 651

VERY FINEST CRANBERRY PEAT LANDS, in center cranberry growing industry, subdivided, 1 to 5 acres, very reasonable prices, if desired, only 20 per cent down; no other payment for five years. By planting part of the holdings in cranberries, crops should meet future payments. Adjacent land produces 100 bbls. per acre. Last season cranberries returned the grower $15 per bbl. at wholesale. For money maker do you know of any other crop comparing with cranberry growing? Besides cranberries, can raise vegetables and chickens for tourist trade; fine dairy land; first class schools, roads, finest beach on coast within one mile. Write or visit us. Long Beach Land Co., Long Beach, Wash.

CUTOVER LANDS, EASY TO CLEAR; $8 TO $20 per acre; 25 miles north of Spokane; on hard surfaced highway; Great Northern and Milwaukee railways; excellent opportunity for dairying and stock raising with Spokane markets and creamery near at hand. Will help the man who will live upon this land and agree to clear a part each year by giving lumber to help start his buildings, and a purebred Jersey bull to groups of farmers. Interest and payments low. Write Milan Farms Development company, Dept. T, Old National Bank bldg., Spokane, Wash.

FOR SALE—LEVEL, BLACK LOAM LAND; Wenatchee district, under first class water right, fully paid; one inch of water per acre; any size tract, 5 to 40 acres. Priced at $165 per acre for raw land, no payment down for first 4 years; 7 years thereafter to complete the payment; admirably adapted for berries, early fruits, diversified ranching. Write Simmons & Munroe and Geo. H. Pfau, Wenatchee, Wash.

BIG OPENING SALE OF YAKIMA VALLEY farmland, under an assessed state and government approved irrigation project; good, deep soil; close to town, railroads and state highway. We sell in tracts to suit purchaser at $25 per acre and up, on easy terms. Our many sales to farmers show that this land is a good investment. Western Lands, Inc., owners, 918 Green bldg., Seattle.

THURSTON COUNTY—5000 ACRES, VERY fertile, level; fruit, berry and poultry lands; right at beautiful state capital. No extremes of temperature; no storms or floods, no irrigation; bumper crops; fine markets. 5 or 10 acre tracts; low prices and long term payments. Send for our valuable pictorial booklet. Norpia Realty Corporation, Olympia, Wash.

174 ACRES, ON KOOTENAI RIVER AND Great Northern; 94 bottom, 8 pasture, 18 fenced and cross-fenced; 3 plowed, 15 ready; ½ acre fruit, 4 cabins, team, harness, wagon, plow, harrow, tools, etc.; 2000 ft. lumber, 14 bales roofing, 6 windows, fine cattle or chicken ranch; fine government range. $4000. Chas. R. Scholz, owner, Ural, Mont.

BITTER ROOT VALLEY, MONT., HAS A record of 50 years without a crop failure; its mild climate, abundant water and wide diversity of products make farming profitable. Get the facts about this unusually sheltered, prosperous valley "where farming is different." Write for free bulletin No. 6. The Bartlett-Bolen Co., Hamilton, Mont.

160 ACRES, 5½ MILES NORTHWEST USK, Wash.; 14 cleared and in clover, timothy, garden truck; six-room furnished house, spring water piped to house, barn, garage; Ford car; cow, horse, chickens, turkeys, farm tools, etc., all for $2800; good Dodge car part pay. B. F. Stong, owner, Usk, Wash. R. 1.

40 ACRES LESS HIGHWAY, OF FINEST soil; 12 acres cleared, balance pasture, easily cleared; lies fine; on main highway; 1½ miles to town; near school; farm buildings. Price $2950; thousand cash, a snap. Write us for dairy, berry and poultry farms. Chas. D. Edwards Co., Centralia, Wash.

TWO HUNDRED FORTY ACRES OKANOGAN stock ranch, twenty dollars acre; forty acres cultivated, sixty more tillable; outside range; terms. A. J. Chitty & Co., Spokane Savings & Loan bldg., Spokane, Wash.

A BARGAIN FOR QUICK SALE—MY FINE, highly improved stock ranch; acres for sale, $6000. Terms. Write me for facts and particulars. Mountain Park Ranch, E. M. Varin, owner, Victor, Idaho.

480-ACRE CHOICE STOCK AND GRAIN farm; three miles from town; 200 acres in crop; going concern; $37.50 per acre; $4500 cash, balance on easy terms. Arthur Lundy, Edmonton, Alberta.

THREE HUNDRED ACRES, OLD HOUSE, two million feet pine; spring; 6 miles west Cleveland, Wash. Sacrifice, ten dollars acre, Fred G. Sanders, Albany, Ore.

SELL YOUR PROPERTY QUICKLY FOR cash; no matter where located. Particulars free. Real Estate Salesman company, 501 Brownell, Lincoln, Neb.

480-ACRE STOCK RANCH IN AENEAS VALley; 50 plowed, 40 can be; small creek; $3500. $800 down, balance easy payments. T. R. Lewis, Tonasket, Wash.

IMPROVED HALF SECTION BEST LAND IN Alberta to exchange for small improved farm in Wash. or Idaho. Bert Mansfield, Steptoe, Wash.

RICHLAND LANDS TRUE TO NAME; PRODuce large incomes, early vegetables, berries fruits. Write for particulars. Briscoe Realty, Spokane, Wash.

BEAUTIFULLY LOCATED, WELL EQUIPPED, prosperous ten-acre poultry farm, $12,000; $5000 cash. A. P. Rushton, owner, Southworth, Wash.

A. F. HORTON, NEWPORT, WASH.—TIMber products, cutover lands, $5 to $15 per acre. Good roads, schools, fine mountain water.

FOR SALE—FARM IN NORTHERN IDAHO. W. H. White, Hope, Idaho.

168 ACRES, $2000 CASH. ADDRESS P. ROOS, Myrtle Point, Ore.

FARM LANDS FOR SALE (Continued) 651

FULLY EQUIPPED STOCK AND DAIRY farm; 465 acres, in beautiful Arcadia valley, only two miles from splendid growing city, Deer Park, Wash., 24 miles north of Spokane; farm is furnishing milk for Deer Park at this time; 100 acres winter wheat, looking fine; 35 alfalfa, under irrigation (perpetual water right); 35 acres ready for spring planting, balance easily cleared; some timber; farm is well improved; seven-room concrete house, basement, 9 feet high; modern dairy and horse barn, with loft for 100 tons hay; two 12x35 concrete silos, capacity 100 tons each; large feed room connects with barn; straw shed, capacity 100 tons; large feeding shed, machinery building and shed; blacksmith and machine shop, ice house, holding 25 tons, completely filled; modern milk house, fully equipped, 77 foot drilled well, with an inflow of 7 feet 6 inches per minute; piped to house, barn, milk house and yard. Complete equipment farm machinery; eight head good work horses and selected herd of 30 purebred registered Holsteins. For price and terms write F. E. Parks, Deer Park, Wash.

LOGGED-OFF LANDS IN STEVENS COUNTY, Washington, at greatly reduced prices. Most of land sells at from $5 to $20 per acre; thickly settled community, good schools, hard surfaced and paved roads to Spokane; best county in state for dairy and stock raising; most places water can be found at shallow depths. Write for folder. Phoenix Lumber company dept T, Spokane, Wash.

WE SELL FORECLOSED LANDS FOR A loan company for one-third cash, balance easy terms. When writing tell us what you want, where preferred, how much you will invest, kind of farming you contemplate, as we have no list and must write special description in each case. No trades. Hartford Land company, 601 Paulsen bldg., Spokane, Wash.

THE BERRY BELT OF THE UNITED STATES, western Washington, near Seattle, produces as high as $800 per acre; all crops contracted for. Over 30 cars shipped last year from one town; good chicken lands, good markets, paved highways, schools, daily mails, etc. You can buy this land without a cent down. Poncin Realty company, 716 3d ave., Seattle, Wash.

$17,000 STOCK RANCH—160 ACRES UNDER irrigation; near Chewelah; good buildings and silo; abundance outside range, including all necessary machinery; 4 horses, 55 head cattle, pigs, chickens, etc.; a money maker; cash. We can supply you with stock or dairy farms any size; let us know your wants. The Big Bend Land company, Spokane, Wash.

STOCK RANCH, 560 ACRES DEEDED LAND, over 2000 acres range adjoining; 2,000,000 feet of lumber; will raise 150 tons of hay; abundance of water for irrigation; hunting and fishing unexcelled; 36 miles to Yakima; splendid road; fair improvements, orchard, etc. Liberal terms to right party. Z. H. Benton, Nile, Wash.

SNOHOMISH COUNTY, WASH—6000 ACRES of the finest dairy, berry or general highgrade farm lands in the northwest, rapidly improving section; no drouths, bumper crops; tracts 1 to 80 acres; 10 yearly payments. This is your opportunity. Send for literature. Brownell Land Co., Birmingham, Wash.

640 ACRES, HIGHLY IMPROVED, 26 MILES east of Calgary; 375 acres irrigable; 400 in crop; 150 summer fallow for 1923; $75 cash, $10,000; or subdivide into two farms, $65 cash, $2000 and $75 cash $5000. Price includes crop. Frank Sugden, Cheadle, Alberta.

30-ACRE FARM, THREE MILES FROM OREgon City; highest state of cultivation; good buildings; acre of fruit; stocked, equipped; lighting and water system. Price $9000; $4000 will handle; interest, 6 per cent. P. Tanzer, Route 1, Box 52, Oregon City, Ore.

WE WANT TO TELL YOU MORE ABOUT the famous Deschutes valley in central Oregon; a dairy, potato and stockman's paradise; a card brings full particulars. Redmond Land & Loan Co., Inc., Redmond, Oregon. (King Murphy's Capitol.)

SACRIFICE SALE EIGHTY ACRES, HALF mile east Plummer; seven-room house, fenced; water; excellent dairy ranch; easy terms. Also one hundred sixty adjoining. O. P. Pring, Eagle bldg., Spokane.

BEST FARMS IN NORTHWEST. HAVE choice stock and grain farms, large, small; 40 well improved; 30 plowed; fine water; $1500; half cash. Smith-Nelson, Goldendale, Wash.

SALE OR LEASE — CALIFORNIA DAIRY farm; conditions ideal; terms liberal. Write A. Gribble, F. & M. bldg., Stockton, Cal.

CHICKEN RANCH SALE—5 ACRES; GOOD buildings, near pavement and car line. [illegible] Martin, Route 3, Box 183, Puyallup, Wash.

CALIFORNIA FARMS NEAR SACRAMENTO for sale, easy terms. Write for list. [illegible] Waite, Shawnee, Oklahoma.

FARM LANDS—Wanted 654

FARMS WANTED—SELL YOURS QUICKLY for cash, no matter where. Particulars free. R. A. McNown, 310 Wilkinson bldg., Omaha, Neb.

WANTED—TO HEAR FROM OWNER OF land for sale. O. K. Hawley, Baldwin, Wis.

IRRIGATED LANDS—For Sale 663

IRRIGATED ACRES, TWO MILES FROM CITY limits of Spokane; prices less than city lots. Soil especially adapted to vegetables, small fruits and poultry raising. Good [illegible] and college. Telephone, electric lights, domestic water and paved highway. Some beautiful homes built and others building. Locate your home where you can have city conveniences and enjoy country life. Write or call upon Country Homes Development company, Dept. T, Old National Bank bldg., Spokane, Wash.

HORSEHEAVEN IRRIGATION DISTRICT offers greatest speculative value and best opportunity to acquire highly productive irrigated land cheaply. Joins famous Yakima valley. Tracts, 20 to 160 acres. Price $15 to $25 per acre. Easy terms. Price list furnished. Yakima Ranches Co., Prosser, Wash.

TWIN FALLS IRRIGATED FARMS, ANY SIZE, any crops, any terms. Home Realty Co., Twin Falls, Idaho

SUBURBAN TRACTS—For Sale. 672

100X200, FINE FIELD BERRIES; SHACK, barn; Montavilla district. Wm. P. Dickinson, 2016 E. Gilsan, Portland.

CITY PROPERTY FOR SALE. 690

ASHLAND REALTY COMPANY HAVE RESIdences, ranches and business places for sale. Write fully what you want, your expectations and send addressed, stamped envelope. Ashland Realty company, Ashland, Ore.

FOR SALE OR EXCHANGE 702

200-ACRE STOCK AND FRUIT RANCH; 12 acres under water and in trees and alfalfa, balance in mountain pasture; good buildings; ½ mile to school and church, 11 miles to railroad. Price $12,000; will take house and lot in good town or city up to $5000 to $6000; cash $2500, balance five years, 6 per cent. Owner too old to farm, so must sell. The Big Bend Land Co., Spokane, Wash.

The GAUNT GRAY WOLF

By DILLON WALLACE

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SYNOPSIS.

Shad Trowbridge, a New England lad of about 20 years, sails on a mail boat to Labrador, where he plans to spend a few weeks of summer hunting and fishing in the wilderness. Upon his arrival he meets two experienced fishermen and trappers, Dick Blake and Ed Matheson, who recommend to him a young lad of 17 known as Ungava Bob, as a guide for his hunting and fishing trip inland. Desiring to lose the least time possible in securing Ungava Bob's services and starting inland for his vacation, Shad starts across the bay in his canoe in the face of a threatening storm. In the darkness his canoe is capsized and he is plunged into the icy water. As he rises to the surface a rope is thrown to him and he hears a voice shouting to make it fast. He is soon drawn aboard a little sailboat which, unknown to him, had approached at the moment of his great need.

To his surprise, Shad discovers that his new friend, the lad with the sailboat, is none other than Ungava Bob. Shad decides to remain a month and visit a part of Bob's winter trapping trail.

They leave for the wild trapping grounds and Shad is so delighted with the wilderness that he decides to remain with Bob on the trails all winter. The other members of the party start back home, leaving the two boys alone to start their long winter of adventure. But they are not alone! Hardly has the boat carried their friends around the bend of the river before Bob and Shad see two Indians watching them from the shadows of the forest trees.

The Indians proved to be old friends of Bob, but it was not many days until enemies appeared. A group of Mingen Indians, catching Bob and Shad out in their canoe on the river above the Great Falls of Labrador, fired upon them, compelling them to remain in the current and be dragged down to the rapids and seeming certain destruction.

In the midst of their peril Bob remembers that in the rapids above the falls there is a small, rocky island, and he skillfully guides the canoe to a safe landing on it. In the meantime their friends, Ed. Matheson and Dick Blake, reach their tilts to find Bob and Shad gone. The Indian maiden, Manikawan, tells them of the supposed loss of Bob and Shad over the falls. She plans to leave at once to wreak vengeance on the enemy Indians who sent them to destruction. Cunningly she entices them onto the river above the rapids and sends them to their deaths at the foot of the falls. Bob and Shad, on their island prison, witnessed the tragic plunge. Suddenly Manikawan appears on the shore, discovers the boys on the island and tells them that she will be back when the sun is noon-high next day with help to get them off, which she does successfully.

As winter comes upon them a strange thing happens. Wild animals of all kinds disappear. There is no game for fresh meat, and a large party of friendly Indians decided to go far north to other hunting grounds. Shad goes with them, Bob returning to his trapping trails and tilts

CHAPTER XVII.

Christmas at the River Tilt.

Christmas fell on Thursday that year, and it had been arranged that the trappers, by turning back on their trails the preceeding Saturday instead of waiting as was their custom until Monday, and by slighting some of the less important sections of the trails on their return trip, should gather at the river tilt on Wednesday evening, in order to celebrate the holiday with a feast.

It was late on Christmas eve when Ungava Bob, returning from the Indian camp, drew his toboggan into the clearing in the center of which stood the river tilt. Its roof was scarcely visible in the moonlight above the high drifted snow. He had hoped that some of the others might have arrived before him, but no smoke issued from the pipe, and fresh drifted, untrodden snow around the door told him that he was the first.

It was fearfully cold. Rime filled the air. The deerskin coat which Manikawan had given him, and which he wore, was thick-coated with frost.

He paused before the door and stood for a moment to painfully pick away the ice that had accumulated upon his eyelashes, partially closing his eyelids, and discovered that his nose and cheeks were frost-bitten. He drew his right hand from its mitten, and holding his nose in the bare palm, covered the exposed hand with the mittened palm of the other, quickly rubbing the frosted parts with the warm palm to restore circulation.

Presently, satisfied that the frost had been removed from nose and cheeks, he kicked off his snowshoes, shoveled the accumulated snow from the doorway with one of them, set the snowshoes on end in the snow at one side, and entering the tilt lighted a candle and kindled a fire in the stove.

Taking the kettle from the stove and an ax from a corner he passed out of the tilt and down to the river, chopped open the water hole, filled the kettle, and returning set it over to heat.

Unpacking his toboggan and stowing the things away, he leaned it end up against the tilt, brought a bucket of water from the river for culinary use, removed his deerskin coat, and settled down in the now comfortable tilt to prepare supper and await his friends.

Presently he heard a movement outside, and a moment later Dick Blake poked his head in at the door.

"Evenin', Bob," he greeted. "Glad t' see you. Th' tilt smells fine an' warm! Where's Shad?" he asked, entering and rubbing his hands over the stove.

"Stoppin' wi' th' Injuns. I were tryin' t' get he t' come back, but he thinks he wants t' go huntin' deer with un, an' stays," explained Bob. "Any fur?"

"Only one marten an' one otter, but they's good uns. No signs o' foxes. But foxes won't stay when th' rabbits goes," and Dick went out to unpack.

Presently Bill Campbell arrived, and a little later Ed Matheson drew his long form through the low doorway, his red beard laden with ice.

"Where's Shad?" he asked, after greetings were exchanged.

Bob explained Shad's absence.

"Well, now!" he exclaimed. "Shad must ha' been gettin' light-headed t' do that. Well, he's welcome t' 'bide 'long with Injunes if he wants to, but I'm thinkin' by about now he's wishin' he was where he ain't. An' by t'morrer he'll have boiled goose an' fried pa'tridges on his mind, an' wishin' harder'n ever he were back here in th' river tilt."

"He were wantin' th' hunt, an' now he may not find un so bad," said Bob.

"He won't be havin' no feather-bed time cruisin' about with Injuns," insisted Ed. "Shad's gettin' wonderful peevish an' sot in his way lately. He's thinkin' o' th' fine grub an' good times he's been havin' t' that college place he talks about, instead o' thinkin' o' how he likes rabbit meat three times a day an' betwixt meals when you an' him was 'bidin' a time on th' island over here because you wasn't havin' wings t' fly off, an' they wa'n't no other way t' get off till th' Injun lass takes you off."

"Shad weren't getting peeved," objected Bob, ready to defend his absent friend. "He were just disappointed at findin' no huntin', an' he 'bides with th' Injuns t' get some deer."

"Maybe so, but Shad'll be glad enough t' get back t' th' river tilt, an' when he is gettin' back he'll be findin' it fine. He'll be thinkin' o' th' tough crusin' with th' Injuns instead o' th' grub at his college place, an' that'll make he think 'tis fine in th' tilts. That's the way it mostly is with folks. They always wants somethin' they ain't got, an' when they gets un they wants somethin' else. An' like's not then they wants what they was havin' first, because they can't have un now."

Ed paused to pour a cup of tea and help himself to pork.

"Shad's a good mate, though," he continued magnanimously. "He ain't gettin' used t' th' bush yet. That's all's th' matter with he. He'll get used t' un after a bit, an' then he won't be gettin' peeved like he is now."

"I'm wishin' he weren't stayin' back with th' Injuns now. I'm fearin' he'll be havin' a hard time of un—an' I'm fearin' he may be gettin' in trouble not knowin' how t' take un," Bob remarked solicitously.

"I'm wonderful sorry, now, he stays wi' th' Injuns. 'Twould be fine t' have he here for Christmas," agreed Ed, as he drew a plug of black tobacco from his pocket and began to shave some of it into the hollow of his hand, preparatory to filling his pipe.

"Any fur this trip?" asked Bob.

"Two martens—both fine uns. Not so bad. How'd you make un, Dick?"

"I gets one marten an' shoots an otter," answered Dick.

"You gettin' any, Bill?" asked Ed, turning to Bill, who was reclining in one of the bunks and smoking in luxurious contentment.

"Aye, one marten, an' I shoots a wolf last evenin'—a wonderful poor wolf, an' his skin ain't much account. Three of un were after me on th' trail all day, but I only gets one."

"Three wolves, now—an' poor uns," commented Dick. "Wolves ain't follerin' a man all day unless they's hungry, an' they ain't like t' be hungry where they's deer."

"No," agreed Ed, who had lighted his pipe, one moccasined heel drawn up on the edge of the bunk upon which he lounged, the other long leg stretched out. "Wolves follers th' deer, but when they ain't no deer t' foller they don't foller un. Which means they ain't no deer in this part o' th' country, an' so they just naturally follers Bill as th' next best meat."

"An' bein' poor means they's hungry, an' bein' hungry means they's lickin' their chops for Bill," continued Dick.

"Were it night, now?" asked Ed.

"No, 'twere broad day," answered Bill, undisturbed.

"Now if 'twere night, I'd say they was follerin' you because you red hair lights th' trail up for un."

"'Tain't no redder'n your'n," retorted Bill.

"Never mind un, Bill," said Bob sympathetically. "Ed's jealous because your hair's curly an' his'n ain't."

"Now, how about gettin' grub?" suggested Ed, when the laugh had subsided. They ain't nothin' t' kill an' we got t' haul grub in from th' bay. I'm thinkin' t' start down Friday, an' if one o' you wants t' go along, we'll both haul up a load on our flatsleds. How'd you like t' go, Bill? They's a moon, an' by travelin' some at night we'll make th' bay for th' New Year, goin' light, an' be back by th' first o' February, whatever, with our loads."

"I'd like wonderful well t' go!" answered Bill, elated at the prospect of a visit to the bay, brief as it would be.

"What you think of un?" asked Ed, addressing Dick and Bob jointly.

"We got t' have grub if we stays on th' trails," agreed Dick, "an they's no sign o' killin' any meat."

"Aye, we'll all have t' leave th' trails by the first o' March, whatever, unless some of us goes for grub," said Bob.

"Bill an' me bein' away'll stretch th' grub we has, for Bill be a wonderful eater——" Bill interjected a protest, but Ed, ignoring it, continued: "An' what we hauls back on th' flatsleds'll carry us over th' spring trappin'. We'll be startin' early on Friday. We'll go down your trail an' spring your traps up on th' way out, Bill."

A late breakfast of fried ptarmigans, and a late afternoon dinner of boiled goose, with an evenin' "snack" of ptarmigan before retiring—the last of the game reserve from the fall shooting—together with camp bread and tea, comprised the Christmas menu.

Directly after breakfast Ed and Bill made ready for packing on their toboggans the light outfit which they were to use on their outward trip, and this done, the four held a service of song in which all joined heartily, and spent the remainder of the day luxuriously lounging in the tilt and telling stories.

Shad was sincerely missed. He had looked forward keenly to the Christmas



His nose and cheeks were frost-bitten.

feast, and many hearty good wishes were expressed for him—that even among the Indians he might pass a pleasant day—that he would not find the hardships so great as his friends had feared—and that he would soon return to them in safety and none the worse for his experiences.

Then the thoughts turned to home, and speculations as to what the far-off loved ones were doing at the moment.

"I'm thinkin' a wonderful lot of home now," said Bob. "Tell mother and father, Ed, I'm safe an' thinkin' of un every day, an' of Emily, away off somewhere in St. Johns t' school. It's makin' me rare lonesome t' think o' home without Emily there. An'—an'—tell mother, Ed—I never forgets my prayers."

"That I will, lad!" promised Ed heartily. "An' what you wantin' me t' say t' Bessie, now? Tell she about th' Injun lass an' th' fine deerskin coat she's givin' you?"

"Tell Bessie I always carries th' ca'tridge bag she gives me—an' I'm thinkin' how 'tis she that makes un—an' I'll be glad t'—get home t' th' bay," directed Bob hesitatingly.

"Oh, aye. Glad t' get back t' see th' bay, I'm thinkin'," laughed Ed.

As Bob and Dick returned to the tilt an hour before daybreak, after watching Ed and Bill disappear down the trail in the still, bitter cold of the starlit morning, Bob remarked:

"I'm feelin' wonderful strange—I'm not knowin' how. 'Tis a lonesomeness—but different—like as if somethin' were goin' t' happen."

"An' I has th' same sort o' feelin'," confessed Dick. "'Tis like th' stillness before a big storm breaks at sea—'tis like as if some one was dyin' clost by."

CHAPTER XVIII.

The Spirit of Death Grows Bold.

When Ungava Bob was gone Shad Trowbridge returned to the deerskin lodge to think. Now that he was alone with the Indians, he was not at all sure that he did not regret his decision to remain with them and share their uncertain fortunes.

For a moment the thought occurred to him that he might even yet follow Bob's trail and overtake him in his night camp. But he thrust the impulse aside at once as unworthy consideration. He had come to his decision, and he was determined to remain and play the game to a finish.

He craved action and excitement, and the glamour of romance that surrounded the Indians and their nomadic life had attracted him. It was this, together with the human instinct to play at games of chance, and the primordial instinct slumbering in every strong man's breast to throw off restraint and, untrammeled, match his brains and strength against the forces of untamed nature, that had led Shad to adopt the red man's life for a period which he believed would not exceed three or four weeks at most.

In preparation for departure the following day, the Indians erected upon an elevated flat rock, which winds had swept bare of snow, a log shelter some five feet square and five feet high. After lining the bottom and sides of this shelter with spruce boughs, a quantity of jerked venison and dried fish was deposited in it, the top covered with boughs, and the roof, consisting of logs laid closely side by side and weighted with stones, was placed in position. This precaution was taken to protect the cache from marauding animals.

In the dim light of the cold December morning the deerskin covering of the wigwam was stripped from the poles, folded and packed upon the toboggans, together with the simple housekeeping equipment of the Indians, and a sufficient quantity of fresh bear's meat and jerked venison to sustain them for a fortnight.

Immediately the march was begun toward the Lake of Willows, Sishetakushin and Mookoomahn in turn taking the lead and breaking the trail, the others following, single file.

Day after day they pushed on and still on through scattered forests, across wide barrens and over frozen lakes, always on the alert for caribou, but always disappointed.

Once a small flock of ptarmigans was seen along the willow brush that lined a stream. Shad drew his shotgun from his toboggan, but the Indians would not permit him to use it, and in disgust he returned it to its place while he watched Sishetakushin and Mookoonmahn kill the birds with bows and arrows. He marveled at their skill. Indeed, he did not observe a single arrow go astray of its mark.

Eleven birds were secured in this way—the first game they had seen, and the last they were to see for several days.

A dead, awful cold settled upon the earth. The very atmosphere was frozen. Rime in shimmering, glittering particles hung suspended in space, and covered bushes, trees, and rocks—scintillating in the sunlight and seeming to intensify the cold.

The brief hours of sunshine were disregarded. The sun rose only to tantalize. For three or four hours each day it hung close to the horizon, then dropped again below the southwestern hills, and its rays gave out no warmth.

No sign of game was seen near the Lake of the Willows, and no halt was made. The life of the Indians depended upon the killing of caribou. The little cache of jerked venison and fish left near the Great lake would scarcely have sustained them a month. The few ptarmigans killed now and again were of small assistance. The food they hauled was nearly exhausted.

Then came a period of storm. For a week snow fell and gales blew with such terrific fury that no living thing could have existed in the open, and during this period a halt was unavoidable.

Once a day a small ration was doled out—pitifully small—enough to tantalize appetite, but not to still hunger. Shad was consumed with a craving for food. He could think of nothing but food. His days on the trails and in the tilts with the trappers were remembered as days of luxury and feasting. He wondered if Bob and the others had thought of him when they ate their Christmas dinner of geese and ptarmigans. "Oh, for one delicious meal of pork and camp bread. Oh, for one night of the luxurious warmth of the river tilt!"

When the storm abated sufficiently to permit them to continue their journey he moved his legs mechanically, even forgetting at last that the effort was painful. An insidious weakness what taking possession of him. It was an effort to draw his lightly-laden toboggan. It made him dizzy to swing an ax when he assisted Manikawan to cut wood for the fire. His knees gave way under him when he sat down.

Manikawan's plump cheeks were sunken. Her eyes were growing big and staring. Her mother had lost half her bulk, and Sishetakushin and Mookoomahn were also noticeably affected. They no longer laughed and seldom spoke.

As one performing a duty that must not under any circumstances or condition be neglected, Manikawan conscientiously looked after Shad's welfare, but still she treated him with the same degree of dignity and reserve, if not aloofness, that she had always maintained toward him. He realized that what she did for him she

(Continued on page eighteen.)

FAMILY CIRCLE

ALICE BARLAND
EDITORIAL CONTRIBUTOR

Experience Letters

From Our Family Circle Women

Dear Mrs. Barland: It is now the time of year when many of us try our luck at raising lambs, so will tell how I manage with mine.

I make a trough on legs the right height for the lambs and bore as many holes in the bottom as I have lambs. I take spools from common sewing thread and cut away the bulge from one end and drive them into the holes and fit the nipples over the other end and I have an excellent feeder. This does away with the bother of bottles.

MRS. D. H. JONES.

Dear Mrs. Barland: I have been a reader of the Family Circle for three years and am asking the sisters for some good breakfast dishes, especially different kinds of toasts, as we do not care for muffins or griddle cakes. We live on a farm and I have one dear little girl.

Idaho. A YOUNG WIFE.

My Dear Young Sister: Allow me to suggest a few good breakfast dishes. I am aware that on the farm where a good deal of work is done before breakfast the first meal should be nourishing.

Poached eggs on toast: Make the toast by putting a little fat, or butter if you can afford it, in a frying pan, get it hot, but don't burn it, put in your slices of bread, keep the pan hot and turn quickly and lift your eggs from the water and put one on each slice with a dash of salt over it. Make corn meal mush the day before and make it thicker than you would for mush and milk. Pack it into a dish the right shape so the mush will cut into nice slices and fry crisp and brown for breakfast. Nearly all the cereal foods are good fried, too.

Baked apples are fine for breakfast and with fried potatoes, scrambled eggs, and with bread, butter, coffee and doughnuts, any family should be well fortified till the noon hour. A. W. B.

Dear Mrs. Barland: I wonder if many mothers are like myself in regard to child training. I don't believe any one can formulate a set of rules whereby a mother can train her children. Every mother must solve her own problems and the more children, the more problems.

I have four children and find that what works with one doesn't with another. For example, a slight slap on the mouth, as suggested by one mother in a recent letter, would result in one child saying, "Aw, that didn't hurt," and another would pout for hours over any corporal punishment. I do not believe mine are worse or better than the average. Please do not think I am criticizing that suggestion, for it works all right with my one girlie. I only say there can not be any set rule for all children.

I think it is a good plan, when children "fuss" among themselves, to set each one to doing something apart from the others or even have them sit still with a book or without it for a while.

I think each child should be taught to help with the work about the house and I insist upon the work being done properly. We know the result when a child is allowed to grow up with the idea that a task may be performed "any old way." But we shouldn't get the fault-finding habit.

I greatly enjoy the home department and nearly always get some help from it.

MRS. "X. Y. Z."

Bedbugs are a disagreeable kind of thing and a Washington sister has sent in a new remedy, which she claims will do the work. Here it is: "Get 10 or 20 cents' worth of hard lump alum and measure one-half cup and dissolve it in a quart of hot water and when the lumps are all gone put the liquid in a machine oil can and use freely in all places where the bugs are supposed to be. This will kill the nits, too. I have used this many times and it never failed. MRS. M. M'C."

Here is another one which would be especially good to use where there were cracks in the wall and places hard to apply the alum water:

Dear Mrs. Barland: I am an interested reader of the Circle page and think my cure for bedbugs may be of benefit to some one. It is a certain cure and less trouble and less offensive than coal oil or turpentine.

Remove from the rooms all good clothing, silver articles or gilt picture frames. (And don't forget to remove any pets, cats, dogs or canary birds.) Close tightly all windows and stuff the cracks. On the floor of the rooms place a pan filled with earth and on that place another old pan containing about two pounds of common sulphur; light each sulphur pot and keep burning for two hours. Open all the doors and windows and let out the fumes and you will find all the bugs are killed. If bedsteads are taken apart and bedding spread over chairs the fumes can better penetrate. This method will also kill all disease germs in a house. MRS. A. F. G.

As spring approaches ants will appear. Below are several ways to be rid of them:

Take one-half teaspoon each of tartar emetic and same of sugar with a few drops of water and place in dishes in places infested by ants. In 24 hours all ants will be gone. For the small red ant mix a little fresh butter with the above mixture.

Mrs. C. M. P. of Bellingham, Wash., says draw a chalk mark wherever the ants run and you will be rid of them. It seems too simple to be true, but she says she had perfect success getting rid of them this way, much to her surprise.

Dear Mrs. Barland: I have been a reader of THE FARMER for a long time and get many helps from the Circle letters.

I am a girl of 17 and last summer and fall I did all the housework as mother was sick and had to stay in bed. I had to care for her and I did the washing, ironing and the cooking and enjoyed it very much. I think housekeeping a pleasure.

I canned 320 quarts of fruit and 3 quarts of jelly. A FARMERETTE.

(This young housekeeper sends a recipe for what she calls rabbit ears which sounds very good. It will appear in order in the recipe column where all the recipes will be found in the future, so you can find them easier and can clip them out with less confusion.—A. W. B.)

Your Health

By Royal S. Copeland, M. D., F. A. C. S.

FIRST AID FOR ULCERATED TOOTH.

Did you ever have an ulcerated tooth? If you did, you know the agony it caused. But do you know how it "happened" and what to do if another abscess forms?



Dr. Copeland.

After the neglect of proper cleansing of the teeth the acid-forming germs of the mouth attack the sugar and starches clinging to the teeth. The acid thus generated cuts the enamel. When this is once perforated, the softer interior structures of the tooth are speedily destroyed. Pretty soon the pulpy center of the tooth becomes a decaying mass. Next, the infection passes through the root-canal into the jaw bone. Now we have an abscess, commonly called an "ulceration."

This is the history of an ulcerated tooth. Mastoid disease does not come suddenly and primarily to plague the victim. It can be traced back to a simple cold in the nose. The condition caused by the cold rapidly grew worse, and gradually spread up the canal to the middle ear. Pus formed here, and after a while the pus germs resulted in an abscess.

In just the same way the remote bony tissues around the root of a tooth are reached by the tireless and relentless pus germs. An ulcerated tooth is not a primary trouble, remember. Like the mastoid attack, it goes away back to a simple and apparently harmless first cause.

Sometimes these root abscesses remain as blind pockets of pus. Beyond the discomfort suffered by the patient they cause no symptoms. Except by the aid of the X-ray they give no visible evidence of their existence.

In other cases there appears a swelling at the root of the affected tooth, and an enormous swelling of the cheek and face. The eye may be closed, and, all in all, the patient may "look" a sight."

As in every other abscess, the object of the treatment is to drain off the pus. To have this done you must, of course, consult your dentist.

Somehow or other, toothache and ulceration seem never to appear when the dental office is open. Something must be done till the dentist can be reached.

Hot fomentations should never be applied to the outside of the face. The danger is that the tissues may be softened and the pus "drawn" to the skin surface. This is unfortunate, because it results in an unsightly, depressed scar. Hot water may be held in the mouth, or rolls of gauze may be dipped in hot water and placed against the tooth, inside the cheek.

"Counter irritation" sometimes helps. That is, a mildly irritating drug directly applied may draw the blood to the surface, and thus relieve the pressure. Here is a mixture—which you can have your druggist prepare—commonly used for the purpose:

Tincture of iodine and of capsicum, of each three drachms. Tincture of aconite, two drachms.

Let it be remembered that this mixture is poisonous in large quantities, and must be used sparingly.

Now to apply it. Roll cotton about a match or a toothpick and dip it in the liquid. Then rub the medicine into the tissues at the root of the trouble, both directly on the gum about the tooth, and on the outside of your cheek, close to the roots of the troublesome tooth.

Should you be successful in relieving the pain and reducing the swelling, do not flatter yourself the trouble is at an end.

The cause is still there. You must have the care of the dentist. Otherwise you will never be free from the dangers of pus absorption with all its evil effects upon your general health.

Home Recipes

Molasses cookies: One cup of sugar, lard, molasses and water, three eggs, one tablespoon of soda dissolved in a little of the water, mix as soft as you can roll out with flour. This makes about four dozen cookies. MRS. C. F. L.

Washington.

Popcorn balls: Popcorn with butter or not as desired. The best way is to put butter or lard into a kettle and pop the corn. To make balls, put a cup of sugar on the stove after wetting thoroughly with one-fourth cup of water, boil till it ropes, then pour over the corn, which should be separated from the hard kernels which didn't pop. Butter your hands and quickly press the corn into balls. Take care not to burn your hands with the hot sirup. Before pressing the corn into balls shake the pan and the corn will begin to stick together while it is cooling.

ALICE W. BARLAND.

To harden a soft wood floor: Clean and dry thoroughly, then oil with boiled linseed oil applied hot, as it penetrates better hot. Put on with a brush as much as the wood will absorb and wipe up with a cloth what doesn't absorb. It is well to keep the oil on hand and apply to spots where there is the most wear.

This is a good substitute for paint, is easily cleaned and dries very quickly. In time and on several applications it will turn the floor darker and will make it last much longer. MRS. M. N.

La Center, Wash.

Applesauce cake: One and one-half cups of applesauce, one cup of sugar, two cups of flour, one cup of seeded raisins, one-half cup of shortening, one tablespoon of hot water, two level teaspoons of soda, one teaspoon each of cinnamon and cloves. Cream the shortening and sugar, add applesauce, dissolve soda in the hot water and add the flour, into which put the spices and sift. Add raisins, rolled in one-half cup of flour, the last thing.

Idaho. MRS. E. B. WENDELL.

(There is no mention of either eggs or baking powder in this cake, but perhaps it is all right.—A. W. B.)

Sour cream cake: One cup of brown sugar, one cup of sour cream, two beaten eggs, one and one-half cups, scant, of sifted flour, one level teaspoon of soda, one level teaspoon of baking powder, sifted with the flour, one level teapsoon of cinnamon, one-half teaspoon of salt, one and one-half squares of unsweetened chocolate. Icing for above: One cup of powdered sugar, two tablespoons of hot coffee, butter size of a walnut, one teaspoon of vanilla, one and one-half teaspoons of cinnamon, two tablespoons of cocoa. This makes two nice layers or if baked in a long dripping pan will cut into very nice squares. MRS. G. F. T.

Meat pie: One large cup of cold cooked beef chopped, one-fourth cup of fat meat chopped, two cups of chopped apples, one-half cup of raisins, one-half cup of currants, one teaspoon of salt, one cup of sugar, one-half teaspoon each of cloves and cinnamon, one cup of water and cider vinegar mixed. MRS. G. H.

(I think this must be meant to be used as mince meat.—A. W. B.)

Sour cream cookies: Two cups of sugar, one cup of lard, one cup of sour cream, two eggs, one teaspoon of soda, stirred into the cream, one teaspoon of salt and one teaspoon of vanilla and flour enough to make a soft dough, roll thin. Bake in a quick oven. MRS. C. C. CAPPS.

Bellingham, Wash.

DISCOVERS NEW WAY TO KEEP KITCHENS COOL ALL SUMMER.

An amazing discovery is claimed to have been made by Mrs. B. B. Oliver of St. Louis. This discovery is a new kind of heat that dispenses entirely with coal and wood. It burns 95 per cent air and 5 per cent kerosene. The device is installed in one minute in any cook stove, heater or range. This new invention is already sweeping over the country like wild fire. It eliminates hours of work, perspiration and drudgery for the housewife in sweltering summer kitchens. Just turn a valve and you have plenty of heat for cooking or baking. Another turn and the heat is off.

It fits any stove without change of parts—simply sets in the firebox. It is absolutely safe and generates its own gas from kerosene. Mr. Oliver will send an attractive booklet to any one interested who writes for it. Just address him at 2121-E Pine St., St. Louis. He is making a special low introductory offer including a thirty-day free trial plan. He is looking for good live local distributors. He will tell you how you can earn $500 a month easily. Request his sales plan.—Adv.



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Bits of Fun for Everyone

Feebly Rooted.

"Which weeds are the easiest to kill?" asked young Flickers of Farmer Sassafrass, as he watched that good man at his work.

"Widow's weeds," replied the farmer. "You have only to say 'Wilt thou?' and they wilt."—Weekly Telegraph (London).

Running Wild.

"What has become of the tin locomotive and train of cars I gave you on your birthday?"

"All smashed up," replied the small boy. "We've been playing government ownership."—Washington Star.

The Fair Chauffeur.

"How are you coming on with your driving, Lucile?"

"Oh, splendidly," replied the fair owner with a blush. "I can blow the horn and fill the radiator. Harry says I'm a wonder for two lessons."—Country Gentleman.

Of Course.

"Who's dead?" asked the stranger, viewing the elaborate funeral procession.

"It's the mayor," was the reply.

"So the mayor's dead, is he?" mused the stranger.

"Well, I guess," said the small boy, witheringly, "D'you think he's having a rehearsal?"—Union Pacific Magazine.

The Natural Position.

Photographer (taking a picture of a man and his son): "Young man, it would look better if you would put your hand on your father's shoulder."

Father: "I beg your pardon, sir; it would be more natural if he put his hand in my pocket."—Successful Farming.

And Then He Heaved a Sigh.

"I found a letter in a woman's handwriting in your pocket this morning," she began angrily.

"But what—where—why—I didn't know—did you open it?" he asked in confusion.

"I did not. It was the one I gave you to mail yesterday."—Exchange.

Took Too Much for Granted.

The minister was delivering his farewell sermon. He had been having tough luck in collecting his salary and concluded to quit. Here is what he said: "Now, brethren, I have been appointed chaplain of the penitentiary of the state, and this will be my last Sunday among you. I will preach from the text, 'I go to prepare a place for you,' after which the choir will sing, 'Meet Me There.'"—Kiowa (Kan.) Review.

These Decadent Days.

"It used to be," grumbled old Riley Rezdidew of Petunia, "that when I got hit and knocked down on a crossing it was by somebody's span of spankin' bays; a team to be proud to drive. But now, gashblitter it, every little while I get spanked over into the mud by a confounded, pusillanimous, second-hand hootin' Nanny car that I wouldn't let 'em ketch me dead drivin' !"—Country Gentleman.

The Argonauting Ache.

One night I went to bed in Maine.
In half an hour I felt a pain
In Massachusetts, so it seemed
And 'twasn't merely that I dreamed.
I tried to soothe the sore spot, but
It soon was in Connecticut.
And though it stabbed me like a fork
The pain was next down in New York.
When morning dawned at last I lay
And ached in Pennsylvania.
I said I went to bed in Maine
'Twas in a Pullman on the train.
—Country Gentleman.

The Gaunt Gray Wolf

(Continued from page sixteen.)

did because he was the friend of her beloved White Brother of the Snow, and not for his own sake—as a dog will guard the thing which its master directs it to guard, faithfully and untiringly, for the master's sake, but with no other attachment for the thing itself.

He wondered why they did not return to their cache on the Great lake after the long storm, and then it occurred to him that probably their destination was the trading post at Ungava, of which Bob had told him.

On the afternoon of the second day after the storm they came upon a single wigwam. Sishetakushin and Mookoomahn looked into it and passed on. Shad raised the flap, and peering in saw the emaciated figure of an old Indian. He was quite stark and dead, his wide-open eyes staring vacantly into space. He has been abandoned to die.

That evening Shad stumbled over an object in the snow. He stooped to examine it in the starlight, and was horrified to discover the dead body of a woman

The following morning, as they plodded wearily forward under the faint light of the stars, they suddenly upon a group of wigwams. Men, women and children came out to meet them—an emaciated, starved, unkempt horde that had more the appearance of ghouls and skeletons than human beings. Some of them tottered as they walked, some fell in the snow and with difficulty regained their feet.

"Atuk! Atuk! Have you found the atuk?" was the cry from all—a hopeless cry of desperation, as they crowded around the travelers.

"We have not found the atuk," answered Sishetakushin.

Some heard him stoically, others staggered hopelessly away to their wigwams, others wailed:

"The Great Spirit of the Sky is angry. He has sent all the spirits to destroy us. The Spirit of Hunger—the Gaunt Gray Wolf—is at our back. The raven, the Black Spirit of Death, is ready to attack us. The Spirit of the Tempest torments us. The Spirits of the Forest and of the Barrens mock us. The Great Spirit of the Sky has driven away the atuk, and our people are starving. Many of our people are dead. Four of our hunters now lie dead in their lodges."

Shad Trowbridge could not understand what was said, but he could not fail to understand the situation.

For some inexplicable reason the caribou, upon which the Indians depended for food, had disappeared from the land. All living things save these starving wretches had vanished.

For 24 hours not a mouthful of food had passed Shad's own lips, and a sickening dread engulfed his soul.

(To be continued.)

Latest High Class Patterns for the Home

Please order the patterns you desire at least two or three weeks before you wish to use them. Desiring to obtain the latest high-class patterns for its readers, THE FARMER has made arrangements to have them sent direct from the east, and under present mailing conditions it takes about that time for them to reach you.



3784. Misses' dress. Cut in three sizes: 16, 18 and 20 years. An 18-year size requires 5 7-8 yards of 40-inch material. The width of the skirt at the foot is about two yards. Price 10 cents.

4000. Girl's dress. Cut in four sizes: 8, 10, 12 and 14 years. A 12-year size requires 3 1-2 yards of 36-inch material. Price 10 cents.

3840-3823. Ladies' costume. The blouse 3840, cut in seven sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. It will require 3 3-8 yards of 40-inch material for a medium size. The skirt 3823, is cut in seven sizes: 26, 28, 30, 32, 34, 36 and 38 inches waist measure. It will require 2 3-4 yards of 44-inch material for a medium size. Two separate patterns, 10 cents for each pattern.

3978-3993-3986. Ladies' costume. Blouse 3978, cut in six sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. It requires 2 3-8 yards of 36-inch material. The cape 3993, cut in four sizes: 14 and 16 years for misses', and medium (38-40), large (42-44) bust for ladies. Skirt 3986, cut in six sizes: 25, 27, 29, 31, 33 and 35 inches waist measure. Cape and skirt will require six yards of 40-inch material for a medium size. The width of skirt at the foot with plaits extended is about two yards. Three separate patterns, 10 cents for each pattern.

3990. Ladies' negligee. Cut in four sizes: Small, 34-36; medium, 38-40; large, 42-44; extra large, 46-48 inches bust measure. The width at the foot is 2 1-2 yards. A medium size requires 5 1-8 yards of 36-inch material. If flounce is made of embroidery 2 1-2 yards 18 inches wide will be required. Price 10 cents.

3456. Ladies' work dress or apron. Cut in four sizes: Small, 32-34; medium, 36-38; large, 40-42, and extra large, 44-46 inches bust measure. A 38-inch size will require 4 1-4 yards of 36-inch material. Price 10 cents.

3738. Ladies' apron. Cut in four sizes: small, 34-36; medium, 38-40; large, 42-44; extra large, 46-48 inches bust measure. A medium size will require 2 7-8 yards of 36-inch material. Price 10 cents.

3628. Girl's dress. Cut in four sizes: 6, 8, 10 and 12 years. A 10-year size requires 4 3-4 yards of 27-inch material with bolero; without bolero 3 1-2 yards will be required. Price 10 cents.

3704. Girl's under garment. Cut in six sizes: 4, 6, 8, 10, 12 and 14 years. A 10-year size requires 2 1-2 yards of 36-inch material. Price 10 cents.

3531. A practical child's set. Cut in four sizes: 6 months, 1, 2 and 3 years. A 2-year size will require two yards of 36-inch material for the dress, 7-8 yard for the sack and 1-2 yard for the bonnet, for which 1-4 yard of lining is also required. Price 10 cents.

3982. Boy's "overalls." Cut in four sizes: 2, 3, 4 and 5 years. A 4-year size requires 2 1-8 yards of 27-inch material. Price 10 cents.

2450. Sun bonnets for ladies and girls. Pattern including both styles is cut in one size: Medium for ladies, and girls. It requires for No. 1, 1 1-2 yards; for No. 2, 1 3-4 yards of 32-inch material. Price 10 cents.

Catalogue Notice.

Send 12 cents in silver or stamps for our up-to-date spring and summer, 1922, catalogue, showing color plates and containing 500 designs of ladies', misses' and children's patterns, a concise and comprehensive article on dressmaking, also some points for the needle (illustrating 30 of the various, simple stitches), all valuable hints to the home dressmaker.

Please fill in this order and mail with remittance to:
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Enclosed find.....cents for which send me the following:

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Just Folks

There is a difference between doing little things in a perfect way and doing little things in a big way.

Doing little things in a big way leads to big things.

Doing little things in a perfect way leads to fine workmanship which is directed and controlled by another and to another's ultimate profit.

I was talking with an employee in a responsible position with a big business concern a day or two ago. He has been in this position for more than a score of years. "I am in love with my work," he said. "My employer is an incident to me. I may or I may not agree with him always. I may or I may not judge him rightly. But that is neither here nor there. My work is my life. To do it daily, accurately, faithfully and with a high sense of pride, is the height of satisfaction."

In these days of talk about so-called labor and capital, employers and employees, bosses and men, it seemed to me I was in another world as I listened to this man's earnest, sincere and enthusiastic devotion to his work—a devotion that led him to regard his employer as an incident in his life.

There are certain recognized units in life. There is the unit of the individual and there is the unit of the family. There is the unit of the clan and of the nation. There is the unit of the race.

In the terms of centuries and ages some of these units may coalesce. In the terms of the individual and of the family, they do not coalesce.

Families may cooperate and by mutual consideration may approach satisfactory life, but they can never be truly united. There is no agitator that can make miscible two or more family units. Even in its form as an institution the harem is oriental, not occidental. Amid all his devious ways, the American has found it advisable to separate his alleged wives in different houses and different towns. Even the outlaw family unit refuses to have its unity outraged.

Even in lawful ways and under open conditions family units have found it difficult, though by no means impossible, to live under the same roof.

The family is a unit and must remain a unit to fulfill its purpose. Broken units of other families may enter and become a part of the household, but as units they can not be joined in peace.

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Verna Rowell writes that she has many pets. Here they are: A guinea pig, nine rabbits, some banties, two cats and two calves. May 24, 1921, Verna was 11 years old. (When you are 12 you will be a graduate, Verna. We like to have graduates write about club work, school work, interesting journeys or short stories.) Verna expected to visit her grandma the day she wrote to us. Her grandma broke her arm and Verna's mamma was staying with her. Verna lives near the Columbia river, in northeastern Washington.

Archie Hausen is going to have a Grandmother Magpie scrapbook. He already has the cover. Now he is going to save the Magpie page from every Junior Farmer. (Yes, Archie, the best pioneer stories get prizes. The stories must be true ones and the characters must be northwestern pioneers.) Archie is a western Washington boy. He lives in King county. October 29 is his birthday.

Here are some of the books that Hazel Heiman says she has read: "Tale of the Sand Hills," "In the Child's World," "Edith's Burglar" and "Daddy Longlegs." Hazel likes short stories, too. She was 9 December 7, 1921. Her home is in southern Lewis county, Washington. She has good times at school.

Edith Aylward's school is out already. On the last day they packed their lunches in a basket and were going outside for a good time, but it snowed. Then they ate in the schoolhouse. This is what they had: Sandwiches, pie, cake, salad, pickled eggs and tea. After lunch they played games and had a good time. Then they went home. Edith lives west of the Grand coulee in Douglas county, Washington. She will be 10 May 4, 1922.

Helen Flork, 10 years old August 18, 1921, has a little black puppy and two cats for pets. She also has three little pigs and some bantam chickens. She says, "I have brown hair, brown eyes and freckles." Helen is a western Washington girl and lives in Pierce county. She doesn't think her lessons at school are hard.

"I ride my pony to school during nice weather," writes our cousin, Lucille Jackson. Lucille lives in eastern Lincoln county, Washington, on an 800-acre farm. She says they have 25 horses and two cows. Lucille's birthday is December 30. She is 9 years old.

Hulda Schmauder, whose home is east of Moses lake, in eastern Washington, writes about the high water last winter when the coulees overflowed. The water came to within 12 feet of their barn. Hulda says, "We had a tin trough which we used for a boat. My brother, Willie, and I put it in the water and both got in. We had fun." April 25 Hulda's school closes.

Here is what Muriel Daugherty, our 6-year-old cousin in southern Washington, writes: "I have a new little cousin. Sister and I are going to color some Easter eggs." Muriel's birthday is January 1.

Clara Breitmein, 8 years old, has never written to us before. She is in the second grade at school and Miss Hafterson is her teacher. Aunt Nellie is glad to hear from Clara, who is a central Washington girl.

Lawrence Chenoweth is an eastern Washington boy and lives near Eloika lake, in Spokane county. This summer he expects to have a fine garden. He has selected carrots, onions and tomato seeds from a good seed catalogue for his garden. He says all winter he enjoyed the coasting, but now he is anxious for spring to come. October 14, 1921, he was 11 years old. Robert, Frank and Philip are his brothers.

Viola Spangenberg, who lives near the Columbia river in northeastern Washington, goes three miles to school. Part of the time she rides her pony, but when it is real cold she walks. Viola writes about her pets. She has a cat, a kitten and a dog named Rover. Her cat's name is Rainbow and she calls the kitten Mike. January 27, 1922, Viola was 9. She says she likes country life better than living in the city.

Bertha B. Brown thanks Aunt Nellie for The Junior Farmer. Bertha's home is in Okanogan county, Wash. She says her pony is brown and white.

At school where Edna Yochum goes there are nine pupils. Edna has another sister who will go to school as soon as the weather gets nice. Edna wonders how many of the cousins crochet. She was making herself a yoke. She had it nearly finished when she wrote. Here is a riddle: As I was going through whealie whirlie whick-a-whack I met Bum Backum. I told Tom Tackum to run Bum Backum out of whealie whirlie whick-a-whack. What is it? Whealie whirlie whick-a-whack was a wheat field; Bum Backum was a pig and Tom Tackum was the dog. (I told the dog to run the pig out of the wheat field.)

Maude Stoney writes about the good time she had skating last winter. She has taken part of her final examinations and passed. In spelling she got 99 per cent; history, 96, and in physiology, 87. She is a western Washington cousin. Her home is in Skagit county.

"I am 11 years old; my birthday is April 14," says Evelyn Glenn, whose home is in the Palouse country, in southeastern Washington. "I have dark hair and dark eyes." Evelyn is a sixth grade pupil. She has two sisters and two brothers.

A dog named Rover and a cat named Buster are Agnes Hassel's pets. She also has a chicken she calls Fluff. She is going to have a puppy, too, as soon as it gets big enough to take away from its mother. Agnes is taking cooking lessons at school. She lives near Puget sound, in Pierce county, Washington. Here are some jokes she has contributed: If a man is a pa, is a pan-a-ma? "I haven't been able to sleep for days." "What do you do for that?" "I sleep nights." How can you get rid of hay fever in the summer? Die in the winter. What is the best thing out? An aching tooth.

Fern Daugherty's mother has made Fern a new dress. It is blue and white checked, with white ruffles. Fern's home is in Yakima valley, Washington. When she wrote to us she was having a vacation.

"I am a little girl 7 years old; my birthday is November 9," writes our little cousin, Bella Harvey. Bella lives near the Canadian border line in Okanogan county, Washington. She says her sister, Pearl, milks nine cows. Sister has a cow of her own. Bella has a kitten named Tiger Lily.

Birthday Greetings

THURSDAY, May 18—Nedra Bacon, 9 years old; Margaret Olive Ewing, 11; Ruby Streeter, 11.

FRIDAY, May 19—Emily Elizabeth Dowell, 11 years old; Naomi Fleager, 10; Gladys Nessly, 11; Clohe Hancock, 10.

SATURDAY, May 20—Culvert P. Baker, 11 years old; Esther Boos, 9; Grace Forbes, 10; Mary Krasselt, 11; Frances Lathen, 11; Thelma Martin, 9; Elizabeth Porter, 8; Mabel Habberstadt, 11.

SUNDAY, May 21—Elizabeth Nyberg, 11 years old; Ada Shockley, 11.

TUESDAY, May 23—Mellie Campbell, 11 years old; Jack Litt, 8.

WEDNESDAY, May 24—Virginia Carviere, 10 years old; Freda Draper, 11; Winifred Mast, 10; Evelyn Norbeck, 11; Helena Wilma Peters, 11; Kathleen Stuhr, 10; Victoria Penhallick, 11.

BEDTIME STORIES

By THORNTON W. BURGESS.

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LONGLEGS AND WHITETAIL QUARREL.

You see, Longlegs the Blue Heron had patiently stood on one foot all the long morning waiting for Grandfather Frog to go to sleep on his big green lily pad. He had meant to have Grandfather for his breakfast and lunch, for he had had no breakfast, and it was now lunch time. He was so hungry that it seemed to him that the sides of his stomach certainly would



"You robber! You thief!" he screamed harshly at old Whitetail.

fall in because there was nothing to hold them up. But Longlegs has patience, a very great deal of patience, and so he had stood, and stood, and stood, and stood, all the time on one foot.

Then without any warning at all old Whitetail the Marsh Hawk had glided out across the Smiling Pool with his great claws stretched out to clutch Grandfather Frog. With a slap of his tail on the water Jerry Muskrat had warned Grandfather Frog, who had dived into the Smiling Pool with a great splash just in the very nick of time.

Now, is there anything in the world so hard on the temper as to lose a good meal when you are very, very hungry? Of course, Longlegs didn't really have that good meal, but he had thought that he was surely going to have it. So when Grandfather Frog splashed into the Smiling Pool of course Longlegs lost his temper altogether. His yellow eyes seemed to grow even more yellow.

"You robber! You thief!" he screamed harshly at old Whitetail.

Now, old Whitetail was just as hungry as Longlegs, and he had come even nearer to catching Grandfather Frog. He is even quicker tempered than Longlegs. He had whirled like a flash on Jerry Muskrat, but Jerry had laughed in the most provoking manner and ducked under water. This had made old Whitetail angrier than ever, and then to be called bad names—robber and thief! It was more than any self-respecting Hawk could stand. Yes, sir, it certainly was! He fairly shook with rage as he turned in the air once more and made straight for Longlegs the Blue Heron.

"I'm no more robber and thief than you are!" he shrieked.

"You frightened away my frog!" screamed Longlegs.

"I didn't."

"You did."

"I didn't! It wasn't your frog, it was mine!"

"Chugarum!" said Grandfather Frog to Jerry Muskrat as they peeped out from under some lily pads. "I didn't know I belonged to anybody. I really didn't. Did you?"

"No," replied Jerry, his eyes sparkling with excitement as he watched Longlegs and Whitetail, "it's news to me."

"You're too lazy to hunt like honest people!" taunted old Whitetail, as he wheeled around Longlegs, watching for a chance to strike with his great, cruel claws.

"I'm too honest to take the food out of other people's mouths!" retorted Longlegs, dancing around so as always to face Whitetail, one of his great, broad wings held in front of him like a shield, and his long, strong yellow bill ready to strike.

Every feather on Whitetail's head was standing erect with rage, and he looked very fierce and terrible. At last he saw a chance, or thought he did, and shot down. But all he got was a feather from that great wing which Longlegs kept in front of him, and before he could get away that long, yellow bill had struck him twice so that he screamed with pain. So they fought and fought till the ground was covered with feathers, and they were too tired to fight any longer. Then slowly and painfully old Whitetail flew away over the Green Meadows, and with torn and ragged wings Longlegs flew heavily down the Laughing Brook toward the Big River, and both were sore and stiff, and still hungry.

"Dear me! Dear me! What a terrible thing and how useless anger is," said Grandfather Frog, as he climbed back on his big green lily pad in the warm sunshine.

(Copyright by J. G. Lloyd.)

LETTERS WELCOMED BY AUNT NELLIE.

Among recent letters received by Aunt Nellie are those from cousins whose names follow. A few of these will be published each week in the regular edition of THE FARMER, and others will appear from time to time in The Junior Farmer:

Josephine Suchanek, Clara Baskette, Kenneth Sieveke, Ethel Stiltner, Hilda Stark, Doris Groff, Audrey L. Miller, Sylvia Goosic, William Carl Sieveke, Doris Meyers, Elsie Stark, Helen Hoard, Pearl Long, Esther Simila, John A. Malone, Helen Wyene, John Norman Roe, Hilda Hageman, Myrtle Harper, Edith Mideke, Anna Blunck, Herbert Scheuerman, Frances Letford.

Marie Thornton, George Lanhart, Mary Aharn, Nellie Templer, Zella Johnson, Annie Thomson, Delia Anderson, Kathleen O'Meara, Winifred Alice, May Reynolds, Emma Miller, Harold Puffert, Ruth Nance, Goldie Peterson, Cecil E. Millhorn, Frances Greely, Clairinda Fagan, David LeRoy, Margaret Gustafson, Marjorie Dean, Fern Parvin, Joyce Louise Wise, Nettie Knox, Harold Marvin, Verna Alice and Verlle Grace Robbins, Phillis Patterson, Minnie Olds, La Vera Grout, Hannah Wells, Impie Wilson, Robert Osborn, Jewel Field, Dorothy Timm, Clara Bernice Smith, Ivan Schafer, Marie Tamley, Fern Stallcop.

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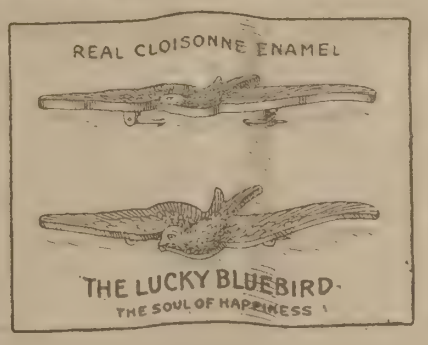
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The set described above will be awarded to you in return for your services in securing two 3-year subscription orders to your State Farm Magazine at the regular rate of 50 cents each or $1.00 for the two subscriptions. Address The Pacific Northwest Farm Trio, Spokane, Wash.

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High Points in News of the Week

After a short rest following the resignation of Senator Kenyon as chairman the farm bloc in the United States senate has again become active. Senator Capper of Kansas is acting as chairman at the present time.

The latest undertaking of the farm bloc is to harmonize all pending legislation having to do with farm credits. There are now several measures before congress providing for various features in improved farm credits under governmental supervision and assistance. The farm bloc hopes to be able to combine the good features of all of these measures into one bill on which congress could unite solidly for better credit to the farmers.

The tendency is to use the existing farm land bank system and extend its powers. These 12 regional banks now make loans on land only, but the proposed legislation would permit loans on the basis of grain, cotton and live stock and other farm products. The government would start the ball rolling with an advance of $100,000,000, though some estimates run as high as $500,000,000, and then the government would float farm bonds as a basis of credit and thus obtain from small investors throughout the country the money to finance the crops of the nation.

Under the present system, the farmer borrows on a 90-day basis from the banks and must dispose of his crops quickly to get money to pay his notes. He dumps his wares on the market and this depreciates the prices.

Meanwhile the speculators and elevator owners who take the farmers' product hold the same for higher prices, thus making the price to the consumer higher. The farmer wants that margin for himself and believes he should be given credit on parity with the speculator or elevator owner who gets it from the city banks.

As Senator Capper expressed it, the present banking system was devised to furnish credit for the manufacturer and merchant who has a quick turnover. For that purpose 90-day credits are sufficient, but for the farmer and cattle raiser a longer period is necessary, for he doesn't turn over his crops as quickly.

* * *

The feature of last week's bond operations was the sensational manner in which $117,000,000 of federal farm loan bonds was absorbed. These bonds pay interest at the rate of 4½ per cent per annum and run 20 years, although they are redeemable after 10 years. The first announcement of the week pertained to $75,000,000 of these bonds and they were readily taken up. Land bank bonds are exempt from all taxation. D. G. O'Shea, president, estimates that the Spokane bank by the end of the year will have $70,000,000 in bonds outstanding, including its share of the bonds now being sold as above. The Spokane bank serves all four northwestern states.

* * *

At this writing it appears likely that the conference at Genoa will adjourn early and meet again within a few weeks, probably on June 15 at The Hague.

* * *

Governor Cooper of South Carolina has been appointed by President Harding and confirmed by the senate as a member of the federal farm loan board to take the place left vacant by the resignation of Asbury F. Lever.

* * *

A press dispatch from Minneapolis last week announced that the national nonpartisan league executive committee had accepted the resignation of A. C. Townley, president of the league. The dispatch said that Mr. Townley had offered his resignation at the recent state convention of the league in North Dakota and Minnesota.

* * *

More than 150 labor leaders have been arrested in Chicago charged with having had part in a series of bombings in that city, one of which resulted in the death of a member of the police force.

Farm Business and Markets Outlook

(Continued from page five.)

The five-year average on May 1 is 3,077,000 cases. The season of heavy production this year started about two weeks later than last spring and therefore may continue later in to the summer than it did a year ago. If it does, a new record in cold storage holdings when the season's high point is reached will not be surprising. Present prices largely discount such a possibility, however, and no decline of any consequence is probable. The eggs produced at this season are counted as the best of the year for storage and demand for this purpose is so active that a slight advance has occurred.

SPRING FLUSH BREAKS BUTTER

The butter market slumped early last week, due in part to convincing evidence that the spring flush period is at hand. Production is increasing rather steadily, receipts at the leading markets are becoming larger almost every week and the amount which must be withdrawn from cold storage in order to supply the trade is diminishing. In another week it is probable that the tide in storage operations will move in the other direction and the accumulating period will begin. Further readjustment in prices downward is not improbable in the next fortnight, but the decline should not be more than 2 or 3 cents.

Cold storage holdings on May 1 were only 3,634,000 pounds, the smallest on that date since 1917. The five-year average is 7,613,000 pounds.

Prices on 92-score fresh butter on May 10 were:

Chicago, 35c; New York, 38c; Boston, 37 1-2c; Philadelphia, 39 1-2c; San Francisco exchange quotation, 37c.

SLIGHT RECOVERY IN CHEESE

The decline in cheese prices was running slightly ahead of the seasonal increase in production and a small upward reaction occurred last week.

FRUITS AND VEGETABLES.

Potato prices advanced sharply for several days last week, but reacted toward the close. Shipments from producing sections each week continue to run considerably ahead of any recent year, although they are not so large as a few weeks ago. About 1000 cars of new potatoes are coming forward each week, compared with an average of about 400 cars at the corresponding time during the three preceding years. Northern sacked round whites in the Chicago carlot market are quoted at $1.50 to $1.70 and Rurals are bringing $1.70

LATEST QUOTATIONS.

The Live Stock Market.

PORTLAND, May 13.—Cattle—Choice steers, $8.50@8.75; good to medium steers, $7.50@8.25; fair to medium steers, 6.75@7.75; common to fair steers, $6.25@6.75; choice feeders $5@6; fair to good feeders, $4.50@5; choice cows and heifers, $6.50@7; medium to good cows and heifers, $5.50@6.50; fair to medium cows and heifers, $4.75@5.50; common cows, $3.75@4.75; canners, $2.25@3.75; bulls, $3.50@5; choice dairy calves, $9@10; prime light calves, $8@9; medium light calves, $7@8; heavy calves, $4.50@7.

Hogs—Prime light, $11.50@11.75; smooth heavy, 200 to 300 lbs., $10.50@11.50; smooth heavy, 300 lbs. up, $10@10.50; rough heavy, $8@10; fat pigs, $11.25@11.50; feeder pigs, $11.25@11.50; stags, subject to dockage, $6@8.

Sheep—Best spring lambs, $12@14; medium spring lambs, $10@13; common spring lambs, $6@10; cull lambs, $5@7; light yearlings, $10@11; heavy yearlings, $9@10; light wethers, $9.50@10; heavy wethers, $9@9.50; ewes, $3@6.

SPOKANE, May 13.—Cattle—Prime steers, $7.25@8.50; good to choice steers, $6.25@7.25; medium to good steers, $5.75@7.00; fair to medium steers, $5@5.75; common to fair steers, $4.75@5; choice cows and heifers, $5.75@7; good to choice cows and heifers, $4.75@5.75; medium to good cows and heifers, $4.25@4.75; fair to medium cows and heifers, $3.25@4.25; canners, $2@3.25; bulls, $3@5.50; light veal calves, $8.50@11; heavy veal calves, $4.50@8.50; stockers and feeders, $4.50@4.75.

Hogs—Prime mixed, $11@11.50; medium, $10@11; heavies, $8@9; fat pigs, $10@11; stockers and feeders, $10@11.

Sheep—Prime lambs, $11@13; fair to medium, $10@11; yearlings, $10@11; wethers, $9.50@10; mutton ewes, $3@7.50; feeder lambs, $8@9.

The Grain Market.

PORTLAND, May 13.—Wheat—Hard white, hard winter, northern spring, $1.28; soft white, white club, $1.26; red Walla Walla, $1.24.

Grain futures: Wheat—Hard white, hard winter, northern spring, May, June, $1.28; soft white, white club, May, June, $1.26; red Walla, May, June, $1.24.

Oats—No. 2 white feed, May, June, $37; No. 2 gray, May, June, $36.50.

Corn—No. 2 eastern yellow shipment, May, June, $29.

SEATTLE, May 13.—Wheat—Hard white, soft white, white club, soft red winter, northern spring, $1.27; hard red winter, $1.28; eastern red Walla, $1.24; Big Bend Bluestem, $1.50.

PULLMAN, May 12.—Red wheat, $1.02; white wheat, $1.05.

LEWISTON, Idaho, May 13.—Fortyfold, club, hard winter, $1.06.

WALLA WALLA, May 13.—Club wheat, $1.10; Bluestem, Turkey red and Bart, $1.12.

RITZVILLE, May 13.—Bart, $1.50; red, $1.34; Fife, $1.06.

DAVENPORT, May 13.—Marquis, $1.35; Bluestem, $1.35; Gold Coin, $1.04.

POMEROY, May 13.—Wheat—Turwey red, $1.07; Hybrid, $1.05.

ODESSA, May 13.—Marquis, $1.50; Bluestem and Bart, $1.48; Turkey red, $1.33; Jones Fife, $1.07.

Hay and Feed Grain.

PORTLAND, May 13.—Millfeed—Price f. o. b. mill; Millrun, ton lots, $34; mixed cars, $33; straight cars, $32 per ton; middlings, $47; rolled barley, $37@39; rolled oats, $42; scratch feed, $47@51 per ton.

Corn—White, $36; cracked, $38.

Hay—Buying price, f. o. b. Portland—Alfalfa, $19@20 per ton; cheat, $17; oats and vetch, $18; clover, $17; valley timothy, $20; eastern Oregon timothy, $21@22.

SPOKANE, May 13.—Wheat—Feed wheat, $46 per ton.

Oats—$40 per ton; steam rolled, $42.

Corn—$36 per ton; cracked corn, $32 ton.

Barley—$40; steam rolled, $42.

Bran and shorts—$30 per ton.

Alfalfa, $22 ton; timothy, $22 ton; mixed hay, $18 ton.

General Produce.

PORTLAND, May 13.—Butter—Cubes, extras, 32@33c per lb.; parchment wrapped, box lots, 37c; cartons, 38c. Butterfat—Buying price: No. 1 grade, 35@36c, delivered Portland.

Eggs—Buying prices, 20c doz., case count; henneries, 22@24c dozen; jobbing prices, case count, 21c; candled ranch, 22c; selects, 25c.

Cheese—Tillamook triplets, prices to jobbers, f. o. b. Tillamook, 23c; young Americas, 24c pound.

Poultry—Hens, 21@24c; ducks, nominal; geese, nominal; turkeys, live, nominal; dressed, 40c.

Veal—Dressed, 13½@14c per pound.

Pork—Fancy, 15½c per pound.

SPOKANE, May 13.—Poultry—Fat hens, 23c per pound; light hens, 20c per pound; roosters, 10c per pound.

Fresh ranch eggs—$6.50 case; no storage; pullet eggs, $6.

Butterfat—34c a pound.

Stump Becomes Own Furnace

(Continued from page three.)

will run into the fire and put it out. Gravelly soil is very hard to bank and it is also hard to shovel. When any soil is dry or frozen deeply it can not be banked as successfully as when it works well and the burning should not be done during the driest parts of summer or in very cold weather, for the above reasons. Almost any kind of loam or clay soil has been found to work successfully during ordinary weather. The presence of sod will help in the banking process.

The new stump burner has much in its favor, since it has several points which are not found in the old charpit method. In the first place, it was difficult for any one not accustomed to the method to get the fire started and to keep it burning until sufficient heat was generated to consume the stump. The new method enables a man to do his work at odd times and to clear his land at a minimum cost. It also adds interest to the work and gets away from the usual backbreaking drudgery that is usually thought of in connection with stump land.

Wheat Goes Up; Then Goes Down

Wheat last Thursday took a sharp upward turn in Chicago to as high as 7 1-2 cents a bushel over the previous day on the basis of May delivery. The closing quotation for May delivery was $1.45 1-4. There was a decline Friday and Saturday, the closing offer for May wheat on Saturday being $1.43 to $1.43 1-2 per bushel.

Range of Live Stock Prices for the Week Ending May 10

CATTLE.	Chicago.	Spokane.	Portland.	N Salt Lake
Choice, prime heavy steers (1100 lb. up)	8.50@ 9.35	.....	.....	.....
Good heavy steers	8.00@ 8.75	.....	.....	.....
Medium heavy steers	7.50@ 8.25	.....	.....	.....
Common heavy steers	7.00@ 7.75	.....	.....	.....
Choice, prime light steers (1100 lb. d'n)	8.65@ 9.50	.....	.....	.....
Good light steers	8.15@ 8.85	.....	.....	.....
Medium light steers	7.50@ 8.35	7.00@ 8.25	7.15@ 8.50	6.50@ 7.25
Common light steers	7.00@ 7.85	5.00@ 7.00	5.00@ 7.25	4.75@ 6.50
Common to choice butcher heifers	5.75@ 8.60	4.25@ 6.75	4.75@ 7.00	4.00@ 6.00
Common to choice butcher cows	4.75@ 7.50	3.50@ 5.50	3.75@ 6.00	3.50@ 5.25
Bologna and beef bulls	4.65@ 6.85	3.00@ 5.50	3.50@ 5.00	2.00@ 3.50
Canners and cutters, cows and heifers	3.65@ 4.85	2.00@ 3.00	2.25@ 3.75	1.50@ 3.25
Canner steers	4.50@ 5.85	3.00@ 4.25	3.00@ 4.50	2.50@ 4.00
Medium to choice light veals	6.00@ 9.00	8.00@10.00	6.50@ 9.00	7.00@ 8.00
Common to choice heavy veals	4.00@ 7.25	4.00@ 8.00	4.50@ 6.50	.....
Common to choice feeders (1000 lb. up)	6.15@ 7.85	.....	.....	.....
Common to choice feeders (750-1000 lb.)	6.15@ 7.85	4.50@ 5.50	4.50@ 6.00	4.50@ 5.50
Common to choice stocker steers	5.85@ 7.75	.....	.....	.....
Common to choice stocker cows, heifers	4.15@ 6.25	.....	.....	.....
HOGS.				
Top of market	11.00	11.50	11.50	10.10
Bulk of sales	9.85@10.90	10.50@11.25	.....	9.35@ 9.85
Heavy (250 lb. up)	10.00@10.65	9.50@10.50	9.50@10.50	.....
Medium (200-250 lb.)	10.15@10.90	10.00@11.00	10.50@11.00	9.45@10.10
Light (150-200 lb.)	10.40@10.95	11.00@11.50	11.00@11.50	9.45@10.10
Light lights (130-150 lb.)	10.25@10.90	10.75@11.50	10.50@11.50	9.50@10.00
Smooth packing sows (250 lb up)	9.25@10.10	8.75@ 9.50	8.00@ 9.50	.....
Rough packing sows (200 lb. up)	8.75@ 9.75	8.00@ 8.75	7.00@ 8.00	.....
Medium to choice pigs (130 lb. down)	9.75@10.65	10.00@11.00	11.00@11.25	.....
Stock pigs	.....	10.00@11.00	11.00@11.25	8.50@ 9.25
SHEEP AND LAMBS.				
Medium to prime lambs (84 lb. down)	11.75@15.00	10.00@13.00	10.00@14.00	10.00@12.50
Culls and common lambs	8.00@12.25	7.00@10.00	6.00@10.00	7.00@10.00
Medium to prime yearling wethers	9.00@13.00	9.00@11.00	8.50@10.50	7.00@ 9.00
Medium to prime wethers	7.25@10.50	8.50@10.00	8.50@10.00	6.00@ 7.50
Medium to choice ewes	5.00@ 9.50	5.00@ 7.50	5.00@ 7.00	4.50@ 5.00
Culls and common ewes	2.00@ 7.00	3.00@ 5.00	3.00@ 5.00	2.00@ 4.50
Spring lambs	13.50@17.00	.....	10.00@14.50	.....

Chimacum Holsteins

Sixty-two Animals Bring $13,620

In order to supply a demand for purebred foundation stock and to cut down the number in their herds, the Holstein breeders of Chimacum valley held a consignment sale of 62 animals at the Grays Harbor county fairgrounds at Elma May 6. A number of visitors came from the adjoining counties, but a greater part of the purchases were made by the local dairymen.

The sale brought a total of $13,620 for the 62 animals, an average of $219.67. This was considered a good figure, since 16 head out of the total were calves under 1 year. The top animal, C. K. K. S. V. Lady May, a 4-year-old, was bid off by C. H. Kampendonk of Chimacum for $510. She was an exceptional animal, who is in her seventh month of the 305-day test and is expected to make over 700 pounds of butter. She was consigned by William Bishop.

The consignment was made up of animals from most of the breeders of the Chimacum valley. The individuals were selected from each herd by the consignor, while a delegation of breeders of Grays Harbor county visited the herds and looked the animals over before the shipment was made.

A few days prior to the sale a representative from each bank in the county met and organized the Grays Harbor Purebred Cattle Loan association for the purpose of helping such breeders as were in need of finance. It was agreed that a five-year loan be allowed for two-thirds the value of the cattle purchased. The application for loans provide for an agreement by the purchaser that he join his breed association, test his animals regularly for tuberculosis as well as for butterfat and sell only such offspring as are passed on by a committee of breeders and the county agricultural agent as advisory member. A number of the dairymen took advantage of this opportunity to secure additional foundation stock for their herds.

Nine of the animals were purchased by Governor Hart for the Western Washington hospital at Steilacoom. It is the governor's intention to build up a strong foundation herd at this institution which can be drawn upon by the other state institutions as they need more animals.

A few head were taken back to the Chimacum valley by purchasers who desired to introduce new animals in their herd and secure new blood. The greater part of the sales, however, were made to breeders in Grays Harbor county.

A detailed report of the sale will appear next week.

Launch Guernsey Club

About 20 Guernsey heifers were distributed to the boys and girls of the Yakima Valley Guernsey club at the annual picnic of the Guernsey Breeders' association at the state fairgrounds at Yakima May 12. The heifers were selected by lot. The prices paid by the boys and girls ranged from $185 to $350, which sums covered the initial costs of the heifers, as recently purchased by representatives of the association in Wisconsin, and all expenses up to date.

The following is a list of club members with the name and age of the heifer which each secured in the drawing: William Heers, Naches Heights, Luna of Elk Meadow, born January 3, 1920; Chester Schlein, Mabton, Fern of Elk Meadow, born December 20, 1919; Charles B. Bell, Yakima, Celestine of Elk Meadow, born May 20, 1920; Delos Clemens, Granger, Starlight Lily of Pleasant Hill, born September 2, 1920; Francis Bohlke, Grandview, Noble Lady of Pleasant Hill, born September 22, 1920; McClellan Brown, Grandview, Hayes Maid of Pleasant Hill, born August 14, 1920; Jessie Harris, Naches Heights, Rue Irmie, born October 29, 1920; William Saar, Mabton, Arvilla of Tristram Farm, born August 6, 1920; Charles Bohlke, Grandview, King's Dairymaid, born April 30, 1919; Fred Keith, Alfalfa, Pretor's Polly Anna, born June 28, 1920; Herbert Short, Granger, Lavina Goldine, born January 14, 1921; Carlyn Winger, Grandview, Katrina Amis Lily, born June 28, 1920; Mark Meyers, Outlook, Ella Velma, born May 16, 1920; Roscoe Angel, Mabton, Rhoda Rebekah, born April 24, 1920; Walter Scott, Naches, Imo's Pride of Roberts, born April 22, 1921; Esther Bohlke, Grandview, Park's Etta of Bonnie Brae, born May 2, 1920; Kenneth Cochrane, Toppenish, Polly of Seymour, born April 25, 1921; C. L. Lightburn, Grandview, Glenwood Dairymaid.

An Enthusiastic Meeting.

The Guernsey breeders of the valley enjoyed an enthusiastic picnic during the day. Among the speakers were E. C. Scott, county club leader; H. E. Angel, president of the association; E. V. Ellington, new head of the dairy department of the state college; H. P. Vermilye, secretary of the state fair; R. W. McKenna, manager of the Yakima Dairymen's association; A. E. Lovett, county agent; W. W. Underwood, assistant county agent leader, and a number of others.

Professor Ellington announced that it was the intention of the state college to begin very early the upbuilding of a Guernsey herd at the college experiment farm. He said that it was the intention to have on the college farm a herd of 15 head of each of the leading dairy breeds.

Doddies Come West

The live stock breeders of the state will be interested to learn that the entire Congdon and Battles herd of Aberdeen-Angus cattle will make their headquarters at the Yakima farm. Two carloads arrived recently from Maquoketa, Iowa, where Mr. Battles has been located for years and built up a reputation for the herd. Special emphasis has been laid on the Yakima herd during the last few years and the combination of the two herds will help in the establishment of the Doddies in the northwest.

The shipment consisted of 35 females and 10 bulls, including Prizemere 9th, proclaimed by expert judges to be one of the greatest Aberdeen-Angus bulls in America today. He won first in the 2-year-old class at the last Chicago International. He was defeated for the grand championship only because he lacked in flesh, it is claimed, due to his having been dangerously sick some three weeks before the opening of that show.

The cattle brought to the northwest are the remainder of the well-known Rosemere herd. They were the cream of 15 years of constructive breeding, and, while Mr. Battles was loath to take them from their native state and farm, around which are associated many boyhood memories and which later on was the scene of his breeding operations and incidental struggle for Aberdeen-Angus supremacy, he felt that he must have all the cattle under his personal supervision on one farm.

In the comparatively short history of the herd it has produced three grand champion bulls at the Chicago International, two grand champion cows and scores of first prize winners.

"We feel that with this addition to our western herd we will be better able to take care of the growing demand for Angus cattle in the Pacific northwest," said Mr. Battles. "There has been a brisk and increasing demand for Angus bulls this spring."

BULL CLUB ORGANIZED.

The Dayton Community Bull club has been organized in Mason county, with 10 members, each one equal shareholder in a registered Guernsey bull, which will replace the scrub bulls in the community. A 15-month-old bull was secured from A. L. Gile and will be the property of the club.

DUROC JERSEY BREEDERS.

All the Duroc Jersey breeders of the lower Yakima valley are supporting the state fair futurity and are making a special effort to put the maximum amount of growth on their young stock, is the report of C. M. Hubbard, state college extension live stock specialist. Boys' and girls' club work will receive the earnest support of the breeders. The breeders will also work for a strong exhibit at the state fair, a breed tour about August 15, a bred sow sale in February and a demonstration herd.

KITTITAS BERKSHIRE BREEDERS.

The Kittitas County Berkshire Swine Breeders' association, which was recently organized with Alva Bull as president, will take up the following program of work for the year:

A breed tour during the summer.
A bred sow sale next February.
Strong support of the boys' and girls' Berkshire club work.
A big exhibit at the county and state fair.

One of the best herds in the county will be used as a demonstration herd following the suggestion of C. M. Hubbard, the state college live stock specialist.

WASHINGTON'S CROP VALUES.

The valuation of farm crops produced in the state of Washington during 1919, not including live stock or live stock products, is given by the census bureau as about $227,212,000.

Helpful Exchange of Ideas and Experiences offered by Your State Farm Weekly



The Washington Farmer is welcomed just as much by the wives and daughters on the farm as it is by those who hold the plow handles or who drive the big reaper. It devotes articles, pages and departments in every issue to the special field of women. It aims to lighten the work of those who must perform the endless tasks in the farm home, and to carry a word of inspiration and cheer to those who keep the wheels in the farm household turning smoothly.

The "Family Circle," with its constant interchange of experiences, ideas, opinions and methods, becomes more and more popular as the weeks pass.

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Continued cooperation is necessary. We hope to make 1922 even more successful for cooperation than the past years have been. Please do your part.

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May 18, 1922.
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World's Record Jerseys

Our herd of 16 cows averaged over 56 lbs. butterfat per month for the year ended April 30, 1922. This is a world's record for the Jersey breed by a herd of 15 or more.

These cows have Register of Merit records averaging over 650 lbs. butterfat at an average age of 3 years 9 months—another world's record for a herd of 15 or more. All but two of these cows were bred by us. The above figures represent all cows in our herd with one or more official records.

Our herd is noted for good udders and teats, large size, correct conformation and ability to produce and reproduce. We are on the Accredited Herd List of the United States Government.

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His three silver medal daughters are—
Allena's Noble Lassie—673.75 lbs. fat in 305 days (world's record). Winner of two gold medals and 1 silver (2 tests).
Tiddledywink's Noble's Pride—532.15 lbs. fat in 305 days (junior 3-yr.-old). Winner of two silver medals and 1 gold (2 tests).
Tiddledywink's Golden Fern—548 lbs. fat (senior 2-yr.-old). Winner of 1 silver medal, now on 2d test.
These three young cows were shown at the state fair and the Pacific International, winning many prizes in the open classes as well as
1st in get of sire.
1st dairy herd in both shows, in spite of the fact they were not yet acclimated and in poor flesh.
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2 GREAT GUERNSEY SALES 2

NORTHWEST BREEDERS' SALE

at Pacific International Pavilion

PORTLAND, OREGON, MONDAY, JUNE 5TH, 1922

53 head of cows, bred and open heifers, service bulls and bull calves the tops of the best herds in the northwest.

Washington State Sale at S. W. Washington Fair Grounds

Chehalis, Washington, Wednesday, June 7th, 1922

50 head of choice Wisconsin Guernseys, mostly bred and open heifers and a few choice young bulls.

For Catalog Giving Full Information, Address

CHAS. M. TALMADGE, Sale Manager, Box T, SALEM, ORE.

Ashburn Farm Leads America

as breeder of cows in last year's medal awards. This is due largely to Valentine's Ashburn Baronet, leading sire in America for that year, and the most consistent sire of any of the gold medal bulls. With this blood we have tried to get the best of the St. Mawes and Golden Glow's Chiefs.

J. M. Dickson & Son **Shedd, Oregon**

220 HEREFORD BULLS, COWS, HEIFERS

all registered, high class animals, from the most famous blood of England and America, many of them from imported stock, at private sale at prices so low you can not afford to buy or keep grades. Cows, 3 to 5 years old; heifers and bulls, from 12 to 20 months old. Many cows have calves at side and are rebred. Many of the heifers bred to our gand herd sires, BEAU GALLATIN 15TH. and CARLOS 85TH. Satisfactory guarantee with each animal sold. Write to

L. L. YOUNG & SONS, Nampa, Idaho.

Great Production on Both Sides Pogis 99th of Hood Farm 48th

is our herd sire. His two nearest dams average 871 lbs. fat. His sire, Pogis 99th of Hood Farm, is recognized as the greatest sire of the Jersey breed, with over 100 Register of Merit daughters. His 10 highest daughters average 842.78 lbs. fat, greater than the highest ten of any other bull. Our females include the blood of St. Mawes and other great producing western strains. Cows now on test are making 70 to 80 lbs. fat per month. Two young bulls of this breeding, ready for service. Priced reasonable.

BEHRMANN FARMS, Forest Grove, Ore.

Six Registered Shorthorn Bulls For Sale

One 14 months old. Three 18 months old. Bred from Scotch bulls. All strong, vigorous animals. Will also sell a limited number of pure bred Shorthorn heifers. Prices right.

SMALLEY BROTHERS, Sprague, Wash.

Holger, Silver Medal Jersey Bull

heads our herd. He will soon be a gold medal bull and his daughters have established a world record for average herd production in the herd of McArthur & Stauff.

We have eight of his daughters and eight more good cows bred to him. Would sell entire herd.

WM. McBRIDE, Shedd, Ore.

Orchard Hill Farm Guernseys

"Home of high class Guernseys."
DR. PARK WEED WILLIS, Owner.
REDMOND, Wash.

Lynden Jersey Farm

offers young bulls of the famous St. Mawes and Golden Glow's Chief breeding. Prices reasonable.

P. MEENDERINCK, Lynden, Wash.

Ayrshires

Cows bred to and heifers bred by Will Peter Pan 16th, also yearlings and calves. Only one bull calf left. Some blood of Lilly of Willowmoor's sire.

J. U. SMITH, R. 1, Newberg, Ore.

ASHBURN FARM

Premier breeders of medal winning cows for 1920. Write for our illustrated folder and further information.

J. M. DICKSON & SON, Box T, Shedd, Ore.

Send for Free Booklet

"Some Suggestions to Live Stock Advertisers," outlining the practices of successful men of long experience. Helps in determining how much to spend, the mediums to select, preparing advertisements, handling inquiries, the use of photographs, etc.

Write today.

THE PACIFIC NORTHWEST FARM TRIO
Dept. L. Spokane, Wash.

Jersey Bulls at Bargain Prices

Send today for our special sale list of registered Jersey bulls from R. of M. dams. Easy terms, liberal credit.

WARREN GRAY, Box T. Jefferson, Ore.

Brown Swiss Stock Farm

Breeders of Brown Swiss cattle, the farmers' dairy cow. Young stock for sale.

THEO BRUGGER, Route 3, Gresham, Ore.

Please mention THE WASHINGTON FARMER when writing advertisers.

Read the "Want Ad" page this week for good offers of all kinds.

OREGON GOLDEN GLOW'S CHIEF JERSEYS

Have Two of Oregon's World Record Cows.
Have the Only Cow in the World With Two Records Over 1000 pounds Fat.

Their great Progenitor, Golden Glow's Chief, has more world record daughters than any other bull in the world. His four highest daughters average 910 lbs. fat, and his three highest, 947 pounds.

OREGLOW GOLDEN GLOW JERSEYS

We invite all attending the Fourth Annual Oregon Jersey Jubilee, May 25, 26, 27, to visit Oreglow Herd.

Our three herd sires are:

POGIS ONEIDA'S CHIEF 141024—Sire, Golden Glow's Chief; dam, Pogis Oneida. His first five two-year-old daughters to calve have made an average record of 533 lbs. fat.

VIVE GOLDEN GLOW'S CHIEF 154816—Sire, Golden Glow's Chief; dam, Vive La France. His first two two-year-old daughters to calve have just completed an average record of 520 lbs. fat.

Our junior sire is DARLING VIVE GLOW CHIEF 187368, a grandson of both Vive La France and Old Man's Darling 2d. Five times descendant of Golden Glow's Chief through that sire's three greatest daughters, who have an average record of 947 lbs. fat. He is seven times descendant of Chief Engineer, sire of Golden Glow's Chief; twice descendant of Pride Olga's 3d's King, sire of Lady Silken Glow, with record 1038.7 lbs. fat.

OREGLOW'S HERD AVERAGE is over 60 lbs. fat and half the records made by 2-year-olds; only two mature records; lowest record 429 lbs. fat.

GOLDEN GLOW'S CHIEF 61460 was bred by W. S. Ladd Estate. He is sire of four and grandsire of two of the 40 highest records of the breed (more than any Oregon sire and second for the breed).

His two greatest daughters and greatest double granddaughter have all been grand champion in the show ring of the great shows in the west and have an average record of 913 lbs. fat and have held four world records between them. No sire any breed has a record anything like this.

He is sire of Vive La France, who has made 555 lbs. fat more in her first five lactations than any other cow, any breed; on her 6th test is now making between 75 and 90 lbs. fat a month; only cow to twice make over 1000 lbs. fat; these records average 1035 lbs. and made two years successively; only cow to break two world records two years in succession (made 3 world records); present senior 4-year-old world record.

He is sire also of present junior 4-year-old world record.

He has 40 daughters TESTED BY TEN DIFFERENT OWNERS with an average record of 526.6 lbs. fat, or 95 lbs. per cow more than the average for the breed. 57 records made by his daughters have an average test of 5.64 per cent or .3 per cent higher than the breed average—high test means economical production.

He is both grandsire and great grandsire of Lady Silken Glow, record 1038.7 lbs. fat. This cow with his daughter, Vive La France, hold three of the seven 1000-lb. fat records of the breed. Their three records average 1036.8 lbs. fat—the four held by other cows average 1023.5 lbs. fat.

He is the only sire with four daughters that average over 900 lbs. fat (910 lbs.)—all cows still alive, producing big and bringing calves.

Oregon's greatest records are made by Oregon bred cows. The following great cows, and coming great cows of Oregon, whose names you have heard over and over have the following relationships to Golden Glow's Chief and Vive La France:

Old Man's Darling 2d—75 per cent or inbred daughter of Golden Glow's Chief.
Vive La France, Old Man's Darling, Sunlight's Glow, Morrow's Select—All daughters of Golden Glow's Chief.
Chief Engineer's Viola—Double granddaughter of Golden Glow's Chief.
Lady Silken Glow—Her dam an inbred daughter of Golden Glow's Chief.
Lulu Alphea of Ashburn—Four times descendant of Golden Glow's Chief.
Clara Lettie of Ashburn—Three times descendant of Golden Glow's Chief.
Star of Ashburn—Two leads to Golden Glow's Chief.
Lulu May of Ashburn—Two leads to Golden Glow's Chief.
Countess Stella of Ashburn—Two leads to Golden Glow's Chief.
Darling's Jolly Lassie—Her dam an inbred daughter of Golden Glow's Chief and her sire a descendant of Chief Engineer, who is sire of Golden Glow's Chief. (Lassie is dam of Oreglow's Junior Herd Sire.)
Lad's Iota—Granddaughter of Ruth Val, daughter of Golden Glow's Chief.
Diamond of Fair Acres—Descendant of Chief Engineer.
Silver Chimes Rua—Descendant of Chief Engineer.
Birdie Karnak of M. L. P.—Granddaughter of Birdie La France.
Birdie's Owl of M. L. P.—Descendant of Birdie La France and of blood in common with Golden Glow's Chief.
Helma of Ashwood—Descendant of Golden Glow.

These above cows have made six of Oregon's last twelve world records. Come to Oregon for Jerseys and to Oreglow for Golden Glow's.

OREGLOW HERD, Iron Mine Farm, Oswego, Ore. W. M. LADD, Owner.
D. BROOKS HOGAN, Mgr.

PICKARD FARM JERSEYS.
GOLDEN GLOW HERD.

We bred and own Vive La France, world's greatest dairy cow. Her production for first five years is greater by 555 lbs. fat than that of any other cow in the world, any breed. She is the only cow, any breed, to make two records each over 1000 lbs. fat. We bred and own Old Man's Darling 2d, world champion Jersey 4-year-old, record 983 lbs. fat. Three cows in our herd average 1020 lbs. fat. No other herd in the world has 3 cows that average so high. We have bred 14 cows that average over 700 lbs. fat. Only 4 of these were mature cows, the most of the others being 2 and 3 year olds. We have bred many others with splendid records. We now own or have bred 10 cows that average over 800 lbs. fat.

Our herd sire is Darling's Gallant Boy, son of Old Man's Darling 2d. His dam and granddam average 900 lbs. fat. His first daughters, as 2-year-olds, are making splendid records. We expect him to be a silver medal bull this year. His full sister, Darling's Gallant Lassie, as a senior 3-year-old, is producing close to 100 lbs. fat per month.

These are all Golden Glows. They are large, beautiful cows, with splendid udders and good teats. If you want to start right, start with Golden Glows, the kind that are proving right in both production and type. Make it a point to see these cows on your trip to Oregon Jubilee, May 25, 26 and 27.

PICKARD BROS. Marion, Oregon.

GOLDEN GLOW'S CHIEFTAIN

is our herd sire. He is a 75 per cent son of the great gold medal bull, **Golden Glow's Chief**, sire of Vive La France, Old Man's Darling 2d and other great cows. Our bull is a full brother of Old Man's Darling 2d, 983.68 lbs. fat as senior four-year-old, a world record which still stands, and his dam is a gold medal cow with a record of 817 lbs. fat. His sons and daughters are of excellent type and his four daughters in milk in our herd, at an average age of 1 year, 357 days, produced an average of over 460 lbs. fat in a year, ordinary herd care, twice a day milking. We have some choice young bulls combining this blood with that of the gold medal bull, Valentine's Ashburn Baronet.

Green Meadows Farm

Henry Stewart, Propr., **Albany, Ore.**

SILVER CLIFF JERSEYS

Foxhall's Chief Engineer, senior herd sire, combines the blood of Foxhall's Jubilee, sire of 28 Register of Merit daughters and 3 Register of Merit sons, with that of Chief Engineer's Viola, 726 lbs. fat, a gold medal cow, that was grand champion Oregon State Fair, 1917. Foxhall's Chief Engineer was grand champion Oregon State fair, 1917. His first daughter on milk won the milking contest Oregon State fair, 1921. She finished a year's test as senior yearling with 605 lbs. fat and qualified for silver medal.

Golden Glow's Chief of S.C. is a direct son of Old Man's Darling 2d, whose world record of 981 lbs. fat, as junior 4-year-old, still stands. She was grand champion Oregon State fair, 1916. Our herd combines type and production.

FOX BROS. Silverton, Ore.

CONAN'S GOLDEN CHIEF 136935

heads our herd. He is a son of Golden Glow's Chief. He was grand champion at the Lincoln county fair, 1921; a great individual, with the capacity and quality which have made this family great. He has back of him the great cows and bulls of the Golden Glow's Chief strain.

L. A. HULBURT, Toledo, Ore.

Fair Meadows Farm Jerseys

Our herd bull is out of a high producing sister of Vive La France, "the wonder cow." Young stock for sale.

V. S. ABRAHAM, Gaston, Oregon.

Blondy's Glow Lad 179934

is our herd sire. He is 40 per cent Golden Glow's Chief blood and 52½ per cent same blood as Vive La France. His sire, a 56½ per cent son of Golden Glow's Chief, and out of a 75 per cent daughter of Pride's Olga 3d's King. His dam is sired by a grandson of Stock Pogis of Prospect. She is a sister to Chief Engineer's Viola and Sultan Telivo, out of Sugar Sweet Violet, a full sister to Vive La France. Lad is 3 years old and weighs over 1600 lbs.; the biggest and best Golden Glow bull in central Oregon. Our females have type and similar breeding.

REELS BROS. Redmond, Ore.

More Than 110,000 Farmers

are subscribers and readers of The Pacific Northwest Farm Trio, The Washington Farmer, The Oregon Farmer and The Idaho Farmer. Your ad placed in these great farm magazines will bring you customers for your surplus stock.

OREGON ST. MAWES JERSEYS

(The St. Mawes-Rosaire's Olga Lad Strain.)

Have 3 of Oregon's 7 World Record Cows;3 of Oregon's Gold Medal Bulls, and More Than a Third of Oregon's 54 Gold Medal Cows.
They Nick With Every Line of Blood and Are Breeding On and On.

BOISE'S OLGA LAD

Sire, Rosaire's Olga Lad, a gold medal bull. Dam, Boise Queen, a gold medal cow. Full sister, St. Mawes Boise Rosaire, 891 lbs. fat; sold for $5100.

Boise's Olga Lad Is Being Mated With

nine daughters of Rinda Lad of S. B., sire of Lad's Iota, 1048.07 lbs. fat, the new sensational world record Jersey for all ages.

Five daughters of St. Mawes Lad, sire of St. Mawes Lad's Lady, 829.09 lbs. fat, the world record senior yearling.

We are offering typy young bulls sired by Boise's Olga Lad, out of daughters of Rinda Lad, that are making gold and silver medals as two and three year olds.

Frank Loughary & Sons. **Monmouth, Oregon**

Type and Production Combined
Our Senior Herd Sire, Daisy's Golden Poppy Is a Silver Medal Bull

He has three silver and two gold medal daughters. Four are now on test; two seem sure of gold medals, the other two of silver medals. His six two-year-olds—all his daughters tested at that age—average for one best day, 39.6 lbs. milk; his five three-year-olds, 50.6 lbs. milk; one four-year-old, 60.7 lbs., and one aged cow, 50.3 lbs.

With four daughters at the Pacific International, 1920, and ten in 1921, he has to his credit, one junior champion, four firsts, five seconds, four thirds, three fourths, two fifths, three sixths, one seventh and two eighths.

DAISY'S GOLDEN POPPY is the first silver medal son of St. Mawes Golden Poppy, sire of Poppy's Dortha, 994 lbs. fat, world record junior three-year-old.

Mated with our herd of cows of fine show type, he reproduces the type and production of the St. Mawes strain. Bull calves for sale.

CHESTER L. MULKEY, **McMinnville, Oregon.**

ST. MAWES LAD

HEADS OUR HERD.

He has more gold and silver medals and more production close up than any other Jersey bull in the west.

Our herd, except Betty's Lady Fern, 660 lbs. fat, is composed entirely of daughters and granddaughters of the great gold medal bull, Rinda Lad of S. B. They include the new world record cow for all ages, Lad's Iota, 1047.94 lbs. fat; Lad's Little Pauline, 941 lbs. fat, world record junior 4-year-old, in class AA, and Rhinda Lad's Trilby, 760 lbs. fat as junior 2-year-old, a class AA record.

The blending of the blood of St. Mawes Lad and Rinda Lad of S. B. produced the world record senior yearling, St. Mawes Lad's Lady, 819.09 lbs. fat, and St. Mawes Lad's Lucy, 708 lbs. fat as a junior 2-year-old, who will freshen for class AA. Four more two-year-olds are on test and all will surpass the records of their dams by a large margin.

We have placed our young bulls of this blood in some of the leading herds of the northwest.

S. J. McKEE, **Independence, Oregon.**

Blending of Two Great Strains

COIN'S DOUBLE GELATINE, son of Capt. Tristrom and Gelatine's Coin, and 56¼ per cent common blood of St. Mawes, is considered worthy for use in his great sire's stead, and is engaged by the owner of St. Mawes Boise Rosaire to be the sire of her next calf. For the sake of constitution and extreme production we are outcrossing him with the blood of Myra's Missionary, 75 per cent common blood of Rosaire's Olga Lad, including Poet's Mabel Mowat, by a 75 per cent son of Myra's Missionary, who will finish soon with about 870 lbs. fat, at 3 years, 3 months. A few calves for sale.

K. Hanneman **Corbett, Oregon**

Sunny Lea Jersey Farm

HERD HEADED BY THE MAORI.

Grandson of St. Mawes Lad through Capt. Tristrom. Dam, Waita of St. Mawes, by same sire as St. Mawes. Has produced 600 lbs. fat, beginning at 16 years, six months of age.

We are mating him to daughters of St. Mawes Lad, including St. Mawes Lad's Lady, our world record senior yearling, 829.09 lbs. fat. Young bulls for sale.

HARRY D. ILIFF, **Independence, Oregon.**

DUFRANO'S POPPY

Our senior herd sire is a son of St. Mawes Golden Poppy, sire of the world record junior 3-year-old, Poppy's Dortha, 994 lbs. fat. His daughters have good type and are producing big with first calf.

ST. MAWES BABE, our junior herd sire, is a son of Capt. Tristrom, who has more common blood of St. Mawes than any other bull. Babe is a double grandson of St. Mawes Lad, sire of the world record senior yearling, St. Mawes Lad's Lady, 829 lbs. fat. He is being bred on the daughters of Dufrano's Poppy. The mating is producing a beautiful lot of calves, with exceptionally good udders. When considering the St. Mawes strain, look our herd over.

GEO. W. LAWSON, **McMinnville, Oregon.**

ST. MAWES OXFORD BEAU.

Our junior herd sire, is a son of St. Mawes Lad, sire of the world record senior yearling, St. Mawe's Lad's Lady. His dam is the imported show and gold medal cow, Edith Oxford Belle.

We have bred him to the daughters of our imported Majesty bull and his calves have all the greatness of the Majestys, and we believe that the production of the Majestys, combined with that of the St. Mawes, will breed on with what is now and ever will be in demand—Production, with Real Type.

STANLEY RICHES. **—REGISTER OF MERIT JERSEYS—** **WALLACE RICHES.**
Turner, Oregon.

SUSIE'S ST. MAWES POPPY.

Our senior herd sire is a son of St. Mawes Golden Poppy, sire of the world record junior 3-year-old, Poppy's Dortha, 994 lbs. fat. His dam is the great show cow, Nashville Susie, grand champion P. P. I. E. stock show. His six daughters on test with first calf, and two with second, average over 50 lbs. fat for April.

Boise Queen's Olga Lad, our junior herd sire, is a full brother to St. Mawes Boise Rosaire, 891 lbs. fat as senior 3-year-old. He is being used on daughters of Susie's St. Mawes Poppy and St. Mawes Golden Poppy. Come and see our young stock.

7 head on test, 2 daughters of St. Mawes Golden Poppy and 5 of Susie's St. Mawes Poppy, have averaged over 51 pounds fat for the last two months. One mature cow in the seven.

JOHN KOPPLIN, **Gaston, Oregon.**

HOWARD'S JERSEY DAIRY

STRAIGHT ROSAIRE'S OLGA LAD-ST. MAWES JERSEYS.

Herd headed by TRISTROM'S ST. MAWES, 56¼ common blood of St. Mawes. He is a son of Capt. Tristrom, the great show bull who carried the richest inheritance of St. Mawes blood, and the magnificent cow, Gelatine's Coin. She is out of Gelatine of St. Mawes, full sister to old St. Mawes and dam of Capt. Tristrom.

Now situated ¾ mile east of Beaverton, and 8 miles west of Portland.

D. C. HOWARD, **Beaverton, Oregon**

Three Grandly Bred Bulls

ANOKA'S POPPY'S ST. MAWES was bred on our foundation cows. He is by St. Mawes Golden Poppy, sire of the world record junior 3-year-old, Poppy's Dortha, 994 lbs. fat. He was followed by **Violet's Olga Lad**, son of the great gold medal sire, Rosaire's Olga Lad, and out of St. Mawes Keffee Violet, 777 lbs. fat. We are now using **Baronet's St. Mawes of Anoka**, a son of the gold medal sire, Valentine's Ashburn Baronet, and out of a daughter of the silver medal bull, St. Mawes of Ashburn, that will be a gold medal cow with near 800 lbs. fat, finishing her test May 31.

R. B. SEELY, **Sherwood, Oregon.**

THE FOUNTAIN HEAD.

ST. MAWES was originally used in our herd. Bred on a small herd of cows rich in the blood of Coomassie, his 20 tested daughters average higher than all the daughters of any other Jersey bull having 20 or more tested daughters. Four of his daughters, full sisters, average 728.2 lbs. fat, the highest average of any four full sisters in the world. One of them has five daughters in the Register of Merit, of which three have won gold medals. Their average is 655.03 lbs. fat, and the four highest average 712.71 lbs. fat. St. Mawes was the first gold medal bull in the west and has more proven grandsons and Register of Merit granddaughters than any other western bull.

ROSAIRE'S OLGA LAD, bred on the daughters of St. Mawes, has 46 daughters in the Register of Merit, and more still coming. He is a gold medal bull and his ten highest daughters average 757.06 lbs. fat. He has 14 proven sons, of whom three have sired world record cows and two of the records still stand. One of these, St. Mawes of Ashburn, is a silver medal bull, sire of the ex-world record senior yearling, Lulu Alphea of Ashburn, 800 lbs. fat. Another is a gold medal bull and sire of St. Mawes Lad, who sired the world record senior yearling, St. Mawes Lad's Lady, 829 lbs. fat. The other sons are St. Mawes Golden Poppy, sire of the world record junior three-year-old, Poppy's Dortha, and Poppy's Golden St. Mawes, sire of the senior two-year-old, St. Mawes Pretty Lady.

POPPY'S ST. MAWES, son of Rosaire's Olga Lad, and out of the best daughter of St. Mawes, was bred and used by us. He was the first gold medal son of a gold medal sire, besides having a dam and dam's sire both gold medal Jerseys. He is the gold medal sire of St. Mawes Lad, who is a world record sire, as mentioned above.

POGIS 75TH OF HOOD FARM, a gold medal bull with four gold medal daughters and breeding going back to common blood with our original herd, is now being bred on the great producers sired by above bulls, though Rosaire's Olga Lad is still being used. Pogis is the fourth gold medal bull used in our herd. We are still breeding potential gold medal bulls and heifers and probably world record Jerseys.

ED CARY, **OAK SPRINGS FARM.** **Carlton, Oregon.**

ST. MAWES GOLDEN POPPY
Heads Our Herd

He is a son of the great sire, Rosaire's Olga Lad, and out of St. Mawes Poppy, the greatest daughter of St. Mawes, both by her own record of 952 lbs. fat, and the world record cows sired by her sons and grandson.

ST. MAWES GOLDEN POPPY sired the wonderful world record junior 3-year-old, Poppy's Dortha, 994 lbs. fat. Three of his two-year-old daughters average 524 lbs. fat, and two of his three-year-olds, 809 lbs. He has a number of daughters on test that will qualify for silver and gold medals. He has a silver medal son, who will soon qualify for a gold medal. One son now for sale out of a silver medal dam.

LYNN & NEDROW, **OAK LODGE FARM.** **Perrydale, Oregon.**

GREAT LINE BRED ST. MAWES HERD.

TOSCA'S ST. MAWES, our first St. Mawes bull, was by the gold medal sire, Poppy's St. Mawes, and out of Tosca's Fair Daughter, an inbred St. Mawes with a record of 539.78 lbs. fat. He was used on cows of Golden Maid's Prince and Noble of Oaklands blood and splendid Jersey type, with records up to 850 lbs. fat. His daughters are big producers.

ST. MAWES POPPY'S ROSAIRE LAD, our second St. Mawes bull, has every prospect of being a silver medal bull with first 3 heifers on test with first calf, 2 of them senior yearlings.

POPPY'S ST. MAWES is now being used. He is by Rosaire's Olga Lad and out of St. Mawes' greatest daughter, and is the first gold medal son of a gold medal sire. He is sire of St. Mawes Lad, who sired the world record senior yearling, St. Mawes Lad's Lady, 829 lbs. fat. His calves have fine udders and good type.

We now have a son of St. Mawes Lad out of LaBelle's Girl, 901 lbs. fat, to breed on these great daughters. How can both heifers and bulls help but breed on?

GEO. BIERSDORF. **Cornelius, Oregon.**

Type and Production

ST. MAWES NOBLE, our senior herd bull, has 14 Register of Merit daughters, with records up to 613 lbs. fat at 3 years old. These records are being greatly raised this year. He combinese the breeding of the great producing St. Mawes strain with the wonderful show type of the Nobles.

ST. MAWES SUSIE OLGA LAD is being mated with these cows. His 3 nearest dams average 841 lbs. fat. He combines the blood of the two greatest daughters of St. Mawes with that of Rosaire's Olga Lad. His get show great uniformity and promise of high production.

Our nine cows on test averaged 64.5 lbs. fat in March. We are offering a choice young bull at an attractive price. Can spare a few heifer calves.

J. C. BROWN & SONS. **Shedd, Oregon.**

RICHEST ST. MAWES BREEDING

GREAT COWS MEAN GREAT OFFSPRING.

with a record of 891 lbs. fat, and her daughter, a straight 75 per cent Rosaire's Olga Lad heifer; also Gelatine's Coin, 607 lbs. fat, under adverse conditions, and Niece of St. Mawes, both out of a full sister of St Mawes. Entire herd straight St. Mawes-Rosaire's Olga Lad breeding. All are or will be officially tested. Capt. Tristrom and Susie's Poppy's St. Mawes will soon have offspring for sale from this mating.

RICHARD C. WILLIAMS, **Sherwood, Oregon.**

BELLEVUE FARM JERSEYS

Rich in the blood of St. Mawes, Rosaire's Olga Lad and Rinda Lad of S. B. Our herd is headed by St. Mawes Chief, son of Poppy's St. Mawes and out of Gem of Boise, a daughter of St. Mawes. Included in the herd are two direct daughters of Rinda Lad of S. B., the gold medal cow, Flossie May St. Mawes, 777 lbs. fat, and others of similar rich breeding.

GEO. LAWRENCE & SON, **Estacada, Oregon.**

HOME OF THE WORLD RECORD SENIOR TWO-YEAR-OLD
ST. MAWES PRETTY LADY

whose 824.35 lbs. fat brought the senior two-year-old record to Oregon for the first time. Her sire, Poppy's Golden St. Mawes, is a full brother to St. Mawes Golden Poppy, sire of the senior three-year-old, Poppy's Dortha, 994.25 lbs. fat, and to the gold medal bull, Poppy's St. Mawes. She has two crosses of the St. Mawes-Rosaire's Olga Lad strain, and is only a sample of the Jerseys we breed.

We have for sale full brother in blood to Lady, 8 months old; also a bull calf out of her dam, Olga Lad's Dewbell, 633 lbs. fat, and by our senior herd sire, Belle's St. Mawes Lad.

L. C. DANIELS. **Tillamook, Oregon.**

JERSEY JEWEL DAIRY FARM.
IOTA'S ST. MAWES

heads our herd. He is a son of the new world record cow, of all ages, Lad's Iota, 1048.09 lbs. fat, and by St. Mawes Lad, sire of the world record senior yearling, St. Mawes Lad's Lady, 829.29 lbs. fat. Our herd gives him some of the best blood of St. Mawes, Rosaire's Olga Lad and Hood Farm stock to breed on. See his daughters and notice their dairy type and temperament.

E. E. WATTS, **Hillsboro, Oregon.**

Washington St. Mawes Jerseys Also

GWENDOLA ROSAIRE

has three gold medal records in succession—830 lbs. fat, 919.8 lbs., and 749.25 lbs. She is the highest record daughter of Rosarie's Olga Lad, and is dam of Silver Chimes Gwendola, ex-world record senior yearling, and still world record in class AA. She is also dam of Gwendola's Rosaire Gertie, that is now making Washington state record as senior yearling, and of other great cows. We have for sale her son, just a year old, by Gertie's Poppy's St. Mawes, whose junior two-year-old daughters have made over 500 lbs. fat with first calf. He is a full brother to Gwendola's Rosaire Gertie and is a good individual. Also other richly bred St. Mawes bulls for sale.

N. C. SORENSEN, **Chehalis, Wash.**

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We began testing last fall. With nine on test, five have made over 50 lbs. fat in a month, one over 73 lbs., and one over 60 lbs. Four are two-year-olds; three, 3-year-olds; one 4-year old, and only one mature cow.

We are breeding both show type and production. Both sexes for sale.

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THE WASHINGTON FARMER

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When Is a Dollar Not a Dollar?--Page 6

Holstein Sale

Of Whatcom County Association

By RALPH ERSKINE.

The breeders of the Whatcom County Holstein-Friesian association are to be congratulated upon the energy and initiative with which they staged their first auction sale of registered Holsteins in that territory. Sixty-four head of breeding stock were consigned at the county fair grounds at Lynden, May 11th.

The seven breeders consigned 50 females and 14 bulls, most of the latter being young animals. Practically all the animals were bred by the members of the association, which made the sale truly a breeders' sale. It was largely due to a turn of good weather and the sale coming at a time when most of the farmers were busy in their fields, that the prices were not as high as was hoped for the quality of the stock offered.

The top animal, Canary Aaggie Piebe, a well bred, straight, typy animal, and a daughter of Paul Aaggie Oakhurst, was consigned by P. P. Lee and purchased by William Bishop of Chimacum, for $300.

The majority of the animals were kept in the county. Thirteen head were purchased by the Milky Way farm of Sumas, while others were picked up by breeders as far distant as Kent and Eatonville.

The 50 females brought an average price of $127.50, while the bulls brought a lower figure and the total average was $112. Much credit is due to the consignors for their effort to put on a quality-guarantee sale that would be satisfactory to the consignor and the buyer.

The consignors were: P. P. Lee, Bellingham; H. J. Evans, Ferndale· Andrew Benson, Lynden; N. P. Sorenson, Bellingham; A. Blankers, Lynden; Piet Bergsma, Lynden, and Claud Graham, Ferndale.

Officers of the Whatcom County Holstein-Friesian association, one of the strong associations of the state, are:

Archie Wright, Everson, president; H. J. Evans, Ferndale, vice president; A. W. Dahlquist, secretary-treasurer. The sales committee consisted of A. W. Dahlquist, Mrs. E. J. Tyrrell, W. B. Vandergriend, D. H. Smith, P. Bergsma, and H. J. Evans.

George A. Gue of Yakima was auctioneer.

BUYS BULL CALF.

J. R. Martin, a well-known Jersey breeder of Satsop, Grays Harbor county, has purchased a new bull calf, Theater Cup, from the A. L. Bright herd at Newark, N. J. The calf is sired by Theater Cup Prince, a prize winning son of Fauvic's Prince, whose daughters have a butterfat production which is said to average higher than any bull of any breed. The calf's dam is Fairy Boy's Oxford Fern, a show



Theater Cup, a new bull calf purchased by J. R. Martin of Satsop, Wash., from the Prospect farm of Newark, N. J.

cow who holds four seconds and one third prize in the big eastern shows where she competed against as high as 20 in her class.

The calf is slightly over 6 months, but shows some excellent quality, and he will soon be placed at the head of the Martin herd of 25 purebred animals. The entire herd is kept on official test and three of the animals are expected to make silver medals before fall. The entire output from the herd is sold to the Elma milk trade and to the cheese factory.

ASSOCIATION BUYS BULL.

The Walla Walla Valley Cooperative Bull association, of which Frank Wilson of Walla Walla, Wash., is secretary, has recently purchased from J. J. VanKleek & Sons of Hillsboro, Ore., a richly bred young Jersey bull. The calf is by the silver medal bull, St. Mawes of Ashburn, and out of Lettie's Blossom, by Sultan's Telivo, a heifer that has just won a silver medal with first calf. M. C. Abrahamson of Amboy, Wash., also purchased a VanKleek bull about the same time. This one is out of Darkey's Lass, another silver medal daughter of Sultan's Telivo, with first calf, and the sire is St. Mawes of Ashburn.

MOVES HERD TO MONTESANO.

Jacob Kooy has recently moved his herd from Elma to Montesano, where he will build up a herd of registered Holsteins. He has seven purebred cows milking at present and two grade animals which will be disposed of later. There are a total of nine purebred females on the place.

He is not forcing any of the cows, but is milking them three times daily, which he considers better for all-around conditions than a four-time plan. It is less work, and the cows do well unless they are giving over 100 pounds a day. He feeds only five pounds of grain for each pound of milk.

Two of the herd are on semi-official test. Ononis DeKol Johanna, a heifer, has produced 4465 pounds of milk and 140 pounds of butterfat in 72 days. She is now on her third month of the test, is fourth in the state for her class. She is by a son of Marjorie Newman, and is out of Ononis Cornicopia DeKol, one of the females owned by T. R. Yarr of Chimacum.

AMONG LEADING RECORDS.

Among the leading yearly records recently reported by the Holstein-Friesian Association of America are four from the northwest, two of them made by Max Arp of Eugene, Ore., one by Ralph H. Tuttle of Walla Walla, Wash., and one by R. L. Rutter Jr. of Ellensburg. Those of Mercedes Alcartra Mead, the new senior 4-year-old state leader, and of Lucy Freela Pontiac, at full age, have already been reported in THE FARMER. The one made by Tuttle was on Von Heim Winnifred Colantha at 5 years. The animal produced 22,546.9 pounds of milk and 805.50 pounds of fat, the equivalent of 1006.87 pounds of butter, in one year, and thus by production as well as by breeding becomes one of the important members of the Tuttle herd. Daisy Blossom Fayne, a junior 4-year-old product of Todd breeding, brings Rutter's Lockwillow herd to the fore with a record of 19,909.3 pounds of milk and 762.38 of fat. The latter is the equivalent of 952.57 pounds of butter.

RECORD FOR FAT PRODUCTION.

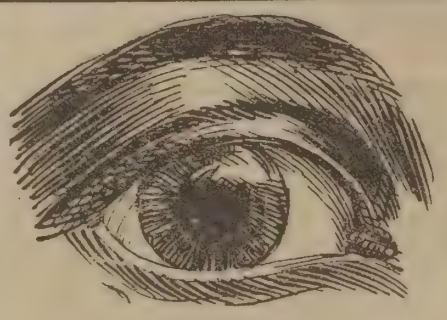
Parker Askew's herd of Jerseys of Montesano still holds the record for fat production in the aged class for Jerseys with Alpha's Lady May. She has a record of 713.40 pounds of fat and 12,751 pounds of milk in a year. She is in class AA.

There are 20 head of purebred females in the Askew herd, all of which are making good records. The herd sire is Oxford Lad, from the Taylor herd and is out of Golden Massie Polo 3d.

HOLDS HIGHEST HERD AVERAGE.

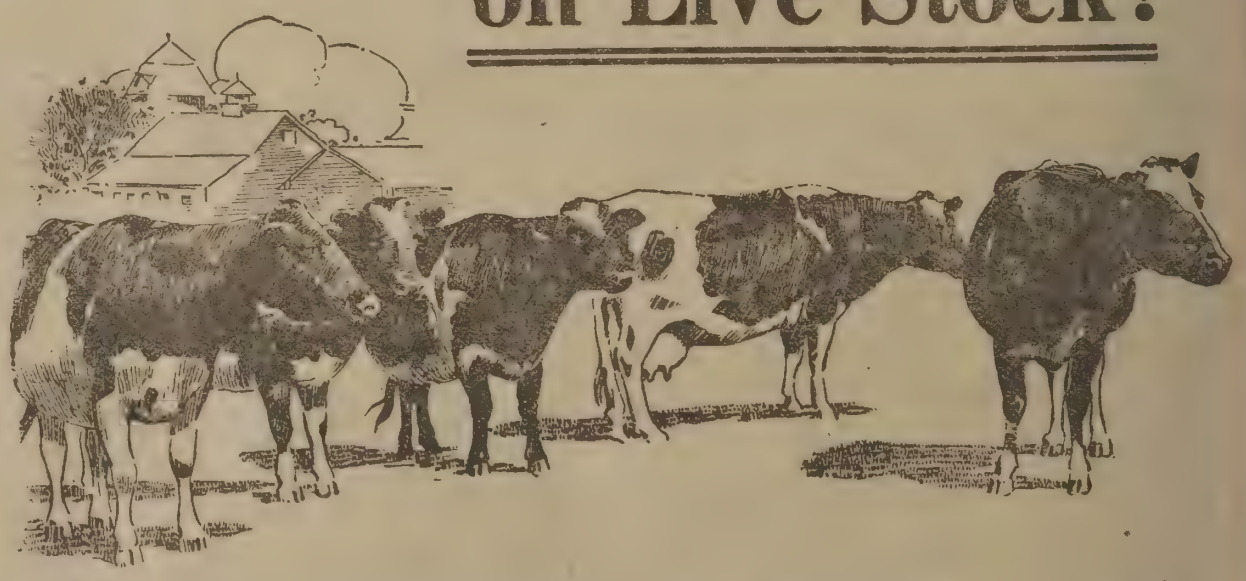
The Valley Gem farm, owned by J. E. Wrage, Guernsey breeder of Arlington, holds the highest herd average in the cow testing association in Washington for the last three months. In March the entire 27 cows averaged 1001 pounds of milk and 46 pounds of butterfat each.

In making this record for the three months' period the herd competed against 2680 cows in western Washigton. Mr. Wrage is a member of the Stillaquamish Valley Cow Testing association, which operates largely in Snohomish county.



Fix Your Eye

on Live Stock!



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For Good Farming, Attractive Country Homes and Happy Country People

State Grange Ready for Convention

Prospects Good for Thirty-Fourth Annual Gathering June 6-9 at Yakima

The 34th annual convention of the Washington state grange will be held this year at the state fairgrounds at Yakima June 6, 7, 8 and 9.

The Horticultural building will be used for all meetings and the delegates and visitors will have a chance to camp in the maple grove on the grounds. The grange warehouse will operate a service for the delivery of all supplies needed on the grounds during the week and a large number are expected to make the trip by auto and camp out.

The voting delegates will include the masters of the Pomona and subordinate granges and their wives, but any granger may attend the convention. There will in all probability be more visitors than delegates present during the entire week.

On Monday, June 5, the state executive committee will hold a preliminary meeting before the convention is formally opened. The directors of the Grange Fire Insurance company will meet and the financial details of the secretary and treasurer will be gone over and put in readiness for the convention. There will also be a meeting on Monday for those that are especially interested in cooperation.

On Tuesday, the opening day, E. L. French, director of agriculture, will deliver the address of welcome. The address of the master will then be given and a sightseeing trip will occupy the afternoon. Congressman John C. Ketchum, past master of the Michigan state grange and past lecturer of the national grange, is expected to address the convention in the evening. A team from the Lower Naches grange will give the first and second degrees.

On the morning of the second day, Wednesday, the third and fourth degrees will be given by a team from the Broadway grange. The election of officers will also take place on the second day in order to fill the office of master, which is now vacant, Fred Nelson having taken the office last year as acting master from his office of overseer following the removal of William Bouck by National Master Lowell. Other officers, such as state lecturer and one member of the executive committee, will be elected. The general election, however, takes place every two years.

Thursday will be held for the receiving of delegates from other fraternal organizations, the farm bureau and the farmers' union having been invited. The installation of officers will also be taken up and the fifth degree will be put on by the Benton county grange and the sixth degree by the state grange officers.

The last day of the convention will bring the reports of all communities and such other details as are to be brought up before the general meeting. The program is expected to be completed before the close of the day and the delegates will have the following day to return to their homes.

Speaking of the possibilities of the meeting, A. W. Swigert of Yakima, treasurer of the state grange, said that he believed this year's session will be one of the most enjoyable conventions ever held and can also be made great in accomplishment.

"GRANGE" BELONGS TO GRANGE.

That the name of "grange" belongs exclusively to the order founded by Father Kelly over 50 years ago and to its state and subordinate orders is the ruling of the superior court of King county in the case brought by the Washington state grange against William Bouck to prevent his using the word as a part of an organization that he is attempting to build up throughout the state. Several months ago the regularly constituted state grange won a preliminary decision in the King county courts and the one handed down last week apparently decides the case definitely and finally in favor of the original order.

Former Master Bouck, after being suspended as master by National Master Lowell, which suspension was unanimously approved by the national convention in Portland last winter, and after having failed in an attempt to have the Washington state grange secede from the national order, undertook the formation of a new and radical order, which he named the Western Progressive grange.

It is apparent that if he desires to continue in the movement for a new organization a name not including the word "grange" will have to be selected.

For the benefit of all persons interested in this important case, The Washington Farmer will, in an early issue, publish in full the findings of Judge Ronald of the King county superior court, upon which he rendered his decision restraining Mr. Bouck and his associates from using the word "grange" in their organization.

The "Bang" Herd at Steilacoom

To the Editor: I want to thank you for your splendid story of our "Bang" herd at the Western State hospital by Mr. Erskine, but I think in fairness to all, one or two slight errors, wholly excusable from a newspaper man's standpoint, but misleading to the general reader, ought to be corrected.

At two different places in the article Mr. Erskine speaks of the "purchase" of tubercular cattle.

Since I have been governor we do not pay anything for "reactors" and do not even accept them as a gift unless they are of exceedingly high class breeding. We have declined to accept "reactors" from some of the largest and highest priced herds in the state simply because the individuals were not better than the ordinary bred cow.

I find that most breeders who are unfortunate enough to have one of their very best cows or heifers react are glad to have us take them and given them the proper care and attention, the breeder getting his pay out of the records that we may be able to make from his breeding. This statement applies to all of the tuberculars we have accepted since I have been governor with the lone exception of our senior herd sire.

I wish you would kindly make note of this in some early issue of THE FARMER.

Very truly yours,
LOUIS F. HART,
Governor.

Olympia, Wash.

Newhouse Takes New Position

Succeeding C. I. Lewis, who recently went to Chicago to become managing editor of a national fruit publication there, M. J. Newhouse of Vancouver, Wash., has accepted a position as assistant manager of the Oregon Growers' Cooperative association and will move at once to Salem, Ore. Newhouse is a graduate of Washington State college, who during his service as agricultural agent in Clarke county showed a talent for organization and became manager of the Washington Growers' Packing corporation. This cooperative concern, which controls a large acreage of prunes in Clarke county, has worked in close harmony with the Oregon growers.

To Loan Money

Wool Growers Form Corporation

Formed primarily to loan money for long periods at low rates of interest to live stock men, the Wool Growers' Service corporation, articles of which were filed at Olympia early in May, will also seek to stabilize the live stock industry through cooperative marketing and the development of winter feeding. A. D. Dunn of Wapato is president, T. J. Drumheller of Walla Walla vice president and J. F. Sears of Prosser secretary-treasurer, and the other incorporators are C. H. Anderson of Ellensburg and T. H. Smith and Archie Prior of Yakima. The capital stock is $100,000, which will enable the corporation to loan a maximum of $1,000,000 through the war finance corporation. Loans will run for three years and will bear about 8 per cent interest. It is expected that money will be available by July 1.

Not merely sheepmen, but cattlemen as well, will benefit by this means, for it is proposed to bring both feeder lambs and feeder steers into the state for market fitting. Local farmers will thus be given a home market for their grain and alfalfa and most of the money that goes out of the state each year in gigantic feeding operations in the east, will be retained. Similarly, officers of the corporation point out, thousands of dollars could have been saved this year if sheepmen had been in a position to control their own wool clip.

"The figures are staggering," says Secretary Sears. "On a business that has a capital of upward of $10,000,000, our loss on wool alone during the last two years, due solely to the lack of organization, was $750,000, or 7 1-2 per cent of the capital. Any fair-minded sheepman will concede that if we had possessed proper facilities for holding and handling our wool in 1921 we could have saved 10 cents per pound. This year, with the same facilities, we could have saved 5 cents per pound. On a 5,000,000-pound clip, this means a $750,000 loss."

Profit From Surplus Skimmed Milk

Surplus skimmed milk is now being manufactured into powdered milk at the Burlington plant of the Skagit County Dairymen's association. Hitherto, the plant has made butter and cheese only while the skimmed milk has been turned out to the dairymen for hog and calf feed, which has not proved as profitable to the dairymen as the manufactured products. The plant is now producing an average of 5000 pounds of powdered milk daily.

"There is a constantly growing demand for powdered milk on the eastern and California markets," according to J. M. Humpheries, manager of the factory. "The powdered milk is used in bakeries, kitchens, for ice cream making, confections, as well as for home use. In California, especially, the housewives are using more and more of this product for general cooking purposes. The powdered product is preferred especially during warm weather when it is difficult to keep milk. There is some demand for the powder on the foreign market, but we have not made any extensive shipments of this kind."

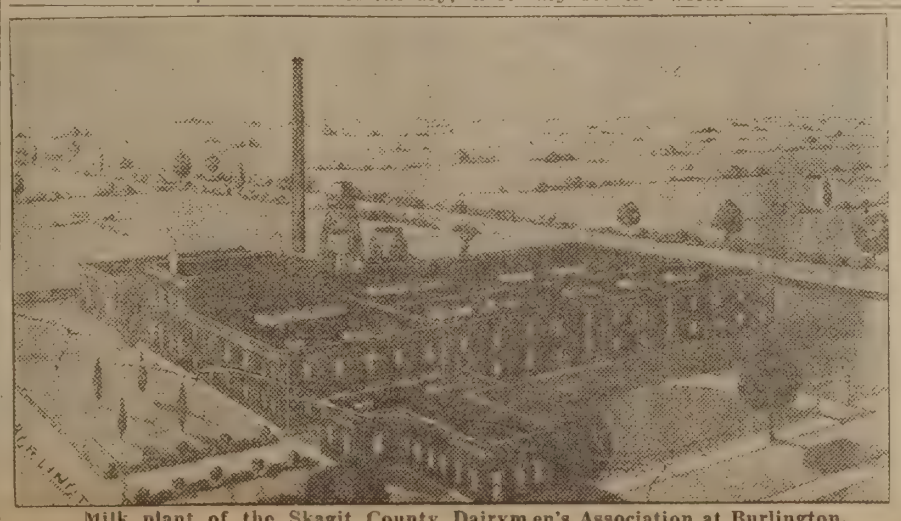
In the process of manufacture the skimmed milk from the separator is condensed to a 4 to 1 consistency which leaves only about 40 per cent solids. The mixture is then pumped into a hot chamber through spray nozzles and the vapor thrown off. The powder is then separated from the vapor as it strikes the dry, warm air. Powdered milk collects in the bottom of the chamber while all of the moisture is drawn out with the vacuum at the top.

This milk plant handles a total of approximately 165,000 pounds of milk daily, a small part of which is kept in the Federal condensery at Mt. Vernon. The butter and cheese produced at the factory are sold largely on the local market. Approximately 2500 pounds of cheese are manufactured daily.

Of the three big plants now in operation by the United Dairy association of Washington, the Skagit county milk plant is the last to be completed. It has, however, almost doubled the capacity of any of the others. There is room for yet another condensing plant and necessary machinery.

The cheese rooms contain six large vats as well as a number of modern glass-lined storage and weigh tanks. The cheese curing room has a capacity of six cars and is cooled by ammonia pipes from the 10-ton capacity refrigerator plant. The battery of five separators is equipped, each having a capacity of 24,000 pounds per hour.

There are about 1000 patrons who supply milk to the plant, all of whom are members of the Skagit County Dairymen's association. The milk routes are handled by contract plans, 20 large trucks being necessary for the work.



Milk plant of the Skagit County Dairymen's Association at Burlington.

Potato Industry

What Certified Seed Means

"An increase of from 10 to 25 per cent would be realized from the entire potato acreage of the United States if every one were to use first-class potato seed. This is what really could be done from the use of certified potato seed," according to E. L. French, director of the state department of agriculture, who quotes the above from the United States department of agriculture. This would mean an increase of money value for the potato crop of the year of between $32,704,000 and $81,984,000.

"The condition of the potato seed used for planting is usually such as to cause a heavy annual loss to the potato grower," said Mr. French. "There are many diseases and pests which affect the potato crop in this state, many of which are increasing at a rapid rate. This increase can be checked by planting seed which is free from disease.

"An increase of at least 25 per cent of the amount of potatoes produced in potato producing areas in Washington could easily be obtained by the use of good seed. Seed potatoes entered for certification in 1919, the first year that the law was in effect, amounted to 451 acres, of which only 90 acres passed the final tests and were certified. This increased in 1920 to 190 acres certified and in 1921, 600 acres were entered for certification, of which 405 acres passed the usual tests and were certified. The most that can be said of this is that a fair start has been made to restore the potato industry of the state through the production of seed free from disease.

"With good seed, produced in strict accordance with law and in sufficient quantities to meet the requirements of the commercial potato growers, there is no reason why potato production in this state should no regain a higher position than even in the past.

"But there are two things to be taken into consideration. One is that these results will not be accomplished if there is any relaxation of the regulations for the production of certified seed. The other is that no good, but possibly a good deal of harm may result if farmers without previous experience in the industry are lead into the attempt to produce great quantities of seed potatoes, which they hope to get certified and to sell at very high prices.

Smith-McNary Bill Delayed

At this writing indications are that the Smith-McNary reclamation bill in congress may not be acted upon at this session of congress. The latest development is the attitude taken by Representative Mondell of Wyoming, republican leader of the lower house, who has taken a position supposedly not exactly against the measure but not in favor of it. He is reported to have refused to assist the house steering sommittee in getting the measure before that body, which apparently promises greatly to delay action on the bill.

It appears that part of the east is doubtful of the measure or actually opposed to it, partially because of misunderstanding the possibilities that it contains for national development, and partially through misguided jealousy of the growing industry of the west.

The measure would advance $350,000,000 as a revolving fund which would be used for the reclamation of land throughout the entire United States. It is estimated that within 20 years the fund would produce $2,000,000,000, or sufficient to develop practically all the productive waste lands

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How Not to Reduce Taxes

It is perhaps more to the point to discuss how to lower taxes than how not to lower them, but it is easier to discuss the latter. Furthermore, if we can find out how not to reduce them, possibly we can reverse the system and slip out from under a part of the staggering burden that threatens to break the back of the American public.

Here is one way that is guaranteed to prevent lowering of taxes: Vote for every bond issue that comes up and see to it that lots of them come up. Bonds have to be redeemed sometime and it takes money to redeem them. It takes taxes usually to raise money for a public purpose like that. Then again, bonds bear interest. That is one reason why investors buy them—to get the money that the people of a bonded district raise by tax levies to meet constantly accruing interest. Hence the desirability of voting plenty of bonds for whatever improvement is wanted, and wanting lots of improvements. Incidentally, we are living in an improvement-loving age. We must keep up with our neighboring county or district at all costs. We want everything and we are determined to have everything that we want.

Then again, if we are threatened with a reduction of taxes, we want to raise a goodly rumpus if our representative in the legislature fails or is about to fail to get an appropriation for the particular bridge or piece of new road or something that we want. Get him to swap his vote with the representatives from other counties that want bridges or those from the cities that want armories and trunk highways. To be sure, the people in the cities that want hard-surface highways across the state have a much better opportunity to help keep taxes up than the farmer who would be satisfied to have his dirt roads graded and drained so he could get to town, but the farmer can do his part by having his representative vote for the city man's project in turn for the city man's voting for his.

To be sure, as suggested at the outset, if it is tax reduction we want, we can get it by reversing these recommendations. We can vote down a few bond issues like we did the $42,000,000 Carlyon highway bill two years ago, and be content to pay for our highways as we go. We can do without a few things that we would like to have and that would really be good to have. We can stand solidly behind our representatives in the legislature when they want to vote down appropriations, and demand that they vote them down whether they want to or not.

If we want something we must pay the contractor to get it for us. If we are willing to do without it we can save our money. When all is said and done, the unprecedented tendency on the part of the American people to have what they want at any cost, and the almost limitless number of their desires, are responsible for the burden of taxation under which county, state and nation are staggering today.

Chinese Eggs a Menace

George Breed of Lynden has had much experience with the Chinese egg problem, having spent some time in China himself with one of the large egg companies. He gives the following brief points about the production of eggs in China:

The Chinese have no chicken houses, but every family has a small flock and the birds live in the house with the family and are given no feed except what few scraps are thrown away. Each flock consists of from 5 to 12 birds. They are mostly red and look like our game flocks. They lay practically no eggs during the winter, but what eggs are laid are saved and sold to Chinese coolies, who gather them in two large baskets for as small prices as possible. They are then taken to the large egg dealers, carrying them a distance of from 5 to 25 miles.

Such labor is worth only 16 cents in gold a day and an average Chinaman can raise a family on this amount. Chinese people never eat eggs except on Chinese New Year, it being their habit to eat nothing that can be sold for actual cash.

At the large egg plants the eggs are either packed for shipping, broken, mixed and frozen for "egg meat" or dried as egg powder. Products of this kind are sent to the American market, where they compete with our eggs that are produced at a greater cost.

There is food for thought in that little picture of an overseas industry that is competing with the farmers of this and other states of America. There may be artificial standards of living in some quarters of this country that make for an unnecessarily high cost of production, but not so on the farm. There is still room for a higher standard on the American farm, room for shorter hours of toil and more freedom and recreation that would result from better prices for farm products. The admission of Chinese eggs into this country, produced on the plane described by Mr. Breed, is a direct slap at the standard of living in our own rural districts.

Yakima Fruit Prospects

Every variety of fruit except plums and prunes, which furnish but a small proportion of the total, will contribute an increase over last season to the total of 18,264 carloads now estimated by H. A. Glen of the Northern Pacific as the output of the Yakima valley for the coming season.

The estimate is based on appearance at blossom time, and is subject to revision after the hard frosts of early May. Frequently, however, these frosts prove more beneficial than otherwise, because of the thinning expense they save.

The total is an increase of 3000 carloads over the actual shipments of 1919, and if the estimate is borne out it will show practically full recovery from the freeze of 1919.

Mr. Glen estimates apple shipments at 13,155 carloads; pears, 2540; peaches, 1534; cherries, 154; strawberries, 35; plums and prunes, 125; mixed cars, 334. Peaches are the only fruit not fully recovered from effects of the freeze. In 1919 2200 carloads of peaches were shipped. The figure fell to almost nothing in 1920, but came back to 1332 last year.

Standard Weights and Measures

The weights and measures division of the state department of agriculture, which was recently transferred from the office of the secretary of state, is making an attempt to standardize all weights and measures that are used for the convenience of the public.

W. B. Newcomb, superintendent of the division, reports that he finds many different kinds of weights which have been plugged or "rebuilt" to replace ones that have been lost. These, while they might balance the scales, are always sure to cause doubt in the minds of those who have to buy goods which are weighed by such weights.

In many cases the home-made weight does not balance on all loads and the inspectors are in the field to correct any default that may be found. It is not always the fault of the owner, but often there are parts of scales that are lost in moving from one place to another. This is especially true with the platform scales, and it is for this reason that the weights are placed on each corner when testing them out.

State Farm News

"The standardization of potato varieties in Thurston county will eventually be realized and will result in a potato grading station that will be managed by a county organization," said County Agent E. B. Stookey, upon being asked how this work was progressing in his locality.

"A difference of $10 a ton is going to make enough difference with the farmers so they will adopt the standard long, white potato instead of raising some of the inferior grades that are classed as "local spuds" and bought at a cheaper price. As soon as we are able to eliminate the '57 varieties' and raise potatoes that the people want, the sooner we will be able to demand around $30 a ton for our crop instead of having to take something like $20 for them and have trouble to dispose of them at that."

* * *

H. P. Huske of Satsop, Grays Harbor county, reports some excellent results from his small patch of Blue Belle field peas. They yielded 53 bushels to the acre and sold well on the local market for seed. The entire patch was certified by the state seed inspector.

* * *

The active demand for wool this spring was reflected in the fact that early in May, before the last of the shearing had been completed, 95 per cent of the 1922 clip had been sold at prices ranging from 20 to 30 cents, the average being about 26 cents. Most of the crop went to Portland or Seattle for sea shipment to Boston, though some of it went by rail. The last big clip to be sold, that of 7000 fleeces sheared by the Yakima Sheep company, brought the highest price of the season for Yakima and Benton counties, though some wool moved at 30 and 32 cents in Kittitas county, it was reported.

* * *

Community fairs have gained much favor in southwestern Washington.

* * *

The Oakville Canning club of Grays Harbor county has 10 members who have made out their budget to include only the canning of fruit that is needed in the home. They will give a mothers' day, when the mothers will be entertained by the members, and a mothers' holiday, when the girls will take entire charge of the home and let their mothers go for a day's vacation. A trip to Hood canal has also been planned by the club, when the girls will take a few days' outing after their summer's work has been completed.

* * *

Riverview residents, in the vicinity of Pasco, formed a Farmers' Welfare association, with D. M. Hurley as president and S. J. Comre secretary-treasurer.

* * *

The Lewis-Pacific Dairy association's condensed milk and powder plant at Chehalis has recently installed a cooperage plant for the manufacture of powdered milk barrels, according to J. A. Scollard, president of the United Dairy association.

Heretofore all barrels have been made at Portland and shipped in cars, which, of course, necessitated a large amount of car space. With the new arrangement the association can ship from 6 to 10 cars of barrels in one car of sets, which includes staves, hoops and heads. The quality of the barrel is also improved by the new arrangement.

* * *

Fully 1000 acres of grapes are being planted in the Yakima calley alone this spring, according to H. M. Church of Kennewick, the pioncer grape juice producer of the Pacific northwest.

* * *

Twenty-five gallons of water per person per day and 20 gallons per head of cattle or horses per day is the amount usually figured on as necessary for the farm supply, and if a windmill is used for pumping the tank should hold a five-day supply. If a gas engine is used a tank that will hold two days' supply is sufficient. If fire protection is planned the mains must be large to afford pressure.

* * *

The county commissioners and members of the commercial club have decided to dedicate Wahkiakum county's new courthouse at Cathlamet June 8.

* * *

Inspector P. S. Darlington has returned to Wenatchee from a trip through the orchard districts of Okanogan county.

"The present indications point to a crop of about 4000 cars in Okanogan county, which is an increase of 1000 cars over last year," he says. "In spite of the slight frost damage which was sustained in some places, prospects are that the county will have by far the largest crop ever produced.

"About 2000 acres of orchard is being set out between Tonasket and Oroville, running strong to Delicious apples."

* * *

Kennewick asparagus is competing with the California product in middle western markets. A carload was shipped to Minneapolis a few days ago.

* * *

Josh Barnes, living near Supplee, dug out a den of coyotes recently and found eight lively pups. The bounty on the eight would be that many dollars, but the boys have made such a demand for them that all the coyotes still live.

* * *

Potato and grain production in the Yakima valley both doubled in two years since 1919, and both crops will set new high records this season. Railroad figures show that potato shipments increased from 2000 carloads in 1919 to 3000 in 1920 and 5000 in 1921, and the figure set for this year is 3000 carloads. The valley's grain crop was less than 750 cars in 1919, but increased to 1200 in 1920 and to 1500 in 1921. Still more will be produced this season. Fruit crop totals increased from 15,000 carloads in 1919 to 17,500 in 1921 and promise to reach 18,000 this year, although frost damage is still to be considered. Alfalfa alone, of all the major crops, may show a falling off. It furnished 10,000 cars in 1919, 15,000 in 1920 and 12,000 in 1921, but many farmers are turning over alfalfa sod to put in cultivated crops.

Coming Events of Interest

May 30—Decoration day.
June 5—Northwest Guernsey breeders' sale, Portland.
June 5-10—National Holstein meet, Kansas City.
June 7—Guernsey consignment sale, Chehalis.
June 10—Republican state convention, Chehalis.
June 14—Flag day.
June 20-22—Lincoln-Adams pioneer picnic, Keystone.
July 26-28—International apple shippers, Seattle.
July 27-28—Whatcom Guernsey gallop, Bellingham.

FARM BUSINESS AND MARKETS OUTLOOK

Enter Period of Expansion

Plunging tactics never are safe, but there are times when it is entirely wise to expand, to proceed with confidence and initiative, while at others contraction of operations and cautious procedure are necessary to avoid trouble.

The evidence steadily accumulates that we will soon be ready to enter a period of expansion if we have not already entered it, in which enterprisers, whether agricultural or otherwise, can go ahead fortified in the belief that they are moving with the current of business affairs. The latest records of industrial output continue to show a big demand for goods of nearly all kinds. April steel production was nearly 3 per cent greater than in March, pig iron made a healthy gain and the unfilled orders of the steel corporation increased substantially. Auto and truck production thus far in 1922 was never exceeded but once in the same period of the year. All previous records for amount of construction started were broken in April.

Bank clearings, which measure business turnover, were 15 per cent larger in April than in the same month a year ago and more than double the highest figure ever reached in April before 1915. Nor can the increase be accounted for on the score of higher prices for goods and securities. Commodity prices are gradually moving upward. Bradstreet's index advanced nine times out of the last 11 months and was 10.2 per cent higher on May 1 than on June 1 last year, when it reached low point. Security prices have been getting a little ahead of the general procession and are passing through a moderate setback.

Credit conditions do not indicate that business expansion has yet begun, however, as interest rates are still easing. But since the United States now has about one-third of the world's gold supply, thus providing a foundation for a large volume of credit, it is not unlikely that considerable expansion could be financed without affecting money rates.

In the field of agriculture itself the outlook has attractive features. This country is short on sheep and its product, wool; there is, apparently, a slight shortage of beef cattle and thus far the profitableness of hog production has not brought about any undue expansion in production. Our dairy cows and poultry are turning out a lot of butter and eggs, but the consumptive demand for both is at a gratifyingly high level. The world-wide situation promises a good year for the American wheat grower, the corn surplus has been largely absorbed by an increased rate of consumption and even oats are gradually coming back in market value.

Thus we can go through the entire list of leading agricultural commodities and find sound reason for belief that supply and demand conditions and market prices will favor the farmer as he has not been favored for two years.

Smaller Cattle Run Expected

A small decrease in receipts around the market circle last week offset a decrease in the demand for beef as a result of hot weather and net changes in prices on the hoof were not marked. The belief that market supply will shrink at least a little further before long is prevalent as the run for the last four weeks has been above the seasonal average, whereas the available supply in the country is thought to be below the average. Quotations are practically the highest of the year. Heavy steers are not being discriminated against as they usually are at this season and, on the other hand, plain light steers are extremely scarce.

A small fraction of the supply of butcher stock and a few steers already show signs of having been on grass. Within a few weeks this factor will widen the price spread in both divisions materially.

The veal calf market is recovering its stride and advanced 75 cents to $1 at Chicago most of the last week, but lost part of the gain at the close. Further improvement in this division should be seen during June.

Steady Demand for Stock Cattle

With but two exceptions the shipments of stocker and feeder cattle from 12 leading markets since the middle of January have not gotten far on the upper or lower side of 50,000 head weekly. Prices have been gaining rather steadily and reached the highest level of the year last week. May usually is the high month, so that the market is running true to form.

The spread between stocker and feeder prices on the one hand and fat steers on the other is abnormally narrow, favoring the breeder rather than the feeder. After the spring demand has been satisfied values in this division are likely to sag.

The movement of cattle from the southwest to northern pastures is now at its maximum, but it will not be completed for 30 days. Total shipments in that direction still promise to fall below those of last year. Unfavorable weather and the failure of the railroads to grant reduced rates were partly responsible.

Hog Market on Profitable Basis

Although receipts of hogs at the 11 leading markets are running ahead of the 10-year average, the fresh pork market has weakened slightly and export sales of hog products are not voluminous, hog prices are holding up exceptionally well. It is quite probable that values will pass through a trough before the middle of June, but a break below the $10 level at Chicago should be of brief duration if it occurs at all. After the June run has been garnered receipts will drop to the lowest level of the year, so that prices should remain on a highly remunerative basis as compared with corn at least until the new crop of hogs begins to come upon the market next fall in large numbers. If hog production has not been increased more than prevalent reports upon loss of spring pigs would indicate, the price level should be a satisfactory one most of the coming year.

The lard situation may make a little trouble later on, as it is not moving into consumption as rapidly as hog meats, in spite of the fact that wholesale prices for lard are but little above the price of hogs on the hoof. Stocks on May 1 were below the average, but the increase during April was above the average and reports show a decided increase at some packing points in the first half of May. A heavy run of fat sows is expected a little later on, as well as a generous supply of heavy fat barrows, so that the lard kettle may be kept well filled all summer. Even so, lard is not likely to become much cheaper than it is now and the usual fall export trade in lard should take care of whatever accumulation occurs.

Live Mutton Selling Lower

The live mutton market has started the seasonal decline in prices which marks the onset of the new crop of lambs and the effect of hot weather on mutton consumption. Receipts at the seven leading markets for three weeks have been practically equal to the eight-year average for this season of the year, but the total supply has been augmented by the arrival of two cargoes of approximately 34,000 carcasses of New Zealand frozen lamb and mutton at an eastern port, with additional shipments said to be on the way. A clean-up of the supply in feedlots will soon be completed and the course of the market will depend largely on the rate at which the movement of spring lambs expands. Further declines are probable as the season works along, but the top of the market promises to hold above $13 at Chicago most of the summer as the supply in all sections is below normal. Some of the range states report rather heavy losses as a result of losses during the lambing season.

Draft Horse Market Strengthens

The draft horse market has been gaining strength for several weeks, as industrial concerns are in the market in a more active way than they have been for months. Horses weighing 1600 to 1800 pounds, if sound and around 6 years of age, are bringing $210 to $250 at Chicago. Chunks are not doing so well, however, as the farm trade is over and prices in this division declined about $10 per head early last week, those weighing 1200 to 1500 pounds clearing mostly at $110 to $150 on the Chicago market.

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Rise in Wool Values Continues

Wool prices continued upward last week, Boston quoting an advance of about 5 cents per clean pound. Seaboard markets were feverishly active, although the supply of wool at these points is small. The range country is excited, with wool changing hands as fast as the growers are willing to sell. About 85 per cent of the Oregon clip and the best Utah and Nevada packages have been sold. As high as 42 cents was paid for some fine Utah clips, with medium and coarse wools seldom selling below 25 cents. These quotations show an advance of around 100 per cent as compared with last spring. The rise has been world-wide, as British and Australian auctions have been uniformly reported firm or higher during the last three weeks. The American Woolen company has had a big increase in orders for cloth and the country's looms are still running at a high percentage of capacity.

The Boston market is quoted as follows:

Wisconsin, Missouri and average New England—1-2 blood, 38@40c; 3-8 blood, 37@39c; 1-4 blood, 35@37c.

Scoured basis:

Oregon—Eastern, No. 1 staple, $1.20@1.25; fine and fine medium combing, $1.15@1.20; eastern clothing, $1@1.10; valley No. 1, $1.05@1.08.

Territory—Fine staple, choice, $1.20@1.28; 1-2 blood combing, $1.05@1.10; 3-8 blood combing, 80@83c; 1-4 blood combing, 68@70c.

May Wheat Unsettles Market

Owing to the alignment of large grain interests on each side of the market for May wheat at Chicago, conditions in that delivery are exercising an exaggerated influence upon the trend of prices. The outcome remains in doubt. Over 5,000,000 bushels have been delivered thus far and the rule permitting deliveries on track has been invoked because of a shortage of storage room, but the wheat has gone into the hands of exporters and other strong interests who appear to want it and it is claimed that a good deal of it has been sold abroad. It is possible that foreigners themselves may be interested in the market on the "long" side. Those who are taking in the wheat delivered are not offering to sell at prevailing prices, apparently looking for a better market in June for any grain which they have not yet placed.

The "shorts" are combing all markets for wheat good enough to meet contract requirements and are rushing it to Chicago with a prospect that several million bushels more will be delivered before the end of May. A shipment of nearly 100,000 bushels has been brought back from Buffalo.

Wheat Disappearance Runs Large

Comparing the foreign visible supply of wheat and stocks afloat on July 1 last year with the stocks in those positions in the middle of May this year and counting world's exports between those two dates, about 573,000,000 bushels of wheat have disappeared in international trade in the last 10 1-2 months, according to Russell, the New York statistician. In the same period in the preceding year disappearance was 529,000,000 bushels. If the rate thus far is maintained importing countries will need 80,000,000 to 85,000,000 bushels more July 1 and 140,000,000 bushels more before August 1 unless stocks afloat which are now about 50,000,000 bushels are allowed to become very small. They have decreased nearly one-third as a matter of fact in the last few weeks, as wheat has been disappearing at the average rate of nearly 14,000,000 bushels per week since last July, while new quantities placed afloat recently have been running from 7,000,000 to 10,000,000 bushels per week.

Australia and Argentina combined are believed to have about 80,000,000 bushels yet for export, which means that North America must furnish a small quota right along and that old crop surpluses will be well cleaned up in all exporting countries before the beginning of the European new crop year on August 1.

Flour Mills Expected to Buy More

Flour mills appear to be grinding wheat at the rate of about 8,000,000 bushels weekly, but the rate is hardly up to the average for this season of the year and is the weakest point in the market situation at present. Some mills which bought wheat at a much lower level of prices are offering to resell. Whether flour stocks and supplies of wheat still held by mills will permit them to remain out of the market until cheaper wheat from the new crop is ready is unknown, but it is generally believed that they will be obliged to buy considerable wheat before harvest and this demand may appear at any moment.

The new wheat crop should be warmly welcomed at prices only 10 to 25 cents below the present cash price. When receipts begin to mount, following harvest, the sales for export for July, August and September shipment will need to be filled. If these export sales continue until new wheat begins to move they should be of sufficient volume to prevent any sharp sag in the market.

The prospect will depend to some extent upon conditions in the new crop. Reports are favorable for the most part, but after the prolonged wet period it is not unnatural to expect some dry weather, which the crop in some sections is not in condition to withstand.

Corn Market Drags

The corn market has been dragging as the movement to primaries has been above the average for this season of the year and the increase which generally appears around the first of June is showing up in the form of larger country offerings. The loss in values has not been marked, however.

Industries are buying more corn. Large starch sales have been made to Japan and one plant in Illinois which has been closed down for a month has reopened.

Clearances for export, which averaged close to 5,000,000 bushels weekly from the middle of January to the first week in April, have dropped off over 50 per cent in the last month. New sales are being made right along, but they do not point to an early renewal of the enormous winter movement overseas. Shipments from the Argentine are increasing, although the new crop is not in very satisfactory condition for shipment across the equator.

Oats Disappearance Quickens

Both domestic and export demand for oats is better than a few weeks ago and this grain is disappearing into distributive channels with more celerity. All reports point to a decreased acreage with a high percentage of late planted grain which generally yields none too well.

The range of cash grain prices for the week ended May 17 was:

CHICAGO—Wheat, No. 2 red, $1.36@1.46 1-4; No. 2 hard, $1.38 1-2@1.46 1-4; No. 3, $1.37 3-4@1.41. Corn, No. 2 mixed, 61 3-4@62 1-2c; No. 3, 60 3-4@62 1-4c; No. 4, 60 1-4@61c; No. 2 yellow, 62 1-4@63 3-4c; No. 3, 60 3-4@62 1-2c; No. 2 white, 62 1-4@63 1-2c; No. 3, 61 3-4@62 1-2c. Oats, No. 2 white, 39 3-4@44c; No. 3, 38 1-4@43c; No. 4, 36 1-2@40c. Rye, $1.05 1-2@1.11. Barley, 62@72c.

Small Clover Seed Carryover

Stocks of clover seed, which were below the average at the beginning of the year, are now said to be exceedingly small. There is but little life to the cash demand. Timothy is more active than clover, with rather large shipments going into the eastern states.

Chicago, per 100 lbs.—Clover, $12@22; timothy, $4.50@6.

Toledo, per bushel—Prime red clover, $13.75; prime alsike, $11.50; prime timothy, $3.10.

Limited buying has weakened the feed market, although prices have not reacted downward very far. Flour mills are not pressing sales of wheat feeds as their production is light. Much the same is true of corn feeds. Demand for cottonseed meal and linseed meal is small.

Prices per ton (100-pound bags) in carlots—Chicago: Bran, $23; standard middlings, $23.25; flour middlings, $27.50; cottonseed meal, 36 per cent, $49; 43 per cent, $53; hominy feed, $22.50; gluten feed, $32.85; old process oil meal, $52.50; tankage, $55.

Light Receipts Support Hay

Light receipts remain the chief support of the hay market at most points as buying is limited. At Chicago, for example, receipts in April were only 11,277 tons, compared with a four-year average of 21,917 tons. Shipments amounted to 1316 tons, compared with an average of 5349 cars during the four preceding years.

Prices per ton in carlots—Chicago: No. 1 timothy, $25@27; No. 2, $23@25; No. 3, $17@20; No. 1 light clover mixed, $24@25; No. 1 clover, $20@21; No. 1 clover mixed, $21@23.50; alfalfa, $17@28; upland prairie, $17@19; midland prairie, $14@17; rye straw, $16@17; oat and wheat straw, $14@16.

Absorption of Eggs for Storage

The movement of eggs into cold storage continues unabated with 50 to 60 per cent of the receipts at the four leading cities going for that purpose. The available supply is large, with receipts running ahead of the corresponding season last year, but it is probable that the peak of the movement has been passed.

(Continued on page sixteen.)

A Good Law But Misused

Trade Commission's Act a Blow to Livestock Men

What seems to be a perversion of the intent of a good law is found in the order issued recently by the federal trade commission at Washington commanding Armour & Co. to dispose of their packing plant at Spokane. Armour & Co. bought that plant five years ago from the E. H. Stanton company. The purchase was open and above-board and has long been regarded by live stock interests in the Inland Empire as beneficial to their industry. Before Armour & Co. bought the Spokane plant the packing industry in Spokane was largely a scalping process. The local packers often took advantage of a grower's necessity and bought his live stock at the lowest possible prices. We think it is practically the unanimous verdict of live stock growers in the Inland Empire that they have had better and more considerate treatment than was accorded them before Armour & Co. came into that field.

Notwithstanding these conditions, the federal trade commission holds that the purchase of the plant was an act of restraint of trade and a violation of section 7 of the Clayton act. Armour & Co. in a statement made at Chicago emphatically deny that their purchase was a violation of law and announce their determination to carry the question to the United States courts. We are confident that a great majority of the live stock growers of the Inland Empire would be sorely disappointed if the courts required the dismantling of the Spokane plant or its forced sale to others who might not be as willing to build up, or as capable of building up, the live stock industry in the Pacific northwest.

Many live stock growers and business men believe that the federal trade commission has been unjustly hounding some of the packers now for several years. The Chamber of Commerce of the United States, a responsible organization that is generally careful about its assertions, openly accused the federal trade commission of prejudice and hostility. In a letter to President Wilson in 1918 it charged that the commission was scheming to bring about government ownership and operation of the packing industry and that when it conducted its hearings it was grossly unfair to the defendant packers, "refusing to permit concerns that were mentioned in the documents to offer any testimony or produce any documents," and further that "it examined witnesses of its own choosing and prevented cross-examination by the concern at which, it was made clear, the proceedings were directed. At each city the special counsel or other members of the staff let it be known that the government contemplated taking over and operating the industry. The result of the commission's course was not to give information to the public, but to place the commission in the position of seeking to create prejudice which would support an apparently preconceived purpose to inaugurate government ownership of the business."

The commission failed in that purpose and seems to have been in a nagging mood against the packers ever since.

THE FARMER is not and never has been a special advocate of the packers. It has been outspoken against some of their practices that it considered unfair. It has always advocated the turning of the searchlight on these great packing concerns. But it does stand for the square deal, and it does not want to see a serious blow delivered at the live stock growers of this region over the shoulders of the Chicago packers.

It was a good thing for the Pacific northwest when Armour & Co. came to Spokane and Swift & Co. to Portland. We should like to see all of the other big packing concerns establish plants in the Pacific northwest. But if the federal trade commission has its way it would seem that the big packers now here are to be driven out and the live stock industry of this region turned back to the old scalping methods that were so costly to our growers.

IN DOUBLE LETTER CLASS.

The record of the Guernsey cow, La France of Bralee, owned by Dr. A. Macrae Smith of Bellingham, has been officially accepted in the double letter class. She made her record of 594.58 pounds of fat from 10,537.0 pounds of milk as a senior 3-year-old and carried a calf 274 days. She leads her class in Washington and ranks seventh of the breed in that class.

Stable Dollar

Little Journeys to the Markets

Most of us assume that the saying "a dollar is a dollar" is axiomatic. It is true that at any given time one dollar in our currency is as good as any other. But it is equally true that our dollar varies in value at different times. During the war the dollar depreciated more than 50 per cent; that is, the quantity of goods which it would buy declined. In the last two years the value of the dollar has been rising.

Usually these changes are thought of from the other angle, that prices have risen or fallen. When prices are high, however, it is just as correct to say that the value of the dollar has shrunk. When prices fall the dollar rises in value.

We think our dollar is constant in value because a dollar in silver or currency is always redeemable in gold and the gold dollar always contains 23.22 grains of pure gold.

Gold is a commodity like any other and is more abundant at times than at others. The discovery of new gold fields, as in California, the Yukon or South Africa, leads to coinage of a larger number of gold dollars or to a larger gold reserve in the banks against which paper money can be issued. With the quantity of goods remaining constant and money more plentiful, prices tend to rise. A decrease in the amount of gold due to exports of the yellow metal or other causes will have the opposite effect.

Since money is a medium of exchange, a perfect dollar should have a constant purchasing power rather than a constant weight. Professor Irving Fisher has suggested the substitution of a dollar which would vary in weight from time to time so that its purchasing power would be comparatively constant. When gold becomes plentiful, increase the amount of gold behind the dollar enough to prevent prices from rising and decrease it whenever money becomes scarce and causes prices to fall.

No gold dollars would be coined, but the amount of pure gold which could be obtained in exchange for gold certificates would not remain constantly at 23.22 grains, but would be raised or lowered periodically according to whether prices as shown by carefully prepared index numbers were tending to advance or decline. The plan as worked out would limit the amount of change in any one month to 1 per cent.

Many people do not believe the plan would work. They argue that fluctuations in prices are due only in part to variations in the supply of gold. The quantity of goods varies also and it would be impossible to stabilize prices unless both production and consumption were stabilized. Under our banking system bank credit functions as money. It is based upon gold reserves, but varying the value of this reserve by 1 per cent each month could hardly affect conditions enough to offset all the other factors which cause price levels to vary.

The plan would not suffice to prevent the rise in prices such as occurred during the war or the declines which occur in times of crisis. It might stabilize prices in normal times, but would fall down when most needed. Furthermore, it would be dangerous for one country to put the plan into effect alone, as foreign countries, foreseeing a crisis, could withdraw gold when most needed and send it back after it had reached a higher value.

Furthermore, the plan is objected to because it would tend to fix the price level prevailing at the time it went into effect. It is difficult to do this without doing injustice to some class or classes of society, the prices of whose labor or commodities happen to be above or below the normal level at the time.

Eventually some such scheme for stabilizing prices may be put into effect, but at present it seems rather remote.

First to establish the $10.90 price—"Usco"

THE makers of U.S. Tires made this announcement last November—

"Hereafter the price of the 30 x 3½ 'Usco' is $10.90."

The lowest price ever quoted on a tire of *quality reputation* and *standard performance.*

* * *

And now, with the opening of Spring, there seem to be quite a number of "New and Special tires" coming into the market in the $10.90 price range.

Perhaps you are wondering just what there *can* be either "new" or "special" about these tires.

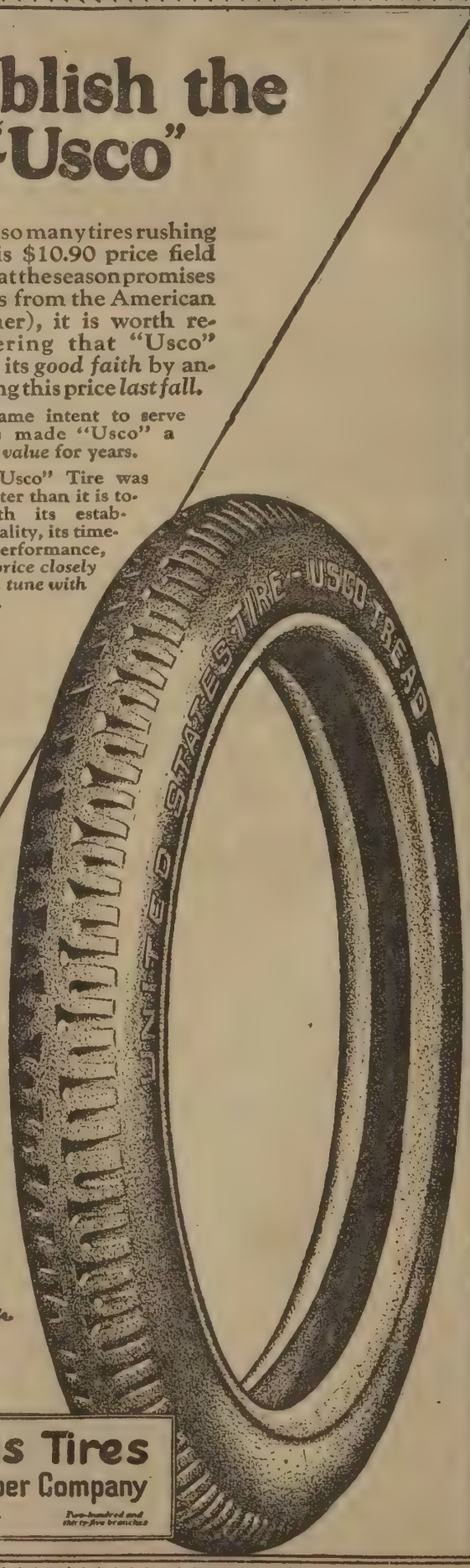
It can't be the $10.90 price—"Usco" established *that* five months ago.

Nor *quality* reputation and *standard* performance—for it takes more than one full season for any new tire to *demonstrate* where it stands in quality and value.

With so many tires rushing into this $10.90 price field (now that the season promises business from the American car-owner), it is worth remembering that "Usco" showed its *good faith* by announcing this price *last fall.*

The same intent to serve that has made "Usco" a *standard value* for years.

The "Usco" Tire was never better than it is today—with its established quality, its time-tested performance, *and its price closely figured in tune with the times.*



United States Tires are Good Tires

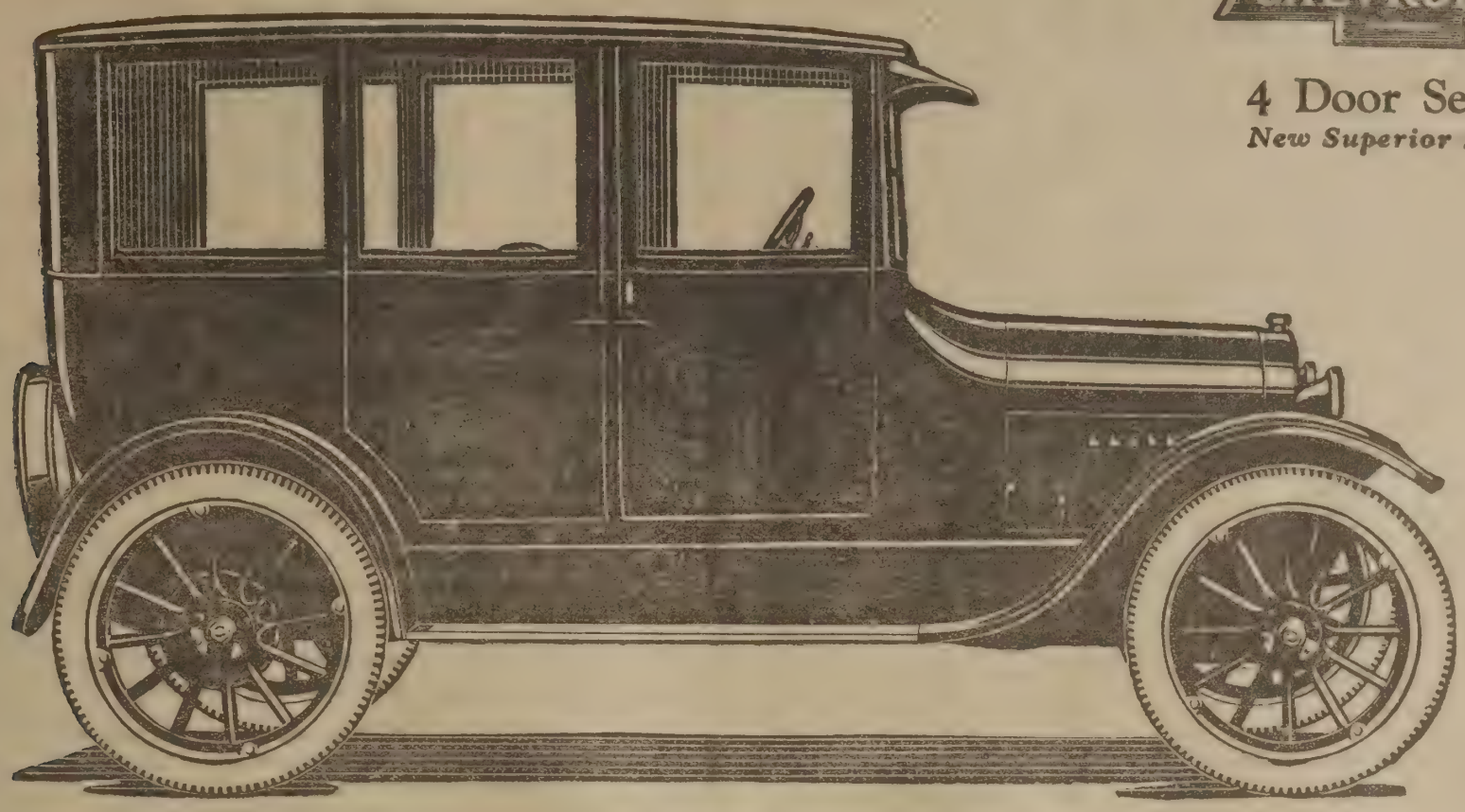
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$10.90 and even better than the price

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Fifty-three Factories — The Oldest and Largest Rubber Organization in the World — Two-hundred and thirty-five branches

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Never before has a Fisher Body Sedan of this quality been offered at a price so low. The beautiful lines, superb finish, luxurious upholstery and refined appointments that have made Fisher Bodies the standard of excellence in closed cars, are all here in full measure. Its four doors fit perfectly and cannot rattle.

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Mounted on the New Superior Model Chassis, this car is fully equipped mechanically, and combines ample power and speed with steadiness and ease of handling.

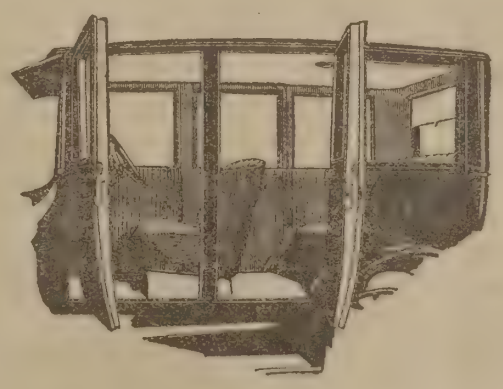
No matter what car you now use, or think of buying, investigate this Sedan. Its power, speed, appearance and appointments please discriminating motorists accustomed to paying higher prices for closed cars.

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LIVESTOCK AND DAIRY

Carrots for Hogs

By JERRY SOTOLA, Instructor in Animal Husbandry, W. S. C.

What is the food value of carrots in comparison with barley for hogs? J. H. Deer Park, Wash.

Barley with a moisture content of 10 per cent contains seven and one-half times as much dry matter per 100 pounds as carrots with a moisture content of 88 per cent. Carrots are not as palatable nor as good keepers as mangels and sugar beets. They tend toward growth rather than fattening and fit well in rations of bacon hogs. In finishing pigs the allowance should be restricted or the desired finish will not be obtained. Pigs are not suited for handling excessively bulky feeds. They become filled up on carrots before they have consumed the quantity digestible matter necessary for putting on the proper finish if roots are fed in large amounts.

Pigs weighing 90 pounds and full fed on grains have made daily gains per head of 1.2 pounds, requiring 499 pounds of feed per hundredweight gain. When the grain ration was reduced by 30 per cent, and roots fed liberally after the grain feed, the daily gains were 1.0 pounds per day, but it required only 358 pounds of grain and 631 pounds of roots per hundredweight gain. During periods of high priced grains roots used in limited quantities induce economy in fattening operations. In this instance 550 pounds carrots replaced 100 pounds of grain.

Because of their slightly laxative effect and their bulkiness, carrots have a special place in the rations of brood sows in winter, a place that can not be filled by barley.

LIFE PRESERVERS FOR LIVE STOCK

By DR. E. E. WEGNER, W. S. C.

INFECTIOUS DISEASES, ARTICLE IX.

Tuberculosis.

There is no disease of man or animals that has such a wide distribution nor which affects such a large number of species of animals as tuberlosis. This disease is no respector of animals or birds, hough not all species of them are equally susceptible.



The greatest loss among lomestic animals is in cattle, hogs and fowls and probably in the order named. Horses seldom suffer and dogs and cats are rarely affected, sheep and goats practically never get this disease, though it has been reported in a few instances. Wild animals do not suffer very much, as they live under conditions that are not favorable to its spread, but when these animals are placed in captivity the disease may cause great distress and severe losses.

A question as to wether tuberculosis can be transmitted from one species to another is still in dispute, but the evidence seems to be that this is possible and that it is actually spread in this way. The difference in the appearance of the organism from different species is not very great, though there are some minor diffeences. Tuberculosis is by far more widely spread among animals and man than is commonly supposed and it is not too much to say that a very high percentage of men and animals have had this disease sometime during their lifetime, though they may not have been aware of that fact. The common opinion that tuberculosis is invariably fatal is not correct and as a matter of fact the contrary is more true. We see unmistakable evidence of this every day in the great packing houses of the country where thousands of animals are killed for food every day. In these places we find that apparently healthy animals have been sufferers from this disease sometime during their lives, though most of them have quite completely recovered.

The fact that all cases are not fatal should not be construed as a reason for relaxing our efforts to eradicate this disease because the fatalities are numerous enough and the economic losses among animals are sufficient to justify us in using every means at our disposal to suppress this dicease. My only thought in mentioninng the large number of recoverie is to impress upon every one the fact that having tuberculosis is not the same as being marked for an early funeral, but every one is justified in going a long way to get around it.

May Affect Any Part.

It was once supposed that tuberculosis was a disease of the lungs and that form was commonly called consumption. We now know that tuberculosis may affect any organ of the body. We are frequently asked to describe the symptoms of tuberculosis, and to such we must reply that the symptoms vary according to the location of the disease or the organs affected. The symptoms would not be the same if the bones of the limb were diseased, as they would be if the bowels were the seat of the trouble, or the lungs or some other organ. The manifestations differ with the location.

Some have the opinion that the disease soon becomes generalized after it enters the system. We find actually, however, that this spread is a very slow one in most cases and that instead of spreading rapidly the tendency is for it to become distinctly localized and in most cases it never spreads beyond the primary seat of infection. Those are the conditions in the many cases that never knew that they were diseased. In the cases that are more serious the disease is likely to be more extensively spread, but even then there is a decided tendency for the disease to be considerably limited. We may see evidence in animals that they have had the disease for considerable time without an extensive distribution throughout the body.

When first entering the lesion appears as a small spot that changes to hard, firm nodule in the substance of the diseased organ. These nodules become more numerous or get larger as the disease advances, though if the patient is sufficiently strong to recover the nodule does not develop as above, but remains permanently small and softens in the center. This soft center is gradually hardened passing through a cheesy state and finally getting gritty and hard throughout. This is the condition found in cases that we say have permanently recovered.

(To be continued.)

Cross-Bred Bulls

By R. T. SMITH, W. S. C.

What kind of calves will a bull produce, if he is one-half Hereford and one-half Durham, thoroughbred on both sides? Would he be a good herd bull?? S. G. Nespelem, Wash.

Cross-bred bulls are unsatisfactory for two reasons. First, their offsprings lack uniformity, and second such a cross never makes for improvement of the herd in any definite direction.

A cross-bred bull may be a better individual than either parent, but as a sire he will be unsatisfactory. Some of the offsprings may be good, but an equal number will be poor individuals and all lack in uniformity. The offsprings will also be scrubs as there is no definite improvement in any direction. I would strongly advise against the using of a cross-bred sire. It is far better from a financial standpoint to put a few more dollars into a good full bred bull.

AVOID THE RUNTY RENEGADE.

One good, thrifty shoat is worth more than two starved, runty renegades and will not cost half as much in feed and vexation.

AN INDIVIDUAL PROBLEM.

Study your own farm with a view to the practicability of a tractor or other power farming machinery.

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Make your own apparatus. We teach you in our practical school or by mail right in your home. Complete course $20. Wholesale prices on parts to students. Address Dept. R.

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When Hungry Little Muscles Say, "Please Help Me"

DID you ever stop to think who it really is that's talking, when childish voices raise a clamor, "Mother, I'm hungry?"

It's really muscles and bones and nerves and cells worn in the stress and strain of play—that are calling for rebuilding material.

What kind of an answer? The *right* thing, or *just anything?* It makes a big difference.

Grape-Nuts, so deliciously crisp and appetizing to taste, and so quick and convenient to serve, is a splendid food for rebuilding young bodies. All the wonderful nutriment put in wheat and barley by Nature, including the vital mineral elements, is there—and Grape-Nuts digests easily, quickly and completely. Served with cream or milk, Grape-Nuts is exceptionally nourishing.

"That's splendid!" says appetite. "That's just the need!" say the hungry muscles, nerves and bones.

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"There's a Reason"

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—land similar to that which through many years has yielded from 20 to 45 bushels of wheat to the acre—oats, barley and flax also in great abundance, while raising horses, cattle, sheep and hogs is equally profitable. Hundreds of farmers in western Canada have raised crops in a single season worth more than the whole cost of their land. With such success comes prosperity, independence, good homes and all the comforts and conveniences which make life worth living.

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See "For Sale or Exchange" ads on the "Want" Ad page this week.

VETERINARY

By DR. S. B. NELSON.

Cholera.—I would like to know when and how to vaccinate pigs for cholera and where to obtain the serum for same?
Ritzville, Wash. E. M.

You can vaccinate pigs for cholera, single treatment, at any time. You can obtain the serum through any reputable druggist, or your veterinarian will get it for you. Do not use the double treatment unless all pigs have cholera.

Sore Ears.—I bought some 6-week-old rabbits and shortly after I got them I noticed scabs down inside the ears which spread until it covered the entire ear. It seemed to be a dry scab that kept sloughing off. I used vaseline in their ears and the scabs went away, but I see it is coming back on one. Is there a cure? A. A. L.
Cosmopolis, Wash.

Try painting the ears with 1-2 per cent solution of picric acid in water once daily.

Mange.—I have a fox terrior pup that has a skin disease that causes the hair to fall. First a red spot appears and then the hair comes out. Is this disease contagious? R. L.
Hoquiam, Wash.

Your dog is probably affected with mange, due to skin parasites, which may be transmitted to other animals and even human beings. Try applying a sulphur ointment made with sulphur and petroleum, so that it is not quite solid and more toward a semi-liquid. Put a muzzle on the dog so he can not lick himself as the treatment is applied. You had better try covering one-fourth of the body the first time, then one-half the body and then the other fourth and repeat in about six days. The reason I suggest partial treatment at a time is that once in a while a dog may become affected from the petroleum. You should give the animal from three to four treatments about six days apart.

Treatment for Gargot.—What is the matter with my cow's udder. The front of the udder swells and the milk gets lumpy. It will stay this way a few days and then gets all right again for two or three weeks and then swells up again. She has been fresh six weeks. A. B.
Valleyford, Wash.

I would suggest that you first give your cow one and one-half pounds of epsom salts in three quarts of water. Two or three days later inject into the udder a 2 per cent solution of boracic acid with water. The water should be boiled and the boracic acid stirred into it. You will have to sterilize the instruments with which you inject the liquid into the udder. The best way to sterilize it is by boiling it. The end of the teat, before the injection is made, should be dipped into tincture of iodine. After the udder is filled hold the teat closed and gently massage the liquid all through the udder and then milk it out. You can repeat the treatment in a week or four or five days if necessary.

Teat Clogged—I have a cow 6 years old that was fresh a month ago. One of her teats is clogged. I open it up twice a day, but it does no good. She seems healthy, eats well and gives eight to 10 quarts of milk at a milking. The teat is not sore or swollen. H. M.
Elk, Wash.

Dip the teat in tincture of iodine before and after each milking. You can also apply a little carbolized vaseline up into the end of the teat. I would not go inside of it with anything.

Sore Ears—I have a valuable cattle dog that has had a running sore in her ear for about six weeks. Sometimes the matter is brown and sometimes white. G. S. M.
Montesano, Wash.

I think that your dog is suffering from a rather severe attack of otitis. I am going to suggest the following treatment to you: Pour into the ears a little peroxide of hydrogen until the ears are fairly clean. You can then dry them carefully with some soft absorbent cotton, being careful not to injure the ear. After this pour some methyl alcohol into the ears. Be careful in using this because this is wood alcohol. After this fill the ears comfortably with boracic acid. Tie the ears down with a long V-shaped cloth with slits in it so that the ends may be brought up and through and then tied. In an hour or two take it off and let the dog shake out the extra amount of boracic acid. Give him that treatment daily for two or three days and then try it every other day and then every week or 10 days as long as necessary.

Elma Holstein Sale

The following is a detailed report of the recent Holstein sale held at Elma, Grays Harbor county, by a number of breeders from the Chimacum valley in Jefferson county:

Consigned by William Bishop:
Chimacum Wayne Phoebe, John McBride, Aberdeen $220
Queen Nana Segis, Western Washington hospital, Fort Steilacoom 220
Phoebe Sadie Vale, William Polson, Montesano 210
Sir Chimacum Andy Wayne, L. E. Smith, Satsop 200
Chimacum Sadie Vale Segis, F. S. Aolz, Chimacum 150
Sir Chimacum Wayne Segis, John Grossman, Acosta 150
Chimacum Bos Lutske, A. O. Hamilton, Chehalis 280
Chimacum Lutke Abberkerk, W. J. Berns, Montesano 300
Twin heifers out of Chimacum Lutske Abberkerk, W. G. Hopkins, Elma 210
Chimacum Violet Cornucopia 2d, A. O. Hamilton, Chehalis 250
Chimacum Ormsby Lilly, W. G. Hopkins, Elma 165
Riverview Lilith Bracelet, A. D. Kain, Chehalis 200
C. K. K. S. V. Lady May, C. H. Kampendonk Chiacum 510
Chimacum Rag Apple, A. O. Hamilton, Chehalis 250
Chimacum Lilith Bracelet, William Polson, Montesano 140
Sir Galaxy Pontiac Ormsby, J. K. Mohney, Elma 115
Consigned by Thomas Yarr:
Clothhilde Wayne Boon, John Grossman, Acosta 220
Mannett Cornucopia Wayne Boon, Western Washington hospital 260
Selah Newaman Sadie Vale, Ellis Mouncer, Elma 200
Jewel Mechtilde Newman, W. G. Hopkins, Elma 140
Astrea Wayne Boon, Western Washington hospital 400
Selah Johanna Wayne Boon, Le e Kegley Lacey 260
Jenny Mechtilde Newman, Edward Valentine, Montesano 335
Consigned by Hugh Nisbet:
Ononis Sena North Star, A. D. Kain, Chehalis 310
Sena Newman Johanna, William Polson, Montesano 180
Aggie Cornucopia Blossom, Ed. Valentine, Montesano 300
Blossom Wayne De Kol Boon, W. J. Berns, Montesano 460
Spofford America De Kol, Edward Valentine, Montesano 340
Mutual Fayne Gladys, F. A. Cronk, Hoquiam 150
Maggie Boon De Kol, W. R. Burbee, Malone 140
Sena Johanna Newman, Homer Mouncer, Elma 210
Blossom Wayne Boon, John Pierce, Montesano 275
Barbara June Sena De Kol 2d, W. G. Hopkins, Elma 80
Consigned by Albert Ammeter:
Ononis Gettie Canary, Western Washington hospital 190
Canary Snowball Gettie, Western Washington hospital 210
Unnamed bull calf, William Polson, Montesano 105
Unnamed bull calf, James Carstairs & Sons, Elma 170
Consigned by C. E. Peterson:
Unnamed, Fred Rosmund, Elma 265
Unnamed, A. A. Seifert, Elma 130
Unnamed, W. L. Crass, Montesano 125
Consigned by Thomas McGee:
Rosamond Aagge Croft De Kol 2d, Bert Morse, Elma 175
Consigned by C. H. Kampendonk:
Netherland Wayne Boon, Western Washington hospital 210
Astrea Wayne Boon Jefferson, A. J. Vantrope, Chimacum 305
Consigned by T. R. Yarr:
Sir Cornucopia Wayne Ononis, Sam Zryd, Montesano 115
Consigned by Charles Eldridge:
Susie Cornucopia De Kol, J. W. Worthington, Hadlock 245
Astrea Wayne Boon Sadie Vale, C. H. Kampendonk, Chimacum 265
Aaggie Nena Johanna, Western Washington hospital 395
May Madeira Burke, R. H. Billard, Vesta.. 200
Rose Chimacum Lotty De Kol, Western Washington hospital 310
Regis Queen Chimacum, John Nesbit, Chehalis 135
Unnamed calf, A. A. Seifert, Elma 135
Chimacum Cornucopia, Sommers Bros., Little Rock 300
Belle Fayne Chimacum Segis, Western Washington hospital 250
Unnamed bull, R. H. Dillard, Vesta..... 115
Unnamed calf, W. G. Hopkins, Elma..... 220
Unnamed calf, C. H. Kampendonk, Chimacum 175
Unnamed calf, William Polson, Montesano 170
Unnamed calf, Lee Kegley, Lacey..... 150
Queen Pieterje Riverside, W. J. Berns, Montesano 310
Clara Netherland Mercedes 2d, F. C. Baker, Olympia 250
Billy Baker Mercedes, John Halman, Elma 125



VEEDOL in your tractor means money in your pocket

Veedol will make money for you this year by cutting costs in the operation of your tractor, truck and car.

Take your plowing for example: The Veedol oil designated for your tractor engine on the Veedol chart forms a piston seal that holds tight even under the terrific heat of extreme operating conditions. This means complete compression with full power at every power stroke, even on a still day under a broiling sun.

Full power means fuel saved, but more important it means better and quicker plowing. Quicker plowing means more acres covered in less time. Time saved means real money to you in the sweat of a busy season. And, perhaps most important, Veedol keeps your tractor engine *on the job* and out of the repair shop.

After you have read the panel at the right get a trial 5 gallon can of Veedol. Test it in your tractor, truck or car. Compare it "under fire" with the oil you have been using.

There are Veedol oils and greases for every type of power farming equipment. Consult the Veedol Charts and select the particular Veedol lubricants designated for your automotive equipment. Use these and no others.

TIDE WATER OIL SALES CORPORATION
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Veedol motor oils and greases are sold throughout the world

YES or NO!



Does your oil meet these rigid requirements?

1. Full power—Your engine delivers full power only when the oil maintains a piston seal. Veedol maintains a piston seal, and gives full power even under extreme operating conditions.

2. Fuel savings—Poor compression allows unburned fuel to seep into the crankcase to further weaken and dilute the oil. Veedol holds compression. Therefore, Veedol saves fuel.

3. Minimum repairs—Over 80% of engine repairs are traced to faulty lubrication. Veedol saves you from seized pistons, burned bearings and scored cylinder walls.

4. Continuous operation—A motor laid up loses more money in a few days than the price of a year's supply of oil. Veedol keeps your machinery on the job.

5. Time and money savings—Full power, fuel savings, minimum repairs and continuous operation mean more acres worked in less time at lower cost. Veedol saves time and money.

Veedol is a Pennsylvania base oil, refined *more* than other oils. The exclusive Faulkner process gives Veedol *extra* resistance to deadly heat and friction.



Resist deadly heat and friction

VEEDOL
Motor Oils and Greases

POULTRY AND RABBITS

Builds Up-to-Date Laying House

Although one of the oldest poultry farms in the vicinity of Longbranch, Pierce county, the Brookdale Poultry farm will be one of the most modernly esuipped when all plans are completed. August Anderson, the owner, has been in the business for nearly 10 years and has made a careful study of new methods and practices.

His new laying house is built after the Shoup plan with a few modifications. It is 18 feet wide and 112 feet long and has a large two-story feed room at one end. Two feed carriers are built so as to handle all the heavy work. One of them passes in front of the dropping boards and is first used to carry the early morning feed to the scratch floors and then on the return trip is filled with manure from the dropping boards. The carrier is then cleaned well and is ready for the next feeding. The mash is fed in troughs below the wire screen at the front of the house and the second carrier operates the entire length of the house on the outside. In this way the feeding can be done very quickly and with the minimum of labor.

"I built the roof low in front, but arranged the gables so they would admit an abundance of light," said Mr. Anderson. "The windows in the gables can be opened or closed from the feed room at the end by means of a lever. In this way an abundance of air can be had in the main scratch room and still enough light. The floor is of concrete which was built with a moisture-proof mixture, thus insuring against dampness.

"To economize on room, I put the nest boxes under the dropping boards. The droppings should always be cleaned out anyway and there is no need for any trouble from this source. The roosts are built in sections and separated by partitions to prevent a draught. I find it a good plan to suspend the roost frames by wires which keep the mites from getting on the hens. It is necessary to use oil and spray the whole house from time to time to keep any such insects from getting a foothold."

Mr. Anderson keeps some of his best hens in a separate compartment of the large house for the production of hatching eggs.

A home-made oat sprouter is being used to good advantage and three small bins made from 12-inch planks, four feet in length, have been built side by side. An old churn sits on top of the oldest bin of oats and when the oats have soaked for 24 hours they are dumped where the sprouted oats have just been removed. The churn is refilled with oats and water and set over the bin which is to be fed next. The main thing to watch is to keep the grain turned each day and keep it from getting sour or becoming matted. An oil heating lamp can be placed underneath in cold weather.

By building the feed room with two stories, Mr. Anderson finds that he has more room for storing such articles as



The new laying house and feed shed on the Anderson farm.

brooder stoves and incubator supplies that are used only in the early spring. These can be taken down in the winter and repaired without having to be moved from one building to another during bad weather.

"I am making the brooder house to serve two purposes," said Mr. Anderson. "The top story will be fitted for raising the young chicks that I want for my own use, while the basement, which runs the full length of the building, will house the incubators. In all I have 10 machines, which have a total capacity of 4000 eggs.

"The building was erected directly over an old creek bed so that we could make use of the water power for running a small dynamo for lighting the farm buildings. I am planning on using this power for different purposes in a small machine shop in an adjoining room from the incubators.

"The creek will run a good flow during six month of the year and that is the time when we will need the lights most. The dam in the creek will make a fine swimming pool for the children for hot weather."

Raising Rabbits

By AGNES E. RENNER.

Is there any money in raising rabbits? Instead of asking an established breeder that question, ask yourself: Have I got the elements of success in me? Will I be successful raising rabbits?

The rabbit business is like any other business; it takes brains, work and lots of courage.

After observing the average rabbit breeder, we find many lack the elements of success. They lack, most of all, the nerve that it takes to stay with what they have started. I have seen many start and quit in a short time, but success is not won that way. It requires planning, thinking, studying and hard work.

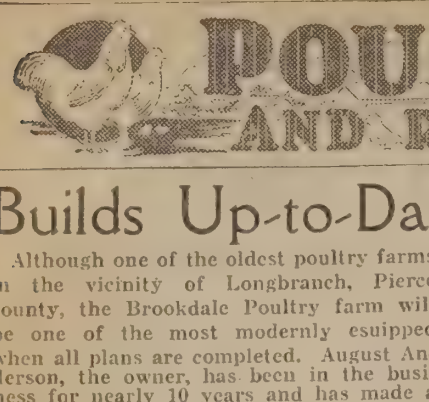
I believe the opportunities today in rabbit raising are brighter than ever before. The present demand indicates that.

The man or woman on the farm is the best suited for commercial rabbit raising. Plan a comfortable and convenient house for your rabbits, and then buy several head of stock of the best foundation stock money can buy. Join a good association. They will help you sell your stock. You can build up a fine business if it is in you. If it isn't, nobody can help you.

I believe the rabbit business pays better for the small amount invested than any other kind of business.

Furnish Cheap Meat

"The cheapest meat I can raise," is the verdict of C. J. Staats, whose farm is about nine miles from Oregon City, Ore., regarding his rabbits. Mr. Staats breeds Guernsey cattle and milk goats, but he has a place for the rabbits also, though he says they take less room and make less trouble than any other kind of live stock. Mr. Staats has New Zealand Reds and Flemish Giants, but is breeding only for the meat and not for predigreed breeding purposes.



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Wipe Out Every Rat and Gopher

Amazing New Discovery Quickly Kills Them All—Not a Poison.

Rats, Mice, Gophers—in fact all Rodents can now be wiped out easily and quickly. Imperial Virus will do it. This new discovery is a fluid, true Virus. Entirely harmless to humans, poultry, stock, pets, etc.



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YOU CAN GET YOURS FREE

Here's how! Send $1.00 today (currency, M. O., Checks, etc.) and we will give you by return mail, postpaid, two regular, full sized (double strength) $1.00 bottles of Imperial Virus. Use one to rid your place of these pests, and sell the other to a neighbor, thus getting yours free. Special inducements to represent us.

If more convenient, send no money, just your name and address to Imperial Laboratories, Dept. 497, 2110 Grand Ave., Kansas City, Mo. Pay postman $1.00 and few cents postage when two bottles arrive. Guaranteed to do the work to your entire satisfaction within 30 days or your $1.00 will be cheerfully refunded.—Adv.



QUALITY IS AT THE PEAK PRICES ARE AT BEDROCK

Year after year the quality of Goodyear Tires has been going up and up.

Veteran users say Goodyear Tires today give more than twice the mileage they did ten years ago.

In the meantime, there has been no slackening in our effort to push Goodyear prices down.

Today these prices are at bedrock—*the lowest they have ever been.*

Look at the figures listed below.

They represent an average decrease in Goodyear prices since 1910 of more than 60 per cent.

Remember—Goodyear quality is at its peak.

These prices, divided by your speedometer reading, tell the story.

Now is the time to buy.

30 x 3½ Cross-Rib Fabric	$10.95		
30 x 3½ All-Weather Tread Fabric	$14.75	33 x 4 All-Weather Tread Cord	$33.40
30 x 3½ All-Weather Tread Cord	$18.00	33 x 4½ All-Weather Tread Cord	$42.85
32 x 3½ All-Weather Tread Cord	$25.50	34 x 4½ All-Weather Tread Cord	$43.90
32 x 4 All-Weather Tread Cord	$32.40	35 x 5 All-Weather Tread Cord	$54.75

Manufacturer's tax extra

GOODYEAR

Copyright 1922, by The Goodyear Tire & Rubber Co., Inc.

DR. HESS Instant Louse Killer Kills Lice on Poultry *and* Stock

Use it on your lousy hens and chicks—your lousy colts, horses and cattle. You'll get better chicks—bigger, better fowls—more eggs—better contented stock.

Chicks are apt to be lousy now. Give them a chance. Sprinkle Louse Killer into the feathers, about the coops, on roosts, in nests of laying and setting hens. Always keep Louse Killer in the dust bath. For lousy horses and cattle, colts and calves, stroke the hair the wrong way and sift in Louse Killer.

We authorize dealers to return your money if it does not do as claimed.

1 lb. 30c, 2½ lbs. 60c (*except in Canada*)

Dr. HESS & CLARK
Ashland, Ohio



Chickens Sick?

Hens Not Laying

GERMOZONE will rid your chickens of roup, colds, canker, sore head, chicken pox, skin disorders, cholera, indigestion, bowel trouble and such ailments—and keep them healthy. For over 30 years the dependable remedy. Get Germozone, also famous Lee Press BOOKLETS, at drug or seed stores. If no dealer, order by card. Postman will collect, 75c and $1.60 sizes. No extra charge.

GEO. H. LEE CO., Dept. F46 Omaha, Neb.

SPOKANE SEED CO., SPOKANE, WASH.
PORTLAND SEED CO., PORTLAND, ORE.
Pacific Northwest Distributors.

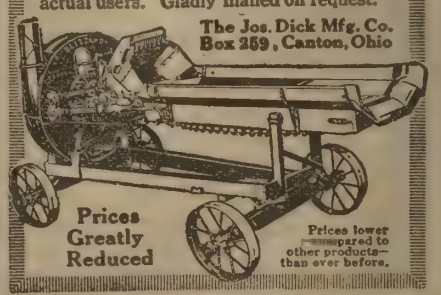
Get the New Catalog

Are you posted on the big improvement in silo filling methods through

Dick's Blizzard *self-feeding* Ensilage Cutters

They greatly increase capacity, increase the work done per man. Absolutely do most cutting per H. P. Fill highest silos easily. Rugged, durable and safe. 20 year old Blizzards still running. They finish the job without time lost. **Get the catalog—study it now.** Much of it was written by actual users. Gladly mailed on request.

The Jos. Dick Mfg. Co.
Box 259, Canton, Ohio



Prices Greatly Reduced

Prices lower compared to other products—than ever before.

Mitchell LEWIS & STAVER CO.

Portland and Spokane

Buy From the Local Mitchell Dealer.
Pacific Northwest Distributors

CREAM WANTED

Correct tests, honest weights, fair treatment guaranteed. Make a trial shipment and get results.

HAZELWOOD CO.
Spokane, Wash.

ORCHARD AND GARDEN

Berry Harvest

Enjoy the Fruits of First Picking

By NELL CROSBY.

From the first of July until frost the beautiful Puyallup valley lying between Seattle and Tacoma, Wash., is the scene of interesting activity, as men and women, both old and young, gather from far and near, to reap the wonderful harvest of luscious raspberries and blackberries for which this fertile valley is noted.

Whole families come to take part in this industry, each family occupying the quarters assigned to them in the low, rambling houses built for their accommodation, which are a necessary part of the berry grower's equipment.



Two visiting girls at a Sumner berry farm, enjoying the fruits of their first picking.

The women and girls in overalls or in khaki breeches and shirts are familiar figures in the fields and even on the highways, indeed they become so accustomed to this style of dress that at the street dances, which were given in the little town of Sumner, Wash., last summer for the amusement of the berry pickers, many of the young girls attended and danced in their khaki costumes.

Bee Calendar

Professor B. A. Slocum, extension bee specialist of the Washington State college, has prepared a monthly calendar giving advice to beekeepers. His calendar for the remaining months of the year follows:

June.

Keep colonies supplied with vigorous, prolific queens. If white clover or alfalfa regions, divide to prevent swarming at this time. Best time to Italianize. Give plenty of room to ripen honey.

July.

Remove comb honey sections as rapidly as capped over. If left are liable to become travel stained. Surplus from fireweed begins, while that from clover ends latter part of month or forepart of August. Increase may be made before end of clover flow.

August.

Replace important queens. June and July suggestions apply for fireweed sections. Give plenty of room for queen and workers as fall storing commences.

September.

Remove all surplus sections and extracting honey supers as storing ceases. See that all colonies have enough stores for wintering, if not feed. Great caution should be taken against robbing. Unite weak colonies. Remove fall honey and give honey saved from beginning of flow. Place super of honey beneath brood chamber, will then pack it around brood nest.

October.

Bees should be packed for winter latter part of month or forepart of November. Suggestions for September apply here. See that all colonies are strong and have 40 or 50 pounds of honey for winter stores.

November.

Finish work left over from October. As a rule all bees should be packed by the middle of month.

December.

Shop work and read. Eat honey, nature's own sweet.

HONEY-PRODUCING SECTIONS.

The intermountain region, extending from the Cascades in Washington east and south through the Rocky mountains to the southern border of Arizona and New Mexico, is the largest area of commercial honey production in the country. The states of New York and California come to the minds of many readers as the large centers of honey production, and they are very important honey areas. Commercially, however, the intermountain area ships several times as many carloads of honey as California and many more than New York, says the department of agriculture.

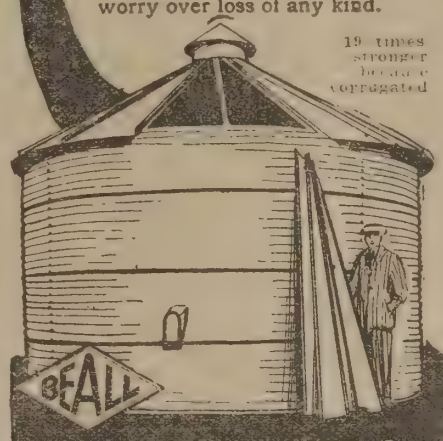
Apple Seedlings

The nurseries of the United States are growing more and more of their own apple seedlings for grafting, according to C. L. Robinson, supervisor of horticulture of the Washington state department of agriculture.

Prior to the World war the nurseries were accustomed to get their seedling stock from France, but the supply was cut off when the war started and the seeds were planted at home for the time being. From this time on the results have been improving and it is possible that this country will grow a large part of the seedlings for use in the nurseries.

BEALL METAL GRAIN BINS

Cut out the sacks —use Beall portable or stationary bins for your grain. Saves time and money —eliminates all worry over loss of any kind.



5 Reasons Why Beall METAL BINS Are Best For You:

1 **Insurance Protection.** Eliminates need for fire insurance—stubble can burn all around and not damage grain or tank.

2 **Rat and Squirrel Proof.** Keeps out the pesky rodents.

3 **Rain Proof.** Crops will be safe and dry during the long winter rains.

4 **Rot Proof.** No loss from mould or decay.

5 **Economy in Handling.** Portable —1000 bushel size readily moved from place to place.

Write for catalog and full details regarding sizes, prices, etc.

County Representatives Wanted

COAST CULVERT & FLUME CO. 91 COLUMBIA BLVD. PORTLAND ORE.

SPOKANE CULVERT & TANK CO. SPOKANE WASH.

Mention THE WASHINGTON FARMER when writing advertisers.

Power!

There's only one Caterpillar Holt builds it

Judge the "Caterpillar" T35 Tractor by its performance—don't let its small size mislead you

Read what the users say regarding power of T35

"With a 10-foot disc weighted down and cutting from 4 to 6 inches deep, the tractor walked right along and even on the turns it did not slow up. It handles a 7-foot scraper and a 15-inch springtooth cultivator without trouble."

"I used the T35 to subsoil and went down 20 inches deep the second time. I pulled my 3-gang plow 9 and 10 inches deep and you could hardly tell the "Caterpillar" was working."

"I have subsoiled 16 inches deep. Have also pulled a 7-foot double disc—the T35 simply played with this load.

The Holt MANUFACTURING COMPANY

Spokane, Wash.

Factories Stockton, Calif., & Peoria, Ill.

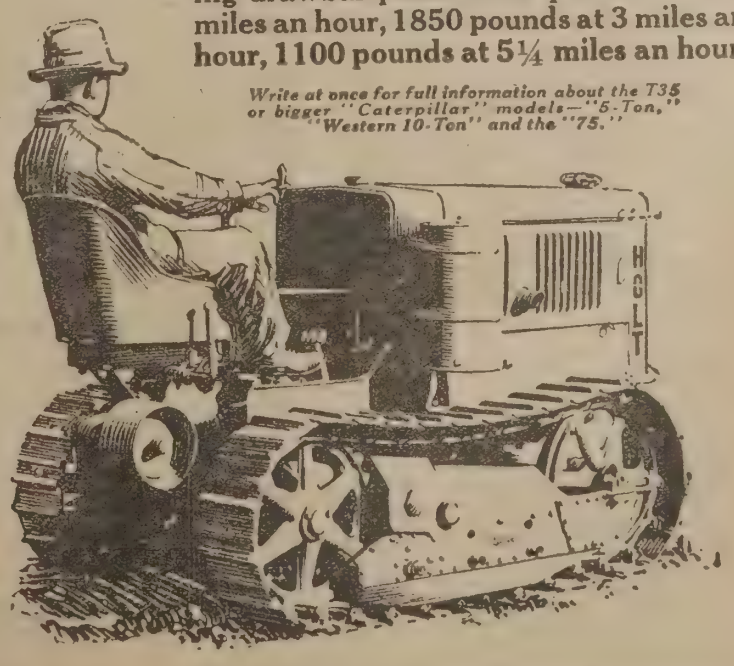
Oregon Representative

J. W. HILL, Henry Bldg., Portland

Don't confuse "Caterpillar" T35 Tractor with the ordinary small tractor, either in dependability, endurance or power. T35 is small, but small in size only. In power it surpasses many tractors of much greater size. In quality of design and workmanship, and in dependable, enduring performance, it is not even approached by any other tractor.

In addition to a liberal warranty covering materials and workmanship, the T35 is guaranteed to deliver 15 drawbar horsepower, with the following drawbar pulls: 2600 pounds at 2⅛ miles an hour, 1850 pounds at 3 miles an hour, 1100 pounds at 5¼ miles an hour.

Write at once for full information about the T35 or bigger "Caterpillar" models—"5-Ton," "Western 10-Ton" and the "75."



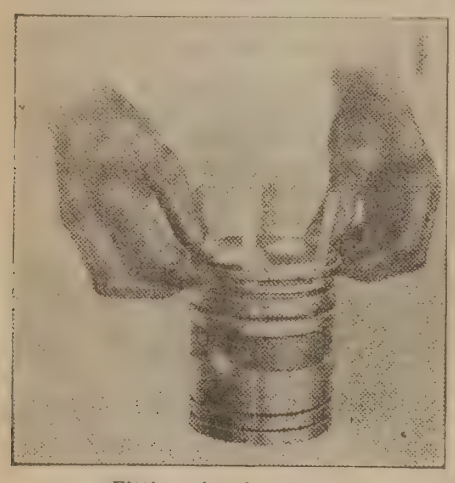
The Piston Ring

By PROF. L. J. SMITH, W. S. C.

If the valves of a motor seat properly, the efficiency of the motor is large dependent upon the tightness with which the piston rings fit the cylinder walls. The rings are made of a high-grade cast-iron, and are of a larger diameter than the bore of the cylinder, which gives them the spring necessary to tightly fit the cylinder walls.

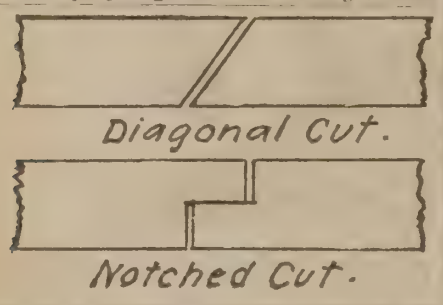
It is customary to replace the upper two rings each season, as they get more wear and are subjected to a higher heat which tends to make them lose their spring.

To remove the ring, spring the ring outward with a thin screwdriver and insert four narrow thin strips of tin under the



Fitting ring in groove.

ring as shown in the cut; then gently slide the ring over the end of the piston head. Then scrape the groves, to remove accumulated carbon, and clean with gasoline and old tooth brush, and wipe dry. If the rings are used again, each should be placed in its proper groove. Do not get them



mixed. Each new ring must be fitted to its respective groove. This is done by rolling the ring in the groove as shown in the illustration. The ring must fit the groove without end-play, yet not tightly.

There is one more important point in putting new rings in a piston. The ring is usually a little too large for the cylin-



Replacing and removing rings.

der and must be filed where the ends meet, else it will bind in the cylinder. The ends usually overlap by means of a diagonal cut or a notched cut as shown. These ends should have a clearance of about one-hundredth of an inch when the ring is in the lower end of the cylinder. When testing for clearance, be sure the ring does not rest at an angle against the cylinder wall. Tight fitting rings insure the maximum power in your motor.

Septic Tank

A septic tank is not as expensive or as difficult to construct as is sometimes imagined. W. A. Hunter of Shelton, Mason county, recently completed a tank under the direction of A. B. Crane, the drainage specialist of the state college. The total cost of the tank was $35, which included all labor and material. The material alone amounted to only $15.

Such a tank can easily be built with the aid of blue prints from the state college, Pullman, Wash., or by closely observing the details of one already constructed. The expenses of the materials and labor of Mr. Hunter's tank are as follows:

Cement	$10.80
Iron pipe	5.00
Two yards gravel	4.00
One yard sand	2.00
Four days' labor	14.00
Total	$35.80

FARMERS' WANT ADS

This is the farmers' "want," "sale" and "exchange" department for small advertisements of farmers, including live stock and poultry.

Advertising rates for ads running 1 to 3 times, 10c per word per insertion, with a special rate to Farmer subscribers, as follows: Ads running 4 to 12 times, 9c per word per insertion; ads running 13 times or more, 8c per word per insertion.

All commercial and land advertising 10 cents per word each insertion. Open also to nonsubscribers.

In using these columns advertisers must observe: (1) No advertisements will be inserted for less than $1.00. (2) Every word, number and initial, including name and address, must be paid for. (3) New advertisements, changes of copy or cancellations must reach general office, Spokane, Wash., 10 days in advance of publication date. (4) Cash must accompany order.

Above rates include insertion in The Washington Farmer, The Idaho Farmer and The Oregon Farmer, which constitute the Pacific Northwest Farm Trio. 46 Review Building, Spokane, Wash.

HELP WANTED—MALE 3

WANTED — SALESMAN WHO CAN SELL high-grade, dependable nursery stock; several counties in Oregon, Wash., Idaho and Montana now open for assignment. Our selling contract will interest you. Address Albany Nurseries, Inc., Albany, Ore.

HELP WANTED GENERAL 5

MEN-WOMEN WANTING RAILWAY MAIL, gov't clerk or carrier positions; $1400-$2300 Write Mokane Institute, A 28, Denver, Colo.

FRESH FOOD PRODUCTS 51-1

HONEY—FINE QUALITY ALFALFA, SWEET clover; 60-lb. can, $7.50; 2 cans, $14.50; three 10-lb. pails prepaid, second zone, $5. Harry Fisher, Prosser, Wash.

SMOKED SALMON, 5-POUND BOX, $1.25; salt salmon bellies, 5 pounds, $1.25, delivered by mail. Coffin Fish Co., Seattle, Wash.

HONEY—FIRST-CLASS ALFALFA, SWEET clover honey; 1 60-lb. can, $7; two cans, $13.50. A. L. Traner, Touchet, Wash.

WORLD'S BEST CLOVER HONEY, 60 pounds, $6.15; two 60s, $12. Browne, Box 499, Twin Falls, Idaho.

FRESH FOOD PRODUCTS (Continued) 51-1

WHITE ALFALFA, SWEET CLOVER honey; 1 60-lb. can, $7.50; 2 60-lb. cans, $14.50; six 10-lb. cans, $8.50; three No. 10 pails, prepaid third zone, $5.50. Wells D. Rose, Sunnyside, Wash.

MISCELLANEOUS—FOR SALE. 60

TOBACCO, NATURAL LEAF—SWEET AND mellow hand-picked chewing or smoking, 5 lbs., $1.50; 10 lbs., $2.50; smoking, 10 lbs., $2. Furnish free recipe for preparing. Quality and delivery guaranteed. Farmers' Tobacco Exchange, Sedalia, Ky.

PIPE — NEW AND SECOND-HAND. ANY size; low price; standard grade roofing paper at a big saving; belting, all plies, all sizes, cheap. Write Alaska Junk Co., S120 Adams st., Spokane, Wash.

HOMESPUN SMOKING TOBACCO. MILD AND mellow; 10 lbs., $1.50; 20 lbs., $2.75; delivery guaranteed. We furnish free recipe for preparing. Smoking Tobacco Exchange, Sedalia, Ky.

QUEEN BEES — INCREASE YOUR HONEY crops by introducing my strain of unsurpassed Italian queens. Write for circular and price list. J. D. Harrah, Freewater, Ore.

MISCELLANEOUS—FOR SALE (Continued) 60

SASH AND DOORS—O. B. WILLIAMS CO., 1943 First ave., So. Seattle. Chicken house sash, 20" wide by 25" high, 80c; a dozen different sizes in stock for immediate shipment. Skylights for chicken houses, 36"x40" price, glazed, $2. This is the size recommended by the Western Washington experiment station. We carry them in stock for immediate shipment. Sash and doors for all purposes at lowest prices. All orders receive prompt attention. Our large illustrated catalogue No. 35, showing full line of building material and built-in fixtures for the home, free on request. O. B. Williams Co. Established 1899.

WALL BOARD—WRITE FOR SAMPLE OF Washington plaster wall board; won't warp, won't burn. Manufactured by Washington Building Products company, 6851 E. Marginal Way, Seattle, Wash.

HOMESPUN SMOKING OR CHEWING TOBACCO, collect on delivery; 5 pounds, $1.50; 10 pounds, $2.50; 20 pounds, $4. Farmers' association, Paducah, Ky.

TOBACCO — HOMESPUN, EXTRA FINE chewing, 10 lbs., $3; smoking, 10 lbs., $2; 20 lbs., $3.50. Producers' Exchange, Mayfield, Ky.

TOBACCO — KENTUCKY'S PRIDE, EXTRA fine chewing, 10 lbs., $3; smoking ten $2; 20 $3.50. Farmers' Club, Mayfield, Ky.

JOHNSON'S PACKAGE BEES, QUEENS. Write for remarkable prices. 165 Raymond ave., San Jose, Cal.

MISCELLANEOUS—Wanted 63

HIDES—WE BUY HIDES OF ALL KINDS. Write for prices and tags. Hibbard-Stewart Co., Hibbard Bldg., Seattle.

WOOL—WE BUY WOOL AND PELTS. WRITE for prices and tags. Hibbard-Stewart Co., Hibbard bldg., Seattle.

MACHINERY—For Sale 93

EXTRAORDINARY BUYS IN USED COMbines, caterpillars, separators, engines and trucks. Fallquist Brothers, Pullman, Wash.

(Continued on the following page.)



Speed and Dependability in the Hay Harvest

McCormick - Deering - International

HAY machines that bear the above names may always be relied on to put your hay where you want it, the way you want it, in the quickest, most economical manner. *McCormick* and *Deering mowers* can be depended on to cut hay every minute. *International tedders* hasten, and insure, better curing. *McCormick* and *Deering self-dump rakes* are known the whole world over for their quick, clean work and light draft. The *International combined side-delivery rake* and *tedder* is a saver of time and labor.

Look at the farmer in this picture, pulling two wagons and two International loaders with the Titan tractor. He is sure to get his hay out of the way for grain harvest.

International sweep rakes and *stackers* provide a quick method of getting your hay to the stack.

International power hay presses put the hay in neat tight bales that keep better, are easier to handle, store and feed, and that bring the top price on the market.

Rely on the McCormick-Deering Dealer in Your Community

INTERNATIONAL HARVESTER COMPANY
CHICAGO OF AMERICA (INCORPORATED) U S A
92 Branch Houses and 15,000 Dealers in the United States

The Circulation of the Pacific Northwest Farm Trio Is More than 110,000 Copies Per Week

AUTO TRUCKS—For Sale 115

WE WILL ABSOLUTELY SAVE YOU FROM $500 to $1500 on the purchase price of a new truck. Creditors' sale of various standard makes; any size, 1 to 5 tons. Also a Holt 75 Caterpillar for $3500. Exceptionally easy terms. Write R. S. Phelps, 607 Empire State building, Spokane.

STOVE REPAIRING 128

WRITE MYER RUBENS, SPOKANE, ABOUT stove repairs, welding broken parts, nickle plating.

FUR-BEARING ANIMALS 170

SILVER FOX RAISING PAYS BIG—KING of all fur bearers. Start now. Easy to raise, easy to sell. Few pairs quality, registered, breeders left; fully guaranteed. Information free. United States Silver Fox Farms, 1210 Hutton bldg., Spokane, Wash.

SILVER AND CROSS FOXES FOR SALE. William Rambo, 407 Sprague, Spokane.

PETS—Dogs, Birds, Etc. 171

PEDIGREED COLLIE PUPS. PRINCESS COLlie Kennels, 4812-42 Southwest, Seattle. Wn.

CHANDLER BIRD HOME. BEAUTIFUL singers and females. Write 2027 East Mill, Portland.

RABBITS and HARES 173

PEDIGREED FLEMISH AND CHECKERED Giants. Prices not fancy. Brookside Rabbitry, Hubbard, Ore.

POULTRY (Baby Chicks) 174

30,000 HENACRES LEGHORN JUNE CHICKS. Our Leghorns mature quickly and these chicks should be laying in November and December. It pays to buy good stock and especially so in June. We furnish special instructions for feed and care with every June order. Safe delivery guaranteed by mail or express. Special price, $16 per 100; $140 per 1000. Eight weeks old pullets, $1.50 each; 500 for $700. Our free illustrated catalog describes our farm, gives feeding methods, formulas, etc. Henacres, Box A, Prosser, Wash.

FRESHLAID WHITE LEGHORN CHICKS have the qualities you want; vigor and scientific breeding for the heaviest egg production; every Freshlaid male is from a high record hen. Freshlaid Farm is one of the largest and oldest chick plants in the Inland Empire. There is a real demand for Freshlaid chicks, especially from our old customers. We are sold out until June. Freshlaid June chicks have been making good as winter layers for ten years. Free catalog. Freshlaid Farm, Colfax, Wash.

CERTIFIED S. C. WHITE LEGHORN BABY chicks from heaviest laying stock; safs delivery; live, vigorous chicks guaranteed. No money in advance; pay on delivery. Prices for May and June $3.50 per 25; $6.50 per 50; $12 per 100. Special prices 500 and 1000 lots. Largest electric hatchery in the world. Established 1898. Member Sonoma county farm bureau accredited hatchery list. Must Hatch Incubator Co., 445 Seventh st., Petaluma, Cal.

BABY CHIX—WHITE LEGHORNS ONLY. May delivery, $13 per 100; June delivery, $12 per 100; order now as the supply is limited and these are not just baby chix, but are chix from stock that has been bred for 20 years for vigor and vitality; mated to male birds from hens with records up to 298 eggs in pullet year; hatched by the oldest established hatchery in the northwest. Lakeside Poultry Farm, Roy, Wash.

EBORALL'S STRAIN WHITE LEGHORNS. Our hatch of 2300 chicks per week is now booked for Feb., March and April, principally to old customers. Your inspection is invited at all times. We are now booking chicks for May at $14 per 100. Write for circular. Crystal White Poultry Farm, McMinnville, Ore. Box 33.

BABY CHICKS FROM TANCRED AND HOLlywood strain; heavy laying White Leghorns mated to cockerels from W. W. experiment station; hens, 265-314 egg records. Late May chix, $15 per 100; $145 1000. Early June, $13 per 100; $125 1000. Hatching eggs, $7 per 100. Wax's Poultry Farm, Kent, Wash.

TRY OUR PARCEL POST PACKAGE—KEEP the old hen busy. We will ship you first-class baby chicks, postpaid to your door, direct from the hatchery and guaranteed all alive. Price, $4.50 per 25; $8 per 50. For delivery April, May or June. Order now. The White Hatchery, Petaluma, Cal.

WHITE LEGHORN BABY CHIX FOR MAY and June delivery at $12 per 100; $115 per 1000, from flocks inspected and accredited by the Sonoma county farm bureau. Safe arrival of full count, live, strong chix guaranteed. The Pioneer Hatchery, 422 Sixth street, Petaluma, Cal.

BABY CHICKS FOR MAY AND JUNE ONLY —4000 every 4 days of the famous O. A. C. strain S. C. W. L.; raised and run on free range. They have the vim. Prices, first half of May, $17, last half of May, $15; June, $12. Moorhead Poultry Farms, Granger, Wash.

UNION DISTRICT HATCHERY IS NOW booking orders for the best thoroughbred baby chicks at the right price. White, Buff and Brown Leghorns, Rhode Island Reds, Black Minorcas, Anconas and Barred Plymouth Rocks. F. & L. Downing, Los Gatos, Cal.

WHITE ROCK BABY CHICKS, "DANIEL'S IDEALS," from our own trapnested stock entirely. Write for prices and dates, also eggs for hatching. Free catalog. Ideal Poultry Yards, Hoquiam, Wash. Star Route No. 25.

WHITE LEGHORN CHICKS (TANCRED strain), from selected two-year-old hens mated to cockerels from 251 to 286 egg trap nested dams; May 31 hatch, $12.50 per 100. Bona Terra Ranch, Drain, Ore.

$12 PER HUNDRED—WHITE LEGHORN baby chicks from Corvallis noted egg strains; electrically hatched. This low price on May 18 to 25 only. Order now. Oregon-Corvallis Hatchery, Corvallis, Ore.

ACME POULTRY FARM, COTTAGE GROVE, Ore. Breeders of Oregon Agricultural college White Leghorns; chicks after May 20th, first pen (100, $13); (25, $3.50); bred to lay, and they will do so.

BABY CHICKS — WE GUARANTEE OUR chicks to be from the highest producing hens in Petaluma. Write for further information. The White Hatchery, Petaluma, Cal.

TANCRED STRAIN WHITE LEGHORN BABY chicks, May, $15; June, $12.50; $100 per 1000. Safe delivery guaranteed. D. A. Gillette, R. 4, Yakima, Wash.

BABY CHICKS, THOROUGHBRED BARRED Rocks; 100, $16.50, delivered. Chas. Muths, Rt. 1, Box 49, Salem, Ore.

WHITE LEGHORN BABY CHICKS. CIRCULAR on request. San Jose Poultry Yards, San Jose, Cal.

Leghorns.

FORD'S BRED TO LAY S. C. WHITE LEGhorns; 2-year-old breeding hens, $1 each. W. A. Ford, Umatilla, Ore.

POULTRY—Leghorns (Continued) 174

SPECIAL SALE OF PACIFIC NORTHWEST trap nested White Leghorns. One and two year old hens, cocks and growing cockerels from Kent, Wash., the home of the world's highest egg record Leghorns, the famous Yesterlaid Egg Ranch strain; 2000 one and two year old hens, free range raised, now one-half price. We must dispose of these to make room for our pullets. Cockerels from 200 to 225 dams, sire's dam 225 to 280 eggs; 8 weeks old, $1.75; 12 weeks old, $2.50; mature, $7.50 each; 225 to 259 dams, sire's dam, 225 to 280, 8 weeks old, $2; 12 weeks old, $3.50; mature, $10 each. Cockerels from 225 to 250 dams, sire's dam, 316, 8 weeks old, $4; 12 weeks old, $6; mature, $12 each. Cockerels from 250 to 300 dam, sire's dam, 316 and 333, 8 weeks old, $7.50; 12 weeks, $10; mature $15 each. Individual pedigreed cockerels (wing banded), 12 weeks and mature at from $5 to $50 and up. Don't miss this opportunity to get breeding stock from one of the largest trap nest ranches on the Pacific coast. Our strain is a blend of the choicest Tancred and Hollywood farms. Our prices are the lowest. We have 8000 hens, 3500 trap nested pullets, 12,000 growing chicks on free range. Baby chicks, $12 per 100. Yesterlaid Egg Ranch, Kent, Wash.

LEGHORN PULLETS, 5000 FEBRUARY, 3000 April and May hatched. These birds are Hollywood-Tancred strain, are unconditionally guaranteed on a money-back basis. Price $1.15 each, at 8 weeks. White Cloud Farm, Route 2, Box 188, Kirkland, Wash.

OREGON AGRICULTURAL COLLEGE WHITE Leghorns. Eggs, $1.50 per setting; $6 per 100, prepaid. Late May and June chicks, $12.50 per 100. Russell Poultry Yards, Route 3, Corvallis, Ore.

CARNATION WHITE LEGHORN PULLETS; April and May hatched pullets from my high record trap nested stock. E. W. Raush, Carnation Poultry Farm, Kent, Wash.

BUFF LEGHORN EGGS AND CHICKS FROM my champion exhibition and laying strains. R. Stromquist, Tigard, Ore.

BROWN LEGHORN EGGS, THE VERY BEST quality; free mating list. E. H. Rosenkranz, Colfax, Wash.

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POULTRYMEN—SEND EIGHT TWO-CENT stamps for special three months' trial for the best and oldest exclusive poultry journal in the west. The articles and advertisements are of special interest to the poultry breeders. Northwest Poultry Journal, 213 Commercial st., Salem, Ore.

GRIFFIN'S FAMOUS WHITE WYANDOTTES, the best for market and egg production; eggs for hatching from best mated pens in northwest; your opportunity to get started with my famous stock. Send for catalog. J. A. Griffin, Box 457, Eugene, Ore.

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MAMMOTH PEKIN DUCKS. "AMERICA'S finest." New blood this year direct from C. C. Shoemaker; eggs, $2 per setting, $12 per 100. Crystal White Poultry Farm, McMinnville, Ore. Box 33.

PUREBRED S. C. RHODE ISLAND RED EGGS for hatching from non-setting, non-fading strain. $3, $5 and $10 per fifteen. Mrs. L. Wham, Double Diamond Ranch, Omak, Wash.

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EGGS, MAMMOTH TOULOUSE AND WHITE Chinese geese; Mammoth Pekin ducks, pearl guineas. C. O. Johnson, R. 1, Medical Lake, Wn.

SHIP YOUR LIVE POULTRY AND EGGS TO us. Highest prices paid; daily remittances. Inland Poultry House, Spokane, Wash.

FANCY WHITE WYANDOTTE COCKERELS, $2.50; hatching eggs, two dollars setting. H. L. Lamon, American Falls, Idaho.

ANCONAS, SHEPPARD STRAIN; EGGS, $1.50 per 15; $7.50 100; day old chicks, $18 100. R. P. Irwin, Tonasket, Wash.

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MAMMOTH PEKIN EGGS FROM DUCKS that take the prizes. Drakes for sale. Mrs. E. A. Bennett, Salem, Ore.

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HUNT'S BARRED ROCK EGGS, PRICES REduced through April, May. W. A. Hunt, Lebanon, Ore.

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S. C. BLACK MINORCA HATCHING EGGS, $1.50 per 15. John Zack, Kalama, Wash.

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LIVE STOCK. 177

LARGE, HEAVY PRODUCING HOLSTEINS for sale at all times in car lots; tuberculin tested; 150 to 200 head always on hand; well marked heifer calves from registered sires and heavy producing dams; crated for shipment anywhere, $25 f. o. b. Levinson & Balmelli, Yakima, Wash.

SHIP US YOUR POULTRY AND LIVE STOCK. We pay the top market prices. Light veal, fat, fancy, 14c to 16c; dressed block hogs, 14½c; hens, light, 20c; heavy, 23c. Prompt returns, John Lewis & Co., Spokane, Wash.

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LIVE STOCK (Continued.) 177

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SEND FOR FREE HARNESS AND SADDLE catalog today; cut out the middleman, buy direct from the manufacturer. Lowest prices in the west; satisfaction guaranteed. Established 1881. Write Pierce Harness Co., Dept. T, Spokane, Wash.

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WE WILL TAN YOUR COW OR HORSE HIDES into robes or coats at the right prices and guarantee our work as we are custom tanners and manufacturers. We also buy hides, furs, wools and pelts, or will exchange harness and sole leather for same. Write for prices. Spokane Fur Tanning Co., 9 Pine st., Spokane.

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EVERBEARING STRAWBERRY PLANTS— All orders received to date and after until further notice will be entitled free, to 1 St. Regis everbearing raspberry, 1 red raspberry, 1 blackberry, 4 Lucretia dewberry, and 1 purple lilac. My Superb and Progressive everbearing strawberry plants are guaranteed and prepaid at 100, $1.40; 500, $6; 1000, $11. Orders for 1000 get 2 lots free, 2000, 4 lots. Dewberry plants, 75c doz.; $4 per 100. Concord rooted grapes, 1 year, and St. Regis everbearing rasp. transplants, 10c each, $1 per doz.; $6 per 100, postpaid; Snider blackberry vines, fine, large, hardy, prolific, 75c per doz.; $5 per 100. Model Fruit Farm, R. 1, Emmett, Idaho. N. B. Matthiessen, prop.

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VERY FINEST CRANBERRY PEAT LANDS, in center cranberry growing industry, subdivided, 1 to 5 acres, very reasonable prices, if desired, only 20 per cent down; no other payment for five years. By planting part of the holdings in cranberries, crops should meet future payments. Adjacent land produces 100 bbls. per acre. Last season cranberries returned the grower $15 per bbl. at wholesale. For money maker do you know of any other crop comparing with cranberry growing? Besides cranberries, can raise vegetables and chickens for tourist trade; fine dairy land; first class schools, roads, finest beach on coast within one mile. Write or visit us. Long Beach Land Co., Long Beach, Wash.

CUTOVER LANDS, EASY TO CLEAR; $8 TO $20 per acre; 25 miles north of Spokane; on hard surfaced highway; Great Northern and Milwaukee railways; excellent opportunity for dairying and stock raising with Spokane markets and creamery near at hand. Will help the man who will live upon this land and agree to clear a part each year by giving lumber to help start his buildings, and a purebred Jersey bull to groups of farmers. Interest and payments low. Write Milan Farms Development company, Dept. T, Old National Bank bldg., Spokane, Wash.

FOR SALE—LEVEL, BLACK LOAM LAND: Wenatchee district, under first class water right, fully paid; one inch of water per acre; any size tract, 5 to 40 acres. Priced at $165 per acre for raw land, no payment down for first 4 years; 7 years thereafter to complete the payment; admirably adapted for berries, early fruits, diversified ranching. Write Simmons & Munroe and Geo. H. Pfau, Wenatchee, Wash.

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174 ACRES, ON KOOTENAI RIVER AND Great Northern; 94 bottom, 8 pasture, 18 fenced and cross-fenced; 3 plowed, 15 ready; ½ acre fruit, 4 cabins, team, harness, wagon, plow, harrow, tools, etc.; 2000 ft. lumber, 14 bales roofing, 6 windows, fine cattle or chicken ranch; fine government range. $4000. Chas. R. Scholz, owner, Ural, Mont.

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SELL YOUR PROPERTY QUICKLY FOR cash; no matter where located. Particulars free. Real Estate Salesman company, 501 Brownell, Lincoln, Neb.

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FOR SALE—FARM IN NORTHERN IDAHO. W. H. White, Hope, Idaho.

168 ACRES, $2000 CASH. ADDRESS P. ROOS, Myrtle Point, Ore.

FARM LANDS FOR SALE (Continued) 651

CATTLE RANCH FOR SALE.

One of the best in the state of Nevada: 3700 acres valley farm land, all under fence; sufficient water to insure crops; 3400 mountain range land, close to ranch; 900 head of Shorthorn stock cattle; 75 head of work, saddle, stock horses; machinery, harness, buildings, etc. Apply J. R. Harvey Co., Paradise Valley, Humboldt county, Nevada.

WE SELL FORECLOSED LANDS FOR A loan company for one-third cash, balance easy terms. When writing tell us what you want, where preferred, how much can will invest, kind of farming you contemplate, as we have no list and must write special description in each case. No trades. Hartford Land company, 601 Paulsen bldg., Spokane, Wash.

THE BERRY BELT OF THE UNITED STATES, western Washington, near Seattle, produces as high as $800 per acre; all crops contracted for. Over 30 cars shipped last year from one town; good chicken lands, good markets, paved highways, schools, daily mails, etc. You can buy this land without a cent down. Poncin Realty company, 716 3d ave., Seattle, Wash.

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640 ACRES GOOD GRAIN AND STOCK FARM; 360 under cultivation; 160 in fall wheat; 165 summer fallowed; watered by good pipe line; fair improvements; close to school; near good town. Price $30 per acre, on easy terms. Will soon be under irrigating project. Box 1, Goldendale, Wash.

640 ACRES, HIGHLY IMPROVED, 26 MILES east of Calgary; 375 acres irrigable; 400 in crop; 150 summer fallow for 1923; $75 cash, $10,000; or subdivide into two farms, $65 cash, $2000 and $75 cash $5000. Price includes crop. Frank Sugden, Cheadle, Alberta.

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160-ACRE DAIRY RANCH; 2½ MILES FROM station; nearly all creek bottom; good improvements, stock and machinery; good chance to get a good place cheap. Adolph Hill, Menlo, Wash.

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320 ACRES MOUNTAIN RANCH: GOOD road, water and wooded; fine for grape, orange or goat ranch; plenty of deer. $4800. Sell all or part. M. Kelly, Cloverdale, Cal.

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47 ACRES, CHEHALIS VALLEY, IMPROVED; new buildings; location ideal; in crop; terms. Write Charles Raytons, Chehalis, Wash. R. 1.

FOR SALE—160 ACRES GOOD HAY, DAIRY and stock ranch. For full particulars write Box 43, Route 3, Odessa, Wash.

320 ACRES GOOD STOCK RANCH. WRITE for particulars. Joe Miller, Granite, Idaho.

FARM LANDS—Wanted 654

WANT TO HEAR FROM OWNER HAVING farm for sale. Give particulars and lowest price. John J. Black, 80th street, Chippewa Falls, Wis.

IRRIGATED LANDS—For Sale 663

IRRIGATED ACRES, TWO MILES FROM CITY limits of Spokane; prices less than city lots. Soil especially adapted to vegetables, small fruits and poultry raising. Good graded school and college. Telephone, electric lights, domestic water and paved highway. Some beautiful homes built and others building. Locate your home where you can have city conveniences and enjoy country life. Write or call upon Country Homes Development company, Dept. T, Old National Bank bldg., Spokane, Wash.

KENNEWICK, WASH., IRRIGATED LANDS, in the finest section of lower Yakima valley, with three railroads; mild winters, long growing seasons; earliest on market; large and small tracts, raw and improved. Prices right; easy terms; some trades. Bert Plowman, Kennewick, Wash.

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40 ACRES KENNEWICK IRRIGATED LAND; half mile Finley; 30 acres alfalfa; 6 acres apples; buildings. $10,000, half cash. Julius Jacot, Finley, Wash.

TWIN FALLS IRRIGATED FARMS, ANY SIZE, any crops, any terms. Home Realty Co., Twin Falls, Idaho

CITY PROPERTY FOR SALE. 690

ASHLAND REALTY COMPANY HAVE RESIdences, ranches and business places for sale. Write fully what you want, your expectations and send addressed, stamped envelope. Ashland Realty company, Ashland, Ore.

FOR SALE OR EXCHANGE 702

200-ACRE STOCK AND FRUIT RANCH; 12 acres under water and in trees and alfalfa, balance in mountain pasture; good buildings; ½ mile to school and church, 11 miles to railroad. Price $12,000; will take house and lot in good town or city up to $5000 to $6000; cash $2500, balance five years, 6 per cent. Owner too old to farm, so must sell. The Big Bend Land Co., Spokane, Wash.

81-ROOM BUSINESS BLOCK, CITY; INCOME $931 monthly. Price $70,000. Will consider farm, $40,000; $20,000 cash. What have you? Briscoe Realty Co., Lindelle bldg., Spokane.

FOR SALE OR EXCHANGE—201 ACRES GOOD soil; 30 acres improved; good house, stable, hen house; timber to pay for place. Write owner, Benjamin Healey, Molson, Wash.

The GAUNT GRAY WOLF

By DILLON WALLACE

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CHAPTER XIX.

The Cache on the Lake.

Shad Trowbridge stood dazed, as one in a dream—a horrid, awful dream. He looked through a haze, and what he saw was distorted, unreal, terrible. The suffering creatures about him were spectral phantoms of the nether world, the shimmering rime a symbol of death, the endless snow the white robe of the grave quickly to cover them all.

A sudden stillness fell upon the camp, to be presently broken by the agonized scream of a woman, shrill and startling, followed by wailings and melancholy moans. The Spirit of Death had snatched away her favorite son.

A sickening nausea overtook Shad, and he sank upon his toboggan, faint and dizzy with an overpowering weakness. His imagination was getting the better of him.

It is always dangerous and sometimes fatal for one to permit the imagination to assert itself in seasons of peril. Will power to put away thoughts of tomorrow, to think only of today, to do today the thing which necessity requires, coupled with a determination never to abandon hope, is a paramount essential for the successful explorer to possess.

In this moment of hopeless surrender Shad felt Manikawan's hand rest lightly upon his shoulder for an instant, and looking up he saw her standing before him, tall, straight, commanding, and as she looked that day on the river bank when she bade him and Bob wait for her return to free them from their island prison.

"The Friend of White Brother of the Snow is not a coward. He is not afraid of the Spirit of Hunger. He is not afraid of the Spirit of Death. He is brave. He once outwitted the Matchi Manitu of the river. He will outwit the Spirit of Hunger. He will outwit the Spirit of Death. The friend of White Brother of the Snow is brave. He is not afraid to die."

The words were unintelligible to him, but their import was unmistakable. She a young Indian maiden, was offering him encouragement, and recalling him to his manhood.

He arose to his feet, ashamed that she had read his mind, ashamed that she had found it necessary to recall him from a lapse into his foolish weakness which must have seemed to her like cowardice.

But he remembered now that he was a man—a white man—and because he was a white man the physical equal and mental superior of any savage there. Looking into Manikawan's eyes, he made an unspoken vow that she should never again have cause to chide him.

Dawn was breaking, and in the growing light a half dozen lodges were to be seen. At one side and alone stood a deerskin tent of peculiar form. It was a high tent of exceedingly small circumference, and where the smoke opening was provided and the poles protruded at the top of the ordinary wigwam, this was tightly closed. It was the medicine lodge of the shaman.

Sishetakushin and Mookoomahn had entered one of the lodges immediately after the tumult caused by their arrival had subsided, and Manikawan now followed her mother into another lodge. There were no Indians visible. The moans of the grief-striken mother, rising above the voices of men in the lodge which Sishetakushin and Mookoomahn had entered, were the only sounds.

The air was bitterly cold, but the tragedy enacting around him had for a time rendered Shad quite insensible to it. When he did finally realize that, standing inactive, he was numbed and chilled, he still lingered a little before joining Sishetakushin and Mookoomahn, dreading to enter the famine-stricken lodges.

At last, however, necessity drove him to do so, and within the lodge he discovered that a council was in progress. In the center a fire burned, and around it the men, solemn and dignified, sat in a circle. One after another of the Indians spoke in earnest debate. They were considering what action they should take to preserve their lives, and Shad, as deeply interested as any, felt aggrieved that he could not immediately learn the final result of the conference, which came to an end as the sun cast its first feeble rays over the barren ranges that marked the southeastern horizon.

When the council closed the Indians filed out of the lodge, and one, a tall old man, fantastically attired in skins, entered the medicine lodge alone, carefully closing the entrance after him to exclude any ray of light.

Immediately drum beats were heard within the tent, accompanied by a low groaning and moaning, which gradually increased in volume and pitch until presently it became a high, penetrating, bloodcurdling screech. This continued for perhaps half an hour, the drum beats never ceasing their monotonous rat-tat-tat.

The shaman, or medicine man, thus working himself into a frenzy, at length believed he saw within the lodge the ghostly form of the particular Matchi Manitu, or evil spirit, responsible for the disappearance of the caribou and the resulting famine.

This spirit's wrath it was believed had for some reason unknown to the Indians been aroused against them. Only the shaman could get into communication with the spirit, and learn from it what course the Indians would be required to pursue to placate its wrath and remove its curse.

When the appearance of the spirit was announced, the shaman began to supplicate and implore the Matchi Manitu to withdraw from the people the pursuit of famine; to return the caribou to the land, and to preserve the lives of the dying.

Presently in tones of joy the shaman announced that he had succeeded in enlisting the services of the Matchi Manitu, and with the announcement the din within the lodge ceased, and for several minutes mysterious whisperings were heard.

Suddenly the shaman threw open the lodge, and in a state of exhaustion tottered forward. Still under the influence of the paroxysms into which he had worked himself, he delivered in a wandering, disconnected jumble of meaningless sentences the demands of the Matchi Manitu. These consisted of many unreasonable and impossible feats that the people were required to accomplish before the Spirit of Starvation—the Gaunt Gray Wolf—would cease to follow upon their trail.

The Indians began at once to break camp. Sishetakushin had reported no caribou to the southward. Their only remaining hope was to reach the haven of Ungava post to the northward, and they were to begin the life-and-death struggle northward at once—a struggle in which many were to fall.

A sense of vast relief was experienced by Shad when Sishetakushin resumed the march. Famished and weak as he was, this was inexpressibly preferable to a continuance with the starving crowd, and he turned his back upon the camp, little caring whence their trail led.

For a while they continued northward upon the frozen bed of a stream, which they had been following for several days, then a sharp turn was made to the eastward, and as the sun was setting they came upon the ice of a wide lake.

At the end of a half hour of slow plodding across an arm of the lake they entered the edge of sparsely wooded forest and halted. Sishetakushin and Mookoomahn began at once to remove the snow from the top of what appeared to be a high drift, and a little below the surface uncovered the roof of a cache similar to the one they had made on the shores of the Great Lake of the Indians, where Shad and Ungava Bob had found them.

Shad's heart gave a bound when the object of the journey was revealed to him. Here was food and promise of life! And Bob's words, so often repeated when they were stranded on the island, flashed into his mind:

"It's th' Lard's way. He's watchin' you when you thinks he's losin' track o' you. He's takin' care o' you an' you does your best t' take care o' yourself."

Manikawan and her mother stretched the deerskin cover upon wigwam poles used the previous summer and still standing near the lake, and Shad cleared the snow from the interior of the wigwam, while the women broke boughs and laid the bed.

In the meantime, Sishetakushin and Mookoomahn opened the cache and transferred its precious contents to the wigwam. A fire was kindled, and in the cozy warmth of their shelter they broke their fast, which had now extended over a period of 36 hours.

The small portion of dried caribou meat doled out to each was far from satisfying. Some of the tea which Ungava Bob had given the Indians still remained. A kettle of this was brewed, and it served to stimulate and warm them. Then they lighted their pipes and for a time smoked in silence.

At length Sishetakushin, turning to Mookoomahn, began:

"On the Lake of the Beaver to the northward we have a small store of atuk weas (deer's meat). We also have there the cover of a lodge. Three suns will pass before we can reach this store of food. On the Great lake we have another store.

"Sishetakushin and the woman will travel to the Lake of the Beaver. With the store of provisions and the lodge which we find on the Lake of the Beaver we will travel northward to the lodge of the white man, where the water of the river joins the big sea water, and where we shall find food.

"Mookoomahn and the maiden, with the friend of White Brother of the Snow, will travel southward to the Great lake. Mookoomahn will show the white man the way to the lodge of White Brother of the Snow. Then he will return to the Great lake and trap the marten and the mink.

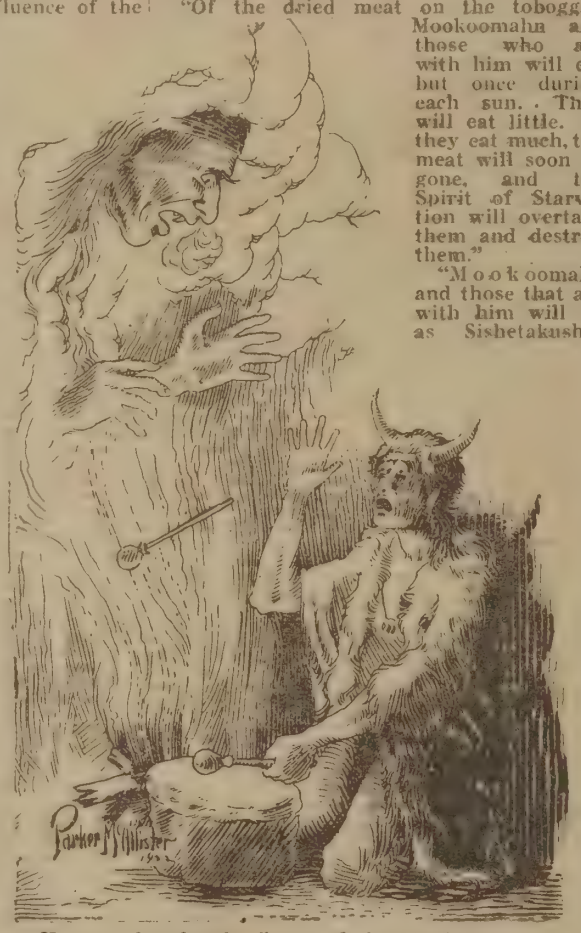
"When the sun grows strong, and drives away the Spirit of the Frost, Mookoomahn will travel northward to the Lake of the Beaver. There he will find Sishetakushin and the woman to welcome him. He will take his food from the waters as he travels.

"The maiden will remain in the lodge of White Brother of the Snow. Sishetakushin gives her to White Brother of the Snow. She is his. White Brother of the Snow is of our people. He will be glad, and the maiden will be glad. White Brother of the Snow has white man's food in great store. Mookoomahn will not be hungry."

"Mookoomahn will do as Sishetakushin directs," answered Mookoomahn.

For a time all smoked in silence, then Sishetakushin resumed:

"Of the dried meat on the toboggan Mookoomahn and those who are with him will eat but once during each sun. They will eat little. If they eat much, the meat will soon be gone, and the Spirit of Starvation will overtake them and destroy them."



He saw the ghostly figure of the Mitchi Manitu.

"Mookoomahn and those that are with him will do as Sishetakushin directs," said Mookoomahn.

A series of signs and pantomime conveyed to Shad the substance of Sishetakushin's remarks. He understood that on the morrow the party was to separate. That he with Mookoomahn and Manikawan were to return to the Great lake, and that they had been cautioned to husband their provisions.

He surveyed the small bundle of jerked venison with misgivings. Even with one light meal a day he calculated that it would not last them above three weeks. Their journey from the cache on the Great lake to their present position had consumed a month, including a period of one week when they were stormbound.

Should they be fortunate and encounter no storms, the food, sparingly doled out, might serve to sustain them. If storms delayed them, it certainly would not.

In any case their lives must hang in the balance until the cache was reached, unless game were encountered in the meantime, which seemed highly improbable.

A meager meal was served at an early hour the following morning. As usual, camp was broken long before day, and then came the farewells.

The parting between Sishetakushin and Mookoomahn was affecting, that between the women more stoical. Shad regretfully shook the hands of the old Indian and his wife. They had been friends to him, and he had no expectation that he should ever see them again.

Then Shad and his companions turned southward into the wide wastes of frozen desolation that lay between him and his friends. It was to be a journey of tragic experiences—a journey that was to try his metal as it had never yet been tried.

CHAPTER XX.

The Folk at Wolf Bight.

The Grays were very lonely and the little cabin at Wolf Bight seemed desolate and deserted indeed during the first days following the departure of the trappers for the interior. Mrs. Gray and Emily cried a little, and often Emily would say:

"I wonders where Bob is now, mother, an' what he's doin'?"

"He's workin' up th' river, lass, an' th' dirty weather's makin' th' trackin' an' portagin' wonderful hard for un," she would answer, when it stormed; or, when the sun shone, "They's havin' a fine day for travellin' now."

But presently the preparations for Emily's departure for school occupied their attention to the exclusion of all else, and they forgot for a time their loneliness.

Her going was to be an event of vast importance. It was an innovation, not only in their household, but in the community, for never before had any of the young people of the bay attended school, and never before, save on the occasion when Emily had been taken to the St. Johns hospital the previous year to undergo an operation, had any of the girls—or women, either, for that matter—been farther from home than Fort Pelican.

When Bob came into his little fortune through the salvage of the trading schooner, "Maid of the North," Mrs Gray had urged that Richard rest from the trail for one season, and at the same time give the animals an opportunity to increase. This he had done, and during the previous winter, when Bob also was at home, he and Bob had occupied their time in the woods with an ax and pit saw, cutting a quantity of timber and planking.

There was no immediate need of this timber, and when Bob was gone Richard determined to utilize it in the construction of a small schooner, in anticipation of the trading operations to begin the following year. Such a vessel would be a necessity in transporting supplies from Fort Pelican to the store at Wolf Bight.

Therefore, he began at once the work of laying the keel. There were nearly three months at his disposal before he would go out upon his trapping trail, and in this time, hoping to accomplish much, he remained at his task from early morning until dusk drove him from it. Thus occupied, Mrs. Gray and Emily seldom saw him save at meal hours, and this made them doubly lonesome.

One day late in August Douglas Campbell sailed his boat over to Wolf Bight to spend the day with his friends and to announce that a week later he would come for Emily to take her to Fort Pelican, where they were to connect with the mail boat for St. Johns.

This recalled the near approach of Emily's departure, and the days that followed passed with amazing rapidity. Emily's new woolen frock—the first woolen frock she had ever possessed—needed still some finishing touches. It was to be her Sunday dress—to be worn at church, where there would be many fine people to see her—and as pretty as the mother's skill and care could make it.

Then there were the print frocks for everyday wear, to be freshly laundered and packed with other clothing into a new wooden chest which her father had made for her, and the innumerable last things to be done, which kept Emily and her mother in a continuous state of flurry and excitement.

Quite too soon Emily's last day at home dawned, and, true to his appointment, Douglas Campbell arrived during the afternoon. He looked very grand and dignified and altogether unlike himself in his suit of gray tweed. He wore this suit only on those rare occasions—usually at intervals of three or four years—when business called him to St. Johns, and Emily had but once before seen him so strangely attired.

He looked so strange and unnatural—so unlike the good old Douglas that she loved, in moleskin trousers and pea-jacket or adicky—that she felt he was somehow different, and that the world was going all topsy-turvy.

And then for the first time there came to her a full realization of the great change that was to take place in her life—that she was going far from home and into a strange land—that for many, many months she was to see neither her father nor her mother—that she was to live among strangers who cared nothing for her—that she would be separated from those who loved her and all that she held dear in the world. A great ache came into her heart—the first heart-hunger of the homesick—and she slipped away behind the curtain to throw herself upon her little white bed and seek relief in stifled sobs.

Presently as she lay there, weeping quietly to herself, loud exclamations of hearty welcome from her father and mother as some one entered the door caused her to sit up and listen. Then she recognized Tom Black's voice and heard Bessie asking:

"Where's Emily?"

(Continued on page eighteen.)

FAMILY CIRCLE

ALICE BARLAND
EDITORIAL CONTRIBUTOR

Experience Letters

From Our Family Circle Women

Dear Mrs. Barland: I will give a little of my experience in raising turkeys. I set my hens on the ground whenever possible, but if not I put ashes under the straw in the nest.

When my turkeys hatch I give them bread soaked in water and no milk at all, not even milk made into biscuits, only the raised light bread, which is made of water. After they are 4 or 5 days old I let them out for an hour first and each day leave them out a little longer. I have no trouble about losing them at all and the same diet will work with little chicks. I never have any bowel trouble in my flocks.

Dear Mrs. Barland: About turkeys, I keep them close in yards, but keep them contented, so they will not know they are confined. I gather the eggs every day and set from 18 to 20 to a setting. The first 24 hours after the little ones are hatched I feed them nothing but give plenty of fresh water and grit. The first feed is cottage cheese with one-half teaspoon of black pepper to a quart of cheese every two hours. I never put salt in anything they eat. After a week I give chick feed with the cottage cheese and after that I mix wheat with the chick feed. After July 4 they are fed wheat only at night, as this brings them home to roost. They like best an alfalfa field to run in.

MRS. L.

Will some one write and tell us how to do hemstitching on a common sewing machine? MRS. O. C. D.
Washington.

A sister who reads the Circle in Nebraska would like to correspond with some of the western sisters. Address Mrs. Henry Marx, Dalton, Neb.

Concerning wormwood: It is very useful in winter for colds. Gather in the fall, cut off the tops and put away to dry. Steep as desired and add sugar and milk. It is given to children as a cure for worms.

MRS. A. D. W.

For perspiring and tired feet: Get a small package of white oak bark, put into one and one-half pints of boiling water in a granite dish and let it steep and set back and let stand till cold. Put in glass jar to use as follows: Bathe the feet daily in warm water to which has been added a little salt or soda; dry thoroughly, then pour into the basin a little of the oak bark solution and soak the feet in this for two or three minutes and let it dry on the feet. It is best to change the stockings every day for a week anyway, or until you get results. MRS. J. H.
Washington.

Dear Mrs. Barland: I read the Family Circle and find many good recipes, but I see very little about bread making. Bread being the most important article on the table every housewife should know how to make it. When my husband says: "Wife, this is fine bread you have today," it more than repays me for the extra work in making it. Bread making is easy if the right method is used. I have baked bread a good many years and used different kinds of yeast with different methods, but the last years have used starter yeast and find it the most reliable. I find I can make altogether the best bread with it that I have ever made.

The starter yeast never runs out, never requires renewing with a yeast cake or other yeasts, but keeps itself going by potato and the water potatoes are cooked in and a little sugar and salt.

It can only be made by getting a start of it from some one using it. Any one wishing to know more about this starter yeast may write to me.

MRS. S. WELTON.
Vancouver, Wash., Route 6, Box 281.
(I am wondering how the first person got started.—A. W. B.)

Dear Mrs. Barland: We have lived here in Kansas for a good many years, but I read THE FARMER every week and am interested in the far west. I spent eight weeks in the Boise valley at one time and it looked to me that life would be well worth living there. We would like to move there, but are told that one must have a good deal of money to get a home there. I would like to live where one could have plenty of fruit and would be very thankful if some of the readers of THE FARMER would write to me about their part of the country and the chnaces of getting a home there.

A KANSAS SISTER.

Dear Mrs. Barland: I am a young reader of the Family Circle and enjoy it very much even at the age of 16. I am a farmer's daughter and have lived on a farm for 13 years. I milk four cows night and morning. I have several saddle ponies and like to ride horseback very much.

Will some one tell what to do for dry hair.

I wish more young girls would write to THE FARMER. "COLUMBINE."

Please, dear Columbine, and every one else, give name and address.—A. W. B.

Dear Mrs. Barland: I have used several of the recipes in the Family Circle and have never yet had a failure. I have been married two years and owe my success in cooking to the Family Circle.

Oregon. MRS. J. F. M'D.

Dear Mrs. Barland: I noticed in a recent number of THE FARMER that a lady asked about papering her house. I would suggest mats which can be bought at a printer's office very cheap. They are called matrix and are put on the walls sidewise with tacks and one can paint or kalsomine over them. If painted one can wash them.

I saw a house fixed with them where the living room was painted cream colored, kitchen white, one bedroom pink and another blue. The floors were oiled and the furniture stained cherry color. It is all inexpensive. Sincerely, MRS. F. M. C.
Washington.

Rhubarb Recipes

By H. A. LYNAN.

Rhubarb pudding: Chop rhubarb pretty fine, put in a pudding dish and sprinkle sugar over it. Make a batter of one cupful of sour milk, two eggs, a piece of butter the size of an egg, one-half teaspoonful of soda and flour enough to make a batter about as thick as for cake. Spread it over the rhubarb and bake until done. Turn out on a plate upside down so rhubarb will be on top. Serve with sugar and cream.

Rhubarb tapioca: Soak two-thirds cupful of pearl tapioca over night, drain and cook in a double boiler with one and one-fourth cups of boiling water and one-third teaspoonful of salt; when tapioca has absorbed water add three cupfuls of rhubarb, cut in three-fourth inch pieces, one and one-third cupfuls of sugar. Cook until tapioca is transparent and rhubarb is soft. Serve hot or cold with sugar and cream.

Rhubarb pie: Line plate with rich pie crust. Skin the rhubarb and cut it in half-inch pieces, using one pound to a pie, and put into dish, and pour boiling water over it, and let stand five minutes. Mix two tablespoonfuls of flour with one cupful of sugar, add one beaten egg, and remove rhubarb from water and mix all, put into crust, cover and bake. Rub milk over top of pie.

Rhubarb ice cream: Heat one quart of milk, add one beaten egg, one pinch of salt, one cupful of sugar; when cold add one pint of whipped cream and, lastly, one pint of stewed rhubarb slightly sweetened, freed of all juice. Freeze several hours.

Just Folks

In the middle ages feudal castles were dotted over European lands. The lord of the castle was the pride of his retainers.

Twenty-five years ago the glory of feudal castles and the pride of feudal lordship was outdone in the vision of men who began irrigation enterprises in a personal way.

I remember visiting a sandbar on the Snake river, watered by pumping from the river, the grapes from its vines taking the first prize at the world's fair in Chicago. It was the beginning of the feudal estate right there on that sandbar.

I remember visiting the far more pretentious feudal estate on which the owner had spent all the money he could obtain from a lucrative professional practice and whose enthusiasm was not excelled by any of the lords of the manor of olden times.

I spent a night in the shack of another dreamer of a feudal estate on the Columbia, whose broad acres of land, dotted with young trees, was wiped out by an untimely flood.

During a night ride on a day coach to Portland, in the small hours of the morning, there entered a man and a woman, a father and daughter. The father was full of enthusiasm over another feudal estate to be erected on an island in the Columbia, containing a section or more of land. All the details were plain in his mind. Alfalfa and peaches and hogs would be the foundation of his estate.

Those were glorious days of personal adventure and will never quite return again. The Columbia basin project, with its undreamed-of possibilities, can not surpass the personal aircastles of these enthusiastic forerunners of feudal estates built upon the sandbars of the rivers.

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Ironing Board
Sleeve Board
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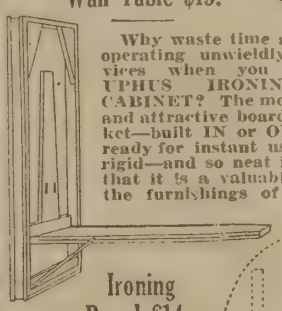
Four-in-One $27.

Looks like a decorative panel on the wall. One turn of the wrist and down comes a table seating five people! Eliminates crowded rooms and bulky furniture. One-piece table top, figured grain, special design. Will make that little alcove into the coziest breakfast nook you ever saw.



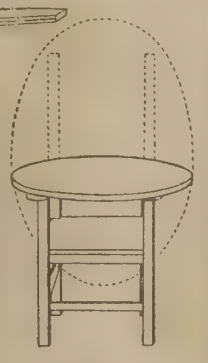
Wall Table $13.

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High Points in News of the Week

Notwithstanding the apparent refusal of Secretary of State Hughes to accept the invitation of European nations that the United States be represented at the international conference on Russian affairs at The Hague next month, there yet appears a possibility that this government will participate. It is explained by the state department that the reason for the flat refusal to accept the invitation lay in certain conditions placed upon the conference by the allied delegates at Genoa. It is reported from Washington, D. C., that President Harding would be willing to see these conditions so amended that this country could feel free to join in the conference with a view to assisting in the solution of Russia's problems.

The conference at Genoa has adjourned, with apparently little definite accomplishment other than the calling of the second conference at The Hague for June 15, at which time the specific question of how best to assist Russia will be taken up.

* * *

One of the notable steps in the hope of bringing about an early reduction of freight rates on staple commodities was taken at Washington last week when President Harding called into conference the presidents of the principal railroads of the country to discuss the problem. The president urged that the railroad officials cooperate with the interstate commerce commission by making voluntary reductions in freight rates as early as possible with a view to bringing about a return of normal industrial conditions. The railroad representatives voted to have a committee named from their membership to take up the suggestions made by the president and recommend such action as seemed to them practical.

The interstate commerce commission has before it at the present time a number of applications on the part of shippers for rate reductions. Under the law, the commission is required to fix rates that will give to the railroads a reasonable profit. It is apparent, however, that President Harding is seeking to have the railroads make a temporary sacrifice in certain instances where reduced rates would deny them such reasonable profit by voluntarily making such reductions with a view to stimulating industry, out of which would later grow a profitable railroad business on the basis of these rate reductions, increased traffic and lower operation costs.

* * *

Following the adjournment of the allied conference at Genoa last week, Premier Lloyd George of England declared the most dramatic spectacle he had ever witnessed was at Genoa when the representatives of more than 30 nations arose and pledged themselves to a future policy of nonaggression. "We must remember," he said, "that only a few weeks ago armies were massing on frontiers extending thousands of miles with the evident intention of marching against each other. By the Genoa conference their march has been arrested."

Premier Lloyd George says he is convinced that the Russians are sincere in their desire for peace and are ready to be readmitted into the society of the leading nations of the world.

While admitting that the Genoa conference was not the success that had been hoped for, he expressed the belief that the second gathering, to open at The Hague June 15, would build upon the foundation laid at Genoa.

* * *

At a meeting last week in Washington, D. C., between President Harding, three members of his cabinet and about 40 representatives of the iron and steel industry the president took up with the steel representatives the desirability and practicability of completely abolishing the 12-hour working day in the steel and iron industry. Definite action on the proposal awaits further developments.

* * *

Steps have been taken to carry out the agreement reached at the arms conference at Washington between China and Japan whereby the Shantung peninsula is to be handed back to China. Japanese troops are being withdrawn from Shantung and are being replaced by Chinese. This province was taken from China by Germany 24 years ago and was taken from Germay by Japan early in the recent war.

* * *

The last British troops in Ireland were withdrawn last week. There is reported to be increasing evidence of the probable success of the contending factions in Ireland in their efforts to bring about permanent conditions of peace.

* * *

Gifford Pinchot was last week nominated in the Pennsylvania primaries as the republican candidate for governor of that state.

* * *

On the charge that they were being used by their owners as the source of wine for violation of the prohibition act, government officials last week seized and took control of vineyards valued at $2,000,000 in the vicinities of Oakland and San Francisco.

* * *

Both the senate and house of representatives have passed the bill appropriation $500,000 for the use of the department of justice in prosecuting persons and concerns charged with defrauding the government in war-time contracts. The department of justice is organizing to push these prosecutions vigorously.

Farm Business and Markets Outlook

(Continued from page five.)

Receipts of dressed poultry at the four leading cities since the first of the year total 68,639,621 pounds, compared with 62,600,393 pounds in the same period in 1921. Consumptive demand is large and storage holdings may have been cut down to 32,309,362 pounds on May 16, compared with 30,788,303 pounds on the same date a year ago.

BUTTER STORAGE BEGINS.

Storage holdings of butter began to increase starting with the third week in May. Stocks were down to about 550,000 pounds at the four leading cities, which is only about 10 per cent of the amount still on hand when stocks were at the minimum last spring. Since receipts have been consistently larger than those of last year, the evidence that consumptive demand has been unusually broad is convincing. Reports upon creamery butter production show a rather steady increase. The market has sagged slightly in the last few days, but further declines are not expected to be severe.

Prices on 92-score fresh butter on May 17 were:

Chicago, 35c; New York, 36 1-2c; Boston, 37c; Philadelphia, 37c; San Francisco exchange quotation, 38 1-2c.

Slight advances in cheese prices occurred at Wisconsin country markets last week and distributing markets responded slightly. Only a few large sales were reported, as most buyers are purchasing for immediate needs only. Nevertheless, about 10 or 15 per cent of the receipts at the four leading markets is going into storage. The total amount in storage at present is not large. The grass cheese season will arrive soon and the movement into storage should expand materially in the next three weeks. Well cured cheese is exceedingly scarce and is quoted at a premium of 6 to 10 cents per pound.

Prices on No. 1 American cheese on May 17 were:

CHICAGO—Twins, 17@17 1-2c; S. Daisies, 17@17 1-2c; D. Daisies, 17@17 1-2c; Y. Americas, 17@17 1-2c; Longhorns, 17@17 1-2c; square prints, 18@18 1-2c.

POTATO SHIPMENTS REMAIN HEAVY.

After making marked gains the potato market has slumped once more under the burden of an unusually heavy supply. Shipments of old and new stock combined in the last 10 days were nearly twice as large as a year ago. Northern whites are quoted at $1.30 to $1.50 per 100 pounds sacked and Russets at $1.75 in the Chicago carlot market. Maine is the chief source of old stock. The new crop in Florida has nearly all been shipped, but South Carolina and Louisiana are becoming active. New potatoes comprise about 25 per cent of the supply at present.

LATEST QUOTATIONS.

The Live Stock Market.

PORTLAND, May 20.—Cattle—Choice steers, $8.70@9; good to medium steers, $8@8.50; fair to medium steers, $7@8; common to fair steers, $6.50@7; choice feeders, $6@6.25; fair to good feeders, $4.75@5.25; choice cows and heifers, $6.75@7.25; medium to good cows and heifers, $5.75@6.75; fair to medium cows and heifers, $5@5.75; common cows, $4@5; canners, $2.25@4; bulls, $3.75@5.25; choice dairy calves, $8.50@9; prime light calves, $8@8.50; medium light calves, $7@8; heavy calves, $4.50@7.

Hogs—Prime light, $11.25@11.50; smooth heavy, 200 to 300 lbs, $10.50@11; smooth heavy, 300 lbs up, $10@10.50; rough heavy, $7.50@9.50; fat pigs, $11.25@11.50; feeder pigs, $11.25@11.50; stags, subject to dockage, $5@7.50.

Sheep—Best spring lambs, $9@10; medium spring lambs, $8@9; common spring lambs, $6@8; cull lambs, $5@6; light yearlings, $8@9; heavy yearlings, $7@8; light wethers, $7@8; heavy wethers, $7@8; ewes, $2.50@6.

SPOKANE, May 20.—Cattle—Prime steers, $7.50@8.75; good to choice steers, $6.50@7.50; medium to good steers, $6@7.25; fair to medium steers, $5.25@6; common to fair steers, $5@5.25; choice cows and heifers, $6@7.25; good to choice cows, heifers, $5@6; medium to good cows and heifers, $4.50@5; fair to medium cows and heifers, $3.50@4.75; canners, $2.25@3.50; bulls, $3.25@5.75; light veal calves, $8.50@11; heavy veal calves, $4.50@8.50; stockers and feeders, $4.75@5.

Hogs—Prime mixed, $11.25@11.75; medium, $10.25@11.25; heavies, $8.25@9.25; fat pigs, $10.25@11.25; stockers and feeders, $10.25@11.25.

Sheep—Prime lambs, $11@13; fair to medium, $10@11; yearlings, $10@11; wethers, $9.50@10; mutton ewes, $3@7.50; feeder lambs, $8@9.

The Grain Market.

PORTLAND, May 20.—Wheat—Hard white, soft white, white Club, hard winter, northern spring, $1.25; red Walla, $1.21.

Grain futures: Wheat—Hard white, soft white, white Club, hard winter, northern spring, May, June, $1.25; July, $1.14; red Walla, May, June, $1.21; July, $1.10.

Oats—No. 2 white feed, May, June, $37; July, $37.50; No. 2 gray, May, June, $36.50; July, $37.50.

Corn—No. 2 eastern yellow shipment, May, June, July, $29.

SEATTLE, May 20.—Wheat—Hard white, soft white, white Club, northern spring, $1.25; hard red winter, soft red winter, $1.26; eastern red Walla, $1.23; Big Bend Bluestem, $1.55.

PULLMAN, May 20.—Red wheat, $1.02; white wheat, $1.05.

WALLA WALLA, May 20.—Club, Bluestem, Bart and Turkey red, $1.09

RITZVILLE, May 20.—Bart, $1.50; red, $1.34; Fife, $1.07.

POMEROY, May 20.—Grain—Turkey, $1.07; Hybrid, $1.04.

DAYTON, May 20.—Club wheat, $1.10; red, $1.07.

Hay and Grain Feed.

PORTLAND, May 20.—Millfeed—Price f. o. b. mill; Millrun, ton lots, $35; middlings, $49; rolled barley, $37@39; rolled oats, $42; scratch feed, $47@51 per ton.

Corn—White, $36; cracked, $38.

Hay—Buying price, f. o. b. Portland: Alfalfa, $19@20 per ton; cheat, $17; oats and vetch, $18; clover, $17; valley timothy, $20; eastern Oregon timothy, $21@22.

SPOKANE, May 20.—Wheat—Feed wheat, $46 per ton.

Oats—$40 per ton; steam rolled, $42.

Corn—$36 per ton; cracked corn, $32 ton.

Barley—$40; steam rolled, $42.

Bran and shorts—$30 per ton.

Alfalfa, $22 ton; timothy, $22 ton; mixed hay, $18 ton.

SEATTLE, May 20.—The following are retail prices: Hay—Timothy, $18; D. C., $25; mixed, $24; alfalfa, $22; straw, $17; barley, whole $30; ground and rolled, $38; clipped, $45; chick starter, $60; chop, all grain, $42; coconut meal, $33; corn, $36; corn, cracked and feed meal, $38; cottonseed meal, $52; linseed meal, $57; scratch feed, $48; soy bean, $58; wheat, $48; Puget sound, $47.

General Produce.

PORTLAND, May 20.—Butter—Cubes, extra, 34c pound; parchment wrapped, box lots, 38c; cartons, 39c. Butterfat, buying price: No. 1 grade, 38@39c, delivered Portland.

Eggs—Buying price, 12@20c doz, case count; henneries, 22@23c doz; jobbing prices, case count, 21c; candled ranch, 23c; selects, 25c.

Cheese—Tillamook triplets, price to jobbers, f. o. b. Tillamook, 23c; young Americas, 24c.

Poultry—Hens, 20@23c; broilers, 20@30c; ducks, nominal; geese, nominal; turkeys, live, nominal; dressed, 40c.

Veal—Fancy, 12c pound.

Pork—Fancy, 15½c pound.

SPOKANE, May 20.—Poultry—Fat hens, 23c lb; light hens, 20c lb; roosters, 10c lb.

Fresh ranch eggs—$6.50 case; no storage; pullet eggs, $6.

Butterfat—36c a pound.

Range of Live Stock Prices for the Week Ending May 17

CATTLE.	Chicago.	Spokane.	Portland.	N Salt Lake
Choice, prime heavy steers (1100 lb. up)	8.50@ 9.25	.....	.....	.....
Good heavy steers	8.00@ 8.65	.....	.....	.....
Medium heavy steers	7.50@ 8.15	.....	.....	.....
Common heavy steers	7.00@ 7.65	.....	.....	.....
Choice, prime light steers (1100 lb. d'n)	8.65@ 9.35	.....	.....	.....
Good light steers	8.15@ 8.75	7.75@ 8.50	8.00@ 8.75	.....
Medium light steers	7.60@ 8.25	6.50@ 7.75	7.00@ 8.00	6.75@ 7.50
Common light steers	7.00@ 7.75	5.00@ 6.75	6.25@ 7.25	8.50@ 6.75
Common to choice butcher heifers	5.75@ 8.50	4.00@ 7.00	4.25@ 7.00	4.00@ 6.50
Common to choice butcher cows	4.75@ 7.25	3.25@ 5.75	3.75@ 6.00	3.00@ 5.00
Bologna and beef bulls	4.50@ 6.60	3.00@ 5.50	3.50@ 5.00	3.00@ 5.00
Canners and cutters, cows and heifers	3.75@ 4.75	2.00@ 3.25	2.25@ 3.75	2.00@ 3.00
Canner steers	4.75@ 5.75	3.50@ 4.50	4.00@ 5.00	3.50@ 4.50
Medium to choice light veals	6.50@10.50	8.50@11.00	7.00@10.00	7.50@ 9.00
Common to choice heavy veals	4.00@ 8.00	4.50@ 8.50	4.50@ 7.00	.....
Common to choice feeders (1000 lb. up)	6.25@ 7.85	.....	.....	.....
Common to choice feeders (750-1000 lb.)	6.25@ 7.85	4.50@ 5.50	4.50@ 6.00	4.00@ 6.00
Common to choice stocker steers	6.00@ 7.75	.....	.....	.....
Com. to choice stocker cows, heifers	4.25@ 6.25	.....	.....	.....
HOGS.				
Top of market	11.00	11.50	11.75	10.25
Bulk of sales	10.20@10.95	10.50@11.25	11.00@11.50	9.50@10.00
Heavy (250 lb. up)	10.30@10.80	9.25@10.25	10.50@11.00	.....
Medium (200-250 lb.	10.40@10.95	10.00@11.00	11.00@11.50	9.25@10.15
Light (150-200 lb.	10.70@11.00	10.75@11.50	11.25@11.75	9.75@10.25
Light lights (130-150 lb.)	10.45@10.90	10.75@11.50	11.25@11.75	9.50@10.00
Smooth packing sows (250 lb. up)	9.40@10.00	8.50@ 9.25	9.00@ 9.75	.....
Rough packing sows (200 lb. up)	9.00@ 9.75	8.00@ 8.50	8.00@ 9.00	.....
Medium to choice pigs (130 lb. down)	10.00@10.75	10.00@11.00	11.00@11.50	.....
Stock pigs	.....	10.00@11.00	11.00@11.50	8.50@ 9.25
SHEEP AND LAMBS.				
Medium to prime lambs (84 lb. down)	11.00@14.25	10.00@13.00	.....	10.00@12.00
Culls and common lambs	7.00@11.50	6.00@10.00	.....	7.00@10.00
Medium to prime yearling wethers	8.50@12.00	9.00@11.00	9.00@11.00	7.50@ 9.00
Medium to prime wethers	7.00@ 9.25	8.00@ 9.00	8.00@ 9.50	6.00@ 7.00
Medium to choice ewes	5.00@ 8.25	4.50@ 7.00	4.00@ 6.00	4.00@ 5.00
Culls and common ewes	2.00@ 5.00	2.00@ 4.00	2.00@ 4.00	2.00@ 4.00
Spring lambs	13.25@15.75	.....	10.00@13.00	.....



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Our large purchasing power enables us to buy standard makes of tires and sell them direct to the consumer at less than the regular wholesale cost. The HALL cord and fabric tire listed below is one of the finest tires we have ever sold. A tough FLAT TOP tread combined with a strong over-size carcass is responsible for the mileage of 18,000, 20,000 and even 25,000 miles. A record of 1460 of this tire sold last year with five fabrics and no cords returned for adjustment is a record of which we are justly proud.

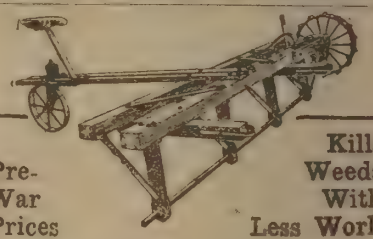
GUARANTEE

Cords—10,000 Miles. Size.	Fabric.	Fabric—7000 Mi's. Cord.	Tube.
30x3	$ 9.25	.....	$1.60
30x3½	11.50	16.25	1.80
32x3½	15.50	19.60	2.00
31x4	16.75	.....	2.50
32x4	18.25	24.50	2.60
33x4	18.75	25.25	2.70
34x4	19.50	25.95	2.80
33x4½	.....	32.40	3.20
34x4½	.....	33.60	3.30
35x4½	.....	34.50	3.40
35x5	.....	41.25	4.00

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Write for information. $1.50 per bottle at druggists or sent parcel post prepaid.

The Lawrence-Williams Co., Cleveland, O.

Glance over the bargains on the "Want Ad" page.

Bits of Fun for Everyone

Tee Hee, It's Wasted.

Billy was riding with his father in the automobile. Father sounded the klaxon before rounding a dangerous corner. When they turned the corner and met no one, Billy cried gleefully, "Tee-hee, dad, you wasted a honk, didn't you!"—Capper's Farmer.

Definition by Example.

Joe—Ere, Curly! You know everything—what's a cosmopolitan?

Curly—Well, it's like this: Suppose you was a Russian Jew livin' in England, married to a black woman, an' you'd just finished a bit of Irish stew, an' was smoking an Egyptian cigarette, while a German band outside was playin' the "Blue Bells o' Scotland"—you'd be a cosmopolitan.—Bystander.

An Ignorant Jury.

Here is another sample of muckraking directed toward juries. A lawyer had a somewhat difficult witness, and finally asked if he was acquainted with any of the men on the jury.

"Yes, sir," replied the witness, "more than half of them."

"Are you willing to swear that you know more than half of them?" demanded the lawyer.

"Well, if it comes to that, I'm willing to swear than I know more than all of them put together."—Los Angeles Times.

Bashful Weather.

"The sun has hard work to shine this week," said a woman to a maid, who was dusting her room one gloomy day. "It comes out for a few minutes, and then the clouds hide it for hours again."

"Yis, mum," said Mary. "It's what ye'd call bashful weather, mum, now, isn't it?"

Can't Avoid Them.

With the idea of naming his boys so that there could be no nicknames, which the father had always detested, the first child was called Edmund, the second Edward, the third Edgar, the fourth Edwin, the fifth Edson, and the sixth Egbert.

"That surely has served your purpose, hasn't it?" a stranger once asked.

"Not at all," said the father. "Beginning with the eldest, they are known as Eddie, Chuck, Bim, Snorkey, Muggins, and Pete, and every mother's son of them answers proudly to his nickname."—Capper's Farmer.

Latest High Class Patterns for the Home

Please order the patterns you desire at least two or three weeks before you wish to use them. Desiring to obtain the latest high-class patterns for its readers, THE FARMER has made arrangements to have them sent direct from the east, and under present mailing conditions it takes about that time for them to reach you.



3699-3698: Ladies' costume—Waist 3699 cut in 6 sizes: 34, 36, 38, 40, 42, and 44 inches bust measure. Skirt 3698 cut in 6 sizes: 24, 26, 28, 30, 32, and 34 inches waist measure. To make the dress for a medium size will require 8 3-8 yards of 32-inch material. The width of the skirt at the foot is 2 1-2 yards. Two separate patterns 10 cents for each pattern.

3976-3906: Ladies' costume—Waist 3976 cut in 6 sizes. 34, 36, 38, 40, 42, and 44 inches bust measure. Skirt 3906 cut in 6 sizes: 25, 27, 29, 31, 33, and 35 inches waist measure. The width of the skirt at the foot is about 2 1-4 yards. Two separate patterns 10c for each pattern.

3988: Ladies' dress—Cut in 6 sizes: 34, 36, 38, 40, 42, and 44 inches bust measure. A 38-inch size requires 4 1-2 yards of 36-inch material. The width at the foot is about 2 yards. Price 10c.

3880: A new bathing suit—Cut in 4 sizes: Small, 34-36; medium, 38-40; large, 42-44; extra large, 46-48 inches bust measure. A medium size requires 2 5-8 yards of material 40 inches wide for the undergarment, and 2 5-8 yards for the smock. Price 10 cents.

3992: Ladies' home dress—Cut in 6 sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. A 38-inch size requires 5 7-8 yards of 32-inch material. The width at the foot is 2 yards. Price 10 cents.

3400: An "easy to make" apron—Cut in 4 sizes: Small, medium, large and extra large. A medium size will require 2 3-4 yards of 27-inch material. Price 10 cents.

3981: Child's dress—Cut in 4 sizes: 2, 4, 6 and 8 years. A 4-year size requires 1 7-8 yards of 27-inch material. Price 10 cents.

3995: Girls' apron—Cut in 4 sizes: 4, 6, 8 and 10 years. A 6-year size requires 1 1-8 yard of 27-inch material. Price 10 cents.

3451: Ladies' blouse—Cut in 7 sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. A 38-inch size will require 3 yards of 38-inch material. Price 10 cents.

3556: Boys' suit—Cut in 4 sizes: 2, 4, 6 and 8 years. A 6-year size will require 2 1-2 yards of 36-inch material. Price 10 cents.

3563: Girls' dress—Cut in 4 sizes: 8, 10, 12 and 14 years. A 12-year size will require 3 yards of 27-inch material. Price 10 cents.

3994: Juniors' dress—Cut in 3 sizes: 12, 14 and 16 years. A 14-year size requires 3 1-2 yards of 32-inch material. Price 10 cents.

Catalogue Notice.

Send 12 cents in silver or stamps for our up-to-date spring and summer 1922 catalogue, showing color plates and containing 500 designs of ladies', misses' and children's patterns, a concise and comprehensive article on dressmaking; also some points for the needle (illustrating 30 of the various simple stitches), all valuable hints to the home dressmaker.

Please fill in this order and mail with remittance to:
PATTERN DEPT., PACIFIC NORTHWEST FARM TRIO, Spokane, Wash.

Enclosed find..... cents for which send me the following:

Pattern No..... Size ..... Pattern No. ..... Size.....

Pattern No..... Size ..... Pattern No. ..... Size.....

Name .....

Postoffice ..... State.....

R. F. D..... Box No..... St. No.....

Be sure to give the pattern number and the correct size.

Your Health

By Royal S. Copeland, M. D., F. A. C. S.

LOOKING FORWARD.

Nobody wants to grow old. It is a common thing to hear somebody say: "I wish I were 10 years younger!"



Dr. Copeland.

Three score years and ten is the frequently repeated reminder of the expected span of human life. I object to this limitation, but that is another story.

Think over the list of persons you know who have reached the age of 70. Isn't it remarkable how they differ in physical appearance, in mental alertness and in sweetness of spirit? Some are old and broken down. On the contrary, some are as young and cheerful and as active as they were at 50. Why the difference?

This is not an easy question to answer, and it must be admitted at once that there are many factors involved. But there is one very definite reason. The mental attitude has much to do with one's state of health at 70 and at all other ages, too.

In a sense, the brain is like a searchlight and the intelligence directing the light. Its operations depend on the direction of the path of light. The mind dwells on the things and events illuminated by the lamp of memory.

But memory of the past isn't the only function of the mind. There are also imagination, vision, calculation, interest in human affairs, devotion to country—all these indicate forward looking.

You may die from physical disability, but you will never grow old so long as the searchlight of your mind is turned ahead. Forward looking is the secret of youthfulness.

If you wish to keep young, you will keep your searchlight directed ahead. Turn it around now and then for the sake of knowing just where you are, and how much you have progressed. But let its main use be for illuminating the future. Keep your light flashing forward and make the century mark your goal!

Oats and Beardless Barley

Still Available

It is a well-known fact that beardless barley and oats suitable for seed purposes have been very difficult to secure this year.

We were fortunate enough, however, to secure three cars of oats and two of barley, and still have a small quantity left.

We also have spring and winter rye, sunflowers and green field peas.

Send in your order at once before our supply is gone.

Inland Seed Company
917 First Avenue.
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"Inland Seeds Are Quality Seeds."

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Tourist Fares East Lower Than Ever This Summer

UNION PACIFIC SYSTEM — THE OVERLAND ROUTE

ROUND-TRIP TICKETS ROUTED OVER THE

Union Pacific System

RETURNING SAME OR BY ANY DIRECT LINE

Salt Lake City	$48.00	St. Louis	$ 76.50
Denver	64.00	Cincinnati	101.30
Kansas City	67.00	Philadelphia	139.95
Omaha	67.00	New York	142.40
Chicago	81.00	Boston	153.35

To other cities in proportion.

Ticket Sales begin May 25th and continue DAILY till August 31st.
Return limit October 31st.

THROUGH SERVICE

Oregon-Washington Limited and Continental Limited

IMPORTANT FACTS—The Union Pacific operates the only THROUGH SOLID TRAIN between Portland and Chicago. Every foot of the track is protected by AUTOMATIC SAFETY SIGNALS. Equipment is the best in the transportation world. Dining car service the very maximum of human skill and art. The service as a whole represents the supreme effort of the management to please and satisfy patrons.

Call our City Passenger Agent when you are ready to go and he will do the rest. Your reservations will be made and your ticket delivered promptly without a moment's trouble or delay.

W. R. SKEY, D. F. & P. A.
F. M. DE RIEMER, C. P. & T. A.

EILER BUILDING & UNION STATION.
MAIN 4100.



Ellen Laakso says the sewing set she received for getting three subscribers for THE FARMER is just fine. Ellen's home is in southwestern Washington, near the Cowlitz river.

Birthday Greetings

THURSDAY, May 25—Lucile Hardung, 11 years old; Annice James, 10; Lois Turner, 8.

FRIDAY, May 26—Agnes Bradley, 11 years old; Valma Stevens, 8.

SATURDAY, May 27—W. Joe Gardner, 9 years old; Doris Turner, 10.

SUNDAY, May 28—Dannie Abel, 10 years old; Anita Leek, 10; Myrtle Nelson, 11; Ivan Schafer, 9; Margaret Wolf, 11; Wilma Woodruff, 11.

MONDAY, May 29—Bernice Lenocker, 10 years old; Kathleen O'Meara, 10; Hubert Roloff, 8.

TUESDAY, May 30—Willabelle Stafford, 11 years old.

WEDNESDAY, May 31—Raymond Lemmon, 9 years old; Otto Miller, 10; Idaho Baker, 10.

LETTERS WELCOMED BY AUNT NELLIE.

Among recent letters received by Aunt Nellie are those from cousins whose names follow. A few of these will be published each week in the regular edition of THE FARMER, and others will appear from time to time in The Junior Farmer.

Carrol Conner, Avis Hall, Mildred Pendleton, Evelyn Pierce, Gennie Rector, Joe Flork, Lucile Skelton, Mary Hofmeister, June Johnson, Maxine Lawrence, Grace Carlson, Doris Meyers, Madaline Hays, Alice Paulson, Fred Kissler, Bertha Holtman, Anna Flork, Allen Lind, Celesta Nichols, Bernice Blanche Bafirs, Roger Stone, Jeannette Smith, Edith Berg, Bernice Moys, Jackson Winterstein, George Sperline, Florence Elizabeth Geiger, Frances Ruchert, Ollie B. Coleman.

Lucile Thwing, Othellia Franz, Myrtle Harper, Astrid Larsen, Anna Blunck, John Norman Roe, Helen Wayne, Lawrence Lindstrum, Elizabeth Parrish, Tyyne Salmela, Bessie E. Mathers, Myrtle Nelson, Grace Olson, Robert Franz, Elsie Stark, Herbert Schuerman, Edith Mideke, Pearl Long, Hilda Hageman, Esther Simila, Mabel Bear, Joyce McDonald, Alma Matson.

Sylvia E. Goosic, Audry L. Miller, Carl Sieveke, Ethel Stiltner, Hilda Stark, Doris Groff, Clara Baskette, Kenneth Sieveke, John Malone, Helen Wirta, Wilba McInturf, Arthur Cartwright, Juanita Arrington; Robert Lee Gilmore, Alma Carlyle, Elva Morehouse, Mabel Maley, Virginia Fife, May Davis, Hazel Detering, Jennie Vanskiver, Helen Hoard, John Blake, Elsie Cooper, Geraldine Schroeder.

BEDTIME STORIES

By THORNTON W. BURGESS.

Copyright, 1919, T. W. B.

GRANDFATHER FROG IS GREEDY.

Grandfather Frog has a great, big mouth. You know that. Everybody does. His friends of the Smiling Pool, the Laughing Brook and the Green Meadows have teased Grandfather Frog a great deal about the size of his mouth, but he hasn't minded in the least, not the very least. You see, he learned a long time ago that a big mouth is very handy for catching foolish green flies, especially when two happen to come along together. So he is rather proud of his big mouth, just as he is of his great goggly eyes.

But once in a while his big mouth gets him into trouble. It's a way big mouths have. It holds so much that it makes him greedy sometimes. He stuffs it full after his stomach already has had all that it can hold, and then, of course, he can't swallow. Then Grandfather Frog looks very foolish and silly and undignified, and everybody calls him a greedy old fellow who is old enough to know better, and ought to be ashamed of himself. Perhaps he is, but he never says so, and he is almost sure to do the same thing over again the first chance he has.

Now, it happened one morning that Grandfather Frog had had a very good breakfast of foolish green flies, and really didn't need another single thing to eat, when who should come along but Little Joe Otter, who had been down to the Big River fishing. He had eaten all he could hold, and he was taking the rest of his catch to his secret hiding place up the Laughing Brook.

Now, Grandfather Frog is very fond of fish for a change, and when he saw those that little Joe Otter had his eyes glistening, and, in spite of his full stomach, his mouth watered.

"Good morning, Grandfather Frog! Have you had your breakfast yet?" called Little Joe.

Grandfather Frog wanted to say no, but he always tells the truth. "Y-e-s," he replied, hesitatingly. "I've had my breakfast, such as it was. Why do you ask?"

"Oh, for no reason in particular. I just thought that if you hadn't you might like a fish. But as long as you have breakfasted, of course, you don't want one," said Little Joe, his bright eyes beginning to twinkle. He held the fish out so that Grandfather Frog could see just how plump and nice they were.

"Chugarum!" exclaimed Grandfather Frog. "Those certainly are very nice fish, very nice fish indeed. It is very good of you to think of a poor old fellow like me and I—er—well, I might find room for just a little teeny, weeny one, if you can spare it."

Little Joe Otter knows all about Grandfather Frog's greediness. He looked at Grandfather Frog's white and yellow waistcoast and saw how it was already stuffed full to bursting. The twinkle in his eyes grew more mischievous than ever as he said: "Of course I can spare it. But I wouldn't think of giving such an old friend a teeny, weeny one."

With that Little Joe picked out the biggest fish he had and tossed it over to Grandfather Frog. It landed close by his nose with a great splash and it was almost half as big as Grandfather Frog himself. It was plump and looked so tempting that Grandfather Frog forgot all about his full stomach. He even forgot to be polite and thank Little Joe Otter. He just opened his great mouth and seized the fish. Yes, sir, that is just what he did. Almost before you could wink an eye the fish had started down Grandfather Frog's throat head first.

Now, you know, Grandfather Frog has no teeth and so he can not bite things in two.



"Those certainly are very nice fish," exclaimed Grandfather Frog.

He has to swallow them whole. That is just what he started to do with the fish. It went all right until the head reached his stomach. But you can't put anything more into a thing already full, and Grandfather Frog's stomach was packed as full as it could be of foolish green flies. There the fish stuck, and gulp and swallow as hard as he could, Grandfather Frog couldn't make that fish go a bit farther. Then he tried to get it out again, but it had gone so far down his throat that he couldn't get it back. Grandfather Frog began to choke.

(Copyright by J. D. Lloyd.)

The Gaunt Gray Wolf

(Continued from page fourteen.)

This was splendid! Bessie had come to spend the night! And, quickly drying her tears and forgetting her heartache, Emily rushed out to greet her friend and to find that the whole Black family were there—Tom, the motherly Mrs. Black and Bessie.

"Oh, Emily, I just had t' come t' see you off!" exclaimed Bessie, as the two girls rushed together and hugged each other in delight. "I coaxes, an' coaxes, an' coaxes father t' bring me over, an' he just teases me an' says he's busy, an' Mr. McDonald can't spare he, till this mornin' he says we're comin'. An' all th' time he an' mother's plannin' t' come!"

"'Twon't do t' tell a maid everything you plans t' do," Tom chuckled.

Bessie pursed up her red lips, and tossing her head at him laughed gaily, showing her dimples.

"Oh, but you just had t' come anyway, for I'd never give you a bit o' peace if you hadn't."

Her cheeks flushed with excitement and her eyes sparkling with pleasure, Tom looked at her proudly, and could not refrain from the remark:

"She ain't a very humbly lass, now be she, Richard?"

"Now, father, stop teasin' Bessie," cautioned Mrs. Black. "He's always teasin' th' lass."

"I'm just dyin' t' see your things, Emily!" exclaimed Bessie, as Emily took her friend's bonnet and wraps. "An' I couldn't let you go without seein' you. An' I'm goin' t' stay awhile, too, with your mother. She'll be so lonesome without somebody t' talk to when you goes."

"Oh, Bessie! How wonderful glad I am o' that! I were just thinkin' how lonesome mother were goin' t' be with me an' Bob both gone—an'—an' 'twere makin' me feel bad;" and Emily brushed away a tear.

"We'll not be lettin' your mother, nor father, either, get lonesome," said Douglas, patting her shoulder gently and looking down in his kindly way into her face. "Bessie'll be 'bidin' here till I comes back in October, an' then she'll be comin' again after th' New Year for a long stop. An' I'll be comin' once every week, whatever."

"Oh, I'm hoping so!" Mrs. Gray exclaimed. "I'm not darin' t' think about how 'twill be when Emily's gone.

"Now I knows, an' Tom knows, an' we was talkin' t' Douglas about un when he were over t' th' post, an' we were sayin', 'Now Bessie'll have t' go over an' 'bide awhile with Mary when Emily's gone,'" said Mrs. Black.

"An' you never tells me, an' just lets me tease t' come!" pouted Bessie.

"We were wantin' t' surprise you, lass. An'," Mrs. Black continued, addressing Mrs. Gray, "I knows what 'tis t' be alone, now, an' th' men folks is all in th' bush. I used t' be alone before Tom takes th' place t' th' post, but now we has plenty o' company."

"'Tis wonderful good an' thoughtful of you!" Mrs. Gray exclaimed heartily. "Now set in an' have a cup o' tea an' a bite. You must need un after th' cruise over."

The evening was spent in chatting and visiting and looking over Emily's new clothes, with excitement—slept much, however, that night, for they had a world to talk about as they lay in bed—but most of all the great and wonderful experiences Emily was to have.

Emily and her mother clung to each other, and Bessie to both of them, and cried and cried, when the time for parting came the following morning, until finally Douglas and Richard were compelled to draw Emily gently into the boat. Then motherly Mrs. Black, surreptitiously brushing tears from her own eyes, put her arm around Mrs. Gray and soothingly urged:

"Don't be cryin', Mary. Th' maid's goin' t' be all right, an' they's nothin' to cry for. 'Twon't be so long till you has she back."

Richard had the hull of the little schooner well under way when the mid-October cold forced him to abandon the work until the following summer, and he was preparing to set out upon his trail when Douglas appeared one evening, fresh from St. Johns, to report Emily comfortably settled in the home of a hospitable family near the school she was attending, and that she was immensely interested in her studies and fairly well contented, though a little lonesome at times for home.

Douglas evidently had something on his mind that troubled him. Once Mrs. Gray asked if he were ailing, but he denied anything but the best of health. Finally, however, as a disagreeable duty that he must perform, the kind-hearted old trapper said:

"I'm not knowin' just how t' tell you—'twill be a wonderful hard blow t' th' lad—th' bank where Bob were puttin' his money has broke, an' I'm fearin' th' money's all lost."

"Lost! Lost!" exclaimed Richard and Mrs. Gray together.

"Aye," said Douglas, "lost."

Then he explained fully the failure of the bank, in which he also had a small amount on deposit, and the improbability of any of the depositors recovering more than a nominal percentage of their deposits, and even that doubtful.

"Well," said Mrs. Gray, "'twill be wonderful hard on th' lad, an' he countin' so on th' tradin' business."

"Aye," repeated Richard, "wonderful hard on he. Wonderful hard an' disappointin', after all his plannin' an' hopin' an' thinkin' about un."

"An' Emily's schoolin' charge! How now be we goin' t' pay un?" asked Mrs. Gray.

"Don't worry about that, now," said Douglas. "I were wantin' she t' go, an' I were th' first t' say for she t' go, an' I'll see, now, about un this year, whatever. Don't worry about th' schoolin', now."

"But we can't be havin' you pay un," remonstrated Richard.

"Well, now, don't worry about un," insisted Douglas. "We'll see. We'll see."

They lapsed into silence for a little, when Bessie remarked:

"'Tisn't so bad, now. 'Tis bad t' lose th' money, an' 'twill be hard an' disappointin' t' Bob, but he's a wonderful able lad—they's no other lad in th' bay so able as Bob. He's a fine lot o' traps on his new trails, an' he'll not be doin' so bad, now."

"Yes," agreed Douglas, "he be, now, a wonderful able lad."

"And," Richard spoke up, beginnning to see the brighter side of the situation, "Bob owns un, an' he's havin' no debt, an' he's payin' up all our debts. They's no other folk o' th' bay as well off as we be."

"I weren't thinkin' of un that way. I were just thinkin' of how hard 'twill be for Bob—givin' up th' tradin'," Mrs. Gray explained. "But we has a lot t' be thankful for, an', as Besie says, Bob's young an' wonderful able."

But nevertheless it was a hard blow—a disheartening blow—to all of them. Bob had planned so much for the future, he was still planning and dreaming of his career as a trader, and building air castles—away up there in the desolate white wilderness.

This meant, instead of the realization of those dreams, a tedious, interminable tramping, year after year, of the fur trails, an always uncertain, a never-ending struggle for the bare necessities of life. A single bad year would throw them again into debt; two bad years in succession would plunge them so hopelessly into debt that the most earnest effort for the remainder of his life would not relieve Bob of its burden.

(To be continued.)

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Grade and Pure Bred Dairy Cattle.
We can save you money whether you wish to buy or sell. One or a carload.
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E2605 Broadway, Spokane, Wash.
NEAR CARSTENS' PACKING PLANT.

Breeders' Dept.

Jersey Herd for Sale
Holger and Golden Glow's Chief Breeding
14 Head, Only $1800, With Terms
Nine cows in milk, 2 bred heifers, 3 heifer calves, 8 of them sired by Judge Benedict, son of the great Holger, a silver medal bull and will be gold medal bull in June, with six gold medal daughters this year. Judge Benedict's daughters are bred to a strongly bred Golden Glow's Chief bull, and the others are in calf to Judge Benedict.
Circumstances requiring me to sell cause me to offer the entire herd for $1800, to turn them quick. They are good individuals, with good udders and are heavy producers. Part terms will be given, if desired. Inspection of the cows and milk checks is invited.
F. E. YERGEN
HUBBARD, OREGON.

Oreglow Jerseys
Last 6 months our Golden Glows on test have averaged 6.47 per cent; 7 in April averaged 7.16 per cent high test, economical production.
IRON MINE FARM, Oswego, Ore.
W. M. LADD, OWNER.
D. BROOKS HOGAN, MGR.

Jersey--Gold and Silver Medal Sire
Ashnook Farm offers a few heifers and young bulls, sired by the gold and silver medal sire, Silver Chimes, of S. B., sire of ex-world champion heifer, Silver Chimes Gwendola, and 20 register of merit daughters, and more qualifying.
DEL PERKINS, Carlton, Ore.

Register of Merit Jerseys
Young bulls out of dams with good official records and sired by Foxhall's Chief Engineer, combining the blood of the great Foxhall's Fern Lad and Golden Glow's Chief strains.
FOX BROS., Silverton, Ore.

Jerseys 797 lbs. of fat, the highest record 3-year-old tested in 1920 is dam of a high class young bull we have to offer.
J. J. VAN KLEEK & SONS, Box T.
BEAVERTON, ORE.

ST. MAWES JERSEY BULL.
Three nearest dams of sire averge 841 lbs. fat. Dam on test, milking over 40 lbs. a day. Priced right.
J. C. BROWN & SONS, Shedd, Ore.

220 HEREFORD BULLS, COWS, HEIFERS
all registered, high class animals, from the most famous blood of England and America, many of them from imported stock, at private sale at prices so low you can not afford to buy or keep grades. Cows, 3 to 5 years old; heifers and bulls, from 12 to 20 months old. Many cows have calves at side and are rebred. Many of the heifers bred to our gand herd sires, BEAU GALLATIN 15TH, and CARLOS 85TH. Satisfactory guarantee with each animal sold. Write to
L. L. YOUNG & SONS, Nampa, Idaho.

Ayrshires
Outstanding bull calves, ready for light service; sired by grand champion Willowmoor Peter Pan 25th, and from high producing cows with show records.
E. W. VAN TASSELL, Wenatchee, Wash.

Northwood Herd Milking Shorthorns
Improve your herd with a Shorthorn bull of the milking strain. Getting milk as well as beef. We have some choice bull calves for sale at farmer's prices from high record cows.
NORTHWOOD FARMS, Redmond, Wash.

Six Registered Shorthorn Bulls For Sale
One 14 months old. Three 18 months old. Bred from Scotch bulls. All strong, vigorous animals. Will also sell a limited number of pure bred Shorthorn heifers. Prices right.
SMALLEY BROTHERS, Sprague, Wash.

Holstein Bulls sired by son of world record cow, from dams sired by brother to Segis Pietertje Prospect. Prices low.
H. R. BOOMER, Payette, Idaho.

Bull Calves From Tested Dams
Records up to 935 pounds butter. Sire, Sir Johanna Fayne Bonheur DeKol, backed by great production. Prices reasonable.
MAX ARP. Eugene, Ore.

Read the "Want Ad" page this week for good offers of all kinds.

"Rose City Herd" Consignment

Guernsey Sale

N. Portland, Oregon, June 5, 1922

A STATE CLASS LEADER.
A DAUGHTER OF A STATE CLASS LEADER, A GRANDLY BRED BULL.

OREGON QUEEN 67837, has a record of 10,731.7 lbs. milk and 544.56 lbs. butterfat, in class CC, and dropped two living calves within the year. This is the leading record in Oregon and the Northwest in her class, and twentieth in the breed.

KATE OF OREGON 88,224, is Oregon Queen's daughter, and a granddaughter of Langwater Frenchman. Both cows have splendid type, along with their heavy production, and both are guaranteed safe in calf to Langwater Khedive, whose 12 nearest dams average over 700 lbs. fat. He is a son of the $25,000 bull, Langwater Steadfast, and one of the outstanding daughters of King of the May.

STARLIGHT'S GOVERNOR OF ROSE CITY 53594, has an A. R. sire and dam and both of them have been grand champion at the Oregon State fair. Look up his breeding in the catalogue.

W. A. GOODIN
CORNELIUS, ORE.

Red Wing Farm Guernseys

Consigned to Northwest Breeders' Sale

No. 1—Cow, Southside Rose, six years, half sister to Yeksa Evedrop sold for $1325, 1919 Pacific International; carries the blood of Gypson's Count, Rutila's Sheet Anghor, Divan and Imp. Lover Bold. Served Dec. 8, 1921, by son of Red Wing of the Glen A. R., 607.03 lbs. fat, class C, carrying 12½ per cent blood of May Rose 2d.

No. 2—Bull, Red Wing Starlight's Bonito, junior champion Oregon state fair, 2d produce of dam. O. S. F. and Pacific international, 1921. Four dams average 676 lbs. fat.; beautiful, typy individual.

No. 3—Heifer, Red Wing Starlight's Missy. Typy, well marked, bred for production, first four dams average 672 lbs. fat. Dam an A. R. cow, her dam Red Wing of the Glen, a full sister to May Fly of the Glen, A. R., 811 lbs. fat. Sire of No. 2 and No. 3, May Rose Yeksa Starlight, whose first two dams average 16,508.8 lbs. milk and 790 lbs. fat. Carries 14½ per cent blood of May Rose 2d.

A. I. and J. Hughes
Oregon City, Oregon

C. T. Gilbert & Sons Consign to the Portland Guernsey Sale, June 5, 1922

Two Richly Bred Heifers, Both Good Individuals.

WALDO HILLS MINERVA, 126874, by Mixter Doctor, son of Yeoman's King of the May, sire of 60 A. R. daughters. Her dam has a record of 10,930.6 lbs. milk and 595.92 lbs. fat, class D, and her dam's dam 13,533.6 lbs. milk and 713.36 lbs. fat.

WALDO HILLS PANSY, 126819, by Mixter Doctor. Her dam has record of 10,969.9 lbs. milk and 552.79 lbs. fat, class C. Dam's dam, 9768.2 lbs. milk and 486.56 lbs. fat. See particulars in catalogue.

We have a few good young bulls for sale at all times.

C. T. Gilbert & Sons Shaw, Oregon

Imported Guernsey Heifers

Consigned to Nortwest Breeders' Sale

No. 1—Imp. Mayflower's Vazon, imported in dam, served Dec. 4, 1921, her dam 1st choice of 30 head in Clackamas county. Well marked, typy; Gov. of the Chene and Masher Sequel breeding.

No. 2—Imp. Brilliant of the Gree's Henrietta, imported in dam, served March 9, 1922, a line bred Gov. of the Chene, large, typy heifer, bred for production; both heifers bred to Red Wing Starlight's Bonito, junior champion, Oregon state fair, 1921; a double bred May Rose bull, whose four dams average 676 lbs. fat.

A. L. BEATIE. Oregon City, Ore.

May Rose Guernsey Heifers

consigned to northwest breeders' sale. Two well marked, beautiful yearlings, conformation and style; a daughter and granddaughter of May Rose Yeksa Starlight. Out of imported dams, good producers.

C. J. STAATS. Oregon City, Ore.

In writing advertisers, be sure to say you saw their advertisement in The Washington Farmer.

Foshay Farms Consignment

Portland Guernsey Sale June 5, 1922

Three fine heifers, one a bred two-year-old, one yearling and one 7 months calf. All are sired by Foshay's Yoeman, grandson of Yoeman's King of the May, who has 60 A. R. daughters averaging 506 lbs. fat. Each heifer has 19 or more tested dams who average over 600 lbs. fat. Foshay's Yoeman's first daughter in milk is now on official test with first calf and is producing almost 50 lbs. fat per month, twice a day milking.

O. & M. L. VOGET
HUBBARD, OREGON.

GRAND CHAMPION GUERNSEYS

Guernseys from our herd have been in the winning wherever shown. One of our Langwater cows, Middledale Waukanee, has won year by year at the Oregon State fair, as follows: 1918, 1st senior calf and junior champion; 1919, 2d senior yearling; 1920, 1st two-year-old; 1921, 1st three-year-old, senior and grand champion.

All cows are in the advanced register or on test. Many other show winners and big producers in the herd. Come and see them.

CRAWFORD BROS.
SALEM, OREGON.

LET THE LITTLE FELLOWS PAY OFF YOUR MORTGAGE.
Silver Fox Ranches Make Big Profits.

Finest Quality Imported Prince Edward Island Stock.



All Pedigreed and Registered. Fully Guaranteed.

Full Particulars free. Write today.
United States Silver Fox Farms Corp.
200 Hutton Bldg. Spokane, Wash.

Ioka Farm Durocs Home of champions
Choice weanling pigs, priced reasonable shipped anywhere without a cent down. If they don't suit, return at my expense.
A. N. DOERFLER. Silverton, Ore.

Great I Am 1st. Duroc-Jersey junior boar. Western Royal and Pacific International, 1921, at head of herd. Bred gilts and weaned pigs for sale.
CRESCENT STOCK FARM, Johnson, Wash.

Bred Duroc Gilts and weaning pigs. Great Wonder and Sensation breeding. All eastern bred stock. Satisfaction guaranteed.
S. D. CORNELL. Grandview, Wash.

CHOICE DUROC SPRING BOARS sired by some of the greatest boars of breed; High Orion Sensation, Pathmaster, First Consul and Unique Sensation, world's junior champion, 1921. Prices reasonable, satisfaction guaranteed.
L. S. BERRY. Gaston, Oregon.

Big Type Polands
Weaned pig time is here. Buy now and save on express. No boars after July first.
BUCK & McDONALD. Yamhill, Ore.

Polands--The Big Wonder Herd
of genuine big type Poland China hogs. Home of the grand champion sow of the northwest. Satisfaction guaranteed on all orders.
E. O. LOE. Silverton, Ore.

BIG TYPE POLANDS—Offering a nice lot of weaning pigs, either sex, at reasonable prices. We solicit club orders. Write us for information on gilts bred for Sept. farrow. Satisfaction guaranteed.
FRED D. ENTERMILLE. Baker, Ore.

River Banks Better Berkshires
Long, smooth, deep fall pigs. Either boars, gilts or trios.
RIVER BANKS FARMS. Grants Pass, Ore.

Riverby Orchard Berkshires
Oldest established Berkshire herd in the northwest. Young pigs and bred sows for sale. Address
D. C. BUNN. Prosser, Wash.

Chester White Swine
Herd headed by Oregon Buster, grand champion Oregon State Fair and winter circuit, 1921. Fall gilts now offered.
CASS A. NICHOLS. Salem, Ore.

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"Some Suggestions to Live Stock Advertisers," outlining the practices of successful men of long experience. Helps in determining how much to spend, the mediums to select, preparing advertisements, handling inquiries, the use of photographs, etc.
Write today.
THE PACIFIC NORTHWEST FARM TRIO
Dept. L. Spokane, Wash.

Auction Sale, 60 Holsteins, State Fair Grounds, Yakima, Mon. May 29, 1922

51 REGISTERED COWS

Many close springers bred to choice bulls. Others recently fresh. Federally tuberculin tested. Guaranteed breeders. 9 splendid registered bulls; some serviceable age.

MOST LIBERAL TERMS EVER OFFERED—1-3 CASH, 1-3 in 6 months, 1-3 in 12 months. 6% INTEREST—BANKABLE NOTES.

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WAIKIKI JERSEYS

Federal Accredited Herd

MALES AND FEMALES FOR SALE AT LOW PRICES

We have a number of high-class Jersey bulls fit for service and out of cows with large Register of Merit records. They are excellent individuals, some of them show ring winners.

We will also sell a few good young registered cows of good breeding—just the kind you want for foundation stock.

ALSO DUROC JERSEY HOGS

Write Us for Prices

Waikiki Farm, Spokane. Wm. Auld, Mgr.

Fifty Registered Holsteins

AT AUCTION

Scappoose, Oregon, Wednesday, June 14, 1922

This offering is one of the best to ever go under the auctioneer's hammer. The most of them are young cows; a few heifers, heifer calves and young bulls. They are nicely marked, in good condition, of conformation that would command attention in any show ring and they are heavy producers.

PRODUCTION

A senior yearling producing over 62 lbs. milk per day.

A mature cow producing 90 lbs. per day. Others producing from 50 to 90 lbs. Straight top lines, free from disease, square udders and right in every way.

Not a cow in the herd but what will produce 50 lbs. per day under ordinary herd care. The average per cent test is high. Every one a profitable producer.

BLOOD LINES.

A number of the offering were sired by Pietertje Beauty Segis, he a full brother to Segis Pietertje Prospect, 1448.68 lbs. butter; 37381.40 lbs. milk, world's record milk producer.

Others, close descendants of such bulls as King Segis, King of the Pontiacs, Lord Netherland De Kol, King Segis Pontiac, Beauty Pietertje Prince, Aaggie Cornucopia Johanna Lad, Colantha Johanna Lad, and other noted sires.

Seldom if ever has as grand a lot of cattle gone over the auction block as will at this sale.

Sale to be held on the Wist Farm, one mile north of Scappoose, Oregon, just off the paved highway, easily accessible by train, stage or auto.

Catalog will be published, giving full information. Mailed upon request to Sale Manager.

One year's time will be given to responsible parties (see catalog for details).

Do not overlook this opportunity to secure these ultra valuable Holsteins at a price set by the buyers.

WIST BROS., Owners, Scappoose, Oregon

Auctioneers:
COL. GEO. A. GUE, Yakima, Wash.
COL. J. W. HUGHES, Forest Grove, Ore.

Sales Manager.
E. A. RHOTEN, Salem, Oregon.

2 GREAT GUERNSEY SALES 2

NORTHWEST BREEDERS' SALE

at Pacific International Pavilion

PORTLAND, OREGON, MONDAY, JUNE 5TH, 1922

53 head of cows, bred and open heifers, service bulls and bull calves the tops of the best herds in the northwest.

Washington State Sale at S. W. Washington Fair Grounds
Chehalis, Washington, Wednesday, June 7th, 1922

50 head of choice Wisconsin Guernseys, mostly bred and open heifers and a few choice young bulls.

For Catalog Giving Full Information, Address
CHAS. M. TALMADGE, Sale Manager, Box T, SALEM, ORE.

O. A. C. Dairy Husbandry Department

offers for sale at farmer's prices, four Holstein bulls, ready for service, sired by Sir Soldene De Kol Pietertje, a double grandson of Florence Idella Sharp, former state record cow with 27,236 lbs. milk and 1146 lbs. butter. All from record dams that are now on retest and increasing their former records by large margins. Also three young calves of the same breeding.

A few Ayrshires, ready for service, are still left and some calves of the Jersey and Guernsey breeds.

DAIRY DEPARTMENT, O. A. C. Corvallis, Ore.

When answering advertisements don't fail to mention this paper.

Every Item a Big Saving!

The smashed prices in this advertisement will surely convince you that Sharood's is the place to shop if you are interested in saving real money. But wait till you actually see the merchandise. Wait till you have examined and compared the quality with similar styles offered elsewhere. Just tell us what to send now. We take all risk. All we ask is the chance to prove that our prices are positively the lowest in America.

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Don't send one cent. Just letter or postcard brings you any of these smashed price bargains. Merely give name and number of each article you want. Also state size and write your name and address plainly to avoid delay. Pay nothing till goods arrive—then only the amazing bargain price and postage. If you are not delighted with your bargain for any reason at all, simply return the goods and your money will be cheerfully refunded. ORDER NOW.

SHAROOD CO., Dept. 51 Minneapolis, Minn.

"Polly Prim" Percale Aprons



2 for 99c

We offer an unusual bargain in these cunning percale aprons. Made in plaid and check patterns. Very useful, yet inexpensive. Two pockets, and rickrack trimming throughout. Comes one plaid and one check to a set of two.

Order by No. 51E6545. Send no money. Pay 99 cents and postage on arrival for 2 aprons. Money back if not satisfied.

Stunning Style Dotted Voile

With Rich Organdy Collar, Cuffs, Sash.



This beautiful model in voile is a very striking design—right up to the moment in following fashion's dictates for spring and summer. It is also a mode that fortunately becomes every figure and a truly amazing bargain at our smashed price. Send today and judge for yourself.

$1.98

Made of standard quality dotted voile with modish panel - trimmed overskirt. The neat tuxedo front, wide, flowing sash and deep cuffs on sleeves, are of sheer white organdy. Make this unusual saving now. Order your size in choice of three colors below. Sizes 34 to 46. **Order Light Blue by No. 51E6354. Navy blue. No. 51E6355. Rose No. 51E6356. Send no money. Pay $1.98 and postage on arrival for either color. Money back if not satisfied. Be sure to mention size when ordering.**

Soft Kid Slippers

One-Strap Model

$1.69



Always mention size.

Soft kid finished comfort slipper. Stylish one strap model with two buttons. Medium round toe. Cushion insoles. Medium rubber heels. solid oak leather soles. A bargain at our slashed price. Sizes 2½ to 8. Wide widths. Black only. **Order by No. 51A228. Send no money. Pay $1.69 and postage on arrival.**

Men's English Model

Smartest shape and best quality; regular $4.00 value. Selected black or brown calfskin. Extension oak soles, leather insoles. Solid leather heels. Sizes 6 to 11.

$1.98



Wide widths. **Order by No. 51A657. Send no money. Pay $1.98 and postage on arrival. State size. Order same style as above in rich brown calf by No. 51A661. Send no money. Pay $2.79 and postage on arrival. State size wanted.**

WHITE CANVAS SPORT OXFORD

Black or brown leather trimming.

$1.98



Dressy, sensible, low-heeled sport oxford for woman. Wonderful value at this low price. Has excellent grade white canvas uppers with choice of black or brown kid finished leather tip, ball strap, eyelet stays and heel foxing. Flexible white fiber rubber soles with white rubber heels. Wide widths. Sizes 2½ to 8. **Order brown leather trimming by No. 51A310. Black leather trimming by No. 51A311. Send no money. Pay $1.98 and postage on arrival. State size.**

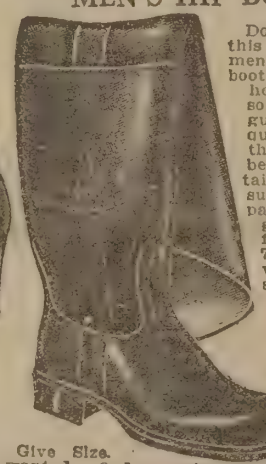
Dressy Wing Tip Oxfords

$1.98



The neatest last any woman could wear for all-around service. Uppers of splendid soft kid finished leather with fancy perforated wing tip and vamp. Strong oak soles and medium rubber heels. A style that will always look dressy. Choice of black or brown. Sizes 2½ to 8. Wide widths. **Order black by No. 51A275. Order brown by No. 51A276. Send no money. Pay $1.98 and postage for either color on arrival. Money back if not satisfied. State size.**

MEN'S HIP BOOTS



Don't fail to make this big saving on men's pure gum hip boots; friction lined; heavy corrugated sole and heel; guaranteed first quality. Made of the very best rubber. Usually retailed at $5. Be sure to order your pair while this great saving offer lasts. Sizes 7 to 14. Wide widths. No half sizes.

$2.48

Order by No. 51A949. Send no money. Pay $2.48 and postage on arrival. State size wanted. Order similar style in knee boot, sizes 7 to 12, by No. 51A950. Send no money. Pay $2.48 and postage on arrival.

CHAMBRAY Work SHIRTS 59c



Regular $1.25 shirt of good weight chambray. Double stitched seams; double yoke; faced sleeves; extension collar band; turnover collar. Handy breast pocket. Guaranteed chambray and well made throughout. Sizes 14½ to 17. **Order by No. 51B1530. Pay 59c and postage on arrival. State size.**

Men's shirts of serviceable khaki material, made with stoutly sewed seams. Cut roomy with two buttoned breast pockets. Faced sleeves, double yoke and attached collar. Neck sizes, 14 to 17. **Order by No. 51B1531. Send no money. Pay 89c and postage on arrival.**

Sturdy black sateen work shirt. Cut full with attached collar, extension neck band, faced sleeves, double stitched seams. Breast pocket. Sizes 14½ to 17. **Order by No. 51B1534. Price 98c and postage on arrival.**

Brown Russian Calf Goodyear Welt Oxford

$3.98



Most popular color men's dress oxford for spring and summer. Dark mahogany brown Russian calf—new brogue style with full vamp (not cut off), and fancy perforations on tip and vamp as pictured. Extension Goodyear sewed soles, pure gum rubber heels, leather insoles. Sizes 6 to 11. Wide widths. **Order by No. 51A634. Pay $3.98 and postage on arrival. Same style in high shoe, 51A635. $3.98.**

STURDY SCOUT SHOE

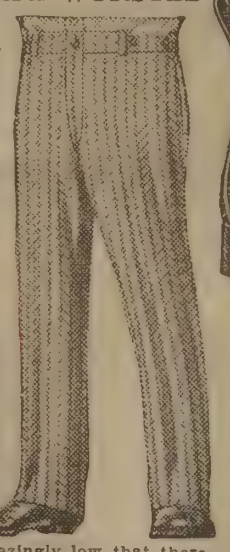
Soft, brown, ooze leather uppers. Reliable oak leather soles stitched and standard screwed to prevent ripping, leather insoles; low, broad, leather heels. Sizes 6 to 11. Wide widths.

$1.79



Order by No. 51A740. Send no money. Pay $1.79 and postage on arrival. Order little boys' sizes 9 to 13½ by No. 51A567. Price $1.39. Order big boys' sizes 1 to 6 by No. 51A566. Price $1.59. Pay bargain price and postage on arrival. Give size.

NARROW STRIPE WORSTED PANTS



Neat narrow stripe pattern of Thorndyke cotton worsted. Celebrated for its durability. Ideal material for work trousers. Suspender buttons. Belt loops, plain bottoms. Stoutly sewed waistband. Sizes, waist 30 to 42. Inseam 30 to 34.

$1.49

Order by No. 51B1563. Pay only $1.49 and postage on arrival. Give your waist and inseam sizes. Order men's strong khaki cloth pants by No. 51B1560. Pay $1.29 and postage on arrival. Give measurement.

Blue Serge Work Pants Bargains

This price is so amazingly low that there will surely be a flood of orders for this number. Fine blue cotton serge of splendid weight material that assures good service. Made with 2 hip, 2 side and 1 watch pocket. Plain bottoms. Strongly sewed waistband. Belt loops and inside suspender buttons. 30 to 42 waist; 30 to 34 inch inseam. **Order by No. 51B1574. Send no money. Pay $1.79 and postage on arrival. Mention necessary sizes. Order men's trousers of genuine all wool serge in same range of sizes by No. 51B1568. Send no money. Pay $3.59 and postage on arrival. State size.**

1 Doz. WORK GLOVES 99c



Regulation stout canvas work gloves with electric knitted wristlets. Generously sized.

Order by No. 51B1649. No money now. Pay 99c and postage for one dozen pairs on arrival.

Not Retreaded

Size 30x3 $6.49

Guaranteed 6000 Miles



Brand New Standard Tires.

Brand new, not retreaded, fresh stock of heavy nonskid tires of live rubber, generously over size. 6000 miles guaranteed but often give 8000 to 10,000. We will apply credit on purchase of a new tire for mileage less than 6000 that you get. Judge for yourself without slightest risk. **Send no money. Pay only bargain price and postage on arrival.**

No. 51D40—30x3	$6.49
No. 51D41—30x3½	$7.98
No. 51D42—32x3½	$10.98
No. 51D46—34x4	$15.48

GUARANTEED INNER TUBES.

Now is your chance to buy extra thick, live rubber inner tubes at a big saving. Give size wanted. No money now. Pay only bargain price and postage on arrival.

No. 51D20—30x3	$1.28
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No. 51D22—32x3½	$1.79
No. 51D26—34x4	$2.15

Dark Brown Stitchdown Oxfords

$1.98

Give Size



Classy stitchdown Oxford for women. Wonderfully comfortable and stylish. Uppers of dark mahogany leather. Smooth leather insoles. Flexible stitched-down oak outsoles. Low rubber heels. Sizes 2½ to 8. Wide widths. **Order by No. 51A268. Send no money. Pay only $1.98 and postage on arrival.**

Ooze Leather Work Shoe

$1.99

State Size



Splendid brown ooze leather work shoe. Heavy, durable uppers; extra strong solid oak leather soles; leather insoles; low, broad leather heels; leather loop pull strap and reinforced leather back stay. Roomy last. sizes 6 to 12. **Order by No. 51A759. Send no money. Pay $1.99 and postage on arrival. Order boys' side leather, sizes 1 to 5½ by No. 51A554. Price $1.98. Order little gents' side leather, sizes 9 to 13½ by No. 51A555. Price, $1.89 and postage on arrival. Mention sizes.**

PATENT LEATHER

"Mary Jane" Slipper

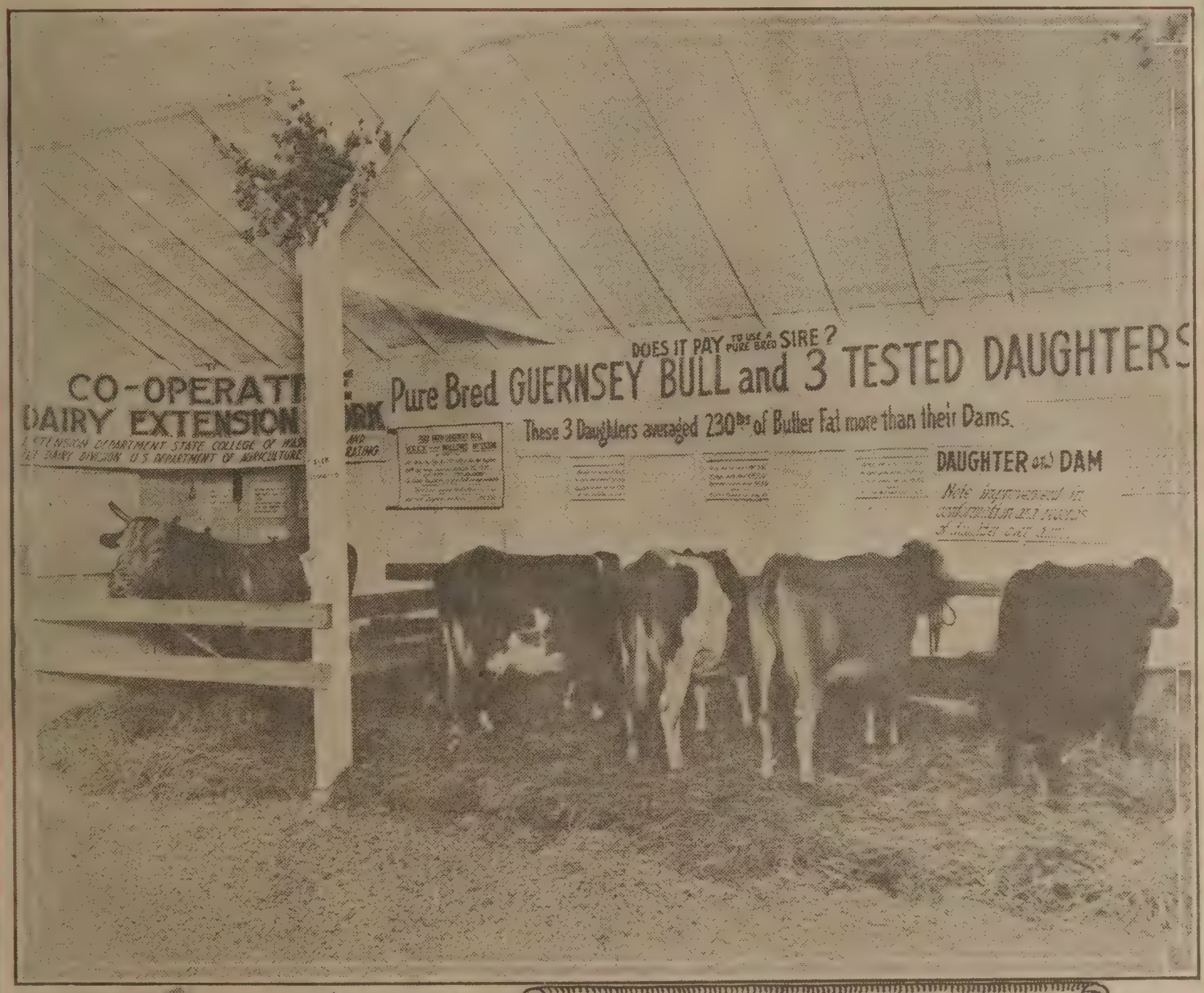
$1.19 Up



This popular, practical warm weather dress slipper is amazingly low priced, quality considered. Uppers of splendid grade black patent leather. Soles of genuine oak leather, flexible but strong. Pliable uppers, low heels, neat bow front. Comes in wide widths and all sizes from infants to big girls. **Order infants' sizes 3 to 8 by No. 51A364. Price $1.19. Child's sizes, 8½ to 11, by No. 51A365. Price $1.49. Misses' sizes 11½ to 2, by No. 51A366. Price $1.59. Big girls' sizes, 2½ to 8, by No. 51A367. Price $1.79. Send no money. Pay bargain price and postage on arrival. State size.**

Be Sure to Give Sizes, Colors, Etc., and Send All Orders From This Page Direct to SHAROOD CO., Dept. 51 Minneapolis, Minn.

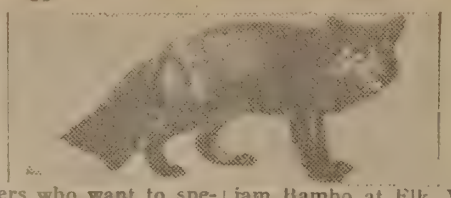
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ESTABLISHED 1894
SPOKANE. SEATTLE.



THE picture above was taken at the Western Washington fair at Puyallup last fall, and shows an exhibit by the live stock extension service of the state college designed to show the value of a purebred sire over a scrub. Three daughters of grade cows and a purebred sire averaged 230 pounds of butterfat per year more than did their poorly bred mothers, and equally convincing cases are on record by the score. In a herd of 10 cows this would have meant 2300 pounds of butterfat, which, supposing fat to be worth 35 cents, would mean over $800 per year more than from a similar herd of scrub cows.

A Study of Our Market Page Each Week Will Make You Money—Page 5.

Fox Farming Takes Its Place in Northwest



Fox farms will never become as common as wheat farms or dairy farms, nor as essential, but they are no longer the rarity they were only a few years ago. Farmers who want to specialize in a specialty that is special, indeed, find fox farming a subject of unusual interest.

There are today, according to the United States biological survey, at least 500 ranches where silver foxes are being raised. On these ranches there are between 12,000 and 15,000 of these semi-domesticated animals. The biological survey estimates that there is now invested in the fox farming industry of the United States about $8,000,000.

The problems met by the breeder of foxes or other fur-bearing animals require an expert knowledge of species, temperament, sanitation, diseases, parasites and so on, perhaps of an even higher order than that required in the case of the successful live stock producer.

Silver fox breeding has taken its place among the farming specialties of the Pacific northwest. Perhaps the most prominent farm is that of the United States Silver Fox Farms corporation of Spokane, where about 60 pairs of breeding animals are in captivity. Another farm, with approximately 50 pairs, is located near Missoula, Mont. Another, with 10 or 12 pairs, is located near Pendleton, Ore., on the farm of Dr. McNab, while another of considerable proportions is operated by William Rambo at Elk, Wash. Several others with from six to 10 pairs of foxes are scattered throughout the northwestern territory.

Until professional breeders began the development of the silver fox industry this animal was considered something of a freak of nature. Like the black sheep, which occasionally appears in a flock of otherwise uniform animals, there would occasionally, in the fox-inhabited wilds, appear a black animal among his red brothers and sisters. This black fur-bearer was the original silver fox, so much desired in a season's catch by the fur trapper, and a few of which have been captured and used as the foundation stock for building up this infant breeding industry. The true silver fox is a lustrous raven black and its fur is among the most prized obtainable.

Owing to different qualities, just as different qualities appear in cattle or other classes of live stock, prices of breeding animals at the present time vary widely, ranging from a few hundred dollars to a few thousand dollars per pair.

Milk Campaign in Pierce

A countywide milk campaign was recently put on in Pierce county by the three extension workers and the county school superintendent. The work was carried on through the schools and by advertising while a demonstration booth was arranged in one of the larger stores in Tacoma. Here a life-size doll would continually pour milk from a bottle and drink it, much to the delight of the children who came to see the demonstration.

A survey is being put on in the schools to determine the increased use of milk since the campaign of last year. A milk poster contest is being put on for the school children for six different grades, while the prizes are $3 for first and $1.50 for second place.

OVER 1000 POUNDS BUTTERFAT.

Cascade Jessie, a mature cow owned by William Todd & Sons of Yakima, is the third Washington Holstein cow to produce over 1000 pounds of butterfat in 365 days. She made 24,866.9 pounds of milk and 1021.42 pounds of fat.

Chips and Splinters

The following pointers from the Extension Service News of the State College of Washington are worthy of a place in the family scrapbook:

Fresh air helps ill temper.

* * *

Rest and exercise sends clean blood to the brain.

* * *

Chew thoroughly, digestion begins in the month.

* * *

Green vegetables and eggs contain iron; milk contains much lime.

* * *

Influence of dress acts upon the person who sees as well as the person who wears.

* * *

Spring housecleaning that includes the electric light globes will increase their efficiency as much as 16 per cent.

* * *

"A woman in business is a housekeeper, and a housekeeper is a woman in business."

* * *

How about that graduation dress this year? Is it going to be a fashion plate or stand forth with simplicity and good sense?

* * *

Did you ever stop to think that whatever income a husband may bring into the family, already has been earned in part by the wife?

* * *

A tablespoonful of ammonia in a quart of tepid water is good to sponge wool skirts that have become shiny. Press over a cloth with a hot iron and brush up the nap with a stiff brush.

QUINCY UNDER BIG PROJECT.

Dan A. Scott, director of the state department of conservation and development, has announced that the QQuincy flat lands, a tract of 100,000 acres lying on the east east side of the Columbia river, will be reclaimed under the Columbia basin project, and not under the Greater Wenatchee project, as proposed. State reclamation engineers have reported that the lands can be watered for $146 an acre under the Columbia basin, while the cost of watering them under the Greater Wenatchee plan will be $196 an acre.

How Advertising Lowers Prices

The makers of a famous camera, when they began advertising over 30 years ago, made one camera which took a 2½-inch picture and which sold at $25. In 1917 (at the time of the violent rise in cost of materials) they made a far better camera which sold for $10.

When the manufacturer of a well-known breakfast food began advertising, his goods sold at 15 cents a package. In 1917 his package was 50 per cent larger and sold for 10 cents.

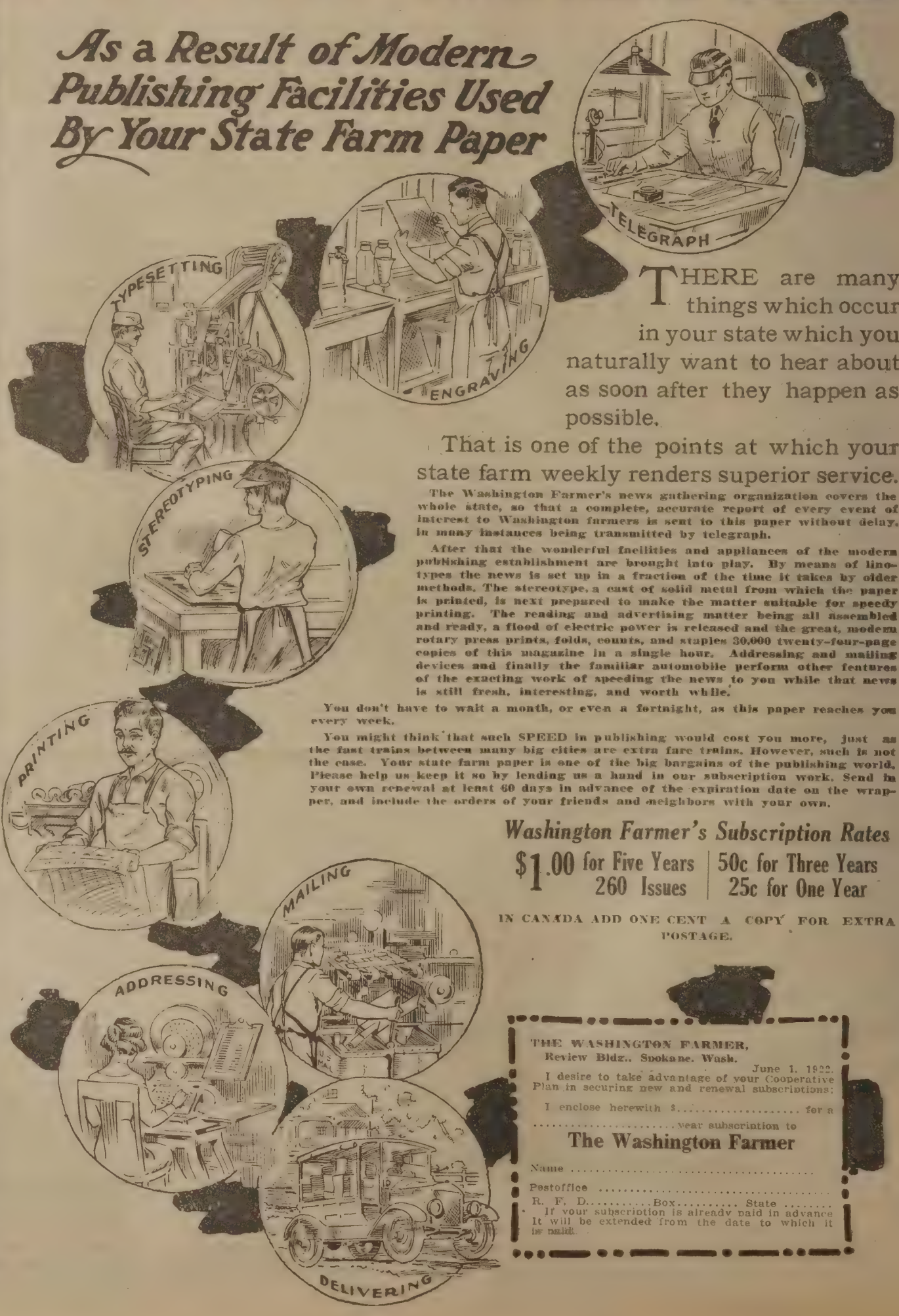
The selling cost of a spark plug was decreased 70 per cent in four years. In 1908 a magneto sold for $50. Ten years later a much better magneto used for the same purpose was selling at $18.

These cases are not exceptional, says Art Metal—just illustrative of some of the things which advertising can do and has done.

To get the full benefit of advertising, we suggest that you read regularly the advertisements in this paper. Also, write the advertisers for additional information, catalogues and price lists. When you do so, please mention the Washington Farmer.

You Get Your State News Quick

As a Result of Modern Publishing Facilities Used By Your State Farm Paper



THERE are many things which occur in your state which you naturally want to hear about as soon after they happen as possible.

That is one of the points at which your state farm weekly renders superior service.

The Washington Farmer's news gathering organization covers the whole state, so that a complete, accurate report of every event of interest to Washington farmers is sent to this paper without delay, in many instances being transmitted by telegraph.

After that the wonderful facilities and appliances of the modern publishing establishment are brought into play. By means of linotypes the news is set up in a fraction of the time it takes by older methods. The stereotype, a cast of solid metal from which the paper is printed, is next prepared to make the matter suitable for speedy printing. The reading and advertising matter being all assembled and ready, a flood of electric power is released and the great, modern rotary press prints, folds, counts, and staples 30,000 twenty-four-page copies of this magazine in a single hour. Addressing and mailing devices and finally the familiar automobile perform other features of the exacting work of speeding the news to you while that news is still fresh, interesting, and worth while.

You don't have to wait a month, or even a fortnight, as this paper reaches you every week.

You might think that such SPEED in publishing would cost you more, just as the fast trains between many big cities are extra fare trains. However, such is not the case. Your state farm paper is one of the big bargains of the publishing world. Please help us keep it so by lending us a hand in our subscription work. Send in your own renewal at least 60 days in advance of the expiration date on the wrapper, and include the orders of your friends and neighbors with your own.

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THE WASHINGTON FARMER,
Review Bldg., Spokane, Wash.

June 1, 1922.

I desire to take advantage of your Cooperative Plan in securing new and renewal subscriptions:

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.....year subscription to

The Washington Farmer

Name .....

Postoffice .....

R. F. D.....Box..... State .....

If your subscription is already paid in advance it will be extended from the date to which it is paid.

THE WASHINGTON FARMER

SUCCESSOR TO

Vol. 46. No. 22 THE RANCH PACIFIC DAIRYMAN HORN AND HOOF June 1, 1922

For Good Farming, Attractive Country Homes and Happy Country People

Where Poultrymen Are Organized for Business

By RALPH ERSKINE

"The standardization of grades and the ability to maintain a high quality egg that is superior to any raised in the eastern sections is the main reason why our western poultrymen can find a ready market and a premium of from 2 1-2 to 5 cents a dozen after being en route at least 30 days," said Harry Beernink, manager of the Lynden branch of the Washington Co-operative Egg and Poultry association. "The flocks in the northwest are able to maintain a steadier production of high-quality eggs throughout the winter months. This is not true with the central and eastern sections of the United States, and the New York market is glad to get our eggs even at a premium.

"If we could produce double the amount of eggs we are today producing the poultryman of the west would be much better off, for when the reputation is once established there is always a greater quantity demanded. There is always, however, an over production of poor-quality eggs."

Mr. Beernink says the industry has increased from year to year until the Lynden plant is now putting out an average from 1000 to 1200 cases of eggs a week. For the last six weeks these eggs all have been shipped to the New York trade except for a very small quantity which are handled at home.

Processing.

For all long-distance shipping at this time of year the eggs are first processed before packing. By this is meant an emersion in a hot oil bath of 265 degrees for seven seconds. This is called a storage pack, and most of them will remain in storage until next winter when they will sell for perhaps 5 cents a dozen more than the common storage eggs.

Processed eggs will candle almost as well as fresh eggs, and many of them are sold as sterilized eggs. There is a call for such a brand in some of the larger hospitals and restaurants since the process kills all germs on the shell as well as avoiding any chance of incubation. The intense heat has no effect on the white of the egg except to toughten the membrane inside the shell and prevent deterioration.

"This processing is being adopted by most of the larger egg associations for the purpose of holding the quality of eggs that are put into storage," said Mr. Beernink. "The oil is a very thin petroleum product. After 36 hours the oil is thoroughly absorbed and evaporated and the egg can hardly be distinguished from the new laid one. The process is considered a precaution much similar to that of the pasteurization of milk."

Where the Cockerels Go.

In addition to the marketing of eggs the Lynden plant is feeding and dressing an average of from 700 to 800 broilers daily during the early summer. The young birds are purchased from the producers at one pound each, or over. The birds are kept in crates and fed for 14 days on a buttermilk, cornmeal and ground oats mash, which is given in a soupy form, and no water is given. The birds added approximately 20 per cent to their weight in 14 days. After killing and picking the birds are first chilled and then stored over night until they are thoroughly frozen, when their heads are wrapped and packed in boxes of one dozen each. These boxes weigh from 14 to 20 pounds net each.

Last year this plant fattened and sold 65,000 broilers during the entire season, and Mr. Beernink expects to handle 100,000 this year. In order to show the capacity of the place it should be noted that one car of egg case shooks are needed every 30 days. All egg cases are made in the plant. One car of excelsior is used every week for the entire association, for placing under the bottom and top layers of each case. The Lynden plant uses one car of egg fillers every six weeks. There are 450 members who are producing eggs in the vicinity of Lynden and shipping through this plant.

More room will be available, however, when the new feed building is completed. It is being built near the main building, and 1000 tons of grain can be stored in eight perpendicular bins with hopper bottoms which hold 64 tons each. Shipments of corn, wheat, oats and mixed feed can be loaded into these bins by means of an elevator, while all mixing is done on the second floor, where the shoots from the bins extend to the mixing machinery. The mixed feeds, which, by the way, include all feeds necessary in poultry production, are then conveyed to the bottom floor, where they are put into sacks. The new building is being erected at a cost of $7000, which does not include machinery, and is being paid for by the savings from last year's surplus over cost of operation.

The Bellingham Plant.

The Bellingham plant of the same association is also erecting a new building to handle poultry and eggs alone. It will have a capacity of 10,000 cases of eggs and four cars of dressed poultry. The new building will mean more room for the feed mixing, and will allow the complete isolation of this department and afford much more room for the packing of eggs and dressed poultry. The building is to be two stories high, with basement and will measure 55x125 feet. All cold storage equipment will be housed in the basement, which will also contain equipment for feeding and dressing the poultry. An average of 2500 birds a day can be handled when this plant begins to operate at full capacity. Such an output, however, can not be realized this year, but next year that number will probably be put out. Twelve men are needed in this part of the plant.

H. G. Smith, manager of this plant, says that they will handle 1600 cases of eggs each week, and is always sold short. The feed department is handling from four to five cars of feed each week. The retail sales from the Lynden plant on poultry feeds alone average better than a car a day for the first three months of this year. The old building will handle nothing but grain and poultry feeds when the new building is completed.

There seems to be very little, if any, dissatisfaction among the poultry producers with the results obtained through their own recently formed association. It is largely because a more definite standard can be established and a surer market obtained by shipping in large quantities. It is also very convenient for each producer to obtain his feeds from his own association, since he feels more confident that he is getting what he wants, and that the quality can be depended upon.



The upper picture shows a general view of the Lynden poultry and egg plant. Below is shown a carload of 480 cases of eggs ready for a trip to New York. Manager Beernink is shown beside the car.

The Name "Grange" Belongs to Patrons of Husbandry

In the case of The Washington State Grange, a corporation, plaintiff, vs. William Bouck, et al, defendants, Judge J. T. Ronald of the King county superior court has rendered a decision that the name "Grange" belongs to the Order of the Patrons of Husbandry and has enjoined the further use of the name "Grange" by the "Western Progressive Grange." The opinion by Judge Ronald is herewith given in full, as readers of The Washington Farmer are entitled to full information on this important decision.

The following is the opinion of the court rendered by Judge Ronald in the case of Washington State Grange vs. William Bouck et al.

It is not necessary to make any finding, but my experience has been that if I don't do it I am always asked to do it and really have to do it before the case goes up.

The court ought never to enjoin anybody or any party of men from doing any act unless they are injuring somebody or doing something that they have no right to do. Now, here are the facts in this case: The whole thing depends upon whether the use of the word "grange" can be enjoined. In so far as the supplemental complaint is concerned, I have no reason to change my opinion that I entertained when I announced a written opinion on a preliminary hearing enjoining the defendants from exercising any authority or function at all as the Washington State Grange. I think that injunction will have to be made permanent. This amended complaint goes further and asks that they be enjoined from using the word Western Progressive "Grange," and the whole question hinges upon the significance to be attached to the word "Grange."

Courts take judicial notice, of course, of the ordinary signification and meaning of the words. In the Universities Dictionary the word "Grange" is said to be a farm with its dwelling houses or appurtenances or a local lodge of the patrons of husbandry for agricultural association in the United States. Now, it appears that away back in 1867 a party of seven men organized the National Grange in Washington City. There isn't any question but what a man can call his farm a grange if he wants to. A farm is not functioning as a secret organization. I suppose a man could call his farm if he wanted to a Masonic lodge or Masonic home, I don't know; it is not functioning as a secret organization. But the first time that the evidence shows here that the word "Grange" has been used in any sense excepting as a designation of some farm and home is by these founders in 1866 or 1867 when they called it a grange of the patrons of husbandry, and they adopted a constitution, and that constitution provided for state granges and for district or pomona granges consisting of more than one local grange and also for local granges; that is the function as a voluntary association, granges of patrons of husbandry, national grange of patrons of husbandry, state grange of patrons of husbandry, district or pomona and local granges of patrons of husbandry.

Now, the word "grange of patrons of husbandry" was the only significant thing in the whole matter. The national Grange meant nothing except that it was a national order. The Ohio State Grange of Patrons of Industry simply meant a grange of Ohio state. Minnesota Grange meant Grange of Minnesota state and Washington State Grange meant Grange of Washington state. So that, so far as the words "Washington State" or "Montana State" or "Idaho State" or "Iowa State" Grange, that is just simply the words used to designate what grange it was. "Grange" being the principal thing. And "Grange" being the peculiar name chosen by a voluntary association of patrons of husbandry; and when it was not used to mean some farm, it meant but one thing up till 1876, and that was a voluntary—in other words an association of patrons of husbandry. That is all the word "Grange" meant. That is the significance that it had. Now, in 1876 it was incorporated by statute as a body corporate or politic by the name of "National Grange of the Patrons of Husbandry" and provided that it should be the controlling body of the order known as Patrons of Husbandry and that the constitution of the order Patrons of Husbandry as it then stood should be and constitute the constitution of the incorporated body. The word "Grange" plainly stands for the organization or corporation of Patrons of Husbandry just as much as the world "Masonic" stands as a society known as Masons, just as much as "I. O. O. F." stands for the society known as "Odd Fellows," has a constitution and by-laws and well defined principles, just as much as "Knights of Pythias" stands for a certain raternity or brotherhood, or "Eagles." That is just what "Grange" meant. A "lodge" don't mean anything except a general designation. There may be a thousand kinds of lodges. There is a Masonic lodge, an Odd Fellows lodge, an Elks lodge and various other kinds of lodges. "Lodges" don't mean anything definite. But an "Odd Fellows Lodge" does. "Masonic Lodge" means something definite. An "Elks Lodge" means something definite. But different from the word "Lodge" is the word

(Continued on page twelve.)

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What Water Will Do

It may at first thought appear to be a far-fetched idea to connect a high school graduating class with an irrigation ditch, and yet in some cases there is a very close relationship. The other day there was graduated from the Sunnyside high school a class of about three dozen young men and young women. For that class the state and federal reclamation services may take much credit.

Not many years ago the land in the district where Sunnyside now stands was little less than a barren waste. But water was stored and irrigation canals and ditches built, with the result that it became a heavily producing area, with prosperous farms and prosperous towns and cities dotting it. But for the irrigation ditch there would be no Sunnyside, no Sunnyside high school, no Sunnyside graduating class.

There are hundreds of parallel cases in the Pacific northwest and other parts of the United States. Dollars and cents can not measure the value of such products as these, as distinctively the products of reclaimed land as are apples and alfalfa. There are yet in this state many thousands of acres of land, both within and without the famous Columbia basin project, that may be changed from desert places to prosperous settlements. Where only the sturdy pioneer eks out an existence today, tomorrow, with well directed land reclamation and development, should find countryside and town filled with contented and prosperous people.

The "Keepability" of Apples

J. S. Crutchfield of Pittsburgh, head of the American Fruit Growers and its western subsidiary, the Northwestern Fruit Exchange, gave a bit of sound advice to the apple growers of the Pacific northwest in a recent interview. Mr. Crutchfield says the northwestern fruit is closely inspected as to color and grade, but not as to quality as it pertains to "keepability." "Under present methods the northwestern apples often lie around the orchards or in sheds or warehouses 30 days before they get on the car." In his own orchards, Mr. Crutchfield allows only from 24 to 48 hours between the orchard and the car. In the Imperial valley only four hours is allowed between field and car in the picking and packing of cantaloupes.

The importance of speedy movement of apples from the orchard to the car or cold storage becomes more evident when the fact is considered that the best marketing period of the northwestern boxed apple crop is from March 1 to July. During the late autumn and winter, up to the first of March, the eastern markets are saturated with barrel apples and common storage fruit. That is not the economic period for the marketing of the northwestern crop. After March 1, eastern competitive stocks have been pretty well absorbed, and then the time comes for the northwestern product to have its inning. A long-keeping quality is therefore a paramount requirement. Boxed apples that are hurried from the orchard to the car or to local cold storage have that long-keeping quality and are in condition to go on the market after March 1 without disappointing results to consumers, distributors or growers.

State Grange Enters New Era

When the Washington State grange meets in annual convention at Yakima next week it will assemble under the most auspicious circumstances that have surrounded any of its gatherings for several years.

Since its convention of a year ago, held at Colville, the order has passed through a series of trials that might easily have destroyed an organization less firmly grounded on sound and enduring principles.

It is as well that we pass over in few words the unfortunate records of the last few years, during which a most sinister influence all but undermined the great farm order in this state. The victory that has been won, not the battle that has been fought, is the matter of present interest.

The Washingon State grange finds itself today freed of a leadership that attempted to betray it. It finds itself sustained by the national organization, which, in convention last winter, unanimously affirmed the action of the national master in removing from office one who attempted to turn the order over to a radicalism whose principles would, if adopted, destroy the institutions of American government. It finds itself sustained by the courts, which declare that it and it alone is "the grange" and that no group which refuses to abide by the fundamental principles of the order can parade under its name.

The Washington State grange stands at the door of a new era. It has placed itself again squarely on the constructive, conservative platform that has enabled the national order and its subordinates to render noble service to the farming people for more than half a century. As in the past, this platform is safe upon which to build for the future, and the present leaders and the loyal membership that have stood behind them in their fight for right during these trying years deserve unstinted commendation.

Better Live Stock Campaign

The whole of western Washington will be roused to the necessity of improving live stock, and will be shown the improvement which has already been made as a result of the "Better Live Stock" campaign, on a purebred live stock tour which will start at Vancouver July 24 and end at Bellingham August 4.

The affair is sponsored by the state college extension service, and Don Magruder, dairy specialist, and C. M. Hubbard, live stock specialist, will assist in preparing for it and will accompany the tourists.

In Clarke county arrangements are in the hands of M. J. Newhouse, formerly county agent and now manager of the cooperative fruitgrowers' association, and Dr. A. C. Brown, a local veterinarian. In other counties, agricultural agents have charge.

Landscape Gardening for Women

More and more women are taking up landscape gardening, says A. M. Doerner, in charge of that department of work at the state college at Pullman.

During the spring vacation a student from Yakima was sent by the extension department of the state college to Zillah to advise regarding the improvement of a new park and automobile camp.

State Farm News

A conservative estimate of this season's fruit crop for Yakima and Kittitas counties by the district horticultural department places the 1922 crop at 14,675 carlots. This is 513 cars more than a like estimate for the 1921 crop, made a year ago. The department estimates the crop in detail at 10,000 cars of apples, 2500 cars of pears, 1500 cars of peaches, 150 cars of prunes and plums, 140 cars of cherries, 65 cars of grapes and 300 cars of melons.

Compared with the 1921 estimate, the apple crop is placed at 500 cars less, while the soft fruit crop shows considerable gain. Less bloom than in 1921 is given as the reason for the estimate of a lesser tonnage of apples than last year. Melons will show an increase above 1921. The potato crop is placed at 7000 carlots, a big increase, due to better seed.

* * *

B. J. Vroman of Methow is experimenting with goats as a source of milk supply.

* * *

The cantaloupe acreage in the Yakima valley this season will be about the same as last year, according to Ira Cleveland, northwest field manager for the North American Fruit exchange, who has looked into the situation closely. While information relative to watermelon acreage is not definite, it appears that there will be an increase this year, he states. H. A. Glen of the Northern Pacific, making an estimate for Yakima and Benton counties, places the melon crop of this season at 480 cars. The production in 1921 was 250 cars of cantaloupes and 100 cars of watermelons.

* * *

Elbertson's 30th annual pioneers' picnic will be held June 21, 22 and 23. The following committee, appointed by the council, will have charge:

J. Bellach, W. N. Divine, J. E. Gray, J. L. Mentzheimer and H. C. Eitel.

* * *

Work on the Tieton dam at Rimrock is being rushed, with 500 men employed, moving 4000 to 4500 yards daily.

* * *

The Washington Cranberry association will abandon the work of marketing cranberries. This action provides for the abrogation of all contracts binding members to the selling and marketing service of the association.

* * *

Actual count of Quinault salmon coming into Lake Quinault through the weir show that 17,153 have passed on to the spawning grounds, according to John R. Russell of Seattle, field superintendent of the department of commerce, bureau of fisheries.

It was noted also that but 52 steelhead had passed in during the same period. This caused Mr. Russell to make the offer to the county game commission by which the government would rear steelhead until they were ready to place and would do this without charge if the commission would supply the eggs.

* * *

The butter output of the Winlock creamery for the month of May is expected to exceed by many hundred pounds that of May, 1921. In April a total of 32,000 pounds were manufactured, an increase of 5000 pounds over the corresponding month of last year. Butterfat is shipped to the Winlock plant from as far south as Kalama.

* * *

Radio receiving paraphernalia is being installed at the Polson railroad camp, northeast of Hoquiam, with a view to ascertaining if concert programs and other features broadcast by newspapers can be heard here, according to Robert Polson, manager of the company. If the plan proves feasible it is said other camps of the company, of which there are 10, will install outfits.

* * *

The Clarke county Pomona grange voted down a proposition to hold a Clarke county fair this fall. It was decided that the expense would be too great to bear just now.

* * *

J. L. Hughes is planting an orchard on 27 acres of Tieton land that till date he has had in alfalfa. He is putting out 20 acres of apples and seven acres of Concord grapes with peach, pear and apricot fillers. His apples are Delicious and Red Rome Beauties, and he has 300 of the former and 200 of the latter. Bartlett pears, Tilton apricots and J. H. Hale peaches make up the fillers. Mr. Hughes is confident that his place is well located for fruit growing and that he has selected varieties that will bring top prices in the market.

* * *

In keeping with the promotion of Bellingham as Tulip town, local men have organized the Holland-American Bulb company, with Bellingham as headquarters and a capitalization of $60,000.

* * *

The Western Washington Fair association hereafter will retain its officials on a salary basis. The board of directors at a recent meeting reelected W. H. Paulhamus as president and voted him a salary for the coming year. This is the first time that the president of the association has received a salary since it was organized 22 years ago.

The salary of the secretary also was fixed for the coming year. The secretary has been the only paid official for several years.

The fair dates for this year are set for October 2 to 3, inclusive. The following officers were reelected unanimously: W. H. Paulhamus, president; J. M. Jones, vice president; W. A. Miller, treasurer, and George D. Osborne, secretary.

Mr. Paulhamus was authorized to appoint the head of the various departments.

* * *

Farmers of Burbank, Two Rivers and Attalia have agreed to grow cantaloupes and asparagus to supply Spokane and Coast markets.

Coming Events of Interest

June 1—County grange picnic, Kettle Falls.
June 2-3—Stampede and celebration, Loomis.
June 3—Grant co. pioneer picnic, Soap Lake.
June 4-5—Salmon celebration, Keller.
June 5—Northwest Guernsey breeders' sale, Portland.
June 5-10—National Holstein meet, Kansas City.
June 7—Guernsey consignment sale, Chehalis.
June 6-9—State grange convention, Yakima.
June 8—Columbia co. pioneer meet, Dayton.
June 14—Flag day.
June 20-22—Lincoln-Adams pioneer picnic, Keystone.
June 21-23—30th annual pioneer picnic, Elberton.
July 24-Aug. 5—Live stock tour, Vancouver to Bellingham.
July 26-27—International apple shippers, Seattle.
July 27-28—Whatcom Guernsey gallop, Bellingham.

FARM BUSINESS AND MARKETS OUTLOOK

Mild Improvement to Continue

A boom is not in sight, but the business cycle forecasters expect at least mild improvement to continue. Summer usually is a dull period, but trade becomes active in the fall. The general trend will be affected to some extent by these seasonal changes.

The failure at Genoa has been largely ignored in business affairs. Sterling exchange reaches a new high after each setback and there has been a good demand in the United States for foreign bonds. European conditions include many rough spots, however, and are the most menacing feature in the present situation. Germany has not yet deflated and there still are fears of a collapse in that country.

The effect of our tremendous gold reserve is arousing conjectures. We have over $3,000,000,000, or nearly 40 per cent of the world's known stock of gold and double the quantity in this country in 1917. As a result interest rates are easing. Time loans are being made on gilt edge collateral in the east at 3 3-4 to 4 per cent for the first time since 1917. Member banks can carry most of their paper without rediscounting with the federal reserve system. Rediscounts with all federal reserve banks which at the peak were close to $3,500,000,000 are now down to $468,000,000. For the same reason it has been easy to float new securities, bonds have been advancing and farm loans are becoming welcome.

Both manufacturing and mining capacity were increased in this country so that but little plant expansion is going on in those fields. Residence construction and railroad equipment were not maintained during recent years, however, and these lines are most active bidders for capital for long time investment. Public utility development is another field which is expanding at present and absorbing capital as well as broadening the market for materials.

With so large a hoard of gold there will be a strong impetus toward reinflation. The discount policy of the federal reserve banks will determine how far it will go. If an effort were to be made to stabilize prices in this country at 50 to 60 per cent higher than the prewar level in order to make it more easy to pay off our national debt represented by Liberty and Victory bonds, financial conditions are highly favorable for success.

Cattle at Year's High Mark

Although the top of the steer market has failed to pass $9.25 at Chicago, average prices have advanced above the previous peak reached in March.

On the whole, cattle trade is in a healthy state. Supply at seven markets has contracted nearly 10 per cent in two weeks, but is still above the average of recent years for this season, with a probability that any change will be a further decrease.

Finished steers predominate, so that the yield of beef is high, but there has been but little surplus above current demand.

Dressed beef prices dragged a little last week, but were stronger than pork, lamb or mutton.

Exporters and eastern shippers were buying steers in the middle west.

And, finally, the hide market is rising.

Seasonal scarcity of plain steers and butcher cows and heifers has been accented by the absence of early Texas grass beef and the small stock of frozen beef. Prices on these classes still are and are likely to remain high compared with finished steers for the next four to six weeks, by which time more or less grass beef will be available.

Veal calf prices have shown weakness in sympathy with the lamb market, but are higher than a week ago.

Most of the buying of stockers and feeders stimulated by the rise of grass has been satisfied. The movement of steers from the southwest to Kansas and Okanogan pastures will be practically complete by the first week in June. Missouri feeders and graziers are nearly all supplied. In the northwest the movement will continue a few weeks longer. The movement to the country from 12 markets has persisted at around 50,000 head weekly, which is larger than in either of the two preceding years, but it can be expected to dwindle materially in the next 30 days and the margin between feeders and fat cattle prices should widen.

June Hog Run at Hand

Receipts of hogs declined slightly for two weeks, but remained equal to the 10-year average. In the last few days there has been an increase again of approximately 20 per cent, which appears to be the vanguard of the June run knocking at the market gates. Thus far prices have held up well and the June break looks much less serious than it did several weeks ago.

Consumers are less greedy for fresh pork than a few weeks ago, but demand for smoked meats has dilated. Stocks of the latter are comparatively light. Combined storage holdings of frozen pork, pickled pork and dry salt pork in the United States on May 1 were 593,337,000 pounds, compared with a six-year average of 825,403,000 pounds on that date. On the average, holdings of these meats have decreased 23,000,000 pounds during April, but only a negligible decrease occurred this year.

Even lard is not piling up so ominously as it appeared to be when only the holdings at the six leading packing points were known. Total stocks on May 1 were 95,882,000 pounds, compared with a six-year average of 113,400,000 pounds. The April increase was only 10,000,000 pounds, whereas the average increase for that month is 9,000,000. The earlier report, based on the six leading packing cities, showed relatively a much greater increase.

Packers report that the foreign outlet for hog meats has widened and the weekly clearances remain respectably large.

Slump in Lambs Halted

The slump in sheep and lamb prices, which have declined $2 to $3 from the high point early in May, was checked, at least temporarily, within the last week. Total receipts normally do not increase much above the prevailing level until toward the first of July, so that the market may not sag a great deal further in that time. Later on, when range lambs begin to come forward freely, a lower level of values may be established. But few California lambs are left for eastern shipment, while corn belt and the southeastern lambs are not yet abundant.

Consumers appear more indifferent to mutton and lamb than a few weeks ago and prices on the hoof in eastern cities last week were $1 to $5 lower. Heavy ewes have dropped most. Arrival of another cargo of frozen lamb and mutton from New Zealand augmented the depression.

Reports of serious losses of spring lambs in the range states have been officially confirmed. Total lamb production in Washington, Oregon, Idaho, Montana, Wyoming and Nevada is estimated at only 70 per cent of normal. Owing to the backward season, the crop is not expected to be ready for market until the last of July or early in August.

With lamb and wool prices much higher than a year ago and more money available, speculators and western feeders are contracting freely for both thin and fat lambs. Many sales have been made at 9 to 10 cents a pound, although these offers have been generally refused in Idaho, Oregon and Washington. A year ago the ruling price was 5 to 7 cents.

In view of range conditions, feeding lambs are apt to be scarce on the open market this fall and breeding ewes will not be available unless at prices quite attractive to range sheepmen.

The diminutive size of the horse trade is shown by the fact that receipts at public stockyards in April amounted to only 29,000 head, compared with a seven-year average of 62,000 head during that month. A marked decrease compared with March of this year is shown, receipts in that month totaling 47,000 head. Prices were a shade lower last week.

New Wool Sold Rapidly

Practically all sections of the west report that the new clip of wool is changing hands at a rapid rate. In the fleece wool states it is moving into pools from which it will be merchandised later. Wool prices were maintained last week, although seaboard markets report a less active demand. Manufacturers are endeavoring to check the upward trend, but have been unable to force a decline. The demand for worsted goods improved slightly, helping the market for fine combing wool, otherwise there is but little change in the manufacturing outlook. The advance in cotton prices has had a slight sympathetic influence upon wool.

The Boston market is quoted as follows: Wisconsin, Missouri and average New England—1-2 blood, 38@40c; 3-8 blood, 37@39c; 1-4 blood, 35@37c. Scoured basis: Oregon—Eastern No. 1 staple, $1.20@1.25; fine and fine medium combing $1.15@1.20; eastern clothing, $1@1.10; valley No. 1, $1.05@1.08. Territory—Fine staple, choice, $1.23@1.28; 1-2 blood combing, $1.05@1.15; 3-8 blood combing, 80@83c; 1-4 blood combing, 68@70c.

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May Wheat Deal About Over

Owing to the situation in May contracts at Chicago the wheat market has been decidedly unsettled. The major trend has been downward. Deliveries on May contracts total 8,067,000 bushels thus far, but the "longs" have taken it without attempting to redeliver and profess to believe in higher prices for cash wheat during June.

On the other hand, domestic mills and export buyers remain inactive, partly in the belief that an effort was being made to force prices up artificially and that the ultimate outcome would be a collapse. As this is being written it is rumored that the leading "short" has filled his contracts and still has some wheat left. Whatever the final result, the uncertainty will be over before long.

Shipments to Chicago from Omaha and Kansas City have been heavy. If they continue the rest of May the bulk of the available wheat in the central west, with the exception of fancy grades at Kansas City, will be at Chicago and it may be necessary to ship some of this wheat back again before harvest in order to supply milling needs. The movement from farms remains surprisingly large, raising doubt as to the accuracy of the March 1 report on farm reserves. Apparently producers are ready to take advantage of the premium on cash wheat over prices for July and September delivery and are making a cleanup.

Germany is estimated to have bought anywhere from 10,000,000 to 25,000,000 bushels of new crop wheat for shipment after harvest, but such buying has subsided recently. A little old crop wheat is being sold abroad, most of it durum and Pacific coast wheat. Reports from the latter section forecast the most complete cleanup before the end of the season that has been seen in years. Hard winter wheat at Chicago is above a parity with Liverpool.

Estimates of the remaining export surplus range from 30,000,000 to 65,000,000 bushels in Argentina, 15,000,000 to 12,000,000 bushels in Australia and 75,000,000 to 90,000,000 bushels in the United States and Canada or a total of 120,000,000 to 185,000,000 bushels. Requirements of importing countries before August 1, when the new European crop year begins, will be around 135,000,000 bushels if the rate of disappearance thus far in the crop year is maintained. The world's surplus of old wheat will not be more than 25,000,000 to 50,000,000 bushels on that date, which is a small reserve.

New wheat from the United States can be shipped to reach Europe in July. India may be in a position to export a little by August, but her wheat requires a long voyage.

There appears to be enough wheat to keep the demand satisfied, but the adjustment is close and the outlook for the coming crop year does not indicate a low level of wheat prices.

Russia, instead of becoming an exporter, is not expected to raise enough for her own requirements again this year.

The acreage seeded to spring wheat, according to scattered reports, is less than last year as a result of a late season. The same cause is expected to reduce the Canadian crop by 2,000,000 acres.

Winter wheat is progressing favorably, with ample moisture in the central west and eastern states, but from Kansas, Nebraska, Oklahoma and Texas reports are not so rosy. Growth is rank and watery over a large area as a result of wet weather, which is favorable to rust and will accentuate the effects of any dry weather occurring later.

Less than half of the Kansas corn acreage has been planted, according to the state's report at the middle of May. The late planted crop will be in danger from dry, hot weather at a critical stage of growth. The central west also is behind hand.

All reports point to a reduced oats acreage. The crop is doing only fairly well in most sections.

Coarse Grains Markets Dull

Coarse grains have been dull in spite of erratic wheat prices. Corn producers have been selling more grain for early shipment and the after-planting movement will show up at primaries in a week or 10 days. Exporters are buying moderate quantities and elevator interests are accumulating again. The high hog market is a sustaining influence under corn prices. Corn producers are not selling the grain on the breaks, as there is a good local demand from hog and cattle feeders in many sections.

Oats prices have been creeping upward, but the total advance has been small.

Cash Grain Markets

The cash grain prices for May 24 were: Chicago—Wheat, No. 2 red, $1.33 1-4@1.45; No. 3, $1.28 1-2@1.40; No. 2 hard, $1.33 3-4@1.45 1-4; No. 3, $1.37@1.38. Corn: No. 2 mixed, 61 1-2@62 1-2c; No. 3, 60@61 3-4c; No. 4, 60@61c; No. 2 yellow, 61 1-2@62 3-4c; No. 3, 60 1-2@62 1-4c; No. 4, 60@61 3-4c; No. 2 white, 61 3-4@62 3-4c; No. 3, 60 3-4@61 3-4c. Oats—No. 2 white, 38 3-4@43c; No. 3, 37 1-4@42c; No. 4, 36@41 3-4c. Rye—$1.04@1.10. Barley—62@72c.

Feed Demand Improves Temporarily

Country demand for feeds has broadened slightly in the last few days and prices have become firm at the recent decline. With pastures coming on in good shape, however, the improvement is not expected to last. Linseed and cottonseed meal, as well as corn feeds, are in a stronger position than wheat feeds.

Prices per ton (100-pound bags) in carlots: Chicago—Bran, $23; standard middlings, $23.50; flour middlings, $27.50; cottonseed meal, 36 per cent, $49; 43 per cent, $53; hominy feed, $23.50; gluten feed, $32.85; old process oil meal, $52.50; tankage, $55.

New Hay Coming

Offers of new crop alfalfa from the southwest and availability of good pastures are cutting into the demand for dairy alfalfa. Clover and prairie hay markets also are weak, but timothy has held firm under light receipts. Stocks of hay are light, but demand is quite limited.

Prices per ton in carlots: Chicago—No. 1 timothy, $25@27; No. 2, $23@25; No. 3, $17@20; No. 1 light clover mixed, $24@25; No. 1 clover, $20@21; No. 1 clover mixed, $21@23.50; alfalfa, $17@28; upland prairie, $17@19; midland prairie, $14@17; rye straw, $16@17; oat and wheat straw, $14@16.

Egg Consumption Shows Increase

The records for New York city alone show that approximately 10 per cent more eggs have disappeared into consumptive channels since January 1 than in the same period in the preceding year. For the four cities, New York, Chicago, Boston and Philadelphia, the rate of disappearance shows an increase of 7 per cent. Receipts of eggs at the leading cities are holding at a level above either of the last three years and cold storage holdings are in a fair way to get a new altitude record before accumulation ceases. Prices have sagged a little recently under the burden of heavy receipts, but no pronounced break is anticipated.

Butter Prices Near Bottom

Although the process of storing butter has begun, the surplus above current consumptive requirements has been small and but little butter of suitable quality for long time storage has arrived. Prices, also, are slightly higher than the majority of dealers are willing to risk. As production expands and the surplus for storage increases it is logical to expect a slight further decline, although the market is not far from the bottom. Receipts will probably increase around 25 per cent before reaching flood tide. As soon as the supply begins to show full grass flavor a steady market is expected, as consumptive demand for butter is broad and cold storage operators will be ready to accumulate large quantities.

Prices for 92-score fresh butter on May 24 were: Chicago, 34 1-2c; New York, 37c; Boston, 37c; Philadelphia, 37 1-2c; San Francisco exchange quotation, 39 1-2c.

(Continued on page sixteen.)

Head Lettuce Industry Shows Growth

According to government figures, the lettuce crop of this country more than doubled in the five-year period, 1917-1920. Shipments of lettuce for the year ended in April, 1922, amounted to 12,266 cars, compared with 11,288 cars to the end of the 1920-21 season.

The 1921-22 season was featured by rapid growth of the lettuce-growing industry in Colorado and Idaho, the car lot movement from these states having gained tremendously compared with 1920. From 125 cars in 1920 Colorado shipments jumped to 244 cars in the autumn of 1921, and Idaho increased its shipments from 26 cars in 1920 to 182 cars in 1921.

Most of the increased acreage in Colorado is located in the high altitudes where the crop is known as "mountain" head lettuce. This lettuce comes on the market when supplies from other sections are light, August and September being the months when heaviest shipments are made. It is very probable that the 1922 acreage in Colorado will be considerably larger than that planted in 1921.

Idaho lettuce moves to market in October and November, following the Colorado stock and preceding any large movement from other sections. Local estimates are to the effect that the Idaho acreage for 1922 will be three times as large as in 1921. The Iceberg variety is grown.

California, the only state to ship lettuce the year round, leads all other states in the volume of shipments. New York state is second in the number of shipments and Florida is third.

The active movement of lettuce to consuming markets extends from August to the last of April. June ordinarily is the month of lightest shipments, and the months of heaviest shipments are January, February, March and April. Nearly all of the shipments during these four months are from California, Florida, South Carolina and North Carolina, although light shipments are made from Arizona. In addition supplies of northern hothouse lettuce are received.

As the season progresses movement begins from regions in the north. The markets during June and July are supplied mostly from California, New York, Washington, New Jersey and Michigan. In August and September the markets are supplied chiefly from California, Colorado, Minnesota and New York. In October and November shipments come mostly from California, Idaho, New Jersey and New York, and in December the markets draw receipts mainly from California and Florida.

Western Washington Production.

W. H. Paulhamus, president of the Puyallup and Sumner Fruit Growers' association, brings out the interesting facts that about five years ago all of the head lettuce consumed in the state of Washington was imported from the state of California. During the last few years the farmers of the valley between Seattle and Tacoma have learned that they can not only grow a profitable crop of head lettuce, but that it is an industry that can be greatly developed. Mr. Paulhamus goes on to say that during the year 1921 a total of 673 cars of head lettuce were shipped out of the district mentioned and marketed at a satisfactory price to the grower. Mr. Paulhamus said he has just had the opportunity of talking with three men who have more to do with the marketing of fruit and vegetable products of the northwest than any other three men in the United States. Taking up with them the development of the head lettuce industry, they tell him that the best head lettuce that reaches the market is produced at Lewiston, Idaho; the second best head lettuce that is availale is produced in the Imperial valley of California; third in quality is produced tributary to Los Angeles, in southern Idaho, and in western Washington.

One of the outstanding strong features in favor of this industry is that the Idaho-grown head lettuce is ready for the market during the months of November, December, January and February. The Imperial valley head lettuce is ready for the market in January, February, March and April; the southern California head lettuce is ready for the market in April, May and June; the Washington head lettuce is ready during July, August, September and October.

The method of marketing head lettuce is also brought out by Mr. Paulhamus. Head lettuce is marketed in crates holding from three to four dozen heads. The bottom of the crate is covered with heads of lettuce with the stem up. In other words, heads of lettuce are placed in crates upside down. After the bottom of the crate is entirely covered with lettuce a scoopshovel of cracked ice is distributed carefully over the top of the lettuce. Then the second row of lettuce is put in, top down. Then another coating of cracked ice, and this procedure is continued until the crate is full and when finished will consist of a layer of head lettuce and a layer of cracked ice. This product is shipped in refrigerator cars, which are also thoroughly iced in the customary way.

"The question that arises in my mind is, can the farmer of Washington produce a quality of head lettuce equal to what is now being produced in Lewiston, Idaho? I am convinced this can be done by the right kind of work on the part of the grower."

Mr. Paulhamus adds:

"It should be our pleasure to help to the extent of our ability the development of the head lettuce industry so that the farmer who has an acre or a half acre or any other plot of ground can produce head lettuce successfully and find a market at a fair price for his product, just as the berry grower is now able to do.

"Here is an industry that will grow to 5000 cars inside of five years if stimulated. Suppose three or four of our leading chambers of commerce should jointly employ for a year a capable man to make a study of the growing and marketing possbilties of head lettuce; this would be real boosting of a constructive kind."

Fruit Growers

Will Meet the Middle of August

Plants for the next summer meeting of the Washington State Horticultural association August 15 to 19 are announced by Secretary-Treasurer M. L. Dean. In connection with this meeting there will be a session of the Pacific Northwest Association of Entomologists, Plant Pathologists and Horticulturists.

The joint meeting will convene in Yakima August 14 and will spend two days in that city, the time being divided between indoor discussions of various topics and visits to typical orchards where the subjects discussed in the meetings will be demonstrated.

On August 17 the entire party will then go to Wenatchee over Blewett pass to spend two days in that city and valley.

A similar program has been adopted for the two days spent in the Wenatchee valley.

The idea of holding the meeting in both places grew out of the fact that the Yakima and Wenatchee valleys are the most favorable places to study horticultural conditions. The last two summer meetings held in Wenatchee and Yakima, respectively, proved to be very successful and profitable.

The proceedings of the regular annual meeting of the state horticultural association in Spokane and the summer meeting in Yakima have been published in book form and will be distributed to members.

These two meetings were among the most important ever held in the 17 years of the association's history. Notable contributions were those of C. A. Newcomer of Yakima on "Codling Moth Control," Roy Larsen of Wenatchee on "Orchard Fertilization" and D. F. Fisher, United States pathologist, on "Life Insurance for Apples."

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Fighting Smut

New Seed Treatment With Copper Carbonate Dust

"A dry treatment of seed wheat with copper carbonate dust, with which the experimental department has been working, promises great improvements in the present methods of fighting smut," said R. M. Turner, assistant county agent leader, at the recent meeting of county agents in Spokane.

"The treatment by formaldehyde and blue stone has, as every farmer knows, resulted in seed being impaired 20 to 60 per cent, with an average of about 45 per cent. This impairment has been clearly shown by samples taken from seed after it had been treated and germinated on more than 50 farms in Whitman county. Similar tests have been made in other counties, all under supervision of George Zundel, state college extension pathologist.

"Under Mr. Zundel's direction county agents in the different wheat counties put out last fall the new seed treatment of cooper carbonate dust, covering 8000 acres. This new dust treatment has resulted in from 25 to 50 per cent better stand, and the crop has gone through the hard winter in fine shape, while some seeding of the old treatment has had to be resown, as shown by reports of county agents to S. B. Nelson, state college extension director.

"These same county agents will check up on the smut control in this 8000 acres, as compared with sowings with the old method of seed treatment.

"Should this experiment prove as successful as it gives every promise of being it will be the greatest boost the wheat industry has had since the college put out the hybrid wheats. If this treatment proves successful it also means less seed per acre. It will also enable more successful seeding in dry ground. About two ounces of the dust is required to the bushel, and the cost of treating is about the same as the present method."

Wool Rates Reduced

Reductions in wool rates from the Inland Empire, Yakima valley and the Lewiston country have been announced by Vice President H. M. Adams of the Union Pacific system.

The new rates will permit the railroad to compete with water rates offered wool growers of the Pacific northwest by steamship lines operating out of Portland.

"Sheepmen can now move their clip east as cheaply by rail as by water," President Adams declared.

The reduction in rates extends east into Montana and southern Idaho. The cut has been authorized to permit the railroad to meet competition developed by warehouses which have sprung up in Portland, where efforts have been made to control the bulk of the northwestern clip for shipment by water to Boston. The rates become effective June 6.

Under the new tariff Inland Empire wool growers will enjoy a rate of $2.35 a hundred pounds from Spokane to Boston. The new rate from Lewiston to Boston is $2.39 and from Yakima $2.05.

Reductions announced represent a cut of 80 cents a hundred on wool from Spokane to the east since January, 1922. The rate was reduced 10 per cent at the first of the year. That carried a drop of 30 cents a hundred; the new reduction represents a further cut of 50 cents a hundred from inland points of eastern Oregon and Washington, southern Idaho and central Montana.

Old rates and new from Spokane, Yakima and Lewiston are given in the following table:

	1920.	Jan., 1922.	June 6.
Spokane	$3.02	$2.72	$2.35
Lewiston	3.12	2.81	2.39
Yakima	2.72	2.45	2.05

Out for Better Sires

A purebred live stock tour to cover the entire length of western Washington is the latest development in the purebred sire campaign which is being conducted by the live stock farmers and the extension service of the state college of Washington.

This western Washington better sires tour will be held from July 24 to August 5, and will begin at Vancouver, Clarke county, and end in Whatcom county at Bellingham. Arrangements are being made between the county agents of Cowlitz, Lewis, Grays Harbor, Thurston, Pierce, King, Snohomish, Skagit and Whatcom to visit dairy and live stock raisers all along the route. The tour will include all types of live stock and the different breeds.

Don Magruder, dairy specialist, and C. M. Hubbard, live stock specialist of the extension service, will have charge of the entire tour and accompany the party from place to place.

It is the purpose of the better sires tour to show the value of the use of a high-class purebred sire. Examples will be shown where herds are being bred up by the use of a high-class purebred sire upon grade stock, showing the early stages of the breeding up process, while in other cases it will show the effect after the process has been far advanced.

A tentative schedule shows that the party, which will travel by auto, and include farmers and live stock men from the entire west side of the state, will spend the first night at Castle Rock. The next night stop will be made at Chehalis, after which will follow Aberdeen, Olympia, Tacoma, Seattle, Monroe, Mt. Vernon and finishing with Bellingham.

Rabid Animals

Seven Counties Are Quarantined

An increase in the number of rabid animals in eastern Washington, the division of dairy and live stock of the state department of agriculture has found it necessary to issue quarantine No. 29, which affects Kittitas, Yakima, Klickitat and Benton counties. It will be remembered that a previous quarantine called for the muzzling of all dogs in Franklin, Adams and Grant counties as well as part of Benton county, in order to prevent the spread of the disease among dogs.

Coyotes have been found in a number of sections of these counties to be affected with rabies and in a number of cases have infected live stock with their bite. A few instances have been reported where coyotes have attacked men and have been killed either with a gun or club.

The quarantine order, which is signed by E. L. French, director of agriculture, and P. W. Turner, chairman of the state board of health, requires every dog running at large within the boundaries of the above counties to be properly and securely muzzled to prevent its biting dogs, animals or persons. No dog shall be transported or moved from the quarantined area to any point outside unless permission is granted.

THURSTON GUERNSEY BREEDERS.

Members of the Thurston County Guernsey Breeders' association plan to meet at the Guernsey sale at Chehalis June 7. It is their plan to see how the animals sell, buy what suits them and then make a trip to Oregon herds, where they will buy what other stock they need. This plan was suggested in preference to making a trip to the middle west to purchase breeding stock, which was the original plan.

MRS. WILLIAM ROSLER, Friday Harbor Wash.—I wouldn't miss one single copy of The Washington Farmer, as it is one of the best little papers on the market. The stories are so thrilling we like them all.

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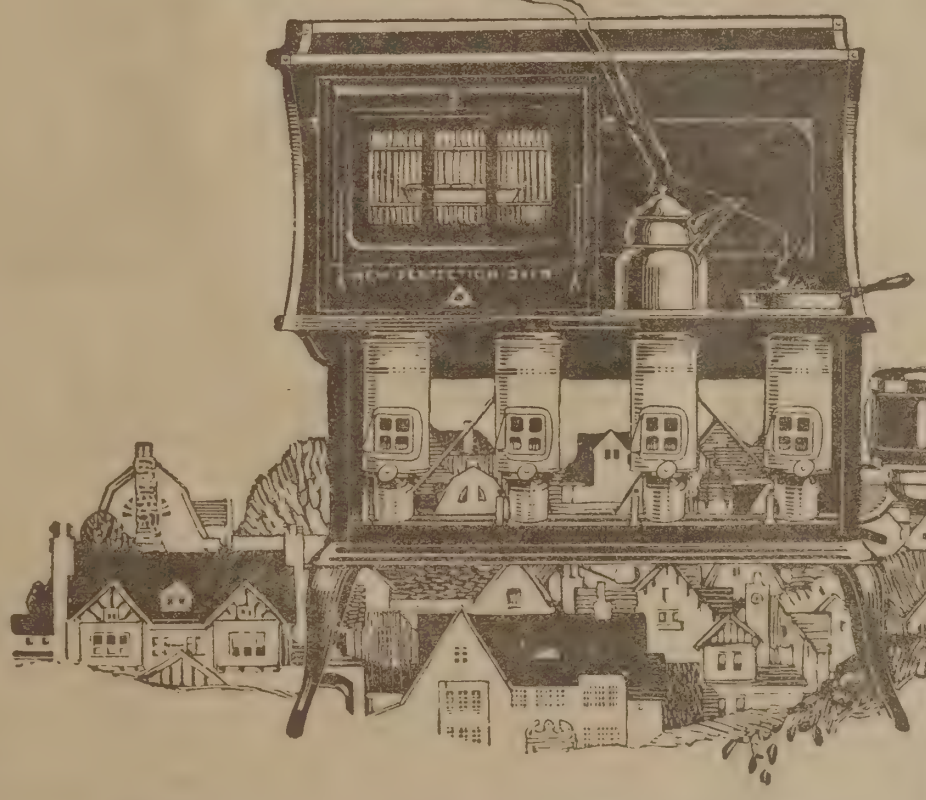


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LIVESTOCK AND DAIRY

Milk Production

Was Not So Profitable Last Year

The total value of dairy products produced on farms during the calendar year 1921 was $2,409,600,000, according to the estimate recently made by the United States department of agriculture. This amount compares with the estimated value of $3,025,400,000 in 1920 and $2,969,600,000 in 1919, the decline from 1920 to 1921 being approximately 20 per cent.

The rise in value from 1919 to 1920—a period during which the values of nearly all other important farm products, including animals, declined—was due to the higher prices paid for milk, butter and cheese during the latter year compared with the prices prevailing during 1919.

The production of milk during the three years under consideration was estimated at 10,535,000,000 gallons in 1919, 10,425,000,000 gallons in 1920 and 11,710,000,000 gallons in 1921.

Sales and farm consumption of whole milk at farmers' wholesale prices had an estimated value of $1,787,400,000 in 1919, of $1,836,400,000 in 1920 and of $1,579,500,000 in 1921. These values are based on estimates of 6,113,000,000 gallons of milk in 1919, 6,101,000,000 gallons in 1920 and 7,118,000,000 gallons in 1921, at the average price of 29.24 cents per gallon in 1919, of 30.1 cents in 1920 and of 22.19 cents in 1921. These average milk prices were computed from extensive information with regard to milk prices derived from all parts of the country, weighted by the relative monthly production of milk.

For butter made on farms a value of $344,900,000 is estimated for 1919, of $366,200,000 for 1920 and of $241,600,000 for 1921, the estimated production of butter falling from 685,000,000 pounds in 1919 to 650,000,000 pounds in 1921 and the average price from 50.35 cents per pound in 1919 and 54.25 cents in 1920 to 37.16 cents in 1921.

Heretofore no estimates of the values of buttermilk, skimmed milk and whey on farms have been included in the total value of dairy products. Based on feeding value, these products had a value of $260,600,000 in 1919, of $230,000,000 in 1920 and of $99,700,000 in 1921.

Stringy Milk

By A. B. NYSTROM.

I would like to know about stringy, ropy milk. Is the milk good to use? How can I find out which cow gives this milk? Should the cream be sent to a creamery?
Toppenish, Wash. MRS. H. B.

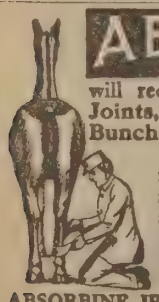
Stringy or ropy milk is not fit for food. It is liable to cause digestive disorders, especially in children. Set away a pint of milk from each cow in a clean, well scalded bottle, and let it stand for 48 hours at a temperature of 75 to 80 degrees F. This will tell you which cow gives the abnormal milk. However, it is probable that all the milk is contaminated from the same source. It may be the water, especially if the vessels and strainer cloth are rinsed in cold rather than boiling hot water. Frequently it is the strainer. The only way to get rid of this trouble is to boil for 15 minutes every day for 5 days, every milk utensil and strainer cloth and then let them dry without wiping, and setting them in the sun.

The cream should not be sent to the creamery, for should the trouble start there the creamery would have to go through the same operations of sterilizing to get rid of it. Stringy cream makes butter of very poor quality.

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Ship your cattle, hogs, sheep, fat or feeders, to the
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Spokane, Wash.
Market reports mailed on request.


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Cutter's Liquid or Solid Blackleg Aggressin. Absolutely safe. Cutter's Solid Aggressin Injectors work just like Blackleg Pill Injectors. If Cutter's Aggressin is unobtainable locally, write
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W. F. YOUNG, Inc. 371 Temple St., Springfield, Mass.

Alfalfa Hay

Should Not Be Harvested Too Soon

Delaying the cutting of alfalfa until it is nearly in full bloom has been found a better practice than mowing it soon after blooming starts. Trials made by the United States department of agriculture and state experiment stations indicate that the yields are larger over a period of years, and that the life of the stand is prolonged by delaying harvesting until the plants are nearly in full bloom.

Hay made when the plants are nearly in full bloom possibly is not quite so palatable, but this is offset by the gain in quantity of hay. The fields that were cut prior to or at the beginning of blooming showed a tendency to die out sooner. Cutting a crop late in the fall so that not enough growth was left for protection in the winter also had much to do with thinning stands. The department recommends that alfalfa be given time to reach a height of 6 to 8 inches before cold weather shuts off the sap flow.

In the past the growing of alfalfa in rows in dry regions has been recommended, but experimental evidence gathered by the department in the last few years shows that, with the exception of a few rare varieties the seed of which sells for a high price, this method is seldom practical. Where the rainfall is not sufficient to grow alfalfa in broadcast stands it can not usually be grown profitably in rows. A slightly larger yield may be produced, but not enough to pay for the added expense. Also the hay harvested on this cultivated ground is apt to be dirty and it is hard to cut and load.

Accumulating experience also has exploded some old notions about the value of cultivation of broadcast stands. It has been found that harrowing a field of alfalfa ordinarily does not increase the yield; neither does it prolong the life of the stand to any noticeable extent. The modified spring-tooth harrow does not injure the plants, but the disk often kills many and reduces the stand. Some sort of cultivation appears advisable in irrigated regions where the water carries a great deal of silt or where the soil has been compacted by the tramping of cattle pastured on the alfalfa. The department believes there is usually little to be gained by cultivating broadcast fields when the stand is good. If weeds and grass work in and reduce the stand it is better to plow up the field and put in another crop for a year or two. It is hard to thicken a thin stand buy cultivating it and sowing more seed; in fact, it is a waste of time, the department believes.

VETERINARY

By DR. S. B. NELSON.

Tuberculosis—Our cow has symptoms of tuberculosis. Can you tell me who to communicate with to have her examined?
Newport, Wash. H. B.

Write to Dr. L. C. Pelton, chief division, dairy and live stock, department of agriculture, Olympia, Wash.

Rheumatism—I have an 8-year-old cow that freshened a few days ago. Her joints all seem to be stiff and her hip joints are the worst. She has been this way for about a year and a half. Can anything be done for her? C. W. P.
Dixie, Wash.

Your cow may possibly have rheumatism. Give her one tablespoonful of sodium salicylate in a pint of water morning, noon and night for two days. Rest her two days and then repeat.

Try Neck Cradle—I have a young cow that has been fresh a week and she has been taking her own milk. Is there any way to break her of this habit?
Blaine, Wash. J. E. H.

Put a neck cradle on your cow. This is made of about ⅛ or ¾ by 1-inch strips, fastened together with strips of leather and a buckle so that it can be put on and taken off. It should fit snugly from the shoulders to the ears. This will prevent her from turning her neck to one side and sucking herself.

Bitter Milk—I have a cow that has been giving milk for 18 months. At irregular intervals the milk becomes bitter for a few days. At these times the cow seems restless and gives less milk. The cow is in good condition, in fact, almost too fat for a good milch cow. I feed alfalfa hay and about three quarts of mill run and oats twice a day. S. W. W.
Gig Harbor, Wash.

Try giving your cow 1½ pounds of epsom salts in three qharts of water. Following this give her a tablespoonful of fluid extract of phytolacca in a little water once daily.

Udder Is Caked—I bought a cow that freshened in February, but one side of her udder is caked. Can I do anything to bring her back to her milk again?
Okanogan, Wash. F. F. F.

The application of heat by means of a poultice or washing with hot water will tend to relieve the inflammation of the caked udder. It is well to give her a purge of 1½ pounds of epsom salts and cut down on her feed and milk her five or six times a day for a little while. Later the use of iodine may be employed to soften the udder. The iodine might be used in this way. Two ounces of iodine and six ounces of soap liniment, mix and massage the affected parts with it after each milking.

Tonic—I have a cow that is run down. She seems to get poorer all the time and does not have a very good appetite. There seems to be an itching all over her body and she licks herself until the hair comes off. She gives nearly her usual amount of milk. W. K.
Hubbard, Ore.

Give your cow a tonic of one tablespoonful of compound tincture of gentian daily for two weeks. It may be given in one-half pint of water.

Indigestion.—I have a 2-year-old heifer that had a calf 2 months ago. She gave three gallons of milk until three days ago when she gave only one pint. Can anything be done for her? C. H. W.
Oakland, Ore.

The symptoms you mention are rather indefinite, but it is possible that the heifer is suffering from indigestion, and I would recommend that you give her one and one-half pounds of epsom salts in three quarts of water; 24 hours later give her one quart of raw linseed oil.

Fed Too Much Corn

Pigs with a potential value of $50,000,000 died this spring from diseases resulting from insufficient vitamines in their food, J. S. Hughes and H. B. Winchester of the Kansas State Agricultural college reported to the American Chemical society at its recent meeting in Birmingham, Ala.

"The opinion is quite generally held," the report said, "that this great loss to hog raisers is due to feeding too much corn."

Mr. Hughes and Mr. Winchester now have an experiment running at Manhattan to test this theory. Four lots of gilts have been on feed in dry lots since weaning more than a year ago. Two lots are getting grain without any alfalfa or other green feed. In other words, their ration lacks sufficient vitamines. Out of four sows in one lot, only one is left alive. In the other lot two sows remain; one is down and the other is twisted out of shape due to the insufficient ration. It had been hoped to produce pigs from these two lots to see what effect the imperfect ration would have on the offspring, but this will be impossible.

In the two other lots, where alfalfa is being fed, the sows are gaining normally and apparently are about to farrow in a normal way.

Unique Calf Club

Something entirely new and unique in the way of a calf club has been organized in Lewis county, Washington. Ordinarily dairy calf clubs are formed with heifer calves, but this one is composed entirely of bull calves.

The idea was evolved by N. C. Sears of Winlock, Washington, who sold one of the calves for half its appraised value to one of the members. County Agent Fowler of Chehalis has given the idea his hearty indorsement, and the club is now well under way, with six members.

Mrs. Sears has agreed to act as club leader and already has had one meeting with the boys, besides the one at which the club was organized. The fair association has offered five prizes, totaling $25, besides a free trip to the state fair, and the Lewis County Jersey Cattle club will present the first prize winner with a Jersey heifer.

The winning will be made on the improvement made in the calf from the time the club was organized until the fair is held and on the kind of a report that is made. Members of the club are Roland Randt, William Rinta, Charles Rinke, Eino Laakso, Archie Laakso and Floyd Morton, all of Winlock, Wash.


You pay for a
De Laval
whether you buy one or not

If you are using a worn-out, inferior cream separator, or skimming cream by hand, you are surely wasting enough cream to pay for a De Laval in a short time.

The selection of a cream separator is more important than that of any other machine on the farm, for none other can either save or waste so much, twice a day, 365 days a year.

A De Laval Separator will:

—Skim cleaner for many more years than any other;

—Skim milk clean at lower temperature than any other separator;

—Deliver a higher testing cream, which is more acceptable to the creamery, and easier and less costly to ship;

—And deliver a cream which will make better butter.

Mechanically a De Laval Separator is the best that fine materials and skilled workmanship can make.

—It lasts longer than any other separator, many giving good service for 15 to 20 years.

—It is easier to turn.

—It is easier to clean.

—It is so simple that one tool will set it up or take it down.

—It has the most perfect lubricating system.

Do not be deceived by separators which are claimed to be "just as good and cost less." When you consider its greater savings, greater reliability, longer life, the extra time it saves, and the greater satisfaction it gives, the De Laval is, in the end, by far the most economical cream separator made.

Even if you have only two cows it will pay you to have a De Laval. One can be bought on such easy terms that it will pay for itself in less than a year. Why not see your De Laval agent at once or write us for full information?

De Laval Pacific Company
61 Beale Street, San Francisco, Cal.

Sooner or later you will use a
De Laval
Cream Separator and Milker

Put Efficiency into the Rush Work on the Farm

By CARL W. ART

The expression, "The last straw that broke the camel's back," has been repeated so many times by ourselves as well as our forefathers that we accept it without thought. But it's true of the busy farmer.

All winter long you have been willing to put up with inefficiencies of different sorts. You had lots of time. One more trip to the barn more or less; extra hauls to town; slower methods of doing things, didn't irritate you because the rush of



Power machinery operating on a large wheat farm.

fall and harvest was a memory and such duties took away monotony.

But it's all action now! Spring is here! In the tedious work of plowing, which has had to start late in many regions of the northwest because Old Man Winter refused to watch the calendar and break his grip, antequated methods begin to irritate. It's slow work and there's so much else to do. A few days longer than you figured on one particular piece of ground, a good man who leaves you without warning, or a poor grade of work for the wages you have to pay—these are the irritations that "break the farmer's back!"—that make him look around and diagnose the new term: Power farming and its application to his particular ranch!

Harrowing! Making the ground fit! Seeding! All these operations take valuable time, and if inefficiency slows them up—you are piling up costs against every sack of wheat and every pound of crop produced next fall.

From 1915 to 1920 you were in the same position as any manufacturer. Getting quantities produced at almost any cost represented your chief problem. Because prices were on the up-grade. Whatever it cost, you were assured of a profitable price in the end. But now—

You're again in the same position of the manufacturer, and you find prices at low ebb, and costs too high. Low prices can have only one message to the farmer who intends to stay in business: Get rid of wasteful methods and inefficiency! Make every acre either produce more or, on a smaller per-acre cost, produce the same. Get more out of every man's day of work by furnishing him more efficient machinery to do with. In other words, don't let inefficiency "break your back." Your profit or your loss will depend on your net cost to produce. You can't control the selling price very much as yet, though cooperation is making progress in that direction, so you must control the cost!

The Inland Empire and the northwest generally are waking up to the possibilities of power on the farm, especially in the use of tractors. While more than half the tractors owned today are located in the states of Illinois, Iowa, Kansas, Minnesota, California, North Dakota, South Dakota and Nebraska, our states are rapidly coming to the front in tractor owning. tractor efficiency is bringing this about!

A Large Farm Experience.

Large ranch owners will be interested in the following test reported by H. J. Dana, tractor instructor at the State College of Washington, operating a 75-horse power tractor near Ione, Ore., last season:

During the rush of the plowing season it was used night and day, 22 hours of the 24, being equipped with a lighting system and stopping only an hour each morning and an hour at night for adjustments, fuel and lubrication! It plowed 1700 acres and seeded 2800 acres during the season, in addition to similarly heavy harvest work and hauling. It pulled 15 1-2 feet of plows in the light soil of that section; 30 acres a shift, or 60 acres a day of 24 hours.

When harrowing it pulled 70 feet of drag-harrows, covering 120 acres a shift. It drew four 20-hoe drills, followed by an equal width of harrows. The average daily operating cost was:

Engineer	$10.00
Plow tender	2.50
Distillate, 50 gallons, at 15c	7.50
Lubricating oil, 1½ gallons, at 80c	1.20
Cup grease and track oil	1.50
Total	$22.70

In the foregoing, depreciation and repairs were not figured, but were not considered excessive.

In the Palouse hills the daily acreage is not as great because the soil is heavier, the grades steeper, and less plows must, therefore, be used. The six-plow tractor, which seems most popular there, plows on an average of 12 to 15 acres in a 10-hour day.

How about the small farm or orchard? The efficiency is the same, and the size of tractor can be determined absolutely according to the amount of work the farmer has for it to do! In connection with spring work, especially, the smaller models lay particular stress on their lightness or their "track-laying" mechanism, which makes it possible to rest lightly on the soft spring soil when the ground could not be worked till possibly two weeks later by teams of horses or mules.

Must Have the Horse Also.

Right here mention should be made of the horse question. Horses have a place on every farm and ranch. A certain number are needed and the man who attempted to farm without them would be foolhardy indeed. But it is obviously most inefficient to carry twice as many head of horses on the board bill for the entire year as are needed continuously, simply to anticipate the six months period when work is heaviest.

Since the invention and perfection of power farming, by which tractors can take care of the "peak load," the farmer today may own exactly the number of horses he needs—using horse and tractor during all busy seasons—and does not have a penny of extra expense for his tractor when it is not earning money for him!

The small farmer of today is proving this also. Even with low prevailing prices of feed for horses, orchardists and truck farmers are sticking to their small tractors because of their efficiency in plowing, cultivating and power uses. While some of

(Continued on page twelve.)

AUTOMATIC HITCH
ONE-MAN CONTROL FOR
FRESNO SCRAPER
Reynolds Patent



MAKES THE TRACTOR DO THE WORK

The power of the tractor is used to dump, load and set the scraper. One finger will operate the loading rope or dumping lever. Can be attached to any standard Fresno Scraper in thirty minutes. All the tools required are wrenches to tighten six bolts. Sold everywhere by dealers. Licensed Manufacturers

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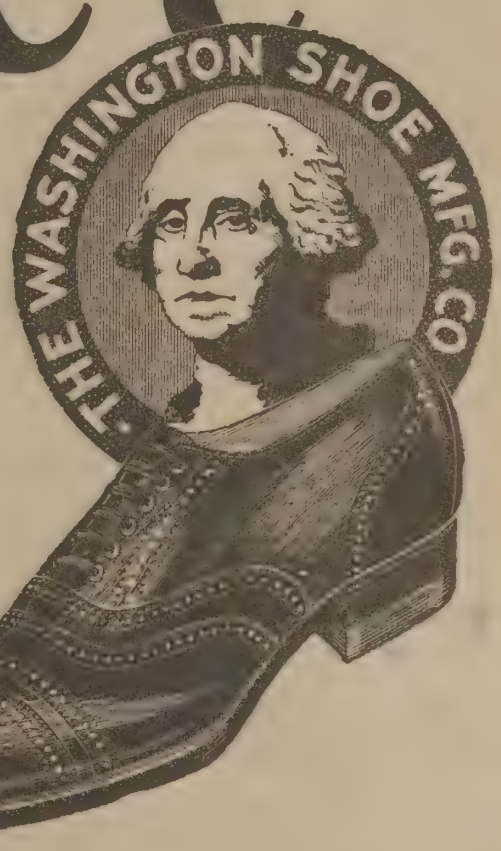
No better machine made than the Anker-Holth, the separator with the Self-Balancing Bowl.

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There will also be a drop in our Renfrew Truck Scale.

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Your advantage—and the dealer's—in Dry Sox Shoes

There is no secret why your dealer likes to sell Dry Sox Shoes. They are the most economical and profitable shoe investment you can make. The reason it this: He can carry a complete stock on a small investment. Near at hand is our factory and stock rooms. He can operate—take care of all shoe demands in fine fashion with a minimum stock—for broken lines can be filled in on short notice. He can telephone or telegraph us and receive the shoes almost at once. Thus he avoids the usual heavy investment—on which customers would have to pay interest. Further, he can afford to sell on a much smaller margin of profit—which means a lower price—because his stock is turned oftener. Dry Sox Shoes last an amazingly long time and require minimum care and repairs. Your first pair will make you an enthusiastic friend of them. Make note of the name, Dry Sox Shoes, so you can obtain them next time you purchase shoes. NOTE: Dry Sox Shoes are sold only through dealers, but, if the dealer you inquire of hasn't them, address us, and we'll see that your demands are given attention.

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Dry Sox
KLIMATICALLY KORRECT SHOES FOR MEN

POULTRY AND RABBITS

Truck Gardening and Poultry

An interesting combination of a truck garden and a poultry farm is being carried out by Clarence Glenn of Montesano. Mr. Glenn has five acres in cultivation, but uses hotbeds for the growing of his young plants, part of which are sold and the rest transplanted into the field.

"I beleve head lettuce is one of the best paying crops for this district," said Mr. Glenn. "Last year I had three acres which would have paid me well if it had not been such a damp season and allowed blight to get a start. I am trying it out again this year and will plant from four to five acre. I have had best results from shipping the crated lettuce to the harbor cities, where there is a strong demand for it. The Los Angeles variety of head lettuce seems to do best here. The seed is planted in the ground and is later thinned to 14 inches, while the rows are 18 inches apart.

There is lots of work to a lettuce crop, but it is not as much work as celery. It comes off earlier than celery and is easier to crate. I have had good luck in selling to the commission houses, and believe that it is more profitable to pay them their small commission than to attempt a small retail selling plan."

In addition to lettuce Mr. Glenn raises cabbage and tomato plants for the local market and finds that there is a good demand for healthy plants. These, of course, are raised in hotbeds, whence they are transplanted and sold in plats.

Mr. Glenn has 1000 White Leghorn chickens, which are kept in a Shope house and fed for commercial egg production. While most of their feed is purchased, he finds that he can utilize much of the waste garden produce from his fields. He is restocking his flock with 600 young pullets, which he has raised from baby chicks.

An unusually heavy loss is reported from the baby chicks this year, which can hardly be accounted for unless it is the unusually backward season. After the birds once got started they developed so fast that the developing mash had to be discontinued. They are now getting scratch and millrun and allowed to run in a patch of winter oats.

"I am a strong booster for the Grays Harbor Egg association," continued Mr. Glenn. "We now have 50 members, with a total of 40,000 hens. The headquarters of the association are at Aberdeen. We are making an endeavor to maintain a certain standard, and we are supplying the market with well-graded eggs. We are storing a few eggs at Aberdeen during the heavy egg production this spring.

"Most of the members are in the eastern part of the county, some of them being as far east as Oakville. Practically three-fourths of the members are in the poultry business alone, and there are only a small percentage who raise their own grain. We expect to develop the poultry industry along with our dairying in this county."

Poultrymen to Organize

Permanent organization of the Willapa Valley Poultrymen's association will be effected at a meeting at Raymond June 5, when a constitution and by-laws will be offered for adoption and permanent officers elected. At a meeting May 2 V. L. Swartz was chosen temporary president, C. E. Lambert vice president, Z. B. Shay secretary-treasurer, and Frank Griffith and Antone Christen trustees. A committee consisting of Messrs. Swartz and Lambert and J. M. Dubla, which had been appointed by County Agriculturist J. R. Beck to canvass the poultry situation, reported, and poultry raisers present indicated that they will have a total of 7000 birds by October 1. Those at the meeting included Charles Gehrman, Antone Christen, Frances; Mr. and Mrs. Frank Griffith, Mr. and Mrs. A. G. Dundas, Lebam; Z. B. Shay, Lou Langer, V. L. Swartz, Gus Bues, Mrs. A. G. Butz, L. Gregg, Menlo; W. G. Wentworth, South Bend; J. M. Dubla, Raymond; A. Kennedy, A. P. Evavold, Willapa, and Mat and Christ Moe, East Raymond.

Fakers Work Culling Poultry

Warning has been received by the extension service of the State College of Washington to the effect that fake poultry cullers are swindling farmers in western Kansas, and working their way westward. The extension service of Colorado has issued the warning and Washington is passing it on to the farmers in the state.

The method used in Kansas is for a faker to go to a farmer and offer to cull his flock for 1 cent a bird, provided he will sell them the culls at the market price. If the farmer agrees, the fakers, who seem to know poultry culling practices, make it a point to take the best layers and leave the culls.

One woman in Kansas lost 80 of her best hens as a result of the swindle and the hens she has left are not laying. One of her neighbors, more observant, saw the fakers pick his best layers and put them into the cull crate, so he stopped the game. Farmers are advised to consult their county agents or poultry specialists if they see or hear of any such fakers.

Cause of Leg Weakness

What ails our baby chicks? They eat heartily, but seems to have a leg weakness. When startled they seem to have convulsions, but get over it quickly. They are kept on a board floor covered with one and one-half inches of wheat chaff. Is this caused by some deficiency in green food or chilling? A. H.
Tekoa, Wash.

The trouble with your chicks is probably leg weakness, due to the fact that your chicks have not had an opportunity to get out upon the ground. I believe that if you force the chicks to get outdoors, or bring in some good green sod into the brooder house that you will not have further trouble. Leg weakness is sometimes caused by overheating and chilling and may be brought on by forcing the chicks with too high a percentage of animal matter, such as meat scrap or fish meal. For little chicks not over 10% of the dry mash should be composed of animal matter. Green feed will, I believe, be a great help in remedying the trouble which you have.

Makes His Own Brooder

Would you beat the high cost of brooding chickens? Follow the example of Hugh Corp, a young poultryman of Lewis county, Wash., who invented and manufactured a brooder at about one-quarter of the usual cost of such devices. Using a barrel as a water supply and expansion tank and an old "airtight" stove with 24 feet of one-half inch coil in it for a heater, he carried hot water in an inch pipe to a wooden hover, turned the pipe four times underneath and brought it back to the top of the barrel. With very ordinary attention he was able to hold the temperature beneath the hover to a variation of two degrees.

GENERAL ADVERTISING.

MINERALIZED WATER ROUTS CHICKEN LICE

Tablets Dropped Into Drinking Founts Banish Vermin, Make Fowls Grow Faster and Increase Egg Yield.

Any poultry raiser can easily rid his flock of lice and mites, make chickens grow faster and increase their egg yield by simply adding minerals to the fowls' drinking water. This does away with all bother, such as dusting, greasing, dipping and spraying. The necessary minerals can now be obtained in convenient tablets, known as Paratabs. Soon after the fowls drink the mineralized water, all lice



and mites leave them. The tablets also act as a tonic conditioner. The health of the fowls quickly improves, they grow faster and the egg yield frequently is doubled. Little chicks that drink freely of the water never will be bothered by mites or lice.

The method is especially recommended for raisers of purebred stock, as there is no risk of soiling the plumage. The tablets are warranted to impart no flavor or odor to the eggs and meat. This remarkable conditioner, egg tonic and lice remedy costs only a trifle and is sold under an absolute guarantee. The tablets are scientifically prepared, perfectly safe, and dissolve readily in water.

Any reader of this paper may try them without risk. The laboratories producing Paratabs are so confident of good results that to introduce them to every poultry raiser they offer two big $1 packages for only $1. Send no money, just your name and address—a card will do—to the Paratab Laboratories, Dept. 578, 1100 Coca Cola Bldg., Kansas City, Mo., and the two $1 packages, enough for 100 gallons of water, will be mailed. Pay the postman $1 and postage on delivery, and if you are not delighted with results in 10 days—if your chickens are not healthier, laying more eggs and entirely free from lice and mites—your money will be promptly refunded. Don't hesitate to accept this trial offer as you are fully protected by this guarantee.—Adv.



The Rumely Ideal Increases Crop Profits

By having a Rumely Ideal Separator you will be able to thresh when you are ready; save the time and expense of stacking; save thresherman's fees; clear your land for early plowing; save the weeks of exchange work with your neighbors; use this time profitably on your own farm; take advantage of the market; get better prices.

Early threshing usually means a better grade and a bigger yield. Weather exposure is reduced and much spoiled and sprouted grain is avoided. This increases your profits.

Rumely Ideal Separator

The Rumely Ideal operates on a tried and proved principle that "saves all the grain." An even flow of straw is maintained through the machine. Winding, clogging and bunching are overcome. You get unusual speed, capacity and thoroughness, at least cost for operation and upkeep. Thousands of farmers know this.

WRITE FOR CATALOG

There are two sizes of the Ideal Rumely Separator adapted for individual use. The 22x36, easily operated by the 12x20 OILPULL TRACTOR, threshes up to 900 bushels of wheat daily. The 28x44, operated by the 16x30 OILPULL TRACTOR, threshes up to 1500 bushels of wheat daily. Write to nearest point listed below for complete catalog. In the meantime, see the local Advance-Rumely dealer.

ADVANCE-RUMELY THRESHER CO., Inc.
Spokane, Wash. Portland, Ore. Pocatello, Idaho

The Advance-Rumely line includes kerosene tractors, steam engines, grain and rice threshers, alfalfa and clover hullers, husker-shredders and farm trucks.

Serviced from 30 Branch Offices and Warehouses

ADVANCE-RUMELY

CREAM WANTED

Correct tests, honest weights, fair treatment guaranteed. Make a trial shipment and get results.

HAZELWOOD CO.
Spokane, Wash.

COLFAX DRAPERS

For All Kinds HARVESTING MACHINERY

Special Drapers made to order on short notice. Largest Draper factory in the west.

WRITE FOR CATALOG and PRICES OR SEE OUR DEALER IN YOUR TOWN.

Spokane Mfg. Co.
Spokane, Wash.

LEE'S LICE KILLER

Kills lice, mites, bed bugs, etc., affecting poultry. Spray or paint on roosts, etc. Gets body lice on chickens, too. Works while they sleep. No dusting, dipping, greasing or handling. Saves lot of unpleasant work. At most towns, at stores handling Lee Poultry Supplies. Write for information and FREE Book.

GEO. H. LEE CO., Dept. F-46 OMAHA, NEBR.

SPOKANE SEED CO., SPOKANE, WASH.
PORTLAND SEED CO., PORTLAND, ORE.
Pacific Northwest Distributors.

THE AUTO-OILED AERMOTOR

A Real Self-Oiling Windmill



Oil an Aermotor once a year and it is always oiled. Every moving part is completely and fully oiled. A constant stream of oil flows on every bearing. The shafts run in oil. The double gears run in oil in a tightly enclosed gear case. Friction and wear are practically eliminated.

Any windmill which does not have the gears running in oil is only half oiled. A modern windmill, like a modern automobile, must have its gears enclosed and run in oil. Dry gears, exposed to dust, wear rapidly. Dry bearings and dry gears cause friction and loss of power. The Aermotor pumps in the lightest breeze because it is correctly designed and well oiled. To get everlasting windmill satisfaction, buy the Aermotor.

Write today for Circular. **AERMOTOR CO.** Chicago Des Moines Kansas City Minneapolis Oakland

HUGHES & COMPANY, Spokane Distributors.

See "For Sale or Exchange" ads on the "Want" Ad page this week.

ORCHARD AND GARDEN

Not Yet Too Late

To Put Out Certain Garden Crops

In view of the coldness of April and the recent May frosts, a representative of THE FARMER asked the other day of a prominent Spokane nurseryman, "What vegetable is it not too late to plant by the first of June?"

The answer was given as applying to the general run of seasons in that region and confined itself, therefore, to those plants and seeds which are usually set or sown late. Of the vegetables that we transplant in the seedling stage, instead of sowing in the open, the late group included, of course, tomatoes, eggplant, celery, peppers, cauliflower, late cabbage, cucumbers, melon seedlings and ground cherries, all of which it is as well not to put out before June 1 in the average location and some of which may better be set even later. There are also available from nurseries, of course, stocks of young onion plants and some others of the hardier vegetables for those who have been belated in sowing at the desirable season.

At the particular nursery in question, which happened to be the Kelly gardens, the writer was introduced to the system of "individuals," an alternative to the flat system of producing seedlings, whereby the latest safe transplanting date is considerably set forward. The individuals, as handled by this nursery in large numbers, were seedlings grown each in its tiny spruce veneer "pot," constructed much as a strawberry box is, and of diameter suited to the seedling and ranging from one and one-half to four inches. The advantage of the spruce boxlet lies in the ease of removing the bottom, so that, without soil disturbance or setback, the plant takes its place in its new environment. Where cutworms are prevalent the little box has another mission to fill. By having the cube of soil around the seedling at the right degree of moisture one may safely raise, just slightly, the walls of the box after removing the bottom. The cutworm, who works from the surface of the ground, does not find in spruce veneer anything to satisfy his springtime appetite, and so is turned away by the "fence" around the seedling.

As concerns rhubarb and asparagus roots, they are far better planted in early spring, while dormant, it was stated, though either could be set even now. Of the asparagus, which is slow in becoming established, one would not be safe in cutting from 2-year-old settings until two years after they were planted. Rhubarb is much more quickly established.

A safe general rule would be that what is perishable by frost should not be set afield before May 20 in the eastern tier of Washington counties, and then covered nights, said Mr. Kelly, and may be set June 15 if so transplanted as to guard against setback. What is not sensitive to frost should be transplanted early in spring, while dormant.

As concerns seeding, all the root vegetables for winter storing—turnips, rutabagas, carrots, beets, etc., are best seeded not before June 1, and the rapidly grown radish or lettuce may be sown at this time or later for renewing the supply.

Half Million Dollars

Fruits and fruit products produced on the farms of the United States during the calendar year 1921 had a total value of slightly more than $525,000,000, according to the estimate made by the United States department of agriculture. This amount was $229,600,000 less than the estimated value of these products in 1919 and $218,700,000 less than the estimated value for 1920.

The sharp decline in the total value for 1921 is accounted for chiefly by the short crop of orchard fruits in 1921. The greatly reduced prices paid for raisins during 1921 was also among the important contributing factors.

Orchard fruits—chiefly apples, apricots, peaches, pears, plums and prunes—dominated all other classes of fruits in value. The estimated value of this class of fruits and their products in 1921 was $271,000,000, or 52 per cent of the value of all fruits and fruit products.

The subtropical fruits, chiefly oranges, followed, with a 1921 valuation of $87,000,000, or 17 per cent of the fruit total. Next came the small fruits, mostly strawberries and cranberries, with an estimated value for 1921 of $74,500,000, or 14 per cent of the fruit total. Grapes and grape products had an estimated value in 1921 of $68,500,000, or 13 per cent of the fruit total.

For the three years of 1919, 1920 and 1921 the estimated values of orchard were $463,400,000, $441,900,000 and $270,000,000, respectively. For subtropical fruits these values were $84,200,000, $88,600,000 and $87,200,000; for small fruits, $63,300,000, $68,90,000, $105,000,000 and $68,500,000. The fruit products of farms for which valuation estimates are made are grape juice, raisins, apple cider, apple-cider vinegar and dried fruits. The total values of these products fell from $102,500,000 in 1919 to $66,000,000 in 1920, a decrease of 34 per cent.

The apple, "the king of fruits," is by far the leading single fruit in value. The fresh apple crop of 1921, a poor year for apples and many other orchard fruits, had an estimated value of $163,200,000. Far below this amount came oranges, with an estimated value of $64,300,000. In declining order came peaches, with a valuation of $52,200,000; strawberries, $40,900,000; grapes, exclusive of grapes used for raisins and grape juice, $29,500,000; plums and prunes, $19,900,000; pears, $18,300,000; cranberries, $6,400,000; apricots, $5,400,000; figs, $1,400,000, and at the foot of the list of individual fruits for which estimates are made came olives, with a valuation of $80,000.

Native Shrubs and Flowers

A landscape plan is being carried out at the home of Robert Taylor, son of J. H. Taylor, a Jersey breeder of Montesano. Robert is in partnership with his father and he has built a small house near the original Taylor home.

The plan will include as many native shrubs and flowers as possible, to obtain a natural effect about the yard. Sword ferns and Evergreen huckleberries have been planted near the house and front porch, while rhododendrons, laurel and pine are set along the edge of the lawn. A few wild currants will be planted next season in order to secure an early blooming shrub. A steep terrace between the lawn and the adjoining field has been planted to salal and Oregon grapes. Most of these plants were set out in February and all are coming through in fine shape. The rhododendrons are making an exceptionally fine growth, an interesting point, since they are considered a hard shrub to transplant.

Mr. Taylor expects to have a very attractive yard in the course of a few years. He has followed a plan given him by A. M. Doerner, landscape architect of the state college.

Here's to your Health—
Running Water
in your home



HERE is a private pumping station that gives you plenty of fresh running water, UNDER PRESSURE, for kitchen sink; for modern bathtub; wash bowl and toilet; for wash tubs; for stock; for washing motor cars, trucks, etc.; in the dairy house; for fire protection.

NOW $125 F.O.B. FACTORY

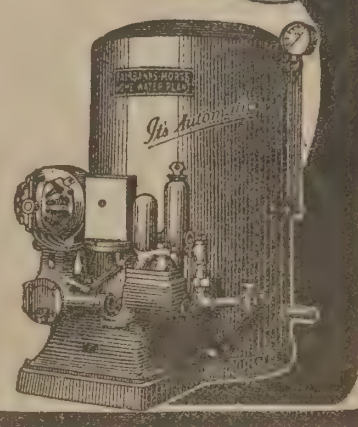
It's Automatic

FAIRBANKS-MORSE
HOME WATER PLANT

Operates from any electric light socket or home lighting plant circuit. Pumps water from cistern, shallow well, spring, stream or lake. Has sturdy *galvanized* tank. Noiseless, self-oiling pump.

Capacity, 200 Gallons per Hour

Now selling at low price. Don't accept a substitute. If you do not know the local Fairbanks-Morse representative, write us for his name. We will include special literature.



FAIRBANKS, MORSE & CO.
Manufacturers Chicago
Western Branches:
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POST CARDS BRING BIG RETURN

Many of our advertisers offer free booklets and information which is very much worth your while to send for. A postal will bring them. Why not place a dime or so in your rural mail box with a note requesting the carrier to leave you some cards? Then use the cards in writing advertisers. When you do so be sure to mention THE WASHINGTON FARMER.

Time to Re-tire?
(Buy Fisk)
TRADE MARK REG U S. PAT OFF



FISK
RED-TOP
EXTRA PLY OF FABRIC
HEAVY TREAD

How a Fisk Red-Top outwore three other tires of another make *and still has a lot of mileage in it*

WHAT a country dealer said to our Memphis Manager:

"There is my car with a 30x3½ Red-Top on the left rear wheel. It was sold to me at the old price; at the same time I bought a cheap tire, and put it on the opposite wheel. I have since purchased three of those cheap tires for that right wheel. I have paid for them in all nearly twice the price of that Red-Top which is not yet more than half worn out. I don't want anything but Fisk Red-Tops after this."

It's the extra heavy, tough red tread and the extra ply of fabric that make this tire a sure success.

There's a Fisk Tire of extra value in every size, for car, truck or speed wagon

The Name "Grange"

(Continued from page three.)

"Grange." That means something definite. A "Grange" means an association or organization, secret organization of Patrons of Husbandry. That is just what "Grange" means. Now, in one of the encyclopedias here it is used as distinguishing the official acts of the Grange from efforts and purposes of farmers generally came to designate the whole class as "Grangers" and their legislative acts and all efforts of farm organization as "grange movements." That is where the word "Grangers" came in. Farmers generally got to be known as "grangers." But "Grange" has always stood for something right up to the beginning of this case, so far as I can find from the Encyclopedia evidence "Grange" has a peculiar and well defined meaning. When "Grange" was used it meant a body of patrons of husbandry under the control of the parent corporation. That is what "Grange" meant. It don't mean a lodge; it simply means a body of patrons of husbandry. Now, when the defendants in this case commenced preparing for the organization of the present lodge they very evidently recognized the fact. I hold here Plaintiff's Exhibit G, being a circular put out by Mr. Bouck and Mr. Cottrell and their associates, in which they say that the courts have ruled that the P of H, being the Patrons of Husbandry, have a prior right to the use of the name "Washington State Grange." Now "Washington State" don't mean anything except just like the word "lodge" or "number" in a local; it means "grange of Washington state," and "Grange" has a well defined meaning. In other words, had a prior right to the use of the word, the name, of "Grange" as characterizing patrons of husbandry in Washington state. Then at the close they say: "Pass a resolution in your Grange to cease affiliation with the Washington State Grange and to affiliate with what? The Western Progressive Grange, Washington Unit." That word "Washington Unit" makes it worse than if it wasn't in there. Western Progressive Grange, Washington Unit. In other words, "we can't use the 'Washington State Grange,' but we will use the 'Washington State Unit of the Washington State Grange'."

Now, Mr. Cottrell in his document, put forth before the suit however, shows their understanding of it. He says it was signed by the executive committee of the State Grange of P. of H. I see all the way through here they recognize that "Grange" means an organization of the P. of H. An organization of the P. of H.—not like a "lodge" which might mean an organization of anything or anybody, but "P. of H." Then at the close he uses the significant language: "Compare the declaration of the purposes of the patrons of husbandry with that of the new organization" showing plainly that the declaration of purposes of the patrons of husbandry was entirely different from the declaration of purposes of the new organization. Now "Grange" means patrons of husbandry and nothing else. And the declaration of purposes of the patrons of husbandry is entirely different from the declaration of the purposes of the new organization, and yet they use—while they have a right to use "Western Progressive" as a part of their name, they use the balance of it, the word "Grange," which is the only designating, peculiarly designating part of the patrons of husbandry. Admitting that the purposes of the new organization are entirely different from the purposes of the patrons of husbandry, so different that they can not affiliate with them and therefore secede, as they have a right to do, because the declaration of purposes, of the patrons of husbandry are so different from our own, we will secede, and they took from the patrons of husbandry the only thing that could be used to designate "patrons of husbandry," that was the "Grange." Now, it is fair to the defendants to find in this case, as I do find, that if there has been any damages resulting to the patrons of the Washington State Grange it has been practically nil; it don't amount to much, and there is not liable to be any damages resulting to the Washington State Grange by reason of money which should come to it being diverted to the new organization, or vice versa. I cannot find that there has been confusion confounded either, but I cannot shut my eyes, and neither can anyone in this case shut his eyes, to the fact that there is likely to be some confusion. Now, if they have no right to use the word "Grange" and they haven't any right if that is the only word significant specifically to characterize the patrons of husbandry, then they have no right to use "White River Grange" if the old organization uses it, or "Edgewood Grange" or "North Side Grange." Now, the testimony shows here that the seceding members of Edgewood Grange have organized a local known as "Edgewood Grange." They can't do that, even if they had a right to use the word "Grange" they wouldn't have it. This new organization as a state organization wouldn't have any right to do that; they can't take that old local's name. Now, I believe what Mr. Cottrell says, that the name of this one in the north, the 86th street, is not "North Side Grange" but that it is "North End." Now, the local of the subordinate of the Washington State Grange is "North Side"; this new one that was organized is the "North End." There is bound to be some confusion. Suppose that a granger came here from Illinois or California or some state and wasn't familiar with the local disputes of these people here, and he wanted to visit a local, he is just as liable to get into a local of the Western Progressive as he is of the Washington State, unless the pass word was different, then they wouldn't let him in, but at the same time there was an opportunity of being confused. You can't help but concede that there is a tendency to some confusion there, though I am going to find that there isn't much liability of any financial damage.

Now Mr. Cottrell's testimony is enough to enable me to decide this case. Mr. Cottrell states frankly that they discussed whether they should use the name "Grange." They had some doubt about their rights, so they telegraphed to Washington City and found out it was not copyrighted. Why did they want the use of the word "Grange"? Why was "Grange" any more popular than "Farmers' Union" or "Farmers' Alliance" or "Farmers' Association" or "Farmers' Cooperative Society"? Because the word "Grange" stood for something; the word "Grange" meant something, and Mr. Cottrell and his associates wanted that name if they could get it. Now, if it meant something then they had no right to use it, if it was the exclusive property of the other parties. Here is where the harm is being done, and serious injury could be done. "Grange" stands for patrons of husbandry and nothing else. Mr. Bouck and Mr. Cottrell are going under the name and the only name that characterizes patrons of husbandry, that means patrons of husbandry. Mr. Nelson and his associates are going under a name that means patrons of husbandry. Patrons of husbandry stands for a certain thing according to the declaration of purposes. Here is another organization going under the name of patrons of husbandry and stands for something absolutely opposite, so opposite that they cannot work together. Now then the people that have the right to the use of that name, in other words the patrons of husbandry that have the right to use that name, cannot be put in a position of standing for something that is obnoxious to them, and yet that is what they are doing. And they have a right to use the name "Grange," and if "Grange" means patrons of husbandry, then the patrons of husbandry are standing, some of them—in other words patrons of husbandry endorse the principles that you must respond to your government and fight whenever the government calls on you, the patrons of husbandry stand for the principle that we won't fight, we won't permit any fighting except when we are invaded by a foreign foe. Now, you can't reconcile the two, patrons of husbandry have no right to be put in the attitude of stand-

(Continued on page eighteen.)

Efficiency in Spring Work

(Continued from page nine.)

these smaller types are of comparatively recent development, they fill a long-felt want and complete the tractor cycle.

Some of the advantages claimed for the tractor in the orchard are these:

It will get closer to the trees without injury to them.

It will not bite the end of the limbs or knock off fruit.

It will turn in a short radius.

It can be guided with exactness.

It will pull heavier tools and cut deeper.

It will readily pull a subsoiler to break the plowpan caused by shallow tillage or the hardpan laid down by nature.

It will get over the ground faster.

It can be worked longer hours, in emergency.

An Orchard Experience.

Read these excerpts from a recent letter from Claude H. Stevenson of the Eden Orchards, Inc., of Salem, Ore., concerning his experience last season:

"* * * I have had my machine one year, have cultivated about 2800 acres, using double disc and nine-foot spring tooth harrow. We know our conditions are unusual, as all of our ground is steep, one orchard has a 40 per cent grade, and the tractor worked it two ways with a five-foot double disc. Am now working an orchard with 30 per cent grade, with a seven-foot disc and we never stop.

"We overhauled the engine last winter, and after such a strenuous season could not take up a single bearing in the motor, gears in perfect condition, practically nothing to do but oil up and go."

This spring the wide-awake farmer has still another reason beyond general efficiency for considering the tractor question. Price reductions have been most drastic. Whether or not they will remain as low as they are today is problematical, to say the least, just as problematical as whether farm products will remain too low, in the farmer's eyes, and in the opinion of those who have studied the problem.

One of the northwest's biggest implement houses, in the words of its president, sees it this way:

"During the last five years there has been no time when the market was so much a buyer's market as at the present time. This necessarily means lower prices for implements and makes it possible for the man who is in the market to buy nearer to his own price and terms than heretofore.

"A great many buyers of agricultural implements think perhaps the market will be lower. The chances are, in time, it will be, although with the present high taxes (and we understand it takes about 46 cents of each dollar spent to carry on expensive tax payments) it doesn't look as if prices would go very much lower."

The probability being, therefore, that prices may eventually be even higher, with labor, metals and taxes at a high mark and manufactured products comparatively low—this would seem to be a good time to buy for the man who has work for the tractor to do. As for efficiency, the tractor, the truck and the innumerable power machines and attachments have come to stay! It is simply a question of choosing the right one for each purpose, considering carefully size, capacity and adaptability.—Copyright, 1922.

Farmers' Want Ads

HELP WANTED—MALE 3

WANTED — SALESMAN WHO CAN SELL high-grade, dependable nursery stock; several counties in Oregon, Wash., Idaho and Montana now open for assignment. Our selling contract will interest you. Address Albany Nurseries, Inc., Albany, Ore.

HELP WANTED GENERAL 5

MEN-WOMEN WANTING RAILWAY MAIL, gov't clerk or carrier positions; $1400-$2300 Write Mokane Institute, A 28, Denver, Colo.

SITUATIONS WANTED—Male 21

POSITION WANTED BY A1 HAND MILKER, Dane; 10 to 15 cows; sanitary board and room; moderate wages. A. S. Myers, Springfield, Ore.

EDUCATIONAL 4

EARN MONEY QUICKLY—THERE'S NO LIM- it to one's earning capacity in business. An- this great business college after training yo thoroughly, places you in a paying position Courses include banking, stenography, account- ing, private secretarial. Write for free cata- logue. Behnke Walker Business College, Port- land, Ore.

FRESH FOOD PRODUCTS 51-1

CANNED SALMON, ALASKA MEDIUM RED fish; 48 one-pound cans, $7.96; 24 cans fo $4.68; one sample order, 6 cans, for $1.48 All charges prepaid, check or money order Pacific Fisheries Exchange, Mutual Life bldg. Seattle.

WHITE ALFALFA, SWEET CLOVER honey; 1 60-lb. can, $7.50; 2 60-lb. cans $14.50; six 10-lb. cans, $8.50; three No. 1 pails, prepaid third zone, $5.50. Wells D. Rose, Sunnyside, Wash.

HONEY—FINE QUALITY ALFALFA, SWEET clover; 60-lb. can, $7.50; 2 cans, $14.50; three 10-lb. pails prepaid, second zone, $5. Harry Fisher, Prosser, Wash.

3-POUND BOX ABSOLUTELY BONELESS codfish, fine white, new catch fish, delivered by mail, $1. Coffin Fish Co., Seattle, Wash.

HONEY—FIRST-CLASS ALFALFA, SWEET clover honey; 1 60-lb. can, $7; two cans $13.50. A. L. Traner, Touchet, Wash.

WORLD'S BEST CLOVER HONEY. 60 pounds, $6.15; two 60s, $12. Browne, Box 499 Twin Falls, Idaho.

MISCELLANEOUS—FOR SALE. 60

WALL BOARD—WRITE FOR SAMPLE OF Washington plaster wall board; won't warp won't burn. Manufactured by Washington Building Products company, 6851 E. Marginal Way, Seattle, Wash.

TOBACCO — HOMESPUN. EXTRA FINE chewing, 10 lbs., $3; smoking, 10 lbs., $2; 20 lbs., $3.50. Producers' Exchange, Mayfield, Ky.

CEDAR POSTS, 6½ FT. BY 6-INCH FACE, cents each f. o. b., in car lots. R. C. Merrick Clayton, Wash.

(Continued on the following page.)



An unbroken record in the hands of the American farmer since 1864

SLOWLY circling lower and lower, all of a sudden Mr. Chicken-Hawk swoops swiftly downward, but—

Bang! Caught in mid-air. That accurate, hard-hitting Stevens was too quick for him.

For 58 years Stevens has built for the American farmer shotguns of unsurpassed accuracy and endurance.

It's easy to prove the accuracy of a Stevens

Here's the test for a full choke: on a piece of paper draw a circle 30 inches in diameter; measure off 40 yards and fire into it. Your Stevens will throw an even pattern of 70% of the pellets into that circle.

A Stevens modified choke will throw an even pattern of 50%. And a Stevens cylinder bore will throw an even pattern of 40%. Try it. Only a perfectly bored gun will meet this test.

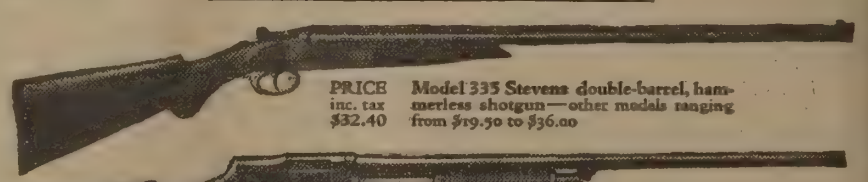
Remember this: when you buy a Stevens you get the last word in accuracy; you get a gun that will last a lifetime; and you get that gun at an exceptionally low price.

Stevens manufactures a complete line of small bore rifles and shotguns of every description. Ask at your dealer's or write for the interesting catalog describing in detail the complete Stevens line. Address:

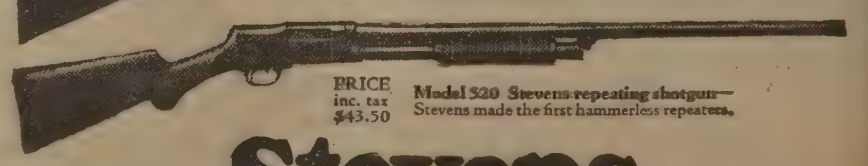
J. STEVENS ARMS COMPANY
Department K333, Chicopee Falls, Mass.
Owned and operated by the Savage Arms Corporation
Executive and Export Offices: 50 Church Street, New York

The famous Stevens Guarantee

Every firearm turned out by the J. Stevens Arms Co. has attached a tag on which is printed the Stevens guarantee. This tag is your insurance for Stevens quality and workmanship. Read carefully this guarantee.



PRICE inc. tax $32.40 — Model 335 Stevens double-barrel, hammerless shotgun—other models ranging from $19.50 to $36.00



PRICE inc. tax $43.50 — Model 320 Stevens repeating shotgun—Stevens made the first hammerless repeaters.

Stevens

FARMERS' WANT ADS

This is the farmers' "want," "sale" and "exchange" department for small advertisements of farmers, including live stock and poultry.

Advertising rates for ads running 1 to 3 times, 10c per word per insertion, with a special rate to Farmer subscribers, as follows: Ads running 4 to 12 times, 9c per word per insertion; ads running 13 times or more, 8c per word per insertion.

All commercial and land advertising 10 cents per word each insertion. Open also to nonsubscribers.

In using these columns advertisers must observe: (1) No advertisements will be inserted for less than $1.00. (2) Every word, number and initial, including name and address, must be paid for. (3) New advertisements, changes of copy or cancellations must reach general office, Spokane, Wash., 10 days in advance of publication date. (4) Cash must accompany order.

Above rates include insertion in The Washington Farmer, The Idaho Farmer and The Oregon Farmer, which constitute the Pacific Northwest Farm Trio, 46 Review Building, Spokane, Wash.

MISCELLANEOUS—FOR SALE (Continued) 60

SASH AND DOORS—O. B. WILLIAMS CO., 1943 First ave., So. Seattle. Chicken house sash, 20" wide by 25" high, 80c; a dozen different sizes in stock for immediate shipment. Skylights for chicken houses, 36"x40" price, glazed, $2. This is the size recommended by the Western Washington experiment station. We carry them in stock for immediate shipment. Sash and doors for all purposes at lowest prices. All orders receive prompt attention. Our large illustrated catalogue No. 35, showing full line of building material and built-in fixtures for the home, free on request. O. B. Williams Co. Established 1899.

PIPE — NEW AND SECOND-HAND. ANY size; low price; standard grade roofing paper at a big saving; belting, all plies, all sizes, cheap. Write Alaska Junk Co., S120 Adams st., Spokane, Wash.

HOMESPUN SMOKING TOBACCO. MILD AND mellow; 10 lbs., $1.50; 20 lbs., $2.75; delivery guaranteed. We furnish free recipe for preparing. Smoking Tobacco Exchange, Sedalia, Ky.

NATURAL LEAF TOBACCO—CHEWING, 5 lbs., $1.50; 10 lbs., $2.50; smoking, 5 lbs., $1.25; 10 lbs., $2. Send no money, pay when received. Tobacco Growers' Union, Paducah, Ky.

KENTUCKY TOBACCO—SPECIAL BARGAIN. Send no money, pay for tobacco and postage when received. 10 lbs. 3-year-old smoking, $1. Farmers' Grange, Hawesville, Ky.

QUEEN BEES — INCREASE YOUR HONEY crops by introducing my strain of unsurpassed Italian queens. Write for circular and price list. J. D. Harrah, Freewater, Ore.

TOBACCO—NATURAL LEAF CHEWING AND smoking; rich, ripe, two-year-old; 5 lbs., $1.75; 10 lbs., $3; sample, 20 cts. Maddox Bros., Dept. 30, Mayfield, Ky.

HOMESPUN SMOKING OR CHEWING TOBACCO, collect on delivery; 5 pounds, $1.50; 10 pounds, $2.50; 20 pounds, $4. Farmers' association, Paducah, Ky.

BEES—ITALIAN QUEENS. WRITE FOR prices. Ira C. Smith, The Dalles, Ore.

MISCELLANEOUS. 61

BARGAIN IN 32X56 REAR BUFFALO PITTS separator; would consider trade for Ford tractor or one-ton truck. Chas. Fitzgerald, Sequim, Wash.

MISCELLANEOUS—Wanted 63

HIDES—WE BUY HIDES OF ALL KINDS. Write for prices and tags. Hibbard-Stewart Co., Hibbard Bldg., Seattle.

WOOL—WE BUY WOOL AND PELTS. WRITE for prices and tags. Hibbard-Stewart Co., Hibbard bldg., Seattle.

MACHINERY—For Sale 93

LARGE CREAM SEPARATOR FACTORY opens branch in Portland—To quickly introduce their machines astonishingly low price to the first purchaser in each locality on 350 lb. capacity. Made of the best Swedish iron and steel; fully guaranteed. Chas. Walker, branch manager, 8 Front st., Portland, Ore.

THREE 2-BOTTOM, 16-INCH OLIVER GANGS, new model 19B, steel bottoms; extra shares, quick detachable; $60 each. Ralph W. Snyder, Washtucna, Wash.

EXTRAORDINARY BUYS IN USED COMbines, caterpillars, separators, engines and trucks. Fallquist Brothers, Pullman, Wash.

STOVE REPAIRING 128

WRITE MYER RUBENS, SPOKANE, ABOUT stove repairs, welding broken parts, nickle plating.

FUR-BEARING ANIMALS 170

SILVER FOX RAISING PAYS BIG—KING of all fur bearers. Start now. Easy to raise, easy to sell. Few pairs quality, registered, breeders left; fully guaranteed. Information free. United States Silver Fox Farms, 1210 Hutton bldg., Spokane, Wash.

SILVER AND CROSS FOXES FOR SALE. William Rambo, 407 Sprague, Spokane.

PETS—Dogs, Birds, Etc. 171

PEDIGREED COLLIE PUPS. PRINCESS COLlie Kennels, 4812-42 Southwest, Seattle, Wn.

CHANDLER BIRD HOME. BEAUTIFUL singers and females. Write 2027 East Mill, Portland.

POULTRY 174

HENACRES WHITE LEGHORN PULLETS are classed among the best. They are large, healthy, range raised, good looking, bred to lay and are reasonably priced. March hatch, June delivery, $1.75 each; 500 for $850; May 1 hatch, July 1 delivery, $1.50 each; 500 for $700; satisfaction guaranteed or money refunded, including return express charges. Ask your neighbor about Henacres Leghorns. June chicks, 16c each; 500 for $75. Free illustrated catalog. Henacres, Box A, Prosser, Wash.

FRESHLAID WHITE LEGHORN CHICKS have the qualities you want; vigor and scientific breeding for the heaviest egg production; every Freshlaid male is from a high record hen. Freshlaid Farm is one of the largest and oldest chick plants in the Inland Empire. There is a real demand for Freshlaid chicks, especially from our old customers. We are sold out until June. Freshlaid June chicks have been making good as winter layers for ten years. Free catalog. Freshlaid Farm, Colfax, Wash.

CERTIFIED S. C. WHITE LEGHORN BABY chicks from heaviest laying stock; safe delivery; live, vigorous chicks guaranteed. No money in advance; pay on delivery. Prices for May and June $3.50 per 25; $6.50 per 50; $12 per 100. Special prices 500 and 1000 lots. Largest electric hatchery in the world. Established 1898. Member Sonoma county farm bureau accredited hatchery list. Must Hatch Incubator Co., 445 Seventh st., Petaluma, Cal.

BABY CHIX—WHITE LEGHORNS ONLY. May delivery, $13 per 100; June delivery, $12 per 100; order now as the supply is limited and these are not just baby chix, but are chix from stock that has been bred for 20 years for vigor and vitality; mated to male birds from hens with records up to 298 eggs in pullet year; hatched by the oldest established hatchery in the northwest. Lakeside Poultry Farm, Roy, Wash.

CARNATION WHITE LEGHORN PULLETS; April and May hatched pullets from my high record trap nested stock. E. W. Raush, Carnation Poultry Farm, Kent, Wash.

TANCRED STRAIN WHITE LEGHORN BABY chicks, May, $15; June, $12.50; $100 per 1000. Safe delivery guaranteed. D. A. Gillette, R. 4, Yakima, Wash.

S. C. ANCONAS, SHEPPARD'S SELECT AND 331 egg strain; eggs, $1.75 per 15; chicks, $18 per hundred. A. B. Larson, Warren, Ore.

BUFF LEGHORN EGGS AND CHICKS FROM my champion exhibition and laying strains. R. Stromquist, Tigard, Ore.

BABY CHICKS, THOROUGHBRED BARRED Rocks; 100, $16.50, delivered. Chas. Muths, Rt. 1, Box 49, Salem, Ore.

POULTRY (Continued) 174

SPECIAL SALE OF PACIFIC NORTHWEST trap nested White Leghorns. One and two year old hens, cocks and growing cockerels from Kent, Wash., the home of the world's highest egg record Leghorns, the famous Yesterlaid Egg Ranch strain; 2000 one and two year old hens, free range raised, now one-half price. We must dispose of these to make room for our pullets. Cockerels from 200 to 225 dams, sire's dam 225 to 280 eggs; 8 weeks old, $1.75; 12 weeks old, $2.50; mature, $7.50 each; 225 to 259 dams, sire's dam, 225 to 280, 8 weeks old, $2; 12 weeks old, $3.50; mature, $10 each. Cockerels from 225 to 250 dams, sire's dam, 316, 8 weeks old, $4; 12 weeks old, $6; mature, $12 each. Cockerels from 250 to 300 dam, sire's dam, 316 and 333, 8 weeks old, $7.50; 12 weeks, $10; mature $15 each. Individual pedigreed cockerels (wing banded), 12 weeks and mature at from $5 to $50 and up. Don't miss this opportunity to get breeding stock from one of the largest trap nest ranches on the Pacific coast. Our strain is a blend of the choicest Tancred and Hollywood farms. Our prices are the lowest. We have 8000 hens, 3500 trap nested pullets, 12,000 growing chicks on free range. Baby chicks, $12 per 100. 5000 pullets, all from high record trap nested stock for sale. Yesterlaid Egg Ranch, Kent, Wash.

THE PROGRESSIVE HATCHERY ANnounces the following prices for May and June, 1922: Single Comb White Leghorn chicks (trap nested), $17 per 100; selected, $14 per 100. Reduced prices for large orders. R. I. Red chicks, trap nested or selected stock, $25 and $20 per 100. Terms, 20 per cent with order; safe delivery guaranteed. 1534 N. E. 12th st., Portland, Ore.

EBORALL'S STRAIN WHITE LEGHORNS. Our hatch of 2300 chicks per week is now booked for Feb., March and April, principally to old customers. Your inspection is invited at all times. We are now booking chicks for May at $14 per 100. Write for circular. Crystal White Poultry Farm, McMinnville, Ore. Box 33.

TRY OUR PARCEL POST PACKAGE—KEEP the old hen busy. We will ship you first-class baby chicks, postpaid to your door, direct from the hatchery and guaranteed all alive. Price, $4.50 per 25; $8 per 50. For delivery April, May or June. Order now. The White Hatchery, Petaluma, Cal.

700 APRIL AND MAY HATCHED HOLLYwood and Tancred strain White Leghorn pullets for delivery at 3 months at very attractive prices. Will also have Queen Quality chicks balance of season. White Leghorn, R. I. Reds, Barred Rocks and Anconas. Queen Hatchery, Seattle, Wash.

BABY CHICKS FOR MAY AND JUNE ONLY —4000 every 4 days of the famous O. A. C. strain S. C. W. L.; raised and run on free range. They have the vim. Prices, first half of May, $17, last half of May, $15; June, $12. Moorhead Poultry Farms, Granger, Wash.

GRIFFIN'S FAMOUS WHITE WYANDOTTES, the best for market and egg production; eggs for hatching from best mated pens in northwest; your opportunity to get started with my famous stock. Send for catalog. J. A. Griffin, Box 457, Eugene, Ore.

WHITE ROCK BABY CHICKS, "DANIEL'S IDEALS," from our own trapnested stock entirely. Write for prices and dates, also eggs for hatching. Free catalog. Ideal Poultry Yards, Hoquiam, Wash. Star Route No. 25.

EGGS FROM PRIZE-WINNING MAMMOTH Toulouse geese, the kind that hatch; 50c each, $45 per 100. Imperial white Pekin duck eggs, $2.50 per 15; $14 per 100. Goslings, ducklings. R. E. Baumgardner, Wenatchee, Wash.

MAMMOTH PEKIN DUCKS, "AMERICA'S finest." New blood this year direct from C. C. Shoemaker; eggs, $2 per setting, $12 per 100. Crystal White Poultry Farm, McMinnville, Ore. Box 33.

PUREBRED S. C. RHODE ISLAND RED EGGS for hatching from non-setting, non-fading strain. $3, $5 and $10 per fifteen. Mrs. L. Wham, Double Diamond Ranch, Omak, Wash.

DOLLARS FOR YOUR EGGS—WE PAY THE top market prices for your eggs and poultry. Daily cash remittances. Western Produce Co., Spokane.

OREGON AGRICULTURAL COLLEGE WHITE Leghorns. Eggs, $1.50 per setting; $6 per 100, prepaid. Late May and June chicks, $12.50 per 100. Russell Poultry Yards, Route 3, Corvallis, Ore.

BABY CHICKS — WE GUARANTEE OUR chicks to be from the highest producing hens in Petaluma. Write for further information. The White Hatchery, Petaluma, Cal.

SHIP YOUR LIVE POULTRY AND EGGS TO us. Highest prices paid; daily remittances. Inland Poultry House, Spokane, Wash.

FANCY WHITE WYANDOTTE COCKERELS, $2.50; hatching eggs, two dollars setting. H. L. Lamon, American Falls, Idaho.

PEDIGREED ANCONA HATCHING EGGS; 330-egg strain; $2.50 setting. Smith's Ancona Farm, Nampa, Idaho.

FORD'S BRED TO LAY S. C. WHITE LEGhorns; 2-year-old breeding hens, $1 each. W. A. Ford, Umatilla, Ore.

LIGHT BRAHMAS, EGGS, $1.75 PER 15; Bronze turkey eggs, $3.50 for 10. Mrs. C. W. Laabs, Irby, Wash.

HUNT'S BARRED ROCK EGGS. PRICES REduced through April, May. W. A. Hunt, Lebanon, Ore.

WHITE LEGHORN BABY CHICKS. CIRCULAR on request. San Jose Poultry Yards, San Jose, Cal.

BARRED ROCK CHICKS, HEAVY LAYING O. A. C. strain. Mrs. E. Hodge, Waterloo, Ore.

LIGHT BRAHMA EGGS, $1.50 PER 15. DALton Poultry Farm, Coeur d'Alene, Idaho.

LIVE STOCK. 177

LARGE, HEAVY PRODUCING HOLSTEINS for sale at all times in car lots; tuberculin tested; 150 to 200 head always on hand; well marked heifer calves from registered sires and heavy producing dams; crated for shipment anywhere, $25 f. o. b. Levinson & Balmelli, Yakima, Wash.

$500—IMPORTED ROYAL BELGIAN STALlion for sale. Philomath Belgian Horse Co., Frank Wyatt, Philomath, Ore.

LIVE STOCK (Continued.) 177

SHIP US YOUR POULTRY AND LIVE STOCK —We pay the top market prices. Light veal, fat, fancy, 12½c; dressed block hogs, 14c; hens, light, 17c; heavy, 20c. Prompt returns. John Lewis & Co., Spokane, Wash.

EPOCHAL BERKSHIRES, 3 MONTHS' PIGS from $20. Yearling boars from $40. Sire, the grand champion Pork-maker's Sincerity. Herd boars from $75. Bred sows from $75. E. V. Orford, Boise, Idaho.

WE PAY TOP PRICES FOR YOUR LIVE OR dressed veal, hogs and poultry. Your check by return mail. Shipping tags on request. M. & J. Packing Co., Spokane.

DUROC BARGAINS—WEANED PIGS, BEST pedigree, registered and crated, $12; boar and sow, $22; boar and two sows, $32. Shadeland Farms, Amity, Ore.

BERKSHIRES—GILTS, YEARLING BOAR grand champion, 1921. Sure breeder. Simonson Hog Co., Buena, Wash.

HEREFORDS WANTED FOR FOUNDATION herd. A. B. Cameron, Carlsborg, Wash.

HARNESS and SADDLERY 189

SEND FOR FREE HARNESS AND SADDLE catalog today; cut out the middleman, buy direct from the manufacturer. Lowest prices in the west; satisfaction guaranteed. Established 1881. Write Pierce Harness Co., Dept. T, Spokane, Wash.

JOB PRINTING. 372

GUARANTEED BETTER BUTTER WRAPpers; 100, 60c; 250, $1.25; 500, $2.25; 1000, $4; printed to order. Home Specialty Co., Middleton, Idaho.

TANNING. 425

LET US TAN YOUR HIDE—COW AND HORSE hides for fur coats and robes. Cow and steer hides into harness or sole leather. Catalog on request. The Crosby-Frisian Fur Co., Rochester, N. Y.

MONUMENTS. 510

COMPLETE STOCK, RIGHT PRICES. CORrespondence solicited. J. W. Harding, Inland Monument Co., N1001 Monroe, Spokane.

BUILDING MATERIAL 588

LUMBER, BUILDING MATERIALS, READYcut houses and barns; no waste, less labor, money saved. Attractive new plan book sent free, 4c postage. Send material lists for prices. Write today. Prices now down to rock bottom. Local Keystone Lumber Co., 3000 Sprague, Tacoma, Wash.

SEEDS. 620

CHOICE MANGEL SEED, 35C LB., POSTpaid; Danish sludstrup, Gate Post, yellow tankard. Warren Cook, La Conner, Wash.

VALLEY COUNTY WINS FIRST SEVEN world prizes. Timothy, 6c; timothy alsike, mixed, 9c. M. Meador, Norwood, Idaho

NURSERY STOCK. 621

EVERBEARING STRAWBERRY PLANTS— All orders received to date and after until further notice will be entitled free, to 1 St. Regis everbearing raspberry, 1 red raspberry, 1 blackberry, 4 Lucretia dewberry, and 1 purple lilac. My Superb and Progressive everbearing strawberry plants are guaranteed and prepaid at 100, $1.40; 500, $6; 1000, $11. Orders for 1000 get 2 lots free, 2000, 4 lots. Dewberry plants, 75c doz.; $4 per 100. Concord rooted grapes, 1 year, and St. Regis everbearing rasp. transplants, 10c each, $1 per doz.; $6 per 100, postpaid; Snider blackberry vines, fine, large, hardy, prolific, 75c per doz.; $5 per 100. Model Fruit Farm, R. 1, Emmett, Idaho. N. B. Matthiessen, prop.

PROGRESSIVE EVERBEARING STRAWberry plants, $1.25 100; $9 1000, postpaid, inspected, guaranteed. O. W. Zurcher, 104 S. 17th street, Boise.

FARM LANDS FOR SALE. 651

CUTOVER LANDS, EASY TO CLEAR; $8 TO $20 per acre; 25 miles north of Spokane; on hard surfaced highway; Great Northern and Milwaukee railways; excellent opportunity for dairying and stock raising with Spokane markets and creamery near at hand. Will help the man who will live upon this land and agree to clear a part each year by giving lumber to help start his buildings, and a purebred Jersey bull to groups of farmers. Interest and payments low. Write Milan Farms Development company, Dept. T, Old National Bank bldg., Spokane, Wash.

BIG OPENING SALE OF YAKIMA VALLEY farmland, under an assessed state and government approved irrigation project; good, deep soil; close to town, railroads and state highway. We sell in tracts to suit purchaser at $25 per acre and up, on easy terms. Our many sales to farmers show that this land is a good investment. Western Lands, Inc., owners, 918 Green bldg., Seattle.

THURSTON COUNTY—5000 ACRES, VERY fertile, level; fruit, berry and poultry lands; right at beautiful state capital. No extremes of temperature; no storms or floods, no irrigation; bumper crops; fine markets. 5 or 10 acre tracts; low prices and long term payments. Send for our valuable pictorial booklet. Norpla Realty Corporation, Olympia, Wash.

174 ACRES, ON KOOTENAI RIVER AND Great Northern; 94 bottom, 8 pasture, 18 fenced and cross-fenced; 3 plowed, 15 ready; ½ acre fruit, 4 cabins, team, harness, wagon, plow, harrow, tools, etc.; 2000 ft. lumber, 14 bales roofing, 6 windows, fine cattle or chicken ranch; fine government range. $4000. Chas. R. Scholz, owner, Ural, Mont.

40 ACRES LESS HIGHWAY, OF FINEST soil; 12 acres cleared, balance pasture, easily cleared; lies fine; on main highway; 1½ miles to town; near school; farm buildings. Price $2950; thousand cash, a snap. Write us for dairy, berry and poultry farms. Chas. D. Edwards Co., Centralia, Wash.

SELL YOUR PROPERTY QUICKLY FOR cash; no matter where located. Particulars free. Real Estate Salesman company, 501 Brownell, Lincoln, Neb.

BEAUTIFULLY LOCATED, WELL EQUIPPED, prosperous ten-acre poultry farm, $12,000; $5000 cash. A. P. Rushton, owner, Southworth, Wash.

FARM LANDS FOR SALE (Continued) 651

BITTER ROOT VALLEY, MONTANA, WANTS you! Many unusual farming conditions make this valley prosperous; small irrigated farms, devoted to dairying, fruit growing, poultry, strawberries, potatoes, seed peas, garden truck pay well in the Bitter Root. Write for free booklet No. 6. It tells about a mighty good place to live, a valley "where farming is different." The Bartlett-Bolen Co., Hamilton, Montana.

EQUIPPED STOCK OR DAIRY RANCH; 400 acres, half river bottom; 135 in crops, mostly alfalfa; grows three crops; owns ditch; unlimited free water rights; best and most extensive range; close to town; big stone house; every kind outbuilding; lots personal property; will feed 500 cattle. Come, look it over. $25,000, good terms. $5000 cash. Four-Site Sales Agency, Medford, Ore.

LOGGED-OFF LANDS IN STEVENS COUNTY, Washington, at greatly reduced prices. Most of land sells at from $5 to $20 per acre; thickly settled community, good schools, hard surfaced and paved roads to Spokane; best country in state for dairy and stock raising; most places water can be found at shallow depths. Write for folder. Phoenix Lumber company, dept. T, Spokane,, Wash.

WE SELL FORECLOSED LANDS FOR A loan company for one-third cash, balance easy terms. When writing tell us what you want, where preferred, how much you will invest, kind of farming you contemplate, as we have no list and must write special description in each case. No trades. Hartford Land company, 601 Paulsen bldg., Spokane, Wash.

THE BERRY BELT OF THE UNITED STATES, western Washington, near Seattle, produces as high as $300 per acre; all crops contracted for. Over 30 cars shipped last year from one town; good chicken lands, good markets, paved highways, schools, daily mails, etc. You can buy this land without a cent down. Poncin Realty company, 716 3d ave., Seattle, Wash

2300-ACRE DAIRY RANCH, NEAR SPOkane; 400 in cultivation; 400 more lake bottom; easily drained; 125 irrigated from stream; $18,000, in most modern improvements; 2 good houses, 2 silos, concrete cow barns, balance land excellent pasture. Price, part trade, $100,000. A. J. Chitty & Co., Spokane, Wash.

IN SKAGIT COUNTY, WASH., I OWN SEVeral 40-acre tracts new logged-off land in Mt. Vernon district, the proven farm belt. This joins big dairy and berry farm and close to market, highway and railroad. Price $1400; $200 cash, balance 6 years. H. C. Peters, 726 3d ave., Seattle.

280 ACRES; 130 IN FALL WHEAT, BALANCE bunchgrass pasture; small orchard; 5-room house, barn, well and windmill; 4½ miles from Washtucna. Price, including crop, $6000. Will also sell cows, horses and farm implements. A. J. Holliday, Washtucna, Wash.

LEAVING FOR EUROPE, SELL 160 ACRES fully equipped, chicken and dairy farm; 80 acres cultivated, balance pasture. $4500; $3000 cash, rest on terms, including all stock, machinery, furniture, etc. Henry Humoeller, owner, Lakeview, Ore.

7000 ACRES SEQUIM LAND SETTLEMENT project, containing the finest berry and dairy land in the state, now offered for settlement at attractive prices and terms. Free booklet. Thos. G. Mortland, Sequim, Wash.

A BARGAIN FOR QUICK SALE—MY FINE highly improved stock ranch; large acreage for sale, $6000. Terms. Write me for facts and particulars. Mountain Park Ranch. E. M. Yarin, owner, Victor, Idaho.

160-ACRE DAIRY RANCH; 2½ MILES FROM station; nearly all creek bottom; good improvements, stock and machinery; good chance to get a good place cheap. Adolph Hill, Menlo, Wash.

BIGGEST SNAP IN 10 ACRES; SIX-ROOM house, barn; five acres cultivation. For information write George B. Smith, Chehalis, Wash.

A. F. HORTON, NEWPORT, WASH.—TIMber products, cutover lands, $5 to $15 per acre. Good roads, schools, fine mountain water.

47 ACRES, CHEHALIS VALLEY, IMPROVED; new buildings; location ideal; in crop; terms. Write Charles Raytons, Chehalis, Wash. R. 1.

160 ACRES, 90 IN CULTIVATION, WITH crop, stock and implements. $4400. Box 121, Benge, Wash.

FARM LANDS—Wanted 654

FARMS WANTED — SELL YOURS QUICKLY for cash, no matter where. Particulars free. R. A. McNown, 310 Wilkinson bldg., Omaha, Neb.

IRRIGATED LANDS—For Sale 663

IRRIGATED ACRES, TWO MILES FROM CITY limits of Spokane; prices less than city lots. Soil especially adapted to vegetables, small fruits and poultry raising. Good graded school and college. Telephone, electric lights, domestic water and paved highway. Some beautiful homes built and others building. Locate your home where you can have city conveniences and enjoy country life. Write or call upon Country Homes Development company, Dept. T, Old National Bank bldg., Spokane, Wash.

KENNEWICK, WASH., IRRIGATED LANDS, in the finest section of lower Yakima valley, with three railroads; mild winters, long growing seasons; earliest on market; large and small tracts, raw and improved. Prices right; easy terms; some trades. Bert Plowman, Kennewick, Wash.

TWIN FALLS IRRIGATED FARMS, ANY SIZE, any crops, any terms. Home Realty Co., Twin Falls, Idaho.

FOR SALE OR EXCHANGE 702

200-ACRE STOCK AND FRUIT RANCH: 12 acres under water and in trees and alfalfa, balance in mountain pasture; good buildings; ½ mile to school and church, 11 miles to railroad. Price $12,000; will take house and lot in good town or city up to $5000 to $6000; cash $2500, balance five years, 6 per cent. Owner too old to farm, so must sell. The Big Bend Land Co., Spokane, Wash.

IDEAL DAIRY FARM, 320 ACRES, 17 MILES from Spokane. Priced to sell quick, $10,000, and will accept Spokane residence up to $4000. 130 acres cultivated, half winter wheat; 10 acres clover land, balance summer fallow; 40 cleared to break. Excellent pasture, good timber; spring piped to house, good barn and outbuildings; easy terms. McCrea & Merryweather, Spokane, Wash.

FOR SALE OR TRADE—40 ACRES, YAKIMA valley, improved, irrigated farm, deep soil. Price $12,000, $4000 farm federal loan, $4800; ½ crop contract, balance cash. Wm. C. Taylor, owner, Benton City, Wash.

81-ROOM BUSINESS BLOCK, CITY; INCOME $931 monthly. Price $70,000. Will consider farm, $40,000; $20,000 cash. What have you? Briscoe Realty Co., Lindelle bldg., Spokane.

FOR SALE OR EXCHANGE—201 ACRES GOOD soil; 30 acres improved; good house, stable, hen house; timber to pay for place. Write owner, Benjamin Healey, Molson, Wash.



CHAPTER XXI.

The Rifled Cache.

The cold of February, intense, searching, deadly, tightened its grip upon the wilderness, sapping the life of the three struggling human derelicts—for derelicts Shad Trowbridge felt himself and his two companions to be—as they fought their way, now hopefully, now despondently, but ever with slower pace, as strength ebbed, toward the precious cache on the shores of the Great lake, and with the slower progress that growing weakness demanded it was quickly found necessary to reduce by half the already minute portion of dried caribou meat allotted to each.

Everything in the world save only themselves seemed to have been frozen into oblivion. There was no sound save the monotonous swish, swish of their own snowshoes to disturb the silence—a silence otherwise as absolute and vast as the uttermost depths of the grave.

Storms overtook them, but they mercifully were storms of short duration and seldom interfered with hours of travel Staggering, but ever struggling forward they forced their way painfully on and on, over pitiless wind-swept ridges, across life-sapping, desolate barrens, through scarcely less inhospitable forests. Exerting their waning strength to its utmost, they never stopped, save when exhausted nature compelled them to halt for brief intervals of sleep and rest, to recuperate their wasted energies.

Shad Trowbridge came finally to wonder vaguely if he were not dead, this another existence, and he doomed to keep going and going through endless ages over endless reaches of snow. To his numbed intellect it seemed that he had been thus going for months and years.

Like a vague, pleasant dream of something experienced in previous life, he remembered Bob and the tilts, Wolf Light farther back, and the dear old college. What would the fellows say now, if they were to see him—the fellows who had known him in that former, happier life?

At other times he fancied he heard Ungava Bob and the others hallooing in the distance, and he would answer in glad, expectant shouts. But there never came a reply.

The first time this occurred Manikawan turned and looked inquiringly at him, through eyes sunk deep in their sockets. When it was repeated later—and he came to hear the voices and to shout to the empty snow wastes at least once every day—she would step to his side, solicitously touch his shoulder and say:

"The friend of White Brother of the Snow hears the voices of the Matchi Manitu of Hunger. Let him close his ears and be deaf, for the Matchi Manitu is mocking him."

Mookoomahn's face was not pleasant to see now; it was horrible—the dark skin was drawn tight over the high cheek bones, the lips shrunken to the gums, and the eyes fallen far back into the skull. His face resembled more than anything else the smoked and dried skull of a mummy.

Shad laughed sometimes when he looked at Mookoomahn's ghastly face, framed in a mass of long, straggling black hair; at other times he was overcome with a heart-rending pity for Mookoomahn that brought tears to his eyes. But tears froze and were annoying and painful.

Manikawan, too, had changed woefully. The lean, gaunt figure stalking along uncomplainingly with Shad and Mookoomahn had small resemblance to the beautiful, commanding Manikawan that bade Bob and Shad be patient in their imprisonment on the island until she returned to relieve them; or the glowing, happy Manikawan that accompanied Shad and the other to the river tilt after she had accomplished the rescue. Though there still burned within her an unquenchable fire of energy, and she never lagged on the trail, she was no longer the Manikawan of old.

In spite of all the hardships and all the pain, and slowly starving as she was, she never ceased her attention to Shad, and she never once lost her patience with him.

When Shad laughed hysterically and derisively at his fate, as he did sometimes, Manikawan would step to his side, touch him lightly with her hand and say in the same old voice, lower than of old, but even more musical and sweet:

"The Friend of White Brother of the Snow is brave. He is not a coward. He is not afraid to die."

This always had a magical, soothing effect upon Shad. Though he never learned to interpret her language, the touch of the hand, the human note of encouragement in her voice, the light in the eyes that looked into his, never failed to recall him to his manhood and to himself, and to the remembrance of his vow that as a white man he must by mere force of will prove his superiority.

All record of time was lost. But the days were visibly lengthening with each sunrise and sunset, and when the wind did not blow to freeze them, and the snow did not drift to blind them, the sunshine gave forth a hint—just a hint—of warmth.

One day the dead silence was suddenly startled by the long-drawn-out howl of a wolf. It was a blood-curdling and almost human cry, and Shad likened it to the agonized cry of a lost soul in the depths of eternal torment. Again and again it sounded, then suddenly ceasing, Shad discovered the animal itself trotting leisurely after them far in the rear, and a feeling of fellowship—of pity—welled up in his bosom.

But when he discovered the creature still following them the next day, now so near that he could see its lolling red tongue, its lean sides and ugly fangs, he became possessed with a feeling of revulsion toward it. Then he fancied it the embodied Spirit of Starvation stalking them and awaiting an opportunity to destroy them. This fancy gave birth to a consuming, intense hatred of the thing. Finally it attained the proportions of a mocking, tantalizing demon.

Cunningly he watched for a moment when it was well within rifle shot, and drawing his rifle from the toboggan he dropped upon a knee, aimed carefully and pulled the trigger. The frost-clogged firing pin did not respond, and the wolf, seeming to understand its peril, slunk away unharmed.

Shad had seen it plainly—its repulsive gray sides so lank that they seemed almost to meet, its red, hungry tongue lolling from its ugly mouth, its cruel white fangs, and its malevolent, gleaming eyes. His hatred for the creature became an obsession, for it appeared again presently, persistently following, but now keeping at a respectful distance.

On the third day, however, the wolf had forgotten its temporary timidity, and with increased boldness stole steadily upon their heels. With a patience quite foreign to him Shad waited, glancing behind constantly, but making no demonstration until the wolf, apparently satisfied that it had little to fear from the hunger-stricken plodders, trotted boldly up and took a place behind them, so near that if the rifle failed at the first snap there would be opportunity for a second attempt before the beast could pass out of range.

Shad again stopped, and seizing the rifle discovered that the beast had also stopped and stood glaring at him, mocking and unafraid. As though knowing their weakness, it had lost respect for their power to injure it.

A mighty rage took possession of Shad. He fell to his knee again, aimed carefully, and again pulled the trigger. This time there was a report, and in an insane frenzy of delight he beheld the carcass of the tantalizing creature stretched upon the snow.

Mookoomahn and Manikawan had halted and stood in breathless silence watching the result of Shad's shot. Now with an exclamation of pleasure from Mookoomahn the two rushed forward, knives in hand, and in an incredibly short time the carcass of the wolf was quartered, a fire lighted and some of the meat cooking.

It was a lean, scrawny wolf, and the meat tough and stringy, but to the famished travelers it meant life, and Shad thought the half-cooked piece which Mookoomahn doled to him as his share the sweetest morsel he had ever eaten.

The wolf meat, carefully husbanded, supplied food until one morning Mookoomahn by a series of signs conveyed the information to Shad that they were within a day's march of the cache. Then they ate the last of it, that it might give them strength for the final effort.

It was evening, but not yet dark, when familiar landmarks told Shad that they were nearing the goal, and a little later they halted where the poles of Sishetakushin's lodge stood in the edge of the woods above the lake shore.

With furious haste Shad and Mookoomahn rushed to the cache, but suddenly stopped, aghast and stupefied. The cache had been rifled of its contents, and lying near it, half covered with snow, lay the frozen, emaciated body of an Indian.

CHAPTER XXII.

Manikawan's Sacrifice.

An examination of the surroundings made it plain that a band of eastern Mountaineer or Mingen Indians, in a starving condition, had visited the place; that one of them, already too far exhausted to be revived, had died; that the others, taking the food, had left the body uncared for and fled.

The disappointment was quite beyond expression. Had they been in good physical condition, a short three days' travel would now have carried them to the river tilt and safety. In their present weakened and starved condition at least twice that time would be consumed in the journey, and no food remained to help them on their way.

In deep depression Shad assisted Manikawan to stretch the deerskin covering upon the lodge, while Mookoomahn gathered wood for the fire. Clumsy with weakness, dizzy with disappointment, Shad reached to spread the skin, his snowshoes became entangled, he stumbled and fell. When he attempted to rise he discovered to his dismay that he had wrenched a knee, and when he attempted to walk he was scarcely able to hobble into the lodge.

The last bare chance of life fled, the last thread of flickering hope broken, Shad sank down, little caring for the pain, numb with a certainty of quickly impending death. He could not keep the pace of the Indians. He could not travel at all, and he could neither ask nor expect that they do otherwise than proceed as usual after a period of rest, and leave him to his fate.



They stopped aghast and stupefied.

Very early in the morning Shad heard a movement in the lodge and realized that Mookoomahn and Manikawan were engaged in low and earnest conversation. This meant, he was sure, that they were going.

He vaguely wondered whether they would take the lodge with them and leave him to die the more quickly in the intense cold of the open, or whether they would leave it behind them as a weight now too great to be hauled farther upon their toboggan.

He did not care much. He was resigned to his fate. He suffered now no pain of body, save an occasional twitch of the knee when he moved. The hunger pain had gone. It would be sweet and restful, after all, to lie there and die peacefully. It would end the struggle for existence. There would be no more weary plodding over boundless snow wastes. The end of hope was the end of trouble and pain.

With his acceptance of the inevitable, and resignation to his fate, a great lassitude fell upon him. He was overcome with a drowsiness, and as the swish, swish of retreating snowshoes fell upon his ears he dropped into a heavy sleep.

It must have been hours later when Shad opened his eyes to behold sitting opposite him, across the fire, Manikawan. She smiled when she saw that he was awake, and he thought how thin and worn she looked, a mere shadow of the Manikawan he had first known.

Then there dawned upon his slowly-waking brain a realization of the situation. She had resigned her chance of life to remain with him. He could not permit this. It was a useless waste of life. There was still hope that she might reach the tilts and safety. By remaining with him she was deliberately rejecting a possible opportunity to preserve herself. Much perturbed by this discovery, Shad sat up.

"Mookoomahn?" he asked, pointing toward the south.

"Mookoomahn," she answered, pointing in the same direction. "Manikawan," pointing at the fire, to indicate that Mookoomahn had gone but she had remained.

He protested by signs that she should follow Mookomahn. He passed around the fire to where she sat, and grasped her arm in his bony fingers, in an attempt to compel her to do so, but she stubbornly shook her head, and forced to submit, he resumed his seat. Both sorry and glad that he should not be left alone, he reached over and pressed her hand as an indication of his appreciation of her self-sacrifice.

Then she dipped from a kettle by the fire a cup of liquid, which she handed him. He sipped it, and, discovering that it was a weak broth, drank it. He looked at her inquiringly.

Turning again to the pail, she draw forth half a boiled ptarmigan, which she passed him.

"Let the friend of White Brother of the Snow eat. It is little, and it will not drive away the Spirit of Hunger, but it will help to keep away the evil Spirit of Starvation until White Brother of the Snow brings food to his friend."

He accepted it and ate, not ravenously, for his hunger now was not consuming, but with delicious relish. Manikawan did not eat, but he presumed that she had already had a like portion.

Shad was able to hobble, though with considerable pain, in and out of the lodge, and to assist in getting wood for the fire, and so far as she would permit him to do so he relieved her of the task.

The following morning and for four successive mornings the cup of broth and the portion of ptarmigan awaited him when he awoke. It was evident Manikawan had killed them with bow and arrow.

He never saw her eat. It was quite natural that she should have done so before he awoke of mornings, for he made no attempt at early rising.

But he noted with alarm that Manikawan was daily growing weaker. She staggered woefully at times when she walked, like one intoxicated. She was weaker than he, but this he ascribed to his stronger mentality.

By sheer force of will he put aside the insistent weakness, which he know would get the better of him were he to resign himself to it. By the same force of will he injected into his being a degree of physical energy. But he was a white man, she only an Indian, and this could not be expected of her.

Then there came a day when he awoke to find her gone, and no broth or ptarmigan awaiting him. Later she tottered into the lodge, and empty-handed laid her bow and arrow aside.

The next morning she was lying prone, and the fire was nearly out, for the wood was gone.

"Poor girl," he said, "she is tired and has overslept"; and stealthily, that he might not disturb her, he stole out for the needed wood.

She was awake when he returned, and she tried to rise, but fell helplessly back upon her bed of boughs.

"Manikawan is weak like a little child," she said, in a low, uncertain voice. "But White Brother of the Snow will soon come. The suns are rising and setting. He will soon come. Let the friend of White Brother of the Snow have courage."

Shad brewed her some strong tea—a little still remaining. She drank it, and the hot stimulant presently gave her renewed strength.

But Shad was not deceived. Manikawan's words had sounded to him a prophecy of the impending end. Her voice and her rapidly failing strength told him that the Spirit of Hunger—the Gaunt Gray Wolf—was conquering; that the spirit most dreaded of all the spirits, Death, stood at last at the portal of the lodge, waiting to enter.

(To be continued.)

Good Stores Are the Foundation Upon Which Thriving Towns Are Built

Trade is the magnet which draws many other advantages to the community. Given a healthy nucleus of good stores, and we are pretty sure to find good roads radiating in all directions, prosperous churches, thriving schools, satisfactory railway service and many other economic or social advantages.

Since the farmer and his family benefit from these things, it is to their advantage to take a hand in building up the home town; especially to give the local merchants just consideration when placing business. If you can conscientiously buy from the local establishment after considering price and service you will be helping to build up that nucleus of good stores which inevitably results in the other advantages mentioned above.

Not Ever.

Rastus (to Sambo in an undertone)—I ain't the man I uster wuz. Time wuz when I could whip the ol' woman in a fair, stan'-up fight.

The old woman (overhearing)—You's a black liar, Rastus Johnsing. Time wuzn't, time ain't, an' time ain't going to wuz.—Nashville Tennessean.

FAMILY CIRCLE

ALICE BARLAND
EDITORIAL CONTRIBUTOR

Experience Letters

From Our Family Circle Women

Dear Mrs. Barland: I get much help from the Circle and will give out a bit for it. To any troubled with moles eating sweet corn after planting, try soaking the seed in coal oil for about an hour before planting. This has been tried with success. MRS. E. P.

Dear Mrs. E. P.: You ask about cleaning silk. You will find a method said to be good in a May issue of the paper. Had you given name and address I would have written you.

Give address, sisters; please do this. I can not take space to explain, but it will make it very much easier for me to serve you if you will do so. I will never print addresses or names if you object.
ALICE W. BARLAND.

Dear Mrs. Barland: I will tell how I have removed the letters from flour sacks: Grease all the letters and coloring with lard and let stand over night; in the morning wash in the usual way. (This should be done before the sacks are wet.—A. W. B.) This method will also remove tar. In blacking stoves where the iron has become red with the heat apply vinegar first to the iron before blacking.
Idaho. "CONNIE."

Dear Mrs. Barland: I removed the letters from flour sacks by soaking them from one wash day to another in a very strong soap suds with a little lye in it. The sacks shouldn't be wet before soaking. Out of a 100-pound sack I made a very pretty pair of rompers for my year-old son. I finished the neck and sleeves in buttonhole stitch and for the pockets I designed a sort of a duck. I have learned many ways to economize since I came west. MRS. G. W. J.

Dear Mrs. Barland: I have found that one can make a nice, smooth mayonnaise dressing by using melted shortening or butter instead of oil. It must be allowed to cool before using, but not to get hard.

Cottage cheese makes a good substitute for American cheese in macaroni and I always add an egg also.
Idaho, MRS. THOMAS W. COLE.

Dear Mrs. Barland: I find that to get plenty of nice blooms from narcissus and tulips they should be allowed to remain in the ground about three years. I find when I dig them up and put away to dry I never get more than one bloom to five bulbs. Bulbs forced in the house need a year or two of growing outside before forcing again.

Four 100-pound flour sacks make good tablecloths with a pretty design worked in the corners. They are also useful for bed quilt linings and take dye well. I piece small scraps on to old worn blankets and lining with sacks I can save buying cotton or wool for filling.

One can use many scraps too small for common piecing by using in "crazy" patchwork. Piece the scraps on paper, then tear out the paper.

One can have a pansy bed on the same ground with bulbs, for the bulbs will force their way up through anything growing among them. MRS. PEARL GAESTEL.
Carrolls, Wash.

Dear Mrs. Barland: In answer to the request of Mrs. J. E. H., Grangeville, Idaho, will give my way of getting rid of the pests which destroy cabbage, turnips and radish plants.

I punch holes in the bottom of an old can or pan and sift wood ashes over the plants as soon as they appear above the ground. I have had good success, but have to go over the plants several times.

For the green worms that come later on cabbage plants I use a little salt in hot water and put on the plants with my sprinkling can. This will do for a small patch near the house, but would not be practical, I amagine, for a large field, as it would be hard to keep water hot.
MRS. MATTIE M'CLURE.
St. Maries, Idaho.

Home Recipes

White cake: One and one-half cups of sugar, one-half cup of butter, four egg whites, three-fourths cup of sweet milk, two and one-half cups of sifted flour, two teaspoons of baking powder, one-half teaspoon of vanilla or almond flavor, a pinch of salt.

Process of making: Cream butter and sugar thoroughly, add all but the eggs, beating well, then lastly add the eggs beaten to a stiff froth. This makes three nice layers. MRS. G. F. T.

Oatmeal cookies: One cup of shortening, two cups of flour, two cups of rolled oats, one cup of sugar, one teaspoon each of cinnamon and nutmeg, one-half teaspoon of soda, one-half cup of milk, two eggs, one cup of chopped raisins. Mix the butter and sugar ,add milk and eggs well beaten, add dry ingredients sifted first, then the raisins chopped and dredged with flour, and bake in a moderate oven 15 minutes. MRS. G. H.
Boring, Ore.

Meat loaf: One-half pound each of veal, pork and beef, ground fine, one cup of bread crumbs, one egg, one chopped onion, salt, pepper, sage to taste. Mix all together and if too thick add a little milk and if too thin add a little flour or more bread crumbs. Mold into a loaf and bake in a medium hot oven one hour.
MRS. G. H.

Dried cherries: Nine pounds of seeded cherries, one quart of sugar, one cup of water; boil until it threads, set off and let cool; pour over the cherries, put on the stove and allow to boil for a while slowly, take off the stove and allow to stand overnight, then bring to a boil again. Drain off the juice and dry in the sun. When dry roll in sugar and pack in jars. One can dry them on windowglass. These will melt in your mouth and beat candy.
MRS. F. L. THOMAS.
Illahe, Curry county, Ore.

Soap from cracklings and rinds: If rinds are salty put in warm water for 24 hours. To each five and a half pounds of rinds and cracklings use one can of lye in one quart of water and be sure to let it cool, then add it to the rinds with two and one-half or three quarts more of cold water. Let this mixture stand 10 days or three weeks will not matter, but stir occasionally. Place in a kettle and boil from one to two hours until it drops like sirup from the paddle.

Ten minutes before removing from the fire add three tablespoons of kerosene; this will make the soap lather, and four tablespoons of salt will make the residue sink to the bottom; one and one-half tablespoons of soda makes soap whiter. In 24 hours cut into desired pieces and lay out to dry, being sure to cut away the settlings from the bottom.

If the soap isn't to your satisfaction when finished add more water and reboil. MRS. C. L. S.
Oregon.

A different way to cook eggs: Break into a well-buttered pan as many eggs as required without breaking the yolks, season with pepper and salt, then sprinkle over the top a hin layer of grated cheese and bake in the oven just long enough to cook the white of the eggs, about 10 minutes in a moderate oven.
Washington. MRS. W. C. H.

Carrot salad: Clean and scrape and chop very fine six good sized carrots and add one-half pound of English walnuts, also chopped fine; add a very little salt and serve with mayonnaise dressing.
MRS. G. A. H.

Mayonnaise dressing: Break two egg yolks into a soup plate, add a pinch of salt and a dash of red pepper and beat with a rotary motion till it begins to thicken; add two tablespoons of lemon juice slowly and beat continually, then add olive oil, dropping slowly until very thick and creamy. There is little danger of curdling if the eggs are perfectly fresh and the oil is added slowly. MRS. G. A. H.
Oregon.
(Any other salad oil may be used instead of olive oil.—A. W. B.)

Just Folks

The evening shadows are quieting. The faint shimmer of the departing sun is restful. Growing old gracefully compensates for the loneliness of age.

Probably no one in the great valley of the Mississippi grew old more happily or found more satisfaction as the years increased than "Johnny Appleseed." His was the vision of the future. To his mind's eye apple trees and apple orchards would dot the fat lands of the valley. Children, as they would eat the fruit, would rise up to call him blessed, as the story of his wanderings, scattering the seeds, was told at the firesides. Johnny Appleseed lived in the future and not in the past, as much as any boy or girl of his time.

Smiling age seeks out the cooperation of youth far more than does youth seek out the cooperation of age, and it is better so.

If older folks appear young it is because their thoughts are with the young. They enter into the promises of youth far more than does youth itself. They see opportunities for others and rejoice in those opportunities even with more sincere appreciation than when similar opportunities open to themselves. They are venturous for others, as their own days of venturing are passing.

He who grows old gracefully may enjoy the ambitious of youth more than youth itself. Age realizes that failures are stepping stones in the path of ambition, while to youth itself these failures shut out the sun for a season.

Hope for the young folks may prove the most enduring and satisfactory of the hopes of age, and happy childhood is the last consolation of the eventide of life. E A S



Bark and Enamel

WHEN you cultivate a young orchard, you take particular care not to scrape the bark off the trees. For when the bark is scratched or broken insects and plant diseases can enter to destroy or decay the tender tissue beneath.

The enamel of your teeth—the outer covering—protects the soft part in much the same way as bark protects the tree. Care should be taken not to damage the enamel by "scratching" or "scouring" it with a harsh, gritty tooth paste. The U. S. Public Health Service recommends using a dentifrice which is free from harsh grit.

COLGATE'S

Cleans Teeth the Right Way

"Washes" and Polishes—
Doesn't Scratch or Scour

Colgate's contains a specially prepared fine chalk. It has no harsh grit, no strong drugs or chemicals. The refreshing, delicious flavor makes tooth brushing a pleasure after each meal.

More dentists recommend Colgate's Ribbon Dental Cream than any other dentifrice. Since 1806 Colgate has made reliable products which every farm family likes.

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Farm Household.
Dept. 258—W
199 Fulton Street,
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Please send me *samples* of the following articles. I enclose amount of stamps shown for each one checked.

[ ] Face Powder 6c
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[ ] Shaving Cream . . . 4c
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Name.....
R. D.....Town.....State.....
Dealer's Name .....
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High Points in News of the Week

As THE FARMER has stood aggressively for a reduction in war-time freight rates, it is pleased, though not satisfied, with the order of the interstate commerce commission of May 24, directing the railroads to put into application by July 1 rate reductions that would average about 10 per cent in the total railway traffic of the United States.

For instance, we said in a recent issue that "there should be an all-round reduction of freight rates and that reduction should be applied to the interior communities as well as to the Coast cities." We have held to the view that it would profit the railroads voluntarily to make such reductions and thus start industry and commerce on the high road of prosperity. The interstate commerce commission takes that view in its order, wherein it says:

"A general reduction in the rate level as substantial as the conditions of the carriers will permit will tend to stabilize the conditions under which commerce and industry are carried on, with consequent fuller assurance to the carriers of realizing a fair return."

The commission estimates that the ordered reductions, if put into effect by the railroads, will mean a yearly saving to the American people of about $400,000,000.

Our disappointment with this decision springs from the fact that the commission's order does not apply to agricultural products, live stock and fruit except in New England. The commission held that the reductions that were made in agricultural products earlier in the year are as far as the railroads should be required to go at this time.

Nevertheless, Pacific northwest farmers will benefit from the proposed reduction, for it will mean lower freight rates on everything the farmer buys, particularly on fuel, building materials, automobiles and tractors, farm machinery and other heavy commodities.

Mr. Calderhead, rate expert for the Washington state department of public works, says: "The mountain-Pacific group of states will benefit most by this reduction on a horizontal basis because the heavy percentage of the traffic of this group moves to the eastern consuming territory and the charges per 100 pounds are relatively high." That benefit, however, applies to such commodities as products of the forests, fisheries and mines, and not to farm products and live stock.

Before the commission made its order President Harding attempted, in a conference at the White House with the heads of the large railroad systems, to induce them to make a voluntary reduction. When the president failed in that effort he passed the question back to the interstate commerce commission, and that body promptly dealt with it in the sweeping order of May 24.

The railway labor board last week ordered a reduction in rail wages affecting about 400,000 employees and totaling about $48,000,000 a year. The greater portion of the reduction hits the maintenance of way men, whose pay is cut an average of about five cents an hour.

* * *

The military committee of the house of representatives has virtually rejected all offers for purchase or lease of the Muscle Shoals property of the government in Alabama, including that of Henry Ford. The rejection takes the form of a counter-proposal by the committee of terms that would be acceptable. It is apparent that the offer made by Mr. Ford came most nearly meeting the requirements of the government, since it is made the basis for the modification in the counter-proposal. Among the prominent points in the proposal made by the military committee is that one of the plants at Muscle Shoals shall be eliminated altogether from the purchase or lease; that the company entering into the contract shall have a paid-up capital of $10,000,000 or more for operation and development; that such concern shall guarantee to produce fertilizers containing at least 40,000 tons of fixed nitrogen each year; that such lease run for 100 years, as provided in the Ford proposal, and that the sale of fertilizers be made at a profit of not to exceed 8 per cent of the cost of production.

* * *

The farm block in the house of representatives has succeeded in its efforts to insure the appointment of a representative of the farming interests on the federal reserve bank board. The bill that will make this possible provides that the board shall consist of eight instead of seven members, as at the present time, and that the president shall be required to appoint as one member a person qualified to represent agriculture. A strong fight has been made on the bill on the charge that it was class legislation. Representative Burton of Ohio, a vigorous opponent of the bill, declared that its passage would lead to demands that congress pass other legislation providing for special representatives of labor, lumber, mining and, finally, even women on the board.

* * *

Two of the prominent labor leaders of Chicago, arrested some time ago on a charge of complicity in a bombing demonstration in that city, were released last week on bonds of $75,000 each.

* * *

Vigorous protest has gone to Washington, D. C., from all parts of the west against the attempted blocking of the Smith-McNary bill for the reclamation of the nation's undeveloped lands. Representative Mondell, majority leader in the house of representatives, has been charged with standing in the way of action on the bill at this session of congress. Representative Mondell has suggested that the measure be connected with the soldiers' bonus bill in such way as to constitute the land settlement feature of the bonus measure. Considerable opposition has been expressed to this plan. Strong pressure is being brought to bear to secure the enactment of the measure at this session of congress.

* * *

The United States circuit court of appeals at San Francisco last week declared the Californian alien land law to be constitutional. Under this law aliens that are not eligible to citizenship, which notably are the Japanese and Chinese, can not acquire title to land in that state.

* * *

Dwight Davis of St. Louis has been reappointed a member of the war finance corporation and his appointment confirmed by the senate.

* * *

Two British officers have started an aviation trip around the world, on which it is estimated they will fly 30,000 miles.

Farm Business and Markets Outlook

(Continued from page five.)

CHEESE MARKET ADVANCES.

Prices on the Wisconsin cheese board have advanced in the last two weeks and a small upturn in distributing markets followed.

Prices for held cheese are unchanged, with twins selling at Chicago around 24 to 25 cents and cheddars for 26 cents.

FRUITS AND VEGETABLES.

The potato market has felt the pressure of excessive supplies during the last few weeks and prices are lower than the level which prevailed during the winter. Idaho sacked Russets are quoted at $1.85 per 100 pounds and Rurals at $1.75 in the Chicago market. Receipts of new potatoes are mounting steadily, the total up to May 22 being 7536 cars, compared with 5247 cars to the same date last year. About 50 per cent of the supply at present is from the new crop.

Practically all kinds of fresh fruits and vegetables from the southern states are more abundant than last year. Strawberries, onions, new potatoes and lettuce all show increases.

Cold storage holdings of apples on May 1 comprised 259,154 barrels and 2,079,997 boxes, compared with 560,721 barrels and 4,106,863 boxes on April 1. Total holdings in terms of barrels were 958,844, compared with 1,929,675 a month before. The decrease during April was nearly 1,000,000 barrels, which is about the same as the disappearance during March.

LATEST QUOTATIONS.

The Live Stock Market.

PORTLAND, May 27.—Cattle—Choice steers, $8.75@9; good to medium steers, $8@8.50; common to fair steers, $6.50@7; common feeders, $6@6.25; fair to good feeders, $4.75@5.25; choice cows and heifers, $6.75@7.25; medium to good cows and heifers, $5.75@6.75; fair to medium cows and heifers, $5@5.75; common cows, $4@5; canners, $2.25@4; bulls, $3.75@5.25; choice dairy calves, $8.50@9; prime light calves, $8@8.50; medium light calves, $7@8; heavy calves, $4.50@7.

Hogs—Prime light, $11.25@11.75; smooth heavy, 200 to 300 lbs., $10.50@11; smooth heavy, 300 lbs. up, $10@10.50; rough heavy, $7.50@10.50; fat pigs, $11.25@11.50; feeder pigs, $11.25@11.50; stags, subject to dockage, $5@7.50.

Sheep—Best medium lambs, $9@10; medium spring lambs, $8@9; common spring lambs, $6@8; cull lambs, $5@6; light yearlings, $7@8; heavy yearlings, $5.50@6.50; ewes, $2@5.

SPOKANE, May 27.—Cattle—Prime steers, $7.50@8.75; good to choice steers, $6.50@7.50; medium to good steers, $6@7.25; fair to medium steers, $5.25@6; common to fair steers, $5@5.25; choice cows and heifers, $6@7.25; good to choice cows and heifers, $5@6; medium to good cows and heifers, $4.50@5; fair to medium cows and heifers, $3.50@4.75; canners, $2.25@3.50; bulls, $3.25@5.75; light veal calves, $8.50@11; heavy veal calves, $4.50@8.50; stockers and feeders, $4.75@5.

Hogs—Prime mixed, $11.25@11.75; medium, $10.25@11.25; heavies, $8.25@9.25; fat pigs, $10.25@11.25; stockers and feeders, $10.25@11.25.

Sheep—Prime lambs, $9@11; fair to medium, $8@9; yearlings, $8@9; wethers, $7.50@8; mutton ewes, $3@6.50; feeder lambs, $6@7.

The Grain Market.

PORTLAND, May 27.—Wheat—Hard white, $1.25; soft white, white club, hard winter, northern spring, $1.24; red Walla, $1.20.

Grain futures: Wheat—Hard white, May, June, $1.25; July, $1.14; soft white, white club, hard winter, northern spring, May, June, $1.24; July, $1.14; red Walla, May, June, $1.20; July, $1.11.

Oats—No. 2 white feed, May, June, July, $37; No. 2 gray, May, June, July, $36.

Barley—Brewing, May, $31; June, $30; standard feed, May, June, $30.

Corn—No. 2 eastern yellow shipment, May, June, July, $28.75.

PULLMAN, May 27.—Red wheat, 93c; white wheat, $1.01.

WALLA WALLA, May 27.—Bluestem, Turkey red and Bart, $1.09; Club, $1.08.

RITZVILLE, May 27.—Bart, $1.50; red, $1.37; Fife, $1.05.

DAYTON, May 27.—Club wheat, $1.04; red, $1.01.

POMEROY, May 27.—Wheat—Turkey red, $1.03; Hybrid, $1.

SEATTLE, May 27.—Wheat—Hard white, soft white, white club, soft red winter, northern spring, $1.24; hard red winter, $1.25; eastern red Walla, $1.21; Big Bend Bluestem, $1.50.

Hay and Feed Grain.

PORTLAND, May 27.—Millfeed—Price f. o. b. mill: Millrun, ton lots, $37; middlings, $51; rolled barley, $37@39; rolled oats, $42; scratch feed, $47@51 per ton.

Corn—White, $36; cracked, $38.

Hay—Buying price, f. o. b. Portland: Alfalfa, $19@20 per ton; cheat, $17; oats and vetch, $18; clover, $17; valley timothy, $20; eastern Oregon timothy, $21@22.

SPOKANE, May 27.—Wheat—Feed wheat, $46 per ton.

Oats—$40 per ton; steam rolled, $42.

Corn—$36 per ton; cracked corn, $32 ton.

Barley—$40; steam rolled, $42.

Bran and shorts—$30 per ton.

Alfalfa, $22 ton; timothy, $22 ton; mixed hay, $18 ton.

General Produce.

PORTLAND, May 27.—Butter—Cubes, extras, 35c per pound; parchment wrapped, box lots, 40c; cartons, 41c. Butterfat—Buying price: No. 1 grade, 39@41c delivered Portland.

Eggs—Buying price, 20c dozen, case count; henneries, 23c dozen; jobbing prices, case count, 21c; candled ranch, 23c; selects, 25c.

Cheese—Tillamook triplets, price to jobbers, f. o. b. Tillamook, 23c; young Americas, 24c pound.

Poultry—Hens, 19@23c; broilers, 25@27c; ducks, nominal; geese, nominal; turkeys, live, nominal; dressed, 40c.

Veal—Fancy, 13½c per pound.

Pork—Fancy, 15½c per pound.

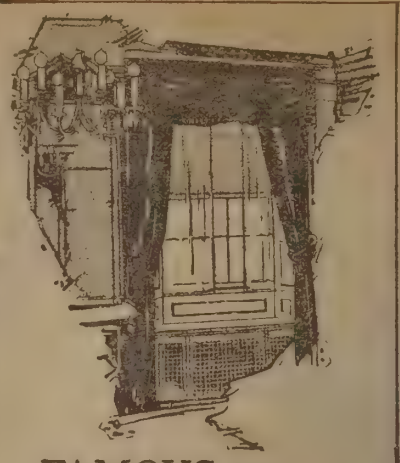
SPOKANE, May 27.—Poultry—Fat hens, 23c lb; light hens, 20c lb; roosters, 10c lb.

Fresh Ranch Eggs—$6.50 case; no storage; pullet eggs, $6.

Butterfat—36c a pound.

Range of Live Stock Prices for the Week Ending May 24

	Chicago.	Spokane.	Portland.	N Salt Lake
CATTLE.				
Choice, prime heavy steers (1100 lb. up)	8.60@ 9.25	.....	.....	.....
Good heavy steers	8.10@ 8.75	.....	.....	.....
Medium heavy steers	7.60@ 8.25	.....	.....	.....
Common heavy steers	7.10@ 7.75	.....	.....	.....
Choice, prime light steers (1100 lb. d'n)	8.75@ 9.35	.....	.....	.....
Good light steers	8.25@ 8.85	8.50@ 8.75	8.50@ 9.00	.....
Medium light steers	7.65@ 8.35	7.25@ 8.50	7.50@ 8.50	6.75@ 7.25
Common light steers	7.10@ 7.75	5.25@ 7.25	6.00@ 7.50	5.00@ 6.75
Common to choice butcher heifers	5.75@ 8.50	4.50@ 7.50	5.00@ 7.50	4.00@ 6.00
Common to choice butcher cows	4.75@ 7.25	3.50@ 6.00	4.00@ 6.50	3.50@ 5.00
Bologna and beef bulls	4.25@ 6.50	3.25@ 5.75	3.75@ 5.25	2.00@ 3.50
Canners and cutters, cows and heifers	3.65@ 4.85	2.25@ 3.50	2.25@ 4.00	1.50@ 3.25
Canner steers	4.75@ 5.75	4.00@ 5.00	3.75@ 5.25	3.50@ 4.50
Medium to choice light veals	7.50@10.25	8.50@11.00	7.00@10.00	7.00@ 8.00
Common to choice heavy veals	4.25@ 8.00	4.50@ 8.50	4.50@ 7.00	.....
Common to choice feeders (1000 lb. up)	6.00@ 7.85	.....	.....	.....
Common to choice feeders (750-1000 lb.)	6.00@ 7.85	4.75@ 5.50	4.75@ 6.25	4.50@ 5.50
Common to choice stocker steers	5.75@ 7.75	.....	.....	.....
Com. to choice stocker cows and heifers	4.15@ 6.25	.....	.....	.....
HOGS.				
Top of market	11.00	11.75	11.50	10.65
Bulk of sales	10.15@11.00	10.75@11.50	10.75@11.25	9.90@10.50
Heavy (250 lb. up)	10.35@10.90	10.00@10.50	10.00@10.75	.....
Medium (200-250 lb.)	10.50@11.00	10.50@11.25	10.50@11.00	9.75@10.50
Light (150-200 lb.)	10.60@11.00	11.25@11.75	11.25@11.50	10.25@10.65
Light lights (130-150 lb.)	10.00@10.85	11.00@11.50	11.00@11.25	10.00@10.50
Smooth packing sows (250 lb. up)	9.35@10.15	8.75@ 9.50	8.50@ 9.50	.....
Rough packing sows (200 lb. up)	9.00@ 9.75	8.50@ 8.75	7.50@ 8.50	.....
Medium to choice pigs (130 lb. down)	9.25@10.25	10.25@11.25	11.25@11.50	.....
Stock pigs	.....	10.25@11.25	11.25@11.50	8.60@ 9.35
SHEEP AND LAMBS.				
Medium to prime lambs (84 lb. down)	10.50@13.35	9.50@11.00	9.00@11.00	9.00@12.00
Culls and common lambs	7.00@10.50	7.00@ 9.50	6.00@ 9.25	6.00@ 9.00
Medium to prime yearling wethers	8.25@11.00	9.00@10.00	8.50@10.00	7.50@ 8.50
Medium to prime wethers	6.50@ 8.75	.....	7.50@ 9.00	6.00@ 7.00
Medium to choice ewes	4.00@ 7.35	4.50@ 7.50	4.00@ 6.00	4.00@ 4.50
Culls and common ewes	2.00@ 4.50	2.00@ 4.50	2.50@ 4.00	2.00@ 4.00
Spring lambs	13.00@15.60	10.00@13.00	9.00@13.00	.....



FAMOUS WINDOWS

—THE BLAINE MANSION

THE home of Maine's greatest son and beloved statesman, James G. Blaine, is now the Governor's Mansion, at Augusta, Me.

And such a home! How classic an example it is of the true Colonial, how fascinating its rich simplicity!

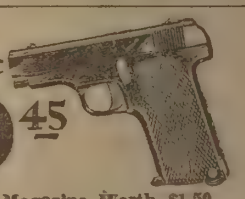
Only highest quality appointments could keep company with this colonial treasure—which accounts for the fact that Hartshorn Shade Rollers and Shade Fabrics are in use throughout; their dignified appearance and their absolute reliability made them *necessary*.

In hotel and club, college and home, the name "Hartshorn" associated with Shades and Shade Rollers is a guarantee of the elimination of all shade troubles.

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FREE—Extra Magazine Worth $1.50

No. E333. Most remarkable pistol value ever offered. Brand new; handsome blue steel, 32 cal. 10-shot automatic, $22.30 value. $10.45

No. E222. 25 CAL. AUTOMATIC PISTOL. Handsome blue steel. Fits pocket, 7 shot, $15 value $7.95
Extra magazine for above, each 80c

No. E555. 45 CAL. REVOLVER. Breakopen, automatic ejector, double action, range type. Nickel finish, $20 value $9.75

All guns use standard ammunition

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says Thomas Carter, Bridgeport, Neb., about



F. WYATT MFG. CO. 942 N. 5th St. Salina, Kan.

In writing advertisers, be sure to say you saw their advertisement in The Washington Farmer.

Bits of Fun for Everyone

Fisherman's Luck.

The morning faded into afternoon, which in turn was shadowed by the coming of the night. It was cold and gray. But the angler moved not, save to readjust his bait. A friend chanced to stroll along the river bank.

"Hallo, George!" he cried. "How many have you got?"

George looked up rather vacantly and replied: "When I get the one I'm after and four more I shall have five."—Pittsburg Chronicle-Telegraph.

Room for One More.

Harold ran back from the lion in the museum. "Don't be afraid, dear," grandmother said; "that lion is stuffed."

"Yes," said Harold, "but mebbe he isn't stuffed so full that he couldn't find room for a little boy like me."—Our Dumb Animals.

Checking Up.

One morning a negro sauntered into the office of a white friend. "Good mawnin', Mr. Withrow. Kin I use yo' phone a minute?" he asked.

"Why, certainly, Sam."

Sam called his number, and after a few minutes' wait said, "Is this Mrs. Whiteside? Well, I seen in de papeh where you-all wanted a good culled man. Is you still wantin' one? Then the man youse got is puffectly satisfactory, and you doesn't connemplate makin' no change soon? All right, ma'am. Goodby."

Mr. Withrow called to Sam as he left the phone, "Now, that's too bad, Sam, that the place is filled."

"Oh, dat's all right, Mr. Withrow. Ise de nigger what's got de job, but I'se just a wantin' to check up."—Judge.

Correct.

Teacher—Willie, can you tell me what steam is?"

Willie—It's water gone crazy with the heat.—Kind Words.

Long-Distance Shooting.

The new night watchman at the observatory was watching some one using the big telescope. Just then a star fell. "Begorra," he said to himself, "that felly sure is a crack shot."—Toronto Goblin.

At Reduced Rates.

Sploshkins wanted to sell his horse, so he prevailed on the local dealer to come and see the animal.

"That's a good horse, Mr. Taylor," Sploshkins said to the dealer. "He cost me 500 pounds, but you shall have him for 50 pounds."

The dealer gasped.

"That's rather a big reduction, Mr. Sploshkins, isn't it?" he asked.

"Well," the vender admitted, "the fact is he ran away one day and killed my poor wife, and now I've got no further use for him."—The Winning Post Winter Annual.

Careless of Her.

Magistrate—So you broke an umbrella over your husband's head. What have you to say?

Defendant—It was a haccident, sir.

Magistrate—How could it be an accident?

Defendant—Well, I 'ad no intention of breaking the umbrella.—The Passing Show.

A Word for Father.

"Dear God," prayed golden-haired little Willie, "please watch over my mamma."

And then he added as an afterthought.

"And I dunno as it would do any harm to keep an eye on dad, too."—The Leatherneck (Washington).

Going Up.

Son—Papa, give me a nickel.

Papa—Why, son, you're too big to be begging for nickels.

Son—I guess you're right, papa, make it a dime.—The Leatherneck (Washington).

Few and Small.

"I understand your cook has left."

"Yes," answered the housewife, who was taking account of broken china, "but not much."—Washington Star.

Latest High Class Patterns for the Home

Please order the patterns you desire at least two or three weeks before you wish to use them. Desiring to obtain the latest high-class patterns for its readers, THE FARMER has made arrangements to have them sent direct from the east, and under present mailing conditions it takes about that time for them to reach you.



3989: Misses' dress—Cut in 3 sizes: 16, 18 and 20 years. A 16-year size requires 5 yards of 36-inch material. The width of the skirt at the foot is about 2 yards. Price 10 cents.

3987: Ladies' dress—Cut in 7 sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. A 38-inch size requires 6 5-8 yards of 32-inch material. The width at the foot is about 2 7-8 yards. Price 10 cents.

3991: Ladies' apron—Cut in 4 sizes: Small, 34-36; medium, 38-40; large, 42-44; extra large, 46-48 inches bust measure. A medium size requires 2 5-8 yards of 36-inch material. Price 10 cents.

2418: Play or work uniform for boys—Cut in 5 sizes: 4, 6, 8, 10 and 12 years. Size 10 will require 4 yards of 36-inch material. Price 10 cents.

3998: Girls' dress—Cut in 4 sizes: 4, 6, 8 and 10 years. A 6-year size requires 2 1-4 yards of 32-inch material. Price 10 cents.

3675: Child's play suit—Cut in 4 sizes: 2, 3, 4 and 5 years. A 4-year size will require 1 7-8 yards for the bloomers and 1 1-4 yard for the waist, of 27-inch material. Price 10 cents.

3996: Girls' dress—Cut in 4 sizes: 6, 8, 10 and 12 years. A 10-year size requires 3 5-8 yards of 32-inch material. Price 10 cents.

3559: Misses' dress—Cut in 3 sizes: 16, 18 and 20 years. An 18-year size will require 4 3-8 yards of 44-inch material. The width of the skirt at the lower edge is 2 yards. Price 10 cents.

3766: Ladies' house dress—Cut in 7 sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. A 38-inch size will require 6 yards of 36-inch material. The width of the skirt at the foot is about 2 1-2 yards. Price 10 cents.

4005: Ladies' slip—Cut in 4 sizes: Small, 34-36; medium, 38-40; large, 42-44; extra large, 46-48 inches bust measure. A medium size requires 5 1-2 yards of 27-inch material. For flouncing as illustrated 2 3-8 yards 15 inches wide will be required. Price 10 cents.

3525: Ladies' envelope chemise—Cut in 4 sizes: Small, 32-34; medium, 36-38; large, 40-42, and extra large, 44-46 inches bust measure. A medium size will require 2 7-8 yards of 36-inch material. Price 10 cents.

3503: Boy's suit—Cut in 5 sizes: 3, 4, 5, 6 and 7 years. A 4-year size will require 2 yards of 44-inch material. Price 10 cents.

Catalogue Notice.

Send 12 cents in silver or stamps for our up-to-date spring and summer 1922 catalogue, showing color plates and containing 500 designs of ladies', misses' and children's patterns, a concise and comprehensive article on dressmaking; also some points for the needle (illustrating 30 of the various simple stitches), all valuable hints to the home dressmaker.

Please fill in this order and mail with remittance to:
PATTERN DEPT., PACIFIC NORTHWEST FARM TRIO, Spokane, Wash.

Enclosed find..... cents for which send me the following:

Pattern No..... Size ..... Pattern No. ..... Size.....

Pattern No..... Size ..... Pattern No. ..... Size.....

Name .....

Postoffice ..... State.....

R. F. D..... Box No..... St. No.....

Be sure to give the pattern number and the correct size.

Your Health

By Royal S. Copeland, M. D., F. A. C. S.

Toothache is just as bad in the summer as it is in cold weather. The food you eat in summer is more likely to affect your teeth than the food you eat in winter, and you are more inclined to neglect your mouth.



Dr. Copeland.

Prepare yourself for the summer season by getting your teeth in fine condition.

If the teeth of the school child are properly cared for, he is likely to have pretty good teeth the rest of his life. But no matter what your age may be, don't neglect your teeth.

You need regular examinations of your teeth and gums. Your dentist will make sure there are no cavities. He will see if there are deposits on your teeth. He will look at your gums to make certain they are healthy.

Never take for granted that your teeth are sound. Almost before you are aware of trouble there may be a great, big cavity. It may be hidden by the adjoining tooth, or it may undermine the gum. The dentist will use good light and his little mirror to get a perfect view of every surface of every tooth.

The minerals we take into our mouths, acted upon by the saliva, become deposited upon the teeth, especially upon the sides and backs of the teeth. This accumulation can not be brushed off or removed by the toothbrush alone. This must be done by the use of the clever little instruments of the dental office.

Smokers are apt to have the insoluble carbon of the smoke deposit on the teeth, producing staining. There is more or less discoloration of the teeth of smokers even though there may not be gross deposits upon them.

There is no greater comfort and satisfaction than in the feeling of smoothness and cleanliness of the teeth after a thorough cleansing in the dental office.

The removal of the tartar permits the gums to snuggle up against the tooth and to guard its base.

Go to your dentist and have him clean your teeth, fill any cavities he may find, and in this way insure your safety from disease of the teeth and gums during the long summer.

If you can not afford to pay a private dentist, seek out a dental clinic where such service is given free or for a nominal charge. You can not afford to neglect your teeth. Your health and your length of life depend on good teeth.

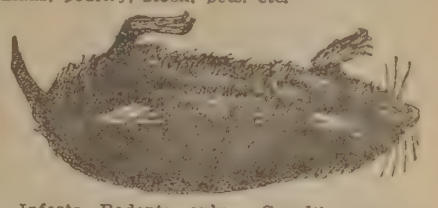
I always feel sorry for middle-aged persons who are suffering from toothache, nervousness, headache, rheumatism and a lot of other disabilities which may be traced to dental defects. These can be avoided if regular attention is given the mouth, especially in early life. So you'd better make an appointment soon for a thorough overhauling of your teeth.

GENERAL ADVERTISING.

Wipe Out Every Rat and Gopher

Amazing New Discovery Quickly Kills Them All—Not a Poison.

Rats, Mice, Gophers—in fact all Rodents can now be wiped out easily and quickly. Imperial Virus will do it. This new discovery is a fluid, true Virus. Entirely harmless to humans, poultry, stock, pets, etc.



Infects Rodents only. Greedily eaten on bait. Sets up burning fever. The pests communicate it to others, and all die outside, hunting air and water. Imperial Virus is put up in sealed bottles, thus insuring full strength and potency. Only safe, sanitary method to overcome these pests. Protect your Poultry, especially Baby Chicks and Egg Hatches.

YOU CAN GET YOURS FREE

Here's how! Send $1.00 today (currency, M. O., Checks, etc.) and we will give you by return mail, postpaid, two regular, full sized (double strength) $1.00 bottles of Imperial Virus. Use one to rid your place of these pests, and sell the other to a neighbor, thus getting yours free. Special inducements to represent us.

If more convenient, send no money, just your name and address to Imperial Laboratories, Dept. 498, 2110 Grand Ave., Kansas City, Mo. Pay postman $1.00 and few cents postage when two bottles arrive. Guaranteed to do the work to your entire satisfaction within 30 days or your $1.00 will be cheerfully refunded.—Adv.

DURO

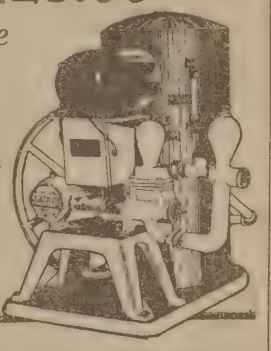
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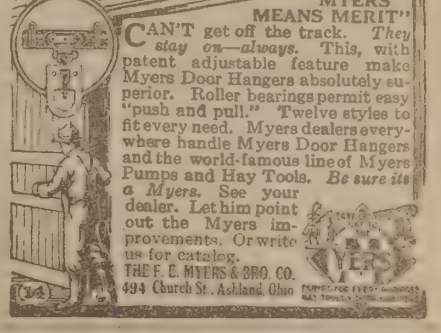
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Birthday Greetings

THURSDAY, June 1—Edward Franks, 11 years old; Ellen Olson, 11; Helen Stonerook, 10; Karl Thomson, 8.

FRIDAY, June 2—Thelma Nelson, 10 years old.

SATURDAY, June 3—Edna Kimble, 11 years old; La Verne Risting, 11.

SUNDAY, June 4—Marie E. Adams; Florence Ulrich, 10 years old.

MONDAY, June 5—Edith Baker, 7 years old.

TUESDAY, June 6—Lola Eaton, 9 years old; Rosalie Guler, 9; Minnie McHargue, 11; Ruth Nance, 11; Levi Naranen, 10; Edna Peper, 11; Dale Robbins, 7; Silvia Wilson, 10.

WEDNESDAY, June 7—Beulah Collette, 10 years old; Ruth Fox, 11.

BEDTIME STORIES

By THORNTON W. BURGESS.

SPOTTY COMES TO THE RESCUE.

Greed's a dreadful thing to see,
As everybody will agree.

At first Little Joe Otter, sitting on the bank of the Smiling Pool, laughed himself almost sick as he watched Grandfather Frog trying to swallow a fish almost as big as himself when his white and yellow waistcoat was already stuffed so full of foolish green flies that there wasn't room for anything more. Such greed would have been disgusting if it had not been so very, very funny. At least it was funny at first.

You see, the fish had gone down Grandfather Frog's big throat head first until it reached his stomach, but then it couldn't go a bit further because his stomach was already full. Right there the fish had stuck, the tail still sticking out of Grandfather Frog's big mouth. Grandfather Frog hitched this way and that way on his big green lily pad, trying his best to swallow. Twice he tumbled off with a plash into the Smiling Pool. Each time he scrambled back again and rolled his great goggly eyes in silent appeal to Little Joe Otter to come to his aid.



Spotty the Turtle settled back and pulled and Grandfather Frog, as fast as he could, pulled, too.

But Little Joe was laughing so that he had to hold his sides, and he didn't understand that Grandfather Frog really was in trouble. Billy Mink and Jerry Muskrat came along, and as soon as they saw Grandfather Frog they began to laugh. They just laughed and laughed and laughed until the tears came. They rolled over and over on the bank and kicked their heels from sheer enjoyment. It was the funniest thing they had seen for a lang, long time.

"Did you ever see such greed?"

"Why don't you pull it out and start over again?" shouted Little Joe Otter.

Now this is just what Grandfather Frog was trying to do. At least, he was trying to pull the fish out. He hadn't the least desire in the world to try swallowing it again. In fact, he felt just then as if he never, never wanted to see another fish so long as he lived. But Grandfather Frog's hands are not made for grasping slippery things, and the tail of a fish is very slippery, indeed. He tried first with one hand, then with the other, and at last with both. It was of no use at all. He just couldn't budge that fish. He couldn't cought it up because it had gone too far down for that. The more he clawed at that waving tail with his hands the funnier he looked and the harder Little Joe Otter and Billy Mink and Jerry Muskrat laughed. They made such a noise that Spotty the Turtle, who had been taking a sun bath on the end of an old log, slipped into the water and started to see what it was all about.

"What's the joke?" he asked.

Little Joe Otter simply pointed at Grandfather Frog. Little Joe had laughed so much that he couldn't even speak. Spotty looked over to the big green lily pad and started to laugh, too. Then he saw great tears rolling down from Grandfather Frog's eyes and heard little choky sounds. He stopped laughing and started for Grandfather Frog as fast as he could swim. He climbed right up on the big green lily pad and, reaching out, grabbed the end of the fish tail in his beaklike mouth. Then Spotty the Turtle settled back and pulled and Grandfather Frog, as fast as he could, pulled. Splash! Grandfather Frog had fallen backward into the Smiling Pool on one side of the big green lily pad. Splash! Spotty the Turtle had fallen backward into the Smiling Pool on the opposite side of the green lily pad. And the fish which had caused all the trouble lay floating on the water.

"Thank you! Thank you!" gasped Grandfather Frog, as he feebly crawled back on the lily pad. "A minute more and I would have choked to death."

"Don't mention it," replied Spotty the Turtle. "And—don't be so greedy again."

"I never, never will," promised Grandfather Frog.

(Copyright by J. G. Lloyd.)

The Name "Grange"

(Continued from page twelve.)

ing for something which they don't stand for, and Mr. Cottrell and Mr. Bouck, if they don't stand for the purposes and principles as announced by the Grange of the Patrons of Husbandry, they have a right to go by themselves and organize, but they can't take with them the flag and the only flag that marks the patrons of husbandry. And so there is the injury.

As I stated, gentlemen, I dislike very much to enjoin any body of men. Great harm has not yet been done and can't be done. The patrons of husbandry, the grange of patrons of husbandry have and it is undisputed here, ten thousand members, over three hundred local lodges. The new organization have some thirty local lodges and not to exceed three thousand members. I don't believe in law that they have a right to the use of the word "Grange." It is not a question of similarity of names. It is not a question as laid town in the authorities cited by Mr. Coudon whether the names are so similar that the public can be deceived. In this case it is a question whether they have a right to use the name and the only name that the patrons of husbandry have. I don't believe they have. I think they will have to be enjoined. If they have, then the Farmers' Cooperative Society of Illinois and the Farmers' Union of Kansas and the Farmers' Alliance of North Dakota can call themselves a Grange, and I don't believe they can do it.

You may prepare your orders and I will allow you an exception, gentlemen.

Club Champions of Chemung

Ready Replies for Secretary Wallace at Washington

Boys and girls' club work has made remarkable progress in the Pacific northwest. There is so much interest taken in this great movement among our people that they like to read not only what is done in their own state, but in other parts of the country as well.

The "club champions of Chemung" visited Washington, D. C., recently as a reward for their excellence in boys and girls' club work. This capable group of boys and girls from Chemung, a New York county, of which Elmira is the center, was composed of Fred and Ralph Bush, potato growers; Margaret Mills, adept at canning; Leo Looman, a coming poultryman; Alton Edsall, owner of a small but growing dairy herd; Gretchen Howland, who made $90.10 worth of raw material into $185.85 worth of cooked food, and Carol Kendal, who was awarded this trip for her ability as a leader. She is 16 years old, but for four years has been elected by the other boys and girls of her community to be the assistant to the county club agent in supervising club work in her county. By giving demonstrations she has also taught others how to cook and can.

This is the 17th trip of club champions from Chemung county to Washington, yet not a single girl or boy in the party was ever here before. In all, 124 have made the pilgrimage. The one person who has made all the 17 trips is Rufus Stanley, county club agent, employed by the United States department of agriculture in cooperation with the New York State College of Agriculture and Chemung county. The group he brings each year is made up of the boys and girls who have done four years' work in the club and are the best in their respective lines of work, including poultry, potatoes, dairying, cooking and canning.

On April 17 these seven boys and girls filed into the office of the secretary of agriculture and told the story of their club work to Secretary Wallace.

"What did you do, Leo?" asked Mr. Wallace.

"I raised some chickens."

"Tell me something about them."

"I have raised them for four years. The first year I raised 15 birds. The best pair I took to the fair. They won me first prize. The next year I raised 30. That year I won prizes at the fair, which gave me a trip to Cornell university. I worked a little harder the next year. I raised 70 chickens. I sold all the old ones. That year my birds won first, but a girl beat me a few dollars on production. Last year a poultry specialist came and taught some of us boys how to tell a good hen from a bad one. I learned quite a few things about poultry that I didn't know. In the fall I exhibited my best fowls and won this trip to Washington."

"And now what do you intend to do?" asked the secretary.

"I am going to have 100 chickens next year." I am going into the chickens business."

"How much do you think you have made?"

"I figure that after deducting expenses I have made $740 in all."

"What Leo did not tell," added the county club agent, "was that he has developed a fine egg-laying strain of White Leghorns, with a record of 250 eggs a hen a year."

Fred and Ralph Bush, two bashful boys, had profited by club training, one of the aims of which is to give boys and girls confidence, for they told their story very well.

"Who raised the potatoes?" asked Mr. Wallace.

"We did," said Fred and Ralph.

"Tell me about it."

"We joined the club the first year we could," said Fred.

"When was that?"

"About five years ago. Ralph was about 7 then."

"How many bushels have you raised?"

"The first year we raised 30 bushels. We had half an acre. The next year we did better, we raised 50. The next two years we got 160 bushels each year."

"How much ground did you have then?"

"An acre. We are going to plant two next year."

"And what did you do?" asked the secretary addressing addressing Margaret Mills.

"Last year I made 40 cakes, 9 puddings, 60 loaves of bread, canned 350 jars of fruit and vegetables and cooked 30 meals."

"And who raised the calves," inquired Mr. Wallace.

"I did," answered Alton Edsall.

"Tell me about them," requested the secretary.

"Father gave me my first calf. That is how I got my start. That calf was not good enough, so I sold it. I bought a better one. Now I have two cows and a calf, worth $700."

"What breed are they?"

"Guernseys."

"Have you ever had the cows tested for milk production?"

"I have not."

"Why don't you do that next?"

"I think I will."

The secretary then commended them for their work, and the boys and girls left to see the sights of Washington.

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News for Breeders

BREWER HERD CUT DOWN.



The E. L. Brewer herd of registered Jerseys at Satsop, Grays Harbor county, Wash., which was once a large commercial herd, has been cut down to 11 head. The two boys at the Brewer farm are looking after the herd and expect to show some of their best animals at the fair this fall.

Olympia Fen's Gamma is one of the cows retained in the herd. She is now a 3-year-old and is a daughter of Olympia Fern, who held the 4-year-old championship for a year with a production of 937 pounds of fat. She made 441 pounds as a 2-year-old.

"We have only 40 acres on the present farm," said Mr. Brewer, "and it is large enough for our purpose. We have had the best results from vetch and white winter oats for a hay, or it can be used as a silage crop. It will make part of its growth during the winter. It is also a good crop to put fertility back into the soil and is not hard to get started. Peas and oats make a good grade of hay if they can be properly cured, but it is hard to get both grains to ripen at the same time. Wheat, rye and vetch will also make a good combination for a hay crop and it is better for yields than any of the others."

Mr. Brewer prefers mangels for feeding milch cows, but says it is difficult to get them started because of the root maggot. It is for this reason that he prefers to raise silage crops for his winter supply of succulent feed.

A pasture scene on the Brewer farm.

GUERNSEY COMBINATION SALE.

The return home of President H. E. Angel and Secretary R. N. West of the Yakima Valley (Wash.) Guernsey Breeders' association from a trip to Minnesota and Wisconsin in search of Guernseys for Yakima county calf club members was followed by the announcement that the association will hold a combination sale during the week of the Washington state fair at Yakima this fall. While in the east they obtained assurance from Wisconsin breeders that they will withhold from local sales this summer and ship to Washington this fall enough stock so that with one or two animals each from a number of Yakima herds, the sale will be worth while.

Two years ago the association sponsored a sale of about 40 head assembled from several eastern states by J. N. Price, then county agent. Since then the demand for Guernseys has been growing rapidly and 28 head brought out from Wisconsin this spring by A. L. Wallace and E. T. Hearron were taken at good prices, 20 of them remaining in the valley. Messrs. Angel and West obtained 28 young animals for club work, and the very fact that these are distributed throughout the valley is expected to stimulate the demand still more.

The latter group consisted of 12 junior yearlings, 11 senior yearlings, four junior 2-year-olds and one 3-year-old. Most of them are bred and several are milking, one of them having produced 200 pounds of butterfat in four months.

WAIKIKI COWS PRODUCE HEAVILY.

During the month of April 15 cows on Waikiki Jersey farm, near Spokane, produced 50 pounds of butterfat or more, the highest production of the month being 82.57 pounds of fat by Poet's Matilda. G. T. Duchess, a gold medal cow in the herd, finished her year's test with 17,131 pounds of milk and 888.9 pounds of fat. Her highest month yielded 1971.6 pounds of milk and 94.05 pounds of fat. She will freshen again in season to qualify for another gold medal. In two years she has produced 30,519 pounds of milk and 653.4 pounds of butterfat. A full sister, G. T. Morocco Duchess, in January finished a year's record of 16,125 pounds of milk and 813 pounds of butterfat, making her champion of her class in Washington. She held a like honor last year.

DAUGHTERS PROVE WORTHY.

The real test of a bull is his daughters, asserts J. H. Quick of Castle Rock, Wash., and it will tell even more quickly on grades than on purebreds, because he has not such a long line of breeding to overcome and his potency is more powerful. Mr. Quick has a most satisfactory lot of daughters from his herd sire, St. Mawes Rosaire Boy. This bull was purchased from Ed Cary and is by Poppy's St. Mawes and out of Naparia Rosaire, a granddaughter of Cowslip's Ashley and Rosaire's Olga Lad. One daughter produced 415 pounds of fat with first calf. Two others, with ordinary herd care and only two milkings a day, produced 406.67 and 401.1 pounds of fat, respectively. Both are class AA records.

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W--O--N

At the State fair, Salem, Ore., Sept. 27, 1921: 1, 2, 3, aged cow; 2, 3, three-year-old. 1st, senior yearling; 2d, senior heifer calf. 1st, senior bull calf. 2d, junior bull calf. 1st, dairy herd. 1st and 2d, get of sire. 1st, produce of cow. We entered 12 head. Grand champion cow. 129 Jerseys competing. Nuf said.

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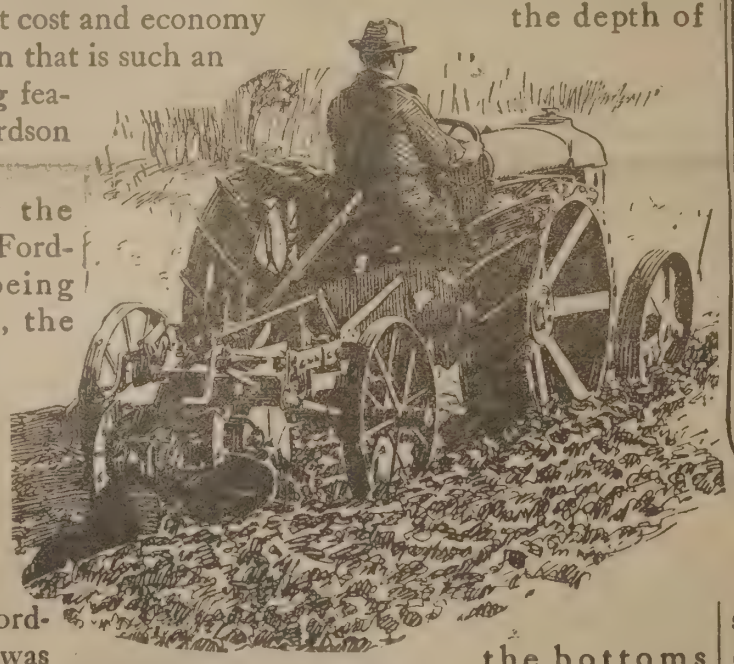
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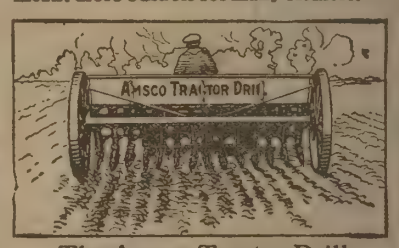
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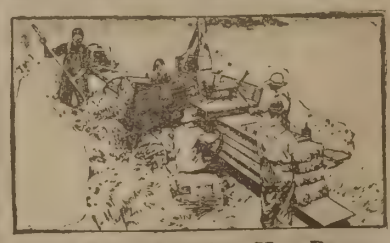
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THE WASHINGTON FARMER
ESTABLISHED 1894
SPOKANE. SEATTLE.

Organization Pays in Whatcom County

By RALPH ERSKINE

"Milk, milk, milk, by the truck load, and when they unload, they go back and get more milk."

So spoke an astonished bystander, as he watched 15 heavily loaded trucks unload their cargo before the Whatcom County Dairy association plant at Lynden. This, he learned, is little more than a third of the daily milk routes which bring in a total of 140,000 pounds, which is manufactured into butter, cheese, condensed milk and powdered skimmed milk.

The outlook for the future is very encouraging since many of the smaller dairymen are watching for a chance to buy an additional milch cow and even some of the larger producers are picking up new animals when the opportunity affords. There are at present 11,500 cows owned by 1665 members who ship either to the Lynden or the Bellingham plant. In the last 10 months the association has made net sales amounting to $1,060,000.



Milk trucks waiting to be unloaded at the Lynden plant

A daily average of 7000 pounds of butter and approximately 2500 pounds of cheese are produced, which necessitates the manufacture of over three tons of skimmed milk powder. The most encouraging feature is that there is a greater demand for all three of the above products than the plants can turn out. There is a total investment of over $400,000 in the two plants, which have recently been remodeled at a cost of $20,000, which was necessary to take care of the increase in business. The two plants have a monthly expenditure of $15,000 for labor and supplies.

The Bellingham plant is more for the purpose of supplying the city milk trade than for the manufacture of by-products, as is the case with the Lynden plant. Butter, ice cream and cheese are manufactured at Bellingham and the cheese supplies 95 per cent of the local cheese consumption.

This organization is a branch of the United Dairy Association of Washington, which owns similar plants and condensaries in other counties of western Washington, all of which have achieved similar results. C. C. Davis, manager of the Bellingham and Lynden plants, shows where the association has put at least $250,000 more into the pockets of the producers in a year's time than under previous conditions through better prices for milk than were formerly obtainable.

As is the case with all holdings in the United Dairy association, the capital stock is owned entirely by the dairymen, which means that every member is a stockholder and is vitally interested in its success. Each member on joining the association pays a fee of $5 per cow in his herd. There has been much good will and satisfaction among the members because each one realizes that the association is being operated by a manager who was elected partly by his own vote. The operating expense of the plant is the only item that comes out of the sales of butter and by-products of the plant and the returns have been very satisfactory to all members.

While the main product of the Bellingham and Lynden plants is butter, a large amount of the milk is made into cheese, which is becoming well known to the people of western Washington because of its excellent quality and the realization that they are getting a product that is made at home. The manufacture of powdered milk is a new industry that has sprung up within the last few years and is a means of disposing of the skimmed milk that accumulates from the manufacture of butter. It is used largely for the manufacture of ice cream and in bakeries. In California, where the housewives find it hard to keep milk because of hot weather, they are making use of the powdered milk, which is put up in one-pound cans especially for use in the home.

"We find that there is a larger consumption of all dairy products within the last few months," remarked Mr. Davis. "The campaigns which have shown the value of milk and its products have not been in vain and we should, therefore, continue the work by every possible means."

For a Comprehensive Report of State Grange Convention See Next Week's Issue

Chehalis Holstein Sale

Notwithstanding the fact that it came toward the end of a series of sales of about the same class in Washington, and notwithstanding also the stringency in money matters, the first annual sale of purebred Holsteins held at the Southwest Washington fairgrounds May 24 under the auspices of the Lewis County Holstein-Friesian club averaged close to $180 for the females and left the breeders who consigned to it feeling that they had been justified in the somewhat hazardous undertaking of putting selections from their own herds under the hammer. Of the 22 buyers, all are Washington breeders. Twenty out of the 51 head sold went out of the county, a Clarke county buyer taking 12 of them, two Jefferson county breeders taking six more, and a father and son from Thurston taking two. Several of the purchasers, including the one from Clarke county, were founding new herds; one Lewis county buyer added an entire family to his herd, and there were two purchases for club purposes, so that even though the hoped-for average was not realized, some valuable distribution was effected. A significant and unexpected feature of the settlement was that 75 per cent of them were for cash.

The Nathan Hamilton dispersal of 19 females and a young bull was the backbone of the sale. M. P. Frame of Ceres, the second heaviest buyer, obtained five of these, including a heifer that topped the sale at $315, and the group cost $1250. Thomas Autzen, formerly of Portland, who has just purchased a large farm on the lower Columbia near Ridgefield, paid $1915 for 12 head and was heaviest buyer. Most of them are mature cows in milk, and they included several at bargain prices.

A feature of the sale was the conversion of a calf club heifer into $230 cash by David Nisbet of Chehalis, a son of Tom Nisbet and formerly a Jefferson County Calf club member. County Club Agent W. A. Dunham of Thurston county helped Heinie Gehrke of the Rainier Calf club select a well-bred heifer, for which he paid $135, and another youthful purchaser was Reuben Eldridge, a Chimacum boy, who planked down $80 in cash for a Hendrichsen heifer. G. W. Literal of route 3, Chehalis, a comparatively new breeder in the county, obtained two nice yearling heifers to add to his four or five head of purebreds, and a January son of The King of Chimacum for a future herd sire. D. L. Crane of Castle Rock, who has handled grades all his life, took the leap into the purebred business by paying $415 for two Nisbet heifers. Albert Ammeter and Tom Yarr of Chimacum were the only other outside buyers, the Lewis county list including, in addition to those mentioned, Jacob Malnerich and C. A. Ives of Centralia, Harvey Shoultes, E. A. Donaldson and L. L. Goff of Adna, Phillip Aust of Klaber, A. M. Moses of route 3, Henry Huber of route 2, Tom Nisbet and W. J. Dempsey, all of Chehalis, W. I. Rector of Bucoda and Harry Hamilton and W. M. Elston of Forest.

The consignors included Nathan Hamilton, J. C. Chamberlain, E. A. Donaldson, Mrs. E. Dunston, A. O. Hamilton, Harry Hamilton, W. A. Hamilton, Chris Hendrichsen, A. C. Mills, A. M. Moses, W. A. Root, Tom Nisbet and Glen O. Roundtree. The total received for 51 head was $8245, 43 females averaging $178. Nathan Hamilton, E. A. Donaldson and H. R. Shoultes comprised the sale committee and George A. Gue and C. E. Payne were auctioneers.

The sale list of females follows:

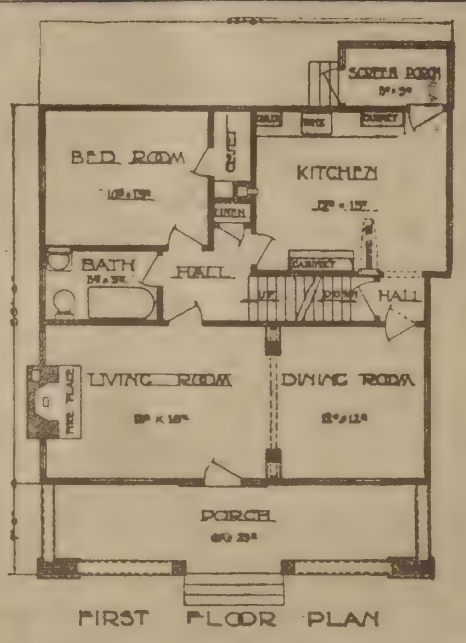
Consigned by A. C. Mills, Curtis:
Otsego Highlands Butterfly, b. Feb. 21, 1910, C. A. Ives, Centralia $170
Unnamed, b. Nov. 8, 1921, H. B. Shoultes, Adna 280
Riverview Pauline Queen Bracelet, b. Sept. 5, 1916, Thomas Autzen, Portland 165
Riverview Beauty Jewel, b. October 14, 1917, L. L. Goff, Adna 180
Chimacum Lutscke Chloe, b. Feb. 7, 1920, Albert Gehrke, Rainier 150
Consigned by Harry Hamilton, Forest:
Newaukum King Deer Banks, b. January 30, 1921, Jacob Malnerich, Centralia 110
Consigned by W. A. Root, Chehalis:
Netherland Glencoe Jewel, b. Oct. 21, 1917, C. A. Ives, Centralia 170
Consigned by Chris Hendrichsen, Forest:
Lady Olga Fayne Korndyke, b. April 1, 1918, Harry Hamilton, Forest 175
Beauty Newaukum Korndyke, b. April 9, 1920, Thomas Autzen, Portland 185
Unnamed, b. May 5, 1921, G. W. Literal, Chehalis 145
Unnamed, b. Nov. 14, 1921, Reuben Eldridge, Chehalis 80
Unnamed, b. June 23, 1921, G. W. Literal.. 105
Consigned by A. O. Hamilton, Chehalis:
Unnamed, b. Sept. 28, 1921, W. I. Rector, Bucoda 150
Consigned by E. A. Donaldson, Chehalis:
Margie Segis De Kol, b. Dec. 28, 1917, Thomas Autzen 235
Consigned by James C. Chamberlain, Ceres:
Bessie Pearl of Cerealia, b. Feb. 10, 1919, Tom Nisbet, Chehalis 235
Consigned by W. A. Hamilton, Chehalis:
Newaukum Inka Palmyra, Thomas Autzen 185
Netherland Pauline Jewel 4th, b. May 22, 1915, Thomas Autzen 180
Newaukum Burke Jewel, Thomas Autzen. 110
Consigned by Mrs. E. Dunston, Chehalis:
Aaggie Hartog De Kol Cornucopia, b. Oct. 27, 1919, C. A. Ives 200
Otie Aaggie Cornucopia, b. May 18, 1914, Thomas Autzen 170
Otie Segis Aaggie, Heinie Gehrke, Rainier 135
Consigned by Nathan Hamilton, Chehalis:
Ann Lunde 4th, b. Oct. 30, 1913, A. M. Moses, Chehalis 250
Newaukum Belle Cornucopia, b. March 22,

(Continued on page nineteen.)

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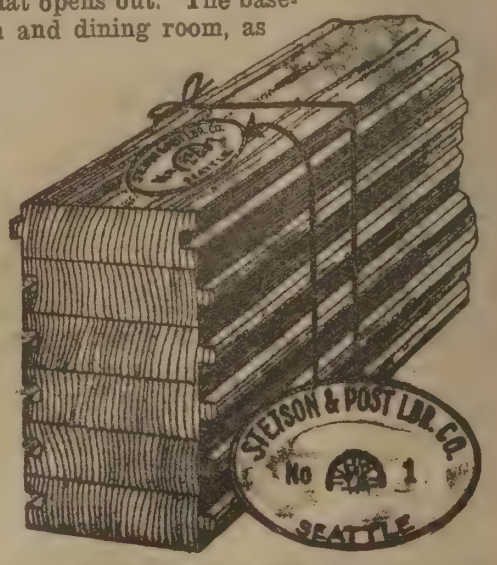
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THE WASHINGTON FARMER

SUCCESSOR TO

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For Good Farming, Attractive Country Homes and Happy Country People

What Story Will the Thresher Tell This Fall?

By J. E. NESSLY

"What will the harvest be?"

This question, the opening words of the old Sunday school hymn we sang in our youth, is on the lips of every farmer, merchant and citizen of eastern Washington where agriculture is the principal industry and the wheat crop is the leading wealth-producing element. This question is asked every year, many times, but it is really a "burning" question this year because of the unfavorable spring, with the continued cold weather and generally unfavorable conditions. Upon the wheat crop more than upon any single element depends the prosperity of the Palouse, the Walla Walla and the Big Bend districts, for wheat brings in more money than all other products of the soil in these rich farming sections.

A representative of The Washington Farmer last week drove through Asotin, Garfield, Columbia, Walla Walla, Whitman and Spokane counties, taking several days to make the trip, stopping at farms, making personal inspection of grain fields, asking questions of farmers, merchants, bankers and other citizens and getting a "line" on conditions generally.

While conditions do not appear good, and, to one unacquainted with the wonderful fertility and never failing qualities of the farming sections visited, would appear gloomy, yet very few were seen and questioned who were not optimistic in the extreme and no one who is really discouraged was found on the trip. Conditions have been much worse at this season in bygone years, and good crops were harvested in those seasons. Standing out among all of the more than 35 years since wheat growing became the leading industy is the year 1897, when conditions up to June 10 were the worst in the history of the country, both before and since that time, and yet 1897 is pointed to by old-timers as "the year of the big crop, the turning point of farming in the Palouse country."

"There is an abundance of moisture in the ground and only warm weather is needed to make the grain grow." This statement was made by a number of farmers, grain dealers and others who have been keeping in close touch with conditions. And the warm weather came while THE FARMER representative was on this trip. It has continued and marked improvement was noticed in the condition of grain during the five days THE FARMER man was making the drive through the wheat belt.

"I have been driving through the country every day for the last week and you would hardly believe the improvement that is shown in the condition of crops since the warm weather began," said a business man of Colfax, whose business takes him into the farming sections of the country during this season of the year. Continuing, he said: "We need warm weather more than anything else. There is lots of moisture beneath the surface and 10 days of warm weather, followed by a good rain, will mean a good crop of grain. Spring wheat is late, but it is coming up evenly, is strong and has a good color. Warm weather and one or two good rains within the next six weeks will work wonders in crop conditions." The same opinion was expressed in different words by at least a score of farmers, grain dealers and others interviewed.

Coming from eastern Oregon THE FARMER representative entered the wheat belt of eastern Washington at Anatone, in Asotin county. Following the splendidly-built state highway from Anatone to Asotin careful note was taken of the wheat fields on Anatone flats, one of the richest wheat sections as well as one of the beauty spots of eastern Washington. Fall wheat is raised extensively and almost exclusively here. General conditions were found to be good. There is a lot of Jim Hill mustard in some of the fields, but the mustard is not of the rank growth, so detrimental to grain, but the stalks are small and, while they are in blossom and now stand higher than the wheat, there is a good stand of the latter, it has a good color and in a couple of weeks will be taller than the mustard, which has reached its extreme height. While the mustard may affect the yield to some extent, Anatone flat will have a good crop, for there are scores of immense fields where there is no mustard and the wheat crop is practically assured. These fields that are free from mustard promise more than an average yield.

From the foot of the grade at Asotin until one is well past Clarkston there is no wheat, but between Clarkston and Pomeroy there are some splendid flieds of both fall and spring wheat that will make an average crop with favorable weather conditions from now until harvest. Around Pomeroy and between that town and Dayton there are some of the finest fields of wheat seen on the 600-mile drive. Great fields of fall wheat standing more than knee high, a rich, deep green color, free from weeds and foul growth, are far enough advanced to insure a good yield with one or two timely rains.

Between Dayton and Walla Walla, going via Waitsburg, detouring to the west on the road to Walla Walla and returning via Dixie, THE FARMER man saw many fields of as good wheat as he has ever seen in 33 years in the northwest. There are some fields of wheat in that section that are already "made" and will yield 40 bushels or more without more rains, but these, of course, are in the minority.

An extensive drive through Walla Walla county showed thousands of acres of splendid wheat, many acres not so good and still fewer acres that must have rain soon to save the grain from damage. Walla Walla county fruit has been hurt by the frost, but there will be a lot of fruit. Vegetables of all kinds are late, but promise about an average yield. Corn, of which there is an unusually large acreage, is exceptionally good. Alfalfa, of which the acreage has increased much in the last few years, is also unusually good.

Returning north via Dixie, Waitsburg, Dayton, Central Ferry to Dusty and LaCrosse, in Whitman county, some splendid fields of wheat were seen. In fact the writer believes the best average conditions of wheat were found between Central Ferry and LaCrosse of the entire trip. There is but little spring wheat in that district and fall wheat generally looks well, stands thick on the ground, has a healthy color, is free from weeds and with reasonable weather conditions will make better than an average crop. About LaCrosse and down to Jay and Canyon there are many good fields of grain.

Around Winona conditions are also good. The acreage is up to normal and conditions are better than normal in most fields. There are many spotted fields about Endicott and Diamond. On north hill sides, where the snow was deep and laid until late this spring, much of the wheat was smothered out and weeds are very bad. But there are many good fields and the good farmers—those who cultivated their land carefully—will be well paid for their labor. In fact it takes an unfavorable season to show how well it pays to farm right and in a season like this the work of the good farmer stands out strikingly.

Between Diamond and Colfax are many good fields, some just an average and some below the average. Weeds are bad in many fields and north slopes have suffered from the deep snow. Seldom have there been as many bare spots in the fields of this section as at present. It will require unusually favorable weather conditions to produce an average yield in some of the fields about Colfax, Diamond and Endicott. William Sutherland, a pioneer grain buyer of Colfax, said: "I place the yield for this section at 75 per cent of normal. I believe that is a conservative estimate, but it may be too low. That will depend upon the weather during the next two weeks. A good rain will make a lot of difference." Colonel Leonard Stroble, another pioneer, said: "I have spent much time in driving in the country and have noticed the crop conditions carefully. I do not believe we will have more than 65 per cent of a normal yield. Of course good weather from now on will make a big difference, but it is going to take lots of rain and lots of warmth to bring the yield above two-thirds of an average crop."

From Colfax to Steptoe, through the very heart of the Palouse country, the district that nearly always produces splendid crops of grain, various conditions were seen. Some crops are above average, some about average, but the majority are below the average. "In more than 40 years that I have lived in the Palouse country I have never seen the weeds so bad as they are this year. We have had other seasons when crop conditions were no better than they are today during the last week in May and first of June, and yet had a good crop, due to rains in June and July," said George McCroskey, whose father settled on Tennessee flat, near the present site of Steptoe (the town, not the butte, which preceded the McCroskey family by a few years), and who is one of the best farmers of Whitman county. Mr. McCroskey is not optimistic about a big yield, but thinks the Palouse country will have as good a crop as any section of Washington this season.

Between Steptoe and St. John there are many splendid fields, some that are just about average and some that are below average. "I look for at least a normal crop in this section," said L. W. Lanning, grain buyer of St. John, who has lived in the Palouse country for 31 years and has bought grain for more than half of that time. Mr. Lanning has made a careful study of conditions and is regarded as an expert on grain and on crop conditions. He says there is plenty of moisture, that the spring grain is coming up evenly and well, and that two weeks of warm weather will make such a change in conditions that one passing through the country now would not recognize it then.

From St. John to Thornton, through Sunset, one finds some great fields of splendid grain, both fall and spring sowing. Conditions are really quite good through this section. At Thornton THE FARMER man talked with Ralph Comegys, banker, farmer and "native son," for he was born on the homestead his father took near Thornton 44 years ago, and he knows the Palouse country as few men know it. Mr. Comegys is quite optimistic. He sees nothing in present conditions to cause alarm. He said: "The last two weeks before harvest are more important than any period during the growing of a crop. I have never seen a crop failure in the Palouse country and I have never seen a poor crop because conditions were not ideal in May and the fore part of June. If we have warm weather and one or two rains in June we will have a better crop than if we had had a fine showing now and the weather turn hot just as the grain is filling. I am not at all alarmed. To a stranger conditions might look bad, but to the Palouser, who has lived here from a quarter to a third of a century and never seen a crop failure, it will take more than present conditions to cause uneasiness."

Between Thornton and Rosalia conditions are about an average for the rest of Whitman county. Some very good crops are seen, others are not quite so good and there are fields that will not produce much grain except with very favorable conditions.

Passing into Spokane county between Rosalia and Plaza one sees some very good crops of all kinds of grain. In southern Spokane county conditions are as good as in any section visited, and probably slightly above the average for the entire trip. About Spangle are some splendid fields, not a few, but many. The fall grain there is practically made. If it does not make at least an average yield it will be due to unprecedented conditions and there will be little grain anywhere, for, outside of a few fields in Asotin county, a few in Garfield and a few in Walla Walla, nothing on the road was seen to compare with the general average of conditions near Spangle, in Spokane county.

Taking the trip as a whole, it is more inclined to inspire optimism than pessimism, taken with the interviews with the men who know conditions, the farmers who have seen such conditions before, and those who have watched the growing crops for 25 to 30 or 40 years, and are optimistic and unhesitatingly declare: "There is nothing in present conditions to cause alarm."

Interest Rate Falls

Land Bank Does Greater Business

The federal land bank, which serves the Pacific northwest through the branch bank at Spokane, last week announced a reduction in its interest rates from 6 per cent to 5 1-2 per cent. This reduction does not affect loans that have already been made at other rates of interest, but all loans made to farmers hereafter will bear the lower rate of interest.

The reduction is the direct result of sale a few weeks ago of $117,000,000 worth of federal farm land bank bonds that will bear 4 1-2 per cent interest. Better financial conditions generally are responsible for the good sale of the bonds and for the corresponding reduction in the interest rates on land bank loans. The land bank law provides that not to exceed 1 per cent more shall be charged the borrower than the interest that the land bank bonds bear, this 1 per cent being necessary to conduct the affairs of the nationwide institution.

The Spokane branch of the land bank did a record month's business during May, closing 467 new loans for a total of $1,,732,800. The large amount of business that the land bank is being called upon to do is indicated by the fact that during the month 1426 applications for loans were received in an aggregate amount of $5,580,000. Many of these applications are still to be acted upon, though some are rejected or revised because of conditions surrounding the proposed loan.

Since the land bank was opened at Spokane in May five years ago 46,297 applications have been received for loans that would have aggregated $151,565,000. During these five years the bank has made 22,386 loans on farms in the four northwestern states in a total amount of over $64,000,000.

"There are now 20 regular appraisers at work, and they are all busy," said president D. G. O'Shea of the Spokane bank. "The volume of new business continues to come in constantly in increasing amounts."

LINCOLN SHORTHORN BREEDERS.

The Lincoln County Shorthorn association will visit eight Shorthorn herds on Monday June 19. They will leave Davenport at 7 a. m., visiting Charles Level's ranch, George Heid's ranch, Cathcart Brothers' pasture, Samuel Squire's ranch, Baring Brothers' ranch and Blenz Brothers, arriving at noon. A basket lunch will be served at the Blenz ranch.

The party will visit the J. H. McCroskey ranch near Sprague and the Day & Rothrock Hercules ranch in the afternoon.

State Crop Report

Indicates Reduced 1922 Production

The government crop report for the state of Washington shows that conditions on May 1 indicated a winter wheat crop somewhat smaller than that produced last year, but still above the average for the last 10 years. The report, as issued by G. S. Ray of the Federal Bureau of Markets and Crop Estimates, states further that rye and hay production give promise of being less than in 1921.

Winter wheat: The winter wheat acreage in Washington on May 1 was placed at 1,202,000 acres, as compared with 1,333,000 acres harvested last year, and 974,000 acres, the average harvested for the last 10 years. it is estimated that 7 per cent of the acreage sown for grain last fall will not be harvested. Abandonment last year was 2 per cent of the acreage sown, while the average abandonment for the five years, 1916-1920, is 16 per cent.

The average condition of winter wheat on May 1 was 85, compared with 85 on April 1; 99 on May 1 of last year, and 92, the average condition for the last 10 years on May 1. The month of April was too cool for the best development of winter wheat and at present it is quite backward in many localities.

The condition of 85 on May 1 is indicative of a yield per acre of 23.6 bushels and a total production of 28,403,000 bushels, assuming that average conditions prevail during the season. The 1921 winter wheat crop was placed at 37,457,000 bushels, while the average for the last 10 years is 25,032,000 bushels.

Rye: The rye acreage in Washington is placed at 19,000 acres, or 92 per cent of the acreage harvested last year. The average condition of rye on May 1 was 93, forecasting a yield of 13.9 bushels per acre and a total production of 265,000 bushels. The rye crops of 1921 and 1920 were, respectively, 294,000 bushels and 190,000 bushels.

Hay: Tame hay, with 968,000 acres, shows a decrease of 4 per cent, as compared with the 1,008,000 acres last year, while wild hay has but 29,000 acres, against 30,000 acres last year. The average condition of all hay on May 1 was 87, indicating a total production of 2,015,000 tons, as compared with 2,666,000 tons in 1921. The late, cool spring has retarded the growth of hay crops.

Stocks of hay on farms May 1 are estimated as 187,000 tons (7 per cent of crop), as compared with 199,000 tons (10 per cent of crop) on May 1, 1921.

THE ORIGINAL BALLBEARINGS.

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THE WASHINGTON FARMER

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Entered as second-class matter, January 13, 1916, at the postoffice at Spokane, Washington, under the act of March 3, 1879.

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We guarantee every subscriber against loss through dishonesty or swindle by any advertiser in this publication; we do not attempt, however, to adjust trifling differences between subscribers and honest, responsible bankrupts. Complaints must be sent to us within 30 days from the date of the transaction and the subscriber must have mentioned The Washington Farmer when writing the advertiser. This guarantee applies to live stock, except that we will not be responsible for claims for damages on account of diseasee in stock sold through these columns.

Vacant Public Lands

Following the issue of recent publicity concerning those vacant lands still available in counties of eastern Washington, some inquiries were made by THE FARMER at the federal land office at Spokane. The lands as yet open are chiefly of timbered, mineral, irrigable or grazing character, or lie in small or broken cultivable areas in generally mountainous regions or arid belts.

In Stevens and Ferry counties the entegable lands total the largest acreages. Those of Adams county's unfiled arid acreage do not include, as a rule, the better bottoms.

The state of Washington as a whole includes 1,038,410 acres of vacant lands, a statement that might be misleading to one unaware of the character of much of this land.

The American farmer is not yet called upon to imitate the Asiatic, who laboriously covers the jutting rocks of his hillslope with soil, that no foot of his holdings may be uncultivable, nor the European who rejoicingly tills the small available benches of his homeland.

Time and demand must be largely depended upon to bring worth to the some day prizeable sloping and bench lands yet open in our beautiful northeastern counties.

Milk, a Child Builder

Miss Inez Arnquist, Spokane county home demonstration agent, reports from Fairfield a striking testimony to the value of the movement to bring to standard weight the child who is dangerously below the normal weight for his age and size.

A seven weeks' campaign was conducted there, during which interval milk was served the children during morning and afternoon recesses. At the end of the period these children had averaged three times the normal rate of gain. In the eighth week the furnishing of milk was discontinued, and at the end of the week the score cards uniformly showed losses in weight at the time of the weekly weighing.

These pronounced results led to the immediate restoration of milk to the daily school program, and it was furnished throughout the remaining five weeks of school. "Usually we find the closing week, with examinations, drill for entertainments, and so forth, affect our weight score cards," stated Miss Arnquist, "but at Fairfield after milk was reintroduced, the average gain for the remaining five-week period was steady and mounted again to twice the normal rate of gain for these children."

The nutrition campaign at Fairfield has been possible through the hearty cooperation of the Women's Improvement Club of Fairfield, under community leadership of Mrs. Otto Adams and of Miss Della Prell, the local home economics teacher. A hot dish was also served the children at lunch time at the school.

A Difference of Opinion

While there has been a marked difference of opinion as to the merits of some of the details in the marketing plan of the United States Grain Growers, Inc., only the blind can fail to see in that organization a notable advance in grain marketing, from the viewpoint of the producer.

Most of us remember that about a year ago the National Grain Dealers' association undertook to raise a quarter of a million dollars with which to conduct a campaign against the United States Grain Growers, Inc. In a public address October 3, 1921, R. I. Mansfield of the grain dealers' association said: "We have successfully met the crisis. The United States Grain Growers is ready for the undertaker."

On that date the United States Grain Growers had a membership of 13,653 producers, with an estimated annual production of 26,500,000 bushels of grain.

On May 9, 1922, only a few weeks ago, Mr. Mansfield, again in a public address, said: "The United States Grain Growers, Inc., is dead."

On the following day, May 10, the United States Grain Growers, Inc., reported a membership of 59,000, or a gain of nearly 400 per cent, with an estimated annual production of at least 118,000,000 bushels of grain, or an increase of over 90,000,000 bushels.

If the United States Grain Growers is dead, as Mr. Mansfield would have us believe, the organization should be buried deep and beneath a massive monument. A corpse as lively as that should not be allowed to run at large.

Credit for Agriculture

The Pacific northwest has good representation on the special committee of the senate agricultural bloc that will hold hearings on legislation designed to provide long term personal credit for farmers. It has two of the seven members—Senator McNary of Oregon and Senator Jones of Washington.

The appointment of this special committee presents a new procedure in congressional action. Heretofore all matters of legislation introduced in congress were referred to regularly designated committees of the senate or the house. In this instance the committee has been selected by a bipartisan group without grant of congress. This action became necessary, in the judgment of the agricultural bloc, because there were too many bills sponsored by interested legislators and too many ideas as to the forms the legislation should take. It is hoped by the members of the bloc that as a result of the hearings before the committee an agreement will be reached on a bill which will be free from points that may be criticized as radical.

Until the passage of the federal farm loan act the government had given no consideration to the special credit needs of agriculture. The federal reserve system was constructed for the benefit of the mercantile and manufacturing interests, who could be served with loans for periods not exceeding 90 days. But the farmers and stock growers needed longer credits, and the purpose of this investigation is to provide separate care for farm needs and live stock requirements.

No date has been fixed for hearings before the committee, but invitations will soon be issued to various officials of the government, including members of the war finance corporation, federal reserve board, federal farm loan board, the secretary of the treasury and the secretary of agriculture and representatives of the farm organizations and of the banks. We hope that as a result of this hearing a bill will be reported out that will be satisfactory to the agricultural interests

State Farm News

Almost simultaneously with the announcement that Manager M. J. Newhouse of the Washington Growers' Packing corporation would leave to join the Oregon growers as assistant manager, the Clarke county organization made the third and final payment on its members' 1921 crops of prunes, the gross receipts from which were $316,235. More than 2,500,000 pounds were marketed, and the average price was better than 11 cents, a figure which in spite of the fact that the crop was only about 25 per cent normal in volume, left the producer much better off financially than he was after selling the 1920 crop. It ran unusually high (87 per cent) in proportion of 30-40s (standard size) or larger. Packing and marketing expense averaged only two cents per pound, which is said to be the lowest of any marketing agency on the Coast.

About 600 Clarke county growers of prunes, strawberries and potatoes are members of the corporation, and important questions relative to handling the 1922 strawberry crop, which will be heavy, were discussed by members interested in small fruits, at a general meeting at Vancouver, May 22.

* * *

It is announced that a branch of the new Oregon-Washington joint stock land bank recently established at Portland will be started at Walla Walla to serve Umatilla county in Oregon, and Walla Walla, Whitman, Columbia, Garfield and Asotin counties in Washington.

* * *

Destruction of all black currant bushes in areas reported infected with white pine blister rust has been accomplished, according to information reaching Supervisor Charles L. Robinson of the state department of agriculture at Olympia. The work was done by federal and state agents in conformity with the recent quarantine established by the department.

The plantings cleaned out were in the vicinity of Sumas, Mount Vernon, Laconner, Port Townsend and Beverly park, near Everett. In the latter section a patch of white pine was also destroyed as a preventive measure, although no evidence of disease was discovered. The authorities are making further investigations.

* * *

A record in speedy freight movement of live stock is claimed by the Northern Pacific railroad in transporting 3000 ewes and 2000 lambs for Howard Nye of Prosser from Kiona to Trout Creek, Mont., 303 miles, over three divisions in about 17 hours. Such a journey has often taken 48 hours, it is said.

* * *

After many years of absence from the county agent column, Skagit county now has an agricultural agent in the person of C. H. Bergstrom, formerly Thurston county agent and more recently a Guernsey breeder of near Olympia. Mr. Bergstrom is already at work in the county and attended his first conference since going to Mt. Vernon, at Puyallup, late in May. Skagit county is regarded as one of the richest fields for extension work in the state. Some work of this character was carried on there in conjunction with horticultural inspection work several years ago, but this was found unsatisfactory.

* * *

Members of the Clallam County Cow Testing association held their annual meeting and elected R. A. Schmuck, C. A. Robinson, Ben H. Ridgway, C. S. Mantle and Bert Sinders as directors for the coming year. E. A. Schmuck was selected president and C. A. Robinson, secretary, with K. B. Cushman tester for the year.

* * *

The Creas Island Guernsey bull club, block No. 2, with 10 members, was organized at East Sound, San Juan county, by County Agent Will Henry. Harry Donohue was elected president, Jake Cramer, vice president, and Walter Sutherland, secretary-treasurer. They purchased one of the sires of the county, "Sammish Trooper," a half-brother of "Sammish Topsy." His dam has a record of 520 pounds butterfat and is a 4-year-old. The bull has been in the county for several years and has several fine daughters.

* * *

The Whatcom County Berry Growers' association has been organized and will establish a receiving station in Bellingham. A. Buettner was elected president; Frank Mittelstadt, secretary and treasurer, and H. R. Clark, F. J. Hill and Alec Beverly, trustees.

* * *

Those interested in the production of milk will be glad to note the decision reached by the National Mothers' Conference and Parent-Teacher association, which was recently held at Tacoma. A resolution was passed indorsing the Voight bill, which will prohibit the shipment of filled milk or substitutes of any kind. The women have declared that filled milk is a menace to infants and children and have thereby voiced their opinion that pure milk is best for all purposes in the home.

* * *

A. G. Woodward is on the job as secretary and manager of the Oakesdale Live Stock and Produce Fair association. The date of the fair will be announced soon.

* * *

The past year, 1,156,857 pounds of arsenate of lead were used in combating the codling moth in the Yakima valley. This cost on an average 20 cents a pound, making the total cost $231,371.40. About 21,000 pounds of calcium arsenate, also a poison, was used. The average cost per pound was 23 cents, making it cost $4830. These are only an item in the entire list of spraying materials used here during the growing season, but are the poisons used in greatest quantity.

* * *

Whatcom county commissioners have pledged the county to pay one-third of the cost of the Mount Baker highway extension to be built by the federal government this summer and to meet the annual maintenance cost of $3000. The road will cost $165,000, it is estimated. The extension will run to Austin pass and assurances have been given that a hotel will be built at the pass for tourist travel.

Coming Events of Interest

June 12—Wheat discount hearing, Seattle.
June 14—Flag day.
June 15—Kittitas county live stock tour.
June 20-22—Lincoln-Adams pioneer picnic, Keystone.
June 24—Annual Cowlitz cheese carnival, Toledo.
June 30—Bankers' meeting, Kennewick.
July 17-22—Experiment station tours, Puyallup.
July 24-Aug. 5—Live stock tour, west Washington.
July 26-28—International apple shippers, Seattle.
July 27-28—Whatcom Guernsey gallop, Bellingham.
Aug. 15-19—Horticultural meets, Yakima, Wenatchee.
Aug. 15-29—Skagit county fair, Burlington.
Aug. 28-Sept. 2—Southwest Washington fair, Chehalis.

FARM BUSINESS AND MARKETS OUTLOOK

May Wheat and Price Stabilization

Trading in May wheat began on August 24, 1921, the range on the opening day being from $1.22 1-4 to $1.24 1-4. From this point it advanced rather steadily to $1.42 3-4 on September 10. Then a long slump followed, marked by a couple of minor upturns of 8 to 10 cents each, to $1.03 1-4 on November 4. Another advance to $1.19 on December 1 followed. By December 15 it was back to $1.10 3-8. On December 29 it reached $1.17 1-2 and on January 3, 1922, touched $1.07 1-2 once more.

From this point a long advance began which culminated at $1.49 7-8 on February 27. By March 15 it had dropped to $1.29 1-2, bounced up to $1.39 3-4 on March 18, then dropped off again to $1.28 1-2 on March 27. After swinging over a 5 or 6 cent range several times it advanced from $1.30 1-2 to $1.45 in four days, nearly 9 cents of it in one day, reaching the latter on April 17, and $1.49 1-8 on April 22. After breaking to $1.39 3-4 on April 27, it rallied to $1.46 on May 3, broke to $1.34 1-2 on May 8, advanced to $1.47 1-2 on May 17, then nose-dived to $1.16 on May 31, having a range of 10 1-4 cents on one market day. The closing trades were at a range of $1.16 to $1.17.

A lot of speculators, who are schooled in erratic action, were made dizzy, sick at the stomach, and all were extremely glad when the ride was over.

What percentage of this action was due to speculative maneuvers and attempted manipulation, it is impossible to say, but this influence undoubtedly has been dominant in the last two months. That a "deal" was on has been common talk for weeks.

Cash wheat prices paralleled closely all of these gyrations of May wherein arises a just cause for complaint on the part of the producer.

Now that it is all over, will the defenders of board of trade speculation please come forward and explain how the institution stabilizes prices? Or is this the exception that proves the rule?

Part of the trouble arises through the fact that so many contracts center in a given month. If conditions do not develop as rapidly as expected by those who have taken a stand on one side or the other, the delivery month may arrive before those conditions become operative. Nevertheless, it is necessary to close all these contracts to shift them to a later delivery date, all of which tends to disrupt the market and makes for erratic prices.

Steer Market Working Higher

Another small advance featured the cattle market last week, raising average prices at Chicago to $8.60, the highest of the year, and about $1.50 higher than last January. A few yearlings brought $9.50 and a full load reached $9.35, the highest since early April, but below the year's top of $10 paid last January.

The run is freighted with well finished beef as this is the season in which the crop of long-fed steers is harvested. How many are still back is conjectural. The number may be above the average and overload the market eventually, but the supply of cornfeds usually begins to shrink along in June.

In general, the outlook favors steady to higher prices on such steers in the next three months with a strong probability that more than $10 will be paid before the summer is over.

Half fat and medium grades of steers are bringing $8 to $8.50, which is more than their owners expect in most cases. Until grassers are available in larger numbers, a month to six weeks hence, cheap beef will be hard to find. But the spread in prices between high and low grades is sure to widen, probably by an advance on choice steers and a decline on common steers.

Butcher cow and heifer prices have practically reached their limit, no matter what steers may do. Many are already showing grass and the gap between choice and common grades is widening. Cutter and canner prices which have been high weakened in the last few days. Calf prices advanced moderately last week because of a lighter supply and an excellent demand for veal. The spring run from dairy districts generally shrinks decidedly during June, although occasionally it remains heavy until the end of that month.

Grass Cattle Supply Not Excessive

With the season for grass beef only a month or six weeks ahead, a survey of the situation does not point to an excessive supply. The movement into Kansas and Oklahoma pastures was the smallest in four years, according to semi-official observations. How the range states can even equal the small output of last year is not clear as herds are small. Prices on Pacific coast markets now look as high as in the middle west. The corn belt states and the eastern grazing areas are not overburdened with cattle, although their supply may be more nearly normal than in other sections. But few Canadian cattle will get over the tariff wall.

Some revision downward on the lower grades of beef steers is probable whenever grass beef arrives, but the outlook for fair prices is far from unattractive.

June Break in Hogs Not Severe

Combined supply of hogs at 11 markets increased nearly 15 per cent last week, reaching the heaviest total since February. The price list was scaled down slightly, but the loss has not been severe and the evidence is piling up that the June break in prices will not be drastic and that prices should hold above $10 at Chicago right along.

There is always a possibility that the number to be marketed exceeds expectations. For a month receipts have been above average volume and the total last week was nearly 20 per cent above normal for that week as shown by past records. On the other hand, the demand for smoked meats has been quickened by hot weather and exports are taking about 25,000,000 pounds of hog meats and lard out of the country each week. Stocks of hog meats in storage are 30 per cent below normal. The June run may be seized as an opportunity to increase stocks for merchandising later in the summer.

Wide Spread in Lamb Prices

Lamb shipments from all sections include an unusually high percentage of low grades which are selling at a wide discount below well finished loads. Culls and throwouts in some cases are almost unsalable. Feeders aer buying more freely than a month ago, but their orders are entirely too few to take care of all thin lambs arriving.

The lamb market is still on a high level. Texas grass sheep and lambs are scheduled to arrive during June and a big increase in receipts of natives, especially from the southwest, is due during the month. This usually means a moderate break in prices, but the small sheep population of the country and the ability of the market to absorb fairly large runs are reassuring.

Demand for Horses Limited

Only drafters and rugged workers for city use appeal to horse buyers at present. The farm chunk season is over. An occasional individual with weight and quality brings $250 to $400, but such sales are rare. Horses weighing 1400 to 1550 pounds, suitable for ice or coal wagons or for use in excavation work, are bringing $150 to $175 at Chicago.

Wool Swings Up Again

After a brief breathing spell the wool market took another upswing last week. Prices were slightly higher at seaboard markets and considerably higher at interior points. Some Texas wools were sold at prices equivalent to 46 to 52 1-2 cents at Boston and 50 cents was paid in Ohio for delaine clips. Offers in Missouri and Iowa ranged as high as 36 cents. It is estimated that 70 per cent of the range clip with the exception of Texas and New Mexico has been sold.

The world-wide character of the advance in wool is shown by the performance at the three London auctions this year. The January series closed 7 to 15 per cent higher than the auction in December. March was 5 to 15 per cent higher than January and the May series just closed was 5 to 15 per cent higher than March.

The emergency tariff alone has not been responsible for the advance in this country.

Mills are being forced to buy and the American Woolen company has advanced cloth prices in line with the raw wool market. April consumption of wool by mills dropped down to 45,000,000 pounds compared with 62,000,000 pounds in March.

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May Wheat Corner Fizzles

The so-called "deal" or corner in May wheat at Chicago finally ended with prices close to the bottom. Heavy deliveries, large receipts at primary markets, a slender demand for cash wheat and favorable growing weather for the new crop were the undoing of the "bulls." Total deliveries, many of them in carlots on tracks instead of in elevators, amounted to more than 12,000,000 bushels, although this amount includes some duplication through deliveries. Large quantities were moved to Chicago and receipts during May at that point were about as large as the combined receipts of the preceding eight months. But little of this wheat has been shipped out, although an impression was given a few weeks ago that a good deal of it had already been sold for export.

Dull Demand for Wheat

Demand for flour broadens spasmodically, but total purchases are moderate. With the exception of choice grades mills are not energetic buyers of wheat. Importing countries have had liberal offers of Canadian, Argentine and Australian wheat recently and Liverpool has been reactionary.

Although buyers have been indifferent, receipts at primary markets for the last 10 days have averaged approximately 1,000,000 bushels per day, the largest on record at this time of the year. Even allowing for duplications due to reshipments to Chicago, the supply has been unusually heavy with farmers, especially in Kansas and Nebraska, cleaning out their bins.

Measured by the receipts at the leading markets since March 1 the movement from farms from that time until the end of May will be about 65,000,000 bushels. Probably 25,000,000 bushels or more were used for spring seeding, making a total farm disappearance of 90,000,000 bushels. Since farm stocks on March 1 were 131,000,000 bushels, the remainder on June 1, if the above estimates are correct, would be 41,000,000 bushels. The 10-year average farm carryover on July 1 is 34,500,000 bushels. If farmers sell at all freely during June, the July 1 farm reserves will be well below the average. However, statistical compilations on wheat have seldom proved out this year.

Price Trend Hinges on Weather

After the drastic decline which has already taken place, further losses should not be severe as both mills and exporters are showing a little more willingness to buy. On the other hand, unfavorable weather for the new crop is about the only factor that can bring a pronounced upturn within the next few weeks. Climatic conditions have been favorable for the most part, but the crop can still be made or marred over a large area, depending upon the turn the weather takes. Harvest will begin within a week in the southern part of Oklahoma and a week or two later in Kansas.

The spring wheat outlook is excellent with ample moisture even in the state swhich have suffered from drought for the last several years. Canada needs dry weather in order to complete seeding. Foreign crop conditions have been more favorable recently.

After Planting Corn Run Is On

Wet weather has made corn planting later than the average and may prevent an increase in acreage. The crop where planted is making favorable growth in most sections.

Receipts of corn at primary markets in the last two weeks have been the largest on record at this season and about twice as large as the average. A further increase may occur before the after-planting run reaches its crest. The market has weakened along with wheat, but the loss has been relatively small. Exporters are buying moderate quantities, but Argentine corn is becoming more suitable for shipment and is being pressed upon the European market, although it is still priced higher than American corn.

The oats crop is less promising than either wheat or corn as the acreage is small and the crop late. Cool weather is needed to bring it through without serious damage. The domestic and export demand for oats has broadened again, but the receipts are about 25 per cent larger than the average for this season of the year and prices remain low.

Cash Grain Markets

The cash grain prices for May 31 were:

Chicago—Wheat—No. 2 red, $1.17 3-4@1.27 1-4; No. 3, $1.14 1-4@1.25; No. 2 hard, $1.17 3-8@1.28; No. 3, $1.15@1.24 3-4; No. 2 northern, $1.52; No. 3, $1.42 1-2@1.46.

Corn—No. 2 mixed, 59 1-2@62c; No. 3, 59@61 1-4c; No. 4, 60 1-2c; No. 2 yellow, 60@62c; No. 3, 59@61 3-4c; No. 4, 58 1-2@61 1-4c; No. 2 white, 60@62c; No. 3, 59@61 1-2c; No. 4, 58 1-4@60 1-2c.

Oats—No. 2 white, 37 3-4@42c; No. 3, 35 1-2@41 1-2c; No. 4, 34 1-2@38 1-2c.

Rye—97 1-2c@$1.00 1-2.

Barley—62@68c.

Feed Demand Extremely Slow

Demand for by-product feeds generally slackens a great deal at this season, but it is even smaller than usual. Wheat feed prices are extremely weak. Only gluten feed and hominy feed are showing much strength, due partly to limited operation of corn industries.

Prices per ton (100-pound bags) in carlots—Chicago—Bran, $20.50; standard middlings, $21.50; flour middlings, $27; cottonseed meal, 36 per cent, $48.50; 43 per cent, $52; hominy feed, $25; gluten feed, $32.85; old process oil meal, $52; tankage, $55.

Alfalfa Hay Remains Weak

Alfalfa hay prices remain weak in most markets with some new crop offered. Most of the latter is of poor quality. Prairie also is sagging, but prices upon good quality timothy hay are firm with the old crop well shipped out in many sections.

Prices per ton in carlots—Chicago—No. 1 timothy, $25@27; No. 2, $23@25; No. 3, $17@20; No. 1 light clover mixed, $24@25; No. 1 clover, $20@21; No. 1, clover mixed, $21@23.50; alfalfa, $17@28; upland prairie, $17@19; midland prairie, $14@17; rye straw, $16@17; oat and wheat straw, $14@16.

Egg Market Holds Up

Although receipts of eggs are running above any recent year and storage holdings at the leading markets are 40 per cent larger than the average of the last three years, prices are holding rather steady. The supply usually tapers more or less from this time on through the summer.

The supply of poultry arriving at the leading markets from week to week since the first of January has been above the average, but consumers have bought freely and frozen stocks in storage were reduced by 53,000,000 pounds in the first four months of the year, the largest decrease in that period in at least five years.

Consumers and Storers After Butter

Unusually broad consumptive demand for butter, which has been the chief support of the market for the last two months, is being aided now by an increase in purchases for storage. Prices have eased under the heavy receipts which are increasing rather steadily, but the decline has been small. A slightly lower level will not be surprising within the next two or three weeks when the supply usually reaches peak for the season, but on the whole the market is in excellent shape.

Prices for 92 score fresh butter on May 31 were:

Chicago, 33 1-2c; New York, 34 1-2c; Boston, 35 1-2c; Philadelphia, 35 1-2c; San Francisco, exchange quotation, 39c.

Advance in Cheese Prices

In spite of the approach of the season when large quantities of cheese are available for storage, Chicago prices are about 3 to 3 1-2 cents higher than a month ago. The advancing market has stimulated a small amount of storing, but regular long-time storage in a large way is not expected to begin for another week or two. Receipts at Wisconsin markets have been running less than at this season last year during every week for the last two months. Attractive butter prices apparently have turned some milk away from cheese factories to creameries.

There is some doubt as to the willingness of the speculative trade to store freely at prevailing prices. But with the available supply running lighter than a year ago and

(Continued on page sixteen.)

Reports Sucessful Year

Wenatchee Cooperatives Sell 2500 Cars of 1922 Fruit Crop

By E. H. McPherson.

The Wenatchee District Cooperative association reports a most satisfactory and successful year of business.

Two thousand five hundred cars of fruit was sold and shipped, returning the growers a little over $3,000,000, all of which has been paid out. A series of warehouses at practically every shipping point in the district has been purchased or built, and substantial payments made on them out of the crop. The association will sell its fruit direct to eastern distributors this year, this department being under the direction of General Manager Dwight L. Woodruff. Of the 3 cents to be spent on advertising, 2 cents will be expended on advertising the Jim Hill and Jim Dandy brands, and 1 cent will be turned over to the East Wenatchee apple district fund. Many prominent grower-members of the association have also signed up the district contracts and will pay 2 cents per box additional, or 5 cents per box altogether.

Though the apple trees of the Wenatchee district bore the heaviest bloom in their history, the drop which followed was so severe that the present crop forecast is only 12,000 cars, compared with 15,000 cars shipped last year. However, the June drop may reduce this figure, though the general tendency of the Winesap trees is to produce more heavily than spring indications promise. As a general rule the orchards are in better physical condition than ever before, as fertilization has been carried on under the advice of experts for the last three years.

A crop of 12,000 cars of high grade apples is regarded as preferable this year to a larger output of fruit which might run largely to lower grades. Inspector Darlington states that all conditions are present for a perfect crop, pests being well under control, the water supply more certain than ever before and better methods in vogue among growers generally.

Local buyers are already contracting for cherries at prices ranging from 7 to 12 cents per pound. The short California crop has a tendency to strengthen the prices here. The preliminary estimate is for a yield of 140 to 150 cars in the district, compared to 100 cars last year.

BOOST SHORTHORN CLUBS.

An informal meeting of the Lower Yakima Valley Shorthorn Breeders' association was recently held at Sunnyside, C. M. Hubbard of the state college extension service and A. E. Lawson, Shorthorn field man, meeting with the breeders.

Among other matters of interest it was decided to hold a breed tour about the middle of August; visiting all of the lower valley breeders, several of the Rothrock Shorthorn Baby Beef club members, and finish the tour at the Dunn ranch at Wapato. The breeders also decided to put on a combination exhibit at the state fair and to foster the Shorthorn club work to the greatest possible extent. A committee consisting of County Agent A. E. Lovett, I. L. Jones of Grandview and E. C. Scott, county club agent, was appointed to formulate plans for the tour.

The Experiment Station Service

By DEAN EDWARD C. JOHNSON, State College of Washington, in Current Experiment Station Report.

The state of Washington has a greater diversity of climate and topography than any other state with the possible exception of California. With rainfall varying from six inches a year in the south central part to over 100 in places on the Pacific slope; with soil conditions varying from the rain-leached lands of parts of western Washington to the sun-parched deserts of the dry belt; with soils as different in agricultural possibilities as volcanic ash, glacial gravel, alluvium, residual disintegration, bogs and tide lands; with natural vegetation to be overcome ranging from sagebrush to the densest forests; with temperatures as diverse as the equable climate along the Coast and the marked summers and winters in the inland country; and with marketing problems due to large distances from centers of population, Washington presents to its farmers who already are using 13,274,720 of its 42,775,040 acres, a vast variety of problems, many of them only partially solved and a host not understood at all.

Some Noted Accomplishments.

The Washington state experiment station is now working on some of these problems and has rendered distinguished service in many fields. The development of high-yielding varieties of wheats, notably hybrid 128 from a cross made in 1899, distributed to farmers in 1909, now grown on over 400,000 acres or one-tenth of the wheat area of the state, averaging 6.8 more bushels per acre than wheats ordinarily grown and increasing the yield for the state over 2,700,000 bushels in 1920; the selection of cereal varieties adapted to improvement of tillage methods; the dedemonstration of the value of sulphur as a plant food; the improvement in seed treatment practices for the control of smut in wheat; the working out of the life history of the codling moth for Washington state; the perfection of the lime sulphur spray and the improvements in spraying practices which have helped to place the great horticultural industry of Washington in the first rank among all states; and the demonstrations of the use of iodine in the control of goiter in domestic animals are but a few outstanding examples of this large service.

The list of over 200 publications of the Washington experiment station illustrates the multiplicity of helpful studies and the contributions to knowledge which the station has made and the divisional reports herein show the consistent progress in the many helpful investigations now under way.

Because of the recognition of the value of the work to the station there is now an ever increasing demand for more investigations of the state's many agricultural problems. With new orchards coming into bearing; with farm lands in the older cultivated sections being robbed of their fertility, with new crop pests and diseases appearing; with the need for diversification; with the problems of land reclamation and the development of marginal lands; with the necessity of greater utilization of by-products of the farm and with the ever increasing complexity in marketing farm products, this demand is natural and a recognition of the source from which help is confidently expected.

The Most Essential Industry.

Furthermore, with a valuation of $1,057,429,848 for all the farm property in the state and with a total valuation of $296,660,990 for all farm products produced in 1919, it is increasingly realized that the agricultural industry of Washington is not only its most essential but also the largest of all its industries. Lumbering, the only other industry approaching agriculture in magnitude, had an output valued at $220,512,000 for the same year. The prices existing at the time of taking this census of 1920 from which these figures are derived, were almost at the peak yet they furnish a comparatively fair basis for comparison.

By standing ready to help solve the problems of this great industry, the experiment sttaion is in a position to render service to the state measurable by many times whatever support it receives. Funds appropriated for its work and economically and efficiently used are a capital investment bearing high returns. Opportunity for such investments must not be permitted to pass by even in strenuous times.

Advertising Is Valuable Part of Any Publication

"Let a man imagine his morning paper—which, without advertising, would cost him necessarily very much more than it now does—as containing only the news. Let him think of the absence of the brightness and good cheer of the many posters drawn by well known artists and beautifully executed. Let him imagine the world without that push and go which well done advertising gives to that great, broad profession called business, and he will acknowledge that this recently developed science is a wonderful factor in the world's progress."—Gordon Selfridge in Judicious Advertising.

What is true of the newspaper is even more applicable to a farm periodical like The Washington Farmer, because the advertisements in this magazine contain news and information about farm implements, machinery and improvements which are absolutely essential in running a farm successfully.

Additional interest will be found in the booklets and folders which many advertisers offer to send without cost or obligation. In writing for them, kindly mention the fact that you are replying to an advertisement in the Washington Farmer.

In writing advertisers, be sure to say you saw their advertisement in The Washington Farmer.

Do You Want Duty-Free POTASH?

Recently a United States Senator, who is actively engaged in trying to defeat the "joker" in the Free List which puts a 100 per cent duty on agricultural Potash, asked why the farmers were not represented at the hearings before the Senate Finance Committee when the subject was under consideration. A man, who attended these hearings, called the Senator's attention to the fact that three owners of farms had appeared, representing New Jersey, Missouri and Indiana; that the New Jersey Federation of County Boards of Agriculture, and the Representative of the New Jersey State Grange appeared; that the Representative of the National Grange made a statement; that the National Farm Bureau Federation and the Representative of the National Bureau of Farm Organizations had been actively working for free Potash, and that the Washington Representatives of these Agricultural Organizations represented millions of real farmers, who paid good money to belong to these organizations and to support their representation in Washington, upon whom they depended to look after legislation affecting farmers' interests.

Later on it developed that other Senators had this same thought—that the farmers were not asking that Potash remain on the Free List. There can be no question that all farmers most strongly object to paying two dollars for a dollar's worth of Potash.

Ten people, representing farmers, fertilizer manufacturers, producers of imported potash, and former producers of American potash, appeared before the Senate Finance Committee, or filed briefs on the subject.

Of these, nine asked that Potash remain on the Free List and one asked for the duty.

Why then have the Senators come to believe that farmers are indifferent about the matter?

The explanation is to be found in the fact that the "United States Potash Producers' Association" maintains in Washington an organization which is very active in urging a duty on the farmers' Potash. At the hearing their propagandist shouted: "Where was the American farmer yesterday? Where was the farmer of the South, who uses more Potash than any other farmer in the country? . . . Where was the American Farm Bureau Federation, which has its offices in Washington? Where was the National Bureau of Farm Organizations, representing thousands of farmers?"

This was clear bluff, for these organizations were represented and they have taken their stand squarely for Free Potash.

But the bluff, constantly repeated, seems to have made an impression that will be costly to the consumers of Potash, unless immediate steps are taken to show the Senators that farmers are very much in earnest about the matter. The farmers' representatives in Washington must be supported by the farmers at home.

The only effective way to do this is for farmers to write to both of their United States Senators at Washington, urging them to see that the "joker" at the end of Paragraph 1635 be struck out and that Potash used in fertilizers remain on the Free List, where it always has been.

The Senate is now considering the Tariff Bill. *Write your Senators today.*

During the time when foreign Potash could not be obtained, Potash sold at more than ten times the prewar or the present prices. Then the American producers, some of whom are called the "Borax Brigade", had the opportunity of profiteering to the limit, and of selling at very high prices Potash of an inferior, and sometimes injurious kind.

Now they ask for "protection" in the form of one of the most excessive duties in the whole Tariff Act. Unless the farmers act promptly, they are likely to get it.

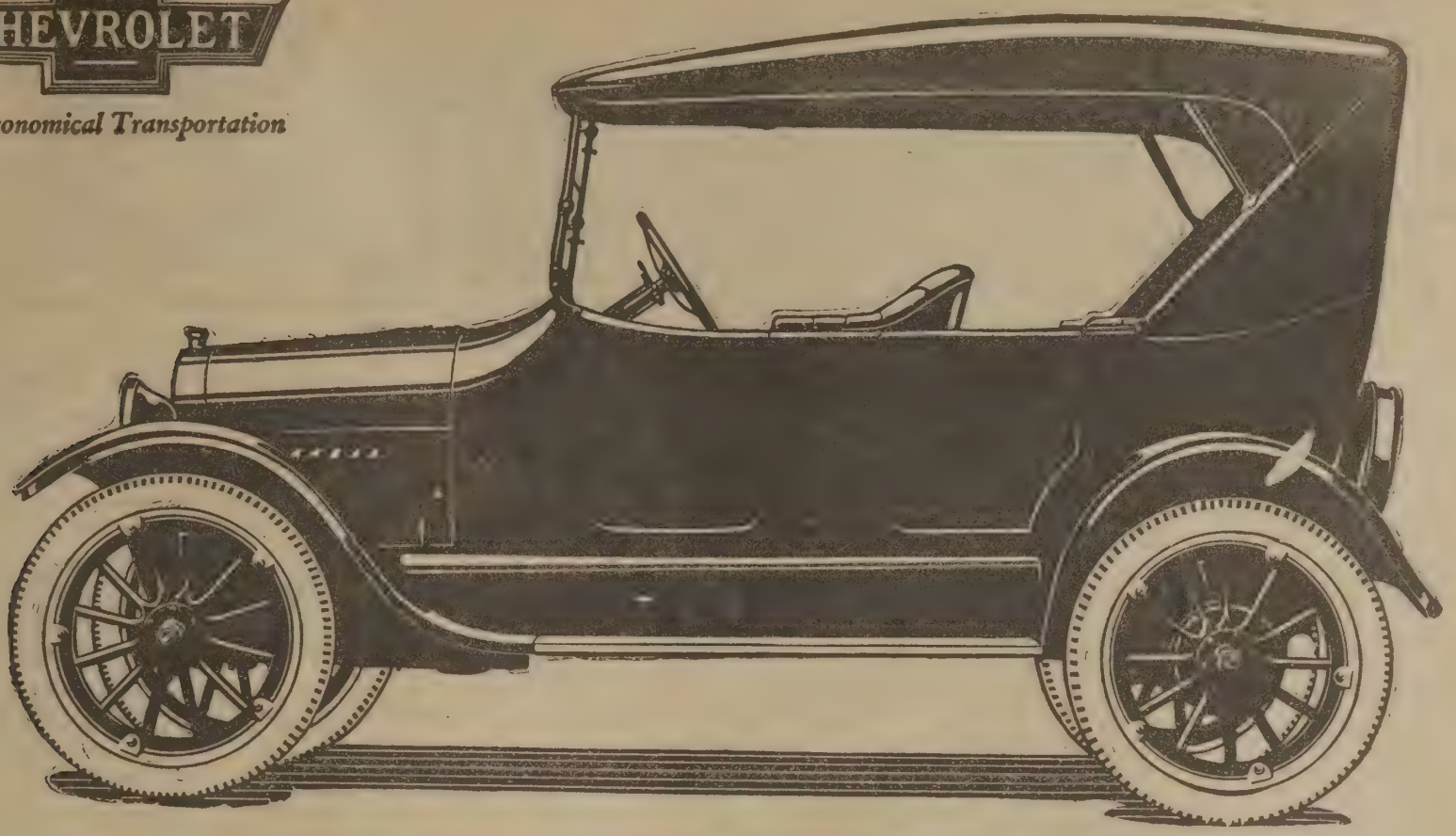
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LIVESTOCK AND DAIRY

Grain and Pasture

By A. B. NYSTROM.

There is a tendency among dairy farmers in general to stop feeding grain while cows are on pasture. This may be a wise practice with dry cows or those giving only a small amount of milk, but with heavy milkers it is not wise.

"It costs too much" is the excuse given. But is this not false economy? Heavy producers must be kept up in flesh and vitality, or they will surely drop off just as soon as pasture is short or as the season advances.

Cows must have a certain amount of the different nutrients to produce milk, and also an additional amount for maintenance. For heavy producers the total required is large and the average sized cow is not capable of eating enough grass to maintain her body and produce the maximum of milk. She must have concentrates to keep up.

Even if the cows on pasture are able to keep up in the milk flow without grain they often lose in weight, and as a consequence dry off earlier than they should.

The amount and kind of grain to use depends on kind and abundance of pasture. Four to six pounds daily of a mixed grain containing some ground oats, ground corn and wheat bran will usually keep the cow in good shape. And while there may be no apparent gain at the pail while the cows are on pasture, there will be a decided gain in the total milk for the season by keeping the cow up at her best for a longer period, even after the pastures are gone.

FINDING THE LOW TESTERS.

The value of getting a complete record of every cow in the herd can not be overestimated. One dairyman in the White River association is now learning that what he thought were his best cows are really among the poorest because they test low.

This particular dairyman took over his father's herd a few years ago. The father was a good dairyman in this respect: he kept close watch of the amount of milk the cows gave, but paid no attention to the test. Perhaps this was not such a poor method from his standpoint, because he sold his milk by the 100 pounds, with little regard to its test.

But of late years the paying for milk has been done strictly on a fat basis and for that reason many low testers proved to be money losers, rather than money makers.

The older dairyman built up a herd of heavy producers by proper selection and breeding. The son took over this herd expecting to continue in the footsteps of his father. Being a progressive dairyman he joined the cow testing association, and to his surprise learned that what he thought were some of his best cows are among the poorest.

This brings out again the point that even the best dairyman can not tell which of his cows are the best and which are the poorest unless he keeps accurate record of them.

Sunflower Silage

Although corn will usually mature a good crop for silage in the Yelm irrigation district, D. R. Hughes prefers to grow sunflowers for this purpose, since the yield is almost double and the cows seem to have little preference for either silage.

Last year a square rod was measured off before the sunflowers were cut and the crop weighed carefully. They were found to measure slightly under 20 1-2 tons to the acre. They were the Mammoth Russian variety and grew to a height of 8 and 10 feet.

For a hay crop Mr. Hughes has found winter oats and vetch to make the best yields to the acre and the growth is often so thick that an extra man is needed to fork the cut hay away from the mower before the next swath can be cut. All of the cultivated crops are planted on land that has been heavily manured and it can be irrigated during the dry weather if necessary.

Fewer Animals Die

Swine on farms that died from disease during the 12 months preceding May 1 numbered 3,082,000, as estimated by the United States department of agriculture. This number is close to the average of the preceding five years, namely 2,944,000. According to the department's records, which extend back to 1888, the highest number of swine on farms that died from disease in any one year was 7,005,000. These deaths occurred in 1914, when the mortality from hog cholera was unusually high. The rate of swine losses from disease during the last 12 months was 54.1 per 1000 head of swine, compared with the average of 54 per 1000 head for the preceding five years.

Cattle losses from disease and exposure on farms and ranges during the last 12 months totaled 2,016,000 animals, or a little less than the average of 2,174,000 animals for the preceding five years. Yearly losses of cattle from disease and exposure have often been greater than the losses for the last year. The rate of losses from disease during the 12 months ended May 1 was 17.8 per 1000 head, or below the five-year average of 18.3 per 1000 head. The rate of losses from exposure was 13 per 1000 head, a rate below the five-year average of 14.3 per 1000 head.

Losses of sheep from disease and exposure during the last 12 months numbered 1,293,000 animals. This number is below the five-year average of 1,512,000 sheep. The rates of losses of sheep from disease and exposure were close to the average. For disease the rate for the last year was 21.5 per 1000 head, the average for the preceding five years being 21.6 per 1000 head, and for exposure the rate of the year was 26.4 per 1000 head, or a little above the five-year average of 25.3 per 1000 head. Lamb losses during the year were at the rate of 62.4 per 1000 a rate almost exactly the same as the five-year average of 62.5 per 1000 head.

Favorable conditions held the mortality of horses and mules from exposure down to 386,000 animals, a number below the five-year average of 410,000. The rate of mortality was 15.7 per 1000 head compared with a five-year average of 16.3 per 1000 head.

Feeding Shed

The feeding shed is unquestionably a success in the Puget sound country.

D. R. Hughes of Yelm has a very convenient shed of this type which joins his dairy barn. The cows can be turned into the feed shed after being milked and they need not go out in the rain except for water. A feed rack extends along one side of the shed and the bull has one shed, which is enclosed, with a door opening into his paddock.

The feed shed measures 20x70 feet and is open on one side. The manure accumulates and is hauled out at times when it is most convenient during the winter. Last year Mr. Hughes cleaned the shed four times, loading the manure direct into the spreader.

The open side has been found to be a disadvantage in stormy weather and Mr. Hughes wants to board this up, leaving only a foot or two of space below the eaves for ventilation, but enough to prevent direct draught on the animals. This will keep out the rain and wind, but will allow an abundance of fresh air at all times. This is the type of shed that is recommended by the western Washington experiment station at Puyallup.

Pasture Mixture

A trial of a pasture mixture, consisting of tall oat grass, clover, orchard grass and blue grass, is being tried by L. G. Nelson of Little Rock, Thurston county. The mixture was recommended by E. B. Stookey, county agent, and has been used at the western Washington experiment station at Puyallup.

The crop was sown early last fall and the ground heavily manured during the winter with both liquid and solid manure.

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1/2 more land cleared per dollar

—with PACIFIC STUMPING POWDER Save still more by using the latest, cheapest blasting methods—



2

Preparing and Loading the Charge



1 *Making the Hole*

SLIT the cartridges (unless the ground is wet) and press each one down firmly in the bottom of the hole dug beneath the stump so as to form a compact mass without air spaces between cartridges. Next, prepare the priming cartridge as follows:

Cut fuse of a length sufficient to project six inches from top of hole. Be sure cut is made squarely across fuse, not diagonally. Remove one blasting cap from box with the fingers. (Do not use a wire, stick, or any other hard implement.) Next slip cap on end of fuse and crimp securely with cap crimper.

Punch a hole diagonally in side of cartridge with pointed handle of cap crimper, and insert cap with fuse attached. To keep cap from slipping out, tie a string around fuse and then around cartridge. Then place cartridge in hole on top of charge. Do not slit it. Cap should point toward bottom of bore hole.

The subsequent steps in stump blasting will be described in future issues of this paper.

Pacific Stumping Powder, the new Du Pont Farm Dynamite, is the cheapest explosive for stumping. A 1¼ x 8 inch stick will do the work of a 1⅝ x 8 inch stick of any standard stumping powder—and you get ½ more sticks of Pacific Stumping per dollar.

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LIFE PRESERVERS FOR LIVE STOCK

By DR. E. E. WEGNER, W. S. C.

INFECTIOUS DISEASES—ARTICLE 10.
(Tuberculosis—Continued.)

In cases that are still progressive the lesion may not get solid in the center, but remains soft or cheesy in the inside and



gradually gets larger until it may extend until it quite completely involves an entire organ, as in the case of the lungs for instance. I have seen lesions as large as the lung itself on one side, making the lung practically solid. The size and the consistency of the lesion differs with the stage and progress of the disease in different cases. In many of the cases that are seen only after the animal or bird has been killed for food the lesion is seen as small nodules in various parts of the body, sometimes in the liver or in the intestines, spleen or the lining of the chest or abdoman, but it may be in the skin, bones or any other part of the body.

The greatest danger from tuberculosis is that it may be contracted by eating the raw foods of animal origin and in this connection milk and all milk food products are the most dangerous because they are likely to be taken into the system in the raw state. This is especially true of milk which is taken as food in the raw condition, especially by children, and as the children use great quantities this way their supply should be protected until infection is known to be impossible. Butter and ice cream are able to carry the infection because they are not processed in a way to kill the organism. Meat and all meat food products would be as dangerous as the milk if they were eaten in the raw state as are the milk products, but since we usually cook the meat quite well the danger is somewhat lessened. Milk may be made harmless be pasteurization, but it is much more satisfactory to get the supply from healthy cows and then we know that the product is free and clean and wholesome.

Test for the Disease.

To the end that all dairy animals may be known to be free from tuberculosis the tuberculin test should be made on all animals supplying milk for human beings, and, too, all other animals, so that the diseased ones may be prevented from spreading the disease to the clean ones. It is impossible to have some diseased animals on a place without danger to all the others, unless they are kept in the strictest quarantine, and this is not a practical way of dealing with tuberculosis except in certain special cases.

A great deal has been done by our federal and state governments to eradicate tuberculosis and the work is still being carried on in the interests of the consuming public. Meats that are intended for interstate or international shipment are inspected by specially trained veterinarians, who see every carcass when it is killed and carefully examine the various glands of the body and inspect the different organs for evidence of tuberculosis and other diseases that might be harmful. The public scarcely realizes what a great work is being done to protect human beings from animal diseases, but the veterinarians of the U. S. bureau of animal industry and the veterinarians of the various states are carefully guarding the public at all times against these serious diseases.

Are Stamping It Out.

Tuberculosis is also being eradicated from the dairy and beef herds of the nation by the application of tuberculin tests by government and state officials who do nothing elsce but carry on this work. When reactors are found they are so disposed of that they can not spread the disease to other animals. They are either killed or quarantined so that they are definitely eliminated for all time. Such a system of eradication has had the effect of cleaning up many herds, but there are still many that have not been touched.

This work should have the support of every person in every state, as it is of vital imoprtance to us al and the work should be carried on until every animal should have a clean bill of health signed by a veterinarian. This includes the single cow dairies as well as the big ones as there is too often a feeling that "the other fellow's cow should be tested, but mine is all right." One can never tell whether a single cof is all right unless he has had the tuberculin test applied by a competent veterinarian. It is too late to wish you had, when a dearly loved member of the family has contracted tuberculosis from the family cow, as I have seen.

Think about it now, and insist that the cow from which you get your milk be tuberculin tested, that is the only safe way and there is a lot of satisfaction in knowing that your milk supply is clean and that your children are safe from tuberculosis from this source.

DON'T BUY BY INSPIRATION.

Calculate the results of any proposed new implement before purchasing it.



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No previous closed car standard prepares you for the quality you find in the Essex Coach.

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POULTRY AND RABBITS

Poultry Problems

By W. D. BUCHANAN, Extension Poultry Specialist, W. S. C.

We have some sick hens. Their combs and wattles and even the flesh turn a deep purple. Their droppings are sickly, yellowish, greenish, containing jointed, flat, cream-colored worms from 1 1-2 to 2 1-2 inches long. The trouble seems to be spreading. What is it and what is a good remedy? E. E. DeF.
Fairfield, Wash.

The flat jointed worms are tapeworms. They appear to be present in such numbers as to cause the other troubles which you note. No method of treatment is entirely satisfactory. The bureau of animal industry recommends that each foul be given a teaspoonful of castor oil to which has been added 15 drops of American wormseed oil. This medicine should be given after a fast and should be repeated in 10 days. For round worms give one pound of finely-ground tobacco in 25 pounds of mash. This treatment should be followed by a dose of epsom salts, about one ounce to each gallon of water. The latter treatment is sometimes prescribed for tapeworms, but I have never used it. Your best plan would be to consult a veterinarian.

Feeding Goslings.

I would like to know what to feed goslings. MRS. G. A. M'K.
Camas, Wash.

Goslings should be fed a mixture of equal parts, ground corn and middlings, or a good grade of mill run, wet with milk. If milk is not available they may be fed a ration composed of six pounds of corn, six pounds of middlings and one pound of sifted meat scrap, wet with water. They should have plenty of green pasture from the start, but should be kept out of the water unless they are raised with geese.

Fertility of Eggs.

I have kept a trio of geese for several years, and, while there is no doubt of their mating, a very large number of eggs are not hatched. This year the first 10 of the eggs did not hatch. They are fed grain and apples in winter and have free range and some grain and running water in spring and summer. What is the matter? E. V.
Nile, Wash.

If the eggs are fertile and fail to hatch it is doubtless due to a lack of vigor. The gander may be too old, or the geese may not be properly fed. Apples, especially sour apples, are not very good feed. Mangles, turnips or soaked alfalfa leaves and blossoms make good winter feed. In the breeding season they should have light feeds of a mash composed of equal parts ground corn and middlings, to which is added about 5 per cent of sifted beet scrap and an equal portion of medium sand, wet with water. Geese do not readily digest whole grain.

Blackhead in Turkeys.

What are the symptoms of blackhead in turkeys? MRS W. M'K.
Prosser, Wash.

The first symptom of blackhead in turkeys is a tendency to stand around and mope, with the head down and a bump on the back. This is soon followed by a greenish-yellow diarrhea. If the liver is examined it will be found to be covered with yellowish-green spots. Blackhead is supposed to be a contagious disease, but some authorities claim that it is caused by too much or too rich feed while the turks are young.

Rough Egg Shells.

What is the cause of hens laying eggs covered with ridges? One killed had a knotty growth in egg sack. I also get a number with soft shells. They get plenty of shell and granulated bone Is this a disease, and, if so, what is the cause?
Seattle, Wash. J. E R.

Ridgy or bumpy egg shells are an indication that the hens are slightly out of condition. It is not necessarily an indication of disease. I would suggest giving the hens plenty of green feed, exercise and fresh air. The knotty growth in the oviduct might be due to inflamation of the oviduct caused by excessive protein feed, or it might be due to a tumor traceable to the same source.

Incubator Temperatures.

Please tell me what the temperature of an incubator and a brooder should be
Hobarth, Wash. E. J.

An incubator should be operated at 102 degrees the first week and 103 degrees the second and third week, with the bulb of the thermometer at level with top of eggs. The temperature of the brooder, at the point where the chicks sleep should be from 90 to 98 degrees for the first few days and should be gradually reduced as the chicks grow older.

Keep Feet Clean.

My baby chicks have a swelling or growth on their feet that covers their toes. Seems to grow to about the size of a head of a match and in a short time makes them unable to walk or scratch. What is the matter and what is a good cure? MRS. P. W. P.
Aberdeen, Wash.

Chicks sometimes get balls of dirt on their toes from running on damp or muddy ground. It is not clear from your letter whether that is the trouble or whether there is a sore or scab. In any event I would advise cleaning and disinfecting the brooder and runs. Scaly leg, not often found on young chicks, is caused by a mite that works under the scales of the legs and feet. It can be cured by keeping the birds clean and washing the feet with a solution of kerosene and lard.

Form Poultry Association

Poultry keeping is greatly on the increase in Pacific county and as a result marketing difficulties are beginning to appear. In order to be fore-handed in the matter County Agent J. R. Beck called a meeting of all poultry keepers in the Willapa valley for one day in May.

There were 37 poultry keepers present and after reports by a committee that had been working on the matter it was voted unanimously to form a local association that would at an early date affiliate with the state association.

Temporary officers were elected as follows: V. L. Swartz of Menlo, president; C. E. Lambert of Willapa, vice president; Zack Shay of Willapa, secretary and treasurer, and Antone Christen of Frances and Frank Griffin of Lebam, directors.

Fifty-seven hundred hens were signed up at this preliminary meeting.

GOOD EGG PRODUCTION.

Mrs. Walter Kellar's White Leghorn hens at Albany, Ore., are making a record for egg production that is bringing satisfaction and profit to their owner. She has 390 hens and in March they averaged a little over 23 eggs each and in April 23 1-3 eggs each. Fof the first 15 days of May they had averaged 180 eggs a day for the entire number.

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Here's how! Send $1.00 today (currency, M. O., Checks, etc.) and we will give you by return mail, postpaid, two regular, full sized (double strength) $1.00 bottles of Imperial Virus. Use one to rid your place of these pests, and sell the other to a neighbor, thus getting yours free. Special inducements to represent us.

If more convenient, send no money, just your name and address to Imperial Laboratories, Dept. 498, 2110 Grand Ave., Kansas City, Mo. Pay postman $1.00 and few cents postage when two bottles arrive. Guaranteed to do the work to your entire satisfaction within 30 days or your $1.00 will be cheerfully refunded.—Adv.

Let the children share this mealtime beverage

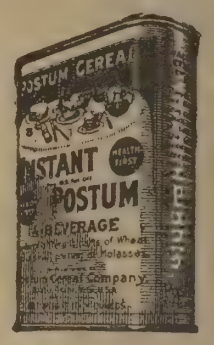


NO NEED to warn the little folks away from the table beverage when Postum is served; every reason to invite every member of the family to join in the enjoyment of this wholesome, satisfying drink.

Postum is made from Nature's best grain—wheat, and contains nothing to harm nerves or digestion.

You'll greatly relish its full-bodied flavor and aroma.

Your grocer has Postum in two forms: Instant Postum (in tins) made instantly in the cup by the addition of boiling water. Postum Cereal (in packages of larger bulk, for those who prefer to make the drink while the meal is being prepared) made by boiling for fully 20 minutes.



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"There's a Reason"
Made by Postum Cereal Company, Inc.
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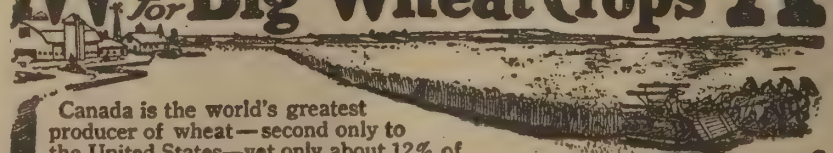
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ORCHARD AND GARDEN

Humus and Nitrogen

Humus and nitrogen are two essentials in the soil on which any crop is to be produced, but there is such a thing as too much of either or of both.

Many orchardists are discovering that the use of cover crops for orchard soil improvement may be overdone. To be sure, in many orchards and orchard regions insufficient cover cropping is practiced.

A rotation of tillage methods is being recommended by some of the best horticultural authorities. That is, they favor the growing of cover crops for a period of years, perhaps, to be followed by a period of clean cultivation. Where year after year a cover crop is grown and incorporated into the soil, the humus and nitrogen content may become excessive and result in an overabundant production of foliage and wood. There apparently is a point in leaf and wood production beyond which the fruit itself does not develop and mature satisfactorily. Poor apple coloring is one result of too much humus and nitrogen in the soil.

It is still probable, however, that the majority orchard lands in the Pacific northwest are deficient in humus and nitrogen content rather than oversupplied. It is a question for the individual orchardist, with the advice of expert horticultural authorities, to solve.

Cranberry Selling

Due to the fact that during past seasons, and particularly in that of 1921, many members disposed of their cranberries independently and at prices below that sought by the association, the Washington Cranberry association has decided to abandon the work of marketing and to devote its attention to that of increasing production and securing state and federal aid in combating cranberry diseases. Flagrant lack of support, it was stated, completely undermined the selling service offered by the association and officials decided that under the circumstances the necessary expenditure of time and money was not justified.

Of 33,000 boxes of cranberries that were harvested and sold last season by the Pacific Cranberry exchange, with which the Washington association was affiliated, 28,000 were furnished by Pacific county, Washington, and Clastop county, Oregon Grays Harbor county, Washington, furnished 4000 boxes and Coos county, Oregon, 1000. The more tender varieties were disposed of first, leaving the larger and firmer berries for the Christmas trade and distant markets were selected, while freight charges were kept down by carload shipments. This fixed policy not only helped maintain prices, which ranged from $4.25 to $6 per box and which averaged $5 for the bulk of the berries sold on the Coast, but also left the local market to independent growers, who were greatly aided thereby. An acute shortage of eastern cranberries contributed materially to the success of the selling campaign.

Ants in Bee Hives

By GEORGE W. YORK.

I would like to know what to do about ants in my bee hive. I have moved the hives several times, but they follow up. These ants are about one-fourth inch long and are red and black. They chase the bees and pinch them. They are also beginning to come into the house. What books or papers would be best for me to get to study, being a beginner?

Powell Butte, Ore. P. V. M.

1. Ants sometimes bother bees in the south, but here in the north I think they have never been a serious trouble. They usually seek the bees and the interior of the hive on account of the warmth. If salt or powdered sulphur is put where the ants gather they are usually driven away.

2. There are a number of bee books and bee papers devoted to bee culture. Perhaps if I mention two or three books and papers it will suffice.

"ABC of Bee Culture" is the most complete book on the subject of beekeeping. It is cloth-bound, with over 850 large pages, and is mailed for $3.15. It is really an encyclopedia on the subject.

"The Honey-Bee" is another large cloth-bound book, originally written by Rev. L. L. Langstroth, the inventor of the movable frame hive in 1852, which revolutionized beekeeping and placed the business of bee culture upon a profitable basis. This book is mailed for $2.65.

"First Lessons in Beekeeping" is perhaps the best small book for beginners. It has 167 pages, is cloth-bound, and is mailed for $1.10.

As in bee books so in bee papers, there are two leading current editions, and both are published monthly. First is the "American Bee Journal," which is the oldest bee paper in the English language. It was started in 1861. It has usually over 40 pages each issue, and the annual subscription price is $1.50. As the writer edited and published this paper for 20 years, naturally he puts it first in importance as well as in age.

"Gleanings in Bee Culture," is another monthly bee paper which was started in 1873, and is also a very excellent publication on the subject of bees and beekeeping. It is $1 a year.

I will be glad to order either books or papers for any one if it is desired that I do so. Simply address me, Box 84, Spokane, Wash.

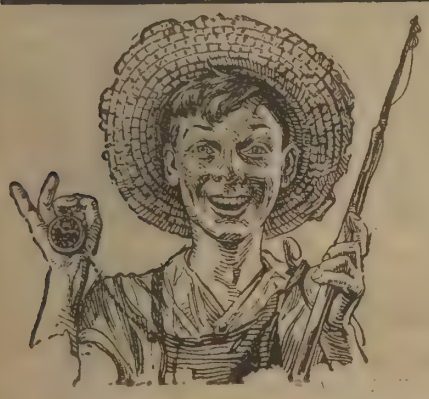
Plants Six Acres of Potatoes

H. A. Kellner of Ferndale, Whatcom county, is planting nearly six acres of potatoes, which he expects to have certified by the state seed inspector. He is planting the long white varieties, believing that there is a better sale for potatoes of this type on the local market. Three acres of the Pride of Multnoma have already been planted and the land is ready for 2½ acres of the Improved Burbank. Along the edge of the patch Mr. Kellner will plant a row each of the American Wonder and the White Star mainly for trial purposes.

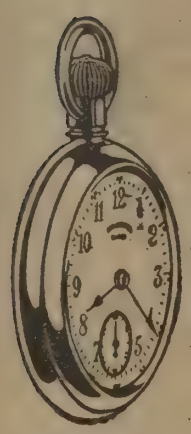
"There is a good demand for certified seed and there is always a shortage when planting time comes," said Mr. Kellner. "I am going to keep my fields clean and use a sprayer to prevent blight and there should be no cause for losses in any other way. The main trouble in raising certified seed is to keep the patch rogued during the growing season and pull out all plants that are not true to the variety and type planted."

Mr. Kellner has had fair success with the Netted Gem, but considers their yield less than some of the other varieties that sell just as well on the market.

A sprayer was purchased jointly by one of the neighbors and Mr. Kellner, and the machine will be used as needed by either man. It is one of the four-row type that takes its power from the axel and operates the pressure pumps. It is one of the first to be used in the neighborhood.



For Summer Time and All the Time



THERE is a certain steady-going faithfulness about Ingersoll Watches that makes them preferred for time-telling on the farm. A sturdiness and reliability that is all-American in spirit.

More than that, a new Ingersoll is a matter of relatively small expense, in the event of possible loss or breakage.

Your dealer can show you a complete line. The models with Radiolite faces are mighty useful in the dark.

Ingersoll Yankee $1.50

Ingersoll Watch Co., Inc.
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KROYER BUILT

135% Strong



WIZARD 4-PULL TRACTOR

DEPENDABILITY

DURABILITY

After delivering the normal listed drawbar pull, the Wizard has 35% extra reserve strength and power—making it 135% strong and 135% powerful.

This is your assurance that the Wizard will make good on the toughest jobs you give it, and will keep at it day after day and season after season.

Rigid 4-Wheel Drive Gives Tremendous Traction

Traction equal to or better than that of a track tractor, with amazingly low upkeep cost, is made possible by the revolutionary rigid 4-wheel drive principle with leader shoes on every wheel.

Every tractor user should know the facts about this wonderful new tractor.

For details, write your name and address across this advertisement and mail it to us.

Kroyer Motors Company

Los Angeles Harbor, San Pedro, Cal.

QUALITY

BEALL METAL TANKS

METAL TANKS for water, oil, gasoline. Any size for any purpose. Beall tanks are made in the west—are better and cost less. Stationary tanks, tower tanks, wagon tanks, storage tanks, water system tanks, stock watering tanks. Write for catalog and price on the kind of tank in which you are interested.



COAST CULVERT & FLUME CO.
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SPOKANE CULVERT & TANK CO.
SPOKANE WASH.

POST CARDS BRING BIG RETURN

Many of our advertisers offer free booklets and information which is very much worth your while to send for. A postal will bring them. Why not place a dime or so in your rural mail box with a note requesting the carrier to leave you some cards? Then use the cards in writing advertisers. When you do so be sure to mention THE WASHINGTON FARMER.

In writing advertisers, be sure to say you saw their advertisement in The Washington Farmer.

How Many Pigs in the Litter?

By C. M. HUBBARD.

"I am going to dispose of my sow because the size of her litter is decreasing every year; at first she had 22 pigs, then 19 and this litter she only had 17. After a few more litters she won't be having any!" The sow was a splendid individual and she and her litter made a fine picture to a lover of live stock, but here was a farmer who did not know when he had the "real thing."

The standing of any breed of hogs in a community depends, quite largely, on the number of pigs farrowed to the litter. For the farmer to show a profit on his hogs the litter must be reasonably large in order to take care of the overhead expenses and still leave him a reasonable return for his investment in time, feeds and money. The farm sow should be farrowing, on the average, from eight up to, say, 12 pigs, and if any of them fall consistently below this lower limit, they should be put into the pork barrel where they belong. Naturally gilts farrowing at one year of age may have a small first litter. What the breeder or farmer must do is to watch such a sow and if she farrows more small litters consign her and her offspring to the fattening pen. However, one small litter from a sow does not mean that she will continue to farrow small litters. A farmer recently stated to me that one of his sows which had four pigs the first litter, farrowed 14 the next. Such instances are common.

Cause of Small Litters.

The question is, what can we do to insure larger litters? The answer lies partly with the purebred breeder and partly with the farmer. First we must ascertain the factors causing small litters. Among these may be mentioned as hereditary tendency toward farrowing only a few pigs, lack of length of body in the mother animal and the sow being too thin and continuing to lose flesh at and after the breeding date. The type of ration fed may also have an ultimate bearing on prolificacy.

Charles Talmadge, a former Berkshire breeder and one of the best known hog men in the Pacific northwest, recently stated that every breeder should closely watch prolificacy and, no matter how good the sow is, no matter what prizes she may have won, or be capable of winning, where sows are weak in this essential characteristic, dispose of them and their litters to the butcher immediately; that for the good of the breed under no circumstances should they be sold to other breeders or to farmers. This is because a tendency toward small litters is carried on in the blood stream of the animals concerned. There is no doubt that inheritance is the main factor involved in the size of litters, being modified to a certain extent by the age of the sow and her condition at breeding time, as well as whether she is of a "big" or "medium" type, and other factors. A rigid weeding out of sows habitually farrowing the smaller litters and the using of boars and sows from large litters will do much to restore the size of, or increase the size of, the litter.

While there is no experimental data to indicate that length of body has a definite bearing on the number of pigs in the litter, still breeders are of the opinion that, as a rule, the longer-bodied gilts or sows average the larger litters; that short bodied sows, from short dams and sired by chunky boars, may farrow large litters, but such cases are exceptions. Large litters is one of the factors explaining the growing popularity of the larger type of hogs.

Vigorous Condition Essential.

The experience of our better breeders and farmers indcate that sows at breeding time should be in fair condition, vigorous, and putting on some flesh if large litters are desired. Their experience also suggests that too much fat on sows at this time is worse than their being too thin. Undoubtedly half way between the two extremes is one of the practical ways of securing more and stronger pigs. Under ordinary conditions the boar has no effect on the number of pigs, as there are a thousand, or more, sperm cells for each female, or egg, cell. However, a boar may have been overused during the breeding season or be in such a rundown condition that while his sperm cells may fertilize the egg cell, still they may lack the life and strength necessary for full embryonic development of the pigs from this mating.

Naturally the continued feeding from generation to generation of a ration exceptionally heavy in such feeds as corn, barley, or wheat, which are lacking in muscle and bone building material, will shorten the body of the hog and have a tendency toward the production of less pigs to the litter.

Thoughtful breeders, by observing these details of breeding, selection, feeding and management, raise larger litters and popularize their breed with the farmer because other factors being equal, larger litters are more profitable.

Your Health

By Royal S. Copeland, M. D., F. A. C. S.

HOT WEATHER CARE OF BABY.

It will not be long before hot days are upon and the mother of a young baby must exercise care to protect the infant against the complaints all too common in summer time.



Dr. Copeland.

There is no brighter page in medical history than that devoted to infant welfare. The last 25 years, the lifetime of the young mother of today, has changed and wonderfully improved the prospect of the newly-born. Twenty - five years ago one baby out of every four died in the first year of life. Now, in New York city, only one out of 14 dies. Isn't this a wonderful record?

This great advance in child welfare is due in large measure to the better milk fed the bottle babies and to the fact that more of them are breast fed. Good milk, pure milk, germ-free milk—this is the secret of health and life for the infant.

I can never resist mention of Mr. Nathan Strauss when I speak about babies. His fight for pure milk, and especially for pasteurized milk, is one of the epoch-making facts of infant history. He is as much entitled to a niche in the hall of fame as is any military hero or literary genius who ever lived.

The bottle-fed baby must be carefully watched from now till cool weather in the fall. Every care must be exercised to keep the bottles, nipples, all the utensils used in preparing the feedings, as well as the milk itself, perfectly clean.

In this connection cleanliness should be surgical cleanliness. By this I mean that everything used in connection with the feeding of the baby must be as free from germs or contamination as are the surgeon's hands, his instruments and all the things which touch the patient who is to be operated on.

The growth of the child is the surest test of his progress in the right direction. The healthy and perfectly normal infant grows amazingly the first half year of his life. In that time he doubles his weight at birth. He adds an equal amount in the next six months. If he weighed seven pounds at birth he should double this in six months, thus weighing 14 pounds. When he is a year old he should weigh 21 pounds.

The modern ways of caring for an infant, and especially the frequent use of the scales, must seem very fussy and unnecessary to old folks. I remember an old uncle of mine said: "Every sucking baby should be given a piece of pork-rind to chew on." Of course, such advise as my relative gave would be considered heresy in this scientific age. But "the test of the pudding is in the eating." The result of these modern methods of caring for infants demonstrate their superiority over the old ways.

The good health of your baby next fall will well repay you for all the trouble you take during the summer.

Just Folks

To be interested is to be alive. Just in proportion as you don't care, you are already dead.

When it comes to living, curiosity is of the essence of the contract.

Thus enthusiasm and even exaggeration is permissible.

America would be a sad place if it waited for the judicial spirit to create.

Mistakes are forgiven if you only do something worth while.

Only today I read of a young man who is occupying a high position on an Atlantic coast daily. Fifteen or 20 years ago he came to me as a raw, overgrown country boy. He persisted in doing things, no matter how crudely.

A few years before another man worked with me who was a finished worker, but he never got anywhere. He became more and more of a hang-around in Washington, D. C., officialdom, until I read of his death a few weeks ago.

You must do things well to succeed, but you have got to do them first, even crudely. Learn to do first; learn to finish secondly. Some spend all their energy in learning to finish.

Fifty years ago there was a minister in New England who was fond of talking of the magnificent enterprises that are carried on in heaven. He was a live wire and I have no doubt that the influence of his enthusiasm is yet radiating throughout the world.

About the same time there was another New England minister who put so much energy into his sermons that he was exhausted on every Monday morning, but he held the partorate of a little country church for 50 years. He christened and married and buried people for almost two generations. I knew him during the last years of his life.

Looking around one sees everywhere resigned people, and satisfied people, and unconcerned people, and retired people, who have lost all youthful interest in their work or in life generally.

I would rather be an energetic doorkeeper in the house of life than one to sit at ease in the master's chair.

If you must choose, choose strenuous and ugly days. Let the other fellow mollycoddle himself to his heart's content.

E A S

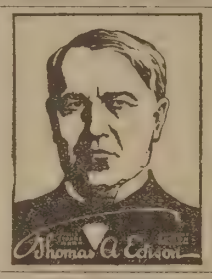
POISONED OATS FOR SQUIRRELS.

Poisoned oats for poisoning squirrels is again being handled this year by the Spokane county agricultural agent, the mixture being sold for 20 cents per quart, put up in 4-quart, 8-quart, 16-quart and 32-quart sacks. The demand came fast and over two tons were sold in 14 days, many coming back after their second order, which indicated that much more of the poison will be put out by Spokane county farmers than last year. The cost this year is about one-third cheaper than last year.

A summary of the sales made so far shows that 504 farmers farming 113,322 acres have purchased the two tons of poison and in addition have purchased 410 ounces of gopher poison mixture.

NOTHING TO COMPLAIN ABOUT.

Don't cry when you hit your own thumb.



EDISON'S BATTERY AND FARM LIGHT PLANT REDUCED IN PRICE 20 TO 50%

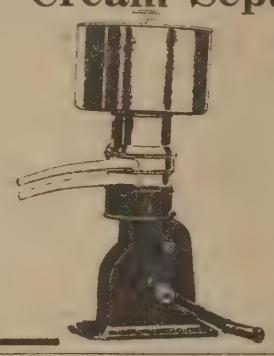
The low cost of operation and the simplicity of running, combined with the durable parts used makes this power plant the most practical and economical one for farm use.

LASTS A LIFETIME, MAKES YOUR WORK EASIER AND YOUR HOME BRIGHTER. DESCRIPTIVE LITERATURE AND INFORMATION FURNISHED FREE. WE ALSO HAVE A COMPLETE STOCK OF ELECTRICAL SUPPLIES TO SELL AT THE RIGHT PRICES. WHOLESALE AND RETAIL.

Nixon-Kimmel Co.

S169 WALL ST., SPOKANE, WASHINGTON.

Cream Separators at Factory Prices

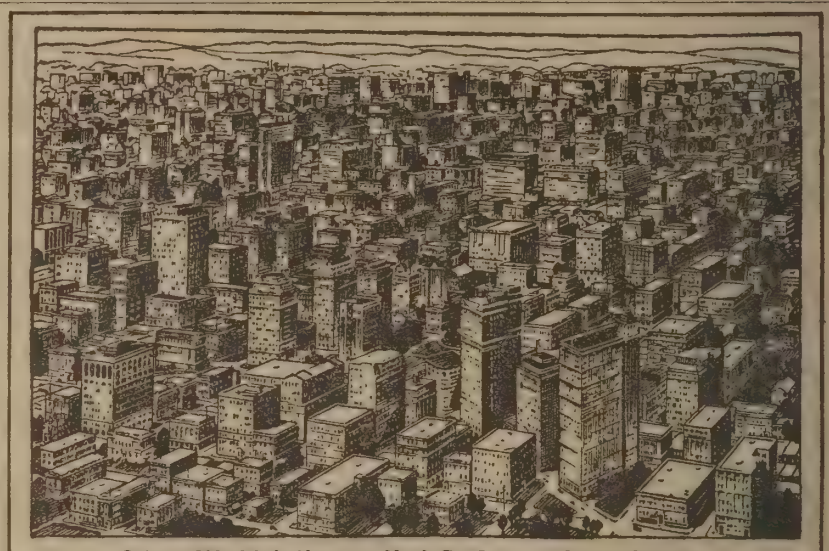


$27.00 Time Payments If Desired

Machine illustrated capacity 15 gallons per hour. Made of the best Swedish iron and steel by an old established factory, FULLY GUARANTEED. Factory Branch in Portland, where you will always receive FACTORY SERVICE. To quickly introduce our machines we will make astonishingly low prices to the first purchaser in each locality. Other sizes comparatively low in prices.

Chas. B. Walker Branch Manager

8 FRONT ST. PORTLAND, OREGON.



Only one-fifth of the buildings owned by the Bell System are shown in this picture.

A Telephone City

Above is an imaginary city, made by grouping together *one-fifth* of the buildings owned by the Bell System, and used in telephone service. Picture to yourself a city *five times* as great and you will have an idea of the amount of real estate owned by the Bell System throughout the country.

If all these buildings were grouped together, they would make a business community with 400 more buildings than the total number of office buildings in New York City, as classified by the Department of Taxes and Assessments.

Next to its investment in modern telephone equipment, the largest investment of the Bell System is in its 1,600 modern buildings, with a value of $144,000,000. Ranging in size from twenty-seven stories down to one-story, they are used principally as executive offices, central offices, storehouses and garages. The modern construction of most of the buildings is indicated by the fact that the investment in buildings is now over three times what it was ten years ago.

Every building owned by the Bell System must be so constructed and so situated as to serve with efficiency the telephone public in each locality, and to be a sound investment for future requirements.

"BELL SYSTEM"

AMERICAN TELEPHONE AND TELEGRAPH COMPANY

AND ASSOCIATED COMPANIES

One Policy, One System, Universal Service, and all directed toward Better Service

Much Farm Equipment

The United States department of agriculture some time ago prepared a report made up of information from 583 manufacturers, showing the manufacture and sale of farm equipment in the good year of 1920.

The general summary for 1920 showed that 90 manufacturers made 203,207 tractors, sold 162,988 in the United States and exported 29,143.

The development of gas tractors is shown as growing from 29,670 in 1916 up to 203,207 in 1920. The majority, or 107,782, had a maker's rating of from 16 to 18 horsepower.

The report on general items making up the farm equipment line is interesting, for it shows that in 1920 there were made 222,587 cream separators, 48,540 fertilizer distributors, 268,287 gasoline and kerosene engines, 103,036 manure spreaders, 500,690 pumps, 24,052 silos, 75,736 windmills, etc.

LARGER STRAWBERRY PRODUCTION.

The United States bureau of markets estimates that there will be a 17 per cent increase in production from an acreage 20 per cent greater of strawberries this season over last year. The forecast of production of strawberries shows Tennessee leading with 2837 cars; Louisiana follows with 1892; Missouri, 1181; Maryland, 1176. Then comes California with 780; Kentucky, 710; North Carolina, 607.

B. F. VASSAR, Brush Prairie, Wash.—I want to give a word of praise for The Washington Farmer. I prize it highly. I have never taken any farm journal of its equal. The information published is from men who have had actual experience in what they write, and that's what counts.

A. G. BARBER, North Bend, Wash.—We take several farm papers, but we prize The Washington Farmer above them all. I don't know as it could be improved upon much.

Farmers' Want Ads

HELP WANTED—MALE 3

WANTED — SALESMAN WHO CAN SELL high-grade, dependable nursery stock; several counties in Oregon, Wash., Idaho and Montana now open for assignment. Our selling contract will interest you. Address Albany Nurseries, Inc., Albany, Ore.

HELP WANTED GENERAL 5

RAILWAY MAIL CLERK EXAMINATION. Now is the time to prepare. Civil Service Department, Jenkins Institute, Spokane.

SITUATIONS WANTED—Male 21

POSITION WANTED BY A1 HAND MILKER, Dane; 10 to 15 cows; sanitary board and room; moderate wages. A. S. Myers, Springfield, Ore.

YOUNG MAN, EXPERIENCED IN HAND AND machine milking, desires employment on dairy farm. Walter U. Hughes, Almira, Wash.

EDUCATIONAL 45

EARN MONEY QUICKLY—THERE'S NO LIMIT to one's earning capacity in business. And this great business college after training you thoroughly, places you in a paying position. Courses include banking, stenography, accounting, private secretarial. Write for free catalogue. Behnke Walker Business College, Portland, Ore.

FRESH FOOD PRODUCTS 51-1

WHITE ALFALFA, SWEET CLOVER honey; 1 60-lb. can, $7.50; 2 60-lb. cans, $14.50; six 10-lb. cans, $8.50; three No. 10 pails, prepaid third zone, $5.50. Wells D. Rose, Sunnyside, Wash.

SMOKED SALMON, 5-POUND BOX, $1.25; salt salmon bellies, 5 pounds, $1.25, delivered by mail. Coffin Fish Co., Seattle, Wash.

HONEY—FIRST-CLASS ALFALFA, SWEET clover honey; 1 60-lb. can, $7; two cans, $13.50. A. L. Traner, Touchet, Wash.

FULL CREAM BRICK CHEESE, DIRECT TO consumer, parcel post, 25c lb., postage added. C. P. Dobler, Menlo, Wash.

WORLD'S BEST CLOVER HONEY, 60 pounds, $6.15; two 60s, $12. Browne, Box 499, Twin Falls, Idaho.

MISCELLANEOUS—FOR SALE. 60

SASH AND DOORS—O. B. WILLIAMS CO., 1943 First ave., So. Seattle. Chicken house sash, 20" wide by 25" high, 80c; a dozen different sizes in stock for immediate shipment. Skylights for chicken houses, 36"x40" price, glazed, $2. This is the size recommended by the Western Washington experiment station. We carry them in stock for immediate shipment. Sash and doors for all purposes at lowest prices. All orders receive prompt attention. Our large illustrated catalogue No. 35, showing full line of building material and built-in fixtures for the home, free on request. O. B. Williams Co. Established 1899.

WALL BOARD—WRITE FOR SAMPLE OF Washington plaster wall board; won't warp, won't burn. Manufactured by Washington Building Products company, 6851 E. Marginal Way, Seattle, Wash.

NATURAL LEAF TOBACCO—CHEWING, 5 lbs., $1.50; 10 lbs., $2.50; smoking, 5 lbs., $1.25; 10 lbs., $2. Send no money, pay when received. Tobacco Growers' Union, Paducah, Ky.

KENTUCKY TOBACCO—SPECIAL BARGAIN. Send no money, pay for tobacco and postage when received. 10 lbs. 3-year-old smoking, $1. Farmers' Grange, Hawesville, Ky.

QUEEN BEES — INCREASE YOUR HONEY crops by introducing my strain of unsurpassed Italian queens. Write for circular and price list. J. D. Harrah, Freewater, Ore.

HOMESPUN TOBACCO, 3 POUNDS, $1; 10 pounds, $2.50. Send no money, pay when received. Farmers' association, Jonesboro, Ark.

HOMESPUN CHEWING AND SMOKING TOBACCO; 5 lbs., $1.25; 10 lbs., $2.50; 20 lbs., $4. Hickory Ridge Farms, Mayfield, Ky.

TOBACCO—HOMESPUN SMOKING, 10 LBS., $2.50; 20 lbs., $4; fine chewing, 10 lbs., $3. Farmers' club, Mayfield, Ky.

FARMERS' WANT ADS

This is the farmers' "want," "sale" and "exchange" department for small advertisements of farmers, including live stock and poultry.

Advertising rates for ads running 1 to 3 times, 10c per word per insertion, with a special rate to Farmer subscribers, as follows: Ads running 4 to 12 times, 9c per word per insertion; ads running 13 times or more, 8c per word per insertion.

All commercial and land advertising 10 cents per word each insertion. Open also to nonsubscribers.

In using these columns advertisers must observe: (1) No advertisements will be inserted for less than $1.00. (2) Every word, number and initial, including name and address, must be paid for. (3) New advertisements, changes of copy or cancellations must reach general office, Spokane, Wash., 10 days in advance of publication date. (4) Cash must accompany order.

Above rates include insertion in The Washington Farmer, The Idaho Farmer and The Oregon Farmer, which constitute the Pacific Northwest Farm Trio, 46 Review Building, Spokane, Wash.

MISCELLANEOUS—FOR SALE (Continued) 60

PIPE — NEW AND SECOND-HAND, ANY size; low price; standard grade roofing paper at a big saving; belting, all plies, all sizes, cheap. Write Alaska Junk Co., S120 Adams st., Spokane, Wash.

HOMESPUN SMOKING TOBACCO, MILD AND mellow; 10 lbs., $1.50; 20 lbs., $2.75; delivery guaranteed. We furnish free recipe for preparing. Smoking Tobacco Exchange, Sedalia, Ky.

TOBACCO—NATURAL LEAF CHEWING AND smoking; rich, ripe, two-year-old; 5 lbs., $1.75; 10 lbs., $3; sample, 20 cts. Maddox Bros., Dept. 30, Mayfield, Ky.

BEES—ITALIAN QUEENS. WRITE FOR prices. Ira C. Smith, The Dalles, Ore.

MISCELLANEOUS. 61

BARGAIN IN 32X56 REAR BUFFALO PITTS separator; would consider trade for Ford tractor or one-ton truck. Chas. Fitzgerald, Sequim, Wash.

MISCELLANEOUS—Wanted 63

HIDES—WE BUY HIDES OF ALL KINDS. Write for prices and tags. Hibbard-Stewart Co., Hibbard Bldg., Seattle.

WOOL—WE BUY WOOL AND PELTS. WRITE for prices and tags. Hibbard-Stewart Co., Hibbard bldg., Seattle.

MACHINERY—For Sale 93

SELF-LAYING TRACK TRACTOR ATTACHment for Fords; does work four horses; closing out while they last, $95 each. Original price, $325. 15 h. p. J. I. Case steam traction engine, first-class shape, $750; easy terms; 15-30 Rumley Oil Pull tractor, fine condition, ready to go, $1000; easy terms. Gallagher Warehouse, Ash and Sinto, Spokane, Wash.

THREE 2-BOTTOM, 16-INCH OLIVER GANGS, new model 19B, steel bottoms; extra shares, quick detachable; $60 each. Ralph W. Snyder, Washtucna, Wash.

EXTRAORDINARY BUYS IN USED COMbines, caterpillars, separators, engines and trucks. Fallquist Brothers, Pullman, Wash.

STOVE REPAIRING 128

WRITE MYER RUBENS, SPOKANE, ABOUT stove repairs, welding broken parts, nickle plating.

FUR-BEARING ANIMALS 170

SILVER FOX RAISING PAYS BIG—KING of all fur bearers. Start now. Easy to raise, easy to sell. Few pairs quality, registered, breeders left; fully guaranteed. Information free. United States Silver Fox Farms, 1210 Hutton bldg., Spokane, Wash.

SILVER AND CROSS FOXES FOR SALE. William Rambo, 407 Sprague, Spokane.

RABBITS and HARES 173

PEDIGREED FLEMISH AND CHECKERED Giants. Prices not fancy. Brookside Rabbitry, Hubbard, Ore.

POULTRY 174

HENACRES WHITE LEGHORN PULLETS are classed among the best. They are large, healthy, range raised, good looking, bred to lay and are reasonably priced. March hatch, June delivery, $1.75 each: 500 for $850; May 1 hatch, July 1 delivery, $1.50 each: 500 for $700; satisfaction guaranteed or money refunded, including return express charges. Ask your neighbor about Henacres Leghorns. June chicks, 16c each; 500 for $75. Free illustrated catalog. Henacres, Box A, Prosser, Wash.

CERTIFIED S. C. WHITE LEGHORN BABY chicks from heaviest laying stock; safe delivery; live, vigorous chicks guaranteed. No money in advance; pay on delivery. Prices for May and June $3.50 per 25; $6.50 per 50; $12 per 100. Special prices 500 and 1000 lots. Largest electric hatchery in the world. Established 1898. Member Sonoma county farm bureau accredited hatchery list. Must Hatch Incubator Co., 445 Seventh st., Petaluma, Cal.

THE PROGRESSIVE HATCHERY announces the following prices for May and June, 1922: Single Comb White Leghorn chicks (trap nested), $17 per 100; selected, $14 per 100. Reduced prices for large orders. R. I. Red chicks, trap nested or selected stock, $25 and $20 per 100. Terms, 20 per cent with order; safe delivery guaranteed. 1534 N. E. 12th st., Portland, Ore.

FRESHLAID WHITE LEGHORN CHICKS have the qualities you want; vigor and scientific breeding for the heaviest egg production. Freshlaid June chicks have been making good as winter layers for ten years because they have the pep to mature early. $15 100, but worth more. Free catalog. Freshlaid Farm, Colfax, Wash.

WHITE LEGHORN BABY CHIX FOR MAY and June delivery at $12 per 100; $115 per 1000, from flocks inspected and accredited by the Sonoma county farm bureau. Safe arrival of full count, live, strong chix guaranteed The Pioneer Hatchery, 422 Sixth street, Petaluma, Cal.

EBORALL'S STRAIN WHITE LEGHORNS. Our hatch of 2300 chicks per week is now booked for Feb., March and April, principally to old customers. Your inspection is invited at all times. We are now booking chicks for May at $14 per 100. Write for circular. Crystal White Poultry Farm, McMinnville, Ore. Box 33.

TRY OUR PARCEL POST PACKAGE—KEEP the old hen busy. We will ship you first-class baby chicks, postpaid to your door, direct from the hatchery and guaranteed all alive. Price, $4.50 per 25; $8 per 50. For delivery April, May or June. Order now. The White Hatchery, Petaluma, Cal.

WHITE ROCK BABY CHICKS, "DANIEL'S IDEALS," from our own trapnested stock entirely. Write for prices and dates, also eggs for hatching. Free catalog. Ideal Poultry Yards, Hoquiam, Wash. Star Route No. 25.

TANCRED STRAIN WHITE LEGHORN BABY chicks, May, $15; June, $12.50; $100 per 1000. Safe delivery guaranteed. D. A. Gillette, R. 4, Yakima, Wash.

S. C. ANCONAS, SHEPPARD'S SELECT AND 331 egg strain; eggs, $1.75 per 15; chicks, $18 per hundred. A. B. Larson, Warren, Ore.

POULTRY (Continued) 174

BABY CHICKS FOR MAY AND JUNE ONLY —4000 every 4 days of the famous O. A. C. strain S. C. W. L.; raised and run on free range. They have the vim. Prices, first half of May, $17, last half of May, $15; June, $12. Moorhead Poultry Farms, Granger, Wash.

EGGS FROM PRIZE-WINNING MAMMOTH Toulouse geese, the kind that hatch; 50c each, $45 per 100. Imperial white Pekin duck eggs, $2.50 per 15; $14 per 100. Goslings, ducklings. R. E. Baumgardner, Wenatchee, Wash.

MAMMOTH PEKIN DUCKS, "AMERICA'S finest." New blood this year direct from C. C. Shoemaker; eggs, $2 per setting, $12 per 100. Crystal White Poultry Farm, McMinnville, Ore. Box 33.

DOLLARS FOR YOUR EGGS—WE PAY THE top market prices for your eggs and poultry. Daily cash remittances. Western Produce Co., Spokane.

OREGON AGRICULTURAL COLLEGE WHITE Leghorns. Eggs, $1.50 per setting; $6 per 100, prepaid. Late May and June chicks, $12.50 per 100. Russell Poultry Yards, Route 3, Corvallis, Ore.

BABY CHICKS — WE GUARANTEE OUR chicks to be from the highest producing hens in Petaluma. Write for further information. The White Hatchery, Petaluma, Cal.

CARNATION WHITE LEGHORN PULLETS; April and May hatched pullets from my high record trap nested stock. E. W. Raush, Carnation Poultry Farm, Kent, Wash.

BUFF LEGHORN EGGS, CHIX AND STOCK— My strain is proven champions for exhibition and laying. R. Stromquist, Tigard, Ore.

SHIP YOUR LIVE POULTRY AND EGGS TO us. Highest prices paid; daily remittances. Inland Poultry House, Spokane, Wash.

FANCY WHITE WYANDOTTE COCKERELS, $2.50; hatching eggs, two dollars setting. H. L. Lamon, American Falls, Idaho.

FORD'S BRED TO LAY S. C. WHITE LEGhorns; 2-year-old breeding hens, $1 each. W. A. Ford, Umatilla, Ore.

LIGHT BRAHMAS, EGGS, $1.75 PER 15; Bronze turkey eggs, $3.50 for 10. Mrs. C. W. Laabs, Irby, Wash.

HUNT'S BARRED ROCK EGGS, PRICES REduced through April, May. W. A. Hunt, Lebanon, Ore.

LIGHT BRAHMA EGGS, $1.50 PER 15. DALton Poultry Farm, Coeur d'Alene, Idaho.

LIVE STOCK. 177

LARGE, HEAVY PRODUCING HOLSTEINS for sale at all times in car lots; tuberculin tested; 150 to 200 head always on hand; well marked heifer calves from registered sires and heavy producing dams; crated for shipment anywhere, $25 f. o. b. Levinson & Balmelli, Yakima, Wash.

SHIP US YOUR POULTRY AND LIVE STOCK. We pay the top market prices. Light veal, fat, fancy, 12½c to 14c; dressed block hogs, 14½c; hens, light, 17c; heavy, 20c; prompt returns. John Lewis & Co., Spokane, Wash.

WE PAY TOP PRICES FOR YOUR LIVE OR dressed veal, hogs and poultry. Your check by return mail. Shipping tags on request. M. & J. Packing Co., Spokane.

DUROO BARGAINS—WEANED PIGS, BEST pedigree, registered and crated, $12; boar and sow, $22; boar and two sows, $32. Shadeland Farms, Amity, Ore.

$500—IMPORTED ROYAL BELGIAN STALlion for sale. Philomath Belgian Horse Co., Frank Wyatt, Philomath, Ore.

BERKSHIRES—GILTS, YEARLING BOAR grand champion, 1921. Sure breeder. Simonson Hog Co., Buena, Wash.

IF YOU WANT A GOOD REGISTERED Guernsey bull for $75, see Peter Erickson, Estacada, Ore.

HARNESS and SADDLERY 189

SEND FOR FREE HARNESS AND SADDLE catalog today; cut out the middleman, buy direct from the manufacturer. Lowest prices in the west; satisfaction guaranteed. Established 1881. Write Pierce Harness Co., Dept. T, Spokane, Wash.

JOB PRINTING. 372

GUARANTEED BETTER BUTTER WRAPpers: 100, 60c; 250, $1.25; 500, $2.25; 1000, $4; printed to order. Home Specialty Co., Middleton, Idaho.

MONUMENTS. 510

COMPLETE STOCK, RIGHT PRICES. CORrespondence solicited. J. W. Harding, Inland Monument Co., N1001 Monroe, Spokane.

SEEDS. 620

CHOICE MANGEL SEED, 35C LB., POSTpaid; Danish sludstrup, Gate Post, yellow tankard. Warren Cook, La Conner, Wash.

NURSERY STOCK. 621

PROGRESSIVE EVERBEARING STRAWberry plants, $1.25 100; $9 1000, postpaid, inspected, guaranteed. O. W. Zurcher, 104 S. 17th street, Boise.

ORIENTAL POPPIES, FIFTY CENTS PER bunch; maiden hair ferns, fifty cents. Mrs. Katie Cooke, Shelton, Wash.

FARM LANDS FOR SALE. 651

CUTOVER LANDS, EASY TO CLEAR; $8 TO $20 per acre; 25 miles north of Spokane; on hard surfaced highway; Great Northern and Milwaukee railways; excellent opportunity for dairying and stock raising with Spokane markets and creamery near at hand. Will help the man who will live upon this land and agree to clear a part each year by giving lumber to help start his buildings, and a pure-bred Jersey bull to groups of farmers. Interest and payments low. Write Milan Farms Development company, Dept. T, Old National Bank bldg., Spokane, Wash.

$8500—160 ACRES, 10 MILES SPOKANE; 90 acres good soil under cultivation; some good timber; nice creek, fair bldgs., orchard; good for mixed crops, alfalfa, clover, grain and potatoes do well; ½ cash. Owner, N1423 Wall., Spokane.

47 ACRES, CHEHALIS VALLEY, IMPROVED; new buildings; location ideal; in crop; terms. Write Charles Raytons, Chehalis, Wash. R. 1.

FARM LANDS FOR SALE (Continued) 651

WITHOUT MONEY YOU MAY BUY OR TRADE for any of my twenty-four farms in the best farming sections of Idaho; close to good towns, where they raise large crops and climate ideal; excellent dairy country, and crops consist of corn, grain, sugar beets, seed peas, seed potatoes, alfalfa seed, clover seed and fruits. Price, $10 to $175 per acre. I am going to retire from farming and offer for sale any farm I own on easy terms; will trade for city property, notes or securities. O. O. Skalet, St. Anthony, Idaho.

BITTER ROOT VALLEY, MONTANA, WANTS you! Many unusual farming conditions make this valley prosperous; small irrigated farms, devoted to dairying, fruit growing, poultry, strawberries, potatoes, seed peas, garden truck pay well in the Bitter Root. Write for free booklet No. 6. It tells about a mighty good place to live, a valley "where farming is different." The Bartlett-Bolen Co., Hamilton, Montana.

BIG OPENING SALE OF YAKIMA VALLEY farmland, under an assessed state and government approved irrigation project; good, deep soil; close to town, railroads and state highway. We sell in tracts to suit purchaser at $25 per acre and up, on easy terms. Our many sales to farmers show that this land is a good investment. Western Lands, Inc., owners, 918 Green bldg., Seattle.

THURSTON COUNTY—5000 ACRES, VERY fertile, level; fruit, berry and poultry lands; right at beautiful state capital. No extremes of temperature; no storms or floods, no irrigation; bumper crops; fine markets. 5 or 10 acre tracts; low prices and long term payments. Send for our valuable pictorial booklet. Norpia Realty Corporation, Olympia, Wash.

WE SELL FORECLOSED LANDS FOR A loan company for one-third cash, balance easy terms. When writing tell us what you want, where preferred, how much you will invest, kind of farming you contemplate, as we have no list and must write special description in each case. No trades. Hartford Land company, 601 Paulsen bldg., Spokane, Wash.

174 ACRES, ON KOOTENAI RIVER AND Great Northern; 94 bottom, 8 pasture, 18 fenced and cross-fenced; 3 plowed, 15 ready; ½ acre fruit, 4 cabins, team, harness, wagon, plow, harrow, tools, etc.; 2000 ft. lumber, 14 bales roofing, 6 windows, fine cattle or chicken ranch; fine government range. $4000. Chas. R. Scholz, owner, Ural, Mont.

IN SKAGIT COUNTY, WASH., I OWN SEVeral 40-acre tracts new logged-off land in Mt. Vernon district, the proven farm belt. This joins big dairy and berry farm and close to market, highway and railroad. Price $1400; $200 cash, balance 6 years. H. C. Peters, 726 3d ave., Seattle.

280 ACRES; 130 IN FALL WHEAT, BALANCE bunchgrass pasture; small orchard; 5-room house, barn, well and windmill; 4½ miles from Washtucna. Price, including crop, $6000. Will also sell cows, horses and farm implements. A. J. Holliday, Washtucna, Wash.

27 ACRES, NEAR STORE, POSTOFFICE, HIGH school, station; Pacific highway; well fenced; creek, spring, timber; fine poultry location; $25 acre. Also 40 acres timber nearby. $15 acre. Fifth cash, 20 years, balance. Owner, Bartlett Johnston, Saginaw, Ore.

160 ACRES, NINE MILES FROM OROVILLE, Okanogan county; about 40 acres under cultivation; forty in timber, bench land; ground well subirrigated; seven-room house, barn, etc. Price, $4500; terms. Write Mrs. S. J. West, Quilcene, Wash.

7000 ACRES SEQUIM LAND SETTLEMENT project, containing the finest berry and dairy land in the state, now offered for settlement at attractive prices and terms. Free booklet. Thos. G. Mortland, Sequim, Wash.

A BARGAIN FOR QUICK SALE—MY FINE highly improved stock ranch; large acreage for sale, $6000. Terms. Write me for facts and particulars. Mountain Park Ranch. E. M. Varin, owner, Victor, Idaho.

I HAVE FOR SALE SOME OF THE BEST general stock ranches in Eastern Oregon; best 860 acres, right against range; water, wood, fair bldgs, $17.50 per acre; terms. Others. E. G. Bailey, Elgin, Ore.

LOCATE IN BEST CLIMATE ON EARTH— Puget sound, where 10 acres is enough to support family. For descriptive booklet write Whidby information bureau, Clinton, Wash.

80 ACRES, 8 MILES KALAMA; TIMBER, running water, orchard and buildings; fenced; open range; bargain at two thousand; easy terms. R. N. Woolford, Kalama, Wash.

1200-ACRE STOCK RANCH, BITTER ROOT valley, Mont.; about 300 a. plowed land; joins reserve. This add will not appear again. Robert Forgy, Stevensville, Mont.

SELL YOUR PROPERTY QUICKLY FOR cash; no matter where located. Particulars free. Real Estate Salesman company, 501 Brownell, Lincoln, Neb.

BEAUTIFULLY LOCATED, WELL EQUIPPED, prosperous ten-acre poultry farm. $12,000; $5000 cash. A. P. Rushton, owner, Southworth, Wash.

15 ACRES BETWEEN ENUMCLAW AND Buckley, all slashed; water in house; $2000, half cash. A. Sartoris, Route 1, Enumclaw, Wn.

A. F. HORTON, NEWPORT, WASH.—TIMber products, cutover lands, $5 to $15 per acre. Good roads, schools, fine mountain water.

THIRTY-TWO-ACRE WATER FRONT BERRY, poultry ranch for sale, cheap. Particulars from owner. Chas. Engel, Yoman, Wash.

FOR SALE—160 ACRES GOOD HAY, DAIRY and stock ranch. For full particulars write Box 43, Route 3, Odessa, Wash.

IRRIGATED LANDS—For Sale 663

KENNEWICK, WASH., IRRIGATED LANDS, in the finest section of lower Yakima valley, with three railroads; mild winters, long growing seasons; earliest on market; large and small tracts, raw and improved. Prices right; easy terms; some trades. Bert Plowman, Kennewick, Wash.

TWIN FALLS IRRIGATED FARMS, ANY SIZE, any crops, any terms. Home Realty Co., Twin Falls, Idaho

FOR SALE OR EXCHANGE 702

81-ROOM BUSINESS BLOCK, CITY; INCOME $931 monthly. Price $70,000. Will consider farm, $40,000; $20,000 cash. What have you? Briscoe Realty Co., Lindelle bldg., Spokane.

560-ACRE RANCH, CLEAR; STOCK, CROPS, equipment; joins range; natural stock country. Want going ranch around $10,000; low altitude. G. Drake, Madison Co., Varney, Mont.

A NO. 1 15-ACRE TRACT FOR SALE OR trade; alfalfa, berry and chicken tract; all under irrigation. Write owner, J. E. Broughton, Kennewick, Wash. Route 1.

160-ACRE IRRIGATED FARM; WILL TRADE for sheep and terms, 7 per cent; 90-acre crop. D. C. Hanks, Tetonia, Idaho.



CHAPTER XXIII.

Tumbled Air Castles.

With the strengthening cold that came with January and continued into February, the animals ceased to venture far from their lairs in search of food, and the harvest of the trails was therefore light. With the disappearance of rabbits, the fox and lynx had also disappeared. The rabbit is the chief prey of these animals during the tight midwinter months, and as the wolf follows the caribou, so the fox follows the rabbit.

With the going of the fox the field of operations was not only narrowed, but the work was robbed of much of its zest. When foxes are fairly numerous the trapper is always buoyed with the hope that a black or silver fox, the most valuable of the fur bearing animals, may wander into his traps; and his hope renders less irksome the weary tramping of the trails at seasons when the returns might otherwise seem too small a recompense for the hardships and isolation suffered.

The two preceding years had yielded rich harvests to Dick Blake, and had more than fulfilled his modest expectations. He was, therefore, though certainly disappointed, far from discouraged with the present outlook, and very cheerfully accepted the few marten and mink pelts that fell to his lot as a half loaf by no means to be despised.

While Ungava Bob had looked forward to a successful winter's trapping, his chief object in coming so far into the wilderness had been the establishment of his new trails as a basis for future trading operations; and more particularly, therefore, with a view to the future than to the immediate present. Neither was he, for this reason, in any wise discouraged. His youthful mind, engaged in planning the castles he was to build tomorrow, had no room for the disappointments of today.

Sishetakushin had given Bob the assurance that the Nascaupees would bring him their furs to barter. He was satisfied, also, that he could secure a large share of the trade of the Eastern, or Bay, Mountaineer Indians, for he would pay a fair and reasonable price for their furs, and they would quickly recognize the advantage of trading with him. And he would have another advantage over the coast traders: He would establish a trading station in the very heart of the wilderness, in the midst of the Indian hunting country.

Previous to his coming into his little fortune his father had, as far back as Bob could remember, been struggling under a load of debt. At times the family had been plunged into the very uttermost depths of poverty; and even now a sickening dread stole upon Bob as he recalled some of the winters through which they had passed when the factor at the post had refused them further credit, and the flour barrel at home was empty, and they could scarcely have survived had it not been for the bounty of Douglas Campbell.

This was the condition still with many of the families of the Bay. They were always in debt to the company for advances of provisions, and there was no hope that they could ever emerge from the deplorable condition. It was the policy of the company that they should not.

In accepting credit from the company the trapper placed himself under obligation to deliver to the company every product of his labors until the debt was discharged. The company allowed the trapper in return for his pelts such an amount as it saw fit. He had no word in the matter, and of necessity was compelled to accept the company's valuation of his furs, which valuation the company took good care to place so low as to obviate any probability of his release from debt. At a reasonable valuation of their furs, there was seldom a year that most, if not all, the Bay trappers might not have been freed from their serfdom.

Thus when a trapper died his only inheritance to his children was a burden of debt, which sometimes passed down from generation to generation; for the son who refused to assume his father's debt was denied credit or consideration at the company's stores.

The Grays, as we have stated, had felt the heavy hand of this inquisitional system. Now that they were free, Bob's sympathy was poured out to his neighbors, and he was secretly planning how, when he became a trader, he might also compass their release.

As rapidly as his profits would permit, Bob was determined to advance, first to one family, then to another, sufficient cash to discharge their debts and relieve them from their obligation to the company.

Then he would advance them the necessary provisions and supplies to sustain them until they returned from their trails with their hunt. He would buy their pelts at as high a price as he could afford with a reasonable profit. This price would always be certainly double, and often four or five times, that which the company was accustomed to allow.

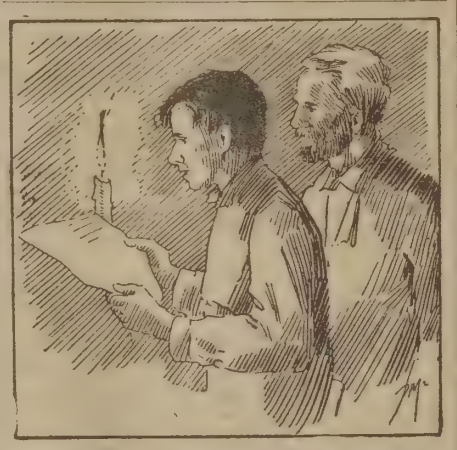
Bob, thus forming his Utopian plans, forgot the tedium of the trail. No person is so happy as when doing something to make some other person happy. And Bob was happy because he believed he was to be the means of bringing happiness to many. Making a comfortable living for himself, he would make it possible for his neighbors to make a comfortable living also.

It never occurred to him that failure was possible, or that, with the amount of capital which he believed was still at his disposal, the plan was unpractical. Young, highly optimistic, and somewhat visionary, his dreams assumed the status of reality.

Bob's mind was thus pleasantly occupied when at the end of the first week in February he returned to the river tilt to find Ed Matheson and Bill Campbell back from Eskimo bay, and Dick Blake, just in from his trail, drawing off his frost-encrusted adicky.

"An' there's Bob, now!" exclaimed Ed, as Bob appeared in the doorway.

"'Tis grand, now, t' see you back," said Bob, his face beaming welcome as he shook



"Mother's sayin' the bank's broke."

the hands of the returned travelers. "Dick an' me's been missin' you wonderful."

"'Twere grand, now, t' see th' tilt when Bill an' me comes in last evenin'. 'Twere th' hardest pull up from th' bay with our loads we ever has, an' we was tired enough t' drop when we gets here. Where's Shad?"

"Wi' th' Injuns yet, an' I'm worryin' about he not comin' back. They must ha' gone a long ways down north lookin' for deer, or they'd been back before this. How'd you find th' folks at th' bay, Ed?"

"Fine—all of un fine. Your mother's wantin' wonderful bad t' see you. But when I tells she you'm all right she shtops worryin'. I were forgettin' t' say anything about th' trouble wi' th' Mingens, though," and Ed grinned.

"Forgettin' a purpose?" asked Bob smiling.

"Maybe so," admitted Ed. "What's past don't do nobody no good t' know when they's nothin' for un t' make right. 'Twouldn't ha' helped none for she t' know about th' Mingens, so I just naturally forgets un."

"I'm glad o' that. Mother'd 'a' worried an' been thinkin' all sorts o' things happenin' what never would happen," and, greatly relieved, Bob asked, "An' when'd you make th' bay?"

"'Twere just New Year. Bill an' me cruises along fast, bein' light, an' takin' short sleeps. 'Twere night when we gets t' Wolf Bight, an' I says t' Bill, says I: 'Tis near midnight, an' likewise t' th' New Year. They'll be sleepin', an' le's's wake un up shootin' th' New Year in like all creation.'

"Gettin' alongside th' winder, we lets go till our rifles is empty, and then rushin' in th' door yells, "Happy New Year!' They was awake, all right, wonderin' what in time an' creation were turned loose on un, we yellin' like a passel o' Injuns. They was glad t' see us.

"Bill goes home t' Kenemish with daylight, an' your father takes me t' th' post wi' dogs an' komatik, your mother goin along, an' I gets home th' evenin'."

"Where they goin' right back home?"

"No, they 'bides t' th' post with Tom Black's folks till th' end o' th' week, an Bessie goes back with un t' be company with your mother. Oh, I were forgettin'! Here's somethin' your mother were sendin'," and Ed reached under the bunk and drew forth a package.

Upon opening the package Bob discovered a quantity of sweet cakes, a loaf of plum bread and a letter. He passed the cakes around, then drawing up to the candle proceeded at once to read hungrily his mother's letter.

It was a message of love and encouragement, closing with the news of the bank failure and consequent loss of the little fortune with which he had planned to do so many things. Presently, looking up, he said, in a shaking voice:

"Why—Ed—mother's sayin' th' bank's broke—an' all our money's gone."

"Aye," admitted Ed, his voice sympathetic and sorrowful. "'Tis broke, lad—I were hopin' she wouldn't write you that, an' you wouldn't know till you gets home. But don't worry about un, now, lad. 'Twon't do no good. If you hadn't known about un now, you wouldn't be worryin' about un. An' now you knows, 'twon't help none."

"I suppose you're right, Ed. But 'twill be hard not t' worry. I were plannin' so."

"'Tain't so bad as t' have some o' your folks die, now. An' I been noticin' all my life that sometimes things happens t' me I thinks is 'most more'n I can stand, an' I feels like givin' up. Then somethin' comes along that's better'n anything I ever thought o' gettin'. An' then when I thinks un out, I finds th' good couldn't ha' come without me havin' th' trouble first. So don't get feelin' too bad about un, Bob. This may be just openin' th' way for some wonderful good luck better'n all th' money you loses," soothed Ed.

There was a postscript which Bob had overlooked. Now in folding the letter his eye caught it and he read it—a brief line added by Bessie, telling him not to think too much about his loss, for she was sure it would all be well in the end, and not to forget it was the Lord's will or it could not have happened, adding, "Remember, Bob, the Lord is always near you."

Nevertheless, Bob was very quiet at supper. He could not forget his tumbled air castles. He could not forget the fact that the returns from the present year's trapping would be insufficient to buy the next year's outfit.

"They was a band o' Injuns comes t' th' post just before I leaves, pretty nigh on their last legs," remarked Ed, when they had finished eating and he had lighted his pipe. "They was about as nigh starved as any passel o' men I ever seen, an' if they'd been starved much more they'd been dead. I hears some o' th' band did die before they gets out."

"Who were they?" asked Bob.

"Mountaineers," answered Ed. "They was back in th' country huntin', but don't find th' deer. They's camped down't t' th' post now."

"Did you hear where'bouts they was huntin'?" inquired Dick. "In th' nu'th'ard or s'uth'ard?"

"They all comes from th' nu'th'ard and west'ard o' th' post," said Ed. "They tells me they finds it th' worst year for fur an' game up that way they ever seen, an' I tells un 'tis th' same here."

"I wonders' now, how Shad an' th' Injuns he's with is makin' out. They'll be wonderful bad off, an' they don't run on th' deer," suggested Dick.

"They'll be likely t' find un up where they finds un when I was with un," reassured Bob, "but 'tis a long cruise there an' back."

Bob's loss was a keen disappointment to him. For several days it robbed him of ambition, and he tramped along the trails and attended to his traps dully and methodically, with a heavy heart. Then he began to say to himself:

"'Tis th' Lard's way. 'Tweren't right for me to go tradin' or t' have th' money, an' th' Lard knowin' it takes th' money away."

This thought, with his natural buoyancy of temperament, restored again to a large extent his interest and ambition in his work; and when he remembered that he was, after all, the owner of two unencumbered trails, with all their traps, he almost forgot his disappointment—but not altogether; that was impossible.

With the end of February ptarmigans began to reappear among the willows along the river bank. They were welcomed by the trappers, for they supplied a much needed variety to the diet. They offered hope, too, that the period of famine was nearing its end.

Ed Matheson's report of the condition of the Indians appearing at the Eskimo Bay post gave the men food for thought. When they gathered again at the river tilt two weeks later, the chief subject of conversation was Shad's continued absence, and many speculations were put forth as to the probable movements of Shad and their Indian friends. Whether or not they were likely to find caribou, where they would go and what they would be likely to do should they fail, were questions which they discussed at length. And they did not conceal from one another the fact that they were deeply concerned for Shad's safety.

When the trappers gathered again at the rendezvous on Friday, the 6th of March, they fully expected that Shad would be there to greet them, but they were disappointed. His failure to appear at this late date excited alarm, but no course of action that would be in the least likely to lead to results presented itself.

They agreed that the Indians had beyond doubt left a cache at the Great lake, for Sishetakushin had stated to Bob that he would do so; and upon returning to that point it was believed Shad would have sufficient food to proceed to the river tilt. Any search beyond the Great lake would be fruitless, for none could know in what direction to search.

Still there was no Shad on Friday, the 20th of March. They ate their supper and resumed their speculations.

"I'm thinkin', now t' make a cruise t' th' place where th' Injuns was camped when I left un," declared Bob. "If they ain't there, I'll come back, unless I sees signs of un. And, anyway, 'twill make me feel better."

"An' I'll go along," said Ed. "We'll be startin' in th' mornin' early, an' we may's well get our stuff out t'night, ready t' pack."

They had blown out the candle and were lying in their bunks, discussing still Shad's long absence, when the door of the tilt was pushed quietly open and the figure of a man appeared in the moonlight at the entrance.

They sprang from their bunks, and Ed Matheson, striking a match, applied it to a candle. As the light flared up the man entered, and Mookoomahn stood before them.

CHAPTER XXIV.

The Messenger.

They looked at the Indian in awed and speechless horror. His tale of suffering was told before he spoke. He had come from a land of tragedy. He had been stalking side by side with death.

This was a mere shadowy caricature of the Mookoonmahn Bob had known. The face was fleshless as that of a skeleton head, with the skin of the former inhabitant stretched and dried upon the bones; the lips so shrunken that they scarcely served to cover the two white lines of teeth; the eyes deep fallen into gaping cavities below the frontal bone.

Drawing his skeleton hands from their mittens, and raising them in an imploring gesture, Mookoomahn looked, as he stood there in the dim candlelight under the low log ceiling, more a spectre—a ghostly phantom visitor—than a living human being.

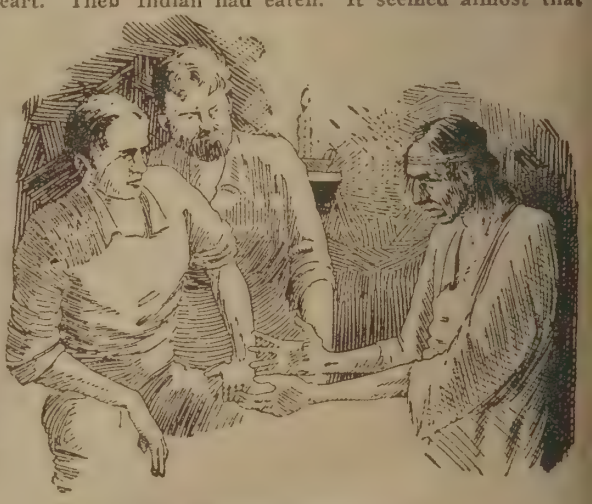
Then he spoke in a voice low and broken:

"White Brother of the Snow, Mookoomahn has long been tormented by the Spirit of Hunger. When he slept the Spirit of Starvation sat by his side, never sleeping. When he traveled the Spirit of Starvation stalked at his heels, never tiring. For many suns the Spirit of Death has had his cold fingers on Mookoomahn's shoulder."

Gently Bob removed the caribou skin coat from the starving and exhausted traveler, and made him comfortable while the others brewed tea and heated some cold boiled ptarmagan in the pan.

"'Twon't do 't give he much at first," cautioned Dick Blake, setting before Mookoomahn a small portion of the meat and a small piece of bread with a cup of the hot tea. "He's like t' be wonderful sick, anyway, th' carefullest we is. We'll let he have a small bit at a time, an' let he have un often."

No questions were asked until after the Indian had eaten. It seemed almost that



No questions were necessary.

no questions were necessary. The man had come alone. He was in the last stages of starvation. These fact spoke loudly enough. They told the tale of wasting strength, of hopeless struggle, of tragic death that had taken place in the bleak wild wastes above.

The food revived and the tea stimulated Mookoomahn, and when he spoke again, in answer to Bob's urgent request that he tell them of the fate of Shad and the others, his voice was stronger.

He described the journey to the Lake of the Willows, and thence to the camp of starving Indians. He told how the shaman had made medicine to the spirits; how the spirits had revealed to the shaman the things that it was required the Indians do; how the Indians in their starved condi-

(Continued on page seventeen.)

FAMILY CIRCLE

ALICE BARLAND
EDITORIAL CONTRIBUTOR

Experience Letters

From Our Family Circle Women

Dear Mrs. Barland: I have been reading THE FARMER for about four years and am interested in the Family Circle and especially in the letters on child training.

I have three fine little youngsters, oldest 7, the next one 5 and third almost 3 years old.

I try my best not to be a scold and I find whipping does very little good. Shutting a child in a dark room or closet may be all right with some children; as yet mine are not afraid of the dark and I do not intend to make them so.

I always try to explain and reason things out with them and when they understand why they are to do certain things it seems easier for them to obey me.

My little 5-year-old is a bright child and will, some day, I hope, be a very fine woman, but she certainly is a trial now; ever since she could creep she has persisted in doing the things she has positively been told not to do and is always "getting into things" when it has been made plain to her she should let them alone. I have whipped her, tied her up, shut her in a dark room, scolded her and have just sat and talked to her by the hour. I have made a special point to praise her when she has been good. I am thankful that she is not quite so troublesome as she was a year ago and I suppose she will grow out of it, but it is certainly nerve-racking now.

I must explain that this little busy-body is very ambitious and quite handy about doing things around the house and if I could find time to arrange work for her so as to keep her busy she wouldn't get into so much mischief. She likes to wash dishes and iron and sew and if I had time I am sure I could teach her to tat and crochet. She is learning to write and can make all the numbers. I find it is much better to say do this and that rather than to be saying don't, don't all the time.

My other two are much alike in disposition and easier to manage.

I would not want a child who never got dirty or into mischief, nor one who never forgot his manners, for such a child wouldn't be normal. Healthy, normal children are bound to do things that are wrong sometimes. MRS. C. R. C.

To mend aluminum ware take the lower half of a white snap fastener, such as is used by dressmakers, the size required, and insert it through the hole to be mended and placing it on an iron surface, hammer it to fit the hole. In about two minutes you have a mend that will stay.
MRS. EMIL DALTON, Wash.

We have used sugar sacks on a cream separator for years, fastening them on with clothes pins. I have learned a new and better way, so will pass it on.

I took an old inner tube and cut it into strips and sewed them together and put it around the strainer to fasten on the bowl. It is much more convenient than the clothes pins. MRS. R. H. A., Wash.

Dear Mrs. Barland: How sour should cream be before it is churned? My butter smells and tastes good, but goes streaked a day or two after churning. What is the cause. A READER, Burley, Idaho.

Dear Reader: Had you given me your name and address I should have answered you long ago. Butter will go streaked when the buttermilk isn't all taken out. For very best results I have found that it is best to salt the butter directly after having washed out all the buttermilk possible, then cover it carefully with a clean cloth wet in cold water. Allow it to stand till the next day, then carefully work it again. The salt will have dissolved and taken out still more buttermilk, even though you may have thought it all out the preceding day. Be careful not to overwork the butter so as to spoil the grain and make it "salvey". Butter just right will show tiny drops of moisture when cut. That is the ideal condition which stands for proper working.

About the sourness of the cream, it is ready to churn when it is all sour clear through, just stirring sweet cream into sour will not do, it should stand till all is what is called "ripened." I think it best to churn cream when it is thoroughly ripened so it will not be too old and become bitter and spoil flavor of butter and buttermilk. A. W. BARLAND.

A little soda cooked in sauer kraut will take out the gas, making it easier to digest. Use only about a quarter of a teaspoonful. Parboiling cabbage with a little soda and draining off the first water after the soda has been added will make it more digestible. MRS. A. J. M., Wash.

A Mason jar lid will clean cooking utensils quicker and make fewer scratches than a knife.

To clean a dish in which rice or any other such sticky food has been cooked, fill with hot water and the steam will loosen all the remaining substance.

For best results in washing clothes with a washing machine put the clothes through a cool water first before putting them into the boiling water in the machine.

I am the mother of five children, the oldest 10 1-2 years, the youngest 20 months, so you will see I appreciate all the helps I can hear of.
MRS. C. G. A., Idaho.

Dear Mrs. Barland: Will you please tell me how to prepare herring for marinading and how to prepare the marinade? What spices are used, how much of each, and does the vinegar and spices have to be boiled? Perhaps some of the women of the Circle can tell how it is done. My wife wants to know. MR. P. C., Wash.

Dear Mrs. Barland: Last fall we were so late in getting our cave completed that we had to put in our fruit and vegetables before the cement was dry. The consequence is that the shelves and rafters are covered with a thick mold. Will some one tell me how to destroy it so it will not come back? I do not want to open it up and allow it to get warm, as it is very cool now. MRS. L. D. M., Wash.

(I fear the only way to kill the mold is to open the cave to sun and air.—Editor.)

Dear Mrs. Barland: I have heard that flowers can be preserved by some process with wax and as I shall graduate in June I would like to keep my flowers as a keepsake. Can some one tell me how to preserve them?
A JUNE GRADUATE, Wash.

Dear June Graduate: Why didn't you give name and address? I have seen paper flowers waxed so that they would keep beautifully for a long time and they looked like natural flowers. I know of no way to preserve natural flowers with hot wax. Perhaps some of the women will know. If it can be done some one will be sure to know how.
A. W. BARLAND.

Home Recipes

Lemon cake pie (has a crust of cake on top and lemon pie underneath): Line a tin with pie crust and put in the following: Two heaping tablespoons of flour, one cup of sugar, butter the size of a walnut, one lemon, juice and rind grated, yolks of two eggs and beat all together, then add one cup of milk and the whipped whites of the eggs, a pinch of salt. Pour it into the pie crust and bake in a rather moderate oven. It will be done when it looks like a layer cake. MRS. THOMAS W. COLE.

Rhubarb Conserve—4 lbs. rhubarb, cut fine; 4 lbs. white sugar, 1 lb. seeded raisins, 4 oranges, grated rind of 2 and the rest chopped fine; 1-2 lb. walnut meats. Mix all and stands on back of stove till sugar's dissolved, then boil till thick and all seems done.
MRS. W. H. GIBSON, Wash.

Ginger cookies: One cup of shortening, two cups of sugar, one cup of molasses, one teaspoon of soda dissolved in a cup of hot black coffee, three eggs, three teaspoons of ginger, one cup of rolled oats, flour enough to make handling easy, and bake in a moderate oven till well done.
Idaho. A READER.

Sour cream cake: One cup of sour cream, one and one-half cups of sugar, three eggs, one teaspoon each of soda and baking powder, a pinch of salt, two cups of flour and vanilla.

Beat the yolks until light, add sugar gradually and stir until creamy, add the cream, then the flour with soda, baking powder and salt sifted in. Add the stiffly-beaten whites and vanilla the last thing and bake in layers. Fill with anything desired. MRS. W. J. T.
Idaho.

Peanut brittle: One cup of white sugar, three-fourths cup of peanuts, crushed if desired. A speck of soda, if desired.

Put the shelled peanuts, chopped, if desired, in a well-buttered pan and set in a hot place. Melt the sugar, stirring constantly with considerable pressure. When the sugar becomes golden brown liquid stir in the nuts very quickly. Remove from stove and pour into a pan, spreading very thin. If a porous result is desired add the speck of soda just before stirring in the nuts.

Delicious Cake Filling—1 cup light brown sugar, 1-2 cup sour cream, yolks of 2 eggs beaten, cook slowly till thick, add chopped nut meats and spread on any light cake.
C. C., Mont.

CARE OF IRONS.

Irons wrapped in waxed paper when set away after the week's ironing is finished will need no polishing the next time they are used.



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High Points in News of the Week

Two official actions, previously reported, have perhaps done more than any others in recent months to give American business a start along the road to normalcy. They were the order of the interstate commerce commission for a 10 per cent reduction of freight rates on nearly all commodities except farm products, and the order of the railway labor board for a reduction in the wages of over 400,000 railroad employees, aggregating an estimated $48,000,000 a year.

Neither the reduction in freight rates nor the reduction in wages is large compared with the enormous increases that had been made during the last four or five years. They are, however, a step in the right direction and are sufficient to give courage and stimulus to industry. Exceedingly high freight rates have stood in the way of return to normal conditions more than any other single thing. Exceedingly high wages paid to railroad employees have stood in the way of rate reductions perhaps more than any one thing. Hence this start in the reduction of the two should go far toward bringing about an improved business condition.

It is significant to note, however, that the railroad employees affected by the cut in wages are threatening to strike rather than accept the reductions. Officials of their various organizations have taken the necessary action for a referendum vote on the question of whether or not to declare a walkout. Press reports seem to indicate that the employees at the present time favor a vigorous protest against the reductions.

Indications are that the strike vote will be taken early in August. It is reported that the vote will be taken by organizations having a total membership of about 1,200,000 railroad workers.

Thirty-seven of the railroads affected by the 10 per cent reduction in freight rates notified the interstate commerce commission immediately that they would accept the reduction without protest. A protest is being made by the roads, however, against that portion of the commission's decision which says that 5 3-4 per cent shall be considered a fair return on railroad investments.

It is expected that further reductions in both freight rates and wages will be made from time to time with a view to hastening the return to normal traffic and industrial conditions.

* * *

Notwithstanding previous reports that seemed to indicate that Ireland was in a fair way to solve her own problems and enter upon a reign of peace, much disturbance and a considerable number of deaths and riotings have been reported from Belfast during the last week. The renewal of the disturbances has caused the British government to suspend its movement for the withdrawal of British troops, and on the other hand has caused plants to be laid for the reenforcement of the troops already in Ireland with a view to coping with the situation in a military way if necessary.

* * *

Led by Samuel Gompers, president of the American Federation of Labor, a number of representatives of national associations last week took steps for the forming of an organization the purpose of which shall be to work for the total abolition of child labor in the United States. This action follows a recent decision of the United States supreme court that the so-called child labor law that has been in effect for a number of years is unconstitutional. This law has placed a special excise tax on the products of child labor. At the organization meeting last week a committee was appointed to draft a constitutional amendment designed to prohibit child labor in mines and factories.

* * *

Herbert Hoover, secretary of commerce in President Harding's cabinet, has set $3.50 a ton as the maximum price which shall be charged for coal at the mines during the present coal strike.

The coal mine owners have offered to ask President Harding to arbitrate the questions involved in the present coal strike. The mine workers have expressed a desire that the federal trade commission and the interstate commerce commission be required to make an exhaustive investigation of the entire coal mining problem to form the basis of future settlement of the strike. The mine workers have so far declined to accept the offer to have the president arbitrate the question.

* * *

The senate finance committee last week voted in favor of recommending the enactment of the soldiers' bonus bill in some form at the present session of congress. The measure has already been passed by the house of representatives with no provision made for raising the funds with which to pay the $3,000,000,000 or $4,000,000,000 that it would require. So far as is announced the senate committee has not worked out a satisfactory means of raising this money. Indications are that while the bill has again been placed in the limelight no real change in its status has been effected.

* * *

Liberty bonds last week sold on the New York market at par or better. This is the first time that these bonds have reached par since the date of issue.

* * *

The allied reparations commission has granted Germany a provisional extension of time for payments of reparations that fall due this year. The concession is made on the pledge of Germany to undertake certain definite steps looking toward a rehabilitation of their financial and industrial conditions. The postponement may be revoked and immediate payment of installments due required at any time that the commission is convinced Germany is not carrying out these steps in good faith.

* * *

The senate last week passed the annual army appropriation bill providing for an army of 133,000 men, and appropriating $341,730,000 for its operation.

* * *

President Harding is reported to have recommended to leaders in congress that they make a special effort to enact the ship subsidy bill at the present session of congress. The president is understood to consider the shipping situation too serious to be permitted to continue as it is until congress would meet in its next regular session. Among the other outstanding measures now before congress are the tariff bills, the bonus bill and the Smith-McNary reclamation bill.

* * *

The revised offer by Henry Ford for the 100-year lease of the Muscle Shoals nitrate plants from the government, meeting certain of the additional requirements specified recently by the military affairs committee of the house of representatives, is reported to have been approved by the committee by a vote of 12 to 9. Indications are that the offer will be vigorously debated when it reaches the floor in congress.

* * *

A conference committee between the house of representatives and the senate has agreed on a compromise by which $50,000,000 would be available during the next fiscal year for continuing federal and state cooperation in road development.

* * *

The unusual weather of the present season has hit Alaska as well as the temperate regions of the United States. Dawson City, in Yukon territory, reported last week a temperature of 85 degrees.

Farm Business and Markets Outlook

(Continued from page five.)

a broad demand for immediate consumption, conditions favor a fairly high price level.

Prices for No. 2 American cheese on May 31 were:

Chicago—Twins, 18 1-2@19c; S. Daisies, 18@18 1-2c; D. Daisies, 17 3-4@18 1-4c; Young Americas, 18 1-2@19c; Longhorns, 18 1-2@19c; Square Prints, 19 1-2@20c.

FRUITS AND VEGETABLES.

Lighter shipments of old potatoes permitted prices to recover slightly in the last few days. Northern whites are bringing $1.40 to $1.50 in the Chicago carlot market. About half of the market supply consists of new potatoes which are bringing around 3 or 4 cents per pound.

LATEST QUOTATIONS.

The Live Stock Market.

PORTLAND, June 3.—Cattle—Choice steers, $8.50@9; good to medium steers, $8@8.50; fair to medium steers, $7@8; common to fair steers, $6.50@7; choice feeders, $5.25@6.25; fair to good feeders, $4.75@5.25; choice cows and heifers, $6.50@7; medium to good cows, heifers, $5@6; fair to medium cows, heifers, $4.75@5.50; common cows, $3.75@4.75; canners, $2@3.75; bulls, $3.75@5.25; choice dairy calves, $8.25@8.50; prime light calves, $8@8.50; medium light calves, $7@8; heavy calves, $4.50@7.

Hogs—Prime light, $11.50@11.65; smooth heavy, 200 to 300 lbs., $10.50@11; smooth heavy, 300 lbs. up, $10@10.50; rough heavy, $7.50@9.50; fat pigs, $11.25@11.50; feeder pigs, $11.25@11.50; stags, subject to dockage, $5@7.50.

Sheep—Best spring lambs, $10@11; medium spring lambs, $9@10; common spring lambs, $7@8; cull lambs, $6@7; light yearlings, $8@9; heavy yearlings, $7@8; light wethers, $7@8; heavy wethers, $6@7; ewes, $2@6.

SPOKANE, June 3.—Cattle—Prime steers, $7.50@8.75; good to choice steers, $6@7.50; medium to good steers, $6@7.25; fair to medium steers, $5.25@6; common to fair steers, $5@5.25; choice cows and heifers, $6@7.25; good to choice cows, heifers, $5@6; medium to good cows, heifers, $4.50@5; fair to medium cows, heifers, $3.50@4.75; canners, $2.25@3.50; bulls, $3.25@4.75; light veal calves, $6.50@8.50; heavy veal calves, $4@6.50; stockers and feeders, $4.75@5.

Hogs—Prime mixed, $11.25@11.65; medium, $10.25@11.25; heavies, $8.25@9.25; fat pigs, $10.25@11.25; stockers and feeders, $10.25@11.25.

Sheep—Prime lambs, $9@11; fair to medium, $8@9; yearlings, $8@9; wethers, $7.50@8; mutton ewes, $3@6.50; feeder lambs, $6@7.

The Grain Market.

PORTLAND, Ore. June 3.—Wheat—Hard white, $1.20; soft white, white club, hard winter, northern spring, $1.18; red Walla, $1.14.

Grain futures: Wheat—Hard white, June $1.20; July $1.17; soft white, white club, hard winter, northern spring, June, $1.18; July, $1.12; red Walla, June, $1.14; July, $1.06.

Oats—No. 2 white feed, June, July, $36.

Corn—No. 2 eastern yellow shipment, June, July, $28.50.

SEATTLE, June 3.—Wheat—Hard white, soft white, white club, hard red winter, soft red winter, northern spring, $1.18; eastern red Walla, $1.16; Big Bend Bluestem, $1.30.

WALLA WALLA, June 3.—Bart, Bluestem, Turkey Red, $1.04; club, $1.02.

RITZVILLE, Wash., June 3.—Bart, $1.40; red, $1.20; fife, $1.

DAYTON, Wash., June 3.—Club wheat, $1; red, $1.

DAVENPORT, Wash., June 3.—Marquis, $1.25; Bluestem, $1.25; Gold Coin, 95c.

PULLMAN, Wash., June 3.—Red wheat, 93c; white wheat, 96c.

ODESSA, Wash., June 3.—Marquis, Bluestem and Bart, $1.40; Turkey red, $1.20; Jones' fife, $1.10.

Hay and Feed Grain.

PORTLAND, June 3.—Millfeed—Price f. o. b. mill; Millrun, ton lots, $37; middlings, $51; rolled barley, $37@39; rolled oats, $44; scratch feed, $47@51 per ton.

Corn—White, $36; cracked, $38.

Hay—Buying price, f. o. b. Portland; alfalfa, new, $14@15 per ton; cheat, $17; oats and vetch, $18; clover, $17; valley timothy, $18; eastern Oregon timothy, $21@22.

SPOKANE, June 3.—Wheat—Feed wheat, $46 per ton.

Oats—$40 per ton; steam rolled, $42.

Corn—$36 per ton; cracked corn, $32 ton.

Alfalfa, $22 ton; timothy, $22 ton; mixed hay, $18 ton.

General Produce.

PORTLAND, June 3.—Butter—Cubes, extra, 35c per pound; parchment wrapped, box lots, 40c; cartons, 41c. Butterfat, buying price, No. 1 grade, 39@41c delivered Portland.

Eggs—Buying price, current receipts, 19@20c dozen; henneries, 23c dozen; jobbing prices, case count, 20@24c; candled ranch, 23c; selects, 25c.

Cheese—Tillamook triplets, price to jobbers, f. o. b. Tillamook, 25c; Young Americas, 24c pound.

Poultry—Hens, 19@23c; broilers, 20@28c; ducks, nominal; geese, nominal; turkeys, live, nominal; dressed, 40c.

Veal—Fancy, 13½c per pound.

Pork—Fancy, 15½c per pound.

SPOKANE, June 3.—Poultry—Fat hens, 19c lb.; light hens, 16c lb.; roosters, 8c lb.

Fresh ranch eggs—$6.50 case; no storage; pullet eggs, $6.

Butterfat—37c a pound.

Range of Live Stock Prices for the Week Ending May 31

CATTLE.	Chicago.	Spokane.	Portland.	N.Salt Lake
Choice, prime heavy steers (1100 lbs. up)	8.75@ 9.35	.....	.....	.....
Good heavy steers	8.25@ 8.75	8.50@ 8.75	8.65@ 9.00	.....
Medium heavy steers	7.85@ 8.35	7.50@ 8.50	7.75@ 8.75	.....
Common heavy steers	7.25@ 7.90	6.00@ 7.50	6.50@ 7.75	.....
Choice, prime light steers (1100 lb. d'n)	8.85@ 9.50	.....	.....	.....
Good light steers	8.40@ 8.85	8.50@ 8.75	8.50@ 9.00	.....
Medium light steers	8.00@ 8.40	7.50@ 8.50	7.75@ 8.50	6.75@ 7.50
Common light steers	7.25@ 8.00	5.50@ 7.50	6.25@ 7.75	5.25@ 7.00
Common to choice butcher heifers	5.90@ 8.60	4.50@ 7.75	5.00@ 7.75	4.00@ 6.00
Common to choice butcher cows	4.50@ 7.25	3.50@ 6.50	4.00@ 6.50	3.50@ 5.50
Bologna and beef bulls	4.25@ 6.50	3.25@ 5.75	3.75@ 5.25	2.50@ 3.00
Canners and cutters, cows and heifers	3.25@ 4.65	3.00@ 3.50	2.25@ 4.00	2.00@ 3.25
Canner steers	4.75@ 6.00	4.50@ 5.25	4.50@ 5.50	3.75@ 5.00
Medium to choice light veals	8.00@10.25	8.50@11.00	7.00@ 9.00	7.00@ 8.00
Common to choice heavy veals	4.25@ 8.25	4.50@ 8.50	4.50@ 7.00	.....
Common to choice feeders (1000 lb. up)	6.00@ 7.85	.....	.....	.....
Common to choice feeders (750-1000 lb.)	6.00@ 7.85	4.75@ 5.00	5.00@ 6.25	4.50@ 5.50
Common to choice stocker steers	5.75@ 7.75	.....	4.75@ 6.00	.....
Common to choice stocker cows, heifers	4.25@ 6.15	.....	.....	.....
HOGS.				
Top of market	11.00	11.75	11.75	10.65
Bulk of sales	10.15@10.90	10.25@11.40	10.25@11.25	9.90@10.50
Heavy (250 lb. up)	10.35@10.75	9.25@10.25	10.00@10.50	9.50@10.25
Medium (200-250 lb.)	10.40@10.90	10.25@11.25	10.50@11.00	9.75@10.40
Light (150-200 lb.)	10.60@10.90	11.25@11.75	11.25@11.75	10.25@10.65
Light lights (130-150 lb.)	10.10@10.80	11.00@11.65	11.00@11.75	10.25@10.65
Smooth packing sows (250 lb. up)	9.35@10.00	8.75@ 9.25	9.00@10.00	.....
Rough packing sows (200 lb. up)	9.00@ 9.60	8.25@ 8.75	7.50@ 9.00	.....
Medium to choice pigs (130 lb. down)	9.25@10.35	10.25@11.25	11.25@11.50	.....
Stock pigs	.....	10.25@11.25	11.25@11.50	8.60@ 9.35
SHEEP AND LAMBS.				
Medium to prime lambs (84 lb. down)	10.50@13.85	8.50@10.00	8.00@ 9.50	9.50@12.50
Culls and common lambs	7.50@10.50	6.00@ 8.50	5.00@ 8.50	6.00@ 9.50
Medium to prime yearling wethers	8.50@11.25	.....	5.50@ 8.00	7.00@ 8.50
Medium to prime wethers	6.00@ 8.75	7.00@ 8.00	.....	5.00@ 7.00
Medium to choice ewes	4.00@ 7.50	4.00@ 6.50	3.50@ 5.00	3.50@ 4.50
Culls and common ewes	2.00@ 4.25	2.00@ 4.00	2.00@ 3.50	2.00@ 4.00
Spring lambs	13.75@15.85	9.00@11.00	8.00@10.00	.....

New 1½ H.P. CUSHMAN

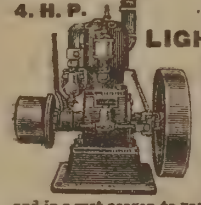
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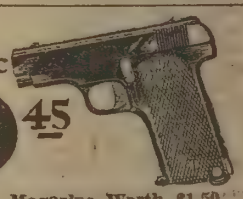
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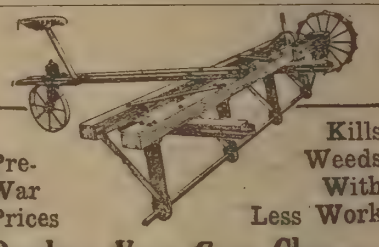
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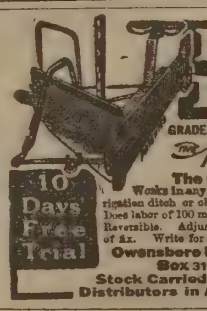
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Farmer—Lady, you forget that that represents a whole day's work for a hen.

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Father (to Bobby, who had just fallen downstairs)—Why, Bobby, did you miss your step?

Bobby—No, sir; I hit every one of them! —Judge.

Exact Likeness.

First Black Lady: "Dat baby ob yours am de puffec image of his daddy."

Second Black Lady: "He sho am. He's a regular carbon copy."—Union Pacific Magazine.

Food for the Parson.

One Sunday morning Parson Jones encountered Josh, a well-known negro character of the town, vainly trying to hide a fishing rod behind him.

"Josh," said the parson sternly, "don't you know it is sinful to go fishing on the Sabbath?"

"Yassir," said Josh in great distress, "but I jes kain't hep' it dis time, suh. Mandy's preacher sent word he's gwine eat supper at our house, an' dem blame chickens what Mandy's bin feedin' roun' de do' de las' fo' days is done got 'spicious an' went home."

Had to Leave Early.

"Have a good time at Jig Fiddlin's last night?" inquired an acquaintance.

"Only just tollable," replied a resident of Frog Level. "The dance was all right, but I didn't stay for the fighting afterward. Some feller rid up and hollered that my house was afire, and I sorter figgered I'd better go and see about it."—Country Gentleman.

The Gaunt Gray Wolf

(Continued from page fourteen.)

tion were not able to fulfill the requirements laid upon them by the spirits, and how in consequence the wrath of the spirits was not placated.

He described the journey to the cache on the northern lake; Sishetakushin's instructions, and gift of Manikawan to White Brother of the Snow; of the parting from Sishetakushin.

Vividly he detailed the long and tedious return to the Great lake, and how the angry spirits reaching up had seized Shad, cast him into the snow, and lamed him.

"The friend of the White Brother of the Snow could not walk. The Mitchi Manitu had wounded his knee. Manikawan, the sister of Mookoomahn, had promised White Brother of the Snow that she would not leave his friend until he came.

"Mookoomahn told Manikawan White Brother of the Snow would not hold her to her promise. That White Brother of the Snow did not mean that she should die for his friend.

"Manikawan would not listen to Mookoomahn, and she said: 'When White Brother of the Snow comes he will find Manikawan waiting with his friend. She has promised. If the Spirit of Death comes into the lodge, White Brother of the Snow will find Manikawan's body with the body of his friend, and he will know that Manikawan kept her word.'

"Seven suns ago Mookoomahn left the lodge. He traveled slowly, for the spirits clung to his feet and made them heavy. The spirits tripped him and made him fall often. He killed three ptarmigans as he traveled, and the flesh of the ptarmigans made him strong to reach the lodge of White Brother of the Snow.

"For seven suns the friend of White Brother of the Snow and Manikawan have had no food. The Spirit of Death stood very near the lodge when Mookoomahn left it. The Spirit of Death has entered the lodge and destroyed Manikawan and the friend of White Brother of the Snow.'

With this somber prophecy Mookoomahn ceased speaking, and leaned back exhausted. As they looked at him they could appreciate the sufferings of Shad and Manikawan, and no great stretch of the imagination was necessary to picture the grewsome spectacle that they had no doubt awaited them in the lodge on the Great lake.

(To be continued.)

Latest High Class Patterns for the Home

Please order the patterns you desire at least two or three weeks before you wish to use them. Desiring to obtain the latest high-class patterns for its readers, THE FARMER has made arrangements to have them sent direct from the east, and under present mailing conditions it takes about that time for them to reach you.



3612-3984: Ladies' costume—Blouse 3612 cut in 7 sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. Skirt 3984 cut in 6 sizes: 25, 27, 29, 31, 33 and 35 inches waist measure. The width of the skirt at the foot is about 1 7-8 yard. To make the dress for a 38-inch size will require 6 7-8 yards of 36-inch material. For facings of plain material 7-8 yard will be required. Two separate patterns 10 cents for each pattern.

3454: Girls' dress—Cut in 4 sizes: 4, 6, 8 and 10 years. An 8-year size will require 3 1-2 yards of 36-inch material. Price 10 cents.

3779: Ladies' gown—Cut in 7 sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. A 38-inch size will require 5 1-2 yards of 40-inch material. Price 10 cents.

4004: Misses' dress—Cut in 3 sizes: 16, 18 and 20 years. A 16-year size requires 4 5-8 yards of 36-inch material. The width at the foot with plaits extended is about 2 1-4 yards. Price 10 cents.

3623: Ladies' apron—Cut in 4 sizes: Small, 34-36; medium, 38-40; large, 42-44, and extra large, 46-48 inches bust measure. A medium size will require 3 3-8 yards of 36-inch material. Price 10 cents.

3997: Girls' dress—Cut in 4 sizes: 8, 10, 12 and 14 years. A 10-year size requires 5 1-4 yards of 32-inch material. Price 10 cents.

4001: Girls' dress—Cut in 4 sizes: 6, 8, 10 and 12 years. A 10-year size requires 2 yards of 27-inch material for the waist and 2 3-8 yards for the skirt. Price 10 cents.

3980: Child's dress—Cut in 4 sizes: 1, 2, 3 and 5 years. A 3-year size will require 1 1-2 yards of 36-inch material. Price 10 cents.

3632: Child's romper—Cut in 5 sizes: 6 mos., 1, 2, 3 and 4 years. A 1-year size will require 2 1-4 yards of 27-inch material. Price 10 cents.

3979: Ladies' blouse—Cut in 7 sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. A 38-inch size requires 2 1-8 yards of 36-inch material. Price 10 cents.

3983: Ladies' skirt—Cut in 6 sizes: 25, 27, 29, 31, 33 and 35 inches waist measure. A 27-inch size requires 3 1-2 yards of 54-inch material. The width at the foot is about 3 3-8 yards. Price 10 cents.

4006: Ladies' house dress—Cut in 7 sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. A 38-inch size requires 6 1-2 yards of 36-inch material. The width at the foot is about 2 yards. Price 10 cents.

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Postoffice ..... State.....

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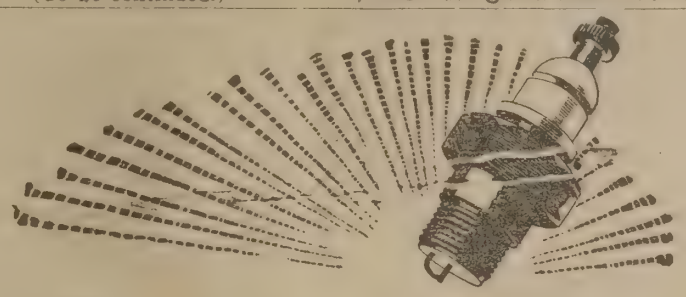
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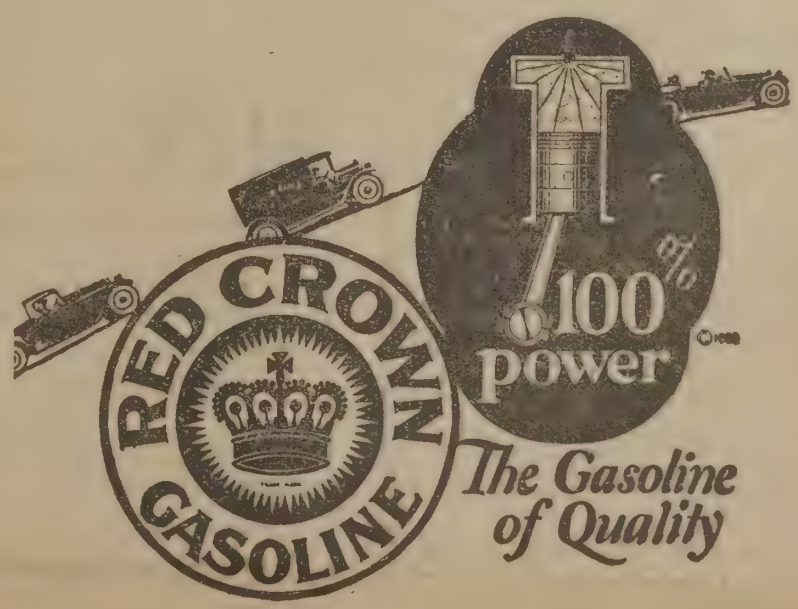
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About the middle of June Dolly Matson is going with her parents for a trip through California and Oregon. First they are going to camp at Mount Rainier and later commence their journey. We will hear from Dolly when she gets settled again, she says. Dolly lives near the Pacific ocean in Grays Harbor county, Washington. There are six girls in her class at school. Her school closes June 9.

A white cat, a calf and eight white hens are Esther Thieman's pets. Esther is a new cousin and is 9 years old. Her birthday is December 15. She lives near the Puyallup Indian reservation, in western Washington.

Alice M. Rupp, a Spokane county (Wash.) cousin, says she is 4 feet 10 inches tall and has brown hair and blue eyes. She is having a good time picking wild flowers. Alice is 11 years old. July 17 is her birthday. (Aunt Nellie will be glad to get your picture, Alice.)

BEDTIME STORIES

By THORNTON W. BURGESS.

WHITEFOOT GROWS SUSPICIOUS.

Whitefoot the Wood Mouse sat thoughtfully pulling his whiskers. Once or twice he looked behind him uneasily. Very carefully he studied the little wee, wee path that led up to the hollow log where he was making his home at present. Some one had been over that path since he went out for his usual morning walk. He was sure of it. He peeped in at his doorway and sniffed. Some one had been in there, too.

"Hello, Whitefoot!" shouted Striped Chipmunk, coming up behind him on tiptoe.

Whitefoot jumped so that he lost his balance and toppled over on his doorstep.

"Ha, ha, ha!" laughed Striped Chipmunk. "You must have been asleep. Supposing I had been Shadow the Weasel, what would have happened to you then?"

Whitefoot grew pale at the very thought. "You—you don't suppose that Shadow the



Whitefoot sat thoughtfully pulling his whiskers.

Weasel is anywhere around, do you?" he whispered.

"Don't know," replied Striped Chipmunk, and I don't care. No, sir, I don't care, for he doesn't know where my house is. I tell you what it is, Whitefoot, there is nothing like feeling safe. It gives one a good appetite. It certainly does. You take my advice and the next time you build a house you build it where no one will suspect it is. Well, I must skip along, now. Look out for Shadow the Weasel."

Whitefoot was more uneasy than ever. He trotted along the wee, wee path, which he had made just for his own use, and looked for footprints. By and by he found one, and just for a second his heart stopped beating. It was—yes, there could be no mistake, it was the footprint of Shadow the Weasel.

White was sure now that Shadow the Weasel had visited his house, and if he had been there once and found no one at home he certainly would come again. You see, Shadow the Weasel is a robber and worse. He is feared by all the little people of the Green Meadows and Green Forest and hated by all those who are big enough not to fear him. He is so slim and short of legs that he can slip into almost any hole that little people like Striped Chipmunk or Danny Meadow Mouse or Whitefoot can.

Whitefoot was thinking of this as he sat with his hand in his pockets and wondered what he had best do. It certainly wouldn't do to stay there. Shadow the Weasel might catch him asleep. With a sigh Whitefoot arose and went into his house in the hollow log. He filled his pockets with food and then he started out to look for a new home. And as he slowly traveled he kept thinking of Striped Chipmunk's advice. But how could he build a home so that no one would find it? A sudden noise behind him made him stop to listen. Then he ran up to the branches of a pine tree, from which he could look back to his old home. Some one was just coming out of his doorway. It was—yes, it was Shadow the Weasel.

Whitefoot waited to see no more, but ran as fast as his legs would take him.

LETTERS WELCOMED BY AUNT NELLIE.

Among recent letters received by Aunt Nellie are those from cousins whose names follow. A few of these will be published each week in the regular edition of THE FARMER and others will appear from time to time in The Junior Farmer:

Senvi Naranen, Margaret Manning, Matt Naranen, Marvin De Gooyer, Helmi Manson, Frances Dirk, Graham Spencer, Pauline Manson, Norine Rinehart, La Vonne Elm, Alvin Cline, Thelma Huck, Nelle Hill, Ethel Strunk, Esther Thieman, Bertha Van Derschelden, Dolly Matson, Helen Staadt, Carol Wolgamot, Blanche Gaurlay, Elmyra Buettner, Eula Buckner, Ward Dull, Frances Thomas, Frances Flanik, Steven Baretich, Anna Van Derschelden, Lillian Dunning, Jennie Vanskiver, Elizabeth Bise, Fred Chase.

Agnes Sjodin, Goldie Miller, Ethel Cronawert, Hilma Anna Borgardt, Bill and Erick Cettla, Josephine Suchanek, Avis Beam, Edna M. North, Edna Logan, Lorena Bull, Emma Webb, Gladys Cook, Gladys Eagle, Helen Flork, Marcella Meyers, Ormonde Robbins, Clara Jacobson, Madeline Moller, Alice Blakeman, Violet Howell, Etta Svinth, Lois Catherine Engleson, Iva Easterling, Emily E. Dowell, Zelma Graham, Hazel Somerville.

Helen Pattinson, Eva Jokela, May Dickenson, Dorothy Timm, Louise Fenton, Hazel Digerness, Hazel Davis, Etta Svinth, Thelma June Bulard, Alice and Joseph Halsted, Dorothy Sonnichsen, Rena Heathers, Elsie Crabb, Mildred Millicent Hedlund, Bertha Brown, Euphemia Rodman.

Birthday Greetings

THURSDAY, June 8—Stanley Shaw, 10 years old; Hulda Mae Hollingsworth, 11.

FRIDAY, June 9—Evelyn Bishop, 11 years old; Harriet Mathis, 9.

SATURDAY, June 10—Louise Gesler, 10 years old; Carson Lemke, 10; Helen Scheller.

SUNDAY, June 11—Audrey Allen, 11 years old; Dean Jackson, 11; June Sundholm, 11; Winnifred Alice May Reynolds, 11.

MONDAY, June 12—Virgil Byford, 11 years old; Adele Julia Lanier, 11; Mabel Stemn, 10.

TUESDAY, June 13—Lauren Lambert, 11 years old; William C. Smith, 11.

WEDNESDAY, June 14—Gladys McCruchen, 11 years old; Harold A. Stevens, 11.



Helps New Settlers and Farmers Already Established

Consider the new settler on a farm in Washington.

Coming from the East, the Middle West, the South, Canada or some foreign shore, he is confronted by changed conditions everywhere—new soils, new seasons for planting, new systems of crop rotation and cultivation, different varieties of grains and fruits, strange pests and plant diseases, unfamiliar markets, another code of laws. Nothing is the same. Where can he turn for advice, information and counsel? Not to the farm paper which he used to read; for it deals with conditions which he has left behind. Not to the farm paper whose attention is divided among ten or a dozen states; for he wants and must have definite, detailed, reliable and comprehensive information centered upon the one state to which he has come to make his home. It is his state farm weekly which gives him the information which is so necessary in the process of adjustment. It posts him regarding every detail of farming in the new environment, guards him from failure, helps him along the road to success, prosperity and contentment.

What is true of the new settler is equally true of the farmer already established. The state farm weekly supplies a service which no other publication can or does give. This valuable localized service is available at low cost as a result of our cooperative subscription plan. If you know of any one who has recently moved to our state, we trust you will call this paper and this offer to his attention.

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June 8, 1922.

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Hog-Market Latin

Little Journeys to the Markets

By Gilbert Gusler.

"Singeing," not "singing," hogs or "singers" is the market name for hogs on the bacon order, with rather narrow backs and trim bellies, weighing 150 to 180 pounds, which are suitable for the English and Canadian bacon trade. In making English cuts the hair is removed by singeing off with straw instead of via the scalding vat.

"Fat backs" are extremely fat barrows weighing 325 pounds or over.

"Roughs" are sows which have not yet dried up fully after weaning their pigs, so that they are rather rough or uneven along the underline as well as thin in flesh. Light, extremely thin roughs are called "skips."

"Throwouts" are hogs showing some kind of abnormality, such as bunches, boils, cuts or ruptures, which are thrown out of loads of hogs because of their undesirable character or the possibility that they may be condemned when slaughtered.

"Deads" are the hogs lost in transit or because of accidents at the stockyards. Failure to take proper steps to keep hogs cool en route is the most prolific cause of loss.

"Directs" are hogs bought by a packer in the country or at railroad concentration points and shipped direct to him instead of being offered for sale in the stockyards.

"Public shrinker" is the official who watches the hogs as they pass over the scales and specifies the amount of dockage to be allowed. In most cases it is at the rate of 70 pounds for each stag and 40 pounds for each pregnant sow.

The "top" of the market is the highest price paid on any given day, quotations on pigs and light lights not considered.

"Bulk" prices refer to the preponderance of sales. In the winter when the hogs are uniform a narrow price range will suffice to include 90 per cent of the receipts. In the summer when there are numerous packing sows a wide range is necessary to cover the bulk. Sometimes separate bulk prices on two or more different groups may be quoted.

Chehalis Holstein Sale

(Continued from page two.)

1918, E. A. Donaldson, Chehalis 305
Newaukum Butterfly Palmyra, b. Aug. 6, 1918, Thomas Yarr, Chimacum 200
Newaukum King Beauty, M. P. Frame, Ceres 315
Newaukum Lunde Segis 2d, b. September 2, 1921, M. P. Frame 225
Newaukum Lunde Segis, b. Oct. 10, 1920, M. P. Frame 305
Newaukum Ann Lunde, b. April 20, 1921, M. P. Frame 305
Newaukum Ann Lunde 2d, b. Bab. 18, 1922, Thomas Yarr 130
Newaukum Butterfly Segis, b. March 23, 1922, Albert Ammeter, Chimacum 55
Almeda Clothilde Korndyke, b. Oct. 12, 1921, Philip Aust, Klaber 125
Arndale Mildred De Kol, b. June 20, 1917, Thomas Autzen 180
Arndale Nettie Colantha Korndyke, b. July 3, 1916, L. L. Goff 165
Arndale Queen Beatrice, b. Sept. 17, 1917, Thomas Autzen 150
Arndale Dolly Canary Johanna, b. April 2, 1918 185
Arndale Primrose Segis Alcartra, b. May 19, 1919, C. A. Ives 185
Arndale Pansy Inka De Kol, b. May 17, 1919, Phillip Aust 170
Arndale Pontiac Segis, b. May 26, 1919, Thomas Autzen 165
Arndale Mildred De Kol Daisy, b. March 17, 1920, Thomas Autzen 175
Newaukum King Beauty 2d, b. Jan. 28, 1922, M. P. Frame 110
Olympic Duchess Sadie Wayne, b. Dec. 29, 1921, Albert Ammeter 160
Consigned by Tom Nisbet, Chehalis:
Riverside Newman Sadie Vale, b. Nov. 10, 1920, D. L. Crane, Castle Rock 185
Rhoda Queen Pontiac, b. Jan. 20, 1921, D. L. Crane 230

ADVANCED REGISTER RECORDS.

A study of 28 sales of purebred Guernseys held during 1921 furnishes further proof that in order to obtain the best prices for Guernseys advanced register records are almost indispensable. The following data show that during 1921 advanced register cows brought more than twice as much as females without A. R. records or A. R. dams, and that daughters of A. R. dams sold for $122 more than daughters of untested dams:

Females.	Average price.
117 A. R. females	$617.94
231 females without A. R. records but having A. R. dams	417.66
761 females without A. R. records and without A. R. dams	295.26

Bulls.	Average price.
2 with A. R. progeny	$462.50
62 with A. R. dams	340.08
108 without A. R. dams	205.04

According to these statistics, an A. R. record placed on a foundation cow in the average breeder's herd would increase the value of her progeny about $125 and the cow herself will double in value. Moreover, the average of $295 for females without records and whose dams have no records can be attributed to some extent to A. R. records elsewhere in their pedigrees. It has been estimated that the cost of placing such a record on a cow varies from $50 to $160, depending on the number tested,

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Breeders' Dept.

Big Buster Polands

For Sale—No. 1, E's Clan No. 461815, farrowed Aug. 27, 1920. Sire, Fox's Clan, sire of grand champion boar at Portland, 1920, and winner of get of sire at Salem and Portland. Dam, Wonder Queen, by a son of Big Bob Wonder, dam, Fox's Smooth Queen, who was grand champion at Portland, 1919, bred by John Miller of Iowa. A "The Clansman—Big Bob Wonder—Giant Buster—old A Wonder" bred boar right in every way. Over 40 inches tall.

No. 2, Big Buster Jones, farrowed March 24, 1921. 36 inches tall, weight 435. Sire, Big Buster, weight 800 at two years. Dam, Miss Jones, granddaughter of King Jones, litter mate to Gerstdale Jones—also a granddaughter of Big Bob Wonder. He combines "Giant Buster—Jumbo—Big Bob Wonder—Giantess" blood to perfection.

We always grow out a few real herd boars. Here are two good enough to drive in any show ring. They are closely related to our sow herd so are for sale. They both are tried breeders and so guaranteed. Have some real litters by them. Both are very smooth, good backs, and the right kind of bone and feet. Price for either, $150. We invite you to inspect them.

Younger boars for less. Write us for full descriptions.

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L. S. BERRY, Gaston, Oregon.

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RIVER BANKS FARMS, Grants Pass, Ore.

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D. C. BUNN, Prosser, Wash.

Chester White Swine
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If you want producers that would be given careful consideration in any show ring—come.

The catalog, now in the hands of the printers, gives details. Send for one.

Sale will be held on the Wist farm, one mile north of Scappoose, Oregon, just off the paved highway. Easily accessible by train, stage or auto.

One year's time will be given to responsible parties. See catalog for details.

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SCAPPOOSE, ORIGON.

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Sale Manager:
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These herds are tuberculin tested and represent the best breeding and individuality to be found in the state. It will pay dairymen interested in registered Holstein cattle to attend this sale for the herds being offered are comprised of a dandy lot of well bred stock that will be sold absolutely without reserve. Terms cash, unless other arrangements are made with owners before sale time.

Remember the day and the date: Tuesday, June 20, at 11 a. m.

ON THE FOLLOWING DAY the Graham Live Stock company will sell 60 head of grade cows, consisting of Guernseys, Jerseys and Holsteins. These animals are tuberculin tested and a splendid lot of heavy producers and high testers. Never before has a better lot of grade cattle been sold in Spokane county. These cows are all fresh or heavy springers and you are invited to look them over. Terms cash unless other arrangements are made with Mr. Graham before the time of the sale.

Remember the time and place: Wednesday, June 21, 11 a. m., at Graham Live Stock Co. sale yards, Spokane, Wash.

Street cars run past the Graham sales barn.

GEORGE A. GUE, Auctioneer.

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offers for sale at farmer's prices, four Holstein bulls, ready for service, sired by Sir Soldene De Kol Pietertje, a double grandson of Florence Idella Sharp, former state record cow with 27,236 lbs. milk and 1146 lbs. butter. All from record dams that are now on retest and increasing their former records by large margins. Also three young calves of the same breeding.
A few Ayrshires, ready for service, are still left and some calves of the Jersey and Guernsey breeds.
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Our herd has been in the winning wherever shown.
Senior herd sire, Francis May King (A. R.) he by Langwater Hambro (A. R.)
Junior herd sire, Rex of Willow Brook, he by Langwater Sunderland (A. R.)
Our herd matrons are cows with A. R. records from such noted sires as Langwater Hambro, Langwater Emigrant and first 5 daughters of Francis May King, to freshen with average records of 480.14 butterfat, at average age of two years and ten months; most of them double letter class.
Some splendid bull calves for sale of above breeding.
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Improve your herd with a Shorthorn bull of the milking strain. Getting milk as well as beef. We have some choice bull calves for sale at farmer's prices from high record cows.
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J. C. BROWN & SONS, Shedd, Ore.

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THE WASHINGTON FARMER

ESTABLISHED 1894

SPOKANE. SEATTLE.



Good Work by Washington State Grange in Annual Session—Page 3

Northwest Breeders' Sale

Forty-Nine Purebred Guernseys Bring $14,140

Twenty-six Oregon and Washington buyers paid $14,140 for 49 purebred Guernseys at the northwest breeders' sale at Portland June 5, and while the crowd was not large and no very high prices were realized, Manager C. M. Talmadge expressed himself as more than satisfied with the sale average of $290. Females averaged $300 and bulls $228. Foundations were laid for at least six or eight new purebred herds, and other structures were strengthened by the addition of a female or two.

H. M. McGowan of McGowan, Wash., paid $2200 for six females and a bull, becoming thereby heaviest purchaser and owner of the top price female, Olympic Maid, a fine 3-year-old consigned by Olympic farm of Seattle, that brought $530. He gave $430 for her half-sister, Olympic Nancy, a 2-year-old, and two half-sisters consigned by T. C. Gilbert & Sons of Shaw were among his purchases also. Oregon Queen, a 6-year-old consigned by W. A. Goodin of Cornelius, ran the "top" a close second, selling to H. R. Edmunds of Tillamook for $525 after Goodin had offered $400 for a heifer calf from her. She has a record of 544 pounds in class CC, made while carrying twin calves, and she is bred to Langwater Khedive. Edmunds also gave $500 for Sunbeam of Chicona, a 3-year-old daughter of Langwater Traveler, consigned by A. L. Gile of Chinook, Wash. The heifer's dam is a granddaughter of Imp. King of the May and also of King of Medfield. Edmunds' total was $1130 for three head, including a bull. Fred Romtvedt of Toledo paid $1035 for three, including Red Wing Starlight's Walla, a showy 4-year-old of great promise that cost him $500. She was consigned by A. I. and J. Hughes of Oregon City. Two young heifers out of Imp. Vazon Nellie, one of the Clackamas county importations of 1920, brought $535 of Romtvedt's money. W. J. Knutzen of Burlington secured one of the bargains of the sale in Imp. Vallon Winsome Pride, a 3-year-old for whose heifer calf her consignor, Leslie G. Perry of Wendell, Idaho, offered $350. She is sired by an imported bull and her imported dam was at one time one of the best cows on the island. Another bargain was Luster of Chicona, a blue ribbon 2-year-old out of Lucilla of Chicona, champion show cow and producer. Consigned by A. L. Gile, she was first in the ring and went for $420. Romtvedt is among the beginners and "near" beginners who obtained good stock at the sale. Others were Gust Hiem of Scappoose, R. Stadeli of Silverton, D. Cruickstank of Buell, E. W. Ross of Kelso, Wash.; W. De Jong of Brownsmead, Mrs. Kittie David of Portland, and the following members of a Guernsey bull club at Goldendale, Wash.: H. D. Roberts, W. E. Hornbrook, M. O. Dayton and D. Admiral. Each of the latter obtained one female. Mrs. David, who is secretary-treasurer of a jewelry house in Portland, bought the first purebred females and a bull for her Pacific highway farm in Clarke county, Wash., run by J. O. Hoots. The bull was in the Hughes consignment and cost $305. He was junior champion at the state fair last fall and his four dams average 676 pounds of fat. A half-sister to Edna of Mountain View, Wallace & Fordyce's big producer, was procured by Mrs. David for $405. She has made 435 pounds of fat in nine months in class CC.

An intensively bred May Rose bull, and a splendid individual, is Chicona Victor, a Gile offering purchased for $615 by C. L. Hawley for his farm at McCoy. The youngster carries 12 crosses to this famous family. He is by Langwater Traveler and is out of a daughter of Langwater Butter Maker that is expected to make 475 pounds in class GG.

In the following summary of the sale, the purchaser is from Oregon, unless otherwise indicated:

Females.

Consigned by Leslie G. Perry, Wendell, Idaho:

Edyetha of Mountain View, born July 31, 1916; E. L. Scobee, Hood River. $285
Barbara of Mountain View, born April 15, 1917; W. De Jong, Brownsmead 280
Imp. Vallon Winsome Pride, born October 26, 1918; W. J. Knutsen, Burlington, Wash. 330
Imp. Lily of the Cloture, born July 8, 1919; William Ober, Seaside 230
Nona of Mountain View (substitute); K. David, Portland 405

Consigned by Henry Schick, Buhl, Idaho:

Hero's Le Bas, born October 5, 1911; Gust Hiem, Scappoose 270
Imp. Bluebell of Sarnia, born March 7, 1911; John A. Hilles, Hood River.. 250
Bluebell of Golden Acres, born April 17, 1919, John A. Hilles 245
Auburn's Idola, born November 19, 1919; K. David 240
Bluebird of Golden Acres, born April 30, 1920; W. E. Hornbrook, Goldendale, Wash. 250
Auburn of Golden Acres, born November 26, 1920; H. D. Roberts, Goldendale, Wash. 265

Consigned by Valley Gem farms, Arlington, Wash.:

Glenwood Girl of Valley Gem, born October 8, 1919; John A. Hilles 430

Consigned by Olympic farm, Seattle, Wash.:

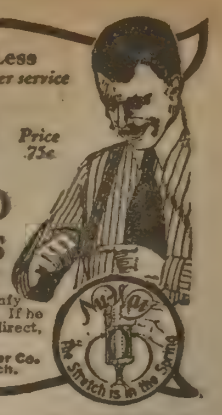
Olympic Nancy, born August 6, 1919; H. M. McGowan, McGowan, Wash.. 430
Olympic Maid, born September 14, 1918; H. M. McGowan 530

Consigned by A. L. Gile, Chinook, Wash.:

Derilla's Pacific Queen, born December 1, 1911; Frank A. Rowe, Portland 300
Pinehurst's Jeda, born March 18, 1912; Lloyd Hathaway, Battle Ground, Wash. 155

(Continued on page nineteen.)

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SUCCESSOR TO

Vol. 46. No. 24 THE RANCH PACIFIC DAIRYMAN HORN AND HOOF June 15, 1922

For Good Farming, Attractive Country Homes and Happy Country People

A. S. Goss Elected Master of State Grange

He Has Been Manager of the Associated Grange Warehouse at Seattle for Two Years

By RALPH ERSKINE

ONE of the most satisfactory conventions that the Washington State Grange has had for many years was held at Yakima on the state fairgrounds June 5 to 9. This was the 34th annual session and resulted in the election of A. S. Goss of Seattle as the state master, with one of the closest ballots ever cast in the history of the organization.

A. S. Goss has been a member of the Washington State Grange for the past eight years, having lived in Finley, a town in Benton county near Kennewick. He has been both secretary and master of the Finley Grange No. 414 during his stay in the community where he operated an 80-acre alfalfa farm. At the request of the grange members he left the farm to take entire charge of the warehouse at Kennewick, which he helped to organize. His success with this undertaking resulted in his being chosen as manager of the Associated Grange warehouse at Seattle two years ago.

A man of nearly 40 years, he has done much to put the grange warehouse on its present footing and believes that such a step has been a great incentive to cooperative movements in other lines.

"We must work for harmony and keep the grange on the right track to prosperity," said Mr. Goss. "There are going to be many big problems that we must meet, but they must be taken as they come and worked out for the good of the organization."

Men who have known Mr. Goss as a farmer testify that he is one of the best of neighbors, a man who will perform what duties are before him to the best of his knowledge and ability. He has never been a faction man, but has always taken a middle of the road attitude.

Fred Nelson expressed himself as believing that the delegates had chosen one of the best men that could have been selected for the position and that Mr. Goss has his full-hearted support.

In order to give the delegates an opportunity to know the candidates each nominee was asked to make a five-minute talk to the audience just before the second ballot was cast. There was much enthusiasm when Master Nelson was called to the floor, but he used his time in thanking his supporters and declining to run as a candidate for the office.

The nominations for master placed nine men on the list : E. O. Hyland, Vancouver; A. S. Goss, Seattle; Fred Chamberlain of Puyallup; A. G. Ziebell, Snohomish; Fred Nelson, Renton-Junction; Knute Hill, Benton City; Herman Nelson, Orillia; A. W. Zwigert, Yakima; and L. L. Todd of Kiona. The second ballot eliminated all but Hyland, Goss and Chamberlain, the first two coming out with 121 and 110, respectively. When the final ballot was counted it showed that Goss polled 150 votes with Hyland only 12 votes behind with 138. There were a total of 288 ballots cast.

Mrs. A. W. Swigert of Yakima was elected to the office of chaplain, which office she filled temporarily. Frank Binns of Shelton was chosen to fill the vacancy on the executive committee. C. S. Councilman, who has been acting as gatekeeper, was elected to the position permanently. Knute Hill of Benton City was reelected lecturer.

Bremerton's invitation to hold the 1923 convention of the State Grange at that place was accepted. Both Auburn and Snohomish were bidding for the convention.

HARMONY HAS AT LAST BEEN REALIZED.

The address by Acting Master Fred Nelson was the principle feature of the opening day of the convention. Mr. Nelson commented on the harmony that had at last been realized by the consistent efforts of those who actually have the interests of the grange at heart.

"The grange is now in a healthier condition than it has been of late, said Mr. Nelson, "and if wise deliberations are taken at this session, its future will be even greater than in the past and the proposed slogan of '25,000 members in 1925' may easily become a reality."

A number of recommendations were made and policies outlined relating to different influences that affect the farmers in general. In all cases he advised the grangers to work for further cooperation with other organizations that had for their purpose the betterment of agriculture and the home.

Although the grange has had its ups and downs, it has always been able to come out with flying colors in the end, and, as Mr. Nelson pointed out, it proves that the institution is founded on the soundest of principles and has lasting qualities."

The chief points of the master's address will be found on page 7.

There were approximately 600 grangers who attended the opening session and heard Master Nelson's address. Many came from Yakima and adjoining counties. Before the close of the morning session Mr. Nelson appointed the 34 committees, and their chairmen. In most cases the old members were retained where they were able to serve.

The members were well pleased with the address and some expressed their wish that Mr. Nelson would continue with the office for another year. He had, however, emphatically expressed himself as not being in line for nomination.

An address of welcome was given on the night of the opening day by E. L. French, state director of agriculture. He first invited the grangers to enjoy themselves and to feel at home on the state fair grounds. He then spoke of the grange as one of the soundest organizations of its kind and told how it was flourishing in almost every part of the United States.

KEEP FREE FROM POLITICAL INFLUENCES.

"There have been many such organizations formed within the last half century," said Mr. French, "but their success or failure has depended on their ability to keep free from political influences. This point is emphasized by the fact that the grange has been able to continue its work among the farmers with probably the greatest membership. It has, however, had a great influence upon legislation through advisory means and has been successful in getting some important measures passed during its existence by this means.

"The social aspect of the grange has had a wonderful influence on the home life of our rural population. In fact it was the first influence that tended to break down the isolation that existed in our rural districts. Today the home life of our farms is more pleasant and the women have a better chance to enjoy themselves.

"This only touches the higher lights of the grange," said Mr. French in conclusion. "It is a wonderful institution with splendid purposes and it promises to fulfill them to a greater extent in the future. The Patrons of Husbandry should be only too glad to cooperate with this and other organizations, but they should remember that the old craft has weathered many storms because it is soundly constructed and ably officered and manned. It will bring us into a haven of peace, security and rest which can be realized by no other organization of farmers."

The first day's entertainment was in charge of the Yakima Pomona granges who served an enormous cafeteria lunch to all grangers and visitors, and the tables and lawn in the adjoining grove were used for the lunchers who ate in picnic style.

AUTOMOBILE TOUR TO THE NACHES VALLEY.

In the afternoon the visitors were taken on an automobile tour to the Naches valley by way of the painted rocks and the Naches Heights road. The return trip was made through the Naches valley and Selah. There were nearly 100 autos that made the trip and the visitors were much impressed with the whole affair.

Two of the evening sessions and part of the morning and afternoon periods were taken up with the conferring of degrees on candidates from different parts of the state. These, of course, were closed sessions but were filled with the beauty of the sacred rites that are known only to grangers.

D. G. O'Shea, president of the federal farm loan bank of Spokane, outlined some of the details of the loan system at the meeting Tuesday night and also talked to a gathering Wednesday morning.

WILL A MONEY LOAN ADD TO BURDEN..

"One of the first points to emphasize when making a loan," said Mr. O'Shea, "is to keep people from borrowing unless they actually need a loan. If the loan is going to be an additional burden for him he should never be allowed to take it out. The object of the federal farm loan bank is to provide a means whereby the farmer can pull himself out of debt by means of the low rates of interest. Since all loans are made with other people's money, the transactions should only be made on sound business principles and sentiment should never enter into the deal.

There is also a mistaken idea that the money is furnished by the government. When the bank was first started the federal money did make the loans possible but the capital is now obtained through the sale of bonds to private individuals. The Federal farm loan bank has nothing to give away because it must get its money by the payment of interest. It carries on its business with a low operating cost and it has no object but to give disinterested service. Its cooperative service, however, affords an opportunity to further the cooperative undertakings everywhere, and there are many that have already taken advantage of it.

The secretary's report which was given on the second day of the convention brought out the fact that the grange had lost only a little more than a fourth of its membership as a result of the recent trouble. In some counties the loss was greater than this while in other instances

(Continued on page six.)

A Group of Prominent Members of the Washington State Grange



Front row, reading from left to right: Knute Hill, Benton City; Fred Nelson, Seattle; A. W. Swigert, Yakima; Mrs. A. W. Swigert; Mrs. Flora Hoyer, Castle Rock; Mrs. J. T. Compton, Wenatchee; Mrs. R. N. Miller, Pullman; Herman Nelson, Orillia; Mrs. Ivan Compton, Wenatchee; J. T. LaFollette, Pullman. Back row—Fred Lewis, Tumwater; Ivan Compton, Wenatchee; C. A. Sperber, Vancouver; Fred Chamberlain, Puyallup, and M. C. Hazen, Snohomish.

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Growing Necessity of Standardizing Farm Products

The joint congressional commission on agricultural inquiry, after weeks of investigation, has rendered a report that throws no new light on the difficult problem of marketing farm products. The only advice that the commission gives the farmers of the United States is just the advice that the Pacific Northwest Farm Trio has been giving its subscribers for years—a general extension of the principle of cooperative marketing of farm products through local associations.

Producers, by assuming through associations the business of "selecting, grading, standardizing and assembling of products," says Chairman Anderson of the commission in his discussion of its findings, "can go far toward improving their own and the public's situation."

"There are certain risks which neither the producer nor the consumer is willing to accept," Mr. Anderson said in outlining the commission's report, "which are now assumed by wholesalers, jobbers and retailers, and these are reflected in the price received by the producer as compared with the price paid by the consumer."

Chairman Anderson added that no single factor in industry or commerce "can be held solely responsible for the spread between producer and consumer." Nor was the congressional commission able to "point out a remedy, legislative or economic, which will reduce this spread."

Inspection at Shipping Point.

The best remedy, so far as there is a remedy, was pointed out by Miles Cannon, Idaho commissioner of agriculture, in an address last Wednesday before the Idaho State Bankers' association on "The Standardization of Farm Products." Mr. Cannon advocates inspection at point of shipment, rather than at eastern terminals, as has been the rule in the past. "When the farmer delivers his product in good order at the point of shipment he is entitled to get his money and have others carry the risks of transport," says Mr. Cannon. "The farmer is the only business man whose wares must stand inspection at the terminal point of the purchaser, and this plan has worked serious injustice in the past. In 1921 we inspected 50,000 cars of farm products at the point of inspection, and few complaints have come because of the standards we established."

Quality Sells Product.

Uncertainty of quality of the product to be delivered has been a prolific cause of the wide spread between the prices paid the producer and the prices paid by the consumer. It is human nature for the buyer to want to know the quality of anything he is buying, and his price will go up or down, according to the certainty or the uncertainty of the quality of a product. Products standardized and sold under a guarantee will command better prices than products put on the market in an unstandardized and haphazard manner.

Now and then an individual grower is strong enough to do his own standardizing and make his own guarantee, but the great majority of producers, as the congressional commission says, should turn to their cooperative marketing associations for the essential work of selecting, grading, standardizing, assembling and marketing their products.

Build Up the Home Market

Europe's gradual agricultural recovery is indicated in the falling off of American grain exports.

In the 10 months ended with April this year total grain exports from the United States aggregated $506,000,000 as compared with $950,000,000 during the preceding 10 months.

In April this year exports of grain aggregated $37,000,000, against $57,000,000 in April a year ago.

A part of this decline is due to falling prices, but much of it is due to decreased volume of exports. For instance, April exports of wheat this year were 4,855,000 bushels, against 17,641,000 bushels in April of last year, while exports of flour were 1,000,000 barrels, against 2,000,000 barrels in April, 1921.

Exports of wheat during the 10 months ended with April aggregated $109,000,000, against $165,000,000 during the corresponding months of 1921, while for the month of April the total was $10,000,000, against $14,000,000 in the same month last year.

It looks as if the American farmer will have to put greater dependence upon the home market hereafter and look less to the foreign markets. We fear that the war-time era of high prices for agricultural products has passed not to return, but with readjustment there is good reason to hope that our farmers will be as prosperous as they were under the feverish war-time inflation. For one thing, costs of production have been lowered and will probably be still further reduced. The trend of freight rates is downward.

There is another reassuring consideration—the increased consumption of farm products that will come with the return of general prosperity and fuller employment of the industrial classes. During the last two years several million wage earners have been out of employment, the estimates running at times as high as 5,000,000. These unemployed wage earners were forced to buy sparingly of food products and cut their tables down to the barest necessaries of life. Moreover, the fear of losing employment caused many others to retrench and not buy as freely as they ordinarily do of the products of our farms, orchards and gardens.

LOOKING INTO OTHER FARM FIELDS

Thirteen counties in Arkansas will plant 853 acres to radishes this year, according to a forecast recently made by the United States department of agriculture.

* * *

The first solid trainload of Georgia peaches of the season passed through Spencer, Ga., on May 17, bound for New York. The crop is estimated at 10,000 cars, or the biggest on record.

* * *

EDMONTON, Alberta.—Returns of crop yields for 1921 from 3114 threshing machines gives a total of all grains for the province of 56,447,972 bushels. Winter wheat averaged 16.98 bushels to the acre, spring 11.76 bushels, oats 30.13 bushels, barley 23.56 bushels, rye 11.07 bushels and flax 4.78 bushels.

* * *

The exports of butter from Denmark in 1920 amounted to 164,904,000 pounds, according to the Danish foreign office journal. This compares with a total export of 210,098,000 pounds during 1914. The production of butter during 1920 amounted to 198,414,000 pounds, compared with 253,529,000 pounds in 1914. The United kingdom provides the chief market for Danish butter exports.

* * *

Investigations by the state highway department of commerce at Greenwich, Conn., have shown that 14.3 per cent of the total volume of goods moved by auto truck on the Boston Post road at that point were agricultural products, which were estimated in value at $10,500,000 annually. The longest haul was in eggs, with 68.21 miles. The average for all agricultural products was 39.5 miles. Poultry was the principal commodity shipped and was valued at $1,320,000.

State Farm News

The prune growers in western Clarke county, where the famous prune belt of this section of the state is the Sara, Felida and Lake Shore districts, south of Ridgefield, are optimistic over the prospects of realizing a bumper crop, now that all danger of damage to the fruit trees is past. It is expected that the biggest crop in years will be harvested.

Officials of the Washington Growers' Packing corporation estimate this year's crop to be about 10,000,000 pounds for Clarke county. The corporation, consisting of fruit growers of this county principally, will handle about 80 per cent of the acreage in the county this year.

The corporation will include a potato branch again this year after making a big success last season.

* * *

A tract of government timber totaling 10,000,000 board feet of fir, cedar and hemlock has been awarded the Klement-Kennedy Lumber company of Forston, Wash. The timber lies on the north fork of the Stillaquamish river, and is being sold at $2.50 a thousand feet for fir and cedar and 70 cents a thousand for hemlock.

* * *

Plans for the construction of a $450,000 Masonic temple in Tacoma, which will far excel any of its kind in the west, were announced May 29.

In addition to a huge auditorium the preliminary plans include the building of a roof garden on the building, which will be so constructed that it can be glassed in during winter months.

The building committee consists of Colonel Coiner, James McCormack, Daniel I. Cornell, S. R. Balkwill and C. J. Backus.

The finance committee consists of Morton Gregory, E. B. King, Edward Tyler, Frank D. Oakley and Wilbur C. Raleigh.

* * *

The eighth annual farmers' excursions to the western Washington experiment station will be held during the week of July 17.

Details for the week's program were worked out at a conference of station officials, county agents, home demonstration agents and club leaders recently at the experiment station.

* * *

C. F. Rau, poultryman of Puyallup, recently stated that from January 10 to May 10 he shipped a total of 135,000 baby chicks of the White Leghorn breed. With a capacity of 45,000 eggs, he used 40 cases a week in seven settings, and had two hatches each week, Mondays and Thursdays, of about 6500 each.

C. F. Rau is the son of H. F. Rau, pioneer poultry expert, who owns a large hatchery at Spanaway and who was the first to introduce the raising of day-old chicks with marked success.

* * *

Over $2000 will be distributed in the various departments included in the premium list of the next annual fair of the Cowlitz County Fair association, which will be held at Woodland September 27-30. Special premiums have been provided for school work, canning clubs and other lines of endeavor in which the children are interested.

* * *

The Skagit County Berry Growers' association met in Burlington recently and established a uniform price for picking, agreeing with that paid by Puyallup and Fidalgo island growers. They will pay 30 cents a crate for strawberries; 40 cents a crate with a 10-cent bonus on each crate, for 2-year-old or over raspberries; 50 cents a crate and a 10-cent bonus for 1-year-old raspberries. The bonus will be paid to pickers who stay until the end of the season.

The North Pacific Berry Growers' association plans to handle the 1922 berry crop from this county and Burlington has been made a receiving station for this section.

* * *

Berry growers in the valleys between Seattle and Tacoma are looking forward to a good season as to crops and prices. A box order amounting to $250,000 has just been placed with the Brewer Manufacturing company of Puyallup by the North Pacific Cooperative Berry Growers' association. It is said that this association expects to spend not less than $1,000,000 for boxes this season.

* * *

The Wool Growers' Service corporation, organized with a capitalization of $200,000 for the purpose of meeting the financial needs of the sheep and cattle industry of this state, began operations June 1 at its main office in Yakima. Several days previous to that stockmen who desired to procure loans were asked for estimates of their needs. Loans running six months or less will bear interest at about 7 per cent, while those for a longer period are expected to bear not more than 7 1-2 per cent.

* * *

Ritzville will hold its thirteenth annual horse show June 16 and 17.

* * *

Secretary Wallace has approved federal expenditures for good roads in Washington state of $575,000, including six projects, totaling 50 miles (serving national forests, one being completion of the last link of the state highway between Sunset and Mount Hope.

* * *

Dr. David Livingstone, prominent Centralia physician, was appointed May 18 to succeed Dr. William N. Keller as superintendent of the western state hospital for the insane at Steilacoom, following acceptance of the resignation of Dr. Keller by W. J. Hays, director of business control. The change was made June 1.

Dr. Keller's resignation was received several months ago, but at the urgent request of Governor Hart and T. E. Skaggs, former director of business control, he remained in the position during the completion of considerable construction work then under way and until certain portions of the program he had instituted had been accomplished. Dr. Keller had been superintendent since November 1, 1914.

Coming Events of Interest

June 16-21—Chautauqua, Pasco.
June 19—Shorthorn tour, Lincoln county.
June 20—Farmers' celebration, Wilbur.
June 20-22—Lincoln-Adams pioneer picnic, Keystone.
June 21-23—30th annual pioneer picnic, Elberton.
June 21-25—Chautauqua, Pullman.
June 26—Pioneer picnic, Woodland.
July 24-Aug. 5—Live stock tour, Vancouver to Bellingham.
July 26-27—International apple shippers, Seattle.
July 27-28—Whatcom Guernsey gallop, Bellingham.

FARM BUSINESS AND MARKETS OUTLOOK

When the rails were used exclusively in moving California and northwestern canned foods to the eastern markets Pacific coast producers were at a disadvantage in competing with eastern packers, who enjoyed a lower freight rate. The opening of Panama canal service at a 50-cent per 100 rate, with regular sailings, has completely altered the situation. Already eastern canners have begun to complain, and seem inclined to seek lower freight rates, which they feel are necessary if they are to continue in the business, as they need some advantage over California, which has a longer growing season. On the present Coast rate by boat the western canner is on an equal footing with New York canners, while those west of the New York border are at a disadvantage. The California rate is only a little above that from Maine. The northwest has strengthened her position as a packer of cherries, pears and of berries of all sorts, and the superior quality of her offerings, combined with a low freight rate, makes her a stronger factor than ever.

Good Market for Good Cattle

Better grades of beef steers are being absorbed without difficulty right along and prices moved up to a new top for the season of $9.50 at Chicago with the average price level about $2 higher than the middle of last January. Receipts were lighter and eastern shipping orders and export buyers both furnished support. Dressed beef trade in all sections is in a healthy state, with prices working higher. The hide market also is moving upward.

At Chicago alone the supply of cattle for May was next to the largest for that month on record and receipts at other points were above the seasonal normal. They have declined in the last 10 days, however, and are practically equal to the average for this season of the year.

Distinct widening of the spread in prices between common and choice cattle other than steers featured the last week. Bulls, canners and cutters, and common and medium butcher cows and heifers trended lower. The supply of common steers remains abnormally small and prices were practically unchanged, but revision downward in that sphere can be expected within a month.

Runs from day to day carry a liberal sprinkling of heavy steers, but discrimination against them is slight. They will be practically cleaned up in a few weeks so that no fear exists of a repetition of last year's history when the liquidation of long-fed steers held back for the market to recover was continued until Christmas. A generous supply of yearlings is reported on the horizon, but if not sold till ripe they will find a warm welcome. Otherwise they will come into competition with grassers a little later on.

Veal calf prices moved higher again last week with the supply light and the dressed veal market sharply higher in the east. Northern markets for calves should show improvement fairly steadily, but southern points can look forward to a heavy supply most of the summer.

Cheaper Stock Cattle Later

Shipments of stocker and feeder cattle countryward are declining, due as much to a limited supply as to lack of buyers. Prices were slightly irregular last week, but are still extremely close to fat cattle values. Better chances to buy can be expected in another month or two and many operators are disposed to wait. Gains in weight on grass in the next month, although it is a good gaining month, may but little more than offset the probable loss in prices.

Prompt Recovery in Hog Market

The June break in the hog market arrived pronto, but the price recovered quickly again, touching $11, the highest since March 11. The average price at Chicago held well above $10 and a dip below that figure is impossible in view of the recent behavior of the market. In the normal year receipts reach the crest of the June run by the third week in the month, so that it is too early to conclude that further breaks will not occur. Whatever the loss, it is almost sure to be put on again in July and August when receipts drop to the lowest level of the year.

The discount on fat sows is widening, but this process is only beginning. Heavy barrows also may meet more discrimination a little later on.

During May the combined stocks of lard at seven leading packing points increased 30,000,000 pounds compared with an average increase during that month in the last eight years of 5,000,000 pounds. Hog meat stocks also increased 19,000,000 pounds, although the usual change during May has been a decrease of 20,000,000 pounds. In spite of the increase, they were only 70 per cent of the average on June 1.

Lamb Market in Slump

Although dressed lamb prices were steady and the combined run at leading middle western markets did not increase materially, hoof prices were scaled down sharply last week. Southeastern lambs are furnishing the annual glut at Louisville, Nashville, Cincinnati and Jersey City. Many of these lambs are forwarded by the larger packers to Chicago, making them independent of other receipts at that point and breaking the market. After this run subsides there may be a brief gap before range lambs begin to move in volume.

Horses weighing under 1500 pounds are extremely poor sellers at prices considerably lower than a month ago. New England buyers and seaboard cities are after good and choice drafters at Chicago, paying $200 to $300. Rugged workers weighing 1500 to 1650 pounds also are relatively easy to move at prices ranging from $165 to $190.

Pace Slackens in Wool Market

Boston reports that the wool market has slowed down in the last few days, although prices have been maintained. Producers and country dealers are extremely optimistic, but manufacturers are endeavoring to make out that the advance is being pushed too far. No one denies, however, that the supply is small and the demand is at least up to normal. The American Woolen company, the leading factor, repriced its goods for the second time since February in line with the higher cost of raw materials. Latest reports from Australia and the Argentine tell of further advances in those markets. Prices abroad are too high to permit imports of any consequence.

The Boston market is quoted as follows:

Wisconsin, Missouri and average New England, one-half blood, 44@45c; three-eighths blood, 43@45c; one-half blood, 41@42c.

Scoured basis:

Oregon—Eastern No. 1 staple, $1.25@1.30; fine and fine medium combing, $1.20@1.25; eastern clothing, $1.10@1.20; valley No. 1, $1.10@1.12.

Demand for Wheat Remains Dull

With prices the lowest in five months and the disturbing influence of May contracts removed, the demand for wheat improved temporarily and about 3,000,000 bushels of grain recently delivered were disposed of, but the betterment was short-lived. Although old gram can be bought at about the same price as the new crop deliveries, millers have no great incentive to buy and the prospect of a fairly liberal new crop to be available soon is preventing any tendency to stock up for future milling needs. The foreign demand has been amply supplied by simultaneous offers of a good deal of Canadian and southern hemisphere wheat. Receipts, which were extremely heavy, have fallen off and the run during June is certain to be far less than that of May.

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Wheat Crop Estimates

Unofficial crop reports indicate a yield of about 605,000,000 bushels of winter wheat and 250,000,000 bushels of spring wheat, or a total of 855,000,000 bushels compared with 795,000,000 bushels harvested last year. Condition of the winter wheat crop improved but little in the last month in spite of excellent weather. The average of spring wheat has been reduced about 7 per cent, but the crop has started off well. The Canadian crop is in good shape in most sections with the acreage but little changed from last year.

Dry weather has affected wheat in the Pacific northwest, while wet weather has made a lot of wheat liable to rust and numerous damage claims are being made, especially in the Ohio valley, Kansas, Oklahoma and Texas. Harvest in the last two states has already started and an increasing acreage is passing the danger point each week, although there is some apprehension that crop damage may yet be severe.

European crop reports are both good and bad. Recently European weather has improvtd, but the French wheat crop condition on May 1 was estimated at 58 per cent, the lowest in years; Italy has had drought; the United Kingdom needs dry, warm weather and the German wheat and rye crops are below normal condition. The European acreage also shows a decrease. As a whole, the European crop is not expected to be as large as last year.

In the last 11 months importing countries have absorbed about 56,000,000 bushels of wheat per month. If the same rate is maintained from June 1 until the beginning of the European crop year on August 1, 112,000,000 bushels more will be needed. Using official estimates, the combined surplus in exporting countries foots up to only 110,000,000 bushels. These figures may not be borne out, but at best the world carryover promises to be small. The United States can export new wheat after July 1, so that the stream to Europe can be kept going. With Europe's new crop less than that of last year, as is now indicated, the increase in the crop in the United States offset by a smaller carryover in this country and only small reserves left in Canada and the southern hemisphere, wheat prices should hold up fairly well unless depressed by dumping large quantities immediately after harvest.

Big Rye Crop Coming

The rye crop is estimated unofficially at 83,000,000 bushels. This is several times as much as the domestic requirements for flour and means a large surplus either for export or for feed. The supply of old crop rye is still fairly large, but exports are running heavy and stocks are being depleted.

Corn acreage will be slightly less than last year, according to comprehensive private reports. Owing to wet weather some planting is still to be done and the outcome is still in doubt.

The after-planting run of corn is on without an equivalent broadening in the demand. Receipts are practically the largest ever known for this season of the year. Prices are slightly lower, but the loss has been small. Exports are increasing again, although the movement to Europe from the Argentine also is heavy.

The oats acreage shows a decrease of about 7 per cent, according to unofficial returns. The condition of the crop is lowest at this season in a number of years with the period of greatest deterioration still to be met. The crop is estimated at about 1,250,000,000 bushels compared with 1,060,000,000 bushels harvested last year.

Cash Grain Markets

The range of cash grain prices for the week ending June 7, was:

Chicago—Wheat—No. 2 red, $1.17 1-4@1.23; No. 2 hard, $1.14 1-2@1.21 3-4; No. 3, $1.12@1.19 1-2. Corn—No. 2 mixed, 58 1-2@60 1-2c; No. 3, 57 3-4@59 3-4c; No. 2 yellow, 58 3-4@61c; No. 3, 58 1-4@60 1-2c; No. 2 white, 59@61c; No. 3, 58@60 3-4c. Oats—No. 2 white, 37@42c; No. 3, 35 1-4@39 1-4c; No. 4, 34 3-4@36 3-4c. Rye—94c@$1. Barley—60@69c.

Bran and middlings have declined sharply in the last 10 days, due to an indifferent demand. Production is not above normal for this time of the year. Cottonseed and linseed meals are lower also, although stocks are light. Only corn feeds show firmness.

Prices per ton (100-pound bags) in carlots—Chicago—Bran, $19; standard middlings, $20.25; flour middlings, $25.50; cottonseed meal, 36 per cent, $48.50; 43 per cent, $52.50; hominy feed, $23.50; gluten feed, $32.85; old process oil meal, $52; tankage, $55.

Easy Tone in Hay Markets

A large part of the receipts of hay are of poor quality and are not wanted. Prices on the best grades are slightly easy, but the demand is practically equal to the supply.

Prices per ton in carlots—Chicago—No. 1 timothy, $24@26; No. 2, $21@23; No. 3, $16@19; No. 1 light clover, mixed, $22@24; No. 1 clover, $18@19; No. 1 clover, mixed, $19@21; alfalfa, $15@26; upland prairie, $13@17; midland prairie, $13@16; rye straw, $16@17; oat and wheat straw, $13@15.

Egg Holdings Set New Record

Cold storage holdings of case eggs in the United States on June 1, according to the preliminary estimate of the bureau of markets, was the largest ever reported by the bureau at any time of year. The total was 7,936,000 cases compared with 6,844,000 cases a year ago and a five-year verage of 5,701,000 cses.

Receipts of eggs are declining, although they are above the average for this time of the year and the surplus for storage remains large. Storage operators are anxious to buy all of the northern eggs arriving, but art neglecting southern stock. Prices, although slightly lower, have changed but little for a number of weeks.

Butter Storing Starts in Earnest

Although storage of butter in a small way had been going on for two weeks previously, large scale operations did not begin until the first of June and storage holdings on June 1 were only 12,973,000 pounds, compared with 21,682,000 pounds a year ago and a five-year average of 17,328,000 pounds. Since a June stamp on stored butter is preferred and the butter now arriving has been showing full grass flavor suitable for long time storage, buying for this purpose is expected to be brisk for the next few weeks. With a good demand for immediate consumption, heavy demand for storage and a small amount of butter being purchased by speculators for a short turn, the market remains in a rather strong position.

Prices for 92 score fresh butter on June 7 were:

Chicago, 34 1-2c; New York, 35 1-2c; Boston, 36 1-2c; Philadelphia, 36 1-2c; San Francisco, exchange quotation, 40 1-2c.

The cheese market has been fairly active, although most buying has been done in small lots. The quality of cheese arriving is satisfactory for storage and about 20 per cent of the receipts at the leading markets are going for that purpose, but interest is limited by the rather high price level. A little storing is taking place on New York state and Wisconsin markets. Prices at distributing markets have sagged recently following a decline in Wisconsin. Twins, single daisies and longhorns have been the most popular styles.

Prices on No. 1 American cheese on June 7 were:

Chicago—Twins, 18 1-2@18 3-4c; Single Daisies, 18 1-2@18 3-4c; Double Daisies, 18 1-4@18 1-2c; Young Americas, 18 1-2@19c; Square Prints, 19@19 1-2c.

New Potatoes Take Lead

Weekly shipments of new potatoes now exceed the movement of old stock, although the latter is abundant for this season of the year. The total movement has fallen off recently and the market has become firm. Northern sacked round whites are quoted at $2 to $2.40 in the Chicago carlot market.

High prices for onions last year have stimulated production. The commercial late onion acreage estimate shows an increase of 15 per cent over last year.

(Continued on page sixteen.)

Elected Master of State Grange

(Continued from page three.)

the membership has been increased to a greater extent than it was before the split.

Mr. Lewis advised the grangers to adopt a definite policy as to the proper means for the study of politics saying that by taking such matters up in a purely educational way they were within the rights and privileges of the grange. Any other means of action, he said, should be left to such organizations as make such actions their sole aim.

In order to prevent the borrowing from one fund to help another, Mr. Lewis asked for a change in the by-laws to this effect. Complications have occurred from this source during the past year and it is believed that better harmony will be had if the change is made.

Mr. Lewis spoke very encouragingly of the present situation regarding the membership, saying that the possibility of reaching the 25,000 goal for 1925 was very good but would require the unified efforts of all grangers.

The grange went on record as approving the Ladd bill which provides for the issuance of legal tender to be issued to the people of the United States and prohibits any private corporation from issuing any currency whatever. The bill is drafted along the same lines as have been endorsed by the grange at previous sessions in other parts of the state and it was hoped that it would soon be enacted into law.

The Associated Grange Warehouse received immediate action when the delegates voted an increase of $100,000 capitalization to give the organization an opportunity to increase its volume of business. This will afford the 125 grange stores, located at different parts of the state, a chance to buy a greater number of commodities on a cooperative basis at a slightly reduced cost.

In commenting on the results accomplished by the warehouse during the past year, A. S. Goss, the manager, said that the entire business has averaged close to a half million dollars a month.

"We have been very successful in our undertaking," continued Mr. Goss, "and our business has increased greatly, especially with articles which are put out under our own brand. We have had our troubles in the past but have succeeded in solving the problems and in many cases have been able to head them off before it was too late."

The bookkeeping system of the Associated Grange warehouse is unique and Mr. Goss told how it has been self-supporting. This is carried on at the Seattle office and the local stores may take advantage of it at cost. They are required to send a daily report to the head office and it is gone over and audited in a set of books that are not complicated and almost anyone can understand them. There is one man who spends his entire time checking over the prices paid by the different stores. If any one has made a purchase that is out of reason or if he could have done better by buying on a different scale he is notified of the fact by return mail.

Upon commenting about this method, C. C. Day, manager of the grange warehouse at Kennewick, said he felt that even though the local warehouses did not buy all of their supplies from the head house, they should let them handle their bookkeeping. It was his opinion that they could save more than double the cost of the bookkeeping by such suggestions as they are able to give regarding purchases. This, he said, is an invaluable service that is not appreciated by all the houses but it would actually save them money in the long run because it eliminates the chance of being "taken in" on small sales that would otherwise pass unnoticed.

The sessions on the last day of the convention were largely taken up with the discussions of resolutions which had been previously drawn up by the different committees.

The resolution which seemed to concern most of the delegates was the one regarding the 30-10 school taxation plan. Ralph Swetman of the Ellensburg normal gave a short talk explaining the plan but the house failed to take any definite action, either for or against it, due to the wide differences of opinion of the grangers.

A very significant resolution was passed which declared that no officer, committee or member of the grange has the right to speak for the grange either in support of or in opposition of any candidate for a political office. This action places the grange on a definite platform opposed to any parcipitation in politics.

The Columbia Basin project was approved and it was recommended that congress take up all such reclamation projects in the order of their importance.

The work of the Washington State college was approved as well as the extension and experimental work which had much to do with the betterment of agricultural conditions.

The committee on marketing found that their subject was too extensive to be handled in so short a time and recommended that a permanent committee be instructed to study marketing conditions and follow the arrangements being tried with the sending of market reports by radio. This committee was instructed to work closely with other farm organizations in the study of standardization, financing, distribution and cost of production.

The report of the taxation committee included many suggestions of which the following were passed: The taxation of timber lands to be levied according to their increase in valuation; a further extension of the income tax; an increase in the inheritance tax; the exemption of $1000 in valuation on improvements on small tracts where the owner lives on same; the assessment of all unoccupied land; the exemption of improvements on land for a five-year period after improvements have been made. It was recommended that such property as mortgages be taxed. A suggested tax of $1.50 a case on all condensed milk where substitutes were used in the manufacture was voted down and a resolution substituted asking for the prohibition of the manufacture of all milk substitutes.

One of the most important resolutions passed was the one which favored the fight against the drug evil and calling on the granges as well as the individual members to support the enforcement of the prohibition law.

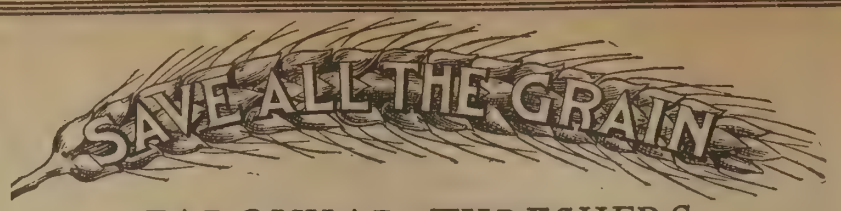
The committee on publication advocated a change in the management of the Agricultural Grange News, which would put one man in charge of the publication.

TO PUSH WORK OF THE JUVENILE GRANGE.

Mrs. Agnes Johnson of Redmond was reappointed as matron of the Juvenile Grange and a collection of $45 taken for the carrying out of the organization work in this department throughout the state. Mrs. Johnson will have the power to appoint supervisors wherever they are needed. This work is much similar to club work and is carried on in the same manner as the grange, the officers being the same as with the older organization. Almost any kind of work that is called for can be taken up provided a supervisor can be found who will give boys and girls the instruction needed. Mrs. Johnson has been matron of the Happy Valley Grange at Redmond, where there is a membership of 26 juveniles. Last year there were 130 juvenile granges in the state and Mrs. Johnson intends to increase the membership to a much greater extent by the time of the next convention.

The executive committee passed a resolution which protested against the action taken by the milk dealers against the Seattle Milk Shippers' association which case is now up for a hearing soon. The milk dealers are trying to make out that the Milk Shippers' association is subject to and has violated the Sherman anti-trust law.

P. J. Cleaver of Toledo, Wash., has been appointed manager of the Associated Grange warehouse and will work under Mr. Goss. He has been manager of the Cowlitz Valley Cheese association at Toledo for a number of years.



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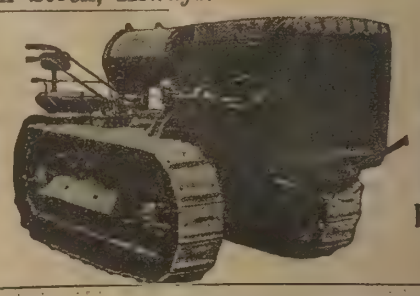


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Master's Address Urges Broader Cooperative Work

"Let us mutually resolve to labor for the good of our order, our country and mankind, remembering our motto, in essentials, unity; in nonessentials, liberty; in all things charity." These are the words of Fred Nelsen in the master's address to the thirty-fourth annual session of the Washington State Grange at Yakima. Reviewing the conditions of the order of the state, the master's address continues:

"One year ago when we met at Colville, we seemed to be at the peak of our success as a farm organization, as we had the largest number of members ever in the history of our state grange. Since that time events have occurred which has tended to tear our beloved order, in this state, to tatters and today we show a decreased membership, although not to such a great extent might have been expected, when the man who was elected as master by an overwhelmingly large majority deliberately walked out, organized a competing organization, making use of our legal name, and invited and urged our granges and our members separately as well, to join with him in the secession movement. It is to be noted that, instead of our organization being destroyed and our membership taken over by the the competing organization, that we have lost, from all causes,, only about one-quarter of our members of a year ago, and a very large part of this loss is caused by the loss of granges, which has not been overcome by the organization of new ones as heretofore." Other informative extracts from the master's address follow:

"The secretary's financial statement for September 30, as perhaps you will remember, showed a deficit of $4716.63. This was the time when your acting master took entire charge of the work. Since then we have paid a debt of $500, which had been borrowed to start the life insurance which failed to materialize, and our expense in attending the national grange meeting at Portland called for about $500 more, besides the expense of the several executive committee meetings and legal expense we have been obliged to meet since that time, which has been rather heavy, yet in spite of this additional expense we have been able, as you will see from the secretary's report, to reduce the deficit in the general fund over $1200, which is not a bad showing under the circumstances.

"This lack of funds has prevented our sending organizers into the field to get new granges and reorganize old ones, and voluntary effort has had to be relied upon to do this work, with the result that we have only organized five new granges since our last meeting. This has prevented the usual method of overcoming the losses caused by the weak granges dying, which has been no greater this year than common, but which has also been beyond our power to prevent on account of the lack of necessary funds to send help when needed.

"On the other hand, however, there is a unanimity of purpose among our members greater than ever before, and a determination to make our organization the power for good that it might be.

"Those of our members who have left us for the new organization have largely been those who have tried to make the grange a political organization, and their leaving has diminished to no small extent the cause for much of the discord that has heretofore existed, and we believe that the grange of Washington is in a healthier condition than it has been of late, and that if you are wise in your deliberations at this session, its future will be even greater than in the past, and that the proposed slogan of '25,000 members in 1925' may easily become a reality.

"Although the grange has no direct vote or voice in the Washington Fire Relief association, we feel it is a grange enterprise as its membership is limited to grangers only. Consequently the grange gets the credit or discredit, whichever it happens to be, of the management of the company. We therefore think that the Washington State Grange should have a representative on the board of directors.

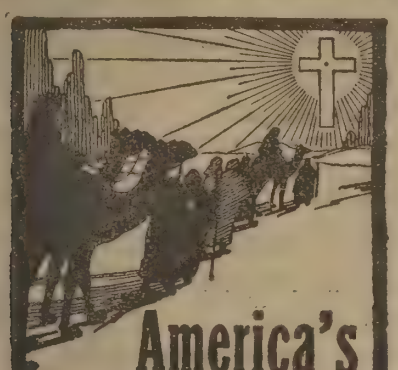
"The state college is a farmers' institution and it is up to us to make the very best use of it. We have the assurance of Dr. Holland that he stands ready and willing to give us any assistance within his power.

"The election of any man or the success of any political party is of little value unless they are possessed by the desire to protect human rights ahead of property rights. As a horrible proof of the truth of this statement stands the United States senate by its action in the Newberry case. Its adoption of the Willis resolution, an attempt at self-justification, is worse, if such a thing be possible, than the original offense.

"Included in the report of the agricultural committee, adopted by the national grange at its Portland session, we find the following good advice, 'and recommends further that the American farmers take their business with them to the polls and secure the election of legislative and administrative officers who are familiar with the farmers' problems, and are in sympathy with his interests.' We, as American citizens, can not look for relief from any other source than the ballot.

"Experience has shown that we have been too narrow in our cooperative work.

(Continued on page nine.)



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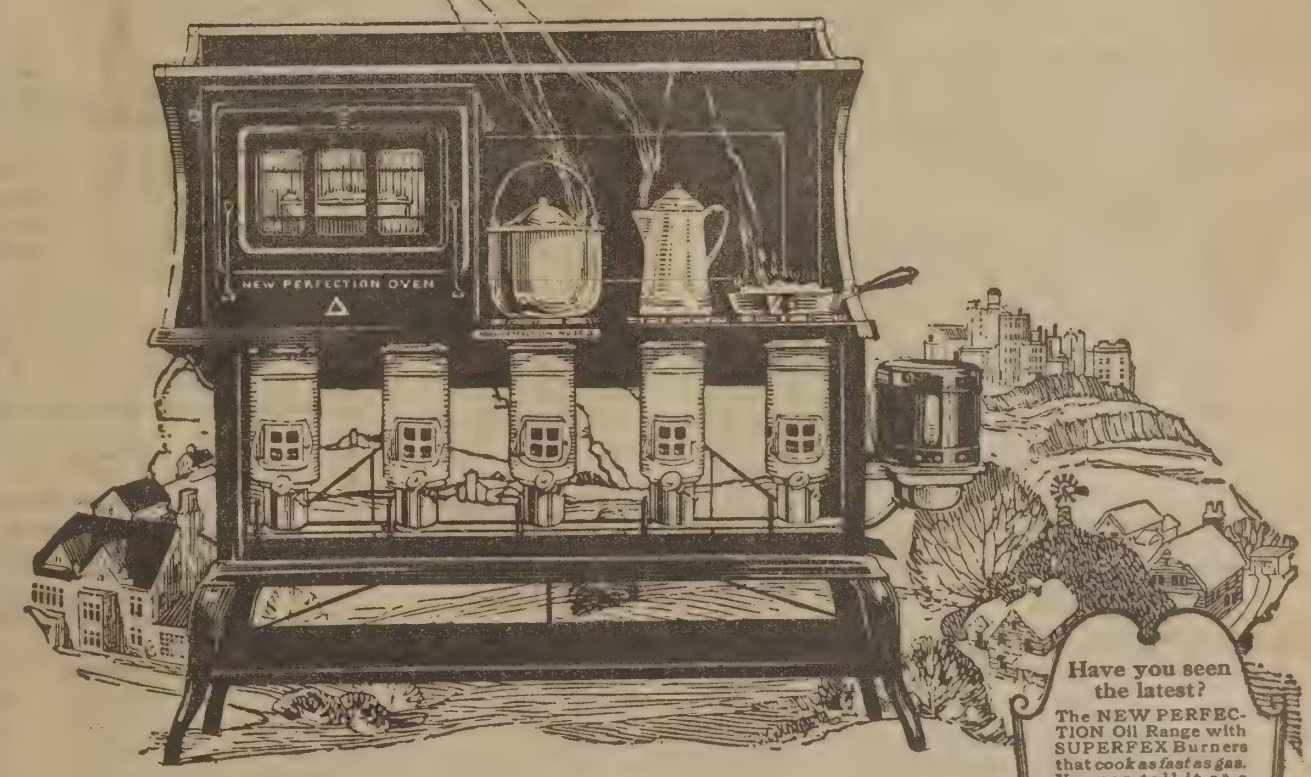
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LIVESTOCK AND DAIRY

Shorthorn Excursion

An enthusiastic Shorthorn excursion was held in Stevens county the first week this month. While about 15 breeders or persons directly interested in the breed made the entire tour of farms where the reds, roans and whites prevailed, a large number of neighbors attended the herd inspections and judging demonstrations at the farms. On June 2 the farm of D. E. Pearsons, near Boyds, was visited, the herd inspected and a judging demonstration staged by C. M. Hubbard, state college live stock extension specialist, and A. E. Lawson, field representative of the Shorthorn association. The herd of Alex Morrison at Valley was also visited on this day. On Saturday the herds of J. W. Fox, Cedonia; Worthly Brothers, Hunters; M. S. Little, Fruitland, and L. E. Warren, Fruitland, were inspected. Judging demonstrations were given on the Fox and Little places. From there the party went to Sprague, in Lincoln county, spending the night at the Hercules farm of F. M. Rothrock, and inspecting the Hercules herd the following morning before disbanding. Among those who made the greater part of the tour were: Mr. and Mrs. D. E. Pearsons, Mr. and Mrs. John F. Helfrey, Curlew; George Reed, Curlew; Mr. and Mrs. Alex. Morrison; James Crawford, Colville; Mr. Graham, Chewelah; Mr. and Mrs. J. W. Fox; Worthly Brothers, M. S. Little, Dr. Kenneth McKay, Colville, and Henry Plumb, county agent, who had general supervision of the excursion.

LIFE PRESERVERS FOR LIVE STOCK

By DR. E. E. WEGNER, W. S. C.

INFECTIOUS DISEASES—ARTICLE II.

Tetanus (Lock Jaw).

This disease is becoming more prevalent in this section of the country and will increase as time goes on, for the reason that it follows civilization. That is, the longer a part of the country is settled the more these diseases are cultivated as one case sows the seed for many more until the soil becomes quite thickly inhabited with the organism that causes the disease. Many years ago this disease was quite rare, but now it is not an uncommon one, and as years go by it will be more prevalent. It is found now more frequently in the eastern states and more extensively probably in Europe where the soil has been tilled for a greater period of time.



The organism lives in the soil and there is danger of the disease occurring whenever a wound is inflicted by a dirty tool or instrument. That is why it so often follows injuries by dirty nails or pitchforks or rake teeth and the like. It is also a fact that this organism does not grow well in an open wound that has free access to the air. The germ does not grow in the presence of free oxygen and for that reason does not ordinarily occur in the open wounds, but selects the punctured wound like the nail prick or the puncture from a rake tooth or some other pointed body that makes a very small outer opening. This gives the organism a good chance to become deeply planted in the tissues and away from the free air, and under those conditions the organism thrives well and is liable to cause serious damage. It may do the same thing if for any reason the open wound becomes sealed up as sometimes happens when a wound heals too quickly on the surface.

Wounds therefore should be encouraged to heal firmly from the bottom first.

We frequently have our attention called to cases of this disease where the owner has forgotten that the animal had any kind of a wound or it may happen that the wound was so small as to go unnoticed. But when it does occur it is quite a certain thing that a wound has preceded it. I have in mind a particular case where the animal was suffering badly and inquiry of the owner brought out a statement that the animal had not suffered from any wound. Then on second thought he said: "Yes, he did have a small nail prick a few weeks ago." This completed the history that is typical of almost all cases.

In horses the time elapsing between the infliction of the wound and the time when the animal begins to show symptoms is from one to three weeks, and it is in horses that the disease most often occurs. Next in order are sheep and goats, especially in the young ones when the infection enters through the open naval cord, Great care must be taken in some localities where this disease is common, in protecting the young animals against this infection.

Muscles Become Rigid.

The symptoms vary with the intensity and the stage of the particular case. There is always the stiffening of the muscles of the body, causing the animals to walk rigidly and there is almost certain to be the same spasms in the muscles of the jaws which gives the disease its common name. As the disease progresses these symptoms become more pronounced until the animal walks like a sawhorse or, losing its balance and getting down, can not rise again, but lies prostrate in spasms, moving its legs and frothing and sweating in pain, many times with the lips drawn back away from the teeth.

When the cases are severe most of the animals die as the treatment in these advanced cases is not very effective. Animals that have this disease should be taken to a cool, dark, quiet place and away from all noise and excitement. The veterinarian should be called immediately as home treatments are useless. The animals must be quieted and relaxed as much as possible. They may have to be fed through a stomach tube or by way of the rectum, as they can seldom eat.

The use of the serum is the best treatment, the only drawback being its cost, which, for a complete treatment is considerable. The use of the serum for prevention, however, when an animal has been injured, is good practice and as the amount required is small the cost is negligible and the results are splendid.

The best advice to give is to keep the animals' quarters as free from loose nails and such things as possible and to prevent the punctured wounds. But after they have occurred the wounds should be properly treated with antiseptics and drained well, and in addition a dose of serum is not bad practice, though, on account of the few cases so far occurring in the northwest it is not generally given.

Protecting Jersey Records

Breeders of Jersey cattle in Washington will be interested in a resolution adopted by the Oregon Jersey Cattle club recently providing for the "preliminary milking" in the testing of cows of the breed. In part the resolution adopted reads as follows:

"Whereas, a preliminary milking is enforced by the other dairy breeds and was recommended by the American Dairy Science association, and while we believe a better system of dairy protection could be devised, nevertheless be it hereby

"Resolved, by the Oregon Jersey Cattle club, that we request the Oregon Agricultural college to put into force the preliminary milking until such time as a better system of protecting records against fraud is adopted."

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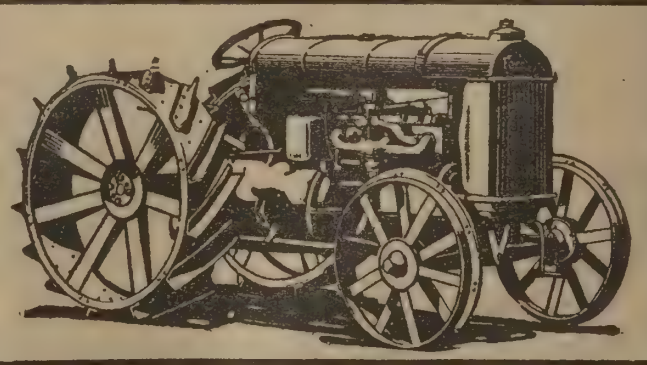
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Guernsey Club

Its Few Members Are Active Ones

What promises to be one of the most active clubs in Whatcom county is one known as the Hub Purebred Guernsey Calf club at Ferndale. Although not one of the largest this club is accomplishing more than some of the larger clubs and will have something to show for their summer's work when the Whatcom county fair is held at Lynden this fall.

There are six members in the club, each of whom owns and cares for a purebred Guernsey calf, and is preparing to fit his animal to be shown at the fair. The members assemble twice each month and carry on a program of some kind for the purpose of keeping the Guernsey standard constantly before them.

Jack Plaster, their club leader, with occasional assistance of Mrs. Plaster, has done much to help the boys and girls to carry out their meetings and to bring up such subjects as are of common interest to all. At one of their meetings held at their schoolhouse on May 20 the entire club assembled, bringing their calves with them in order to look them over and compare them. Some of the business men of Ferndale, as well as many of the boys' and girls' parents attended the meeting and listened to the program, which was held in the open.

The calves were judged by one of the business men, who placed the animals according to the improvement they had made since the calves were purchased late in the winter. The placing of the calves were as follows, the owners' names only being given: Billie Kellman, first; Vincent and Stanley Plaster, second; Lucille Hansen, third; Ted Plaster, fourth; and Floyd Kinley, fifth. This placing, of course, was only for their improvement, and does not mean that the animals will stand this way at the fair, but much will depend on the way they are fed and cared for during the summer.

Members expect to take up feeding and fattening problems at their future meetings, and be in readiness for such work as will be necessary to have them in show condition.

Master's Address

(Continued from page seven.)

Instead of working in harmony with other organizations engaged in the cooperative work, we have been inclined to antagonize them. We can make no progress by tearing down the good efforts of other cooperatives, and we should endeavor to accept and make use of the cooperative institutions established by other organizations and in return should extend to them like courtesies in the use of our organization.

"To the farmer who is thousands of miles from his markets the matter of a square deal in transportation is a matter of almost life and death. A fair deal in transportation, other things being equal, means prosperity, and a crooked deal, means the robbery of profits to the point of making farming mere slavery. Our greatest danger from transportation discrimination today is on the ocean, and the greatest need we have today to insure us a rightful share of the world's market prices of our products, is an American merchant marine absolutely loyal and just in its service to all the people. This can only be accomplished by building and operating enough merchant ships to have a controlling power over ocean freight rates.

"We believe the tendency of consolidating our rural schools with the city is a serious mistake. It tends to draw the boys and girls from the country to the city."

The master's address also reviewed the work of the national grange held in Portland, Ore., last November and announces that invitations were sent out to the farmers' union and the farm bureau to send delegates to the state grange meeting to form a farmers' council at Washington, D. C., and "has accomplished much good by supplying data and figures on the railroad situation, which have been of great value to us. However, the open and vicious attack on the national grange should not be tolerated. We still believe that calling one another wild names does not get us anywhere. An earnest difference of opinion properly presented can not be taken as offensive. Stop slandering. Much good can then be accomplished with such a council." It is also stated that "the work of the cooperative committee of the grange and the Associated Grange Warehouse company during the past year has been along the line of getting the different cooperatives to cooperate rather than organizing new cooperatives. The fact that out of 97 stores affiliated with the Associated Grange Warehouse in 1921 there was only one failure, means that considerable progress was made along this line."

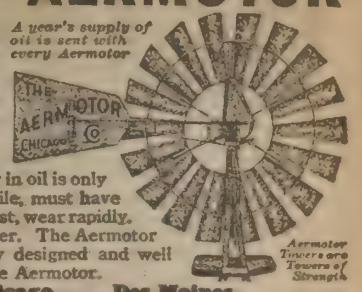
Speaking of the cooperative association of dairymen, especially on the west side of the mountains, the address said: "We can only recommend that our local and pomona granges support the dairymen's organization wherever possible.

"We find that taxation is steadily growing worse and believe a revolution in tax laws is necessary. A land value tax is the only solution."

The address reviews the fact that for many years the Washington State Grange fought for a dry law and finally succeeded, but that now "thousands of stills have been established and operated in every nook and corner of the state," and that the only way "to stop this evil is to make it a criminal offense, punishable by a term in the penitentiary for the first offense." The recommendation is made that the growing drug evil should be referred to a committee of the grange to work out a plan for a vigorous campaign against this evil.

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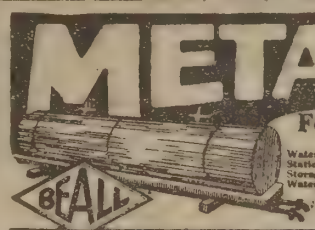
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POULTRY AND RABBITS

Lice and Mites

By W. D. BUCHANAN
Poultry Extension Specialist, Washington State College.

This is the time of year when both lice and mites are getting in their deadly work. Mites do not stay on the hen more than a day or so at a time. They usually live on the roosts, roost supports or in the roosting closet. They can always be reached by a good spray. Some people get good results from using the cylinder oil drained from the auto or stationary engine. If the latter is used it should be strained so that it may work well in a spray pump.

It is not safe to assume that a house is free from mites just because it is new and has been kept clean. I have seen new houses that were literally full of mites, and old houses that were free. Take no chances. Lift the roosts from their supports occasionally and look for a silvery dust or scale. Its presence is a sure sign of mites. Run your fingers along the lower edges of the roosts. If you find them stained with blood, the mites are getting fat off the hens. Spray once or twice a year, whether you find mites or not.

As for lice, there are many varieties. All of them live on the hens. In looking for them, examine the feathers just below the vent or in the thick feathers on the thigh. If you find any, powder the hens with sodium fluoride, using about 10 small pinches for each bird. The proper method is illustrated in a bulletin published by the western Washington experiment station at Puyallup. In warm weather the birds may be dipped. Use water about blood heat, dissolving one ounce sodium fluoride in one gallon water. Use tub holding about four gallons. Hold hens by grasping wings in left hand and using right hand to ruffle feathers so that water will reach the body. Submerge head for an instant before taking the bird out. In doing this, it is wise to hold the beak shut with the finger and thumb. Remember, this drug is very stringent; use it with care.

Meat in the Poultry Ration

While all poultry rations should contain more or less meat scrap or its equivalent, it must be used judiciously. Too much of it will overbalance the ration and perhaps cause digestive troubles. Where milk is fed the meat scrap in the ration should be considerably reduced. The same is true where green bone or bone meal is being fed. Green bone is one of the most desirable elements in the ration, but should not be fed too lavishly.

Too much meat or other feed containing high percentages of protein are likely to cause leg weakness as well as digestive troubles. Leg weakness is sometimes referred to as protein poisoning because of an excessive percentage of protein in the ration.

A liberal amount of green stuff always available for the chickens will go a long way in helping them to avoid the troubles from excessive meat or other elements in the ration.

Rabbit Furs

Six years' experience with the rabbit business has taught T. J. Bergeron of Bellingham, Wash., that the furs will bring a neat profit if properly handled. The meat, of course, is the first consideration and he makes a point to put out a first quality product for which there is a constant demand on the local market, but in all cases the hides are carefully saved and sent to a furrier where they are tanned, dyed and clipped.

This work costs slightly over a dollar a hide, but they are then ready to be sewed into the proper shape for furs or coat collars. A special machine makes the sewing easier since all seams must be made from the under side and not show from the fur side. All padding and lining is done similar to that done on furs which are on the market and it is difficult to detect the finished product from one purchased from a clothing store.

"I made a large sealskin fur for my daughter not long ago," said Mr. Bergeron, "and I used eight skins. The fur when completed was eight feet long and could hardly be detected from genuine sealskin. In fact, they are sealskin furs after being clipped, but they are made from rabbit hides and it takes an expert to detect them from the genuine fur.

"It would take about 62 skins to make a fur coat that would cost from $150 to $400 if purchased outright. There are several different finishes that can be put on the furs and it is all done in the dyeing. Hudson seal and Hudson Bay seal are the most common furs, the latter having a red tint to the under fur. If the clipping is done very close they can be made to look like mole skin. This, of course, requires a different color of dye."

Mr. Bergeron explained how the animals could be killed so as to have the furs prime. The New Zealand Reds are usually at their best when three and a half weeks old, while it takes four and a half weeks for the Flemish Giants to become prime. One can tell by pulling gently at different places on the fur and if none pulls loose the animal can be killed. If properly fed the meat will be at its best because at this age it is always fat if the animal is properly fed.

"When the skins are to be saved for tanning they should be removed with care and the legs and head skinned out clean. This will make larger trimmed furs and it is not so hard to get them stretched on the boards. It is also a good plan to keep the fur as free from blood as possible when butchering.

"Almost any breed of rabbit is good for a fur animal, but for myself I favor the Flemish Giant," said Mr. Bergeron. "There are four colors in this breed, but that makes little difference since they must be dyed anyway. The New Zealand Red is also a good fur rabbit and so is the Polish White. I have a few of the American Checkers, which are white with black spots. These can be used for making furs without clipping or dyeing.

CUT GRAIN RATES.

Reduction in freight rates on grain from Molson and other points on the Oroville branch of the Great Northern railroad to Puget sound terminals has been ordered by the state department of public works, with the recommendation that rates frmo the same points to Spokane be maintained on a parity with the Puget sound rates to give the grain growers access to either market on the same basis. The reductions ordered by the department are made effective on or before July 2.

At the time the reduction was asked the rate on wheat and wheat products from Molson to Seattle and Tacoma was 33 cents, as against a 27-cent rate from Spokane to the same points. While the case was in progress the railroads made a reduction of 10 per cent, which left the Molson rate at 30 cents and the Spokane rate at 24 cents. The department reduces the Molson rate to 27 cents, with corresponding reductions from all other points on the Oroville branch.

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and mites leave them. The tablets also act as a tonic conditioner. The health of the fowls quickly improves, they grow faster and the egg yield frequently is doubled. Little chicks that drink freely of the water never will be bothered by mites or lice.

The method is especially recommended for raisers of purebred stock, as there is no risk of soiling the plumage. The tablets are warranted to impart no flavor or odor to the eggs and meat. This remarkable conditioner, egg tonic and lice remedy costs only a trifle and is sold under an absolute guarantee. The tablets are scientifically prepared, perfectly safe, and dissolve readily in water.

Any reader of this paper may try them without risk. The laboratories producing Paratabs are so confident of good results that to introduce them to every poultry raiser they offer two big $1 packages for only $1. Send no money, just your name and address—a card will do—to the Paratab Laboratories, Dept. 878, 1100 Coca Cola Bldg., Kansas City, Mo., and the two $1 packages, enough for 100 gallons of water, will be mailed. Pay the postman $1 and postage on delivery, and if you are not delighted with results in 10 days—if your chickens are not healthier, laying more eggs and entirely free from lice and mites—your money will be promptly refunded. Don't hesitate to accept this trial offer as you are fully protected by this guarantee.—Adv.

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PUMPS

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ORCHARD AND GARDEN

Nitrate of Soda

By A. B. NYSTROM.

Nitrate of soda applied at the rate of 2 1-2 pounds per tree to run down apple orchards may be the quickest means of bringing them back to full bearing.

In March of 1921 A. J. Linnestad of Vashon island, in cooperation with J. L. Stahl of the state college and the county agent of King county, planned an orchard fertilizer test to find out what the soil needed to bring back the orchard into full bearing.

The trees selected were 80 Baldwins in a block set 8 trees in 10 rows. Two rows were left untreated. The third and fourth rows received an application of 2 1-2 pounds of nitrate of soda and seven pounds of acid phosphate per tree. The fifth and sixth rows received 2 1-2 pounds of nitrate of soda and 2 1-2 pounds of muriate of potash; the seventh and eighth rows were left untreated and the ninth and 10th rows got 2 1-2 pounds of potash and seven pounds of acid phosphate per tree.

The yield last fall, as was expected, did not show striking differences. The average yield per tree from the check rows was 18 1-2 boxes per row and from the nitrate of soda rows was 22 boxes per row. The rows treated with potash and phosphate alone yielded only nine boxes per row.

However, there was a noticeable difference in the foliage last season. The nitrate rows had a much heavier foliage and the apples were larger and greener than on any of the other rows.

There was also a heavier setting of fruit spurs on the nitrate rows. This was apparent even during the dormant season, and when the trees were in full bloom there was a marked difference. The trees treated with nitrate were loaded with blossoms, while the check rows and the rows treated with potash and phosphate had only a few scattering blossoms on them.

The real test will come next fall at harvest time. Mr. Linnestad will keep accurate account of the yields of the different plots, and it seems apparent that an interesting deduction will be made at that time.

Spray Pipe System

The report comes from Wenatchee, Wash., of the use of the pipe system in orchards for spraying.

This year A. H. Cady and C. E. Smith are using this system on their 25-acre ranch in Sunnyslope and J. W. Zufall installed one on his ranch on North Wenatchee avenue. Last year William Moss of Sunnyslope piped his 10-acre tract.

The first rancher to pipe his place for spraying was Joe Edwards of East Wenatchee, who installed a system three years ago.

There are no patent rights on the idea, and the orchardist can put in his own pipe lines and pumps if he is a fairly good mechanic, says the Wenatchee World.

The system consists of a cement mixing tank, a pump mounted on a cement base, a main pipe and lateral pipes going all over the orchard and plenty of small bore hose.

Mr. Cady and Mr. Smith installed the systems on their 25 acres at an approximate cost of between $900 and $1000.

Mr. Cady and Mr. Moss outline the advantages of the system as follows: It is more reliable than a spray rig; it gets the spraying done quicker and with less work; it practically eliminates sprayer repair bills; it eliminates the need, in many cases, of keeping a team of horses; ditches are not damaged and apples are not knocked off and trees bruised as when the spray wagon is used.

The cement tank and the pump mounted on a strong cement base do not get out of order quickly; vibration is what damages machinery and stationary base largely does away with that.

The large cement tank holds enough to spray a half day with two guns at a pressure of 350 pounds. The spray wagon tanks must be replenished every hour, more or less.

Mr. Cady has a tank that holds 1150 gallons, and has a five-horsepower engine to operate his pump. His main pipe rises 90 feet in 700 feet. At the end of that pipe, he gets 400 pounds pressure with one gun, and 350 with two guns.

Each pipe serves seven rows of trees. Hydrants are 150 feet apart. Mr. Cady uses 125 feet of 3-8-inch hose.

Effect of Size in Grain Seed

"Many experiments have been conducted to determine the relative value of large or heavy and small or light kernels for seed," says a government bulletin on the subject of small grains. "While there has been some conflict in results, they have usually favored the use of large, heavy seed. Particular attention has been given to the subject at the Kansas, Ohio and Ontario stations. An eight-year test was conducted at the Kansas station, in which heavy-seed oats gave an average yield an acre of 30.9 bushels, common seed 29.9 and light seed 27.5 bushels. The common seed used was the seed as it came from the thresher, the light and heavy grades being obtained by the use of the fanning mill. The grades were usually taken from the ordinary seed, but in the last year of the experiment, when the greatest difference was noticed, the heavy and light seed were taken from the corresponding grades the previous year.

"At the Ohio station, in a seven-year test, the average acre yield for heavy seed oats was 46.3 bushels, for common seed 44.8 bushels and for light seed 42.6 bushels. In a similar nine-year test with wheat little or no difference resulted in favor of the heavy or large kernels.

"More striking results were obtained at the Ontario station, where the grading was done by size instead of weight. In an eight-year test large seed yielded an average of 21.7 bushels per acre, as against 18 bushels per acre for the small seed. In a six-year test with fall wheat the large seed averaged 46.9 bushels per acre, as against 40.0 bushels for the small."

DON'T BLAME THE WORM.

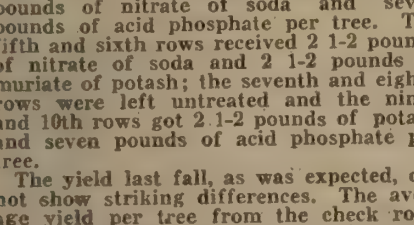
If you do not spray don't get peevish when you find worms in your apples.

THAT STITCH IN TIME.

Give the garden seed enough moisture to insure a good start.

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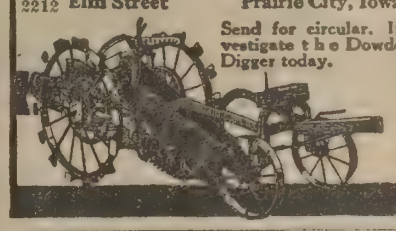
Do you use your chicken house cleanings effectively in the garden?

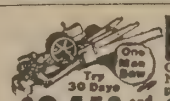


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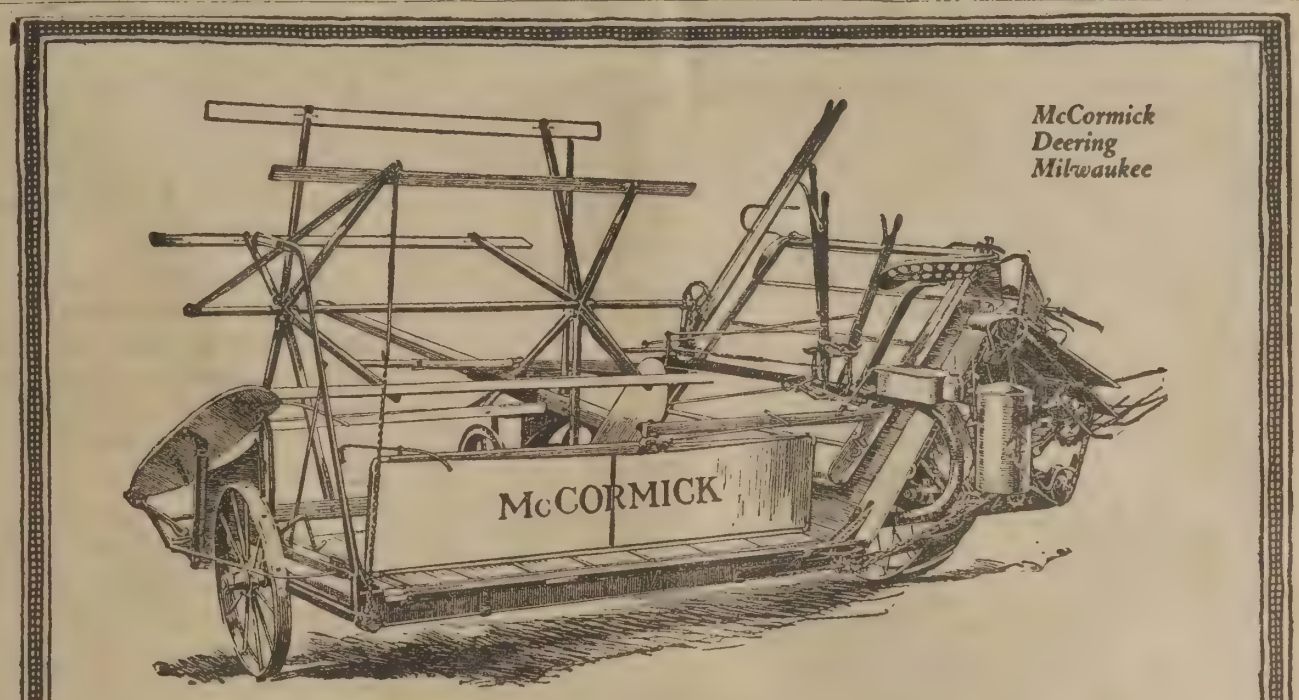
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Your Health

By Royal S. Copeland, M. D., F. A. C. S.



Dr. Copeland.

A few weeks ago I had occasion to travel out to Ohio to make some addresses about health. It is remarkable what interest is being taken everywhere in this subject. More than ever before people are seeking accurate knowledge about health and disease.

It is easy now to cross the continent. The modern Pullman car is a very comfortable substitute for home. Every effort has been made to make travel safe and attractive. Two or three days on a train can be spent delightfully.

Of course, there are health hazards associated with travel. To begin with, you come in contact with persons from every part of the world and from all sorts of homes. Not every such individual is a clean and sanitary companion.

The washbasins, bathtubs and toilet articles should be looked upon always as possible dangers. In this modern age it is believed that disease is carried by persons and not by things. To contract contagious or infectious disease it is necessary to come into such intimate contact with the sick person as to be sprayed by the secretions of his nose and throat, or otherwise to receive the products of his body. The fresh secretions are much more dangerous than the dried secretions. The soap, the lining of the basins or tubs, and the towels may retain the moist secretions of an infected person.

Never make use of a public comfort station if you can avoid it. If you do so, make sure that your own person is protected in every possible manner. Instead of using the basin, wash in the running water if you can. Cleanse the soap before you use it. By the way, leave the piece of soap clean after you have finished with it. The surest mark of good breeding is found in the soap receptacle. If it is dirty and the soap is covered with dried lather, I am suspicious of the cleanliness of that establishment.

Fortunately, liquid soap or soap powders are employed almost universally in public places, and this should be the rule. Likewise, the dangers of the common towel are avoided by the use of paper and individual towels.

The traveler gets thirsty. He takes a chance every time he gets a drink of water in a strange place. The public safety is promoted by the governmental supervision of water supplies. Most of the states demand water on the railroad trains, and the federal government supervises the water supply of the railroad cars used in interstate travel. Care is taken to get the water from approved sources, and the manner of icing the water and the conditions of the storage tank are looked after by the government.

Needless to say, the common drinking cup is rarely seen these days. Years ago in New England it was a source of sad amusement to me to see the brakeman "pass the water" to the passengers. When his other duties were not pressing, he would carry the wooden pail along the aisles. For every thirsty passenger he dipped the single cup or "dipper" in the pail and repeated the process for the next one. The declining contents of the pail became constantly richer in germs. Thank goodness, that sort of thing is not done any more! Paper cups have replaced the common drinking glass.

Not every community regulates the quality of its milk and other food supplies. The traveler runs the danger of food poisoning. On this account he should indulge sparingly in every kind of uncooked food.

The temptation to overeat is ever present. Most of the traveler's meals are in the dining car, hotel or restaurant, where the bill of fare offers a variety of attractive or attractive-sounding dishes. Self restraint must be exercised or digestion will be upset. Many illnesses of travelers may be traced to lack of good judgment in eating.

Temperance in eating and drinking and the few precautions I have suggested will add to the safety of travel.

HENRY R. ANDERSON, Deer Park, Wash. —Would not be without your good paper. Have enjoyed the stories and find much of interest for every one.



Every Woman Loves to Paint

When She Knows How

—Let Us Tell You

PAINTING is really fascinating work. Once you are started you'll probably not want to stop until you have refinished many things you did not intend to do at first.

Of course, there are some simple directions that must be followed if the work is to be successful, and we have a special "Home Service Paint Department" which was organized just to tell you how to paint.

Perhaps some of your furniture, floors, woodwork or walls are beginning to look a little old—just on the surface. Pick out one or two things to do. Tell us about them and how you want them to look when finished.

Our experts will tell you what materials to use, how to do the work step by step, what brushes you'll need, and everything about it.

For 73 years we have been making paints, varnishes, enamels, wall finishes and stains for women to use. They are the finest materials of their kind that we know.

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Write us now—a postcard—for Fuller's "Home Service" Paint Book, which tells you just what to buy for every kind of painting. Send full description and get our free advice on any kind of painting you want to do.

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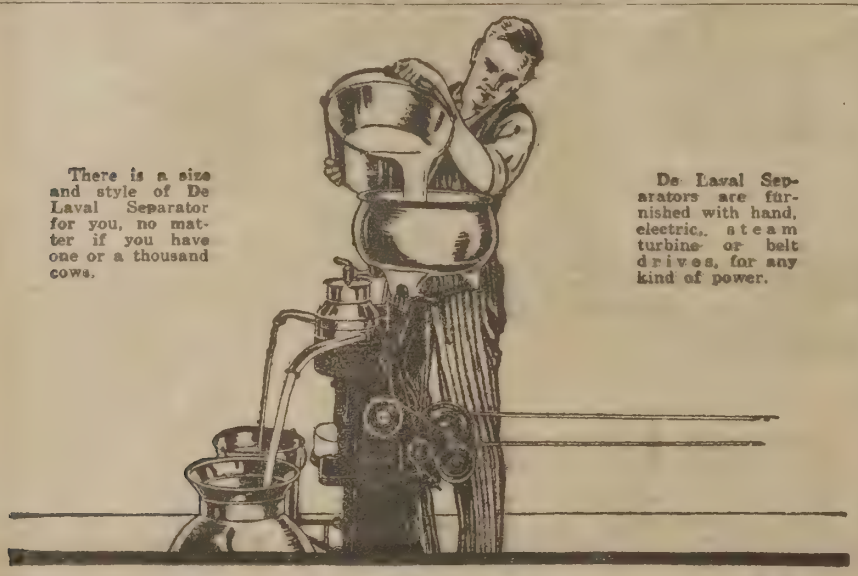
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De Laval Separators are furnished with hand, electric, steam turbine or belt drives, for any kind of power.

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"Last week we replaced a machine made by ..... which had been used only five years. Our customer, Mr. Crawford Cook, living near Foyil, Oklahoma, shipped one can of cream from ..... and then one from the De Laval, and changed about in this manner for four weeks, the result being that the De Laval got him exactly two pounds more butter-fat per day, and he is milking 12 cows. This amount at 35c per pound makes 70c per day, or $255.50 per year, more than twice as much as the new De Laval was worth. Mr. Cook said we could use his name and this information, and if they didn't believe it, he would make an affidavit to that effect."

This was taken from a letter from one of our agents, but there is nothing unusual about it. We are constantly receiving letters of a similar character from people who say they waited too long before buying a De Laval.

On hundreds of thousands of farms today there is an enormous amount of butter-fat being wasted by inferior or worn-out separators and by hand skimming. Perhaps such waste is going on right on your farm. Stop it at once by getting a new De Laval. It is not only the world's best cream saver, but lasts longer and is easier to clean and turn than any other.

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DRAW A GOOD SALARY BY STUDYING LAW, medicine, engineering, etc. Civil Service Dept. Jenkins Institute, Spokane.

SITUATIONS WANTED—MALE 21

YOUNG MAN, EXPERIENCED IN HAND AND machine milking, desires employment on dairy farm. Walter U. Hughes, Almira, Wash.

EDUCATIONAL 45

EARN MONEY QUICKLY—THERE'S NO LIMit to one's earning capacity in business. And this great business college after training you thoroughly, places you in a paying position. Courses include banking, stenography, accounting, private secretarial. Write for free catalogue. Behnke Walker Business College, Portland, Ore.

FRESH FOOD PRODUCTS 51-1

CANNED SALMON, ALASKA MEDIUM RED fish, 48 one-pound cans, $7.46; 24 cans, $4.66; one sample order, 6 cans, for $1.25; all charges prepaid, check or money order. Pacific Fisheries Exchange, Mutual Life bldg., Seattle.

WHITE ALFALFA, SWEET CLOVER honey; 1 60-lb. can, $7.50; 2 60-lb. cans, $14.50; six 10-lb. cans, $8.50; three No. 10 pails, prepaid third zone, $5.50. Wells D. Rose, Sunnyside, Wash.

3-POUND BOX ABSOLUTELY BONELESS codfish, fine white, new catch fish, delivered by mail, $1. Coffin Fish Co., Seattle, Wash.

FULL CREAM BRICK CHEESE, DIRECT TO consumer, parcel post, 25c lb., postage added. C. P. Dobler, Menlo, Wash.

WORLD'S BEST CLOVER HONEY, 60 pounds, $6.15; two 60s, $12. Browne, Box 499, Twin Falls, Idaho.

MISCELLANEOUS—FOR SALE. 60

SASH AND DOORS—O. B. WILLIAMS CO., 1943 First ave., So. Seattle. Chicken house sash, 20" wide by 25" high, 80c; a dozen different sizes in stock for immediate shipment. Skylights for chicken houses, 36"x40" price, glazed, $2. This is the size recommended by the Western Washington experiment station. We carry them in stock for immediate shipment. Sash and doors for all purposes at lowest prices. All orders receive prompt attention. Our large illustrated catalogue No. 35, showing full line of building material and built-in fixtures for the home, free on request. O. B. Williams Co. Established 1899.

SACKS—SECOND-HAND GRAIN AND SPUD, correctly sorted and graded; also pipe, new and second-hand, any size; standard grade roofing paper at a big saving; belting, cable, etc. Alaska Junk Co., S120 Adams st., Spokane, Wn.

WALL BOARD—WRITE FOR SAMPLE OF Washington plaster wall board; won't warp, won't burn. Manufactured by Washington Building Products company, 6851 E. Marginal Way, Seattle, Wash.

QUEEN BEES—INCREASE YOUR HONEY crops by introducing my strain of unsurpassed Italian queens. 1, $1.25; 12, $12.50; 100, $95. Circular free. J. D. Harrah, Freewater, Ore.

HOMESPUN SMOKING TOBACCO. MILD AND mellow; 10 lbs., $1.50; 20 lbs., $2.75; delivery guaranteed. We furnish free recipe for preparing. Smoking Tobacco Exchange, Sedalia, Ky.

NATURAL LEAF TOBACCO—CHEWING, 5 lbs., $1.50; 10 lbs., $2.50; smoking, 5 lbs., $1.25; 10 lbs., $2. Send no money, pay when received. Tobacco Growers' Union, Paducah, Ky.

KENTUCKY TOBACCO—SPECIAL BARGAIN. Send no money, pay for tobacco and postage when received. 10 lbs. 3-year-old smoking, $1. Farmers' Grange, Hawesville, Ky.

TOBACCO—NATURAL LEAF CHEWING AND smoking; rich, ripe, two-year-old; 5 lbs., $1.75; 10 lbs., $3; sample, 20 cts. Maddox Bros., Dept. 30, Mayfield, Ky.

HOMESPUN TOBACCO, 3 POUNDS, $1; 10 pounds, $2.50. Send no money, pay when received. Farmers' association, Jonesboro, Ark.

HOMESPUN CHEWING AND SMOKING TObacco; 5 lbs., $1.25; 10 lbs., $2.50; 20 lbs., $4. Hickory Ridge Farms, Mayfield, Ky.

TOBACCO—HOMESPUN SMOKING, 10 LBS., $2.50; 20 lbs., $4; fine chewing, 10 lbs., $3. Farmers' club, Mayfield, Ky.

BEES—ITALIAN QUEENS. WRITE FOR prices. Ira C. Smith, The Dalles, Ore.

MISCELLANEOUS. 61

BARGAIN IN 32X56 REAR BUFFALO PITTS separator; would consider trade for Ford tractor or one-ton truck. Chas. Fitzgerald, Sequim, Wash.

MISCELLANEOUS—Wanted 63

HIDES—WE BUY HIDES OF ALL KINDS. Write for prices and tags. Hibbard-Stewart Co., Hibbard Bldg., Seattle.

WOOL—WE BUY WOOL AND PELTS. WRITE for prices and tags. Hibbard-Stewart Co., Hibbard bldg., Seattle.

AUCTION SALES 78

80 ACRES, ADJOINING TOWN OF TENSED, Idaho, to be sold at auction same day cattle are sold, June 24th. Terms, one-fifth down, balance five equal payments, 7 per cent. B. R. Svensgaard, owner, Tensed, Idaho. H. C. Cranke, auctioneer.

MACHINERY—For Sale 84

THREE 2-BOTTOM, 16-INCH OLIVER GANGS, new model 19B, steel bottoms; extra shares, quick detachable; $60 each. Ralph W. Snyder, Washtucna, Wash.

EXTRAORDINARY BUYS IN USED COMbines, caterpillars, separators, engines and trucks. Fallquist Brothers, Pullman, Wash.

FARMERS' WANT ADS

This is the farmers' "want," "sale" and "exchange" department for small advertisements of farmers, including live stock and poultry.

Advertising rates for ads running 1 to 3 times, 10c per word per insertion, with a special rate to Farmer subscribers, as follows: Ads running 4 to 12 times, 9c per word per insertion; ads running 13 times or more, 8c per word per insertion.

All commercial and land advertising 10 cents per word each insertion. Open also to nonsubscribers.

In using these columns advertisers must observe: (1) No advertisements will be inserted for less than $1.00. (2) Every word, number and initial, including name and address, must be paid for. (3) New advertisements, changes of copy or cancellations must reach general office, Spokane, Wash., 10 days in advance of publication date. (4) Cash must accompany order.

Above rates include insertion in The Washington Farmer, The Idaho Farmer and The Oregon Farmer, which constitute the Pacific Northwest Farm Trio, 46 Review Building, Spokane, Wash.

MACHINERY—For Sale (Continued.) 93

SELF-LAYING TRACK TRACTOR ATTACHment for Fords; does work four horses; closing out while they last, $95 each. Original price, $325. 15 h. p. J. I. Case steam traction engine, first-class shape, $750; easy terms; 15-30 Rumley Oil Pull tractor, fine condition, ready to go, $1000; easy terms. Gallagher Warehouse, Ash and Sinto, Spokane, Wash.

AUTO TRUCKS—For Sale 115

1¾-TON SIGNAL TRUCK AT A BARGAIN price. A. E. Rosenan, Genesee, Idaho.

STOVE REPAIRING 128

WRITE MYER RUBENS, SPOKANE, ABOUT stove repairs, welding broken parts, nickle plating.

FUR-BEARING ANIMALS 170

SILVER AND CROSS FOXES FOR SALE. William Rambo, 407 Sprague, Spokane.

PETS—Dogs, Birds, Etc. 171

PEDIGREED COLLIE PUPS, PRINCESS COLlie Kennels, 4812-42 Southwest, Seattle, Wn.

FOR SALE—SHEPHERD PUPS; WILL MAKE heelers. A. E. Rosenan, Genesee, Idaho.

POULTRY 174

HENACRES WHITE LEGHORN PULLETS are classed among the best. They are large, healthy, range raised, good looking, bred to lay and are reasonably priced. March hatch, June delivery, $1.75 each; 500 for $850; May 1 hatch, July 1 delivery, $1.50 each; 500 for $700; satisfaction guaranteed or money refunded, including return express charges. Ask your neighbor about Henacres Leghorns. June chicks, 16c each; 500 for $75. Free illustrated catalog. Henacres, Box A, Prosser, Wash.

SPECIAL SALE WHITE LEGHORNS—INcrease your egg production and add new blood to your flocks. 10,000 pullets and cockerels from trap nested stock, with egg records of from 200 to 333 a year. 2000 one and two year old hens from our famous breeding pens, now laying better than 65 per cent, at one-half price and less. 500 breeding cocks from our pens. Send for price list. Yesterlaid Egg ranch, Kent, Wash. "Home of the 300-egg hen."

CERTIFIED S. C. WHITE LEGHORN BABY chicks from heaviest laying stock; safe delivery; live, vigorous chicks guaranteed. No money in advance; pay on delivery. Prices for May and June $3.50 per 25; $6.50 per 50; $12 per 100. Special prices 500 and 1000 lots. Largest electric hatchery in the world. Established 1898. Member Sonoma county farm bureau accredited hatchery list. Must Hatch Incubator Co., 445 Seventh st., Petaluma, Cal.

S. C. WHITE LEGHORNS—NOW IS YOUR chance to grab that opportunity. Fruits of our 24 years. One-year-old hens at $1 each, for your foundation stock. None better at any price, and you are the judge. Breeding cockerels, but baby chicks all sold. Casey & Colfax, R. 2, Attalia, Wash.

WHITE LEGHORN BABY CHIX FOR MAY and June delivery at $12 per 100; $115 per 1000, from flocks inspected and accredited by the Sonoma county farm bureau. Safe arrival of full count, live, strong chix guaranteed The Pioneer Hatchery, 422 Sixth street, Petaluma, Cal.

EBORALL'S STRAIN WHITE LEGHORNS. Our hatch of 2300 chicks per week is now booked for Feb., March and April, principally to old customers. Your inspection is invited at all times. We are now booking chicks for May at $14 per 100. Write for circular. Crystal White Poultry Farm, McMinnville, Ore. Box 33.

TRY OUR PARCEL POST PACKAGE—KEEP the old hen busy. We will ship you first-class baby chicks, postpaid to your door, direct from the hatchery and guaranteed all alive. Price, $4.50 per 25; $8 per 50. For delivery April, May or June. Order now. The White Hatchery, Petaluma, Cal.

FRESHLAID JUNE CHICKS—PULLETS. OUR June chicks make winter layers because they have the pep and breeding that counts. $15 100. Freshlaid June chicks have made good for ten years. Big, husky, ten weeks' old pullets, $1.50. $135 per 100. Free catalog. Freshlaid Farm, Colfax, Wash.

2000 ONE AND TWO YEAR OLD WHITE Leghorn hens, with records better than 200 eggs. One-year hens, $2 each; two-year hens, $1.50 each. Now laying about 70 per cent. Order quick and send cash with order. F. Leonard, N. Y. block, Seattle, Wash.

BABY CHICKS — WE GUARANTEE OUR chicks to be from the highest producing hens in Petaluma. Write for further information. The White Hatchery, Petaluma, Cal.

CARNATION WHITE LEGHORN PULLETS; April and May hatched pullets from my high record trap nested stock. E. W. Raush, Carnation Poultry Farm, Kent, Wash.

TANCRED STRAIN WHITE LEGHORN BABY chicks, May, $15; June, $12.50; $100 per 1000. Safe delivery guaranteed. D. A. Gillette, R. 4, Yakima, Wash.

DOLLARS FOR YOUR EGGS—WE PAY THE top market prices for your eggs and poultry. Daily cash remittances. Western Produce Co., Spokane.

S. C. ANCONAS, SHEPPARD'S SELECT AND 331 egg strain; eggs, $1.75 per 15; chicks, $18 per hundred. A. B. Larson, Warren, Ore.

BUFF LEGHORN EGGS, CHIX AND STOCK—My strain is proven champions for exhibition and laying. R. Stromquist, Tigard, Ore.

FANCY WHITE WYANDOTTE COCKERELS, $2.50; hatching eggs, two dollars setting. H. L. Lamon, American Falls, Idaho.

FORD'S BRED TO LAY S. C. WHITE LEGhorns; 2-year-old breeding hens, $1 each. W. A. Ford, Umatilla, Ore.

LIGHT BRAHMAS, EGGS, $1.75 PER 15; Bronze turkey eggs, $3.50 for 10. Mrs. C. W. Laabs, Irby, Wash.

HUNT'S BARRED ROCK EGGS, PRICES REduced through April, May. W. A. Hunt, Lebanon, Ore.

LIGHT BRAHMA EGGS, $1.50 PER 15. DALton Poultry Farm, Coeur d'Alene, Idaho.

POULTRY (Continued) 174

MAMMOTH PEKIN DUCKS, "AMERICA'S finest." New blood this year direct from C. C. Shoemaker; eggs, $2 per setting, $12 per 100. Crystal White Poultry Farm, McMinnville, Ore. Box 33.

LIVE STOCK. 177

LARGE, HEAVY PRODUCING HOLSTEINS for sale at all times in car lots; tuberculin tested; 150 to 200 head always on hand; well marked heifer calves from registered sires and heavy producing dams; crated for shipment anywhere, $25 f. o. b. Levinson & Balmelli, Yakima, Wash.

SHIP US YOUR POULTRY AND LIVE STOCK. We pay the top market prices. Light veal, fat, fancy, 12½c; dressed block hogs, 14c; hens, light, 17c; heavy, 19c. Prompt returns. John Lewis & Co., Spokane, Wash.

WE PAY TOP PRICES FOR YOUR LIVE OR dressed veal, hogs and poultry. Your check by return mail. Shipping tags on request. M. & J. Packing Co., Spokane.

BERKSHIRES—GILTS, YEARLING BOAR grand champion, 1921. Sure breeder. Simonson Hog Co., Buena, Wash.

REGISTERED GUERNSEY BULL, 2½ YEARS old, for sale. Hugo E. Engler, Ridgefield, Wash.

REGISTERED HAMPSHIRE PIGS, CHOICE stock, $16 each. Merryvale, Barlow, Ore.

HARNESS and SADDLERY 189

SEND FOR FREE HARNESS AND SADDLE catalog today; cut out the middleman, buy direct from the manufacturer. Lowest prices in the west; satisfaction guaranteed. Established 1881. Write Pierce Harness Co., Dept. T, Spokane, Wash.

JOB PRINTING. 372

GUARANTEED BETTER BUTTER WRAPpers: 100, 60c; 250, $1.25; 500, $2.25; 1000, $4; printed to order. Home Specialty Co., Middleton, Idaho.

MONUMENTS. 510

COMPLETE STOCK, RIGHT PRICES. CORrespondence solicited. J. W. Harding, Inland Monument Co., N1001 Monroe, Spokane.

NOTICES 534

NOTICE TO OYSTER AND GRAIN GROWERS.

The department of business control offers for sale to oyster and grain growers of the state of Washington, for a period of time extending from date to the 20th day of June, 1922, approximately 850,000 jute bags, manufactured and on hand at the state penitentiary, at the specific price of eleven cents (11c) per bag.

Bids for the purchase of these bags may be submitted by growers upon all or any portion thereof.

The price specified in this proposal is f. o. b. cars, Walla Walla, or at the state penitentiary, Walla Walla. Terms must be cash and each proposal must be accompanied by cash or certified check for ten per cent of the amount of bid.

Address all bids to Jno. W. Pace, superintendent, state penitentiary, Walla Walla, Wash. Dated at Olympia, Washington, June 5, 1922. DEPARTMENT OF BUSINESS CONTROL. By W. J. HAYS, director.

PERSONAL 537

POULTRYMAN, 35, WISHES TO CORRESPOND with poultrywoman, 25 to 30; object, matrimony. Address G 10, Washington Farmer, Spokane.

SEEDS. 620

CHOICE MANGEL SEED, 35C LB., POSTpaid; Danish sludstrup, Gate Post, yellow tankard. Warren Cook, La Conner, Wash.

NURSERY STOCK. 621

FOR SALE—PLANTS, CABBAGE, $3.25 per M.; kale, $2 per M.; broccoli, brussels sprouts, $5 per M., all postpaid. Address J. W. Peabody, Forest Grove, Ore.

ORIENTAL POPPIES, FIFTY CENTS PER bunch; maiden hair ferns, fifty cents. Mrs. Katie Cooke, Shelton, Wash.

FARM LANDS FOR SALE. 651

CUTOVER LANDS, EASY TO CLEAR; $8 TO $20 per acre; 25 miles north of Spokane; on hard surfaced highway; Great Northern and Milwaukee railways; excellent opportunity for dairying and stock raising with Spokane markets and creamery near at hand. Will help the man who will live upon this land and agree to clear a part each year by giving lumber to help start his buildings, and a pure-bred Jersey bull to groups of farmers. Interest and payments low. Write Milan Farms Development company, Dept. T, Old National Bank bldg., Spokane, Wash.

BIG OPENING SALE OF YAKIMA VALLEY farmland, under an assessed state and government approved irrigation project; good, deep soil; close to town, railroads and state highway. We sell in tracts to suit purchaser at $25 per acre and up, on easy terms. Our many sales to farmers show that this land is a good investment. Western Lands, Inc., owners, 918 Green bldg., Seattle.

THURSTON COUNTY—5000 ACRES, VERY fertile, level; fruit, berry and poultry lands; right at beautiful state capital. No extremes of temperature; no storms or floods, no irrigation; bumper crops; fine markets. 5 or 10 acre tracts; low prices and long term payments. Send for our valuable pictorial booklet. Norpia Realty Corporation, Olympia, Wash.

IN SKAGIT COUNTY, WASH., I OWN SEVeral 40-acre tracts new logged-off land in Mt. Vernon district, the proven farm belt. This joins big dairy and berry farm and close to market, highway and railroad. Price $1400; $200 cash, balance 6 years. H. C. Peters, 726 3d ave., Seattle.

$8500—160 ACRES, 10 MILES SPOKANE; 90 acres good soil under cultivation; some good timber; nice creek, fair bldgs., orchard; good for mixed crops, alfalfa, clover, grain and potatoes do well; ⅓ cash. Owner, N1423 Wall., Spokane.

7000 ACRES SEQUIM LAND SETTLEMENT project, containing the finest berry and dairy land in the state, now offered for settlement at attractive prices and terms. Free booklet. Thos. G. Mortland, Sequim, Wash.

FARM LANDS FOR SALE (Continued) 651

BITTER ROOT VALLEY, MONTANA, WANTS you! Many unusual farming conditions make this valley prosperous; small irrigated farms, devoted to dairying, fruit growing, poultry, strawberries, potatoes, seed peas, garden truck pay well in the Bitter Root. Write for free booklet No. 6. It tells about a mighty good place to live, a valley "where farming is different." The Bartlett-Bolen Co., Hamilton, Montana.

EQUIPPED STOCK OR DAIRY RANCH; 400 acres, half river bottom; 135 in crops, mostly alfalfa; grows three crops; owns ditch; unlimited free water rights; best and most extensive range; close to town; big stone house; every kind outbuilding; lots personal property; will feed 500 cattle. Come, look it over, $25,000, good terms. $5000 cash. Four-Site Sales Agency, Medford, Ore.

LOGGED-OFF LANDS IN STEVENS COUNTY, Washington, at greatly reduced prices. Most of land sells at from $5 to $20 per acre; thickly settled community, good schools, hard surfaced and paved roads to Spokane; best country in state for dairy and stock raising; most places water can be found at shallow depths. Write for folder. Phoenix Lumber company, dept. T, Spokane, Wash.

WE SELL FORECLOSED LANDS FOR A loan company for one-third cash, balance easy terms. When writing tell us what you want, where preferred, how much you will invest, kind of farming you contemplate, as we have no list and must write special description in each case. No trades. Hartford Land company, 601 Paulsen bldg., Spokane, Wash.

174 ACRES, ON KOOTENAI RIVER AND Great Northern; 94 bottom, 8 pasture, 18 fenced and cross-fenced; 3 plowed, 15 ready; ½ acre fruit, 4 cabins, team, harness, wagon, plow, harrow, tools, etc.; 2000 ft. lumber, 14 bales roofing, 6 windows, fine cattle or chicken ranch; fine government range. $4000. Chas. R. Scholz, owner, Ural, Mont.

2300-ACRE DAIRY RANCH, NEAR SPOkane; 400 in cultivation; 400 more lake bottom; easily drained; 125 irrigated from stream, $18,000 in most modern improvements; 2 good houses, 2 silos, concrete cow barns, balance land excellent pasture. Price part trade, $100,000. A. J. Chitty & Co., Spokane, Wash.

BUY A BEARING FRUIT RANCH IN BEAUtiful Fairoaks, California; grow everything from apples to oranges; only 15 miles from Sacramento; three paved highways; low prices. Free descriptive folder. Wm. Anwyl Jones, Fairoaks, Cal.

I HAVE FOR SALE SOME OF THE BEST general stock ranches in Eastern Oregon; best 360 acres, right against range; water, wood, fair bldgs, $17.50 per acre; terms. Others. E. G. Bailey, Elgin, Ore.

80 ACRES, 8 MILES KALAMA; TIMBER, running water, orchard and buildings; fenced; open range; bargain at two thousand; easy terms. R. N. Woolford, Kalama, Wash.

SELL YOUR PROPERTY QUICKLY FOR cash; no matter where located. Particulars free. Real Estate Salesman company, 501 Brownell, Lincoln, Neb.

FORTY ACRES TIMBER, TWENTY MILES Lewiston, Idaho; well watered; school two miles; two acres meadow; easy terms. Box 43, Harrison, Idaho.

BEAUTIFULLY LOCATED, WELL EQUIPPED, prosperous ten-acre poultry farm, $12,000; $5000 cash. A. P. Rushton, owner, Southworth, Wash.

120 ACRES, HALF CULTIVATION; BERRIES; good buildings; school on place; half mile to church. $16,000. F. F. Tooze, owner, Sherwood, Ore.

47 ACRES, CHEHALIS VALLEY, IMPROVED; new buildings; location ideal; in crop; terms. Write Charles Raytons, Chehalis, Wash. R. 1.

STOCK RANCH IN WASCO COUNTY, ORE.; stocked and equipped. G 9, Oregon Farmer, 411 Stock Exchange bldg., Portland, Ore.

A. F. HORTON, NEWPORT, WASH.—TIMber products, cutover lands, $5 to $15 per acre. Good roads, schools, fine mountain water.

160 ACRES, CROP, STOCK, MACHINERY; $2000 will handle. Anton Branner, Bossburg, Wash.

FARM LANDS—Wanted 654

WANT TO HEAR FROM OWNER HAVING farm for sale. Give particulars and lowest price. John J. Black, 80th street, Chippewa Falls, Wis.

FARMS WANTED — SELL YOURS QUICKLY for cash, no matter where. Particulars free. R. A. McNown, 310 Wilkinson bldg., Omaha, Neb.

WILL EXCHANGE CLEAR SEATTLE AND Sound property for equity in good wheat lands. Walthew, 4329 1st Northeast, Seattle.

WANTED—TO HEAR FROM OWNER OF land for sale. O. K. Hawley, Baldwin, Wis.

IRRIGATED LANDS—For Sale 663

KENNEWICK, WASH., IRRIGATED LANDS, in the finest section of lower Yakima valley, with three railroads; mild winters, long growing seasons; earliest on market; large and small tracts, raw and improved. Prices right; easy terms; some trades. Bert Plowman, Kennewick, Wash.

71½ ACRES, IRRIGATED; NEW HOUSE, well; some alfalfa; 2½ miles from town; terms. E. Wagoner, Prineville, Ore.

TWIN FALLS IRRIGATED FARMS, ANY SIZE, any crops, any terms. Home Realty Co., Twin Falls, Idaho.

FOR SALE OR EXCHANGE 702

IDEAL DAIRY FARM, 320 ACRES, 17 MILES from Spokane. Priced to sell quick, $10,000, and will accept Spokane residence up to $4000. 130 acres cultivated, half winter wheat, 10 acres clover land, balance summer fallow; 40 cleared to break. Excellent pasture, good timber; spring piped to house, good barn and outbuildings; easy terms. McCrea & Merryweather, Spokane, Wash.

480 ACRES WHEAT LAND, NEAR ALMIRA, Lincoln county; 320 cultivated; 160 pasture; buildings, water. Price $30 per acre; trade for coast or other property. 760-acre stock ranch; 250 cultivated; fine water, orchard, small fruit; close to school; good road; 35 miles N. E. of Mansfield, Douglas county. Price $20; mtg., $5500; trade for small place. Box 897, Port Angeles, Wash.

81-ROOM BUSINESS BLOCK, CITY; INCOME $931 monthly. Price $70,000. Will consider farm, $40,000; $20,000 cash. What have you? Briscoe Realty Co., Lindelle bldg., Spokane.

560-ACRE RANCH, CLEAR; STOCK, CROPS, equipment; joins range; natural stock country. Want going ranch around $10,000; low altitude. G. Drake, Madison Co., Varney, Mont.

FOR SALE OR TRADE—NEHALEM VALley; 320 acres. Owner, Box 32, Birkenfeld, Ore.

DRAG SAW AND BUZZ SAW. EXCHANGE for car. George Smith, Wapinitia, Ore.



CHAPTER XXV.

A Mission of Life and Death.

Bob's face had grown pale and tense as he listened. With Mookoomahn's last words he rose from the edge of the bunk where he had seated himself, and turning to Ed Matheson, asked:

"Be you goin' with me, Ed? Th' moon's good for travelin', an' I knows th' way."

"That I be," Ed responded, beginning his preparation at once. "I couldn't be restin' here a minute knowin' them poor souls was dyin' out there."

"I'm goin', too," declared Dick Blake, reaching for his adicky. "Three can travel faster'n two, by changin' off in th' lead."

"What you doin', Bill, with your adicky, now?" Ed suddenly asked, observing that Bill Campbell was also drawing on his adicky.

"Goin'," answered Bill laconically.

"No, Bill, you better stay here with th' Injun," directed Ed. "Somebody'll have t' stay with he. If they don't by tomorrer he'll get eatin' so much he'll kill hisself if he ain't watched.

"You stay an' keep an eye on he. Give he just a small bit t' a time, till he gets over th' first sickness. He'll be wonderful sick t'night, an' for a week, but sick's he is, by day after t'morrer he'll be wonderful hungry, an' want t' eat everything in sight, an' more too, an' if he eats too much 'twill kill he sure. His belly'll be givin' he trouble for a month yet, whatever, two ways—wantin' t' stuff un, an' makin' he sick because he does."

Bill Campbell was plainly disappointed, but there was no doubt Ed was right, and laying aside his adicky he uncomplainingly assumed the role of nurse to which Ed had assigned him.

The men set forth in haste upon their mission of life and death. The moon, a white, cold patch, lay against the steel-blue sky. The snow, thick coated with frost, glittered and scintillated in the moonlight. A silence impressive, complete, tense, lay upon the frozen white world. It spoke of death, as the bated breath of the storm, before it breaks, speaks of calamity.

The three trappers, who had entered the tilt that evening wearied from the day's labor upon the trail, forgot their weariness as they swung forward at a rapid pace toward the camp on the Great lake.

First one, then another, took the lead, breaking the trail and making it easier for those who followed. To men less inured to hardship and less accustomed to wilderness travel, it would have been a killing pace, continued unabated, unvarying, hour after hour.

At length the moon, falling near the western horizon, threatened quickly to withdraw her light; and then a halt was called, the tent quickly stretched between two convenient trees, the sheet-iron stove set up, a fire lighted, a few boughs spread for a bed, and the men stretched themselves for a two hours' rest.

They were up again before light, a hurried breakfast was eaten, and with daybreak they were away. Seldom was a word spoken. Each was stingy of his breath. To have talked would have been to expend energy.

Only once during the day did they halt, early in the evening, to make tea and partake of much-needed refreshment, and then were quickly on their way again, continuing by moonlight.

It was past midnight when, Ungava Bob in the lead, crossing a barren rise, beheld the smooth white surface of the Great lake stretching far away to the northward. Descending the ridge and plunging into the thin forest below, he turned with a nameless dread at his heart toward the lodge where, three months before, he had said farewell to Shad and Manikawan. Then they were in the full exuberance of health and strength. How should he find them now? He dared not answer the question.

A little farther, and the lodge, a black blot on the snow, loomed up through the trees. Quickening his pace, he peered anxiously ahead for smoke, half hoping, wholly dreading, the result. Yes, there it was! The merest whiff rising about the protruding lodge poles at the top! At least one lived!

Bob broke into a run, the others at his heels, and, scarcely halting to drop the hauling rope of his toboggan from his shoulders, he lifted the flap and entered, calling as he did so:

"Shad! Shad! Manikawan! Does you hear me?"

The place was dark. The smouldering embers of a fire gave out no light, and receiving no answer Bob shouted to the others to bring a candle. Ed Matheson had anticipated the need, and, close at Bob's side, struck a light.

CHAPTER XXVI.

"Greater Love Hath No Man Than This."

As the candle sputtered for a moment and then flared up, it revealed, lying prone on opposite sides of the lodge, feet to the embers of the dying fire, two human wrecks, whose emaciated features and shrunken forms could never have been recognized as those of Shad and Manikawan.

Bob stooped, and taking Shad gently by the shoulder shook him, saying as he did so:

"Shad! Shad! Shad!"

Slowly Shad, awakening from deep and exhausting slumber, opened his cavernous eyes and stared vacantly at Bob.

"Shad!" Bob repeated. "'Tis Bob an' Ed an' Dick come for you! Shad! We has grub, Shad!"

Still Shad gave no sign of recognition.

"Shad! Shad!" pleaded Bob. "Don't you know me now, Shad?"

Then light came into Shad's face, and he forced himself to a sitting position.

"Bob! Oh, Bob!" he exclaimed, in a weak voice. "Am I awake or is it just a dream? Oh, Bob! Good old Bob! And Ed! and Dick! I was dreaming of you and the tilts. The dear old tilts! And you've come! You've really come? I heard you calling, Bob—days and days and days I heard you, and I answered. But my voice was took weak, and you couldn't hear.

"We've been in hell, Bob! In hell! The devils chased us, Bob—chased us for months and months and months. They looked like wolves, Bob—hungry, ugly wolves. I shot one! Yes, shot it! We ate it, and it was good! Ate the devil, Bob! and Ed! and Dick! Are you angels from heaven, or really you?"

"A bit o' tea's what he needs first thing," suggested Ed, in a shaky voice, as Shad paused in his ramblings. "Dick, you cut some wood, now, an' I'll be fillin' th' kettle with ice an' get un over. Bob better be stayin' right here."

"Bob!" Shad continued, as Dick and Ed passed out of the lodge. "Is it really you, Bob?"

His voice was now more rational, though very weak.

"Yes, Shad, 'tis me."

"How is Manikawan, Bob? Look after her, won't you? I'm all right now. I've tried to keep her out of the deep sleeps she falls into. I've been afraid she'd die. But I was very tired, and I think I must have been very sound asleep myself—and slept for hours. Leave me, Bob, and wake her up. I'm all right."

Bob obediently passed over to Manikawan, leaving Shad sitting and anxiously watching him.

It seemed for a time that he was not to succeed in rousing Manikawan from the coma-like sleep into which she had passed. But when Dick placed wood upon the fire, and the lodge began to warm, she displayed symptoms of waking; and Bob lifted her head to his shoulder, chafed her temples, and spoke her name over and over again. At last she opened her eyes, and with almost instant recognition smiled:

"White Brother of the Snow—Manikawan is glad you have come. It has—been—long—but Manikawan knew—White Brother of the Snow—would come at last—she did not—leave his friend."

Then she paused, exhausted, but presently continued:

"Manikawan told—White Brother of the Snow—she would—stay until he came—for his friend."

"Manikawan has done well. She has been very brave. She is a Ne-ne-not (Nascaupee), and brave." Bob could trust himself to say no more, for his voice was thick.

Manikawan's eyes lighted at these words of praise, and, never taking them from Bob's face, she lay silent upon his shoulders until the food was ready.

Ed Matheson gave some tea and a small portion of broiled ptarmigan and bread to Shad, while Bob held the cup for Manikawan, then fed her some morsels of the meat as one would have fed a child. It was difficult for her to eat, though the tea stimulated her temporarily, and she began presently to speak again, in a scarcely audible voice:

"The Spirit—of Hunger—followed us. The Gaunt Gray—Wolf—was—always—behind—us. The—Spirit—of—Death—stood—at—the—door—of—the—lodge. The spirits—were—strong—and cunning—like the wolverine—Manikawan—was—weak—like—a rabbit."

She was out of breath again and had to rest, and Bob held the cup of tea to her lips. With renewed strength she continued:

"Manikawan—killed—two ptarmigans—with—her—arrow. She—ate—the—entrails—but she—gave—the meat—to the friend—of White Brother of—the Snow. She was—not afraid—to die. She—could—not say to—White Brother—of the Snow—when he came—'The Spirit—of Death—has—entered—the lodge—and—taken—your—friend.'"

There was another pause. Bob could see, and Ed and Dick could see that the Spirit of Death was even then in the lodge, and that his cold hand was upon Manikawan's brow. Tears trickled down Bob's cheeks. He could not check them.

"White—Brother—of—the—Snow—must—not—feel—bad. He—must—be—strong. Manikawan—is—happy. She—is—warm—as—when—the—sun—grows — brave—in—summer — and — come—to—warm—the—earth." A smile played upon her lips.

"Manikawan—is — very — happy. She—sees — a — light — like—the—rising—sun. White—Brother—of—the—Snow——"

That was the end. Bob's cheeks were wet as he laid the lifeless form upon its couch of boughs, and gently covered it with a deerskin robe; and tears streamed down the weather-beaten cheeks of the two rough trappers standing at his side.

Manikawan was not a Christian. She had never heard of Christ and His saving grace. But dare any say He did not welcome her to His Father's house?

She had renounced her own hope of life by remaining behind in the lodge when Mookoomahn left them. In the name of love and duty she had made the supreme sacrifice—she had laid down her life for another—and Christ hath said: "Greater love hath no man than this, that a man lay down his life for his friends."

And, after all, did Manikawan not worship the same God that you and I worship? Standing upon the high pinnacle of rock, looking toward the rising sun, she offered a silent prayer to the Great Mystery, that she might be made nobler, braver, and more generous—worthy to stand in the presence of the Great Mystery—the Maker of heaven and earth and all things.

We call Him God. Manikawan called Him the Great Mystery.

CHAPTER XXVII.

Shad's Tribute to the Indian Maiden.

Though Shad's weakness caused him to wobble woefully when he walked, his knee had much improved since the day of his injury.



"Shad, does you hear me?"

The food, given him in small portions at frequent intervals, and the assurance of continued life that the appearance of the rescuers brought, stimulated his body to new strength and restored to him his mental equilibrium. Hope is life, and one possessed of a large degree of hope, coupled with a good physique, may withstand a tremendous amount of hardship and privation.

The very presence of Manikawan during the long period of enforced inactivity and waiting, had kept alive in Shad Trowbridge the hope that Mookoomahn might after all reach the river tilt and send his friends to the rescue before it was too late. Had it not been for this, it is scarcely probable he would have survived until they came.

The few Indian words which Shad had acquired had not been sufficient to permit him to carry on connected conversation with Manikawan or the other Indians. Denied this privilege for so long, he talked almost incessantly to the three trappers, while the four sat through the hours until daybreak, keeping vigil with Death. He talked of the prospect of continued life, and what a blessed thing it was to know that he was still to be in and of the great and glorious world; of his trying experiences since he had joined the Indians.

With dawn the tent was pitched among the trees, not far from the lodge. Then they removed to its more comfortable shelter, with Bob walking at Shad's side to steady his uncertain footsteps.

Shad was sick, and suffered severely from nausea that day—and at intervals, indeed, for several days thereafter—a result that always follows the introduction of food into the contracted stomach after a long period of starvation, particularly when the food is of coarse quality and unsuitably prepared.

Almost immediately, too, his legs began to swell. But this disturbed him little. It was merely an incident and another result of his long period of starvation, quite to be expected.

"Don't worry about un none," advised Ed Matheson, when Shad called attention to the phenomenon. "Injuns as starves always gets swelled legs, an' they stays swelled for quite a bit, too. Just forget un now. You'll be all right so long's you don't get too rapid wi' th' grub, an' set you'm belly swellin' too fast."

"Ed," said Shad, "after what I've been through, I think there's nothing would alarm me much. It doesn't disturb me in the least to have my legs swell. I'm rather proud of them They contrast beautifully with the rest of me, and give me a certain sense of stability that otherwise I should not have, for they're the only part of me that looks in the least natural. Do you hear my bones rattle when I move? I have a presentment that, unless I'm pretty careful, my skeleton will fall apart before I get flesh enough to hold it together."

"Now that's th' way I likes t' see folk!" exclaimed Ed. "Not growlin' like a bear because they looks summat like a dead man, an' because they has a bit o' ache in their insides every time they eats. You'm do look as though you'm just rize from th' grave. But you'm a wonderful live corpse yet, Shad. A man may's well be happy even if he do feel like all creation turned inside out, 'specially when he knows he ain't goin' t' keep feelin' that way. A man is just as happy as he's thinkin' he is, an' no happier, an' as miserable as he's thinkin' he is an' no miserabler. I finds bein' happy an' content wi' things is just a matter o' th' way o' lookin' at un."

"Yes, Ed, I think you're right," agreed Shad. "I'm finding no fault. I'm thankful to be alive and in the beautiful world, and I'm very much contented with my lot. I would be very happy, too, but for the thought of that poor little Indian girl."

The earth, frozen to adamantine hardness, precluded the possibility of digging a grave during the winter season. Therefore, after the manner of her people, a platform of poles, high raised above the snow, was built among the spruce trees to receive Manikawan's body.

It was late in the afternoon when the platform was completed and the four weather-beaten men again entered the silent lodge, where they were to conduct a simple, primitive funeral service, and give Manikawan the rites of Christian burial before raising her body to the platform.

Bob, who never was separated from the little Testament his mother had given him years before, drew the book from his pocket when they had seated themselves in the lodge, and opening to John xv, passed it to Shad, who, accepting it, read the chapter aloud in a low but clear voice, while the others, reverently listened.

"Bob," said Shad at length, closing the Testament, "you knew her first. Tell us about her."

Responding, Bob described how Sishetakushin and Mookoomahn, finding him unconscious in the snow, had carried him to their lodge—the very lodge in which they were now sitting; and how upon first opening his eyes to consciousness he had seen her, weaving the web of a snowshoe, opposite him, across the fire—just where she was lying now; and she had looked up and smiled when she discovered he was awake. And then, ever gentle, ever considerate, she had nursed him to health, and ministered to him until he had left them.

When Bob had finished, Shad spoke of her never-failing thoughtfulness and consideration. Of the encouragement of her example as, uncomplaining, she followed the weary, endless trail day after day. Of her hand lightly laid upon his shoulder as she looked into his eyes and spoke words of encouragement he could not understand, but which never failed to call him back to himself and his manhood and to banish an impulse which frequently assailed him to give up the fight for life, lie down in the snow and accept the release from suffering which death offered.

"But her crowning sacrifice," said Shad, "came when she refused to leave me alone to die; and I certainly could not have survived had I been left in this lodge without human companionship.

"Manikawan could have gone on with Mookoomahn and saved herself. He went to you and told you of our need. He did well, but he did it mainly to save himself. It was the instinct of self-preservation that gave him inspiration to accomplish it. But she remained, and remaining she gave me the only food that fell to her arrow, while she starved. That was divine unselfishness—divine sacrifice."

Stepping to the side of Manikawan's lifeless body, he lifted and laid aside the skin robe which covered her face, then kneeling at her side, with tears upon his cheeks, he continued:

"Manikawan, your skin was red, but your soul was as white as the driven snow that

(Continued on the following page.)

FAMILY CIRCLE

ALICE BARLAND
EDITORIAL CONTRIBUTOR

Experience Letters

From Our Family Circle Women

Dear Family Circle: As I have had many requests for information about putting butter away for winter use I will give you my method which I learned from my mother, who was considered the very best butter maker in the community where she lived. She always received a little more per pound for her butter than the other butter makers because of its excellence.

The school in which I learned to make butter was a hard one and my mother a very exacting teacher for I began as a veritable apprentice. My first lessons were given in the place in our house called the "milk room" and it was important enough to begin with capital letters. Not a thing but milk, butter and cream was ever allowed to remain in that immaculately clean room. My first lessons, as I said, in butter making began in this room. It was built on purpose for milk after the rest of the house, so it was left unpainted and shelves and floor were of pine boards. Its only furnishings were the shelves and a pine table for working on and once every week all that pine wood was scrubbed to a wonderful whiteness. The floor was as white as the shelves and table. Oh, those scrubbing days! I shall never forget them. I used to wonder then why that room had to be so painfully clean, but now I know that the secret of my mother's wonderful butter was perfect cleanliness.

In course of time I was promoted from the scrubbing of the milk room to washing the "milk things." I am sure if it were possible to place me back in the same old summer kitchen where this important rite was performed, I could go through the operation blindfolded with credit, so exactly was the routine followed year after year.

I can see in my mind the whole array of "milk things" spread out just as they appeared morning after morning. There were the milk pails, five or six of them, and inside, the cheese cloth strainers which had to pass the inspection of my mother's nose as well as her eyes before they could be used again.

These were the days of setting milk in tin pans and mother would be up at 5 o'clock in the morning and have the skimming done and the empty pans would be piled high on the work table in that "summer kitchen," 20 or 30 of them. There was no convenient sink with water under pressure which came at the turn of a faucet. In those days of my apprenticeship we drew the water with buckets from a well and heated all we used in kettles on a wood range and it had to be boiling, too, or I heard from my mother in language easy to understand.

The pails were the first to have attention and I hated that part more than all the rest. First the strainers must be taken out and shaken free of all hair and straw or whatever may have fallen into the pail of milk while the milking was being done, then all the pails were rinsed out carefully in perfectly cold water and the strainers set aside to soak in cold water. Next the pans must be washed first in cold water, for they were the kind made with seams and hot water would convert the milk into a sort of paste in those seams.

Next a big dishpan of strong hot soap suds must be provided and a perfectly clean cloth and a pine stick sharpened at one end and one by one those pans were put through the hot suds; the stick run all around every seam every morning, and they were set aside till the pails were passed through the same operation and every strainer cloth was rubbed on a board and then the scalding began.

Nothing short of a whole pail of boiling water would satisfy my mother and once I got at the scalding process I rather enjoyed it. But best of all I liked to take the pans and turn them upside down in a long shining row on a rack made for that purpose out in the bright sunshine; there they remained till the middle of the afternoon with the pails keeping them company and the sweet strainer cloths pinned onto the line ready for the evening milking. The "milk dish cloth" also was left to float to the sweet breezes of heaven and woe to any one who used that cloth for any purpose under any circumstances, except for the "milk things." These milk laws were like those of the Medes and Persians, unchangeable.

I am sure you mothers are smiling if I have succeeded in making you see that 12-year-old girl putting all that pile of tinware through its morning ablutions day by day.

Every alternate day the old-fashioned dasher churn came in for its share of attention and was treated like all the other milk things, only more so, for the wooden dasher was hard to keep just right. The wooden butter bowl was mother's especial care. She seldom ever trusted any one but herself to wash that. I hate to think what would have happened at our house if any person had dared to put anything whatever into that bowl except butter.

I have told you this to amuse you, but in the story lies the secret of perfectly sweet butter which my mother made, and I have eaten it when it has kept from one June to the following June as sweet and delicious as when fresh churned.

There are other details as necessary as those mentioned. One should stir the cream every day once at least, lest it form a crust on top, which will make hard flakes in the butter and nothing can be done to remove them. It is common now in creameries to salt the butter and pack it away the same day, but when one is making butter at home and wishes to take no chance of its spoiling it is safest to leave the churning stand in the bowl after salting till next day and work out the salt, which is sure to remain even though one is very careful to work it out at the first period. The salt will draw out more of the buttermilk. Never work the butter till it becomes like salve, sort of greasy, for then the grain, as it is called, is destroyed and butter so worked will never keep sweet.

To pack for winter use have stone jars. I think a three-gallon size is good, and never use one to pack butter in which has had something else in it. This may seem foolish to you, but it is not. Sprinkle a handful of salt on the bottom of the jar pack in your butter (having allowed one tablespoonful of salt to the pound), put in your layers about two or three inches thick, then add another sprinkling of salt and add another layer of butter. It is easier to cut out the butter when the layers are not too thick. Keep on packing as you churn till your jar is within two inches from the top, then cut a piece of white cloth the size of the jar, fit it down over the butter, fill the jar with salt, then pour on water till almost the very top and cover carefully and put in a clean, cool place where there are no odors, such as onions or cabbage or other strong odors. Watch from time to time and add more water as it evaporates, so the very top of your butter will be as sweet as that down deeper.

Be careful your cream is "ripened" before churning. Never add cream skimmed the same morning to other cream you are to churn that day. Allow all to stand together for 48 hours, but never leave cream till it becomes bitter and old and never fail to stir it every day. This in itself will delay the cream from becoming too old to be good.

Remember, dear women, that perfect cleanliness about every thing, from the time the milk goes into the pail from the cow down to the cloth you tie over the top of your jar of packed butter is necessary for a perfect product. There are much easier methods now. Few of you have to draw water from a well. You do not have to use pans and there are fine churns with thermometers attached, but cleanliness is just as essential as when I was a little girl washing "milk things."

Your friend, ALICE W. BARLAND.



STARVED BABIES

make rapid gains on Dennos, because vital food elements are supplied. Try it. Druggists sell it. Sample free.

DENNOS FOOD CO.
Portland, Ore.

The Gaunt Gray Wolf

(Continued from the preceding page.)

covers the desolate land of your people. Your features are shrunken with starvation and suffering, but still they are beautiful, for they reflect the beautiful, unselfish soul which they once sheltered.

"Your lips smile. Did you see the glory of heaven as you passed from us—a thousand times more beautiful than the brilliant aurora or the gorgeous sunsets that glorify the skies of this land of awful desolation where you existed? Did you see the light of the Eternal City shining through its gates when they were opened to receive you?"

As though in answer to Shad's question the last rays of the setting sun dropped through the open top of the lodge and rested upon the upturned face of the dead Indian maiden in a bright, illuminating glow.

"Manikawan, you sacrificed your life to duty and to human sympathy. You died a Christlike death, and your sacrifice shall not be wasted. Your body is dead, but your spirit still lives.

"So long as the breath of life is in me, Manikawan, I shall never forget your example of patience and encouragement and self-effacement. It has built for me new ideals. It has taught me that there are other things to live for than the mere attainment of pleasure and the gratification of selfish desires.

"You were an Indian, Manikawan, and the world would have called you a pagan and a savage. But you have pointed out to me the way to a nobler and better life."

Shad arose and resumed his seat. He had spoken in a voice of tense earnestness, and for a little while all sat in awed silence. Then Ed Matheson began to sing, and the others joined him:

"Rock of Ages, cleft for me,
Let me hide myself in thee."

With the last notes of the grand old hymn they all knelt, while big Dick Blake, in a voice shaken with emotion, offered a short but fervent prayer.

Manikawan's body was wrapped tightly in deerskin robes, and in the darkening twilight of the cold winter evening it was reverently borne to the newly erected platform among the spruce trees. Here it was to lie exposed to winds and storms, but beyond the reach of marauding animals, until the next summer's sun should warm and soften the earth sufficiently to permit Mookoomahn and the trappers to dig a grave and lay it in its final resting place.

(To be continued.)

Would Rather Walk Rails.

"They need laborers in the next town."

"Thanks for the warning, boss. I'll make a detour."—The Farm Journal.

He Was Holding the Ship.

Captain—Ahoy there, let go the anchor.

Sailor (near the anchor)—I ain't touched it yet.—Harvard Lampoon.

Rx Red + Cross Ball Blue
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If every wash-day is a day for the "Blues"—the *right* blue will send them scuttling away.

Red Cross Ball Blue

is the secret of successful washing;—Pure White, dazzling clothes that leaves the happy smile of satisfaction at the end of a day of hard work.

5 Cents. At Your Grocers'

Read the "Want Ad" page this week for good offers of all kinds.



How long should a shingle roof last?

Answer that by another question—How much service in a tractor? Depends largely on the care you take of it. Same for a shingle roof.

Unless you fill the pores of the wood with a weather-resisting preservative, natural oils will evaporate, rain will soak in, then shingles will warp and crack under the hot sun and withering winds.

ORONITE SHINGLE OIL made by Standard Oil Company (California), is easy to apply, and will save your shingle roofs or shingled side-walls many a repair job. A tight, well-laid roof treated with it should last a lifetime.

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STANDARD OIL COMPANY
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ORONITE SHINGLE OIL

High Points in News of the Week

The soldiers' bonus bill has been formally presented to the senate, Senator McCumber saying that in the very near future he hoped to be able to lay aside the tariff bill for a day or so for the purpose of considering and passing, if possible, the compensation bill. Informal canvasses of each side have indicated that the bonus legislation has a substantial majority in the senate, but whether the amended house bill will be approved is problematical.

* * *

Enactment of legislation designed to bring about development of the government's power and nitrate project at Muscle Shoals, Alabama, by private enterprise has been recommended to the house in three reports filed by members of the military committee. Each of the reports admitted that the committee had been unable to agree upon details for the project's development and expressed belief that the work should be performed by the public itself.

* * *

Appropriations of $294,235,000 are made in the annual naval appropriation bill as reported by the senate appropriations committee. This represents nearly $43,000,000 over the house bill, but $131,000,000 less than requested by the navy department.

* * *

James K. Mason of Chicago, treasurer of the United States Grain Growers' association, and William M. Eckhardt of Chicago, former treasurer of that association, were summoned to appear before a subcommittee of the senate agricultural committee, with the account books and records of their association. Members of the subcommittee say that this is to give an opportunity to combat the charges which have been made that the grain growers' association has not, in fact, aided the farmers.

* * *

A well-informed Washington correspondent remarks that the republicans say they are going to pass the tariff bill before the November election. The democrats say that the republicans are fooling, that they don't really expect to pass the bill, but merely want to put the blame for not passing it on the democrats.

* * *

The report is confirmed that Captain Roald Amundsen, the explorer, contemplates a polar flight. Captain Amundsen will be accompanied on his perilous journey by only two companions. The plane will carry gasoline sufficient for a 26-hour trip and the aviators will have for food only sandwiches, a few ounces of concentrated food and a vacuum bottle filled with tea. According to the plans, the plane will pass over the top of the world and head straight for Spitzenbergen or Grant land.

* * *

Li Yuan Hung, who five years ago was forced out of the presidency of China by the militarists, arrived in Peking Sunday and resumed the post of the nation's chief executive. Li came from Tientsin in response to the call of the revived republican parliament, which recently met there, that he again assume the direction of China's affairs.

* * *

Smith W. Brookhart was nominated the republican candidate for United States senator from Iowa at the primary Monday.

* * *

Richard A. Ballinger, who was secretary of the interior during President Taft's administration, died at his home in Seattle June 6.

* * *

Nikolai Lenine, dictator of Russia in its regime of bolshevism, can be considered as eliminated," says David Lawrence, the well-informed writer. "Brain trouble—some reports say a paralytic stroke—others say a cerebral breakdown—is taking Lenine out of the situation, if not out of the world altogether. Predictions vary as to whether he will live. Some reports indicate Lenine can not last 10 days more.

* * *

Wu Pei-Fu, dominant Chinese military leader, and Chang Cho-Lin, Manchurian war lord, have agreed on an armistice. The suspension of hostilities is to continue indefinitely while the two discuss a permanent peace.

* * *

"Keep your mouth shut; halt when you are ordered; keep out of crowds; keep moving and stay off the streets as much as possible." This is the timely and well-meaning welcome of Belfast, Ireland, to visiting strangers. Floyd Gibbons, the newspaper correspondent, adds: "Here, in this bustling metropolis of almost 500,000 souls, I have found in four hours more gun-toting than Kit Carson or Diamond Dick ever dreamed of in the early days in the west. To the stranger it would appear that half the population of Belfast carry revolvers with a city license."

* * *

A violent storm, accompanied by shifting winds that reached a velocity of 88 miles an hour, took the lives of more than 50 persons, injured more than 100 and caused enormous property loss in New York city, Sunday. Forty persons were reported to have lost their lives while boating in Long Island sound and many others were killed by falling trees, lightning and accidents caused by the wind. Ten bodies of the drowned have been recovered, and the waters about New York are being searched tonight for 33 reported missing.

The storm came at the close of one of the hottest days of the season.

* * *

Deciding the celebrated Coronado coal case, the United States supreme court holds that labor organizations, although unincorporated, are amenable to the Sherman anti-trust act and that under it such organizations may be prosecuted for restraint of interstate commerce. While the court also held, that, while unincorporated, labor organizations could be sued under the Sherman anti-trust law for triple damages for losses to property caused by them, there was nothing in the evidence of the present case to show that the acts complained of were aimed by the labor union to restrain interstate trade, and that the international union and its officers should not have been held by the trial court as subject to joint liability with the district and local organizations. Hailed as a "great victory" by counsel of the United Mine Workers of America, the Coronado coal case is expected by union officials to be followed soon by the release of $1,100,000 of union funds now tied up by litigation.

Farm Business and Markets Outlook

(Continued from page five.)

LATEST QUOTATIONS.

The Live Stock Market.

PORTLAND, Ore., June 10.—Cattle—Nominally steady; no receipts.

Hogs—Nominally steady; no receipts.

Sheep—Steady; no receipts. (1332 sheep contract).

SPOKANE, June 10.—Cattle—Prime steers, $7.50@8.75; good to choice steers, $6.50@7.50; medium to good steers, $6@7.25; fair to medium steers, $5.25@6; common to fair steers, $5@5.25; choice cows and heifers, $6@7.25; good to choice cows, heifers, $5@6; medium to good cows, heifers, $4.50@5; fair to medium cows, heifers, $3.50@4.75; canners, $2.25@3.50; bulls, $3.25@4.75; light veal calves, $6.50@8.50; heavy veal calves, $4@6.50; stockers and feeders, $4.75@5.

Hogs—Prime mixed, $11.25@11.65; medium, $10.25@11.25; heavies, $8.25@9.25; fat pigs, $10.25@11.25; stockers and feeders, $10.25@11.25.

Sheep—Prime lambs, $9@11; fair to medium, $8@9; yearlings, $8@9; wethers, $7.50@8; mutton ewes, $3@6.50; feeder lambs, $6@7.

The Grain Market.

PORTLAND, Ore., June 10.—Wheat—Hard white, $1.20; soft white, white club, hard winter, northern spring, $1.18; red Walla, $1.14.

Grain futures: Wheat—Hard white, June, $1.20; July, $1.19; soft white, white club, hard winter, northern spring, June, $1.18; July, $1.14; red Walla, June, $1.14; July, $1.08.

Corn—No. 2 eastern yellow shipment June, July, $29.

SEATTLE, June 10.—Wheat—Hard white, soft white, white club, hard red winter, soft red winter, northern spring, $1.18; eastern red Walla, $1.15.

DAYTON, Wash., June 10.—Club, $1; red, $1.

RITZVILLE, Wash., June 10.—Bart, $1.30; red, $1.10; Fife, 95c.

WALLA WALLA, June 10.—Bluestem, Turkey red and Bart, $1.04; club, $1.02.

LEWISTON, Idaho, June 10.—Soft white, Fortyfold, 98c; red Russian, 95c.

PULLMAN, Wash., June 10.—Red wheat, 98c; white wheat, $1.01.

Hay and Feed Grain.

SPOKANE, June 10.—Wheat—Feed wheat, $46 per ton.

Oats—$40 per ton; steam rolled, $42.

Corn—$36 per ton; cracked corn, $32 ton.

Barley—$40; steam rolled, $42.

Bran and Shorts—$30 per ton.

PORTLAND, June 10.—Millfeed—Price f. o. b. mill: Mill-run, ton lots, $37; middlings, $51; rolled barley, $37@39; rolled oats, $44; scratch feed, $47@51 per ton.

Corn—White, $36; cracked, $38.

Hay—Buying price, f. o. b. Portland: Alfalfa, new, $14@15 per ton; oats and vetch, $18; clover, $17.

General Produce.

PORTLAND, Ore., June 10.—Butter—Steady. Extra cubes, 35@35½c; undergrades, 32@34c; cartons, 41c; prints, 40c. Butterfat—No. 1 churning cream, 41c f. o. b. Portland; undergrades, 38c.

SPOKANE, June 10.—Poultry—Fat hens, 19c lb; light hens, 16c lb; roosters, 8c lb.

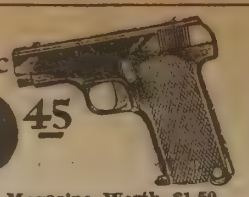
Fresh ranch eggs, $6.50 cash; no storage; pullet eggs, $6.

Butterfat—37c a pound.

Range of Live Stock Prices for the Week Ending June 7

CATTLE.	Chicago.	Spokane.	Portland.	N.Salt Lake
Choice, prime heavy steers (1100 lbs. up)	8.70@ 9.60	.....	.....	.....
Good heavy steers	8.25@ 9.10	8.25@ 8.75	8.25@ 8.75	.....
Medium heavy steers	7.85@ 8.60	7.50@ 8.50	7.50@ 8.50	.....
Common heavy steers	7.25@ 8.10	6.50@ 7.75	6.50@ 7.75	.....
Choice, prime light steers (1100 lb. d'n)	8.85@ 9.70	.....	.....	.....
Good light steers	8.40@ 9.15	8.25@ 8.75	8.25@ 8.75	.....
Medium light steers	8.00@ 8.70	7.60@ 8.60	7.60@ 8.60	7.00@ 7.75
Common light steers	7.25@ 8.25	6.50@ 7.75	6.50@ 7.75	5.50@ 7.00
Common to choice butcher heifers	5.75@ 8.75	4.75@ 7.25	4.75@ 7.25	4.00@ 4.75
Common to choice butcher cows	4.25@ 7.40	3.75@ 6.25	3.75@ 6.25	3.50@ 5.00
Bologna and beef bulls	3.90@ 6.40	3.75@ 5.25	3.75@ 5.25	2.00@ 3.00
Canners and cutters, cows and heifers	3.00@ 4.40	2.00@ 3.75	2.00@ 3.75	1.50@ 3.25
Canner steers	4.25@ 5.90	4.00@ 5.50	4.00@ 5.50	3.50@ 4.50
Medium to choice light veals	8.25@11.25	7.00@11.00	7.00@ 8.50	7.00@ 8.00
Common to choice heavy veals	4.50@ 8.50	4.50@ 7.00	4.50@ 7.00	.....
Common to choice feeders (1000 lb. up)	6.00@ 8.00	.....	.....	.....
Common to choice feeders (750-1000 lb.)	6.00@ 8.00	4.75@ 6.00	4.75@ 6.25	4.50@ 5.50
Common to choice stocker steers	5.75@ 8.00	.....	.....	.....
Common to choice stocker cows, heifers	4.00@ 6.00	.....	.....	.....
HOGS.				
Top of market	11.00	11.75	11.65	10.65
Bulk of sales	10.10@10.95	11.00@11.50	11.00@11.50	10.00@10.50
Heavy (250 lb. up)	10.25@10.80	10.00@10.75	10.00@10.75	.....
Medium (200-250 lb.)	10.35@10.95	10.50@11.50	10.50@11.50	9.75@10.50
Light (150-200 lb.)	10.50@10.95	11.25@11.75	11.25@11.65	10.25@10.65
Light lights (130-150 lb.)	10.25@10.90	11.25@11.50	11.25@11.50	10.25@10.60
Smooth packing sows (250 lb. up)	9.25@ 9.90	8.25@ 9.25	8.50@ 9.50	.....
Rough packing sows (200 lb. up)	9.00@ 9.55	7.50@ 8.50	7.50@ 8.50	.....
Medium to choice pigs (130 lb. down)	9.25@10.55	10.25@11.25	11.25@11.50	.....
Stock pigs	.....	10.25@11.25	11.25@11.50	8.50@ 9.25
SHEEP AND LAMBS.				
Medium to prime lambs (84 lb. down)	9.75@13.10	.....	.....	.....
Culls and common lambs	7.00@ 9.50	.....	.....	.....
Medium to prime yearling wethers	8.00@10.85	7.00@ 9.00	6.00@ 9.00	6.50@ 8.50
Medium to prime wethers	5.75@ 8.25	6.00@ 8.00	5.50@ 8.00	5.50@ 7.00
Medium to choice ewes	3.00@ 7.25	3.00@ 6.00	3.50@ 6.00	3.50@ 4.50
Culls and common ewes	1.50@ 3.50	2.00@ 3.00	2.00@ 3.50	2.00@ 3.50
Spring lambs	13.00@15.00	8.50@11.00	9.00@11.00	9.00@12.00

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All guns use standard ammunition

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U. S. navy wool sweaters $2.65
New stock govt. hip rubber boots, all sizes $4.65
Govt. hob nail shoes, all sizes $3.95
Herman's army Munson last shoes, work or dress, tan; best made, and great value at $4.95
Army wall tents, 8x10 ..... $9.45
Army wall tents, 10x12 ..... $12.95
U. S. army officers' khaki blankets $5.00
U. S. navy blankets $5.00
Double gray blankets $4.50
U. S. army steel cots $3.95
Auto robes, waterproof $3.95
8x10 tarpaulins, special $2.50
Folding camp chairs ....75c, $1 to $1.25
Ladies' Khaki breeches or coats ..$3.00
U. S. army breeches ..... $1.25 to $4.50
U. S. army shirts, wool ....$1.95 to $2.50
U. S. army leather puttees ..$4 and $5.00
U. S. army spiral legging ..... $ .95
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Bits of Fun for Everyone

That's Nothing—Who Didn't?

Weary Willie—I may be poor now, but when I was young I had my own carriage.

Leary Louis—Yep, and yer maw pushed it.

Time Was Precious.

Dad—Why are your clothes so very dirty?

Bobbie—I fell in the street.

Dad—With your new suit on?

Bobbie—Yes, dad. I didn't have time to come home and take it off.

Getting the Idea.

A Grand avenue school teacher was relating some of her experiences in different schools throughout the country.

"I taught school among my own people in the Tennessee mountains for several years after I graduated from college. Funny thing happened.

"Hearing a boy say 'I ain't gwine thar,' I said to him, 'That's no way to speak. Listen: 'I am not going there; you are not going there; he is not going there; we are not going there; they are not going there.' Do you get the idea?"

"'Yessum, I gits it all right. They ain't nobody gwine.'"

Glad if He Swore.

"What would your mother say, little boy," reproved a passerby virtuously, "if she could hear you swear like that?"

"She'd be tickled to death," answered the bad little boy. "She's stone deaf."

Out o' Luck.

A small girl asked her mother, "If I grow up, will I have a husband like papa?"

"Yes, my dear," mother replied.

"And if I do not get married, will I be an old maid like Aunt Susan?"

"Yes," was the reply.

The little girl thought for a minute, put her hands to her head, and said, "Well, I am in a fix."—Argonaut.

Latest High Class Patterns for the Home

Please order the patterns you desire at least two or three weeks before you wish to use them. Desiring to obtain the latest high-class patterns for its readers, THE FARMER has made arrangements to have them sent direct from the east, and under present mailing conditions it takes about that time for them to reach you.



3948-3727: Ladies' costume—Waist 3948 cut in 6 sizes: 36, 38, 40, 42, 44 and 46 inches bust measure. Skirt 3727 cut in 6 sizes: 24, 26, 28, 30, 32 and 34 inches waist measure. To make the dress as illustrated requires 4 1-8 yards of figured material and 3 7-8 yards of plain material for a 38-inch size. The width of the skirt at the foot is about 2 1-4 yards. Two separate patterns 10 cents for each pattern.

3829-3985: Ladies' costume—Waist 3829 cut in 6 sizes: 34, 36, 38, 40 2 and 44 inches bust measure. It requires 2 1-2 yards of 36-inch material. The skirt 3985 cut in 7 sizes: 25, 27, 29, 31, 33, 35 and 37 inches waist measure. The skirt will require 3 3-8 yards of 36-inch material. The width at the foot is about 2 yards. Two separate patterns 10 cents for each pattern.

3653: Child's dress—Cut in 4 sizes: 2, 4, 6 and 8 years. A 4-year size requires 2 3-4 yards of 27-inch material. Price 10 cents.

4002: Girls' dress—Cut in 4 sizes: 4, 6, 8 and 10 years. A 6-year size requires 3 1-4 yards of 36-inch material. Price 10 cents.

3776: Ladies' coat dress—Cut in 7 sizes: 36, 38, 40, 42, 44, 46 and 48 inches bust measure. A 38-inch size requires 6 1-4 yards of 40-inch material. Price 10 cents.

3999: Boys' suit—Cut in 4 sizes: 4, 6, 8 and 10 years. A 10-year size requires 3 yards of 36-inch material. Price 10 cents.

3562: Junior's dress—Cut in 3 sizes: 12, 14 and 16 years. A 14-year size will require 3 1-2 yards of 44-inch material. Price 10 cents.

3566: Child's dress—Cut in 4 sizes: 1, 2, 4 and 5 years. A 2-year size will require 2 1-4 yards of 36-inch material. Price 10 cents.

3528: Ladies' house or work dress—Cut in 6 sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. A 38-inch size will require 7 yards of 24-inch material. The width of the skirt at its lower edge is 2 1-8 yards. Price 10 cents.

2872: Men's shirt—Cut in 8 sizes: 15, 15 1-2, 16, 16 1-2, 17, 17 1-2, 18 and 18 1-2 inches neck measure. Size 16 requires 3 5-8 yards of 36-inch material. Price 10 cents.

4003: Ladies' "apron frock"—Cut in 4 sizes: Small, 34-36; medium, 38-40; large, 42-44; extra large, 46-48 inches bust measure. A medium size requires 4 1-4 yards of 36-inch material. The width at the foot is about 2 1-8 yards. Price 10 cents.

3234: A new play apron—Cut in 5 sizes: 1, 2, 3, 4 and 5 years. A 4-year size will require 1 1-2 yards of 36-inch material. Price 10 cents.

Catalogue Notice.

Send 12 cents in silver or stamps for our up-to-date spring and summer 1922 catalogue, showing color plates and containing 500 designs of ladies', misses' and children's patterns, a concise and comprehensive article on dressmaking; also some points for the needle (illustrating 30 of the various simple stitches), all valuable hints to the home dressmaker.

Please fill in this order and mail with remittance to:
PATTERN DEPT., PACIFIC NORTHWEST FARM TRIO, Spokane, Wash.

Enclosed find..... cents, for which send me the following:

Pattern No..... Size ..... Pattern No. ..... Size.....

Pattern No..... Size ..... Pattern No. ..... Size.....

Name .....

Postoffice ..... State.....

R. F. D..... Box No..... St. No.....

Be sure to give the pattern number and the correct size.

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For Every Engine Everywhere

Cost You Less—



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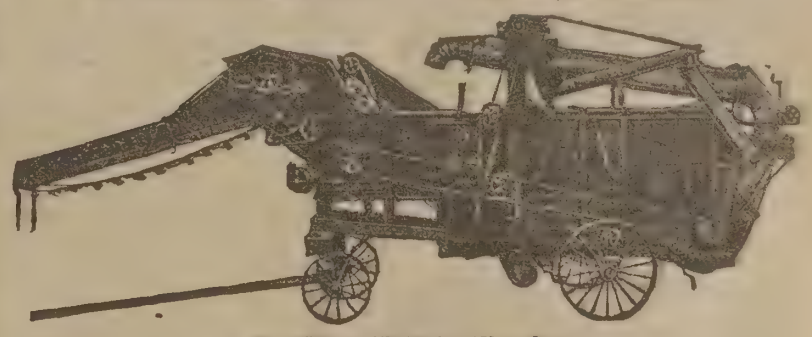
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Please send me, without obligation on my part, information relative to a RUSSELL THRESHER of proper size for my .....Tractor, which is .....horse-power in size.

.....Name.

.....R. F. D. Address.



The following is a note from Graham Spencer, who lives near the Columbia river in central Washington: "I shall be 11 years old August 28, 1922. I have 18 pet rabbits. They are Golden Fawns."

Pauline Manson says: "I am 9 years old. My birthday is March 6. My pets are a cow and a cat. Our school closed April 28. I have four brothers and four sisters." She is a southwest Washington girl.

Lady, Prince and Dixie are three horses and they belong to Evelyn Shockley's father, who lives in western Yakima county, Washington. Evelyn will be 9 years old June 23, 1922. Ada and Ethel are her sisters.

Frances Dirk was visiting with her cousins, Carol, Graham and Myra Spencer, in Chelan county, Washington, when we heard from her. She was going to see her grandma soon. Frances is 10 years old. Her birthday is November 30.

Every evening Norine Rinehart rides her pony, Jewel, to the pasture after the cows. Norine is a Lincoln county (Wash.) cousin. Before she came to Washington she lived in Kansas. She is 11 years old. Next year she will be in the seventh grade at school. Her birthday is September 11.

"I shall be 8 years old July 18, 1922," writes La Vonne Elm. This little cousin has blue eyes and light hair. She says school closed May 19. She used to walk a mile and a half to school. Her home is in Pierce county, Washington.

LETTERS WELCOMED BY AUNT NELLIE.

Among recent letters received by Aunt Nellie are those from cousins whose names follow. A few of these will be published each week in the regular edition of THE FARMER and others will appear from time to time in The Junior Farmer.

Lauretta Schuman, Esther Simila, Beth Daniels, Leatha Runner, Hattie Nichols, Nadine L. Hutchens, Carol Margaret Smith, Mary Jane Liscum, Eula Turner, Shirley Brooks, Marie Wichert, Signa Nieme, Marie Thornton, Viola Spangenberg, Leona Ball, Esther St. Lawrence, Leetta Ball, Emrose Corbin, Caroline Wesch, Sylvia L. Wilson, Doris Vivian Aldrich, Laura Hill, Amy Beam, Helen Smith, Gladys Anderson, Sylvia Rogers.

BEDTIME STORIES

By THORNTON W. BURGESS.

WHITEFOOT SEEKS ADVICE.

Whitefoot the Wood Mouse was tired and frightened and homeless. Early that morning he had been frightened from his home in a hollow log by Shadow the Weasel. He had started out in the world to build a new home, and he had walked and walked and walked, but nowhere had he found a place that looked really safe. Whitefoot had not forgotten the advice of Striped Chipmunk, to build his house where no one would think of looking for it, but how could he find such a place?

Pretty soon Whitefoot met Johnny



They found Grandfather Frog sitting on his big green lilypad just as usual.

Chuck in surprise. "Aren't you lost, Whitefoot?"

Whitefoot shook his head. "No," said he. "I'm not lost, because I haven't any place to be lost from."

"What do you mean by that?" asked Johnny Chuck.

"I mean that my old home is no longer my home, for Shadow the Weasel has found it, and I do not dare to go back there. So now I am looking for a place to build a new home. Oh, Johnny Chuck, do you know of any place where no one would think of looking for a home of mine?"

Johnny scratched his head and thought very hard, very hard, indeed, for Johnny Chuck is a very obliging little fellow. "No," he said, slowly, "I don't believe I do. I tell you what, let's go over and see Grandfather Frog. He is so old and wise that he is sure to know.

Whitefoot agreed, so off they started for the Smiling Pool. Whitefoot had never been there before and he kept close to Johnny Chuck's coattails all the way there. They found Grandfather Frog sitting on his big green lilypad just as usual. He heard them coming through the bulrushes.

"Hello, Johnny Chuck! What brings you down here today?" asked Grandfather Frog.

Johnny Chuck explained Whitefoot's difficulty. Grandfather Frog listened very attentively.

"Now what would you do?" concluded Johnny Chuck.

"Chugarum! How should I know?" replied Grandfather Frog, in his deepest and gruffest voice. But all the time there was a twinkle in his big goggly eyes as he watched Whitefoot's face fall.

Just then a foolish green fly came within reach of Grandfather Frog. His big mouth opened wide, the fly disappeared and Grandfather Frog patted his white and yellow waistcoat as if something inside felt very nice, indeed.

"It seems to me that if I was in the habit of living in hollow trees or logs and wanted to make a new home where no one would think to look for it I'd hunt up some nice old house that is supposed to be deserted and I'd move in and not let any one know that I was living there," said Grandfather Frog, and as he spoke his eyes were fastened on one of Mrs. Redwing's old nests in the rushes.

Whitefoot saw the nest and a great idea came to him. "Thank you, thank you, Grandfather Frog!" he cried. "I'm going to do just that thing."

(Copyright by Thornton W. Burgess.)

Birthday Greetings

THURSDAY, June 15—Wilber Fagan, 7 years old; Dorothy Graham, 9; Bernice Reynolds, 9.

FRIDAY, June 16—Helen Sandberg, 11 years old; Sylvia Wilson, 10; Helen Moilanen, 10.

SATURDAY, June 17—Laverne Axlund, 10 years old; Frank Ennis, 10; June Johnson, 9; Bill Kemp, 9; Merna Van Leuven, 10.

SUNDAY, June 18—Robert Andrew, 8 years old; Carol Simerman, 11; Martha Stockton, 11; Anna Mae Tarter, 9; Andell Wilson, 10; Fern Elaine Hollingsworth, 4.

MONDAY, June 19—Bernice Anderson, 11 years old.

TUESDAY, June 20—Edores Bowles, 10 years old; Edward Copp, 11; Lina Kamm, 11; Fred Komar, 11; Marian Whitman, 8.

WEDNESDAY, June 21—Madeline Graham, 10 years old; Frank Simons, 11; Fern Parvin, 8.

Scientists, as Well as Practical Farmers, Contribute to Your State Farm Weekly



In addition to printing hundreds of articles from practical farmers, fruitgrowers, market gardeners, stock breeders and dairymen, The Washington Farmer gives space to the scientist and the agricultural expert who carry on careful research work with regard to seeds, plant growth, soils, fertilizers, the care and breeding of poultry and farm animals, the eradication of pests, and many other matters which have a close bearing on agricultural production and prosperity of this state. He has a vast store of information garnered together from many sources which can help solve the farm problems peculiar to this section. What the experimenters at the agricultural schools are finding out, what the scientists who specialize on agricultural problems discover are given to our readers in complete, reliable form. This feature helps round out the paper and gives it greater value to those who make a business of farming.

Your state farm weekly gives big value at low cost on account of its cooperative subscription plan.

We say to our friends: "Send your subscription orders direct. Get your neighbor to do the same. We will give you and your neighbor the benefit of every penny which would ordinarily go to the agent handling the subscription."

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50 Cents for 3 years.
25 Cents for 1 year.
In Canada add 1 cent a copy for extra postage.

June 15, 1922.

THE WASHINGTON FARMER,
Review Building, Spokane, Wash.

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I enclose herewith $.....for a.....year subscription to

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If your subscription is already paid in advance, it will be extended from the date to which it is paid.

Guernsey Sale

(Continued from page two.)

Sunbeam of Chicona (substitute), H. R. Edmunds, Tillamook 500
Lustre of Chicona, born March 2, 1920; W. J. Knutzen 420
Consigned by A. I. and J. Hughes, Oregon City, Ore.:
Red Wing Starlight's Walla, born February 2, 1918; Fred Romtvedt, Toledo 500
Red Wing Starlight Missy, born January 20, 1922; H. M. McGowan 205
Consigned by H. F. Boeckman, Sherwood, Ore.:
Imp. Bessie of the Isle, born July 29, 1912; W. J. Knutzen 275
Jewel of Cedar Brook, born October 12, 1917; D. Cruickshank, Buell 275
Maple Brook's Queen, born April 28, 1920; W. De Jong 270
Maple Brook's Daisy, born October 9, 1920; A. L. Gile, Chinook, Wash..... 245
Consigned by W. A. Carlson, Estacada, Ore.:
Glade's Fern of Hoodview farm, born July 25, 1921; D. Cruickshank..... 200
Consigned by W. L. Hawley, McCoy, Ore:
Landom's Beauty Golden, born May 18, 1921; A. L. Gile 300
Landom's Golden Promise, born February 27, 1921; R. Stadeli, Silverton 170
Consigned by Clyde Ringo, Mulino, Ore.:
Clearbrook Golden Dean, born March 2, 1921; John M. Rennie, Eugene... 255
Consigned by T. C. Gilbert & Sons, Shaw, Ore.:
Waldo Hills Pansy, born June 10, 1921; H. M. McGowan 290
Waldo Hills Minerva, born June 24, 1921; H. M. McGowan 265
Consigned by A. L. Beattie, Oregon City, Ore.:
Imp. Brilliant of the Gree's Henrietta, born December 1, 1920; John M. Rennie 225
Imp. Mayflower's Vazon, born August 27, 1920; Fred Romtvedt 310
Consigned by Carl J. Staats, Oregon City, Ore.:
Vazon's Starlight Beauty, born July 28, 1921; Fred Romtvedt 225
Laddie's Starlight Lily, born April 10, 1921; Clyde Ringo, Mulino 200
Consigned by W. A. Goodin, Cornelius, Ore.:
Kate of Oregon, born August 8, 1918; D. Cruickshank 400
Oregon Queen, born June 27, 1916; H. R. Edmunds 525
Consigned by J. T. Whalley, Portland, Ore.:
Calypso's Lincolnette, born February 12, 1921; W. De Jong 240
Calypso's Catherine, born September 29, 1921; M. O. Dayton, Goldendale, Wash. 230
Consigned by Octav Voget, Hubbard, Ore.:
Yeoman's Royal Blossom, born February 1, 1920; H. R. and Carl Taylor, Chehalis, Wash. 365
Consigned by Roy C. Jones, Corvallis, Ore.:
Sweet Briar's Queen of the May, born April 11, 1920; H. M. McGowan.... 300
Tillamook Wild Rose, born April 29, 1920; D. Admiral, Goldendale, Wash. 300

Males.

Consigned by Valley Gem farms:
Unnamed, born January 11, 1922; D. Cruickshank 105
Consigned by A. L. Gile:
Chicona Solon; H. M. McGowan 180
Chicona Victor; C. L. Hawley, McCoy 615
Consigned by A. I. and J. Hughes:
Red Wing Starlight's Bonita, born September 10, 1920; K. David, Portland 305
Consigned by C. L. Hawley:
Chicona Landom, born November 5, 1916; E. W. Ross, Kelso, Wash. 150
Landom's Top Golden, born October 27, 1920; R. J. McIsaac, Hood River 100
Consigned by W. A. Goodin:
Starlight's Governor of Rose City, born August 22, 1918; H. R. Edmunds 105
Consigned by Roy C. Jones:
Oregon Ultra King, born June 14, 1921; Olympic farm, Seattle, Wash. 265

Just Folks

Much trouble is caused by confusing purposes and methods. Methods are not purposes, although long-established methods may indicate the purposes behind them.

The broad purpose of health conservation may include a variety of methods. The avoidance of starchy foods may be taken to be the supreme health purpose, when, in fact, it is only one of the means of conserving health.

The purpose of religion is to implant in the soul a guiding principle in conduct, yet the methods of religion may cause serious faults when the purpose of religion is forgotten and methods become supreme.

Taking the symbol for the spirit characterized the hypocrite of the New Testament.

In other words, the same purpose is manifested through various methods, according to age, climate and nationality.

It is best, as a rule, to use current and understandable methods for the expression of a designated purpose, until those methods become so dominant that the purpose is forgotten. Then comes trouble, then comes the era of reform, then comes the establishment of new methods.

When shall the methods and forms be changed? Those are serious questions and are not to be solved in a hurry.

It is better to try to revive the spirit than merely to change the form. The true spirit will shine through almost any form or method. E&S



Prevent Blackleg By using

Blackleg Aggressin

NATURAL GERM-FREE VACCINE

OR

Blackleg Filtrate

CULTURAL GERM-FREE VACCINE

Scientifically Prepared and Tested

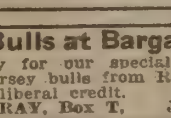
Consult your veterinarian or druggist.
Write for booklet on blackleg prevention.

Animal Industry Department
OF
PARKE, DAVIS & CO.,
DETROIT, MICH.

YOUR MARKET
Ship your cattle, hogs, sheep, fat or feeders, to the
SPOKANE UNION STOCK YARDS.
Spokane, Wash.
Market reports mailed on request.

Breeders' Dept.

LET THE LITTLE FELLOWS PAY OFF YOUR MORTGAGE.
Silver Fox Ranches Make Big Profits.
Finest Quality Imported Prince Edward Island Stock.



All Pedigreed and Registered. Fully Guaranteed.
Full Particulars free. Write today.
United States Silver Fox Farms Corp.
200 Hutton Bldg. Spokane, Wash.

Registered Holstein Cows

due to freshen this month and next. Bred to King Pontiac Segis of Brookside, one of the best bred sons of the greatest sire the world has ever known, King of the Pontiacs.

These cows are strong in the blood of the leading families of the breed. Good individuals, heavy producers. Some with good official records. This is your opportunity to secure the foundation for a choice registered herd, but you must act quick. They are priced to sell. They are fully guaranteed.

Garfield Stock Farm
Garfield, Wash.

Holstein Bulls at Farmer Prices

Sired by son of former world's champion and out of cows that make good at the pail.
S. D. CORNELL, Grandview, Wash.

220 HEREFORD BULLS, COWS, HEIFERS

all registered, high class animals, from the most famous blood of England and America, many of them from imported stock, at private sale at prices so low you can not afford to buy or keep grades. Cows, 3 to 5 years old; heifers and bulls, from 12 to 20 months old. Many cows have calves at side and are rebred. Many of the heifers bred to our gand herd sires, BEAU GALLATIN 15TH, and CARLOS 85TH. Satisfactory guarantee with each animal sold. Write to
L. L. YOUNG & SONS, Nampa, Idaho.

TWO YOUNG JERSEY BULLS

Sired by Lalla's Prince, a show bull with great winnings in middle west. Dams, Glenwood breeding. Priced to sell.
W. S. STEELE, Corvallis, Ore.

Lynden Jersey Farm

offers young bulls of the famous St. Mawes and Golden Glow's Chief breeding. Prices reasonable.
P. MEENDERINCK, Lynden, Wash.

ASHBURN FARM

Premier breeders of medal winning cows for 1920. Write for our illustrated folder and further information.
J. M. DICKSON & SON, Box T, Shedd, Ore.

Jersey Bulls at Bargain Prices

Send today for our special sale list of registered Jersey bulls from R. of M. dams. Easy terms, liberal credit.
WARREN GRAY, Box T, Jefferson, Ore.

Fourth Gold Medal Jersey Bull

now in use in my herd. No other herd ever had so many. Young stock for sale.
ED CARY, Carlton, Ore.

Read the "Want Ad" page this week for good offers of all kinds.

Type Production

WAIKIKI JERSEYS

Federal Accredited Herd

MALES AND FEMALES FOR SALE AT LOW PRICES

We have a number of high-class Jersey bulls fit for service and out of cows with large Register of Merit records. They are excellent individuals, some of them show ring winners.

We will also sell a few good young registered cows of good breeding—just the kind you want for foundation stock.

ALSO DUROC JERSEY HOGS

Write Us for Prices

Waikiki Farm, Spokane. Wm. Auld, Mgr.

Dispersal Sale

TENSED, IDAHO, SATURDAY, JUNE 24, 1922, AT 1 P. M.

Will sell at auction: 30 head registered Shorthorns, including Herd Bull Lurene's Silver, outstanding grandson of Villager, a bull of lots of scale and quality; 5 range bulls and 25 head of females.

Sale will be held at Tensed, Idaho, 10 miles south of Tekoa, Wash.

These cattle are all well bred and in just farm condition.

Terms of sale: Cash or bankable paper, due October 1, 8 per cent interest.

Write for catalog.

B. R. SVENSGAARD, OWNER, Tensed, Idaho.
HARRY C. CRANKE, AUCTIONEER. Moscow or Nez Perce, Idaho.
FRED C. POOLE, Tekoa, Wash., Clerk.

Ruby Dell Guernsey Farm

Our herd has been in the winning wherever shown.

Senior herd sire, Francis May King (A. R.) he by Langwater Hambro (A. R.)

Junior herd sire, Rex of Willow Brook, he by Langwater Sunderland (A. R.)

Our herd matrons are cows with A. R. records from such noted sires as Langwater Hambro, Langwater Emigrant and first 5 daughters of Francis May King, to freshen with average records of 480.14 butterfat, at average age of two years and ten months; most of them double letter class.

Some splendid bull calves for sale of above breeding.

H. E. ANGEL, Mabton, Wash.

Orchard Hill Farm Guernseys

"Home of high class Guernseys."
DR. PARK WEED WILLIS, Owner.
REDMOND, Wash.

Brown Swiss Stock Farm

Breeders of Brown Swiss cattle, the farmers' dairy cow. Young stock for sale.
THEO BRUGGER, Route 3, Gresham, Ore.

CHOICE DUROC SPRING BOARS sired by some of the greatest boars of breed; High Orion Sensation, Pathmaster. First Consul and Unique Sensation, world's junior champion, 1921. Prices reasonable, satisfaction guaranteed.
L. S. BERRY, Gaston, Oregon.

REGISTERED DUROC JERSEY HOGS of quality. Booking orders for spring pigs, sired by Sensation Great Orion, grandson of world's twice champion boar, Great Orion Sensation. Write for prices.
F. D. GANO, Sunnyside, Wash.

Send for Free Booklet

"Some Suggestions to Live Stock Advertisers," outlining the practices of successful men of long experience. Helps in determining how much to spend, the mediums to select, preparing advertisements, handling inquiries, the use of photographs, etc.
Write today.
THE PACIFIC NORTHWEST FARM TRIO
Dept. L. Spokane, Wash.

In writing advertisers, be sure to say you saw their advertisement in The Washington Farmer.

Indian City Berkshires

We offer for sale an October service boar, best of individuality, by great sire, dam a grand champion. Price $60. Address.
DR. W. J. KEYES, Spokane, Wash.
202 FERNWELL BLDG.
B. F. WATSON, Herdsman, Rockford, Wash.

River Banks Better Berkshires

Long, smooth, deep fall pigs. Either boars, gilts or trios.
RIVER BANKS FARMS, Grants Pass, Ore.

Pay for Berkshires in Pork

Improve your stock. You get the breeding hog now; pay when you get the pork. Write for plan.
F. M. CURTISS, Fruitland, Wash.

Big Type Polands

Weaned pig time is here. Buy now and save on express. No boars after July first.
BUCK & McDONALD, Yamhill, Ore.

BIG TYPE POLAND CHINAS.
Weaned pigs sired by state fair winner. Also young boars at express prepaid prices. My pigs make good from California to Alaska.
H. J. STILLINGS, Hermiston, Ore.

Big Type Polands

We have that herd boar you are looking for. We have pigs by Archdale Chess, Checker's Son, Peter the Great 2d, Designer's Model, and others. Our prices are reasonable. B. F. KAMMERZELL & SONS, Colfax, Wash., R. 5.

Maple Lane Stock Farm

Poland China spring pigs and bred sows shipped anywhere on approval.
HERBERT WILLARD, Dayton, Ore.

Maplethorpe Farm Polands

Choice weanling male pigs shipped anywhere on approval. Price reasonable.
W. P. EMERY, Macleay, Ore.

Farm Lands for Sale

Read our "Want Ad" Page for good offers this week.

Montesano Club Work

Projects Are Outlined for Girls as Well as Boys

It was not until after the meeting of the Montesano Agricultural club was well started that the writer entered the room in company with Robert Cowan, the county agent. The boys were having their weekly meeting when questions were being asked by each member to be answered by the club leader, Robert Polson, or by the boys themselves.

The secretary was at his desk and as he called the roll each member rose to his feet and stated his question. Before he began he addressed the president of the club, who occupied a chair in front of the gathering, who, in turn, acknowledged the speaker as "Mr. ————."

As each boy asked his question it was answered by one or more members or by the club leader. The performance was repeated again and again until the entire roll had been called.

The most striking feature was the fact that almost perfect order prevailed in the room. Occasionally a bit of merriment was noticed when some of the boys saw the funny side of some particular expression, but they soon quieted down and listened to the program. In one case a boy forgot to address the chair and he was immediately called by the secretary, who insisted that he be recognized by the president before speaking.

The questions that were asked showed that much work and study had been done. In some cases the club leader himself was forced to fall back on the county agent for advice. The last part of their meeting was given over to a demonstration of milk testing, put on by the county agent. Other demonstrations of this kind are given and each meeting is a drawing card, which no member can afford to miss if he is able to venture out of his home.

There are four branches of club work being taken up, namely, garden, pig, poultry and potato. Each branch of club work has a separate meeting each month, many of the boys taking up two or uore branches. While the work is carried on in the school building and many of the boys are high school students, the work in the classes have no connection with the school, but it is hoped that agricultural classes can be included in the work for next year.

Officers of the Montesano Agricultural club are: James Hutcheson, president; Floyd Gochnour, secretary; Earl Nelson, treasurer, and Crosby Valentine, vice president.

While the boys are meeting in one room the girls of the Montesano Home Economics club hold their meeting in an adjoining room. A similar program is carried out with the girls and they have outlined a heavy schedule for the summer months with the help of Miss Mabel Webber, county home demonstration agent. The girls' work includes sewing, cooking, canning and home management. Each member in the canning club is required to keep a budget which outlines the amount of fruit that is needed in the home for winter. The girls will endeavor to can as much of this fruit as possible in order to save work for their mothers.

A Mothers' day has been planned, which will give each mother a chance to get away from her work for at least one day during the summer, at which time the daughter will have complete charge of the house and preparation of meals for the men folk.

An exhibit will be prepared for the county fair. This will include some of the best articles that have been made by the sewing club, as well as some of the canned fruit and vegetables.

Each member has resolved to bring herself up to normal weight by fair time. An outing to Pacific beach has been planned, which will take place some time during the summer. Officers of the club are as follows: Mary Evers, president; Margarite Curle, vice pres.; Phillis Bryant, secretary, and Genevieve Curle, club leader.—R. E.

Slay Jack Rabbits by Thousands

A total of 683,800 jackrabbits killed is reported by the biological survey of the United States department of agriculture as a result of jackrabbit campaigns this spring in Utah, Oregon and Washington. The figures are based on very close counts by farmers and other interested persons and are considered conservative. Probably a great many more rabbits were killed than were actually reported. In the Goose Lake valley, Oregon, while the actual kills of rabbits were not large, the saving of future crops was very important. This is an irrigated district that is coming into heavy production, and the rabbits do a great deal of damage. More than 278,300 rabbits have been destroyed during the Oregon campaigns.

In checking up the central Washington district a total of 155,500 rabbits were reported in six counties as having been killed between November and February. This is the most successful campaign ever conducted in the state.

WANT MORE LIVE STOCK.

St. John, in Whitman county, is awakening to the need of more live stock on the farms and the business men are taking an interest in a movement to remedy the shortage of live stock. A pig club, with 15 boy members, has been organized and brood sows bought for each of the 15 members, who are taking a deep interest in the matter and will strive hard to win prizes that will be offered for the best results. A poultry club is now in process of formation and will be organized soon, and then the matter of increasing the number of dairy cows for the district will be taken up. St. John is preparing to adopt the Idaho farm bureau slogan, "The cow, the pig and the hen," and to secure more of each for the farms surrounding the prosperous town. St. John is the second largest wheat receiving point in that section of the Palouse country, the annual receipts direct from the farms there averaging from 500,000 to 600,000 bushels annually, but the need of more poultry, more hogs and more cows is keenly felt and united efforts will be put forward to secure more of each during the next year or two.

How To Crowd Two Days' Tillage Work Into One

MANY jobs are done on Fordson farms that would not be done if horses were depended upon for power. More thorough seedbed preparation is possible because there is more time available for this important work. Good farming practice demands that stubble be disced immediately after removing the grain from the fields, to return valuable humus to the soil, to make fall plowing easier and to conserve moisture.

The success of the next crop may depend upon this saving of moisture already in the soil. For this work with the Fordson, as well as for cutting up corn stalks, cotton stalks, and for many other jobs, no other implement does as well as the double disc harrow. There is one disc harrow especially built in every feature to work with the Fordson.

Roderick Lean
Automatic Engine Disc Harrow

Made dy Roberick Lean Mfg. Co., Mansfield, Ohio

This tool is operated entirely from the tractor seat, and the angle of the discs changed by the power of the tractor, providing quick and easy adjustment without stopping and with little effort on the part of the tractor operator. The entire harrow may be fully and instantly straightened for wheeling through a wet spot, or over an obstruction, while the tractor is in motion.

Working your ground with the Roderick Lean means working every foot of soil. Double reach bars connecting the rear harrow to the front, make the rear disc blades always cut midway between the cuts of the front blades. They cannot track. The rear section cannot slide down hill on sloping ground.



Because the rear section is flexibly connected to the front, this harrow turns short and works close in field corners. No time is lost at headlands —straightening of gangs for turning is unnecessary. The harrow works at uniform depth its entire width, leaving headlands level and well pulverized.

These and many other features have placed the Roderick Lean Automatic Engine Disc first in the estimation of Fordson owners.



The World Famous Oliver No. 7
On thousands of farms, the world famous Oliver No. 7 has been the plowing partner of the Fordson from the beginning.



The Oliver Two-Way Sulky
Fordson power is available in plowing to the irrigation farmer with the Oliver Two-Way Sulky. Power lift, easy running.



Fordson Disc Plowing
Oliver Fordson special disc plows have set a new standard. They penetrate the toughest soils, yet are light running.



Good Work With Roller Pulverizer
Final Fitting of the seed bed with Fordson power and the roller pulverizer has meant more bushels for many farmers.



Roderick Lean "Cutmore" Mower
Attaches without changes to the Fordson. Power taken direct from driveworm. Makes a one-man outfit with Fordson.



The Amsco Tractor Drill
Tractor speed and accuracy utilized by the Fordson owner with the Amsco special drill. Force feed makes positive planting.



The Amsco Two-Row Cultivator
Cultivating corn is easy for the Fordson farmer with the Amsco Cultivator—special for the Fordson. Made for hard work.



Money-Maker Ensilage Cutter
Fordson silo filling with the Money-Maker done quickly and cheaply. Strength and scientific design give perfect work.



Wood Bros. Individual Thresher
The Wood Individual Humming Bird Thresher and Fordson make short work of threshing. All grain is saved.



The Money-Maker Hay Press
Baling hay with the Fordson and Money Maker baler is an important operation to the farmer with large hay acreage.

Ford Dealers Everywhere Sell Standard Fordson Equipment

JUNE 22, 1922. Washington's Great Farm Magazine EVERY THURSDAY

THE WASHINGTON FARMER

ESTABLISHED 1894

SPOKANE. SEATTLE.



ALBERT S. GOSS

Master of Washington State Grange

Railroads Can Help Build Up Livestock Industry—Page 3

Why We Can Now Have Big Yield Farming

Since oxen tramped out wheat on the threshing floor, no more important invention has been made than the modern thresher that saves all the grain

FARMERS everywhere are rapidly recognizing the new era of farming—the era of Fordson Farming, the era of farming-profit without the toil and drudgery unavoidable when old-fashioned methods were employed. For the farmer of today has come to realize the tremendous advantages now offered him through the use of mechanical power—bigger crops, larger profits, with time for pleasure doubled.

Highly important in the era of Fordson Farming is the Wood Brothers Individual Thresher. For with it, a big yield is assured because *all the grain is saved.*

This big yield feature illustrates what is probably the chief advantage in farming with the powerful, lightweight, inexpensive Fordson and the Standard Equipment that operates so perfectly with it.

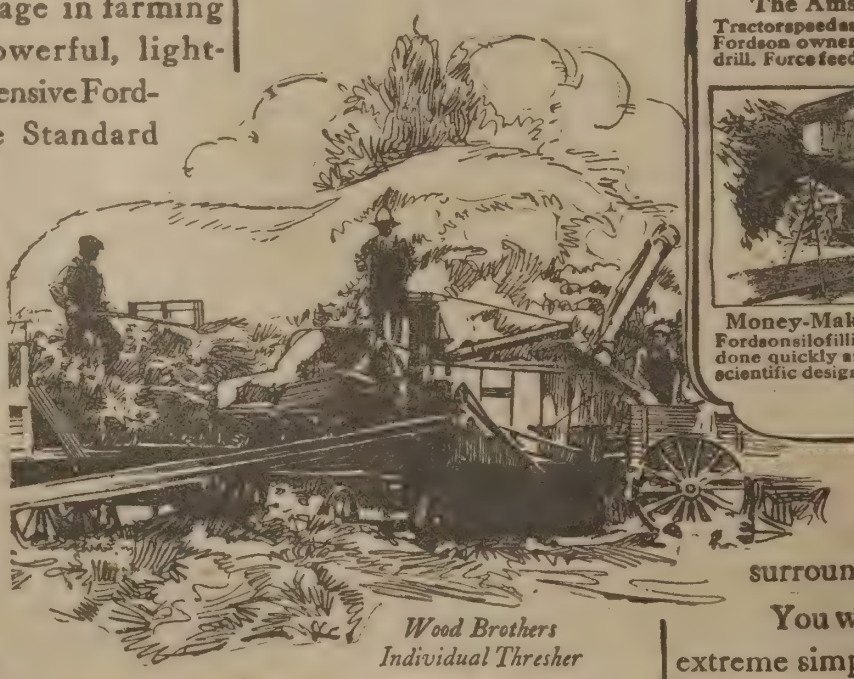
Not only does this combination put the soil into the very best of condition, giving the seed an opportunity to produce its utmost, but with Standard Individual threshing equipment, all of the grain is saved thus making the biggest yield.

Saving of grain is dependent upon two things: sufficient power, and a separator that will thresh clean. When grain is once blown into the straw stack, there is no means of recovering it.

Patterned in simplicity after the Fordson itself, and built in large quantities, the Wood Brothers Individual Thresher produces results fully up to the Fordson standard and is sold at a price that any farmer can afford.

Individual Threshing is the coming method because it permits threshing at the time the grain is in its best condition. Thus it all is saved.

At a price only about twice that of the Fordson itself, this separator often earns its own cost the first season by using it to thresh for the surrounding neighbors.



Wood Brothers Individual Thresher

You will understand its extreme simplicity when you know that there are only five belts and every one of these operates in a straight line. Farmers with no experience, use this Individual without any difficulty at all.

It is guaranteed that even wet straw will not wrap 'round the cylinder, that every Individual will thresh clean.



The World Famous Oliver No. 7
On thousands of farms, the world famous Oliver No. 7 has been the plowing partner of the Fordson from the beginning.



Oliver Single Bottom Sulky
For deep mouldboard plowing in trashy conditions with the Fordson. Similar in construction to world famous No. 7 gang.



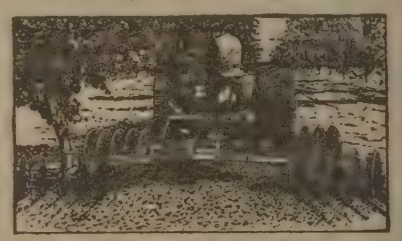
Fordson Disc Plowing
Oliver Fordson special disc plows have set a new standard. They penetrate the toughest soils, yet are light running.



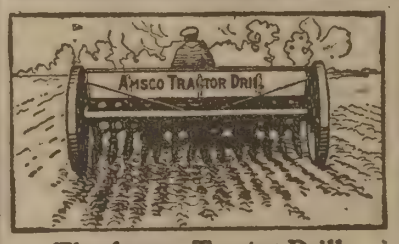
Roderick Lean Automatic Harrow
Fitting the Seed Bed the Fordson way with the Roderick Lean Automatic Tractor Disc—a special Fordson Harrow.



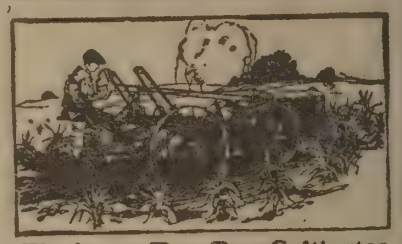
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Final Fitting of the seed bed with Fordson power and the roller pulverizer has meant more bushels for many farmers.



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Orchard discing with Fordson speed with gangs set in or extended with the Roderick Lean Automatic Orchard Disc.



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Tractor speed and accuracy utilized by the Fordson owner with the Amsco special drill. Force feed makes positive planting.



The Amsco Two-Row Cultivator
Cultivating corn is easy for the Fordson farmer with the Amsco Cultivator—special for the Fordson. Made for hard work.



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Fordson silo filling with the Money-Maker done quickly and cheaply. Strength and scientific design give perfect work.



The Money-Maker Hay Press
Baling hay with the Fordson and Money Maker baler is an important operation to the farmer with large hay acreage.

Ford Dealers Everywhere Sell Standard Fordson Equipment

THE WASHINGTON FARMER

SUCCESSOR TO

Vol. 46. No. 25 THE RANCH PACIFIC DAIRYMAN HORN AND HOOF June 22, 1922

For Good Farming, Attractive Country Homes and Happy Country People

Railroads Can Help Build Up Live Stock Industry

Build Up the Country in General as Well, by a Broad Policy, Applied Without Favoritism, Making Special Rates on Purebred Breeding Stock

It was one of Poor Richard's maxims that "God helps them that help themselves." George Herbert, English writer, living about 100 years before Benjamin Franklin, also said: "Help thyself and God will help thee."

At any rate, the recently organized Sherwood Live Stock association commands the encouragement and support of those who have the agricultural development of the Pacific northwest at heart. There is a note of inspiration in the way these Ferry county farmers have taken hold of the movement to improve their live stock. Read the following letter from the secretary of this association and you will join with The Washington Farmer in not only wishing them success but in lending a helping hand so far as it may be in your power to do so:

URGENT APPEAL FROM FARMERS' ASSOCIATION

To the Editor of The Washington Farmer: Five other farmers and I, living in the Sherwood valley, west of Boyds, have organized the Sherwood Live Stock association, with the intention of encouraging the breeding of pure blood live stock here in our community. We are all dairymen, clearing our farms on cut-over land, and want to eliminate the scrub sire and dairy cow. We were unanimous in selecting the Brown Swiss cattle breed, and we are intending to buy a registered sire now, and several heifer calves or yearlings as soon as we can dispose of part of our herds of grades.

Now we would like to know if the railroad companies will meet us half way in bringing this pure blood stock into the country, which will be indirectly a benefit to them, or shall we have to pay full freight rates, the same as merchandise. I have been told that Canadian railroads ship pure blood sires free of charge and such a concession, it seems to me, would greatly promote the breeding of pure blood live stock, especially in such a case as ours, where we are selling our cows down to the lowest number that will support out families in order to start with pure bloods. The transportation in our case will amount to something, as there are no Brown Swiss herds closer than 300 miles and no large herds closer than about 1000 miles, so that careful selection may mean a long-distance shipment.

Boyds, Wash. A. J. COULTER.
Secretary.

A copy of the above letter was sent to a number of prominent men who are known to be deeply interested in the growth and prosperity of the Pacific northwest, together with the following note:

"A real problem has been put up to The Washington Farmer. We believe it to be a problem of far-reaching importance. Its importance is not lessened by the fact that it is not a new problem.

"We are enclosing the letter of A. J. Coulter, which we propose soon to publish. Can you help us to answer our correspondent? He deserves a hearing by the best men in the state. It would seem a fine thing to do to help this little association which evidently is doing its best to help itself."

It will be interesting to note that this matter has at least been called to the personal attention of Louis W. Hill, chairman of the board of the Great Northern Railway company, who writes:

To the Editor of The Washington Farmer: Your letter of May 30, together with printed copy of letter from A. J. Coulter of Boyds, Washington, regarding methods for encouraging the breeding of pure-bred live stock in the vicinity of Boyds, Wash.

The question of rates covering movement of such stock is a matter which comes under the jurisdiction of Mr. W. P. Kenney, vice president and director of traffic, and I am therefore referring your letter and the enclosure which accompanied it to him for attention. LOUIS W. HILL.
Great Northern Railway company,
St. Paul, Minn.

RAILROADS ASSERT LEGAL RESTRICTIONS

W. P. Kenney, vice president and director of traffic of the Great Northern Railway company, to whom Louis W. Hill referred the Coulter letter, writes:

To the Editor of The Washington Farmer: Mr. A. J. Coulter, in his letter, comments on the fact that the Canadian lines are handling such stock for breeding purposes free of charges and suggests that it would be a very desirable thing for the American railroads to take similar action.

I am calling your attention to the fact that the legal restrictions as to such action are very different in the United States to what they are in Canada. We are prevented by law from making free rates on shipments of this character. Any rate below the regular rate which we felt should be made would have to be taken care of by published tariff—thereby making it a legal rate for all parties desiring to make use of it.

The Great Northern is, of course, very much interested in the proper building up of the dairy herds along its line, but we have not felt under present conditions that we would be justified in attempting to handle these shipments at less than the present tariff rates.

I am calling your attention to the fact that shipments of purebred live stock, on account of their high value, impose considerable liability on the carrier, and at the same time require special attention while in transit, as they are not—as a rule—accompanied by attendants. In addition to this it has been found impracticable to load other freight in the same car with animals. When all these conditions are taken into consideration it has seemed to us that the present rates are reasonable and just.

St. Paul, Minn. W. P. KENNEY.

EMERGENCY CASES HANDLED BY STATE

F. W. Graham, the writer of the following letter, is assistant general agricultural agent of the Great Northern Railway company:

To the Editor of The Washington Farmer: Referring to your letter of the 30th ult., with enclosure regarding a free or reduced rate on purebred live stock which Mr. A. J. Coulter of Boyds, Wash., wrote you about.

We did make a reduced rate for many years for the purpose of improving the live stock. This was back in the lifetime of Mr. J. J. Hill, who imported a large number of blooded sires and distributed them in Great Northern territory. We were obliged, however, to abandon this concession when the stringent laws governing the railroads became apparent. We could not defend a lower rate on high grade cattle than is applied on ordinary cattle. We are not permitted to publish a reduced rate under the present regulations excepting to departments of a city, state, or federal government, and in such cases the freight charges must be paid by the said governments. Where individual shipments are involved we can not discriminate. Neither can we publish rates of a class kind or contingent on some particular use.

Occasionally where emergencies have arisen in the past we have published half rates on hay, on account of droughts, but these cases were handled by the state.

We used to have half rates on seed and seed grain, but could not carry them any longer, as we can not make any discrimination as to the use to which a commodity or article is put. In other words, coal is coal, lumber is lumber, grain is grain, apples are apples, and by the same token live stock is live stock.

I appreciate the desire of Mr. Coulter and his associates to improve the quality of their live stock, and there are many other communities throughout the northwest who are working toward the same objective. Conditions, however, have so changed, and as much as we might like to, it would not be possible for us to make any rate reductions in this or any similar cases. F. W. GRAHAM.
Seattle, Wash.

It appears that an appeal had already been made to Ira Inman, secretary and treasurer of the Brown Swiss Cattle Breeders' association, by Mr. Coulter himself:

To the Editor of The Washington Farmer: We have your letter of the 30th in regard to letter written to your paper by Mr. A. J. Coulter of Boyds, Wash. Mr. Coulter has written to us and we assured him that we would be very glad to do anything that we could to assist the new organization of breeders. The point of shipping which he speaks of is surely a very important one, as there are few herds of Brown Swiss in his locality, and we would be very glad to see the organization get a good deal from the railroads.

We will keep these breeders in mind and perhaps may be able to locate some cattle nearer them within a month or so. IRA INMAN.
Beloit, Wis.

JIM McCROSKEY SAYS IT'S ONLY AN EXCUSE

James H. McCroskey, the well-known Lincoln county stockman and who, with his sons, are the proprietors of Meadow Lake stock farm, writes:

To the Editor of The Washington Farmer: Yours regarding the Coulter letter received. The high freight and express rates charged by the transportation companies have always been one of our chief obstacles in distributing purebred cattle. We have tried in vain to show the companies it would in the end be a great benefit not only to the breeder, but themselves, to distribute purebred sires in their respective neighborhoods at half price. Now they claim the commission will not allow them to discriminate in favor of live stock, which I think is only an excuse. I believe the fact should be brought before the commission and insist on a reduction.

The financial stringency has about killed the purebred business and something must be done to relieve the situation. In reviewing the situation I find very nearly as many scrub sires used now as ever in the history of the state.

You know I have spent the most of my life working and talking for better stock, but I'll have to admit now that I've almost bucked a stone wall. A few obstacles I'll enumerate to you—high transportation, high rates of interest charged stockmen, 2 to 3 per cent more than any other business, as well as short loans; freaky health laws to be enforced by ignorant vets.

Now the finances should have been relieved by the war finance loans, but how can stockmen expect relief from that source when administered by the same bankers that have charged us high rates and wish still to charge high rates? Take it onto yourself to ask a committee of, say, three or five men to go personally before the rail-

(Continued on page twelve.)

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Regional Farm Headquarters

The seriousness of a fruit pest was being discussed by the agricultural bureau of the Spokane Chamber of Commerce.

An appeal was made for greater research work in determining the best methods of controlling the pest. After the discussion had proceeded apace, one man arose, saying that recently he was talking with a scientist on a 1400-acre orchard in western Montana where the control of the same pest had been under investigation; that he spent an evening with the scientist, who gave him details and figures showing the wide range of experiments made and those that had proved most successful in controlling the pest.

Leaving the meeting, a member of the committee said, "That again brings up the importance of a clearing house of farm information for the Pacific northwestern states."

It is becoming more and more evident that regional investigation and a regional clearing house of farm information must come sooner or later.

Value of Good Paint

The Dutch have an old proverb which says: "Good paint costs nothing, for it saves more than it costs." Painting one's buildings is an investment. It insures against depreciation and rotting.

Paints have been high during the last few years, but are now reported down to about a normal basis. There are many brands of paint on the market and to the consumer all paints look about alike. It is only when the paint has been applied to a building for four or five years that the quality is demonstrated. See that you get the brands of paint that have a standardized value.

Paints are not new. From the days of the pyramids to the present is a long period, yet in those far-off days, as at present, paints were used for beautifying and preserving the objects which they covered.

Federal Food Inspection Service

The latest figures give evidence of the growing popularity of the food products inspection service of the U. S. department of agriculture.

The inspections now cover 75 different fruits and vegetables. During the 10 months ended May 30, 1920, 20,746 inspections of fruits and vegetable shipments were made; in 1921 there were 19,316 inspections, and in 1922 there were 24,986 inspections. Potatoes and apples are the two principal commodities inspected; 6524 shipments of potatoes being inspected during the last 10 months, and 4761 shipments of apples. Butter inspections at five markets last year totaled 3649, and the preceding year 1881.

In the past the service has been restricted to products in interstate commerce and markets specially designated by the secretary of agriculture. Beginning July 1, the interstate restriction will be removed, provision for inspection being made "at points which may be conveniently reached from designated markets." Also, in accordance with provisions in recent appropration bills, efforts are now being made to cooperate in inspection at shipping points with state officials in states that have well organized shipping point inspection organizations.

Big-Mindedness and Big-Heartedness Are Needed

According to a survey recently made by Harry Thompson, agricultural engineer, the total area of logged-off land in the state of Washington approximates 4,603,450 acres, of which 3,974,250 are in western Washington.

This is the report made public by D. A. Scott, state director of conservation and development. Mr. Scott believes that the logged-off land investigations and the future should be along lines to determine, first, the cost and methods of clearing these lands, and, second, the income from the farms already developed on the soil types of the uplands.

Logged-off land is found in every county in western Washington and in six counties of eastern Washington.

The report continues, that dairying is the type of farming most frequently found on logged-off lands, although poultry and fruit farms are numerous. The principal crops are hay, oats and potatoes. Small fruits, strawberries, blackberries and other bush fruits are grown on the fruit farms. Farmers on the uplands estimate that prewar average cost of clearing land to be $150 an acre.

"So far, poultry farming has proved the most profitable on the logged-off hill lands," says the report.

In the six counties of eastern Washington—Klickitat, Pend Oreille, Skamania, Spokane, Stevens and Kittitas—there are 629,200 acres of cutover lands, of which 188,000 acres are suitable for agriculture and 425,200 for grazing.

Three great farm problems are being attacked by the people of this state—irrigation, drainage and cutover lands—and the problem of settling them is surely as big as that of preparing these lands for settlement.

Big-heartedness as well as big-mindedness is needed in the successful solution of these great problems.

LOOKING INTO OTHER FARM FIELDS

Salisbury, Md., will ship over 1000 cars of cantaloupes this season, starting about August 10.

* * *

Onley, Va., has shipped 375 solid cars of strawberries this season, which netted growers over $500,000.

* * *

"There is only one important canned milk factory in France, and it is not likely that that country will become an important producer in the near future. The French prefer to devote surplus fresh milk to cheese and butter making.

* * *

With an estimated planting of 20,000 acres, it now appears that the shipments of white potatoes from South Carolina will fill 4000 to 4500 cars. Last year only 9000 acres were planted, and about 2500 carloads were shipped from that section.

* * *

Reports were received from France the early part of the week and have since been verified that the crop of French prunes this year will be almost a total failure. Last year the production was over 15,000,000 pounds and this year, on account of the recent damage, they do not expect to have over 2,500,000 pounds.

* * *

Another record breaking year for the deciduous fruit industry of California, with shipments totaling over 50,000 cars, is expected. Some officials expect 55,000 cars, and no estimates of less than 50,000 cars have been spoken of. Last year 40,420 cars were sent east. In 1921 35,420 cars were shipped, and in 1920 shipments were 26,121 cars.

* * *

Rhode Island and Connecticut report no large settings of apple trees beyond what is needed to replace old ones and perhaps a small gain. Apparently the best selling early and fall varieties and Baldwins are the ones mostly set. These include McIntosh, Wealthy and others that have proved their commercial value.

State Farm News

A 520-acre tract of splendid timber, 12 miles south of Chehalis on the Pacific highway and near its junction with the National Parks highway, probably will be set aside for state park purposes, as the result of an inspection of the property by several members of the state park board. The tract is almost ideally located for park and tourist purposes, is well watered, and is said to contain the finest body of standing timber along the highway. In the inspection party was W. P. Bonney, secretary of the state historical society, who visited also the old courthouse where civil life in Lewis county began, and made some plans for its development. The courthouse is very close to the proposed park site, and readers of The Washington Farmer may recall that a photograph of the old log building appeared as a cover picture several months ago.

* * *

The Mount Adams creamery plant has been opened at White Salmon by a company formed of George A. Read, Roy L. Heaman and Ira E. Hyde, all White Salmon business men. A 900-pound-capacity churn has been installed and a modern refrigerating room has been built.

* * *

A number of dairymen of the Pleasant valley, Salmon creek and Baker districts, south of Ridgefield, held a meeting recently at the Salmon Creek schoolhouse for the purpose of organizing a chapter of the Battle Ground Dairymen's union, which resulted in the election of the following to head the Salmon Creek union: George Goddard, president; Mrs. William Steward, vice president; Mrs. B. A. Bowdler, secretary; H. P. Hanson, treasurer. Other officers chosen include: Mrs. A. Olsen, lecturer; E. P. Miller, master-at-arms; M. H. Anderson, guard; C. Hutchins and B. A. Mowdler, councilmen.

* * *

B. E. Gregory has sold his 10-acre orchard on Pogue flat, two miles north of Okanogan, to Otto Newman of Wenatchee for $12,000. The tract is set to commercial varieties of apples, the trees being 12 years old. There is an overcrop of alfalfa.

* * *

The fruit crop in western Washington is threatened by an invasion of the tent caterpillar, which is doing a large amount of damage, according to telephone advices received at the state department of agriculture from state horticulturists in the field. On Vashon island, where the season is earlier than on the mainland, the caterpillars are reported to have cleaned foliage off many fruit trees and are attacking the gooseberries and currant bushes.

* * *

That grain warehouse rates should not exceed 75 cents a ton for handling charges and 5 cents a ton per month for storage was the sentiment of the 150 farmers attending the tri-county union meeting at Pomeroy recently.

* * *

A group of project leaders of the Spokane county farm bureau have agreed to help conduct a fly campaign this summer. This will consist of an attempt to gain concerted action in the treatment of breeding places, the construction and use of fly traps and finally the persistent use of the swatter.

* * *

Christen Brothers of Frances, extensively engaged at dairying, have taken up chickens, beginning with a lot of 500 day-old chicks.

* * *

June 24 has been set as the date of the annual Cowlitz valley cheese carnival given at Toledo by the highly successful cooperative cheese factory there. It is expected that President E. O. Holland of Washington State college will be the principal speaker on the elaborate program which is being prepared.

* * *

The Grays Harbor county fair will be held this year September 3 to September 6 at Elma.

* * *

Plans to ship in three large cars of binder twine, which will cost but $11.10 a hundred, as compared to $15.14 a hundred, paid last year by the Spokane county farm bureau members, were made at a recent meeting of the board of directors. The bureau will order 120,000 pounds.

* * *

Dan W. Bush, who will operate the Lewis county cannery this year, has signed contracts for beans and pumpkins for this year's packing. A large quantity of Burpee stringless greenpod beans will be canned.

* * *

The Washington Berry Growers' association is building two new refrigerating rooms at their shipping station at the Northern Pacific station at Sumner, doubling the capacity of the pre-cooling plant, which was built last season. Their cannery, near the Milwaukee station, has been completely renovated and it is expected will begin operation in two weeks. The association has more than 500 members, with a daily increasing roll.

* * *

Franklin county will hold its first county fair next fall. The people of Connell had the initiative, and citizens of that part of the county have obtained grounds and organized a fair association. The county commissioners have appropriated $2500 toward the erection of buildings.

* * *

In spite of a salary cut from $3000 to $2500 per year, A. W. Kasten will remain at his post as head of the agricultural department of Walla Walla high school. He returned his contract when the salary was cut to $2400, but reconsidered when urged to do so by the county farm bureau. Mr. Kasten is one of the most successful Smith-Hughes teachers in the state. He has occupied his present position several years. The farm bureau of Umatilla county, Oregon, likewise took a hand in affairs when Fred L. Bennion, county agent there since 1919, was offered a five-year contract at $5000 per year as director of athletics and head of the department of economics and marketing at Montana Agricultural college. They insisted upon assurance from the county court that Bennion would be retained for one year, at least, at his present salary of $4250.

Coming Events of Interest

June 21-23—30th annual pioneer picnic, Elberton.
June 21-25—Chautauqua, Pullman.
June 26—Pioneer picnic, Woodland.
June 28—Demonstration day, experiment station, Lind.
July 12—Demonstration day, experiment station, Prosser.
July 24-Aug. 5—Live stock tour, Vancouver to Bellingham.
July 26-27—International apple shippers, Seattle.
July 27-28—Whatcom Guernsey gallop, Bellingham.

FARM BUSINESS AND MARKETS OUTLOOK

Handsome Margins for Feeders

Every factor in the cattle trade at present is in a state of health. The eastern dressed beef market is advancing, reflecting improved public buying power, hide prices are higher, eastern slaughterers are buying in the middle west and operations of exporters are only restricted by the fact that steer prices are a trifle out of their range.

The corn belt harbors a limited number of feeders who specialize in the production of long-fed steers for the early summer market. Cattle from such feed lots are now on top. Most of them have been money makers, with margins between cost as feeders and final selling price ranging from $2.50 to $3.50.

At last the steer market is showing returns more comparable with those obtained by lamb and hog feeders. A top of $9.75 has been reached at Chicago and an advance to $10.50 for grain fed steers within three months looks probable.

Further advances on lower grades of beef steers are not so probable. The movement of stockers and feeders from the 12 leading markets to the seven principal feeding states in the first four months of 1922 totaled 665,000 head compared with 500,000 head in the same period a year ago, and 575,000 head two years ago. These figures do not indicate a shortage. Steers have been an attractive vehicle with which to market the huge corn crop.

The Arizona crop of beef, the only state upon which an official forecast has been made, is estimated at 103,000 head compared with 94,000 head last year and 86,000 two years ago. More steers were shipped into Kansas and Oklahoma in the last two months than during the same period of either of the last two years. Private estimates upon the supply to come from the northern range states point to a decrease under last year.

Grass beef is not yet an important factor, but most cows and heifers demonstrate that diet; south Texas is beginning to forward grass steers to Fort Worth, and dressed beef markets report a larger percentage of common and medium carcasses, many of them showing a grass finish.

Interest in Stockers Not Appeased

The buoyant fat steer market, together with confidence restored in the future of the cattle industry revived interest in stock steers and breeding cows after it had died down in May. Suitable kinds are scarce and priced too high to look safe, especially with the season just ahead when a sharp drop in values generally occurs. The breadth of interest and scarcity, however, may prevent as severe a decline in midsummer as usual.

Higher Hog Prices Ahead

The June run of hogs has been absorbed without average prices at Chicago dropping as low as $10 at any time. The market has been repeatedly halted whenever prices reached a top of $11 in the last month, but declines below that point have not been severe and probably the next time the line is reached it will be crossed.

Within 30 days receipts of hogs should begin to decrease. Weekly runs at the leading markets may drop as much as 40 per cent or more below the present level before the fall increase begins so that an advance of $1 to $1.50 appears reasonably certain. Packing sows and heavy barrows will not advance as much as butcher and bacon grades, but can easily sell higher than at present.

Lamb Prices Trending Lower

The trend in lamb prices continues downward although there are occasional temporary halting places. The southeastern crop will be moving for two or three weeks longer, and the number of corn belt lambs waxes weekly. Range lambs will not become numerous until late July so that temporary bare spots may develop in the meantime, but it is quite unlikely that lowest prices have yet been seen as the period of heaviest receipts has not been reached.

Buying of feeding lambs and breeding ewes is exceptionally heavy for this time of the year. It is reasonable to expect better bargains, especially in feeders, and a more choice selection a little later on.

With virtually all the wool in the Pacific northwest already sold and a good lamb market assured when the 1922 crop is ready for the block in the early fall, sheep of the territory will pay dividends this year of approximately $60,000,000, according to estimates of sheepmen. The 1922 wool clip is estimated at 22,000,000 pounds for Idaho; 15,000,000 pounds for Montana; 15,000,000 for Oregon and between 4,000,000 and 5,000,000 pounds for Washington.

Averaging eight pounds to a fleece this represents approximately 6,800,000 sheep.

Sheepmen expect that lambs ready for the market this year will be worth about $7, or $42,000,000 for the total production.

Washington wool has sold this year at from 18 to 35 cents a pound, the top price last season at this time being 18 cents and many sales being made at from 11 to 14 cents. Fall sales last year ran from 22 to 24 cents.

Prices vary in the western states. Montana growers this year are getting from 25 to 41 3-8 cents per pound; Idaho from 25 to 35 cents and Oregon from 25 to 40 cents. With a total production of around 55,000,000 pounds and averaging the price at slightly above 30 cents, the value of the wool clip is put at close to $18,000,000. It is estimated that 90 per cent of all northwestern wool is now in the hands of dealers.

The lambs are on the forest ranges. The Washington Wool Growers' association has sold between 4,000,000 and 5,000,000 pounds of wool. The members are enjoying a lower freight to Boston, the Spokane rate being $2.35, as against $2.76 last year, and the Yakima valley rate, applying on the bulk of the state production, $1.99, as against $2.39 a year ago.

Grain Crops Exceed Last Year

The official forecast upon the wheat crop confirmed private estimates of a yield of 855,000,000 bushels of winter and spring compared with 795,000,000 bushels harvested last year and an average of 799,000,000 bushels in the five years, 1916 to 1920.

Cutting of wheat has started in Oklahoma, Kansas, southern Missouri, Illinois and Indiana so that a large area is past the danger point. As the harvest season is reached, however, reports indicate that the crop in Kansas and Oklahoma which was delayed by drought up until March, has not headed as well as the growth of straw promised and recent hot weather has caused some premature ripening. Early threshing returns from Texas have been disappointing. The spring wheat states had rains recently, but they can be severely damaged still by drought and there is some apprehension of a black rust scare.

Wool Market Remains Firm

Although the wool market is nervous with much talk of a possible reaction on the part of buyers, prices have been quite firm both at seaboard markets and in the country. The finer grades appear to be especially scarce. Prices in some cases are said to be up to the level of the rates in the senate tariff bill, but they are not yet up to the emergency tariff which is the measuring stick until the permanent tariff bill is nearer enactment. Foreign markets have been a little easier in the last few days, with declines of 5 per cent reported at London and Sidney. Prices at country points in many cases are above a parity with Boston.

Horse Buyers Want Specialties

Choice draft horses are sought for rather actively and lumber companies have been in the market for hairy legged horses to be used in logging camps. Rugged workers suitable for city teaming and a few wagon horses sell fairly well. Demand for farm chunks is practically nil.

Chicago—Good and choice heavy drafters, $175@275; common and medium drafters, $110@185; good and choice wagon horses, $110@150; common and medium wagon horses, $60@110; farm chunks, $50@135.

Wheat Buyers' Indifferent

Both mills and exporters continue to be indifferent buyers of wheat. Mills are grinding about the average amount for this season of the year, but this normally is a dull season. New wheat is a little more desirable for milling so that there is but little incentive to accumulate reserves of old wheat, especially with the market declining. A little wheat is being sold for export from time to time, but amounts are small and European buyers have been reselling a good deal notwithstanding the general belief that Europe must draw heavily upon the United States during the last half of the year.

Growers are contracting to sell some new wheat, but such advance sales have been few whenever they netted the producer less than $1 at his loading point in the middle west, a price which necessitates about $1.15 at Chicago.

In view of recent events, the wheat market may sag a little lower, but if export develops later on as expected, prices are not far from their probable low point.

Coarse Grains Scratching Bottom

Corn prices have been on a low level, but there is a belief that they discount all bearish factors and that changes will be for the better. Corn fed to live stock, including dairy cattle and poultry, has netted in many cases two or three times as much as when sold as grain, so that farm disappearance has been heavy. The big crop and carryover have furnished enormous shipments to primary markets also, but domestic and export outlets have prevented any unusual accumulation at terminals. The after-planting run is practically completed. The new crop prospect is none too good. Corn prices easy; could have an advance of 10 to 20 per cent before summer is over.

The rye crop was estimated at 81,000,000 bushels which is 40 per cent more than last year and nearly 20 per cent over the average of the previous five years.

The oats crop estimate was 1,305,000,000 bushels. This is slightly larger than expected in view of previous reports of its low condition. Since the crop is late, cool weather will be necessary to prevent heavy deterioration. Some sections already report that the crop is heading out late. Last year's harvest was 1,061,000,000 bushels and the average of the preceding five years was 1,413,000,000 bushels.

The visible supply of old crop oats is about three times the average for this season of the year and prevents the oats market from scoring any pronounced advance. The carryover in commercial channels when new oats begin to move is sure to be heavy.

The barley crop estimate at 191,000,000 bushels is 40,000,000 bushels more than last year, but 6,000,000 bushels less than the average for the five years, 1916 to 1920.

Cash Grain Markets

The range of cash grain prices for the week ending June 14 was:

Chicago—Wheat—No. 2 hard, $1.14@1.18. Corn—No. 2 mixed, 59 1-2@61 3-4c; No. 3, 58 1-2@61 1-2c; No. 4, 57 1-4@60c; No. 2 yellow, 60@62 1-2c; No. 3, 58 3-4@61 1-2c; No. 4, 57 1-4@60 1-2c; No. 2 white, 60@62c; No. 3, 59@61 1-2c; No. 4, 57 1-2@60c. Oats—No. 2 white, 35 1-4@41 1-2c; No. 3, 33 3-4@39 1-2c; No. 4, 33@37 1-4c. Rye—86 1-2@93c. Barley—55@69c.

Selling pressure has been reduced in the market for wheat feeds, but demand is limited and prices have advanced but little. A still lower market would not be surprising later on when mills begin grinding the new crop of wheat. Demand for other feeds also is slight.

Prices per ton (100 pound bags) in carlots—Chicago—Bran, $18.50; standard middlings, $20.25; flour middlings, $24.50; cottonseed meal, 36 per cent, $47; 43 per cent, $51; hominy feed, $24; gluten feed, $32.85; old process oil meal, $50.50; tankage, $50.

Hay Crop Looks Heavy

The hay crop, according to the government's June 1 estimate, will be 106,000,000 tons compared with an average of 101,000,000 tons in the preceding six years. Condition of pastures on that date was placed at 93.8 per cent compared with a 10-year average of 91 per cent. With increased receipts and slow demand, hay prices have been working a little lower recently.

Prices per ton in carlots—Chicago No. 1 timothy, $22@24; standard No. 2, $19@21; No. 3, $15@18; No. 1 light clover mixed, $20@22; No. 1 clover, $16@18; No. 1 clover mixed, $17@19; alfalfa, $14@24; upland prairie, $13@18; midland prairie, $13@16; rye straw, $16@17; oat and wheat straw, $12@14.

Egg Market Declines

Egg prices held at about the same level for 60 days, but the accumulation in cold storage has become so large that doubt has been aroused as to the possibility of merchandising it to advantage during the coming fall and winter and prices have sagged. No drastic break is expected, however, and fresh egg prices will recover later on from any loss.

Heavy Butter Storage Under Way

The movement of butter into cold storage at the four leading cities in the last 10 days averaged over 1,000,000 pounds per day. Prices are about 10 per cent higher than during the storing season a year ago, but the prospect of a broad demand during the fall and winter has induced operators to buy rather freely. Receipts at the leading markets during the past week promised to set a new record at least so far as the last three years are concerned. Demand for butter scoring 90 or better has been active, but lower grades moved slowly. The market has been slightly nervous with prices a little lower at the close. They are likely to hold within a limited range for the next month or two.

Prices on 92 score fresh butter on June 14 yere:

Chicago, 35c; New York, 36 1-2c; Boston, 37c; Philadelphia, 37c.

Cheese Markets Soft

Cheese prices at distributing markets are materially higher than a year ago. The cheese arriving is showing full grass flavor and is excellent for storing. Some storing is going on, although the net accumulation is still comparatively light, comprising only about 20 per cent of the receipts.

Potato Prices Hold

Potato prices have held most of the recent advance. Shipments are comparatively heavy, but below the average of the last 12 months. Old potatoes composed about 25 per cent of the supply, but they will be off the market by the middle of July. The early crop in the intermediate states was estimated on June 1 at 20,672 cars, an increase of 1700 cars over last year. Northern whites are quoted at $1.75 to $2 per 100 pounds in the Chicago carlot market.

Fruit Crops Generous

The apple crop was estimated at 180,000,000 bushels on June 1 compared with 97,000,000 bushels harvested last year and an average yield of 179,000,000 bushels in the five years, 1916 to 1920. The peach crop was estimated at 54,000,000 bushels against 33,000,000 bushels last year and a five-year average of 44,000,000 bushels.

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Sheep Market Jargon

Like all the rest, the sheep market has a little language all its own. For example:

"Mutton Sheep" are mature ewes and wethers fat enough for slaughter.

"Choppers" are aged ewes which are not fat, but in medium flesh, whose carcasses, presumably, are good enough to produce mutton chops.

"Docked Lambs" have had their tails cut off. Those which have not been docked generally come to market with tails badly gummed up, a condition which hurts the sale. Docking is universal on the range, but corn-belt farmers often neglect the operation, which is one reason why range lambs generally outsell natives.

"Peewees" are small, unfinished lambs often thrown out of loads of fat lambs. Many of them are late born lambs.

"Hothouse Lambs" are those born during the fall or winter so that they can be marketed while still quite young anywhere from Christmas time to Easter. They seldom come upon the open market, but are farm dressed and sold direct to hotels and restaurants.

"Spring Lambs" are those born in the spring and sold in the regular way. After June 15 or July 1 the term "spring" is generally dropped.

"Aged Lambs" are those born in the spring of the previous year, but marketed after "spring" lambs are available. They are classed as yearlings on most markets after June 15 or July 1.

"Montanas," "Wyomings," and "Idahos" are names indicating the state of origin. "Mexicans" come originally from Mexico or New Mexico, but generally they have been fattened in Colorado or an adjacent state. They are not good mutton types, but are high dressers and sell exceptionally well.

"Light Lambs" are those weighing around 75 pounds or less. "Handyweights" are those weighing 75 to 85 pounds.

"Break Joint" is not a true joint, but in dressing the carcass of lambs and most wethers less than 2 years old the leg can be broken at a point about a half inch above the pastern joint. The "break joint" has a sawtooth appearance and the housewife who can recognize it can make sure that she is not given mutton when she asks for lamb. Naturally the leg is broken in this way whenever possible. A "breaker end" refers to a small part of a load of mature sheep which probably can be made to show this sign of youth.

LIVESTOCK AND DAIRY

Pasteurizing Milk

By WINIFRED MITCHELL.

Milk for ordinary uses and for infants and children may be successfully pasteurized on the farm. It is not hard to do and requires but little equipment. A deep pail with a perforated false bottom is the best utensil in which to heat the milk. An inverted pie tin with a few holes punched in it makes a very good false bottom. A good thermometer is also needed. Milk is very easily pasteurized in bottles. Fill the bottles almost to the top with the milk and place the covers on, punching a hole in one of them for inserting the thermometer. Set the milk in the pail and fill with cold water nearly to the level of the milk and heat until the thermometer registers 145 degrees F. Remove the pail from the flame, allowing the milk to remain in it for 30 minutes, replacing if necessary to maintain the temperature of 145 degrees F. Next replace the hot water with cold, gradually, until the temperature of the milk is down to 50 degrees, using ice water if necessary. Place it in a refrigerator and keep at that temperature or less.

Milk is a dangerous carrier of disease germs. Serious epidemics have been traced to the milk of one farm. Among those diseases which may be spread by milk are scarlet fever, typhoid fever and diphtheria. The bacteria causing these diseases may enter the milk from contaminated water used in washing milk utensils or from persons handling the milk who have been exposed to the disease or who carry the germs in their own bodies.

Pasteurizing kills about 90 per cent of the milk germs.

LIFE PRESERVERS FOR LIVE STOCK

By DR. E. E. WEGNER, W. S. C.

INFECTIOUS DISEASES—Article XII.

Forage Poisoning.



Under the above name is listed those disturbances that occur in animals from eating spoiled foods or foods that contain an organism that causes a severe general systemic disturbance. It was previously supposed that the foods causing this trouble were always moldy or spoiled in appearance, but we have more recent evidence to indicate that the cause is in most cases an organism that lives well on moldy hay or grain, but one that may also live on feeds that to the eye may appear quite normal. For this reason the matter is beginning to clear up somewhat, when we realize that where the trouble is found it is not necessarily associated with the visibly spoiled feeds.

The greatest losses probably have occurred in localities where the animals were required to eat spoiled stuff, as in the cases that occurred several years ago in the middle west where the trouble was due to eating spoiled fodder. In that particular outbreak the losses were particularly severe. It is true that animals may eat moldy and spoiled foods and not suffer, as they frequently do, but it is equally true that they may suffer serious consequences as a result. It is impossible to tell by looking at the hay or grain whether it will injure the animals or not. I have seen typical cases of this trouble that resulted from eating grain that to the eye appeared good and wholesome, unless it was for a very small lump here and there that had been wet at some previous time. The animals may get sick from this disease while on pasture that has passed through the fall rains and frosts or from feeding at old strawstacks or from any moldy or spoiled foods particularly. The trouble can usually be traced to something of this kind, though not always.

Animals Become Unsteady.

The symptoms that are common are for the animals to first show a certain unsteadiness of gait, frequently in the hind limbs first. They may have difficulty in rising after they have been down, but after being assisted to their feet they may be able to get around in a rather uncertain fashion. As the disease advances this unsteadiness or weakness becomes more pronounced and the animals are unable to rise or even stand after being assisted to the standing position. They lie in a normal position and appear to want food, but are frequently unable to swallow, not only solid foods, but liquids as well. They may put the nose into the water and appear to drink, but the water does not go out of the pail, as there is a paralysis of the throat as well as the other parts of the body and they are unable to take any nourishment whatever. After such a course the animals usually die, though some of the milder cases recover. However, if the case is so severe that the animal can not rise the chances are not good. This is especially true in horses.

Prevent Rather Than Cure.

The treatment of this disease is mainly in its prevention and the source of the trouble must be located. This is best accomplished by one who is accustomed to dealing with the disease and who knows the most likely place to look for the source of the trouble, as it is sometimes obscure. Preventive treatment by vaccination is now recommended and some good results have been reported by its use. In this connection the veterinarian will be of great value in its application. It is probably too early to give unqualified approval of this treatment since it has not been time tested, but it is worthy of earnest consideration.

Some feeds that are harmful for horses can be fed to cattle without producing the disease as the cattle are not such frequent suffers, though in all cases it would not be wise to recommend its use extensively. When the trouble has occurred it is frequently necessary to completely change the feeds that the animals are getting, or at least that part that appears spoiled if such can be located. Your veterinarian's advice in such outbreaks is of greatest value and may save many hundreds of dollars' worth of animals. This disease is actually very serious, as when it occurs the losses are usually not single, but dozens are frequently laid to rest from its ravages.

VETERINARY

By DR. S. B. NELSON.

Horse Tonic.—I have an old mare that does not seem well. She was all right this winter when kept in the barn and fed hay and oats. Since turning her out on grass she will not eat hay or oats. There is always noise in her stomach and she is getting thin. E. H.

Anacortes, Wash.

I am going to suggest that you give your horse a tonic composed of one dram of powdered iron sulphate, five grains of powdered nux vomica, two drams of powdered ginger, four drams of powdered gentian and two drams of powdered fenugreek seed. Give this once daily for about 30 days.

Swelling on Back.—I have a heifer that got a swelling on her back two weeks after freshening. The swelling broke and a white substance runs from it. She does not seem to be sick or lame. R. J. K.

Mineral, Wash.

I am going to suggest that you lance the swelling over the back at its lowest point. Wash it out daily with equal parts of peroxide of hydrogen and water. Use just a little and let it foam out and then wash out the wound with a 2 per cent solution of creolin.

Stunting Horns.—Please tell me how to stop the growth of horns on our 2-month-old calf. F. N. S.

Selah, Wash.

It is difficult to remove the horns from a 2-month-old calf so as to do a nice piece of work. It is better to wait until she is 8 or 10 months old and then remove them with the clippers. In the young animal you can often well remove the horns through the means of caustic applied when the nubs begin to appear when the calf is 3 to 5 days old.

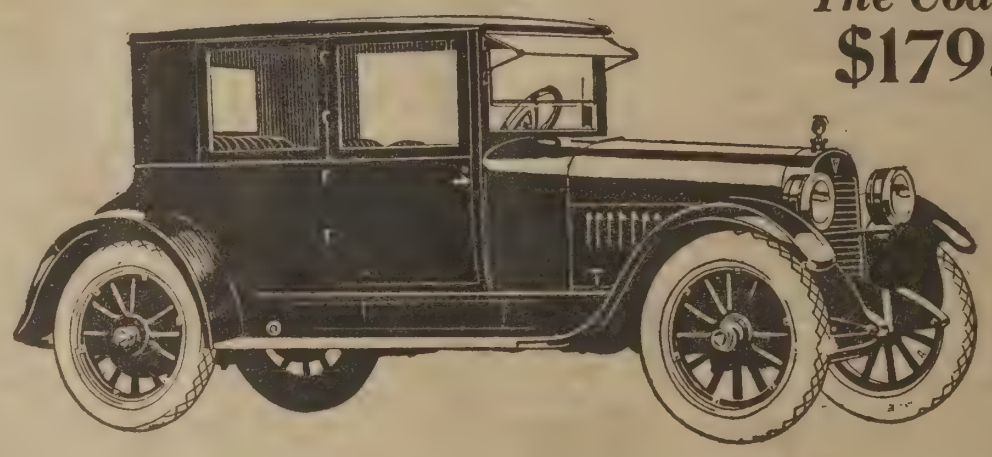
Nose Discharge.—Can a horse be cured of a continued discharge from the nose? C. Y. C.

Madras, Ore.

Whether a horse can be cured that has a continual chronic discharge from the nose depends entirely upon the cause of it. This may be caused from the animal being affected with glanders; it may be caused from a chronic catarrh, or it may be caused from infection of the sinuses of

(Continued on page nineteen.)

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POULTRY AND RABBITS

Poultry as a Sideline

Although orchard owners do not usually feel that they can afford the time for the raising of poultry on a commercial scale, there are many in the Yakima valley who have taken up the business as a side line to their orchard, according to A. S. Brown, manager of the Yakima branch of the Washington Cooperative Egg and Poultry association.

"The members so far are commercial egg producers," said Mr. Brown, "and as yet we have not encouraged small shipments. The flocks are increasing rapidly and we expect to have a greater amount of eggs to handle after the new pullets begin to lay in the fall.

"Our feed business has also made a rapid increase and it reached the $1000 mark one week in June. As yet we are only mixing the scratch feeds, but we handle the mashes ready mixed. Our branch warehouse at Sunnyside has been doing a good business in feeds and we get more than a third of our eggs from that district. There are also many eggs shipped from Grandview, Kennewick and Prosser and they are all from members of the association.

"We are placing a larger number of graded eggs among the local stores," continued Mr. Brown, "and we do not plan on shipping many out of the valley. The housewife is beginning to appreciate the value of grading eggs and she calls for them. They find that they can get a better quality egg if it has been graded for size and condition. The association members are advised to gather their eggs at least four times each day during the hot weather."

Mr. Brown told how they were encouraging the orchardists to modernize their poultry houses and keep from 200 to 300 hens. This can be done, he said, as easily as raising 75 and it will bring in from $300 to $400 a year if properly handled. The income will be made between harvests and it is considered a good side line that will pay the grocery bill.

A few hot weather suggestions are given out by the association which, if followed, will result in a better grade of eggs during the summer. They are as follows:

If the dropping boards are cleaned every morning just after feeding it will mean cleaner feet and, therefore, cleaner eggs and a cleaner house.

Keep plenty of clean straw in the nests, since it is a help to keeping the eggs clean and it prevents checked eggs.

Clean straw on the scratch floor will also help to keep the feet clean.

It is very important to gather the eggs at least four times every day. Each hen that is on the nest keeps the egg at an incubating temperature of about 90 degrees and lowers its keeping quality.

Less time is required to prevent eggs from getting dirty and to gather them oftener than it does to wash them after they have been gathered.

When eggs are gathered they should be put in an open container and kept in the coolest place on the farm. It is best not to wash or pack until ready to ship.

Poultry Problems

By W. D. BUCHANAN, Extension Poultry Specialist, W. S. C.

MAY BE ALL GANDERS.

I have two geese and one gander. They are very friendly, but have never mated, neither have the geese laid. They are the big Toulouse geese and white Chinese gander. They were fed with the chickens all winter and are in the open alfalfa field with water. Can you give me any information? MRS. B. B. B.

Toppenish, Wash.

There is a possibility that the geese are all ganders. Either that, or they got so fat feeding with the chickens, that they can not lay. Another possibility is that they are laying in the alfalfa field where you can not find the eggs. In this case they will soon go to setting. My guess is that they are all ganders.

BUMBLEFOOT.

We have some chickens that have lumps between their toes. They seem to be full of pus, but after opening I pressed out a hard substance as large as a small marble. They seem to feel all right. Could you give us any information as to what to do for them? MRS. G. H. W.

Everson, Wash.

The lumps between the toes are probably bumblefoot, or stone bruises, caused by flying from high perch onto hard ground or bare floor. Open the lumps, squeeze the pus and matter out as you have been doing and paint the scab or open sore with tincture of iodine. Then lower the roosts or cover the floor with deep litter.

LIVERS ARE ENLARGED.

My hens have been laying heavily since last September and lately I have lost six of them. They stopped eating and drooped around. Their combs turn black and they die in from four or five days. On opening them I found their livers were about two or three times the normal size and seemed to have started decaying. There was blood around the intestines. The hen house is 12x32 and they have free range. Have about 180 hens.

The trouble may be due to too much protein, or possibly to too much crude fiber. The latter would be the case if you find any oat hulls or fiber beyond the gizzard, that is, having passed through it. The trouble might also be due to intestinal round worms or even to tapeworms. I would suggest slitting the intestines lengthwise to see if any of these are present. If you can not locate the trouble, send a sick or dead hen to Dr. Johnson at the western Washington experiment station at Puyallup.

FARM BUREAU AIDS POULTRYMEN.

"Until the farm bureau came in here and organized the poultrymen into an association, there wasn't any market in Yakima except the one the speculators chose to give us," asserted George Slade, a member of both the bureau and the association, who runs 350 birds on the hill west of Selah. "Now we feel as though the thing is on some kind of sound basis. Associations have been successful elsewhere—why not here? There is no reason why poultry raising should not be profitable here, and we believe it will be. We are now selling eggs on a New York basis, whereas before they might be worth 50 cents and we'd get 15!"

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Has 4000 Hens, With Market Garden on the Side

By RALPH ERSKINE

It is not always possible for a commercial poultryman to combine other industries with his work and be able to take care of each to the best advantage. At the Lynden Poultry yards in Whatcom county Herman Oordt and his three sons have been able to take care of 4000 hens and keep a good sized market garden as a side line as well as to feed and take care of four milch cows.

There is an unusual combination in the Oordt household, since the two boys take naturally to the raising of poultry and devote their entire time to the poultry plant. Mr. Oordt himself is more interested in the vegetable garden crops and gives his personal supervision to this part of the farm. Mrs. Oordt and the girls take care of the work that is necessary about the house and cook the meals for the men folks, including what hired men are needed during the summer months.

There are approximately seven acres of the 20 on the farm that are occupied by the buildings and poultry yards. The Incubator house has a capacity for 13,000 eggs and the machines are all electrically heated. While the baby chick business is largely a side line with the boys, they have found it almost necessary to continue to raise the chicks because of the strong demand for stock in this locality. At least twice the number sold this year could have been disposed of if they could have supplied the orders that came in during the hatching season.



One of the large yards of White Leghorns on the Lynden Poultry yards. The entire plant has been built in the midst of an orchard and the trees have been allowed to remain for commercial crops. The farm is only a short distance from Lynden.

DOES NOT TRAPNEST THE LAYING HENS.

"We do not believe it is worth the extra time to trapnest the laying hens," said Mr. Oordt, "because the slight increase in the quality we might build up does not pay for the extra time that would be necessary to carry on the work. We have thought some of doing this, but we find that by a thorough system of culling we can keep the stock at a high standard and there are only a few of the chicks that are not strong enough for breeding. This idea is contrary to the best authority on chick raising, but we believe it suits our conditions better than keeping a special pen of breeders.

"The 2-year-old hens are the best ones to breed from and we have made it a practice to use all the other pens for the production of commercial eggs. We have not sold any chicks to the out-of-town trade, since we have enough orders from the local poultrymen to keep our supply cleaned up."

NESTS IN TIERS PLACED FOUR HIGH.

All of the laying houses on the Oordt farm are of the flat roof type with a 30-inch open front covered with wire mesh. In bad weather this opening can be covered with a curtain to keep out drafts and dampness. The nests are in tiers, placed four high, and eight to 12 nests in a tier, according to the room available at the end of the house. Each section, which is made from 1x125 is placed one upon the other, the top one only being hooked to the partition. The nests open on the opposite side from the windows, which allows them to be kept dark.

Concrete floors have been installed in all the buildings except the incubator house. This is a great help in keeping the houses clean and it also eliminates rats. Each laying house is cleaned and disinfected twice during each year, while the drop boards are dusted with powdered lime, which makes cleaning easier and prevents mites.

An enclosed dust bath has been built at each end of the houses in front of the nest boxes. This keeps all dust out of the main feed pen and the hens are not apt to be molested by the other hens while dusting. The clean straw is placed on the floor every two weeks. No litter or egg carriers are used in any of the houses, since the boys finds that wheelbarrows or push-carts can do the work equally as well and these can be used in other buildings. It is also easier to keep the manure farther from the barn by the use of a wheelbarrow. A manure pile close to any building is an invitation for rats, according to Mr. Oordt, and then there is an odor from the manure which impairs the health of the flock. Cleanliness has long been one of the main axioms of the Lynden Poultry yards, and they consider it a key to successful poultry production.

SIXTY PER CENT EGG PRODUCTION MAINTAINED.

"Sixty per cent production of eggs has been maintained throughout the winter months, while there are times when this average will be beaten," said Mr. Oordt. "In good weather we will get a slight increase over this amount, but we try to keep it under 70 per cent. We grade all of our eggs before shipping, and we have found that it is easier to sell eggs when one has established an excellent grade. We are putting up from two to three hundred cases of eggs this spring for cold storage.

"We have fed our own cockerels and sold them direct to the larger cities, most of them going as live birds. It is not hard to fatten them to an average of one pound and a quarter at the age of eight or nine weeks. They are weeded out of the breeder pens at from five to six weeks of age. We find that we can make a fair profit on the cockerels by feeding in this manner because the feed consumed does not cost as much as can be realized from the marketable bird. This, however, applies only to cases where one is raising his own chicks."

Mr. Oordt explained how they kept their flock in best condition by feeding only the best feed which is free from dirty or moldy grain. There are times when it is necessary to feed epsom salts with the mash, but this is not done as a general rule. Very few of the birds are given medical attention except as above stated, because when such a large number are to be cared for they feel they can not afford the time to doctor any of the birds, but kill those that do not promise to recover.

TWO ACRES OF STRING BEANS.

While the two boys themselves could handle the poultry work they have found it best to hire two men that help them and attend to other details such as milking the cows, hauling eggs, and feeding and attending to other odd jobs about the place. The market garden is an outgrowth of the local demand for such products as green peas, string beans, and other vegetables. Two acres of string beans are planted this year as a commercial crop and sold to the cannery. The home garden is the first consideration, and Mr. Oordt believes in storing a sufficient quantity of all classes of vegetables for their own table supply during the winter.

Fruit trees are growing in and about the poultry yards and have been found a paying sideline and to have required little attention except during the harvest.

MRS. E. W. FLACH, Grandview, Wash.—We enjoy reading every bit of The Washington Farmer and the few times it didn't come, owing to the subscription having reached the end, we felt lost without it. I enjoy the letters of advice and suggestions in so many things, above all, my two children dearly love those little bedtime stories, which I even enjoy myself. I read them to the kiddies every time and they can hardly wait for them to come each week.

Recent Government Bulletins

Recent farmers' bulletins published by the United States department of agriculture, which may be of interest to northwestern farmers and which may be obtained free from the department at Washington, include the following:

"Practical Information for Beginners in Irrigation" (farmers' bulletin 864).

"The Care of Leather" (F. B. 1183).

"Tree for Town and City Streets" (F. B. 1208).

"American Moles as Agricultural Pests and as Fur Producers" (F. B. 1247).

"Stored-Grain Pests" (F. B. 1247).



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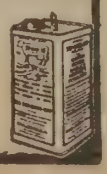
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GOODYEAR
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The Thirty-Ten Taxation Measure

To to Editor of The Washington Farmer: In a recent issue of The Washington Farmer appeared an article on "30-10" by Dr. Penrose of Whitman college, in which were several statements that seem to need comment. One of these statements is that the parent-teacher association which is initiating "30-10" is "made up largely of teachers." This is not the case, as out of a membership of 23,000 only about 2000 are teachers. The other members are the parents of the school children and the majority of them are taxpayers. There are about 10,000 teachers in the state, and if every one of them belonged to the P. T. A. that would be only half the membership. However, all the teachers of the state do not belong, but only those in the 420 schools having P. T. A. in connection with the school.

Another statement carries the inference that this measure ought to be defeated because the teachers of the state are supporting it. Does Dr. Penrose know of any worth-while educational legislation ever passed anywhere without the support of teachers? Who but the teacher has fought the battle of the public school since the days of its beginning in Massachusetts in the 17th century, or since leaders like Horace Mann gave their very lives to the cause of public education? If the teachers of the state were opposing "30-10," instead of supporting it, there would in that case be reason to question its merit. He also says that the "teachers hope that salaries may be advanced out of the more abundant funds." Does he know of a single teacher organization in the state which is asking for an increase of salary?

Again Dr. Penrose says, "To introduce an initiative bill like the 30-10 under a deceitful title which suggests that it is proposing a new and fair principle of educational distribution may be smart politics, but it is bad citizenship." He goes on to cite the barefoot school boy law to show that this is not original with 30-10.

Evidently the doctor does not know that the word initiative is the one necessarily used in securing any law by means of direct vote of the people, and that the use of the word in no way implies that the principle set forth was first evolved by those backing the measure.

If Dr. Penrose will read the literature which has been sent out by the P. T. A. he will see that from the very first the barefoot schoolboy law has been cited as the foundation on which 30-10 was built. If the doctor was a resident of the state at the time of the passage of that law he will recall that it suffered the same kind of attack and opposition that is being meted out to this.

He says again that "Ever since the adoption of the barefoot schoolboy law by the legislature of 1895, as introduced by John R. Rogers, the public expenditure for education has been equalized throughout the state." That statement sounds as if all the money raised for schools were under the equnlized distribution plan, while the truth is that only such portion as is raised by the state is so distributed. The balance of the necessary fund is raised on the county and local district basis and in the latter of these occur the gross inequalities. For the very reason that the state portion of the school fund is raised and distributed on the most equitable basis, both from the standpoint of education and taxation, the P. T. A. proposes that a greater part of the school money be raised on that basis and lessen the local district basis. Dr. Penrose questions the reduction of local taxation. He evidently is not aware that the measure itself arbitrarily cuts 3 mills off the maximum tax that the people may vote upon themselves. It is not possible to legislate upon anything except the maximum. It is for the district which is paying the heavy tax that the help is sought. He says that local taxes will not be decreased, yet declares that the demand for tax reduction is overwhelming. If such demand exists, as all admit, then the people will reduce their local tax, and if they do not reduce it it will be because the demand does not exist. Does the doctor think that people levy 20 and 30 mill taxes upon themselves just because they like to do it, or that they would continue to do so if the necessity were removed?

How much does Dr. Penrose, from his pedestal as president of a wealthy private college, really know about the struggles of the isolated rural public school or of the children being given only six months of school a year under untrained, inefficient teachers?

He also says there is no crisis. In many districts there certainly is a crisis, when the P. T. A. has to vote dollars to buy a load of wood to keep their children warm, and when the teacher is instructed not to build the fire till a few minutes before the arrival of the children in order that the precious wood may last as long as possible, with that same teacher finishing out the term without any hope of getting her last month's salary because there is nothing to pay with, yet, rather than see the school closed and the children sent home, she continues to teach. Is that a crisis? Is there any reason why the district of abundant means, with surplus of funds at the end of the school year, should not be required to divide with such places? Dr. Penrose goes on to say, "The advocates of the bill say that it will help the poor country districts. They say that if $10 more is given per child to the remote country district, educational opportunities there will be greatly improved." Continuing, he says, "It might be well to look at the facts: a school district which has 14 pupils and one teacher would get $140 a year more under the proposed measure. A school district of six would get $60 more. In what respect will the educational opportunities in such districts be improved?" That paragraph is absolutely positive proof that Dr. Penrose is opposing a measure about which he is not informed. The 30-10 does not work like that at all. If he would read the measure once and find out a little about it and its real effect and how it does work, and if he would become familiar with the actual conditions under which many of our membership are struggling to give their children a common school education, he might not be so unqualifiedly opposed to this measure along with the other members of the governor's tax commission.

The parent-teachers' association does know the bill, it does know the conditions that call for relief, it helps to pay these taxes and it is the avowed purpose of the organization to look first after the welfare of the school children of the state regardless of color, creed, or boundary line.

MRS. VICTOR H. MILLER,
Chairman Washington State Parent-Teacher Association.

New Grange Master

The Washington Farmer is pleased to present on its cover page this week a portrait of the newly elected master of the Washington State Grange, A. S. Goss. The new master is both an east and west sider, in so far as his state-wide interests are concerned. For several years he was a farmer in the Kennewick section. Later he was for a period manager of the grange warehouse at Kennewick, from which position he went to Seattle two years ago to take charge of the Associated Grange warehouse in the western Washington metropolis.

Mr. Goss was born in Rochester, N. Y., some 40 years ago. Soon after finishing his high school education, he entered the milling business with his brother. He came west in 1912, and has been active in community and grange life since that time.

There is a significance in the foregoing facts. Master Goss is a real dirt farmer. He is a business man with several years' experience in the actual cooperative work of the grange. He has served as master in subordinate granges. This is a combination of experience that should serve him well in the important post to which he has been elevated by his fellow grangers. Following his election he repeated his oft-expressed desire that the grange proceed along conservative, constructive lines. "We must work for harmony," he said. "There are many problems to meet. They must be met as they arise and solved as best we are able to solve them for the good of our entire membership."

GOOD FRUIT PROSPECTS.

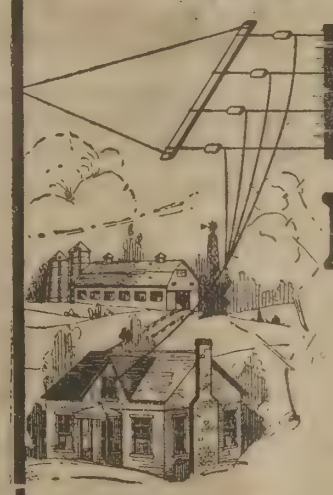
Fruit prospects in the vicinity of Miles and Peach, in the Spokane-Columbia river valleys, were reported never better. The Emerson sawmill, on the Columbia river near the mouth of the Spokane, has started a box factory to meet the prospective increased demand for fruit boxes this season.

MRS. J. BEYER, Seattle, Wash.—For a farm magazine, The Washington Farmer is the best ever.

The Dawn of a New Day

RADIO

In Every Home



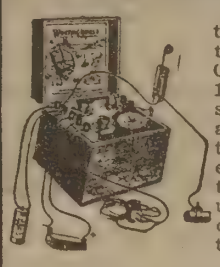


Radio telephony is an accomplished, practical fact, and the most wonderful feature of this last great forward step of science is the fact that immediately it has become available to every home in the land, no matter how humble, no matter how isolated. The great electrical corporations, aided by the discoveries of enthusiastic amateurs, have reached a stage of perfection in their marvelous apparatus that will bring to your home all that is best in entertainment, in educational features and in the business news of the day.

There will be improvements in this wonderful apparatus from time to time, of course, just as the automobile, the phonograph and the aeroplane have been improved, but today we are able to offer you equipment that will enable you to enjoy immediately all the marvelous possibilities of this last great invention, and all at a cost well within the reach of the most moderate incomes. In every center broadcasting stations are being established and in the state of Washington alone there are already over 20 such stations, ready to serve the owner of a good receiving set. Daily market reports, latest news items from all parts of the world, weekly health talks distributed by the U. S. public health service bureau, covering the health of the live stock as well as of the family. Daily musical programs in which the country's noted artists often participate. Choral societies, symphonies and the latest phonograph releases. Special weekly dance programs which by means of a "loud speaker" can be used for dancing parties in your own home—these are only some of the advantages you are offered by this modern marvel.

Below we list two styles in receiving sets that are reliable in every respect, that any one can operate, and that come to you so complete that you can start to enjoy all these untold delights and advantages the same day as you receive your set.

WESTINGHOUE AERIOLA SENIOR RECEIVING SET



Complete with Brandes double telephones, dry battery, detector tube, and 1-22½ volt "B" battery. Complete aerial equipment including 150 feet of copper wire, set of insulators, ground wire and lightning arrester. A high grade tube set that under ordinary conditions will enable you to receive from a distance of 100 to 150 miles. Can be used anywhere and is absolutely complete to the last detail. For the inclusive price of **$73.50.**

FEDERAL CRYSTAL RECEIVING SET

Complete with double head phones, aerial equipment, ground wires and insulators all ready to use the day you receive it. Under ordinary conditions will pick up from a distance of 25 miles. As easy to use as a phonograph. Price complete **$27.50.** Many other styles of high-grade sets for long distance receiving at prices up to **$350.** Write for full descriptions and prices.



Whatever radio apparatus you intend to purchase you will save yourself the possibility of annoying and perhaps costly mistakes by first consulting our radio engineer, who will be glad to write to you on any point of radio service, and who will gladly advise you as to the best apparatus for your particular locality and requirements, regardless of the cost.

THIS OLD ESTABLISHED FIRM

has been known throughout the northwest for many years as a leader in the electrical engineering and contracting business and in entering the new field of radio telephony it is their intention to conduct a business along lines that will enhance a well earned reputation for absolute reliability in every respect.

J. J. AGUTTER & CO. ELECTRICAL ENGINEERS

J. J. Agutter & Co.

1217 Fourth Avenue
Seattle, Wash.

WRITE FOR FREE COPY of "USEFUL RADIO HINTS AND TABLES"

an interesting booklet which we have just compiled for your convenience. 24 pages of up-to-the-minute Radio facts.

SEND IN THIS Coupon TODAY

and when writing let us know what particular Radio apparatus or parts you are interested in.

Name . . . . . .

Address . . . . . .

. . . . . .

ORCHARD AND GARDEN

Loganberries

Proper Handling When Picking

That a high-grade evaporated loganberry may be obtained certain conditions must be met, says J. C. Bell of the Oregon Agricultural college.

The best berries for evaporating purposes are fully ripe, yet firm. Immature berries are too tart and there is greater loss in weight in evaporating. It is well to bear in mind that during the ripening process the acid of the fruit is being changed to sugars and that these sugars are among the desirable qualities to be retained in the final product.

That these qualities may be obtained it is necessary that the berries be picked often, to the end that the fruit may be uniformly ripe. For if overripe, prime and underripe berries are being dried on the same tray the final product will lack uniformity. The frequency of picking will depend on weather conditions, soil moisture, type of soil and cultural methods. As most picking is done by piece work, there is ever present an incentive on the part of the pickers to hasten their work and become careless. By having too many berries in the hand they become crushed and melt down in the warm hand. Leaves and stems are also permitted to become mixed with the berries. To avoid such carelessness a rigid system of inspection must be maintained, discharging those pickers who disregard instructions after due warning.

Picking should be done during the cool of the day, as berries picked in the morning dry heavier, drip less and retain their shape better than those picked during the heat of the day. The drip carmelizes on the trays, giving the berries a mussy and discolored appearance.

Loganberries for evaporating should be picked only in hallocks, as it is necessary that they retain their natural shape and are not crushed. As it is the usual practice to use the hallocks over again, care must be exercised to keep them clean and dry, discarding at once those that have become soaked with juice as they soon become moldy. The filled boxes should not be placed one on top of another, preventing circulation. If the hallocks are piled several tiers deep a lath should be placed on top to allow air circulation.

It is the practice of some growers to use push carts to move the berries from the pickers to the end of the rows. The conveyance used for transporting the berries from the field to the evaporator should be provided with easy riding springs, so that there will be the least possible jolting. It is well to place a canvas over the load as a protection against dust, insects and the heat of the sun.

Prune evaporators are frequently used for evaporating loganberries. Both the stack and tunnel types are used, the latter being preferred by most growers. The tunnel evaporator is a series of parallel almost horizontal tunnels from 20 to 25 feet long, the width depending on the size of the trays used. To facilitate air movement and ease in pushing the trays along the runs the tunnels have a slope of from one to two and a half inches per foot. Along the sides are cleats or rollers upon which the trays rest. The fresh fruit is introduced at the upper end and pushed down. When the berries on the lower tray of a run have become dry it is removed and all the trays are pushed down one notch and a fresh one introduced at the upper end.

Vegetable Crops

More Than $1,000,000,000 in 1921

Vegetables grown on farms in the United States in 1921 had an estimated value of $1,104,000,000, according to the United States department of agriculture. This was 15.7 per cent of the total value of all crops. The products of market gardens, which may or may not have been productive enough to be farms within the census definition, are not included in these estimates.

The total estimated value of truck vegetables produced for sale, often called the commercial crop, was $227,000,000.

The potato crop had a farm value of $385,000,000, and the sweet potato $87,000,000. Together these two crops comprised 43 per cent of the value of all vegetables in 1921. The tomato crop of 1921 had a farm value of $60,000,000; the cantaloupe was worth $17,000,000; the cucumber, watermelon and cabbage crops each had a value of about $15,000,000.

Farm gardens are a new item in the vegetable list and had an estimated value of $405,000,000 in 1921.

The value of the vegetable crop in relation to prominent single crops and to groups of crops has some striking ratios for 1921, a year when the values of the large crops were low. The total value of the vegetable crop for 1921 was 85 per cent of the value of the great corn crop; it was almost as large as the value of the hay and forage crops; it was nearly one-half as large as the value of the dairy products; it was considerably larger than the value of all poultry products; 46 per cent larger than the value of the cotton crop, and 50 per cent larger than the value of the winter and spring wheat crops.

Honey Prospects

By GEORGE W. YORK.

Owing to the heavy losses of bees during the last winter, and also due to a very late and unfavorable spring, the prospects for a large crop of honey this year are not at all promising.

As so many bees were lost during the last winter, the demand for bee supplies has been rather meager. It may require one season to refill the empty hives with bees, so that the prospects for a fair crop of honey would not materialize until 1923.

It appears that the 1921 crop of honey is practically all disposed of so the new crop should find a very receptive market, and at a fairly profitable price to the producer. It would be a good time for the producers to get together and agree upon a minimum price for honey, both wholesale and retail. Then, if proper and more even distribution is looked after there should be no good reason why the right prices could not be maintained throughout the season.

The honey marketing problem is one that deserves more attention than any other in which the commercial beekeeper is interested at the present time. For what shall it profit him if he secures a good crop of honey and then disposes of it at a loss?

PRUNE CROP WITHDRAWN.

Report comes from Vancouver, Clarke county, that the Washington Growers' association has withdrawn the crop of the prune growers from the 1922 market, having already sold 4,000,000 pounds at from 6 to 11 cents. The price is thought to be stiffening. Indications are that the prune crop will be unusually good.

"EAT WENATCHEE APPLES."

The Wenatchee District Cooperative association has voted to appropriate 1 cent per box to the "Eat Wenatchee Apples" campaign and 2 cents to the regular association brand advertising.

1200 ACRES OF CANTALOUPES.

The report comes from Wapato, Yakima county, that the cantaloupe output of the valley will cover some 1200 acres.

YARN DIRECT FROM THE MILL

Judge the quality and price of NoYaCo Brand Yarn at first hand. Samples of Sport Mixture, Sport Floss (silk and worsted), Persian Fleece (brush wool) and Knitting Worsted sent on request, FREE OF CHARGE.
NORFOLK YARN CO.
739W Boylston St., Boston, Mass.

Perfection Plaster Wallboard makes beautiful homes



"Perfection" is just the best plaster made up in portable form, and it's not only ideal for all kinds of repair jobs and for nailing over broken plaster walls and ceilings, but it can be used with the best results for the finest and most decorative interior construction of every description.

Fireproof, waterproof, soundproof and won't warp or buckle, and can be nailed on just like lumber. Can be used with or without battens and is easily decorated with paint, calsomine or tint. Ask your local lumber dealers or hardware man for sample, or write for free descriptive booklet to the makers—

Western Wallboard Co.
4527 9TH AVE. SO., SEATTLE, WASH.

"Watch me,"
said the strong swimmer,
"I'm not afraid."



So he matched his strength against the swirl of the rapids, and laughed at the danger, and kept repeating the stunt, until—

It was the day the life-savers had been waiting for—that day the call for help came.

It's an easy matter to smile at coffee warnings when you're going strong.

But a good many strong swimmers won't risk the rapids, and a good many coffee drinkers are beginning to think of the caffeine in coffee.

Coffee *can* disturb nerves and digestion, and often it *does.*

There's a safe and satisfying course for everybody in the selection of a table drink.

Postum has charm without harm. It's the *safe* drink for all, and probably, therefore, it's the *better* drink for *you.* Thousands have found it better, and fully satisfying, for *them.*

Your grocer has both forms of Postum: Instant Postum (in tins) made instantly in the cup by the addition of boiling water. Postum Cereal (in packages of larger bulk, for those who prefer to make the drink while the meal is being prepared) made by boiling for fully 20 minutes.

"There's a Reason" *for* Postum

Made by Postum Cereal Co., Inc., Battle Creek, Mich.

Western Canada
Wonderful Stock Raising Country

Vast stretches of undeveloped fertile agricultural land of the highest productiveness await the settler in Western Canada. The land possesses the same character of soil as that which has produced the high quality of cereals that have carried off the world's premier honors so many times in the past ten years.

Native Grasses are Rich and Abundant

Cattle fatten upon them without any grain being fed.

Limited capital on high-priced lands is not a success, neither can the tenant burdened with high rents hope to succeed. The place to overcome these is in Western Canada — where *land is cheap* where a home may be made at low cost, and where *dairying, mixed farming and stock-raising give an assured profit.*

Land may be purchased from the Railway Companies or from responsible land companies or from private owners. **Free homestead of 160 acres** each are to be had in the more remote districts.

For illustrated literature, maps, description of farm opportunities in Manitoba, Saskatchewan, Alberta and British Columbia, reduced railway rates, etc., write

J. L. PORTE,
COR. 1ST & POST STS.,
SPOKANE, Wash.

Authorized Agent, Dept. of Immigration and Colonization, Dominion of Canada.



160 ACRE FARMS IN WESTERN CANADA FREE

Musical Merchandise WRITE US

WE SAVE YOU MONEY!
W. Martius Music House, Inc.
1009 First Avenue, Seattle, Washington
Everything Known in Music

SHEET MUSIC WRITE US

Read the "Want Ad" page this week for good offers of all kinds.

Berry Prices

Puyallup-Sumner Fruit Growers

The marketing facilities of the Puyallup-Sumner Fruit Growers' association are outlined in a statement made by W. H. Paulhamus, the president of the association.

Mr. Paulhamus says that from this time on the association will be exclusively a marketing organization, that it has no canning alliance, but will sell berries to any canning company that desires to purchase at the best prices obtainable.

The board believes that the association has made excellent cannery sales this year, selling all the cannery gooseberries at 7 cents per pound; red sour cherries at 8 cents per pound; strawberries in barrels, 2 plus 1, at 9 cents per pound net contents of barrels; red raspberries in barrels and for canning will range from 9 cents to 11 1-2 cents per pound; evergreen blackberries for canning purposes at 5 1-2 cents per pound.

"It is the plan to sell all the strawberries possible for fresh consumption, so as to net the grower $1.50 per crate up. We expect to market for fresh consumption one-half of our red raspberry crop and one-third of our blackberry crop.

It is also announced that growers desiring to pick strawberries with the hulls off will be entitled to credit for the cost incurred in stemming the berries at the canning plant. Many growers' associations are picking all of their cannery berries with their hulls off. The recommendation is made to pay the pickers 30 cents per crate for picking with the hulls on, or 40 cents per crate for picking with the hulls off. The statement also says:

"The association has sold a considerable quantity of red raspberries to an outside canning plant at 9 cents per pound spot cash, the day delivered, or payments each week. It has also accepted a number of contracts for raspberries in barrels up to 11 1-2 cents per pound net contents of barrels, to be packed one pound sugar and two pounds raspberries.

"On blackberries the association has made two sales to canning plants operating outside of the Puyallup valley amounting to 1,000,000 pounds of blackberries at 5 1-2 cents per pound, buyer to furnish picking crates and accept berries at our receiving stations, cash when received."

Farmers' Want Ads

HELP WANTED—MALE 3

WANTED — SALESMAN WHO CAN SELL high-grade, dependable nursery stock; several counties in Oregon, Wash., Idaho and Montana now open for assignment. Our selling contract will interest you. Address Albany Nurseries, Inc., Albany, Ore.

SITUATIONS WANTED—MALE 21

YOUNG MAN, EXPERIENCED IN HAND AND machine milking, desires employment on dairy farm. Walter U. Hughes, Almira, Wash.

EDUCATIONAL 45

EARN MONEY QUICKLY—THERE'S NO LIMIT to one's earning capacity in business. And this great business college after training you thoroughly, places you in a paying position. Courses include banking, stenography, accounting, private secretarial. Write for free catalogue. Behnke Walker Business College, Portland, Ore.

FRESH FOOD PRODUCTS 51-1

CANNED SALMON, ALASKA MEDIUM RED fish, 48 one-pound cans, $7.46; 24 cans, $4.66; one sample order, 6 cans, for $1.25; all charges prepaid, check or money order. Pacific Fisheries Exchange, Mutual Life bldg., Seattle.

WHITE ALFALFA, SWEET CLOVER honey; 1 60-lb. can, $7.50; 2 60-lb. cans, $14.50; six 10-lb. cans, $8.50; three No. 10 pails, prepaid third zone, $5.50. Wells D. Rose, Sunnyside, Wash.

SMOKED SALMON, 5-POUND BOX, $1.25; salt salmon bellies, 5 pounds, $1.25, delivered by mail. Coffin Fish Co., Seattle, Wash.

FULL CREAM BRICK CHEESE, DIRECT TO consumer, parcel post, 25c lb., postage added. C. P. Dobler, Menlo, Wash.

WORLD'S BEST CLOVER HONEY, 60 pounds, $6.15; two 60s, $12. Browne, Box 499, Twin Falls, Idaho.

FRESH FRUIT DIRECT—SEND FOR CHERRY price list. Ward K. Richardson, 2393 Front, Salem, Ore.

MISCELLANEOUS—FOR SALE. 60

SASH AND DOORS—O. B. WILLIAMS CO., 1943 First ave., So., Seattle. Chicken house sash, 20" wide by 25" high, 80c; a dozen different sizes in stock for immediate shipment. Skylights for chicken houses, 36"x40" price, glazed, $2. This is the size recommended by the Western Washington experiment station. We carry them in stock for immediate shipment. Sash and doors for all purposes at lowest prices. All orders receive prompt attention. Our large illustrated catalogue No. 35, showing full line of building material and built-in fixtures for the home, free on request. O. B. Williams Co. Established 1899.

QUEEN BEES—INCREASE YOUR HONEY crops by introducing my strain of unsurpassed Italian queens. 1, $1.25; 12, $12.50; 100, $95. Circular free. J. D. Harrah, Freewater, Ore.

HOMESPUN SMOKING TOBACCO, MILD AND mellow; 10 lbs., $1.50; 20 lbs., $2.75; delivery guaranteed. We furnish free recipe for preparing. Smoking Tobacco Exchange, Sedalia, Ky.

NATURAL LEAF TOBACCO—CHEWING, 5 lbs., $1.50; 10 lbs., $2.50; smoking, 5 lbs., $1.25; 10 lbs., $2. Send no money, pay when received. Tobacco Growers' Union, Paducah, Ky.

KENTUCKY TOBACCO—SPECIAL BARGAIN. Send no money, pay for tobacco and postage when received. 10 lbs. 3-year-old smoking, $1. Farmers' Grange, Hawesville, Ky.

BEES—ITALIAN QUEENS. WRITE FOR prices. Ira C. Smith, The Dalles, Ore.

FARMERS' WANT ADS

This is the farmers' "want," "sale" and "exchange" department for small advertisements of farmers, including live stock and poultry.

Advertising rates for ads running 1 to 3 times, 10c per word per insertion, with a special rate to Farmer subscribers, as follows: Ads running 4 to 12 times, 9c per word per insertion; ads running 13 times or more, 8c per word per insertion.

All commercial and land advertising 10 cents per word each insertion. Open also to nonsubscribers.

In using these columns advertisers must observe: (1) No advertisements will be inserted for less than $1.00. (2) Every word, number and initial, including name and address, must be paid for. (3) New advertisements, changes of copy or cancellations must reach general office, Spokane, Wash., 10 days in advance of publication date. (4) Cash must accompany order.

Above rates include insertion in The Washington Farmer, The Idaho Farmer and The Oregon Farmer, which constitute the Pacific Northwest Farm Trio, 46 Review Building, Spokane, Wash.

MISCELLANEOUS—FOR SALE (Continued) 60

SACKS—SECOND-HAND GRAIN AND SPUD, correctly sorted and graded; also pipe, new and second-hand, any size; standard grade roofing paper at a big saving; belting, cable, etc. Alaska Junk Co., S120 Adams st., Spokane, Wn.

WALL BOARD—WRITE FOR SAMPLE OF Washington plaster wall board; won't warp, won't burn. Manufactured by Washington Building Products company, 6851 E. Marginal Way, Seattle, Wash.

TOBACCO—NATURAL LEAF CHEWING AND smoking; rich, ripe, two-year-old; 5 lbs., $1.75; 10 lbs., $3; sample, 20 cts. Maddox Bros., Dept. 30, Mayfield, Ky.

HOMESPUN SMOKING OR CHEWING TOBACCO, collect on delivery; 5 pounds, $1.50; 10 pounds, $2.50; 20 pounds, $4.50. Farmers' Association, Paducah, Ky.

HOMESPUN TOBACCO, 3 POUNDS, $1; 10 pounds, $2.50. Send no money, pay when received. Farmers' association, Jonesboro, Ark.

HOMESPUN CHEWING AND SMOKING TOBACCO; 5 lbs., $1.25; 10 lbs., $2.50; 20 lbs., $4. Hickory Ridge Farms, Mayfield, Ky.

FOR SALE—BEE EQUIPMENT, HIVES, drawn combs, extractor, at Dalkena, Wash. Write H. Sutcliffe, Anaconda, Mont.

TOBACCO—HOMESPUN SMOKING, 10 LBS., $2.50; 20 lbs., $4; fine chewing, 10 lbs., $3. Farmers' club, Mayfield, Ky.

MISCELLANEOUS. 61

BARGAIN IN 32X56 REAR BUFFALO PITTS separator; would consider trade for Ford tractor or one-ton truck. Chas. Fitzgerald, Sequim, Wash.

MISCELLANEOUS—Wanted 63

HIDES—WE BUY HIDES OF ALL KINDS. Write for prices and tags. Hibbard-Stewart Co., Hibbard Bldg., Seattle.

WOOL—WE BUY WOOL AND PELTS. WRITE for prices and tags. Hibbard-Stewart Co., Hibbard bldg., Seattle.

AUCTION SALES 78

80 ACRES, ADJOINING TOWN OF TENSED, Idaho, to be sold at auction same day cattle are sold, June 24th. Terms, one-fifth down, balance five equal payments, 7 per cent. B. R. Svensgaard, owner, Tensed, Idaho. H. C. Cranke, auctioneer.

MACHINERY—For Sale 93

SELF-LAYING TRACK TRACTOR ATTACHment for Fords; does work four horses; closing out while they last, $95 each. Original price, $325. 15 h. p. J. I. Case steam traction engine, first-class shape, $750; easy terms; 15-30 Rumley Oil Pull tractor, fine condition, ready to go, $1000; easy terms. Gallagher Warehouse, Ash and Sinto, Spokane, Wash.

THREE 2-BOTTOM, 16-INCH OLIVER GANGS, new model 19B, steel bottoms; extra shares, quick detachable; $60 each. Ralph W. Snyder, Washtucna, Wash.

EXTRAORDINARY BUYS IN USED COMbines, caterpillars, separators, engines and trucks. Fallquist Brothers, Pullman, Wash.

FAIRBANKS 25 HORSE ENGINE; TYPE N; tanks, pulleys for sale; might trade for car. George Sharp, Ephrata, Wash.

AUTO TRUCKS—For Sale 115

1¾-TON SIGNAL TRUCK AT A BARGAIN price. A. E. Rosenan, Genesee, Idaho.

STOVE REPAIRING 128

WRITE MYER RUBENS, SPOKANE, ABOUT stove repairs, welding broken parts, nickle plating.

FUR-BEARING ANIMALS 170

SILVER AND CROSS FOXES FOR SALE. William Rambo, 407 Sprague, Spokane.

PETS—Dogs, Birds, Etc. 171

IRISH SETTER PUPS, THREE MONTHS OLD; healthy, vigorous; ready for hard work when season opens; females, $12.50; males, $25. H. A. Bushby, Parma, Idaho.

PEDIGREED COLLIE PUPS, PRINCESS COLlie Kennels, 4812-42 Southwest, Seattle, Wn.

FOR SALE—SHEPHERD PUPS; WILL MAKE heelers. A. E. Rosenan, Genesee, Idaho.

RABBITS and HARES 173

PEDIGREED FLEMISH AND CHECKERED Giants. Prices not fancy. Brookside Rabbitry, Hubbard, Ore.

POULTRY 174

SPECIAL SALE WHITE LEGHORNS—INcrease your egg production and add new blood to your flocks. 10,000 pullets and cockerels from trap nested stock, with egg records of from 200 to 333 a year. 2000 one and two year old hens from our famous breeding pens, now laying better than 65 per cent, at one-half price and less. 500 breeding cocks from our pens. Send for price list. Yesterlaid Egg ranch, Kent, Wash. "Home of the 300-egg hen."

WHITE LEGHORN BABY CHIX FOR MAY and June delivery at $12 per 100; $115 per 1000, from flocks inspected and accredited by the Sonoma county farm bureau. Safe arrival of full count, live, strong chix guaranteed The Pioneer Hatchery, 422 Sixth street, Petaluma, Cal.

TRY OUR PARCEL POST PACKAGE—KEEP the old hen busy. We will ship you first-class baby chicks, postpaid to your door, direct from the hatchery and guaranteed all alive. Price, $4.50 per 25; $8 per 50. For delivery April, May or June. Order now. The White Hatchery, Petaluma, Cal.

FRESHLAID JUNE CHICKS—PULLETS. OUR June chicks make winter layers because they have the pep and breeding that counts. $15 100. Freshlaid June chicks have made good for ten years. Big, husky, ten weeks' old pullets, $1.50. $135 per 100. Free catalog. Freshlaid Farm, Colfax, Wash.

THE PROGRESSIVE HATCHERY—2, 3, 4, 5 weeks White Legborn chicks, $20, $22, $25, $28 per 100; from trap nested, pedigreed hens; 200 eggs up. 10 R. I. Red cocks, yearling and 2 years, $10 up. 1534 N. E. 12th., Portland, Ore.

POULTRY (Continued) 174

HENACRES WHITE LEGHORN PULLETS are classed among the best. They are large, healthy, range raised, good looking, bred to lay and are reasonably priced. March hatch, June delivery, $1.75 each; 500 for $850; May 1 hatch, July 1 delivery, $1.50 each; 500 for $700; satisfaction guaranteed or money refunded, including return express charges. Ask your neighbor about Henacres Leghorns. June chicks, 16c each; 500 for $75. Free illustrated catalog. Henacres, Box A, Prosser, Wash.

2000 ONE AND TWO YEAR OLD WHITE Leghorn hens, with records better than 200 eggs. One-year hens, $2 each; two-year hens, $1.50 each. Now laying about 70 per cent. Order quick and send cash with order. F. Leonard, N. Y. block, Seattle, Wash.

PULLETS, BARRED ROCKS, BUFF ORPINGtons, S. C. Reds, ten weeks old, $1 each; Speckled Sussex, $1.25. Satisfaction or refund your money. Parma Heights Poultry Farm. H. A. Bushby, Parma, Idaho.

BABY CHICKS — WE GUARANTEE OUR chicks to be from the highest producing hens in Petaluma. Write for further information. The White Hatchery, Petaluma, Cal.

DOLLARS FOR YOUR EGGS—WE PAY THE top market prices for your eggs and poultry. Daily cash remittances. Western Produce Co., Spokane.

S. C. ANCONAS, SHEPPARD'S SELECT AND 331 egg strain; eggs, $1.75 per 15; chicks, $18 per hundred. A. B. Larson, Warren, Ore.

BUFF LEGHORN EGGS, CHIX AND STOCK—My strain is proven champions for exhibition and laying. R. Stromquist, Tigard, Ore.

SPECKLED SUSSEX BREEDING STOCK; special low price to make room for growing stock. H. A. Bushby, Parma, Idaho.

FANCY WHITE WYANDOTTE COCKERELS, $2.50; hatching eggs, two dollars setting. H. L. Lamon, American Falls, Idaho.

FORD'S BRED TO LAY S. C. WHITE LEGhorns; 2-year-old breeding hens, $1 each. W. A. Ford, Umatilla, Ore.

LIGHT BRAHMAS, EGGS, $1.75 PER 15; Bronze turkey eggs, $3.50 for 10. Mrs. C. W. Laabs, Irby, Wash.

LIGHT BRAHMA EGGS, $1.50 PER 15. DALton Poultry Farm, Coeur d'Alene, Idaho.

LIVE STOCK. 177

LARGE, HEAVY PRODUCING HOLSTEINS for sale at all times in car lots; tuberculin tested; 150 to 200 head always on hand; well marked heifer calves from registered sires and heavy producing dams; crated for shipment anywhere, $25 f. o. b. Levinson & Balmelli, Yakima, Wash.

SHIP US YOUR POULTRY AND LIVE STOCK. We pay the top market prices. Light veal, fat, fancy, 12½c; dressed block hogs, 14c; hens, light, 17c; heavy, 19c. Prompt returns. John Lewis & Co., Spokane, Wash.

WE PAY TOP PRICES FOR YOUR LIVE OR dressed veal, hogs and poultry. Your check by return mail. Shipping tags on request. M. & J. Packing Co., Spokane.

BERKSHIRES—GILTS, YEARLING BOAR grand champion, 1921. Sure breeder. Simonson Hog Co., Buena, Wash.

FRESH MILCH GOATS AND KIDS; PURE bred Saanen buck. Mamie Rand, E1024 Decatur, Spokane, Wash.

REGISTERED TOGGENBURG MILCH GOATS. Edwin Pritchett, Route 1, Box 287, Long Beach, Cal.

SHETLAND PONIES PRICED REASONABLE. Ship anywhere. C. C. Calkins, Heppner, Ore.

POLAND CHINAS, PEDIGREED PIGS, $12. Cloverdale Ranch, Orient, Wash.

HARNESS and SADDLERY 189

SEND FOR FREE HARNESS AND SADDLE catalog today; cut out the middleman, buy direct from the manufacturer. Lowest prices in the west; satisfaction guaranteed. Established 1881. Write Pierce Harness Co., Dept. T, Spokane, Wash.

JOB PRINTING. 372

GUARANTEED BETTER BUTTER WRAPpers; 100, 60c; 250, $1.25; 500, $2.25; 1000, $4; printed to order. Home Specialty Co., Middleton, Idaho.

KODAK FILM DEVELOPING 472

SEND US 15C AND ROLL FILMS. WE WILL develop and include six velvet prints. Texo Laboratories, 4444 52 street, South East, Portland, Ore.

MONUMENTS. 510

COMPLETE STOCK, RIGHT PRICES. CORrespondence solicited. J. W. Harding, Inland Monument Co., N1001 Monroe, Spokane.

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TURNS PLASTERING INTO PLAY—PERFECtion plaster wallboard can be nailed on just like lumber, and makes a perfect plaster job. Western Wallboard Co., Seattle, Wash.

NURSERY STOCK. 621

WANTED—2500 BARCELONA AND 500 DU Chilly filbert trees; must be true to name. Villa Nurseries, Portland, Ore. Route 1.

FARM LANDS FOR SALE. 651

CUTOVER LANDS, EASY TO CLEAR; $8 TO $20 per acre; 25 miles north of Spokane; on hard surfaced highway; Great Northern and Milwaukee railways; excellent opportunity for dairying and stock raising with Spokane markets and creamery near at hand. Will help the man who will live upon this land and agree to clear a part each year by giving lumber to help start his buildings, and a pure-bred Jersey bull to groups of farmers. Interest and payments low. Write Milan Farms Development company, Dept. T, Old National Bank bldg., Spokane, Wash.

BIG OPENING SALE OF YAKIMA VALLEY farmland, under an assessed state and government approved irrigation project; good, deep soil; close to town, railroads and state highway. We sell in tracts to suit purchaser at $25 per acre and up, on easy terms. Our many sales to farmers show that this land is a good investment. Western Lands, Inc., owners, 918 Green bldg., Seattle.

FARM LANDS FOR SALE (Continued) 651

BITTER ROOT VALLEY, MONTANA, WANTS you! Many unusual farming conditions make this valley prosperous; small irrigated farms, devoted to dairying, fruit growing, poultry, strawberries, potatoes, seed peas, garden truck pay well in the Bitter Root. Write for free booklet No. 6. It tells about a mighty good place to live, a valley "where farming is different." The Bartlett-Bolen Co., Hamilton, Montana.

EQUIPPED STOCK OR DAIRY RANCH; 400 acres, half river bottom; 135 in crops, mostly alfalfa; grows three crops; owns ditch; unlimited free water rights; best and most extensive range; close to town; big stone house; every kind outbuilding; lots personal property; will feed 500 cattle. Come, look it over, $25,000, good terms. $5000 cash. Four-Site Sales Agency, Medford, Ore.

MUNICIPAL LANDS FOR SALE BY THE DISTRICT; no agents, no commission; interested only in getting home builders on the project. Longest growing season in the northwest. Gardens and fruits thrive; schools, highways and railroads the best. Junction Snake and Columbia rivers. Write for terms and folder. Address Burbank Irrigation district No. 4, Burbank, Wash.

THURSTON COUNTY—5000 ACRES, VERY fertile, level; fruit, berry and poultry lands; right at beautiful state capital. No extremes of temperature; no storms or floods, no irrigation; bumper crops; fine markets. 5 or 10 acre tracts; low prices and long term payments. Send for our valuable pictorial booklet. Norpia Realty Corporation, Olympia, Wash.

WE SELL FORECLOSED LANDS FOR A loan company for one-third cash, balance easy terms. When writing tell us what you want, where preferred, how much you will invest, kind of farming you contemplate, as we have no list and must write special description in each case. No trades. Hartford Land company, 601 Paulsen bldg., Spokane, Wash.

FOR SALE—IDEAL STOCK AND DAIRY ranch; 120 acres; 9 miles south of Cottage Grove; 3 miles north of London; on good county road; good neighborhood; good house, two barns, family orchard, running water; 30 acres in crop; more land easily cleared. Price $9000, including stock and farm implements. O. P. Wills, Cottage Grove, London Rt., Ore.

174 ACRES, ON KOOTENAI RIVER AND Great Northern; 94 bottom, 8 pasture, 18 fenced and cross-fenced; 3 plowed, 15 ready; ½ acre fruit, 4 cabins, team, harness, wagon, plow, harrow, tools, etc.; 2000 ft. lumber, 14 bales roofing, 6 windows, fine cattle or chicken ranch; fine government range. $4000. Chas. R. Scholz, owner, Ural, Mont.

80-ACRE FARM, 17 MILES PORTLAND; ONE mile Wilsonville; 75 acres cultivation; good buildings; abundance water; $200 per acre, or $225, including machinery, stock and crop. Henry Raymond, Route 5, Sherwood, Ore.

70 ACRES OF RIVER BOTTOM LAND, 11 head of stock, farm implements; 25 acres in crop; 3 acres potatoes; lots of fruit and berries; 2 sets of buildings. $7000, half cash. Owner, David McMullen, Mist, Ore.

I HAVE FOR SALE SOME OF THE BEST general stock ranches in Eastern Oregon; best 860 acres, right against range; water, wood, fair bldgs, $17.50 per acre; terms. Othera B. G. Bailey, Elgin, Ore.

320 ACRES GOOD SOIL; 72 WHEAT; HORSES, and machinery; actual cash value, $10,000, will sell all for $5500; terms. For particulars write Dennis Ravary, Foremost, Alta., Canada.

STOCK RANCH FOR SALE—844 A.; 4-WIRE fence; cross-fenced; buildings, corrals, nearly new depot, P. O. on ground; forty miles south of Tacoma. N. W. Everts, McIntosh, Wash.

160-ACRE HIGH GRADE DAIRY; FINE buildings; $25,500; cash $10,000; good terms, 5 per cent. Particulars, write Frank Marquardt, Route 2, Lebanon, Ore.

SELL YOUR PROPERTY QUICKLY FOR cash; no matter where located. Particulars free. Real Estate Salesman company, 501 Brownell, Lincoln, Neb.

FORTY ACRES TIMBER, TWENTY MILES Lewiston, Idaho; well watered; school two miles; two acres meadow; easy terms. Box 43, Harrison, Idaho.

BEAUTIFULLY LOCATED, WELL EQUIPPED, prosperous ten-acre poultry farm. $12,000; $5000 cash. A. P. Rushton, owner, Southworth, Wash.

120 ACRES, HALF CULTIVATION; BERRIES; good buildings; school on place; half mile to church. $16,000. F. F. Tooze, owner, Sherwood, Ore.

32-ACRE POULTRY-BERRY RANCH FOR sale cheap; 1800 feet beach; Puget Sound. Particulars from owner, Charles Engel, Yoman, Wash.

40 ACRES OF UNIMPROVED NEHALEM VALley land; 3 miles from town; on county road. $12.50 per acre. Owner, John Bachmann, Mist, Ore.

A. F. HORTON, NEWPORT, WASH.—TIMber products, cutover lands, $5 to $15 per acre. Good roads, schools, fine mountain water.

98-ACRE FARM FOR SALE; WELL IMproved; running water; near town, churches and high school. J. W. Sprenger, Shedd, Ore.

FOR SALE—75-ACRE POULTRY AND DAIRY farm; on highway; improved; under irrigation. Write Percy Dixon, Klamath Falls, Ore.

¼ SECTION TIMBER LAND; IN LAUREL, Wash.; must be cash deal. C. H. Abelson, Route 7, Idaho Falls, Idaho.

160 ACRES, CROP, STOCK, MACHINERY; $2000 will handle. Anton Branner, Bossburg, Wash.

FARM LANDS—Wanted 654

WILL EXCHANGE CLEAR SEATTLE AND Sound property for equity in good wheat lands. Walthew, 4329 1st Northeast, Seattle.

IRRIGATED LANDS—For Sale 663

50-ACRE IRRIGATED DAIRY FARM; SIX-room dwelling, new barn; thirty acres cropped, balance pasture; eleven cows, team, machinery; living stream; driven well; quick sale price. Thos. G. Mortland, Sequim, Wash.

71½ ACRES, IRRIGATED; NEW HOUSE, well; some alfalfa; 2½ miles from town; terms. E. Wagoner, Prineville, Ore.

FOR SALE OR EXCHANGE 702

81-ROOM BUSINESS BLOCK, CITY; INCOME $931 monthly. Price $70,000. Will consider farm, $40,000; $20,000 cash. What have you? Briscoe Realty Co., Lindelle bldg., Spokane.

FOR SALE OR TRADE—NEHALEM VALley; 320 acres. Owner, Box 32, Birkenfeld, Ore.

TO EXCHANGE—Real Estate 705

FOR TRADE—STOCK OF GENERAL MERchandise; in Fairport, Cal.; will invoice about $4000; building, 2 lots, small garage; worth $3500; want alfalfa or fruit ranch. Address Postmaster, Fairport, Cal.

Railroads and the Stock Industries

(Continued from page three.)

way officials and then to the railroad commission and ask and demand a lower rate. I'll act as one, if you wish. This is the only way to get action.

Passing resolutions by associations will never get us anywhere. Act and I am sure you will never regret it.

JAS. H. M'CROSKEY.

Sprague, Wash.

ONE-WAY FARE FOR EXHIBITS AT FAIRS

Dr. S. B. Nelson, dean and director of the extension service of the State College of Washington, whose heart and soul is in the work of improving live stock throughout the state, writes:

To the Editor of The Washington Farmer: I have your letter of May 30, to which is attached letter from A. J. Coulter.

For many, many years the live stock men of the state of Washington have been diligent in trying to obtain concessions from the railways in the matter of freight and express returns on purebred breeding animals. Up to the present time they have been unsuccessful in this. The best that they have been able to obtain has been a one-way fare for the round trip where they make exhibits and the animals are returned to the farm.

The State College of Washington, through its extension service, would be more than glad to do everything in its power which would reflect to the advantage of not only the dairy industry, but the live stock industry, as well, not alone through better breeding, feeding and management, but also, if possible, in obtaining concessions in transportation charges.

Pullman, Wash. S. B. NELSON.

BELIEVE RAILROADS POWERLESS UNDER LAW

No one takes a deeper interest in the agricultural development of the state than W. H. Paulhamus of Puyallup. He knows live stock as well as berries. In his answer Mr. Paulhamus says:

Mr. Coulter's suggestion appeals to every red-blooded citizen, but I doubt the advisability of asking the transportation companies to haul such animals free of charge, as it opens the door for exceedingly bad practice. I would suggest that the commercial clubs of various communities would be delighted to help finance meritorious propositions provided, upon investigation, they proved of merit.

A. L. Rogers of Waterville has been foremost in doing constructive work along all agricultural lines in the state. Following is an extract from his letter:

I have not taken active interest in outside matters for some time. There has been so much demand for all my energies right here at home in Douglas county. Replying to Mr. A. J. Coulter's letter, would state that railroads are not philanthropists, nor can they expect to be and pay dividends to their stockholders. Nevertheless, I have always found them willing to do their part when it is put up to them in a business way.

John A. Gellatly of Wenatchee, who has not hesitated to throw himself into the brunt of the fight, especially along the lines of irrigation development, says:

Most every industry and most every new district is held back for the want of similar assistance, and while I agree that this is a most worthy place for some one to give assistance, I do not see where the railroad company could be asked to do this unless they adopt a like policy in all of the districts where they will be directly benefited if they will help develop. It would pay the state or the government to see that every pioneer district is given the assistance it merits, but so far we have not done much along that line. We have all had to lift ourselves by the bootstraps, so to speak, and in many instances it has been a slow process.

Just Folks

Sometimes it seems to me that the specialist has become the supreme idol of modern civilization. It is easy for specialism to become idolatry in these days. We surrender body, soul and spirit to the specialist. The specialist in fashion imperiously dictates the style of the clothes we wear. The specialist in food becomes the autocrat of our diet. The specialist in education dominates our schools and it is the specialist in religious thought who carries the farthest.

Uncontrolled specialism runs amuck. Specialism is a two-edged sword. The specialist, whose chief aim is to climb higher and higher on the narrowing spiral stairway of his specialty, sooner or later topples over. He has neglected to broaden the base of his structure as he has sought record heights.

Wheat is regarded as the staff of life. Our specialists have been at work on wheat. Patent flour is the result of years of work of one specialist after another, of many combined specialists. Now we have bread of the finest texture. Other specialists come along and tell us that this finest of flour, producing the finest texture bread, is dangerous to health; that we must eat coarser wheat flour, graham flour and even bran to compensate for the necessary qualities which have been taken out of the wheat in the manufacture of flour.

We are more than apt to forget this idea of compensation, listen to the bran specialist and cast aside the use of flour. Coarse cereal food undoubtedly has its dietary use, but there are those who told us during the World war that the overbalanced use of these coarser cereals irritated and harmed the digestive organs.

Meat specialism has its danger point, fruit specialism has its danger point, cereal specialism has its danger point and it is a puzzle for the ordinary man to counteract the harmful effects of one specialism with another specialism.

We have specialists in drugs and drugless specialists. The medical fraternity is more and more given to differentiating the body and creating a specialist for every differentiation.

The time is rapidly approaching when we need another important kind of specialists—those who will tell us when to go to specialists and when to leave them alone and let nature do her best; when to use home remedies and when to ask for specialized medical prescriptions.

All idolatry costs money—big money. The devotee is peculiarly susceptible to pecuniary solicitation. The more different kinds of specialists there are the greater is the total cost of specialism. So great has this now become that those who can well afford to employ specialists are being more and more reduced to two great classes—the rich, who can pay, and the poor, who can not pay. The great middle class is struggling mightily to save itself from being ground between the upper and the under millstones of specialism.

But specialism is not confined to the medical fraternity by any means. The courts have become greatly specialized institutions, so have county, state and national governments. Look at the specialism running through the army and navy! Look at the specialism running through our transportation system, from dining and sleeping coaches to magnificently appointed railway stations! Take the telephone and telegraph, the auto and the thousand and one specialized agencies and conveniences of modern life—are they growing any less expensive in their total demands upon the people?

You say these things are necessary, are signs of progress, are the things which put us far ahead of all the generations which have gone before us; that specialism has made possible to the common people innumerable blessings of which former generations knew nothing. There is no disposition here to argue the question. Let it all be granted, and yet, has that old rule of life been successfully thrown into the discard, that old and simple statement: "Man's life consisteth not in the abundance of the things which he possesseth"?

In these days it certainly demands an abundance of possessions to meet the calls made by specialists.

TARIFF ON IMPORTED SEED.

Skagit county seed growers, who produce more than 80 per cent of the cabbage seed stock of this country as well as a number of other varieties of seed, have been advised by Senator Poindexter that the old tariff charge of 12 per cent on imported seeds will undoubtedly be carried under the new bill.

CANNING SPINACH AT YAKIMA.

It is expected that 400 tons of spinach will be canned in Yakima this year.

Watch for the announcement in next week's issue of The Farmer of another rattling good serial story by Lewis B. Miller, the author of "The Crooked Trail," "Trappers of the Ozarks" and "Big Smoke Mountain."

In writing advertisers, be sure to say you saw their advertisement in The Washington Farmer.

Send No Money

Rare Value Send Quick!

for this Richly Embroidered Ramie Linene SUIT-DRESS



You simply must see this fetching frock—a combination of sleeveless dress and suit at a price that positively defies all competition. Don't send one cent—just coupon brings it for approval. If not amazed at the value and delighted with the style, return dress and you aren't out a penny.

$2.98

Cool, practical Ramie Linene cloth which launders splendidly. Note the swagger model of coat with full length lapels and cuffs of sleeves elaborately embroidered in white. Coat has self-material sash belt as pictured. Skirt of dress encircled with wide band of embroidery to match coat. Sizes, 16 to 46 for misses and women.

Order Harding Blue by No. 3FE6382. Rose by No. 3FE6383. State size wanted.

Act Today! Yes, hurry your order, while stock lasts. Remember, no money now—just the coupon with name and address. When dress arrives, pay bargain price, $2.98, and postage. If not satisfactory, simply return dress and we will refund your money. Send quick!

SHAROOD CO., Dept. 3F Minneapolis, Minn.

Send the beautiful Ramie Linene Suit-Dress marked X in ☐ below. I will pay $2.98 and postage on arrival; it being understood that if not satisfied, I can return dress and you will refund my money.

☐ 3FE6382 Blue ☐ 3FE6383 Rose Size.....

Name.....

Address.....

Keep Posted on Prices Through Advertising

You will have a better idea of the prices you should pay for merchandise if you carefully read the advertisements in this magazine and also write the advertisers for the catalogues and circulars which they offer free.

Moreover, you will find in the long run, that advertised merchandise, quality considered, costs you less than unknown brands.

For these reasons it pays you in dollars and cents to read the advertisements regularly; and in addition they keep you informed regarding many important developments and improvements in manufactured goods.

In dealing with our advertisers you are protected by our guarantee, but we request that in writing them for literature or to place an order, you mention The Washington Farmer.

GMC

More Speed and 30 Per Cent More Pull

There are sound reasons why the G. M. C. Truck, with its tremendous stability, flexibility, power and endurance, is the first choice of thousands of growers and farmers. One reason is

Two-Range Transmission

You will appreciate at once what a wonderful advantage it is to have a truck that will literally go anywhere a team can go; a truck with such extremely low gear ratio that you can haul the heaviest loads out of the field, yet with such extremely high gear ratio that it will take the load flying along the highway.

G. M. C. two-range transmission does this. It isn't complicated. It is simple. Easy to operate. One range-lever controls two distinct driving ranges, each with four forward speeds and reverse, each with the high speed a direct drive. Economical high-speed operation for the 96% of your work that requires it; yet, instantly ready, 30% super power for the other 4% of your work.

Think what an advantage this one feature gives you. Yet it is only one of the big features of the G. M. C.

Standard Parts and State-Wide Service Through Local Representatives Go With G. M. C. Models and Prices Delivered, State of Washington Points

War Tax NOT Included

K-16, 1-ton, $1520 K-71, 3½-ton, $4050
K-41, 2-ton, $4700 K-101, 5-ton, $4475
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ELDRIDGE Buick SALES CO

NORTHWEST DISTRIBUTORS

SEATTLE

GENERAL MOTORS TRUCKS

In writing advertisers, be sure to say you saw their advertisement in The Washington Farmer.

Asotin Crop Prospects

Asotin county in general, and Clarkston and Asotin and surrounding districts in particular, are enjoying bright prospects for bounteous crops of grain, potatoes and fruits.

While the hard freeze of early May cut the fruit crop badly and reduced the yield from 25 to 50 per cent in some sections, there will be a fairly good crop of most varieties of fruit and the quality has never been better. Strawberries will be at least 75 per cent of a normal yield, with quality never excelled, if ever equaled, in the history of the district.

While prices are not as high as growers expected, the crop will bring in many thousands of dollars to the district. The local demand is heavy and fair prices are being obtained.

Scores of automobiles from the surrounding country visit Asotin and Clarkston daily and take back loads of strawberries to be canned. Ranchers from the Palouse, Potlatch and Camas Prairie districts and from the farming sections of southern and western Asotin county are buying heavily and great truck loads go daily to surrounding towns.

It is believed that the sweet cherry crop will be at least 75 per cent of normal and the quality promises to be unusually good. The trees are not heavily loaded with fruit and the smaller yield means better quality. Cherries are ripening rapidly, although retarded somewhat by the recent rains, and the harvest will begin as soon as the principal strawberry season is over. But as many growers raise the everbearing strawberries, this fruit will be on the market until frost comes next fall. The cherry crop will add thousands of dollars to the receipts of orchard owners in the district this year.

There is a considerable acreage of head lettuce which is now beginning to be marketed. The quality is excellent and the yield good. The season has been unusually favorable for head lettuce and good prices are expected. While the industry is yet in its infancy, it is believed it will become a permanent and profitable addition to the gardening and fruit growing of this section.

Clarkston is growing more rapidly this year than at any time since the war began. Building operations which were practically at a standstill during and after the war, have been resumed. Scores of new homes, many of them costing well into thousands of dollars, are being built, while good homes of lesser cost are springing up everywhere. The "Own your home" campaign, started here some time ago, is bearing fruit. It is believed that several hundred new homes in the town and on nearby orchard or garden tracts will be erected this year. Some good barns and poultry houses have been built and others are contemplated.

Clarkston and the Vineland district are getting down to real business in diversifying and poultry and dairying are being added to the fruit growing and gardening that have proved so successful in past years. Poultry raising is becoming an important industry here and there are a number of large poultry yards where egg production has been reduced to a science and purebred birds of high-laying records are being used exclusively. It has been found that poultry raising can be successfully carried on in connection with garden and fruit and this discovery is being utilized to add to the profits of gardeners and fruit growers.

Taken as a whole Clarkston and Asotin and the intervening and surrounding territory are enjoying greater prosperity and have brighter prospects for the future than at any time since the World war began and optimism is manifested everywhere among farmers, business men, fruit growers, gardeners and dairymen.

The grain-growing sections of the county are faring better than many parts of the wheat belt, and estimates of the 1922 crop vary from 70 to 90 per cent of a normal yield. The outlook was not encouraging during the early part of the season, but rains in the first half of June have added much to the prospects and give assurances of a good yield of fine quality grain in many parts of the county.

The live stock industry also shows improvement. There are not many sheep in Asotin county, but there are some, and sheep owners are jubilant over present conditions and future prospects. The hog industry is showing marked improvement and, while there is a shortage of hogs, the present high prices and prospects for future high prices are encouraging, while labor and feed costs have been greatly reduced. Those who have hogs feel that they are certain to make good profits this year and those who are short of hogs are striving to increase the number on their farms and, as hogs increase rapidly, the shortage will probably be overcome within a year.

Beef and dairy cattle also show improved conditions. There is an increased interest in dairying and fairly good prices for dairy products, combined with reduced cost of production, is helping the industry. More people are engaged in this industry than ever before. The beef cattle industry does not show as marked improvement as the others, but it shows improvement and the outlook is regarded as encouraging.

Public Market, Walla Walla

Walla Walla is to have a public market where farmers, fruit growers, market gardeners and poultrymen may dispose of their products direct to the consumers.

The market will be operated under the auspices and supervision of the farm bureau, which has completed arrangements and organized a corporation with a capital stock of $25,000 to build and equip the market. It is planned to rent stalls to merchants who may want room in the market.

A committee, composed of Milo McIvor, assistant county agent; G. W. Webber, J. D. Tuke and Harry Riffle, has the matter in charge. It is planned to have the market ready for occupancy within a few weeks, possibly by the time the fall fruit crop is ready to harvest.

The market will be patterned after the markets in other towns and cities. The committee which investigated markets was much pleased with the one at Eugene, Ore., and the Walla Walla market will be quite similar.

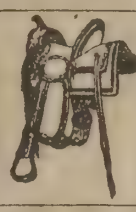
Thinning Demonstrations

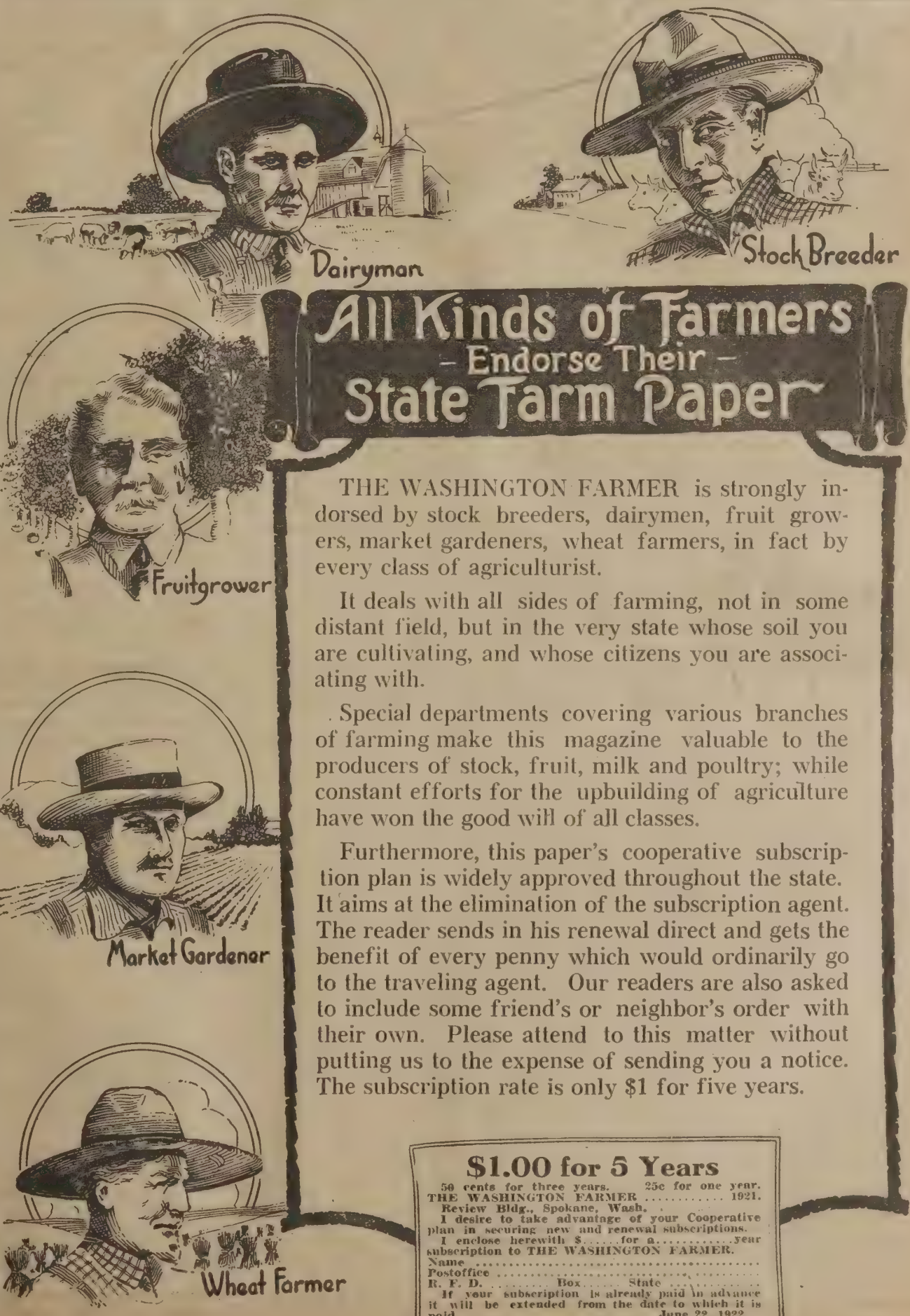
A series of thinning demonstrations has been carried on recently in the fruit growing districts of Yakima county by E. G. Wood, extension horticultural specialist of the state college. "Although there are a few varieties that have a light crop of fruit, the thinning should be carried out," said Mr. Wood. "Even on the trees where only one or two limbs have a crop, the apples should be thinned. The limbs seem to work as separate units and will produce no bigger apples than if the tree were loaded. This has been proven by experimentation and we know that it is true."

In some of the orchards the trees being thinned are to be checked over in the fall when the crop is harvested and the thinned trees compared with an occasional tree that was left without being thinned. The crops will be compared for size and value of the crop. This will demonstrate in dollars and cents the actual value of thinning.

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CHAPTER XXVIII.

Trowbridge & Gray, Traders.

At the end of a week, when the supply of provisions which the trappers had brought with them was running low, Shad suggested that he was quite able to make the journey to the river tilt. His knee was now so far improved that it caused him but slight inconvenience to walk, and he was rapidly regaining strength.

He was anxious indeed to return to the tilt. He thought of it much as one thinks of home, and the thought carried with it visions of rest and comfort. The others could ill afford a longer absence from their trails, and it was, therefore, with a sense of deep satisfaction to all that the camp on the shore of the Great lake was broken.

Traveling slowly, with Shad following in the well-packed trail which the others made, they arrived at their destination on an afternoon five days later, and were welcomed by Bill Campbell and Mookoomahn.

How deeply or how lightly Mookoomahn felt when he learned of Manikawan's death, none knew. He listened in stoical silence while Bob related to him in detail the circumstances of her going and the subsequent happenings in the lodge and in the camp at the Great lake, but throughout the recital Mookoomahn made no comments, and his countenance betrayed nothing of his sensations.

Mookoomahn was recovering rapidly. He was passing, indeed, quite beyond Bill Campbell's control, and not satisfied now with the limited portions of food which Bill, religiously adhering to the advice he had received from Dick Blake and Ed Matheson, doled out to him, he had the day before the return of the travelers stolen away to the willows along the river bank below the tilt, killed some ptarmigans on his own account and gorged himself upon the flesh to his temporary satisfaction, but nature balanced her account with him in the hours of subsequent agony which he suffered for his indiscretion.

Fully a month elapsed after their return before Shad could eat a meal with any assurance that it would not be followed by distress. His normal appetite, however, had begun to return before they broke camp on the Great lake, and had quickly developed into a highly abnormal appetite.

No sooner was one meal finished than his mind was centered upon the next. At night his last thought was his next morning's breakfast, and when he awoke breakfast was still on his mind. Eating during this period of recuperation was to him the all-important object in life.

It was nearly a month after his return to the river tilt that Shad first learned of Bob's loss of fortune. It was upon the occasion of the fortnightly rendezvous, when Ed Matheson remarked:

"Th' next round's about th' last we can make. Th' fur's 'most too poor t' take, now, an' when I comes back I'll strike up my traps. An' it's been a wonderful poor hunt."

"Aye, wonderful poor, an' wonderful disappointin'," sighed Bob.

"Th' worst I ever see," continued Ed. "If 'tweren't for you, Bob, clearin' Dick's an' my old debts, we'd be in a bad way gettin' next fall's debt from th' company. An' now your losin' all your money, th' bad furrin' comes hard on you—wonderful hard. I'm fearin' th' new debt we'll all have t' start off next season with'll be a big un."

"What money did you lose, Bob? I hadn't heard of it," asked Shad, as Ed passed out of the tilt to join Dick and Bill, who were cleaning the snow from the roof of the tilt in anticipation of an early thaw.

"Th' money I has in th' bank t' St. Johns," explained Bob. "When Ed comes back from th' bay he brings me a letter from mother sayin' th' bank broke an' th' money's gone."

"That bad!" Shad sympathized. "How much was there?"

"About $12,000. But 'tain't so bad. We has th' traps, an' th' new trails laid."

"But that was the capital you were t' begin trading on?"

"Aye, but we'll have t' give th' tradin up now. I'm thinkin' th' Lard weren't wantin' us t' go tradin' or t' have th' money, an' I'm not complainin', though I were wonderful disappointed when I hears of un first."

Shad asked many questions, in the course of which he drew from Bob a description of the air castles which Bob had been building, and which had been so unceremoniously knocked down about his ears by his mother's letter; of the poverty-stricken condition of the bay folk, which Bob in his big-hearted and youthful enthusiasm had hoped to relieve, and of many other things which he had planned to do with his fortune.

Though all this was of the past, and of little importance now, he had intended to keep it a secret. But he and Shad had grown very close together, and somehow Shad had a way of drawing from him even his most sacred thoughts—and before Bob realized it he had bared his heart to his friend.

"An' I were thinkin'," said Bob, after the sum total of his shattered plans had been disclosed, "when we was up on th' Great lake, what a rare fine thing 'twould ha' been for the Injuns, if I hadn't ha' lost th' money, t' make a tradin' station an' a cache o' grub up th' other end o' th' Great lake—70 or 80 miles in from where Manikawan dies— so when another bad year comes th' Injuns down that way could get grub t' carry un out t' th' Ungava post. If they'd been a cache there this winter Manikawan wouldn't ha' died, an' a lot o th' other poor Injuns as must ha' died would ha' got out."

"That's so," agreed Shad. "What an amount of suffering it would have saved! And the poor little Indian girl wouldn't have been sacrificed."

The others returned at this point, and conversation drifted into other channels—the striking up of the traps—the probability of an early break-up—the hard times that the present season's failure was certain to cause among the people of the bay.

"Bob, if you're going to strike up and make this next trip your last one of the season I'm going over the trail with you," said Shad, the following day. "I want to see again the trail I helped you lay, and the tilts we built together. It seems a long while ago, and the memory of it is already a pleasant one."

So on Monday morning they started on the last round of traps for the season. The days were long now, and the sun was still high when they reached the tilt on the first lake—the tilt where Manikawan had found Bob's rifle, and the first of the series of tilts Bob and Shad had built.

They cooked and ate their supper, and then lounged back upon their bunks to chat of their first exploration of the trail, their visit to the falls and of Manikawan's unexpected appearance when they were on the island.

Finally they lapsed into silence, Shad sitting on the edge of his bunk, his elbows on his knees and his chin in his palms; Bob lying back, his hands folded under his head, his eyes studying the ceiling, but his thoughts far away with the loved ones at home and with Emily at school.

Suddenly Shad broke the silence and Bob's thought with the question:

"How would you like me for a partner, Bob?"

"A trappin' partner, Shad? 'Twould be fine, now!" exclaimed Bob, coming back to himself and his surroundings. "But I was thinkin' you'd be weary o' th' trails, Shad, after what you've been through."

"No, Bob, a trading partner," and Shad sat up. "You were going into business, Bob, but your loss, you tell me, has made it impossible, because you have no capital. I'd like to be let in on your plans, for they appeal to me. Such a trading operation as you outlined to me should prove not only profitable, but at the same time would be a practical method of relieving a vast amount of suffering. It would give the bay people independence and bring them a good many comforts of life they've never enjoyed.

"And if your suggestion were carried out to establish two or three trading stations with provision caches attached, up here in the Indian hunting country, there could be no repetition of this year's horrible experience.

"Now, Bob, you know the people and their needs, and you're an expert in judging furs, but you haven't the funds to carry out your plan. I don't know much about these things, but I have the funds. Let's come together—your experience and knowledge against my cash—and form a partnership. What do you say?"

"Oh, Shad! 'Twould be—'twould be th' grandest thing in th' world, Shad!" and Bob's face flushed with excitement; and then suddenly, he continued: "But I



"How would you like me for a partner, Bob?"

couldn't do it, Shad. 'Twouldn't be fair for me t' be partners, for I hasn't any money t' put in for a share."

"Don't be foolish, now, Bob. Don't talk nonsense. Money without a knowledge of the people and their needs isn't enough. I haven't the knowledge, and I'd make a failure of it alone. But with your knowledge and my money we'd be successful.

"You've said a good many times that things don't happen by chance, but are brought about by the direction of the Lord, haven't you, Bob?" asked Shad.

"Aye, 'tis th' Lard brings things t' happen," admitted Bob.

"Now, Bob, listen to me. I came here in the first place just to enjoy a pleasant summer's outing. Pleasure and good times were all I ever thought of, and I knew nothing of life or life's higher motives. I doubt if I could have earned my own bread if I had been turned loose in the world empty-handed, because I hadn't the power or patience to stick to a thing or to face discouraging conditions for any length of time.

"I did not know the meaning of the word toil; I did not know what privation meant, or the suffering that comes through privation. I had always had whatsoever my fancy craved, and had never known want or disappointment.

"Here in your country, Bob, I have experienced toil. I have been tried out in the furnace fire of physical suffering and mental agony, and I have learned what sympathy means.

"I am living today only because Manikawan, an Indian girl, made it possible by the sacrifice of her own life for me to live. I'd have given up and thrown myself down in the snow to die a hundred times but for the encouragement she gave me to keep going, for I was constantly possessed of a desire to seek the rest and peace of death. And those poor Indians shared with me, Bob, the little they had, when they might easily have left me to perish.

"Do you know, Bob, there has not been a night since she died that I have not dreamed of Manikawan? She seems to say to me: 'I gave my life for yours. Go forth and make your life useful—offer a helping hand to others. It is in your power to guard my people from starvation.' So, Bob, I've got to do it if I am ever to have peace of mind, and you've got to help me.

"Do you think that these things just happened, Bob? Or were they brought about by divine direction? Don't you think that this combination of incidents points out to us our life work? Don't you think they suggest that we are to unite our talents and so use them that we shall not only help ourselves, but help others? Come, Bob, what do you say?"

For a moment Bob did not speak, and when he did his voice betrayed deep emotion.

"Th' way you puts un, Shad, I'm thinkin', now, you'm right. 'Tis th' Lard's way o' bringin' things about. You'm wonderful good, Shad, t' think o' me for a partner, an' I'll be wonderful proud t' be partners with you, Shad."

"That's the way to talk, old man!" exclaimed Shad, grasping Bob's hand.

"I'm not' knowin' how to thank you, Shad," replied Bob, his heart overflowing.

"That feeling is reciprocated, Bob, so we won't either of us thank the other. Now we've agreed to our partnership, we'll have plenty of time to arrange the details of our business before we go to the bay, and then I think you'll have to make a trip to St. Johns or Boston with me to have the copartnership agreement drawn and executed in proper legal form."

Shad explained to Bob that at the time of his birth his grandfather set aside $100,000 to be held in trust for his benefit. It was provided that the income of this trust fund was to be paid to his guardian annually, upon his birthday, to be applied to his immediate needs, or to constitute an annual allowance of spending money, until he attained his majority, when he was to receive the principal.

"But I've never spend any of grandfather's allowance," said Shad. "Father got me everything I needed and kept me supplied with spending money, and every year when the income from the trust fund came in father bought government bonds with it and placed the bonds in a safety deposit vault for me.

"These bonds amount to more than the principal of the trust fund now—I don't know just how much, but I know there's considerably more than $100,000, for they have been earning interest all these years.

"This money is mine to use as I see fit, and I'm going to invest $100,000 of it in our partnership and hold the balance as a reserve. Of course my sister will have to act for me until I'm of age. She's 10 years older than I am, and has been my guardian since father died. She'll not object, for she has a great deal of confidence in my judgment.

"When father died, nearly three years ago, he left me a snug fortune, and I have plenty to live on even if our trading venture doesn't prove a money-making business at first."

"'Tis a wonderful lot o' money!" declared Bob. "More'n I can think!"

"We'll need a pretty fair capital to succeed," said Shad. "We'll have to purchase a vessel of some sort to carry on trade along the outer coast and bring our supplies to the bay, and carry to market our furs, fish and oil. You'll look after the native trade, with the men you employ to help you, but I'll have to engage expert assistance in purchasing the trading goods and disposing of the products to the best advantage until I finish college and learn my end of the business. All will cost money, though I hope when we once get started we'll build up a trade that will warrant it."

Bob went to his bunk that night with his head all awhirl. The amount of capital which Shad proposed to put into their partnership, and the extensive business which he proposed to build up, were too big and too wonderful for Bob to comprehend all at once.

A substantial structure had indeed taken the place of his tumbled air castles, though it was long before he could bring himself to realize that this structure was not, after all, another and greater air castle than those which had been destroyed. (To be continued.)

Bits of Fun FOR Everyone

What Are They, Compared to—?

"You have a better home, nicer clothes and more playthings than Jimmy Jones," said the mother reproachfully.

"I know, mom, but he can wiggle his ears."—Country Gentleman.

And There's Only One Cure.

"Is your husband still worrying about your automobile?"

"Constantly," replied Mrs. Chuggins. "I never knew a man to suffer so much with flivver complaint."—Washington Star.

Why They Were "Canned" Perhaps.

A teacher who believed in keeping her youngsters in touch with the march of events was beginning a lesson on the revolution in Russia.

"Now, who can tell me what the ruler of Russia used to be called?" she asked.

"The czar," bellowed the class.

"Right! And what was his wife called?"

"The czarina," two or three ventured.

"Good," said the teacher. "Now, I wonder if you know what the czar's children were called?"

There was a long pause, then one little voice piped up: "Czardines!"—Union Pacific Magazine.

Convinced—Almost.

A traveler on a sleeping car had written a complaint to headquarters about the presence of vermin in a berth that he had occupied. He received from the department a lengthy letter of apology. Never before had such a complaint been lodged against the line and the management would have done anything rather than offend such a distinguished citizen, etc.

He was pleased with this abject apology and was about to throw the letter away when he happened to notice a small slip of paper that had been enclosed, apparently by mistake. On it was his address and these words: "Send him the usual bedbug letter."—Forbes.

Defining a Second.

"Now, Willie," said a schoolmaster to a pupil, "how many seconds make a minute?"

"Masculine or feminine?"

"Masculine or feminine? What do you mean?"

"There's a big difference," replied the youngster. "When father says he'll be ready in a minute it takes him 60 seconds, but sister's minutes contain about 600 seconds."

Or Skip It Altogether.

A Britisher tells a story of an English railway strike during which much difficulty was experienced in obtaining engineers.

One of the young substitutes ran some distance past a station, and then, putting back, ran as much too far the other way. He was preparing to make a third attempt, when the station agent shouted:

"Never mind, Harry; stay where you are! We'll shift the station!"—Capper's Farmer.

Admirable.

"How did you get on with spelling?" Harry's mother asked him, after his first day at school. "You look so pleased that I'm sure you did well."

"No, I couldn't spell much of anything," admitted Harry, "and I couldn't remember the arithmetic very well, nor the geography."

The mother showed her disappointment, but Harry had consolation in reserve.

"But that's no matter, mother," he said; "the boys admire me; they say I've got the biggest feet in the class."—Chicago News.

FAMILY CIRCLE

ALICE BARLAND
EDITORIAL CONTRIBUTOR

Experience Letters

From Our Family Circle Women

Dear Mrs. Barland: I have been a reader of the Family Circle ever since it started and greatly enjoy the letters.

We live on a small farm but it is all our own. I am glad we live in the country even though there is a great deal of hard work connected with farm life. We have so many blessings when we stop to count them. There is every fall, a cellar filled with canned fruit and vegetables enough to last all winter, two or more hogs and very often a beef to be butchered, providing plenty of meat. Then we have the old bossy cow and the hens giving us the best of food. We must not forget the wood lot and the well of nice pure water free for the taking.

All these things are enough to make one love the farm if nothing else was taken into account. Who would trade places with the city sister who has to go to the grocery store and pay out cash for every mouthful of food her family eats?

I wonder how many have tried making every-day middies for themselves and the little girls out of flour sacks? Bleach well before cutting and use plain colors or plaids which will not fade, for collars and cuffs and pockets and a band around the bottom.

Pretty quilts can be made also by dying six sacks green and six red and cutting them into six inch squares, then sew alternate colors together and tie the quilt with white yarn.—MRS. C. T., Wash.

Dear Mrs. Barland: I am like many others who enjoy the Family Circle and I get much help from the recipes and in hints on the care of children. I have three and the oldest is only four years old.

We live on a small ranch three miles from White Salmon and we like it very much.

I would like to ask if any of you women have been bothered with a little black bug which seems to stay mostly where bacon and hams are kept. I have lots of meat and I can not get rid of these bugs. I have often seen them in flour. I wish you would tell me how to get rid of them. —MRS. L. H. BREEDLOVE.

Dear Mrs. Barland: I have a boy of five years who was very much inclined to lag when dressing so one day I made him go all day with only his union suit on and needless to say he has been very prompt in dressing ever since.

Depriving him of a pleasure doesn't do any good at all, he is so stubborn, but if I make him do some real disagreeable task he remembers the punishment and never repeats the same misbehavior. I have to spank him occasionally as the same punishment becomes too common so I change whenever I think of a new way. By this method he doesn't know what to expect when I tell him he has to be punished, and is more apt to heed a warning.

Please don't think I have to be punishing him all the time for on the contrary he is a very good boy and a great help to me. He carries all my wood and water and empties my tubs on wash day. This last is a great treat as he likes to see the water run. When we are working we sing little duets together or sometimes I tell him stories and this makes him want to help me.

I do enjoy the letters from the mothers of the little ones and I wonder if Mrs. E. K. answers all the questions asked, especially when she is in a hurry to have something done. My daddy used to tell us to do the task first then ask questions afterward.—MRS. H. D. ALLEN, Wash.

Dear Mrs. Barland: I read with interest the letters on children as I have four. They are aged four, six, eight and 11, girls oldest. I will number them as they come, to save space. Number one, the oldest, sleeps till 7:45 in the morning, then dresses, eats breakfast and walks six blocks to school. She helps me fine only when she gets on a tired or lazy streak. Then I ask her how she ever expects to keep house if she doesn't learn and how long a life she wants me to live or how long she expects I can live if I have all the work to do. This usually brings results. If she offers back talk I appear very much surprised that a daughter of mine would do or say such things. I wonder what "grandma or auntie would think." She has never seen her grandmother since she can remember.

Number two gets up about 6 o'clock and usually has one foot dressed by 8 if she has good luck. But she gets a move on, then as she says "time to hurry" and she gets ready for school and goes with her sister. I use the same tactics with both of them.

Number two always figures everything counts and doesn't care to do anything she can't turn into arithmetic. She always tries to have the last word. If I tell her to put wood in the stove she usually minds, but while doing it she says, "I don't see why you don't make No. one do it, she never has to work."

Number three always minds me though he is so small, only six. He is always ready to stop play to "help mamma." He wants to do things too hard for him and is never too tired or lazy.

Number four is about like number three though not quite so willing as he is yet so young. I find I need to use the strap sometimes; the fault may be mine, though I hope not, of course.

My children have all been teased by their uncle, auntie, grandpa and even by their daddy and have been made unruly and rebellious. They think if others tease they can talk back. I talk to them about it but I don't do more for I do not consider them to blame. I feel that it is spoiling my babies, but seem powerless to help it.

I do not wish to complain, but it is hard to bear even though it is only thoughtlessness on the part of these grown-ups.—MRS. H. G.

Dear Mrs. Barland: I have been wanting to send a letter to THE FARMER for a long time but I have three small children and am never idle and have very little time for writing even to my relatives and friends.

In Mrs. M. F. M.'s letter in the December issue she tells of making or fixing a box into a dresser and making a nursery chair out of an apple box. I did about the same thing except that I made a regular chiffonier with three long drawers and two small ones at the top.

I made a nursery chair out of a box and put a small board below the seat concealing the chamber and I put on the chair a table from an old high chair which had been laid away for two years.

I removed mildew from a white voile dress by soaking it in buttermilk over night then washing in warm suds.—MRS. G. GOE, Worley, Idaho, R. 2.

Dear Mrs. Barland: I live about two and one-fourth miles from the Pacific ocean over quite a steep hill. I have never seen the waves by moonlight but have driven for miles along the beach and watched the waves when the sunshine made them sparkle like jewels of all colors.

It seems to me sometimes, that we live almost out of the world. There is not even a railroad as we have to cross the bay to reach one. It is about five miles to the bay from our farm. Neighbors are very scarce, there is one a mile away and no others nearer than two miles.

I am not very strong as I had a nervous breakdown two years ago and as I have a large family of small children I am sometimes worn out and get lonely and blue. I feel sometimes that I could never endure the loneliness of this place if it were not for my love for nature. I get much comfort writing poetry mostly about nature.

I would call the attention of any of you to the beauties of nature if you, like myself, feel lonely. You will find therein great companionship.—A READER.

Dear Mrs. Barland: I have canned apples and pears when the flavors have not been distinct. I would like the sisters of the Circle to send combinations of fruit juices to use with this sort which would be good for pies, puddings, etc.—MRS. M. D., Wash.

Dear Mrs. Barland: I would like to know if there is any way to take out a cider stain from a white table cloth. I have a fine one and napkins which were soaked in cider. I washed the napkins and seemed to have ruined them.

The table cloth has very fine lace work on it and will not stand much hard rubbing.—MRS. B. E. B., Wash.

Dear Mrs. Barland: I would like to ask if some one can tell how to restore night gown yokes to their original whiteness which have become discolored with vapo rub used during the "flu."

Would like to ask also what will remove old olive oil stain from a linen center piece. It hasn't been laundered since oil was spilled on same.—MRS. G. F. G., Wash.

HOME-MAKING AN ART.

"Ladies" means, literally, loaf-givers, remarked Miss Mary Sutherland of Washington State college extension department, recently addressing a home bureau. Miss Sutherland's appeal was for more appreciation of the high task, the duty and the grace of home-making. "Let us try to put into our cooking and into our serving something of English thoroughness, something of French art, and of Arabian hospitality," she said.

Rhubarb Recipes

Steamed rhubarb puffs: Sift together two cupfuls of flour and three teaspoonfuls of baking powder, a little salt. Add one cupful of milk and make a heavy batter. Grease small cups, put one tablespoonful of batter in each, then a spoonful of stewed rhubard, cover with more batter. Steam for 30 minutes. When done turn out on small plates and serve hot with cream or sauce.

Rhubarb dessert: Wash three pounds of rhubarb, cut it into small pieces and stew it with one cupful of sugar until tender. Soak one heaping tablespoonful of gelatine in half a cupful of orange juice and when the rhubarb is removed from the fire add this mixture to it. Let it get perfectly cold. When ready to serve fill some small patty shells with the rhubarb mixture, heap sweetened whipped cream on top and sprinkle over a few chopped nut meats.

Rhubarb sherbet: One pound of rhubarb, six tablespoonfuls of sugar, the rind of one-half lemon, three cupfuls of water, a little whole ginger. Cut the rhubarb in small pieces, boil in the three cupfuls of water for 10 minutes, stirring frequently. Add the lemon rind and ginger and simmer for 10 minutes longer. Put in the sugar, stir until it is dissolved, then pour the mixture through a piece of muslin, bottle for use and cork.

Rhubarb omelette: Beat the yolks of three eggs; with three tablespoonfuls of sugar, the grated fruit or a three-inch stick of rhubarb and three tablespoonfuls of the juice. Add the stiffly-beaten whites and pour into a hot buttered pan. Do not shake the pan, but let it cook quietly. Fold at the edges and while hot sprinkle with powdered sugar, and brown with a hot poker.



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DENNOS FOOD CO.
Portland, Ore.

High Points in News of the Week

By the vote of every delegate the American Federation of Labor convention at Cincinnati Thursday indorsed the nation-wide coal strike that, since April 1, has kept a half million miners from work, and also indicated, by a demonstration, its approval of the threatened walkout of more than 1,000,000 railroad workers.

Pruning nearly $27,000,000 from the annual payroll of 325,000 railway employees by cutting clerks, signal men and stationary firemen from 2 to 6 cents an hour, the United States railroad labor board Saturday announced another wage slash, bringing total reductions under the board's orders up to $135,000,000 beginning July 1.

Formal notice was served Sunday night on the railroad labor board by the chiefs of 10 railroad unions of their intention to go through with a strike in event one is authorized by the 1,126,000 workers whose wages are to be reduced July 1 under orders of the board.

Coupled apparently with the action of the rail union leaders was a statement that the railroad workers "have no alternative except to fight," made by John L. Lewis, leader of the striking coal miners, who will meet again with the rail union leaders to consider joint strike action. He also pledged the miners' aid to the rail men, but declined to state definitely what might result.

* * *

Favorable report on the Capper-Tincher bill to amend the future trading act so as to meet the recent decision of the supreme court deciding sections of that act inoperative was ordered by the house committee. Declaring that contracts upon exchange for the future delivery of grain are "effected with a national public interest and that grain or its products when "sent from one state with the expectation that they will end their transit in another" is interstate commerce, the friends of the bill are confident the government can exercise jurisdiction and control over the largest grain exchanges.

* * *

Legislation requiring operation of public terminal grain elevators by railroad companies was recommended to congress Friday by the federal trade commission in a report on terminal grain marketing, which also urged improved banking facilities for the movement of grain in the northwest. Elimination of the financing of commission houses by terminal elevators, improvement in the methods of making up cash quotations and elimination or reduction of so-called insurance charges levied on country shippers at Duluth were among other recommendations.

* * *

The navy department's plan to create a civilian naval reserve force, similar to the national guard, has been adopted by the senate in accepting an amendment of the house provision of $50,000 to $3,000,000 to begin the work. Under the plan of the department 3000 officers and 10,000 enlisted men will be molded into a civilian reserve force, paid for one month's service annually and be subject to call to duty.

* * *

House and senate conferees on the army appropriations bill have reached a compromise on an army of 125,000 enlisted men for the next 12 months. This represents a reduction of 8000 from the senate figure and an increase of 10,000 over the size of the army fixed by the house.

* * *

Shipping of liquor on shipping board vessels at sea will continue, Lamon Lasker reiterated Wednesday, until a separate decision is forthcoming holding such practice illegal under the prohibition law and until he "has been convinced of its illegality." Mr. Lasker's assertion was in reply to a communication addressed by August A. Busch of St. Louis to President Harding with reference to alcoholic drinks being regularly served on shipping board vessels at sea.

* * *

General Chen Chiung-Ming, formerly civil governor of Kwantung province, whose troops seized Canton Friday, announced today that the south China or Canton government has been terminated and that henceforth Canton will unite with the north in recognizing the old republican parliament.

Dispatches from Canton describe the collapse of the southern government as complete, Sun's military forces crushed and the former Canton president himself a fugitive.

Dr. Sun Yat-Sen was called by his supporters the father of the Chinese republic and the life and soul of the democratic revolution of 1911, which resulted in the death of the monarchy and the birth of the republic.

* * *

Senators supporting and opposing Henry Ford's offer to purchase and lease the government's war-initiated projects at Muscle Shoals, Ala., clashed Saturday in a two-hour heated discussion over ways and means of developing the projects for peace-time operations.

Senator Underwood of Alabama, democratic leader, declared himself a "Ford man" and asked an opportunity to vote for the acceptance of the Detroit manufacturer's proposal before congress adjourned.

Senator Norris of Nebraska, chairman of the agriculture committee investigating Mr. Ford's proposal in connection with other offers for Muscle Shoals, also went on record. He declared he was opposed to the acceptance of the Ford tender or to any other which would have the effect of selling properties "costing the people $106,000,000 for $5,000,000" and leasing those not sold to private interests for 100 years.

* * *

Secretary Hoover has secured the agreement of representatives of the National Coal association and the National Retail Coal Merchants' association to the plan to prevent advance in coal prices in all branches.

* * *

Accompanied by a terrific rain and hail storm a tornado tore its way through parts of 8 or 10 townships in Saint Croix county, Wisconsin, leveling or otherwise damaging buildings on some 200 farmsteads, killing live stock, uprooting trees and damaging growing crops, is the report from Glenwood City, Wis. Six known deaths and injury to 200 persons and doing a damage of $1,000,000 is the latest summary.

Trade in China

Robert Dollar believes that opportunities for trade in China are greater than in any other country. This must come about by increasing the purchasing power of the Chinese people.

Mr. Dollar relates a conversation with a Chinese on a street in his native city, who declared that the purchasing power of the people can not be increased. "At that moment," says Mr. Dollar, "a wagon load of lumber from my lumber yard came along; it was being pulled by 13 men. It was in the winter and snow lay on the ground, but those men were all barefooted. I was paying them 8 cents a day. I said: "'You take those 13 men off that wagon, put a horse there with one man to drive it and put the other 12 men into a factory and you will increase their purchasing power. They will buy more and develop the commerce of your country.'

"I asked him how many persons in China were going barefooted, and he replied that there must be 100,000,000, anyway, if not more. I told him that they were going barefooted from necessity and not from choice and that if they could earn more they would not go barefooted. Each one of them wanted to buy a pair of shoes and stockings. Maybe a shoe manufacturer will read this; what would it mean to him to supply 100,000,000 people?

"And bear in mind that shoes are not the only necessities that these 100,000,000 people are doing without for the simple reason that they have been too poor to buy."

Shipments by Wheat Growers

With virtually all the 1921 crop of wheat shipped or in process of shipment, Walter J. Robinson, general manager of the Washington-Idaho Wheat Growers' association, reports the total shipments the last season through the cooperative marketing organization of 15,500,000 bushels. This is made up of 6,700,000 bushels from Washington, 3,300,000 bushels from Oregon, 1,750,000 bushels from Idaho and 1,175,000 bushels from Montana.

Mr. Robinson adds that all the main wheats are gone and only a limited amount of Turkey red remains.

The 1920 tonnage was about 3,000,000 bushels.

"Our 1922 tonnage will be much greater than 1921, other things being equal," said Mr. Robinson. "Our membership has been greatly increased and there will be little mortgaged wheat this coming season. In addition, of course, we will have 10,000,000 bushels of North Dakota wheat which will be marketed next season by the Northwest Wheat Growers, Associated."

Berry Rates to Be Investigated

Senator McNary of Oregon has replied to messages from W. H. Pauthamus of Puyallup, Wash., president of the berry growers' association, and Robert Paulus, manager of the Oregon Growers' Cooperative association at Salem, protesting against the continued high rates on berries, that after a conference with the interstate commission he believes the whole subject will be investigated.

Farm Business and Markets Outlook

(Continued from page five.)

LATEST QUOTATIONS.

The Live Stock Market.

PORTLAND, Ore., June 17.—Cattle—Choice hayfed steers, $8.25@8.35; med. to good hayfed steers, $7.75@8.25; choice grass steers, $7.75@8.25; medium to good steers, $6.75@7.75; fair to medium steers, $6.25@6.75; common steers, $5@6.25; choice cows and heifers, $6.25@6.50; medium to good cows and heifers, $5.25@6.25; fair to medium cows and heifers, $4.25@5.25; common cows, $3.50@4.50; canners, $2@3.50; bulls, $3.75@5; choice dairy calves, $8.50@9.50; prime light calves, $8@8.50; medium light calves, $7@8; heavy calves, $4.50@7.

Hogs—Prime light, $11.75@12; smooth heavy, 200-300 lbs., $11@11.75; smooth heavy, 300 lbs., up, $10@11; rough heavy, $8@10.25; fat pigs, $11.75@12; feeder pigs, $11.75@12; stags, subject to dockage, $5@8. ¼ ¼

Sheep—Best spring lambs, $10@11; medium spring lambs, $9@10; common spring lambs, $7@8; cull lambs, $6@7; light yearlings, $8@9; heavy yearlings, $7@8; light wethers, $7@8; ewes, $2@6.

SPOKANE, June 17.—Cattle—Prime steers, $7.25@8.50; good to choice steers, $6.25@7.25; medium to good steers, $5.75@7; fair to medium steers, $5@5.75; common to fair steers, $4.75@5; choice cows and heifers, $5.75@7; good to choice cows and heifers, $4.75@5.75; medium to good cows and heifers, $4.25@4.75; fair to medium cows and heifers, $3.25@4.25; canners, $2@3.50; bulls, $3.25@4.75; light veal calves, $6.50@8.50; heavy veal calves, $4@6.50; stockers and feeders, $4.75@6.

Hogs—Prime mixed, $11.25@11.75; medium, $10.25@11.25; heavies, $8.25@9.25; fat pigs, $10.25@11.25; stockers and feeders, $10.25@11.25.

Sheep—Prime lambs, $8@10; fair to medium, $7@8; yearlings, $7@8; wethers, $6.50@7.50; mutton ewes, $3@6.50; feeder lambs, $6@7.

The Grain Market.

PORTLAND, Ore., June 17.—Wheat—Hard white, $1.15; soft white, white club, hard winter, northern spring, $1.13; red Walla, $1.09. Today's car receipts: Wheat, 43; barley, 6; flour, 5; oats, 1; hay, 8.

Grain futures: Wheat—Hard white, June, $1.15; July, $1.14; August, $1.09; soft white, white club, hard winter, northern spring, June, $1.13; July-August, $1.09; red Walla, June, $1.09; July-August, $1.03.

Corn—No. 2 eastern yellow, shipment, June, July, August, $29.25.

SEATTLE, June 17.—Wheat—Hard white, soft white, white club, soft red winter, northern spring, $1.12; hard red winter, $1.13; Big Bend Bluestem, $1.25.

WALLA WALLA, June 17.—Bluestem, Turkey red and Bart, 99c; club, 97c.

LEWISTON, Idaho, June 17.—Soft white, 90c.

ODESSA, Wash., June 17.—Marquis, $1.23; Bart and Bluestem, $1.23; Turkey red, $1.03; Jones fife, 93c.

DAVENPORT, Wash., June 17.—Bluestem, $1.12; Marquis, $1.08; Gold Coin, 90c.

POMEROY, Wash., June 17.—Turkey red, 94c; hybrid, 91c.

Hay and Feed Grain.

SPOKANE, June 17.—Wheat—Feed wheat, $46 per ton.

Oats—$40 per ton; steam rolled, $42.

Corn—$36 per ton; cracked corn, $32 ton.

Barley—$40; steam rolled, $42.

Bran and shorts—$30 per ton.

PORTLAND, June 17.—Millfeed—Price f. o. b. mill: Millrun, ton lots, $35; middlings, $41; rolled barley, $36@38; rolled oats, $43; scratch feed, $50 per ton.

Corn—White, $35; cracked, $37.

Hay—Buying price, f. o. b. Portland: Alfalfa, new, $14.50@15.50 per ton; cheat, $15@16; oats and vetch, $14; clover, $17; valley timothy, $18; eastern Oregon timothy, $21@22.

General Produce.

PORTLAND, Ore., June 17.—Butter—Cubes, extra, 34½@35c per lb.; parchment wrapped, box lots, 40c; cartons, 41c. Butterfat, buying price, No. 1 grade, 41c delivered Portland.

Eggs—Buying price, current receipts, 21c dozen; henneries, 24c dozen; jobbing prices, case count, 21@22c; candled ranch, 25c; selects, 27c.

Cheese—Tillamook triplets, price to jobbers, f. o. b. Tillamook, 23c; Young Americas, 24c pound.

Poultry—Hens, 16@22c; broilers, 17@25c; ducks, 20@25c; geese, nominal; turkey, live, nominal; dressed, 40c.

Veal—Fancy, 12@12 1-2c per pound.

Pork—Fancy, 15 1-2c per pound.

SPOKANE, June 17.—Poultry—Fat hens, 19c lb.; light hens, 16c lb.; roosters, 8c lb.

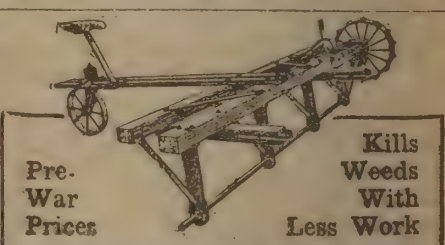
Fresh ranch eggs—$6.50 case; no storage; pullet eggs, $6.

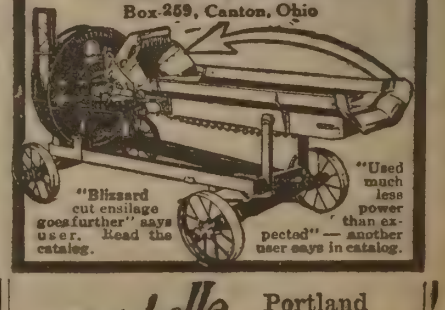
Butterfat—37c a pound.

Range of Live Stock Prices for the Week Ending June 14

CATTLE.	Chicago.	Spokane.	Portland.	N. Salt Lake
Choice, prime heavy steers (1100 lb. up)	9.00@ 9.70	.....	.....	.....
Good heavy steers	8.50@ 9.10	.....	.....	.....
Medium heavy steers	8.00@ 8.60	.....	.....	.....
Common heavy steers	7.25@ 8.10	.....	.....	.....
Choice, prime light steers (1100 lb. d'n)	9.00@ 9.70	.....	.....	.....
Good light steers	8.50@ 9.15	8.25@ 8.75	8.25@ 8.75	.....
Medium light steers	8.10@ 8.70	7.50@ 8.25	7.50@ 8.25	6.75@ 7.75
Common light steers	7.25@ 8.25	5.25@ 7.50	6.25@ 7.50	5.75@ 7.00
Common to choice butcher heifers	5.75@ 8.75	4.50@ 7.50	4.25@ 7.25	4.50@ 5.00
Common to choice butcher cows	4.25@ 7.40	3.50@ 6.00	3.50@ 6.00	3.75@ 5.00
Bologna and beef bulls	4.15@ 6.50	3.25@ 4.75	3.75@ 5.50	2.50@ 4.00
Canners and cutters, cows and heifers	3.00@ 4.40	2.25@ 3.50	2.00@ 3.50	1.50@ 3.25
Canner steers	4.50@ 6.00	3.50@ 4.75	3.50@ 5.00	3.00@ 4.50
Medium to choice light veals	8.75@11.50	6.50@ 8.50	7.00@ 9.50	7.00@ 8.00
Common to choice heavy veals	4.75@ 8.50	4.00@ 6.50	4.50@ 7.00	.....
Common to choice feeders (1000 lb. up)	6.00@ 8.00	.....	.....	.....
Common to choice feeders (750-1000 lb.)	6.00@ 8.00	4.75@ 5.00	5.25@ 6.25	5.00@ 5.50
Common to choice stocker steers	5.75@ 8.00	.....	.....	.....
Common to choice stocker cows, heifers	4.00@ 6.00	.....	.....	.....
HOGS.				
Top of market	11.00	11.65	12.25	10.75
Bulk of sales	10.00@10.95	11.00@11.40	11.35@11.90	10.00@10.50
Heavy (250 lb. up)	10.30@10.80	10.90@11.00	10.90@11.25	9.75@10.25
Medium (200-250 lb.)	10.40@10.95	11.00@11.35	11.25@11.75	10.00@10.50
Light (150-200 lb.)	10.60@10.95	11.25@11.65	11.75@12.25	10.25@10.75
Light lights (130-150 lb.)	10.35@10.90	11.00@11.50	11.50@12.00	.....
Smooth packing sows (250 lb. up)	9.15@ 9.95	9.25@ 9.75	9.50@10.25	.....
Rough packing sows (200 lb. up)	8.75@ 9.75	8.25@ 9.25	8.00@ 9.50	.....
Medium to choice pigs (130 lb. down)	9.50@10.60	10.25@11.25	11.50@11.75	9.00@ 9.50
Stock pigs	.....	10.25@11.25	11.00@11.75	8.50@ 9.25
SHEEP AND LAMBS.				
Medium to prime lambs (84 lb. down)	8.75@13.00	7.00@ 9.00	7.00@ 9.00	7.00@ 8.00
Culls and common lambs	6.00@ 9.00	4.50@ 7.00	5.00@ 7.00	5.00@ 7.00
Medium to prime yearling wethers	7.50@10.85	7.00@ 8.00	6.00@ 8.00	5.50@ 7.00
Medium to prime wethers	4.50@ 8.75	.....	.....	.....
Medium to choice ewes	2.50@ 7.25	4.00@ 6.50	4.00@ 6.00	3.00@ 4.50
Culls and common ewes	1.50@ 3.00	2.00@ 4.00	2.00@ 4.00	2.00@ 3.00
Spring lambs	12.50@15.00	8.00@11.00	9.00@11.00	10.00@12.00


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Your Health

By Royal S. Copeland, M. D., F. A. C. S.



Dr. Copeland.

One of the most difficult things in the world is to get a nervous individual to keep quiet for an hour or two. To ask a person of this sort to sit in a comfortable chair and to stay there for any length of time is almost equal to imposing penance. Repose seems impossible.

The same person will go to a concert and sit still for hours without moving an eyelid. Is it the effect of the music, conformity to a custom or the actual enjoyment of the occasion?

There can be no doubt of the subtle effect of music. To some it is soothing—almost sleep-producing. To others it is as stimulating as wine. To still others music really means little more than do the sounds of the city streets.

It is interesting to study an audience at a concert. The other night I sat in a box on the side of a great audience. In a position where I could look along one row and closely observe the 40 persons in that particular line. For a quarter of an hour at a stretch not one person would move.

I assume that most persons who go to a formal concert are interested in music. But there must be a few obliging husbands and some equally bored wives in an audience of that size. Therefore there are a lot of people who can and do keep quiet when custom demands it.

It is good discipline to compel yourself to sit with folded hands for two or three hours. It is refreshing to the tired body. It restores the over-active heart. No medicine can be better. Yet I suppose a doctor would be considered queer if he were to advise two hours of perfect quiet after lunch.

At the close of a social season many a woman is tired out. Her nerves are tingling, she is ready "to jump out of her skin." Why? Because she tries to run her body without replenishment of her nerve force. That is no more possible than it is to run an automobile without refilling the gasoline tank.

It is not possible for most of us, nor is it necessary for the perfectly healthy and normal person to take a rest in the middle of the day. But "nervous" folks, especially frail and anemic persons, must have periods of rest. They can not plough through the whole day without refreshment.

Now I can hear some lady say "I can not rest in the middle of the day." Why can not you keep perfectly quiet for an hour or two in the early afternoon, if you can sit through an evening concert without a murmur? Of course you can. Try it a few times and you will be amazed at the change in your attitude toward life. You will be less irritable, less fussy and will be in every way a better companion.

As I watch some thin and strawny persons I am not surprised they have no flesh. If exercise will take flesh off a fat person, why are you surprised if constant activity and lack of repose make a slight person skinny? Without a doubt a reasonable amount of flesh is essential to the best of health. To gain this flesh and to add to the health and vigor be reposeful for a few hours every week. Do not wear out your body by keeping it in perpetual motion.

INVASION OF TENT CATERPILLAR.

Department of agriculture officials advise that the fruit crop in western Washington is menaced by an invasion of the tent caterpillar, which is already doing considerable damage in certain sections.

Latest High Class Patterns for the Home

Please order the patterns you desire at least two or three weeks before you wish to use them. Desiring to obtain the latest high-class patterns for its readers, THE FARMER has made arrangements to have them sent direct from the east, and under present mailing conditions it takes about that time for them to reach you.



3809. Ladies' work or house dress. Cut in six sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. A 38-inch size requires five yards of 36-inch material. The width of the skirt at the foot is about two yards. Price 10 cents.

4022. Ladies' apron. Cut in four sizes: Small, medium, large and extra large. A medium size requires 2 3-4 yards of 40-inch material. Price 10 cents.

3815. Girl's dress. Cut in four sizes: 8, 10, 12 and 14 years. A 12-year-size requires 3 3-8 yards of 44-inch material. Price 10 cents.

4035. Girl's dress. Cut in four sizes: 4, 6, 8 and 10 years. A 6-year size requires 3 1-2 yards of 27-inch material. Price 10 cents.

4023. Ladies' combination. Cut in four sizes: Small, 34-36; medium, 38-40; large, 42-44; extra large, 46-48 inches bust measure. A medium size requires three yards of 32-inch material. Price 10 cents.

3571. A practical undergarment. Cut in four sizes: Small, 34-36; medium, 38-40; large, 42-44; extra large, 46-48 inches bust measure. A medium size will require three yards of 36-inch material. Price 10 cents.

4009-4012. Ladies' costume. Waist 4009, cut in seven sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. Skirt 4012, cut in eight sizes: 25, 27, 29, 31, 33, 35, 37 and 39 inches waist measure. A 29-inch size requires 2 1-2 yards of 40-inch material. The width of the skirt at the foot is 2 3-8 yards. The waist requires 2 1-2 yards of 40-inch material for a medium size. Two separate patterns, 10 cents for each pattern.

4026. Misses' dress. Cut in three sizes: 16, 18 and 20 years. An 18-year size requires 5 1-2 yards of 32-inch material. The width of the skirt at the foot is 2 5-8 yards. Price 10 cents.

4018. Girls' dress. Cut in four sizes: 6, 8, 10 and 12 years. A 10-year size requires 3 3-4 yards of 32-inch material. Price 10 cents.

3337. Child's play suit. Cut in four sizes: 2, 4, 6 and 8 years. A 6-year size will require 2 5-8 yards of 27-inch material for the dress and 1 3-8 yards for the bloomers. Price 10 cents.

4027. Ladies' dress. Cut in seven sizes: 36, 38, 40, 42, 44, 46 and 48 inches bust measure. A 38-inch size requires 6 3-4 yards of 40-inch material. The width of the skirt at the foot is about two yards. Price 10 cents.

3494. Boys' rompers. Cut in four sizes: 2, 3, 4 and 5 years. A 4-year size will require three yards of 27-inch material. Price 10 cents.

Catalogue Notice.

Send 12 cents in silver or stamps for our up-to-date spring and summer 1922 catalogue, showing color plates and containing 500 designs of ladies', misses' and children's patterns, a concise and comprehensive article on dressmaking, also some points for the needle (illustrating 30 of the various simple stitches), all valuable hints to the home dressmaker.

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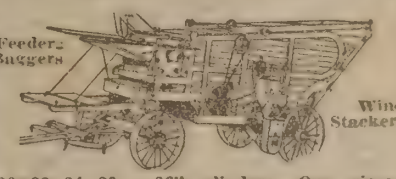


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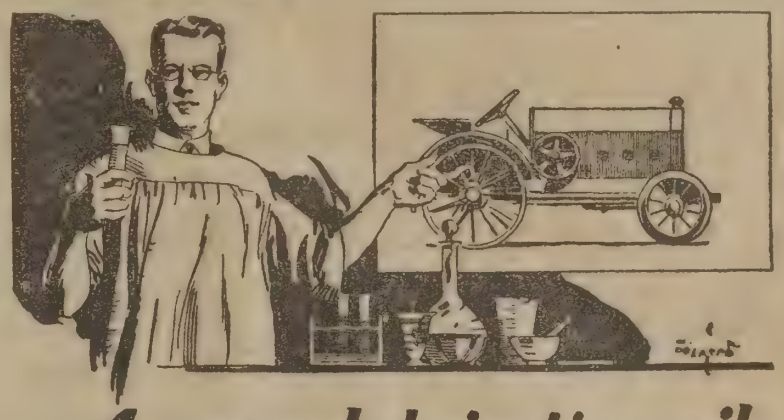
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Lois McAlvey writes to us again from northern Washington, Okanogan county. Lois was 11 years old March 3, 1922.

The school which Delerah Buckner attends closed April 29. Next term she will be in the fourth grade. Delerah lives north of Curlew lake, in Ferry county, Washington. She has one sister. Her papa is going to start his sawmill soon.

Clyde Dowell, a cousin in northern Washington, says he helped his mother tie a quilt. He was going to help her tie another one, but when he got home from school it was already tied. Clyde likes The Junior Farmer. He copied a cartoon for Aunt Nellie. (Thank you, Clyde.)

The following letter is from Christian Larsen, a cousin in Douglas county, Washington: "I live on a large wheat ranch. School is out now. I shall be in the third grade next term. I have three brothers. Their names are Everett, Raymond and Iven. I was 8 years old February 15, 1922. We have 31 head of horses."

A calf named Buster and two cows, Boss and Spot, are the pets at Grace Ione Mains' home in Yakima valley, southern Washington. Grace was 10 October 5, 1921. She has six brothers and sisters, and she is a new cousin.

We have a nice letter from Myrtle Easton, also a little poem written by her and her friend. Allienta Gifford. (Thank you, Myrtle.) Myrtle's pet cat ran away, but, she says, there are plenty left that she can pet. She hopes she will find her letter in print before long. Her home is in the Methow valley, northern Washington.

Dorothy Peterson now weighs 104 pounds, which is one pound more than she weighed when she wrote to us before. She lives on a 240-acre farm in Grays Harbor county, Washington. This summer, she says, her father is going to teach her to use the milker. Her pets are a cat, a dog and a calf. She has two cows all her own. Their names are Nellie and Chloe. (Yes, Dorothy, please send Aunt Nellie your picture.)

Some time this summer Esta Rivers, Okanogan county, Washington, is going to send us her picture. She has a camera of her own and has learned to take pictures. (The Junior Farmer comes out the first Thursday of every month, Esta. Thank you for the pretty Easter card.) Esta's school closed April 28.

We have another letter from Sennie Vandercreek, an Okanogan county (Wash), cousin who tells us a story about a lion, too weak and old to hunt for food. The lion went into his den and pretended to be very sick and many animals went in to see him and he ate them. One day a fox was going by and the lion begged him to come in and see him, but the wary fox did not do so. He sat down outside the den and took note that all the tracks went in, but none came out. He was too wise to go into the den and be eaten.

Marguerite Edline, 10 years old March 17, 1922, lives near the British Columbia line in Whatcom county, Washington. She is in the fifth grade and goes to school in a two-room schoolhouse. Why can't a button shoe talk to a lace shoe? Because it hasn't any tongue.

We have an interesting letter from Alvin Cline, a Walla Walla county (Wash.) cousin, in which he says he has passed into the sixth grade and is very happy about it. Alvin got 100 per cent in his arithmetic test. (That was fine, Alvin.) Miss Lillian Billington is his teacher and he says she is a fine teacher. He is going to set a hen and raise the chickens for himself. The money he gets when he sells them he will put in the bank. Alvin was 11 March 14, 1922.

We were glad to hear from Thelma Huck, who lives on a farm in Stevens county, Washington, where is a big orchard. She has a cherry tree of her own. Thelma was 9 June 25, 1922. She has five brothers and sisters. School closed May 25.

Ethel Strunk has joined a sewing club. All the girls in the school that she attends have taken up sewing. May 26 school closed and a nice program was given. Ethel has two little new cousins. One is named Lola Valentine White; the other one hasn't been named yet. Ethel's home is near the Columbia river, in Clarke county, Washington.

Nelle Hill went with her schoolmates and teacher May 19 for a picnic. School closed that day and everybody had a good time. Nelle writes that she passed into the sixth grade. She also got a certificate because she was neither tardy nor absent during the whole year. She has a spelling diploma, too. In three examinations her grade was 100 per cent in spelling and once she got 98, because she missed "punctuate." She left out a "t." Marie likes the stories in The Junior Farmer. Her friend, Marie Waters, borrowed her last paper, so she could read the stories. Marie lives in the Big Bend country, eastern Washington.

This is what we hear from Bertha Van Derschelden of Okanogan county, Washington: "I surely enjoy reading the letters and stories in The Junior Farmer. We have a little pet lamb, which we feed on a bottle. His name is Peter. I have a little pet lamb of my own. The bluebells and crayon bills are in bloom now. When sister Anna and I go for the sheep in the evening we pick many of them." Bertha also told Aunt Nellie about the old man who owned a donkey. One day when he was taking a sack of wheat to the mill, to be ground into flour, and the little donkey was staggering under the load, the old man decided to help the donkey out. He took the sack of wheat and put it on his own shoulders, then got on the donkey's back and rode up the hill.

Helen Staadt, a cousin in southwestern Washington, writes to us about the stock on her father's farm. There are cows, horses and pigs, besides four puppies, six cats, a little kitten and 90 baby chickens. Helen has a sweet pea garden, too. Before school closed she was in two plays. One was "Tom Thumb's Wedding" and the other was "The Brownie's Whisper."

Delma Hedington of eastern Benton county, Washington, writes her first letter to the Corner. Delma's papa has six acres planted to potatoes. Delma has brown, curly hair. A little kitten named Tommy is her pet. This cousin's birthday is November 9.

Birthday Greetings

THURSDAY, June 22—Margaret Prest, 9 years old.

FRIDAY, June 23—Gladys Critchfield, 11 years old; Clementine Deatry; Aune Palola, 11; Evelyn Shockley, 9; George A. Nelson, 10.

SATURDAY, June 24—Hanna Bohnet, 11 years old; Steinar Fjerlie, 9; Eva Paavola, 10; Thelma Paul, 7; Herbert Peters, 10; Sylvia M. Leikas, 8.

SUNDAY, June 25—Thelma Huck, 9 years old; Bernice Blanche Bafirs, 11.

MONDAY, June 26—Milan Marvin Byrd, 10 years old; Johnnie Mikesh, 10; Isabel Morris, 11.

TUESDAY, June 27—Bernice Brace, 11 years old; Marvin Olsen, 10; George Lanhart, 10; Addie Moore, 8.

WEDNESDAY, June 28—Alice Coons, 11 years old; Warena Jones, 11.

LETTERS WELCOMED BY AUNT NELLIE.

Among recent letters received by Aunt Nellie are those from cousins whose names follow. A few of these will be published each week in the regular edition of THE FARMER and others will appear from time to time in The Junior Farmer.

Edith Clifford, Esther Duchow, Josie Murphy, Clare M. Salme, Odna Evans, Christian Larsen, Lillie Johnson, Edna Melton, Mildred Brown, Leslie John Beardsley, Violet Binder, Alice Taber, Esther Pershall, Kenneth Albert Leamer, Katherin Gies, Alvena Walter, Hugh Adams, Mabel Loy, Dora M. Duffy, Esther Bakke, Etta Marie Hill, Marguerite Duffy, Emma Jones, Lawrence Wade, Hulda Poutta, Bennie Nead, Clyde L. Harrison, Melva Underwood, Peggy Broadfield.

BEDTIME STORIES

By THORNTON W. BURGESS.

THE SKY PARLOR OF WHITEFOOT.

Whitefoot the wood mouse chuckled to himself as he ran up a low alder and examined an old nest that had once belonged to Mrs. Redwing before she had moved over to the bulrushes on the edge of the Smiling Pool. He had seen that old nest times without number, but he had never given it a thought until Grandfather Frog had said that if he was looking for a new home where no one would think to look for him he would move into the deserted house of some one else.

Now, Whitefoot had always lived in a hollow tree or a hollow log, and every one knew it. So when Shadow the Weasel, who is a robber and worse, had started out to look for Whitefoot he had first examined all hollows in trees and every hollow log that he found. He had found Whitefoot's house while Whitefoot was out, and then Whitefoot did not dare go home again. So Whitefoot had started out to build a new home.

Whitefoot picked up some bits of stick and old dried leaves out of Mrs. Redwing's old nest. Then he curled himself up in a ball in the bottom just to see how it would feel. The Merry Little Breezes came along and saw him there. They didn't know that he was thinking of living there; they thought he had climbed up there just for fun. Gently they rocked the alder to and fro. In a few minutes Whitefoot was fast asleep.

When he awoke he couldn't think where he was. He was in a lovely soft bed and he was very, very comfortable. Suddenly he remembered. Once more he chuckled to himself: "This suits me," said he. "It is my sky parlor. Who will ever think of looking down in a deserted nest of Mrs. Redwing for Whitefoot the Wood Mouse? I'll just put a roof on this and then I'll have the safest, coziest, snuggest house in the Green Forest."

Whitefoot peeped over the edge of the



"This suits me," said he. "It is my sky parlor."

nest. When he was sure that no one was looking he scampered down to the ground. Then he became very busy. What do you think he was doing? Why he was collecting soft, dry grass and the lining from strips of bark and little sticks and leaves. It took him all day, and just as Old Mother West Wind started for home behind the Purple hills Whitefoot sat down to eat his supper of berries and to rest. Hidden under the broad leaf of a skunk cabbage plant was his pile of grass, little sticks and leaves.

When all the little meadow people and forest folk who play by day had gone to bed Whitefoot climbed the alder once more, and this time he took up with him the grass he had gathered. Up and down up and down the alder all night long ran Whitefoot. When jolly, round, red Mr. Sun threw off his nightcap the next morning and started to climb up in the blue sky he looked down on the alder and smiled. Mrs. Redwing's old nest was still there, but it had a roof, and still it looked like nothing but an old nest.

And inside, in the softest of beds, was a little, round ball of soft fur fast asleep. It was Whitefoot the Wood Mouse in his new sky parlor.—Copyright, T. W. Burgess

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News for Breeders

ANNOUNCE PUREBRED SALES.

Two purebred sales will be held in the vicinity of Tekoa within the next few weeks, according to announcement by Colonel Harry C. Cranke, auctioneer in charge. The first is that of B. R. Svensgard of Tensed, Idaho, 10 miles east of Tekoa, on June 24, where 30 head of Shorthorn cattle headed by a Villager bull purchased from S. E. Bennett of Wilsall, Mont., will be offered. The catalogue includes four bulls and the balance females. The second sale is a combination of 30 Duroc bred gilts and 20 Holstein females on the farm of S. L. Banks, Tekoa. Most of the heifers are sired by Sir Fayne Pietertje Piebe, and the hogs include some excellent ancestry in their pedigrees.

PUREBRED SHORTHORNS.

One of the good Shorthorn herds of eastern Washington is that owned by W. H. Leonard of Pomeroy, who has about 100 head of purebred, registered Shorthorns on his farm of 1160 acres between Pomeroy and Mayview. Mr. Leonard is a pioneer of that section and still owns his preemption claim and homestead taken more than 40 years ago, and, like many other pioneers, bought all the land that joined his. He cultivates about 600 acres, raising fine crops of wheat, and uses the remaining 560 acres for pasture. He has a fine crop of wheat and barley growing on his farm and says the prospects for a good yield are good. Mr. Leonard plans to hold an auction sale of purebred Shorthorns each year.

LATAH-WHITMAN SHORTHORNS.

The annual Latah-Whitman county Shorthorn excursion will be held June 22-23. The start will be made at the Washington State college farm at Pullman the first morning, following which the party will go east through Johnson and Uniontown, Wash., to the Idaho line, thence through Genesee and on to Moscow and the University of Idaho farm. The excursion will continue north and northwesterly, visiting farms in the vicinities of Palouse, Farmington and Garfield, and probably disbanding at Hercules farm, near Sprague, Lincoln county.

VETERINARY

(Continued from page six.)

the head or from a diseased tooth. Generally an animal can be cured except when he is affected with glanders.

Lumps in Udder.—My cow has a calf a week old. Before the calf came she had a hard lump in her udder and there were a few lumps in her milk. Now there are three hard places in her udder. She is a heavy milker. Can she be cured?
Hood River, Ore. M. E. H.

Give your cow one tablespoonful of fluid extract of phytolacca night and morning for some time. Paint the quarter of the udder affected with tincture of iodine, four ounces; soap liniment, four ounces. Since she is a heavy milker, it may help to milk her three times daily for a while.

Lumpy Jaw.—Is there anything that can be done for a cow with lumpy jaw? Will she spread the disease to others?
Powell Butte, Ore. P. V. M.

Cattle affected with lumpy jaw sometimes yield to the potassium iodide treatment: One and one-half drams once daily for a week, rest a week, give a week, rest a week, give a week. Give it in a little water. If the lumpy jaw is not attached to the jaw remove it surgically and dress with tincture of iodine daily. This is an infectious disease and it will spread to others. It is wise to dispose of the affected animal rather than take chances in having her spread the disease.

Wild Parsnip.—Can anything be done for a cow that is poisoned with wild parsnips? S. S.
Merrill, Ore.

One of the remedies which have been recommended against wild parsnip poisoning in cows is to give the animal a quantity of potassium permanganate solution, from 15 to 60 grains, in one or two quarts of water, the dose depending upon the size of the cow.

Impaction.—I would like to know how to treat a horse for impaction. J. H.
Homedale, Idaho.

Impaction is caused either from indigestion due to feed or it is sometimes due to a twist in the bowel or to paralysis of a section of the bowel. If it is caused by indigestion purges are used, such as a quart of raw linseed oil once daily, for instance, in the morning, and one pound of epsom salts in two quarts of water at night. This can be repeated for three or four days if necessary.

If it is due to paralysis of the bowel the bowel wall must be stimulated. This is frequently done through the use of nux vomica. This is a poison and veterinarians knowing how to use it give very, very large doses of it with splendid results at times. Since this is a poison, it should be used practically by veterinarians only.

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For further information and catalog write to Economy Farms, Tekoa, Wash., or Col. Harry C. Cranke, Moscow, Idaho.

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ASSISTED BY FRED MILLER, OAKESDALE, WASH.

Dispersal Sale

TENSED, IDAHO, SATURDAY, JUNE 24, 1922, AT 1 P. M.

Will sell at auction: 30 head registered Shorthorns, including Herd Bull Lurene's Silver, outstanding grandson of Villager, a bull of lots of scale and quality; 5 range bulls and 25 head of females.

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Write for catalog.

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FRED C. POOLE, Tekoa, Wash., Clerk.

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offers for sale at farmer's prices, four Holstein bulls, ready for service, sired by Sir Soldene De Kol Pietertje, a double grandson of Florence Idella Sharp, former state record cow with 27,236 lbs. milk and 1146 lbs. butter. All from record dams that are now on retest and increasing their former records by large margins. Also three young calves of the same breeding.

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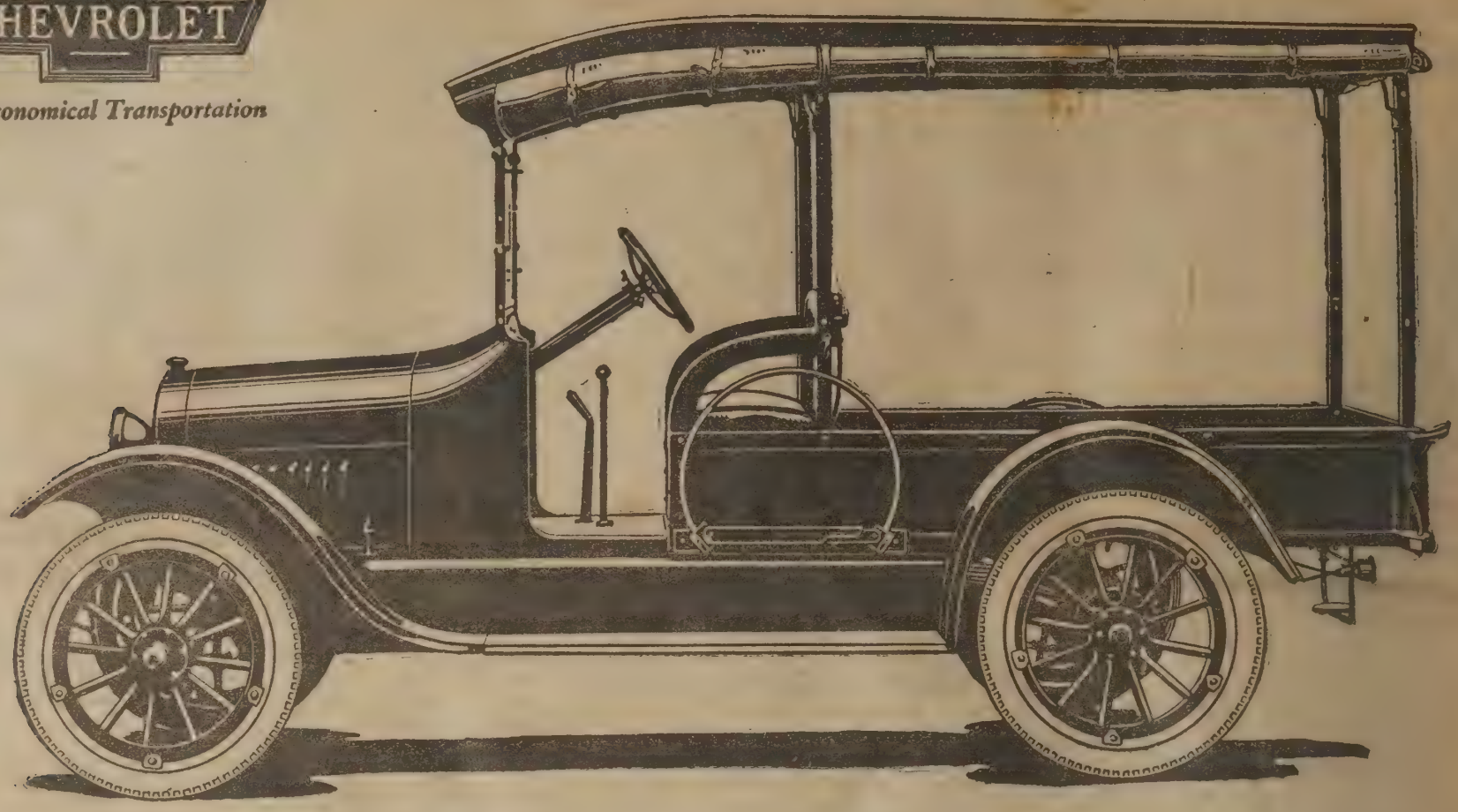
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THE WASHINGTON FARMER
ESTABLISHED 1894
SPOKANE. SEATTLE.



The Star-Spangled Banner

O say, can you see by the dawn's early light
What so proudly we hailed at the twilight's last gleaming?
Whose broad stripes and bright stars through the perilous fight
O'er the ramparts we watched, were so gallantly streaming;
And the rocket's red glare, the bombs bursting in air
Gave proof through the night that our flag was still there;
O say, does that Star-Spangled Banner yet wave
O'er the land of the free and the home of the brave?

On that shore, dimly seen through the mists of the deep,
Where the foe's haughty host in dread silence reposes,
What is that which the breeze, o'er the towering steep
As it fitfully blows, now conceals, now discloses?
Now it catches the gleam of the morning's first beam,
In full glory reflected now shines in the stream:
'Tis the Star-Spangled Banner. O long may it wave
O'er the land of the free and the home of the brave!

O thus be it ever, when freemen shall stand
Between their loved homes and the war's desolation;
Blest with victory and peace, may the heav'n rescued land
Praise the power that hath made and preserved us a nation!
Then conquer we must, when our cause, it is just,
And this be our motto: "In God is our trust";
And the Star-Spangled Banner in triumph shall wave
O'er the land of the free and the home of the brave!



Shall Intoxicating Liquor Be Served on American Ships?—Page 4

Washington Crops

Forecast of 44,865,000 Bushels of Wheat for 1922

The June 1 crop report of the bureau of markets and crop estimates shows, for the state of Washington, (1) a decrease of over 1,000,000 bushels of winter wheat production, as compared with the May 1 forecast; (2) a spring wheat acreage the same as last year, with about an average production expected; (3) small decreases in oats and barley acreages and production as compared with 1921.

Winter Wheat.

Washington winter wheat dropped from a condition of 85 on May 1 to 79 on June 1. This condition of 79 forecasts a production of 27,253,000 bushels, as compared with the May forecast of 28,404,000 bushels. The 1921 crop amounted to 37,457,000 bushels, while the average production for the five years, 1916-20, is 18,376,000 bushels. On June 1 of last year the condition of the crop was 96, while the 10-year average condition on June 1 is 89.

Spring Wheat.

The acreage of spring wheat in Washington this year is placed at 1,147,000 acres, the same as the acreage of 1921. Spring wheat on June 1 averaged 83 per cent of normal, against 91 on June 1, 1921, and 92, the 10-year average condition on June 1. The condition of 83 gives promise of a crop of 17,612,000 bushels, as compared with 17,205,000 bushels in 1921 and 17,543,000 bushels, the average production for the five years, 1916-20.

All Wheat.

June 1 conditions forecast a total production of 44,865,000 bushels this season, against 54,662,000 bushels in 1921 and 41,665,000 bushels in 1920. The average wheat production for the five years, 1916-20, is 35,919,000 bushels, while for the 10-year period, 1911-20, the average is 43,036,000 bushels.

Oats.

The oat average in Washington is estimated to be 202,000 acres, or 86 per cent of the 1921 acreage. Averaging 90 per cent of normal on June 1, the oat crop forecast is 8,636,000 bushels, as compared with 10,500,000 bushels produced in 1921 and 10,420,000 bushels, the average production for the five years, 1916-1920.

Barley.

The 76,000 acres of barley in Washington this season (92 per cent of the 76,000 acres last year) gave promise on June 1 of producing 2,267,000 bushels, against 2,797,000 bushels in 1921 and 3,964,000 bushels, the five-year average, 1916-21. The average condition of the crop on June 1 was 82, as compared with 92 one year ago and 93 the 10-year average condition on June 1.

Rye.

Rye on June 1 was 88 per cent of normal, a drop of 2 points since May 1. This condition forecasts a crop of 251,000 bushels, against 294,000 bushels in 1921 and 162,000 the five-year average, 1916-20.

Hay.

Hay with an average condition of 90 on June 1, shows an increase of 3 points over the May 1 condition. The total hay crop now promises to be 2,120,000 tons (2,091,000 of tame hay and 38,000 of wild hay), against the May 1 forecast of 2,015,000 tons. The 1921 hay crop amounted to 2,666,000 tons.

Clover and Alfalfa.

As compared with 1921, the clover acreage shows a decrease of 1 per cent and the alfalfa acreage a decrease of 4 per cent. Clover on June 1 had a condition of 95, against 100 on June 1, 1921. The condition of alfalfa on June 1 was 88, as compared with 96 one year ago.

Home-Made Soap

The making of home-made soap is usually regarded as a relic of frontier times and something that is too impractical for the modern housewife even to try to accomplish when she has the country store to fall back on for her supplies.

A group of women of the Eld community, Thurston county, have tried out a recipe for gasoline soap, which resembles ordinary white laundry soap, but which has given exceedingly satisfactory results, both as to efficiency and cost, according to figures compiled by the women.

The recipe is as follows:

Five pounds of grease.
Two and one-half pints of hot water.
One can of Red Seal lye.
Three tablespoonfuls of powdered borax.
One-half pint of gasoline.

Strain grease. Combine hot water, lye and borax. Stir until dissolved. Let cool until lukewarm. Pour lye very slowly into the lukewarm fat, stirring constantly until smooth and homeylike. Add gasoline. Mix well. Pour into mold, let cool, then cut into bars. This recipe makes 15 bars.

Mrs. Charles Starr, who is the community leader at McLane, is responsible for getting the idea started in the neighborhood and a number of the farm women in the district have found it to be equally successful. Almost any kind of fat can be used and there is often a chance to utilize surplus fat that accumulates about the kitchen or at butchering time. The use of gasoline adds to the cleansing properties of the soap.

Other details of home laundering have been taken up by this and other communities in the county and the women find that they can get many ideas on home washing that save considerable time and backache. Methods of removing stains have been found very practical and are not difficult to carry out. Equipment for the drying of clothes inside the house has been planned and installed which is found to be a great help in rainy weather.

One woman had her husband build some stationary tubs of wood in her new laundry and they have been found satisfactory. New methods that make the home washing easier are demonstrated before the community meetings and each woman can then use them or not, according to her own particular plan of carrying out her work.

The work is carried on largely by means of the community leaders, who are able to do much in getting the farm women organized and holding regular meetings. Occasional assistance can be given by Miss Ruth Kennedy, the county home demonstration agent, who can furnish bulletins and other information of this kind.

A plan is on foot to purchase soap chips by the barrel, where it is not found practical to make the home-made soap. In this way a great saving can be made on the grocery bill.

Kitchen Conveniences

Means for making housework more interesting as well as the saving of time have been found by the women of Wiley City, in Yakima county. This work was in the nature of a testing circle in which the women tried out a number of kitchen conveniences which had been furnished for trial by supply houses and were distributed by the local community leader, Mrs. M. W. Beechan.

Such articles as the bread mixer, gasoline iron, dish drainers and the utility table have been found to save much time in a month or a year's time, but the most interesting point brought out is that the daughters, in many cases, are as much interested in the articles as their mothers. Mrs. John Wiley told how her two girls, both under 12 years, asked to mop the floors in order to use the new mop wringer.

Miss Edna Ladwig, county home demonstration agent, tells of other similar testing circles that are being carried on with equally outstanding results. In all cases the local stores are willing to help the work along by getting such articles that are needed in the circle. In some cases the manufacturers have sent a list of articles from which the leader may pick out 10 to be used for trial purposes in the community and any additional articles can be purchased as needed. This plan has been a great help to the women in picking out the articles they want for their kitchens.

Glass Sun Driers

The women in Yakima county have found the glass-covered sun driers to be a great help in the utilizing of surplus fruit that can not be utilized in other ways. These driers are fitted with trays of wire mesh and there is an opening at the bottom on one side and at the top of the other side to allow for ventilation. All such openings are closely covered with wire screen to prevent flies from entering.

Such a drier can be placed on the porch or in the yard where the sun will strike it and be left until the fruit is ready to be packed for the winter. It needs practically no attention except filling and emptying and it has proved to be very efficient and is a convenient means of putting up dried fruit.

Never before could you get so much tire worth for $10.90

CAR-OWNERS who bought a 30 x 3½ "Usco" for $10.90 last Fall have discovered this by now—

Nobody before ever got so much tire value in the neighborhood of ten dollars.

They never had to question the *quality*—with the makers of U.S. Royal Cords behind it.

They couldn't help admiring the price—*spontaneously made* to meet the *new economy times.*

* * *

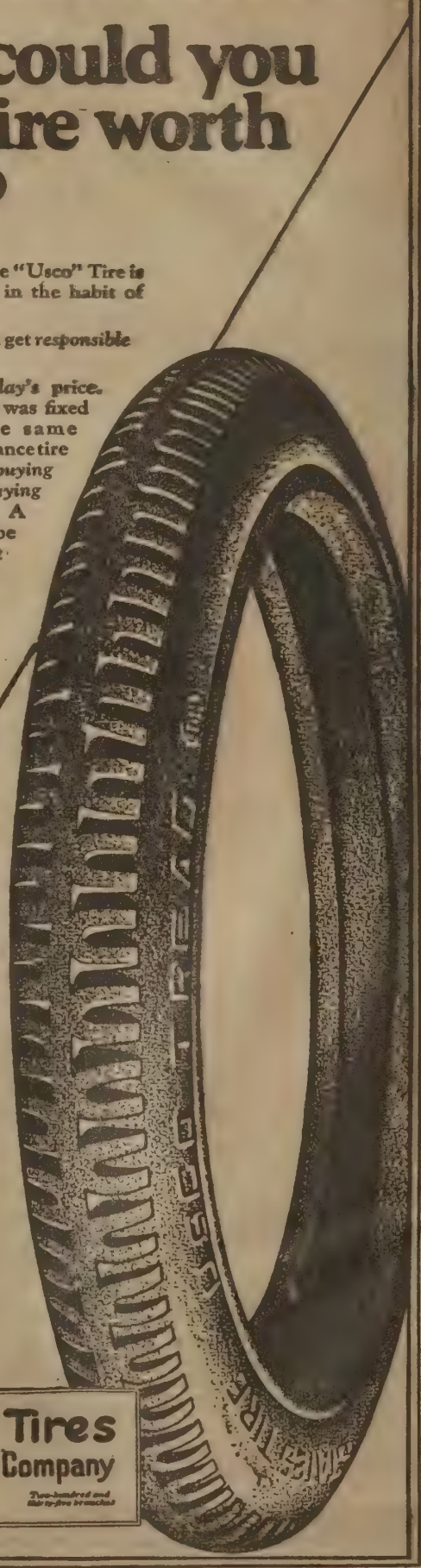
Today a number of other 30 x 3½ tires have come into the popular $10.90 price range originally established by "Usco."

So it might be well to remember just what the "Usco" Tire is in case you are in the habit of *comparing.*

In "Usco" you get *responsible quality.*

$10.90 is *today's* price. But the *quality* was fixed *long ago*—the same "Usco" performance tire users have been *buying* and *using* and *buying again* for years. A tire that would be *high value* at *more than* $10.90.

At $10.90 it is *unapproached.*



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THE WASHINGTON FARMER

SUCCESSOR TO

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For Good Farming, Attractive Country Homes and Happy Country People

One Hundred Million Bushels Pooled

"It is a shame that farmers are being compelled to take the low price for wheat that rules the general market at this time," said President George C. Jewett of the Northwest Wheat Growers, Associated, to a representative of THE FARMER in his offices at Portland the other day. "The world needs our wheat, and it needs it to such a degree that the market ought to be strong enough to give at all times an adequate return to the grower for his investment and labor, but at the present time, as in times past, it doesn't do it."

Twelve or perhaps 15 per cent of the wheat produced in the United States this year will be marketed on a pooling basis if Mr. Jewett's estimate of the total amount signed up or to be signed up in 100 per cent pools proves to be correct. Mr. Jewett estimates that there will be approximately 100,000,000 bushels of grain pooled in the United States this year. Of this amount about 50,000,000 bushels will be in the five states now operating through the Northwest Wheat Growers, Associated.

Up to a few days ago there were only four states operating through the northwest organization. The fifth to come in is North Dakota, with probably 15,000,000 bushels and possibly as high as 17,000,000 signed up under iron-clad pooling contracts. Washington is estimated to have 19,000,000 bushels signed up, Idaho and Montana about 7,000,000 each and Oregon about 4,000,000.

The agreement for the entering of North Dakota into the Northwest Wheat Growers, Associated, was effected at Portland a few days ago when George E. Duis, manager of the North Dakota pooling organization, met with the board of directors of the Northwest Growers.

The North Dakota Situation.

The United States Grain Growers, Inc., included North Dakota in its campaign for membership and at the present time has a considerable bushelage signed up under the United States Grain Growers' plan. It is problematic at this time how large a proportion of the grain now signed up with the United States Growers will be marketed through the Northwest Grain Growers, Associated, but the bushelage above quoted is understood not to include any that is questionable and which may be marketed through the regular channels of the United States Growers.

A prominent North Dakota attorney, who has been active in the organization of both the United States Grain Growers' and the North Dakota pooling organization, is reported to have given the opinion that contracts between growers in North Dakota and the United States Grain Growers, Inc., are null and void, in that they were secured under alleged misrepresentation. It is asserted that growers signed up on the understanding that the United States Grain Growers was to form a functioning sales agency and financing corporation, but that such agency and corporation has not yet been so effected as to render the service originally intended. A couple of interesting questions arises in connection with the United States Grain Growers' membership in North Dakota: First, do the members of the United States Grain Growers, Inc., in that state wish to nullify their contract and enter the North Dakota pool? Second, would the United States Growers permit such nullification without recourse to court action to determine the validity of such contract?

The Northwest Wheat Growers, Associated, is now establishing in Minneapolis a sales department that will this year handle the grain of North Dakota and Montana and probably all pooled grain in South Dakota and Minnesota. Mr. Jewett is leaving early in July for Minneapolis, where he will have personal charge of the work at that market during the next few months.

The American Growers.

A few months ago a movement was launched under the leadership of the Northwest Wheat Growers for the formation of a national organization, to be known as the American Wheat Growers, Associated, for the purpose of coordinating the efforts of all cooperative grain associations. A tentative organization was formed at a meeting in Denver, but it is not actively functioning this season. However, in a somewhat unofficial way, under the leadership of officials in various 100 per cent pooling organizations, the wheat-growing sections of the United States have been divided into four general regions; namely, the Pacific northwest, with headquarters at Portland; the northern, with headquarters at Minneapolis; the central, with headquarters at Kansas City; and the southern, with headquarters at Galveston. While there is no binding contract between any of the various sectional organizations of 100 per cent poolers for a centralized control of this season's marketing of the estimated 100,000,000 bushels of wheat, there appears to be a sort of tacit understanding that, in the opinion of leaders, will unquestionably result in an orderly marketing of this grain in a way that will do much toward stabilizing the grain market.

The financial condition of the Northwest Wheat Growers, Associated, is understood to be much better this year than at any time in the past. It appears doubtful that the organization itself will have to issue bonds or take other steps to finance itself, as there appears to be a much more favorable attitude on the part of the private banking institutions than heretofore. There appears to be a general sentiment among those close to the heart of the organizations of the Pacific northwestern states that several of the more or less violent storms of the past two years have been successfully weathered and that the prospects are good now for the best season in their marketing operations.

We Must Cut Expenditures

By LESTER M. LIVENGOOD, Manager Spokane County Taxpayers' Economy League

"As a member of the state commission for the revision of taxation appointed by Governor Hart, it has been my duty during the last winter to attend hearings in all parts of the state at which citizens of every kind expressed their views upon the subject of taxation. The impression made upon my mind was simple and deep. Everywhere people were protesting against the heavy burden of taxation," states President S. B. L. Penrose of Whitman college.

No wonder they protest! A 1214 per cent increase in the total tax burden in the state of Washington during its 30 years of statehood is certainly enough to make even a taxpayer protest, especially when the property that pays those taxes increased only about one-fourth as much or 336 per cent, and the number of people only 280 per cent in the same period.

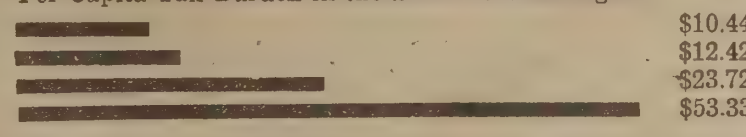
Washington is not alone in this respect. Idaho, Oregon and Montana are in the same boat. If President Penrose could tour those states he would find the same universal protest against the tax burden. Rapid organization of taxpayers' associations in these northwest states is evidence that the "worm is turning." The people are beginning to realize the age-old legal maxim that "the power to tax is the power to destroy." The tax power like many another good tool may become dangerous to its user if not handled with judgment.

The key to the development of the northwest is taxation. It is fundamental that for us to prosper we must have more people and more money invested in our northwest states. Yet we have erected a tax barrier which must be cut down before these people and new capital will come. When the tax burden gets around 3 1-2 or 4 per cent investors look for other fields. When the tax rate passes a certain point people are deterred from entering into various business enterprises. Real estate does not move, buildings are not constructed, industries fail to develop, and so on. Out here in the northwest we have become public spendthrifts. We want everything that the old and rich communities in the east have, and feel that nothing is too good for us. The result is that in the state of Washington, for example, the total tax burden per capita increased from $10.44 in 1890 to $53.33 in 1920 (excluding federal income and profits taxes and other federal taxes) or to about $100 per capita including federal taxes, or about five times, while the property that pays those taxes increased from $622 per capita in 1890 to $880 in 1920 or only about one-third of one time which puts the increase in state tax per capita about 15 times as rapid as the property value increased.

The time has come to call a halt. Taxes must come down. Protesting against the tax burden is all right if followed by action, but the need of the hour is action.

The great question is: What can we do about it? The big thing to do and practically the only thing to do first is to cut expenditures. We can't have our cake and eat it, too. We are paying to have our government do things for us that we never dreamed of 10 years ago. We must get down to the fundamentals in government before we talk about new revenues. If we can not learn to spend our present revenues economically, then new sources of revenue will be nothing but new methods of robbing the taxpayer.

Per Capita Tax Burden in the State of Washington.



Merge Fruit Organizations

Cooperative Growers Will Sell Through North American

The Federated Fruit Growers, Inc., established a few months ago under the auspices of the American Farm Bureau federation on the recommendation of the bureau's fruit marketing committee of 21, last week entered into a contract under which the North American Fruit Exchange becomes its marketing agency. Under the terms of the contract the two organizations will be united after January 1, 1923. The merger is effected in order to give the Federated Fruit Growers the advantage of an experienced sales service.

A contract has also been signed whereby Arthur R. Rule, vice president and general manager of the North American Fruit Exchange, will become general manager of the Federated Growers beginning January 1.

W. F. Gwin, who has been active in fruit marketing work in the northwest several years and who is in charge of operations in the Pacific northwest for the North American Fruit Exchange, comments as follows on the step just taken:

"The consolidation of the North American Fruit Exchange with the Federated Fruit Growers, Inc.—an arm of the great American Farm Bureau federation—means the realization of the long deferred hopes of farmers' cooperative societies all over the United States for a big, strong, non-profit, cooperative marketing and sales organization of their own.

"Under this consolidation, the organization will be grower-owned and grower-controlled throughout."

Mr. Rule, who becomes general manager for the united organizations, says: "The arrangement marks the beginning of a new day for the American fruit gorwer by enabling him to sell his product cooperatively at all markets. It places at his disposal an efficient sales service which we have been 11 years in building according to a cooperative plan. It will likewise mean a better quality of products and improved service for the consumer. From member cooperative selling associations of the Federated Fruit Growers, Inc., and the large permanent clientele of the North American Fruit Exchange, sufficient tonnage is already assured to make the new cooperative sales service a pronounced and continued success from a business point of view."

President J. R. Howard of the American Farm Bureau federation, who appointed the committee of 21 that worked out the plan of organization of the Federated Fruit Growers, Inc., said of the action just taken:

"I believe this to be one of the greatest accomplishments yet made in the development of cooperative marketing and in the elimination of waste between the producer and the consumer."

Wenatchee Apples

Estimated Between 13,500 and 14,000 Cars This Season

An apple crop in the north central Washington or Wenatchee district of between 13,500 and 14,000 cars is indicated by estimates made during the recent series in thinning demonstrations held throughout the entire district under the auspices of the Chelan County Farm bureau.

More than 1000 of the leading growers in the district attended these demonstrations and all reported that their crops will be much larger than they believed one month ago. Most of them will have to thin their Winesaps heavily, though this variety was believed to be very scarce.

Hydrant System of Spraying.

The next drive to be taken up by the Chelan County Farm bureau will probably be in favor of the introduction of the pipe and hydrant system of spraying. This plan has been tried out during the past four or five seasons with such uniformly satisfactory results, that its general introduction will be strongly recommended by the bureau.

Demonstrations of the workings of this system will be made at various parts of the district during the next month, if plans of the bureau materialize.

The system consists of a tank and spray pump located in the center of the orchard, with pipe lines sufficient to reach within 100 feet of either side. About three lines are necessary for the average orchard. These can be moved as one section is sprayed. The usual method is to lay the pipes to reach one-fourth of the tract, using hose 100 feet long to attach to the hydrants in the pipes. As many as four of the lines, each having a nozzle or spray gun, can be used. A saving of fully one-half the time necessary for spraying is said to be obtained by this method and better results are obtainable with less difficulty mechanically. The cost of installation is not great.

BEET PROSPECTS ENCOURAGE.

The sugar beet crop in Yakima valley looks the best ever to Dr. E. G. Titus of Salt Lake City, Utah-Idaho Sugar company specialist. He says that the Yakima season is much farther advanced than those in Utah or Colorado, and that the plants look better than they did even in the banner year of 1920. The company is conducting trials in sugar beet growing in Skagit county, where if successful the industry would be a valuable adjunct to the dairy industry.

WHITMAN HARVEST WAGES.

Whitman county farmers in a meeting held adopted the following scale of harvest wages to be paid this year: Haying, $2; shocking, $3; box drivers, wheat haulers, straw haulers, hoe downs, header tenders, $3; sack sewers, combine drivers, loaders, $4; header punchers, push binder drivers, $5; pull binder drivers, $4; gas engineers, $6; steam engineers, $5; firemen, $4; separators, 50 cents, and wagons, 50 cents.

News comes from the Yakima valley that

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Keep Bars Off Ships That Fly the American Flag

Chairman Lasker of the United States shipping board, the federal authority that manages and operates the great merchant marine that the American people built at such cost and sacrifice during the war, takes the indefensible position that the Constitution and the Volstead act do not apply to American ships when they are outside of the three-mile limit at sea. Chairman Lasker argues that, since foreign ships operate bars and sell booze to their passengers, American ships would be at disadvantage if they did not engage also in the liquor traffic at sea.

We are for maintaining an American merchant marine, but not at the expense of the Constitution, the law and the respect of other nations, as certainly would follow if Uncle Sam, who has declared for national prohibition, should permit booze to be sold on his ships at sea. The argument that he needs the money and can not afford to let foreign ships get the booze traffic is false and weak. It was the argument, before we came to prohibition, that was advanced by the breweries, the distilleries and the saloon keepers. They "needed the money."

The further argument is heard that shipping is a world trade and not a local matter, and that for American ships to compete with the world equal conditions must prevail for success. If that reasoning were allowed to control it would be necessary to let the Northern Pacific, the Great Northern and other American transcontinental roads sell booze on their dining cars because the Canadian Pacific Railway company has been selling booze on its cars.

Let us be consistent. Let us be courageous. Let us go down the line for prohibition, since prohibition is the constitutional and statute law of the land. Let us keep bars off the ships that fly the American flag. Let the shipping board appeal to that sane class of ocean travelers who feel, with reason, that they will be safer at sea on dry ships than on ships that are dispensing booze. If alcoholic liquors are bad on land, how far more dangerous they must be upon the deep sea, where opportunity and temptation to drink should be withheld from the captain and his officers and the members of the crew.

If, on that stand for principle and right, Uncle Sam's ships still lose some money from loss of passengers who prefer to sail on wet ships, why, let us pocket that loss and be consistent and true to the Constitution and the law.

The Halo of Economics

Economics is quite a word in itself. The word economics, like the word psychology, has all the flouirshes of learning surrounding it as a halo. Economics appeals to the practical man as well as to the speculative scientist.

The whole realm of housewifery is being summed up in home economics. Pretty near the whole realm of government is being summed up in political economics, and the whole realm of commerce and finance may be waiting for the right word to define its own economics.

In its methods, modern economics is comparatively a new science. Like all new sciences, exaggerated claims are made for its first conclusions.

There are dangers in economics as well as great helps. There are fads and freaks in economics as well as in any other department of knowledge. It is not only the student, the educated reader of books and other high-browed people who are interested in economics. The wage earner on the street and the hired laborer on the farm are thinking out these economic problems for themselves and becoming established in their opinions.

It is becoming a serious question whether the so-called hobo is not thinking out these economic questions in a more intensive way, though perhaps a mistaken way, than merchants or railroad directors. Is there a fundamental truth being sought by the street worker and the farm laborer, no matter how fantastic may be some of his conclusions?

The tortuous paths of economics need to be straightened into highways upon which the common people may travel toward the truth.

To Lead or to Follow

To lead or to follow efficiently demands that you should do one of two things—either lead or follow.

Some say that leaders are born, not made. It might be a truer statement that leaders are born and are made.

Likewise, the best followers are born and are made.

Every leader makes more or less mistakes. The nature and the frequency of those mistakes are the factors which determine whether he is a wise or an unwise leader, whether he is a successful or an unsuccessful leader.

Likewise, followers are apt to make mistakes with regard to their leaders, and whether they are loyal or unloyal followers depends upon the nature and the frequency of their criticism of the leader.

The leader who proves himself impracticable or false must be deposed and the loyalty of the follower is seen in deposing such a leader as well as staying by a leader whose faults are to be overlooked.

The follower who will not trust his leader, even to some personal disadvantage, can never hope to reap the ultimate rewards of true cooperation.

LOOKING INTO OTHER FARM FIELDS

Backed by bankers and other business men, 60 farmers residing in the immediate vicinity of Yuma, Ariz., have perfected plans for the planting of 500 acres of lettuce during the coming season. Already more than 1000 acres have been signed up near Gadsden.

* * *

Those who like garlic now need have no cause for anxiety, for the Royal School of Agriculture at Portici, near Naples, Italy, reports that the garlic crop has suffered no damage from a severe rainy spell. Better than that is the information just received by the department of Commerce from American Consul Byington, Naples, that the onion and garlic acreage is not only normal, but that the harvest now taking place is better than normal.

* * *

Lower California has been spared the decade of revolutionary disturbances suffered by the mainland of Mexico, and consequently its cattle supply has not been reduced, Consul William C. Burdett reports to the department of commerce. Thousands of semi-wild cattle are scattered over vast stretches of cheap land—mostly dotted with rather poor range land. While the forage is scant, the desert bred cattle thrive on it by running over large expanses of unfenced land. In very dry years the cattlemen move the animals into the high mountains, keeping them there until the next winter's rains. Lower California cattle have been bred up for 20 years and are considered superior to most range cattle of the United States.

State Farm News

Libby, McNeill & Libby of Yakima will handle this season from 550 to 600 tons of cherries, most of them grown in the Yakima valley, according to G. B. Kile, superintendent. The canning season will be a fairly long one, as cherries from other localities, such as Wenatchee, Walla Walla, Wash.; Freewater, Ore., and Lewiston, Idaho, will be brought in to extend the season. There will thus be but little time intervening between the cherry and the pear run. Some canning of apricots will be done in the interval, but a very limited tonnage will be handled, as the production of canning apricots is very light in the Yakima valley as yet.

* * *

One of the very active boys and girls' clubs in Pacific county is that led by Nestor Pessola at Naselle. This is a Jersey community, and quite naturally a dairy club would "lean" toward Jerseys. There are 11 members, and nine of them have Jersey calves.

* * *

The Chehalis Box, Basket and Veneer company, whose plant burned last winter, is operating again, the first work being an order for 7000 egg crates for local use. The plant was made into a box factory with the idea of making boxes for eastern Washington fruit men, said Mr. Merrell, recently returned from eastern Washington with an order for 200,000 boxes. But since the plant is in operation it has been discovered that there is a much larger demand for boxes and crates by local concerns than was supposed.

* * *

The Yakima warehouse of the Washington Cooperative Egg and Poultry association, though established only a short time, is now handling 400 cases of eggs weekly, all its shipments being to eastern markets.

* * *

Last year the Yakima Fruit Growers' association entered into a contract with the North American Fruit exchange to sell the association's fruit through that organization for the season of 1921, the confirmation of all sales being in the name of the association. At their last meeting the association voted to cancel this contract with the North American Fruit exchange, which has been done, and the association will proceed to sell its fruit again this year through its own sales organization and through its own broker, as it has in times past.

* * *

Directors of the Horse Heaven irrigation district have formally canvassed the returns of the bond election and prepared formal notice incident to court action asking for confirmation of the $32,000,000 bond issue. The vote was 221 for and 4 against. If there is no opposition to the confirmation, final decree of court will be obtained July 12 and under the contract with Howard Amon, construction of the canal must be started within 90 days thereafter.

* * *

George M. Wilson of Wilbur will again be the judge of horses at the state fair at Yakima this year.

* * *

Evaporated milk products, with substitute fats, produced in the state of Washington last year totaled in value $746,952, a report by E. L. French, director of agriculture, shows.

The total value of all dairy products in the state last year was $28,845,925, exclusive of milk delivered to dealers. The value of ice cream totaled $2,125,781 and butter products $9,499,647.

* * *

Yakima fruit dealers are planning to entertain the delegates who attend the fruit shippers' convention at Seattle July 26, 27 and 28. L. G. Hays has been appointed as chairman of the entertainment committee and reports that $10,000 has been raised in the valley, which will be used at Yakima and Seattle to show the visitors the apple-producing sections. The delegates will spend one full day in the Yakima valley and from there go to Wenatchee via Spokane.

* * *

Captain R. J. Graham has added 10 acres to his 25 acres of bearing orchard at Cashmere, buying the addition from J. G. DeBord for $13,000. This property was formerly known as the D. E. Graves place. It has the commercial varieties of Winesaps, Spitzenburgs, Jonathans and Delicious. This place joins a 15-acre tract already owned by Captain Graham. He now has 35 acres in bearing orchard.

* * *

A number of persons rose to prominence during the balmy days of hop growing on the Pacific coast. One of the best known of these was Julius Pincus, for 25 years a well-known hop grower and dealer. Mr. Pincus was a native son of the state of Washington, being born in Stillacoom 51 years ago. He was a son of Isaac Pincus, one of the founders of the state and a pioneer in the hop industry. Isaac Pincus established himself in business in Stillacoom in 1852, later moving to Tacoma. Two of Mr. Pincus' brothers also were prominent hop dealers.

* * *

Announcement is made that the Northern Pacific railway will put on special berry and cherry trains to carry Puyallup valley and Yakima products to eastern markets under a schedule that will be much faster than present passenger service between Puget sound and St. Paul. There will be two trains daily carrying refrigerator cars and stopping en route only for the purpose of reicing.

* * *

Yakima is to be linked with other cities in the northwest in a firm known as the Fruit Export corporation, just incorporated under the laws of Washington. J. McPhee Ferguson of Yakima is vice president of the company and will have charge of the Seattle office. H. F. Davidson, pioneer fruit grower of Hood River, Ore., is president of the firm and will have charge of the Portland office. A branch will be established in Wenatchee. The corporation is the first to be formed exclusively of northwest men to ship apples direct by water. The corporation expects to handle 600 carloads of apples its first year. An office will be opened soon in England.

Coming Events of Interest

June 30—Planters' day, Woodland.
July 8—Field day, experiment station, Waterville.
July 10—Field day, experiment station, Pullman.
July 12—Demonstration day, experiment station, Prosser.
July 24-Aug. 5—Live stock tour, Vancouver to Bellingham.
July 26-27—International apple shippers, Seattle.
July 27-28—Whatcom Guernsey gallop, Bellingham.
July 27—Alfalfa growers' tour, Stevens county.

FARM BUSINESS AND MARKETS OUTLOOK

Survey of spring pig crop shows an unusually large increase to occur in one season.

Top steers at Chicago have ascended to $9.75 and the general average price of good steers is the highest in 15 months with a further advance almost a certainty.

Veal calf market seems to have reached the turning point.

On western markets breeding cows and heifers are said to be so scarce that quotations are merely nominal.

Hot weather has reduced the domestic demand for fresh pork, but helped the sale of smoked meats.

Too many horses were offered at Chicago last week and prices fell $10 to $15 a head on the plainer sorts.

Wheat harvest is in full swing already in the southern part of the winter wheat belt.

Broomhall estimates a world carryover of 80,000,000 to 100,000,000 bushels of wheat at the beginning of the new crop year.

Corn market is primed for a moderate advance.

Heavy shipments caused a sharp slump in the potato market last week.

Big Increase in Hog Production

The survey of the spring pig crop by the department of agriculture on May 1 has been made public and shows a net increase in the number of pigs saved in 11 cornbelt states of 14.5 per cent over last year. The number of litters farrowed was 22.8 per cent larger than in the spring of 1921, but reports of heavy losses were confirmed as the average number of pigs saved per litter was 7 per cent less than a year ago.

The increase is an unusually large one to occur in one season. The department's report on the number of brood sows on farms in the same states on April 1 indicated an increase of 15.6 per cent in spring pig production.

Besides the increase in the spring pig crop the prospective increase in fall farrowing in the cornbelt averages 49.3 per cent. If the latter work out as expected, the total number of sows to farrow for the entire year will be 28 per cent larger than in 1921.

In the three eastern states, New York, Pennsylvania and Maryland, the total number of pigs saved this spring decreased 2.7 per cent compared with last year, while in the three southern states of Georgia, Alabama and Mississippi the number was only 0.3 per cent larger than a year ago. All of these eastern and southern states, however, show an increase of approximately 25 per cent in the number of brood sows bred or to be bred for fall farrowing.

The department points out that the increase in hog production will offset the shortage in meat stocks and lard in storage as compared with the average of the last five years. In two of those years, however, stocks of these products were a burden upon the hog market and if good hog prices are to be maintained, it is not desirable that stocks be built up again to this average.

This report indicates that hog prices may go considerably lower next fall and winter than during the last few months and they may average below the level of last fall and winter. Whether hog prices will maintain a profitable ratio compared with corn depends largely on the size of this year's corn crop.

Choice Cattle Higher; Others Lower

The cattle trade is becoming a two-sided affair with choice kinds advancing and common and medium grades, most of which show signs of grass, taking the opposite course. Top steers at Chicago have ascended to $9.75 and the general average price of good steers is the highest in 15 months, with a further advance almost a certainty. A falling market on lower grades of all sizes and sexes is even more assured. Their loss last week ranged from 10 to 50 cents.

Thus far the cattle shortage theory has not been confirmed. Receipts at the 20 leading markets from January 1 to June 19 totaled 5,313,000 head compared with 5,863,000 head in the same period of 1921. The result is surprising in view of the liquidation which was under way last year in contrast with the restocking process which has been going on this spring. The movement of feeders to the cornbelt in the last five months indicates a normal supply to come from those states while the grazing sections promise to have about as much grass beef as last year.

The veal calf market has limped badly recently, perhaps influenced by the slump in lambs. A good deal of the advance since the spring break was erased, but with lighter receipts on the horizon, recovery is probable. The market seems to have reached the turning point already.

Feeder Shipments Fall Off

Total shipments of stockers and feeders from the 12 leading markets have decreased over 50 per cent in the last few weeks, although the potential demand if prices were lower undoubtedly is broad. Kansas City reported a decline of 50 cents on some grades last week and further revisions in the price scale can be expected, although no bargain counter is probable at any time this year. On western markets breeding cows and heifers are said to be so scarce that quotations are merely nominal.

Rally in Hog Markets

The hog market dipped again early last week under receipts which were practically the heaviest of the June run, but rallied with the same promptitude that has followed each minor decline recently, and again reached a top of $11. Large packers bought freely on the break revealing that they need hog products and later on eastern shippers expanded operations after a long period of inactivity. In spite of the accumulation of lard, which increased 10,000,000 pounds at Chicago in the first half of June, heavy barrows and packing sows are still selling at a small discount, but the spread is widening. In another week or two receipts of hogs will begin to decline if they have not already started to do so. This should mean an advancing market. Light hogs are likely to sell at $12 or higher before the summer is over.

Clearances of hog meats and lard are making an excellent showing and foreign buyers were reported last week to be actively in the market for additional stocks. Foreign buying usually shows a decided increase in the late summer and the present spurt may mean that it is making an early start. Hot weather has reduced the domestic demand for fresh pork, but helped the sale of smoked meats.

Lamb Market Crowded

Native lambs crowded the market last week and prices fell $2 to $2.50. Kentucky and Tennessee shipped heavily, Virginia flooded Jersey City, the cornbelt sent a large quota and a few Idahoes arrived. Hot weather played havoc with the demand for the dressed product and heavy slaughter from previous weeks pounded prices on the hook in the east $4 to $5 per hundred pounds. A cargo of 17,500 carcasses of New Zealand frozen lamb and mutton arrived at New York.

The southern lamb run will soon be over and prices should become more stable. With a small crop in the range states, the market may not go much lower.

Feeder buyers are playing for a repetition of last year's fat lamb performance and are contracting for thin lambs in all the range states. A broad demand at the leading markets is expected this summer and fall, in addition, but values promise to be a little lower later on than they are now.

Too Many Horses Arrive

Too many horses were offered at Chicago last week and prices fell $10 to $15 a head on the plainer sorts. Good drafters are wanted, there is a market for loggers and rugged workers weighing 1450 to 1600 pounds, suitable for teaming, trucking, excavating and the like, can be sold. Blemished stock sells for but little more than the cost of freight.

Chicago—Good and choice heavy drafters, $175@275; common and medium drafters, $100@180; good and choice wagon horses, $100@140; common and medium wagon horses, $50@100; farm chunks, $40@125.

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Advance in Wool Halts

Flolowing a slowing down in foreign wool markets with declines of 5 to 10 per cent on coarse grades in London and Australia, the domestic market has become less active. Although Boston quotations come higher, prices at a sale in Texas were a shade lower and buyers in the west representing eastern firms were told to reduce their limits by 2 to 3 cents. Mills are resisting further upturns in the price of raw wool and are not taking all the offerings. The course of the market will hinge upon the trend of prices abroad, the progress of tariff legislation and the tenacity of owners of the remainder of the clip not yet in manufacturers' hands.

Boston quotations were as follows:

Scoured basis

Oregon—Eastern No. 1 staple, $1.30@1.35; fine and fine medium combing, $1.20@1.35; eastern clothing, $1.10@1.20; valley No. 1, $1.10@1.12.

Territory—Fine staple, choice, $1.30@1.35; one-half blood combing, $1.12@1.18; three-eighths blood combing, 85@90c; one-fourth blood combing, 75@78c.

Wheat Harvest Is On

Wheat harvest is in full swing already in the southern part of the winter wheat belt. Threshing has begun in a number of states and the first cars of new wheat arrived at St. Louis and Kansas City. Most of the early threshing returns have been disappointing. Premature ripening from high temperature is reported from Kansas, Missouri and Nebraska. Spring wheat is progressing favorably in most sections and the prospect is one of the best in years, but rains will be needed soon to maintain its condition. The annual black rust scare has been started, but thus far it has not received serious attention.

The Canadian acreage is estimated officially at 22,464,000 acres or 794,000 acres less than last year. The crop has had a better start this year, however, and the yield may yet exceed that of 1921. The European crop is about up to the average in all countries except France, Germany and Poland where it is below the average. The acreage seeded for the next harvest in Argentina and Australia is reported to be heavy, but India needs general rains to aid in seeding.

Undertone in Wheat Improves

Wheat prices reached a new low point for the season last week, but the market is showing more resistance to pressure and the undertone is more firm.

Mills are supplying their wants without attracting attention and exporters have been indifferent until the last few days when breaks began to uncover liberal export sales and it is now reported that most of the heavy deliveries at Chicago on May contracts have been placed.

On passage stocks are only 58,000,000 bushels compared with 87,000,000 bushels at this time last year, sales to Europe for future shipment from the United States are smaller than usual at this season, and the new European crop is late as well as smaller than last year so that her fall requirements will be large. A year ago Europe scrambled for wheat when our new crop began to move and bought it on an advancing market for two months and a half. In view of the supply situation it is possible that she will repeat the performance this year, but there is no evidence of it yet.

Besides the 245,000,000 bushels of wheat on hand in the United States on March 1 about 3,000,000 bushels have been imported, making a total of 248,000,000 bushels. Approximately 33,000,000 bushels were exported in March, April and May, 27,000,000 bushels were used for feed and 101,000,000 bushels consumed as flour, or a total disappearance of 161,000,000 bushels, leaving 87,000,000 bushels in all positions on June 1. Consumption and exports during June promise to be about 43,000,000 bushels, leaving a calculated carryover of 44,000,000 bushels on July 1, if the estimates are correct, compared with 90,000,000 bushels last year and an average of 75,000,000 bushels. Due to small exports in the last few months the decrease below the average is smaller than expected.

The Argentine crop estimate apparently is in for revision. The export surplus would have been only 92,000,000 bushels, but 87,000,000 bushels have already been shipped since January 1, and the visible supply is 4,000,000 bushels, practically accounting for the entire surplus with no evidence that shipments are going to cease. Private estimates exceed the official by 25,000,000 to 40,000,000 bushels.

Broomhall estimates a world carryover of 80,000,000 to 100,000,000 bushels at the beginning of the new crop year. His earlier forecast was for a very small reserve.

Corn Market Ready for Advance

The corn market is primed for a moderate advance. The after-planting movement has come and gone, heavy feeding operations have cut down farm stocks and the new crop needs rain.

Cash oats prices are the lowest since last fall. Demand is only fair, stocks are large and shipments from farms unseasonably heavy. Crop reports are mostly unfavorable, with dry weather, weeds, rust and chinch bugs all playing part. The Canadian acreage is placed at 16,934,000 acres or 16,000 acres less than last year.

The cash grain prices for June 21 were:

Chicago—Wheat—No. 2 hard, $1.12@1.13 1-4; No. 3, $1.08 1-2@1.12 1-2. Corn—No. 2 mixed, 60@62 1-4c; No. 3, 59@61 1-4c; No. 2 yellow, 60 1-2@63c; No. 3, 59@61 3-4c; No. 4, 58@60 1-4c; No. 2 white, 60 1-2@63c; No. 3, 59@61c; No. 4, 58@60 1-2c. Oats—No. 2 white, 34 3-4@40c; No. 3, 33@36 1-4c; No. 4, 32@36c. Rye—86@87c. Barley—54@62c.

Feed Market Still Declining

The trend of the feed market continues downward. Rather large quantities of wheat feeds, especially bran, are being offered, although flour mills are not operating heavily. Offerings of high protein meals are not excessive, but demand is extremely limited. Total stocks of cottonseed and cottonseed cake at southern mills on June 1 were 132,919 tons compared with 213,781 tons on the same date a year ago. Hominy feed has declined, but gluten feed has held unchanged.

Prices per ton (100-pound bags—in carlots—Chicago—Bran, $17; standard middlings, $18.75; flour middlings, $25; cottonseed meal, 36 per cent, $46; 43 per cent, $50; hominy feed, $23; gluten feed, $31.85; old process oil meal, $49; tankage, $50.

Hay Prices Weaken

Few hay buyers are in evidence and only the better grades are wanted, while most of the arrivals are low grades. The markets are generally weak.

Prices per ton in carlots—Chicago—No. 1 timothy, $21@24; No. 2, $18@20; No. 3, $10@16; No. 1 light clover mixed, $18@20; No. 1 clover mixed, $12@14; alfalfa, $14@22; upland prairie, $13@18; midland prairie, $13@16; oat and wheat straw, $12@14.

Egg Prices Are Stable

Since the decline occurring about the middle of June the egg market has been rather stable. Storage stocks are of record size and are still accumulating. With much lower prices this year, however, consumption has expanded and the storage stocks, even though large, should be absorbed in due course. Receipts will decline rather steadily in the next two or three months.

Butter Markets Steady

The butter market has been holding within a limited range for the last month. Receipts increased sharply during the period, but the demand expanded likewise and drastic declines were prevented. With the market showing stability, storage operators have been coming to the conclusion that it will be impossible to buy butter much more cheaply and have been purchasing freely from the June make. Production continues to show an excess over any recent year. Lower scores of butter are becoming more plentiful and are more difficult to move.

Prices on 92 score fresh butter on June 21 were:

Chicago, 35 1-2c; New York, 36 1-2c; Boston, 37c; Philadelphia, 37c; San Francisco exchange quotation, 40 1-2c.

Cheese Stored at High Prices

Although this is the season in which the largest quantity of cheese goes into storage, prices have retained the advance which occurred during May. Storing operations expanded decidedly last week, about 50 per cent of the

(Continued on page twelve.)

LIVESTOCK AND DAIRY

Quality in Hay

Means Butterfat at Less Cost

By E. B. FITTS.

Quality in hay and other roughage in the ration is important. Dairy products should be produced largely from the cheaper and more bulky feeds.

A light green color, the presence of leaves and other finer parts and a pleasing aroma are indications of quality and feeding value in hay. Whether buying hay or producing your own see that it carries these qualities. It means milk and butterfat at less cost.

Of the crops grown in this country hay ranks third in value, being exceeded only by corn and wheat. The annual yield is nearly 100,000,000 tons. The average quality is inferior, not more than 10 per cent grading as choice. This means an enormous loss in feeding value. Improper methods in curing are responsible for the greater part of this loss.

No crop grown requires more care in harvesting and none is more easily damaged by neglect. The stage of growth at which the crop is cut and the manner of curing are the prime factors in determining quality.

When to Cut.

Early cut hay is best for dairy cattle. A common rule is to cut during the early bloom. This rule will vary somewhat with the different crops. Clover seems best when in full bloom or just after that stage. Vetch when the first pods are about half formed. Some hay plants rapidly lose palatability when nearing maturity. Rye grass, Johnson grass and mesquite are examples. These should be cut as soon as the heads appear. Late cutting means loss of protein, of palatability and of the finer and more valuable parts of the plant.

Mowing and Raking.

Do not mow when the crop is wet with rain or dew. This moisture will dry off much faster when the plant is standing. Cut in the morning as soon as the dew is off and rake in the afternoon, or cut in the afternoon and rake the next day as soon as the curing process is under way. The greater part of the curing should be done in windrow or cock. Get into stack barn as soon as sufficiently cured.

How Hay Cures.

In growing plants the roots are continually drawing water from the soil, which after having done its work is expelled through the leaves. Many tons of water thus pass through the leaves for each ton of hay produced. When the plant is cut the leaves continue to draw moisture from the stems and throw it off into the air. Therefore, the leaves should not be allowed to shrivel in the sun, as curing is thus retarded and leaves broken off and lost. Curing in windrow or cock provides partial shade for the leaves and allows them to continue their work.

Hay Caps.

Hay caps often save serious losses. They are made from unbleached muslin one yard square. The corners may be weighted or fastened with wooden pins stuck into the hay.

A cap will adequately protect a cock containing 150 to 200 pounds of hay and may easily save its cost in a single storm.

Canned Milk

"Before the war the American condensed milk industry contented itself with supplying domestic needs. These domestic requirements ran slightly under 20,000,000 cases a year. In the boom period, culminating in 1919, about 39,000,000 cases were produced, or nearly 100 per cent more than was needed for domestic consumption. This surplus represented nearly 75 per cent of the world's consumption of canned milk in 1914.

"In 1920 the United States production dropped to less than 25,000,000 cases. It is interesting to observe that whereas the United States attained peak production in 1919, continental Europe reached its highest production point only in 1921.

"A swift reaction has now set in, with evidences of marked curtailment. One may not reasonably anticipate a return to the small prewar production, but the drift just now is plainly toward the resumption of cheese and butter making at the expense of the newly developed canned milk industry.

"Even Italy, which can not be rated as a dairy country, has produced some canned milk in the last two or three years. Italian canned milk has been offered within the last 30 days on the Paris market, but at prices considerably above American brands of equal quality. Spain has been buying large quantities of tinned milk through its former source of supply, The Netherlands.

"There is no country in Europe in which more condensed milk could be used now than Germany. The reduced herds and the scarcity of fodder, due to last season's prolonged drought, combine to produce a severe shortage in the supplies of fresh milk. Trade with the United States is affected by the difficulty of financing imports. The same demand, only more acute."—From an official report to the United States bureau of foreign and domestic commerce.

Silage Almost Essential

To get results economically most cattle feeders should use some kind of silage in the rations, says the United States department of agriculture. Steers fed on silage usually not only make more economical gains, shrink less and make more profits than steers fed on dry roughage, but also make it possible to utilize crops grown primarily in a rotation for restoring the fertility of worn-out lands.

The comparative value of a number of different silage crops for steer feeding was recently worked out by the department. In one instance similar lots of cattle were fed a ration of cottonseed meal and blackstrap molasses in combination with corn silage, corn and Biloxi soy bean silage, sorghum silage, sorphum and Biloxi soy bean silage, and Japanese cane and Biloxi soy bean silage.

The best gain was made by the steers fed the straight corn silage, but it was shown that the capacity of a farm for fattening or wintering cattle may be greatly increased by the use of heavy-yielding silage crops, such as sorghum and Japanese cane. Immature Biloxi soy beans mixed with corn or sorghum were not so satisfactory, but with late-maturing crops like Japanese cane, these soys gave very good results. Sorghum silage and Japanese cane and Biloxi soy bean silage are practically equal in feeding value for steers when supplemented by cottonseed meal and molasses.

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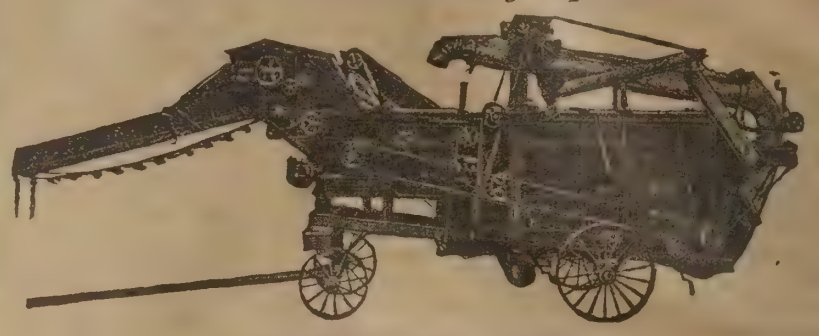
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POULTRY AND RABBITS

Capons Bring Much Higher Price

By H. W. BALDWIN.

The art of caponizing has been understood and practiced for a long time, although it is only recently that the possibilities of capon production have been realized, and are now being developed. In the eastern section of our country, principally in Massachusetts, New Jersey and eastern Pennsylvania, the production of capons has been made a specialized branch of the poultry industry, being produced for markets in the larger eastern cities As an industry it is still in its infancy, with great possibilities in its development. The question of whether to caponize the surplus cockerels, or to sell them as broilers, depends largely upon the local market conditions. Capons bring a much higher price than broilers, and if the demand is sufficient, capon production will be found profitable. Otherwise it will prove more satisfactory to market the surplus cockerels as broilers.

As capons grow and develop there is a marked change in their appearance and disposition. They are much quieter, lose their ability to crow and become very tame. If kept with the other fowls they much prefer the company of the old hens and chicks, and will keep away from the roosters. Some commercial poultrymen successfully use capons for hovering young chicks. In appearance the capons increase in size very rapidly, the comb, wattles and spurs cease to grow and the birds develop large and beautiful plumage

When preparing capons for market they should always be dry-picked. The feathers on the neck, head, tail, base of the tail, those on the last two joints of the wing and those on the lower part of the leg should not be removed. Neither should the head be removed, as this will prevent the bird from bringing capon prices. The true capon head, and the feathers remaining, are the characteristic signs by which a capon is distinguished on the market.

Capon production is greatly handicapped if range is limited, or if it is necessary to buy all the feed. The amount of feed consumed by capons is much larger than that of other fowls, and for that reason it is preferable to allow them as much range as possible, in order to lower the cost of production. This factor of range is a point in favor of raising capons on the farm.

The market requirement for capons is constant throughout the year, although the demand is greater during the holiday season. The advantages of marketing the surplus cockerels as capons are a larger and heavier fowl at killing time; sweeter meat of finer flavor; a much higher selling price; a lower cost, due to ease of fattening; the birds have a more docile disposition; they can better endure close confinement, and capons can be used for hovering young chicks.

Of the various breeds the Plymouth Rock is one of the best for capon production on the farm. Other breeds suitable for capon production are the Light Brahma, Barred Plymouth Rock and Wyandotte. The Light Brahma is generally considered the best capon breed of the three mentioned. It is possible to have a flock of these capons weighing 12 or 15 pounds each at 8 to 10 months of age. Birds of this weight are called heavy capons, while light capons, such as those produced from the Plymouth Rock, will weigh 10 or 12 pounds. This latter weight is undoubtedly in greatest demand, since it more nearly approaches the meat requirement of the average family.

The best time for caponizing is when the birds weigh from one to one and a half pounds, or are from 2 to 4 months old. It is not advisable to caponize birds over 6 months of age, as the operation is apt to result disastrously. Neither should cockerels under 2 months of age be caponized, because the testicles have not developed sufficiently to make their removal successful. Size is a better indication than age when determining the time to caponize. June, July, August or September are the best months, since spring-hatched cockerels will reach the desired size, and will be ready for market during December, January, February and March, the months of highest prices and greatest demand.

It is suggested that a beginner see the operation performed by an expert before attempting it himself, or else practice on dead birds in order to learn the location of the organs and the manner and place of making the incision. There are many sets of instruments on the market, some of which are satisfactory, while others have less value. The sets recommended are those made double, that is, each end of the instrument is used for some part of the operation. Such a set consists, in reality, of six instruments, but are so designed that they are combined into four. The chief requirements of a good caponizing set are that it be made of good material, that it is durable and that it is efficient. The set should consist of a sharp knife for making the incision, a spreader to keep the incision open while working, a probe that is blunt at one end and formed into a sharp hook at the other end. The fourth instrument is used to remove the testicles. Caponizing sets can be purchased from most any poultry supply house or veterinary instrument company at reasonable prices.

(Detailed description of performing the operation of caponizing will be given in another article.)

A Critical Season

The coming of the warm days of summer brings to the farm poultry flock one of its most critical periods. The body pests of poultry, especially the multitudinous mites, thrive when it is warm and only when it is warm.

The professional poultryman is not so likely to be troubled with mites and lice as is the ordinary farmer with his side-line flock, because the former is prepared to prevent the pests and combat them successfully if they appear. The farmer, on the other hand, with his many other duties, is likely to discover all at once some warm day that he is getting few eggs, that his birds are showing signs of distress and that, upon investigation, his poultry house is alive with the mites.

A poultry house may be thoroughly clean, so far as filth is concerned, and yet be a perfect breeding place for mites and lice. The mite does not breed and dwell in the filth as is sometimes supposed, but rather in comparatively clean places on the under side of the roosts, in cracks or in chinks in the wall.

One habit of the mite is at once a hindrance and an aid in the warfare against it. It spends the greater part of the daytime in its hiding place, coming forth at night to feed upon the hens.

Unquestionably the way to control this pest is to make its habitation uninhabitable. The best way to do this is to use an oil, creosote, or a disinfectant spray or paint that will serve not only as a death-dealing device, but as a repellant as well. Kerosene, crude petroleum or distillate is effective when sprayed onto the perches and walls of the poultry house with a garden or orchard sprayer or if applied with a brush. Carbolineum or almost any coal tar preparation is effective. Any waste oils from the automobile or tractor are effective.

Lime sulphur spray is sometimes used effectively in the same way that it is applied to the trees in the orchards.

Whitewashing is an excellent means of preventing and combating the mite pest. It is well, however, to supplement the whitewash with a frequent spraying of oil.

Under all circumstances, the application of the oil or other mite-destroying preparation must be repeated frequently throughout the warm season. It should be begun before the mites appear, as the season's control work will thereby be made much simpler and the losses be minimized.

Cost of Farm Products

For the third consecutive year, a force of agricultural experts representing the United States department of agriculture and the experiment stations of the agricultural departments of Washington State college and the University of Idaho is engaged in taking a large number of records on farms in Latah and Whitman counties to obtain data on farm organization, the cost of farm production and other facts. The records are to be taken on between 250 and 300 representative farms of this area. They will cover almost all phases of farm production in the two counties.

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Correct tests, honest weights, fair treatment guaranteed. Make a trial shipment and get results.

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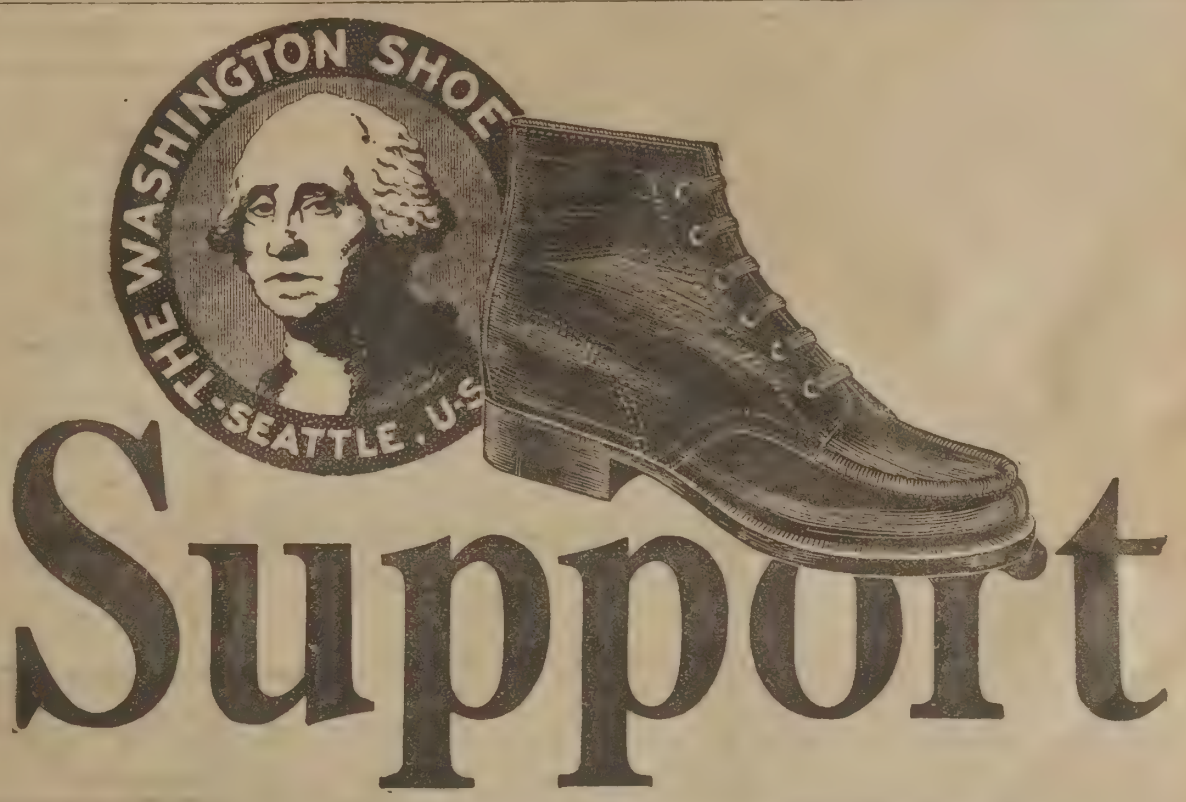
Spokane, Wash.

Sick Baby Chicks? GERMOZONE is a positive remedy for roup, colds bowel trouble and such costly ailments. Preventive as well as curative. A wonder worker for poultry. On market over 20 years. Endorsed by many thousand users. Don't lose your baby chicks. Get GERMOZONE TODAY. At drug and seed stores. If no dealer, order by card. 75c and $1.50 sizes. Postman will collect. No extra charge.

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PORTLAND SEED CO., PORTLAND, ORE.
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Support dealers who handle shoes that properly support your boy's feet ⤷ Give the boy proper foot support. "As the twig is bent the tree is inclined"—the boy's shoes control the man's foot health. ⤷ "Billy Buster" are the shoes to buy. They have the desirable good looks—for school and dress. Their shape is sensible—round, full toe and solid heel. A more comfortable shoe for boys is not made. Feet don't break down in "Billy Busters." And they wear so well that thousands of parents will have NO other kind for their boys. ⤷ Therefore, patronize the dealer who offers you Billy Buster Shoes. They properly support the growing foot—help it to grow the way nature intended. ⤷ Seek out the dealer in your community who handles Billy Buster Shoes. He is offering footwear which is friendly to your boy's feet and kind to your purse. You are assured honest, standardized values, long wear and entire satisfaction through Billy Buster Shoes for your boys. Get them.

Billy Buster

"BIG VALUE SHOES FOR BOYS"

ORCHARD AND GARDEN

Thinning Apples

Basic Principles Must Be Followed

By Elwin G. Wood,

While thinning alone can not be depended upon to produce the maximum crops of large fruit of the highest grades, it is necessary in orchards that are in full bearing in the northwest. The orchard management program aims at the maximum production of large fruit of the highest grade.

Thinning helps to maintain the vitality of the tree, which in turn results in annual bearing. While thinning alone can not increase the vigor of the tree, it materially prevents wasting the vitality the tree already has. A young vigorous tree making a good average growth will come into full bearing and produce several good crops. Then it will overbear and lose in vigor and thus begin the habit of biennial bearing. Too great a portion of the tree's activity is consumed in the production of fruit buds and fruit at the expense of wood growth and the tree loses in vigor so rapidly that it is only a step from biennial bearing to a condition in which the tree bears only an occasional crop of undersized fruit. Such trees can be brought back to normal bearing only by increasing the fertility of the soil, heavy pruning and heavy thinning. On the other hand, if the crops are thinned every year, beginning when the trees first come into full bearing, they are never allowed to overbear and the biennial bearing habit is prevented. We are assuming ,of course, that proper attention is given to pruning and to the maintenance of soil fertility.

Thinning in its relation to pruning deals with the individual fruit spurs of the tree, while pruning deals with the top and fruiting wood of the tree as a whole. Good pruning shortens the length of the branches and reduces the number of fruit spurs to such an extent that larger fruits are produced, but it can not take the place of systematic hand thinning.

It is the normal tendency of a fruit spur to rest one year after bearing fruit. It is only spurs of exceptional vigor that will bear two years in succession. Systematic thinning leaves a large number of spurs well distributed throughout the tree to rest each year, and this greatly increases the likelihood of the tree producing a full crop the following year.

Again, if the trees are not pruned sufficiently to induce to new wood growth and the production of new fruit spurs from year to year, the spurs may become too old and weak to produce good-sized fruit even on alternate years, and in that case thinning may fail to keep the tree in heavy annual bearing. This serves to emphasize the fact that all of our orchard practices are so interrelated that we can not neglect any one of them without its having an important bearing on the others.

Time to Thin.

From the above considerations we are able to see the importance of early thinning. The fruits should be removed before they begin to draw heavily on the food supply of the tree. Since an important factor is allowing a large proportion of the spurs to rest in order that they may set vigorous blossom buds for the following year, it is important that the thinning be done early. This will give such spurs the entire summer to rest and get ready a vigorous blossom bud for next spring.

Experimental data is lacking so that we do not know just how early in the summer the differentiation between blossom buds and leaf buds takes place in the various sections of the state. We do know, however, that the differentiation begins in the fore part of the summer and that the longer the apples are left on a spur before they are removed the less likely that spur is to form a fruit bud the next year. The best and most economical time to thin is just after the "June drop." At that time the thinning can be so thoroughly done that it will be unnecessary to go over the trees a second time except to pick off and destroy wormy apples.

In a second article Professor Wood will discuss the benefits of thinning.

Kill the Cutworm With Poison

Cutworms can readily be controlled by the use of poisoned bait. This is the way to prepare and apply the poison:

To one bushel of dry bran add one pound of white arsenic or paris green and mix thoroughly into a mash with four gallons of water, in which has been stirred one-half gallon of sorghum or other cheap molasses. This amount will be sufficient to treat four or five acres of cultivated crops. After the mash has stood for several hours scatter it in lumps of about the size of a marble over the fields where the injury is beginning to appear. Put it about the bases of the plants which have been set out. Apply the mash late in the day, so as to have the poison in place around the plants before night, when the cutworms are active. Apply a second time if necessary.

Cutworms destroy hundreds of thousands, even millions, of dollars' worth of crops every year throughout the United States. They especially attack tomatoes, cabbage, lettuce and other vegetables that have been started under glass and transplanted. Cutworms sometimes appear in great numbers in the spring and early summer and frequently do severe injury before their ravages are noticed.

Their method of attack is to cut off the young plants near the ground. They are of large size and are voracious feeders, capable of destroying many plants in a single night. Often they cut down more than they can devour.

Color Problem

Standards for Extracted Honey

By GEORGE W. YORK.

An attempt will be made by the bureau of crop estimates and the bureau of entomology at Washington, D. C., to work out color standards for extracted honey. Requests have been sent out to some of the leading commercial honey producers of the United States for samples of various kinds of honey which will be used in deciding just what the colors in different kinds of honey are. Some definite standards will then be fixed and indicated so that those buying and selling extracted honey can do business without seeing the honey.

There may be some difficulty in establishing these color grades, as it seems that honeys from the same source vary in color in different localities. For instance, alfalfa honey produced in Colorado and Utah appears to be very much lighter in color than that stored from alfalfa in New Mexico and Washington. If this condition prevails to any large extent it may be necessary to localize the color grades.

However, it will be interesting to note the results obtained by the government in this investigation.

As the expense involved in the undertaking is but nominal, it will not matter so much if no valuable results are obtained from the effort.

"Topping" Vegetables

Succulent vegetables, such as radishes, carrots, beets, spring onions and turnips, should be "topped" while in the field, to prevent withering and to keep them firm and fresh for marketing. This is the conclusion of L. B. Rhodes of the North Carolina department of agriculture, Raleigh, N. C., who recently read a paper on the subject before the North Carolina section of the American Chemical society.

"It is generally known that all growing plants continually give up moisture to the air from the leaves by evaporation, the phenomenon of transpiration," said Mr. Rhodes. "It seems to have never been recognized that transpiration would increase the wilting of root vegetables. According to the following explanation this would seem plausible. While the plant is in the ground, the soil through the rootlets supplies evaporation losses; when pulled up, transpiration continues, the moisture being supplied through the root as usual. The root, as, for instance, root vegetables, being unable to replenish the supply, wilts as the moisture streams up to the leaves.

"In order to find out just the effect of tops on vegetables as carrots, radishes, etc., a series of experiments was made. Vegetables of the same size and variety were matched by twos. From one the top was removed; otherwise the pairs were exposed for different periods of time under like conditions, after which the moisture content of each was ascertained.

"It was discovered that by removing the top the time the vegetable would invariably remain firm and marketable, under ordinary conditions, was practically doubled, while those exposed with tops on rapidly withered in comparison. These tests were made on radishes, carrots, beets, spring onions and turnips, all of which showed more marked wilting with tops on. Any cause, as sprinkling, that tends to preserve the tops increased the wilting at the root. It is practically certain that other root vegetables would behave similarly. From these experiments, the conclusions follow: Tops of root vegetables should be removed in the field. The vegetables would remain marketable and hence could be shipped further. Space and expense would be saved in shipping. They would be of superior quality, firm and containing the soluble mineral matter as when pulled. Valuable fertilizing constituents in the tops would be returned to the soil. It is no exaggeration to say that were this practice followed thousands of dollars would be saved to those who handle the products."

The Old Carriage Maker Had an Important Truth



"To make each part as strong as the rest," was his way of "building a wonderful, one-horse chaise that wouldn't wear out till judgment day."

This illustrates a fact that is keeping many doctors busy these days—human bodies, like chaises, break down because some part isn't as strong as the others.

Very often it's because of ill-balanced food, lacking in some important element of nutrition. This is especially true of ills developed in childhood, and carried on through life.

Grape-Nuts, that world-famous, ready-to-eat cereal, brings the plan of building each part as strong as the rest—to serve human need. Grape-Nuts contains all the nutriment of those best of the field grains, wheat and barley, including the vital mineral elements, and it is a wonderful food for building and sustaining health and strength.

The delicious flavor and crispness of Grape-Nuts make it a welcome dish whenever you're hungry.

Grape-Nuts

THE BODY BUILDER

"There's a Reason"

Postum Cereal Co., Inc., Battle Creek, Mich.

"Stitchdown" $1.98

Oxford for Women

Ladies—here's a shoe bargain you cannot afford to miss. Simply unmatchable anywhere else in America. See for yourself. Send only name and address. When shoes arrive examine and try them on. Return if not satisfied and you aren't out a cent.



No Money Now

We want you to see this classy "Stitchdown." Just give size and when shoes arrive, pay bargain price, $1.98, and postage. Then note the fine dark mahogany uppers—smooth leather insoles, low rubber heels and extremely flexible stitchdown oak outsoles. Positively worth $3 today. If you don't think you have saved $1, return shoes and get your money back.

Furnished in Wide Widths
Sizes 2½ to 8. Give size.
Order by No. 6JA268.

SHAROOD COMPANY, Dept. 6J Minneapolis, Minnesota

THE AUTO-OILED AERMOTOR

A Real Self-Oiling Windmill

A year's supply of oil is sent with every Aermotor



Oil an Aermotor once a year and it is always oiled. Every moving part is completely and fully oiled. A constant stream of oil flows on every bearing. The shafts run in oil. The double gears run in oil in a tightly enclosed gear case. Friction and wear are practically eliminated.

Any windmill which does not have the gears running in oil is only half oiled. A modern windmill, like a modern automobile, must have its gears enclosed and run in oil. Dry gears, exposed to dust, wear rapidly. Dry bearings and dry gears cause friction and loss of power. The Aermotor pumps in the lightest breeze because it is correctly designed and well oiled. To get everlasting windmill satisfaction, buy the Aermotor.

Aermotor Towers are Towers of Strength

Write today for Circular. **AERMOTOR CO.** Chicago Des Moines Kansas City Minneapolis Oakland

HUGHES & COMPANY, Spokane Distributors.

A LITTLE "WANT AD" FREQUENTLY OFFERS A BIG BARGAIN. MAKE IT A PRACTICE TO READ OUR "WANT ADS"

State Hay Grades

Believing that the new state hay grades will be a benefit to the hay grower of the Yakima valley a committee of the county farm bureau have drawn up plans for selling their hay direct to the dairymen of the Puget sound district.

If sufficient tonnage can be signed up through the committee, or sales agency, to assure state inspection on the basis of the new grades, they will ship their hay direct to the dealers in Coast cities or the dairymen themselves. There have been some offers made for hay on the basis of the old grades, which include six grades instead of two, and the growers are greatly in favor of the latter, which is now the state grading plan.

A decrease of approximately 25 per cent in the acreage of alfalfa in the Yakima valley has been estimated for this year and there are a greater number of stock to feed at home. The growers anticipate a strong market this season. A number of the dairymen of the Coast have already begun to buy their hay direct from the growers in the hay-growing sections and it is the hopes of the farm bureau members that a greater tonnage can be disposed of in the future in this manner.

The committee is composed of H. L. Hull, president of the farm bureau; N. H. Massie, secretary; Claud White of Grandview, George W. Varnum of Mabton and George Dash of Naches Heights. The committeemen expect to meet at different parts of the valley to discuss their plan with other hay growers.

TO SELL RESERVATION FARMS.

The Spokane Indian agency has advertised 30 farms for sale on the Spokane reservation. The sale will close August 8. The terms are one-fourth down, with three annual deferred payments at 6 per cent interest. Ten per cent of the amount must accompany the bid in certified check or cash. Bids are received by J. A. Garber, Indian agent at Wellpinit, Wash.

Farmers' Want Ads

HELP WANTED—MALE 3

WANTED — SALESMAN WHO CAN SELL high-grade, dependable nursery stock; several counties in Oregon, Wash., Idaho and Montana now open for assignment. Our selling contract will interest you. Address Albany Nurseries, Inc., Albany, Ore.

FRESH FOOD PRODUCTS 51-1

WHITE ALFALFA, SWEET CLOVER honey; 1 60-lb. can, $7.50; 2 60-lb. cans, $14.50; six 10-lb. cans, $8.50; three No. 10 pails, prepaid third zone, $5.50. Wells D. Rose, Sunnyside, Wash.

3-POUND BOX ABSOLUTELY BONELESS codfish, fine white, new catch fish, delivered by mail, $1. Coffin Fish Co., Seattle, Wash.

FULL CREAM BRICK CHEESE, DIRECT TO consumer, parcel post, 25c lb., postage added. C. P. Dobler, Menlo, Wash.

WORLD'S BEST CLOVER HONEY, 60 pounds, $6.15; two 60s, $12. Browne, Box 499, Twin Falls, Idaho.

MISCELLANEOUS—FOR SALE. 60

SASH AND DOORS—O. B. WILLIAMS CO., 1943 First ave., So. Seattle. Chicken house sash, 20" wide by 25" high, 80c; a dozen different sizes in stock for immediate shipment. Skylights for chicken houses, 36"x40" price, glazed, $2. This is the size recommended by the Western Washington experiment station. We carry them in stock for immediate shipment. Sash and doors for all purposes at lowest prices. All orders receive prompt attention. Our large illustrated catalogue No. 35, showing full line of building material and built-in fixtures for the home, free on request. O. B. Williams Co. Established 1899.

SACKS—SECOND-HAND GRAIN AND SPUD, correctly sorted and graded; also pipe, new and second-hand, any size; standard grade roofing paper at a big saving; belting, cable, etc. Alaska Junk Co., S120 Adams st., Spokane, Wn.

WALL BOARD—WRITE FOR SAMPLE OF Washington plaster wall board; won't warp, won't burn. Manufactured by Washington Building Products company, 6851 E. Marginal Way, Seattle, Wash.

QUEEN BEES—INCREASE YOUR HONEY crops by introducing my strain of unsurpassed Italian queens. 1, $1.25; 12, $12.50; 100, $95. Circular free. J. D. Harrah, Freewater, Ore.

HOMESPUN SMOKING OR CHEWING TObacco, collect on delivery; 5 pounds, $1.50; 10 pounds, $2.50; 20 pounds, $4.50. Farmers' Association, Paducah, Ky.

HOMESPUN TOBACCO, 3 POUNDS, $1; 10 pounds, $2.50. Send no money, pay when received. Farmers' association, Jonesboro, Ark.

HOMESPUN CHEWING AND SMOKING TObacco; 5 lbs., $1.25; 10 lbs., $2.50; 20 lbs., $4. Hickory Ridge Farms, Mayfield, Ky.

TOBACCO—HOMESPUN SMOKING, 10 LBS., $2.50; 20 lbs., $4; fine chewing, 10 lbs., $3. Farmers' club, Mayfield, Ky.

MISCELLANEOUS—Wanted 63

HIDES—WE BUY HIDES OF ALL KINDS. Write for prices and tags. Hibbard-Stewart Co., Hibbard Bldg., Seattle.

WOOL—WE BUY WOOL AND PELTS. WRITE for prices and tags. Hibbard-Stewart Co., Hibbard bldg., Seattle.

MACHINERY—For Sale 93

SELF-LAYING TRACK TRACTOR ATTACHment for Fords; does work four horses; closing out while they last, $95 each. Original price, $325. 15 h. p. J. I. Case steam traction engine, first-class shape, $750; easy terms; 15-30 Rumley Oil Pull tractor, fine condition, ready to go, $1000; easy terms. Gallagher Warehouse, Ash and Sinto, Spokane, Wash.

EXTRAORDINARY BUYS IN USED COMbines, caterpillars, separators, engines and trucks. Fallquist Brothers, Pullman, Wash.

FOR SALE CHEAP—28X48 RED RIVER separator, all complete; run 25 days. J. W. Curry, Rockford, Wash.

FARMERS' WANT ADS

This is the farmers' "want," "sale" and "exchange" department for small advertisements of farmers, including live stock and poultry.

Advertising rates for ads running 1 to 3 times, 10c per word per insertion, with a special rate to Farmer subscribers, as follows: Ads running 4 to 12 times, 9c per word per insertion; ads running 13 times or more, 8c per word per insertion.

All commercial and land advertising 10 cents per word each insertion. Open also to nonsubscribers.

In using these columns advertisers must observe: (1) No advertisements will be inserted for less than $1.00. (2) Every word, number and initial, including name and address, must be paid for. (3) New advertisements, changes of copy or cancellations must reach general office, Spokane, Wash., 10 days in advance of publication date. (4) Cash must accompany order.

Above rates include insertion in The Washington Farmer, The Idaho Farmer and The Oregon Farmer, which constitute the Pacific Northwest Farm Trio. 46 Review Building, Spokane, Wash.

MACHINERY—For Sale (Continued.) 93

30 HORSEPOWER CATERPILLAR TRACtor; will pull 9 gang plows, discs, harrows, etc.; 40 horsepower belt attachment; bargain; would give terms. Carl Leiendecker, Kent, Wn.

15-45 STEAM THRESHER, 28-INCH SEPArator, $1200; 20-40 gasoline engine, 24-inch separator, $1500; both Case outfits; in good condition. H. T. Vincent, Creston, Wash.

AUTO TRUCKS—For Sale 115

1¾-TON SIGNAL TRUCK AT A BARGAIN price. A. E. Rosenan, Genesee, Idaho.

STOVE REPAIRING 128

WRITE MYER RUBENS, SPOKANE, ABOUT stove repairs, welding broken parts, nickle plating.

FUR-BEARING ANIMALS 170

SILVER AND CROSS FOXES FOR SALE. William Rambo, 407 Sprague, Spokane.

PETS—Dogs, Birds, Etc. 171

IRISH SETTER PUPS, THREE MONTHS OLD; healthy, vigorous; ready for hard work when season opens; females, $12.50; males, $25. H. A. Bushby, Parma, Idaho.

SHEPHERD BOBTAIL PUPS; NATURAL heelers; $10 each; 1 trained female, 9 months old. Hentges, Valley, Wash.

FOR SALE—SHEPHERD PUPS; WILL MAKE heelers. A. E. Rosenan, Genesee, Idaho.

RABBITS and HARES 173

FLEMISH GIANTS, PAIRS AND TRIOS, young stock. W. P. Layport, 1441 S. Stevens, Tacoma, Wash.

POULTRY 174

HENACRES WHITE LEGHORN PULLETS are classed among the best. They are large, healthy, range raised, good looking, bred to lay and are reasonably priced. March hatch, June delivery, $1.75 each; 500 for $850; May 1 hatch, July 1 delivery, $1.50 each; 500 for $700; satisfaction guaranteed or money refunded, including return express charges. Ask your neighbor about Henacres Leghorns. June chicks, 16c each; 500 for $75. Free illustrated catalog. Henacres, Box A, Prosser, Wash.

WHITE LEGHORN BABY CHIX FOR MAY and June delivery at $12 per 100; $115 per 1000, from flocks inspected and accredited by the Sonoma county farm bureau. Safe arrival of full count, live, strong chix guaranteed The Pioneer Hatchery, 422 Sixth street, Petaluma, Cal.

TRY OUR PARCEL POST PACKAGE—KEEP the old hen busy. We will ship you first-class baby chicks, postpaid to your door, direct from the hatchery and guaranteed all alive. Price, $4.50 per 25; $8 per 50. For delivery April, May or June. Order now. The White Hatchery, Petaluma, Cal.

A FORTUNE IN TURKEYS—START RIGHT, with 2 Mammoth Bronze laying hens, unrelated tom, $35 trio. We are turkey specialists and have positive cure for blackhead, liver troubles; 30 capsules, $1. Inglewood Poultry Co., Inglewood, Cal.

THE PROGRESSIVE HATCHERY—2, 3, 4, 5 weeks White Leghorn chicks, $20, $22, $25, $28 per 100; from trap nested, pedigreed hens; 200 eggs up. 10 R. I. Red cocks, yearling and 2 years, $10 up. 1534 N. E. 12th., Portland, Ore.

PULLETS, BARRED ROCKS, BUFF ORPINGtons, S. C. Reds, ten weeks old, $1 each; Speckled Sussex, $1.25. Satisfaction or refund your money. Parma Heights Poultry Farm. H. A. Bushby, Parma, Idaho.

A LIMITED NUMBER OF HANSON'S WHITE Leghorn, pedigreed, three months old cockerels for sale at two dollars each. Arnold Way Poultry Farm, Corvallis, Ore. W. H. Alnutt, prop.

BABY CHICKS — WE GUARANTEE OUR chicks to be from the highest producing hens in Petaluma. Write for further information. The White Hatchery, Petaluma, Cal.

HUNT'S BARRED ROCK SALE THIS YEAR'S breeders at bargain prices; buy now and get splendid breeders for next season. W. A. Hunt, Lebanon, Ore.

DOLLARS FOR YOUR EGGS—WE PAY THE top market prices for your eggs and poultry. Daily cash remittances. Western Produce Co., Spokane.

S. C. ANCONAS, SHEPPARD'S SELECT AND 331 egg strain; eggs, $1.75 per 15; chicks, $18 per hundred. A. B. Larson, Warren, Ore.

BUFF LEGHORN EGGS, CHIX AND STOCK—My strain is proven champions for exhibition and laying. R. Stromquist, Tigard, Ore.

SPECKLED SUSSEX BREEDING STOCK; special low price to make room for growing stock. H. A. Bushby, Parma, Idaho.

FANCY WHITE WYANDOTTE COCKERELS, $2.50; hatching eggs, two dollars setting. H. L. Lamon, American Falls, Idaho.

200 PUREBRED SINGLE COMB BROWN LEGhorn hens, one and two years old; $1.50 each. E. V. Eldridge, Dixie, Wash.

FORD'S BRED TO LAY S. C. WHITE LEGhorns; 2-year-old breeding hens, $1 each. W. A. Ford, Umatilla, Ore.

LIGHT BRAHMAS, EGGS, $1.75 PER 15; Bronze turkey eggs, $3.50 for 10. Mrs. C. W. Laabs, Irby, Wash.

MAMMOTH BRONZE BABY TURKEYS, 50C each. M. J. Foster, Route 4, Grants Pass, Ore.

LIVE STOCK. 177

LARGE, HEAVY PRODUCING HOLSTEINS for sale at all times in car lots; tuberculin tested; 150 to 200 head always on hand; well marked heifer calves from registered sires and heavy producing dams; crated for shipment anywhere, $25 f. o. b. Levinson & Balmelli, Yakima, Wash.

REGISTERED BIG TYPE POLAND-CHINA pigs, big, growthy fellows; Oregon Big Wonder blood. Buy your fall breeders now, either sex, $16 each, f. o. b. Goldendale, Wash. Butterfly Ranch.

SHETLAND PONIES PRICED REASONABLE. Ship anywhere. C. C. Calkins, Heppner, Ore.

MY HERD OF 15 GRADE HOLSTEIN COWS for sale. D. G. Reinig, Snoqualmie, Wash.

LIVE STOCK (Continued.) 177

SHIP US YOUR POULTRY AND LIVE STOCK. We pay the top market prices. Light veal, fat, fancy, 12½c; dressed block hogs, 14½c; hens, light, 14c; heavy, 17c. Prompt returns. John Lewis & Co., Spokane, Wash.

WE PAY TOP PRICES FOR YOUR LIVE OR dressed veal, hogs and poultry. Your check by return mail. Shipping tags on request. M. & J. Packing Co., Spokane.

FOR SALE—TWO MONTHS OLD REGISTered Jersey bull calf; both sire and dam from Prosser Pogis. K. P. Runa, Prosser, Wash.

FRESH MILCH GOATS AND KIDS; PURE bred Saanen buck. Mamie Rand, E1024 Decatur, Spokane, Wash.

REGISTERED TOGGENBURG MILCH GOATS. Edwin Pritchett, Route 1, Box 287, Long Beach, Cal.

WILL SELL 30 HEAD OF REGISTERED Shropshire rams. Write McK. Edwards, Valley, Wash.

POLAND CHINAS, PEDIGREED PIGS, $12. Cloverdale Ranch, Orient, Wash.

HARNESS and SADDLERY 189

SEND FOR FREE HARNESS AND SADDLE catalog today; cut out the middleman, buy direct from the manufacturer. Lowest prices in the west; satisfaction guaranteed. Established 1881. Write Pierce Harness Co., Dept. T, Spokane, Wash.

JOB PRINTING. 372

GUARANTEED BETTER BUTTER WRAPpers; 100, 60c; 250, $1.25; 500, $2.25; 1000, $4; printed to order. Home Specialty Co., Middleton, Idaho.

KODAK FILM DEVELOPING 472

SEND US 15C AND ROLL FILMS. WE WILL develop and include six velvet prints. Texo Laboratories, 4444 52 street, South East, Portland, Ore.

MONUMENTS. 510

COMPLETE STOCK, RIGHT PRICES. CORrespondence solicited. J. W. Harding, Inland Monument Co., N1001 Monroe, Spokane.

BUILDING MATERIAL 588

LUMBER, BUILDING MATERIALS, READYcut houses and barns; no waste, less labor, money saved. Attractive new plan book sent free, 4c postage. Send material lists for prices. Write today. Prices now down to rock bottom. Local Keystone Lumber Co., 3000 Sprague, Tacoma, Wash.

FIX BROKEN PLASTER WALLS WITH PERfection plaster wallboard; nailed on like lumber; takes calcimine or paint; sample and booklet from Western Wallboard Co., Seattle, Wash.

NURSERY STOCK. 621

WANTED—2500 BARCELONA AND 500 DU Chilly filbert trees; must be true to name, Villa Nurseries, Portland, Ore. Route 1.

FARM LANDS FOR SALE. 651

CUTOVER LANDS, EASY TO CLEAR; $8 TO $20 per acre; 25 miles north of Spokane; on hard surfaced highway; Great Northern and Milwaukee railways; excellent opportunity for dairying and stock raising with Spokane markets and creamery near at hand. Will help the man who will live upon this land and agree to clear a part each year by giving lumber to help start his buildings, and a purebred Jersey bull to groups of farmers. Interest and payments low. Write Milan Farms Development company, Dept. T, Old National Bank bldg., Spokane, Wash.

FARM PART OF ESTATE BEING DIVIDED and sold in from 3½ to 40 acre tracts; located in the celebrated fertile Chehalis valley; adjoins city limits of Centralia; very rich land; under high state of cultivation; will be divided as follows: Five 10-acre tracts, one 5-acre tract, one 3½ acres, one 12 acres and one 40 acres; one or all will be sold at a very attractive price. Address A. E. Sears, trustee, Centralia, Wash.

BIG OPENING SALE OF YAKIMA VALLEY farmland, under an assessed state and government approved irrigation project; good, deep soil; close to town, railroads and state highway. We sell in tracts to suit purchaser at $25 per acre and up, on easy terms. Our many sales to farmers show that this land is a good investment. Western Lands, Inc., owners, 918 Green bldg., Seattle.

LOGGED-OFF LANDS IN STEVENS COUNTY, Washington, at greatly reduced prices. Most of land sells at from $5 to $20 per acre; thickly settled community, good schools, hard surfaced and paved roads to Spokane; best country in state for dairy and stock raising; most places water can be found at shallow depths. Write for folder. Phoenix Lumber company, dept. T, Spokane, Wash.

400 ACRES WHEAT AND DIVERSIFIED; 250 now in crop; 125 fall wheat, 125 spring grain, 50 summer fallow, 100 pasture; fine large house, spring water under pressure; 2 barns, silo, school on place; 5 miles to haul grain; 10 cows, 9 horses, harness, wagons, binder, mower, plows, harrows, etc.; 17 miles west Spokane. $31,000; $14,000 cash, rest easy terms. Owner, Box 595, Spokane, Wash.

FOR SALE—200-ACRE FARM, ABOUT 30 cleared; on county road, mail route, telephone; water piped to house; eight-room house, barn, etc.; some good timber; crops are in. Price $5000. Owner, John Kilkelly, Woodland, Wash. R. F. D. No. 1.

40-ACRE FARM FOR SALE—ONE OF THE best farms west of town; new model house, electric lights, air pressure water system; more information write H. F. Lovelin, Silverton, Ore.

BARGAIN—15 ACRES FOR $5000; ALL SORTS of fruit; stock, farm machinery, some timber. Write for terms. Myron Holden, Puyallup, Wn., R. 3, Box. 183.

TEN ACRES, ENOUGH TO SUPPORT YOUR family; best climate on earth; Puget Sound. Free booklet. Whidby Information Bureau, Clinton, Wash.

A. F. HORTON, NEWPORT, WASH.—TIMber products, cutover lands, $5 to $15 per acre. Good roads, schools, fine mountain water.

GOOD STOCK RANCH, 3520 ACRES; ALL fenced; 300 meadow; best range anywhere, $4 per acre. A. Millard, Kinsey, Mont.

FARM LANDS FOR SALE (Continued) 651

FOR SALE—IN THE FAMOUS TILLAMOOK cheese belt; 180 acres dairy ranch, cows and equipment. This ranch is perfectly level, two creeks running through place; half mile to school and cheese factory; quarter mile off paved road; on rural route; reason for selling, owner too old to operate; two houses on place; buildings in good condition. For information write to Box 194, Tillamook, Ore.

MUNICIPAL LANDS FOR SALE BY THE DIStrict; no agents, no commission; interested only in getting home builders on the project. Longest growing season in the northwest. Gardens and fruits thrive; schools, highways and railroads the best. Junction Snake and Columbia rivers. Write for terms and folder. Address Burbank Irrigation district No. 4, Burbank, Wash.

THURSTON COUNTY—5000 ACRES, VERY fertile, level; fruit, berry and poultry lands; right at beautiful state capital. No extremes of temperature; no storms or floods, no irrigation; bumper crops; fine markets. 5 or 10 acre tracts; low prices and long term payments. Send for our valuable pictorial booklet. Norpia Realty Corporation, Olympia, Wash.

WE SELL FORECLOSED LANDS FOR A loan company for one-third cash, balance easy terms. When writing tell us what you want, where preferred, how much you will invest, kind of farming you contemplate, as we have no list and must write special description in each case. No trades. Hartford Land company, 601 Paulsen bldg., Spokane, Wash.

FOR SALE—IDEAL STOCK AND DAIRY ranch; 120 acres; 9 miles south of Cottage Grove; 3 miles north of London; on good county road; good neighborhood; good house, two barns, family orchard, running water; 30 acres in crop; more land easily cleared. Price $9000, including stock and farm implements. O. P. Wills, Cottage Grove, London Rt., Ore.

174 ACRES, ON KOOTENAI RIVER AND Great Northern; 94 bottom, 8 pasture, 18 fenced and cross-fenced; 3 plowed, 15 ready; ½ acre fruit, 4 cabins, team, harness, wagon, plow, harrow, tools, etc.; 2000 ft. lumber, 14 bales roofing, 6 windows, fine cattle or chicken ranch; fine government range. $4000. Chas. R. Scholz, owner, Ural, Mont.

FOR SALE—IMPROVED 160 ACRES; GOOD water, good roads; 3½ miles from town with three elevators; 110 acres in crop; all can be plowed; crop, stock, implements if sold before harvest, $35 per acre. Ernest Mahr, Milk River, Alberta.

80-ACRE FARM, 17 MILES PORTLAND; ONE mile Wilsonville; 75 acres cultivation; good buildings; abundance water; $200 per acre, or $225, including machinery, stock and crop. Henry Raymond, Route 5, Sherwood, Ore.

160 ACRES, 4½ MILES FROM LEADORE, IDAho; 95 in cultivation; gilt edge water right; 165 inches; good pasture, 6 milch cows, 6 horses, tools, implements, $6000. R. H. Davidson, Leadore, Idaho.

STOCK RANCH FOR SALE—844 A.; 4-WIRE fence; cross-fenced; buildings, corrals, nearly new depot, P. O. on ground; forty miles south of Tacoma. N. W. Everts, McIntosh, Wash.

160-ACRE HIGH GRADE DAIRY; FINE buildings; $25,500; cash $10,000; good terms, 5 per cent. Particulars, write Frank Marquardt, Route 2, Lebanon, Ore.

SELL YOUR PROPERTY QUICKLY FOR cash; no matter where located. Particulars free. Real Estate Salesman company, 501 Brownell, Lincoln, Neb.

BEAUTIFULLY LOCATED, WELL EQUIPPED, prosperous ten-acre poultry farm, $12,000; $5000 cash. A. P. Rushton, owner, Southworth, Wash.

32-ACRE POULTRY-BERRY RANCH FOR sale cheap; 1800 feet beach; Puget Sound. Particulars from owner. Charles Engel, Yoman, Wash.

98-ACRE FARM FOR SALE; WELL IMproved; running water; near town, churches and high school. J. W. Sprenger, Shedd, Ore.

¼ SECTION TIMBER LAND; IN LAUREL, Wash.; must be cash deal. C. H. Abelson, Route 7, Idaho Falls, Idaho.

FARM LANDS—Wanted 654

WANT TO HEAR FROM OWNER HAVING farm for sale. Give particulars and lowest price. John J. Black, 80th street, Chippewa Falls, Wis.

FARMS WANTED — SELL YOURS QUICKLY for cash, no matter where. Particulars free. R. A. McNown, 310 Wilkinson bldg., Omaha, Neb.

IRRIGATED LANDS—For Sale 663

50-ACRE IRRIGATED DAIRY FARM; SIX-room dwelling, new barn; thirty acres cropped, balance pasture; eleven cows, team, machinery; living stream; driven well; quick sale price. Thos. G. Mortland, Sequim, Wash.

40 ACRES, MAIN HIGHWAY; CROPS AND equipment; want small improved acreage. Henry Savage, Firth, Idaho.

RESORT PROPERTY 684

WILL TRADE FIVE-ROOM COTTAGE, ACRE ground, valued two thousand dollars; East sound, Orcas island, popular summer and winter salt water resort. Percy Livesey, Bellingham, Wash.

SUMMER ON PUGET SOUND, AT CLINTON; ideal location; select your site; large 60-foot lots, $150. Free booklet. Henry L. Pinney, Clinton, Wash.

FOR SALE OR EXCHANGE 702

A REAL PUGET SOUND FARM—FAMOUS Skagit valley; 100 level, cleared acres in crop; finest silt loam, wonderfully fertile; complete set buildings, all machinery, tools and stock; 11 cows, 4 calves, 20 hogs, 10 sows, 4 horses, everything complete; adjacent fine town, schools, railroads, interurban electric; worth $50,000, priced much lower. Equity of $18,000 for going place or business, balance easy. J. W. A. Myers, owner, Route 2, Sedro-Woolley, Wash.

WELL IMPROVED SECTION OF LAND FOR sale with or without equipment; would consider small farm in exchange. For particulars apply to Isaac Gibson, Innisfail, Alta.

FOR SALE OR TRADE—NEHALEM VALley; 320 acres. Owner, Box 32, Birkenfeld, Ore.

TO EXCHANGE—Real Estate 705

TO EXCHANGE FOR CALIFORNIA, WESTern Oregon or Washington; 160 acres subirrigated land; house, barn, etc.; equity $2000; mtg., $1000; on a good trade would pay cash to amount of mortgage; prefer land on coast, unimproved. Address A. D. Hopper, R. R. 3, Coeur d'Alene, Idaho.

FOR TRADE—STOCK OF GENERAL MERchandise; in Fairport, Cal.; will invoice about $4000; building, 2 lots, small garage; worth $3500; want alfalfa or fruit ranch. Address Postmaster, Fairport, Cal.

WILL TRADE MY IMPROVED IRRIGATED forty acres, Yakima valley, for stock ranch. Write Alfred W. Jensen, Mabton, Wash.

Miller's "Pike's Peak or Bust"

The Washington Farmer's New Serial Story by the Author of "The Crooked Trail," "Trappers of the Ozarks" and "Big Smoke Mountain," Will Begin Next Week

It is with great pleasure that The Washington Farmer is able to announce that it has secured another serial story by Lewis B. Miller, author of "The Crooked Trail," "Trappers of the Ozarks" and "Big Smoke Mountain." The new serial, which will begin in the issue of July 6, is entitled "Pike's Peak or Bust." In regard to this story Mr. Miller says: "For serial purposes I consider this far and away the best story I have yet written. 'Pike's Peak or Bust' covers a phase of American pioneer history concerning which every school boy and school girl knows something. And yet, so far as my reading has gone, there is almost no story literature on the subject."

"Pike's Peak or Bust" is Mr. Miller's latest story, copyrighted in 1921.

"The Crooked Trail," "Trappers of the Ozarks" and "Big Smoke Mountain" stand out as the most popular and eagerly read stories among THE FARMER'S host of readers. One letter after another has reached the office showing the interest taken in these stories.

The principal characters of the story leave their home in Illinois and join the great rush of gold seekers to the Pike's Peak country in Colorado. This was before the days of transcontinental railroads. The adventurers in that great rush to the gold fields traveled a-foot, on horseback and prairie schooner and by every contrivance at hand. Fights with grizzly bears, narrow escapes from hostile Indians and murderous gangs of white men were some of the stirring incidents of those days.

An intimate knowledge of the builders of the great "Western Empire" of the United States is the heritage of Lewis B. Miller. His ancestors were pioneers. Mr. Miller was born in a settler's cabin near Red river, Cooke county, Texas, then on the very edge of the wilds. Almost his first recollections are of living in Fort Blocker, where the settlers had "forted up" as a defense against the Comanches and Kiowas. His father was a flatboatman on the Sabine river, a cowboy on the Texas to California trail and a Pike's Peak or Bust gold seeker. Adventures where life balanced totteringly in the hands of fate were the lot of his boyhood.

Is it any wonder he writes the fascinating and interest-gripping stories of pioneer days which readers devour with delight and clamor for more? Lewis B. Miller's stories are clean, wholesome, absorbing and teach splendid moral lessons. One of his best stories, if not his very best story, "Pike's Peak or Bust," will begin in THE FARMER next week, July 6.

Those who have read "Big Smoke Mountain," "The Crooked Trail" and "Trappers of the Ozarks," appearing in our columns, can imagine what a treat is in store for them. Those who have not made the acquaintance of Mr. Miller's stories will be delighted when they start reading "Pike's Peak or Bust."

GAUNT GRAY WOLF

By DILLON WALLACE

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CHAPTER XXIX.

The Fruit of Manikawan's Sacrifice.

At length the breakup came, much as it always comes in that country. The sun, grown strong and bold, vanquished the Spirit of Frost. The snow became a sea of slush, and water covered the ice of lakes and river. Finally the clouds opened, and for a week rain fell in a deluge.

A thousand new streams sprang into being, rushing in white torrents to join the swollen river. Cascades fell from every ledge and parapet. Now and again a great boulder was loosened and went crashing down a hillside with terrifying roar. The river, freed from its ice shackles, overflowed its banks, and in the wild, unrestrained ardour of its new power, uprooted trees and washed them away upon its turbulent bosom as it dashed madly seaward.

One day, when the rain had ceased and the waters had somewhat subsided, Ungava Bob and Shad Trowbridge, accompanied by Mookoomahn, turned northward in Shad's canoe to the Great lake, following the route which Manikawan had taken several months before in her journey to the river tilt.

Manikawan's body was found as they had left it, and undisturbed. It was lowered from its rude platform and they laid it in its final resting place in a grave among the spruce trees not far from her father's lodge. Over the grave a cairn of boulders was raised, and surmounted by a tablet of wood upon which was carved the word, "Manikawan."

Then they parted, Mookoomahn to turn northward in his long and lonely journey to join his people, Bob and Shad to return to the river tilt, and homeward.

It was on an afternoon late in June when the browned and weather-beaten voyageurs turned their boat into Wolf Bight. What a long, long time had elapsed, it seemed to Shad, since that foggy morning in August when they had left the little cabin and said farewell to the tearful group upon the shore; and how homelike and restful the cabin looked now! What an age of experience had passed since that night when Bob pulled him out of the bay and introduced him, shivering and wet, to its hospitable shelter and warmth.

As they approached the shore a glad shout was heard, and a moment later Emily—who had that very day reached home from St. Johns—and Bessie, who was there to meet her, came running to the landing, with Mrs. Gray and Richard and Douglas Campbell at their heels.

Emily laughed and cried with delight, quite smothering Bob with kisses, and when she relinquished him to her mother she kissed each of the other brown faces. Bob was quite impartial, and when his mother released him Bessie was not forgotten in his greeting.

The most important, and therefore, the first piece of news to be imparted, was the partnership agreement between Shad and Bob. Douglas at once prophesied success, and when, a fortnight later, Bob and Richard took passage with Shad to St. Johns, Douglas accompanied them as expert adviser in the selection of a trading vessel and the necessary supplies for their posts.

* * * * *

The firm of Trowbridge & Gray began operations with the establishment of stations in the interior, as originally designed. Dick Blake was engaged to take charge of the post at the northerly end of the Great lake, where he quickly built up a large and lucrative trade with both Nascaupee and Mountaineer Indians.

The river tilt was enlarged and became a trading station and supply base for the interior, over which Ed Matheson presided. Bill Campbell, during the open season of navigation, had command of the brigades of Indians employed to transport goods from Wolf Bight to the interior posts, and during the midwinter months conducted a subpost and storehouse situated at the southerly end of the Great lake, not far from Manikawan's grave.

With the interior trade in such able hands, Ungava Bob devoted his attention to the bay trade, and it is needless to say that the trappers of the region prospered.

Richard, in command of the trim schooner, "Manikawan," also opened a profitable trade with livyeres and Eskimos of the coast.

Shad Trowbridge, after graduation from college, quickly developed into an able business man, and personally attended to the purchase of supplies and the sale of products.

Trowbridge & Gray made mistakes, as was to be expected, and had their ups and downs, but in the end they succeeded, and the firm is known today from Boston to Hudson's straits as one of the most honorable and substantial concerns in the north.

At the very beginning of their career Shad and Bob adopted as their trademark the picture of an Indian maiden with bow raised and arrow poised ready for its flight, and beneath it the word, "Manikawan." With this constantly before them Shad declared they could never stray from the original object of their enterprise, and could never forget the lesson taught by Manikawan's heroic sacrifice. And never since the firm began business have Manikawan's people failed to receive relief in times of need, and never has there been a repetition of the awful year of starvation.

"'Tis wonderfully strange, Bessie, how things come about," Bob sometimes says to his wife, in their cozy home at St. Johns. "I used to think the Lord had forgotten me sometimes, but I always found later that those were the times he was nearest to me."

"The Lord has always been very close to you, Bob," Bessie invariably replies.

Emily, at the earnest solicitation of Shad, was permitted to finish her education in Boston under the chaperonage of Shad's sister, and developed into a charming and accomplished woman, though she never lost her love for the little cabin at Wolf Bight.

But the failures and successes of Trowbridge & Gray, and the experiences of Emily in the new and greater world which she entered, are stories by themselves, and each would require a volume to relate.

(The end.)

Bits of Fun FOR Everyone

Young Owl to Old Owl.

"Are all owls wise, pop?"

"No, my boy. Too many of them hoot without knowing what they are hooting about."

Like Mother and Father.

He—If we get married, I wonder if you can make pies like mother used to make?

She—And I'm wondering if you can make money like father used to make!

Efficient Remedy.

History lecturer—Can any of you tell me what makes the Tower of Pisa lean?

Fat lady—I don't know, or I would take some myself.—London Opinion.

Salary Insufficient.

One of the tellers in a Columbus bank says that, of his customers, a teacher is the wittiest thing yet. "We make it a practice to give out new bills whenever we are able to send the old ones back to the government," said the teller, "and once when this customer appeared I apologized that I was unable to give her new bills, and asked her if she had any fear of microbes. 'I don't really think there are any on this money,' said the teacher: 'no microbe would attempt to live on my salary.'"—Successful Farming.

Only One Could Say It.

Mrs. A.—Do you believe any man could truthfully say, 'You are the only woman I ever loved"?

Mrs. B.—Yes; I know one—Adam.

How to Tell a Gentleman.

An example of a fine, but it seems proper, distinction is given in this conversation reported in Harper's Magazine:

"Mr. Smith," a man asked his tailor, "how is it you have not called on me for my bill?"

"Oh, I never ask a gentleman for money."

"Indeed! How, then, do you get on if he doesn't pay?"

"Why," replied the tailor, hesitating, "after a certain time I conclude he is not a gentleman, and then I ask him."

The First Installment of the New Serial Story "PIKE'S PEAK OR BUST" Will Be Given in Next Week's Issue of The Washington Farmer, July 6

FAMILY CIRCLE

ALICE BARLAND
EDITORIAL CONTRIBUTOR

Experience Letters

From Our Family Circle Women

Dear Family Circle—Because of insufficient address several letters have not reached you and have been returned to me. Please don't feel neglected if you fail to receive the information you ask for, but write again and be sure to give full and correct address. When you don't give name I can not write to you and only when your questions are of general interest can I reply through the paper. Some have personal problems and I will gladly write you personally, but you must give name and address. You need have no fear that I will print your name if you object. A. W. BARLAND.

You have all been very kind to write and tell us how you make bread starter and it appears that all we need to make it is a couple of good big potatoes, about one-half cup of sugar and a yeast cake. We used to call this liquid yeast when I was a little girl and it was the very first thing my mother taught me to make in the line of cooking. The only difference is I was taught to grate the potatoes raw and pour over them some hop tea, boiling hot, and made by boiling a handful of hops in about two quarts of water and pouring over the grated potato, after I had stirred in one-half cup of sugar and one-fourth cup of salt. Then we set it away till cool and added some of the "yeast" saved from the last time or if we were out we added a cake of dry yeast.

There has been very little variation in the recipes which have been sent in except some add a little flour, some leave out the salt; all agree that it is much better to use than yeast cakes.

You will find in the following letter the gist of the whole matter.

Dear Mrs. Barland: Here is my story about starter yeast and I trust it will help some housekeeper:

I used starter yeast for years when I lived in Utah and when we moved to Idaho I took great pains to carry with me some in a pint bottle in my suitcase. All went well till one time when I was sick and the starter was neglected and spoiled. I didn't know what to do at first as I couldn't get any of the starter here, but finally a happy thought came to me that I could make it and start it with a yeast cake and save some from time to time. This I did and it worked all right and here is my method:

Bread Starter—Boil two medium sized potatoes, mash well, add enough luke warm water to almost fill a two-quart fruit jar, to this add two heaping teaspoons of sugar and one square of yeast cake. Set this in a warm place until it works well. (Don't cover tight.) I make my yeast at noon so as to use some of the potatoes that are cooked for dinner, but I do not salt the potatoes when I am to use them for yeast.

At night I make a sponge of a sieve of flour and all the yeast in the jar except about one and one-half inches which I save for the next start and to make this start I add to the amount in the jar two heaping teaspoons of sugar and tighten the cover.—Mrs. W. G., Idaho. (She can tighten the cover now as there is so little in the jar, and this will keep the yeast sweet till her next baking day when she will add her potatoes and water at noon. —A. W. B.).

Dear Mrs. Barland: Any one who has stomach trouble should refrain from eating baked or boiled navy beans, boiled cabbage, cheese, veal, young beef, bananas, nuts or candy. Grape fruit is very soothing to the stomach. Cut the fruit in two parts and extract the juice with a spoon. It is best to eat it without sugar. Following the method given above has been better for me than all stomach medicines. I did no lunching between meals and have gained in weight.

The stomach is the most abused organ of our bodies, caused by too frequent and overeating. The result is untold misery. —Mrs. M. D.

Have any of the readers had experience with using sour dough? I would like directions for using it in making hot cakes and bread.—MRS. C. D. W., Wash.

If thou are worn and hard beset
With sorrows that thou wouldst forget,
If thou wouldst read a lesson that will keep
Thy heart from fainting and thy soul from sleep,
Go to the woods and hills! No tears
Dim the sweet look that nature wears.
—Longfellow.

Dear Mrs. Barland: I feel that I would like to have a little visit with the sisters of the Family Circle.

I am the mother of six little ones and always enjoy reading the Circle page in search of suggestions that will save time and money, both of which are important where there are small children to feed and sew for. I make all my children's clothes, even their every-day stockings. I put up (last year) about 500 quarts of fruit (and fruit juice for jelly), pickles and vegetables. With all this to do I am always on the lookout for labor-saving devices.

The following is one of the most helpful devices I have found for making fruit butters. Take a piece of wire window screening the size of your largest dish pan, nail it to a wooden frame.

Stew your crabapples, pears or apples and after mashing them put them through this wire screen; you will be surprised how quickly they will pass through and how smooth the fruit will be. Ad your sugar and spices and bake in the oven. The fruit butter will need very little stirring and will taste much better than when cooked on top of the stove. This is also a good way to make apple sauce out of small apples.—"ANNIE LAURIE," Wash.

Will some one tell what to do for black head in turkeys?—MRS. C. E. S., Wash.

Dear Mrs. Barland: I have canned apples and pears that the flavors were not distinct. I would like it if the sisters of the Circle would send in recipes for combining them with other fruits or juices to make pies, puddings or salads. I like the household page in the Farmer, think it is fine.—MRS. M. D., Wash.

All mothers may not know that they can send to the United States department of labor, children's bureau, Washington, D. C., and get, free of charge, a bulletin on the care of infants.

Will some one tell how to put up horseradish, both with mustard and in vinegar? MRS. W. C.
Blaine, Ore.

Will some one tell me how to smoke hams and bacon when one has no smokehouse? I am a beginner in farm life.
Oregon. MRS. S. C. N.

Dear Mrs. Barland: I have a nice collection of dark shades in brown, black, tan and green in Skinner satin and would like suggestions for working them up.

Also I would like to know how to kill poison oak. Our yard is just full of it and we have to be on guard every time we go out of doors.—MRS. E. S. D., Oregon.

Dear Mrs. Barland: Please tell me how to make soda crackers like we buy in the stores.—MRS. M. E. S.

(If any one knows how to make this kind of crackers I shall be glad to have you write me, as I have had so many requests for them. In the factories the dough is run through heavy rollers, which makes the crackers tender.—Editor.)

Cool in the Kitchen

The coming of the hot weather of summer creates a problem in the farm home kitchen that all too few of us realize. Where there are hired hands or a large family to cook for, and where there is canning of fruits and vegetables to be done for the winter supply of these desirable foods, the housewife spends several hours each day in the hot kitchen, baking, cooking, washing, canning, scrubbing. The heat of the open harvest field, where the air is limitless and pure, is not comparable to the heat of the kitchen, where the coal or wood range is sizzling and the pots and kettles are sending up their clouds of steam.

Too little thought is given to eliminating or overcoming the discomforts and inconveniences of the kitchen. To be sure, they can not all be eliminated or overcome, but some of them can.

In many homes the small oil stove of one or two or three burners is installed to do a considerable portion of the cooking and boiling during the hot weather. Where this is done the added comfort may be experienced of taking it to the back porch or to a sheltered spot outside the kitchen where it may do its duty without heating up the kitchen. Now and then a farm home is so situated as to find gas or electric plates or ranges possible and practical.

Another life saver in many a home is the fireless cooker, by means of which much of the hottest work may be done in the day, with the cooker finishing the meal in a cooler kitchen. If one does not desire to purchase a modern and efficient fireless cooker, it is not a difficult task to make one that will serve many of the simpler purposes for which they are designed.

Running water, a most desirable feature in any home, is especially worth while in the summer time. It is not always possible to have a plentiful supply of hot water, but in the steaming kitchen the cold water faucet is the source of a world of cooling comfort, as well as relieving the housewife of the necessity of numerous trips to the well or the spring for a supply of water that she is sure to use sparingly because of the difficulty of obtaining it.

Screens on the windows and doors so that they may be thrown open, a screened-in porch where much of the work may be done, a refrigerator or other cooling device, a high stool upon which to sit while washing dishes or paring potatoes—such things as these are comparatively inexpensive when the comfort they bring to the busy farm housewife is considered.

It is well to think of the barn and field equipment and make it modern, but the time is ripe for the people on the farm—the man as well as the woman—to give part of their best thought to means of making the kitchen comfortable and efficient.

Home Recipes

Quick Salad Dressing—One-fourth cup condensed milk, a little salt and pepper, 2 large tablespoons of sugar, 1-4 teaspoon dry mustard; mix all the dry ingredients then add the condensed milk, mix thoroughly and to this add 1-4 cup or less of vinegar. When all is stirred it will be as thick as boiled dressing. Vary amount of vinegar to suit taste but always mix the sugar and cream before adding vinegar or it will curdle. If oil is desired it should be stirred into the cream before the vinegar. I sometimes add chopped green peppers and a little pimento in the dressing.
MRS. G. W. PERKINS, Wash.

To Make a Rose Jar—Gather the rose leaves and dry them in the shade. From a drug store get a few drops each of different kinds of perfumed oils in one bottle and having placed the leaves into a jar which can be sealed, drop bottle and all into the leaves and seal.

I made mine 10 years ago or more, and it is as fragrant now as when first made. The jar must be kept sealed.
MRS. G. B., Oregon.
(When you wish to enjoy the perfume open jar till room is fragrant.—Editor.)

Rose Jar or Pot Pourri—Gather rose leaves in the morning and spread on a cloth till the dew is dried off them. Put a layer of petals into an earthen jar and sprinkle with a little salt; continue to do this till you have gathered as many as you wish, stirring occasionally. Let them cure for a week or so then add spices or perfumes or oils, as many as you wish. One can use orris root, tonka bean, cardamon seeds, cloves, cinnamon, ground nutmeg, lavender flowers, oil of rose geranium and rosemary, essence of tuberose, cologne, any combination your fancy prompts.

After you have added all you wish seal up the jar and allow to cure for a couple of weeks, then place in fancy jars and distribute about the rooms. When you desire the fragrance open the jars and allow perfume to fill the room.
MRS. CHAS. MILNE, Oregon.

Just Folks

Two or three years ago, at a conference at Washington, D. C., I heard the head of the United States bureau of animal industry say that it was most difficult to obtain reliable information regarding the extent of steer feeding operations by farmers. Those who fatten stock for the market are too busy on the job to fill out blanks or to make reports of what they were doing.

Even in these times of ferment the bringing up of children is much discussed. We hear a lot of talk about it—good, bad and indifferent.

Perhaps those who are really on the job are too busy to write about it.

I was reminded of this the other morning when a man invited me to ride to town in his auto. He remarked that he had just brought out his two boys to practice baseball. I do not know his name nor his business; never met him before and may never meet him again, but the little talk I had with him was illuminating. He said he had two boys and two girls. His girls were older, one being married and the other just graduating as a nurse from a hospital. The two boys evidently were in school. He said he kept track of his boys. There was seldom an evening that he didn't know where they were, because often he was with them, not as a spy, but as a comrade. When they wished to go to some athletic or other event he took them in his auto, and when it came time to go home he asked his boys if there were not other boys on the route that could be taken to their homes also, so the auto was filled up with boys and his own boys did not feel that their father was taking them home, but it was a party of boys that were being taken home together.

He said his wife remarked: "Why, you were out pretty near every evening this week with the boys!" He replied: "Yes, but I know where they are in the evening."

He added: "I always tell my boys that when they get into trouble to come to dad. If they break out a window in a neighbor's house we will go and fix it up and there is no upbraiding or other talk about the matter. Our home welcomes the other boys. They are pretty noisy at times, but they have a good time and while the other boys come to our home we know where our own boys are."

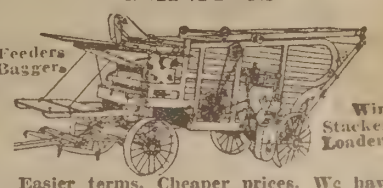
Here was a man who was giving the best there was in him of mind and heart and soul to the bringing up of his boys, and it came to me that there are dozens and scores and hundreds and thousands of men and women who are doing the same thing, who have neither the time nor inclination nor the ability to attend conferences, write for the newspapers and all that sort of thing, about the general subject of bringing up children.

Far be it from me to depreciate the wise advice, conference meetings, talks, writings and everything that can be said and done in the way of practicable advice in the bringing up of children. It's all needed. It is comforting, however, to think there are a lot of people who are doing this very thing in a constructive way. They probably pick up more or less of this information that is going around, but it has to pass their judgment.

A parent like this, like the unknown soldier, is worthy of all honor. E A S

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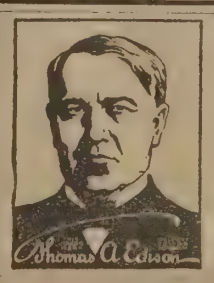
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High Points in News of the Week

An act of lawlessness seldom if ever equaled in this country was committed at Herrin, Ill., last week when a mob of citizens of that place, mostly striking coal miners or their supporters, attacked and killed some 25 strikebreakers who were operating one of the Southern Illinois Coal company's mines. This is one of the first acts of violence growing out of the nationwide coal strike in which some half a million miners are taking part. The situation is unusual in that the massacre of the strikebreakers appears to have the 100 per cent approval of the people of the community, who even forbid disinterested parties going in to recover and care for the bodies of the dead.

Steps were taken to send militia troops into the community to take charge of the situation, but a committee appointed by Governor Small of Illinois to investigate recommended that no troops be sent in, fearing that their coming would lead to further violence on the part of the mob element in that territory.

Reports of the massacre that appear thoroughly reliable say that the strikebreakers were attacked by overwhelming numbers of strikers and strike sympathizers, taken captive, driven into a wooden district, told to "beat it" and shot down as they ran for their lives.

The massacre was preceded a day by a skirmish in which one union striking miner was killed.

A coroner's inquest over the dead bodies resulted in a verdict that the coal mining company was both directly and indirectly responsible for the unfortunate affair.

* * *

An assassination of world-wide interest occurred in Berlin last week when Dr. Rathenau, German minister of foreign affairs, was shot and killed by three men as he left his home for the office. The assassination apparently had been carefully planned, the three assassins acting as a unit, even following up their shooting by the explosion of hand grenades in the minister's automobile and later making their escape in an apparently prearranged manner.

Dr. Rathenau was one of the important officials under the present republican government in Germany and his assassination is looked upon by many as possibly the first act in a monarchist plot to overthrow the republican form of government and reseat upon the throne the old Hohenzollern line or its representatives.

A tense scene was enacted in the reichstag at an extra session called by Chancellor Wirth. The nationalist members of this legislative body were openly charged with being party to the crime directly or indirectly. The act apparently has done much to solidify republican sentiment in Germany and representatives of the new form of government have virtually declared war on the monarchists.

* * *

Another assassination took place last week when two men in a prearranged manner shot and killed Field Marshal Henry H. Wilson of the British army in London. This act was charged in the public mind to the Irish republican organization as a retaliatory measure against the activities of the British army in Ireland. General Duffy, chief of staff of the Irish republican army, immediately denied that that organization had any part in the crime.

* * *

Between 10,000 and 15,000 Chinese soldiers, representing the northern army of the Chinese empire now operating against Sun Yat Sen's army in Kaingsi province, mutinied last week and destroyed much property and many lives. It is estimated that the dead as a result of the mutiny will reach 4000. Several cities were wrecked and considerable foreign property largely belonging to Christian missions was destroyed.

* * *

The elections in Ireland last week resulted in a victory for the treaty of peace entered into between the British and the Irish for the setting up of an Irish free state. Of the 128 members elected to the new parliament in south Ireland, only 36 are definitely committed against the treaty, whereas 58 are known to be for it and 34 scattered, many of whom are probably favorable toward the peace program.

* * *

Sentiment appears to be strengthening in favor of broader powers on the part of the tariff commission. It is charged that under present conditions the tariff is handled in a political manner whereas it should be taken out of politics and determined on an scientifically economic basis. Many favor extending to the tariff commission powers over tariff rates similar to those exercised by the interstate commerce commission over freight rates.

* * *

At the request of Senators Jones and Poindexter of Washington, Secretary Fall of the department of interior has prepared a tentative bill providing for the formation of a commission of three to work out the problems of the Columbia basin project. One member of the commission would be appointed by the secretary of interoir, one by the secretary of agriculture and one by the secretary of commerce. It would include an irrigation expert, a soil expert and a transportation expert.

* * *

The prosecuting attorney of King county has filed a suit against Japanese owners of the Japanese Commercial bank of Seattle on the ground that the bank is holding land illegally under the anti-alien land law. This is the fourth suit brought in King county for alleged illegal holding of land by Japanese.

* * *

President Harding has replied to the Philippine parliamentary commission that he considers the time for Philippine independence not yet reached.

* * *

The American Federation of Labor has launched plans for the establishment at the national capital of a labor defense council whose primary purpose will be to defend labor unions against suits that may be brought under recent supreme court decisions adverse to organized labor.

* * *

Samuel Gompers was last week reelected president of the American Federation of Labor at the convention in Cincinnati, Ohio.

* * *

The federal reserve bank in the New York district has announced a reduction of its discount rate from 4 1-2 per cent to 4 per cent, the lowest rate in five years. This reduction is understood to be due to a general improvement of the money market. Similar reductions are expected in other districts.

* * *

Indications are that the referendum vote of organized railroad employees on the question of a strike as a result of recent wage reductions will result in an overwhelming vote in favor of such strike. The vote is one on the question of whether or not to authorize the organization officials to call a strike or order a continuation of work in their own discretion. These officials have indicated that if authorized to do so they will call an early strike. The government railway labor board last week issued a statement through its chairman urging these officers to prevent a strike on the ground that it would work a tremendous hardship on the workers themselves as well as the country at large.

* * *

Guglielmo Marconi, the inventor of wireless, has announced the invention of what may be termed a radio searchlight by means of which radio waves can be reflected like light waves and sent in a given direction as a beam of light instead of being scattered broadcast in all directions as at present.

* * *

President Harding has announced the cancellation of his proposed trip to Alaska this summer. The pressure of public business at Washington is given as the reason for its cancellation.

* * *

William Rockefeller, brother of John D. Rockefeller and heavily interested in the oil business, died last week at the age of 81 years. His wealth is estimated at a few hundred million dollars.

Farm Business and Markets Outlook

(Continued from page five.)

receipts at the four leading markets going for that purpose. Production probably has passed the high point for the season. Prices on the Wisconsin board have been advancing and distributing markets followed suit. Eastern buying is in evidence on Wisconsin markets.

Prices on No. 1 American cheese on June 21 were:

Chicago—Twins, 18 1-2@19c; S. Daisies, 18 1-2@19c; D. Daisies, 18 1-4@18 3-4c; Young Americas, 18 1-2@19c; Longhorns, 18 1-4@19c; Square Prints, 19@19 1-2c.

POTATO MARKET SLUMPS.

The potato market has lost some of its recent strength. Shipments are slightly above the average of the last 10 months. The supply of old stock is decreasing rapidly and will be practically gone by the middle of July. The crop of early potatoes in the intermediate states is estimated at 20,672 cars of 200 barrels each, an increase of 1700 cars over last year. New Bliss Triumphs are quoted at $2.75 to $3.25 per 100 pounds and Irish Cobblers at $4.50 to $6.50 per barrel in middle western consuming markets.

Heavy shipments caused a sharp slump in the potato market last week. The total movement has been nearly 1000 cars per day compared with an average of 700 cars during the last year. Prices on new stock declined $2 to $3 per barrel. Receipts are falling off and the market is strengthening.

LATEST QUOTATIONS.

The Live Stock Market.

PORTLAND, June 24.—Cattle—Choice hayfed steers, $8.25@8.75; medium to good hayfed steers, $7.75@8.25; choice grass steers, $7.75@8.25; medium to good steers, $6.75@7.75; fair to medium steers, $6.25@6.75; common steers, $5@6.25; choice cows and heifers, $6.25@6.75; medium to good cows, heifers, $5.25@6.25; fair to medium cows, heifers, $5.25@6.25; common cows, $3.50@4.50; canners, $2@3.50; bulls, $3.75@5; choice dairy calves, $8@8.50; prime light calves, $7.50@8; medium light calves, $7@7.50; heavy calves, $4.50@7.

Hogs—Prime light, $11.50@11.75; smooth heavy, 200 to 300 lbs, $11@11.25; smooth heavy, 300 lbs up, $10@11; rough heavy, $8@9.50; fat pigs, $11.75@12; feeder pigs, $11.50@11.75; steers, subject to dockage, $5@8.

Sheep—Best spring lambs, $8@9; medium spring lambs, $7@8; common spring lambs, $6@7; cull lambs, $5@6; light yearlings, $7@8; heavy yearlings, $6@7; light wethers, $5@6; ewes, $2@5.

SPOKANE, Wash., June 24.—Cattle—Prime steers, $7.25@8.50; good to choice steers, $6.25@7.25; medium to good steers, $5.75@7; fair to medium steers, $5@5.75; common to fair steers, $4.75@5; choice cows and heifers, $5.75@7; good to choice cows, heifers, $4.75@5.75; medium to good cows, heifers, $4.25@4.75; fair to medium cows, heifers, $3.25@4.75; canners, $2@3.50; bulls, $3.25@4.75; light veal calves, $6.50@8.50; heavy veal calves, $4@6.50; stockers and feeders, $4.75@5.

Hogs—Prime mixed, $11.25@11.85; medium, $10.25@11.25; heavies, $8.25@9.25; fat pigs, $10.25@11.25; stockers and feeders, $10.25@11.25.

Sheep—Prime lambs, $8@10; fair to medium, $7@8; yearlings, $7@8; wethers, $6.50@7.50; mutton ewes, $3@6.50; feeder lambs, $6@7.

The Grain Market.

PORTLAND, Ore., June 24.—Wheat—Hard white, June, $1.15; July, $1.14; August, $1.09; soft white, white club, June, $1.15; July, August, $1.09; hard winter, northern spring, June, $1.14; July, August, $1.09; red Walla, June, $1.09; July, August, $1.03.

Corn—No. 2 eastern yellow, shipment June, July, August, $29.50.

PULLMAN, Wash., June 24.—Red wheat, 90c; white wheat, 93c.

DAVENPORT, Wash., June 24.—Bluestem, $1.12; Marquis, $1.08; Gold Coin, 90c.

DAYTON, Wash., June 24.—Club wheat, 96c; red, 92c.

POMEROY, Wash., June 24.—Turkey red, 94c; hybrid, 91c.

RITZVILLE, Wash., June 24.—Bart, $1.20; red, $1; fife, 90c.

WALLA WALLA, June 24.—Club wheat, 99c; Bart, Bluestem and Turkey red, 98c.

ODESSA, Wash., June 24.—Marquis, Bluestem and Bart, $1.23; Turkey red, $1.03; Jones' fife, $5c.

Hay and Feed Grain.

SPOKANE, June 24.—Wheat—Feed wheat, $44 per ton.

Oats—$40 per ton; steam rolled, $42.

Corn—$36 per ton; cracked corn, $34 ton.

Barley—$42; steam rolled, $44.

Bran and Shorts—$34 per ton.

PORTLAND, June 24.—Millfeed—Price f. o. b. mill: Millrun, ton lots, $35; middlings, $41; rolled barley, $36@38; rolled oats, $43; scratch feed, $50 per ton.

Corn—White, $35; cracked, $37.

Hay—Buying price, f. o. b. Portland: Alfalfa, new, $14.50@15.50 per ton; cheat, $15@16; oats and vetch, $14; clover, $17; valley timothy, $18; eastern Oregon timothy, $21@22.

General Produce.

PORTLAND, June 24.—Butter—Cubes, extra, 35c per lb; parchment, wrapped, box lots, 40c; cartons, 41c. Butterfat, buying price, No. 1 grade, 41c delivered Portland.

Eggs—Buying price, current receipts, 20c dozen; henneries, 22@23c dozen; jobbing prices, case count, 21@22c; candled ranch, 25c; selects, 27c.

Cheese—Tillamook triplets, price to jobbers, f. o. b. Tillamook, 24c; Young Americas, 25c pound.

Poultry—Hens, 16@22c; broilers, 17@25c; ducks, 20@25c; geese, nominal; turkeys, live, nominal; dressed, 40c.

Veal—Fancy, 12½@13c per pound.

Pork—Fancy, 15½c per pound.

SPOKANE, June 24.—Poultry—Fat hens, 19c lb; light hens, 16c lb; roosters, 8c lb.

Fresh ranch eggs—$6.50 case; no storage; pullet eggs, $6.

Butterfat—37c a pound.

Range of Live Stock Prices for the Week Ending June 21

CATTLE.	Chicago.	Spokane.	Portland.	N.Salt Lake
Choice, prime heavy steers (1100 lb. up)	9.20@ 9.90	.....	.....	.....
Good heavy steers	8.75@ 9.25	.....	.....	.....
Medium heavy steers	8.00@ 8.75	.....	.....	.....
Common heavy steers	7.25@ 8.00	.....	.....	.....
Choice, prime light steers (1100 lb. d'n)	9.10@ 9.85	.....	.....	.....
Good light steers	8.60@ 9.20	8.00@ 8.50	8.00@ 8.75	.....
Medium light steers	7.85@ 8.75	7.25@ 8.25	7.25@ 8.25	7.00@ 7.85
Common light steers	7.00@ 8.00	5.25@ 7.25	5.25@ 7.50	5.25@ 7.00
Common to choice butcher heifers	5.50@ 8.60	4.25@ 7.25	4.50@ 6.75	4.00@ 5.75
Common to choice butcher cows	4.00@ 7.25	3.25@ 6.00	3.50@ 5.75	3.25@ 5.00
Bologna and beef bulls	4.15@ 6.50	3.25@ 4.75	3.75@ 5.00	2.00@ 3.00
Canners and cutters, cows and heifers	2.75@ 4.25	2.00@ 3.50	2.00@ 3.50	1.50@ 3.25
Canner steers	4.00@ 5.75	3.00@ 4.50	3.00@ 4.50	3.00@ 4.00
Medium to choice light veals	7.50@10.00	6.50@ 8.50	7.00@ 9.50	7.50@ 8.50
Common to choice heavy veals	4.00@ 7.75	4.00@ 6.50	4.50@ 7.00	.....
Common to choice feeders (1000 lb. up)	5.75@ 8.00	.....	.....	.....
Common to choice feeders (750-1000 lb.)	5.75@ 8.00	4.75@ 5.50	.....	5.00@ 5.50
Common to choice stocker steers	5.25@ 8.00	.....	.....	.....
Common to choice stocker cows, heifers	3.50@ 6.00	.....	.....	.....
HOGS.				
Top of market	11.00	11.75	12.00	10.65
Bulk of sales	9.85@10.40	10.25@11.50	11.25@11.85	9.75@10.50
Heavy (250 lb. up)	10.30@10.65	10.00@10.85	10.00@11.50	9.50@10.25
Medium (200-250 lb.)	10.40@10.90	10.25@11.25	11.25@11.75	9.75@10.50
Light (150-200 lb.)	10.60@10.90	11.00@11.75	11.50@12.00	10.25@10.65
Light lights (130-150 lb.)	10.25@10.85	10.75@11.50	11.50@12.00	10.00@10.50
Smooth packing sows (250 lb. up)	9.20@10.00	8.75@ 9.25	9.00@10.25	.....
Rough packing sows (200 lb. up)	8.80@ 9.50	8.25@ 8.75	8.00@ 9.00	.....
Medium to choice pigs (130 lb. down)	9.25@10.50	10.25@11.25	11.75@12.00	.....
Stock pigs	.....	10.25@11.25	11.75@12.00	8.50@ 9.25
SHEEP AND LAMBS.				
Medium to prime lambs (84 lb. down)	11.50@13.25	8.00@10.00	9.00@11.00	8.50@11.00
Culls and common lambs	6.00@11.00	5.00@ 8.00	6.00@ 9.00	5.00@ 8.50
Medium to prime yearling wethers	8.00@11.50	7.00@ 8.00	7.00@ 9.00	5.00@ 6.00
Medium to prime wethers	4.50@ 8.00	6.00@ 7.50	6.00@ 8.00	4.00@ 5.00
Medium to choice ewes	2.50@ 6.75	4.00@ 6.50	3.00@ 6.00	3.00@ 4.00
Culls and common ewes	1.50@ 3.00	3.00@ 4.50	2.00@ 3.00	.....
Full-mouth to yearling breeding ewes	4.50@11.00	.....	.....	.....
Feeder lambs	10.50@12.00	6.00@ 7.00	.....	.....

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AGRICULTURAL LIBRARY

Junior Farmers Spend Week at College

By LINCOLN LOUNSBURY
Agricultural Extension Editor, W.S.C.

Lettuce—Lettuce—Turnips—Beets,
We're the ones that grow the eats.
Can the berries,
Cook the spuds.
Rah! Rah! Rah! Washington Clubs.

The club yell in the box rang out from the 121 boys and girls as they gathered twice daily at assembly during the first annual short course held for their benefit at the State College of Washington, from June 19 to 24.

Many short courses and institutes have been held for the regular farmer, but not till this year has the junior farmer been given a chance to receive training adapted to his own use. Boys' and girls' club week at the state college was inaugurated for the purpose of training club members in the use of the best methods in agriculture and home economics.

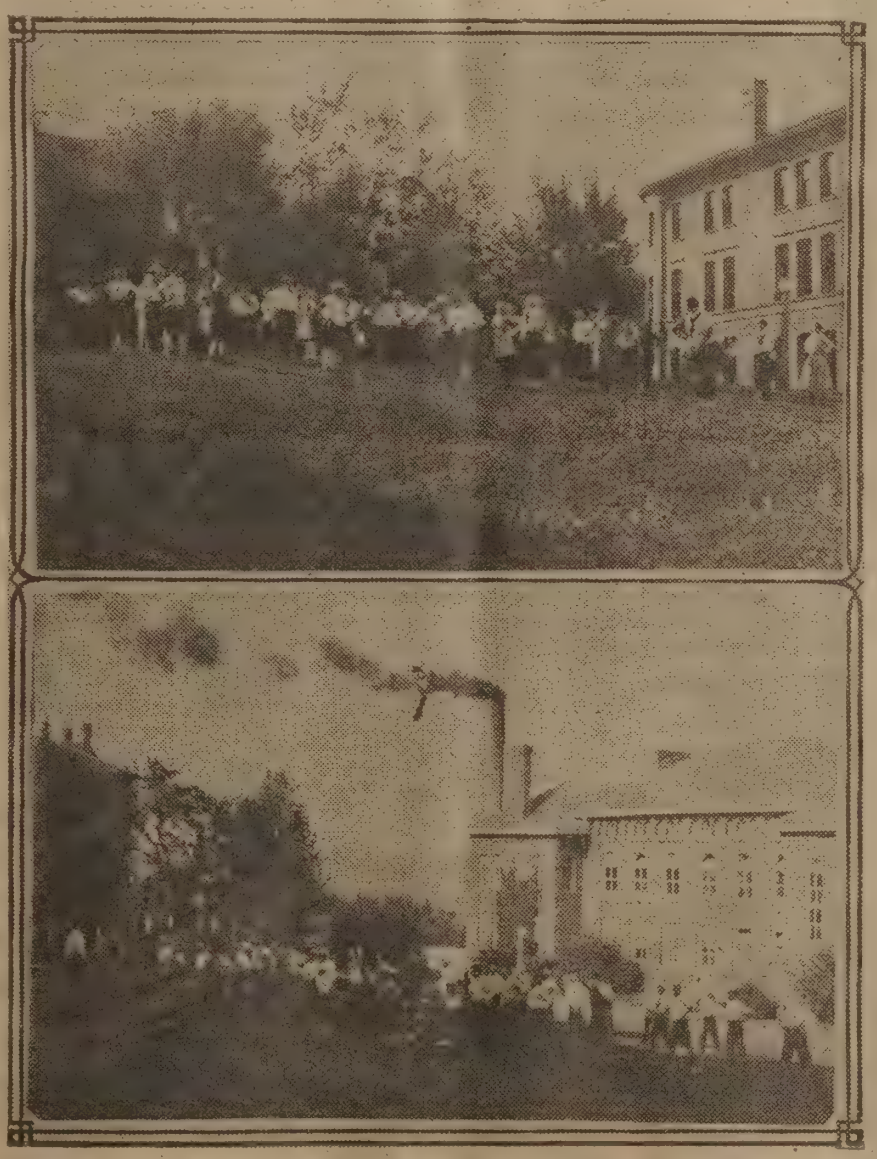
A regular junior college was established and classes organized and instruction given by members of the regular faculty and extension specialists. The schedule called for instruction in feeding, management and judging in poultry, dairy cows, swine, sheep and beef cattle, all of interest to the boys, while lessons were given in canning, cooking, sewing, hat making and home management for the girls. How to raise a garden, handle cereal crops, control diseases and pests which might trouble the crops of the junior farmer, and the principles of dairy manufacturing, were of interest to both the boys and girls.

"I am taking in everything I can, because I want all the information possible to take back to the Montesano clubs," said Robert Polson, when stopped on the campus and asked how things were going. This was the general sentiment of the 121 boys and girls representing 23 counties of the state.

"This is one of the most serious minded groups of boys and girls I have ever handled in my experience as a teacher," remarked one of the instructors after she had finished her first class. "It is certainly a picked group."

She was right in saying it was a picked group, for those 121 boys and girls were picked from over 6000 club members in the state. The five representatives from each of the counties were selected by F. L. Andrain, state club leader, with the assistance of club agents, county agents and home demonstrators in the various counties. They were chosen on the basis of quality of work accomplished last year, ability as a leader and interest in club work.

This group of boys and girls made the remarkable record last year of making $10,391.89, or an average of $115 each. While the average age of the junior farmers was a little more than 15 years, and the average net profit amounted to over $100, the highest amount was made by Clifton Axling of Lynden, who made $981.11 on his poultry. Out of the group of boys and girls, 29 made over $100; 15 over $200 and 12 over $300 from their club projects last season.



Every morning the boys and girls were assembled on the campus for a little vigorous exercise, a "morning constitutional," or what the soldier in the army camps calls "setting up exercises."

The daily life of a short course student was not in the least monotonous, but rather one full round of work and play. Reveille sounded at 6:00 a. m., after which Dr. Bohler, head of the physical education department, aided by one of his lady assistants, put the boys and girls through their morning exercises, just like a company of soldiers. With an hour for breakfast, the regular classes of the day began at 8 o'clock, continuing till noon. Assembly call was given at 1 o'clock, when a musical program was given by members of the summer school in music. Short addresses and an educational movie finished the assembly period. The balance of the afternoon was taken up with class work till 4 o'clock, when supervised play was conducted. Evenings were spent with movies, singing and general club rallies.

Besides having their regular classes for instruction, the local leaders gathered and formed a new statewide organization known as the "Washington Four

Continued on page eighteen

Community Experience Should Be Accepted as Guide—Page 4

Teaches By Object Lesson

By J. E. NESSLY

Walla Walla county has a real, live, pushing farm bureau that is getting results. With 1100 "live wire" members, a county agent who takes his work seriously and a splendid farming district in which to operate, the farm bureau is "doing things" that are really worth while.

The farm bureau has adopted the more modern methods of teaching, which have been successful in the schools. Object lessons are being used. They theory "what man has done man may do" has been adopted, and the bureau, the county agent, the department of agriculture in the high school and the live citizens of Walla Walla (and no town its size has a larger percentage of live citizens) are cooperating in the effort to improve agricultural conditions in Walla Walla county.

Excursions which take those interested through the county, where they are given an opportunity to see what others are doing, have been arranged and they have proven highly beneficial and instructive. A poultry excursion held this spring took more than 100 who are interested in poultry raising to the leading poultry farms of that section. A live stock excursion was held Saturday, May 27, and a bee excursion is planned for later in the season.

The Washington Farmer representative had the good fortune to accompany the live stock excursion and has no hesitation in saying it was one of the most successful, instructive and enthusiastic he has ever seen and there can be no doubt the results will be highly beneficial to all who were fortunate enough to be members of the excursion and there were more than 150 such fortunate persons. The excursion was under the management of W. H. Talley, county agent; Dan Barclay, an expert on dairy cattle, and A. W. Kasten, instructor in agriculture in the Walla Walla high school, with a number of able volunteer assistants. Probably no one took a deeper interest than did C. M. Rader, an attorney of Walla Walla, who is interested with his son, Ralph, in a fine stock farm and herd of Shorthorn cattle. Mr. Rader took an active part in making the excursion a decided success.

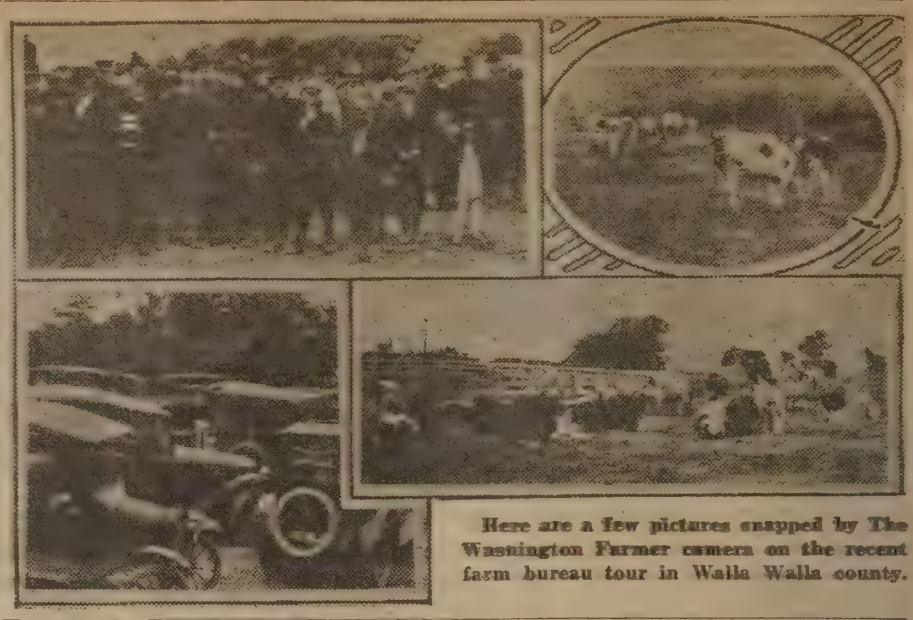
Leaving Walla Walla at 7:30 in a drizzling rain, 30 automobiles, each loaded to capacity, headed for the state penitentiary to inspect the splendid herd of Hampshire hogs kept there. The excursion was for the double purpose of seeing the best herds of hogs, dairy and beef cattle, sheep and horses in the country surrounding Walla Walla and to give the agricultural and animal husbandry classes of the Walla Walla high school some object lessons in the care of live stock and in stock judging. While the students and many others took score cards and marked their estimates of the relative merits of five splendid Hampshire gilts selected for the judging contest, many of the visitors went about the grounds and viewed the 400 splendid Hampshire hogs on the penitentiary farm. Emil Wimer, who has charge of the hogs and poultry, accompanied these visitors and showed what has been accomplished in producing pork, eggs and poultry (for there are 4000 Leghorn hens and some turkeys and other poultry on the pentiary farms.) These visitors were intently inspecting the hogs and poultry and asking questions of Mr. Wimer, when the honking of auto horns announced that the judging contest was ended and it was time to be on the way to the next stop.

This proved to be the dairy farm of N. C. Nelson, where 11 head of especially fine Jersey cows and heifers, every one registered and a real aristocrat, were inspected and five of these were selected for the judging contest. The dairy judges announced their decisions on the placing of the cows, after which Mr. Barclay and Professor Kasten spoke briefly in explanation of why the animals were so placed. The cards marked by the contestants were assembled by the clerk before the announcements were made.

Just across the fine paved highway from the Nelson farm the big dairy of F. L. Shannon, called "Shannondale Purebred Stock farm," a beautiful, well-arranged and evidently profitable dairy farm, was next visited. Mr. Shannon has 40 head of purebred, registered Guernsey and Holstein cows, the latter slightly outnumbering the former. He is also milking a few high-class grade cows. "These rather spoil the looks of the herd," said Mr. Shannon to THE FARMER representative, "but they are fine milkers, give a lot of rich milk, and we are operating a retail milk route. That old brindle cow (pointing to a grade Jersey) is not a beauty, but she gives a lot of rich milk and we can not afford to dispense with her." Asked why he keeps both breeds—Guernseys and Holsteins—Mr. Shannon said: "We need the Guernseys to give more color and richness to the milk. The Holsteins give the quantity, but we need the richness gained by adding the product of the Guernseys." Several classes of cows and heifers were judged at the Shannon farm and then the caravan, which had been augmented to 36 automobiles, sped away to the farm of John W. Tenney, a Duroc Jersey hog breeder.

The visit was a complete surprise to Mr. Tenney, who said: "I expected three or four automobiles and about a dozen high school boys to judge my hogs and was not prepared for this crowd." He had five very nice, "typy" gilts, showing the modern type of Durocs, which were judged by the contestants. Mr. Tenney gave a very interesting talk on raising hogs for profit. Those shown, while nearly a year old, had been fed grain but two months. "They are pasture hogs," said Mr. Tenney, "and were raised at a minimum of expense, which naturally means a maximum of profit." He explained that he is producing, not raising, hogs, for the purpose of making money. He feeds his brood sows an average of one pound of middlings or an ear of corn per head per day and lets them run on alfalfa and bluegrass pasture. He fattens no hogs, but keeps 22 brood sows and each sow produces two litters of pigs each year; they average about 7 1-2 pigs to a litter, or 15 per year. He sells the pigs at weaning time (6 to 8 weeks old) at $5 each and has no difficulty

(Continued on page thirteen.)



Here are a few pictures snapped by The Washington Farmer camera on the recent farm bureau tour in Walla Walla county.

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For Good Farming, Attractive Country Homes and Happy Country People

The "Thirty-Ten" Initiative Measure

By N. D. SHOWALTER
President, Cheney Normal School

Before another issue of The Washington Farmer comes from the press it probably will be known whether or not the 30-10 bill will be on the ballot at the November election, as the petitions under the initiative law are now being filed. THE FARMER has presented from able educators and students of educational administration a number of articles dealing with both sides of this question. The article herewith is the last of the series, unless the measure is found to have enough legal petitioners to place it before the people of the state in November. If it goes onto the ballot, the discussion will continue with a view to enabling every voter to understand the bill in all its many aspects.—EDITOR.

One of the first fundamental principles of government is to provide a means for proper maintainence. The cost of government depends upon quality quite as much as the cost of living depends upon quality. The better the article the greater the value—hence the necessity of greater cost.

"A government of the people, for the people and by the people" becomes complex in its operation because it is dependant upon a multiplied number of individuals for its function and for its development, as well as for its maintenance. Free government must recognize the welfare of all of its citizens, considering the large social group acting and reacting together. To move forward together means united action; to lose because of a lack of unity or failure to cooperate means a serious loss indeed. If we really move forward at all we must move forward together—not by sections, not by groups, either social or economic.

Recognizing these governmental principles, general education becomes a basic necessity. Without referring to arguments used or statements made by our early statesmen, we may simply refer to the ordinances of 1787 and 1789. Since it was early recognized that our federal unit must be made up of a large group of sovereign states, it at once became a problem to determine just what should be delegated unequivocally to the state units.

Education was positively placed as an obligation on each of the several states and no constitution has been accepted since 1802 without a binding agreement placed therein relating to educational maintenance. The obligation then of public education rests upon the state unit. The state may find it expedient to shift its responsibility to the smaller district units. But whenever it fails to see to it that "a uniform system of public education is maintained for all of the children within the state" it has failed to meet its constitutional obligation. Further, it has lost its opportunity to consider equally the whole social group. A strong state as well as a strong nation meets its obligations willingly.

Much has been said about the 30-10 plan in connection with general financing. Nowhere have I seen the principle of increased state revenue for public education set forth on an applied basis. Our state law requires that first and second class districts must work on a budget basis. That is to say, the qualified officers must set forth in detailed budget form the necessary revenue required to maintain public education through the current year. This financial budget must be advertised and an opportunity given any citizen or group of citizens to have a hearing for consideration of any item of cost which they think extravagant or unbusinesslike in its provisions. The school officers who have been elected by the people are by law required to give attention to the people's wishes in their financial management. In third-class districts the school board is also required to make a budget, setting forth in detailed form their school needs, but this budget is reviewed by the county superintendent of schools and county treasurer, who have the right to make changes which seem wise and necessary to good financing.

In each case the plan of procedure is first to make an estimate of the state revenue which will come to the district under our plan of appropriation. Second, to estimate the county revenue on the same basis. These two funds when taken from the amount of the entire budget will leave the necessary balance to be raised by local taxation. The three funds taken in the aggregate must meet the financial budget lawfully adopted. And in each case this budget is subject to review and correction. Under such a plan there can be little waste, provided the administration is painstaking and considerate of the people's best interests.

The question at once arises as to whether the budget plan can be made effective. No one can question the fact that as the state fund increases the district tax decreases accordingly, and vice versa. Since the fairest means of raising revenue is to equalize the tax by means of covering the largest possible unit, then the fairest educational tax must be a statewide tax. It is not only equitable and fair, but it recognizes the state's lawful obligation. It is in harmony with the recognized spirit of our government and recognizes universal education as a basic need for social and economic progress.

The general statement that the 30-10 plan means simply an increase of taxes must presuppose that our budget plan of school financing is a failure. It must also presuppose the theory that our elected school officers are looking for an opportunity of advantage rather than giving first consideration to the educational needs of the community placed in budget form. If either or both of these theories are true, the condition can not be properly cured by simply withholding the state's obligation in making possible a uniform system of public education. The one greatest weakness in our whole taxing plan is the inequality which makes one piece of property in the state pay 20 times as much as others when equal benefits are to be derived. In all fairness it may be said that the 30-10 plan proposed will provide greater equality to the several communities of the state, and under proper administrative direction it should be just as economical as any other financial plan. Serious inequalities makes our present plan defective, and it is perfectly natural to look for some scheme which will place educational opportunity on an equitable basis for all the children of the state regardless of whether they live in the country or in the city.

Community Experience Counts

In Choice of Crops and Breeds of Animals

To the Editor of The Washington Farmer: I am very thankful for the marked copy of The Washington Farmer of June 22, in which you digest the question of the railroads helping build up the live stock industry.

I am afraid that you have not digested this problem in the best way. In my judgment it doesn't make any difference how much the railroads do for the average settler or whether the state would buy and give to settlers such stock as the settler should desire, unless the whole subject was treated in a constructive manner. For example, many settlers undertaking to farm do not first ascertain what kind of a crop they should produce or what kind of stock they should endeavor to start with, with the result that we have too many failures on the farm on account of lack of constructive vision.

It is now a well established fact that for egg production at a profit, the white leghorn hen has proven the best breed that the industry offers. In the production of dairy cattle, there are three or four outstanding breeds. In beef cattle, the same is true. In sheep and hogs, there are certain breeds best adapted to climatic and feed availability conditions. If this foundation is correctly presented, the first step that can be accomplished by The Washington Farmer is to impress upon its readers the necessity of first ascertaining what the farmer should produce and this would largely be based upon the section of the state located and if the foundation is properly laid, then is the proper time to ask for help, that when secured, will produce results.

For example, in the Puyallup valley we have established two or three industries in a substantial way and it is the constant effort of our people to ascertain what other industries are particularly suitable to the climatic and soil conditions of the Puyallup valley with a view of keeping our people from undertaking an industry that is impossible.

In my former letter to you I suggested that the inquiry printed in The Washington Farmer relating to the transportation companies helping certain settlers secure Brown Swiss cattle leads me to believe that you will not accomplish anything for these settlers by helping them secure a breed of cattle that is not particularly well adapted for profit making. Please do not misunderstand this communication. I appreciate that The Washington Farmer is rendering a wonderful service in a constructive way. I am only offering this suggestion for your consideration and not with a view of criticism.

W. H. PAULHAMUS.
The Puyallup and Sumner Fruit Growers' Association, Puyallup, Wash.

A new serial story, "Pike's Peak or Bust," begins in this issue of THE FARMER on page 14. This story is by Lewis B. Miller, author of "Trappers of the Ozarks," "A Crooked Trail" and "Big Smoke Mountain." This new story chronicles stirring events of the days of the gold seekers in the west. Do not fail to read this first installment.

The agricultural bureau of the Spokane Chamber of Commerce is actively interested in this matter of securing reduced rates from the railroads on breeding animals.

J. K. McCornack, the chairman of the bureau, is in favor of appointing a strong committee of three to start a request to the railroads for a special rate in such cases.

R. A. Balch of the live stock committee of the agricultural bureau tells The Washington Farmer that the tentative efforts already made convince him that the railroad officials sense the importance to the development of the country of better live stock, and he believes that when the matter is brought to their attention properly so that they can unite more or less on a concerted plan, they will be glad to do all in their power to make concessions of rates on the shipment of breeding animals.

Kale, Not Jim Hill

To the Editor of The Washington Farmer: In his article, "What Story Will the Thresher Tell This Fall," Mr. Nessly says of Anatone Flats, "There is a lot of Jim Hill mustard in some fields."

Closer inspection, however, would show that it is not Jim Hill, but what is locally called "kale." When blossoming in the wheat, kale somewhat resembles Jim Hill. At this time it is higher than the wheat, but at harvest time the wheat is from 6 to 18 inches higher than kale, so is easily cut.

Kale usually accompanies dry fall seeding and is quite easily controlled by summer cultivation. There is very little Jim Hill in this section and we feel the mistake (quite a natural and unintentional one) should be corrected.

Asotin, Wash. R. RAY TUTTLE.

Will Try Out New Grain Cleaner

A new grain cleaner, devised by the United States department of agriculture, has been received and will be tested out this season near Spangle by George W. Carr, pioneer farmer and thresherman, under the direction of an expert sent there by the department of agriculture. The machine was on exhibition recently at Spokane, where Mr. Carr had it in operation. The machine did splendid work in taking out foreign matter of every description.

It is not a fan, but a series of aluminum disks revolving rapidly, and each disk has small indentation, that take up the wheat, the weed seeds and all foreign matter and separates them, throwing the perfectly cleaned wheat into one receptacle and the dirt and cleanings in another.

Those who witnessed the test in Spokane were pleased by the results. From two sacks of very dirty grain 15 pounds of mustard, wild buckwheat, smut and cracked grains of wheat were taken out. The cleaned wheat was as clean as if run through the cleaner at a flour mill. There was absolutely no foreign matter in it. The machine is called the Carter-Mayhew recleaner and can be attached to a threshing machine and clean the grain as it is threshed, or can be taken off the thresher, placed in a warehouse and clean the grain there. It was sent west by the federal government and Mr. Carr has agreed to attach it to his thresher when he begins operations.

Wheat Growers

Hold Annual Meeting at Spokane

The annual meeting of the Washington Wheat Growers' association was held in Spokane last week with an attendance of between 100 and 150 members.

At the time of the meeting the association still had on hand about 194,000 bushels of grain, but General Manager W. J. Robinson announced that final returns should be in the hands of the growers early this month. Prices at which the association has sold its more than 6,500,000 of wheat ranged from an average of $1.19 to $1.39, depending on the variety, it was stated. The highest price received was $1.70 for Bluestem.

Secretary A. C. Adams' report showed that the association had recorded receipts of $8,256,772 during the fiscal year.

The membership of the Washington association approximates 3500, while that of Idaho, the northern membership of which operates through the Spokane office, approximates 3000.

The officers of the Washington association, many of whom are reelections to the positions they have heretofore held, are:

President, Roy V. Peringer, Oakesdale; vice president, J. H. Smith, Ephrata; secretary-treasurer, A. C. Adams, Spokane; general manager, Walter J. Robinson, Pomeroy.

Directors: District No. 1—J. R. Shepard, Goldendale. District No. 2—W. S. Guntle, Waitsburg, and C. N. Hatch, Walla Walla. District No. 3—James Oliver, Pomeroy. District No. 4—William McCauley, Dayton. District No. 5—H. E. Goldsworthy, Rosalia, and Roy V. Peringer, Oakesdale. District No. 6—V. R. Hyslop, Deep Creek. District No. 7—P. F. Oehlschlaeger, Connell, and W. A. Arlt, Ritzville. District No. 8—H. Jurgenson, Wilbur, and Almer McCurtain, Davenport. District No. 9—J. H. Smith, Ephrata. District No. 10—T. S. Hedges, Waterville.

The warehouse company of the association also met last week, the principal action being the election of officers and the decision not to operate warehouses this season. The company will remain intact, however, and assist localities in warehousing their own grain.

Seven warehouses were operated last year, handling 485,464 bushels of grain at an average operation cost of 3.15 cents per bushel, or $1.05 per ton. The company showed a gross profit of $7063, though the inclusion of organization expenses of the association in the warehousing company's accounts left a visible deficit of about $2000.

Officers of the warehouse company as elected or reelected are:

President, H. E. Goldsworthy, Rosalia; vice president, H. Jurgenson, Wilbur; secretary-treasurer, A. C. Adams, Spokane; general manager, W. J. Robinson; directors, Walter J. Robinson, Pomeroy; H. E. Goldsworthy, Rosalia; Almer McCurtain, Davenport; H. Jurgenson, Wilbur, and Henry Triede, Fairfield.

WAIKIKI GETS IMPORTED JERSEYS.

Waikiki farm of Spokane reports the purchase of the young imported Jersey bull, The Cids Imperator and the imported heifer, The Cids Oxford Duchess. Imperator was bred by J. Carson King's Sutton, Banbury, England, and imported by T. S. Cooper & Sons, Coopersburg, Pa. He is a son of the noted bull, The Cid, claimed to be the highest priced bull ever imported from England. The Cids Oxford Duchess is a beautiful show heifer bred by E. J. Malzard, Grouville, Island of Jersey. She is a granddaughter of Oxford You'll Do and The Cid, two of the most fashionably bred bulls in the world.

Waikiki has also purchased a carload of registered island bred Jerseys in Tennessee which are expected to arrive in about two weeks.

THE LOSS OF A CROP.

Many a fruit crop is lost because of improper pollination.

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Community Experience Counts

In a letter to The Washington Farmer, W. H. Paulhamus, president of the Puyallup and Sumner Fruit Growers' association, brings out a proposition of the utmost importance in state development. Community experience in farming is beginning more and more to take the place of individual preferences of the farmer himself.

Wise farm leaders will agree with Mr. Paulhamus that the first thing to do is to find out what crops and what breeds of animals will do best in a community. Then, those crops and those animals are at the basis of farm success in that community.

The best switch on a railroad track is not necessarily the one that at first suits the fancy of the superintendent. The efficient superintendent will set on foot an investigation as to the merits of the proposed switch, will compare it with switches used on other railroads and then base his opinion on the reports of these investigations.

The successful merchant does not trust his own individual judgment when it comes to buying goods in large quantities for his customers. He finds out, in a small way at first, what his customers like the best. Those goods that sell the best in his town and district are the ones that he buys. His own thought as to what his customers should buy or what they will like to buy are in the background. Community desires are respected because community desires lead to good business for the merchant.

As Mr. Paulhamus, himself, says: "Many settlers undertaking to farm do not first ascertain what kind of a crop they should produce, or what kind of crop they should endeavor to start with, with the result that we have too many failures on the farm on account of the lack of perspective vision."

In publishing Mr. Paulhamus' letter, The Washington Farmer has no desire, at this time, to start a discussion of the relative merits of different breeds of cattle or hogs or chickens. It is simply repeating the fundamental farm doctrine that when community experience proves certain crops and certain breeds of animals to be the best adapted to the section and to give the largest returns in that section, the new settler, or even the established farmer of that community, will do well to listen to the voice of that community experience in preference to any individual notions which he may have or which he may have had.

Especially, when it comes to getting help from the outside to develop a farming industry, it is more than the part of wisdom for those who are rendering that help to insist that community experience shall be regarded.

In other words, we are rapidly departing from merely individualistic notions in farming and are learning that community experience and cooperative effort are becoming more and more necessary to successful farming.

The letter of Mr. Paulhamus, published elsewhere in this issue, commands thoughful reading.

A State Farm Bloc

A new movement appears about to be launched for the formation of a farm bloc to participate in the next session of the Washington state legislature at Olympia.

It may be safely predicted that certain other industries of the state will raise a protest if anything like this takes place. But we rise to ask what there is wrong about a farm bloc in the state legislature. Ever since the lumber industry of Washington began to grow there has been in the legislature at Olympia a lumber bloc, though, to be sure, it was never advertised as such. The fishing industry has always maintained at the state capital during legislative sessions a very definite alignment intended to protect and foster the fishing interests. Every big industry except agriculture has very definite ways of developing and protecting its own interests during the sessions of the legislature. The time is ripe, therefore, for the farming industry to see that good representatives and senators are chosen to represent them at the next session of the legislature and it is appropriate and proper that these senators and representatives align themselves in a clearly defined, well organized farm bloc to protect and foster the most fundamental of all our industries.

We are not advocating a farm oligarchy in the legislature. The farmers want no special favors at the hands of the lawmakers or of the state executives. All they want is fair play, and the way to get it is to go out after it in an organized way.

Unjust to the Dairyman

It is a common thing to find grocery stores in almost any town or city displaying prominent notices in their windows or in their published advertising quoting cut-rate prices on milk. Enough of these stores operate on this price-cutting basis frequently to bring about a general reduction in the price of milk throughout the city.

The dairymen, who are making little or no money at the most favorable prices they can receive for their product, are the victims of this practice. Milk is one of the most essential food products. The building up of a stable dairy industry is essential to the wellbeing and prosperity of any city and the rural territory tributary to it. Yet this staple and essential food product is made a football to be kicked around at will by retailers and cut-rate distributors.

City people with sufficient breadth of vision to see the injustice that is being done should cooperate with the dairymen in stamping out this evil practice.

LOOKING INTO OTHER FARM FIELDS

The blueberry crop in northern Wisconsin will bring in more than $200,000 this season.

* * *

WASHINGTON, June 18.—A Spanish decree has been promulgated, effective immediately, prohibiting the importation of wheat and wheat flour, to continue in effect until the price of wheat on the local market exceeds 53 pesetas per hundred kilos and remains at this price for one month, Commercial Attache C. H. Cunningham cabled the department of commerce today.

* * *

Production of 20,672 cars of 200 barrels each of early Irish potatoes in the states that produce and ship after the early southern crop has gone to market, is forecast by the United States department of agriculture. This is an increase over 1921 of about 1700 cars. The indicated yield per acre is the same as the reported yield last year, and the acreage planted is greater.

Production in New Jersey is forecast at 10,951 cars, or a little less than the 11,125 cars of 1921. Production in Kansas is forecast at 2816 cars, as compared with 2923 cars in 1921. Maryland will have 3375 cars, as compared with 2722 cars last year; Kentucky, 1635 cars, as compared with 1225; Oklahoma, 1089 cars, as compared with 472; Missouri, 542 cars, as compared with 338; and Arkansas, 264 cars, as compared with 160.

State Farm News

The Waterville experiment branch station has the best stands of both winter and spring grains that it has had since establishment five years ago, showing striking results in tillage experiments. The same results have been obtained on adjoining farms which have followed the station's good tillage methods.

July 8 Superintendent C. E. Hill of the station and Director E. C. Johnson of the experimental work in Washington will hold the annual demonstration day, when visitors will inspect all the crop work and tillage experiments. County Agent F. H. Zentner of Douglas county, and the Waterville Chamber of Commerce will cooperate. The latter will serve a free lunch to all guests.

* * *

Washington stands relatively high in club work among the states of the Union. The state stands sixth in the number of clubs organized and second in the number of standard clubs organized, according to E. C. Scott, Yakima county club agent.

* * *

One of the largest turnouts of farmers that has been known in the county for some time was had at La Conner, Skagit county, Washington, at the farmers' picnic on June 17. This picnic included all farmer organizations, such as the Farm Bureau, United Dairy association, beekeepers, etc. An extensive program was arranged and each party was asked to bring a basket lunch; the United Dairyman furnishing the ice cream and the Farm bureau furnishing coffee, cream and sugar.

* * *

Pioneers of the Yakima valley rounded out another year by the celebration of Pioneer day at the ranch of W. P. Sawyer in the Parker Bottom district, near Wapato, June 18. About 1000 were in attendance to enjoy the program.

* * *

David and Allen Fowler are two farm boys of the "Shanghai" district in Cowlitz county who are intensely interested in club work, though when a Washington Farmer man called at their father's hill farm to find out how his fertilizer demonstration was coming on, they had no local leader and were not certain that they would have any this season. This is merely another illustration of the inestimable value of local club leaders, for Miss Nora Kelly, county club agent, said afterward that the Fowler boys undoubtedly would do well in potato club work if they had proper direction and that she hoped to find it for them. J. L. Fowler, the boys' father, moved there not long ago from near Portland, and is farming 40 acres.

* * *

L. W. Hanson, state dairy inspector, who has been located at Seattle, has tendered his resignation to E. L. French, director of the department. Mr. Hanson has been with the state department of agriculture since 1905. He has announced that he will go into the creamery business in Skagit county.

* * *

Cranberry diseases in Pacific county are being studied by Dr. F. D. Heald, head of the plant pathology department of the state college of Washington, who spent a few days there recently. M. D. Armstrong, extension horticulturist, is planning a spraying program for the season as a part of the cleanup program which will be pushed vigorously in cooperation with the state department of agriculture in abandoned bogs and seeing that growers employ the best-known spraying practices.

* * *

Indians of the Quinault reservation reaped a harvest of $125,000 from this season's salmon run, according to W. B. Sams, Indian agent.

Canneries at Taholah, two at Moclips and one at Aberdeen have been packing the fish. Only Indians are allowed to catch fish in the Quinault river, which lies in their reservation.

* * *

Word comes from the state authorities at Olympia that the existing blanket freight rates on cull apples from the Wenatchee district to Puget sound points will remain in force despite the contention of an Everett company. Although Everett is 60 miles closer to the point of shipment than other Sound cities, the department of public works held that Everett facilities are inadequate to store cull apples and that lower rates would be unfair to the producers who seek greater markets.

* * *

According to District Horticultural Inspector P. S. Darlington the cherry crop in the Wenatchee valley is better than it has been for several years.

It is estimated that there will be about 200 cars of cherries shipped out of the valley within the next few weeks.

* * *

Virgil McWhorter, a former Yakima boy, now in charge of the sheep experiment station at Dubois, Idaho, has been selected as judge for the sheep exhibited at the state fair this fall, according to Secretary H. P. Vermilye. Mr. McWhorter has for a number of years been with the United States department of agriculture with one phase or another of the sheep and wool industry. He is considered an expert.

* * *

The new common frost-proof storage and fruit warehouse being constructed by A. E. Marsh of Yakima at Zillah is nearing completion. The building is 110 by 70 feet and has full basement. Including the porch, 10 feet wide, the building will have a total floor space of a little less than 16,000 square feet. The building will be used for storage and commercial packing. The first floor has skylights and is thus well lighted. The floor of the basement is nearly level with the ground on the lower side and the fruit will be received there and the packing will be done in the basement. The construction is substantial and ample ventilation is provided by four large vents passing from the basement up through the first floor. There are air intakes underneath the basement floor, thus providing for a change of air as desired.

Coming Events of Interest

July 8—Field day, experiment station, Waterville.
July 10—Field day, experiment station, Pullman.
July 12—Demonstration day, experiment station, Prosser.
July 24-Aug. 5—Live stock tour, Vancouver to Bellingham.
July 26-27—International apple shippers, Seattle.
July 27-28—Whatcom Guernsey gallop, Bellingham.
July 27– Alfalfa growers' tour, Stevens county.

FARM BUSINESS AND MARKETS OUTLOOK

Long-fed cattle are becoming scarcer right along, but there is an abundance of light short-fed steers, which scarcely avoid competition with grassers.

The outlook is for an advance of $1 or more on the butcher and bacon grades of hogs.

Dry and hot weather over the greater part of the west and southwest was a prominent factor in an advance in all grain markets. The government's report confirmed premature ripening from hot weather.

A tentative estimate of the reserves of old crop wheat above domestic needs on July 1 in the United States, Canada, Argentina and Australia, indicates that the supply is below the average. The United States has about 40,000,000 bushels left, compared with an average of 75,000,000 bushels in the last 10 years.

The peak of butter production probably has been passed and, barring occasional reactions, the trend of the market is likely to be upward.

Steers Cross $10 Mark

The spread in cattle prices widened further last week. Choice heavy corn fed steers sold at $10.10 at Chicago, while common and medium steers continued the decline started two weeks ago. Long-fed cattle are becoming scarcer right along, but there is an abundance of light short-fed steers which scarcely avoid competition with grassers. Heavyweights are capturing the premium at present as prime yearlings have not sold above $9.85. This discount may become even more marked as summer advances owing to the partiality to light feeders last fall and winter.

Cows and heifers have declined $1 to $1.25 in some of the southwestern markets. The trend has been and is still downward in the middle west also. The dressed veal market was $1 to $2 lower last week and values on the hoof at Chicago sank $1. Recovery can be looked for in this division later on.

Grass Beef Harvest Begins Soon

A good many grass steers are coming to market already, but the real movement from the grazing sections will not get under way until about the middle of July. Kansas and Oklahoma will begin to ship freely by that time and before the end of the month the northwestern range states will begin to disgorge. Texas grass steers are already on tap and this beef is cutting a figure in the western dressed trade. Drought in that state early in the season delayed its arrival, otherwise common and medium steers and cows and heifers would not have sold so high during May and early June.

Stocker and feeder prices are following the trend of the lower sorts of fat steers. Some grades at Kansas City are as much as $1 lower than two weeks ago. Pastures are not so promising as they were a few weeks ago, the busy season on farms is keeping buyers away, and those showing up have been discouraged by sagging values for plain light killers. The same cause has shunted more of the receipts into stocker and feeder alleys.

June Hog Run Is Heavy

Although there has been nothing like the usual June break in hog prices, the June run is holding up and the total for the month will be far above the average. Receipts last week at the 11 leading markets were the highest since February. This is a little later than the run usually lasts and may have been due to an effort to anticipate the threatened railroad strike.

A substantial decrease in the supply in the next 60 days is a practical certainty. The outlook is for an advance of $1 or more on the butcher and bacon grades. A heavy run of brood sows is already under way and a further increase is to be expected as well as a lot of heavy barrows. The spread in prices between butcher and packing grades has widened considerably and is due to go still further.

Lard stocks in the United States on June 1 were 123,670,000 pounds compared with a six-year average on that date of 113,511,000 pounds. Stocks of frozen and cured hog meats including those in process of cure were 634,846,000 pounds compared with a six-year average of 844,726,000 pounds.

Southeastern Lamb Movement Subsides

Receipts of lambs, especially from the southeast, were lighter last week and the slump in the market was checked. The Tennessee movement is nearly over and Kentucky will be through in a couple of weeks. In addition, only a few yearlings and wethers are left at feeding stations near the large markets. The advance guard of Idahoes arrived last week, but the main crop is not due for several weeks. If receipts remain light as they were last week the market should hold at the present level for a while. The dressed lamb trade has digested its big meal from the heavy slaughter of the last few weeks and prices have begun to recover.

Breeding ewes are going to Kentucky in rather large numbers while Michigan feeders are the principal buyers of thin lambs.

Horse Buyers Are Scarce

The horse market generally becomes extremely dull late in June and during early July. It is going true to form. Receipts are running light, but buyers are scarce. Most of the 1800-pound drafters at Chicago are selling at a range of $200 to $250, although an occasional team is matched up from individuals costing as high as $400. Horses with a worky appearance weighing from 1400 to 1550 pounds bring $125 to $165. A few choice wagon horses can be sold at $160 to $200.

Wool Prices Slightly Lower

All the wildness has left the wool market and slightly lower prices were in vogue last week. With buyers' limits reduced, but little business was transacted in the west as growers are resisting the decline. Mills apparently have provided for their needs in the next two or three months and are buying sparingly awaiting the outcome of tariff legislation. Prcies at the London auction were lower at the opening, but choice merinos have regained their loss with some American buying in evidence. The more distinct outlook for prices after mills have used up part of their present holdings remains strong unless a low tariff is enacted. There are said to be about 86,000,000 pounds of foreign wool in bond at eastern ports.

Crop Damage Lifts Grain Prices

Dry and hot weather over the greater part of the west and southwest was a prominent factor in an advance in all grain markets last week. The government's report confirmed premature ripening from hot weather. In Kansas and Oklahoma only the late wheat was injured and the amount of damage is in doubt. Nebraska suffered more than any other state and private estimates upon the yield in that state are 20 to 25 per cent less than the government's June report. The crop in the Pacific northwest is being injured by continuous drought.

Conditions in the spring wheat territory are favorable with the exception of parts of South Dakota, but more rain will be needed right along. The spring wheat yield will probably gain a little during June and offset part of the loss in winter wheat. The prairie provinces of Canada suffered a little from dry weather, but fairly general rains have occurred since.

Damage reports upon the oats crop are numerous and are coming from a wide range in the surplus states. The grain is heading on short straw and it is entirely possible that the ultimate yield will be no larger than that of 1921. Conditions in the northwest are fairly favorable thus far.

Dry weather has damaged the corn crop in a limited area, but the critical period for this grain has not yet arrived. Chinch bugs are a serious menace this year.

World's Wheat Carryover Lower

A tentative estimate of the reserves of old crop wheat above domestic needs on July 1 in the United States, Canada, Argentina and Australia, the four countries which have furnished most of the wheat for export in the last several years, indicates that the supply is below the average. The United States has about 40,000,000 bushels left compared with an average of 75,000,000 bushels in the last 10 years. Canada on the other hand has about 50,000,000 bushels compared with an average of 25,000,000 bushels. Australia has approximately 5,000,000, according to recent estimates, against an average of 25,000,000 bushels, and Argentina 30,000,000 against around 20,000,000 bushels. Total holdings are about 125,000,000 bushels compared with an average of 145,000,000 bushels.

The estimates upon present reserves are not final, but are based on official data as far as possible. The official figures when issued may change the individual countries, but the total is not apt to be greatly altered.

Besides these four countries India also has a surplus of 55,000,000 bushels for export if her home needs are no greater than the average. But her preceding crop was so far below domestic requirements that invisible supplies undoubtedly were depleted and replenishment of these will cut down the quantity for export. Furthermore, the ban on exports imposed a year ago has not been lifted. The record indicates that India has held an average of about 15,000,000 for export on July 1. Even with possible exports from India considered, the world's supply appears to be only equal to the average.

Export buying of wheat has broadened in the last week and the Liverpool market shows more strength as a result of firmness in this country and the prospects of lighter shipments from Australia. Flour trade has been stimulated slightly and mills are buying back some of the wheat they sold during May.

Bulge in Coarse Grains

Coarse grains advanced even more than wheat last week. Corn was influenced by widespread belief that the price is lower than general conditions warrant, while crop damage gave independent strength to the oats market. There is some export buying of these grains and domestic distribution of corn holds at a high level. The advance last week was partly due to speculative buying and may not hold if the movement to primary markets continues heavy.

The range of cash grain prices for the week ending June 28 was as follows:

CHICAGO.—Wheat—No. 2 hard, $1.13@1.15 1-2.

Corn—No. 2 mixed, 62@64c; No. 3, 61 1-4@63c; No. 2 yellow, 62 1-2@64 3-4c; No. 3, 61 1-4@63 3-4c; No. 4, 60 1-4@62 1-2c; No. 2 white, 62 1-2@64 3-4c; No. 4, 60 1-4@62 1-2c. Oats—No. 2 white, 38 1-4@43c; No. 3, 36 1-4@40c; No. 4, 35 1-2@37 1-2c. Rye—83c. Barley—48@52c.

Feed Market Steady

Offerings of by-product feeds have dried up and the decline has been checked, although the market is unsettled. Demand is limited to immediate needs with the exception of bran, of which heavy sales for future shipment were made on the recent decline. If a drought occurs buying will increase, otherwise the downward trend on wheat feeds may be resumed.

Prices per ton (100-pound bags) in carlots: Chicago—Bran, $17.50; standard middlings, $19.25; flour middlings, $25; cottonseed meal, 36 per cent, $46; 43 per cent, $50; hominy feed, $23; gluten feed, $31.85; old process oil meal, $48; tankage, $30.

Hay Market Overloaded

Receipts of hay, especially of the lower grades, have been in excess of the demand and prices are weak.

Prices per ton in carlots: Chicago—No. 1 timothy, $21@23; No. 2, $18@20; No. 3, $8@14; No. 1 light clover mixed, $18@20; No. 1 clover, $17@18; No. 1 clover mixed, $14@17; upland prairie, $13@18; midland prairie, $13@16; rye straw, $13.50@15; oat and wheat straw, $9@13.

Eggs, Butter and Cheese

The decline in the egg market resulting from excessive storage stocks and liberal fresh arrivals was checked last week. A little further downturn may take place in prices of fresh eggs, but no drastic break is probable. Receipts decreased about 15 per cent last week and were only about equal to the average of the three preceding years. In the next 60 to 90 days receipts normally shrink about 50 per cent. This reduction in the supply should support the market and lead eventually to an advance on fresh eggs, but the outlook for storage stocks is not so hopeful.

Storing demand has been sufficient right along to clean up the supply of the higher scores of butter, but undergrades were piling up rather steadily until last week, when a big export order for 87 to 89 score butter, said to be for British account, was filled and the accumulations were cleaned up. With this supply removed from the market, top scores also became more firm and prices reached the highest point touched in June. When the order was filled the market weakened slightly again. The peak of production probably has been passed and barring occasional reactions, the trend of the market is likely to be upward.

Prices for 92 score fresh butter on June 28 were:

Chicago, 36 1-2c; New York, 38 1-2c; Boston, 38 1-2c; Philadelphia, 38 1-2c. San Francisco exchange quotation, 42 1-2c.

Prices for cheese on distributing markets advanced again last week. Country markets are setting the pace in the upward trend. Buyers have more confidence in present price levels than they have shown for several weeks. Twins, daisies and longhorns have been most active and prices seemed to be edging still higher toward the close of the week. The movement into storage at the four leading markets is heavy, accounting for 40 to 50 per cent of the total receipts and buying for this purpose is a big factor. Like butter, it is probable that receipts of cheese will gradually decrease from this time on.

(Continued on page sixteen.)

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Lexicon of Grain Pits.

Daily grain market reports are given over largely to a discussion of speculative operations. These transactions affect cash grain prices to some extent and thus are of concern to the farmer.

Sometimes actual grain is bought in the "sample market," the section of the exchange where samples of carloads of grain are displayed and put in storage as a speculation, but most of the "speculative trading" goes on in the "pit" or the miniature amphitheaters where the operators engage in "future trading" or buying and selling for "future delivery." Most of these trades are "closed" or crossed out by selling or buying equivalent amounts anywhere from a few minutes to a few months later, but before the final delivery day arrives.

These trades are made by "local professionals" who are members of the board of trade who buy and sell more or less frequently on their own account and have no cash grain business, or by "pit scalpers," traders who are in and out of the market many times in the course of a day taking small losses and small profits, by elevator" or "cash grain interests," or by mills who may or may not be "hedging" actual grain or flour or by outsiders or "amateurs" who are not members of the board, but who carry on their operations through "commission houses" or "brokers" who have memberships. "Wire houses" are commission firms which have branches at the smaller towns with which they are connected by private wires. Balances of the trades made by all these parties and through commission houses are struck through a "clearing house" system.

When buyers have predominated on the speculative market for a while, it sometimes crumbles under them when they endeavor to sell out and capture profits on their purchases, in which case the market is said to have been "overbought." Likewise the market may become "oversold," resulting in a strong rally. The "technical position" is considered strong when there is a big "short interest," that is, a large number of "bears" who have sold "short" and who must "cover" by buying back equivalent amounts. It is weak when there is a large number of "bulls" who are "long," or who have bought and must eventually sell out in order to even up their trades.

"Margin" is the money put up by the trader as a guarantee that he will fulfill his contract if the market goes against him or by the outsider as a protection to the commission house through which he is trading.

"Stop loss orders" are orders used to limit losses. They are placed by buyers to sell out immediately if the market declines to a certain point or by those who have "sold short" to buy back if the market goes up to a certain figure.

LIVESTOCK AND DAIRY

Tests Each Month

Knows What Each Cow Is Doing

In order to know what each cow is doing R. J. Kegley, whose farm is near Olympia, has his entire herd of Holsteins tested each month in the county cow testing association. It was from the association records that a total profit of over $1888 was estimated above the cost of feed on the cows tested. The outstanding individuals are put on official test.

Mr. Kegley has developed an interesting system of marketing the milk. About 50 gallons are bottled daily and delivered to the retail trade, both at private residences and at hotels. In addition some 40 gallons are delivered to restaurants in bulk, most of which is put up in three-gallon cans. In order to supply a certain demand for bottled cream Mr. Kegley separates a small part of the milk for this purpose.

All bottling is done in the concrete milk house on the farm and taken into town early each day.

The Kegley farm consists of 124 acres of sandy loam and shot clay soil. One piece of bottom land contains 40 acres, which is level and part of which is being seeded to oats and alsike clover. There are 45 acres on the place which is in cultivation and the rest is in stump pasture. One 12-acre field has a fine stand of red clover, which will be cut for hay this season. Eleven acres have been seeded to spring grain and 10 acres to potatoes. In addition a six-acre field will be planted to sunflowers which will be used for silage purposes.

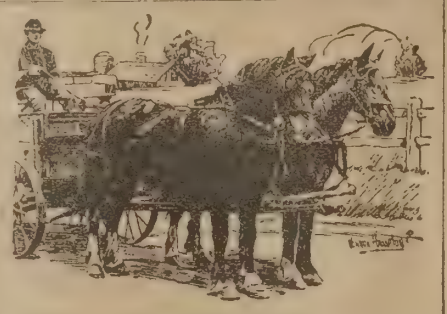
"One of the most difficult problems of our farming in western Washington is the clearing of our logged-off lands," said Mr. Kegley. "We have found that one of the quickest ways to get the land under cultivation is to clear off the logs and pasture between the stumps until the land can be plowed. In this way one has a larger amount of land for pasture, and it requires less feed in the early spring and late fall months. I have found it is better in many ways to have the cows on pasture even during part of the winter months. It actually saves feed and cows are more contented.

"I am a strong advocate for the covered feed shed," continued Mr. Kegley. "Our milking barn has only 14 stanchions on each side and we are using only one side at present. We find that it saves much labor to drive in 14 at a time, milk them and turn them out immediately. During rainy or cold weather the entire herd is allowed to feed under the large feeding barn and an abundance of straw is scattered on the floor from time to time to afford good bedding. I have estimated that from $200 to $300 have been saved on the manure by leaving it in the feed shed until it can be hauled on the fields. In this way it is kept out of the rain and all the liquid manure saved. We used 20 tons of straw last winter for bedding, which also adds to the quality of the manure."

Mr. Kegley has proven to his own satisfaction that labor can be saved by hauling the manure only as the weather permits. This also saves much labor in the milking barn and the cows do not have to be kept so long in the stanchions. It is considered much easier to drive the cows to and from the milking barn, where they are fed grain only and allowed access to hay and water at will in a large building.

Ready for Work

These horses are more than 20 years old. The last 17 years they have been in the service of the farm crops section of the Iowa experiment station at Ames. Only



three men connected with the station are older in its service than Billy and Major and none has given more faithful service, according to L. C. Burnett of the farm crops section of Iowa state college.

Frisky? They will run away once in a while, Burnett says, apparently just to avoid the impression they are growing old.

But they can and will pull as was evidenced last fall when Mr. Burnett desired to move a wagon and load, weighing 10,000 pounds, a short distance. Billy and Major were hitched to it and a skilled driver took charge. The faithful old horses settled into their collars and "felt it out." Easing up to get their breath, they settled again and, slowly, almost by inches, the heavy load moved to the designated place.

Feeding Molasses to Steers

That there is a limit to the quantity of blackstrap molasses which can be added with economy to a ration of 5.4 pounds of cottonseed meal and 46 pounds of corn silage for fattening yearling steers was shown in a test made by the United States department of agriculture.

Two lots of nine 700-pound steers were fed for 112 days. Forty-six pounds of silage per steer per day was practically the limit of their capacity. Lot 1 was fed 5.42 pounds of molasses per steer daily, while lot 2 was fed 8.07 pounds of molasses per steer daily. As lot 1 gained 2.48 pounds per steer daily, while lot 2 gained only 2.41 pounds per steer daily, it is evident that 2.65 pounds of molasses was wasted daily per steer in lot 2. The results in lot 2 might have been more favorable to the use of so much molasses had the cottonseed meal ration been reduced to 3.5 pounds. In the test, lot 1 consumed 1880 pounds of silage, 218 pounds of molasses per 100 pounds gain, while lot 2 required 2 per cent more silage, 3 per cent more cottonseed meal and 54 per cent more molasses to produce 100 pounds of gain.

Advantages of Wooden Hoop Silo

Almost any kind of silo will prove satisfactory if properly handled, but because of its cheapness and simplicity of construction the wooden hoop silo is one of the most popular. No scaffold is needed to build one, except five or six poles or 2x4s, and four men to nail and one to help will complete a wooden hoop in one and one-half days, except the doors. The cost of materials is about $100.

WANT WATER FOR 10,500 ACRES.

Irrigation of 10,000 acres in the Spokane valley, which will practically double the present irrigated area adjacent to Spokane, is planned. Petitions have been in circulation and 264 land owners out of a total of about 300 have already signed. The cost of irrigation is estimated at $100 an acre.



SPRAY Before Milking

Swishing tails, stamping feet and fretting cows mean more than the discomfort to you when milking. They mean real money lost in lessened milk and loss of flesh.

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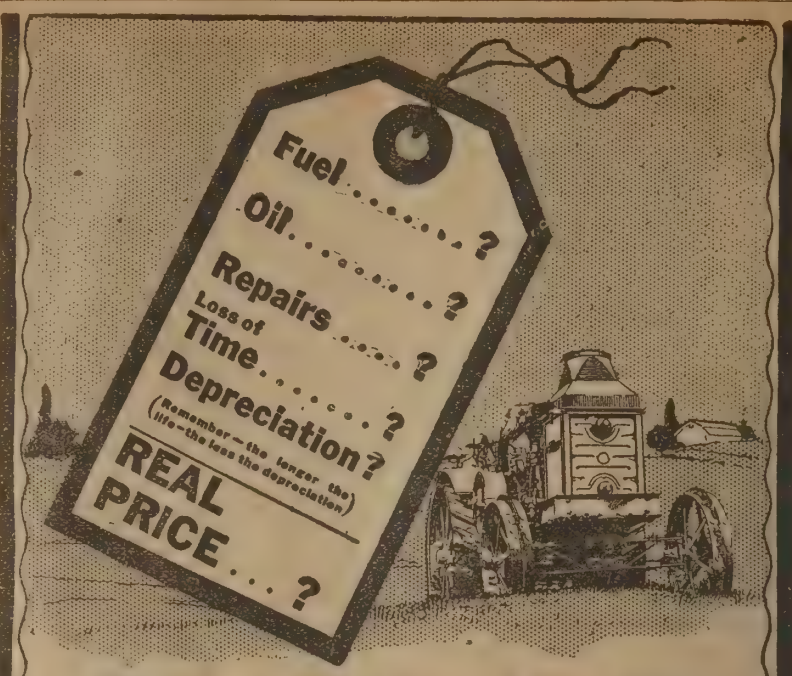
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What Would the Real Price Tag Say?

—if Tractors Were Priced According to Their Cost per Year of Service

FARMERS everywhere face the same problem. Here is a "low price" tractor with flashy inducements, on one hand. Here is a "quality" machine—a long-life machine—at a reasonable price, on the other hand. Which tractor is the best investment—which costs the least in the end? Here is the answer:

Imagine tractors priced on the cost per year of service. Add up the cost of fuel, oil, repairs, loss of time, depreciation, etc., for one year on each tractor. (Remember that the longer the life, the less the depreciation.) Then compare these totals, which are the real prices. These prices would tell a different story. Many so-called "cheap" tractors would be exceedingly expensive. "Quality" tractors would prove their real economy.

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Read the "Want Ad" page this week for good offers of all kinds.

POULTRY AND RABBITS

Poultry Questions

BY W. D. BUCHANAN,
Extension Poultry Specialist, Washington State College.

Will you please tell me how to mix my developing mash for young chicks? I want to know what to use and the proportions. Also how is chick feed mixed?
Walla Walla, Wash. D. V. B.

A good chick mash could be made by mixing, by weight, six parts bran, four parts middlings, or 10 parts millrun, five parts ground corn, five parts ground oat groats, two parts best grade fish meal or sifted meat scrap, one part bone meal, one part alfalfa leaves and blossoms, and one part charcoal. One-half pound of fine table salt should be added to each 100 pounds of mash. Spread the ingredients layer upon layer, on the floor and turn over three or four times with a shovel. Chick feed may be made by mixing two parts cracked wheat, one part cracked corn and one part cracked oat groats.

USING SODIUM FLUORIDE.

I read in your paper that sodium fluoride was good for ridding chickens of lice and mites. Can it be used on hens that are sitting, also hens hovering chicks? If I can not use this powder what will rid my hens of lice so the little ones will grow? MRS. C. C.
Curlew, Wash.

Sodium fluoride can and should be applied to every sitting hen before she is set; but it may be applied any time during the hatch. If the hen is powdered thoroughly before being set she will be free from lice and so will the chicks. The hen may be powdered after the chicks hatch, but the powder must be used very sparingly and very carefully as too much will kill the chicks.

FEEDING MEAT SCRAPS.

Eight weeks ago I started with 1000 S. C. White Leghorn chicks. They did fine until I began to feed commercial meat scrap and since then they have been dying off right along. I started by feeding chick feed rolled oats, and chick starter, also one dozen eggs daily. Later I began feeding developing feed, curd and chick feed, also eggs, six daily. I am now feeding developing feed, rolled oats, curd, eggs and Dr. Le Gear's poultry tablet at each feeding. At first I fed every two hours, but now every three hours. The chicks get some greens. The droppings on many of them form in a lump on the feathers around the vent and harden. They just lie down and hardly move around. They eat little or nothing when they get that way. Sometimes one will have a white rectal discharge. I am feeding 56 ounces at each feeding. I have stopped the meat scrap. Please tell me what to do to save them? F. V. M.
Castle Rock, Wash.

You seem to have started all right, though I am not sure from your letter whether you are feeding any mash or not. You mention chick feed and chick starter; possibly you mean that one of these is a mash. The curd and eggs probably furnished protein enough without meat scraps. If so, the addition of the meat scrap would overdo the protein content and give the chicks diarhea. The meat scrap may have been putrid or rancid and this would naturally increase the trouble. Clear the poison out of their system by giving them one ounce of epsom salts in four gallons of water. Cut out patent medicines and give plenty of green feed, fresh air, exercise, grit and charcoal.

WHICH IS MALE GUINEA?

Will you please tell me how to tell the male and female guineas apart? E. H.
Castle Rock, Wash.

The helmet and wattles are a little larger in the male, but the surest way is to watch carefully the cry of the birds. The male never cries in two syllables, while the female usually does, her cry resembling the word "buckwheat."

Turkeys in Orchard

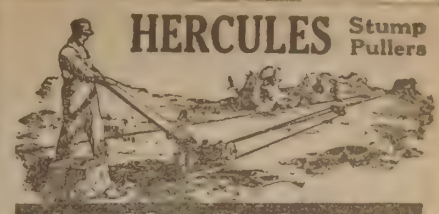
Turkeys and an orchard are a very convenient and profitable combination, according to F. A. Stimson of the Fairview district of Yakima. Mr. Stimson raises the Mammoth bronze turkeys and has this year 100 young birds, part of which are being raised by Rhode Island Red hens. He has but 20 old birds and two toms, but in order to secure best results finds that each tom should be allowed with the flock for but one day at a time. Two toms are alternated, keeping each one in a pen to himself the first day and allowing him to run with the flock the second day. This is necessary in order to secure a high fertility in eggs.

"We have three acres in pasture for the birds, but find that it is enough for even a larger sized flock if it is given proper attention," said Mr. Stimson. "It is my experience that the birds do not interfere with the fruit crops, and we unusally get the picking done before the young birds are old enough to want to roost in the trees. The cropping system should be handled so that as much of the feed as possible can be raised at home. That is why we are raising as much corn as we have room for this year. Our garden crops are protected from the birds by a wire fence, although in the early season the hens and young turkeys will not injure the crop to a great extent.

"In hatching the young birds we find it most profitable to set the earliest eggs under hens, so that the turkeys can be kept laying. The eggs are taken from them every day and should any of them stay on the nest their quality will not be injured. When they are through laying they are given a setting of eggs in a nest built on the ground. The hens, however, do not make as good mothers as do the turkey hens. This is especially true in damp weather and the turkey will not take the young birds out into the grass while the dew is on. For this reason it is sometimes best to keep the hen in a coup and let her out only as the weather permits.

"Milk is very good for young turkeys and we give them all they will eat. They like it best as clabber, and will even eat it as thick as clabbered cheese. For very young birds it is best to add a little black pepper. Insect powder should be used in all cases to dust the hen as soon as she is set. When the birds hatch they should also be dusted and a little lard or vaseline rubbed on top of their heads and under the wings to prevent lice from getting started. Keep them warm at first and give them chick feed. The hens should have scratch, but the little ones will not eat enough of the larger sized grain to hurt them.

"I want to increase the size of the flock and feel that I can handle 1000 young turkeys next year," said Mr. Stimson. "I think, however, that one can not get too much experience before he goes into anything of this kind too deep. It is a business all of its own and a man should learn it as he goes along. I am making it a point to study the habits of the birds and give them what they want, and thus make them more contented. It is possible that I could handle a larger acreage and keep turkeys as a main line. I am not sure, however, as to the size of a farm one man could handle in this manner, and whether he wants an orchard in connection or not. This is but another detail that must be worked out to suit one's own likes and conditions."


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ESSEX MOTORS—DETROIT, MICHIGAN

Live Stock in the Ahtanum Valley

BY RALPH ERSKINE.

There is yet some land in the Ahtanum valley, near Yakima, that is still in the raw stage and has not been cleared of the scattered sage brush and occasional willow clumps. This, of course, makes good pasture land and the small creek which winds down the valley affords water and shade. Ray N. West, Guernsey breeder, has 90 acres of such land and rents 80 more adjoining. About half of the acreage is in cultivation and is used for growing hay and grain crops for his cattle.



A group of Guernsey cattle on the Ray West farm near Ahtanum.

While there are 40 head of animals on the farm, there are but 22 that are registered Guernseys. Mr. West has four cows that are daughters of Langwater Emigrant from the Calkins and Riggs herd which is now located at Battle Ground, Wash. One female, Ribers Julia, is 20 years old and won many honors in the show ring during her younger days. She has three daughters in the herd and is still producing her share of milk.

Practically all of the animals are typical of the breed and even the grades are high class milkers. Some of the young calves and heifers look exceptionally promising and Mr. West expects to have something that will show up well at the state fair this fall.

Mr. West had the misfortune to lose his herd bull, Chicona Nabob, who came from the A. L. Gile herd and traces back to the May Rose breeding. Unable to get the kind of animal he wanted here in the west to replace him, a half interest was purchased in Bountiful of Fourpine, a yearling bull from the Babson herd at Hindsdale, Ill. This animal shows some excellent quality and has plenty of masculinity.

"Our main feed is alfalfa, corn silage anr barley," said Mr. West. "We raised 30 acres of wheat and the same amount of barley last year and this year we will have some oats. The barley and oats can be ground and fed at home, but we generally sell a large part of the wheat except what we feed to the hogs. In order to pay best the farm should support the herd and we can raise practically all feeds except a few concentrates.

"Another plan that has proved practical is the feeding of hogs and pasturing them on alfalfa. We plan on keeping at least three brood sows and raising from 30 to 50 pigs each year, part of which are fall pigs. There is always plenty of grain to fatten them on and we can use part of the wheat for this purpose. As a general rule they take but little work and they make a good combination with the dairy business."

Grange Store

Does a $120,000 Business in 1921

BY RALPH ERSKINE.

It was early in the winter of 1919 and 1920 that the grangers in the vicinity of Pullman began to plan on the organization of a store which would handle groceries and other goods for the farmers and some of the college organizations. There were many who believed that some plan of buying on a wholesale scale could be handled very advantageously.

Shares were sold at $25 each and there were 125 shareholders who used their capital for renting floor space and purchasing a stock of groceries. The plan worked well and the number of the shareholders increased until there are now 300 who represent a capital stock of $7500.

At first the farmers were the principal buyers, but in order to increase the sales, the different college group houses were invited to become members of the grange and take advantage of the plan of cooperative buying. Today practically all of the groups buy the bulk of their supplies through the store and a number of the faculty also take advantage of the new method.

Each house manager of the student organizations is a grange member and together they are allowed to elect one member to the board of directors of the store There are five directors in all who have entire supervision of the store and can be called for special session if any important matter needs attention.

Since there was a special call for such articles as automobile tires, paints, oils, hardware and a few other commonly used articles, the management has found it practical to carry them and the farmers find it a great convenience to be able to buy them at their own store.

"We feel that the plan has well been worth the effort to get it established," said E. F. Gaines, master of the Whitman County Pomona grange, who was one of the instigators of the plan. "At first we hardly hoped to get the fraternity and sorority houses to join us and help us to buy in larger quantities, but they have all done their part and taken a keen interest in our development.

"The store did a $120,000 business last year and is expected to turn over $150,000 this year since the sales have averaged approximately $500 a day for the first five months of this year. The trade does not drop off during the summer months as one might imagine when he thinks of the college trade that is curtailed at this time of year, but the summer needs of the farmer and his harvest supplies keep the store busy until school opens up again in the fall."

The officers of the grange store are as follows: E. F. Gaines, president; Fred A. Hodges, vice president; C. E. Colpitts, president of the board; Scott Getchel, treasurer, and Charles Cassady, manager.

More Live Stock

Campaign in Whitman County

By J. E. NESSLY.

Farmers in the country about Winona, in Whitman county, are taking a deeper interest in live stock and diversified farming, with the usual results. They are getting into better conditions.

A campaign to encourage the production of more live stock is being carried on. Professor M. D. Jacques of the high school, has organized a boys' pig club, with a good membership, and the boys have secured a fine lot of Duroc Jersey and Chester White brood sows and will contest for prizes at the county fair at Colfax. Arrangements are being made for a three-day celebration July 4, 5 and 6, and one of the features will be discussions of live stock by men prominent in the industry.

H. M. Moffitt of the program committee has asked President Holland of Washington State college to send an animal husbandman there to address the "old and young farmers" on the need of more and better live stock on the farms of that section.

The Henderson brothers, T. L. and W. L., who live near Winona, are setting a good example in this respect by building up good herds of Shorthorn cattle on their farms. They have secured some splendid individuals of the best breeding and they do not hesitate to pay high prices for the best animals obtainable. The Henderson brothers secured a number of the best individual Shorthorns at the Rothrock sale last spring and they have proved a valuable addition to the live stock industry of western Whitman county.

Purebred Hereford Cattle.

That purebred Hereford cattle can be raised profitably in connection with wheat farming is the belief of W. E. Chapman of southwestern Whitman county, and he

The Dawn of a New Day

RADIO

In Every Home



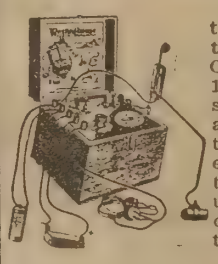


Radio telephony is an accomplished, practical fact, and the most wonderful feature of this last great forward step of science is the fact that immediately it has become available to every home in the land, no matter how humble, no matter how isolated. The great electrical corporations, aided by the discoveries of enthusiastic amateurs, have reached a stage of perfection in their marvelous apparatus that will bring to your home all that is best in entertainment, in educational features and in the business news of the day.

There will be improvements in this wonderful apparatus from time to time, of course, just as the automobile, the phonograph and the aeroplane have been improved, but today we are able to offer you equipment that will enable you to enjoy immediately all the marvelous possibilities of this last great invention, and all at a cost well within the reach of the most moderate incomes. In every center broadcasting stations are being established and in the state of Washington alone there are already over 20 such stations, ready to serve the owner of a good receiving set. Daily market reports, latest news items from all parts of the world, weekly health talks distributed by the U. S. public health service bureau, covering the health of the live stock as well as of the family. Daily musical programs in which the country's noted artists often participate. Choral societies, symphonies and the latest phonograph releases. Special weekly dance programs which by means of a "loud speaker" can be used for dancing parties in your own home—these are only some of the advantages you are offered by this modern marvel.

Below we list two styles in receiving sets that are reliable in every respect, that any one can operate, and that come to you so complete that you can start to enjoy all these untold delights and advantages the same day as you receive your set.

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Complete with Brandes double telephones, dry battery, detector tube, and 1-22½ volt "B" battery. Complete aerial equipment including 150 feet of copper wire, set of insulators, ground wire and lightning arrester. A high grade tube set that under ordinary conditions will enable you to receive from a distance of 100 to 150 miles. Can be used anywhere and is absolutely complete to the last detail. For the inclusive price of **$73.50.**

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has demonstrated that his belief is founded on facts.

Mr. Chapman has been farming extensively near Canyon, below Hay station, on the O. W.-R. & N. He admitted to The Washington Farmer representative that he has a "fair-sized farm" and that he has "done pretty well" by farming and raising live stock.

His "fair-sized" farm contains 5400 acres. He has 145 head of purebred, registered Hereford cattle of high class. Mr. Chapman had his first annual sale the first Saturday in May this year and sold 15 bulls at prices ranging from $80 to $225. He plans to have a sale the first Saturday in May each year. Mr. Chapman's home is near Riparia, which is his postoffice, although Canyon station is on his land.

MAY "COPYRIGHT" WHEAT.

The Northwest Wheat Growers, Associated, is planning to adopt a brand or copyright mark for the wheat grown by its members in the various state associations.

Seed Potatoes

Yakima Growers Seeking the Best

The potato growers of the Yakima valley have long since learned the value of good seed, but they find that a still closer check on the quality of seed that planted will make an average increase of several tons to the acre above the present yield.

There are a number of experiments that are being carried out at different places in the valley this year, which will include seed from seven seed-raising sections. Spokane and Stevens counties and the Vancouver district in Washington, the north Idaho section, the Blue mountain and Bend districts of Oregon and a county in Montana have all sent shipments of seed to the growers and they will endeavor to determine which seed is best adapted to the Yakima valley.

This year there are a number of growers that have ordered their seed potatoes to be grown under contract, the total amount beinlg about 800 tons. Part of these will be grown in eastern Washington, while a greater portion of the tonnage will be grown in the north Idaho sections.

"We are past the point of education for a standardization of varieties," said H. N. Massie, secretary of the farm bureau, who has been helping with the seed potato question. "There is little else grown in the valley except the 'Yakima Gems,' as they are known, but there is some talk of working for a better pack.

"This can be worked out later, but the main point just now is to get the right kind of seed from which to grow our marketable crops. We are putting on another corn and potato show this fall and we expect to have a much better display than was shown last year. We are going to demonstrate the fact the imported seed will produce an increase of from 25 to 200 per cent, which was actually the case last year with two extreme cases.



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ORCHARD AND GARDEN

Strawberry Pest

BY CHESTER C. VINCENT,
Instructor in Horticulture, Washington State College.

The leaves on my strawberries are curling up and on the inside of the leaves there are worms that are white with brown and black heads. Their nest is filled with a web. The plants are bearing and what spray shall I use and will it injure the fruit for use? L. O. P.
Meteor, Wash.

The insect which you described is the strawberry leaf roller, and often seriously injures the strawberry plants by folding the two halves of the strawberry leaflets together and feeding within the shelter so formed, causing the leaves to turn brown and die. The worm is a small greenish or brownish caterpillar.

The strawberry leaf roller can be effectively controlled by a single, timely application of arsenate of lead, five pounds in 100 gallons of water. It is absolutely necessary that this be applied within a week after the first appearance of the moths, which appear from April to June, and just before the young larvae begin to fold the leaves. Spraying after the leaves are folded will do little or no good. I would suggest that you burn over your strawberry field soon after the crop is harvested since the leaves are already rolled up. In this way you can destroy practically all the larvae and pupae in the folded leaves.

Fundamental Facts

Two factors must always be borne in mind in determining the method of cultivating orchard soils, or the soils in which any crop is produced, for that matter. In the first place the soils must necessarily contain the plant food that will be needed by the trees or the growing plants for the production of a crop. Second, the condition of the soil must be such as to enable it to absorb and retain moisture.

While many farms and orchards have a soil today that is deficient in actual plant food elements, low production is probably more often due to a poor condition of the soil, which results in making the plant food that is present unavailable for use by the plant. Moisture and the bacteria that can thrive only in moist soil, are the fundamental factors in making plant food available for the plant.

Humus in the soil is essential to adequate absorption and retention of moisture. A soil deficient in humus tends to run together and pack, and when in this condition the evaporation is rapid, due to capillary activities.

Probably the best method of incorporating humus into the soil is the production of cover crops and the plowing under or discing of them into the soil. Barnyard manure would serve the same purpose and, like the cover crops, incorporate plant food into the soil as well, but the amount of this material available is the limiting factor in its use in Pacific northwest orchards. On the other hand, there is comparatively no limit to the use of the cover crops for the upbuilding of the soil both as to plant food content and moisture retaining conditions.

Pruning Principles

In giving some advice on pruning, E. G. Wood, Washington State college extension specialist, outlines the following general principles which may be applied to almost any orchard.

One must keep in mind that old trees need a different kind of pruning from young trees. While the trees are young we prune to develop a large, strong, well formed tree which will occupy to the fullest possible extent the space allotted to it in the orchard when it becomes mature. The mature tree is pruned to influence the amount, size, color and quality of the fruit. As the tree grows older it tends to produce heavier crops each year at the expense of normal wood growth until it overbears and loses vitality. Consequently the fruit diminishes in size and often loses in quality. The problem becomes one of increasing the vitality of the tree, which in turn has its influence on the fruit produced. The trees must be stimulated by increasing the fertility of the soil, heavier pruning, and thinning the fruit. We must maintain a proper balance between wood production and fruit production.

Must Have Sunlight.

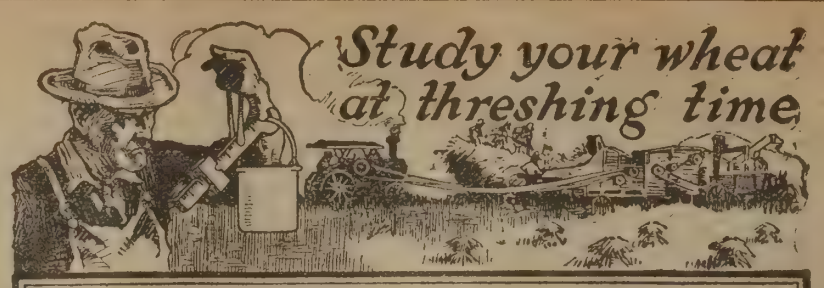
One of the most important factors in pruning bearing trees is to open them up to the sunlight. All plant food taken up by the roots of the trees must first be elaborated in the leaves before it can be utilized for tree growth or fruit development. It is only through the action of the sunlight on the leaves that this elaboration takes place. Hence, it is not only important that the trees have an abundance of vigorous, healthy leaf surface, but it is fully as important that the leaves receive sufficient sunlight. The trees in mid-summer should throw a mottled shade upon the ground and not a solid shade.

Most of the nourishment received by the fruit is elaborated in the leaves of the spur upon which the fruit is growing. Hence, every spur must receive some sunlight, if it is to develop its fruit to be a good size and quality.

Apples produce the largest fruits on the younger spurs. For example, the Winesap produces the largest fruits on one and two year old spurs and Jonathan produces the largest apples on three and four year old spurs. On any variety spurs which have reached the age of seven years or more seldom produce apples of good marketable size. We should prune old trees heavily and encourage the formation of new fruiting wood and young spurs. This will encourage the growth of crops of larger apples.

In as much as heavy pruning removes much fruiting wood it thins the fruit. This will increase the size of the apples on the wood that is left and will reduce the amount of hand-thinning necessary.

Letting the sunlight through the trees helps to control fungous diseases, espe-



OF course, you are very busy then but it will pay you to take time to find out not only the yield but the real quality.

Is the weight per struck bushel up to the standard?

Does it grade high enough to bring the top price in your market?

Is the weed seed box free from light chaffy wheat grains?

Has the clover and grass made a good set in the stubble?

If not, why not?

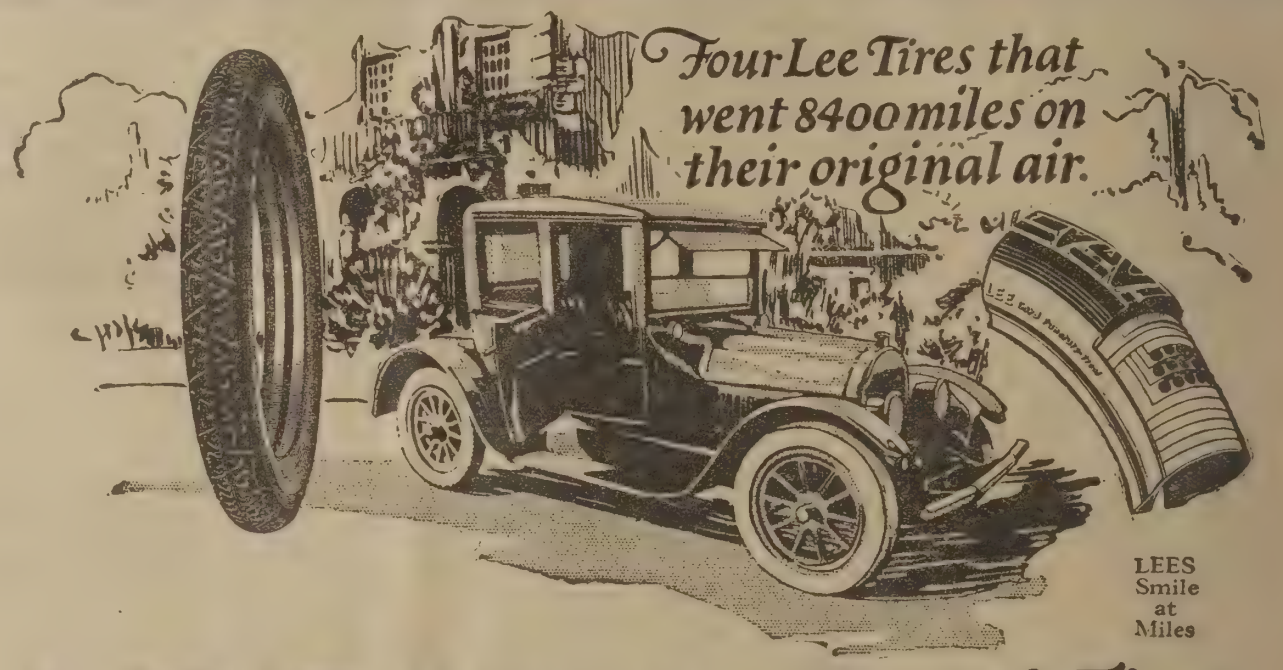
Six years of Potash starvation has had its effect on wheat lands. Enough German Potash has now come forward, so that those who wish can buy wheat fertilizer with 4 to 6 per cent. of Potash. Potash prices are now much lower.

Tell your dealer now what you want and insist on having it.

Potash Pays

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LOOK AT THE GOOD FARM BARGAINS THAT ARE OFFERED ON THE FARMERS' "WANT AD" PAGE THIS WEEK.



LEE Puncture Proof Tires

Jno. L. Dabbs, E. I. DuPont de Nemours Co., Charlotte, N. C., reports: his Cadillac Coupe with Lee Cord Puncture-Proofs ran 8,800 miles the first 18 months on the original air in the front tires. After 8,400 miles the rear tires were retreaded, but up to that time had never been flat.

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cially the pear and apple scab, and makes thorough spraying easier.

General Principles.

While each tree is a problem in itself, a few general rules of procedure for pruning mature trees can be laid down:

First, remove all dead and badly diseased wood in trees where such limbs are to be found.

Second, saw off large limbs that are parallel and too close to each other to allow proper formation of side branches. Where one limb is directly above another one should be removed if they are so close as to shade the lower one.

Remove limbs which hang too low or cut them back to stiffen them.

Remove crossing or interfering limbs. Thin the entire top of the tree by removing limbs about the size of a man's thumb. On most trees some smaller branches near the ends of limbs will need to be removed to thin out clusters of twigs.

Head back limbs which are growing out of bounds—either too high or too wide. Cut them back to a lateral branch whenever possible.

Never do short heading back, cutting in one or two year old wood unless the twigs are cut back to side branches. Such short heading in bearing trees fills the top with a growth of succulent upright twigs which shade the fruit during the latter part of the summer and prevent its proper development.

SHIP BERRIES BY FAST TRAINS.

Two special express trains of "reefers," which will stop en route only for the purpose of reicing and which will make better than passenger train time between Puget sound and St. Paul, have been provided by the Northern Pacific to accommodate shipments of Puyallup valley berries and Yakima valley cherries this season. Leaving Puyallup early in the morning, the first train reaches Yakima about 3 p. m. The second runs about seven hours later to pick up afternoon deliveries, and both travel over the Sunnyside branch to Pasco, where the nonstop schedule begins.

Farmers' Want Ads

HELP WANTED—MALE 3

WANTED — SALESMAN WHO CAN SELL high-grade, dependable nursery stock; several counties in Oregon, Wash., Idaho and Montana now open for assignment. Our selling contract will interest you. Address Albany Nurseries, Inc., Albany, Ore.

HELP WANTED GENERAL 5

START A BUSINESS IN YOUR OWN HOME. Clean and restore colors in rugs; absolutely new. You can make good money. Send $5 for complete formula and full directions. Economy Dye Co., 314 Railway Exchange bldg., Seattle.

AGENTS WANTED 9

MEN WITH HORTICULTURAL EXPERIENCE can make good money selling our splendid line of well grown trees and plants. Write for contract. An early start will give you the advantage. Salem Nursery Company, 428 Oregon bldg., Salem, Ore.

FRESH FOOD PRODUCTS 51-1

BING AND LAMBERT CHERRIES, 20 LB. crate, $2.60; 100-lb., $12.50, postpaid, third zone, Oregon or Washington. Fourth and Idaho, 40c crate more. Safe delivery guaranteed. Checks good. Ward K. Richardson, 2393 Front, Salem, Ore.

WHITE ALFALFA, SWEET CLOVER honey; 1 60-lb. can, $7.50; 2 60-lb. cans, $14.50; six 10-lb. cans, $8.50; three No. 10 pails, prepaid, third zone, $5.50. Wells D. Rose, Sunnyside, Wash.

NEW HONEY—ALFALFA AND SWEET CLOver; 1 60-lb. can, $7.50; two, $14.40; discount on large quantities. Ernest Sires, Yakima, Wn.

SMOKED SALMON, 5-POUND BOX, $1.25; salt salmon bellies, 5 pounds, $1.25, delivered by mail. Coffin Fish Co., Seattle, Wash.

WORLD'S BEST CLOVER HONEY, 60 pounds, $6.15; two 60s, $12. Browne, Box 499, Twin Falls, Idaho.

MISCELLANEOUS—FOR SALE 60

SASH AND DOORS—O. B. WILLIAMS CO., 1943 First ave. So., Seattle. Chicken house sash, 20" wide by 25" high, 80c; a dozen different sizes in stock for immediate shipment. Skylights for chicken houses, 36"x40"; price, glazed, $2. This is the size recommended by the Western Washington experiment station. We carry them in stock for immediate shipment. Sash and doors for all purposes at lowest prices. All orders receive prompt attention. Our large illustrated catalog No. 35, showing full line of building material and built-in fixtures for the home, free on request. O. B. Williams Co. Established 1899.

CORN HARVESTER CUTS AND PILES ON harvester or winrows; man and horse cuts and shocks equal corn binder; sold in every state; only $25 with fodder tying attachment. Testimonials and catalog free showing picture of harvester. Process Harvester Co., Salina, Kas.

SACKS—SECOND-HAND GRAIN AND SPUD, correctly sorted and graded; also pipe, new and second-hand, any size; standard grade roofing paper at a big saving; belting, cable, etc. Alaska Junk Co., 8120 Adams st., Spokane, Wn.

WALL BOARD—WRITE FOR SAMPLE OF Washington plaster wall board; won't warp, won't burn. Manufactured by Washington Building Products company, 6851 E. Marginal Way, Seattle, Wash.

FREE MAIL ORDER CATALOG OF GROceries and general merchandise; fresh stocks; everything guaranteed. We will save you money on your harvest supplies. Jordan Lawler Co., Spokane.

QUEEN BEES—INCREASE YOUR HONEY crops by introducing my strain of unsurpassed Italian queens. 1, $1.25; 12, $12.50; 100, $95. Circular free. J. D. Harrah, Freewater, Ore.

TOBACCO — KENTUCKY'S PRIDE: EXTRA fine chewing, 10 lbs., $3; smoking, ten lbs., $2; twenty, $3.50. Farmers' Club, Mayfield, Ky.

FARMERS' WANT ADS

This is the farmers' "want," "sale" and "exchange" department for small advertisements of farmers, including live stock and poultry.

Advertising rates for ads running 1 to 3 times, 10c per word per insertion, with a special rate to Farmer subscribers, as follows: Ads running 4 to 12 times, 9c per word per insertion; ads running 13 times or more, 8c per word per insertion.

All commercial and land advertising 10 cents per word each insertion. Open also to nonsubscribers.

In using these columns advertisers must observe: (1) No advertisements will be inserted for less than $1.00. (2) Every word, number and initial, including name and address, must be paid for. (3) New advertisements, changes of copy or cancellations must reach general office, Spokane, Wash., 10 days in advance of publication date. (4) Cash must accompany order.

Above rates include insertion in The Washington Farmer, The Idaho Farmer and The Oregon Farmer, which constitute the Pacific Northwest Farm Trio, 46 Review Building, Spokane, Wash.

MISCELLANEOUS—FOR SALE (Continued) 60

NATURAL LEAF TOBACCO—CHEWING, 5 lbs., $1.25; 10 lbs., $2.25; 20 lbs, $4.50; smoking, 5 lbs., $1; 10 lbs., $1.75; 20 lbs., $3.25. Hickory Ridge Farm, Mayfield, Ky.

DYE YOUR OWN RUGS ON THE FLOOR, the new way. Send $1 for enough dye for 9 x12 rug. State color. Economy Dye Co., 314 Railway Exchange bldg., Seattle.

HOMESPUN SMOKING OR CHEWING TObacco, collect on delivery; 5 pounds, $1.50; 10 pounds, $2.50; 20 pounds, $4.50. Farmers' Association, Paducah, Ky.

MISCELLANEOUS—Wanted. 63

HIDES—WE BUY HIDES OF ALL KINDS. Write for prices and tags. Hibbard-Stewart Co., Hibbard bldg., Seattle.

WOOL—WE BUY WOOL AND PELTS. WRITE for prices and tags. Hibbard-Stewart Co., Hibbard bldg., Seattle.

MACHINERY—For Sale 93

30 HORSEPOWER CATERPILLAR TRACtor; will pull 9 gang plows, discs, harrows, etc.; 40 horsepower belt attachment; bargain; would give terms. Carl Lelendecker, Kent, Wn.

15-45 STEAM THRESHER, 28-INCH SEPArator, $1200; 20-40 gasoline engine, 24-inch separator, $1500; both Case outfits; in good condition. H. T. Vincent, Creston, Wash.

FOR SALE—ONE 25-HORSEPOWER RUSSELL steam tractor; in good condition; price $1250, with steel tank and truck. Lincoln Trust Co., Spokane, Wash.

EXTRAORDINARY BUYS IN USED COMbines, caterpillars, separators, engines and trucks. Fallquist Brothers, Pullman, Wash.

STOVE REPAIRING 128

WRITE MYER RUBENS, SPOKANE, ABOUT stove repairs, welding broken parts, nickle plating.

FUR-BEARING ANIMALS 170

SILVER AND CROSS FOXES FOR SALE. William Rambo, 407 Sprague, Spokane.

PETS—Dogs, Birds, Etc. 171

ORANGE PERSIAN KITTENS, FEMALES, $7.50; males, $10; white, females, $5 and $7; orange male for service, $5. Mrs. Howe, 327 E. 48th st., Portland, Ore.

SHEPHERD BOBTAIL PUPS: NATURAL heelers; $10 each; 1 trained female, 9 months old. Hentges, Valley, Wash.

PEDIGREED FOX TERRIER PUPPIES; THE useful kind. Wood Thompson, R. 1, Nampa, Idaho.

RABBITS and HARES 173

FLEMISH GIANTS, PAIRS AND TRIOS, young stock. W. P. Layport, 1441 S. Stevens, Tacoma, Wash.

POULTRY 174

WHITE LEGHORN HENS, $1 EACH; 1000 two-year-old "Henacres" hens, clean, healthy, heavy laying, selected stock must go to make room for our pullets. Also 1000 yearling hens at $1.50 each. These hens will make good breeders for 1923. Orders accepted for ten or more at above prices. July or August delivery. Satisfaction guaranteed. Free catalog. "Henacres," the Inland Empire's greatest poultry farm, Box A, Prosser, Wash.

TRY OUR PARCEL POST PACKAGE—KEEP the old hen busy. We will ship you first-class baby chicks, postpaid to your door, direct from the hatchery and guaranteed all alive. Price, $4.50 per 25; $8 per 50. For delivery April, May or June. Order now. The White Hatchery, Petaluma, Cal.

WHITE LEGHORN BABY CHIX FOR SUMmer and fall months from stock accredited by Sonoma County Farm bureau. We guarantee safe arrival. Write for prices and literature. The Pioneer Hatchery, 422 Sixth street, Petaluma, Cal.

PULLETS, FRESHLAID FARM; QUALITY stuff; three months old, April hatch, fine, husky, thrifty stock; if they don't suit send them back; $18 dozen, $140 100. Freshlaid Farm, Colfax, Wash.

BABY CHICKS — WE GUARANTEE OUR chicks to be from the highest producing hens in Petaluma. Write for further information. The White Hatchery, Petaluma, Cal.

HUNT'S BARRED ROCK SALE THIS YEAR'S breeders at bargain prices; buy now and get splendid breeders for next season. W. A. Hunt, Lebanon, Ore.

DOLLARS FOR YOUR EGGS—WE PAY THE top market prices for your eggs and poultry. Daily cash remittances. Western Produce Co., Spokane.

FANCY WHITE WYANDOTTE COCKERELS, $2.50; hatching eggs, two dollars setting. H. L. Lamon, American Falls, Idaho.

200 PUREBRED SINGLE COMB BROWN LEGhorn hens, one and two years old; $1.50 each. E. V. Eldridge, Dixie, Wash.

FORD'S BRED TO LAY S. C. WHITE LEGhorns; 2-year-old breeding hens, $1 each. W. A. Ford, Umatilla, Ore.

LIGHT BRAHMAS, EGGS, $1.75 PER 15; Bronze turkey eggs, $3.50 for 10. Mrs. C. W. Laabs, Irby, Wash.

LIVE STOCK 177

LARGE, HEAVY PRODUCING HOLSTEINS for sale at all times in car lots; tuberculin tested; 150 to 200 head always on hand; well marked heifer calves from registered sires and heavy producing dams; crated for shipment anywhere, $25 f. o. b. Levinson & Balmelli, Yakima, Wash.

SHIP US YOUR POULTRY AND LIVE STOCK. We pay the top market prices. Light veal, fat, fancy, 12½c; dressed block hogs, 14½c; hens, light, 14c; heavy, 17c; prompt returns. John Lewis & Co., Spokane, Wash.

FOR SALE—REGISTERED SHROPSHIRE lambs. Write Walter Scott, Scotts Mills, Ore.

MY HERD OF 15 GRADE HOLSTEIN COWS for sale. D. G. Reinig, Snoqualmie, Wash.

FOR SALE—HEREFORD BULLS, GOOD ones. Platt Bros., Genesee, Idaho.

LIVE STOCK (Continued) 177

REGISTERED BIG TYPE POLAND CHINA pigs, big, growthy fellows; Oregon Big Wonder blood. Buy your fall breeders now, either sex, $16 each, f. o. b. Goldendale, Wash. Butterfly Ranch.

WE PAY TOP PRICES FOR YOUR LIVE OR dressed veal, hogs and poultry. Your check by return mail. Shipping tags on request. M. & J. Packing Co., Spokane.

10 GRADE HOLSTEIN DAIRY CATTLE FOR sale; fresh, tuberculin tested. H. E. Scholz, Menlo, Pacific county, Wash.

REGISTERED TOGGENBURG MILCH GOATS. Edwin Pritchett, Route 1, Box 287, Long Beach, Cal.

WILL SELL 30 HEAD OF REGISTERED Shropshire rams. Write McK. Edwards, Valley, Wash.

POLAND CHINAS, PEDIGREED PIGS, $12. Cloverdale Ranch, Orient, Wash.

HARNESS and SADDLERY 189

SEND FOR FREE HARNESS AND SADDLE catalog today; cut out the middleman, buy direct from the manufacturer. Lowest prices in the west; satisfaction guaranteed. Established 1881. Write Pierce Harness Co., Dept. T, Spokane, Wash.

JOB PRINTING 372

GUARANTEED BETTER BUTTER WRAPpers: 100, 60c; 250, $1.25; 500, $2.25; 1000, $4; printed to order. Home Specialty Co., Middleton, Idaho.

KODAK FILM DEVELOPING 472

SEND US 15C AND ROLL FILMS. WE WILL develop and include six velvet prints. Texo Laboratories, 4444 52 street, South East, Portland, Ore.

MONUMENTS 510

COMPLETE STOCK, RIGHT PRICES. CORrespondence solicited. J. W. Harding, Inland Monument Co., N1001 Monroe, Spokane.

BUILDING MATERIAL 588

TO PATCH A HOLE OR BUILD A HOME, use Perfection Plaster wallboard. Easily handled with hammer and saw; fireproof, waterproof. Western Wallboard Co., Seattle, Wn.

BUILDERS, CONTRACTORS, HOME OWNERS, write for free 1922 catalog. Tacoma Sash & Door Co., Tacoma, Wash.

SEEDS. 620

TIMOTHY, ALSIKE AND RED CLOVERS, grown, mixed, 9c; germination, .94; timothy, 6c. M. Meador, Norwood, Idaho.

NURSERY STOCK 621

WANTED—2500 BARCELONA AND 500 DU Chilly filbert trees; must be true to name. Villa Nurseries, Portland, Ore. Route 1.

FARM LANDS FOR SALE 651

FOR SALE—FOUR EIGHTY-ACRE TRACTS in the Yakima valley, where crop failures are unknown; all under cultivation and producing good crops; each eighty has a good new five-room house, with screened front and rear porch and necessary farm buildings and implement shed. Most of this land is now in wheat and has an excellent crop growing on it. Can not be excelled for dairying. Business matters makes it necessary for me to sell this land and will sell on easy terms. Here is your chance to get some good land in the garden spot of the northwest. Now is a good time to look it over and see the kind of crop that is growing. Inquire of owner, S. E. Chaffee, Sunnyside, Wash.

SACRIFICE SALE — BRITISH COLUMBIA stock ranch; an opportunity with a future. 813 acres deeded land; alfalfa, 150 acres; timothy, 150 acres; 75 acres pasture under ditch; first water record; all can be put under ditch; has gentle slope. Also 320 acres of a lease; 80 acres which is with lease sown to timothy; unlimited range adjoining ranch for one thousand cattle; good water on range; good buildings; 120 cattle, 20 horses, 40 sheep, 47 pigs, 90 hens; all kinds of machinery; all for $62 per acre; one-half cash, balance can be arranged. W. A. Hall, 1905 5th ave., Seattle, Wn.

CUTOVER LANDS, EASY TO CLEAR; $8 TO $20 per acre; 25 miles north of Spokane; on hard-surfaced highway; Great Northern and Milwaukee railways; excellent opportunity for dairying and stock raising, with Spokane markets and creamery near at hand. Will help the man who will live upon this land and agree to clear a part each year by giving lumber to help start his buildings, and a pure-bred Jersey bull to groups of farmers. Interest and payments low. Write Milan Farms Development company, Dept. T, Old National Bank bldg., Spokane, Wash.

BIG OPENING SALE OF YAKIMA VALLEY farm land, under an assessed state and government approved irrigation project; good, deep soil; close to town, railroads and state highway. We sell in tracts to suit purchaser at $25 per acre and up, on easy terms. Our many sales to farmers show that this land is a good investment. Western Lands, Inc., owners, 918 Green bldg., Seattle.

400 ACRES WHEAT AND DIVERSIFIED; 250 now in crop; 125 fall wheat, 125 spring grain, 50 summer fallow, 100 pasture; fine large house, spring water under pressure; 2 barns, silo; school on place; 5 miles to haul grain; 10 cows, 9 horses, harness, wagons, binder, mower, plows, harrows, etc.; 17 miles west Spokane. $31,000; $14,000 cash, rest easy terms. Owner, Box 595, Spokane, Wash.

FOR SALE — 200-ACRE FARM; ABOUT 30 cleared; on county road, mail route, telephone; water piped to house; eight-room house, barn, etc.; some good timber; crops are in. Price $5000. Owner, John Kilkelly, Woodland, Wash. R. F. D. No. 1.

A. F. HORTON, NEWPORT, WASH.—TIMber products, cutover lands, $5 to $15 per acre. Good roads, schools, fine mountain water.

98-ACRE FARM FOR SALE; WELL IMproved; running water; near town, churches and high school. J. W. Sprenger, Shedd, Ore.

GOOD STOCK RANCH, 3520 ACRES; ALL fenced; 300 meadow; best range anywhere, $4 per acre. A. Millard, Kinsey, Mont.

FARM LANDS FOR SALE (Continued) 651

IRRIGATED FARMS FOR SALE—160-ACRE farms, improved or unimproved; 30 to 160 acres irrigable land on each parcel; near Lethbridge, in sunny southern Alberta, can be bought for $15 to $40 an acre. No need for pioneering. Well settled country, good roads, railways, schools, telephones; agreeable social conditions; fertile land; success of irrigation farming here already demonstrated; irrigation system being constructed under government supervision. Water available in 1923. Write for information concerning crops grown and description and location of farms to the province of Alberta, irrigation council, 12 Provincial building, Lethbridge.

MUNICIPAL LANDS FOR SALE BY THE DIStrict; no agents, no commission; interested only in getting home builders on the project. Longest growing season in the northwest. Gardens and fruits thrive; schools, highways and railroads the best. Junction Snake and Columbia rivers. Write for terms and folder. Address Burbank Irrigation district No. 4, Burbank, Wash.

THURSTON COUNTY—5000 ACRES, VERY fertile, level; fruit, berry and poultry lands; right at beautiful state capital. No extremes of temperature; no storms or floods, no irrigation; bumper crops; fine markets. 5 or 10 acre tracts; low prices and long term payments. Send for our valuable pictorial booklet. Norpia Realty Corporation, Olympia, Wash.

WE SELL FORECLOSED LANDS FOR A loan company for one-third cash, balance easy terms. When writing tell us what you want, where preferred, how much you will invest, kind of farming you contemplate, as we have no list and must write special description in each case. No trades. Hartford Land company, 601 Paulsen bldg., Spokane, Wash.

174 ACRES, ON KOOTENAI RIVER AND Great Northern; 94 bottom, 8 pasture, 18 fenced and cross-fenced; 3 plowed, 15 ready; ½ acre fruit, 4 cabins, team, harness, wagon, plow, harrow, tools, etc.; 2000 ft. lumber, 14 bales roofing, 6 windows, fine cattle or chicken ranch; fine government range, $4000. Chas. R. Scholz, owner, Ural, Mont.

52 ACRES STOCK AND CHICKEN RANCH; well improved; 10 good milch cows, team colts, 250 chickens, new, modern barn, all kinds machinery; ¾ mile from Anacortes; crop goes if taken at once, $7500; terms. J. W. Rogen, owner, Anacortes, Wash.

BIG LUMBER CO. LAND SALE IN SKAGIT county; 40 acres, $1400; 20 acres, with new house, $1500. Lumber furnished for building. Lots of work for the settler; splendid district, roads, schools and towns. H. C. Peters, 726 3d ave., Seattle.

7000 ACRES SEQUIM LAND SETTLEMENT project, containing the finest berry and dairy land in the state, now offered for settlement at attractive prices and terms. Free booklet. Thos. G. Mortland, Sequim, Wash.

101 ACRES FERTILE VIRGIN LAND IN MILD British Columbia, near Prince Rupert; over half mile river front; $900, on terms. This is less than was paid government. H. L. Pinney, 1002 Third, Seattle, Wash.

QUICK SALE—160 ACRES, COLVILLE VALley upland, $8 acre; 2-3 cash; 7 acres fall wheat, potatoes; other improvements; 5½ miles from Chewelah; ½ mile state road. Charley Eaton, Chewelah, Wash.

EXCELLENT OPPORTUNITY FOR SETTLERS and also for loggers or millmen; finest soil and water; close to live seaport; cheap; splendid dairy, berry, fruit section. H. E. Scholz, Menlo, Pacific county, Wash.

160 ACRES, 4½ MILES FROM LEADORE, IDAho; 95 in cultivation; gilt edge water right; 165 inches; good pasture, 6 milch cows, 6 horses, tools, implements, $6000. R. H. Davidson, Leadore, Idaho.

STOCK RANCH FOR SALE—844 A.; 4-WIRE fence; cross-fenced; buildings, corrals, nearly new depot, P. O. on ground; forty miles south of Tacoma. N. W. Everts, McIntosh, Wash.

160-ACRE HIGH GRADE DAIRY; FINE buildings; $25,500; cash $10,000; good terms, 5 per cent. Particulars, write Frank Marquardt, Route 2, Lebanon, Ore.

SELL YOUR PROPERTY QUICKLY FOR cash; no matter where located. Particulars free. Real Estate Salesman company, 501 Brownell, Lincoln, Neb.

160-ACRE STOCK FARM; ALBERTA; GOOD house, outbuildings; $1600; $800 cash, balance terms, or acreage near Portland. Thos. H. Scott, Gaston, Ore.

BEAUTIFULLY LOCATED, WELL EQUIPPED, prosperous ten-acre poultry farm, $12,000; $5000 cash. A. P. Rushton, owner, Southworth, Wash.

160 ACRES FARM AND TIMBER LAND; new buildings; 18 acres in cultivation; good water; one mile from school. Owner, Box 33, Ione, Wash.

154 ACRES, 5 MILES FROM DRAIN; 70 IN cultivation; 575 bearing prune trees. L. A. Propst, owner, Drain, Ore.

IRRIGATED LANDS—For Sale 663

IRRIGATED BARGAIN; PAID UP WATERright; 27 acres, 4-room cottage, barn, 2 concrete silos; ¼ mile to concrete road; 4 miles from three good towns; paved road to either one; now in crop; alfalfa, potatoes and beans. Price $6500, including ½ of all crops. $2500 will handle; no trade. Community State Bank, Mabton, Wash.

FARM LANDS FOR RENT 657

FOR RENT—FIRST CLASS COLVILLE VALley farm that will run 30 to 50 dairy cows; close to shipping point; attractive terms to right party. The Big Bend Land Co., Spokane, Wash.

SUBURBAN TRACTS—For Sale 672

60-ACRE SPOKANE SUBURBAN HOME; EXceptionally good buildings, implements, stock, $6500; $1000 cash. W. Thomas, R. 1, Mica, Wn.

RESORT PROPERTY 684

WILL TRADE FIVE-ROOM COTTAGE, ACRE ground, valued two thousand dollars; East sound, Orcas island, popular summer and winter salt water resort. Percy Livesey, Bellingham, Wash.

FOR SALE OR EXCHANGE 702

WELL IMPROVED SECTION OF LAND FOR sale with or without equipment; would consider small farm in exchange. For particulars apply to Isaac Gibson, Innisfail, Alta.

TO EXCHANGE—Real Estate 705

TO EXCHANGE FOR CALIFORNIA, WESTern Oregon or Washington; 160 acres subirrigated land; house, barn, etc.; equity $2000; mtg., $1000; on a good trade would pay cash to amount of mortgage; prefer land on coast, unimproved. Address A. D. Hopper, R. R. 3, Coeur d'Alene, Idaho.

Solves Hay Marketing Problem

Feeds the Alfalfa and Grain Crops to the Hogs and Cows

BY RALPH ERSKINE.

A good solution of the hay marketing problem is suggested by A. D. Paddison, who owns a 60-acre alfalfa and hog farm near Ahtanum, Yakima county, Washington. There are 10 acres of the farm devoted to an apple orchard, but the remainder of the land is planted to alfalfa and grain crops.

The remark from Mr. Paddison that he had not sold a load of hay in five years naturally causes astonishment until one learns of his feeding operations, that the farm has 65 pigs, 10 head of brood sows, and two herd boars, all of which are big type Poland Chinas.

For many years Mr. Paddison has been a breeder of registered hogs. One of his oldest sows, Cedar Daisy D., is an Iowa sow, now 4 years old, and has been priced at $400. All of the sows are typical big type Poland Chinas, stand well off the ground, and are kept in excellent condition. There are two sows and one boar from the John Funke herd of Cottonwood, Idaho. The large herd boar, Big Giant, is a Nebraska bred animal, formerly from a herd in the Naches valley. He won first prize as a 6 months pig at the state fair last year.

All of the animals are given an abundance of good alfalfa pasture, the 10 brood sows having two acres over which to range. In early June, most of the hay in the valley was ready to cut, but the hay in this lot was considerably shorter than in the unpastured fields, and Mr. Paddison remarked that he would not cut any hay from it if the sows could keep it down, as they had already done. Mr. Paddison believes in feeding a green ration both summer and winter.

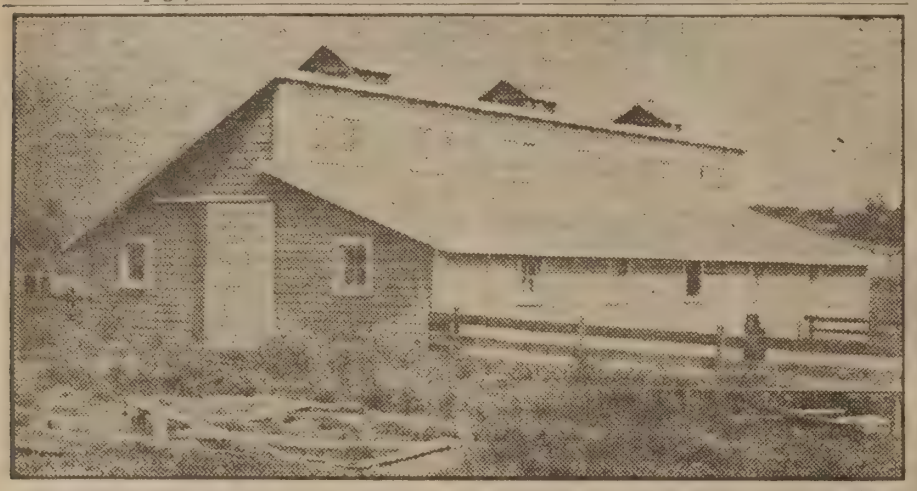
Boxes of salt and lime are placed in the shade of some large trees which furnish shelter in hot weather. The animals are all given a balanced ration, with plenty of minerals, as well as an occasional worm remedy to keep the young pigs healthy.

Fifteen acres of the Paddison farm are devoted to alfalfa, and it has been known to run as high as five tons to the acre. The pigs are given all of the pasture they can keep down. Mr. Paddison does not put rings in their noses unless they root unusually bad. Even during the winter the sows are allowed to range in lots of this kind, and are taken into the hog house only as they are ready to farrow.

"In addition to the hogs, we keep from six to eight milch cows," said Mr. Paddison, "and we are sometimes short of hay for the winter. There is more money in farming in this section if one keeps a few cows to milk. It gives a market for the hay, and affords a steady income. It also gives an opportunity to hire a man the year around instead of having to pick up untried help at rush seasons of the year.

"The alfalfa is not kept as a continuous crop, but is rotated with oats, barley and corn. Blue barley has been found to yield almost as well as any other grain, and it can all be used in the hog ration by running it through a feed grinder. Corn also is a good grain to mix in the ration, and the fodder can be fed to the cows or horses. Oats is one of the best grains to feed the brood sows, even before they farrow, since it puts excellent growth on the pigs."

Mr. Paddison has a large hog house of the half-monitor type. There are six pens on each side, with outside gates as well as gates opening into the main alley. Shortly before farrowing the sows are brought into the house and allowed to become accustomed to their new quarters. There is an abundance of sunlight in all the pens, due to the windows in the top and the openings at each side. As soon as the pigs are large enough, they are taken from the sows to an outside pasture and fed in a trough which the sows can not reach.



The half-monitor hog house on the A. D. Paddison farm at Ahtanum. The building runs north and south, has good ventilation and sunlight. It measures 24x48 and is 14 feet high. There are six large roomy pens on each side of the alley which runs through the center. The gate from each pen closes the entire alley when open, thus avoiding the necessity of additional help to drive the sows from one pen to another. Feed gates are swung from the top, and allow the trough to be filled with feed without being molested by the sows. Guard rails are arranged on each side to prevent sows from crushing their pigs. The entire house was built at a cost of approximately $1000, including the time for two men, but not counting the part time put in on the construction by the owner.

CATTLE MARKET LOOKS UP.

There is apparent return of confidence in the cattle trade throughout the country following the depression of the last couple of years.

LEARN AUTO and TRACTOR BUSINESS

IN 6 TO 8 WEEKS

Automobile, Airplane and Tractor Mechanics, Vulcanizers, Acetylene Welders needed everywhere. We teach you to be an Expert so that you can make the biggest kind of money. Our Graduates command the biggest pay.

We are the only automobile and tractor school north of Missouri which was approved by the U. S. government war department for training U. S. A. soldier auto mechanics.



Free Radio Course.

You can learn this attractive, well-paying business in a practical school that has complete equipment. Transfers to all schools—St. Paul, Seattle, Spokane, San Francisco and Vancouver. The Largest Trade School System in America.

FREE—Send for our Free 100 page Illustrated Catalog which will explain everything fully. Write for it today.

Modern Auto & Tractor Schools.
Dept. 50. 1803 3d Ave., Spokane, Wn.



15 Minutes to Replace a Scored Cylinder

There are sound reasons why the G. M. C. Truck, with its tremendous stability, flexibility, power and endurance, is the first choice of thousands of growers and farmers. One reason is

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Teaches by Object Lesson Method

(Continued from page two.)

in selling all that are produced. His only expense is feeding the sows, about 365 pounds of shorts or middlings and a little slop when the pigs are young. The sows produce about $75 per head per year, and it does not require the services of an expert to figure out a neat profit from this cost for feed and the gross receipts.

From the Tenney farm the excursionists drove to the dairy farm of John Michelbrook, where a fine herd of Jersey cows and heifers and one of the best Jersey bulls in eastern Washington were seen and admired. Four splendid heifers were judged and their respective merits discussed. One of these heifers was pronounced by the judges as "of grand champion qualifications," and she is surely an outstanding individual. All of the 13 females in this herd are splendid individuals, but this one, a little more than a year old, was pronounced a great animal by the judges. Dan Barclay said: "If Mr. Michelbrook were to tell me I could have two of his heifers for $500 or take my choice of one for $500 I would walk off leading this splendid animal and feel that I had got a bargain." The bull, Chief Waltz, carrying St. Mawes blood lines, attracted much attention and admiration. He had been recently dehorned. Mr. Michelbrook keeps only hornless or "polled" Jerseys. His older animals are dehorned and the younger animals have their horns blighted when the horns first begin to appear. Cattle without horns handle much better and are less apt to injure one another.

The next stop was at the beautiful dairy farm of R. H. Tuttle, who is an automobile dealer of Walla Walla, but has a hobby for good cows and a good farm and has built up one of the greatest Holstein herds in the Walla Walla valley. He has more than 30 head of especially good purebred, registered Holstein cows and a bull of royal breeding. His farm and country home are pointed out as one of the beauty spots of Walla Walla county and his dairy barns, milk rooms, cooling rooms and everything about the great dairy are models of cleanliness and sanitary care.

From the Tuttle farm the caravan drove to one of Walla Walla's institutions to which the citizens "point with pride." This is the Stubblefield home, established by a foundation given by Mr. and Mrs. Stubblefield, a pioneer couple who died childless and left their fortune to establish a home for orphans. The great building at the home located on a beautiful knoll that slopes gently in all directions, is beautiful and well arranged in all its departments. Superintendent and Mrs. Campbell take great pride in the institution and the more than a score of orphans who have a real home here seem to love their guardians as real parents. C. M. Rader is one of the directors of the home and upon his arrival the boys swarmed around him and told him of the work they had been doing, how they had cleaned the great garden, which supplies the home with fresh vegetables "from every weed and there ain't a weed in it."

Only a short stop was made at the Stubblefield home, for it was nearing noon and it had been arranged to have lunch at the William G. Cordiner farm, a short distance away. The people from town had been requested to bring their lunches and they had done so, but the meager lunches put up by the restaurants and hotels for the people from towns were not needed. At the Cordiner home a great table had been arranged under the spreading branches of a great maple tree more than 10 feet in circumference, with a spread of branches covering more than 50 feet, and this long table was fairly loaded down with only such a lunch as country people can provide for such an occasion.

After the lunch, or banquet, the visitors went to the great barns on the Cordiner farm and saw Shorthorn cattle that were worth going 100 miles to see. Mr. Cordiner has 20 head of them. When it is learned that he has cows for which he paid from $1600 to $2000 each, some idea of the real aristocracy of his splendid herd may be gained. Several classes, ranging from aged cows to suckling calves, were judged and A. E. Lawson of Spokane, western representative of the American Shorthorn association, gave an interesting and instructive talk, in which he told why the judges placed the animals as they did.

Leaving the Cordiner farm the excursionists drove 14 miles toward Wallula to the Shorthorn farm of Ralph Rader, where there are 60 head of high-class Shorthorn cattle, all purebred and many of them outstanding individuals. The splendid barns were filled with high-class cows on one side and young bulls, ranging from junior calves to senior yearlings, on the other. For the judging contest the two great herd bulls, each weighing more than a ton, were selected. Snow King, a mammoth pure white bull, not in the best of condition because of hard service and the fact that he has had no feed but grass, is a splendid animal. He is 6 years old and was a blue ribbon winner at Walla Walla, Spokane, Yakima and Salem in 1919. Good Mariner, a great roan bull, 3 years old and in the best of condition, was given first place by the judges, A. E. Lawson and Henry Delaney.

The next stop was at the farm of William Lauer, who specializes in Shire horses. Two splendid stallions, full brothers, one a yearling and the other 3 years old, were in the corrals at the barns and a Mammoth jack, also used for breeding purposes on the farm, attracted the admiration of the visitors, the judging classes and many spectators trudged across a summer-fallowed field to see some splendid Shire mares and their colts and these were judged by the class.

The next stop, which was the last of the long tour, was at the farm of Charles H. Craig, where some magnificent Rambouillet sheep were seen, admired and judged.

Professor C. M. Hubbard, live stock extension specialist of Washington State college, Pullman, judged the sheep and gave a highly interesting and instructive talk, in which he pointed out the best points of each animal judged and told why breeders sought to bring out these points in their sheep. His talk was of value to all present and the farmers, business men and agricultural students gave it the closest attention.

The excursion ended at the Craig farm and the automobiles scattered, the farmers returning to their farms, their flocks and herds and the townspeople and those from other points returning to Walla Walla through the beautiful and historic valley where the Whitman colony founded the first settlement in Washington. Some of the cars stopped near the Whitman monument and Mr. Rader pointed out the objects of special interest in connection with the settlement, the mill pond, the old mill, the stone burs which were made near Spokane and carted to the valley where the wheat, the corn and other grains grown by the pioneers were ground into flour and meal.

The excursionists returned to Walla Walla in the evening just as the country folks were returning to their homes from the circus. Covered with dust from the long drive (for the sun had come out about 11 o'clock and the afternoon was hot and dusty), they were a dirty but happy crowd, for all felt that the day had been profitably spent and that they had seen and learned much of interest and benefit in meeting the hospitable farmers and seeing the great work of improving the live stock of the Walla Walla country that is going forward slowly but surely and promises much for the future of this great agricultural section of Washington.

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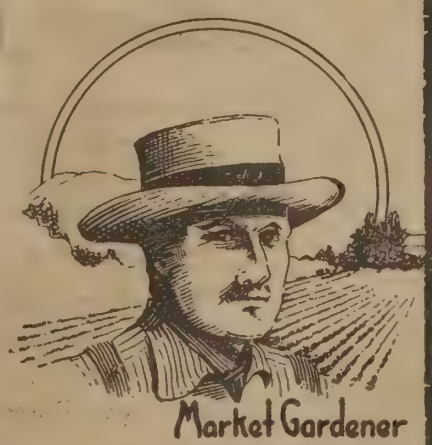
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PIKE'S PEAK OR BUST

BY LEWIS B. MILLER

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CHAPTER ONE

Off to the New Gold Diggings.

A pleasant morning it was, with blue skies, bracing air and bright sunshine, that morning in early April, 1859. And a rather numerous group of men, women and children had come together in the single street of a little Illinois village, Johnsville by name. Two persons were the center of interest in that group.

One of these was a broad-shouldered, powerfully built man of about 30 years. He was very sunburnt, somewhat weather-beaten and rugged-looking. Everything in his appearance indicated that he was accustomed to outdoor life and to the heaviest, roughest work.

The other of the two was very different. Still scarcely a month beyond his 21st birthday, he was slightly built, with a thin, rather pale face. Though wide-awake and intelligent-looking, he was plainly not very strong and not in the best of health.

Esau Haggerty, the older of the men, was standing between the handles of a wheelbarrow. The barrow's upper part was a box, whose contents, whatever they might have been, were concealed under folded canvas held in place by ropes. Between the ropes and the canvas was a gun, its muzzle pointing forward.

Haggerty's younger companion, Orlando Medford by name, was standing with a rope in one hand and a rather long, muzzle-loading rifle in the other. The rope's farther end was around the horns of a big cow of a brindled color. On the cow's back was a packsaddle, with a fair-sized load on it. This load, like that on the wheelbarrow, was mostly covered over with canvas.

The attention of several persons in the crowd was now directed to Haggerty's barrow. For on each side of the box, crudely burnt with a hot iron into the new plank, were the words:

PiKEs Peak oR BUsT

Most of those present had read of similar inscriptions on other vehicles headed in the same direction; but this was the first time that any of them had actually seen such a thing. Several were commenting upon it, jokingly.

At length Haggerty turned to the other man and remarked:

"Well, Lando, time for me and you to be joggin' along, I reckon. It's eleven or twelve hundred miles from here to Pike's Peak, they say. And the sooner we begin makin' tracks in that direction the sooner we'll land there."

"All right, Esau. I'm ready for the road whenever you are," answered the young fellow addressed, as he gathered up the rope connecting him with his burden-bearing cow.

Now everybody shook hands with the two travelers.

"Good-bye, Esau! Here's hopin' you may come back with all the gold you can push on your wheelbarr'!" called out the village blacksmith.

"Oh, I'll be satisfied with a whole lot less than that, Mr. Gray," laughed the prospective gold seeker, as he stooped and put his head under a leather strap, one end of which was fast to each handle of the wheelbarrow.

"Good luck to you, Lando boy! Come back to us rich and hearty!" called out the leading merchant in the village. In this man's store young Medford had been clerking until the last few days.

"If I can come back hearty, it's little I'll worry about how rich I am, Mr. Karnes. To me health will be better than wealth. But of course I'd rather bring home both."

Many similar good wishes were shouted at the travelers as they moved off. And all the villagers stood in the street or in their doors, gazing after them along the road that led west.

Once under way, the pair of gold seekers tramped along at a steady gait. Haggerty was trundling his wheelbarrow on one side of the wagon road, while young Medford, with his rifle on his shoulder, was leading his cow along the other side. And ahead of them trotted Frisk, their dog.

Two or three hundred yards beyond the village the young traveler turned and waved his hand to the people in the street. All of them waved in reply. Then he shifted his rifle to the other shoulder and tramped on.

About a mile from the village the pair found themselves entering some woods. There a bend in the road would hide the village from view. Now both paused and turned to gaze backward.

All their past lives had been spent near that village; and they had started on their present journey from a farm half a mile beyond it. As yet neither of them had ever traveled more than a hundred miles from home. Hence the journey they were entering upon seemed to them a venture into the great, mysterious unknown. As most of their traveling would be through a wilderness swarming with savages, both realized but too well that many things might befall them ere they returned. And they might never return.

However, they were too full of hope and enthusiasm to think much about possible misfortunes. Their minds were busy with the wonderful things they expected to see and with the golden treasures they hoped to unearth in that new California which had just been discovered in the Rocky Mountain region. After one long look behind, they turned and moved on into the woods, both with eager steps.

"Well, Esau, we're on the way at last! On the way to the land of gold and adventure!" young Medford exclaimed, his pale face lighting up with eagerness.

"That's what! That's what we air, Lando boy! A good many steps we'll have to take from here to the Pike's Peak country. But we'll step 'em. And no tellin' what we'll come packin' home with us."

"Even if we don't dig up very much gold, we're sure to run across hundreds of interesting things and to pass through some thrilling experiences," Orlando ventured.

"I'll bet we will! I'll jest bet a button we will! And, on top of all that, I'm hopin' we may come home with our pockets crammed and jammed with the yaller metal."

"That will be wonderful if we can—if we only can. Must be lots of gold out there, from all the excitement it's stirring up. But if I can just get back my health, that will mean more to me than all the gold that ever was mined."

"Oh, you'll do that, I've never a doubt. Them that's traveled through the Rocky Mountain country says it's fine to make ailin' folks well and pindlin' folks hearty."

"How does your wheelbarrow feel by this time, Esau? Beginning to get heavy?"

"Not a bit, Lando! Narry bit. Fact is, I half believe I can walk along better with it than I could without it. Gives me somethin' to lean ag'in'."

"Must be splendid to be as big and strong as that," remarked the young fellow, looking his stalwart companion over half enviously.

"Well, 'taint sech a bad thing, I own up. Like as not you'll be able to push a loaded wheelbarr' by the time we start home from this trip. That is, if the' ain't too much yaller gold on it."

Orlando laughed. "There'd have to be a lot of it to be too much."

In spite of its brightness, the morning had been chilly, almost frosty. But as the run rose higher the travelers took off their coats. Esau laid his on the wheelbarrow, but Orlando's was carried on its owner's arm.

In time the travelers arrived at a good-sized stream. A rough wooden bridge spanned it, and they passed over without any trouble. But the sight of the water below moved young Medford to remark:

"I'm wondering what we'll do when we come to a creek like this without any bridge. Brindle can ford it all right with her pack. But how can you cross without wetting your load? Your wheelbarrow's legs are a lot shorter than Brindle's legs."

"Well, there'll be ways a plenty, I'm 'lowin'. If no other, I can unload and pack everything acrosst on my back. Resk me to find some way when the needcessity comes."

For a time the cow led well enough. But the farther she traveled from home the more reluctantly she followed. Finally it required steady pulling to get her along at all.

"Come on here, old lazybones!" exclaimed her owner, in exasperation. "Think I'm going to drag you all the way from here to the gold diggings? Not if I know myself!"

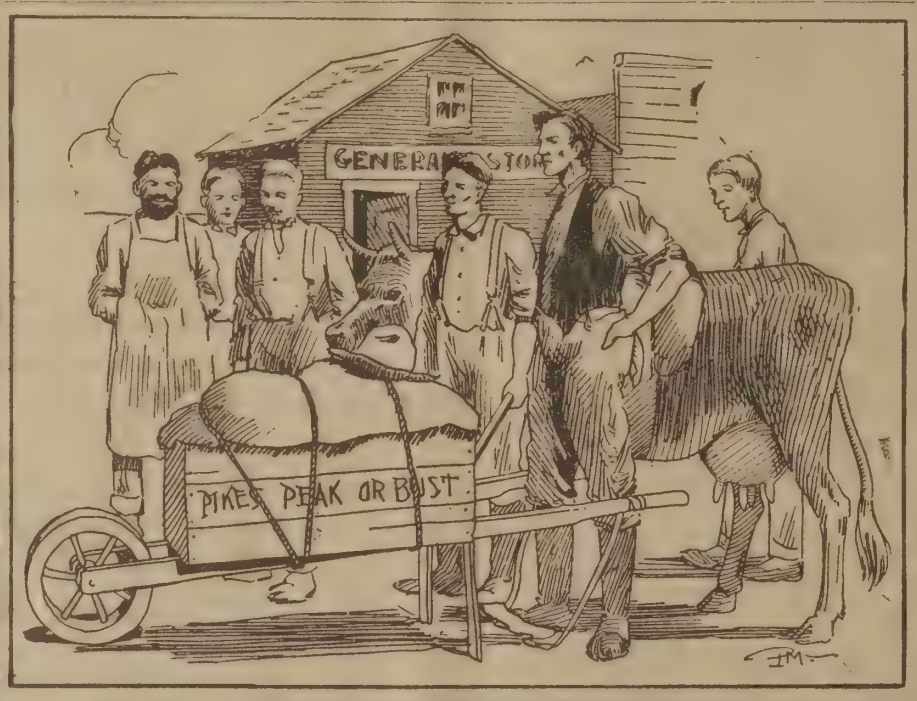
"Cow brutes don't like to travel fur from their ever'-day stampin' ground," Haggerty commented. "And Brindle may be thinkin' some about that spotted ca'f of her'n she didn't say good-by to this mornin'."

"A two-months' calf is old enough not to worry about. But I've got all I can stand of this! Driving beats dragging any old day!"

Soon the young fellow had his cow in front. He was still holding the rope that was around her horns; and sometimes he used the end of it to increase her speed.

"That's better—worlds better," he remarked. "Now maybe I can get to Pike's Peak before the gold there is all dug up. It's little chance I'd have had if I'd dragged that brute the whole way."

Steadily, but without hurrying, the two travelers pursued their journey. The part of Illinois through which their road led was not very thickly settled. Sometimes the road ran between rail fences; but more of it wound through woods, or stretched itself across unfenced prairies.



This was the first time any of them had actually seen such a thing.

The farmhouses they passed were, many of them, log cabins.

At last dinner time came. Esau and his companion had started early; and their half day of steady tramping had given them sharp appetites. They were now out on a rather wide prairie. But, coming to a little, winding stream, they halted by it, on a grassy bank, in the slight shade of some leafless willows. Here the wheelbarrow was allowed to stand. But they proceeded to unload the cow, that she might rest and graze to better advantage.

First the canvas cover was removed from her pack, and then a roll of quilts and blankets from the top of the packsaddle. Now the pack was seen to consist of two huge, well-filled pockets of rawhide, one on each side, and both hung from the crossed horns of the saddle by loops. When these pockets had been let down, the packsaddle itself was ungirted and taken off. After that a rather long rope was tied to the shorter one of the cow's horns, and the other end made fast to a willow. Then Brindle was fed nearly a gallon of shelled corn from her own pack and left to eat that and to graze for the rest of her dinner.

"We don't need a camp fire today, do we, Esau?"

"Guess not. We've got cooked victuals a plenty for this meal."

From under the canvas covering of his wheelbarrow Haggerty took two packages, both wrapped in newspapers. These, when untied and opened, proved to contain various cooked delicacies, prepared for the travelers the day before by their relatives. Of these edible things the two made a hearty meal, and with part of them and the scraps they fed Frisk.

"Well, how do you feel after your first half-a-day's tramp?" inquired Haggerty. The meal was ended, and he was sitting on the grass, picking his teeth with a grass stem.

"Nothing to complain of. I'm a little jaded, of course. Not so much, though, as I expected to be. But I'm wondering how I'd feel if I'd been pushing a wheelbarrow load of stuff, like you have, instead of merely leading or driving a cow. Does it strain your arms much?"

"Not yit it hain't. The strop over my shoulders keeps the weight off'n my arms. My shoulders does the holdin' up. 'Bout all the use I have for my hands is to push the concern along."

"How many days will it take us to reach St. Louis, do you think, Esau?"

"All depends on how fast we foot it."

"How many miles can we make a day?"

"We can make more'n it'll be safe for us to try to make. If we hump ourselves too hard at the start, one or both of us might break down. Then we'd have to lay by for a spell, to rest up. Twenty miles a day will be enough to begin with. After we've got our feet toughened and our muscles hardened, we ought to do a right smart better. Slow but shore is the idy at the startoff. We won't see St. Louis under five days, I'm thinkin'. That is, if the weather holds out good. No great certainty of that this time of year."

For at least two hours the travelers and their dog, and part of the time their cow, lay on the grass and rested. After that the men rose up, saddled and packed Brindle again and were soon on their way as before.

All the afternoon they kept traveling, their general course being toward the northwest. The sun was low when Haggerty said:

"Lando, you might take your gun and ramble around a little through the bresh. That is, if you don't feel to tard. See if you cain't knock over a rabbit or squir'l or somethin'. We may need it."

"We've got fried chicken enough and cold ham enough for supper, I'm thinking."

"For our supper, yes. But some game will come in handy for breakfast and for our dinner tomorr'. We've got to depend on our guns for meat anyhow; and the sooner we begin the better. Make a loop in your rope and hang it over my arm. I can drive Brindle."

Orlando did as his traveling companion had suggested. Soon he had the dog were off in the woods, wandering about in quest of such game as the country afforded. Ere long Esau, moving on at a steady gait, heard Frisk yelping and then barking excitedly. Evidently the dog had treed something. Later rang out the report of a rifle. And a little while after that Orlando returned to the road, carrying a rabbit and a squirrel. Esau and Brindle were in sight, and the hunter was not long overtaking them.

"Didn't have to shoot the rabbit. Frisk treed 'im, and I thrust my arm into the hollow tree and yanked 'im out. Air's getting chilly. About time to camp, isn't it?"

"As soon as we run onto water and grass together."

A few minutes later they found what they wanted. Now they went into camp, on the bank of a little stream. They were still in the woods. After the cow had been unpacked and unsaddled and tethered to a bush, the two men gathered a pile of dry sticks and logs and kindled a fire. Then they set up their little tent. Neither of them had done much camping before, and the experience was all the more interesting because of its novelty.

As darkness began to settle down, a great camp fire was flaming and crackling. Near it Haggerty was busy preparing supper. Farther back, but still in the light, Orlando, after feeding Brindle, was milking her. For she had been brought to furnish milk as well as to carry a pack.

For a little while after supper the traveling companions sat on the grass near their fire, chatting of the friends they had left behind, and of the 1100-mile journey that stretched out ahead of them. Both were weary from their unaccustomed exertions, Orlando especially so. Ere long they untied a roll of quilts and blankets and made a bed of them in their tent. On this they lay down, with their feet to the fire, and a few minutes later they were sleeping soundly.

At the first break of day they were up, and soon had their camp fire blazing. Before breakfast Orlando fed Brindle some more shelled corn, and while she was eating he milked her again, obtaining more milk than on the night before. Two big-mouthed bottles, brought for the purpose, were in Brindle's pack. In those milk for the travelers' dinner and supper could be carried.

"I tell you, Lando, that was a wise idy of yo'r'n—that idy of takin' old Brindle with us to Pike's Peak," Haggerty remarked, while the two were sitting on a log by the fire, eating their breakfast. "We both like milk so much better'n coffee; and it saves us the trouble of packin' an old, black coffeepot in our outfit."

"And the best of it is, Esau, that milk is food and gives strength, while coffee only stimulates. Let's hope it may be many a day before our pack horse goes dry."

Not a great while after breakfast the cow was saddled and packed. Now the bedclothes were stowed away on her pack-

(Continued on page eighteen.)

FAMILY CIRCLE

ALICE BARLAND
EDITORIAL CONTRIBUTOR

Closetless House

A Little Thought Solves Problem

By MRS. E. M. ANDERSON.

When I hear any one say a certain person is or is not a good housekeeper, I wonder just how much it really amounts to anyway. It has been my experience and observation that the house often has fully as much to do with the matter as the woman has. To be sure some women are naturally orderly souls and some are not, but a house that is well supplied with closets and clothes presses is so much easier to keep in order than one without, that it seems as if it almost keeps itself.

My house is not very well kept, but it is much better than it used to be and possibly my solution of some of its problems may help some one else who is similarly situated. I haven't a single clothes press or a real closet; the house originally had no arrangement for putting anything away, because there was no logical place where anything in particular really belonged. I had a carpenter make several boxes with hinged covers and it is surprising how much stuff they stow away. One stands in the corner of the landing at the head of the stairs and holds some choice files of old magazines, a nondescript assortment of scraps for mending or piecing, and a smaller box or two containing remnants of various kinds of cloth. Before I make a new thing I always look over my accumulation of odds and ends and generally find a part, and often all of my materials already on hand. Another box is placed beside my dining room heater where it makes a cozy chimney corner seat. It holds a varied collection of little daughter's playthings, that would otherwise little the whole house. A third box stands in a "jog" in the wall in an upstairs bedroom where it serves as a window seat and also as a receptacle of freshly ironed pieces that may be folded flat. A fourth box slides under the cot-bed out of the way and holds winter underwear in summer and strictly summer things in winter. A smaller one than any of the others fits compactly into a corner of my room and holds shoes and slippers not in every day use. Otherwise they would be under foot and exposed to dust and dirt. These boxes are fitted with smoothly gliding rollers on each corner, so they move easily even when very heavy.

Across the end of my largest sleeping room (which is almost square) we put a long smooth pole such as rugs are sometimes rolled around and from this pole are suspended a quantity of clothes hangers. By this means a surprising number of coats, suits, dresses, etc., may be hung away in small space without crumpling or mussing. As a protection from the dust we have a curtain of muslin, colored, to harmonize with the wall paper, etc., strung across the front of our improvised "clothes press." Another sleeping room has a lot of big screw hooks in an out-of-the-way corner behind the door and these, with a big roomy shirtwaist box and a shirt box, help out wonderfully in a closetless house. Try my plan and see if it doesn't.

Home Recipes

Wormwood has many friends, here is another use for it.

To give one an appetite, put 2 leaves into a cup of boiling water, let stand till it is cool then drink it before eating in the morning.

Put a good handful of the herb in 2 quarts of water and let come to a boil, allow to stand one-half hour, then strain and add a large cup of sugar and boil 15 minutes, removing any scum that may appear on the top. When it is cool add 10 cents' worth of brandy to keep it and bottle. A dose is one wine glass every morning for 14 days, then omit for 14 days and take it again for 14 mornings. This is a fine medicine for a torpid liver. I have tried it with success.

MRS. ELIZABETH HOWARD, Idaho.

Hard Soap Without Boiling—1 can lye, 5 pints melted grease, 2 1-2 pints cold water, 2 teaspoons oil of sassafras, 2 teaspoons of ammonia, 2 teaspoons of carbolic acid. Dissolve lye in water and let cool, strain and have the grease luke warm, pour the lye in the grease slowly, add other ingredients, stirring all the time until it begins to thicken, then pour into paper lined tins and mold. Cut bars before too hard. It is very white if the grease isn't scorched. (I think cracklings do more good fed to the hens.) MRS. E. M. VARIN, Idaho.

Wormwood is a fine medicine for sprains and bruises. It is healing and wonderful to take out pain from sprains.

Put some of the wormwood on to steep and boil it well, keep it hot and wring out a woolen cloth and wrap it around the sprain, wringing out again as it cools. I had a sprained ankle which I thought would surely lay me up, but I treated it as I have said all day and the next morning got up and went about my work and had no further trouble.

MRS. J. MANELY, Wash.

Apply scraped potato to a burn as soon as possible; it draws out the fire and is cool and easing. MRS. G. S., Oregon.

Carrot Preserves—4 lbs. carrots, 4 lbs. sugar, 2 entire lemons, 1 can pineapple; cook carrots till done, put lemons, pineapple and carrots through the food chopper, using the coarse knife; add sugar and cook slowly until clear and thick.

C. C., Mont.

Canning Gooseberries—Pick the berries soon as they are as large as they will grow. Snip off the ends and wash and place from 2 to 4 quarts into a porcelain kettle and set on the back of the stove covered with boiling water; as soon as they begin to turn white fill jars as fast as possible but don't crowd or mash the berries; fill jars with the hot water and seal, using no sugar.

When a jar is opened drain off the juice which by this time has become thick and very tart. I use this for making jelly, and the berries are easily sweetened and very good.

Gooseberries are not very highly prized by some, but will be found delicious when canned by this simple recipe. — MRS. SQUIRE WEAR, Athol, Idaho.

Milk Pudding—To about a quart of lukewarm milk add sugar and flavor to taste, then dissolve a piece of rennet tablet about one-half the size of a dry pea, add this to the milk and stir well and pour into saucers. If you care to make it fancy add cake coloring and serve with whipped cream. (Plain cream is also very good.—Editor.) This makes a delicious pudding. If it becomes watery you have used too much rennet. The rennet tablets may be had for 25 cents a dozen at any drug store.—"ANNIE LAURIE," Wash.

Vinegar From Fruit Juices—A cask or barrel is best for making vinegar in, and it should never be more than three-fourths full so as to allow air space and the bunghole should be covered with cheese cloth or muslin.

Put in a quart or more of good vinegar for a start then add fruit juices of any sort carefully strained. One can boil apple parings and add the water and molasses rinsed from jugs and sirup pitchers. Judgment must be used in adding the proper amount of water; one can determine this by testing the liquid from time to time.

Place the cask out in the sun and on the side so as to allow the air to circulate over as large a surface as possible. In warm weather it will require about two or three weeks to make vinegar.

Make The Laundress Happy



by making it possible for her to turn out beautiful, snowy white, clothes like new.

Red Cross Ball Blue

will enable the laundress to produce fine, fresh-looking pure white clothes instead of the greenish yellow usually obtained. RED CROSS BALL BLUE always pleases.

5 cents.

At all up-to-date grocers.

POST CARDS BRING BIG RETURN

Many of our advertisers offer free booklets and information which is very much worth your while to send for. A postal will bring them. Why not place a dime or so in your rural mail box with a note requesting the carrier to leave you some cards? Then use the cards in writing advertisers. When you do so be sure to mention THE WASHINGTON FARMER.

Glance over the bargains on the "Want Ad" page.

Just Folks

If you were in a Portland hotel on a visit to the city and should take up a newspaper and find that a big fire in your home town had wiped out all your possessions, how would you take it? This experience overtook a citizen of Prineville the other day. The visitor told a reporter that he lost everything in the fire, and among other things were records and documents of which he had no duplicates.

One person after another has gone through this experience of losing practically all his property from one cause or another. Some have given way to despair; others have been born again in courage.

Once I was taking a vacation trip on horseback of a hundred miles or so over a portion of the old colonial stage road from Boston to Bangor, Me. Travel was meager over portions of that old highway, and in more than one place grass was growing between the wheel tracks. As the sun went down I came to an old New England village and stopped at the hotel, perhaps I should say the tavern. During the evening I picked up a story of one who had been a leading citizen of the town. I do not remember the name. What I do remember are the facts told me regarding this man, who had lost all his property when he was over 70 years of age. He did not despair. He had a new birth of courage. He shamed many a young man by the way he planned and worked. He had not only lost all his property, but his debts amounted to something big for those days. He was bound to pay those debts before he died. In a few years his big aim was accomplished; the last debt was paid. Then, he died.

The tremendous effort made by Sir Walter Scott or by our own General Grant in paying off gigantic debts during the closing years of their lives are not the only examples. Every day life has its heroes in this respect.

The only real loss is discouragement. Determined hope is the only thing that can call out that wonderful reserve power in men and women. More than once the impossible has become the possible. A hidden door has opened in the solid wall.

At any rate, the fight is worth while, and this heroic fight against calamitous misfortune even robs death of its horrors. E A S

TO SAVE THE LINOLEUM.

Linoleum conforms to the surface over which it is laid. Thus, if the floor is uneven or possesses unsightly bumps and ridges, the linoleum may be expected to do the same after it has been on the floor for some time. As a consequence the linoleum wears worse in the more prominent spots. An extra strip of linoleum is a protection in such places, or, better still, the surface may be leveled to some extent by the use of a cheap grade of building paper under the linoleum.

GENERAL ADVERTISING.

Easy Now to Rid Your Place of Flies

Widely Known Scientist Discovers Wonderful Chemical That Is Fatal to Flies. Not a Poison—Harmless to Stock.

Flies are one of the most dangerous and annoying things with which the farmer has to contend. Now, through the discovery of E. R. Alexander, widely known scientist, you can rid your house and barns and live stock of these pests almost instantly, and with no trouble at all. This discovery is in the form of an organic chemical that is fatal to flies, and similar pests, such as chiggers, mosquitoes and moths.



This new discovery, which is called Alexander's Rid-O-Fly, is not a poison. Though it kills flies like magic, farm animals and human beings are not affected by it at all. In addition to killing these insects, Rid-O-Fly is a strong repellant. Flies will not come near stock or buildings where Rid-O-Fly has been used. Rid-O-Fly is particularly valuable for cows and horses, as it is a known fact that flies do untold harm to these animals.

So confident is Dr. Alexander that his discovery will rid your house, barns and live stock of these pests that he offers to send a $2.00 supply for only $1.00 on the guarantee that if Rid-O-Fly does not solve your fly problems it will cost you nothing. Two big Kansas City banks guarantee the reliability of this offer.

SEND NO MONEY—Just your name and address to the Alexander Laboratories, 1508 Gateway Station, Kansas City, Mo., and this introductory offer will be mailed at once.—Adv.



PROTECT THE BOTTLE FED BABY

by using Dennos. The needed food elements are supplied in an easily digested form. Endorsed by physicians. Sample free.

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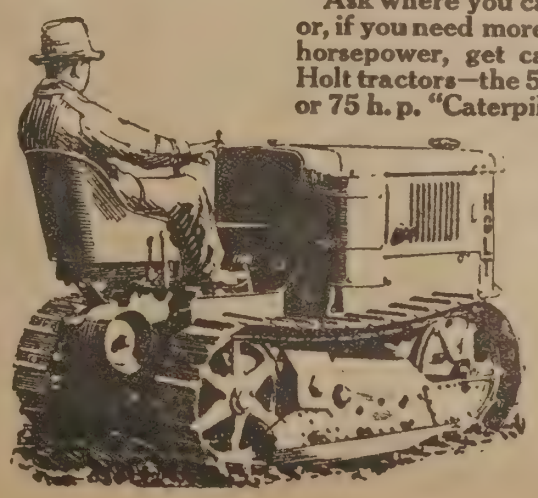
In writing advertisers, be sure to say you saw their advertisement in The Washington Farmer.

Proof

There's only one Caterpillar Holt builds it

More convincing than anything that may be said about "Caterpillar" T35 Tractor is the evidence of what this tractor is actually doing in service. Study its design and specifications and you will find features of simplicity, superior materials and construction, perfect lubrication, complete enclosure from dust and dirt. Watch its performance in the field and you will see how these features are translated into greater power, amazing economy and enduring service.

Ask where you can see a T35 at work, or, if you need more than its 15 drawbar horsepower, get catalogs on the larger Holt tractors—the 5-Ton, Western 10-Ton or 75 h. p. "Caterpillar" Tractors.



The HOLT Manufacturing Co.

SPOKANE, WASH.

Factories Stockton, Calif., and Peoria, Ill.
Oregon Representative
J. W. HILL, Henry Bldg., Portland.

High Points in News of the Week

The outstanding news feature of the week was the railroad strike which took place at 10 o'clock last Saturday, affecting about 400,000 employees in the railroad shops throughout the United States. During the last few weeks the members of the several unions making up the shopcrafts branch of the railroad service, which manufactures and repairs railroad equipment, have been taking a referendum vote on the question of whether or not to authorize their officers to call a strike rather than accept the reductions in wages recently ordered by the government railway labor board. The vote was said to be overwhelmingly in favor of the strike, and accordingly the officers called the men out.

Chairman Ben W. Hooper of the labor board declared in a formal statement following the strike that it would be considered an act against the government rather than against the railroads themselves, since the labor board is an authorized agency of the government. He declared that the government would consequently protect any members of the shopcrafts unions who declined to strike in response to the order, and would also protect any independent workmen who took the places of strikers.

Both the railway labor board and the heads of the railroads declared that the strike in its present form will not vitally affect the operation of the railroads for at least several weeks. Neither the maintenance of way employees nor the actual operators of the trains are affected by the strike order, and, therefore, the trains will continue to operate uninterruptedly until such time as the railroad equipment should reach such condition as to require the operation at full strength of the railroad shops. It is altogether problematic at this time what action other organized bodies of railway employees may take.

At this writing there is no definite information available as to the number of members of the shopcraft unions who are remaining at their posts, but it is known that in some cases a considerable percentage refused to walk out. The great majority, however, are idle.

The strike is in protest against wage reductions totaling about $135,000,000 annually, or an average of a little more than $100 per person per year, though the reductions are not uniform in all classes of employment.

There are approximately 1,425,000 railway workers in the service at present, but probably not more than 1,000,000 of these will feel the cut in their pay envelopes.

Three decisions of the United States railroad labor board during the last month and a half form the basis for the wage reductions. Several classes of employees, notably the engineers, firemen, conductors and trainmen, were not included in the reductions and no decision has yet been issued for one other group, the telegraphers. The train dispatchers suffered no reduction whatever.

The railway employees were not hit so hard this year as when the board cut the wages of all workers last year a total of $350,000,000. The cuts ranged from 1 to 9 cents an hour for various classes of workers, while certain groups of semi-official and supervisory employees escaped the pruning knife entirely.

The tendency in the United States senate seems to be to increase, rather than diminish, the tariff rates on agricultural products as compared with the rates already agreed upon in the house of representatives. The senate last week approved a tariff of 30 cents a bushel on wheat, or 5 cents higher than the rate fixed by the house bill which the senate is now considering. The senate has approved a tariff of 78 cents per hundred on flour, as against 50 cents per hundred in the house bill. The present rate on wheat, under the emergency tariff act, is 35 cents per bushel.

The house of representatives has adjourned for about a month's vacation, but the senate is still in session, wrestling with the tariff bill and other important legislation.

* * *

United States Senator McCumber of North Dakota was defeated in the primaries last week for nomination to succeed himself by Lynn J. Frazier, former governor of that state and leader in the non-partizan league. Governor Nestos, independent, who ran against Governor Frazier in a recall election a few months ago, at which time Frazier and two other non-partizan league state officers were recalled, was renominated over the candidates indorsed by the league. Both contests were in the republican primary.

* * *

The federal farm land bank at Spokane, serving the four Pacific northwestern states, during the month of June made loans to 546 farmers, totaling $2,064,700. This makes the total number of loans completed by the bank up to date 22,932, or a total of $66,162,585. In June 1177 applications were filed for loans, totaling $4,907,000. Since the bank was established four years ago 47,474 applications have been received, or a total of $156,473,000.

* * *

A conference of coal mine owners and representatives of the miners' union is being held in Washington, D. C., at the call of President Harding with a view to attempting to reach a settlement in the present coal strike. The last week brought no further apparent developments in the coal strike situation other than the calling of this conference.

* * *

Considerable rioting and warfare between the republican and the nationalist faction in Ireland continued throughout the last week. * * *

The next important state primary election occurs in Nebraska, and one of the interesting features in this election will be the candidacy of C. H. Gustafson for the United States senate on the republican ticket. Mr. Gustafson is president of the United States Grain Growers, Inc.

* * *

President Harding last week called a delegation of leaders of farm organizations and other representatives of the agricultural interests for the purpose of laying before them his reasons for wishing a ship subsidy to aid in the upbuilding and maintenance of the American merchant marine. * * *

The lumber trade in the Pacific northwest is said to be better now than for several years. This is understood to be due largely to the widespread activities in building throughout the United States.

Farm Business and Markets Outlook

(Continued from page five.)

Prices for No. 1 American cheese on June 23 were:

Chicago—Twins, 19@19 1-2c; S. Daisies, 19@19 1-2c; D. Daisies, 19@19 1-4c; Young Americas, 19 1-2c; Longhorns, 19@19 1-2c; Square Prints, 20c.

POTATO RECEIPTS ARE LIBERAL.

Receipts of potatoes have declined recently, but they are about equal to the average for the entire year and heavier than usual at this season. Old potatoes compose about 10 per cent of the supply, but they will be gone in another fortnight. Prices are more stable than two weeks ago with new No. 1 Bliss Triumphs quoted at $2.65 to $2.85, and Irish Cobblers at $2.50 per 100 pounds sacked in the Chicago carlot market.

LATEST QUOTATIONS.

The Live Stock Market.

PORTLAND, July 1.—Cattle: Choice hay-fed steers, $8.25@8.75; medium to good hay-fed steers, $7.75@8.25; choice grass steers, $7.75@8.25; medium to good steers, $6.75@7.75; fair to medium steers, $6.25@6.75; common steers, $5@6.25; choice cows and heifers, $6.25@6.75; medium to good cows, heifers, $5.25@6.25; fair to medium cows, heifers, $5.25@6.25; common cows, $3.50@4.50; canners, $2@3.50; bulls, $5.75@6; choice dairy calves, $5@5.50; prime light calves, $7.50@8; medium light calves, $7@7.50; heavy calves, $4@7.

Hogs—Prime light, $11.50@11.85; smooth heavy, 200-300 lbs., $11@11.25; smooth heavy, 300 lbs. up, $10@11; rough heavy, $8@9.50; fat pigs, $11.50@11.75; feeder pigs, $11.50@12.10; stags, subject to dockage, $5@8.

Sheep—Best spring lambs, $8.50@9.25; medium spring lambs, $7.50@8.50; common spring lambs, $6@7.50; cull lambs, $5@6; light yearlings, $7@8; heavy yearlings, $6@7; light wethers, $5@6; ewes, $2@5.

SPOKANE, July 1.—Cattle: Prime steers, $6.75@8; good to choice steers, $5.75@6.75; medium to good steers, $5.25@6.50; fair to medium steers, $4.50@5.25; common to fair steers, $4.25@4.50; choice cows and heifers, $5.25@6.50; good to choice cows, heifers, $4.25@5.25; medium to good cows, heifers, $3.75@4.25; fair to medium cows, heifers, $2.75@3.75; canners, $1.50@2.75; bulls, $3@4.75; light veal calves, $6.50@7.50; heavy veal calves, $4@6.50; stockers and feeders, $4.75@5.

Hogs—Prime mixed, $11.25@11.85; medium, $10.25@11.25; heavies, $8.25@9.25; fat pigs, $10.25@11.25; stockers and feeders, $10.25@11.25.

Sheep—Prime lambs, $8@10; fair to medium, $7@8; yearlings, $7@8; wethers, $6.50@7.50; mutton ewes, $3@6.50; feeder lambs, $6@7.

The Grain Market.

SEATTLE, July 1.—Wheat—Hard white, soft white, white club, soft red winter, northern spring, $1.16; hard red winter, $1.17; eastern red Walla, $1.13; Big Bend Bluestem, $1.25.

RITZVILLE, Wash., July 1.—Club wheat, 99c; red, $1; Fife, 90c.

WALLA WALLA, July 1.—Club wheat, 99c; Bluestem, Turkey red and Bart, 96c.

ODESSA, Wash., July 1.—Marquis, Bluestem and Bart, $1.22; Turkey red, $1.02; Jones Fife, 94c.

PULLMAN, Wash., July 1.—Red wheat, 91c; white wheat, 94c.

DAVENPORT, Wash., July 1.—Bluestem, $1.12; Marquis, $1.08; Gold Coin, 90c.

PORTLAND, July 1.—No quotations on account of no session of the exchange due to death of a member.

Hay and Feed Grain.

PORTLAND, July 1.—Millfeed—Price f. o. b. mill: Millrun, ton lots, $35; middlings, $41; rolled barley, $36@38; rolled oats, $43; scratch feed, $50 per ton.

Corn—White, $35; cracked, $37.

Hay—Buying price, f. o. b. Portland: Alfalfa, new, $14.50@15.50 per ton; cheat, $15@16; oats and vetch, $14; clover, $17; valley timothy, $18; eastern Oregon timothy, $21@22.

SPOKANE, July 1.—Wheat—Feed wheat, $44 per ton.

Oats—$40 per ton; steam rolled, $42.

Corn—$36 per ton; cracked corn, $38 ton.

Barley—$42; steam rolled, $44.

Bran and shorts—$34 per ton.

Alfalfa, $22 ton; timothy, $24 ton; mixed hay, $22 ton.

General Produce.

PORTLAND, July 1.—Butter—Cubes, extra, 35c per lb; parchment wrapped, box lots, 40c; cartons, 41c. Butterfat, station buying prices, 39c.

Eggs—Buying price, current receipts, 20@21c dozen; henneries, 23c dozen; jobbing prices, case count, 21@22c; candied ranch, 25c; selects, 27c.

Cheese—Tillamook triplets, price to jobbers, f. o. b. Tillamook, 25c; Young Americas, 26c; long horns, 20c pound.

Poultry—Hens, 15@22c; broilers, 20@25c; ducks, 15@22c; geese, nominal; turkeys, live, nominal; dressed, 40c.

Veal—Fancy, 13½@14c per lb.

Pork—Fancy, 15½c per lb.

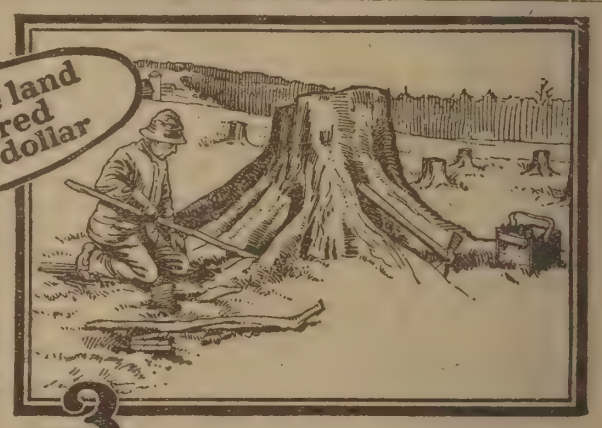
SPOKANE, July 1.—Poultry—Fat hens, 17c lb; light hens, 14c lb; roosters, 8c lb.

Fresh ranch eggs—$5.25 case; no storage; pullet eggs, $5.

Butterfat—37c a pound.

Range of Live Stock Prices for the Week Ending June 28

	Chicago.	Spokane.	Portland.	N.Salt Lake
CATTLE.				
Choice, prime heavy steers (1100 lb up)	9.35@10.20	.....	.....	.....
Medium heavy steers	8.00@ 8.85	.....	.....	.....
Good heavy steers	8.75@ 9.50	.....	.....	.....
Common heavy steers	7.00@ 8.15	.....	.....	.....
Choice, prime light steers (1100 lb. d'n)	9.10@ 9.85	.....	.....	.....
Good light steers	8.60@ 9.25	8.10@ 8.50	8.25@ 8.75	.....
Medium light steers	7.75@ 8.65	7.25@ 8.25	7.25@ 8.40	7.00@ 7.85
Common light steers	6.85@ 7.85	5.00@ 7.50	5.50@ 7.50	5.50@ 7.25
Common to choice butcher heifers	5.50@ 8.50	4.25@ 7.25	4.50@ 7.00	4.00@ 6.00
Common to choice butcher cows	4.00@ 7.40	3.25@ 6.25	3.50@ 6.25	3.00@ 5.00
Bologna and beef bulls	4.00@ 6.40	3.25@ 4.75	3.75@ 5.00	2.00@ 3.00
Canners and cutters, cows and heifers	2.75@ 4.00	2.00@ 3.50	2.00@ 3.50	1.50@ 3.25
Canner steers	3.75@ 5.25	3.00@ 4.25	3.25@ 4.25	3.00@ 4.00
Medium to choice light veals	7.00@ 9.00	6.50@ 8.50	7.00@ 8.50	7.50@ 8.50
Common to choice heavy veals	4.00@ 7.50	4.00@ 6.50	4.50@ 7.00	.....
Common to choice feeders (1000 lb up)	5.65@ 7.75	.....	.....	.....
Common, choice feeders (750-1000 lb)	5.65@ 7.75	4.50@ 5.00	.....	5.00@ 5.50
Common to choice stocker steers	4.85@ 7.65	.....	.....	.....
Common, choice stocker cows, heifers	3.50@ 5.75	.....	.....	.....
HOGS.				
Top of market	11.00	11.35	11.75	10.50
Bulk of sales	9.60@10.90	10.25@11.50	11.25@11.65	9.50@10.25
Heavy (250 lb up)	10.25@10.65	9.50@10.25	10.00@11.65	.....
Medium (200-250 lb)	10.40@10.90	10.25@11.25	11.00@11.50	9.50@10.25
Light (150-200 lb)	10.65@10.90	11.25@11.85	11.50@11.75	10.00@10.50
Light lights (130-150 lb)	10.40@10.85	11.25@11.75	11.50@11.75	9.85@10.25
Smooth packing sows (250 lb up)	9.10@10.00	8.75@ 9.25	9.00@ 9.50	.....
Rough packing sows (200 lb up)	8.50@ 9.35	8.25@ 8.75	8.00@ 9.00	.....
Medium, choice pigs (130 lb down)	9.25@10.50	10.25@11.25	11.75@12.00	.....
Stock pigs	.....	10.25@11.25	11.50@11.75	8.50@ 9.25
SHEEP AND LAMBS.				
Medium to prime lambs (84 lb down)	11.50@13.65	8.65@10.00	7.50@ 9.00	9.50@11.00
Culls and common lambs	6.50@12.00	5.00@ 8.00	5.00@ 7.50	6.00@ 9.50
Medium to prime yearling wethers	8.25@11.65	7.00@ 8.00	6.00@ 8.00	4.50@ 6.00
Medium to prime wethers	4.50@ 8.50	6.50@ 7.50	5.00@ 6.50	3.75@ 5.00
Medium to choice ewes	3.00@ 7.25	4.00@ 6.50	3.50@ 6.00	3.00@ 4.00
Culls and common ewes	1.50@ 3.25	3.00@ 4.00	2.00@ 3.50	2.00@ 3.00
Full-mouth to yearling breeding ewes	5.00@11.25	.....	.....	.....
Feeder lambs	10.50@12.25	6.00@ 7.00	.....	.....



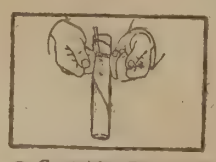
—with PACIFIC STUMPING POWDER Save still more by using the latest, cheapest blasting methods—

3

Filling and Tamping the Hole



1 *Making the Hole*



2 *Cartridge Prepared and Ready to Load*

AFTER the hole has been made under the stump and the charge properly primed and loaded, the next step is filling and tamping the hole. The purpose of this is to seal the hole tightly so that the gases from the explosion will not escape, but will exert all their pressure against the stump. The success of the shot depends very largely on careful and thorough tamping.

Moist clay, free from gravel and stones, fine sand or moist loam, makes excellent tamping material.

First, fill up four or five inches of the hole with this substance, and tamp it down gently with a rake handle with end sawed off square, or similar tamping stick. Then continue to fill the hole, tamping more firmly until the top is reached, and the passage securely sealed.

Stump blasting has become a cheaper operation since the development of Pacific Stumping Powder. You get ½ more sticks per dollar and each 1¼ x 8 inch stick will do the work of a 1⅜ x 8 inch stick of any standard stumping powder.

Buy Pacific Stumping Powder at your local dealer's and write us for free 125-page book "Development of Logged-Off Lands," which gives full instructions covering the use of explosives for land clearing, ditching and tree planting.

E. I. DU PONT DE NEMOURS & CO., Inc.

Spokane Seattle Portland

NON-HEADACHE DU PONT NON-FREEZING

PACIFIC

STUMPING POWDER

Bits of Fun FOR Everyone

Industrious as the Devil.

It was an old Scotch lady who always saw some good in every one. One day a neighbor in desperation said, "Well, Mrs. Campbell, I do say I believe if I was tellin' ye the devil is black ye'd think o' some good o' him."

"An' I might," mused gentle Mrs. Campbell. "We'd have little trouble in this world were we all as industrious as the devil."

A New Hero.

"You say you're a moving picture hero?"

"Yes, my wife drags me to them four times a week."—Boston Transcipt.

No Cushioned Wheels.

An old farmer who, by hard work and parsimonious habits, had got together a little fortune, decided that the time had at length arrived when he was justified in ordering a family carriage. He went to a carriage builder's and described in detail the kind of vehicle he wished to buy.

"Now, I suppose you want rubber tires?" said the carriage builder.

"No, sir," replied the old farmer in tones of resentment. "My folk ain't that kind. When they're riding they want to know it."—Edinburgh Weekly Scotsman.

Feet, Do Your Duty.

A negro subpoenaed as a witness in a shooting scrape under cross-examination gave his testimony as follows:

"Was there actually any shooting?" he was asked.

"Yas suh, dah was some shooting, cause Ah heard a bullet!"

"You heard a bullet?"

"Yas, suh! Ah heard that bullet twice. Ah heard it wonst when it passed me, and wonst when Ah passed it!"—Union Pacific Magazine.

The Lesser of Two Evils.

"Why did you keep suggesting that Mr. Gadder put on another jazz record when we were at his house last night?" asked Mrs. Dubwaite. "I didn't think you cared for jazz."

"I don't," said Mr. Dubwaite, "but I could tell from the way he was fidgeting that he was getting ready to relate for perhaps the thousandth time how he felt when the liner he was on was torpedoed by a U-boat."—Birmingham Age-Herald.

Your Health

By Royal S. Copeland, M. D., F. A. C. S.

A doctor friend of mine has just completed 45 years of practice. Because he has reached a place of distinction in the medical profession he was given a dinner at the Detroit Athletic club. He was so kind to me when I was a young doctor that I traveled out to Detroit to attend this dinner. I am glad I did because I saw a number of old friends and received much inspiration from them.



Dr. Copeland.

At the table was a classmate of the honored guest. There was another doctor who has been in practice 50 years. There was still another who is engaged in medical work after 54 years of active practice.

As years go, these four doctors would be counted old men, but I should be shocked to hear any one of them referred to as "old Doctor" So and So. While three of them are white-haired, the oldest has locks as brown as when I first gazed upon them, a third of a century ago. Every one of these doctors stands up straight as a soldier on parade. When I saw the guest of the evening hustle down the front steps of the club, garbed in a plaid "sport" overcoat, jaunty in a soft felt hat and carrying a set of golf clubs we had given him as a souvenir of the occasion, I could believe it was only yesterday he was one of my professors in medical school.

These four doctors are not old men. They are as young as they ever were. Why?

To keep young you must live in the present. You must plan for the future, just the same as you did in your youth. When you spend your time thinking and talking of the past, when you pay little heed to every-day affairs, and when you have lost interest in the future, then you are old.

I observed that all four of the doctors I have mentioned are thin men—not skinny or scrawny, but lithe and hard in muscle. They walk and play golf. They never give thought to their years, but do now in a physical way exactly as they did 50 years ago.

What struck me most forcibly was their intense interest in the future of medicine, how the college should be conducted, the sort of teaching which should prevail.

"Times have changed." "Conditions are different." These were frequently used expressions. There was no evidence of crystallization. These men are adapting their lives and practice to modern conditions. So long as elasticity and adaptability remain, youth continues, no matter what the calendar may say.

The mental attitude means a lot. The other day Colonel William Muldoon told me that he never feels old except when some contemporary shuffles up and whispers:

"Bill, we're getting old!"

This wonderful man is as strong and active and useful as ever. It is hard to believe he was a dashing cavalryman in the Civil war. He acts like a boy instead of a veteran of a war nearly 60 years past.

Guard your health and keep up your mental and physical activity. You should be active and useful at 80.

Latest High Class Patterns for the Home

Please order the patterns you desire at least two or three weeks before you wish to use them. Desiring to obtain the latest high-class patterns for its readers, THE FARMER has made arrangements to have them sent direct from the east, and under present mailing conditions it takes about that time for them to reach you.



3801-3639. Lady's Costume—Waist 3801 cut in seven sizes: 34, 36, 38, 40, 42, 44, and 46 inches bust measure. Skirt 3639 cut in six sizes: 24, 26, 28, 30, 32, and 34 inches waist measure. The width of the skirt at the foot is two yards. To make this dress for a medium size will require 6 yards of 40-inch material. Two separate patterns, 10c for each.

3839. Lady's Dress—Cut in six sizes: 34, 36, 38, 40, 42, and 44 inches bust measure. A 38-inch size will require 5 yards of 40-inch material. Price 10c.

4019. Girl's Dress—Cut in four sizes: 8, 10, 12, and 14 years. A 10-year size requires 5¼ yards of 40-inch material if made with long sleeves. With the sleeves short, ½ yard less is required. Price 10.

4020. Misses' Dress—Cut in three sizes: 16, 18, and 20 years. An 18-year size requires 5 7-8 yards of 32-inch material. Price 10c.

3656. Lady's House Dress—Cut in seven sizes: 34, 36, 38, 40, 42, 44, and 46 inches bust measure. A 38-inch size will require 5 yards of 36-inch material. The width of the skirt at the foot is two yards. Price 10c.

3805. A Popular Apron and Cap Set—Cut in four sizes: Small, medium, large, and extra large. A medium size requires 3¼ yards of 36-inch material for the apron and ¾ yard of 30-inch or wider material for the cap. Price 10c.

3681. Girl's Undergarment—Cut in six sizes: 4, 6, 8, 10, 12, and 14 years. A 10-year size will require 2 1-8 yards of 36-inch material. Price 10c.

4036. Girl's Dress—Cut in four sizes: 8, 10, 12, and 14 years. A 12-year size requires 6 yards of 36-inch material. Price 10c.

3677. Boy's Suit—Cut in four sizes: 3, 4, 6, and 8 years. A 4-year size will require 2¾ yards of 36-inch material. Price 10c.

4031. Child's Romper—Cut in three sizes: 6 months, 1 year and 2 years. A 1-year size requires 2½ yards of 36-inch material. Price 10c.

4014. Lady's Skirt—Cut in seven sizes: 25, 27, 29, 31, 33, 35, and 37 inches waist measure. A 29-inch size requires 2 5-8 yards of 40-inch material. The width at the foot is about 2¼ yards. Price 10c.

4008. Lady's Waist—Cut in seven sizes: 34, 36, 38, 40, 42, 44, and 46 inches bust measure. A 38-inch size requires 2½ yards of 32-inch material. To make collars and cuffs, and bosom of contrasting material will require ¾ yard 32 inches wide. Price 10 cents.

CATALOGUE NOTICE.

Send 12 cents in silver or stamps for our up-to-date spring and summer 1922 catalogue, showing color plates, and containing 500 designs of ladies', misses' and children's patterns, a concise and comprehensive article on dressmaking, also some points for the needle (illustrating 30 of the various simple stitches), all valuable hints to the home dressmaker.

Please fill in this order and mail with remittance to:
PATTERN DEPT., PACIFIC NORTHWEST FARM TRIO, Spokane, Wash.

Enclosed find..... cents for which send me the following:

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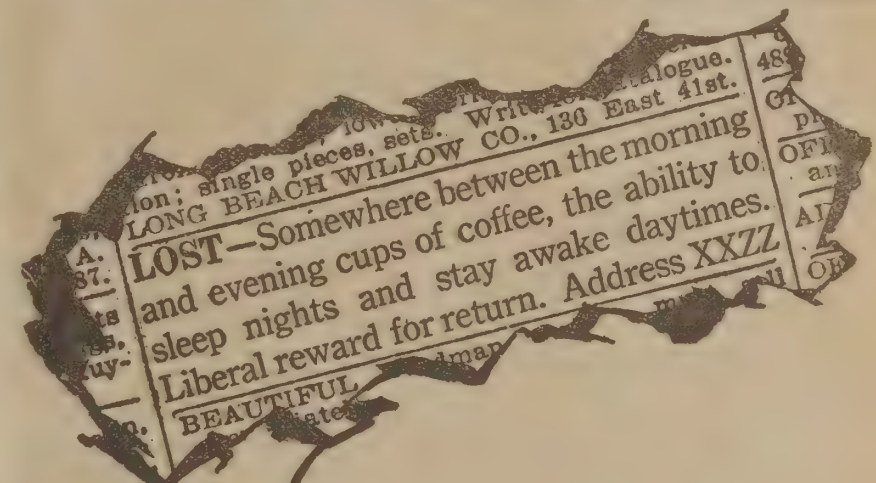
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Postum Cereal Co., Inc., Battle Creek, Mich.



We are glad to receive an interesting letter from Josephine Weaver, a new cousin in Skagit county, Wash., near the Cascade mountains. Josephine's home is a 22-acre farm with a large orchard and a big field. Her daddy is building a new barn for the cows. Josephine's birthday is September 27. She is 11 years old. Her kitten's name is Little Bun.

Arithmetic is Frances Letford's hardest study at school. When school closed, Frances attended the picnic and had a fine time. She caught 22 fish that day. Her home is on a farm in Whitman county, Wash. They have horses, cows, mules and chickens at the Letford home. Frances has four little kittens. Their names are Nigger, Spotty, Tiger and Biggy.

Birthday Greetings

THURSDAY, July 6—Olive Peterson, 7 years old; Mildred Brown, 11.

FRIDAY, July 7—Fanny Kalama, 11 years old; Roy Kister, 10; Alice O'Hara, 11; Fanny Pakkala, 11.

SATURDAY, July 8—Meredith Coon, 9 years old; Mary Reynolds, 8.

SUNDAY, July 9—Thelma Bulard, 10 years old; Pauline Clancy, 11; Harriet Perkins, 10; Daniel Trupp, 9; Elva Morehouse, 9.

MONDAY, July 10—Murray Dean Snell, 6 years old.

TUESDAY, July 11—Ethel Early, 11 years old; Grace Ensley, 11; Clara Breitmeir, 8.

WEDNESDAY, July 12—Ella Littlejohn, 11 years old.

LETTERS WELCOMED BY AUNT NELLIE.

Among recent letters received by Aunt Nellie are those from cousins whose names follow. A few of these will be published each week in the regular edition of THE FARMER, and others will appear from time to time in The Junior Farmer:

Esther Hoikka, Melva Hume, Hilma Hoikka, Bernice Rudrud, Maty Esther Thomas, Matilda French, Loretta Elma Zorneo, Iola Jack, Linda Hoikka, Clara Baskette, Joyce Louise Wise, Bernice Williams, Clara Breitmeir, Margaret Stockton, Anna Mae Tarter, Frances Letford, Wilbur Scott, Vernie Maurer, Okel Sperline, Dolly Gifford, Eva Cade, Anna Belcher, Carmyn Sherman, Josephine Weaver, Helen Miller, Myrtle Matre, Virona Johnson, Amalia Schaal, Annie Anderson, Archie Bishop, Esther M. Osborne, Grace Ross, Eva Charlotte Cole, Iva Harriet Hixson, Esther Walter, Blanche L. Gourlay, Ora Schafer, Edna Van Aalsberg, Hazel Schafer, Ethel Boawn, Frances Irene Haxton, Leda Ruby Harrel, Irene Bernece Beardslee, Arthur Gall, Floyd William Beardslee, Mabel Terry, Doris Jackson, Helen Berg, Lola Freeman, Alice Buntain, June Johnson, Sigrun Agnes Runol, Hazel and Mary Phillips, Madeline Moller, Margaret Anderson, John Otter.

BEDTIME STORIES

By THORNTON W. BURGESS.

MR. TOAD'S OLD SUIT.

Old Mr. Toad looked very fine in his new suit. Of course, it was very sober colored, because Mr. Toad wears sober colors only. But it was, nevertheless, veryb right and clean and good to look at. Peter Rabbit, peeping over the old log behind which he was hiding, could hold his curiosity in no longer.

"Good morning, old Mr. Toad," said Peter Rabbit. "You are looking very fine this morning. I see you have a new suit."

Old Mr. Toad rolled his big eyes round at Peter Rabbit.

"What if I have?" he asked crossly, for



He swallowed all his old clothes.

he was still tired from his struggle to get out of his old suit.

"Nothing; oh, nothing at all," replied Peter Rabbit, "only I would like to know what you do with your old suit. I have never seen your old clothes lying around anywhere."

"Humph!" replied old Mr. Toad. "I take care of my old clothes."

"But what do you do with them?" whispered Peter Rabbit.

"That is my business," replied Mr. Toad. "You notice, Peter Rabbit, that I don't leave them in rags all over the Green Meadows.

Peter grinned a little foolischly, while Striped Chipmunk and Johnny Chuck and Jimmy Skunk laughed uproariously, for they had many and many a time found bits of Peter Rabbit's old clothes clinging to the edge of the old brier patch.

Old Mr. Toad settled himself comfortably, with his old clothes lying on the ground in front of him. Peter Rabbit and his three little companions watched until they grew tired, but Mr. Toad seemed to be taking a nap.

"I don't believe he does anything with his old clothes," said Jimmy Skunk. "Come on and help me find some beetles."

"You think too much of your stomach, Jimmy Skunk," said Johnny Chuck. "Let's go down to the Smiling Pool and ask Grandfather Frog what Mr. Toad does with his old clothes. He'll know."

So off they started for the Smiling Pool. No sooner were their backs turned than old Mr. Toad awoke from the nap he had seemed to be taking. He scrambled up on the old log to make sure that his visitors had departed. Then he hurried down to his old suit. And what do you think he did? Why, he began with the trousers and swallowed all his old clothes, and to this day Peter Rabbit, Striped Chipmunk, Johnny Chuck and Jimmy Skunk still wonder what old Mr. Toad does with his cast-off suits, for, though Grandfather Frog knows, he wouldn't tell.

Pike's Peak or Bust

(Continued from page fourteen.)

saddle, and the other things in the wheelbarrow. Soon the gold seekers were moving again—following the well-beaten St. Louis road once more.

This second day proved as fine as the first day had been. And the two men tramped somewhat farther. They might have traveled farther still; but before night Orlando found himself growing very tired. So they camped rather earlier than they had expected. While Orlando was kindling a fire, Haggerty visited a farmhouse a quarter of a mile away, where he bought a sackful of corn in the ear and some sheaf oats. With these Brindle had a good feed. As before, Orlando fed the cow and milked her while his companion was busy with supper. Another night they and Frisk slept by a camp fire.

The sun was well up when they began their third day's journey. Neither of the travelers had as yet become accustomed to daily tramping, and both complained of feeling stiff and sore, as well as a little weary. For that reason it was thought wise to reduce this day's march to 12 or 15 miles. That gave them a long rest at noon, and allowed them to stop early for their night camp.

By the fourth morning Esau the rugged had regained his strength and he declared that never in his life had he felt better. But his companion, less hardy, was not doing so well. He had gone to bed very tired, and had complained of feeling tired when he awoke.

"Maybe we'd better lay by for a day or two, Lando, so's to give you a good chance to rest up."

"No, we won't! At least not till we have to. I do nothing but drive Brindle and carry my gun, while you trundle that heavy wheelbarrow. I don't claim to be very strong. But if I can't travel as fast and as far as you can with that load of yours, I'll keep trying till I wilt down in my tracks!"

"Jest as you say, Lando boy. Glad to see you've still got plenty of sand in your craw. But I don't want you to wilt down in your tracks. Better for you to rest before you peter out than after'ds."

"Oh, I don't think I'm going to peter out. At least I hope not. I'll get used to steady tramping before a great while, I guess. This is just the life I like. I'm hoping to have at least a year or two of it."

"So am I. But we'll jog along at an easy gait for sever'l days."

Not till the afternoon of the sixth day did the two travelers find themselves in Illinois Town. This place, some day to be an important city, known as East St. Louis, stood in the lowlands along the east bank of the Mississippi. Here Esau trundled his wheelbarrow aboard a steam ferryboat, and Orlando drove Brindle aboard. They were ferried across to St. Louis. Both men had been here before. But they found the scene along the levee, or river front, very busy and very interesting.

And the city people seemed to find the wheelbarrow, with its hot-iron legend, and the packsaddled cow interesting to gaze at. Indeed, the two gold-seekers attracted not a little atttention as they trudged westward up the middle of Olive street.

At length they halted in front of a store with a huge gun suspended over the door as a sign. There, while Orlando stood guard over Brindle and the wheelbarrow, and exchanged remarks with the passers-by, his partner went in to purchase some ammunition. After leaving the gun store, they halted again, in the next block, to buy several other things, particularly mining tools. After that they kept tramping.

When at length they had left the city behind, they found themselves in a picturesque, uneven country. Part of it was in cultivation; but the larger part was still wild woods. A few miles beyond the city night overtook them, and they went into camp.

(To Be Continued.)

Junior Farmers Attend College

(Continued from page one.)

H club," the purpose of which will be to advance boys' and girls' club work in the state. Every member regularly enrolled in the regular clubs is a member of the state club. As part of the advancement plan, it is the intention of the state club to have each local club appoint some person in the community as sponsor for the club. The purpose is to have a prominent person backing club work in each community in which there is a club.

Bringing the delegations to the college from all parts of the state was no small part of the club week, and this was done through the splendid efforts of local bankers and commercial clubs in the different parts of the state. Generally the banks in the county provided the money to care for the club members in so far as their meals were concerned while at the college, and then either the business men individually or through the commercial clubs paid their traveling expenses in autos.

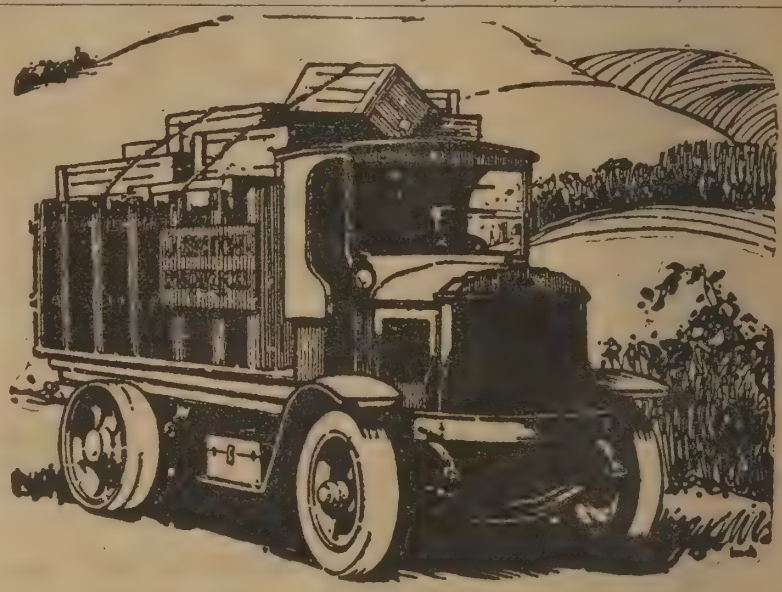
One of the exceptions in raising the finances is that of Kitsap county, where the chambers of commerce of Bremerton, Charleston and Port Orchard divided the expense equally. Another exception is that of Clallam county, where the Naval lodge of Elks not only raised the money, but provided their secretary on full time to use his car and drive the delegation from Port Angeles to Pullman and return, covering nearly 1300 miles with six boys and girls.

On the trip across the state, Grays Harbor, King, Snohomish, Kitsap and Lewis met at Fall City and the seven cars drove in caravan fashion with Yakima joining when the party passed through that city and Benton and Klickitat adding to the party at Kennewick.

The State College of Washington turned over two of the large dormitories for use of the county club delegations and their chaperones, and provided a special cafeteria arrangement to feed the junior farmers.

As a closing part of the program demonstrations were given in judging home economic products by the college faculty, while the live stock division held a judging contest.

In the judging contest, including classes in sheep, swine, beef cattle and dairy cows, all the boys entered and the 10 highest scores were awarded their choice between a year's subscription to Hoards Dairyman, the Breeders' Gazette or the Chicago International Live Stock Album. The boys winning in the contest were: Harlan Shephardson, Kelso, 390 points; Ralph Cole, Pullman, 375; Edwin Pease, Usk, 372; Earl Selle, Goldendale, 365; Patsy Page, Addy, 360; Clifton Axling, Lynden, 358; Donald Stein, Burley, 358; Robert Polson, Montesano, 356; Henry Weir, Yakima, 355; and Floyd Gouchner, Montesano, 350.



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If you want to keep your truck trouble-proof, feed it "Red Crown" and *nothing else.*

The quality of "Red Crown" is always the same, whenever and wherever you buy it. It vaporizes rapidly and uniformly in the carburetor. And it is consumed *completely* in the combustion chambers, converting *all* its heat units into power at the driving wheels. That means a better average mileage, and a sweeter-running engine.

Fill at the Red Crown sign — at Service Stations, garages, and other dealers.

STANDARD OIL COMPANY
(California)

The Gasoline of Quality



Holstein Records Are Broken

Ten state records for Oregon, Washington or Idaho Holsteins in 305-day and 365-day work have gone down within the last few weeks and as many new dairy queens are on their thrones.

In Washington, Hollywood Segis Mercedes De Kol, a senior 2-year-old bred and developed by Hollywood farm, smashed both the milk and butter record formerly held by Aaggie Sunset Wayne, owned by A. H. Reilly of Waukon. She excelled the former milk record by more than 5000 pounds and the former butterfat record by 120 pounds, making 599.70 of fat from 19,221.2 of milk in 305 days. In 365 days a Todd heifer, Cascade Piebe, took the junior 4-year-old fat record from Inka Princess Mutual De Kol II., owned by Carnation, by making 912.70 pounds from 23,920.9 of milk.

In Oregon one 365-day and three 305-day records have changed hands. Mercedes Beauty Alcartra, owned by Max Arp of Eugene, took the fat record from Henry McCall's Fairview Pearl Johanna, but left undisturbed her claim to the 365-day state milk title for junior 3-year-olds. This record, and that of Hazelwood Josephine Korndyke, Dr. W. T. Phy's new champion junior 3-year-old for both milk and butter in 305 days, have previously been reported in THE FARMER. Henry McCall of Prineville, whose Clothilde Hengerveld Washington held the belt for some time, had the experience of seeing another of his own cows, Florence Soldene, take it away from her with 16,867.3 pounds of milk and 514.82 of fat, and then lose it to Dr. Phy's heifer, which made 17,324.9 pounds of milk and 603.99 of fat. The Hot Lake physician has another state 305-day champion in Queen Ocean Rideau, which, by producing 18,493.7 pounds of milk and 615.11 of fat, took both records from Lady Von Holingen of Rock, owned by F. R. Beals of Tillamook.

In Idaho two existing records were broken and two established in classes from which none had previously been reported. The state university's Idaho Segis Colantha improved slightly on the 365-day junior 2-year-old record of another university heifer by making 13,004.9 pounds of milk and 470.47 of butterfat. The Intermountain institute's Institute Hope Walker improved considerably on the 305-day junior 3-year-old record of another institute heifer by making 16,751.8 of milk and 526.33 of fat; and Mercena Mabel Hartog, also an institute heifer, created a niche for herself by making 21,083.2 pounds of milk and 698.55 of fat in 365 days as a senior 3-year-old. Similarly, Viola May Hartog produced 11,727.3 pounds of milk and 404.32 of fat in 305 days as a senior 2-year-old and hung up the first record for that age in Idaho.

SELL 49 GUERNSEYS.

Over 400 people attended the consignment sale of 49 head of Guernseys at Chehalis June 7, when 23 buyers paid a total of $9510 for the animals purchased. The top animal was a yearling heifer, Murne Cowan Alice of Sylvanite, consigned by Richard F. Klemm of Wisconsin and purchased by Charles Gifford of Rainier, Wash., for $335. Mr. Gifford and W. J. Knutzen of Burlington were the heaviest buyers, taking five head each. The general average of the sale was $192.40, with the eight bulls averaging $158 and the 41 cows and heifers averaging $201. The list of purchasers follows: George W. Siepman, Bellevue; L. J. Pettit, Centralia; F. J. Saliger, Chehalis; Charles Gifford, Rainier; A. F. Schmit, Chehalis; Joe Muller, Oak Harbor; Joe Whealdon, Centralia; G. L. Seifert, Winlock; J. M. Pratt, Oak Harbor; A. L. Bell, Shelton; W. J. Knutzen, Burlington; James A. Luman, Bucoda; John Dean, Yelm; E. E. Case, Raymond; J. H. Guerin, Olympia; Mrs. Lena Hart, Roy; K. David, Portland, Ore.; Bues Bros., Menlo; E. B. Stookey, Olympia; Victor Furrer, Chehalis, and Johnson Bros., Mt. Vernon.

DAIRY COWS ON SMALL TRACT.

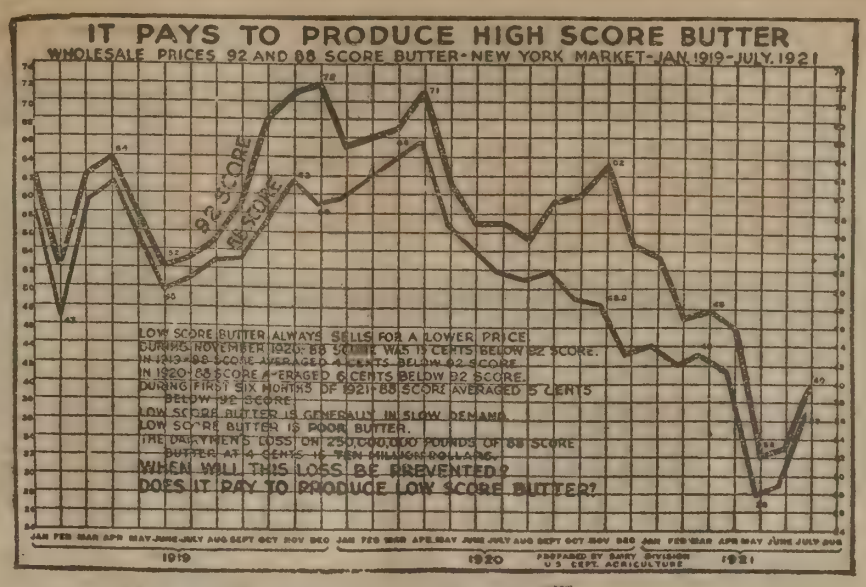
An interesting example of diversified farming is to be found at the home of Frank Majesski, near Yakima, who keeps four milk cows in a small feed lot and feeds them hay and grain the year round, with some green feed during the summer.

The entire eight and one-half acres are planted to orchard and the hay between the trees is used for feeding. There is not enough hay, however, and Mr. Majesski finds it necessary to harvest a neighbor's crop on shares in order to get enough for his cows. The entire six head of animals on the place are Guernseys. Three of which are registered, one of the cows is out of one of H. E. Angell's cows that has a 600-pound fat record. Zaro's Dallas, another one of the cows, won junior champion at the state fair in 1920.

This herd promises to be one of the high-class Guernsey herds of the valley when the young animals have had time to develop into mature animals.

PURE BREEDERS TO FROLIC.

The annual picnic of the Lewis County Pure Breeders' association will be held at Alexander park, Chehalis, July 26, on the day of the arrival of the western Washington live stock tourists from Vancouver to Bellingham.



Lost! 10 Million Dollars A Year

By American Butter-Fat Producers

It has been estimated by the Department of Agriculture that ten million dollars a year are being lost through the production of low score butter. With high quality cream your creamery can make higher score butter, which not only commands a higher price but is in greater demand; therefore they can afford to pay you more.

One of the greatest aids in p oducing high quality cream is a clean separator. The De Laval is exceptionally easy to keep in a clean condition, and in addition it will

—skim cleaner for many more years than any other;
—skim milk clean at lower temperature than any other;
—deliver a higher testing cream, which is more acceptable to the creamery and easier and less costly to ship;
—and deliver a cream which will make better butter.

A De Laval also lasts longer and turns easier than any other. Built in a variety of sizes, with hand, power or motor drives. See your De Laval Agent now about getting a new De Laval. It will soon pay for itself. Sold on easy terms.

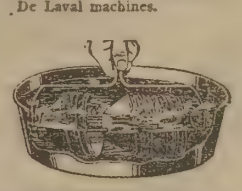
De Laval Pacific Company
61 Beale Street San Francisco



The De Laval bowl is as simple and easy to clean as a teacup. It is completely unassembled in cleaning, and every part is smooth, visible and easily reached. The whole bowl is thoroughly washed in a few minutes.

The bowl shell is a single piece and the combined bowl bottom and central feed shaft is a single piece. The discs are very quickly cleaned and easily handled with a simple transfer device. This device, which permits of washing and rinsing the discs as a single piece, is a very great convenience and its use is restricted to De Laval machines.

Sooner or later you will use a
De Laval
Cream Separator and Milker



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SOLIDIFIED DISINFECTANT

A Better Dip in a Handier, Cheaper Form

Comes in cube-marked cakes instead of cans. Solid like soap. You simply cut off and drop one of the handy Tarx cubes in a gallon of water and you have 1 gallon of the best dipping and disinfecting solution you ever used.

Each Cube Makes 1 Gallon

No guess work—no waste—no bother—no leakage—no breakage. You pay nothing for bottles, barrels or cans. No freight on factory water which you can just as well add at home. Easily shipped anywhere. Packs in small space. Keeps indefinitely.

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Send only $2.60 (check or M. O.) for 5-lb. package. Makes 150 gallons. Shipped prepaid. If you are not pleased your money will be refunded. You take no risk. Send today.

TARX CHEMICAL CO. (5)
84 Peoples Gas Bldg., Chicago

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from "WOOD-LARK"
REPELLENT



1 qt., ...75c
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Won four grand championships, nine championships and twenty-eight first prizes at five leading fairs last fall. Let us quote you on spring pigs.
RIVER BANKS FARMS. Grants Pass, Ore.
CLYDE E. NILES, MGR.

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Oldest established Berkshire herd in the northwest. Young pigs and bred sows for sale. Address
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Bred Duroc Gilts and weaning pigs Great Wonder and Sensation breeding. All eastern bred stock. Satisfaction guaranteed.
S. D. CORNELL, Grandview, Wash.

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Ruby Dell Guernsey Farm

Our herd has been in the winning wherever shown.

Senior herd sire, Francis May King (A. R.) he by Langwater Hambro (A. R.)

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Our herd matrons are cows with A. R. records from such noted sires as Langwater Hambro, Langwater Emigrant and first 5 daughters of Francis May King, to freshen with average records of 480.14 butterfat, at average age of two years and ten months; most of them double letter class.

Some splendid bull calves for sale of above breeding.

H. E. ANGEL, Mabton, Wash.

Car Load of Guernseys

Bred cows and heifers, purebred and grade. Communities wanting foundation stock should take advantage of this opportunity. Best Guernsey blood lines. A few bull calves.

O. & M. L. VOGET, Hubbard, Ore.

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"Home of high class Guernseys."
DR. PARK WEED WILLIS, Owner.
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Sired by Lalla's Prince, a show bull with great winnings in middle west. Dams, Glenwood breeding. Priced to sell.
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Guernseys Two splendid May Rose bull calves at farmers' prices.
H. W. BATEMAN, R. 2, Bellingham, Wash.
FEDERAL ACCREDITED HERD.

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Register of Merit cows for sale, group priced low for quick removal, choice stock for foundation herd.
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Jerseys--$597.97 a Month

This was our cream check for May from 19 cows, all ages, all stages of lactation. Fifteen R. daughters of St. Mawes Golden Poppy, sire of the world record junior 3-year-old, Poppy's Dortha, 994.57 lbs. fat. A few young bulls for sale, very reasonable, breeding considered.
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Jersey Bulls at Bargain Prices

Send today for our special sale list of registered Jersey bulls from R. of M. dams. Easy terms, liberal credit.
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Jerseys 797 lbs. of fat, the highest record 3-year-old tested in 1920 is dam of a high class young bull we have to offer.
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Registered Jerseys for Sale

Registered Jersey females, the best of blood lines. 1 bull, ready for service, at farmers' prices.
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Improve your herd with a Shorthorn bull of the milking strain. Getting milk as well as beef. We have some choice bull calves for sale at farmer's prices from high record cows.
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Brown Swiss Stock Farm

Breeders of Brown Swiss cattle, the farmers' dairy cow. Young stock for sale.
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Holstein Bulls sired by son of world record cow, from dams sired by brother to Segis Pietertje Prospect. Prices low.
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offers a few registered Oxford rams with bone, type and quality. From blue ribbon prize winners. Ten years selective breeding. Big fellows, better than ever. Just the kind to head your flock. Yearlings, $50; lambs, $35. Photos on request. Also one registered Hampshire boar, nine months old, good bone, well marked; good breeder, $50. O. I. C. weaned pigs each, $11; trio, $30.
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Look at these sensationally priced bargains — these last minute price cuts which we have made to clear our warehouse of all summer stocks. No time now to quibble over losses. We must make room for new fall goods. Everything sacrificed regardless of cost. You are the one to profit by this mammoth cleanup. But you must act quick! Don't delay! Let us prove how Sharood saves you big money.

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We offer an unusual bargain in these cunning percale aprons. Made in plaid and check patterns. Very useful, yet inexpensive. Rick-rack trimming throughout. Comes 1 plaid and 1 check to set of 2 aprons. **Order by No. 52E6546. Send no money. Pay 89c and postage on arrival for 2 aprons. Money back if not satisfied.**

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Extra Special



This is positively the most sensational pants value of the season. It will pay you to order several pairs of this splendid quality today at only—

$1.19

Made of heavy khaki cloth with reinforced waistband, 5 pockets, cuff bottoms, belt loops, suspender buttons. Stout seams. Sizes: Waist, 30 to 42; inseam, 30 to 34. **Order by No. 52A1560. Send no money. Pay $1.19 and postage on arrival. Money back if not satisfied. Give measurements.**

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Black or Brown

$1.69



Always mention size.

Soft kid leather slipper. Stylish strap model with two buttons. Medium round toe. Cushion insoles. Medium rubber heels, solid oak leather soles. A bargain at our slashed price. Sizes 2½ to 8. Wide widths. **Order black by No. 52A228. Order brown by No. 52A229. Send no money. Pay $1.69 and postage on arrival.**

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Brand New Standard Tires

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30x3 size
Now only

$6.39

Fresh stock of heavy nonskid tires of live rubber. Generously oversize. 6000 guaranteed, but often give 8000 to 10,000 miles. Choice of nonskid or rib-tread in 30x3 size. Others are nonskid. Pay only bargain list price below and postage on arrival.

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Now is your chance to buy extra thick, live rubber inner tubes at a big saving. Don't wait for tube prices to go up. How many shall we send? **Give size wanted. No money now. Pay only bargain price and postage on arrival.**

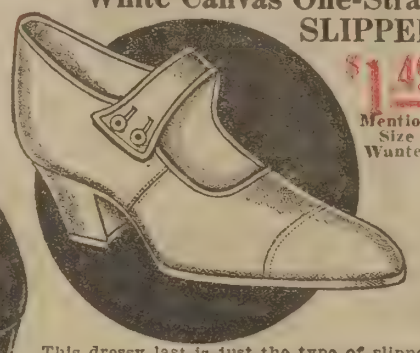
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White Canvas One-Strap SLIPPER

$1.49

Mention Size Wanted



This dressy last is just the type of slipper you want for spring and summer, 1922. Uppers of excellent white canvas. Firm, flexible, white finished oak soles white Cuban heels with rubber top lift. Big bargain. Sizes 2½ to 8. **Order by No. 52A307. Send no money. Pay $1.49 and postage on arrival. State size.**

Popular Stitchdown Dark Brown Oxfords

$1.98

Give Size

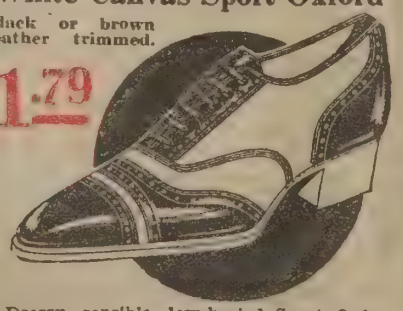


Classy stitchdown Oxford for women. Wonderfully comfortable and stylish. Uppers of dark mahogany leather. Smooth leather insoles. Flexible stitched-down oak outsoles. Low rubber heels. Sizes 2½ to 8. Wide widths. **Order by No. 52A268. Send no money. Pay only $1.98 and postage on arrival.**

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Black or brown leather trimmed.

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Dressy, sensible, low-heeled Sport Oxford for women. Wonderful value at this low price. Has excellent grade white canvas uppers with black or brown kid finished leather tip, ball strap, eyelet stays and heel foxing. Flexible, white Fiber Rubber Soles with white rubber heels. Wide widths. Sizes 2½ to 7. **Order brown trimmed by No. 52A310. Order black trimmed by No. 52A311. Send no money. Pay $1.79 and postage for either color on arrival. State size.**

Patent Leather Mary Jane SLIPPER

99c Up



This popular practical warm weather dress slipper is amazingly low priced, quality considered. Uppers of splendid grade black patent leather. Soles of genuine oak leather; flexible but strong. Pliable uppers; low heels; neat bow front. Comes in wide widths and all sizes from infants to big girls. **Order infants' sizes 3 to 8 by No. 52A364. Price 99c. Child's sizes 8½ to 11 by No. 52A365. Price $1.39. Misses' sizes 11½ to 2 by No. 52A366. Price $1.59. Big girls' sizes 2½ to 8 by No. 52A367. Price $1.79. Send no money. Pay bargain price and postage on arrival. State size.**

Sturdy Barefoot Sandal

79c Up



Most popular of all warm weather shoes for babies, children and growing girls. Wonderfully sturdy barefoot sandal of durable dark brown Russian leather. Soles are of heavy oak leather and **stitched down** to make them perfectly flexible. Insoles are of leather. Wide, roomy, comfortable, footform last. **Order infants' sizes, 5 to 8, by No. 52A360, 79c. Child's sizes, 8½ to 11, No. 52A361, 99c. Misses' sizes, 11½ to 2, No. 52A362, $1.09. Big girls' sizes, 2½ to 8, No. 52A363, $1.49. Send no money. Pay bargain price and postage on arrival. State size.**

MEN'S HIP BOOTS



Don't fail to make this big saving on men's pure gum hip boots: friction lined; heavy corrugated sole and heel; guaranteed first quality. Made of the very best rubber. Usually retailed at $5. Be sure to order your pair while this great saving offer lasts. Sizes 7 to 14. Wide widths. No half sizes.

$2.48

Order by No. 52A949. Send no money. Pay $2.48 and postage on arrival. State size wanted. Order similar style in knee boot, sizes 7 to 12, by No. 52A950. Send no money. Pay $2.48 and postage on arrival.

Give Size.

Stunning Style Dotted Voile

With Rich Organdy Collar, Cuffs, Sash.



This beautiful model in voile is a very striking design—right up to the moment in following fashion's dictates for spring and summer. It is also a mode that fortunately becomes every figure and a truly amazing bargain at our smashed price. Send today and judge for yourself.

$1.98

Made of standard quality dotted voile with modish panel - trimmed overskirt. The neat Tuxedo front, wide, flowing sash and deep cuffs on sleeves, are of sheer white organdy. Make this unusual saving now. Order your size in choice of three colors below. Sizes 34 to 46. **Order Light Blue by No. 52E6354. Navy blue. No. 52E6355. Rose No. 52E6356. Send no money. Pay $1.98 and postage on arrival for either color. Money back if not satisfied. Be sure to mention size when ordering.**

Striped Dress Shirts 79c



Mention Size.

Think of it—only 79c for this wonder value. Fine striped materials. Latest style front. Perfect fitting, full cut, splendidly made French sleeves. Furnished in assorted striped patterns. Sizes 14 to 17. **Order by No. 52B1538. Send no money. Pay only 79c and postage on arrival. Be sure to give size. Order splendid fiber silk dress shirts in beautiful assorted striped patterns, sizes 14 to 17, by No. 52B1522. Send no money. Pay $2.48 and postage on arrival.**

Brown Leather Work Shoe

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State Size



Splendid brown ooze leather work shoe

Heavy, durable uppers; extra strong solid oak leather soles; leather insoles; low, broad leather heels; leather loop pull strap and reinforced leather back stay. Roomy last. sizes 6 to 12. **Order by No. 52A758. Send no money. Pay $1.98 and postage on arrival. Order boys' sizes 1 to 5½ by No. 52A554. Price $1.89. Order little boys' sizes 9 to 13½ by No. 52A555. Price $1.79 and postage on arrival. Mention sizes.**

DURABLE OUTING BAL

Scout shoe of soft pliable brown leather. Absolutely guaranteed barnyard proof; reliable, sturdy soles; low, broad leather heels; leather insoles; reinforced leather back stay. Guaranteed to stand hardest wear. Wide widths. Sizes 6 to 12.

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Be Sure to Give Size.

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THE WASHINGTON FARMER
ESTABLISHED 1894
SPOKANE. SEATTLE.

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Railroads the Problem, Says Senator Norris

To the Editor of The Washington Farmer: I am in receipt of your letter of June 22d, in which you ask my opinion as to whether or not it would be good policy to permit the railroads to offer reduced rates upon the shipment of purebred stock for breeding purposes.

Your query opens up a very interesting question on transportation. To my mind, it would be good policy for the country as a whole, for the farmers, and for the railroads, if this reduction were permitted, under proper rules and regulations, by the interstate commerce commission. We would, however, have to guard against any abuse of the power so granted, and the reduction ought not be so low that shipments would take place at a loss.

In a much broader sense, I have been of the opinion for some time that the cost of transportation on our railroads is too great and ought to be reduced on everything. This must either be done or we must rebuild our entire system of business and of living. Transportation enters into the cost of everything that everybody uses in any way. There is nothing that we eat but what part of its cost is transportation. There is nothing that we wear but what is added to by transportation costs. We ought, therefore, to have a scientific system of transportation. The model system would be to take profit entirely out of it, the same as we do when we provide for the supplying of water to the citizens of a municipality. It is something that is of such universal use that it ought not to be used as a machine for the making of money or the building up of large fortunes.

In our system of privately owned transportation companies, all kinds of tricks have been resorted to in order to increase the profit. Fictitious values, the installation of water in the stock, the manipulation of contracts through a ring of managers by which the public is compelled to pay exorbitant freight charges in order to enrich the pockets of individuals, have put upon the shoulders of the American people a tax that is just as secure and just as definite as though it were a tax levied by an act of congress or of a legislature. We are paying interest on water that cost nothing when it was originally put into the stock.

I think the modern student recognizes that competition in the transportation business has long since disappeared. The railroads ought to be combined. The business ought to be a monopoly, and when you have gone that far, you are presented with the question of whether a monopoly ought to exist unless it is owned by all the people—the government. Personally, I believe the railroads ought to be owned by a governmental corporation, placed by law beyond the power of politicians to interfere in any way, either directly or indirectly, with their management. But if it is decided that this would be unwise, they ought at least be under one ownership, with strict governmental regulation. The distance between New York and San Francisco can be shortened by some 300 miles without the building of any additional railroad or the laying of any additional track except a few switches at transfer points. By the building of a very small amount, this distance could be shortened more than twice that length. The same thing can be said in practically every case when we are measuring distances between shipping points of our great manufacturing and distributing centers. A scientific arrangement would bring such a thing about. It would lessen the cost of transportation very materially.

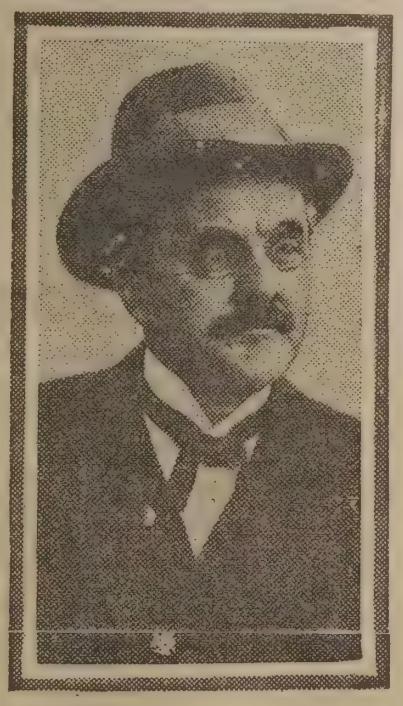
If the railroads are privately owned, every particle of water ought to be squeezed out. Great economies could be brought about by avoiding in through shipments the delay and the expense incurred in transferring at some of the great shipping centers, like Chicago, St. Louis, etc. In shipping from New York to San Francisco, Portland, Spokane, St. Louis, or any other similar points, the freight ought not be delayed by shipping it into a place like Chicago, and yet, under our present system, freight thus shipped goes into Chicago, is transferred two or three times by switching operations, is delayed several days, and the cost very materially increased.

Our people have not yet commenced to realize the importance of transportation, and have not commenced to study it on a scientific basis. Until they do, we have not mastered the question of the cost of living. It has more to do with it than any other one thing.

G. W. Norris

United States Senate Chamber, Washington, D. C.

United States Senator George W. Norris, who writes the accompanying letter to The Washington Farmer, was one of the 15 original members of the farm bloc in the senate, and is now a member of that bloc and chairman of the senate committee on agriculture and forestry. These facts give unusual interest to his discussion of the railroad problem. His letter is in response to one written to him and a number of other prominent men throughout the United States by the editor of THE FARMER concerning the question of railroads granting reduced rates on the shipment of purebred breeding animals to assist farmers in building up their herds and flocks.



Senator G. W. Norris.

With Senator Norris' proposition, that if the railroads are privately owned "every particle of water ought to be squeezed out," THE FARMER is in thorough accord. There must be vigorous government regulation, to the fullest extent that will be consistent with justice and reason.

We doubt, though, if a majority of American farmers want government ownership and operation of the railroads. The farmers and other producers have not forgotten that we had government operation of the railroads during and after the war, nor have they forgotten the costs of that operation—higher and higher freight rates, enormous yearly deficits that had to be made up by taxing the people, unsatisfactory service, repeated wage advances to the organized railway employees, the granting to them of easy working conditions by the politicians who were in control of the roads, and the enormous resultant burden that rolled back upon the producers and consumers.

Senator Norris couples his support of government ownership with the condition that the railroads be "placed by law beyond the power of politicians to interfere in any way, either directly or indirectly, with their management," but that seems an impossbile qualification.

Don't Fail to Read Our New Serial Story, "Pike's Peak or Bust"—Page 10

Live Stock in Kittitas County

By RALPH ERSKINE.

The second annual Kittitas county live stock tour in June was the occasion which afforded approximately 100 farmers and business men an opportunity to visit some of the larger live stock herds of the county. The above number does not do the event justice, since there were nearly 500 who turned out for the barbecued dinner. County Agent W. L. Davis, ably assisted by other leaders, had planned an excursion program and conducted the tour effectively.

The first speaker after the barbecue was C. M. Hubbard of the state college. "Efficiency in the production," he said, "has been traced back to the purebred sire. One estimate brings out the striking fact that purebred live stock have been found to be 40 per cent more efficient in production than scrub stock. This is on a milk, beef or pork production basis and not from the sale of stock for breeding purposes. The extension service is making an unusual effort to increase the number of purebred stock in the state, believing that the entire country will be benefited as a result."

The president of the county farm bureau, C. B. Woodhouse, emphasized the work that the boys' and girls' clubs have accomplished, and said that in some cases they are even doing better than their parents. "Under no circumstances," he said, "can a farmer afford to raise scrub stock of any kind, especially if he is a poor man. In fact, the only one who can possibly afford to keep scrub live stock is the man who can afford to lose money. The farmer with small capital can not afford to take chances and should not make an attempt to raise anything but registered stock.

Duncan Dunn of Wapato emphasized the importance of the study of the taxation problem, the value of our educational institutions and the excellent work that is being carried on by our experiment station and extension service.

The tour itself started at 8:30 at the George Harvey farm, near Thorpe, when an exhibit of Chester White sows and litters was shown by five of the Kittitas County Boys and Girls' Chester White Swine club. The boys exhibiting at this place were: Elmer Harvey, Leonard Newman, Merle Yearwood, Ivan Hutchinson and Lewis Edes. A pen of five lambs, all of which were from two ewes, each of which had triplets, or a 300 per cent increase, was shown. One of the lambs was not shown in the pen.

The second trip was at the Paul Birr poultry farm, who has a modern laying house with a 1200-bird capacity. At present Mr. Birr has but 800 hens, but is raising 2200 young birds, pullets from which will be added to the flock and the cockerels sold as fattened. Partitions are set in as needed to afford room for the young birds until they are large enough to be placed in laying houses to themselves. Mr. Birr has but 10 acres of land, and makes no attempt to raise his grain, but raises an abundance of green feed. Runways are arranged both in front and at the back of the house, using the former for the old birds, while the young chicks are given range in the pens at the rear, where they have access to alfalfa pasture. Oats was seeded in the pens for the older birds, but they soon cleaned it out and are now being fed alfalfa. Mr. Birr uses the trap-nest system and believes that it more than pays for the extra labor needed, since it gives him accurate records on all birds in the flock.

At the J. Alva Bull farm, on the opposite side of town, the Shorthorns were tied to the fence under some large shade trees. Ten of the animals, including the herd sire, belong to Mr. Bull, while two steers were exhibited from the Hercules Baby Beef club. Roy Bowers brought his three head of polled Ssorthorns, one of which was a 2-year-old herd bull, Headlight. Mr. Bowers is getting started with this type of Shorthorns and expects a large per cent of his calves to come without horns.

The swine pens were another source of interest on the Bull farm and the six head of Berkshire brood sows were penned up temporarily for exhibition. The sows have access to a large alfalfa pasture, the dry sows getting no grain in addition to the pasture, and yet they are in excellent condition. The herd boar, Riverby Duke 7th, is sired by Royal Dominator the 4th.

At the D. B. Jeffries farm were five Shorthorn heifers and one bull, all of which came originally from the Duncan Dunn herd of Wapato. Three of them were owned by C. B. Woodhouse. All showed uniformity in type, were in good condition, and showed the results of good care and management. A pen of six Hampshire lambs was exhibited by one of the county sheep club members. Six Hercules Baby Beef club steers were also shown at this place.

At the Ernest Wilson farm were shown the lambs from the Blastock ewes, which Mr. Wilson is keeping on partnership basis. Mr. Blastock, president of the American Hampshire Breeders' association, imported a number of these rams from Europe. Part of them are kept at Filer, Idaho, and the rest on the Wilson farm at Ellensburg. The lambs were in excellent condition and a number of them had gained more than one pound per day for the first 100 days.

In order to avoid unnecessary delay with other stops some of the club sheep and pigs were exhibited at this farm as follows: Four Hampshire lambs owned by Carol Robinson; Chester White sow and five pigs owned by Florence Robinson; six pigs owned by Ward Rugh; sow and nine pigs owned by Helen Kreagre. Gene Wilson and Bill Walgren each showed their two head of Hercules Baby Beef club steers.

At the Nichols and Plunkett farm the entire Jersey herd was tied to the fence in order that the crowd could give each animal a close inspection. The 8-year-old herd sire, Brown Lad's Rioter, was the first in line. His grandsire has three daughters in the register of merit class, one with a record of 700 pounds of butter in 10 months. His dam has a record of 640 pounds of butter as a 3-year-old, which was the state record for the age at that time. The younger bull, Majesty's Cowslip Noble, a 4-year-old, is of Island breeding and carries a large per cent of Oxford blood, and also traces back to Noble of Oaklands. The bull has three half sisters in the register of merit class, one having a 711-pound butterfat record. While only four of the cows are of mature age they have made records of which any herd should be proud. Brown Lad's Cowslip, a 6-year-old cow, is the first gold medal cow for Kittitas county. She made 15,017 pounds of milk and 711 pounds of fat, milking as high as 60 pounds per day and averaged 50 pounds a day for six months.

After the picnic dinner and program at the farm of Mrs. Olive Sanders the crowd were made welcome on the Willow Wood farm and inspected the Shorthorn herd owned by Mrs. Sanders. There are 70 head of registered Shorthorns on the entire farm, some of which come from the Frank Brown herd in Oregon. One of the herd bulls, Diamond Perfection, is one that Frank Brown used for two years. The other herd bull is Sir Gainford Guard, sired by Gainford Guardian, also owned at the time by Frank Brown. All of the animals show excellent type. Mrs. Sanders expects to build up the herd to about 200 head.

Forty head of purebred Holsteins are kept on Lockwillow farm, which is part of the Willow Wood estate. R. L. Rutter, the owner, gives his entire time to the management of the herd and sells the milk for wholesale trade. One cow, Cascade Maggie, a 9-year-old, made 1107 pounds of butter and 26,600 pounds of milk, thus giving her 16th place in her class. Her best day's record was 110 pounds of milk, but made 704 pounds as a seven-day record. Daisy Blossom Fayne, a 4-year-old, was 17th in her class. The herd bull, Cascade Sir Blossom Fayne, was sired by the Todd bull, Sir Johanna Ruth Fayne. Mr. Rutter is doing some constructive breeding and expects to make further records by careful feeding and management.

Spokane Pioneer Picnic

The 30th annual picnic of the Pioneer Society of Spokane County will be held at Manito park, city of Spokane, on Saturday, July 15, 1922. "Come early and bring your lunch," says the announcement. "Ice cream and coffee provided by the society. A fine program of music and speaking has been provided. Come and meet your old friends of the pioneer days."

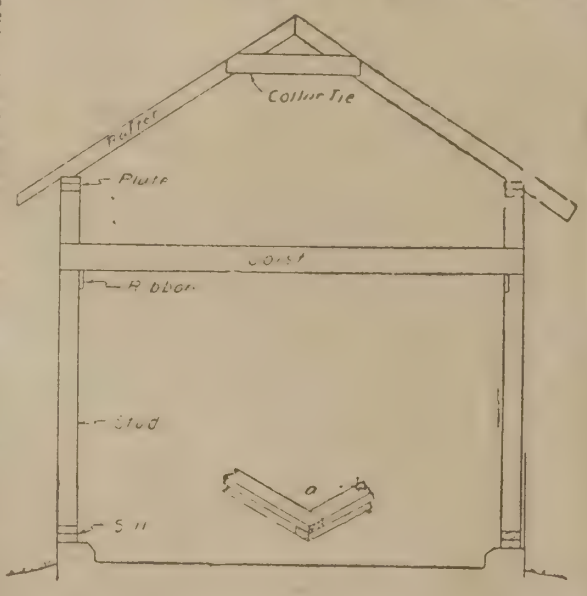
GET AT THE SOURCE.

The place to destroy flies is in the manure pit, slop pail or other places where they breed. Prevent them.

Construction of Small Buildings

By PROF. L. J. SMITH, W. S. C.

There is a lot of small building construction about the farm that the average owner should be able to do for himself at odd times. This work is not so difficult to pick up Implement sheds, work shops, garages and poultry houses are not so hard to build as they look.



A lot depends upon the attitude one takes in regard to work outside his regular line. The man behind the counter in our cities would be tickled to have a chance to mess around with tools and build some small building. His job at the same old little spot year in and year out gets pretty monotonous, and he enjoys the big outdoor life of other men.

The first thing in building is to know some of the principles of framing. The figure herewith will be of assistance. After the foundation is ready, the first wood laid down is the sill. It is bedded level in cement-lime mortar, the surface in contact with the cement being well coated with creosote to prevent rotting. In windy localities, the sill is bolted to the concrete every six or eight feet. At the corners, the sills are lapped as shown at "A".

For farm buildings, the studding are usually set up two feet from center to center. It will save time to mark the spacing for the studs on the sill. In a small building, the plate may be spiked to the upper ends of the studs, and the whole side set up on the sill at once and the lower ends well toenailed to the sill. Be very careful to get all studs the same length. Use one stud as a template; don't measure each one individually. The ribbon, or ledger board takes the strain off the joists, though each joist is well nailed to its stud. Often the ribbon is notched into the studs for greater strength.

The laying out of the rafter is the most difficult part of the job. Another article will explain this most important step in building construction.

In small buildings the collar tie is usually one inch thick. If there is to be no loft to the structure, the collar tie can be left out and the joist is then put up on the plate and acts merely to support the ceiling, if any.

Now let us spend a few moments on the slope or "pitch" of the roof. To get the pitch of a double slope or gable roof all you have to do is to divide the "rise" or vertical height of the roof by the "span" or the width of the building from outside to outside of studding. For example, if the span of a building were 16 feet and rise of the roof 8 feet, the pitch would be one-half. One-half, one-third, and one-quarter pitch roofs are most commonly used, though many like the three-eighth pitch roof. If the building were 16 feet wide, a three-eighth pitch would give a rise to the roof of six feet.

Watch for Professor Smith's discussion of the rafter in an early issue.—Editor.



Warped shingles on your roof?

Shingles exposed to drenching rains, hot sun and wind, soon lose the strength stored in them by nature, Oils and sap evaporate, the wood becomes brittle. Warping and cracking are sure to follow,—*unless shingles are given preservative treatment.*

The time to secure continued life and service for shingle roofs is before the natural oils dry out. ORONITE SHINGLE OIL penetrates the wood fibre and holds in their original strength. It keeps your roofs tight and firm—helps *prevent* warping. In the case of old roofs, ORONITE SHINGLE OIL renews their life.

You can mix ORONITE SHINGLE OIL with colors. We have an agent near you who will give you formulas—also show you how easily ORONITE SHINGLE OIL is applied, both to roofs and shingled side walls.

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THE WASHINGTON FARMER

SUCCESSOR TO

Vol. 47. No. 2 THE RANCH PACIFIC DAIRYMAN HORN AND HOOF July 13, 1922

For Good Farming, Attractive Country Homes and Happy Country People

Farming Must Be Made More Profitable

N. B. Coffman, President of the State Chamber of Commerce, Outlines Undertaking of That Body

Upon his election as president of the Washington State Chamber of Commerce, N. B. Coffman of Lewis county announced that rural upbuilding would be made one of the chamber's leading objects under his administration. Recently the chamber held sectional meetings throughout the state at which representative farmers and business men were present to discuss the work of the organization for the ensuing year. President Coffman attended the meeting held at Kennewick and there presented in brief form his plan for the rural upbuilding work. The Washington Farmer is pleased to present herewith a condensation of his statement on that occasion.

This movement marks another step in the rapidly increasing acknowledgment of the fundamental principle for which THE FARMER has always stood, namely, that the state of Washington as a whole can prosper only as its farming industry prospers. To whatever degree the commendable movement launched by the state chamber of commerce abides by that principle, to that degree can the movement succeed and to that degree it has the unstinted support of The Washington Farmer.—Editor.

The ambitions of the state chamber of commerce is to work out a program for uniting all of the organizations of the state, aiming to work concertedly and in conjunction, so far as possible and acceptable, with the administration departments of the state and the state legislature in plans for betterment of agricultural conditions and in support of definite local and statewide irrigation, land clearing, land redemption and land settlement projects.

The need for such a united movement in this state at this time is a crying one. The state chamber of commerce assumes that it is the natural nucleus for such a movement.

The object of these meetings, therefore, is an appeal to all communities for enlistment—to fall in line—to back up the efforts of this organization.

It is a call to the whole state to speak as with one voice and act as with one purpose in support of a definite program for rural betterment through enlargement of vision and broadening of the scope of organized effort.

It can include study and work for betterment of farm marketing and for reduction of transportation costs, support of the Smith-McNary reclamation bill, indorsement of the Columbia basin irrigation project, tackling with renewed vigor the problem of clearing cut-over lands and the reclamation of swamp and tidelands, getting behind the big projects for hydroelectric power development and pushing along reforestation.

Increase of population in the state is almost at a standstill. The tide of immigration must be turned our way. We must have something big and outstanding in opportunity to attract and impel the people to come to Washington. The lure of the land is still the elemental call to the emigrant. The opening of large additions to our agricultural areas will supply the magnet which will attract settlers in swarms and renew and enlarge local sustenance to commerce, trade and industrial enterprises.

The Basic Problem.

But, after all, opening of new agricultural areas and increase of population does not go to the heart of the rural problem. The slogan adopted is "Rural upbuilding." Upbuilding contemplates soundness and permanence of foundation.

It is more important that agriculture prosper than that it multiply.

The primary place to look for betterment is on the farms that are now being cultivated.

Take the United States over, what is going on in the rural districts is not land development, but farm abandonment.

Farming must be made more profitable before there can be sound and permanent rural upbuilding.

The whole trend of population and wealth is increasingly toward the cities, and that trend is the result of rural failures, discouragement and dissatisfaction. The farms of the United States are not yielding adequate returns to those who till them. The farmers of the state of Washington can not be expected to become enthusiastic over projects looking to a large increase of new agricultural areas, fostered and made possible through government aid, so long as the products which they are now putting on the market yield but slightly more or even less than the cost of production.

We have not taken up the whole or most vital problem of rural upbuilding until we have included in the questions to be studied and solved those of marketing at a profit to the producer and of transportation that shall eliminate the flagrant waste of the unnecessary haul, measured by both miles and commodities.

These problems of marketing and transportation go back to the question of consumption of home products to which the educational department of the state chamber of commerce will give increased attention—problems that now contribute toward blocking the way to successful farming.

It is these problems that stand in the way of reducing the cost of living. They are keeping the economical development of the state out of balance. The condition of those now engaged in farming must be had in mind while we are providing for multiplying agricultural areas and the volume of farm products.

The welfare of the agricultural districts of the state which do not require irrigation, the districts given over to general farming, to dairying, poultry raising and small fruit raising must be included in the program of agricultural betterment, along with the orchard, alfalfa and arid land reclamation districts.

An agricultural movement that is planned to be made statewide must appeal from the standpoint of benefits to every part of the state and to all kinds of farming.

The Comprehensive Plan.

This, then, is the comprehensive plan of work laid out by the directors of the state chamber of commerce. To put it forward calls for cooperation arising out of faith and confidence—faith and confidence in each other united with a common effort to accomplish a big purpose. It calls for whole-hearted and generous support. It must be based on the conviction that each unit of the organization is best accomplishing its own upbuilding by working unitedly with all the other organizations to a centralization of effort for the betterment of all. Cooperation must be secured from the smallest and most remote and extend throughout the state until it ties in the biggest and most influential. It must bind together every city, town and rural community, and embrace the most remote farm, factory, mill and mine. Small differences must be buried beneath an effort to obtain big benefits.

Size of Apples

Affects Price on General Market

Figures computed by Yakima shippers show that Jonathan apples of the extra fancy grade averaged 30 cents more a box than did the fancy grade of the same size. This was 90 cents more than the same size apples of the C grade. As a comparison of sizes in the extra fancy grade, 96 to 125 apples per box sold for 80 cents more per box than the size of 175 and smaller. This indicates that thinning can be made to pay by increasing the size of the apples even at the expense of a larger number of smaller ones. In many instances it takes but a little increase in the size to make apples grade in the next larger pack and this can be accomplished by thinning. An increase of one-sixteenth of an inch in the diameter of the 175 size apples will put it into the 150 pack which has a greater value.

Estimates made in the Wenatchee district last year show that the cost of production of 348 boxes to the acre was $1.52 a box, while in orchards where the yield was 1000 boxes to the acre the cost was only 88 cents a box. While the larger size apples can be had by thinning, there are many other factors that enter into the game, such as careful pruning, spraying and irrigating. The soil also has much to do with the production of a profitable crop.

Many of the growers have come to the conclusion that the eastern consumer is paying all he ever will pay for the northwestern apples and the only way for the producer to increase his profit is to lower the cost of production.

Saved His Pig

To the Editor of The Washington Farmer: I want to tell you what The Washington Farmer did for me. Not long ago a neighbor told me of your paper, which I started taking. About five months later my pig took sick. I looked back through the veterinary questions in The Washington Farmer and I found just the way my pig acted, so I started with the prescription it gave, and today my pig is well. If I had not done this I do not believe I would have him today. E. MABBUTT.

Edmunds, Wash.

Combining With Motor

As Compared With the Ground Power Combine

R. N. MILLER, Specialist in Farm Management, Washington State College.

"A dollar saved is a dollar earned." The keynote of more economical harvesting was struck by progressive farmers of Adams county when they began to keep accurate records of the cost of harvesting wheat, comparing ground power combines and the combine with a motor. The extension service of the state college, through the local county agent, was asked to assemble and tabulate the figures.

B. B. Gillespie, Frank West, Frank Benwood, Henry Bauer, J. N. Wellsandt of Ritzville and Washtucna and seven others have observed the high cost of harvesting wheat and last year offered the records of their harvesting cost for comparison.

"The big question we want to settle," says B. B. Gillispie, who is the leader in the work, "is whether the motor on a combine is economical or not. In cooperation with N. C. Donaldson, county agent, we are going after the facts. We have asked that the records show the first cost, interest, depreciation, insurance, repairs, amount cut per day, efficiency in saving wheat, the actual pull of the different machines, and other facts necessary to get the real costs."

The records for the first year show that it cost $2.59 per acre to operate a combine, regardless of the power used, pile the sacks ready for handling and pick up the straw for winter use. For a 20 bushel per acre yield the cost per bushel would be 13 cents, for a 25-bushel yield 10.3 cents.

The average cost of the combine with motor was $3629, the average interest on the present value was $175.54, the yearly depreciation was estimated at $325.57; acres cut per machine, 694; acres cut per day, 39.2, and cost per acre, $2.81. The gas and oil cost was 7 per cent of the total, the man labor cost 33 per cent and the horse cost 19 per cent, leaving 41 per cent for interest, depreciation and overhead. No sum was added to cover the value of the farmers' managerial ability, for most of these men took a hand in harvest. This year an effort is being made to approximate this charge.

The ground power machines last year harvested an average of 653 acres apiece. They cut 30.2 acres per day and cost $2.09 per acre or at a saving of 25.6 per cent over the combines with a motor. For a 20-bushel crop the cost was 10.4 cents per bushel, for a 25-bushel 8.4 cents. The average first cost was $1800 as the machines were old, one being a "used machine" that cost the present owner $400.

A study of the records shows a wide variation in cost. The highest cost per acre was $3.36, the lowest $1.93, a difference of $1.43 or 7 cents per bushel on a 20-bushel crop. The use of a motor did not seem to reduce the number of horses used, but the machines may have pulled easier.

The farmers have asked the extension service for a dynamometer test of the "pull" of the two types and arrangements are now being made for this test. The interest taken is keen and 10 more machine owners have offered their harvest records for 1922. The work is being done on a five-year project and will be completed in 1926.

While results from a one-year study should not be considered conclusive, it would seem that the ground power combine can be operated at the least cost in the Ritzville section. Additional cost records will be followed closely.

Berry Festival

Elma Holds First Annual Event

Grays Harbor has started a new undertaking which is proposed to encourage strawberry growing. On June 27 the citizens of Elma held their first annual strawberry festival along one side of the paved street in the center of town.

Long tables were placed and the crowd was served with all the strawberries and cream they could eat, and plenty of cake to go with it. Everything was free to the visitor, but his attention was called to the fact that the climate and soil conditions in the vicinity were ideal for producing an extra quality of dark red, solid strawberries. Twenty crates of strawberries were furnished by the local berry growers' association, while 25 gallons of cream was supplied by the county dairymen's association. Seventy-five cakes were furnished by the ladies of Elma.

Since this district lies between the Puget sound section and the Harbor country there is very little foggy weather, and the berries are said to ripen more naturally, are uniform in size and have a very sweet flavor. Farmers of this locality were urged to plant more strawberries, as well as other small crops, all of which can be grown to a good advantage. The local berry growers' association has already shipped a number of loads of berries to the Seattle market.

Music and speaking completed the program for the evening, and the event was declared to be the first of a series of annual festivals of a similar nature. It is planned to have a greater display of varieties of berries and awards given for the best display for next year's festival. Much of the success of the festival was due to the efforts of J. J. Anderson, who was chairman of the committee in charge of the celebration. William Harding, William McBride and H. R. Solinger, all of Elma, did much to complete the program and to make the affair a success. Mrs. Leo France, Mrs. H. B. Dollar and Mrs. Dinsmore rendered valuable assistance in preparing the tables.

Will Hold Potato Show

The agricultural bureau of the Spokane Chamber of Commerce has approved the holding of the second annual potato show in Spokane, and referred the matter, with its approval, to the chamber of commerce.

Enough has been done in the way of growing seed potatoes in and around Spokane, especially in the counties to the north in Washington and Idaho, to show that a high quality of seed potatoes can be produced in this region.

Not only has the growing of seed potatoes been stimulated by the potato show last winter, but a better quality of table potatoes has been grown, for something of the same care required in growing marketable seed potatoes will produce a superior quality of table potatoes which will command a price in excess of the additional costs in raising them.

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The Way to Lower Taxes

As pointed out by Manager Livengood of the Spokane County Taxpayers' league in a recent article in The Washington Farmer, the way to bring about lower taxes is to stop spending so much public money. We have become a nation of public spendthrifts, says Mr. Livengood. There is nothing too good for us to have, and it is seldom too high-priced for us to afford it.

It does no good for us to complain about the price of an article that we have ordered, after it is delivered to us with the bill for it. At the time of ordering we should perhaps think less about the desirability of the article and more about the difficulties we shall encounter in raising the money to pay for it.

The way to reduce taxes is to sacrifice a few of our desires and buy less with the public money.

The Dog and the Sheep Business

Although 48 states have dog laws designed to protect sheep, many of them are so poorly planned or so poorly enforced that dogs still do much damage to flocks, especially in the farming states where flocks are small and dogs are plentiful. There is need for improvement in these laws, but, says the United States department of agriculture, a poor law that is enforced with energy may produce better results in sheep conservation than a much better law that is half-heartedly enforced. Dogs keep many men from going into the sheep business, which is probably a greater setback to the industry than the actual damage done by them.

The Purebred Business

"One of the main differences between the business of running grade cows and that of breeding purebreds is the difference in the character of the main income producing product. In the one case it is milk, and in the other live stock," said A. L. Gile of Chinook, Wash., "and the problems of disposing of these two products are fundamentally different. Into that of selling purebreds the element of salesmanship largely enters, and production back of the animals is of paramount importance. The pure breeder is therefore almost compelled to show his animals from time to time in competition and to do official testing. He must maintain personal contact with his own world of breeders and he must study the art of selling. I am of the opinion that in the large majority of cases, at least, the pure breeder should first have been successful with grades, and I am coming to feel more and more that any well established breeder who can not show something in the way of definite type in his herd has a long way yet to go. On the other hand, we are a long way from knowing all about the science of breeding cattle, and sometimes when I hear this one or that one confidently air his knowledge of the subject, I think of the modest way in which the late Lathrop Ames, perhaps the most constructive breeder of Guernseys in the country, once told me that the more he studied the subject the more he was conscious of his stupendous ignorance. It would be well for the industry in general if we could have more of this recipient spirit, and of the feeling that all pure breeders are working toward the same general ends. I never think of a Holstein or a Jersey breeder as a competitor and I haven't time to argue with any one over the merits of his favorite breed."

Mr. Gile's Chicona farm herd is known among Guernsey breeders the country over as one of the good examples of constructive breeding in the Pacific northwest, and while his primary business is that of running a cannery, it is easy to see that a "horse of another color" occupies first place in his affections.

Iowa Eggs and Washington Wheat

Iowa farmers receive more for eggs than the wheat farmers of Washington receive for their wheat crops. Iowa claims to rank first as an egg-producing state. Its total income from that source last year amounted to about $51,376,000, according to State Food Commissioner Barney.

That is approximately what the wheat farmers of Washington received last year for their 54,652,000 bushels. But last year's crop was a heavy one. The state's wheat crop in 1920 was 41,665,000 bushels and the 10-year average from 1911 to 1920 was 43,000,000. With wheat averaging $1 a bushel, its yearly value in what we term the Inland Empire—that is, eastern Washington, northern Idaho and eastern Oregon—would about balance the value of the egg production of Iowa, for the $51,376,000 worth of eggs which Iowa marketed last year did not take into account the large number consumed on the farms in the state.

The average farm price for eggs in 1921 was 38.6 cents, which means that 133,100,000 dozens of eggs were marketed. In the 12 years from 1910 to 1921 inclusive the average price of eggs on the Iowa farm ranged from 12 cents in July and August, 1911, to 64 cents in November, 1920. In 1920 the average price ranged from 37 cents to 61 cents, and January, 1921, started off with an average price of 49 cents. Then came a slump, and the average price in April, 1921, fell to 18 cents.

While on this subject we note that President Barbour of the United Pacific Coast Poultry association and Professor James E. Rice of Cornell university are working at Washington for an 8-cent instead of a 6-cent tarif on frozen eggs, and 24 cents, instead of 18 cents, on dried eggs.

"We need a tariff," said Mr. Barbour, "not to keep Chinese eggs out, although it would not hurt our feelings if that resulted, but to make it safe and certain that the American egg-freezing and drying industry can come back to this country. There is a tremendous possible supply of eggs in this country. The poultry industry will easily expand to supply all our needs, and much beside, if we can have a market for the surplus through drying and freezing plants.

"Under free trade these plants have shut down and the machinery moved to China. We have been careful and conservative in our figures and estimates and we know that the industry can not be rebuilt here on the basis of a 6-cent and 18-cent tariff. The 8-cent rate and the 24-cent rate are not too high. We are insisting on these two changes."

Let the Train Pass First

Figures filed by the interstate commerce commission show that at railroad grade crossings in this country last year 1072 persons were killed and 4818 were injured.

The wise suggestion is made to observe the rule, "Let the train pass first." This is a pointer for every automobile driver.

State Farm News

Snohomish county is fairly provided with means to take care of a largely increased output from the soil and from the dairy farms, it is reported. There are four fruit canneries in the county and four big condensaries. The last census accounted for 16,000 Snohomish county cows and gave credit for the annual production of 85,000,000 pounds of milk. Poultry is raised everywhere, but the main center of the industry is at Alderwood, between Everett and Seattle, from which point a weekly average of three carloads of eggs are shipped.

The biggest pear orchard in the state and the largest privately-owned berry farm in the Pacific northwest are both located in Snohomish county.

* * *

A prune harvest festival will be held at Vancouver again this fall, with the Vancouver Prunarians sponsoring the show, which will exploit the prunes grown in Clarke county. Dr. Herbert C. Lieser, Big Prune, will appoint all of the necessary committees as soon as possible.

* * *

Fruit thinning demonstrations, under the supervision of M. D. Armstrong of the Washington State college, were held in the vicinity of Bellingham June 19 and 20.

Demonstrations were made on the farms of E. S. Cingmars, near Ferndale; C. C. Ireland at Mountain View; Arthur Rogers, Laurel, and E. W. Bays, Lynden.

At each farm two similar trees were chosen for the tests; one was thinned and the other was left with its natural crop. In the fall of the year the apples will be picked from each tree separately, sorted into grades, and the test made for the benefit of the county fruit growers.

* * *

Fifty Kittitas poultry raisers visited the Yakima branch of the Washington Egg and Poultry association June 23. It was said that future affiliation of the visitors with the association was likely, in which event they would market through the Yakima warehouse.

* * *

Prices announced late in May by the Washington Growers' Cooperative association for 1922 prunes range from 6 1-2 cents per pound for 80-90s to 11 cents for 40-50s, in 25-pound boxes f. o. b. Vancouver, Wash. The price will be uniform in Washington and Oregon, but charges for packing and freight will be deducted from the amount due grower-members on this basis. About 40 carloads had already been sold in advance of the announcement.

* * *

The people of Toledo June 25 held their annual cheese carnival to celebrate the organization and continued operation of the Cowlitz Valley Cheese association, which began operations three years ago as a cooperative plant owned by the farmers. Dr. E. O. Holland, president of the Washington State college, Pullman, and T. J. O'Conner, secretary of the state chamber of commerce and secretary of the Chehalis Citizens' club, were the speakers. During the first three years of operation, ended December 31, 1921, the association handled 8,145,371 pounds of milk produced by the dairymen, for which they received $225,003.71 net.

* * *

Excavation for three new concrete grain tanks, with a storage capacity of 30,000 bushels, has started at the Big Bend mill at Davenport, the work being in charge of James Scott of Davenport, who has a crew of 10 men at work. Manager T. A. Lantzy of the Big Bend Milling company stated that the tanks will be ready for use by August 1.

* * *

The Washington Growers' Packing corporation has a force of girls hulling small strawberries at the packing plant and packing them in paraffin-lined barrels with one part sugar to two parts berries, says a Vancouver report. These will be placed in cold storage for shipment to eastern sirup and jam manufacturers. This is the first attempt to dispose of the smaller berries in bulk and is more or less of an experiment. The number of crates disposed of through the association will not be known for some time, but the amount of berries handled will fall below the crop of last year.

* * *

The Maggie Johnson ranch, near La Center, composed of 80 acres, has been sold to Gustave Goodis, proprietor of the Orpheum restaurant at Vancouver. About 65 acres of the farm is under cultivation and well adapted to grain and hay crops.

* * *

Arthur Frank, plant pathologist of the western Washington experiment station, started experiments at the A. S. Caton farm west of Olympia recently to check the strawberry root weevil menace.

Heretofore no method to control the weevil has been discovered, and its prevalence has been halted only by plowing up strawberry fields, a "killing-to-cure" system, farmers declare.

* * *

Produce men estimate Walla Walla county will harvest and ship over 700 carloads of onions this year. This will be 50 carloads more than were shipped during 1920 and about 200 more than last year. The onion harvest will start about July 20.

* * *

Pacific cranberry bogs were hard hit by a late frost, C. A. Hunley, special cranberry inspector for the department of agriculture, reported to the department recently. Several bogs lost from 50 to 75 per cent of their crop, the majority sustained a loss of from 5 to 20 per cent, while a few escaped entirely, the report said. The temperature dropped to 32 degrees, according to the government observer there.

* * *

At the meeting of the Lewis county Guernsey breeders at Chehalis June 20 the Lewis County Guernsey Cattle club was organized and officers elected and bylaws adopted. The officers chosen were J. F. Saliger, Chehalis, president; P. H. Thomsen, Centralia, vice president; R. H. Taylor, secretary-treasurer; L. J. Pettitt, Centralia, and J. D. Haight, Chehalis, together with three first named officers, will constitute the executive committee. The bylaws provide that the annual meeting shall be held in Chehalis on the third Saturday of January of each year. Any owner of a purebred Guernsey sire is eligible for membership.

Holstein breeders of this county have a strong club, and the Jersey men have an active organization. The Holstein club will hold an annual business meeting and banquet in January of each year and an annual picnic at some time each summer. This year the picnic will be July 26 at Alexander park, at which time the better sires delegation, which will be touring the state, is to be entertained.

FARM BUSINESS AND MARKETS OUTLOOK

Receipts of cattle during June were considerably above the average for that month.

Interest in feeder market is keen as the corn belt is well supplied with feed, although the new corn crop is not yet assured.

Receipts of hogs at Chicago during June were the second largest since 1899.

Wool prices have receded slightly but growers are resisting the decline so that only small sales to dealers have been made at country points in the last two weeks.

Unofficial estimates on spring wheat are about 15,000,000 bushels higher than a month ago.

Exporters have been buying a good deal of corn recently and prices have been stronger than for other grains.

Egg market is fairly stable again after the recent decline.

Butter receipts are falling off in spite of the attraction of relatively high prices confirming the general belief that the peak of the flush period has been passed.

Receipts of dressed poultry at the four leading markets since January 1 amount to 90,669,188 pounds compared with 78,665,643 pounds to the same date last year.

Cattle Market Two-Sided

The cattle market promises to remain a two-sided affair during the next two or three months. Corn-feds advanced to a new high of $10.20 at Chicago last week under a dwindling supply which is likely to bring a still higher level before summer is over. In-between grades also advanced because of a light run influenced more or less by the national holiday and because of a higher dressed beef market.

Grassy steers on the other hand remain in a weak position and the price trend still appears to be downward. Steers from grazing sections reputed to put on "hard flesh" are a possible exception.

Butcher she stock is in much the same position as steers except that the upper crust of well-finished kinds which can be sold to good advantage is thinner. Canners and cutters become more abundant during the summer and fall. Bulls usually are most numerous at the inception of the range cattle movement.

Receipts of cattle during June were considerably above the average for that month, casting doubt on cattle shortage theories on the one hand and revealing a broad demand for beef on the other as good prices were paid for the supply.

The veal calf market has been in the throes of vicissitude, but has begun to recover, following improvement in the dressed trade.

Good Feeder Market Assured

July on the average is the month of smallest shipments of stocker and feeder cattle to the country and frequently it is the period of lowest prices. Demand generally increases 50 per cent during August, but during the range run, thin steers are numerous so that prices do not respond much to the increase in purchases.

Interest in the feeder market is keen as the corn belt is well supplied with feed, although the new corn crop is not yet assured. The satisfactory outcome of most feeding operations last winter will also help the demand for thin steers. Prices may go a little lower depending on the rate at which range producers sell, but prices probably are not far from bottom and an active market is assured right along.

Hog Market Remains Firm

Receipts of hogs at Chicago during June were the second largest since 1899. Other markets also were supplied. Prices on butcher and bacon grades continue to hover near $11 at Chicago, which has been the stopping point on numerous upturns in the last two months. The strength reflects the breadth of consumptive demand and the confidence of buyers that any surplus of hog meats and lard will find a good market a little later on. Receipts of hogs should taper off in the next few weeks and an upward price trend is quite probable.

Average prices at Chicago have been lowest since last March, but the loss has been due to lower average quality rather than to the general trend of values. Discarded brood sows are numerous.

Range Lamb Movement Starts

Although the range lamb crop was expected to be late, a number of loads of Idahoes have already arrived at Omaha and Chicago and rather heavy loading are being made in the first half of July. The advance guard sold at around $13 to $13.50 at Chicago with feeders out at around $12 to $12.50. The dressed lamb market has recovered its stride and prices are higher nearly all along the line in the sheep market. It is possible that lowest prices of the season have been uncovered as the balance of the native crop will be shipped more uniformly and westerns will not be crowded upon the market especially if the crop is 30 per cent short as reported from official sources some time ago.

Wool manufacturers appear to be playing a waiting game in the hope that the permanent tariff will be enacted in the next few months. Sentiment shows some revulsion against extremely high duties and this may show up in the wool schedule, although the Boston wool trade admits that the farm bloc is decidedly in the saddle when it comes to tariff making.

Wool prices have receded slightly, but growers are resisting the decline so that only small sales to dealers have been made at country points in the last two weeks. There is a keen demand for fine wools in foreign markets, but crossbreds are not moving so easily. About 35 per cent of the stocks of Merino wools in Australia were disposed of in the first quarter of the calendar year, whereas only 10 per cent of the coarser grades were sold in the same period.

In spite of the advance in prices, cloth markets are in good shape. Demand for worsteds, especially, has increased and there is relatively greater activity in combing wools as a result.

Good Wheat Crop in Prospect

The government's report on the condition of the winter wheat crop as of July 1 is expected to show a loss and may even fall below the final yield of last year. Comprehensive private reports now average about 40,000,000 bushels below the June 1 estimate. Threshing is fairly general and nearly all reports tell the same story of disappointing returns, although they run a little better than two weeks ago. Drought in the southwest last fall and winter, excessive rains during the blooming period and hot weather thereafter were the chief causes.

The loss in yield will be partly offset, however, by a gain in the estimated yield of spring wheat. Unofficial estimates on the latter are about 15,000,000 bushels higher than a month ago. The spring wheat is progressing favorably in practically all sections, although black rust has made its appearance as it does almost invariably at this season of the year. No serious damage has occurred thus far and the danger point will be passed soon. Canada has had heavy rains recently and a yield about 10 per cent larger than last year is predicted.

The spring wheat crop still must run the gantlet of a period during which dry weather frequently occurs and the black rust menace, but the excellent start thus far points to a fairly good final yield. It seems unlikely that the total yield of both winter and spring wheat will fall below the average of about 800,000,000 bushels. Private reports average about 825,000,000 bushels at present.

Europe Wheat Crop Smaller

Acreage of wheat in 12 countries of central and western Europe show a decline of about 3 per cent below last year. Owing to unfavorable weather the yield will not be generous, although damage from the same cause occurred last year.

Total shipments of wheat from exporting countries in the 12 months ended July 1, 1922, were 656,000,000 bushels. North America cleared 42,000,000 bushels, Argentina and Australia approximately 115,000,000 bushels each, the Balkans nearly 6,000,000 bushels and India 1,000,000 bushels.

Importing countries on the whole are expected to use about the same amount in the coming year.

Wheat is marking time at present as buyers are waiting to see how rapidly the new crop will come forward. Producers have not contracted much for future shipment, but a heavy movement direct from the threshing machine is quite probable. Mills are not buying ahead and foreign countries are not displaying anxiety, although both sorts of buyers must take large quantities in the next six months. The trend of prices depends largely on whether the movement to primaries exceeds or falls below the needs of buyers.

Rye Crop Looks Big

Besides a heavy carryover of old rye the new crop appears to be about 20 per cent larger than that of last year. The European acreage also is comparatively large. The harvest of the new crop in the northwest will begin in another week or two. Owing to the greater abundance of rye it is selling at a wider discount below wheat than its value for bread justifies. Unsettled political conditions in Germany are interfering with foreign outlets.

Although the oats crop is fairly good in some sections, most reports are unfavorable from Illinois, Iowa, Nebraska, Missouri, Ohio and Indiana, which are the chief surplus states. Unofficial estimates average about 100,000,000 bushels less than a month ago. Oats prices have responded to some extent to the poor outlook, but demand is not exceptional.

The corn crop prospect appears to be slightly less than the initial estimates last year. Exporters have been buying a good deal of corn recently and prices have been stronger than for other grains.

The range of cash grain prices for the week ending July 5 follows:

Chicago—Wheat: No. 2 hard, $1.16@1.19.

Corn—No. 2 mixed, 62 3-4@65c; No. 3 mixed, 62 1-2@64 1-2c; No. 2 yellow, 63 1-4@65 1-4c; No. 3 yellow, 62 3-4@64 1-2c; No. 2 white, 63 1-2@65 1-2c; No. 3 white, 62 1-2@64 1-2c.

Oats—No. 2 white, 38@42 1-2c; No. 3 white, 36 3-4@41c; No. 4 white, 35 1-4@40c.

Barley—58@67c.

Feed Markets Listless

Offerings of wheat feeds are comparatively light, especially from the northwest, but the demand is quiet and prices are unchanged. The cottonseed meal market is quoted lower in the east and gluten feed has declined about $2 a ton.

Prices per ton (100-pound bags) in carlots: Chicago—Bran, $17; standard middlings, $19.25; flour middlings, $25; cottonseed meal, 36 per cent, $47.50; 43 per cent, $51.50; hominy feed, $24; gluten feed, $28.85; old process oil meal, $46; tankage, $55.

Hay Markets Heavy

Only timothy hay is selling to good advantage at present. Pastures have become dry in a few sections, but thus far demand for alfalfa and clover hay has been limited. Receipts of new clover and mixed hay are fairly heavy. Unless the dry area spreads the trend is likely to be slightly downward until the movement of new hay has been fully discounted.

Prices per ton in carlots: Chicago—No. 1 timothy, $21@23; No. 2, $18@20; No. 1 light clover mixed, $18@20; No. 1 clover, $12@16; No. 1 clover mixed, $14@17; rye straw, $13@15; oat and wheat straw, $11@13 and $9@12.

Egg Market Steady

The egg market has become fairly stable again after the recent decline. Receipts at the leading cities have decreased 35 per cent or more from the high point of the season late in April and early in May, but there is still a surplus to be placed in storage, and such accumulation generally continues throughout July. Cool weather will help to maintain production during the summer, but under the most favorable conditions the supply is sure to decrease in the next 60 days, and prices on fresh eggs should take an upward trend before long. Whether they will advance enough to make the season a profitable one for cold storage operators is another matter.

Receipts of dressed poultry at the four leading markets since January 1 amount to 90,669,188 pounds compared with 78,665,643 pounds to the same date last year. Current arrivals are not sufficient to supply the entire demand, however, and cold storage holdings are being reduced.

Butter and Cheese

The butter market reacted moderately from the extreme levels reached when the recent order for low grades for export was being filled, but prices remain comparatively high. Receipts are falling off in spite of the attraction of relatively high prices confirming the general belief that the peak of the flush period has been passed. The supply is enough heavier than last year, however, to cut down steadily the shortage in cold storage holdings compared with a year ago. The net movement into storage continues at the rate of about one million pounds daily. Minor declines can be expected from time to time, but within a few weeks an upward trend should begin.

Prices on 92 score fresh butter July 5 were:

Chicago, 36 1-2c; New York, 38c; Boston, 38c; Philadelphia, 38c; San Francisco exchange, 42 1-2c.

Further advances were made in cheese prices recently due to strength in country markets, which have been setting the pace for the last month. Storage operators appear to have given up hope of being able to buy at lower levels and are purchasing rather freely. Storage holdings at the four leading cities are slightly less than at this time a year ago. Receipts are running about equal

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Market Grades of Eggs

There are no official grades for eggs, but dealers' associations have adopted standards which are in rather general use.

There are three main classes, "fresh gathered," "storage packed" and "refrigerator" eggs.

"Fresh gathered extras" must be "packed in new, white wood, 30-dozen cases unless otherwise specified," must "be free from small and dirty eggs" and from February 15 to May 15 must contain 90 per cent of "fresh, reasonably full, strong in body, sweet eggs," 80 per cent from May 15 to October 15 and December 31 to February 15, and 70 per cent from October 31 to December 31. The balance may be defective in strength or fullness, but must be sweet. There may be an average total loss of one-half dozen per case from September 1 to June 1 and one dozen per case from June 1 to September 1.

"Fresh gathered firsts" must have from 45 to 70 per cent of eggs of the same quality as "extras," similarly packed, and be "reasonably clean and of good average size." The total loss allowable ranges from two to two and one-half dozen per case.

"Fresh gathered ordinary firsts" consist of current receipts in whatever kind of cases is specified.

"Storage packed" eggs are those prepared for storage and must meet special requirements as to kind of wood, method of nailing cases, fillers and padding.

"Storage packed extras" must be of "good size, fresh, full and sweet and must weigh 44 pounds average per case and the loss must not exceed one to one and a half dozen per case, of which not over three eggs can be "rots" and "leakers," the balance being small, dirty, checked, shrunken or stained eggs. The checked eggs are not to exceed an average of 14 per case.

If these requirements are not fully met the eggs classify as "storage packed firsts," and if still less desirable as "storage packed ordinary firsts."

"No. 1 dirties" must be packed in new white wood cases, show good quality and sweet flavor. They may be "storage packed."

"Refrigerator eggs" are those which have been in storage and of course were originally "storage packed." The month in which they are placed in storage must be specified when sold. They are graded in descending scale as "extras," "standards," which are packed only in March, April or May, "firsts" or "ordinary firsts."

"Loss" consists of rotten, broken (leaking), spots, broken yolks, frozen (split), hatched (blood veined) and sour eggs. Very small, very dirty, cracked but not leaking, badly heated, badly shrunken, salted and chilled eggs are counted three for one as "loss" except in "seconds," "dirties" and "checks."

LIVESTOCK AND DAIRY

More Money for Milk

The greatest convention of cooperative dairymen ever held in the United States convened at Utica, N. Y., June 17, when members of the Dairymen's League Cooperative association convened to hear reports on the first 11 months' operation of the plan for the collective marketing of milk. This great association had a membership on June 1 of 71,296.

President George W. Slocum of Newton, Pa., pointed out in his annual report that the average price of milk prior to 1915, before the old Dairymen's league became effective as a marketing agency, was $1.35 per 100 pounds.

Against that old-time record, he set the fact that the average price received during the last 11 months for all grade C milk in the 201-to-210 mile freight zone testing 3 per cent butterfat was $2.01 per 100 pounds.

Within these 11 months sales of milk and milk products totaled the tremendous sum of $62,000,000. Pooled milk handled by the association totaled 2,565,476,805 pounds.

Pooled producers received approximately $5,800,000 more than they would have received had the price been the same as the average price during the same period in all other organized territories.

"I believe that the cooperative association is working on principles which are fundamentally sound," said President Slocum. "There has been criticism by our enemies of our manufactured products coming into competition with the products of dealers who buy their raw milk of this association. This association would rather have the dealers operate all of the plants, and we have made it possible for them to do so. But when they fail, then the association must step in for its members."

The report of W. W. Hovey, general manager, showed that the total administrative expense for the fiscal year amounted to 29 cents per 100 pounds. Other items, including advertising, insurance funds to cover losses of uncollectable accounts and depreciation, totaled an additional 5 cents per 100 pounds.

The magnitude of the business done by the association is further shown by the fact that during the 11 months it exported its manufactured products to all parts of the world. The exports aggregated $1,327,500. The association is now operating 123 plants.

This is cooperation on a big and inspiring scale, and the results are in cheering contrast to the distressing conditions that were presented by our review of the dairying industry in New York and surrounding states a few years ago. The further fact is to be considered that all this was accomplished although the last year was one of the worst ever experienced in the dairy industry of the United States because of the general price depression.

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LIFE PRESERVERS FOR LIVE STOCK

By DR. E. E. WEGNER, W. S. C.

DIGESTIVE DISTURBANCES, ARTICLE I.

May I digress from my program and discontinue for the time being my series on "Contagious Diseases" and take up a subject that at this time of the year is of first importance, that is, the matter of digestive disturbances, which are so prevalent during the summer when the work is hard and the weather is hot and the feeds are new—a combination that is hard to reconcile.



I have purposely refrained from using the word "colic," as it is altogether too inclusive. It means any pain in the abdomen and may or may not arise from the digestive tract. Then, too, it is not sufficiently accurate to describe the specific trouble. It does not tell where the trouble is, whether it is stomach, small intestine or large one or whether the cause is gas, spasm, overloading or something else, and the one thing that we must realize first is that in all cases of digestive trouble an accurate diagnosis must be made. The location must be found out and the nature of the trouble ascertained. Then, and then only, can a rational treatment be prescribed.

My friends who treat "colic," as such, with a bottle of colic medicine are certainly fortunate if they get the desired results. They take a bottle of medicine without knowing it's contents and give it to an undiagnosed case and hope to cause the animal to recover. This kind of therapy always reminds me of the story of the old lady who, after 20 years, decided to clean the top shelf in the pantry and while doing so found a bottle of pills; the label was so faded that she could not read it, but she said the pills looked all right and she was taking one after every meal and believed they were helping her.

No Single Remedy.

It is obvious that no one remedy can be produced that will meet the requirements of all cases and for that reason all such should have careful attention to determine where the trouble is located and what had best be given to correct it. The term colic is so frequently used as to give the impression that it is not a serious thing, and while it is true that all cases do not die if given no treatment, we can not deny that there is a tremendous loss from this source, greater, I think, than the losses from many other noncontagious diseases combined, and yet we refuse to take it seriously. Many are the men who call us and say, "only a touch of colic," and pass it over lightly, as if there was no danger. But who can say when this symptom starts where the end will be? Is this to be one of the fatal cases or will the animals be quite well again in a few hours? We should regard every indication of abdominal pain with suspicions and realize that there is always danger to the life of the animal. Instead of being easy to diagnose, the abdominal troubles are frequently very hard; much harder, in fact, than a lot of other diseases. Pneumonia, pleurisy, milk fever and a long list of others are easy in comparison. It may be easy to determine that there is an abdominal disturbance, but just then the work begins to determine the where and what, and until that is determined a rational treatment is impossible.

Your veterinarian will make his decision after knowing what the animal has been eating, how long it has been sick and how it has acted. Then he will examine the abdomen through the side wall and probably examine some cases through the rectum to get additional information. He may also pass the stomach tube to get information from that organ. All suggests that it is no easy thing to make a certain diagnosis and one should regard all cases of digestive troubles with apprehension.

We often hear of the man who can tell at 100 yards what the trouble is. That man is a quack and an impostor and the story is pure bunk, because it can not be done. I would rather see an animal entrusted to the care of a consciencious owner than to one who pretends so much. Let us begin with the understanding that the subject is a serious one and one for the man who has made a special study of its treatment. Too often these cases are allowed to go day after day without the veterinarian, when every-day means so much in the treatment of them. If we would only treat them seriously the results would be better.

The next article will discuss the digestive system of the horse in relation to digestive troubles.



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POULTRY AND RABBITS

Full Directions for Caponizing

By H. W. BALDWIN.

In this second article by Mr. Baldwin details of the operation of caponizing are given.

It is important that the cockerels be starved from 30 to 36 hours before the operation is performed. They will stand the operation better if this is done, and the intestines will be empty, out of the way of the operator. Water, as well as food, should be denied the birds. The operation can be performed on a table placed at a convenient height for the operator, or the bird can be placed on a barrel top. Place the table or barrel in a good light, preferably strong sunlight. The bird is laid diagonally across the table or barrel top and held in place by means of weighted strings around the feet and around the wings near the body. One-half a brick makes a satisfactory weight. It is suggested that the strings be fastened by means of loops, thus making it easier and quicker to fasten or release the birds. All equipment should be conveniently near the operator. It is well also to have a small pan filled with a disinfecting solution in which to keep the instruments.

The operation can be performed from either side, although for the first few times it will be more convenient if the bird is placed on its left side with its back away from the operator. Moisten the hands in the disinfecting solution and pluck away the feathers from the last two ribs. If the surrounding feathers bother they can be moistened and will lay down out of the way. Before making the incision hold the skin taut, then make the cut about one inch long, beginning about one-half inch from the backbone. If the skin is held taut while making the incision it will slip back into place after the operation is over, thus preventing the incision in the skin and the one in the body wall from being directly over each other. Make the cut quickly with one or two strokes, always cutting away from the backbone. The bird will struggle a little, but this is the only time during the operation that it will bother.

When making the incision care should be taken not to cut deep enough to pierce the intestines. After the incision is made insert the spreaders to keep the ribs apart, being careful to see that each hook of the spreader is against a rib. If necessary to enlarge the incision so as to insert the instrument for removing the testicles, this should be done, taking care, however, not to cut more than necessary. After the incision is made a thin membrane will be found covering the intestines. This should be torn apart with the hook, being careful not to rupture the arteries or membranes. It is best not to make this tear in the membrane larger than the incision. The testicles can now be seen and will appear as two small yellow bodies attached to the back. The next step is the removal of the testicles and is the most delicate part of the operation. Care must be used at this point because of the close proximity of a large blood vessel. If this is cut the bird will bleed to death in a few minutes. Should this accident happen, however, the bird can be used for food, and should be picked at once.

Both testicles are usually removed from the same side, the lower one being taken first. It sometimes happens that the removal of the testicles is accompanied by a slight loss of blood. When such is the case, were the upper testicle removed first, the flow of blood would greatly hinder the removal of the lower organ. To one not familiar with the operation it may be very difficult to remove both testicles from the same side. It is suggested, therefore, that the beginner remove one testicle from one side and remove the other by repeating the operation from the other side. After a little experience, however, this will not be necessary. Grasp the testicles with the instrument, taking care to see that the whole organ is grasped and will be completely removed. One should also take care to see that the blood vessel or surrounding tissue is not included. Having firmly grasped the testicles, twist the instrument one or two times, and remove the testicles with a quick pull.

The importance of having a good light, especially at this point of the operation,

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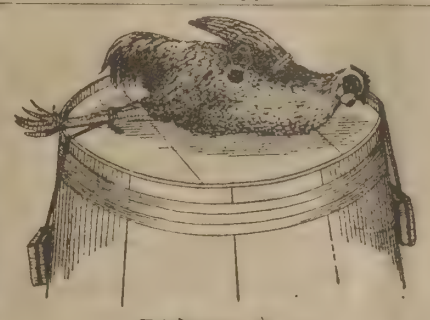


Figure 1.



Figure 2.

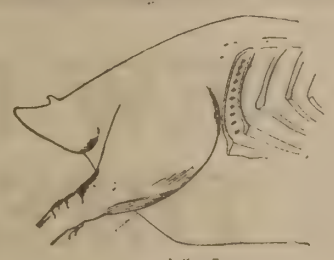


Figure 3.

Figure 1—Method of securing fowl; also spreader in place. Figure 2—Ready to make the incision. Figure 3—Diagram showing where incision should be made between last two ribs.

Poultry Problems

BY W. D. BUCHANAN,

Extension Poultry Specialist, Washington State College.

Can you tell me what is killing my little ducks? They were very strong and seemed to be healthy in every way. When they were a week old four of them died in one night and two more are almost dead. They droop and refuse to eat and finally turn on their backs and die. I feed them wheat and plenty of water, keep them shut up in a pen with the hen. The pen is about four feet square. I had never put them on the lake. What should young ducks be fed and how soon should I put them on the lake? H. D.
Bridgeport, Wash.

Whole or cracked wheat is not a good food for ducks, especially for young ducks. This may be the cause of your trouble. For the first three days the feed should be equal parts bran, middlings and corn meal, mixed with 5 per cent sand, fed a little at a time about five times daily. After the first three days add 5 per cent sifted beef scraps to the mixture. This feed should be moistened with water. If ducks are confined to a small space, they should be fed plenty of green feed in the form of chopped clover alfalfa or lettuce. They should not be allowed in the water till they are nearly feathered.

OVER FEEDING TURKEYS.

Can you tell me what to do for my young turkeys? They seemed to do well until 3 weeks old, then they got weak in the legs. They hang around for a part of the day and die. They are free from lice and have green feed and lots of water. I feed cottage cheese, hard-boiled eggs and a little mixed scratch feed. S. R.
Yakima, Wash.

Your turkeys are probably dying from over feed. If turkeys are fed cottage cheese and hard-boiled eggs it should be in very small quantities. The safest feed is small, hard grains and water to drink.

IMPROPER FEED.

What is the matter with my ducks, about 3 weeks old? Sometimes they fall on their backs, stagger, their heads wobble and they act crazy. Sometimes they make a little noise, run a little, then fall over. What should I do for them?
Kettle Falls, Wash. E. E. L.

Improper feed, like whole or cracked grains, might cause the trouble you describe. Or, if fed ground grains, it might be due to a lack of grit, or to ptomaine poisoning resulting from spoiled or tainted milk. Feed ground feeds, mixed with a little sand, and see that they have plenty of green feed and shade.

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ORCHARD AND GARDEN

Orchard Troubles

By C. C. VINCENT.

What will rid my premises of ants? My orchard and garden is alive with them.
MRS. J. A. M.

There are several methods of getting rid of ants. A common method of destroying colonies of ants in their nests is to saturate the upper surface with a solution of cyanide of potassium made at the rate of one ounce to one gallon of water. Injecting carbon bisulfide into the nests is also very effective where the nests can be found and it can be used. In many other cases, kerosene, crude petroleum, or boiling water poured on the nest will destroy the colony. A favorite way of ridding pantries is to trap them on a sponge saturated with sirup or sugar solution. The ants will swarm through it and when it is well covered, the sponge should be dropped into boiling water after which it should be washed thoroughly of dead ants and the operation repeated.

Kindly give me formula for bordeau mixture. Do Bing and other sweet cherries need a pollenizer? A. G.

The formula for bordeaux mixture is: Bluestone, five pounds; lump lime, five pounds; water, 50 gallons. Dissolve the bluestone (suspended in sack) in 25 gallons of water. Slack lime in another vessel and dilute with 25 gallons of water. Pour these solutions in a third vessel at the same time.

Bing, Lambert and Royal Ann are not only stirile, but intersterile and require other sweet cherries as pollenizers. Good pollenizers for these are Black Tartarian, Black Republican or long-stemmed Waterhouse.

For the last two years I have noticed beetles that kill potato bugs. What are they? C. I.

There are several parasites which prey upon potato bugs. Many of our common lady bird beetles and their larvae check this pest by feeding upon the eggs. Several predaceous bugs closely resembling our common squash bug destroy many of the larvae by thrusting their powerful beaks into them. A number of ground beetles are also found preying upon the larvae and beetles by attacking them with their powerful biting jaws. One should not depend upon these parasites to hold the potato beetles in check. Arsenate of lead applied when the larvae are feeding upon the leaves will control them. Use arsenate of lead at the rate of one pound to 50 gallons of water or five heaping teaspoonsful in two gallons of water.

Kindly advise me what will kill a small black bug three-sixteenth inches long that is attacking my strawberry plants. This bug is of a black and bronze color and hops or jumps when disturbed. C. L.

The small black beetle is known as the flea beetle. This insect can be held in check by spraying with arsenate of lead and bordeaux mixture.

Will you please let me know if there is anything I can do for the worms on my strawberry plants. They are small white worms about a quarter of an inch long with a black head. They eat the leaves and also cause them to curl up. E. M.

The worm working on your strawberry plants is the strawberry leaf roller. There are two methods of controlling the leaf roller. First the plants may be sprayed with arsenate of lead, using from one pound to one and one-half pounds to 50 gallons of water. This is to kill the worms when they are feeding and is not effective after they have folded up the leaves. The second method is in destroying the old leaves on the bed as soon as possible after the crop is harvested. The leaves should be mowed and the bed burned off.

Orchardist Has Cows

"I have always maintained that an orchard is not complete without a few cows to furnish an income during the winter and to afford a source of fertilizer for the soil," said G. H. Blatdorf of Wenatchee, who has a five-acre orchard and keeps six cows. "I used to have nine of them, but I found that it was too much for one man to handle in addition to other work, so I sold some.

"I find a good demand for a special grade of milk and I can easily get a sale for all I can produce at 18 cents a quart or six for $1. Since there are four Jerseys in the herd and two Holsteins, the milk tests high and we keep the bacteria count well down."

The cows are kept in the feed lot the entire season and get alfalfa and grain the year round, with the exception of some green feed in the summer months. No hay is cut from the orchard, but it is all disked under in order to keep up the fertility. Both cow manure and henhouse litter is applied to the orchard in as large amounts as the supply will afford.

The hens are the White Leghorns and they have been culled out and mated for high production and the flock will lay better than 60 per cent.

"I will admit that the orchard is the main source of income of the farm," said Mr. Batdorf, "but by keeping a few cows one can find something to do about the place all winter. There is a good income from the cows and chickens and one should not forget the value of the manure to the orchard. I am going to breed up the herd and put out a special "baby" milk that will be even better than the present brand and I know there will be a good demand for such a product."

Moves Large Trees

In order to replace some of his apple trees in the main orchard and to thin down one corner where the trees were too close together, O. T. Clawson of Wenatchee, Wash., tried moving a number of half grown trees during the winter months. A heavy tripod was arranged with skids and the trees were lifted with a block and tackle after they had been loosened at all sides and at the bottom.

The work was started late in the fall and before they had all been moved the weather turned cold and a few trees had to be left until the ice at the bottom thawed out. This, of course, caused some loss of moisture to the tree and in checking over this spring Mr. Clawson found that the trees that had been thus exposed had not lived. The others that had been moved before the cold weather set in were growing in fine shape and it is estimated that from 5 to 10 years will have been saved in the operation.

No Law Against Bees

By A. B. SLOCUM, Extension Specialist in Agriculture, Washington State College.

Please tell me of some way to destroy pest bees that are a nuisance around the house. Is there a law against bees being too close to a person's property?
Kennewick, Wash. P. A. P.

Bees, as a general rule, unless sweets are exposed, are not a nuisance around the house. Possibly your home is in line with the flight of the bees as they are going to the field. If this is the case, speak to the beekeeper and he will very likely move his bees and thus change their line of flight. The most simple way of destroying bees is to locate their home and brimstone them.

There is no law which would prevent the keeping of bees too near another's property unless it is the one relating to the keeping of anything which is a public nuisance. Whether bees are a nuisance or not depends upon the negligence of the beekeeper. Where bees are kept properly and the proper precautionary measures taken bees cease to be a nuisance. Using the language of the supreme court in a decision handed down by them, "Neither the keeping, owning nor raising of bees is in itself a nuisance. Bees may become a nuisance in a city, but whether they are so or not is a question to be judiciously determined in each case."

Lets Chickens Run in Orchard

Although the raising of chickens does interfere with the operation of an orchard there are some who believe it is well worth while to clean out a few ditches occasionally when irrigating and allow the birds to get a large part of their feed from the orchard.

O. T. Clawson of Wenatchee keeps about 60 mature Rhode Island Reds and has raised 350 young birds this spring. In order to get the maximum hatch, a number of sitting hens were purchased from wherever they could be found and the earliest ones were set on the ground in a cellar. All sittings were made on the ground and from 9 to 12 eggs were hatched from all hens. This is considered a good percentage and Mr. Clawson is well pleased with the results.

This flock won over 50 per cent of the awards for Rose Comb Rhode Island Reds at the state Rhode Island Red meet at Wenatchee last January. Among the prizes were: First, second and third cockerel; first, second and third pullet; first and second young pen; silver medal for best display and the silver cup offered by the Rhode Island Red association for the best display.

Use Up All the Apple

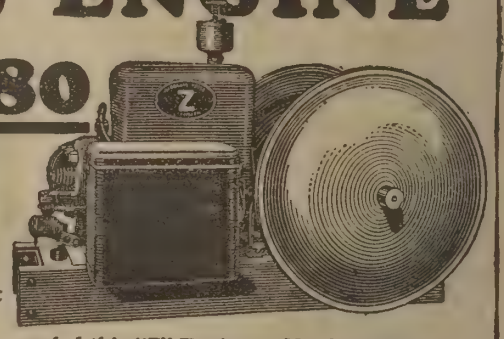
The thoroughness with which the apple is now worked over and utilized by some manufacturers makes it comparable with the packing house pig that leaves only a futile squeal. The apple is not transformed into such a variety of products as the pig, but all are useful, and when the last of the series has been made hardly a smell is left.

In many of the apple-using factories the apples are first pressed to produce cider, which may be sold as such or may be manufactured into vinegar. After thorough pressing the pomace is treated with hot water to remove the pectin, which, after purification, is sold in either liquid or solid form to manufacturers of jellies and similar products and to housewives. The much-wasted and squeezed residue is dried, ground and sold as cattle feed.

KEEP FARM ACCOUNTS.

Twenty-four northern and western states now have 30 specialists to devote full time to farm management extension work. County agents in 895 counties report that they distributed 51,083 farm account books in 1921; 519 counties reported 18,448 books kept and 444 reported that 8454 farmers were assisted in summarizing their accounts. County agents in 237 counties report that 2972 farmers made changes in their business as a result of keeping accounts. More than 800 farm-account schools, with an attendance of 20,000, were held in 1921, the United States department of agriculture reports.

Remarkable Demand Greets
This "Z" ENGINE
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The enthusiastic welcome accorded this "Z" Engine proves it meets the popular demand as regards both dependability and price. It delivers more than rated horsepower, has simple high-tension battery ignition, control lever gives six speed changes. Over 300,000 "Z" Engines in use. See your dealer or write us.

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WHEN you buy a reliable thresher you expect to pay for it out of increased profits from your crop. Has it occurred to you that without a thresher you pay the price for one anyway—in losses?

With a New Racine Thresher—20 x 32 or 24 x 40 sizes—you can do your threshing early and avoid all the losses of delayed and inefficient threshing. A light tractor will furnish plenty of power and your own help can handle the outfit. The New Racine is especially designed for individual and neighborhood service.

Ask your nearby McCormick-Deering dealer for information on this thresher and write us for our new descriptive literature.

INTERNATIONAL HARVESTER COMPANY
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92 Branch Houses and 15,000 Dealers in the United States

Full Directions for Caponizing

(Continued from page seven.)

will be quickly appreciated; more so by the beginner. For the operation to be a success it is necessary that the testicles be completely removed. If even a small part is left the bird will not develop into a true capon, but will grow in the same manner as the uncaponized cockerel and, therefore, will not bring capon prices These birds are known as "slips." After the operation remove the spreaders and release the bird. Place the caponized birds in a small, clean coop by themselves. It is best to remove all roosts and other fixtures that the birds can fly up to, as the wound will heal much quicker if they are kept quiet. Supply them with fresh



Figure 4.



Figure 5.

Figure 4—Cannula in use. (The lower aperture appears in the illustration simply to show cannula in operation, and of course is not made in the fowl.) Figure 5—Twisting scoop in use.

water and soft feed at once, and this soft feed should constitute their ration for four or five days, after which they may be given their regular ration.

In about 10 days the capons can be placed with the other chickens, or put on range and handled in the usual manner. It is suggested that two or three days after the operation the birds be examined for wind puffs that may have formed near the wound. If any are found they may be reduced by pricking with a needle or a sharp-pointed knife. These wind puffs are due to the formation of gases and are not serious. Marking the capons in order to prevent them from becoming mixed with the remainder of the flock, or to prevent any "slips" from getting into the breeding pens, is advisable. This may be done by leg banding or toe punching.

Farmers' Want Ads

HELP WANTED—MALE 3

WANTED — SALESMAN WHO CAN SELL high-grade, dependable nursery stock; several counties in Oregon, Wash., Idaho and Montana now open for assignment. Our selling contract will interest you. Address Albany Nurseries, Inc., Albany, Ore.

AGENTS WANTED 9

MEN WITH HORTICULTURAL EXPERIENCE can make good money selling our splendid line of well grown trees and plants. Write for contract. An early start will give you the advantage. Salem Nursery Company, 428 Oregon bldg., Salem, Ore.

FARM PICNICS AND FAIRS OFFER EXCEPtional opportunities to make money soliciting subscriptions for farm papers; liberal commissions offered to responsible and experienced solicitors. For particulars address P. O. Box 110, Harrisburg, Pa.

EDUCATIONAL 45

EARN MONEY QUICKLY—THERE'S NO LIMit to one's earning capacity in business. And this great business college after training you thoroughly places you in a paying position. Courses include banking, stenography, accounting, private secretarial. Write for free catalogue. Behnke Walker Business College, Portland, Ore.

FRESH FOOD PRODUCTS 51-1

WHITE ALFALFA, SWEET CLOVER honey; 1 60-lb. can, $7.50; 2 60-lb. cans, $14.50; six 10-lb. cans, $8.50; three No. 10 pails, prepaid, third zone, $5.50. Wells D. Rose, Sunnyside, Wash.

CHOICE NEW ALFALFA, SWEET CLOVER honey; direct from the producer. Discount given on large orders. Write for prices. Wm. R. Sires, Wapato, Wash.

NEW HONEY—ALFALFA AND SWEET CLOver; 1 60-lb. can, $7.50; two, $14.40; discount on large quantities. Ernest Sires, Yakima, Wn.

5-POUND BOX ABSOLUTELY BONELESS codfish, fine white, new catch fish, delivered by mail, $1. Coffin Fish Co., Seattle, Wash.

FRESH FRUIT DIRECT. LOWEST PRICES. Send for complete list. Ward K. Richardson, 2393 Front, Salem, Ore.

WORLD'S BEST CLOVER HONEY, 60 pounds, $6.15; two 60s, $12. Browne, Box 499, Twin Falls, Idaho.

HONEY—NEW EXTRACTED, TWO SIXTYpound cans, $10. J. M. Ruyts, Buhl, Idaho.

MISCELLANEOUS—FOR SALE 60

SACKS—SECOND-HAND GRAIN AND SPUD, correctly sorted and graded; also pipe, new and second-hand, any size; standard grade roofing paper at a big saving; belting, cable, etc.; special lot used centrifugal pumps and 4 and 6 inch galvanized iron irrigation pipe. Alaska Junk Co., 8120 Adams st., Spokane, Wn.

FARMERS' WANT ADS

This is the farmers' "want," "sale" and "exchange" department for small advertisements of farmers, including live stock and poultry.

Advertising rates for ads running 1 to 3 times, 10c per word per insertion, with a special rate to Farmer subscribers, as follows: Ads running 4 to 12 times, 9c per word per insertion; ads running 13 times or more, 8c per word per insertion.

All commercial and land advertising 10 cents per word each insertion. Open also to nonsubscribers.

In using these columns advertisers must observe: (1) No advertisements will be inserted for less than $1.00. (2) Every word, number and initial, including name and address, must be paid for. (3) New advertisements, changes of copy or cancellations must reach general office, Spokane, Wash., 10 days in advance of publication date. (4) Cash must accompany order.

Above rates include insertion in The Washington Farmer, The Idaho Farmer and The Oregon Farmer, which constitute the Pacific Northwest Farm Trio, 46 Review Building, Spokane, Wash.

MISCELLANEOUS—FOR SALE (Continued) 60

SASH AND DOORS—O. B. WILLIAMS CO., 1943 First ave. So., Seattle. Chicken house sash, 20" wide by 25" high, 80c; a dozen different sizes in stock for immediate shipment. Skylights for chicken houses, 36"x40"; price, glazed, $2. This is the size recommended by the Western Washington experiment station. We carry them in stock for immediate shipment. Sash and doors for all purposes at lowest prices. All orders receive prompt attention. Our large illustrated catalog No. 35, showing full line of building material and built-in fixtures for the home, free on request. O. B. Williams Co. Established 1899.

CORN HARVESTER CUTS AND PILES ON harvester or winrows; man and horse cuts and shocks equal corn binder; sold in every state; only $25 with fodder tying attachment. Testimonials and catalog free showing picture of harvester. Process Harvester Co., Salina, Kas.

HOMESPUN SMOKING TOBACCO: MILD AND mellow; 10 lbs., $1.50; 20 lbs., $2.75; delivery guaranteed. We furnish free recipe for preparing. Smoking Tobacco Exchange, Sedalia, Ky.

WALL BOARD—WRITE FOR SAMPLE OF Washington plaster wall board; won't warp, won't burn. Manufactured by Washington Building Products company, 6851 E. Marginal Way, Seattle, Wash.

GRAIN BINS—SPOKANE CULVERT AND Tank Co. Metal grain bins, four 1000, ten 2000 bushels; all for $2500, f. o. b. Washtucna; first class condition. Bassett Hardware, Washtucna, Wash.

FREE MAIL ORDER CATALOG OF GROceries and general merchandise; fresh stocks; everything guaranteed. We will save you money on your harvest supplies. Jordan Lawler Co., Spokane.

NATURAL LEAF TOBACCO—CHEWING, 5 lbs., $1.25; 10 lbs., $2.25; 20 lbs, $4.50; smoking, 5 lbs., $1; 10 lbs., $1.75; 20 lbs., $3.25. Hickory Ridge Farm, Mayfield, Ky.

HOMESPUN SMOKING OR CHEWING TObacco, collect on delivery; 5 pounds, $1.50; 10 pounds, $2.50; 20 pounds, $4.50. Farmers' Association, Paducah, Ky.

TOBACCO — KENTUCKY'S PRIDE: EXTRA fine chewing, 10 lbs., $3; smoking, ten lbs., $2; twenty, $3.50. Farmers' Club, Mayfield, Ky.

MISCELLANEOUS—Wanted. 63

HIDES—WE BUY HIDES OF ALL KINDS. Write for prices and tags. Hibbard-Stewart Co., Hibbard bldg., Seattle.

WOOL—WE BUY WOOL AND PELTS. WRITE for prices and tags. Hibbard-Stewart Co., Hibbard bldg., Seattle.

MACHINERY—For Sale 93

FARM IMPLEMENTS FOR SALE—BRAND new four-section spike tooth harrow and Amsco combination grain and seed drill. Price for both implements, $165, f. o. b. Seattle, which is below dealer's cost. Central Agency, Ford Dealers, Seattle, Wash.

FOR SALE—ONE 25-HORSEPOWER RUSSELL steam tractor; in good condition; price $1250, with steel tank and truck. Lincoln Trust Co., Spokane, Wash.

EXTRAORDINARY BUYS IN USED COMbines, caterpillars, separators, engines and trucks. Fallquist Brothers, Pullman, Wash.

CASE THRESHING OUTFIT FOR SALE BY Herman Mennrich, Odessa, Wash.

STOVE REPAIRING 128

WRITE MYER RUBENS, SPOKANE, ABOUT stove repairs, welding broken parts, nickle plating.

MACHINERY—Wanted 96

WANTED—C. L. BEST, OR HOLT CATERpillar engine; state lowest cash price in first letter. Walter Batzel, Weiser, Idaho.

FUR-BEARING ANIMALS 170

SILVER AND CROSS FOXES FOR SALE. William Rambo, 407 Sprague, Spokane.

PETS—Dogs, Birds, Etc. 171

SHEPHERD BOBTAIL PUPS; NATURAL heelers; $10 each; 1 trained female, 9 months old. Hentges, Valley, Wash.

PUREBRED WALKER HOUNDS, FROM KENtucky; prize winning stock. M. Gottwald, Molalla, Ore.

COLLIE PUPS, UNREGISTERED, BUT PURE bred; sire well trained; $6 each. J. E. Finnicum, Dayton, Ore.

RABBITS and HARES 173

FLEMISH GIANTS, PAIRS AND TRIOS, young stock. W. P. Layport, 1441 S. Stevens, Tacoma, Wash.

POULTRY 174

WHITE LEGHORN HENS, $1 EACH; 1000 two-year-old "Henacres" hens, clean, healthy, heavy laying, selected stock must go to make room for our pullets. Also 1000 yearling hens at $1.50 each. These hens will make good breeders for 1923. Orders accepted for ten or more at above prices. July or August delivery. Satisfaction guaranteed. Free catalog. "Henacres," the Inland Empire's greatest poultry farm, Box A, Prosser, Wash.

PULLETS—1500 APRIL AND MAY HATCHED White Leghorn pullets for sale at attractive prices; hatched from thoroughbred Hollywood and Tancred strains; sired by cockerels 250 to 290 egg strains. We ship at three months of age and guarantee satisfaction or you may return the birds in 3 days. We can give you quality and service. Queen Hatchery, Seattle, Wash.

TRY OUR PARCEL POST PACKAGE—KEEP the old hen busy. We will ship you first-class baby chicks, postpaid to your door, direct from the hatchery and guaranteed all alive. Price, $4.50 per 25; $8 per 50. For delivery April, May or June. Order now. The White Hatchery, Petaluma, Cal.

WHITE LEGHORN BABY CHIX FOR SUMmer and fall months from stock accredited by Sonoma County Farm bureau. We guarantee safe arrival. Write for prices and literature. The Pioneer Hatchery, 422 Sixth street, Petaluma, Cal.

POULTRY (Continued) 174

S. C. WHITE LEGHORN COCKERELS FOR breeding; extra select March hatched from high record O. A. C. stock; not excelled for egg production. Corvallis Poultry Farm, Corvallis, Ore.

BABY CHICKS — WE GUARANTEE OUR chicks to be from the highest producing hens in Petaluma. Write for further information. The White Hatchery, Petaluma, Cal.

HUNT'S BARRED ROCK SALE THIS YEAR'S breeders at bargain prices; buy now and get splendid breeders for next season. W. A. Hunt, Lebanon, Ore.

DOLLARS FOR YOUR EGGS—WE PAY THE top market prices for your eggs and poultry. Daily cash remittances. Western Produce Co., Spokane.

FANCY WHITE WYANDOTTE COCKERELS, $2.50; hatching eggs, two dollars setting. H. L. Lamon, American Falls, Idaho.

200 PUREBRED SINGLE COMB BROWN LEGhorn hens, one and two years old; $1.50 each. E. V. Eldridge, Dixie, Wash.

FORD'S BRED TO LAY S. C. WHITE LEGhorns; 2-year-old breeding hens, $1 each. W. A. Ford, Umatilla, Ore.

LIVE STOCK 177

LARGE, HEAVY PRODUCING HOLSTEINS for sale at all times in car lots; tuberculin tested; 150 to 200 head always on hand; well marked heifer calves from registered sires and heavy producing dams; crated for shipment anywhere, $25 f. o. b. Levinson & Balmelli, Yakima, Wash.

SHIP US YOUR POULTRY AND LIVE STOCK. We pay the top market prices. Light veal, fat, fancy, 12½c; dressed block hogs, 14½c; hens, light, 14c; heavy, 17c; prompt returns. John Lewis & Co., Spokane, Wash.

REGISTERED BIG TYPE POLAND CHINA pigs, big, growthy fellows; Oregon Big Wonder blood. Buy your fall breeders now, either sex, $16 each, f. o. b. Goldendale, Wash. Butterfly Ranch.

GET ROYAL OAK REGISTERED HAMPshire Dawn sheep. The premier mutton sheep. Rams and ewes for sale. Order rams early. Lloyd Millhallen, Corvallis, Ore.

WE PAY TOP PRICES FOR YOUR LIVE OR dressed veal, hogs and poultry. Your check by return mail. Shipping tags on request. M. & J. Packing Co., Spokane.

FOR SALE—REGISTERED GUERNSEY BULL, No. 50574; four years old. F. M. Sherman, Portage, Wash.

REGISTERED TOGGENBURG MILCH GOATS. Edwin Pritchett, Route 1, Box 287, Long Beach, Cal.

WILL SELL 30 HEAD OF REGISTERED Shropshire rams. Write McK. Edwards, Valley, Wash.

POLAND CHINAS, PEDIGREED PIGS, $12. Cloverdale Ranch, Orient, Wash.

FOR SALE—HEREFORD BULLS, GOOD ones. Platt Bros., Genesee, Idaho.

MY HERD OF 15 GRADE HOLSTEIN COWS for sale. D. G. Reinig, Snoqualmie, Wash.

JERSEY BULL CALF FROM REGISTERED stock, cheap. M. J. Edwards, Kellogg, Idaho.

FOR SALE—REGISTERED SHROPSHIRE lambs. Write Walter Scott, Scotts Mills, Ore.

HARNESS and SADDLERY 189

SEND FOR FREE HARNESS AND SADDLE catalog today; cut out the middleman, buy direct from the manufacturer. Lowest prices in the west; satisfaction guaranteed. Established 1881. Write Pierce Harness Co., Dept. T, Spokane, Wash.

JOB PRINTING 372

GUARANTEED BETTER BUTTER WRAPpers: 100, 60c; 250, $1.25; 500, $2.25; 1000, $4; printed to order. Home Specialty Co., Middleton, Idaho.

KODAK FILM DEVELOPING 472

SEND US 15C AND ROLL FILMS. WE WILL develop and include six velvet prints. Texo Laboratories, 4444 52 street, South East, Portland, Ore.

MONUMENTS 510

COMPLETE STOCK, RIGHT PRICES, CORrespondence solicited. J. W. Harding, Inland Monument Co., N1001 Monroe, Spokane.

BUILDING MATERIAL 588

TURNS PLASTERING INTO PLAY—PERFECtion plaster wall board can be nailed on just like lumber, and makes a perfect plaster job. Western Wallboard Co., Seattle, Wash.

BUILDERS, CONTRACTORS, HOME OWNERS, write for free 1922 catalog. Tacoma Sash & Door Co., Tacoma, Wash.

NURSERY STOCK 621

WANTED—2500 BARCELONA AND 500 DU Chilly filbert trees; must be true to name. Villa Nurseries, Portland, Ore. Route 1.

FARM LANDS FOR SALE 651

BIG OPENING SALE OF YAKIMA VALLEY farm land, under an assessed state and government approved irrigation project; good, deep soil; close to town, railroads and state highway. We sell in tracts to suit purchaser at $25 per acre and up, on easy terms. Our many sales to farmers show that this land is a good investment. Western Lands, Inc., owners, 918 Green bldg., Seattle.

CALIFORNIA—FREE INFORMATION REgarding agricultural and living conditions in any section of the state. Write Publicity Dept. California Farm Lands Bureau, I. Merritt bldg., Los Angeles, Cal.

FOR SALE—GOOD IMPROVED 120-ACRE farm; 60 acres in crop; in Pend Oreille lake valley; bargain; must sell at once on account of health. Write for terms. W. H. Ahlborn, R. 1, Sandpoint, Idaho.

A. F. HORTON, NEWPORT, WASH.—TIMber products, cutover lands, $5 to $15 per acre. Good roads, schools, fine mountain water.

154 ACRES, 5 MILES FROM DRAIN; 70 IN cultivation; 575 bearing prune trees. L. A. Propst, owner, Drain, Ore.

FARM LANDS FOR SALE (Continued) 651

FOR SALE—FOUR EIGHTY-ACRE TRACTS in the Yakima valley, where crop failures are unknown; all under cultivation and producing good crops; each eighty has a good new five-room house, with screened front and rear porch and necessary farm buildings and implement shed. Most of this land is now in wheat and has an excellent crop growing on it. Can not be excelled for dairying. Business matters makes it necessary for me to sell this land and will sell on easy terms. Here is your chance to get some good land in the garden spot of the northwest. Now is a good time to look it over and see the kind of crop that is growing. Inquire of owner. S. E. Chaffee, Sunnyside, Wash.

IRRIGATED FARMS FOR SALE—160-ACRE farms, improved or unimproved; 30 to 160 acres irrigable land on each parcel; near Lethbridge, in sunny southern Alberta, can be bought for $15 to $40 an acre. No need for pioneering. Well settled country, good roads, railways, schools, telephones; agreeable social conditions; fertile land; success of irrigation farming here already demonstrated; irrigation system being constructed under government supervision. Water available in 1923. Write for information concerning crops grown and description and location of farms to the province of Alberta, irrigation council, 12 Provincial building, Lethbridge.

CUTOVER LANDS, EASY TO CLEAR; $8 TO $20 per acre; 25 miles north of Spokane; on hard-surfaced highway; Great Northern and Milwaukee railways; excellent opportunity for dairying and stock raising, with Spokane markets and creamery near at hand. Will help the man who will live upon this land and agree to clear a part each year by giving lumber to help start his buildings, and a purebred Jersey bull to groups of farmers. Interest and payments low. Write Milan Farms Development company, Dept. T, Old National Bank bldg., Spokane, Wash.

LOGGED-OFF LANDS IN STEVENS COUNTY, Washington, at greatly reduced prices. Most of land sells at from $5 to $20 per acre; thickly settled community, good schools, hard surfaced and paved roads to Spokane; best county in state for dairy and stock raising; most places water can be found at shallow depths. Write for folder. Phoenix Lumber company, Dept. T, Spokane, Wash.

400 ACRES WHEAT AND DIVERSIFIED: 250 now in crop; 125 fall wheat, 125 spring grain, 50 summer fallow, 100 pasture; fine large house, spring water under pressure; 2 barns, silo; school on place; 5 miles to haul grain; 10 cows, 9 horses, harness, wagons, binder, mower, plows, harrows, etc.; 17 miles west Spokane. $31,000; $14,000 cash, rest easy terms. Owner, Box 595, Spokane, Wash.

MUNICIPAL LANDS FOR SALE BY THE DIStrict; no agents, no commission; interested only in getting home builders on the project. Longest growing season in the northwest. Gardens and fruits thrive; schools, highways and railroads the best. Junction Snake and Columbia rivers. Write for terms and folder. Address Burbank Irrigation district No. 4, Burbank, Wash.

THURSTON COUNTY—5000 ACRES, VERY fertile, level; fruit, berry and poultry lands; right at beautiful state capital. No extremes of temperature; no storms or floods, no irrigation; bumper crops; fine markets. 5 or 10 acre tracts; low prices and long term payments. Send for our valuable pictorial booklet. Norpia Realty Corporation, Olympia, Wash.

174 ACRES, ON KOOTENAI RIVER AND Great Northern; 94 bottom, 8 pasture, 18 fenced and cross-fenced; 3 plowed, 15 ready; ½ acre fruit, 4 cabins, team, harness, wagon, plow, harrow, tools, etc.; 2000 ft. lumber, 14 bales roofing, 6 windows, fine cattle or chicken ranch; fine government range. $4000. Chas. R. Scholz, owner, Ural, Mont.

FOR SALE BY OWNER—120-ACRE STOCK and dairy ranch, including stock, crop and implements; 14 milk cows, team, harness and wagon, some other stock; all farm implements; plenty of feed; new barn; old house, but livable; other outbuildings. Priced to sell, $7000; one-half cash, balance easy. Fred Schults, Route 3, McMinnville, Ore.

52 ACRES STOCK AND CHICKEN RANCH; well improved; 10 good milch cows, team colts, 250 chickens, new, modern barn, all kinds machinery; ¾ mile from Anacortes; crop goes if taken at once, $7500; terms. J. W. Rogen, owner, Anacortes, Wash.

BIG LUMBER CO. LAND SALE IN SKAGIT county; 40 acres, $1400; 20 acres, with new house, $1500. Lumber furnished for building. Lots of work for the settler; splendid district, roads, schools and towns. H. C. Peters, 726 3d ave., Seattle.

7000 ACRES SEQUIM LAND SETTLEMENT project, containing the finest berry and dairy land in the state, now offered for settlement at attractive prices and terms. Free booklet. Thos. G. Mortland, Sequim, Wash.

QUICK SALE—160 ACRES, COLVILLE VALley upland, $8 acre; 2-3 cash; 7 acres fall wheat, potatoes; other improvements; 5½ miles from Chewelah; ½ mile state road. Charley Eaton, Chewelah, Wash.

160 ACRES, 4½ MILES FROM LEADORE, IDAho; 95 in cultivation; gilt edge water right; 165 inches; good pasture, 6 milch cows, 6 horses, tools, implements, $6000. R. H. Davidson, Leadore, Idaho.

SELL YOUR PROPERTY QUICKLY FOR cash; no matter where located. Particulars free. Real Estate Salesman company, 501 Brownell, Lincoln, Neb.

FARM LANDS—Wanted 654

WANT TO HEAR FROM OWNER HAVING farm for sale. Give particulars and lowest price. John J. Black, 80th street, Chippewa Falls, Wis.

FARMS WANTED — SELL YOURS QUICKLY for cash, no matter where. Particulars free. R. A. McNown, 310 Wilkinson bldg., Omaha, Neb.

WANTED—TO HEAR FROM OWNER OF land for sale. O. K. Hawley, Baldwin, Wis.

IRRIGATED LANDS—For Sale 663

IRRIGATED BARGAIN; PAID UP WATERright; 27 acres, 4-room cottage, barn, 2 concrete silos; ¼ mile to concrete road; 4 miles from three good towns; paved road to either one; now in crop; alfalfa, potatoes and beans. Price $6500, including ½ of all crops. $2500 will handle; no trade. Community State Bank, Mabton, Wash.

RESORT PROPERTY 684

WILL TRADE FIVE-ROOM COTTAGE, ACRE ground, valued two thousand dollars; East sound, Orcas island, popular summer and winter salt water resort. Percy Livesey, Bellingham, Wash.

FOR SALE OR EXCHANGE 702

320-ACRE DAIRY OR STOCK FARM WITH abundant free range; in best clover belt of Montana for sale or trade. H. J. Vaughan, E3807 2d ave., Spokane.

PIKE'S PEAK OR BUST



Esau Haggerty, a strong man of mature years, and Orlando Medford, a young, slightly built and frail companion, have started from their Illinois home town for the great gold diggings of the west. Esau is pushing a provisions-laden wheelbarrow. Orlando is leading a cow. For three days they have been trudging slowly southwestward carrying out the determination crudely lettered on the side of the wheelbarrow, "Pike's Peak or Bust"

CHAPTER TWO.

Tramping the Santa Fe Trail.

Up till now the weather had been dry and cool—just the weather for traveling on foot. And it was the same when the two men fell asleep. But well on in the night they awoke, to find all completely changed. A raw wind was rushing down from the northwest, the sky was black with clouds and an icy rain was beginning to fall.

The travelers had a little tent with them—in halves, which could be buttoned together. Each used a half to cover his pack when traveling. They had not set it up since the first night. Just now they would have found it very useful. But before camping here they had passed a deserted log cabin. They had thought of camping in it, or by it, but had not done so because, at the time, there was no need of shelter. Now, however, as everything indicated a lengthy spell of bad weather, the two quickly decided to try to get back to the cabin.

Hastily the packsaddle was placed on the cow, without being girted, and the big pockets hung on the saddle. Part of the other things were loaded on Brindle and part on the wheelbarrow, all being covered over as well as possible. Then the travelers started. Besides leading Brindle, Orlando was carrying a chunk with fire on one end.

The cabin stood only a few hundreds yards away. But it was back in the woods from the road; and so dark was the night that the two men were 15 or 20 minutes finding it. By this time the cold rain was pattering down steadily, and any kind of shelter would be very welcome.

Stopping at the south end, where a blacker patch against a black wall indicated a shutterless door, they made ready to take possession.

"Dark as a stack of black cats in there, Lando! Dark enough out here. You'd better push in with your fire, I reckon, and try to rustle up a little light. We cain't do much without it."

"This chunk's pretty nearly rained out. But maybe I can blow up a blaze somehow. At least I'll try."

After thrusting in his fiery-ended stick till he could catch a faint glimpse of the interior, Orlando stepped over the low sill and into the cabin. Frisk was already in there, smelling about. Once the house had been floored, probably; but both the floor and the sleepers were gone. There was a chimney, however, and by the aid of his glowing chunk the young man soon located the fireplace. It was a foot deep in dry leaves, which the wind had swept in there from the surrounding woods. After some blowing, he was able to start a blaze among them. At once the whole inside of the cabin was lighted up brightly.

Now Orlando stood and gazed around. "Good big place. Room in here for all of us and everything, Esau. Hasn't we better bring Brindle in, load and all?"

"Cain't be done, with this door. We'll have to strip off her pack before she can squeeze through."

There being by this time plenty of light, Orlando hurried out to help get everything of theirs indoors. First Brindle's pack was stripped off and carried in, and then the cow herself was led through the doorway. After that the two men lifted the wheelbarrow over the doorsill. All their belongings were now inside.

While Orlando was tying the cow in a back corner and removing her packsaddle, Esau found a number of small sticks, scattered over the ground floor, and had soon started a more lasting fire with them. Now the two men stood in front of the fireplace and gazed about while they warmed themselves.

"Lucky thing for us we noticed this old shanty as we passed it," Esau remarked. "Looks like we're in for a spell of ugly weather. Sech a time as this it seems good to have a board or two over a body's head to turn the rain, and a log or two around a body to shet out the wind."

"It surely does, Esau. Yes, this is about as good a place to weather a storm as two wayfarers could have found."

By rolling them up, the men had managed to keep their quilts and blankets dry. These they now unrolled and spread down again on the ground in front of the fire; and on them they lay down to sleep. They had no timepiece, but surmised that the hour was not long past midnight. For a good while they lay talking and listening to the wind and rain. Finally both fell asleep.

Daylight, a dull gray, was shining in at the door when they awoke. Rain was still pattering on the roof, and the wind still dashing itself against the walls. And both wind and rain continued to rage for a day and a night longer. The two travelers, with their cow and dog, remained in their shelter. Blanketed, they sometimes ventured out into the surrounding woods for fuel; and once Esau visited the nearest farmhouse to buy feed for Brindle.

At some time during the following night the rain turned to snow. When morning came, the snow was at least four inches deep, and still falling. It ceased before long, and the sky cleared. But the air was now sharply cold—colder than it had yet been.

"Well, what do you think by this time, Lando? Will we stay housed up here another day? Or had we better strike the road ag'in?"

"That's for you to say, Esau. The weather's pretty sharp. We can soon warm ourselves, though, when we get to tramping. But the snowy road will make your wheelbarrow pushing harder."

"It's little a shallow snow like this will bother me. After being caged up two nights and a day, I feel the need of laig exercise anyhow."

"Do you? Well, I'm feeling the same way. So it seems to me we'd just as well pack up and jog along. If the sun happens to shine, it will soon thaw the road to slush. But we can camp if the slush gets too deep."

So, after feeding Brindle and milking her and cooking and eating their breakfast, the two travelers bundled up their things and got ready for the road. A little later they were out and trudging through the snow.

For a time it seemed that the sun, when it had climbed high enough, would start the snow to melting. But a thick haze gradually spread itself over the sky, and the air continued too cold for anything to thaw.

During the day the travelers came to the swift, muddy Missouri, and a steam ferryboat landed them on the north bank, in the town of St. Charles. After that their road led up the river, sometimes along or near the bank, oftener back against the foot of the bluffs.

All day long the little party trudged their way through the snow. As night was coming down they stopped at a farmhouse long enough to buy a sack of corn in the ear and some sheaf oats. Those were for Brindle; and they were fastened on top of her pack. Then the travelers moved on again.

Night overtook them in thick woods. They turned aside and stopped in the shelter of a huge log—a log almost as high as the men's heads.

"This ain't quite as snug a campin' place as what we had last night and the night before," Esau remarked, while helping Orlando to unpack and unsaddle the cow. "Reckon, though, we can manage to keep warm somehow."

"We'll be all right after we get the snow raked away."

With a short-handled shovel from the wheelbarrow, Esau fell to work by the south side of the log. Under the snow here was a deep litter of leaves, which made the snow easier to clean away. After clearing ground enough for their camp fire they lengthened it in one direction to make room for their tent, and in the other to have dry ground for Brindle to stand on and lie on.

Now, after starting a fire against the side of the log, the two men made use of the little light that remained to gather, out of the snowy forest, a big pile of fuel. With that they soon had such a camp fire as went far to dispel the gloom of this wintery night.

After feeding and milking Brindle, Orlando took their axe and cut two forks and a pole for their tent. The lower ends of the forks were sharpened, and with the back of the axe he drove them into the ground. When the pole had been laid in the forks, he put up the two halves of their tent and buttoned them together. That done, he stretched the tent over its pole, the whole tent being so placed that the light and heat from the fire would shine in at its open end.

By the time Orlando had the tent pegged down, Esau had supper ready. So they seated themselves by the fire and ate. After eating and giving Frisk his supper, they sat on their bedclothes in the mouth of their tent and rested. Both were wearier than usual. They had made a long day's march; and the snowy road had not been easy to travel. While they were still sitting there, snowflakes began to flutter down again.

"I'm anxious to discover Pike's Peak the first minute possible. But if much more snow visits us, I'm thinkin' we'd better lay by in camp till it melts off," Esau told his companion.

"That might be just as well. Snow won't be apt to lie on the ground long this time of year."

After sitting up till the heat from the fire had dried the ground in their tent, the two men made down their bed there and were quickly asleep. Brindle had already dropped down on the other side of the fire, on her bed of leaves; and Frisk had curled himself up in front of the fire.

From time to time during the night one or the other of the men crept out of bed and out of the tent to toss more wood on the fire. And every time they emerged from shelter they could feel snowflakes against their hands and faces.

Not only did snow continue to fall during the night, but it was still falling when daylight came. And it kept coming down, at intervals, till about noon. After that it ceased, and soon the air grew colder. Being comfortable enough where they were, the travelers remained in camp, by the sheltered side of their big log. And here they spent another night.

The morning that followed was coldest of all, but still and clear. The travelers lingered near their camp fire till about the middle of the forenoon. By this time bright sunshine was warming the air. Being well rested, the two men now packed up, and ere long they were following the road westward again. The snow was deeper than before—more than half a foot deep.

By noon the air had grown very mild, and the snow was thawing fast. Having started so late in the day, the travelers did not halt for dinner, but kept tramping till night. Again they camped in some thick woods; and again they kindled their camp fire against a big log. When morning dawned, Orlando complained of not feeling as well as usual. While wading the slush and mud the day before, he had caught a severe cold. However, he insisted that they keep traveling.

And keep traveling they did. But the road was so slushy in most places that they could not make many miles. They camped earlier than usual. By this time the young traveler was so nearly exhausted that he lay down as soon as they could get their tent up and a bed in it. Esau fed Brindle, and did the milking and the cooking. He also did the eating; for Orlando had no appetite, and only drank a few swallows of milk.

Morning broke and found the sick man far worse. His face was flushed with fever, and he declared himself past traveling. Esau felt greatly worried, though he did not say so. Their camp was in the woods, a few miles from the last house. How far ahead the next house would be he could only guess.

After waiting an hour or two in camp for somebody to pass by, he decided not to delay longer. He would try to get the sick man to a house and summon a doctor. After thinking the matter over, he decided upon a plan and proceeded to carry it out.

First he saddled and packed Brindle, adding to her load a few pieces from the wheelbarrow's load. After that, using a rope, he contrived some rude harness for the cow and hitched her to the fore end, close to the wheel. Having prepared a bed, he lifted the sick man upon the wheelbarrow. Stupefied by fever, Orlando now lay on his back, covered with blankets, with his feet and legs hanging down at the fore end. He was too sick to understand, or to care much, what was being done with him.

Everything being ready, Esau stooped and got the strap over his shoulders, thus raising the barrow's rear end, and grasped the handles. Luckily the cow had already learned to drive; and, when he spoke to her, she started back toward the road, then took the road and followed it. Though familiar with carrying a load, she had never pulled one before. Naturally she was somewhat awkward at first. But, being patient and good-natured, she soon became accustomed to her new task. Between Brindle's pulling and Esau's pushing, the wheelbarrow, doubly laden though it was, moved on well enough.

The sick man roused himself once or twice, to mumble some protest against what his fellow traveler was doing. Once he even raised himself to his elbow, for a look around. But he quickly fell back.

By and by the little procession came to a house. But it was only a one-room log cabin, standing some distance from the road. And so little prospect did he see of being taken in there that Esau did not even stop. A mile farther on he met a man riding a mule.

The stranger stared hard at the wheelbarrow. "Thunder and blazes! What you got there?" he reined up to demand.

"A sick pardner. And I'm doin' my level best to git 'im to a doctor. Can you tell me how fur ahead it is to where I'll run acrosst one?"

"You bet I can! It's about six miles. Doc' Ponder hangs out there."

"Reckon I'll be likely to find 'im at home?"

"Apt as not you will, mister. I seen doc' in the stoor door as I come through the little burg, about a hour ago. Wheelbarr' with a whole man on it makes a whale of a pushin' job, don't it?"

"I've handled lighter things. No use denyin' that. But, between me and old Brindle, we manage to keep the little shebang rollin'. We'll fetch up some'r's by and by, I reckon."

The mule rider spurred on east, and Brindle and the wheelbarrow continued their travels. The road was still muddy—very muddy in places; and the wheelbarrow's progress was slow and laborious. But Esau had plenty of determination and prided himself on the fact that nothing was too hard for him. So, in spite of mud and slush, he finally arrived at the village.

There an inquiry at the one store brought the information that the doctor had just ridden away, on horseback, to visit a sick woman. He was expected to return inside of an hour or two. Some of the villagers invited Esau to wheel his patient to their homes. But an old shed stood on the outer edge of the village, with plenty of dry ground under it. He

(Continued on page thirteen.)

Bits of Fun for Everyone

Degree of Servitude.

Said a friend to the proud father of a college graduate who had just been awarded an A. M. degree:

"I suppose Robert will be looking for a Ph. D. next?"

"No. He will be looking for a J. O. B."—Life.

Too True.

"Of course there is no such thing as woman's supremacy." "Think not? From the time a boy sits under a street light playing with toads until he is blind and old and toothless he has to explain to some woman why he didn't come home earlier."—Cleveland Plain Dealer.

Ministerial Repartee.

Father Kelly and Rabbi Cohen were a banquet one evening at which ham was the best of friends. They were guests at served. Father Kelly smilingly whispered to Rabbi Cohen:

"Rabbi, when are you going to lay aside that old stuff and eat ham?"

The rabbi smiled back and whispered:

"At your wedding, Father Kelly."

Something New for Him.

Friends of the late Henry P. Davison of J. P. Morgan & Co., convalesing at a hospital one time, described how he jested with surgeons and nurses as preparations were being made for his recent operation, about which there were grave fears. As he was about to be shaved he was reminded of a story and halted the proceedings till he told it. It was about a visitor to a small town who had difficulty in find a barber. Finally the only one available made the visitor lie on a bed for removal of his beard. "Why did you do that?" asked the visitor on arising after one of the smoothest shaves he had ever had.

"Because," answered the villager, "I am the town undertaker. I never shaved a live man before."—De Laval Monthly.

Couldn't Be Otherwise.

An Irishman stood looking at an electrical contrivance, when an inventor walked over to him and asked: "Some machine; I wonder who the inventor is?"

The Irishman looked at him and replied: "Shure it was a son o' the sod. Can't you see his name there—'Pat Pending.'"

Wake Up—Then Get Called.

A New Yorker was spending a night at a "hotel" in a southern town, and told the colored porter that he wanted to be called early.

The porter replied: "Say, boss, I reckon yo' ain't familiar with these heah modern inventions. When yo' wants to be called in de mawnin' all yo' has to do is jest to press de button at de head of yo' bed. Den we comes up and calls you."

For Home Brew, Maybe.

Pat went to a druggist to get an empty bottle. Selecting one that answered his purpose, he asked:

"How much?"

"Well," said the clerk, "if you want the empty bottle it'll be 5 cents, but if you have something put into it we won't charge anything for the bottle."

"Sure, that's fair enough," said Pat. "Put in a cork."—The Western Fruit Jobber.

FAMILY CIRCLE

ALICE BARLAND
EDITORIAL CONTRIBUTOR

Baby's Wash Day

Many substances are apt to be present in baby's soiled garments which will set stains after the washing if a few simple rules are not available.

Milk stains are most easily washed out first in cold water; in hot they soon yellow the garment.

Oil stains, such as vaseline, come out best if first washed with warm water and soap. If vaseline has been boiled in, use kerosene or turpentine.

Urine should be rinsed out in cold water before the diaper dries and the garment then boiled, boiling being as frequent as three times a week. To avoid mildew, the well-rinsed diapers may be kept weighted in an enameled pail under water until the tri-weekly boiling day.

Do not let little flannel shirts remain long dirty, and be sure all stain is removed at every washing. Soak all woolens five minutes in warm suds of water and soap jelly and rub stains with the jelly. Wash wool quickly by dipping and then squeezing between the hands instead of rubbing. Rinse them in waters of nearly the same temperature, and instead of twisting them squeeze them dry or put them through a wringer. Dry them in temperatures near those of the rinising water to prevent shrinkage.

Remember not to use "fussy," unwashable things about baby's crib. Far better care consists in having everything about him pure and sweet than beribboned and possibly not admitting of frequent washing. Protect the pillow by a small pad inside the case that may be boiled occasionally.

Home Recipes

Hemstitching on Sewing Machine—Pull as many threads as desired, turn a narrow fold on the edge of the hem, place it at the top of the drawn space, stitch on the wrong side of the goods with a long stitch, then pull down to the lower part of the drawn space and it will look almost like hand hemstitching, and the machine stitching will not show on the right side. —MRS. E. M.

Hemstitching Number 2—I do hemstitching on a common machine as follows: I pull the threads same as if to hemstitch by hand; then if I am going to hemstitch at the edge of the hem I baste the edge of the hem over on the space where I pulled the threads, then stitch real close to the edge of the hem. When stitched I take the piece in both hands and by being careful I can pull the hem over where it should be. It looks very well and is much faster than to hem by hand.—MRS. R. B. D., Wash.

(Mrs. R. B. D. will make this clearer if any wish to have her. I will forward any letters if stamp is enclosed.—A. W. Barland.)

Ice Cream Without a Freezer: Mix your cream as usual and put into a pail with a tight cover. (I use a sirup pail.)

Use either fine ice or crusty snow and pack it with plenty of salt in a water pail or some other pail the right size. Put the pail of cream down into the salt and ice and pack the salt and ice well up to the top and then take hold of the bail of the sirup pail and twist and turn it around back and forth. It will soon begin to freeze in the bottom and around the sides. Scrape it loose and continue to turn and scrape alternately until it is frozen. It never takes more than 30 minutes.

Washington. MRS. A. J. M.

Custard to freeze: Two and one-half cups of milk, one and one-half cups of rich cream, three-fourths cup of sugar or more if preferred, two eggs and one tablespoon of vanilla. Beat the eggs with the sugar, scald the milk, mix with eggs and sugar and pour the mixture into a double boiler. Cook just long enough to set the eggs, but not to thicken the mixture. Remove from the fire and add the cream and vanilla. Leave till thoroughly cold, then freeze. This will make a gallon.

One can make fine ice cream without cooking. If you use cream and whole milk half and half with sugar and vanilla it is not necessary to add any eggs and not necessary to cook, saving much time. The cream will swell more than if it is cooked custard, so allow for that. Three and one-half quarts will usually make a gallon when frozen if the cream is nice and rich.

Raisin shortcake: One teaspoon salt, one-half cup milk, one tablespoon shortening, one and one-half cups flour, one and one-half teaspoons baking powder.

Sift the flour, baking powder and salt into a bowl, add the shortening by rubbing in gently with the tips of fingers, add milk enough to make a soft dough; put on a floured pie tin, smooth the top and brush with milk and bake in a moderate oven 20 or 25 minutes.

Raisins to fill: One-half teaspoon salt, one tablespoon cornstarch, one and one-half cups water, one tablespoon lemon juice, one heaping tablespoon sugar, one cup seeded raisins.

Wash raisins, put in a pan with cold water, bring slowly to a boil, add salt, sugar and cornstarch, which has been mixed with a little cold water; boil four minutes, then add lemon juice. Split the shortcake, fill with raisins, dust with sugar. The cake is best served warm and the filling cold.

MRS. CHARLES WATSON.

Washington.

Hemstitching Number 2—Seams can be stitched to represent hemstitching by inserting blotting paper between the two thickness of the goods with the face sides of the material together and the edges even. Insert strips of blotting paper between the two pieces at the edge, remove the sewing machine foot, loosen the tensions and stitch through two thicknesses of the material and the blotting paper. Tear the paper away, turn the raw edges of the seams away from each other and stitch each side of the seam. The hemstitching can be widened by using two or three thicknesses of blotting paper.—MRS. HENRY STROEBER, La Grande, Ore. Box 683.

Just Folks

Nature overdoes in order to do. A thousand seeds are produced in order that a dozen plants may grow; a thousand plants begin to grow in order that a dozen plants may bear fruit.

Likewise man must overdo in order to do.

There is no such thing as just doing. More often than not, just doing fails to reach the mark.

The man who is satisfied with the average never does the average.

For the so-called calculating individual about the most profitable thing for him to do is to cast bread upon the waters.

There are poor prospects ahead for those who work merely for the immediate reward.

In gaining an end, in accomplishing a purpose, in carrying out a program—just enough is not enough.

He who would provide for overcoming only one obstacle in the gaining of his purpose, will not get very far.

The misadventures of life are many. Your money may give out, your friends may fail, your health may be uncertain. Unless you are fortified, more or less, all along the line you will find hard sledding.

Prodigality of work, a few extra dollars —these may tide over possible contingencies—these are only incidents in the lives of those who do things.

I passed a man on the street a day or two ago. His face as well as his clothes looked sick. He had a bedraggled appearance. He looked as though he was on his last legs. I had not seen him for several years. He was then making good wages, much above the average. In a casual talk he gave me to understand that he did not believe in making too much preparation for the future. His theory was to live while you live; what you spend now you have; what you save for the future you may not have to spend. His was not the boast of the young man who was sowing his wild oats. He was in middle age, in the prime of life. Yet he did not believe in overdoing nor in giving extra thought to the future.

There was certainly a contrast in the man with whom I had a talk only a few years ago and the man whom I passed on the street the other day. I had passed him quite a distance before I could make myself believe he was the same man.

The boy or the girl who only gets his lesson does not get it. Sidelights of information on the lesson are needed and sidelights take extra time and extra study.

The man who knows only his specialty does not know it. The relations of that specialty to other specialties must be known.

The credit man must know human nature as well as the figures at command. Circumstances and conditions of life, family traits and neighborhood relations count.

There is always something on the side to be learned and all that is "overdoing." E A S

CHEMISTRY BEGINS IN THE MOUTH.

Two children, seriously within the danger line of underweight for their years and height, were brought to normal weight without change in their dietary habits when attention to their manner of eating forced itself upon the attention of nutrition experts. It was noticed that they were "bolters"; they did not take time to properly chew their food. Careful instruction as to the part chewing plays in nourishment, and a careful watch over their practice for a time, effected the needed improvement in weight and condition.

Aside from the more perfect digestion of the well-chewed food, thorough chewing tends to be a safeguard. It brings out the natural flavors of wholesome foods, lessening the demand for constipating condiments or sweetening. It satisfies the palate with a lesser quantity of food than had been previously bolted and ill-digested by the over-eater. On the other hand, it stimulates the appetite that is otherwise insufficient, owing to the hitherto undue effort required to digest ill-chewed food.

Small children may be induced to eat more slowly by giving them salt spoons, if they tend to bolt food.

FOOD FOR THE FAMILY.

"Where can I get a table showing the different elements of food for family use and what is required for a person?" writes H. R. H. of Moro, Ore.

His inquiry was referred to the school of home economics at Oregon Agricultural college, and the department's reply may interest other readers. A college bulletin, "A Week's Food for An Average Family" (No. 1228), gives the kinds of food needed, and other help may be found in "Food for the Family," O. A. C. extension department, Corvallis, Ore., and in "How to Select Foods," farmers' bulletin No. 808, department of agriculture, Washington, D. C. Any of these bulletins may be had free for the asking.

A PLANTING APRON.

A planting apron is another help at gardening time. This may be made of gingham or a square of muslin with deep pockets, in one of which the unopened seed packets may be carried, while the other may be used for holding the loose seeds while planting. It is almost as convenient to drop large seeds such as corn and beans.

A Bit of Advice.

If you save the pennies the dollars will take care of the lawyer who breaks the will.

Subnormal Children

The Parent-Teachers' association at Opportunity, Spokane county, has stood financially responsible for and has heartily cooperated in the effort to bring to standard weight the school children found to be seriously below normal weight for their age and height, reports Miss Inez Arnequist, county home demonstration agent, who is associated with Miss Mary Sutherland of the state college in state extension work along this line, with the cooperation of local organizations.

Mrs. Harry Raymond has been the community leader in charge of the child nutrition work, assisted by Mrs. Safranek and by the parents. The nutrition movement was organized and the hot lunch and optional milk twice a day were provided for four weeks before the close of the school for the year, during which time individual weights were systematically recorded. Not all the underweight children took the milk regularly, but all had the hot lunch.

At the end of the fourth week 18 of the 26 had gained weight at three times the normal rate. Miss Arnequist regards the fact that eight did not do so as significant of the fact that not all took the milk twice a day here, even more complete results having attended a few local campaigns under her direction in the county. Every child gained at Opportunity during the time it received the milk regularly, the score cards showed.

Working With Dress Forms

Seventeen communities have been working with dress forms in Grays Harbor county with the help of Miss Mabel Webber, the home demonstration agent. In the meetings that are being held this spring 18 dress forms have been made and their use explained.

When the beginners are taken into the classes they first work on decorative stitches, after which they take up such work as copying garments. The women have found the classes very beneficial in their home dressmaking and they have signified their intention of doing more work of this kind.



Health is wealth itself

—and depends more upon the selection of proper food than upon anything else.

The reason is simple—the *right* kind of food digests promptly and is absorbed into the blood for building sound tissue; while food that digests slowly may ferment and lead to serious conditions.

Grape-Nuts—the delicious cereal food made from whole wheat flour and malted barley—is so easy to digest that even delicate people and young children thrive on it.

This is only natural, because Grape-Nuts is baked for 20 hours, which transforms and partially pre-digests the starch elements, resulting in easy digestion and quick assimilation.

Served with milk or cream, Grape-Nuts is a complete food—and along with its nutritive qualities is that wonderful flavor!

"There's a Reason" for Grape-Nuts

Sold by grocers everywhere

Made by Postum Cereal Company, Inc., Battle Creek, Michigan.

High Points in News of the Week

The words of Patrick Henry, the patriot, uttered nearly a century and a half ago, might be repeated with considerable degree of accuracy after a survey of the leading news developments of last week. "Gentlemen may cry, 'Peace,' but there is no peace."

A railroad strike of 300,000 or 400,000 shop workers is in progress in this country, with a threat on the part of several other railway labor organizations to walk out.

The coal strike of more than half a million miners is still in progress after several months of idleness on the part of the coal mines of the country.

Ireland continues in a state of civil war.

Following the meeting of representatives of the allied nations in Europe at Genoa several months ago, adjournment was taken to The Hague for a continuation of the consideration of unsolved problems. While some progress is apparently being made toward the solution of vital problems at The Hague, the sailing is not smooth, and indications are that this conference may also adjourn with but a limited record of accomplishment on world problems.

The assassination a few weeks ago of Dr. Rathenau, German minister of foreign affairs, has thrown that country into a state of political turmoil that is believed by many to be leading to open conflict between the monarchist element and the republican government now in control.

Some reports indicate a grave fear that the present government of Germany will collapse under the strain of financial and political problems and that a chaotic condition similar to that in Russia during the last few years will follow. Other nations of the world make no effort to conceal their anxiety along this line, realizing that a collapse in Germany would be a tremendous menace to the peace and reconstruction of all Europe. In the meantime, Germany is making further effort to secure from the allies greater concessions in the way of extension of time for the payment of the huge reparations required by the latter for Germany's destruction during the war. There apparently is an increased tendency on the part of the allies to extend terms, in view of the fact that the failure of the Germany government at this time would not only render reparation payment impossible, but would place additional burdens on the shoulders of France, England and other nations involved.

General Bell, a leader in military affairs in this country, declared last week that the Polish situation was such as to indicate the possibility, if not the actual probability, of another war in the near future in which this country would be called to play a part. He denounced disarmament proceedings and reduction in military power, not only in this country but in the forces of the allied nations as well, declaring that we could as well abolish our police force and consider ourselves safe on the streets as abolish our armaments and consider ourselves safe among the nations of the world.

Even congress has continued to operate under conditions anything but peaceful. An attempt last week to put into force a regulation limiting the length of debate on the tariff issue now before the senate resulted in failure and left the doors open for an unlimited discussion of any or all phases of that question, which probably will postpone for an indefinite period of time the final enactment of the bill.

On top of it all, forest fires last week gained headway throughout nearly all of the timbered regions of this country, especially in the Pacific northwest. Steps have been taken under the leadership of fire wardens and state officials that have already gone far toward placing the fire situation under control. Nearly all logging operations have been suspended, not only to reduce the fire hazard, but to enable logging crews to join the fire-fighting forces.

* * *

Practically all of the railroad companies last week made definite announcement that they would employ any person qualified to work in their shops, whether nonunion or union men. Advertisement for such help was sent broadcast. Most of the roads announced that striking employees who returned to work immediately would be permitted to retain their seniority rights for promotions and pensions. Officials of the unions of shopcraft men declared that the strike was still 100 per cent effective, though the railroad officials expressed confidence that the shops would be operated on sufficient scale to keep the railroad equipment in condition for uninterrupted operation. No other organization of railway employees has as yet joined in the strike. Maintenance of way workers have been ordered by their officials to continue in their positions until opportunity has been given for a settlement of the questions involved after a thorough investigation.

While there has been little violence in any of the strike districts, the attitude of the strikers in some places has been one of defiance to persons desiring to take their places in the railroad shops. Picketing is reported at some shops and in a few instances trains have been canceled by the railroad companies because of inability to get equipment in and out of the roundhouses. In some states the national guard has been mobilized for whatever action might be necessary toward the protection of life and property should clashes occur between strikers and those taking their places, or should the strikers undertake to prevent others going to work.

* * *

Notwithstanding the disturbances in Ireland, reports from that country are encouraging from the standpoint of the advocate of peace. The regularly constituted goverment of the Irish Free State is apparently conducting successful operations against the revolutionary element under the leadership of De Valera. British forces are taking no part in the activities at this time other than supplying arms and munitions to the Free State government. It is a case of the Irish people's putting down their own civil revolution. A report late last week indicated that De Valera, the leader of the revolutionists, had disappeared from the scene of the actual fighting. It was believed that he had been wounded and had withdrawn to a place of safety for treatment.

Notwithstanding successes of the Irish government, the situation remains grave. Reports indicate that in the warring territory many residents are leaving their homes for places of safety, many of them emigrating to other countries, including America.

* * *

Secretary Fall of the department of the interior has gone on record as favoring the Poindexter bill in the United States senate providing for a federal investigation of the Columbia basin project. The senate committee on irrigation and reclamation is this week holding a hearing on the bill and is expected to report it back to the senate very early with a recommendation that it be enacted into law. General George W. Goethals, who made a survey of the project last winter, is among the experts called to testify before the committee.

* * *

President Harding again last week made an earnest appeal to include in the present tariff bill a provision giving the nonpartisan tariff commission greater authority over tariff rates. He takes the position that the tariff commission should have authority over tariff rates similar to the authority over freight rates exercised by the interstate commission.

* * *

Two men were hanged at the Oregon state penitentiary last week for complicity in the killing of Sheriff Taylor of Umatilla county in the jailbreak in 1920. Every possible legal step had been taken to secure the freedom of the two men. The actual slayer of Sheriff Taylor had been previously executed for the crime.

Profitable Marketing

To the Editor of The Washington Farmer: I desire to congratulate and thank you for the excellent editorial in The Washington Farmer of a few weeks ago, under the heading "Bedrock of Cooperation," which is addressed very largely to the apple growers of the Wenatchee district. This is the right kind of advice and I do not know of any community that should receive it with a greater degree of satisfaction than the Wenatchee district.

The Wenatchee tree fruit district is one of the greatest assets of the state of Washington. Their products are wonderful, but I do not know of any community that has suffered more from lack of constructive selling than the Wenatchee district.

Every citizen of the state of Washington is deeply interested in the success, not only of the Wenatchee district, but every other fruit growing section of our state. In fact, the prosperity of our state depends entirely upon our ability to produce commodities that can be marketed at a reasonable profit above the cost of handling. It is the money that comes into the state derived from the marketing of products produced by the state that decides whether or not we will be prosperous. The Wenatchee district can render a wonderful service to the balance of the state by marketing their products to the best possible advantage.

There is one other point that enters seriously into the successful marketing of our crop, and that is the transportation question, which at the present time is entirely out of line and will continue to remain out of line until there is an intelligent and determined fight made against the existing conditions. We must throw off the 40 per cent increase made during the war period based upon the then existing rate, and endeavor to put our rates on a fair basis with our competitors.

Puyallup, Wash. W. H. PAULHAMUS.

Farm Business and Markets Outlook

(Continued from page five.)

to the average for this season during the three preceding years.

The demand for white cheese has improved and small premiums have been paid recently on twins and daisies over colored cheese.

Prices on No. 1 American cheese on July 5 were:

Chicago—Twins, 20@21c; S. Daisies, 20@20 1-2c; D. Daisies, 20@20 1-4c; Young Americas, 20 1-2@21c; Longhorns, 20 1-2@21c; Square Prints, 21@21 1-2c.

POTATO PRICES LOWER.

Potato prices declined last week and the trend still appears to be downward. Receipts are slightly above the average for this time of the year and a relatively heavy supply looks probable right along. Old potatoes have almost disappeared from the market. New stock is coming from states as far north as Kansas. Bliss Triumphs No. 1 are quoted at $2.65 to $2.95 per 100 pounds sacked, with Irish Cobblers at $3.85 to $4.75 per barrel in middle western consuming markets.

LATEST QUOTATIONS.

The Live Stock Market.

PORTLAND, July 8.—Cattle—Choice steers, $7.75@8.50; medium to good steers, $7@7.75; fair to medium steers, $5@7; common to fair steers, $4@6; choice cows and heifers, $6.25@6.75; medium to good cows, heifers, $5.25@6.25; fair to medium cows, heifers, $4.50@5.25; common cows, $3.50@4.50; canners, $2@4.50; bulls, $3.50@4.50; choice dairy calves, $8.50@9; prime light calves, $8@8.50; medium light calves, $7.50@8; heavy calves, $5@7.50.

Hogs—Prime light, $11.50@12; smooth heavy, 300 lbs. up, $10@11; rough heavy, $8@9.50; fat pigs, $11.50@11.75; feeder pigs, $12@12.25; stags, subject to dockage, $5@8.

Sheep—Choice spring lambs, $10@10.50; medium spring lambs, $9@10; common spring lambs, $6@8; cull lambs, $5@6; light yearlings, $7@8; heavy yearlings, $6@7; light wethers, $6@7; heavy wethers, $5@6; ewes, $2@5.

SPOKANE, July 8.—Cattle—Prime steers, $6.75@8; good to choice steers, $5.75@6.75; medium to good steers, $5.25@6.50; fair to medium steers, $4.50@5.25; common to fair steers, $4.25@4.50; choice cows and heifers, $5.25@6.50; good to choice cows, heifers, $4.25@5.25; medium to good cows, heifers, $3.75@4.25; fair to medium cows, heifers, $2.75@3.75; canners, $1.50@2.75; bulls, $3@4.75; light veal calves, $6.50@7.50; heavy veal calves, $4@6.50; stockers and feeders, $4.75@5.

Hogs—Prime mixed, $11.25@11.85; medium, $10.25@11.25; heavies, $8.25@9.25; fat pigs, $10.25@11.25; stockers and feeders, $10.25@11.25.

Sheep—Prime lambs, $8@10; fair to medium, $7@8; yearlings, $7@8; wethers, $6.50@7.50; mutton ewes, $3@6.50; feeder lambs, $6@7.

The Grain Market.

PORTLAND, July 8.—Wheat—Hard white, $1.14; soft white, white club, hard winter, northern spring, $1.12; red Walla, $1.09.

Grain futures: Wheat—Hard white, July, $1.14; August, $1.13; soft white, white club, hard winter, northern spring, July, $1.12; August, $1.11; red Walla, July, $1.09; August, $1.08.

Oats—No. 2 white feed, July, $35; August, $32.

SEATTLE, July 8.—Wheat—Hard white, $1.16; soft white, white club, hard red winter, soft red winter, northern spring, $1.14; eastern red Walla, $1.17; Big Bend Bluestem, $1.25.

PULLMAN, July 8.—Red wheat, 90c; white wheat, 93c.

WALLA WALLA, July 8.—Bart, Turkey red, Bluestem, 98c; club, 96c.

RITZVILLE, July 8.—Bart, $1.20; red, $1; Fife, 90c.

DAYTON, July 8.—New crop, club, 98c; red, 96c; old wheat, 95c.

POMEROY, July 8.—Turkey red, 95c; hybrid, 92c.

Hay and Feed Grain.

PORTLAND, July 8.—Millfeed—Price f. o. b. mill: Millrun, ton lots, $33; middlings, $41; rolled barley, $36@38; rolled oats, $43; scratch feed, $50 per ton.

Corn—White, $37; cracked, $39 per ton.

Hay—Buying price, f. o. b. Portland: Alfalfa, new, $14.50@15.50 per ton; cheat, $15@16; oats and vetch, $14; clover, $17; valley timothy, $18; eastern Oregon timothy, $21@22.

SPOKANE, July 8.—Wheat—Feed wheat, $44 per ton.

Oats—$40 per ton; steam rolled, $42.

Corn—$36 per ton; cracked corn, $38 ton.

Barley—$42; steam rolled, $44.

Bran and shorts—$34 per ton.

Alfalfa—$22 ton; timothy, $24 ton; mixed hay, $22 ton.

General Produce.

PORTLAND, July 8.—Butter—Cubes, extra, 38c per lb.; prints, parchment wrapped, box lots, 43c; cartons, 44c. Butterfat, 43@44c delivered; station buying price, A grade, 41c.

EGGS—Buying price, current receipts, 20c dozen; henneries, 23c dozen; jobbing prices, case count, 21@22c; candled ranch, 25c; selects, 28c.

CHEESE—Tillamook triplets, price to jobbers, f. o. b. Tillamook, 25c; Young Americas, 26c; long horns, 26c pound.

POULTRY—Hens, 15@22c; broilers, 20@25c; ducks, 15@22c; geese, nominal; turkeys, nominal.

VEAL—Fancy, 14c per pound.

PORK—Fancy, 15½c per lb.

SPOKANE, July 8.—Poultry—Fat hens, 17c lb; light hens 14c lb; roosters, 8c lb.

Fresh Ranch Eggs—$5.25 case; no storage; pullet eggs, $5.

Butterfat—39c a pound.

Range of Live Stock Prices for the Week Ending July 5

CATTLE.	Chicago.	Spokane.	Portland	N Salt Lake
Choice, prime heavy steers (100 lb up)	9.50@10.25	.....	.....	.....
Good heavy steers	8.85@ 9.80	.....	.....	.....
Medium heavy steers	8.15@ 9.25	.....	.....	.....
Common heavy steers	7.00@ 8.35	.....	.....	.....
Choice, prime light steers (1100 lb down)	9.30@10.15	.....	.....	.....
Good light steers	8.65@ 9.60	.....	8.00@ 8.75	.....
Medium light steers	7.85@ 9.10	7.00@ 8.00	7.00@ 8.25	7.00@ 7.85
Common light steers	6.85@ 8.15	4.75@ 7.00	5.25@ 7.25	5.25@ 7.00
Common, choice butcher heifers	5.50@ 8.75	4.00@ 6.75	4.50@ 7.00	4.00@ 5.75
Common, choice butcher cows	4.00@ 7.75	3.00@ 5.50	3.25@ 5.75	3.00@ 5.00
Bologna and beef bulls	4.10@ 6.75	3.00@ 4.75	5.00@ 6.00	2.00@ 3.25
Canners, cutters, cows and heifers	2.75@ 4.00	1.50@ 3.00	2.00@ 3.00	1.50@ 3.00
Canner steers	3.50@ 5.00	3.00@ 4.00	3.00@ 4.25	2.50@ 4.00
Medium, choice light veals	7.00@ 9.00	6.50@ 8.50	7.00@ 8.50	7.50@ 8.50
Common, choice heavy veals	4.00@ 7.50	4.00@ 6.50	4.00@ 7.00	.....
Common, choice feeders (1000 lb up)	5.65@ 7.75	.....	.....	.....
Common, choice feeders (750-1000 lb)	5.65@ 7.75	4.75@ 5.00	.....	5.00@ 5.50
Common, choice stocker steers	4.75@ 7.65	.....	.....	.....
Common, choice stocker cows, heifers	3.25@ 5.75	.....	.....	.....
HOGS.				
Top of market	11.00	11.85	11.85	10.00
Bulk of sales	9.35@10.95	11.00@11.50	11.25@11.50	9.75@10.40
Heavy (250 lb up)	10.35@10.75	10.00@11.00	10.75@11.25	9.50@10.25
Medium (200-250 lb)	10.50@10.90	10.75@11.70	11.00@11.50	9.75@10.50
Light (150-200 lb)	10.70@10.95	11.25@11.85	11.50@11.85	10.25@10.60
Light lights (130-150 lb)	10.25@10.90	11.00@11.50	11.50@11.60	.....
Smooth packing sows (250 lb up)	9.00@ 9.85	8.75@ 9.25	9.00@ 9.50	.....
Rough packing sows (200 lb up)	8.65@ 9.40	8.25@ 8.75	8.00@ 9.00	.....
Medium, choice pigs (130 lb down)	9.25@10.50	10.25@11.25	11.50@11.75	.....
Stock pigs	.....	10.25@11.25	11.50@12.10	8.50@ 9.25
SHEEP AND LAMBS.				
Medium, prime lambs (84 lb down)	12.00@13.65	8.00@10.00	8.00@ 9.25	9.50@11.00
Culls, common lambs	6.50@12.00	7.00@ 8.00	5.00@ 8.00	7.00@ 9.50
Medium, prime yearling wethers	8.75@11.75	7.00@ 8.00	6.00@ 8.00	5.00@ 6.00
Medium, prime wethers	5.00@ 8.50	6.50@ 7.50	5.00@ 6.00	4.00@ 5.00
Medium, choice ewes	3.50@ 7.50	3.50@ 6.00	3.50@ 5.00	3.00@ 4.00
Culls, common ewes	1.50@ 3.75	2.00@ 3.50	2.00@ 3.50	.....
Full-mouth, yearling breeding ewes	5.00@11.25	.....	.....	.....
Feeder lambs	11.00@12.30	6.00@ 7.00	.....	.....

WITTE Log Saw



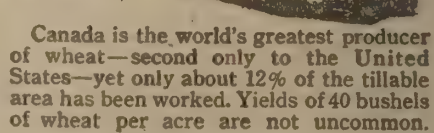
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Your Health

By Royal S. Copeland, M. D., F. A. C. S.

What do you know about the gall bladder and gallstones?

The gall bladder is a hollow sac, located under the liver and immediately in contact with it. Indeed, it is in reality a part of the liver. It is shaped like a pear, is three or four inches long and stands with the thick part upward. This sac is capable of holding about one ounce of fluid.



Dr. Copeland.

The contents of the gall bladder are discharged through a duct or canal about two inches long. This is not an open tube, but its lining is thrown into folds, making an arrangement not unlike a spiral stairway in a tower. This drainage canal joins with a similar canal from the liver, forming what is called the "common bile duct." This is the size of a goose quill, is about three inches long and empties into the intestine.

The bile accumulates within the gall bladder. During the digestive process the bile flows through the complicated drainage system I have described, into the intestine, where it has a part in digestion.

One of the normal constituents of bile is cholesterin, a white, glistening, fatty, crystalline substance. This is taken from the blood in which it is found normally, and the quantity then extracted depends on certain conditions. For instance, if there is marked congestion or inflammation of the gall bladder or its ducts, more cholesterin appears to be absorbed by the bile.

What causes such irritation or inflammation? The most common of the direct causes is the presence in the gall bladder of microbes or germs.

If you know anything about germs you will see at once that a warm, moist place, like the gall bladder, offers a splendid breeding place for microbes. If they once gain entrance here they multiply rapidly.

Of course, there are other things which assist in producing conditions favorable to the development of gallstones. Anything which interferes with the free escape of the bile is one of these.

Under this combination of conditions much more than the normal amount of cholesterin is extracted from the blood. One of the germs or a group of them in the gall bladder or the spiral canal may act as the nucleus, and upon and around this center gradually collects a layer and then other layers of the cholesterin. Just as any salt in a saturated solution will deposit on the neck of its bottle, so the cholesterin deposits and continues to do so until a good-sized grain or stone is formed.

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4017. Juniors' dress. Cut in three sizes: 12, 14 and 16 years. A 14-year size requires 4 1-4 yards of 32-inch material. Price 10 cents.

3712. Girl's dress. Cut in four sizes: 4, 6, 8, and 10 years. A 6-year size will require three yards of 27-inch material. Price 10 cents.

3810. Ladies' dress. Cut in six sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. It will require 2 3-8 yards of 27-inch material for the guimpe, 4 3-4 yards for the dress for a medium size. The width at the foot is two yards. Price 10 cents.

4007-4013. Ladies' costume. Blouse 4007, cut in seven sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. Skirt 4013, cut in seven sizes: 25, 27, 29, 31, 33, 35 and 37 inches waist measure. The width at the foot is about 2 1-2 yards. To make the dress for a medium size requires eight yards of 40-inch material, without the bolero, which requires one yard of material. With flounces in straight outline three-fourths yard less is required. The foundation skirt if made of lining or contrasting material requires 1 3-4 yards. Two separate patterns, 10 cents for each pattern.

4025. Ladies' dress. Cut in seven sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. A 38-inch size requires 4 1-8 yards of 40-inch material. The width at the foot is about 2 1-4 yards. Price 10 cents.

4033. Boys' suit. Cut in four sizes: 2, 3, 4 and 5 years. A 3-year size requires 1 1-2 yards of 24-inch material for the waist and 2 3-4 yards for the trousers. Price 10 cents.

4032. Child's dress. Cut in five sizes: 1, 2, 3, 4 and 5 years. A 4-year size requires 2 3-8 yards of 36-inch material. Price 10 cents.

3807. Ladies' house dress. Cut in six sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. Size 38 will require 5 1-4 yards of 36-inch material. The width of the skirt at the foot is 1 7-8 yards. Price 10 cents.

4021. Ladies' apron dress. Cut in four sizes: Small, 34,36; medium, 38-40; large, 42-44; extra large, 46-48 inches bust measure. The width at the foot in the medium size is two yards. It will require 5 1-4 yards of 32-inch material. Price 10 cents.

4024. Ladies' lounging or bath robe. Cut in four sizes: Small, 34-36; medium, 38-40; large, 42-44; extra large, 46-48 inches bust measure. A medium size requires 4 3-4 yards of 40-inch material. The width at the foot is about two yards. Price 10 cents.

2186. Infants' set, consisting of a cap, a sack, a night gown and a dress. Cut in one size: For the dress of flouncing it will require 1 3-4 yards of 36-inch material with 1 1-4 yards of plain material for yoke and sleeves. Of nainsook or lawn 36 inches wide it will require 2 1-4 yards. The gown will require 2 1-2 yards of 24 or 27 inch material. The cap, one-half yard of 18-inch material. The sack requires seven-eighths yard of 27-inch material. Price 10 cents.

3939. Men's shirt. Cut in seven sizes: 38, 40, 42, 44, 46, 48 and 50 inches breast measure, neck measure to correspond in sizes, 15, 15 1-2, 16, 16 1-2, 17, 17 1-2 and 18. It requires 3 1-2 yards of 36-inch material for a 17-inch neck size. Price 10 cents.

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Pike's Peak or Bust

(Continued from page ten.)

preferred to go to that and camp. And so he did, pushing his one-wheeled vehicle over there and taking out the cow and unsaddling her under the shed.

Now he made a bed on the dry ground and helped Orlando to lie down on it. By this time the sun was shining brightly, the air being so warm that no fire was needed. But Esau kindled one, just out from under the shed, and proceeded to do some cooking.

Two or three hours passed before the doctor returned. Somebody told him that he was wanted, and where, and he rode over at once, with his pill bags rattling on the saddle behind him. Fortunately Orlando was better by this time. His fever was almost gone, and he felt able to sit up. He had also drunk some milk.

The doctor asked him several questions, expressed an opinion that his sickness would not prove serious and left him a few doses of medicine.

In the afternoon various people visited the camp, some to inquire how the sick man was, or if they could do anything, others to leave various cooked delicacies. On learning that Orlando was better, most of the visitors lingered to talk of the gold excitement and of how these two gold seekers came to be traveling so far on foot. When told that the trip was partly to dig for gold and partly in quest of health for Orlando, who was threatened with consumption, all agreed that it was a wise trip to take if the young fellow could stand the hardships. But of that most of them were doubtful.

The rest of the day and the following night, and another day and night, the two pilgrims remained in their camp under the shed. But on the second morning they made ready to travel. By this time Orlando was much better; so nearly well that he felt anxious to get on the road once more. Also, the snow was all gone, and the roads were pretty well dried up. So the two saddled and packed their cow and were soon trudging westward again.

Though still not strong, Orlando managed to tramp several miles before he and his companion halted for dinner. And, after a long rest, he traveled nearly as far in the afternoon. He ate a hearty supper and next morning, after a good night's sleep, declared that he felt nearly as well as ever.

After that the two continued their journey as before, the younger traveler growing stronger all the time. Every day they tramped except Sunday, when they were glad to lie by and rest. At such times they always attended preaching if there was anything of the kind near at hand. Otherwise they remained quietly in camp during the day.

At Boonville they crossed the Missouri again; and after that they traveled up the south side of the river. When near the stream, they often saw steamboats passing up and down. And when farther back they heard them and saw their smoke.

From time to time, as the travelers moved on, they heard much talk of the gold excitement in the Pike's Peak country. Many people were thinking of going into the mountains, and a few had already gone. But for days Esau and his partner saw nobody who was ready to start. At length, however, they began to notice covered wagons, all moving westward. Sometimes the wagons passed them. Oftener they passed the wagons. And the farther the two men journeyed the more numerous those wagons became.

At last the foot travelers arrived at Kansas City. This town had now about 3000 inhabitants. It stood on a high bluff, which sloped steeply down to the Missouri. A mile or two above the town was the mouth of the Kansas, or Kaw, river.

This new and bustling little city was the outfitting point for all the wagon trains that crossed the plains, whether bound for Santa Fe or for the gold diggings. Steamboats were unloading vast quantities of freight on the wharf, and the big wagons were being loaded with it as fast as possible and then rolling westward.

Just now, as the two foot travelers soon learned, the town was swarming with prospective gold seekers, all preparing to start for the Pike's Peak country. The time was about the first of May, and the gold excitement was already at its height. Many miners had gone, and the wildest rumors were flying about as to what they had found out there.

After passing through the little bluff-perched city, Esau and his partner went on and camped on the bank of the Missouri, not far above the town. Most of the wagons now about to set out westward were in camp between the town and the Kaw river, where their teams could find grass. There were hundreds of them, the whole country being dotted with their white tops.

In their camp on the river bank the two

(Continued on the following page.)

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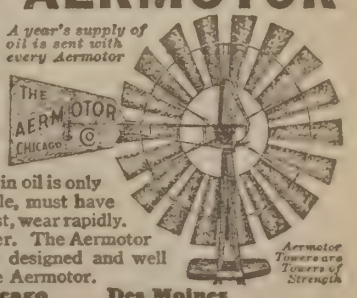
White?—why it gives your clothes a whiteness that even the fleeciest clouds cannot rival.

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THE AUTO-OILED AERMOTOR

A Real Self-Oiling Windmill



A year's supply of oil is sent with every Aermotor

Oil an Aermotor once a year and it is always oiled. Every moving part is completely and fully oiled. A constant stream of oil flows on every bearing. The shafts run in oil. The double gears run in oil in a tightly enclosed gear case. Friction and wear are practically eliminated.

Any windmill which does not have the gears running in oil is only half oiled. A modern windmill, like a modern automobile, must have its gears enclosed and run in oil. Dry gears, exposed to dust, wear rapidly. Dry bearings and dry gears cause friction and loss of power. The Aermotor pumps in the lightest breeze because it is correctly designed and well oiled. To get everlasting windmill satisfaction, buy the Aermotor.

Aermotor Towers are Towers of Strength

Write today for Circular. **AERMOTOR CO.** Chicago Kansas City Des Moines Minneapolis Oakland

HUGHES & COMPANY, Spokane Distributors.



Eva Cade writes about the picnic at Smith's grove given by the school at the close of the term. Everybody brought a lunch and in the afternoon there was a barbecue. There were sports and races and in the evening a marshmallow and wiener roast and fireworks and last of all a dance. Every one had a good time. Eva lives in Chelan county, Wash.

Anna Belcher, one of our new cousins, lives on a farm in southwestern Washington. Her father and mother have a large orchard, a big field of grain and fields of clover hay. Anna says she couldn't manage her pets if she didn't live on a farm. She has 25 little chickens to feed, a calf named Buttercup and two cats, Fluffy and Timmy. December 16, 1922, Anna will be 7 years old. She has a little brother 16 months old. Brother and she play together.

"I live on a big ranch where there are 50 cattle, most of them on the range," writes Carmyn Sherman of Okanogan county, Wash. "We have three dozen chickens and 14 horses—some dandy saddle ponies. One of them is mine. His name is King George. We have a nice shepherd dog and three kittens." Carmyn sent a poem she wrote about herself and her cousin, Dolly. Carmyn says she is going to write poetry when she grows up. Her cousin, Dolly, expects to be a moving picture actress. One day, when Carmyn and Dolly were washing dishes, they spilled the dishwater.

Birthday Greetings

THURSDAY, July 13—Inez Brown, 10 years old; Violet May Clark; Eva Lillian Hood, 11; Irwin Paulson, 11; Loretta Elma Zorneo, 11.

FRIDAY, July 14—Hazel Reeves, 10 years old; Edna Doris Melton, 9.

SATURDAY, July 15—Margaret Ames, 10 years old; Helen Demaris, 11; George Gugat, 11; Leona Tuisku, 10.

SUNDAY, July 16—Mildred Eaton, 11 years old; Patricia Ferguson, 10; Opal Jenkin, 11; Katherine Lund, 9; Mildred Stiles, 10.

MONDAY, July 17—Hilda Hamlett, 11 years old; Thelma Harry, 11; Edith McCarty, 11; Allison H. Towne, 9.

TUESDAY, July 18—La Vonne Elm, 8 years old; Chester Nicholson, 9.

WEDNESDAY, July 19—Dana Cleveland, 11 years old; Laura Esko, 10.

LETTERS WELCOMED BY AUNT NELLIE.

Among recent letters received by Aunt Nellie are those from cousins whose names follow. A few of these will be published each week in the regular edition of THE FARMER and others will appear from time to time in The Junior Farmer:

Georgia Jewett, Forrest Moore, Ruth Williams, Edward Harnelt, Lila Elliott, Keith Cyphert, Ellen Ludwig, Margaret Leibing, Marguerite Smallwood, Inez Brown, Agnes Maurer, Mildred Page, Melvina Williams, Stella Cade.

BEDTIME STORIES

By THORNTON W. BURGESS.

PETER RABBIT'S BIG COUSIN.

"Look who's coming!"

Jimmy Skunk pointed over toward the Green Forest. Johnny Chuck looked. Then he rubbed his eyes and looked again.

"Is there anything wrong with my eyes?" asked Johnny Chuck, turning to Jimmy Skunk. Jimmy laughed.

"They looked all right to me," he replied.

Johnny Chuck looked again over toward the Green Forest. "When did Peter Rabbit begin to grow?" he asked gravely.

"I don't know," replied Jimmy Skunk just as gravely. Then they looked at each other and began to laugh. It certainly was a funny sight coming across the Green Meadows from the Green Forest. Hopping on ahead was Peter Rabbit, looking very important and also very, very proud. Behind him came—whom do you think? You never will guess. It was some one who looks just like Peter Rabbit, only ever so much bigger. His ears are like Peter Rabbit's, only ever so much longer. He looks like Peter Rabbit. He sits up like Peter Rabbit.

Peter came hopping along up to Johnny Chuck's doorstep. "This," said he, "is my cousin, Jumper the Hare, who has come down from the Great Woods to make me a visit."

Johnny Chuck and Jimmy Skunk bowed politely and told Jumper the Hare that they were very glad indeed to meet him, and that they hoped he would like the Green Meadows so well that he would want to stay. Then Peter Rabbit bustled off with his cousin Jumper the Hare with his most important manner to call on all the other little meadow people.

Johnny Chuck watched them hurry down the Lone Little Path. Every few jumps Peter's big cousin would stop and sit up. He would look this way and look that way, just as if he expected to find some one in hiding ready to spring upon him.

"My, what a timid fellow!" exclaimed Johnny Chuck. "I'd like to steal up behind him and shout 'Boo!'"

Jimmy Skunk chuckled. Then he whispered to one of the Merry Little Breezes, who raced off as fast as he could go. He stopped at the house of Danny Meadow Mouse. Then Johnny Chuck and Jimmy Skunk saw Danny slip out of his back door and hide behind a clump of grass. A few minutes later along came



"This is my cousin, Jumper the Hare."

Peter Rabbit and his big cousin. Just as they passed the clump of grass Danny Meadow Mouse sprang out. Jumper the Hare jumped clear over Peter Rabbit's head and started across the Green Meadow at a rate that made those who saw him gape in astonishment.

"That big fellow afraid of Danny Meadow Mouse!" exclaimed Jimmy Skunk.

(Copyrighted by T. W. Burgiss.)

Pike's Peak or Bust

(Contniued from the preceding page.)

foot travelers rested and let Brindle rest for a few days, while they learned what they could of the journey ahead of them, and of the newly opened gold diggings. Almost every day a great wagon train rolled and rumbled away toward the sunset. While the trail to the Rockies led through an Indian country, so many people were traveling it now that there was not supposed to be much danger. None at all for the first week or two. So Esau and his partner made up their minds to travel alone. By so doing they could start when they wanted to, travel as fast or as slowly as they wanted to travel, and camp whenever they cared to camp.

However, they would soon reach the country where more or less danger lurked. Also they would have to depend on hunting for meat as they traveled. So they cleaned their weapons carefully and bought some additional ammunition. Each of them, besides his gun, was provided with a revolver. Orlando's gun was a rather long-barreled Kentucky rifle. Esau's was a double-barreled gun. It looked much like a shot-gun; but only the right-hand barrel was for shot. The other barrel had a smaller bore and was really a rifle. The travelers had powder and caps, and carried a supply of lead in small bars. They also had bullet molds—a pair for each weapon. While resting here they molded a good supply of bullets.

"Well, Lando boy, think you're ready for another long tramp?" Esau demanded of his traveling companion, late one day. "We've already covered nigh onto 400 miles of our journey. But we've got about 700 yit to travel—more than 700, I 'low. Does that make you feel wabbly in the knees?"

"Not a bit! Not even a little bit! I'm ready for the road whenever you are."

"Reckon you can take hand and foot and tramp it straight through?"

"Not a doubt of that. I've never felt better in my life, seems to me. And I know I've never felt as strong. I can not only tramp my way, but I've a suspicion that I can give you a boost now and then with your wheelbarrow."

"Don't 'low I'm apt to need that. But I'm tickled that you feel so—so husky-like. Back yander a good piece, when you got laid up, I begin to feel mighty juberous. I'm easy in my mind now, though. You'll stand the balance of the trip all right, I make no doubt. So, if you feel well rested up, I'm 'lowin tomorr' mornin' will be as good a time as any for us to roll out west."

(To be continued.)

NAIMA KUKKA, Rosburg, Wash.—We all like The Washington Farmer—every bit of it—and think it is the best farm paper printed.

JOHN INCH, Winlock, Wash.—I highly recommend The Washington Farmer. It has done me a lot of good along veterinary lines. I also like the stories.

Boys Lie in Wait

No more interested or attentive listeners than Herman Felber, Louis Nettleton and Edward Jamie, South Bend Poultry club boys, were in the audiences which gathered at Willapa, Menlo and South Bend to hear W. D. Buchanan, state poultry extension specialist, discuss this industry which is becoming of so much importance in Pacific county as elsewhere in the state. They were lying in wait, with their lunches ready, for County Agent J. R. Beck when he left South Bend soon after 8 o'clock in the morning; they investigated every new "wrinkle" at Charles Lambert's highly efficient poultry plant, sat through the lecture and then demonstrated the characteristics of a laying hen.

They had lunch at Menlo and heard another talk by Mr. Buchanan at S. Martin's that afternoon, and it would not be surprising, though history does not recount this particular, if they attended his lecture at the South Bend Commercial club rooms the same evening. There are three other members of the club, Melvin Raybell, George Hall and George Olson, and from this group the county agents expects to recruit material for a poultry team that will "clean up" all the other entrants at the Southwest Washington fair in August.

TO FIGHT THE LAWN ANTS.

To get rid of lawn ants entomologists of the United States department of agriculture suggest drenching the nests with boiling water or pouring in a small quantity of kerosene oil. Similar treatment may be applied to nests between or beneath paving stones. Spraying the lawn with kerosene emulson or with very strong soap wash is also recommended. For large ant nests disulphid of carbon injected into the nest by means of an oil can or a small syringe is recommended to kill the ants. The fumes of disulphid of carbon have a very disagreeable odor and are inflammable, but they are not injurious to higher animals in the open air.

Club Work Attracts

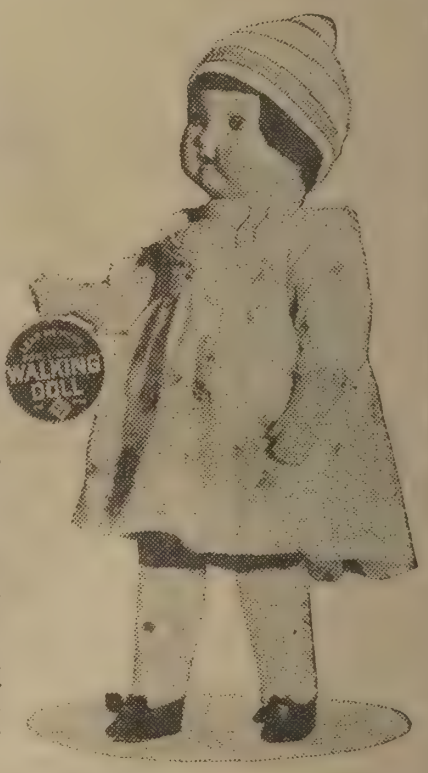
"It's a wonderful thing for club work that it attracts men and women like Mr. Alexander," said Miss Elmina White, assistant state club leader, after a day's work recently in Lewis county. "It gives dignity and standing to the work; it furnishes endless inspiration to the men and women officially engaged in it; and it gives the youngsters the benefit of valuable leadership." She was referring to J. T. Alexander, vice president of the Security State bank and owner of a large farm near Chehalis, who, as she expressed it, devoted his time to her that day as though he had nothing else to do, and promised continued assistance, which will be invaluable.

Mr. Alexander has accepted responsiblity as county representative of the national committee, and among other things plans to see to it personally or through friends that Lewis county representatives attend club week at Pullman in June and the Pacific International at Portland in November. He has also promised that every boy or girl who makes good in live stock work this season and who desires to obtain purebreds in 1923, shall have the opportunity, financially, to do so, and his bank contributed $100 toward prizes for club contests at the Southwest Washington fair this fall

You Can Win Walking Doll

Nothing will make any girl happier than one of our UNBREAKABLE WALKING DOLLS. The walking feature intensifies the attractiveness of the doll 100 per cent. Moreover, it is light in weight, has a soft body, and is well made from top to toe. It stands 13 inches high.

There are no springs or sharp edges in our walking dolls—the mechanism is all concealed in the body. OUR UNBREAKABLE WALKING DOLLS sleep, sit, stand, and when led by the hand they REALLY WALK WITH YOU.



A walking doll with sleeping eyes and real hair will be awarded to YOU in return for your services in securing nine 3-year subscription orders to your State Farm Magazine at the regular rate of 50 cents each, or $4.50 for the nine subscriptions. A little time spent securing subscription orders and one of these wonderful walking dolls will be your very own for keeps. Get busy now before some one else starts to harvest the orders in your neighborhood.

TheWashington Farmer

Review Building,
Spokane, Wash.

Van Tassel Ayrshires

Lady Stuart of Menie, a 17-year-old cow in the E. W. VanTassel herd of Ayrshires at Wenatchee, is expected to make a record all her own in the 300-day period. She has been producing at the rate of 15,000 pounds of milk and 550 pounds of fat and she was bred to qualify for the roll of honor, which requires her to carry a calf 180 days out of the 300. There is no other Ayrshire of the same age in the United States that is competing for the honor.

Mr. VanTassel has been doing official testing for several years and finds that it pays to keep the work going throughout the year. For the month of May there were 10 cows in the herd that showed an average of 70 pounds of milk a day when they were only being fed for a 60-pound production. One day they reached a 78-pound average. Grain is the only feed being fed throughout the summer, since there is sufficient pasture to supply roughage in the ration. The pasture is perhaps largely responsible for the high milk production, since it is a mixture of sweet clover, alsike and orchard grass, making a combination that is eaten readily.

One cow in the herd, Queechie of Wenatchee, has the honor of once being the second highest in her class in the United States. Stuart Robin, a daughter of the 17-year-old cow, finished her 300-day test as a junior 3-year-old and is on test again as a junior 4-year-old and milking at the rate of 17,000 pounds of milk with 4 per cent fat. A granddaughter of the old cow made ninth place in the United States in her class as a junior 3-year-old.

Other cows in the herd promise to make equally outstanding records and the farm has every facility for making records; plenty of feed, good shelter, proper management and a determination on the part of the herdsman as well as the owner to have the cows do their best.

The herd is a combination of the Robin Hood and the Peter Pan strains and the two have been crossed, with good producing offspring as the result. Mr. VanTassel has no particular choice between the two blood lines, but feels that they are about equal as far as production and type are concerned.

Late last fall Mr. VanTassel made an exchange with the state college for their herd sire, Queen Scottish Cavalier, a 4-year-old animal which was bred at this herd. The one taken by the college in the exchange was Robin Hood 16th, who won grand champion at the state fair last year and similar honors in other shows.

Uniontown Live Stock Show

Vareuse II., owned by the Uniontown Percheron Breeding association, was awarded the grand champion stallion prize at the third annual Uniontown Live Stock show recently.

Carl Greif's champion Shorthorn bull, Victoria Sultan, repeated his show winnings of last year.

Orange Blossom Lady, a Shorthorn in the state college string, was adjudged grand champion cow over all breeds. She won junior champion honors at the 1921 Pacific International.

McKay Brothers of Uniontown won champion honors on their undefeated Shire mare, Jolly B. Professor C. W. Hickman and Fred Bayliss of the University of Idaho judged the draft stock

Raises Rams for the Range

"We find an ever increasing demand for the Hampshire rams for range purposes and the buyers are looking for a ram that will put more wool on the mutton type wether," said S. P. Wipple, the veteran Hampshire breeder of Ellensburg, Wash. "By breeding a ewe to a Hampshire ram the lamb will have more wool on the face than its mother, one of the indications that the cross will make an increase in the amount of wool on the back.

"Since our main market for the pure-bred rams is with the range men, we are raising them so that they will stand up in good shape when they are put out for service. With this in view we have cut down on the amount of feed that is fed to the lambs. They get only a half pound of grain a day, while the ewes get more. In this way we keep them from getting too soft before being sold and they learn to be better rustlers."

Mr. Whipple wintered his ewes in good shape and got a 150 per cent increase at the lambing season. There were 45 per cent ram lambs and 55 per cent ewe lambs. One ram lamb made an average gain of a pound a day for 150 days, while there were others that made gains almost as outstanding. All of the sheep are registered, the stud ram being a son of Remesis, who was leased for one season for $1250 in Europe.

While there is a good demand for the ram lambs, Mr. Wipple makes no attempt to sell the ewes, but keeps them on the farm for breeding purposes and some years even buys more to add to the flock. A number of the best animals will be fitted for the county fair and will also be shown at the state fair at Yakima.

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Senior herd sire, Francis May King (A. R.) he by Langwater Hambro (A. R.)

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Our herd matrons are cows with A. R. records from such noted sires as Langwater Hambro, Langwater Emigrant and first 5 daughters of Francis May King, to freshen with average records of 480.14 butterfat, at average age of two years and ten months; most of them double letter class.

Some splendid bull calves for sale of above breeding.

H. E. ANGEL, Mabton, Wash.

Registered Guernsey Bull

Tahoma of Bralee, 4 years, permanent holder cup best dairy bull, all breeds, Clarks Fork fair; great-grandson Glenwood Girl 6th, and King of the May; bargain, $150. Guaranteed sure breeder; t. b. tested; papers furnished.
FIR GROVE FARM, Clarks Fork, Idaho.

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Sired by Lalla's Prince, a show bull with great winnings in middle west. Dams, Glenwood and Sequel breeding. Priced to sell.
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Guernseys Two splendid May Rose bull calves at farmers' prices.
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FEDERAL ACCREDITED HERD.

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Young bull sired by a son of the grand champion and richly bred St. Mawes bull, Capt. Tristrom; dam, Sophie's Itelka; she by the great Pogis 99th of Hood Farm, and out of Lass 92d of Good Farm, 742 lbs. butter fat as junior 4-year-old. Good individual, dropped May 5; priced for quick sale.
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F. M. CURTISS, Fruitland, Wash.

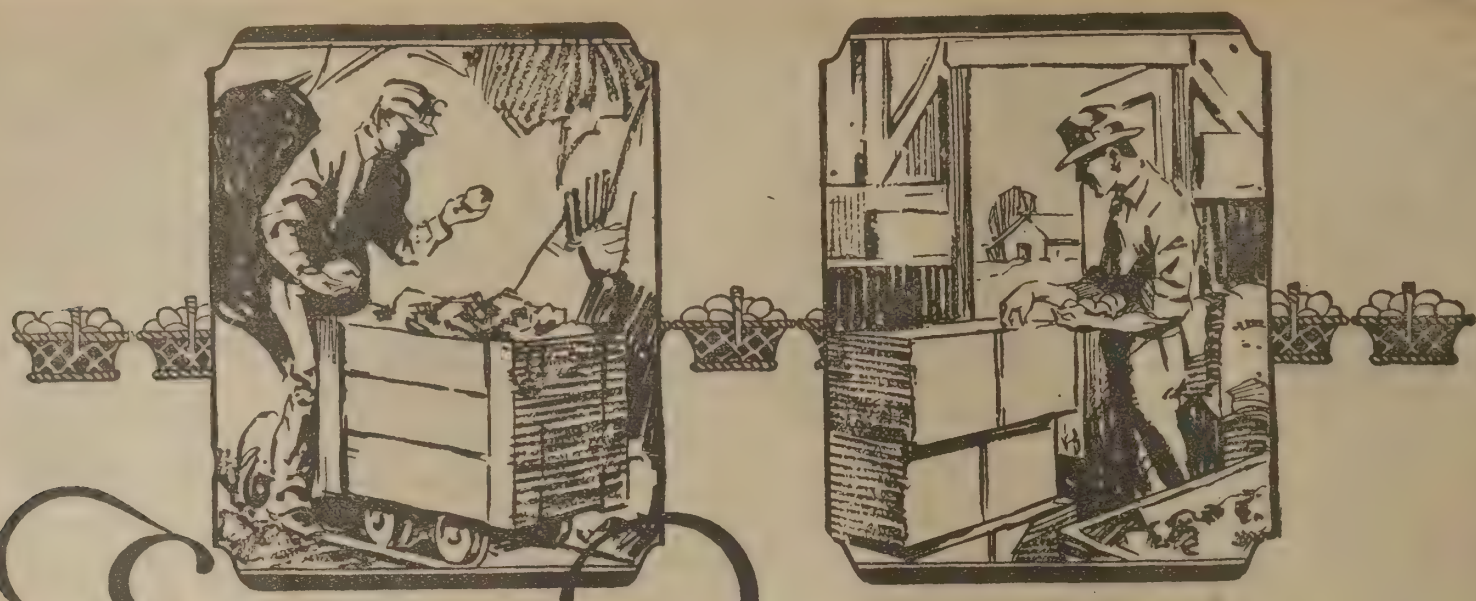
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H. J. STILLINGS, Hermiston, Ore.

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EVERY good hen is a mine—a golden mine of eggs. This mine will yield a certain revenue even if you go at it hit-or-miss. But, you can never expect to get the greatest yield—to strike the real "pay-streak"—until you tap the right vein. *And that's feed!*

No matter how carefully selected your stock may be—no matter how good the housing and care you give them—sooner or later you will "dig down" to this rock-bottom fact: feed is the nub and the rub of the situation.

Even the big poultry operators who have been mixing their own feeds and have switched to SURELAY will tell you it's the "cheapest" feed in the long run—cheapest because it nets *more* egg-money in return for the feed-money it costs.

These seasoned poultrymen realize—as you must—that a hen uses more energy in converting poor feed into money than she does in converting good feed into money. And, at that, how little is the difference in cost between good feed and poor feed! But look at the difference in the egg-sheet when you're through!

SURELAY has helped to put many a poultryman on his profit-feet by proving two things to him: First—that cheap feeds lessen the profits of every hen in his flock; second—that our large scale production enables us to turn out a better and more economical feed than he could hope to.

Blended and balanced according to a true-to-test formula, SURELAY stands top-high as a uniform egg mash that will make your hens pay by making them lay. The best way is the find-out-way. Order a sack of SURELAY from your dealer—and see! See how this high-grade mash "assays" in feed value. See how our daily laboratory tests insure the same feed value every time. See how SURELAY actually "pans out" with your flock. See how it rids your mind of feed-worry for all time. For "what's on the tag is in the bag"—always!

Also, send for the new edition of our booklet, "Makes Hens Happy." It is by far the most complete and helpful book we have ever issued on poultry feeding. And it's free! Simply clip the coupon—and mail today!

Plan to attend the Poultrymen's Convention at Oregon Agricultural college, Corvallis, August 1, 2 and 3.

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THE WASHINGTON FARMER

ESTABLISHED 1894 SPOKANE. SEATTLE.



HARVEST POWER

Will Unify Wheat Exportation

Cooperatives Contract With Leading European Importer

Announcement is made by the Northwest Wheat Growers, Associated, with headquarters at Portland, that arrangements have been made whereby Heatley & Co., an old-time and one of the leading European importeds of wheat, becomes the exclusive distributing agent of the cooperative wheat growers of Oregon, Washington, Idaho, Montana and North Dakota. The contract for this service was completed at a meeting of the board of trustees of the Northwest Wheat Growers, Associated, in Portland, with K. A. Oswald of the importing firm's office. Mr. Oswald has returned to England to assist there in preparing to receive that part of the new crop of wheat which the cooperative growers will soon be ready to export. Wheat of the Pacific northwestern states will be handled through the Portland headquarters of the Northwest Wheat Growers, Associated, while the Montana and Dakota cooperative grain will be handled through the new sales office at Minneapolis.

"The new distributing firm for the Northwest Wheat Growers, Associated, has acted as agent for some of the largest American exporters at various times during its long history of dealing in American wheat," says the Producer, official organ of the cooperators, in announcing the arrangement. "It was the exclusive European connection of the Houser interests during the years when the former Coast dealer was handling more wheat than any other exporter. Heatley & Co. have representatives in every important milling section of England, Ireland and Scotland, and in all importing European nations.

"'The name of Heatley & Co. is excellently known in the world's wheat centers,' said George C. Jewett, general manager of the Northwest Wheat Growers, Associated. 'This arrangement, whereby the English firm becomes our exclusive distributors for Eureope means that the associations are definitely and permanently on the world's map. It is another move in straightening out the chain between the producer and the consumer, and as such it will result in greater returns for the members of the associations.

"'Heatley & Co. have the experience of many, many years to go on when they start to handle cooperative wheat only. They have been distributing American wheat practically since it first moved to Europe. They know the requirements of every importing vicinity, of every mill. They are known, and known well, by bankers and shippers. They form for us as strong an international connection as ever has been at the disposal of any business, no matter what kind.'

"Because of the new export arrangements of the Northwest Wheat Growers, Associated, the task of expanding the Minneapolis branch is being hurried to completion. With the additional bushelage being contracted in North Dakota and Montana there probably will be several million bushels to be exported through that office in addition to large domestic mill sales of hard wheats. The new middle western organization must be completed before the northern wheat starts to move, soon after the beginning of shipments of Pacific coast grain.

"The connection with Heatley & Co. for European wheat distribution will not alter present arrangements of the association for exporting to Japan and China, this part of the work being carried on as heretofore."

New Smut Preventive

Within the last few years a new method of treating cereals for smut has been developed which promises to supersede the bluestone and formaldehyde treatment in many parts of the country, in the opinion of state college experts. The new treatment consists in thoroughly coating the surface of the seed with a finely powdered carbonate, two ounces being used per bushel. This may be done months before seeding, at the farmer's convenience, for the coating does not injuriously affect the germinating properties of the grain, but, on the other hand, improve it. The copper carbonate has been found to control wheat smut better than either bluestone or formaldehyde. In many cases substantial increases in yields have been reported.



The grain treating machine.

In order to facilitate the use of the copper carbonate dust, a mixing machine has been developed by the college experiment station at Pullman.

Full details as to the method of treating grain with the new dust treatment and concerning the mixing machine are included in a bulletin No. 168, "The Dusting of Wheat for Smut and Stinking Smut," by F. D. Heald and L. J. Smith, which are now ready for distribution. This bulletin may be secured by writing Director E. C. Johnson, agricultural experiment station, State College of Washington, Pullman, Washington.

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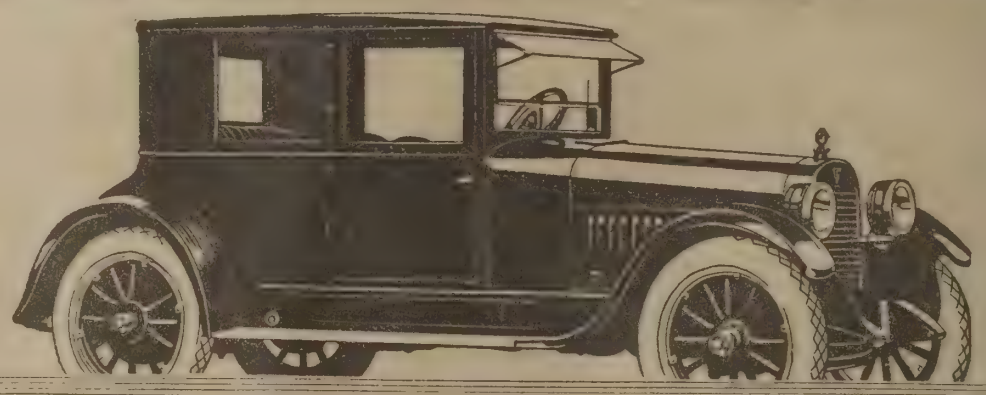
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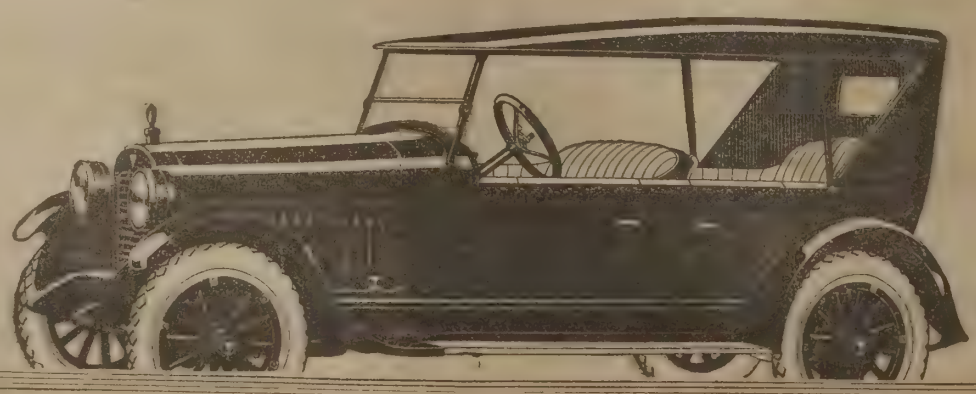
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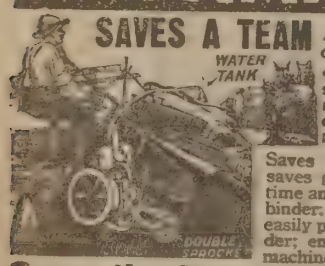
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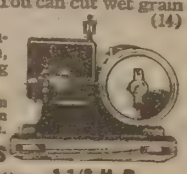


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For Good Farming, Attractive Country Homes and Happy Country People

Where Does Our Tax Money Go?

By LESTER M. LIVENGOOD, Attorney and Manager Spokane County Taxpayers' Economy League

The state of Washington is "tax-bound." It can not grow much because a wall of high taxes keeps out the only things that can make a state prosper and grow; people, capital and industries.

During the decade from 1900 to 1910 this state's population increased 120.4 per cent and the assessed valuation 281.45 per cent, but during the next decade (1910-1920) the population increase was only 18.79 per cent and the valuation increase 30 per cent. Such a change from phenomenal growth to almost stagnation in such a short period should invite our most serious consideration. An inkling as to what is wrong with us is found in a census advance report just off the press covering the years 1920-21. It shows that the taxes levied on property and other incidents for state funds in the state of Washington amounted to $17,755,-002, while the great state of California with three times our wealth and population got along nicely with only $11,696,226! Oppressive taxation is what is holding us back.

All over the state there is a protest against high taxes, but when we come to the question of how to reduce them it is every man for himself as to method. The problem is so vast and complex and the taxpayers can visualize so little of it that reducing taxes is many times harder than increasing them. Out of all the various opinions, however, there are two outstanding theories of tax reduction. The first is the course of least resistance, that is, shift the burden on some one else. Believers in this theory are not interested in the question of public extravagance or of living beyond our means, but are interested solely in finding new things to tax hoping that these new revenues will be used to reduce taxes on other things. They overlook the fundamental principle that unless we first get down to a basis of economy and efficiency with our present laws any new revenues will be wasted and new objects found to spend them on instead of using them to reduce the present taxes. Governments like people must live within their means. The only way we can afford to have all the desirable things that our standard of living has developed in recent years is to increase the production of wealth proportionate to the increase in our desires. But we have not done it. We want to keep the cake and eat it, too.

The second theory of tax reduction calls for a program of doing without the government luxuries added in recent years and which have largely caused the present tax burden. This is the only lasting and sound principle of tax reduction which will permit us to prosper. Cutting off unnecessary public expenditures must precede devising new sources of revenue because we can not know whether new revenue will be needed or not until we get down to an economical basis and buy only what we can afford.

Therefore, to reduce taxes materially we must do without things. But what shall be cut out and what not? To answer this question requires the taxpayer to know where the tax money is going and the relative importance of each object of expenditure. The tax problem is so big that it is hard to see it as a whole. Many taxpayers would like to know how the total tax money raised in the state for all purposes is spent, and, therefore, I have prepared the accompanying table classifying the taxes into the few larger functions and comparing the levies for several years. This table will show where the outstanding increases have been made during the last 12 years and point the direction for future investigation as to what can be reduced. Necessarily, all detail has been omitted, as the purposes of the table are only to give a general birdseye view of the total taxes in this state. Specific items will be taken up in detail in future articles.

Total taxes levied in state of Washington by functions.
(Collectible year following one designated).

	1910	1914	1918	1921	Per cent increase 1921 over 1910
Education	$ 9,278,040.18	$13,196,659.98	$17,705,061.28	$29,107,253.46	231.72
Cities, towns and metropolitan park districts	7,034,791.26	8,098,895.58	11,321,599.84	12,503,712.65	77.74
Roads (including townships).	4,672,174.37	7,142,753.19	8,591,938.08	11,829,898.44	153.19
County current expense	3,140,885.67	3,842,834.88	5,245,602.12	6,199,400.49	97.37
State general fund	1,925,973.28	2,558,272.01	1,876,275.63	2,669,103.48	38.58
State (other funds except school and road)	140,912.37	116,418.54	832,200.18	*2,596,101.17	1742.56
County debt and interest	475,367.55	1,000,281.37	1,312,282.97	1,804,460.12	279.60
Drainage, diking and misc. taxing districts	248,579.77	791,829.81	588,919.24	1,155,055.59	365.02
All other	167,265.39	72,470.92	248,813.96	340,624.59	103.64
Grand total	$27,083,979.84	$36,818,416.31	$47,722,683.30	$68,206,809.98	151.83
Population	1,141,990			1,356,621	18.79
Assessed valuation	$906,247,994.00	$1,031,901,697.00	$1,035,938,619.00	$1,177,239,240.00	30.00

*Soldiers' bonus voted by people comprises $1,179,962.60 of the item.

Crop Estimates for Three States

By the Federal Agents in Washington, Oregon and Idaho

Oregon. Number Bushels	Oregon. Per Cent Condition	Washington. Number Bushels	Washington. Per Cent Condition	Idaho. Number Bushels	Idaho. Per Cent Condition
Winter Wheat.					
17,846,000	85 per cent	23,677,000	67 per cent	8,155,000	78 per cent
Spring Wheat.					
3,000,000	70 per cent	14,091,000	63 per cent	15,655,000	88 per cent
Oats.					
7,209,000	92 per cent	7,299,000	73 per cent	6,847,000	88 per cent
Barley.					
2,150,000	73 per cent	1,960,000	70 per cent	2,921,000	87 per cent
Corn.					
2,000.000	91 per cent	2,369,000	94 per cent	1,824,000	92 per cent
Potatoes.					
5,150,000	85 per cent	8,184,000	88 per cent	13,644,000	92 per cent
Hay.					
2,150,000	tons	2,020,000	tons	2,933,000	tons
Hops.					
10,545,000	lbs.	4,512,000	lbs.		
Apples.					
6,220,000	bus.	4,275,000	bus.	27,000,000	bus.

While hot winds and a prolonged dry spell have done much to reduce all crop yields throughout the entire Pacific northwest, majority of the crops are up to the 10-year average, and will net the farmers good returns, according to the July government crop reports, which were made public during the past week.

The Oregon report was prepared by F. L. Kent of Portland, the Washington report by G. S. Ray of Spokane and the Idaho report by Julius H. Jacobson of Boise.

General Average Over 75 Per Cent.

Totaling the reports of the three agents gives 51,678,000 bushels as the estimated 1922 production of winter wheat, with the average crop condition estimated at 76.6 per cent. Total spring wheat yield is estimated the 32,746,000 bushels, and condition of the crop on July 1 over the three states at 73.6 per cent. This makes a total estimated wheat crop of 84,424,000 bushels in the three states, and a general crop condition average of 75.1 per cent.

Potato Average May Be Reduced.

The reports show a total estimate of 26,978,000 bushels of potatoes in the three states, and an estimated general crop condition of 88.3 per cent, but these figures may be reduced, especially in Oregon, if the present warm dry weather continues.

Hay tonnage is hard to compute, but the figures show a total estimated tonnage of 7,103,000 tons.

Apple Crop.

Washington will produce the lion's share of the apples, her estimate being placed at 27,000,000 bushels. Last year Washington's final production was estimated by the government at 29,062,000 bushels. Oregon's crop is estimated at 6,220,000 bushels, against 5,571,000 for last season, and Idaho at 4,275,000 against 4,400,000 for the previous year. This makes a total estimated 1922 production of 37,495,000 bushels in the three states, with Oregon the only state showing any gain.

Where Truth Is Better Than Fiction

Are you reading the new serial story by Lewis B. Miller, "Pike's Peak or Bust"? If not, begin this week. You can get the first part of the story from the synopsis.

With regard to this story, in a recent letter Mr. Miller writes:

"Should you care to so state, you may mention that 'Pike's Peak or Bust' is mainly and essentially true. Even many of the details are true. I have been hearing the story all my life; and I had the old Pike's Peaker in the house with me when I wrote it."

Farmers Visit Experiment Stations

Results of Many Studies Are Demonstrated to the Visitors

Farmers in western Washington are this week guests of the experiment station at Puyallup. Eastern Washington farmers had their innings last week, when field days were held at the main experiment station at Pullman, the dry land station at Waterville and the irrigation station at Prosser. Between 600 and 800 farmers spent the respective days on these three experiment farms under the leadership of President E. O. Holland, Director E. C. Johnson and other members of the faculty and experimental staff of the state college, together with Superintendent C. E. Hill of the Waterville station and R. B. Bean of the Prosser station.

The Waterville and Prosser stations are primarily interested in solving problems that must be met by the farmers operating under the conditions peculiar to these two sections. The station at Pullman, while solving problems of peculiar interest to Palouse farmers, is also doing experimental and research work of a general interest. One of the most interesting features of the field day at Pullman was the presentation of a hybrid wheat developed by crossing Florence and Turkey Red varieties. While this new hybrid variety is not as yet entirely satsfactory from the standpoint of yield, it possesses the long-sought quality of being almost entirely smut-resistant. Another feature of special interest at Pullman was the demonstration of the new method of treating wheat with copper carbonate dust rather than with formaldehyde or the more common bluestone treatment. While this new treatment is still in the experimental stage, results have been obtained from it that lead the experimenters to expect it to become an important factor in eliminating smut in the Pacific northwest.

At the Waterville station the greatest interest was manifested in the work of that station in demonsrating improved methods of soil tillage to overcome blowing and drouth that have in previous years greatly reduced the yield and are this year cutting the crop to a low point on many farms. In an early issue of The Washington Farmer an article by Superintendent C. E. Hill of the Waterville station will be given touching upon the tillage methods as practiced and the results that have been obtained from them.

Many problems in irrigation farming are being solved at the Prosser station, including tillage methods, the time of cutting alfalfa, methods of fertilization, suitable crops to be sown, methods of irrigation and so on.

The three field days occurring at Waterville July 8, at Pullman July 10 and at Prosser July 12, respectively, were among the most successful that have yet been held.



At the Waterville experiment station on Field Day.

Irrigation District Rule

An existing irrigation district at Greenacres, which it was proposed to include in a new and much larger district petitioned for in the Spokane valley, must first be eliminated from consideration, according to State Attorney General L. L. Thompson, even though the original petition included more than the requisite 50 signers both from within the old district and from within the newer portion of the proposed new district, severally. The attorney general's ruling answered the question submitted to him by the county commissioners of Spokane county on this point, it being matter of doubt whether provision existed in the statutes for the incorporation of a district organized under the law with unorganized territory. Failure of the petition for the enlarged district to mention the previous creation of the Greenacres district under the statutes had raised also the question whether the petition set forth all needful facts, as law requires. Furthermore, whether the commissioners were empowered to create a second corporation exercising identical functions with those already exercised by a previously created corporation, and in the same territory, was a point raised.

To the sufficiency of the petition the quantity and nature of the lands it is proposed to include are immaterial, except to determine the qualifications of the petitioners and the sufficiency of notice to be given to owners, rules the attorney general, for the petition does not fix the boundaries of the lands to be included in the district. That devolves upon the coun-

(Continued on page fifteen.)

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Would Bar Orientals

Representative Albert Johnson of Washington state, chairman of the house committee on immigration, recently introduced a bill that should have the cordial support of every citizen who believes in preserving this country against Asiatic ownership and occupation. Representative Johnson's bill would bar from admission to the United States aliens who are ineligible for citizenship, thus excluding Japanese, Chinese and Mongolians.

Senator Poindexter is vigorously on record in support of this method of solving the difficult Japanese problem. He advanced that solution five years ago in a speech in the senate proposing then the same method of exclusion that is now applied in Chairman Johnson's measure.

The Washington Farmer congratulates Chairman Johnson and Senator Poindexter on their vision and courage. We have no prejudice against the Japanese race; on the contrary, we respect and admire its many virtues. It is not a question of the superiority or inferiority of one race or the other, but of wise precautions against dangerous commingling of two very different races. The greater the number of Japanese in this country, the more acute and alarming will be the Japanese problem. If there were no Japanese at all on the Pacific coast, we should have no Japanese problem. Misinformed eastern sentimentalists who express a fear that we may offend Japan and bring on a war if we attempt further exclusion will do well to get this truth into their minds. Unrestricted admission of Japanese would be the surest way of bringing on a war with Japan, because the presence here of Japanese in large numbers would lead to increasing friction.

Wenatchee Seeks New Outlet

The objection of Great Northern officials to the building of the proposed Wenatchee Southern railroad, that the region it would traverse "is only a jack rabbit country and would not originate enough business to warrant the building of the line," is irrelevant and wide of the mark. The purpose of the Wenatchee hearing is to provide a better outlet to the markets of the world for the products of the Wenatchee valley and the rich, productive region to the north of that fine city.

That region now has no competition of railroad service. It is bound exclusively to the Great Northern. Construction of the Wenatchee Southern, a short line of a few miles, would give the Wenatchee region a competing outlet over the Milwaukee, the Northern Pacific and the Union Pacific systems.

The need of this key connection is well understood by the fruitgrowers, stockmen, other farm producers and the commercial organizations of the long region from Kennewick on the south to the Okanogan country on the north. So far as that region is concerned the northwest has only one transcontinental railroad.

The Great Northern is a fine system and deserves credit for pioneering in that region. On the whole it has taken fairly good care of the Wenatchee country, but there have been years when it was unable adequately to serve that region and heavy losses were suffered by the people. As orchard and farm production increases, the need of increased railway service will be felt more and more in that region. The interests of the Great Northern should not be permitted to check the growth and restrict the prosperity of the communities that are longing for increased and competitive service.

Still No Need for That Big Debt

In opposition to the Carlyon $42,000,000 road-bonding bill of two years ago, The Washington Farmer told its readers that it was folly to incur so gigantic a debt when the state, from various sources, would have as much money as it could economically expend. We said then that there was no reason to doubt that the federal government would continue its policy of making large appropriations and this state could count upon its share from that source.

These predictions are fully verified. For the three-year period beginning July 1 this year, congress has made provision for $190,000,000 for federal aid. Fifty million dollars of that sum will be available for the first year.

At the same time the postoffice appropriation bill, signed by President Harding June 18, authorized an appropriation of $65,000,000 for the same purpose, to be expended during the fiscal year beginning July 1, 1923, and $75,000,000 for the succeeding fiscal year. The conditions are the same for all three years, and will bring the total amount expended during the period, if the states comply with the stipulation and expend like sums, to $380,000,000. These federal funds will be administered by the secretary of agriculture through the bureau of good roads.

Under the apportionment to be made to the various states for the fiscal year which began July 1, Washington will receive $735,806; Oregon, $788,443; Idaho, $625,691, and Montana, $1,031,257. The requirements of the federal government are that the state receiving aid must match the federal appropriation dollar for dollar, must maintain adequate highway departments, must maintain the federal roads when completed and must construct roads sufficient to the traffic anticipated.

It is estimated that the $190,000,000 appropriated by congress will result in the construction of more than 25,000 miles of road, which, added to the 46,000 miles that are expected from previous federal appropriations, makes a total of 71,000 miles, or nearly 40 per cent of the estimated 180,000 miles of good roads on the system of federal aid roads now being outlined.

We are in an era of extensive and expensive building of good roads, and THE FARMER is cordially in accord with that policy, but it believes in moderation in all things. It clearly foresaw that if the state of Washington, or any other state of the Pacific northwest, should make the mistake of laying out too much road construction it would pay dearly in excessive cost and slighted construction. In this state, in particular, we are going as rapidly as good judgment could demand. Out of various sources Washington has sufficient revenue for road building without contracting a big and unnecessary bonded debt.

Insurance Is Not Enough

It is a wise precaution for one to insure his destructible property against loss by fire, but insurance is not enough. The utmost precaution should always be used to avoid losses even though the property is insured to the maximum value. Property destroyed by fire is simply wealth wiped from the face of the earth. It often leaves the owner and his family in difficult and unhappy circumstances. At best it causes a great deal of trouble and inconvenience.

Most fires are caused by carelessness. It may be carelessness in the stove or furnace connections. It may be carelessness in electric wiring. It may be carelessness on the part of oneself or a hired man or visitor in dropping matches or cigarette stubs.

Insurance is indeed desirable in the large majority of cases. Care and caution are desirable in every case.

State Farm News

L. L. Bruning of Colfax was unanimously elected president of the Whitman County Pioneers' association at the annual meeting and picnic held recently at St. John. B. F. Manring of Colfax was elected vice president and Ivan Chase, Colfax, was named secretary-treasurer.

Among the early settlers at the meeting were Mr. and Mrs. S. D. Woodward of Colfax. Mr. Woodward settled in Whitman county in 1872. F. M. Clow, who came to St. John in 1876 and who was postmaster there for many years in the early days, told of handling the mail then. There was no stated place for the office and the early settlers say he often carried the mail around in his pockets, distributing it to the people as he met them.

Another interesting pioneer at the picnic was H. C. Harlow of Harrington, who settled on Pine creek in 1871.

* * *

A coyote, which is said to have killed $14,000 worth of lambs and $100 worth of poultry in Adams county, has been killed by Lee Land, according to Glenn R. Bach, federal predatory animal inspector.

* * *

At the end of the first week in July the total cherry shipments from Yakima to date in car lots amounted to 69 cars. The estimated total is fixed at 100 cars. Pear growers report a good crop and are looking forward to good prices.

More than 3000 tons of valley hay is said to have been sold in the Seattle market for $16.50 per ton. H. L. Hull, president of the Yakima farm bureau, says that one salesman contracted 1630 tons f. o. b. Yakima and that several farmers report successful sales.

Peach growers report the peach crop is about normal and the peaches in healthy condition. The apple crop looks promising.

* * *

Virtually all of the 1922 prune crop in western Clarke county, including Felida, Sara and Ridgefield, some of the heaviest prune producing sections in the country, has been contracted for at prices ranging from 9 to 11 cents a pound by the Washington Fruit Growers' association and outside concerns.

* * *

There are 300,000 hens in Lewis county, and the state college, through the extension service, aims with the cooperation of Lewis county poultrymen, to increase their production five eggs per hen annually for four years. This will add, it is estimated, $40,000 per year to the wealth of the county—and the poultry income is already larger than that from milch cows.

* * *

According to reports of railway officials Yakima's 1922 wool clip is all out of the hands of the growers and all but three cars have been shipped. Total pounds clipped is estimated at 1,800,000, which is 200,000 less than the 1921 clip. Prices this year averaged 26 cents a pound, which is practically double the last year's price.

* * *

At a recent election at Morton 80 per cent of the electors voted in favor of the $16,000 bond issue for the installation of the new Connolly creek gravity water system.

* * *

Fifty government and state agricultural research workers of the three northwest states will meet in Yakima July 24 for their annual conference, which will also be attended by some experts from Washington, D. C. A. E. Lovett, county agent, will arrange a number of orchard tours to enable the scientists to study and inspect pests at first hand.

* * *

The first carload of red raspberries to be shipped from the Puyallup valley for the 1922 season left the Puyallup & Sumner Fruit Growers' association tracks July 1 for Winnipeg, Manitoba, at $4 per crate, f. o. b. Puyallup. Three carloads were shipped east through the association. Each car carries 740 crates.

* * *

A meeting was held at Chinook recently by the executive committee of the Chinook school and community fair to arrange for the annual fair to be held on October 6 and 7. This committee was appointed by the Chinook Parent-Teacher association to have charge of the fair for this year.

The following chairmen of committees were selected to look after the details of the several departments:

Vegetable gardening, Mrs. Oscar Olsen; dairy products, Mrs. John Gile; farm products and grain, G. Raiser; poultry, Mrs. F. J. Metty; fruit and flowers, Mrs. Erick Lindstrom; fancy work, Mrs. F. O. Gaither; sewing, Mrs. Ruth Yeager; canning and preserving, Mrs. William Rees and Miss Henrietta Johnson; sports, Professor R. G. Johnson; live stock, Mrs. J. W. Phillips. The executive committee consists of L. C. Johnson, chairman; B. G. Johnson, secretary; Mrs. Edward Gardlin, treasurer; L. C. Fenn, advertising manager; Mrs. K. V. Jernstrom, member.

Coming Events of Interest

July 20-22—Community jubilee, Centralia.
July 21-22—Experiment station field days, Puyallup.
July 24-Aug. 5—Live stock tour, Vancouver, Bellingham.
July 26—Potato tour, Yakima.
July 26—County purebreeders' picnic, Chehalis.
July 26-27—International apple shippers, Seattle.
July 27-28—Whatcom Guernsey gallop, Bellingham.
July 27—Alfalfa growers' tour, Stevens county.
July 29—Peninsular beekeepers' meet, Olympia.
Aug. 14-19—Skagit county fair, Burlington.
Aug. 28-Sept. 2—Southw't Wash. fair, Chehalis-Centralia.

FARM BUSINESS AND MARKETS OUTLOOK

The number of business failures in June was the smallest since last September and total liabilities the lightest since October, 1920.

Dressed cattle trade is in a healthy state, with beef prices $1 to $2 higher in the east and the veal market steady to $3 higher.

The tariff makes for unsettlement in the wool market so far as the long distance outlook is concerned.

The trend of wheat prices in the next few weeks depends upon the rate at which the new crop is sold and the demand which develops for it.

Recent rains have improved the oats prospects to some extent, but a crop below the average of 1,250,000,000 bushels looks probable.

The hay crop is estimated at 107,000,000 tons compared with 97,000,000 tons last year.

Butter receipts have fallen off, but remain large enough to furnish a surplus over domestic consumptive needs.

Business Barometers Favorable

Although a few clouds have gathered on the horizon recently, most of the business barometers continue to forecast favorable weather.

The building boom is the biggest ever known and a long string of related industries such as lumber, hardware, cement, paints and oils are sharing in its benefits. The iron and steel industries are operating at above the pre-war level. Boot and shoe manufacturing, clothing, furniture, implements and drugs and chemicals all show improvement over last year, according to comprehensive surveys.

As a result the amount of involuntary employment has dropped down to the lowest level since the depression started and a shortage of skilled labor in certain lines and of unskilled labor in certain districts is reported.

With the turn of the tide, business failures have dropped off, the number in June being the smallest since last September and total liabilities lightest since October, 1920.

The demand for loans has increased in industries, which show most complete revival but, speaking broadly, the supply of capital is increasing more rapidly than the demand for it, so that interest rates are easing. Mortgage money is more abundant, savings deposits are rising and the demand for investment securities, as measured by the price trend of Liberty bonds, most of which sold at new high levels last week, is increasing.

About 700,000 men are out of work in the coal strike which started 15 weeks ago and stocks of coal are getting low enough to occasion alarm as to the maintenance of industrial operations. The federal government is taking a hand, however, and the prospects of settlement are becoming brighter.

The strike of rail shipment takes an additional 400,000 men from the payroll and reduces buying power for farm products by that much more. It is too early to form any satisfactory notion of the outcome of this clash, although serious trouble is not generally expected.

The worst of recent developments was the evidence of a new collapse of the German government and the headlong plunge of the mark to a new low figure of over 550 for $1, compared with slightly over four to a dollar in normal times.

Until foreign political and financial affairs become more settled, export trade in wheat, corn, cotton, hog meats, lard and other farm products will be restricted. Besides Germany the countries most affected will be France, Belgium and Italy, which were counting upon large reparation payments to help solve their own financial woes.

In the markets for agricultural products heavy receipts of live stock and of dairy products have been absorbed in recent weeks at highly profitable prices, cost of feed considered, and the grains have held comparatively stable. The trend in the latter in the next few weeks depends largely on developments in export circles. The general commodity price level seems to be moving upward. Bradstreet's index number advanced 1.7 per cent during June.

Holiday Helps Cattle Trade

Curtailed receipts of cattle, partly due to the holiday a week ago, have been felt in distributing channels and values on the hoof were advanced nearly all along the line. Dressed trade is in a healthy state, with beef prices $1 to $2 higher in the east and the veal market steady to $3 higher. Eastern shippers competed with local packers on middle western markets and exporters also took a small slice.

Prices advanced even more on intermediate grades than the rise to a new high for the year of $10.50 on prime steers indicates, putting some of the lower grades out of line again. An influx of grassers can be looked for at any time, however, which will widen the spread once more. Yearlings are not being dumped in an unfinished state as freely as a few weeks ago. Cows and heifers shared in the upturn on steers and veal calves gained 50 to 75 cents for the week.

Eleven dollars may be paid for steers at Chicago before summer is over, as but few feeders care to go into "fly time" when the finishing touches are hard to put on. All grain-feds and hard-finished grassers should share in this prosperity. Prices for the general run of steers from the grazing area will not be so buoyant, although the range supply is not believed to be heavy.

Feeders Favor Low Grades

In an effort to avoid high cost feeders are buying mostly common and medium grades of thin steers. This may be safe policy if they are not to be resold until next spring, but they must compete with an abundance of low grades from all grazing sections if disposed of this fall. The movement from the leading markets is holding up exceptionally well and will increase as soon as a larger supply is available, and farm work is a little less pressing. Shipment of stock calves from the southwest is expected to start about August 1.

New High for Hogs

The hog market at Chicago finally broke over the $11 line last week, reaching $11.15, the highest since last March. Receipts are declining slowly, although they remain heavier than usual at this season.

Under an early and heavy run of packing sows the price rage has widened decidely in the last two weeks. Extremes are about $3 apart. Likewise the average cost of droves has dropped considerably below the top of the market paid for choice lights, although it holds around $10 or above.

Low prices for lard have discouraged its production, nevertheless it keeps piling up. The stock at seven main packing points on July 1 was 111,763,000 pounds compared with an eight-year average on that date of 90,059,000 pounds. Stocks of hog meats on the contrary are only 266,684,000 pounds, the lightest since 1914 and about 21 per cent below the eight-year average. The gain in lard is partly due to lighter exports, while there is a keen domestic demand for smoked meats. Unsettled political conditions in Europe have restricted foreign buying recently.

Range Lambs on Schedule Time

Range lambs started to market at about the usual time. Several thousand head of Idahoes, Oregons and Washingtons have already landed at Chicago and Omaha. The movement from the southwest is relatively light, while the dressed trade is in splendid shape and prices on the hoof last week were the highest in a month.

The demand for feeder lambs is expanding. Thin range lambs are selling almost as high as fat ones, spelling prosperity for the producer. Buying of breeding ewes has started early and many more could be sold than are available.

Wool Market Dull

Recent inactivity in the wool market has been heightened by the advent of summer dullness. Some sales were made to mills at prices practically unchanged for the week and inquiries are increasing. Many of the big dealers are holding for higher prices, while the mills are awaiting the opening on spring lines of cloth. The tariff makes for unsettlement so far as the long distance outlook is concerned. Australian markets are reported firm, with British markets a little irregular.

Boston prices follow:

Scoured basis: Oregon—Eastern No. 1 staple, $1.30@1.35; fine and fine medium combing, $1.20@1.35; eastern clothing, $1.10@1.15; valley No. 1, $1.07@1.10.

Territory—Fine staple choice, $1.35; 1-2 blood combing, $1.10@1.15; 3-8 blood combing, 85@90c; 1-4 blood combing, 75@78c.

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When Wheat Is Harvested

Wheat ripens in some important producing section of the world in all but three or four months of the year. Even in these months minor countries are harvesting so that the process is practically continuous.

Cutting of winter wheat begins in the southeastern part of the United States about June 10. It continues through most of July and is followed by the spring wheat harvest in August.

Canada, Argentina, Australia and India are the other prominent wheat exporting countries whose harvest dates it is well for the grower to keep in mind. Canadian wheat ripens in August and September or a little later than our spring wheat. By November cutting begins in Argentina and continues through December. Australian wheat matures in January, while India harvests in March and April.

About two months are required to move Argentine and Australian wheat to Europe, where most of the surplus is consumed. Whenever stocks of old wheat are well exhausted in the southern hemisphere, European countries must do the bulk of their buying in North America until late in February, by which time new wheat from Argentina begins to arrive. If an exportable surplus in the United States is carried into the late winter and spring months it must be sold in competition with whatever surplus the southern hemisphere countries have. The course of the market then depends upon whether the combined surpluses in all countries are larger than importing countries need.

The European harvest runs about a month later than in the United States. Mediterranean nations begin to harvest in June, but the process continues until October, when Scandinavian countries finish up.

Wheat Supply Same as Last Year

Although spring wheat failed to come up to trade expectancy, the government's forecast of a total wheat crop of 817,000,000 bushels was not much below the unofficial estimates. It is 22,000,000 bushels more than last year and 18,000,000 bushels more than the average from 1916 to 1920.

Farm reserves were 31,641,000 bushels which, with stocks in country mills and elevators unofficially estimated at 16,000,000 bushels and Bradstreet's visible supply, makes a total carryover of 68,000,000 bushels. Added to the new crop estimate the total supply would be 885,000,000 bushels compared with 887,000,000 bushels last year.

The trend of wheat prices in the next few weeks depends upon the rate at which the new crop is sold and the demand which develops for it. Producers are doing but little contracting ahead owing to uncertainty created by the rail strike, but total receipts at primaries are slightly heavier than usual for this season of the year and are increasing rapidly. On the average during the last 10 years receipts have more than trebled from the first week in July to the first week in August.

European Needs Are Large

Official predictions upon European yields are not available, but Broomhall, the British statistician, estimates the total European crop at 120,000,000 bushels less than last year. Ruesia presumably is excluded. The Italian crop is 40,000,000 bushels less, France shows a big falling off and Hungary reports a 20 per cent loss. The weather in France, Germany and Great Britain has improved lately, but a big increase in European import needs in the next 12 months over last year is indicated. This increase will be partly offset by smaller shipments to non-European countries and a larger rye surplus from Canada and the United States.

Based on present indications importing countries will need about 60,000,000 bushels per month. But little has been bought for fall shipments as the European harvest is on and buyers are in position to wait until the North American crop is moving in heavier volume. Unsettled foreign financial affairs and unfavorable exchange rates also tend to delay purchases. If the estimates upon import needs are correct, importers will be compelled to buy around 425,000,000 bushels from North America in the next eight months, which will take care of most of the surplus in the United States and Canada now estimated at about 475,000,000 bushels.

Corn Acreage Slightly Reduced

The area planted to corn was estimated officially at 103,234,000 acres compared with 103,850,000 acres last year, a decrease of .6 per cent. The yield was estimated at 2,860,000,000 bushels, a decrease of 220,000,000 from the final yield in 1921. With the heavy exports and rapid domestic disappearance in the last eight months and a reduction in the crop as large as shown by the government's forecast, the total supply for the next crop year would be about 400,000,000 bushels less than for the present crop year, although still larger than the average.

Severe Loss in Oats Crop

The government's estimate upon the oats crop was 1,187,000,000 bushels, showing a loss of 118,000,000, or 9 per cent, during June. Recent rains have improved prospects to some extent, but a crop below the average of 1,250,000,000 bushels looks probable. Harvest has already started along the southern border of the oats belt. Receipt at primaries for the last several weeks have been above the average for this season.

Good Yields of Lesser Grains

The rye crop estimate was 82,000,000 bushels compared with 58,000,000 bushels last year and an average of 68,000,000 bushels in the five years, 1916 to 1920.

Barley was estimated at 182,000,000 bushels, compared with a six-year average of 189,000,000 bushels.

Flax was forecast at 10,700,000 bushels against a six-year average of 10,500,000 bushels.

Cash Grain Markets

The range of cash grain prices for the week ending July 12 was:

Chicago.—Wheat—No. 2 red, $1.14@1.18 1-2; No. 3, $1.13@1.17 1-2; No. 2 hard, $1.15@1.20. Corn—No. 2 mixed, 62 3-4@64 1-4c; No. 3, 61@63 1-2c; No. 2 yellow, 63@65 1-4c; No. 3, 62 1-2@64 1-2c; No. 2 white, 63@65c; No. 3, 62 1-4@64 1-4c. Oats—No. 2 white, 36@42 1-2c; No. 3, 34 1-2@39 1-2c; No. 4, 34 1-2@39 1-4c. Rye—83 1-2@87c. Barley—62@68c.

Feed Markets Weak

An ample supply of most by-product feeds together with very light country buying keeps the feed market weak. Tankage is the only important exception. Dry weather would increase the demand, otherwise there is little prospect of change until fall buying develops. The season's low point may be reached soon.

Prices per ton (100-pound bags) in carlots: Chicago—Bran, $16.50; standard middlings, $18.25; flour middlings, $24; cottonseed meal, 36 per cent, $46; 43 per cent, $50; hominy feed, $23; gluten feed, $28.85; old process oil meal, $47.50; tankage, $55.

Good Quality Hay Scarce

Good quality hay, especially timothy, is in demand, but receipts of low grades, particularly from the new crop, remain heavy and are hard to move. The crop is estimated at 107,000,000 tons, compared with 97,000,000 tons last year.

Prices per ton in carlots: Chicago—No. 1 timothy, $24@26; No. 2, $22@24; No. 3, $12@18; No. 1 light clover mixed, $22@24; No. 1 clover, $14@18; No. 1 clover mixed, $18@20; upland prairie, $13@18; midland prairie, $13@16; rye straw, $13@15; oat and wheat straw, $9@12.

Egg Holdings Set High Record

Cold storage holdings of eggs on July 1, according to the preliminary official report, were 9,763,000 cases, compared with 7,534,000 cases last year and a five-year July 1 average of 7,022,000 cases. The highest record in any previous year was 7,850,000 cases on August 1, 1919. The supply figures point to a small additional increase during July. Prices have changed but little during the last week. Receipts are falling off and fresh eggs will

(Continued on page twelve.)

LIVESTOCK AND DAIRY

Dehorning Cattle

"Animals of any age can profitably be dehorned," says B. W. Cooney, Douglas county agent, "but, like all other practices, there is a right time and right age at which the work can be done, with the least possible shock to the animal."

Mr. Cooney adds that 20 years' experience, after having dehorned thousands of head of cattle in the feed lot and on the range, has convinced him that the best results are secured if the animal can be dehorned at about 16 months of age for the beef breed and five months less for the dairy breed.

The time of the year when the work is done is of more importance than the age of the animal. He finds that the animal is in the best condition for this work about June 4. The blow fly problem has been solved by a paint which acts as a repellent to the flies.

LIFE PRESERVERS FOR LIVE STOCK

By DR. E. E. WEGNER, W. S. C.

DIGESTIVE TROUBLES, ARTICLE II.

The digestive system of the horse is very complicated and for the purpose of understanding the diseases to which it may fall heir we must consider its parts briefly. The stomach is small, considering the size of the animal, and holds only about three and one-half gallons, so one can readily understand that the foods and fluids that are taken in must pass on rather rapidly; especially is this true of the fluids when the animal isthirsty. The opening from the gullet to the stomach is such that it forms a kind of valve, which quite prevents foods or gases from being passed backward into the stomach or nose. We very seldom see the horse vomit or belch because of this construction, and when either occurs it is generally a sign of rather serious condition.



The small intestine which leads from the stomach is about 75 feet in length and is arranged in irregular folds in the left side of the abdomen. The foods remain in the small intestines only a very short time, as they pass through quite rapidly. Fluids, especially, pass very rapidly and may be heard at times when the animal has drunk quite a quantity of water. Next on the digestive tube is the blind pouch called the caecum, about four feet long and 10 or 12 inches in diameter, the inlet and outlet to this pouch are only about four inches apart and both in the large, posterior end, so that materials that enter this portion of the digestive tract must make their way toward the blind end and back again to get out. This is one cause of difficulty, since there is danger of the foods becoming packed together here and becoming unable to get out. This sack is apparently intended for a water reservoir principally, but solid materials also pass into and out of it, as they must on the way to the next portion. Foods may accumulate in the blind end of the caecum and remain there for a long period, while oils, etc., given to dislodge it passes only through the base and out again. This may give the animal the appearance of having an open digestive tube when in reality there is an obstinate obstruction in the caecum.

From the caecum the foods go through a short passage into the great storehouse of the horse, the large colon. This portion is about 14 feet long and varies in diameter from four inches to about 12 or 14. It is folded upon itself twice in order that it may be contained within the abdomen. The great bulk of food that the animal eats remains here for a time, and because of the great amount of food and its prolonged stay there are many difficulties that arise in this portion, where the final stages of digestion take place.

From here the food leaves and enters a smaller tube, the floating colon, which is about 12 feet long, and from there what remains enters the rectum to be expelled from the body.

Not only are the various portions of the digestive tube very different, but their actions are different also and we may have a very serious disturbance of action as well as of placement or size, so that if the organs are all in proper place and not overfilled with gas or food we may still have serious troubles from improper action of the parts. Unless there is perfect harmony of action as well as proper relation of parts the machine can not operate properly.

Aside from the above there are other things concerned in digestion. For example, there are the various fluids that are thrown into the tube from the nearby glands to assist in the preparation of it for assimilation. Numerous bacteria inhabit the tract and at times get too active and cause an unusual amount of gas that distresses the animal. Then there are numerous kinds of parasites that are more or less frequently found here and they are capable at times of causing distress. Foreign particles taken in with the food or water may be responsible for trouble, so that altogether there are many factors that must be considered when an animal is found with abdominal pain. All are serious and some are incurable, even if taken for treatment at once.

The next article will discuss symptoms of trouble in the digestive system.

WATCH FOR DEATH CAMAS.

Death camas, of which there are four principal species in the range country of the west, although causing heaviest losses among sheep, are also poisonous to horses and cattle. Under range conditions cattle are seldom poisoned. Horses are frequently made sick, but deaths are rare. A few cases are known where persons have been fatally poisoned by the weed. Children have eaten the bulbs out of curiosity and adults have gathered the plant, mistaking it for the edible sego. The United States department of agriculture has not found a remedy for poisoning by death camas, but the deadly species are now recognized, and ranchers may safeguard their flocks.

DAIRY AND POULTRY PRICES.

Prices of dairy and poultry products suffered the least in the rapid deflation of prices of farm products which began in 1920 and continued through 1921, according to the United States department of agriculture.

FEEDING ROOT CROPS.

The main difference between roots and ensilage for winter feeding is in the problem of storage. It is much more expensive to store roots, but they make great feed for the small herd.

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POULTRY AND RABBITS

Poultry Questions

By W. D. Buchanan,
Extension Poultry Specialist, Washington State College.

BROODY HENS.

We have 470 hens and about 75 of them are clucking. These are S. C. White Leghorn. Is it usual for this breed to do so? What causes it? Does it pay to keep them? A number of others are molting. Should these and the cluckers be sold at once? R. & M'I.
Kennewick, Wash.

It is not usual for so many Leghorns to go broody at once. You probably feed them without making them work enough, and the ration may have been lacking in protein and green feed. I would advise plenty of exercise and green feed. If your stock is of a good strain it might pay to keep them. Otherwise send all moulters and broody hens to market.

MAY HAVE TUBERCULOSIS.

Can you tell me what is the matter with my chickens and what to do for them? They seem to get lame in one leg and just sit around getting weaker and weaker. And as time passes they seem to be only able to drag their legs, seeming to have lost all use of their toes. They also lose their appetites. R. G. C.
Rice, Wash.

If the lameness which you mention is due to a stiffness in the joint and the hens get thin for some time before they die, it is probably due to tuberculosis. Examine the liver of a dead hen and if you find it covered with hard, raised nodules, this is most likely the cause. If, however, the hens are in good condition, and the lameness seems more like paralysis, the trouble is more likely to be indigestion. If this is the case, give them one-half ounce of baking soda in one gallon of drinking water, and follow this a few hours later with one ounce of epsom salts in one gallon of water. If the trouble is T. B. kill and burn all sick hens.

RAISING TURKEYS.

Will you please send me any information you can concerning the raising and care of turkeys and chickens? Also where could I get a ready market for all surplus stock in the fall about Thanksgiving time? G. R. M'C.
Prescott, Wash.

The first requisite for successful turkey raising is have strong, vigorous breeding stock. Keeping the stock pure, but do not inbreed. Give plenty of range and feed the young stock very sparingly. Send to the United States department of agriculture for farmers' bulletin 791. For information on raising chickens visit the experiment station at Puyallup. You will probably find a ready market for all surplus stock in Seattle.

EYES SWELL SHUT.

What can I do for chickens having sore eyes? Their eyes swell shut and the lids look white. I have cured a few with weak salt water, but most of them die in a few days. It is just the young chicks that are affected. MRS. A. B. G.
Spangle, Wash.

It is almost impossible to prescribe a cure without fuller details. Bad colds or roup will close the eyes as you describe. So also will chickenpox; but the latter is always accompanied with raised nodules or scabs. I would suspect the trouble which you describe as being a bad cold. If so, give the chicks plenty of fresh air, especially at night. Keep the premises clean and put a little epsom salts in the drinking water, about one ounce to four gallons of water for half a day.

Value of Milk for Poultry

A cow's freshening, with the consequent surplus of skim milk for feeding a small flock of laying hens, made all the difference between 120 and 180 eggs per day for A. G. Dundas of Pacific county, who is running 275 birds of several different breeds on a five-acre tract near Frances. This surprising illustration of the value of milk in feeding for egg production was brought out at the Dundas "ranch" during one of the May meetings held in Pacific county by W. D. Buchanan, poultry extension specialist. A small group of interested neighbors gathered in the new brooder, which Mr. Dundas had built for the oncoming "crop," and listened and questioned for two hours while the college expert brought out the good and bad points about various methods of feeding. The Dundas flock was being fed germinated oats in the morning, with 20 pounds of grain (one-third corn and two-thirds wheat) at 5 p. m., and with dry commercial mash before them at all times. This grain ration, Mr. Buchanan pointed out, was a little light, the usual recommendation being 10 1-2 pounds to each 100 birds. The hens were then laying 165 eggs, and it was in this connection that the owner recounted his experience with milk. This is his first venture on a farm, he having been in the mercantile business practically all of his life, in the middle west. He professes a liking for it, however, and a desire to make the combination of berries and chickens pay. He has made real progress in clearing up the logged-off land, and the poultry are making good use of that which is still in stumps.

Club Boy's Chickens

"Edwin's mother used to keep chickens, but his competition got too strong and she went out of business. Now he has all the hens on the place and is figuring on a new hen house."

No one who could see the careful accounts which Edwin Halvorsen of Menlo keeps and the earnestness with which he absorbed every word of advice offered by W. D. Buchanan, poultry extension specialist, would doubt for a moment that what County Agent J. R. Beck said of him was true. Edwin raises Rhode Island Reds and has been very successful with them under very ordinary conditions. He is president of the Menlo Poultry club, and late in May he had 250 chicks 4 weeks to 2 months old and 107 old birds. Here is the way his account books stood for four months this spring, though, of course, they were much more carefully worked out, with all the entries for feed, eggs and dressed poultry in the right columns:

Expenditures.	Receipts.
$18.16	$55.33
16.60	26.39
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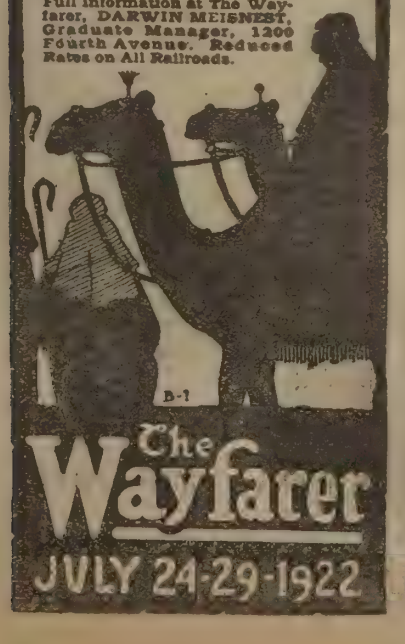
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Wheat and Clover



Some farmers continue to raise wheat at little or no profit, because a stand of clover can be secured in it if it is rightly fertilized. No crop responds better to POTASH FERTILIZATION than clover. For wheat to be seeded to clover insist on having a fertilizer containing

6 to 8% POTASH

and you will have a profitable clover crop, as well as a better wheat crop. In this as well as in other ways

Potash Pays

SOIL AND CROP SERVICE, POTASH SYNDICATE, H. A. HUSTON, Mgr.
42 Broadway New York

ORCHARD AND GARDEN

Cover Crop

Tries Red Clover and Alfalfa

In the hopes of finding some cover crop that will be easy to handle in an orchard, Captain R. G. Graham of Cashmere is trying red clover on five acres of his orchard near town. There are two five-acre tracts which are almost identical as to soil, size of trees, and land conformation. The second half of his orchard has been seeded to alfalfa in order to compare the results with the clover crop.

"We find that clover is a very convenient cover crop to have in an orchard," said Captain Graham, "since it is not as tall and does not entangle ladders and workers as does alfalfa. Clover affords a quick method of building up the soil. On the other hand, the alfalfa roots go much deeper, and the soil is opened up and allows for the water to go deeper into the ground. As a fertilizer the alfalfa seems much more efficient and the results are more convenient since it does not need to be planted from time to time.

"Our plan is to seed clover this fall or spring as conditions permit, and disk the rows slightly the first year. The second year thorough disking will be needed. We hope to be able to compare the results with the adjoining field of alfalfa. It may be that the clover will give almost as good results from the first two years as will alfalfa, but it is doubtful if the same results can be obtained in the long run.

"It is my opinion that the most economical plan will be to seed clover for the first two years, disking it thoroughly at the end kill the crop. The following spring, alfalfa will be seeded which will remain as a permanent crop."

Captain Graham has used alfalfa for almost 10 year, and in fact he was one of the first ones to adopt its use as a cover crop in orchards. Such a method of fertilization is much better in the long run than by the use of commercial fertilizer, according to Captain Graham. Alfalfa produces a steady food supply, and also gives an abundance of humus. There is practically no danger of an oversupply of plant foods, as is sometimes the case when commercial fertilizers are applied. Captain Graham believes in making a specialty of his orchard and finds that it is better not to attempt any side lines. "I believe that a man can better watch his eggs if he has them all in one basket. Too many baskets require divided attention and there is greater chance for a loss." Captain Graham has been 12 years away from the sea, being retired from active duty.

Fertilizes Orchard

Although the growing and discing of an alfalfa crop in the orchard has been carried out for a number of years on the E. Remy farm near Yakima, a heavy application of barnyard manure was put on this spring as an experiment. This was done to a part of the orchard where the alfalfa had thinned down and there was a need of something to take the place of it and to add humus.

"I put the manure on at the rate of 100 tons to the acre and some of it could not be plowed under. It will not be hard to disc under this fall and I expect to get the benefit of it all," said Mr. Remy.

"The trees are getting almost too close in this part of the orchard since they were planted 25 feet apart. I believe, however, that by careful pruning and proper fertilization, they can be left as they are, at least for a few years longer.

"I have heard of the value of sulphur for alfalfa and I applied some with the manure on part of the land to see if it would make any noticeable difference on the trees or the fruit. I also used some hen manure and sheep manure in other parts of the orchard. Both of these are good for the soil, but they do not usually have the humus that is contained in the barnyard manure."

Mr. Remy told how he believed that a few hens could be handled to a good advantage in an orchard, but that it was difficult to keep them up during the summer and if they were allowed to run at large they would scratch up the irrigating ditches and the whole orchard would have to be gone over by hand and the ditches opened before the water could be run down the rows. It is better, he said, to keep them up and feed them green feed every day than to give them their liberty in an orchard. After the water has been run in the ditches for a few times there is less danger of the hens filling them up, but they will scratch more or less litter in them and make a lot of trouble.

Orchard and Hens

Although a five-acre orchard affords enough work to keep one man busy the greater part of the year, Bert S. Fenton of Wenatchee plans on keeping from 1000 to 1500 White Leghorn chickens, as soon as he can get the flock established. He intends to build a modern laying house, 60x20 feet, which will be protected by four inches of straw placed on wire netting stretched at the same height as the ceiling. The ventilation will be provided for by vents leading through the roof.

By keeping the birds housed the greater part of the time they will do no damage to the orchard and very little extra work will be required for looking after them. This, of course, will interfere with no work during the winter months, and Mr. Fenton says there is no reason why he can not spare enough time to do all necessary work during the busy season.

The orchard itself consists of Stamen Winesaps, Jonathans and Winter Bananas. He is using the continuous alfalfa crop, which is disked under each spring. He intends, however, to clean-cultivate between the rows except for a strip between the trees, and apply an abundance of stable manure to maintain fertility. Five carloads of manure will be used this fall if it can be obtained. Next year a heavier application will be made, and still more the following year until the fruit begins to show the effects of too much fertilizer, at which time the application will be cut down.

THE CUCUMBER BEETLE.

A dust mixture of nicotine sulphate, for which the United States department of agriculture will supply a formula upon application, will keep the striped cucumber bettle from cucumbers, melons, squash and pumpkin vines.

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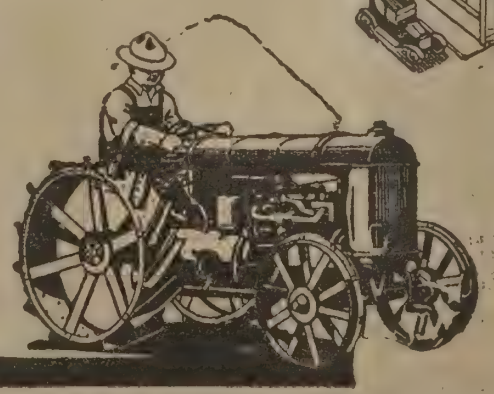
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Spokane, Wash.

Write US Pelts Ship US

WE ARE PAYING TOP PRICE.

Hibbard-Stewart Co.

Hibbard Building, Seattle.

Cellar Seepage

Is Sometimes Hard to Overcome

By PROFESSOR L. J. SMITH, W. S. C.

During the last six months the writer has had many letters from the irrigated sections telling of water leaking into the cellars and wanting to know how to keep it out.

When the land was first settled it was dry and people naturally put in deep cellars, often putting their homes too near the irrigation ditch. Later, after the water was put on the land, the underground water level slowly rose until it came above the level of the cellar bottom.

It is possible to build a cellar wall and floor water tight, but it is very hard to waterproof it after it is built. Ordinary seepage may be stopped by digging the dirt away from the outside of the wall clear down to the bottom of the foundation, and cleaning the surface very thoroughly, then coating with hot tar or asphaltum.

It is better if the outer surface be given a thick coating of lime-cement motar and then asphalted. This should keep the water from coming horizontally through the wall; but still it may seep up through the cellar floor or where the floor joins the inside surface of the wall. In such a case the trouble might be overcome by putting in a new concrete floor of one part of cement to three parts of sand, right over the old one, in which case it would be well to slope it toward the side where the seepage was worst and then have a little shallow pit concreted where any slow seepage might collect and be pumped out from time to time.

It may be that a great many building houses in ditch-irrigated sections will have to give up the idea of having cellars under their houses, and build an above-ground vegetable and fruit storage cellar just off the back porch, as is commonly done in older settled districts of the subirrigated type where the water level is within four or five feet of the surface of the ground.

Sugar Beets in Yakima Valley

L. D. O'Donnel of Billings, Mont., one of the best known sugar beet and alfalfa producers in the Pacific northwest, has been in the Yakima valley to cooperate with the Washington State College extension service in making a survey with particular reference to the place of sugar beets in the general agriculture of the region.

"In our section we are working to a rotation, as we figure that is what is going to make our farming pay," said Mr. O'Donnell. "We are growing beets for the sake of the land and the other crops in the rotation, as otherwise we could not get the yields of grain and potatoes that we do.

"We are turning all the byproducts on our farms and what would otherwise go to waste into beef, pork and mutton, and I find that the utilization of these byproducts and the waste is my profit. The fence corners, the fence rows and the ditch banks are pastured off in the fall and the beet tops are utilized. It is surprising how much this amounts to in beef, pork and mutton when it is all gathered up."

EASY TO KILL THEM.

Common dust will kill tree slugs.

Farmers' Want Ads

FARMERS' WANT ADS

This is the farmers' "want," "sale" and "exchange" department for small advertisements of farmers, including live stock and poultry.

Advertising rates for ads running 1 to 3 times, 10c per word per insertion, with a special rate to Farmer subscribers, as follows: Ads running 4 to 12 times, 9c per word per insertion; ads running 13 times or more, 8c per word per insertion.

All commercial and land advertising 10 cents per word each insertion. Open also to nonsubscribers.

In using these columns advertisers must observe: (1) No advertisements will be inserted for less than $1.00. (2) Every word, number and initial, including name and address, must be paid for. (3) New advertisements, changes of copy or cancellations must reach general office, Spokane, Wash., 10 days in advance of publication date. (4) Cash must accompany order.

Above rates include insertion in The Washington Farmer, The Idaho Farmer and The Oregon Farmer, which constitute the Pacific Northwest Farm Trio, 46 Review Building, Spokane, Wash.

HELP WANTED—MALE 3

WANTED — SALESMAN WHO CAN SELL high-grade, dependable nursery stock; several counties in Oregon, Wash., Idaho and Montana now open for assignment. Our selling contract will interest you. Address Albany Nurseries, Inc., Albany, Ore.

HELP WANTED GENERAL 5

RAILWAY MAIL CLERKS, GOVERNMENT clerks and carriers wanted. List of positions free. Write Mokane Institute, Dept. B21, Denver, Colo.

AGENTS WANTED 9

MEN WITH HORTICULTURAL EXPERIENCE can make good money selling our splendid line of well grown trees and plants. Write for contract. An early start will give you the advantage. Salem Nursery Company, 428 Oregon bldg., Salem, Ore.

FARM PICNICS AND FAIRS OFFER EXCEPTional opportunities to make money soliciting subscriptions for farm papers; liberal commissions offered to responsible and experienced solicitors. For particulars address P. O. Box 110, Harrisburg, Pa.

SITUATIONS WANTED—Male 21

BUTTER MAKER WANTS POSITION IN west; 14 years experience; references furnished. I. E. Amos, Hailey, Idaho.

EDUCATIONAL 45

EARN MONEY QUICKLY—THERE'S NO LIMit to one's earning capacity in business. And this great business college after training you thoroughly places you in a paying position. Courses include banking, stenography, accounting, private secretarial. Write for free catalogue. Behnke Walker Business College, Portland, Ore.

FRESH FOOD PRODUCTS 51-1

WHITE ALFALFA, SWEET CLOVER honey; 1 60-lb. can, $7.50; 2 60-lb. cans, $14.50; six 10-lb. cans, $8.50; three No. 10 pails, prepaid, third zone, $5.50. Wells D. Rose, Sunnyside, Wash.

WORLD'S BEST CLOVER HONEY, 60 pounds, $6.15; two 60s, $12. Browne, Box 499, Twin Falls, Idaho.

FRESH FOOD PRODUCTS (Continued) 51-1

SMOKED SALMON, 5-POUND BOX, $1.25; salt salmon bellies, 5 pounds, $1.25, delivered by mail. Coffin Fish Co., Seattle, Wash.

FRESH FRUIT DIRECT. LOWEST PRICES. Send for complete list. Ward K. Richardson, 2393 Front, Salem, Ore.

HONEY—NEW EXTRACTED, TWO SIXTY-pound cans, $10. J. M. Ruyts, Buhl, Idaho.

MISCELLANEOUS—FOR SALE 60

SASH AND DOORS—O. B. WILLIAMS CO., 1943 First ave. So., Seattle. Chicken house sash, 20" wide by 25" high, 80c; a dozen different sizes in stock for immediate shipment. Skylights for chicken houses, 36"x40"; price, glazed, $2. This is the size recommended by the Western Washington experiment station. We carry them in stock for immediate shipment. Sash and doors for all purposes at lowest prices. All orders receive prompt attention. Our large illustrated catalog No. 35, showing full line of building material and built-in fixtures for the home, free on request. O. B. Williams Co. Established 1899.

SACKS—SECOND-HAND GRAIN AND SPUD, correctly sorted and graded; also pipe, new and second-hand, any size; standard grade roofing paper at a big saving; belting, cable, etc.; special lot used centrifugal pumps and 4 and 6 inch galvanized iron irrigation pipe. Alaska Junk Co., S120 Adams st., Spokane, Wn.

CORN HARVESTER CUTS AND PILES ON harvester or winrows; man and horse cuts and shocks equal corn binder; sold in every state; only $25 with fodder tying attachment. Testimonials and catalog free showing picture of harvester. Process Harvester Co., Salina, Kas.

HOMESPUN SMOKING TOBACCO: MILD AND mellow; 10 lbs., $1.50; 20 lbs., $2.75; delivery guaranteed. We furnish free recipe for preparing. Smoking Tobacco Exchange, Sedalia, Ky.

WALL BOARD—WRITE FOR SAMPLE OF Washington plaster wall board; won't warp, won't burn. Manufactured by Washington Building Products company, 6851 E. Marginal Way, Seattle, Wash.

GRAIN BINS—SPOKANE CULVERT AND Tank Co. Metal grain bins, four 1000, ten 2000 bushels; all for $2500, f. o. b. Washtucna; first class condition. Bassett Hardware, Washtucna, Wash.

FREE MAIL ORDER CATALOG OF GROceries and general merchandise; fresh stocks; everything guaranteed. We will save you money on your harvest supplies. Jordan Lawler Co., Spokane.

TOBACCO — KENTUCKY'S PRIDE; EXTRA fine chewing, 10 lbs., $3; smoking, ten lbs., $2; twenty, $3.50. Farmers' Club, Mayfield, Ky.

MISCELLANEOUS. 61

ANY RADIO PARTS AND APPARATUS SENT prepaid. Write Stellar Radio Co., 428 Schuyler st., Portland, Ore.

YUBA TRACTOR TO TRADE FOR HORSES. H. L. DeWolfe, Helix, Ore.

MISCELLANEOUS—Wanted. 63

HIDES—WE BUY HIDES OF ALL KINDS. Write for prices and tags. Hibbard-Stewart Co., Hibbard bldg., Seattle.

WOOL—WE BUY WOOL AND PELTS. WRITE for prices and tags. Hibbard-Stewart Co., Hibbard bldg., Seattle.

MACHINERY—For Sale 93

FOR SALE—ONE 25-HORSEPOWER RUSSELL steam tractor; in good condition; price $1250, with steel tank and truck. Lincoln Trust Co., Spokane, Wash.

EXTRAORDINARY BUYS IN USED COMbines, caterpillars, separators, engines and trucks. Fallquist Brothers, Pullman, Wash.

CASE THRESHING OUTFIT FOR SALE BY Herman Mennrich, Odessa, Wash.

STOVE REPAIRING 128

WRITE MYER RUBENS, SPOKANE, ABOUT stove repairs, welding broken parts, nickle plating.

MACHINERY—Wanted 96

WANTED—C. L. BEST, OR HOLT CATERpillar engine; state lowest cash price in first letter. Walter Batzel, Weiser, Idaho.

FUR-BEARING ANIMALS 170

SILVER AND CROSS FOXES FOR SALE. William Rambo, 407 Sprague, Spokane.

PETS—Dogs, Birds, Etc. 171

COLLIE PUPS, UNREGISTERED, BUT PURE bred; sire well trained; $6 each. J. E. Finnicum, Dayton, Ore.

PUREBRED WALKER HOUNDS, FROM KENtucky; prize winning stock. M. Gottwald, Molalla, Ore.

BEAUTIFUL WHITE COLLIE PUPPIES; reasonable prices. Urbandale Farm, Oakley, Idaho.

RABBITS and HARES 173

FLEMISH GIANTS, PAIRS AND TRIOS, young stock. W. P. Layport, 1441 S. Stevens, Tacoma, Wash.

POULTRY 174

PULLETS—1500 APRIL AND MAY HATCHED White Leghorn pullets for sale at attractive prices; hatched from thoroughbred Hollywood and Tancred strains; sired by cockerels 250 to 290 egg strains. We ship at three months of age and guarantee satisfaction or you may return the birds in 3 days. We can give you quality and service. Queen Hatchery, Seattle, Wash.

CERTIFIED WHITE LEGHORN BABY chicks; booking orders now for summer and fall delivery; safe arrival live, vigorous chicks guaranteed; no money in advance; pay on delivery. Established 1898. Sonoma county farm bureau accredited hatchery. Must Hatch Incubator Co., 445 Seventh st., Petaluma, Cal.

TRY OUR PARCEL POST PACKAGE—KEEP the old hen busy. We will ship you first-class baby chicks, postpaid to your door, direct from the hatchery and guaranteed all alive. Price, $4.50 per 25; $8 per 50. For delivery April, May or June. Order now. The White Hatchery, Petaluma, Cal.

POULTRY (Continued) 174

WHITE LEGHORN HENS, $1 EACH; 1000 two-year-old "Henacres" hens, clean, healthy, heavy laying, selected stock must go to make room for our pullets. Also 1000 yearling hens at $1.50 each. These hens will make good breeders for 1923. Orders accepted for ten or more at above prices. July or August delivery. Satisfaction guaranteed. Free catalog. "Henacres," the Inland Empire's greatest poultry farm, Box A, Prosser, Wash.

WHITE LEGHORN BABY CHIX FOR SUMmer and fall months from stock accredited by Sonoma County Farm bureau. We guarantee safe arrival. Write for prices and literature. The Pioneer Hatchery, 422 Sixth street, Petaluma, Cal.

S. C. WHITE LEGHORN COCKERELS FOR breeding; extra select March hatched from high record O. A. C. stock; not excelled for egg production. Corvallis Poultry Farm, Corvallis, Ore.

BABY CHICKS — WE GUARANTEE OUR chicks to be from the highest producing hens in Petaluma. Write for further information. The White Hatchery, Petaluma, Cal.

HUNT'S BARRED ROCK SALE THIS YEAR'S breeders at bargain prices; buy now and get splendid breeders for next season. W. A. Hunt, Lebanon, Ore.

DOLLARS FOR YOUR EGGS—WE PAY THE top market prices for your eggs and poultry. Daily cash remittances. Western Produce Co., Spokane.

FANCY WHITE WYANDOTTE COCKERELS, $2.50; hatching eggs, two dollars setting. H. L. Lamon, American Falls, Idaho.

FORD'S BRED TO LAY S. C. WHITE LEGhorns; 2-year-old breeding hens, $1 each. W. A. Ford, Umatilla, Ore.

LIVE STOCK 177

LARGE, HEAVY PRODUCING HOLSTEINS for sale at all times in car lots; tuberculin tested; 150 to 200 head always on hand; well marked heifer calves from registered sires and heavy producing dams; crated for shipment anywhere, $25 f. o. b. Levinson & Balmelli, Yakima, Wash.

SHIP US YOUR POULTRY AND LIVE STOCK. We pay the top market prices. Light veal, fat, fancy, 12½c; dressed block hogs, 14½c; hens, light, 14c; heavy, 17c; prompt returns. John Lewis & Co., Spokane, Wash.

DUROC-JERSEYS—PIGS, BRED GILTS, SOWS, boars; the best breeding and good individuals. Owing to hired help, am selling all at prices to move them quick. E. A. Goodhue, W1227 6th ave., Spokane.

REGISTERED BIG TYPE POLAND CHINA pigs, big, growthy fellows; Oregon Big Wonder blood. Buy your fall breeders now, either sex, $16 each, f. o. b. Goldendale, Wash. Butterfly Ranch.

GET ROYAL OAK REGISTERED HAMPshire Dawn sheep. The premier mutton sheep. Rams and ewes for sale. Order rams early. Lloyd Millhallen, Corvallis, Ore.

WE PAY TOP PRICES FOR YOUR LIVE OR dressed veal, hogs and poultry. Your check by return mail. Shipping tags on request. M. & J. Packing Co., Spokane.

BONAPORK REGISTERED BERKSHIRES; farm bred spring pigs, $15 each; service boar, $50; best type and breeding. Kenneth Hinshaw, Goldendale, Wash.

I HAVE A FEW GOOD SHORTHORN COWS and bulls for sale cheap. O. L. Pearsall, Priest River, Idaho.

FOR SALE—CLASSY 9 MONTHS ST. MAWES registered Jersey bull. Address 399 Beach street, Ashland, Ore.

WILL SELL 30 HEAD OF REGISTERED Shropshire rams. Write McK. Edwards, Valley, Wash.

FOR SALE—HEREFORD BULLS, GOOD ones. Platt Bros., Genesee, Idaho.

MY HERD OF 15 GRADE HOLSTEIN COWS for sale. D. G. Reinig, Snoqualmie, Wash.

FOR SALE—REGISTERED SHROPSHIRE rams. Write Walter Scott, Scotts Mills, Ore.

TOGGENBURG MILCH GOATS; 4 AND 5 QT. strain, $30. Goat Ranch, Banks, Idaho.

HARNESS and SADDLERY 189

SEND FOR FREE HARNESS AND SADDLE catalog today; cut out the middleman, buy direct from the manufacturer. Lowest prices in the west; satisfaction guaranteed. Established 1881. Write Pierce Harness Co., Dept. T, Spokane, Wash.

JOB PRINTING 372

GUARANTEED BETTER BUTTER WRAPpers; 100, 60c; 250, $1.25; 500, $2.25; 1000, $4; printed to order. Home Specialty Co., Middleton, Idaho.

HANDSOME BUTTER WRAPPERS, FIFTY cents per hundred. Try sample order. Eagle, Eden, Idaho.

MATERNITY HOMES 497

MATERNITY HOSPITAL; STRICTLY PRIvate; doctor in attendance; prices reasonable. Mrs. Elizabeth Peel, matron, W1324 Broadway, Spokane.

MONUMENTS 510

COMPLETE STOCK, RIGHT PRICES. CORrespondence solicited. J. W. Harding, Inland Monument Co., N1001 Monroe, Spokane.

BUILDING MATERIAL 588

FIX BROKEN PLASTER WALLS WITH PERfection plaster wallboard; nailed on like lumber; takes calcimine or paint; sample and booklet from Western Wallboard Co., Seattle, Wash.

BUILDERS, CONTRACTORS, HOME OWNERS, write for free 1922 catalog. Tacoma Sash & Door Co., Tacoma, Wash.

NURSERY STOCK 621

CABBAGE PLANTS, LEADING VARIETIES, 500, $1.50, postpaid; 1000, $2.25, express; satisfaction guaranteed. Ray Parks, Bancroft, Idaho.

WANTED—2500 BARCELONA AND 500 DU Chilly filbert trees; must be true to name. Villa Nurseries, Portland, Ore. Route 1.

NURSERY STOCK. (Continued.) 621

GROW BUREAU OF PLANT INDUSTRY'S new pedigreed variety Washington asparagus; best in the world. Ask for literature and terms. Home Nursery, Richland, Wash.

FARM LANDS FOR SALE 651

IRRIGATED FARMS FOR SALE—160-ACRE farms, improved or unimproved; 30 to 160 acres irrigable land on each parcel; near Lethbridge, in sunny southern Alberta, can be bought for $15 to $40 an acre. No need for pioneering. Well settled country, good roads, railways, schools, telephones; agreeable social conditions; fertile land; success of irrigation farming here already demonstrated; irrigation system being constructed under government supervision. Water available in 1923. Write for information concerning crops grown and description and location of farms to the province of Alberta, Irrigation Council, 12 Provincial building, Lethbridge.

CUTOVER LANDS, EASY TO CLEAR; $8 TO $20 per acre; 25 miles north of Spokane; on hard-surfaced highway; Great Northern and Milwaukee railways; excellent opportunity for dairying and stock raising, with Spokane markets and creamery near at hand. Will help the man who will live upon this land and agree to clear a part each year by giving lumber to help start his buildings, and a purebred Jersey bull to groups of farmers. Interest and payments low. Write Milan Farms Development company, Dept. T, Old National Bank bldg., Spokane, Wash.

BIG OPENING SALE OF YAKIMA VALLEY farm land, under an assessed state and government approved irrigation project; good, deep soil; close to town, railroads and state highway. We sell in tracts to suit purchaser at $25 per acre and up, on easy terms. Our many sales to farmers show that this land is a good investment. Western Lands, Inc., owners, 918 Green bldg., Seattle.

THURSTON COUNTY—5000 ACRES, VERY fertile, level; fruit, berry and poultry lands; right at beautiful state capital. No extremes of temperature; no storms or floods, no irrigation; bumper crops; fine markets. 5 or 10 acre tracts; low prices and long term payments. Send for our valuable pictorial booklet. Norpia Realty Corporation, Olympia, Wash.

174 ACRES, ON KOOTENAI RIVER AND Great Northern; 94 bottom, 8 pasture, 18 fenced and cross-fenced; 3 plowed, 15 ready; ½ acre fruit, 4 cabins, team, harness, wagon, plow, harrow, tools, etc.; 2000 ft. lumber, 14 bales roofing, 6 windows, fine cattle or chicken ranch; fine government range. $4000. Chas. R. Scholz, owner, Ural, Mont.

160 ACRES FINE LOGGED-OFF VALLEY land; 52 miles from Tacoma; good running water, splendid roads, stock range; work in nearby camps; near two railroad towns; some buildings on place; will sell half or all, $40 an acre. Lloyd Sachs, 522 South 56th st., Tacoma, Wash.

960 ACRES AT $22.50; ALBERTA GRAIN AND stock ranch; northwest of Lacombe, on railroad under construction; no fail crops; full set good buildings; 190 acres broken; will subdivide; school, church, station, postoffice 1½ miles. Irving Jayne, Edwall, Wash.

52 ACRES STOCK AND CHICKEN RANCH; well improved; 10 good milch cows, team colts, 250 chickens, new, modern barn, all kinds machinery; ¾ mile from Anacortes; crop goes if taken at once, $7500; terms. J. W. Rogen, owner, Anacortes, Wash.

BIG LUMBER CO. LAND SALE IN SKAGIT county; 40 acres, $1400; 20 acres, with new house, $1500. Lumber furnished for building. Lots of work for the settler; splendid district, roads, schools and towns. H. C. Peters, 726 3d ave., Seattle.

290-ACRE FARM IN NORTHERN WHITMAN county; 160 summer fallow; fair buildings; water under pressure; family orchard; on county road; 1 mi. to warehouse. $17,000 will handle. P. O. Box 1034, Spokane.

EXCELLENT OPPORTUNITY FOR SETTLERS and also for loggers or millmen; finest soil and water; close to live seaport; cheap; splendid dairy, berry, fruit section. H. E. Scholz, Menlo, Pacific county, Wash.

7000 ACRES SEQUIM LAND SETTLEMENT project, containing the finest berry and dairy land in the state, now offered for settlement at attractive prices and terms. Free booklet. Thos. G. Mortland, Sequim, Wash.

CALIFORNIA—FREE INFORMATION REgarding agricultural and living conditions in any section of the state. Write Publicity Dept., California Farm Lands Bureau, I. Merritt bldg., Los Angeles, Cal.

FOR SALE—FOUR-YEAR LEASE ON 320-acre farm; all machinery, stock, crop, everything goes. Price $4000. Worley Real Estate Exchange, Worley, Idaho.

HIGHLY IMPROVED 80-ACRE FARM; NEAR Tekoa, Wash.; level, first-class soil; 5 good springs; water in house. Owner, E604 21st ave., Spokane.

SELL YOUR PROPERTY QUICKLY FOR cash; no matter where located. Particulars free. Real Estate Salesman company, 501 Brownell, Lincoln, Neb.

A. F. HORTON, NEWPORT, WASH.—TIMber products, cutover lands, $5 to $15 per acre. Good roads, schools, fine mountain water.

GOOD STOCK RANCH, 3520 ACRES; ALL fenced; 300 meadow; best range anywhere, $4 per acre. A. Millard, Kinsey, Mont.

TRACT AND SMALL DAIRY, WITH GOOD paying milk route; price reasonable. J. W. Sharp, Moscow, Idaho.

IRRIGATED LANDS—For Sale 663

80 ACRES, IRRIGATED; NEAR GOODING, Idaho; poor house, barn; fine deep well; orchard; all machinery; ten 5-gallon cows, 10 heifers, bull, 2 purebred Berkshire sows, with 12 pigs; purebred Berkshire boar; all crops, including 60 tons first cutting alfalfa, all for $137.50 per acre; at least $3500 cash, balance terms. Hodgson, Schmitt & Whipkey, Gooding, Idaho.

SUBURBAN TRACTS—For Sale 672

7-ROOM HOUSE, MODERN EXCEPT HEAT; 9 lots; close to Spokane; good well, pumping plant for all purposes; fine garden, nice yard, shrubbery. For price and particulars write M. J. Walters, Route 6, Hillyard, Wash.

FOR SALE OR EXCHANGE 702

FOR SALE OR TRADE—160 ACRES; 70 acres in cultivation; subirrigated; 4-room house, barn, drilled well; abundance water; twenty miles north Spokane, Wash. C 9, care Washington Farmer, Spokane.

320-ACRE DAIRY OR STOCK FARM WITH abundant free range; in best clover belt of Montana for sale or trade. H. J. Vaughan, E3807 2d ave., Spokane.

NEW, UP-TO-DATE CAFE AND CONFECtionery; in good location; to sell for cash or trade for good farm. W. J. Scott, Pomeroy, Wash.

PIKE'S PEAK OR BUST

By LEWIS B. MILLER

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Esau Haggerty, a strong man of mature years, and Orlando Medford, a young, slightly built and frail companion, have started from their Illinois home town for the great gold diggings of the west. Esau is pushing a provisions-laden wheelbarrow. Orlando is leading a cow. For three days they have been trudging slowly southwestward carrying out the determination crudely lettered on the side of the wheelbarrow, "Pike's Peak or Bust." Rain and snow impeded their progress, and Orlando falls sick and requires a couple of days to rest before proceeding. Then, with the village that is now Kansas City passed, they follow the Santa Fe trail westward, being but one of scores of outfits of various kinds headed for the fields of golden riches. Once again they stop for a good rest before plunging into the real wilderness, 700 miles of which is still ahead of them to be conquered by foot, cow and wheelbarrow.

CHAPTER THREE.

A Whole Family of Gold Seekers.

Sunrise the following morning found the two foot travelers almost ready to start. Brindle was saddled and packed, and the wheelbarrow had its full load. As usual, Esau's gun was under the ropes that held down the cover of his wheelbarrow. Orlando, having little to do but drive or lead his pack-cow, still carried his rifle on his shoulder. Also, being about to plunge into the wilds, each now had his six-shooter belted on.

"Well, here goes for Pike's Peak!" cried Esau, after thrusting his head under the supporting strap. He seized the handles of his wheelbarrow and gave it a vigorous push.

Soon the two had reached the broad, well-beaten road and were moving on at a steady gait. Now something like a thrill ran through them, and especially through the younger traveler, as they realized that at last they were on the great wilderness road of which they had been hearing all their lives—the far-famed Santa Fe trail.

From time to time during the day—their first day on the Santa Fe trail—Orlando, to show how strong he had already grown, insisted upon taking the wheelbarrow's handles and pushing it several hundred yards. Esau, tramping along close by, protested that he had become so accustomed to his load that he felt rather lost without it.

At this time there were many travelers on the big trail; so many that the two men were not often out of sight of some of them. A few of these, pushing ahead rapidly, overtook Esau and Orlando and passed them. Those were the horse teams. But the ox-wagons crawled along at a slower, creepier pace, and the two foot travelers easily left them behind.

But there were other travelers besides those in wagons. Numerous men were mounted, each riding one horse and leading a pack horse. Others, leading pack horses, were themselves on foot. There were also men with wheelbarrows—usually a party together—and other men with handcarts. And still others, hardiest of all perhaps, were not only tramping their way, but were carrying their packs on their own backs. And good-sized packs those were, too, many of them.

Now Esau and his partner tramped along steadily, day after day. Though the country was very thinly settled, they saw so many people that there was little time to become lonely. The weather continued mild and the grass grew green; and, though they had no feed for Brindle, she did well enough, and furnished as much milk as the two men needed to drink. Like most of the travelers, they camped a good while before night. That was to give the cow time to fill herself with grass and then take a good, long rest. This was important, especially if she was to carry a pack and give milk at the same time.

Usually they camped on the bank of some creek or smaller stream, where both wood and water could be found. The nights were cool, and they enjoyed sitting by their camp fire after dark. They had bacon with them, but were saving that for emergencies. So they did some hunting every day, either before starting in the morning or after camping for night. Because of the much travel along the trail, all the big game had been killed or frightened away. But there was an abundance of small game, such as rabbits and squirrels and prairie chickens, with a few wild turkeys; and, using the shot barrel of Esau's double-barreled gun, they killed all the meat they and Frisk needed. Sometimes they shot game while traveling. When camping by a creek, they always did some fishing and left their hooks set out over night. In this way they were able to vary their diet.

For several days after leaving Kansas City, Esau and his partner found the weather all that could be desired. But at length came a change.

One night they went to bed with the air unusually mild and pleasant, and with everything indicating that the following day would be good for traveling. But, some time during the night, they were awakened by a blustering wind from the northwest, and glanced upward to find the sky black with flying clouds.

"Looks for all the world like we're in for another spell of bad weather, Lando boy!" Esau exclaimed, after sitting up and gazing around.

"It does that!" was the drowsy, shivering answer. "We might have known—There! I felt a drop of rain! We'd better get to pegging down our tent!"

Up they sprang. And while one buttoned the two halves of the tent together, the other was chopping forks and a pole. The tent was small; but, when stretched, it had room for their bed and for Brindle's pack, and also for the wheelbarrow and its load.

For Brindle there was, of course, no room in the tent. But she was not to go without shelter. Among the travelers' bedding was a heavy, rain-proof horse blanket. Ordinarily they used this to go under their bed, as a protection from damp ground. But now Orlando took it and covered the cow with it, tying it in place.

By the time Brindle had been blanketed, and the little tent ditched around, an icy rain was beginning to fall. The wind was still blustering overhead, but the camp was in a patch of timber and brush, by a little stream, and the tent was sheltered from the wind.

"Chances air we're in for a right smart spell of this," Esau remarked, after the two had sought shelter in their tent and were about to get into bed again.

"Sounds that way. Not much traveling we'll do tomorrow, I'm thinking."

Both were quickly asleep. When daylight came the wind was still blowing and the rain still spattering the tent. While up, the campers had piled wood on their fire, and that was now burning briskly in spite of the rain. Looking out, they saw Brindle at the edge of the prairie, grazing as usual. Protected from the rain by her blanket, and from the wind by that patch of woods, she did not seem to mind the storm. For a good while she had not been tied at night. Instead, her fore feet were hobbled and she wore a bell.

"Jest as we 'lowed, Lando. It's little travelin' we'll do this day, unless we're bold enough and hardy enough to splash through mud and slush."

"Yes, and face that northwest wind. We'd better lie by, I say. There'll be more good weather for traveling."

Now the two, well blanketed, got out and gathered wood for their fire. After that Orlando milked Brindle and helped to cook breakfast. Later they sat in the open end of their tent, near the fire, and ate. The meal ended, they leaned back and talked, speculating first on what their friends were doing at home, and then on what was happening in the Pike's Peak country.

From where they were sitting, they could gaze out through the woods at the trail, only a few hundred yards away. About the middle of the forenoon they heard rumbling, and saw a long string of wagons rolling westward in spite of the stormy weather.

"Those fellows must be anxious to reach the gold diggings," Orlando commented.

"I wonder if—if they air. More likely, though, this cold, wet spell su'prised 'em out on the high prairie; and they're jest rollin' ahead a few miles till they can find a campin' place that's sheltered from the wind."

This surmise was doubtless correct; for no more wagons passed during the day. Rain and wind continued to rage, and the two travelers, with Frisk, remained in their tent, sometimes chatting and sometimes napping. Just after nightfall the rain ceased; but the wind was still blustering when the campers fell asleep.

Morning came, and there was neither wind nor rain. The travelers were up at daylight, cooking and eating their breakfast. Before going down, the wind had dried things. Brindle, with her blanket still on, was lying comfortably in the grass. Orlando had to drive her up to milk her.

Their breakfast ended, the two men bottled their milk for carrying, then took down their tent, packed their things on the cow or on the wheelbarrow, and started back toward the trail.

They found the great road—it was nearly a hundred feet wide in most places—still wet. But there was not mud enough to cause them serious inconvenience. The trail continued muddy till the afternoon by which time the sun, now shining from a cloudless sky, had dried it except in the lowest places. Orlando relieved his fellow traveler no wand then, sometimes by pushing the whole wheelbarrow, and sometimes by merely holding one handle.

Now the numerous tribe of gold seekers, having abandoned their various sheltered camps, were rolling westward again; and the great thoroughfare was as busy a place as ever. When night came, the foot travelers camped near more than a dozen big wagons. Those wagons were heavily loaded, with six yoke of oxen in each team, and they did not cover many miles in a day's journey.

After that spell of rain and wind, the weather was all that could be desired. Orlando was growing stronger every day. And both he and his partner declared themselves in love with life on the trail.

One afternoon, not long before sunset, the two went into camp near a little prairie stream. On the far side of the stream was another camp, with a lone wagon in it. Several oxen, three cows with their calves and a pony were grazing not far from the wagon.

A few minutes after the foot travelers had camped, Orlando took their water keg and went down to the branch for water. And scarcely had he started when he noticed a girl coming from the other camp, with a bucket in her hand. Soon the two met on the banks, with only the stream between them.

The young man raised his hat; and the girl, whose age was 16 or 17, nodded shyly,



They met with only the stream between them.

without speaking. But she looked friendly, and Orlando said:

"On your way to the land of gold, I suppose."

"Yes, sir." The answer was in shy, soft tones. "That is, we hope to find it a land of gold. We're on our way to see what's there."

"Where did you start from?"

"From Missouri—Boone county."

"My partner and I are from Illinois. Our home is about a hundred miles southeast of St. Louis. We came through Missouri."

"Are you— You seem to be traveling on foot."

Orlando nodded. "We've footed it the whole way."

"And you expect to walk all the rest of the way to the mountains?"

He nodded again. "That's what we started out to do."

"It's a long, long road to tramp. I should think you'd wear yourselves out before you get there."

"Hard part came first. The first few days were very hard for me. Since I've got used to tramping I rather enjoy it. I wasn't very strong when we started; but I'm growing a little stronger every day. Of course I'm having an easier time than my partner. He's trundling all his things along on a wheelbarrow. I've got a cow to carry mine—a big cow."

"I'd noticed that. But it's a strange way to travel. I never saw a cow carry a pack before."

"Neither did I. But she beats a horse badly enough. She not only carries my pack, but she furnishes us milk."

"Do you actually milk her?"

The young man nodded. "Twice every day. And she gives as much milk as my partner and I care to drink."

"We have some cows with us, but they're not giving any milk to speak of; not more than enough for their calves. My brothers drive them all behind the wagon. We've got one pony, and they take turn about riding him."

"You appear to be traveling alone. With no other wagons, I mean."

"Yes, sir. My father prefers to travel that way. If it's safe, we may travel alone all the way to the mountains. That's not likely to be safe, though. When we strike the Indian country, we may have to join a wagon trail. But—but I must hurry back They're waiting for me to come with some water."

She began to look for a sloping place. But Orlando hurried down, sprang across the narrow stream, took her bucket and filled it, then handed it up to her. She thanked him and moved away toward the wagon.

The young man climbed the bank, then stood gazing after her. She was bareheaded, and her face was very pleasing to look at. Finally he went down again, dipped his water keg into the stream, held it under till it was full, and then returned to camp with it.

By this time Esau had a fire blazing, and was busy with supper. Brindle, with her bell and her hobbles on, was grazing close by. Orlando got a cup out of his pack and went to milking her.

"Whole family over yonder on their way to the gold country."

"Yeh. They're from Missouri."

"How did you know that, Esau?"

"The man told me. I went down the branch to them big trees yonder for an armful of wood. And he was there, pickin' up wood, too, him and his boys. He invited us to his camp. I told 'im we might step over after supper."

"Good! That's just what we'll do. Whoever that Missourian is, he's got a strikingly pretty daughter."

"How do you know that?"

"Why, I saw her—and talked a little with her. Down at the branch, when we both went for water."

"I see. No wonder it took you so long to fill your kag."

Night came on while the two men were eating. After supper, leaving Frisk to guard their camp, they crossed the branch and approached the other camp fire, by the big wagon. As they appeared in the light, a bearded man sprang from his seat by the fire.

"Come round! Come round and sit down!" he called out, heartily. "We're a little short of chairs, but we'll do the best we can for you!"

"Cheers? We've forgot how to set in 'em," Esau assured him. "Keep your seats, everybody!"

"Yes, we're so used to sitting on the grass, we feel more natural that way," Orlando remarked. As he spoke his eyes were running here and there, in quest of one member of the family.

Soon he discovered her, well back in the darkness. She and her mother had been making down beds under the big wagon and putting the youngest children to sleep there.

"Cooper's my name," the head of the family was saying, as he advanced to meet the visitors with outstretched hand. "What might be yours?"

They told him while shaking hands; and then they seated themselves on a box which he urged them to take.

While the visitors were chatting with the immigrant, Cooper's wife and daughter appeared in the firelight. They greeted the visitors and seated themselves. There were no introductions. The woman soon joined in the conversation, but the girl was content to listen.

Before long whimpering was heard back in the darkness. Now the mother said:

"Hazel, go and see what's the matter with that child, won't you?"

Without a word the girl arose and went. Orlando's eyes followed her to the wagon. Just at this time Esau was saying to Cooper:

"How comes it you're takin' your whole fam'ly with you to the gold diggin's? This is the first fam'ly we've run acrosst sence we left home. The first fam'ly on the way to the Rockies, I mean."

"Well, I was thinking some of coming by myself; but my wife and daughter, they wouldn't agree to that. They said if any of us made the trip we'd all make it. If we didn't like it out there, it wouldn't be any further from the Rocky mountains to Missouri than it was from Missouri to the Rocky mountains. We could turn around and come rolling back."

"It will be an interesting trip for all of us," the woman spoke up. "My husband had traveled through this country. And we'd all heard him talk so much about it that we wanted to see it—were eager to see it for ourselves."

"You've been out here before? When was that, Mr. Cooper?" questioned Orlando.

"Oh, 20 years ago, before I was married. I made a trip to Santa Fe in the spring of '39; and then another trip the following spring. A teamster, I was. I liked the country out there, and I liked to cross the plains. The Santa Fe trader I was driving a wagon for—his name was McKnight—begged me to stay with 'im longer. I was half in love with plains life; but I was heels over head in love with a certain girl back in Howard county, Missouri. So, of course, I threw up wagoning, married the girl and settled down at farming. And I've stayed settled down ever since—till now."

"We still own our farm, back yonder in Boone county, Missouri," Mrs. Cooper here explained. "If we don't like the Rocky mountains country, we'll turn round and roll for home."

And the man added, "Yes, we rented our farm before we started on this trip. Rented it to one of our neighbors for two years. That is, if we want to stay two

(Continued on page thirteen.)

FAMILY CIRCLE

ALICE BARLAND
EDITORIAL CONTRIBUTOR

Experience Letters

From Our Family Circle Women

Dear Mrs. Barland: THE FARMER just came and as usual I took a few minutes off to look at the Family Circle. The verse you quote is a favorite of mine.
bP

"Three things a man must learn to do
If he would make his record true.
To think without confusion clearly,
To act from honest motives purely,
To love his fellow men sincerely,
To trust in God and Heaven securely."

If we follow the rule in the last line to the letter we need never fear anything. I thoroughly believe that cleanliness is next to godliness, but I believe that cleanliness should be in the mind as well as the body. If our minds are clean we will desire to have our surroundings clean and the clean mind will reflect the clean body and clean home. Hateful, resentful or unloving thoughts are sure to react upon the thinker and will cause bodily ailments sometimes and unfit one for clear thinking and careful acting, thereby causing accident often.

Kindly thoughts result in good deeds and react in like kind, proving the truth of the Bible verse, "With what judgment ye judge ye shall be judged and with what measure ye mete, it shall be measured unto you."

I love the twenty-third Psalm. It has given me more strength to do and be what I ought to be than any other one thing. It only emphasizes the last line of your verse, "To trust in God and heaven securely."

I am not what might be called religious and many people think I am irreverent because they say I make God seem common by using him for the trivial things of life. I feel that if God is then he is not unmindful of the least thing which concern his creatures.

Most of the mothers' and homemakers' lives are made up of the little things which taken singly seem small, but having to be borne day after day roll up into greatness like the snowballs the children make. And what terrible results follow and what scars are sometimes made on women's souls and bodies when she carries her burdens unaided and has no help in overcoming the constant worries which make up her days!

"To trust in God and heaven securely" is the surest way I know of putting the true value on trifles and overcoming them.

M. S. D., Wash.

Dear Mrs. Barland: I receive so many helps from this page that I will try to add a few.

To make ink for the children at school dissolve a piece of lead one-fourth inch long from an indelible pencil in warm water. This will make an ink bottle full.

Paste the "Home Recipes" in note books arranging each in its proper division. They make nice presents.

Make the Bedtime Stories into a volume. My little one of scarcely 4 years loves her "Bedtime" story book. If you can not afford to buy the note books to paste the various clippings in you can make a scrap book by using the leaves of the magazine. You will find if you classify your clippings and paste them accordingly they will be more available because so much easier to find.

MRS. J. C. G., Oregon.

Your Health

By Royal S. Copeland, M. D., F. A. C. S.

HAVE ALL BOTTLES LABELED.

Where do you keep your household remedies?

What sort of bottles and packages do they fill?

Is every bottle labeled?



Dr. Copeland.

You couldn't hire me to take medicine out of an unlabeled bottle. For 25 years there has been a rule in my office which is never violated. Every unlabeled bottle or package of medicine is to be dumped into the sink as soon as it is discovered. The bottle should be supplied with a proper inscription before it is filled.

Without a label, a bottle is like a pistol. More men and women have been killed by pistols which they or others did not know were loaded than have been destroyed by some wars.

Almost every drug and remedy is in some degree a poison. In sufficient quantities they will kill adults. Much smaller doses will destroy children.

Every community should have a law against distributing "samples" of any sort of medicine or other article which is capable of doing harm if taken into the stomach. No chance should be taken of an improper use being made of the sample.

In many a bathroom or medicine closet is a row of bottles. Sometimes they are labeled and sometimes not. The third bottle on the left is supposed to contain, let us say, argyrol; and the sixth iodine. Another has carbolic acid, and still another a fluid of similar color. How easy it is to transpose the bottles or to mistake one bottle for another.

There is a call in the middle of the night for this or that remedy. You get up in a daze, have no glasses on, and are really incompetent to select the proper bottle. No wonder mistakes occur.

Aspirin and bichloride of mercury tablets may be the same color and the same size. How terrible it is to take the mercury by mistake!

One way to guard against mistakes is to have a needle inserted, business end up, in the cork of every bottle of poison. This may be an uncomfortable, but a definite reminder that the contents of that bottle are dangerous.

There are various inventions of odd-shaped bottles, rough or stippled bottles, and other devices to give warning through the sense of feeling that you are holding poison.

But never fail to read the label. Always make sure what the package contains.

Make it a rule never to put medicine into a bottle which has on it the label of another article. In short, have the label mean exactly what a stranger would understand it to mean.

One of the habits everybody should form is to read the label—no matter whether it is medicine, external application or food. The federal, state and municipal laws are strict as regards labeling, and if you would be safe, read the label!

Know what you are taking and never trust to anybody's knowledge except your own. Many a life will be saved when labels are read and when labels read as they should.

Just Folks

In the quiet hour what are the things of life that make the strongest appeal, what are the things to be thought about?

These questions have been answered by the wise throughout the ages. Here is one answer:

> Finally, brethren, whatsoever things are true, whatsover things are honest, whatsoever things are just, whatsoever things are pure, whatsoever things are lovely, whatsoever things are of good report, if there be any virtue and if there be any praise, think on these things.

You and I may not practice these things, but in the quiet hour are they not worth thinking about?

One does not have to preach a sermon about truth. The very word truth is a sermon in itself.

All our lives we have heard honesty discussed. Just what is our own idea of honesty?

Purity not only strengthens the heart, but it clears the mind in its search after truth.

If you are just you will give a square deal so far as it lies in your power.

What are the lovely things of life? Is it the affection of an Evangeline that endures and is patient until it is enveloped in the light that never was on sea or land? Is it the protecting care of fatherhood or the abiding faith of motherhood? Does it culminate in the golden wedding?

I was in a florist shop the other day when the young man waiting on me said that there was nothing he liked to do so well as to fix up a bunch of roses for a golden wedding.

Moral teachers are always contrasting reputation and character; and yet what is there of import in a good reputation? Things of good report are to be desired. They are worth while. You may undermine a good reputation, but a good reputation remains one of the prized possessions of life.

If there be any virtue anywhere; any phase of virtue, any flavor of it, any spirit of it manifested in any of the dealings between man and man—that is worth thinking about.

Finally and as a climax, if there be any praise, if you can smile, if you can approve, if you can say a good word, if you can encourage and hearten—that is to lay up treasures for the quiet hour at eventide.

Who are they who can most easily think of those things? Not the rich, not the mighty, not the learned, but those who pursue the even tenor of their life with common folks, those who belong to the kingdom of breadth, those who share the common joys, the common sorrows and the common hopes of plain people. More or less of a smoke screen is always thrown around riches and honors and learning when it comes to measuring the values of the things of life.

EAS



Care for your Teeth

In regulating an incubator, running a tractor, or cleaning dairy utensils, great care must be taken to do the work in the *right way*.

It's just as important to clean the teeth the *right way*. A good farmer would no more buy a gritty, soapless dentifrice for his family than he would use a gritty soap to wash the high polish of his car. Nor would he give the children a "druggy" tooth paste with strong chemicals any more than he'd use a spraying material so strong as to burn the foliage of his orchard.

COLGATE'S

Cleans Teeth the Right Way

"Washes" and Polishes—
Doesn't Scratch or Scour

The U. S. Public Health Service tells us that diseases of the heart, blood, kidneys and joints are often caused by neglect of the teeth. Cleaning the teeth twice a day with Colgate's is a common sense investment in health.

Colgate's Ribbon Dental Cream has just the combination you need—

(1) Its specially prepared chalk with *rounded* edges cleans and polishes safely.

(2) Its "washing" quality gently cleans the teeth and inside of your mouth.

If your store doesn't carry *all* the Colgate products listed below, send in the coupon.

W. F.
7-20-22
COLGATE & CO.
Farm Household
Dept. 258-W
199 Fulton Street,
New York, N.Y.

Please send me *samples* of the following articles. I enclose amount of stamps shown for each one checked.

( ) Face Powder, ..4c
( ) Baby Talc 4c
( ) Rapid Shave Cream 5
( ) Ribbon Dental Cream ..... Free

Name .....
R. D. ..... Town ..... State .....
Dealer's Name .....
Address .....

Good Teeth - Good Health

High Points in News of the Week

At this writing there is little information upon which to base a prediction as to early developments in the railroad strike situation. The railroad companies and the organized employees are standing firm in their original positions, the railroad executives declaring their determination to stand by the awards of the railway labor board and the 400,000 striking shop craftsmen declaring they will not return to work under the terms laid down by the board.

A significant feature in last week's development was the issuance by President Harding of a proclamation directing "all persons to refrain from all interference with the lawful effort to maintain interstate transportation and the carrying of the United States mail." This proclamation followed reports of a number of minor acts on the part of strikers in a few railroad shop districts tending to prevent nonunion men from being employed in their places and endeavoring to prevent the handling of trains. A number of trains, in a few instances, were reported to have been canceled by the railroad companies owing to their inability to operate them.

"These activities (referring to interstate transportation and the carrying of the mails) and the maintained supremacy of the law are the first obligations of the government and all the citizens of our country," said the president in his proclamation. "Therefore, I invite the cooperation of all public authority, state and municipal, and the aid of all good citizens to uphold the laws and to preserve the public peace and to facilitate those operations in safety which are essential to life and liberty and the security of property and our public welfare."

Later in the week President Harding authorized the war department to provide military protection wherever necessary to insure the operation of trains and to prevent any possible destruction of property where there was likelihood of striking workmen refusing to abide by their officers' instruction to do no violence to railroad property or nonunion workmen.

There has been comparatively little activity on the part of the military forces, though guards have been placed at some of the railroad centers.

The railroad companies have continued throughout the week to endeavor to secure enough help to operate the shops sufficiently to keep railroad equipment in operating condition.

While trains might be operated successfully for an indefinite time with only the shop workers out on strike, the gravity of the situation lies primarily in the possibility of other railroad workers' organizations striking. The maintenance of way union has already been authorized by its membership to call a walkout, but its officers have refrained from doing so, in the hope of reaching an agreement either with the railroad owners or through the action of the railway labor board. A significant event of late last week was a conference between President Harding and the heads of the maintenance of way employees. The conference was reported to have been a constructive one, offering some hope of an agreement whereby a strike of the 400,000 maintenance of way workers would be avoided.

Steps have been taken by the postoffice department looking forward to the possibility of carrying mails by motor trucks in case the strike reaches a point where mail handling would be interfered with.

In the main, railway train service has been little interfered with up to the present time.

Pacific Poultry Producers

Change in the management of the Pacific Cooperative Poultry Producers has been announced in a circular letter, which the executive committee has mailed to all members.

The letter says:

"The executive committee, at its meeting on July 10, relieved Mr. Upson from further duties as manager of the association, effective at once, his salary continuing until August 15. President F. C. Schroeder was placed in full charge of the association temporarily, pending the selection of a permanent successor to Mr. Upson, his per diem being fixed at $12.50 for each working day."

It is also stated that a motion was carried declaring it to be the policy of the association to select a permanent manager as quickly as possible from sources other than the board of directors.

The executive committee adds:

"We feel warranted in assuring you that there is no alarm over the situation. There will be a meeting of the board of directors on July 21, at which time the actions of the executive committee may be fully reviewed.

Farm Business and Markets Outlook

(Continued from page five.)

become less plentiful right along.

BUTTER PRICES WEAKEN.

Demand for butter fell off sharply last week and prices weakened. Storage operators bought freely as long as a June mark could be obtained, but their purchases declined sharply at the end of the mouth. Also the export demand, which absorbed about 1,500,000 pounds a short time ago, has dwindled away. Receipts have fallen off, but remain large enough to furnish a surplus over domestic consumptive needs. Storage holdings in the United States on July 1, according to the reliminary report, were 67,848,000 pounds accumulated mostly in June. A year ago they were 61,991,000 pounds and the five-year average is 60,759,000 pounds. They generally continue to increase until around the first of September.

Prices for 92 score fresh butter on July 12 were:

Chicago, 35c; New York, 37c; Boston, 37 1-2c; Philadelphia, 37 1-2c.

CHEESE MARKETS REACT.

Cheese markets both country and distributing opened strong last week, but buyers refused to follow and the close was weak with the immediate trend downward. Eastern points were less affected than Chicago. Production is falling off, but rains recently in both New York and Wisconsin will clip to sustain it. Total cold storage holdings of American cheese in the United States on July 1 were approximately 32,941,000 pounds, compared with 34,948,000 pounds last year and a five-year average on that date of 33,263,000 pounds.

Prices for No. 1 American cheese on July 12 were as follows:

Chicago—Twins, 19 1-2@20c; S. Daisies, 20@20 1-2c; D. Daisies, 19 3-4@20c; Longhorns, 20@20 1-2c; Square Prints, 20 3-4c.

FRUITS AND VEGETABLES.

The potato crop was estimated as of July 1 at 429,000,000 bushels, compared with 347,000,000 bushels during the preceding five years. If this year's promise is fulfilled it will be the third largest crop on record. Shipments of new potatoes have been a little lighter recently and prices are not expected to change much in the immediate future.

The sweet potato crop is estimated at 111,000,000 bushels compared with an average during the six preceding years of approximately 90,000,000 bushels. If this year's crop lives up to the forecast, it will be the largest on record.

The apple crop was estimated at a total of 190,000,000 bushels with a commercial crop of 31,400,000 barrels. The boxed apple states have a slightly smaller crop than last year, while the barreled apple states have a much larger crop. Shipments of new apples to July 10 were 1366 cars, compared with 128 cars to the same date last year.

LATEST QUOTATIONS.

The Live Stock Market.

PORTLAND, Ore., July 15.—Cattle—Choice steers, $7.75@8.50; medium to good steers, $7@7.75; fair to medium steers, $6@7; common to fair steers, $4@6; choice cows and heifers, $6@6.50 medium to good cows and heifers, $5.25@6; fair to medium cows and heifers, $4.50@5.25; common cows, $3.50@4.50; canners, $2@4.50; bulls, $3.50@4.50; choice dairy calves, $9@9.50; prime light calves, $8@8.50; medium light calves, $7.50@8; heavy calves, $5@7.50.

Hogs—Prime light, $11.75@12; smooth heavy, 200-300 lbs., $11@11.50; smooth heavy, 300 lbs. up, $10@11; rough heavy, $8@10; fat pigs, $11.50@12; feeder pigs, $11.75@12; stags, subject to dockage, $5@8.

Sheep—Choice valley lambs, $8@9; medium valley lambs, $7@8; common valley lambs, $6@7; cull lambs, $5@6; light yearlings, $7@8; heavy yearlings, $6@7; light wethers, $6@7; heavy wethers, $5@6; ewes, $2@5.

SPOKANE, July 15.—Cattle—Prime steers, $6.75@8; good to choice steers, $5.75@6.75; medium to good steers, $5.25@6.50; fair to medium steers, $4.50@5.25; common to fair steers, $4.25@4.50; choice cows and heifers, $5.25@6.50; good to choice cows, heifers, $4.85@5.25; medium to good cows and heifers, $3.75@4.25; fair to medium cows and heifers, $2.75@3.75; canners, $1.50@2.75; bulls, $3@4.75; light veal calves, $7@8.50; heavy veal calves, $5@7; stockers and feeders, $4.75@5.

Hogs—Prime mixed, $11.25@11.85; medium, $10.25@11.25; heavies, $8.25@9.25; fat pigs, $10.25@11.25; stockers and feeders, $10.25@11.25.

Sheep—Prime mixed, $8@10; fair to medium, $7@8; yearlings, $7@8; wethers, $6.50@7.50; mutton ewes, $3@6.50; feeder lambs, $6@7.

The Grain Market.

PORTLAND, July 15.—Wheat—Hard white, $1.16; soft white, white club, hard winter, northern spring, $1.14; red Walla, $1.11.

Grain futures—Wheat—Hard white, July, $1.15; August, $1.15; soft white, white club, hard winter, northern spring, July, $1.14; August, $1.13; redWalla, July, $1.11; August, $1.10.

Oats—No. 2 white feed, July, $35; August, $32.

Corn—No. 2 eastern yellow, shipment July, August, $30.

SEATTLE, July 15.—Wheat—Hard white, soft white, white club, hard red winter, soft red winter, northern spring, $1.17; eastern red Walla, $1.14; Big Bend Bluestem, $1.30.

Hay and Grain Feed.

PORTLAND, July 15.—Millfeed—Price f. o. b. mill: Millrun, ton lots, $34; middlings, $41; rolled barley, $36@38; rolled oats, $43; scratch feed, $50 per ton.

Corn—White, $37; cracked, $39 per ton.

Hay—Buying price, f. o. b. Portland: Alfalfa, new, $14.50@15.50 per ton; cheat, $15@16; oats and vetch, $14; clover, $17; valley timothy, $18; eastern Oregon timothy, $21@22.

SPOKANE, July 15.—Wheat—Feed wheat, $44 per ton.

Oats—$40 per ton; steam rolled, $42.

Corn—$36 per ton; cracked corn, $38 ton.

Barley—$42; steam rolled, $44.

Bran and shorts—$34 per ton.

Alfalfa, $22 ton; timothy, $24 ton; mixed hay, $22 ton.

General Produce.

PORTLAND, July 15.—Butter—Cubes, extra, 38c per lb.; prints, parchment wrapped, box lots, 43c; cartons, 44c. Butterfat, 43@44c delivered station; buying price, A grade, 41c.

Eggs—Buying price, current receipts, 21c dozen; henneries, 23c dozen; jobbing prices, case count, 22@23c; candled ranch, 27c; selects, 29c. Association selling prices: Selects, 31c; browns, 30c; firsts, 28c; pullets, 27c.

Cheese—Tillamook triplets, price to jobbers, f. o. b. Tillamook, 26c; Young Americas, 27c; longhorns, 27c pound.

Poultry—Hens, 14@23c; broilers, 20@25c; ducks, 15@22c; geese, nominal; turkeys, nominal.

Veal—Fancy, 13@14c per pound.

Pork—Fancy, 15½c per lb.

SPOKANE, July 15.—Poultry—Fat hens, 17c lb.; light hens, 14c lb.; roosters, 8c lb.

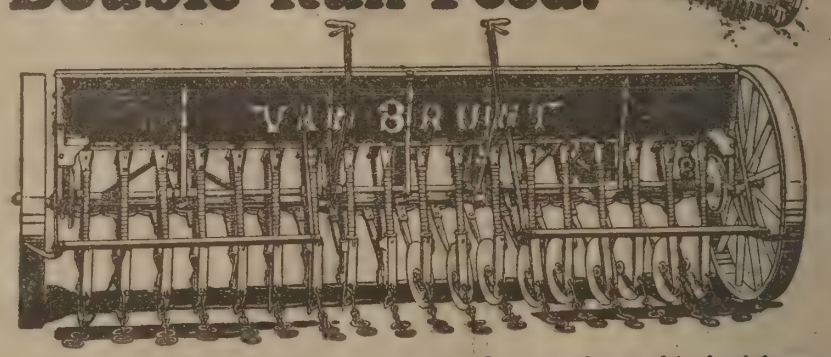
Fresh ranch eggs—$5.25 case; no storage pullet eggs, $5.

Butterfat—39c a pound.

Range of Live Stock Prices for the Week Ending July 12

CATTLE.	Chicago.	Spokane.	Portland.	N.Salt Lake.
Choice, prime heavy steers (1100 lb. up)	9.80@10.40	.....	.....	.....
Good heavy steers	9.25@ 9.95	.....	.....	.....
Medium heavy steers	8.35@ 9.35	.....	.....	.....
Common heavy steers	7.25@ 8.60	.....	.....	.....
Choice, prime light steers (1100 lb down)	9.60@10.35	.....	.....	.....
Good light steers	9.10@ 9.80	.....	8.00@ 8.50	.....
Medium light steers	8.15@ 9.25	7.25@ 8.00	7.25@ 8.00	6.50@ 7.00
Common light steers	7.00@ 8.50	4.50@ 7.50	4.50@ 7.50	4.50@ 6.50
Common, choice butcher heifers	5.50@ 9.00	4.00@ 6.75	4.00@ 7.00	3.75@ 5.75
Common, choice butcher cows	4.00@ 7.85	3.00@ 5.75	3.25@ 5.75	3.00@ 5.00
Bologna and beef bulls	4.40@ 7.00	3.00@ 4.75	3.50@ 4.50	2.00@ 3.00
Canners, cutters, cows, heifers	2.75@ 4.10	1.50@ 2.75	2.00@ 3.00	1.50@ 2.75
Canner steers	3.50@ 5.25	3.00@ 4.00	3.00@ 4.25	2.50@ 4.00
Medium, choice light veals	7.50@10.00	6.50@ 7.50	7.50@ 9.00	7.50@ 8.50
Common, choice heavy veals	4.00@ 7.75	4.00@ 6.50	5.00@ 7.50	4.50@ 7.00
Common, choice feeders (1000 lb up)	5.65@ 7.75	.....	.....	.....
Common, choice feeders (750-1000 lb)	5.65@ 7.75	4.50@ 5.00	.....	5.00@ 5.50
Common, choice stocker steers	4.75@ 7.65	.....	.....	.....
Common, choice stcker cows, heifers	3.25@ 5.75	.....	.....	.....
HOGS.				
Top of market	11.15	11.85	12.00	10.35
Bulk of sales	9.00@11.05	11.00@11.70	11.25@11.75	9.50@10.15
Heavy (150 lb up)	10.30@10.80	10.00@10.50	10.00@11.00	9.00@10.00
Medium (200-250 lb)	10.50@11.00	10.25@11.25	10.75@11.60	9.50@10.35
Light (150-200 lb)	10.70@11.05	11.25@11.85	11.50@12.00	9.75@10.35
Light lights (130-150 lb)	10.00@10.95	11.25@11.75	11.25@11.75	9.50@10.25
Smooth packing sows (250 lb up)	8.65@ 9.50	8.75@ 9.75	9.00@10.00	.....
Rough packing sows (200 lb up)	8.00@ 9.00	8.25@ 9.00	8.00@ 9.00	.....
Medium, choice pigs (130 lb down)	9.25@10.50	10.25@11.25	11.50@11.75	.....
Stock pigs	.....	10.25@11.25	12.00@12.25	8.50@ 9.25
SHEEP AND LAMBS.				
Medium, prime lambs (84 lb down)	12.25@14.00	7.50@10.00	8.00@10.50	9.50@11.00
Culls, common lambs	7.00@12.50	6.00@ 7.50	5.00@ 8.00	6.00@ 9.50
Medium, prime yearling wethers	8.50@12.00	7.00@ 8.00	6.00@ 8.00	5.00@ 6.00
Medium, prime wethers	5.75@ 9.00	6.50@ 7.50	5.00@ 7.00	4.00@ 5.00
Medium, choice ewes	4.50@ 7.75	4.50@ 6.50	4.00@ 5.00	3.00@ 4.00
Culls, common ewes	1.50@ 4.25	3.00@ 4.50	2.00@ 4.00	2.00@ 3.00
Full-mouth, yearling breeding ewes	6.00@11.25	.....	.....	.....
Feeder lambs	11.50@12.75	6.00@ 7.00	.....	.....

The Grain Drill With Double Run Feed.



You can plant treated or dry seed of every size or kind without bruising or cracking it, in the desired quantity per acre, in trenches of uniform width and depth by using the

JOHN DEERE
VAN BRUNT GRAIN DRILL
WITH DOUBLE-RUN FEED

Van Brunt features compel accuracy and provide a wide range of adjustment. The adjustable gates of the Van Brunt double-run feed, together with the multiple gear construction, make it possible easily to adjust drill to plant 48 different quantities of grain—wheat, 16 to 258 pounds per acre, and other grains in proportion. No wire reducers or other contrivances are required.

Kernels of every kind and size are planted at regular distances apart—there are no vacant spots. All the seed is properly covered so that it establishes root connections easily and receives the nourishment from the soil necessary to make deep roots and strong stalks. The result is a crop better able to withstand excessive heat and blighting winds.

Operates on steep hillsides without axle end-play, and the grain cannot shift to one side, leaving part of the box empty. *The grain box will not sag*, even after years of use—it is trussed to the frame and axle at five points. *The frame is angle steel, reinforced.* The Van Brunt is built like a steel bridge—it cannot buckle or sag. Frame is supported on long, strong wheel hubs.

Gears always in mesh—no sudden jerks to strip them. They are self-aligning, dirt-proof, and are provided with spring relief—obstacles pass through without breaking or damaging the gears.

Guaranteed disc bearings; tilting levers for adjusting position of furrow openers to cut deep or shallow; single discs, double discs or hoe furrow openers.

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JOHN DEERE
THE TRADE MARK OF QUALITY MADE FAMOUS BY GOOD IMPLEMENTS

Pike's Peak or Bust

(Continued from page ten.)

years. If we go back sooner, the man we rented to will vacate at the end of one year. And if we don't go back at all—don't care to go back, he'll buy the place."

"A pretty safe arrangement, that," Orlando commented. "You've left the gate open, whichever way you want to travel. I suppose you're like all the rest of us gold seekers: expecting to journey back to civilization some day with a good-sized bag of gold."

"Well, as to that, I don't know what my wife and children are looking forward to. I'm hoping to dig up gold enough to pay for our trip, and maybe a few dollars besides. And then, of course, there's always the possibility of 'striking it rich' out there. That, together with what we'll see on the way and in the mountains, is what makes the trip interesting. Even if we don't have anything but the journey, that will be well worth while, in my opinion. The children will always have the recollection of it, as I have of my trips to Santa Fe. I'm old enough to know that it's worth something to have interesting experiences to look back to, and to think about and talk about."

"I'm not old enough and haven't been away from home enough to have had much experience; but I'm sure you must be right," Orlando answered. "At any rate, I've always been as much interested in the trip itself as I have been in what we may dig out of the mountains. This is already a wonderful experience to me."

"So it is to all of us, I think." Mrs. Cooper was speaking. "And the most interesting part lies still ahead."

"We Coopers come by our love of pioneering honestly," the man remarked later. "I mean this particular family of Coopers. My grandfather, Captain Sarshall Cooper, was one of the first settlers in the Boone's Lick region. That was before there was any country called Missouri. My grandfather and his brother, Colonel Ben Cooper, were leaders in the movement to settle what is now Howard and Cooper counties, Missouri. That was in 1810. And when the war of 1812 broke out with England, they were leaders in organizing a band of 200 riflemen, and in defending their settlement against the Pottawatomies and other redskins that the British sent against 'em. For six years theirs was the outermost, westernmost settlement in America. My grandfather and his brother, with 40 or 50 other men, built Cooper's fort, 10 miles or thereabouts northwest of where Boonville now stands. And during that war my grandfather was killed—in Cooper's fort."

"Inside of the fort? How did that happen?" Esau wanted to know.

"It was a stormy night in April. He was sitting in front of the fire, with his youngest child on his lap. The back wall of his cabin made the wall of the fort—the outside of the fort. While grandpa was sitting there, unsuspicious of any danger, a redskin gouged the mud out from between two logs, poked a rifle barrel through and shot 'im dead. Or, anyhow, he died in a minute or two."

"Why, I've read about that," Orlando hastened to say. "And I've read a lot more about the Coopers and the Boone's Lick settlement, and what happened there during the war with England. It was all very interesting."

"Yes, it's thrillingly interesting, especially when you hear the old settlers tell about it, as I have so many times. My wife's people were pioneers in the Boone's Lick country, too. She was an Adair before I married her. Her father, Rollin Adair, traveled all the way from North Carolina to Boone's Lick in a canoe. He and an old friend of his, a gunsmith named Thompson, made the trip together. They drifted down the French Broad and the Tennessee and the Ohio to the Mississippi; and then they paddled up the Mississippi and the Missouri to Boone's Lick. They spent a winter hunting and trapping there, even before the Coopers came to stay."

"And Rollin Adair's wife, my grandmother, traveled farther in a canoe than he did," Hazel Cooper now spoke for the first time to say. "Grandma Adair and her father came all the way from the St. Lawrence river, in New York state. After reaching the headwaters of the Allegheny, they drifted down that and down the Ohio in a birch-bark canoe. And then they worked their way up to Boone's Lick. I've heard her tell about it so many times. At the mouth of the Tennessee she first saw the man she afterwards married—my grandfather, Rollin Adair. You ought to hear those two talk if you want to listen to thrilling experiences."

"And they're still alive?" asked Orlando.

"Indeed they are—very much alive!" the girl assured him. "Grandpa's getting close to 80 now. He's 77. Grandma's 12 years younger—only 65. Grandpa's white-headed, but grandma has only a few gray hairs. They're both cheerful and lively."

Now Mrs. Cooper spoke again, "All the old settlers say that Hazel is the living picture of her grandmother at Hazel's age. Those who knew my mother when she was Rosalie Tucker of Cooper's fort, say that Hazel looks strikingly like my mother did. My grandfather, Cicero Tucker, lived on an island in the Missouri river, and made powder there before the war with England; also a little during the war, as long as he could get materials. He was half French, and had black hair and black eyes; and so had his daughter, my mother. Those skipped me, but Hazel got them. She looks like her grandmother, but not a bit like Mr. Cooper or me."

There were many things for the travelers to talk about, both of what had happened to the Cooper family's ancestors in the Boone's Lick settlement, and of what had happened to the head of the family on his youthful trips to Santa Fe. So it was late when Esau and Orlando returned to their own camp.

As usual, the two foot farers slipped out of bed at daybreak next morning. And they were ready to travel not long after sunrise. But the campers beyond the branch had not yet begun preparations for the day's march. Cooper's work cattle, with their big bells ding-donging, were still grazing quietly, a quarter of a mile from the wagon they were accustomed to pull.

For some reason Orlando was rather reluctant to set out, even after he and his partner were ready. First he made the excuse that Brindle needed to graze an hour or so longer. And when the cow had filled herself with grass and lain down, he still objected.

But—but it seems a—a little unneighborly to—to rush off and leave those folks over there by themselves."

"Oh, does it?" laughed Esau. "I'm glad that's the reason you're so slow pokey this mornin'. If you hadn't up and told me better, I might ha' been gump enough to believe that little Cooper gal had somethin' to do with holdin' you here."

Orlando blushed. "Well, even if she did, where would be the harm? Haven't I a right to get interested in the little Cooper girl if I want to?"

"Why, to be shore you have, Lando boy! To be shore! From what I saw of her last night, I think purty well of her myself. She's certainly all up and a-settin' for looks. But we didn't start out here on any gal-hunt, me and you. Not by a long shot! We're out for yaller gold—all we

(Continued on page sixteen.)

Latest High Class Patterns for the Home

Please order the patterns you desire at least two or three weeks before you wish to use them. Desiring to obtain the latest high-class patterns for its readers, THE FARMER has made arrangements to have them sent direct from the east, and under present mailing conditions it takes about that time for them to reach you.



3850. Lady's Dress. Cut in seven sizes: 36, 38, 40, 42, 44, 46 and 48 inches bust measure. A 38-inch size requires 5 yards of 36-inch material. The width at the foot is about 2 1-4 yards. Price, 10 cents.

4039-4049. Lady's Costume. Waist 4039 cut in seven sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. Skirt 4049 cut in seven sizes: 25, 27, 29, 31, 33, 35 and 37 inches waist measure. A medium size requires 8 3-8 yards of 40-inch material, if of one material. If made as illustrated, 7 yards of figured will be required and 1 7-8 yards of plain material. The width of the skirt at the foot when finished is about 2 1-8 yards. Two separate patterns, 10 cents for each pattern.

4042. Child's Play Suit. Cut in four sizes: 2, 4, 6 and 8 years. A 4-year size requires 3 1-2 yards of 32-inch material. To trim as illustrated requires 5-8 yard of contrasting material 32 inches wide. Price, 10 cents.

4053. Misses' Dress. Cut in three sizes: 16, 18 and 20 years. An 18-year size requires 5 3-4 yards of 32-inch material. If collars and puffs are made of contrasting material 7-8 yard of 40-inch material will be required. The width of the skirt at the foot is 2 5-8 yards. Price, 10 cents.

4060. Girl's Dress. Cut in four sizes: 4, 6, 8 and 10 years. A 10-year size requires 3 1-4 yards of 32-inch material. Price, 10 cents.

4059. Girl's Dress. Cut in four sizes: 6, 8, 10 and 12 years. A 10-year size requires 4 yards of 40-inch material. Price, 10 cents.

4054. Lady's House Frock. Cut in seven sizes: 36, 38, 40, 42, 44, 46 and 48 inches bust measure. A 38-inch size requires 6 1-8 yards of 32-inch material. Collar of contrasting material requires 1-2 yard. The width at the foot is 2 5-8 yards, with plaits extended. Price, 10 cents.

4068. Lady's Apron. Cut in four sizes: Small, 34-36; medium, 38-40; large, 42-44; and extra large, 46-48 inches bust measure. A medium size requires 4 1-2 yards of 27-inch material. Price, 10 cents.

3858. Junior's Dress. Cut in three sizes: 12, 14 and 16 years. A 14-year size will require 3 yards of 38-inch material. Price, 10 cents.

3619. Girl's Dress. Cut in four sizes: 8, 10, 12 and 14 years. A 12-year size requires 4 yards of 36-inch material. Price, 10 cents.

3863. Child's Set. Cut in five sizes: 6 months, 1, 2, 3, and 4 years. The dress requires 2 1-4 yards of material; the petticoat requires 1 7-8 yards, and the drawers 1 yard for a 2-year size. For ruffles of embroidery on petticoat and dress, 2 1-4 yards for each will be required. Price, 10 cents.

3549. Boy's Play Suit. Cut in four sizes: 2, 3, 4 and 5 years. A 4-year size will require 2 1-2 yards of 36-inch material for the overalls and 1 1-2 yards for the blouse. Price, 10 cents.

CATALOGUE NOTICE.

Send 12 cents in silver or stamps for our up-to-date spring and summer 1922 catalogue, showing color plates, and containing 500 designs of ladies', misses' and children's patterns, a concise and comprehensive article on dressmaking, also some points for the needle (illustrating 30 of the various simple stitches), all valuable hints to the home dressmaker.

Please fill in this order and mail with remittance to:
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Enclosed find..... cents for which send me the following:

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Widely Known Scientist Discovers Wonderful Chemical That Is Fatal to Flies. Not a Poison—Harmless to Stock.

Flies are one of the most dangerous and annoying things with which the farmer has to contend. Now, through the discovery of E. R. Alexander, widely known scientist, you can rid your house and barns and live stock of these pests almost instantly, and with no trouble at all. This discovery is in the form of an organic chemical that is fatal to flies, and similar pests, such as chiggers, mosquitoes and moths.



This new discovery, which is called Alexander's Rid-O-Fly, is not a poison. Though it kills flies like magic, farm animals and human beings are not affected by it at all. In addition to killing these insects, Rid-O-Fly is a strong repellant. Flies will not come near stock or buildings where Rid-O-Fly has been used. Rid-O-Fly is particularly valuable for cows and horses, as it is a known fact that flies do untold harm to these animals.

So confident is Dr. Alexander that his discovery will rid your house, barns and live stock of these pests that he offers to send a $2.00 supply for only $1.00 on the guarantee that if Rid-O-Fly does not solve your fly problems it will cost you nothing. Two big Kansas City banks guarantee the reliability of this offer.

SEND NO MONEY—Just your name and address to the Alexander Laboratories, 1508 Gateway Station, Kansas City, Mo., and this introductory offer will be mailed at once.—Adv.

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with the "Wash day *smile*," instead of the Wash Day Grouch, in sheer joy and delight at the dazzling, snowy white purity of her white goods.

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will chase "wash-day-blues"—Succeed where others fail, and bring the smile of triumph to every housewife who *really cares* for pure, white, fresh clothes.

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VITAMINES

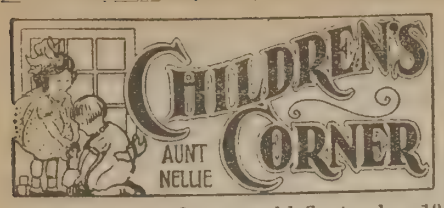


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DENNOS

The Milk Modifier. Try it for your baby. Ask your doctor. All druggists sell Dennos. Sample free.

DENNOS FOOD CO., Portland, Ore.



Dolly Gifford, 9 years old September 10, 1921, lives on a big dairy ranch in the Methow valley, Okanogan county, Wash. Every night she goes after the cows on her pony named Alcatraz. Dex Carlo, the dog, goes with her. Once Dolly and her cousin, Carmyn, went with Dolly's brother, Gilbert, after some range stock. Dolly rode Wrangle that day and Wrangle tried to buck her off, but she stayed on. Dolly has freckles and says she doesn't like them.

Just before school closed Clara McCloy went with her schoolmates for a hike down the river. Some went swimming and some went wading. Then, after eating a good lunch they all went down the river two miles. About 4 o'clock they returned to the schoolhouse. This year at school domestic science and music were taught. Clara enjoys every copy of The Junior Farmer. She lives in Walla Walla county, Washington, near the mouth of the Snake river.

Our cousin, Zoe Ludwig, lives in southern Washington, east of the Yakima Indian reservation. Zoe is 10 years old. July 11, 1922, she will be 11. She has a calf for a pet.

Birthday Greetings

THURSDAY, July 20.—Frederic Albert, 10 years old; Helen Miller, 11.

FRIDAY, July 21.—Ruby Bailey, 10 years old; Gladys Lucile Barcelow, 10; Arthur Cartwright, 10.

SATURDAY, July 22.—Stuart Duncan, 11 years old; Bonnie Belle Hood, 6; Beatrice Olsen, 11; Wilbur Stiles, 9; Thelma Woodland, 10.

SUNDAY, July 23.—Nina Bean; Elizabeth Coby, 10 years old; Gladys Page, 10.

MONDAY, July 24.—Inez Eck, 10 years old; Alma Laurene Stensaa, 9.

TUESDAY, July 25.—Frances Haxton, 10 years old; Blanche James, 11; Virginia James, 11.

WEDNESDAY, July 26.—Helen Howe, 9 years old.

LETTERS WELCOMED BY AUNT NELLIE.

Among recent letters received by Aunt Nellie are those from cousins whose names follow. A few of these will be published each week in the regular edition of THE FARMER, and others will appear from time to time in The Junior Farmer:

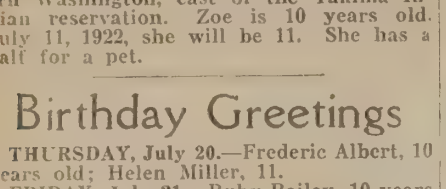
Frances Fishback, Archie Hansen, Catherine Atkinson, Esther Simila, Henrietta Pinster, Ruth Carlin, Elizabeth Reykjalin, Norma Rogers, Alice Sargant, Marion Lovelace, Hazel Helmo, Margaret Hunter, Goldie Mae Green, Verna Stevens, Eva Quesnell, Gladys Stone, Donald DeHart, Blanche Didra, Elga Wing, Florence Uhlrich, Grace Cockley, Helen Richardson, Lydia Granwahl, Dale Early, Edith McCarty, Blake Jones, Katherine Scott, Howard Swift, Alma Leola Dicfe, Gaylus Adams.

BEDTIME STORIES

By THORNTON W. BURGESS.

WHY JUMPER IS TIMID.

Jumper the Hare had come a long distance to visit his cousin, happy-go-lucky Peter Rabbit. He had come out of the Great Woods of the north; in fact, the very same Great Woods out of which Prickly Porky had come. But the little meadow people and those who live in the Green Forest on the edge of Green Meadow knew nothing about where he came from nor what kind of a place it was. They simply saw that Jumper the Hare, who was twice the size of Peter Rabbit, was twice as timid as he, and every one knows that Peter has been known to try to run away from his own shadow.



"No one is a coward, Peter, who runs away from those bigger and stronger than he."

So while all were polite to Jumper the Hare, they smiled behind their hands when he had passed, and behind his back called him a coward. He jumped at every shadow and at every little noise. If any one spoke to him unexpectedly he would jump so that it seemed as if he really might jump right out of his skin. Even Peter Rabbit had to admit that appearances were very much against his cousin—that Jumper seemed very, very much like a coward. Finally Peter told Jumper the Hare what the others thought of him. Jumper just smiled.

"Peter, who are you afraid of?" he asked.

Peter thought for a few minutes. "The fur hunter's son when he has a gun and Granny Fox when I am a long way from the old brier patch, and old Whitetail the Marsh Hawk if there isn't a hiding place handy."

"Is that all?" asked Jumper.

"Yes," said Peter.

"And usually you can see them a long time before they can get near you," said Jumper.

"Yes," replied Peter.

Jumper munched a mouthful of sweet clover. "No wonder you don't understand," said he finally. "Why, if that was all I had to be afraid of I wouldn't—why, just wouldn't be afraid, that's all. Now, up in the Great Woods where I come from live Mr. Panther and Mr. Wolf and Mr. Fisher, and Mr. Bear, and Tufty the Lynx, and each one is very fierce and strong. Each one would rather dine on fat hare than anything else under the sun. While some of them try to catch me by day, the others spend their nights looking for me. So I have had to live always ready to jump at the least sound, hiding in dark places most of the time, and with my heart in my mouth whenever I came out into the open. Here on the Green Meadows it is all open and I have not got used to it. Every sound I head I think is Mr. Wolf or Mr. Fisher stealing up, and I jump. No one is a coward, Peter, who runs away from those bigger and stronger than he."

Peter thought it all over. Then he hastened to tell Johnny Chuck, Johnny told Jimmy Skunk, and Jimmy Skunk passed the story along. But still there were a few who called Jumper the Hare a coward and one of these was Reddy Fox.

PLUMBING

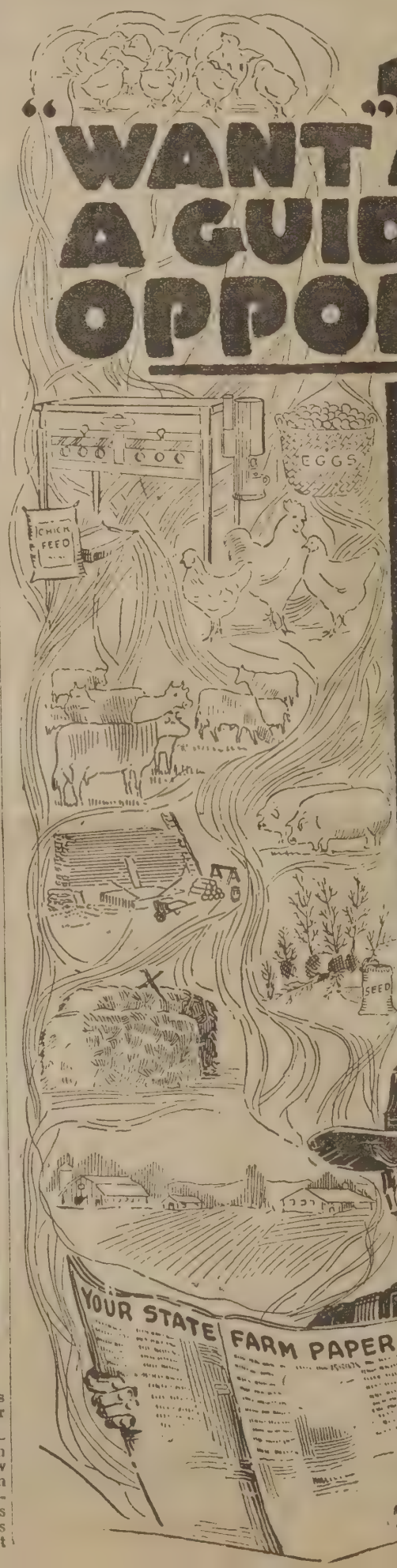


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July 20, 1922.

Irrigation District Rule

(Continued from page three.)

ty commissioners, after they have determined the sufficiency of the petition. If a petition otherwise meets the requirements of the law, the fact that it includes lands which can not be legally included in the district will not of itself invallidate such petition. If it were otherwise the board could never exclude lands it was proposed by the petitioners to include, without the withdrawal of the petition and the filing of a new one, whereas the commissioners are expressly authorized to determine what lands will be benefited by the project and to exclude such as will not be. When it has so fixed the boundaries of a proposed irrigation district the matter is submitted to a vote of the land holders involved, in the manner prescribed by law.

Attorneys for the petitioners declared that, under those circumstances it would be needful only to eliminate the names of signers within the Greenacres district, and proceed under the original petition. An extension of time has been granted them for the purpose of determining and setting forth that it is still the will of the needful number of signers outside the Greenacres district that the dry land involved be created an irrigation district. Elimination of the already watered territory will presumably somewhat increase the cost per acre of the new project, and hence the extension of time for determining the pleasure of the dry land holders originally favoring the district.

Large holders in certain sections of the dry lands concerned had strenuously opposed the creation of the new district, charging that the total acreage represented by the signers of the petition was but 2541 of the 10,500 acres involved, so that the bonded burden would fall heavily on the now dry lands for the improving of the Greenacres irrigation system. It was proposed by the newer district to replace the partially pumped water in the Greenacres ditches with an all-gravity system.

Guernsey Week

Guernsey breeders of western Washington are going to have a real Guernsey week and visit the herds in three counties in the northwestern part of the state. The tour will begin July 25 in Whatcom county, where two days will be spent under the direction of County Agent H. B. Carrol Jr. This trip is known as the annual Whatcom county Guernsey gallop and includes some of the best herds and club members' animals in the northwest. The next move will be a boat excursion to Island and San Juan counties on July 27, 28 and 29. The steamer Potlatch will take the visitors to all points where Guernsey herds may be found on the islands and make one or two stops in Clallam county.

The rates on the boat will be $6 a day, which will include fare, state room and meals. There are state rooms for 64 persons, but since there is room on the boat for about 400 passengers it may be necessary for the late comers to secure sleeping quarters at night stops.

PICNIC AT NOTED JERSEY FARM.

About 150 persons enjoyed a picnic Saturday, July 15, at Waikiki Jersey farm on the Little Spokane river, north of Spokane. Among the speakers were Dean E. J. Eddings and Professor F. W. Atkeson of the University of Idaho and Dr. S. B. Nelson and Professor E. V. Ellington of the Washington State college. In addition to the regular herd of Jerseys at Waikiki a carload of purebred Jerseys recently purchased in Tennessee and a new imported bull were inspected by the Jersey men and their families.

REPRESENTS NORTHWEST.

E. W. Van Tassel was elected as one of the directors of the National Ayrshire association at their recent meeting at Devon, Pa. There are 12 directors in all, most of whom are located in the eastern states. Mr. Van Tassel is now the only director in the Pacific coast district. He is one of the leading Ayrshire breeders of the west, having an excellent herd on his farm at Wenatchee, Wash.

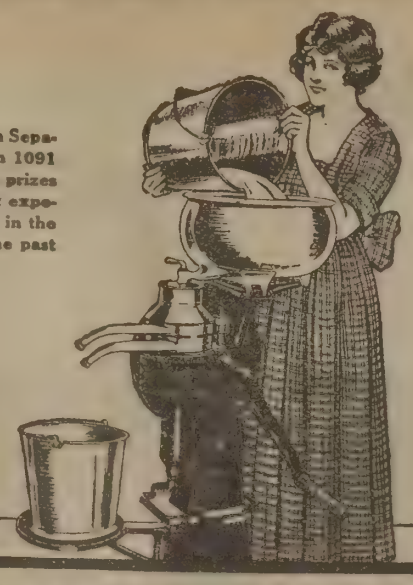
ELIGIBLE TO ENTER SALE.

There are only 33 cows in Washington, three in Oregon and one in Idaho whose sons will be eligible to entry in the auction sale of Holsteins at the Pacific International this fall, under the rule that only bulls whose dams have yearly records of at least 800 pounds of butterfat will be admitted. This is the standard recently established by George Gue, who manages the sale.

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(1) From an investigation conducted by the **Purdue Agriculturist (Indiana), Iowa Agriculturist, Cornell Countryman (New York), Agricultural Student (Ohio), Penn State Farmer, Tennessee Farmer,** published by the students of the various agricultural colleges in question, and their readers, who received the questionnaire, are either graduates or former students:

64.8% use cream separators of the following makes:

50.6%—De Laval.
16.8%—Nearest competitor.*

(2) Sixty-two per cent of the cream separators on 388 representative Minnesota dairy farms, selected at random and over a wide area, are De Lavals, according to a survey recently made by **The Farmer,** of St. Paul.

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Nearest competitor—6.4%.*

(3) From the Dairy Farm Survey of **Hoard's Dairyman** (the foremost dairy paper in the world, having a circulation of approximately 85,000 at the time of this investigation).

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Sensation and Pathfinder breeding; unrelated pairs; satisfaction guaranteed; papers furnished. Prices reasonable. Good references.
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Big Type Polands We have that herd boar you are looking for. We have pigs by Archdale Chess, Checker's Son, Peter the Great 2d, Designer's Model, and others. Our prices are reasonable. B. F. KAMMERZELL & SONS, Colfax, Wash., R. 5.

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EXPERIMENT STATION
PULLMAN

Pike's Peak or Bust

(Continued from page thirteen.)

can rustle up. And the faster we hump ourselves t'wards the Rockies, the better chance we'll stand to git there before somebody else totes it all off."

Ere long the wheelbarrow and the pack cow were moving toward the trail. After crossing the branch, the foot travelers stopped for a few words with the people at the wagon.

"Well, from what you boys told us last night, I rather reckon you'll peg along faster'n we care to drive," Cooper remarked.

"Yes, guess maybe we will." Esau was answering. "It stands us two in hand to git to the mountains as soon as ever we can. Sorry, too, I am. Wisht us and you uns could ha' crossed the plains together."

"So do I—so do I," Cooper assured him. "But even if we cain't do that, we're likely to run onto you boys again after we arrive at our journey's end."

"Yes, and we'll keep a sharp lookout for you there," Orlando spoke up. His words were addressed to Cooper, but his glance ran back to Cooper's shy little daughter, who was now standing near the wagon. She blushed slightly, and her eyes went down in a modest way.

A few minutes longer the two traveling parties stood talking together. Then Esau put his head under the strap, and caught up the handles of his wheelbarrow. Orlando took a closer grasp on the rope reaching to Brindle's horns as he called out:

"Well, good-bye to you, all of you, till we see you again at the gold diggings!" His eyes swept around to the whole family, but rested on Hazel last and longest.

As the foot travelers trudged away over the dusty trail, Orlando turned his head from time to time to gaze back. And he kept doing the same thing as long as that lonely camp was in sight. One look showed him Hazel's two younger brothers, one mounted and the other on foot, driving the oxen toward the wagon; and the last look showed Hazel's father putting the yokes on his work cattle.

After a few miles Esau and his companion saw numerous still-smoking camp fires not far from the trail. And from the next high point they could make out many white-topped wagons crawling over the prairie, far ahead. From every elevated position Orlando gazed back, hoping to catch sight of a solitary wagon—the Cooper wagon. But he was always disappointed.

Day after day the two men journeyed on, alone. Every few miles they passed a string of wagons, from three or four to a dozen. For they were out-traveling all the work cattle. On the other hand, wagons drawn by horses or mules sometimes passed the wheelbarrow party. However, most of the teams were oxen.

Late one day, not a great while after Orlando and his fellow traveler had gone into camp, Esau stood gazing eastward along the trail for a little while, then called out:

"Lando, what do you reckon that spot is on the road back yander?"

The young fellow addressed, who was busy milking while the cow cropped the grass, now stood up and gazed in the direction his partner was gazing.

"That's more than I can tell yet, Esau. It's moving this way, though. Wait till the thing comes closer. Then we can make it out."

A little later Orlando said: "Now I can guess what your moving spot is. It's a—seems to be a—handcart. And I see several men pulling it—and pushing it."

"Yes, reckon that's what the funny shebang must be—a pushcart."

In a little while the cart and its crew were close enough for Frisk to run out and bark at them. When nearing the camp, the travelers slowed down somewhat, and one of them sang out:

"Hello! Hello there! Can you tell us how fur ahead it is to water and grass?"

"Water a plenty right down yander in that little holler!" Esau called back.

"And there's grass enough around here, if you're not too hungry," Orlando told them, with a grin. "Better turn out and camp with us!"

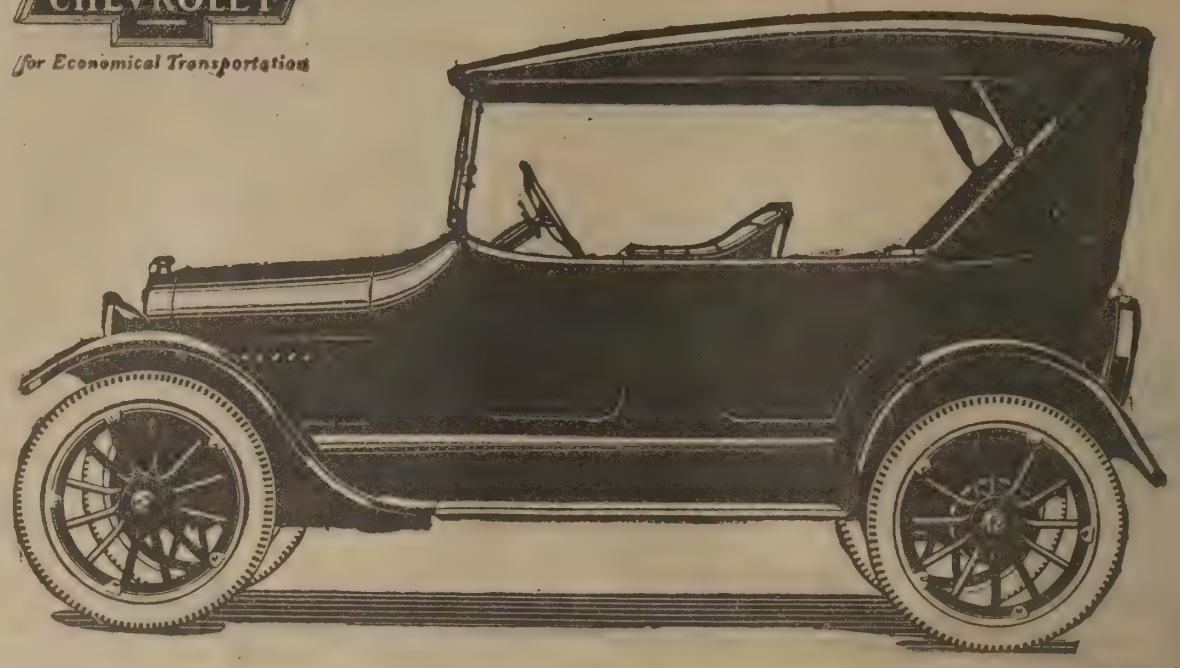
The handcart stopped, and the men with it could be seen consulting together. While they were thus engaged, Orlando and his partner were observing them and their traveling outfit.

(To be continued.)

BRAND QUITS BLUE GOOSE.

Announcement is made by the department of agriculture that Charles J. Brand, who was organizer and first head of the federal bureau of markets, has resigned as vice president of the American Fruit Growers, Inc., and will, on July 1, return to the department of agriculture as consulting specialist in marketing. Mr. Brand resigned from his former position with the bureau of markets a few years ago and affiliated himself with the J. S. Crutchfield interests in the formation of the American Fruit Growers, a producing and marketing organization. This concern is probably best known by its blue goose trademark.

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JULY 27, 1922 Washington's Great Farm Magazine EVERY THURSDAY

THE WASHINGTON FARMER

ESTABLISHED 1894

SPOKANE. SEATTLE.



A GUERNSEY AND A GUERNSEY LOVER

Do Not Wait Another Week to Begin Reading "Pikes Peak or Bust"—Page 10

Sweet Clover

Proves a Good Crop on Poor Land

Land in the Wenatchee valley is considered too high priced for the raising of dairy cattle, but E. W. Van Tassel, one of the leading Ayrshire breeders of the west, has solved the problem by raising sweet clover on a piece of rocky land that would not be suited for an orchard. This field contains 11 acres and was seeded to a mixture of sweet clover, alsike and orchard grass. The seeding was done in the fall and since part of the field is subirrigated, the crop got a good start the following spring.

While the alsike and orchard grass are showing up in spots, the sweet clover has far the greater stand and grows among the large boulders where the other grasses will not take hold. The cattle will eat the sweet clover readily since it is one of the first crops to come through the ground in the spring and in this way they become accustomed to the peculiar taste.

"We find that the sweet clover is one of the earliest pasture crops that we can grow and it will also hold on until late in the fall," says Mr. Van Tassel. "Last fall it was green until November 15 and it was growing enough to pasture by April 1 this spring. We are pasturing 18 head of cows on the 11 acres and they do not begin to keep it down. It is my opinion that the field could handle almost double the number that we are now running.

"As it is now we do not have to reseed the field, but if the plants were kept down it would pay to reseed every fall to keep the crop from thinning down. Fall seeding seems to produce a better stand in this climate, although we have had good results from seeding clover in the spring. In any case, the crop must have plenty of water, especially while the young plants are getting a start, but we have noticed that the sweet clover will stand up much longer than the other grasses when the land gets a little dry. The alsike will begin to fail long before the sweet clover has shown any signs of needing water."

At one corner of the field is a small patch of alfalfa, but Mr. Van Tassel turns but a very little water on the part of the pasture since there is danger of the animals bloating. No such effects have been experienced where the cows have fed on the sweet clover alone. As for milk production, it has proved satisfactory and there has been no noticeable effect in the milk from the peculiar taste of the sweet clover.

The Cover Page

This is a great week for Washington Guernsey breeders, especially those living in the island counties of Puget sound and in Whatcom county. A three-day Guernsey tour of leading farms on which are found this breed is being made by boat and auto. The illustration on the cover page of this week's issue shows a Guernsey of prominence and a lover of the breed—La France of Bralee and Mrs. A. Macrae Smith, respectively, both of Bellingham. La France won second place in the 4-year-old class at the Pacific International last fall, after a battle royal with a heifer from the Woodbury herd, and early this year became a double letter class leader with a year's record of 10,537 pounds of milk and 594.58 of butterfat, started at 3 years 8 months of age.



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THE WASHINGTON FARMER

SUCCESSOR TO

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For Good Farming, Attractive Country Homes and Happy Country People

Wallace Is Alert on Freight Rates

Writes Letter to Washington Farmer Regarding Rates on Purebred Breeding Animals

Department of Agriculture, Washington.

To the Editor, Washington Farmer: Receipt is acknowledged of your letter of June 22, 1922, enclosing a discussion in The Washington Farmer of reduced freight rates on purebred breeding stock.

The discussion has been read with interest. The late James J. Hill was a far-seeing man. The development of the west following the building of railroads has shown the wisdom of his policies. It does not follow, from the fact that the interstate commerce commission now regulates rates, that a special rate on live stock to be used for breeding purposes can not be made. The commission should, of course, determine a general policy applied without favoritism.

I am very much interested in this subject, in fact, in the whole subject of the relation of railroads to agriculture. You may be interested in the enclosed material, which has been issued from here relating to the subject. I would suggest that you present your case to the interstate commerce commission with all the facts that you are able to bring together in support of your proposition.

Sincerely yours,

Secretary.



Secretary Wallace.

The foregoing letter from Secretary Wallace is interesting in itself, but it is more significant that the secretary of one of the government's most important departments is sufficiently interested in this farm problem to write this letter as a part of The Washington Farmer's program to bring it before those with power to influence action upon it. Secretary Wallace is keenly alive to the crisis through which agriculture is passing and the part that high freight rates is playing in it. In a recent address he said:

"Agriculture is our greatest industry; transportation our second greatest. These two industries are dependent upon one another, and the national well-being is dependent upon both. The failure of either to function efficiently results in widespread inconvenience, financial loss and quite possibly national disaster."

Looking into the future he summarized his thoughts as follows:

"To discuss in detail the effects upon agriculture and industry in general of the advances in freight rates of the last four years would require hours and days rather than minutes. In brief, if the present high rates are continued for any length of time their probable effect will be:

"First, to favor the farmers of South America and Australia at the expense of our own farmers, and all the more so because of the substantial decreases in ocean rates.

"Second, to keep prices of farm products in the large surplus producing states at figures lower than are justified by the investment in land and equipment and cost of farm production, except during years of short crops.

"Third, to prolong the period of dissatisfaction among farmers and encourage advocates of economic fallacies of all sorts.

"Fourth, to improve the position of eastern truck and fruit growers, but add considerably to the cost of production of milk and dairy products, because of the advanced prices of hay and coarse grains necessarily shipped in from the west.

"Fifth, to gradually shift industrial enterprises westward, nearer the surplus food producing territory.

"Sixth, to promote sectional rather than national spirit and make more and more difficult large national policies with respect to international affairs.

"No good citizen can find comfort or satisfaction in contemplating such results."

Progress Is Made Toward Better Credits

Congressman J. Stanley Webster of the Fifth district of Washington, in a speech in his home city of Spokane recently, spoke in congratulation over the absence of fears of a financial panic and the upturn in business and industrial conditions. He reminded his audience that government bonds are now at par or better, while only a comparatively short time ago they were down to from 83 to 85 per cent of par.

Undoubtedly a large part of the confidence that has brought about these improved conditions is due to a belief in the minds of the American people that this country now has the best financial monetary and banking system that it has ever had, and that there is a growing disposition at Washington to look out for the credit needs of the farmers as well as those of the business man.

MONEY IS CHEAP ON PACIFIC COAST.

The fact is that money is cheap at the source on the Pacific coast. The Federal Reserve bank at San Francisco lowered its rediscount rate on July 8 to 4 per cent, from 4½ per cent. The San Francisco bank is the third institution of the 12 in the federal reserve system to cut its rate to the 4-per cent level, New York and Boston having previously announced similar reductions.

It should follow that every time a federal reserve bank lowers its rediscount rate the member banks of that district should lower their interest rate correspondingly to their customers. The federal reserve bank does not do business with the public in the same sense that banks usually do. It has better been described as a bank of banks. A member bank wanting more currency to loan to its customers can get it in the form of federal reserve notes by depositing with the San Francisco Reserve bank as security a given quantity of notes of its customers. That is called "rediscounting," and the borrowing bank gets the money at 4 per cent interest. In turn, it loans that money to its customers at whatever rates the customers are willing or may be forced by stress of circumstances to pay. Anything the member bank may get from its customers above 4 per cent and the cost of doing business is profit to itself.

FARM MEMBERS ON RESERVE BOARD.

Farm organizations and other leaders, feeling that the agricultural interests have not been taken care of as well as the commercial and manufacturing interests, have demanded that a farmer be appointed as a member of the federal reserve board, which has nine directors. President Harding has acknowledged the justice of that demand and has promised to make such an appointment.

Unfortunately, under the law the federal reserve system can loan money only in a limited way to farmers. The system was constructed primarily and essentially to take care of business men and manufacturers. To remedy that injustice, temporarily, congress extended and increased the powers of the war finance corporation and gave it an additional credit of $1,000,000,000 with which to take specific care of agriculture and live stock.

The war finance corporation resumed operation in January, 1921, and since that time has authorized loans aggregating $363,000,000, of which $53,000,000 was to assist in financing exports and $310,000,000 for agricultural and live stock purposes.

AGRICULTURAL BLOC GIVES GOOD AID.

Here, again, the government does not do business directly with individual farmers or live stock owners. It provides freer credits by making these loans to banking and financial institutions, including live stock loan companies and cooperative marketing associations. Of the loans thus advanced up to June 30 last, Managing Director Eugene Meyer reports that $289,000,000 was authorized to financial and banking institutions, including live stock loan companes, $64,000,000 was to cooperative marketing associations and $9,000,000 was to exporters.

This more just and liberal policy of dealing with the great agricultural interests is due chiefly to agitation and the powerful influence of the agricultural bloc in congress.

We venture the prediction that never again in the history of this country will our farmers be compelled to deal in an uncurbed and unprotected way with banks and mortgage companies.

Credit henceforth will be easier and the interest charges more reasonable. That does not mean that farmers or others lacking credit will be able to get it at a low rate of interest. It does mean that the farmer who is entitled to credit and wants it will get it, and at a reasonable rate of interest.

It means, moreover, that the farmer who goes it alone and does not identify himself with a cooperative marketing organization will not be in a position to get as good treatment as will be extended to the members of all worthy cooperative associations. This is an era of organization—in business, in finance, in manufacturing, in mining, in lumbering, in the field of labor. If the farmers would have their share of influence and recognition, they, too, must find it in strong, well directed organizations.

Artesian Water for Irrigation

The Cold creek artesian basin, 20 miles from White Bluffs and Hanford and 40 miles from Yakima, is in the limelight just now, says the Yakima Herald. The reclamation of 10,000 to 20,000 acres by artesian wells has aroused much discussion. Its success of two artesian wells, which, it is said, together will irrigate about 600 acres, has started the ball rolling. A Yakima real estate firm has contracts covering 15,000 acres and is making arrangements to put down a well immediately.

The main question is the extent of the field and the permanency of the supply. Two theories seem to prevail as to the source. One holds that somewhere many miles above the basin the Columbia is diverted through a crevice in the rocks and flows in an underground channel beneath the Cold creek basin at a depth of about 600 feet. On this basis they argue that the supply is inexhaustible, but the field is of limited range. They hold that, perhaps, a series of wells may be brought in, but will all be in line with the Brown and Lemcke wells.

The other theory is that the Cold creek basin is a well marked artesian field and that while depths may vary water will be struck when the impervious strata are pierced. Those who hold to this theory give the field a larger scope and maintain that 30,000 to 35,000 acres is susceptible of being reclaimed from this source of supply. There seems to be an inexhaustible supply of water in the White Bluffs-Hanford section. Out of the 60 wells sunk for the soldier settlement projects all but two were successful and met the state requirements, a pumping capacity of 350 gallons a minute.

Where the two wells failed, others sunk in the vicinity were successful, so the failure is not attributed to a lack of supply, but to some local cause.

Traffic Problems

Handled by Wenatchee Association

During the apple shipping season there are always more or less details that can not be handled through the regular channels. Such information as the possible production of the entire district, the number of cars needed for the season's crop, and all data pertaining to rates, can be easily handled by some organization, which can spend its entire time with this kind of work.

It was for the purpose of working out such details that the Wenatchee Valley Traffic association was organized in 1918, and has been producing results for all apple shippers in the district. At first the officers of the association worked without pay, hiring only such office help as was necessary. The results obtained demonstrated that still greater returns could be realized by establishing the organization on a larger basis.

At the present time many phases of shipping are covered by the traffic association, and it handles the work for nearly all growers and shippers in the valley. It assists the shippers in getting the proper number of cars at the time when they are most needed; it helps him to obtain lower freight rates, and in many cases has prevented them from going higher. In fact, the association handles almost any problem which is of interest to the growers and shippers, but is in reality out of their jurisdiction.

In order to carry on the work the association first collected one-quarter of a cent a box on all fruit shipped, and 50 cents a car from shippers. The fee has been reduced to one-eighth of a cent a box from the growers, and 50 cents a car from the shippers; the latter charge is estimated to pay the running expense of the office. The growers' payment finances all details, such as rate hearings, supplying cars, working against hurtful legislation, and fighting pests.

A year ago very little publicity was given to the growers, since no means of doing so was available. Since the office has been established, however, a publicity man has been secured, who furnishes information to the local newspapers, and also gets out a weekly bulleting which is sent to all growers. It is his duty to keep all members posted. Practically all growers in the district feel that this small payment of one-eighth of a cent per box is none too much for the returns secured through the association. Last year the association operated on less than $16,000. The saving on car supply alone is estimated at $3000, while a reduction of the freight on apples to points east of the Missouri river amounted to 16½ cents a box. This reduction affected approximately 8000 cars last year.

Practically all growers and shippers in the valley are represented in the traffic

(Continued on page fourteen.)

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Smoking in the Fields

Cigars and cigarette stubs are the causes of many fires and are probably the most difficult to combat. In some cases the owner of the grain smokes in the field himself and allows the men to do likewise. Many fires are started by the careless throwing away of cigar or cigarette stubs or from the lighted match. Smoking should at all times be discouraged in the harvest field, the dry-land pasture, the hay field, the forests and everywhere that combustible material is present.

A Fundamental of Immigration

Congressman Albert Johnson and Senator Miles Poindexter of Washington are on the right track when they declare that the immigration laws should grant admission for permanent residence only to aliens who would be eligible for citizenship. That would close the gates against Japanese, Chinese and Mongolians. Congressman Johnson, who is chairman of the house committee on immigration, has introduced a bill to that end in the house, and Senator Poindexter has been advocating the same method in the senate.

V. S. McClatchy, publisher of the Sacramento Bee, who is regarded as the outstanding advocate of more vigorous restriction of Japanese immigration, commends Representative Johnson and Senator Poindexter. In a letter to the senator, Mr. McClatchy says:

"I have read with great interest your speech concerning proposed exclusion of ineligible aliens. There could be no better or more effective way of disposing of the Japanese question without friction than through the passage of a provision such as has been suggested."

The gist of Senator Poindexter's speech, referred to by Mr. McClatchy, is in the following extract:

"Our people, engaged in the ever-intensifying struggle for existence, should not be put to sharp competition by a horde of aliens who have not the essential elements which will enable them ultimately to become merged into the currents of American citizenship. If we can not make them citizens, has not the time come to prohibit their immigration and permanent residence in the United States? I am of the opinion that it has. I think we ought to be able to say, and we ought to say, that all those who come to our shores to reside permanently and to make their homes here, to enter into our industrial life, should be such as ultimately may be accepted into full citizenship in our great national republic. The house of representatives have adopted that principle, as I said before, and it is a wholesome principle."

The FARMER finds itself in thorough accord on this question with Mr. McClatchy, Congressman Johnson and Senator Poindexter. Ultimate citizenship should be the rigorous test of admission of immigrants to the United States. If certain races are not such material as we want to put into the building of the great temple of the republic, they should be excluded from our shores. We have problems enough, and shall have them increasingly, perhaps, in future, without further complicating our present difficulty of making citizens out of a great deal of undesirable material that is already in the United States.

Regional Farm Problems Are Important

The state is the logical unit in the dissemination of agricultural information. Through its public school system, the state farm papers, and the state press generally, this agricultural information can be spread most effectively.

The state agricultural colleges do their best work as teaching institutions, including extension work, together with local experimentations and demonstrations.

It yet remains that important regional problems of agriculture are not now being solved efficiently in this country.

Most of the important agricultural problems of any single state are common to adjacent states. In other words, the regional farm problems include many of the big farm problems of the separate states included in the region.

The growing of apples is a regional problem in the four states of the Pacific northwest—Washington, Oregon, Idaho and Montana. While local conditions are different in the different states, and in the different portions of the same state, yet there are important apple-growing problems common to the four states. The same is true of the potato-growing industry, of the grain-growing industry, of the various live stock industries. A lot of these big problems belong to the region and can be solved regionally better than by the separate states.

The great agricultural problems are not so much national problems or state problems as they are regional problems. The 10 or 12 states of the cotton belt form a distinctive agricultural region. So does the agricultural corn belt. The bulk of the great wheat-growing industry also can be divided into one or more regions, including several states in each region.

The southwestern states reaching to the Pacific are a region of their own agriculturally; so are the northwestern states reaching to the Pacific a region of their own. The big farm problems of New England can be easily included in a region of their own.

The agricultural industries of these several regions may overlap and interlay. That does not disturb the proposition that a great agricultural industry, carried on largely in several contiguous states, forms an agricultural region, and that the problems of that region can be more effectively solved within that region by concerted action than by the states separately.

A single agricultural research establishment in each region, under a director having proper executive authority, will do better and more work than is done by the several research establishments in the several states of the region.

Farm Bureau and Grange

Recently there was held in Chicago a joint meeting of the executive committees of the National Grange and the American Farm Bureau federation. Both President Howard of the federation and National Master Lowell of the grange were present. The meeting was a significant one, indicating a high degree of harmony between these two leading farm organizations. Following the meeting, President Howard wrote the following letter to Master Lowell, stating the case succinctly:

"The executive committee of the American Farm Bureau federation appreciates very greatly the associations with your executive committee during the past three days. We feel that the work of our organizations is on very similar lines and that our ideals are practically identical.

"It is the desire of the American Farm Bureau federation to cooperate with the National Grange in the largest possible degree. Our work is the building of American citizenship through the medium of better farm homes, schools, churches and community centers. We together have an important function in the maintenance of personal initiative and the preservation of the rights of the common people.

"The farm bureau has always recognized the great work of the grange along these lines, particularly in building of community centers. Our executive officers have always advised county farm bureaus to cooperate with the grange in the promotion of this important community work and this will be our continuing policy.

"We feel that this conference should be but the beginning of a closer cooperation and a better acquaintance between our various leaders."

State Farm News

C. A. Taylor, Charles Kletch, William Beck, Al Bray and J. W. Taylor of Kelso, Wash., and Max Whittlesay and George Barker of Portland have purchased the mill and equipment of the Linco Log and Lumber company at Lindberg, Wash., near Morton, on the Tacoma & Eastern.

They are organizing the C. A. Taylor Log and Lumber company, with a capitalization of $150,000. C. A. Taylor, William Beck, Al Gray, Charles Kletch and George Barker are trustees and Mr. Taylor will be president and manager; William Beck, vice president, and Max Whittlesay, secretary-treasurer.

* * *

The prices of milk for the Seattle markets has been raised as follows: July, $2.40 per hundredweight; August, $2.65, and September, $2.75. This, of course, applies only to milk which goes for the city trade and is based on a 3.6 test.

* * *

Eastern capitalists, according to reports from Portland, have decided to underwrite the $32,000,000 bond issue of the Horse Heaven irrigation district, in southeastern Washington. This is said to insure the beginning of work this year on a project second only to the Columbia river basin project in importation, doubling present irrigation in the state.

* * *

E. D. Hillis has recently moved onto the old Hargerty farm near Monroe. Mr. Hillis comes from Victoria, B. C., and brings 40 head of purebred Holstein females, including 28 cows and 12 calves. While in Canada Mr. Hillis carried on some record of performance testing which corresponds to A. R. O. or R. of M. work in this country. He is planning on fitting some of his herd for the county live stock show at Everett, and may possibly send some to the larger fairs.

* * *

The new highway being constructed at Porter is fast nearing completion, a night crew having been put on recently. The bluff near the Northern Pacific water tank is being cleared away by use of a steam shovel.

* * *

Noel Bakke of Peshastin expects a normal crop of apples from his 10-acre orchard near town. There are 250 trees of Stayman Winesaps and 250 Spitzenburgs, while the remaining varieties are Rome Beauties and Jonathans. Mr. Bakke's orchard is located just below the pipe line and his home water supply comes from his spring on the side hill, where a large reservoir is being installed.

* * *

Fire blight, a new pest, has broken out in the Wenatchee district, especially on the more elevated locations. It attacks the Jonathan and Spitzenburg trees worse than any others, apparently. It is similar to pear blight in many respects and can be treated only by cutting out the infected parts of the tree. District inspector Neilsen warns all growers to disinfect all cutting tools thoroughly while at work to prevent the spread of the pest.

* * *

J. H. Latham sold 10 acres of prune orchard in the Felida district to J. E. Deako of Sara for $9000, retaining this year's crop. Latham has two other orchards in the district and Deako owns property in the Sara district.

* * *

A carload of grade Holsteins was purchased in the Hannaford valley, northeast of Centralia, recently by Charles Fisher, a Seattle buyer. The average price paid was $90. According to Mr. Fisher, it was the best lot of stock he ever shipped out of the county. Those disposing of cows were Jess Rector, Marion Jackson and R. C. Allbritton, six head each, and A. W. Thompson and C. A. Beaver, two head each.

* * *

The North Pacific Cooperative Berry Growers' association has put up more than 1000 barrels of strawberries this season, most of which will be held for future sale. The association has found that they can in this way take care of a large quantity of surplus fruit and prevent its being dumped on the market at a low figure, or becoming a total loss. The season was very short this year and in spite of the fact that prices were low the entire crop of the membership was handled satisfactorily.

Coming Events of Interest

July 27-28—Whatcom Guernsey gallop, Bellingham.
July 27-29—Guernsey cruise, Puget sound.
July 27—Alfalfa growers' tour, Stevens county.
July 24-Aug. 5—Western Washington live stock tour.
July 27—Farm bureau meeting, Lopez.
July 28—Farm bureau meeting, Shaw island.
July 29—Peninsular beekeepers' meet, Olympia.
Aug. 3—Skagit county pioneers picnic, LaConner.
Aug. 10—Pierce county farm bureau picnic.
Aug. 10-12—Old settlers' picnic, Ferndale.
Aug. 14-19—Skagit county fair, Burlington.
Aug. 19-20—Ninety-first division reunion, Seattle.
Aug. 28-Sept. 2—Southw't Wash. fair, Chehalis-Centralia.

FARM BUSINESS AND MARKETS OUTLOOK

Cattle markets have continued to absorb the supply at prices favorable to the producer.

In spite of a drop in average quality of hogs and lower average prices, the latter are holding above $10 at the principal middle western markets, making an unusually profitable outlet for corn.

Purchases of feeder lambs are expanding and the range supply has not been sufficient thus far to fill the orders. Prices being paid are nearly as high as for fat lambs.

Although export buying of wheat is a little more healthy and millers are moderately active, the wheat market is decidedly unsettled because of strike conditions and shows no decisive trend in either direction.

Widespread rains over most of the corn belt have provided a supply of moisture which will carry the corn crop through most of the critical period.

Prices of oats are holding in a narrow range and following the trend of wheat and corn.

Demand in the feed markets has broadened, as some of the larger users of bran are accumulating supplies for fall and winter use, in the belief that prices will not go much lower.

The egg market has not yet risen far above the lowest levels of the season.

Butter scoring 90 or below has moved indifferently recently and prices have declined, while fancy butter is slightly higher.

The potato market has declined sharply.

Good Cattle Market Continues

Cattle markets have continued to absorb the supply at prices favorable to the producer. Prime steers sold at $10.80 at Chicago last week and a large number crossed the $10 mark. The actual advance was confined to grain-feds. Grassers and those fed corn or grass, which have been too high compared with top grades at Chicago, weakened and declines were in vogue at other points.

Steers from the northern ranges are beginning to show up and the movement from Kansas and Oklahoma is steadily gathering volume. The supply for slaughter will probably increase 35 per cent in the next 60 days, so that it is doubtful if values on the lower grades will be maintained, although settlement of the coal and rail strikes would expand outlets for beef. Choice and prime steers are in a class by themselves and appear to be in a secure position by virtue of scarcity, although the advance may not carry much further.

The trends in the butcher cow and heifer markets are the same as for steers. Bulls are generally most plentiful during midsummer, when the range first begins to ship. Light veal calves are advancing, as they were out of line with other meat animals, and the seasonal trend is upward. Heavy grass calves are an exception, as they will become more numerous later on.

Big Feeder Demand Expected

The prospect of a generous crop of corn, hay and rough feed, with profitable results for cattle feeders in the last five months and advancing prices on fat steers promise to maintain a broad outlet for thin cattle during the fall. July curtailed buying as usual, the movement from 12 leading markets in the first week in the month declining 50 per cent compared with the last week in June. As more range steers become available and the busy season on farms passes, buying will expand, but it probably will not lift values much, if any, and the plainer light weights are apt to work gradually lower during the late summer and fall.

Hog Market Reacts Again

The hog market has crossed the $11 mark twice recently, but the run expanded each time and part of the advance was lost. Receipts are holding up surprisingly. Conditions in Germany are unfavorable for the export trade in hog products, although a big Chicago packer displayed his faith by starting a big shipment for that country during the week, and other continental countries were buying. Heavy foreign buying of hog meats and lard and lighter receipts of hogs are the two factors which generally boost the market during the late summer.

The spread between common and choice bacon hogs is about $3.50 at Chicago and even wider at other points. In spite of a drop in average quality and lower average prices, the latter are holding above $10 at the principal middle western markets, making an unusually profitable outlet for corn. As production is being increased rapidly it has been suggested by officials of the department of agriculture that it would be well to dispose during the summer of part of the sows bred for fall litters in order to prevent overproduction.

Range Lambs Run Below Normal

Receipts of range lambs are not quite up to the usual number at this season, probably reflecting the 30 per cent shortage in the crop. The dressed trade is healthy, the eastern trade is again being forced to resort to middle western markets for supplies and total receipts are not burdensome, so that prices are holding well.

Purchases of feeder lambs are expanding and the range supply has not been sufficient thus far to fill the orders. Prices being paid are nearly as high as for fat lambs.

Horse Trade Is Slow

Seasonal dullness pervades the horse markets. Lower prices were necessary to effect a clearance of a moderate run at Chicago last week. Resumption of coal mining and delivery would improve outlets for heavy chunks.

Chicago: Good and choice drafters, $175@275; common and medium drafters, $75@165; chunks, 1450 to 1600 pounds, $75@160; wagon horses, $40@180; farm chunks, $50@135.

Wool Dull but Steady

This is "between seasons" in the wool market as the mills are waiting to see the volume of orders for spring goods at the openings started this week. Cloth prices made by the leading factor were about 5 per cent below the level established during June. Wool prices are steady, as most of the new clip is in manufacturers' or dealers' hands and the possibility of passage of the permanent tariff, with lower rates on raw wool before next January, now looks remote. Mills are inquiring for supplies, but are proceeding with caution. Seaboard markets are receiving large shipments from the west at present.

Wheat Needs Abroad Run Larger

All estimates upon the import requirements of European and non-European countries combined during the coming 12 months run larger than for the last 12 months. There is a disagreement of 50,000,000 to 75,000,000 bushels as to the total amount.

Conditions have improved in Europe during the last few months, but the yield in France and Italy is estimated officially at about 15 per cent less than last year, so that an increase in wheat substitutes has been authorized in France and Italy is removing the tariff on wheat imports. The German government is reported to be making plans for provisioning its people by requisitioning a part of the crop from the farmers and by extensive purchases abroad. Broomhall recently estimated that the Balkan states, Rumania and Bulgaria would have an export surplus of 40,000,000 bushels. Last year, however, they exported only 6,000,000 bushels and official estimates upon their yields this year do not indicate a big increase.

On the other hand, the crop in the orient is better than a year ago, the yield in China being estimated at 175,000,000 bushels, compared with 150,000,000 bushels last year. Also, Russia is expected to take care of most of her own needs unless recent press dispatches were purely propaganda.

In spite of the large estimated import requirements, but little has been bought. Apparently the European buyers will not rush the market during the early part of the shipping season, as they did in greater or less degree each of the two preceding years, only to have the market decline considerably later on.

Although export buying of wheat is a little more healthy and millers are moderately active, the wheat market is decidedly unsettled because of strike conditions and shows no decisive trend in either direction. There is more or less anxiety lest shipment from the producing sections or from terminal markets to mills and the seaboard be interrupted and the shortage of coal is being felt, not only in the movement of freight, but in the supply of fuel for threshing. A few sections in the southwest report a shortage of cars, with local elevator space already filled. In addition, black rust is present over a large area in the northwest. While it has done only a limited amount of damage thus far, there is apprehension and will continue to be until about August 1, when the crop will be out of danger.

Good Corn Crop Assured

Widespread rains over most of the corn belt have provided a supply of moisture which will carry the corn crop through most of the critical period. It now seems highly probable that a crop as large as or larger than the July 1 estimate will be matured.

Export buying of corn has increased again recently as weather has been unfavorable for drying out the Argentine crop, upon which European countries usually depend at this season of the year. Receipts at primary markets are above the average, but prices have held within narrow limits.

Oats harvest is on in a large part of the central section of the belt and primary receipts which have been above the average for weeks will begin to increase soon. Prices are holding in a narrow range and following the trend of wheat and corn.

Cash Grain Prices

The range of cash grain prices for the week ending July 19 was as follows:

CHICAGO.—Wheat: No. 2 red, $1.12 1-2@1.18; No. 3 red, $1.12 1-2@1.17 1-2; No. 4 red, $1.11@1.13 3-4; No. 2 hard, $1.14@1.20 1-4; No. 3 hard, $1.13 1-4@1.18 3-4; No. 4 hard, $1.14 3-4. Corn: No. 2 mixed, 64@65 1-4c; No. 3 mixed, 63@64 3-4c; No. 2 yellow, 64 1-2@65 3-4c; No. 3 yellow, 64@65c; No. 4 yellow, 63@64 3-4c; No. 2 white, 64 1-4@65 1-2c; No. 3 white, 65c; No. 4 white, 63@64 1-2c. Oats: No. 2 white, 35 1-2@43c; No. 3 white, 34 1-4@39 1-2c; No. 4 white, 33 3-4@37c. Rye: No. 3, 85c. Barley: 59@69c.

EAST ST. LOUIS.—Wheat: No. 2 red, $1.12@1.15 1-2; No. 3 red, $1.08@1.11; No. 2 hard, $1.12@1.13 1-2; No. 3 hard, $1.10. Corn: No. 2 mixed, 63@64 1-2c; No. 2 yellow, 66 1-2@67 1-2c; No. 3 yellow, 65 1-2@66c; No. 4 yellow, 65@66c; No. 2 white, 63 1-2@64 1-2c; No. 3 white, 63c; No. 4 white, 62 1-2c. Oats: No. 2 white, 38@39 1-2c; No. 3 white, 37@39c; No. 4 white, 36 3-4c.

Feed Markets Slightly Higher

Feed markets moved a little higher recently. Demand has broadened as some of the larger users of bran are accumulating supplies for fall and winter use, in the belief that prices will not go much lower. Widespread rains recently will tend to reduce purchases by dairymen and flour mill operations are likely to increase decidedly in the next month or two, so that wheat feeds will be more abundant.

Prices per ton (100-pound bags) in carlots: Chicago—Bran, $18.50; standard middlings, $20; flour middlings, $26; cottonseed meal, 36 per cent, $45.50, 43 per cent, $49.50; hominy feed, $25.75; gluten feed, $28.85; old process oil meal, $45; tankage, $55.

Old timothy is still selling at a premium of $4 to $6 over new hay. Low grades of all kinds are hard to sell. Demand is small for new clover and only fair for new alfalfa. The rail strike is restricting receipts.

Prices per ton in carlots: Chicago—No. 1 timothy, $25@27; No. 2, $24@25; No. 3, $14@20; No. 1 light clover mixed, $24@25; No. 1 clover, $15@19; No. 1 clover mixed, $20@22; upland prairie, $14@19; midland prairie, $13@17; rye straw, $13@15; oat and wheat straw, $9@12.

Eggs, Butter and Cheese

The egg market has not yet risen far above the lowest levels of the season. Receipts are larger than at this time a year ago, but there is only a small surplus over consumptive needs to be placed in storage. Stocks of frozen poultry in the United States on July 1 amounted to 34,751,000 pounds, compared with a five-year average on that date of 35,824,000 pounds.

Butter scoring 90 or below has moved indifferently recently and prices have declined, while fancy butter is slightly higher. Export buying was expected, but it failed to develop as British markets weakened. Receipts have been falling off, but rains have revived pastures and an increase in production is expected, or prevention of a further decline for the time being. The daily surplus for storage at the four leading markets remains rather heavy, but the total storage surplus is not yet excessive.

Prices for 92-score fresh butter on July 19 were:

Chicago, 33 1-2c; New York, 36c; Boston, 36 1-2c; Philadelphia, 36c.

Cheese distributing markets were weak in the last few days, as the supply has been too large for immediate consumption and speculative buying for storage was negligible. Widespread rains are expected to increase production again. New York state cheese has had the preference in the east. Stocks in storage are only moderate, so that prices are not apt to sag much lower.

Prices for No. 1 American cheese on July 19 were:

Chicago—Twins, 18 1-2@19c; Daisies, 19 1-2@20c; D. Daisies, 18 3-4@19c; Longhorns, 19 1-2@20c.

Fruits and Vegetables

The potato market has declined sharply in the last 10 days. Shipments from producing sections are running about 40 per cent above the average for this season of the year. The Caldwell, Idaho, district has 11,000 acres, compared with 4500 last year, and condition is rated at 90 per cent, compared with 93 per cent last year.

(Continued on page twelve.)

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Butter Classes and Grades

Butter is classified on the markets into seven different kinds: Creamery, centralized creamery, held butter, renovated, ladles, packing stock and grease butter.

"Creamery" butter must be made in a creamery from cream either separated from the whole milk at the creamery or received by team or motor direct from the farm.

"Centralized creamery" may be hade from cream gathered direct from the farmer or shipped in by rail from individual shippers or cream stations.

Both the individual states and the United States have cold storage laws which define when butter becomes "cold storage" or "held."

"Ladles" consist of butter collected in rolls, lumps or whole packages and reworked or rechurned, resalted or recolored by the dealer or shipper.

"Packing stock" consists of butter without additional moisture or salt, from a creamery or dairy, which has been collected in any quantity and packed in tubs, barrels or other containers. It must be fit for human consumption as food and free from adulteration.

"Grease" butter consists of all grades below thirds.

Creamery and held creamery are commonly graded as "extras," scoring 92 points or better; "firsts" scoring 88 to 91, "seconds" scoring 84 to 87 and "thirds" from 79 to 83. Centralized creamery butter is graded as extras, firsts, seconds and thirds. Renovated and ladles are graded into firsts and seconds and packing stock as No. 1, No. 2 and No. 3.

LOOKING INTO OTHER FARM FIELDS

Practically the entire supply of domestic carrot and lettuce seed in the United States is produced in California.

* * *

The 1922 potato crop promises to be the largest since 1917, when a bumper yield of 442,108,000 bushels was harvested. The 1922 crop is estimated at 428,607,000 bushels.

* * *

The Texas Farm Bureau Sweet Potato Growers' Exchange, which met in Dallas recently, laid plans for increasing the annual sweet potato crop of Texas from 1,000,000 bushels to 5,000,000 bushels.

* * *

The French chamber of deputies recently passed a law authorizing the government to fix by decree the percentage of wheat in flour and the addition of substitutes in preparation for the expected shortage in this year's wheat crop. The crop is variously estimated at from 50,000,000 to 100,000,000 bushels short of requirements.

* * *

More than $4,000,000 will have been returned to California apricot growers for their 1921 crop of dried apricots when final payments to the growers are completed by the California Prune & Apricot Growers' association. The prices paid during the past season ranged from 11 1-3c to 23 1-2c, according to size and quality. The average price paid to growers was slightly more than 16 1-2c.

LIVESTOCK AND DAIRY

Summer Feeding

There are two factors concerned in profitable milk production whether the season be summer or winter. They are:

1. The milking capacity of the cow.
2. The kind and amount of feed consumed.

The pasture season is always welcome, for it brings relief from much labor and expense and there is also an increase in the milk yield. Cows give more milk at this season because their ration is:

Palatable
Balanced
Succulent
Abundant.

The closer we can maintain these conditions throughout the year the greater will be both milk yield and profit, says E. B. Fitts, dairy extension specialist of the Oregon Agricultural college.

The ordinary cow needs no other feed while on good pasture. The high producing cow, however, must have some grain even on the best of pasture. It is impossible for a cow producing two pounds of fat or more daily to digest enough of the bulky succulent grass to meet her requirements. She will get thin in flesh and soon drop in milk yield. Such cows pay well for grain, usually $2 to $3 for each $1 expended.

What Grain to Feed.

When pasture is abundant there is nothing better than rolled barley and oats. Barley alone gives good results, as does also a mixture (2 to 1) of corn meal and millrun. Later in the season when pasture gets short a different mixture is necessary. Some oil meal or cotton seed meal should then be added.

How Much Grain to Feed.

Feed whatever grain is needed to keep the cow from getting thin. A good cow will need 4 to 8 pounds daily and an exceptional one considerably more. Keep the cows up in flesh, for it is always expensive to allow them to become thin.

Soiling Crops.

Pastures in the average section seldom remain good longer than four to six weeks, after which they become short and unsatisfactory. Green crops may be grown for supplemental feeding. A succession of crops might be rye, clover, vetch and oats, second crop clover, corn, kale, roots. A rotation using other crops can easily be worked out.

The Summer Silo.

The summer silo greatly simplifies the problem of supplemental feeding. A crop of clover or vetch and oats or other early maturing crop run into the silo will provide splendid feed for the summer. Under most conditions it is cheaper, requires less labor and is quite as satisfactory as a succession of green crops fed direct to the cow. The silo can be filled again in the fall with corn for winter feeding.

Milk Production Pointers.

Breed—High producing cows are necessary. Use only a registered bull from exceptional ancestors.

Feed—Liberal and intelligent feeding is necessary to develop the heifer and to secure greatest profits from the cow. DON'T SKIMP.

Weed—Apply the milk scales and Babcock test to every cow. They are impartial judges.

LIFE PRESERVERS FOR LIVE STOCK

By DR. E. E. WEGNER, W. S. C.

DIGESTIVE TROUBLES, ARTICLE III.

The symptoms of abdominal troubles are supposed to be very commonly known,



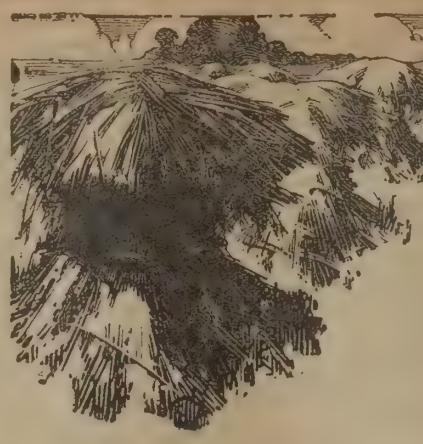
but we must keep in mind that the principal symptom is a manifestation of pain and this is common in some other troubles. I have seen animals go through all the manifestations of pain, common in digestive troubles, when the pain was in the shoulder, so that the mere evidence of pain does not necessarily locate it.

The common symptoms are pawing, getting up and lying down, turning the head around to the side and placing the nose on the side wall of the abdomen, sitting up on the haunches like a dog and sometimes raising the head at the same time to stretch the abdomen, standing with the hind feet far back and stretching the abdomen in that way. This last symptom sometimes causes the owner to believe that the animal is trying to urinate and is unable to do so, when it is only trying to assume a position that will give a little relief from the pain within. Sometimes the animals lie for a long time on the side, stretched out, or lie up on the breast in a natural position. In cases of very severe pain that comes on like cramps the animals may trot in a circle with the head lowered and the knees slightly bent, dropping down at frequent intervals to roll. When in severe pain the animals may sweat profusely, the water dripping from the abdomen and legs.

Aside from the above there may be distention of the abdomen if there is an accumulation of gas, or there may be louder sounds than normal from the abdomen or, in other cases, there is a suspension of movement and an absence of sound. The breathing may be fast and labored and this has caused many to think that the trouble was in the chest and the patient was treated for pneumonia. This happened recently when, in the absence of a veterinarian a doctor was called upon for advice and his diagnosis was pneumonia. I do not consider this any reflection upon the ability of the physician, but he was unfamiliar with the manifestations of animals. A good veterinarian would not have made such an error, because he is accustomed to translating the language or actions of animals. The animals can not talk our language, but they tell by their actions how they feel. If you can understand and translate those actions, you can arrive at quite an accurate understanding of their condition. They never lie about their feelings, but tell an honest story for all to know, because they live honest lives and are not ashamed of what they have done, as some human beings are.

The veterinarian is in much the position as the child doctor whose patient can not talk and tell how it feels. The veterinarian is sometimes misguided by the owner, but by his patient, never. Owners sometimes give medicines or other treatments and for reasons of their own refuse to say anything about them or even admit that they have done anything. This is very misleading and causes the veterinarian no end of trouble at times. I recall an instance where the veterinarian was trying to find out what had been given and the owner insisted that he had given nothing; the actions of the patient belied the statement, but the owner refused to admit his guilt. On the second day's visit the veterinarian asked: "How much coal oil did you say you gave this horse?" and the owner responded, "About a pint." All of these things are a part of the day's work when treating animals and the symptoms that the animals manifest are various, but they always agree with the animal's feelings. Sometimes they are very difficult to translate and the man who is not well trained to this work usually sees very little of what the trained one sees. He may also lay a lot of stress upon a very unimportant thing and ignore important features. Many times he does not recognize the signs of approaching death and sends for a veterinarian when the animal has only a few minutes or hours to live.

Next article will take up the causes of digestive troubles.



Back to the Grain Fields For Health

Grape-Nuts is a regular "three bags full" of the best food qualities of whole wheat flour and malted barley, carefully mixed and slowly baked—

To develop all their appetizing flavor,

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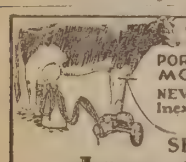
There's not a bit of artificial sweetening in Grape-Nuts—it just *becomes* sweet of its own accord in the long baking.

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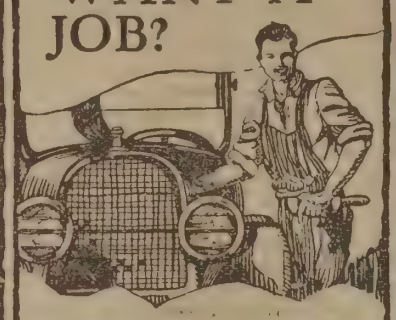
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POULTRY AND RABBITS

Quick Cooperation

It was at the farm of August Hippi in the Vader district of Lewis county that W. D. Buchanan, state poultry extension specialist, received one of the surprises of his life. This is how it happened. For the benefit of the small knot of poultrymen who turned out late in May for the poultry specialist's demonstration, Mr. Hippi had corralled one of his so-called laying birds for Mr. Buchanan's inspection. The latter went over her point by point, calling attention to her non-laying characteristics, and concluded with the judgment that while she might possibly pay for herself, the evidence was overwhelmingly against her. "All right, here goes," said Mr. Hippi, and stepping to the edge of the platform, with two or three twists of a powerful arm put the hen forever beyond any use to man save what he might get out of her as fricassee. For a moment Mr. Buchanan was speechless, but he recovered to say that if he obtained as quick cooperation as that from all poultry owners, he could put the industry in Washington on a highly profitable basis in very short order.

"I want to commend the condition of the litter in this house," he approved. "Litter does cost a little money, but it's worth the cost to have it for fertilizer. There is none better, and in some places they are willing to pay $20 a truckload for it. It is rich in superphosphate and very valuable for the farm. I would also commend the healthy activity of these birds. There are very few on the roosts, and practically all of those on the floor are busily interested in something. You know one of the best times to cull the flock is at feeding time, and I can almost always tell as I approach a laying house, even without seeing the birds, whether they are well and happy."

Poultry Questions

By W. D. Buchanan,
Extension Poultry Specialist, Washington State College.

PTOMAINE POISONING.

What is the matter with a laying hen when she stands a minute looking down, her head working convulsively, then backs up a step or two and runs around in a small circle? Her eyes look O. K., but sight seems poor. She has difficulty in finding her feed. SUBSCRIBER.
Manson, Wash.

The trouble may be due to ptomaine poisoning, resulting from putrid milk or meat, or it may be due to a partial paralysis of the nerves controling the eyes and head, due to this or some other digestive trouble. It might be due to something lodged in the throat.

PREVENTING A WINTER MOULT.

We have 700 February hatched pullets and would like to know if it is possible to get them through the winter without them moulting. How and what should they be fed? W. H. P.
Charleston, Wash.

It is difficult to keep February hatched pullets from moulting and it is next to impossible if they are allowed to lay too early. If they are kept from laying till they are 6 months old, then fed plenty of green feed, kept very busy by scratching in a deep clean litter, fed wholesome grain composed of wheat, corn and oats, and any good egg mash fed regularly and without change, they can be carried through without moult.

TROUBLE WITH EYES.

I bought 100 White Leghorn chicks, hatched on May 22, and they have white diarrhoea. Their eyes are sore and it seems they can not open them. The eyelids are somewhat swollen. They don't seem to eat any kind of mash, wet or dry. What can I do for them? O. H.
Napavine, Wash.

Your trouble seems to be about the same as that described by Mrs. A. B. G. and answered in last week's issue of THE FARMER as follows: "Bad colds or roup will close the eyes as you describe. So also will chickenpox; but the latter is always accompanied with raised nodules or scabs. I would suspect the trouble which you describe as being a bad cold. If so, give the chicks plenty of fresh air(especially at night. Keep the premises clean and put a little epsom salts in the drinking water, about one ounce to four gallons of water for half a day."

Hints for Poultrymen

The following points and hints on the raising and care of poultry were gleaned from the recent poultry demonstrations and lectures conducted in western Washington by W. D. Buchanan, poultry extension specialist from the Washington State college:

The only secret in getting eggs from healthy, vigorous birds lies in how one feeds. They must be kept always busy and always happy.

No hen is good enough to be used as a breeder unless she has laid at least 150 eggs, and a minimum of 180 is better.

A purple comb indicates that the wearer is suffering from ptomaine poisoning or indigestion—the severity of the attack being shown by the amount of the discoloration.

Applying sodium fluoride is the one really good way to get rid of lice—eight or 10 finger-pinches of the powder can be quickly applied to the hen's body, or if the days are warm a solution of one ounce of fluoride to one gallon of water may be used for dipping the birds. This is the most effective method, for you can dip three hens while you are powdering one. The solution is poisonous, but there is no danger to the birds if you keep it out of their eyes and nostrils.

Dependable heat, fresh air and cleanliness are essential to successful chick brooding.

The 54-inch hover advertised as of a 1000 capacity usually will not hold to advantage more than 600 babies, and more chicks will mature if only 500 are put under it.

Compare with competitors, its merits and measure for hand washing and hardware, by weighing and washing with it.

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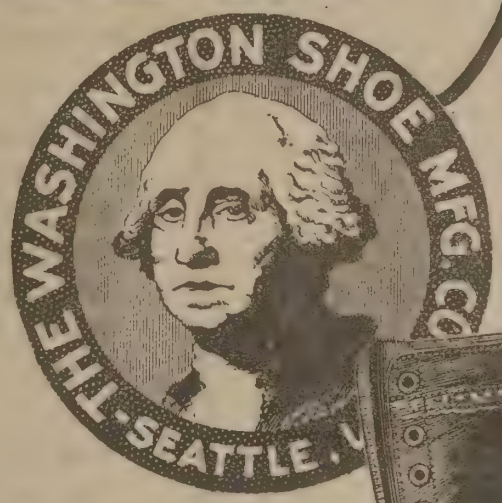


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ORCHARD AND GARDEN

Tank on Wheels

Also Carry Large Spray Pump

By O. M. MORRIS,
Head Department of Horticulture, Washington State College.

The best spray producing machine that I have seen in operation this season is working in an orchard above Selah, Washington. The outfit belongs to S. M. McKee, who has arranged to set a 400-gallon spray tank on wheels, which carry also a large spray pump. The engine ordinarily used to run the pump has been set aside and by his own ingenuity and work, Mr. McKee has connected the pump with the drive shaft of the tractor used in the orchard. The connection is provided with knuckle joints and a slip rod and socket so that turning around and uneven ground causes no trouble with the pump. This connection is also fixed with a clutch whereby the pumps may be thrown in or out of gear independent of the action of the tractor engine. When I saw this machine in operation the pressure gauge was standing above the 300 mark.

The pump was supporting two spray guns and throwing a fine, strong spray from each gun so that the men could reach 20 to 30 feet from the end of the gun with force enough to turn the leaves and small twigs. After one of these guns had been used on the tree no dry surface could be found. The men with the nozzles kept moving at a good pace and were doing splendid work. A very interesting feature of this was that the tops of the trees were apparently sprayed as thoroughly as the lower parts and the center as well as the outside.

I was told by one who knew that the idea of connecting the pump with the tractor and the memchanical work was all done by Stuart McKee, the son of S. M. McKee. Stuart McKee is a young man who has been brought up on the farm and orchard and appreciates thoroughly the value of good machinery.

Orchard Pests

By O. M. MORRIS,

How can we destroy the little mole that burrows along rows of vegetables?
Charleston, Wash. A. BeM.

The best method of destroying the moles that work in the garden is to poison them by using raisins. Carrots or pieces of potato can be used but with less success.

Split each raisin and place a very small quantity of strychnine (alkaloid strychnine is best) in each raisin, then close together and open a hole straight into the burrow with a stick about the size of a lead pencil, push your raisin down to the burrow and cover it with earth. Plant two or three of these in each burrow and go over the ground two or three days later. If any burrows appear plant a new supply of poisoned raisins.

Could you tell me of something that would kill the little black bug that eats all the leaves off the radishes, turnips and cabbage? Just as soon as the leaves are out, those little bugs start eating them, which kills the plants. I have tried salt, pepper, ashes and louse powder, also a spray of kerosene and fly chaser.
Colville, Wash. MRS. R. K.

The little black bug which you mention as destroying the foliage of the garden plants is probably the potato flea beetle.

The best method of destroying this pest is to spray the plants with Bordeaux mixture. This probably is not poisonous in extreme degree to these insects, but is a very efficient repellent. The results are usually quite satisfactory.

The Bordeaux mixture can be made by dissolving one pound of copper sulphate in a gallon of water. Use one gallon of milk of lime which may be prepared by slacking one pound of fresh lime in a gallon of water. Pour the two solutions together and add about five or six gallons of water. Spray or sprinkle this mitxure over your plants.

What can I do for my gooseberry bushes? They have green worms with black spots, that eat all the leaves off. Also our snowball tree has some kind of small black bug on the leaves, underside, and they are drying up, curling into a roll and getting black. How can I get rid of these pests? E. M.
Deep River, Wash.

The green worm which is attacking the gooseberry bushes can very easily be controlled by spraying with lead arsenate or paris green. The first named material is best.

If your crop is not yet harvested and you feel that you must spray before harvesting, then use white helebore, one ounce to two gallons of water. This is not as effective as the arsenate of lead, but will not be poisonous upon the fruit when it is gathered.

The best method of control is to spray very early, before the fruit is well formed, using at that time the lead arsenate spray. One pound of the powdered lead arsenate is sufficient to 25 or 50 gallons of water.

The bugs that are on your snowball plants are evidently aphis and can best be controlled by using black leaf 40, one ounce to 1000 ounces (about 8 gallons) of water. This material is a nicotine extract of tobacco. It will be most effective if thrown upon the plant with a spray pump and thrown with a good deal of force, otherwise it will not reach the insects inside of the curled leaves.

Head Lettuce Planting

By O. M. MORRIS,

Will you please tell me all about growing head lettuce for fall market? What variety and when to plant in this locality?
Pasco, Wash. G. J.

You should plant your material in two or three plantings running through the month of August. It will require from 60 to 90 days for your crop to produce marketable size heads.

If your land can be well watered one of the best methods is to plant the seed in the field where the plants are to grow, thinning your crop so that the plants will stand about nine to 12 inches apart in the row with the rows from 12 to 18 inches apart. The thinning must be done very early so that the individual plants will have an opportunity to grow rapidly and vigorously from the start.

The most important thing in growing a good crop of head lettuce is to have a thoroughly rich soil. This can best be prepared by turning under a heavy dressing of well rotted manure. Do not attempt to grow a fancy crop of lettuce on a soil that is just rich enough to grow ordinary farm crops in good condition. Head lettuce that grows slowly is not fit for market and you must have your soil in a very high state of fertility and very fine tilth. Thorough and frequent working with disk and harrow are probably the best forms of preparation for planting. The thorough, frequent, shallow tillage in order to maintain sold tilth, fertility and freedom from weeds is a necessity.

Fertilizer for Orchard

"The experiments on the use of fertilizers for orchard soils has saved me a considerable sum of money in knowing what kind of fertilizer to use on my own orchard," said Ted Lucian of Cashmere, who has 10 acres of Winesaps, Black Bens and Yellow Newtowns.

This orchard is one of the experimental orchards upon which a number of fertilizers were tried out by Roy Larson, who has charge of the Chelan county bureau of soils. Although a number of fertilizers were used in this experiment it was found that ammonium sulphate was the best and cheapest application that could be used.

"I was so well pleased with the results of the experiment that I covered 10 acres of my orchard with ammonium sulphate last fall," said Mr. Lucian. "I find the trees are making better growth, have better color, the leaves are larger and there is a slight increase in the size of the apple, provided the trees are properly thinned. I feel that such a work is a great thing for the farmers because it saves them doing experimentations of their own, which would necessarily involve greater time and expense than if done by the county and experiment stations, as it is now being done."

Wants Medium Size Apple

C. B. Fly of Cashmere has a 15-acre orchard, most of which is Winesaps. He believes that he can keep the size up to 150 by properly thinning early in the season.

A few Rome Beauties are growing here and there about the orchard and are considered among the best paying varieties that can be grown in this district. Mr. Fly feels that he should make an attempt to keep this variety from attaining too large a size, since the general demand calls for a medium size apple.

The orchard is disked thoroughly each spring in order to keep out the blue grass which gets started if not given proper attention. The disk, however, does not injure the alfalfa roots and it seems almost impossible to kill it out by means of a disk. Alfalfa is one of the best crops that can be returned to the soil, and makes as good or better fertilizer than anything that can be purchased, according to Mr. Fly. It is a simple matter to incorporate it into the soil, and is very easy to grow in this climate.

ESTIMATES LOW CROP YIELD.

A recent issue of the Producer, the official organ of the Farmers' union and the cooperative wheat growers, summarizes an investigation of crop conditions in an estimate of a yield of from 60 to 90 per cent normal, depending on weather conditions from now to harvest time.



No scars—no blemishes

GOMBAULT'S CAUSTIC BALSAM does the work better than firing. Hair positively grows back natural color

A reliable remedy for Curb, Splint, Sweeny, Capped Hock, Strained Tendons, Founder, Windpuffs, Skin Diseases, Thrush, Spavin, Ringbone, Throat or Bronchial Troubles. Will not scar or blemish. Supercedes all firing and cautery.

As a human liniment it is unsurpassed. $1.50 per bottle at druggists or by parcel post.

The LAWRENCE-WILLIAMS CO.
Cleveland, Ohio

GOMBAULT'S *Caustic* BALSAM

THE Northwestern Bell Telephone Company uses Red-Tops on all its cars, because "not alone do they give a greater amount of service, but because they give it without interruption."

Their men, who have to do the greatest part of their work in the worst kind of weather, when the telephone lines are down, always where the roads are roughest, feel certain when they go on these trips that no Red-Top is going to blow out or be punctured.

Last year this telephone company bought $15,000.00 worth of Red-Tops for one district—and put them on every car it used.

The extra ply of fabric and the heavy tread of the Red-Top will carry any small car over the roughest road, under any weather conditions and with heavy loads, for a longer mileage than any other tire we know.

There's a Fisk Tire of extra value in every size, for car, truck or speed wagon.



FISK RED-TOP CLINCHER TIRE

Extra Ply of Fabric *Extra Heavy Tread*

Engine Lubrication

By PROFESSOR L. J. SMITH, W. S. C.

Not many users of cars are careless in the matter of keeping enough oil in the crank case of the motor. We all recognize the fact that the engine will not run without oil. There is a danger, however, in being satisfied merely with the fact that the indicator shows plenty of oil in the crank case. That is not necessarily a sure sign of good lubrication for the bearings of the motor or the walls of the cylinders.

Each time one starts the motor some of the heavier parts of the gasoline recondenses in the cool cylinders and leaks past the rings down into the crank case. This in time so dilutes the crank case oil that it is more like kerosene than a high grade oil. A highly diluted oil does not properly lubricate the motor bearings and cylinder walls. There is no "body" to the oil to make it stick to the wearing surfaces.

What is the result? Why, loss of compression and power and an undue loosening of the bearings. The thing to do is to drain the crankcase, wash it out with kerosene and refill it with a good quality of cylinder oil. Use a grade heavier oil in summer than the winter months. If the pistons are getting pretty loose use a heavy grade in the summer and medium in the winter.

Many who drive a good deal make it a practice to flush out the crank case once a month and put in fresh oil. The next time you drain the motor let the old oil settle a few hours, slowly pour off the oil nearly to the bottom of the pail, then examine the sediment left at the bottom, and you will wonder how the motor ever stood up under such lubrication.

Truely a tractor or automobile motor is a wonderful piece of mechanism.

NOTE: For cars using a considerable amount of lubricating oil it is wise to keep a two-quart or a gallon can of spare oil under the hood alongside the motor.

Dairy Tour in Pacific County

In connection with the Pacific county Pomona grange meeting which was held in June at Long Beach, grangers and community dairy project leaders cooperated with County Agent J. R. Beck in arranging a dairy tour which had for its main objective a study of breeding results in the famous Chicona farm Guernsey herd of A. L. Gile at Chinook. The various families of cows, their sires and records, which the 1921 Guernsey Gaieties found so fascinating, were on display, and Don G. Magruder, state dairy extension specialist, and two men from the United States division used them as texts for lectures on the subject of herd improvement. No better illustrated "textbook" on the subject could be found in the state, and much profit was derived from the study. Incidentally a big crowd of people enjoyed a fine holiday just before haying set in.

Willapa Harbor people interested left South Bend early in the morning and were joined at the Naselle river crossing by a delegation from that district. Residents of the peninsula joined them at Chinook and picnic lunches were eaten at Chicona farm. After the breeding demonstration the crowd spent the rest of the afternoon and evening at Long Beach, where entertainment was furnished by local residents. At the regular grange lecture hour there was a fine program of talks and music, and many members of the party remained over night at the beach, returning home Sunday.

J. L. BRUNE, Ione, Wash.—I find a great many things in The Washington Farmer to help me along on the farm.

Farmers' Want Ads

HELP WANTED GENERAL 5

RAILWAY MAIL CLERKS, GOVERNMENT clerks and carriers wanted. List of positions free. Write Mokane Institute, Dept. B21, Denver, Colo.

AGENTS WANTED 9

MEN WITH HORTICULTURAL EXPERIENCE can make good money selling our splendid line of well grown trees and plants. Write for contract. An early start will give you the advantage. Salem Nursery Company, 428 Oregon bldg., Salem, Ore.

EDUCATIONAL 45

EARN MONEY QUICKLY—THERE'S NO LIMIT to one's earning capacity in business. And this great business college after training you thoroughly places you in a paying position. Courses include banking, stenography, accounting, private secretarial. Write for free catalogue. Behnke Walker Business College, Portland, Ore.

FRESH FOOD PRODUCTS 51-1

WHITE ALFALFA, SWEET CLOVER honey; 1 60-lb. can, $7.50; 2 60-lb. cans, $14.50; six 10-lb. cans, $8.50; three No. 10 pails, prepaid, third zone, $5.50. Wells D. Rose, Sunnyside, Wash.

NEW HONEY—ALFALFA AND SWEET CLOVER; 1 60-lb. can, $7.50; two, $14.40; discount on large quantities. Ernest Sires, Yakima, Wn.

NEW CLOVER HONEY, 60 POUNDS, $6.15; two 60s, $12. Also 5, 10 pounds. Agents wanted. Browne, Box 499, Twin Falls, Idaho.

3-POUND BOX ABSOLUTELY BONELESS codfish, fine white, new catch fish, delivered by mail, $1. Coffin Fish Co., Seattle, Wash.

NEW CROP PURE EXTRACTED HONEY, $6.50 per 5-gallon can; two cans, $12.75. Everett Sauter, Touchet, Wash.

FARMERS' WANT ADS

This is the farmers' "want," "sale" and "exchange" department for small advertisements of farmers, including live stock and poultry.

Advertising rates for ads running 1 to 3 times, 10c per word per insertion, with a special rate to Farmer subscribers, as follows: Ads running 4 to 12 times, 9c per word per insertion; ads running 13 times or more, 8c per word per insertion.

All commercial and land advertising 10 cents per word each insertion. Open also to nonsubscribers.

In using these columns advertisers must observe: (1) No advertisements will be inserted for less than $1.00. (2) Every word, number and initial, including name and address, must be paid for. (3) New advertisements, changes of copy or cancellations must reach general office, Spokane, Wash., 10 days in advance of publication date. (4) Cash must accompany order.

Above rates include insertion in The Washington Farmer, The Idaho Farmer and The Oregon Farmer, which constitute the Pacific Northwest Farm Trio, 46 Review Building, Spokane, Wash.

FRESH FOOD PRODUCTS (Continued) 51-1

FINEST NEW HONEY, 60 POUNDS, $7.50; 2 cans, $14.40; add postage; 10 pounds, $1.90; 5 pounds, $1 prepaid; satisfaction guaranteed. Geo. Bancroft, Hermiston, Ore.

BEST ELBERTA AND CRAWFORD PEACHES. Write for prices. Stanley Arnold, Pateros, Wash.

HONEY—NEW EXTRACTED. TWO SIXTY-pound cans, $10. J. M. Ruyts, Buhl, Idaho.

MISCELLANEOUS—FOR SALE 60

SASH AND DOORS—O. B. WILLIAMS CO., 1943 First ave. So., Seattle. Chicken house sash, 20" wide by 25" high, 80c; a dozen different sizes in stock for immediate shipment. Skylights for chicken houses, 36"x40"; price, glazed, $2. This is the size recommended by the Western Washington experiment station. We carry them in stock for immediate shipment. Sash and doors for all purposes at lowest prices. All orders receive prompt attention. Our large illustrated catalog No. 35, showing full line of building material and built-in fixtures for the home, free on request. O. B. Williams Co. Established 1899.

SACKS—SECOND-HAND GRAIN AND SPUD, correctly sorted and graded; also pipe, new and second-hand, any size; standard grade roofing paper at a big saving; belting, cable, etc.; special lot used centrifugal pumps and 4 and 6 inch galvanized iron irrigation pipe. Alaska Junk Co., S120 Adams st., Spokane, Wn.

CORN HARVESTER CUTS AND PILES ON harvester or winrows; man and horse cuts and shocks equal corn binder; sold in every state; only $25 with fodder tying attachment. Testimonials and catalog free showing picture of harvester. Process Harvester Co., Salina, Kas.

GRAVITY APPLE AND ORANGE PICKER, deposits fruit in receptacle without bruising, sent for $2.85; and berry picker sent, postpaid, $1.40; try one of each. John Diers Mfg. Co., Blakeley, Minn.

HOMESPUN SMOKING TOBACCO: MILD AND mellow; 10 lbs., $1.50; 20 lbs., $2.75; delivery guaranteed. We furnish free recipe for preparing. Smoking Tobacco Exchange, Sedalia, Ky.

WALL BOARD—WRITE FOR SAMPLE OF Washington plaster, wall board; won't warp, won't burn. Manufactured by Washington Building Products company, 6851 E. Marginal Way, Seattle, Wash.

GRAIN BINS—SPOKANE CULVERT AND Tank Co. Metal grain bins, four 1000, ten 2000 bushels; all for $2500, f. o. b. Washtucna; first class condition. Bassett Hardware, Washtucna, Wash.

FREE MAIL ORDER CATALOG OF GROceries and general merchandise; fresh stocks; everything guaranteed. We will save you money on your harvest supplies. Jordan Lawler Co., Spokane.

TOBACCO — KENTUCKY'S PRIDE: EXTRA fine chewing, 10 lbs., $3; smoking, ten lbs., $2; twenty, $3.50. Farmers' Club, Mayfield, Ky.

MISCELLANEOUS. 61

YUBA TRACTOR TO TRADE FOR HORSES. H. L. DeWolfe, Helix, Ore.

MISCELLANEOUS—Wanted. 63

HIDES—WE BUY HIDES OF ALL KINDS. Write for prices and tags. Hibbard-Stewart Co., Hibbard bldg., Seattle.

WOOL—WE BUY WOOL AND PELTS. WRITE for prices and tags. Hibbard-Stewart Co., Hibbard bldg., Seattle.

MACHINERY—For Sale 93

FOR SALE—ONE 25-HORSEPOWER RUSSELL steam tractor; in good condition; price $1250, with steel tank and truck. Lincoln Trust Co., Spokane, Wash.

EXTRAORDINARY BUYS IN USED COMbines, caterpillars, separators, engines and trucks. Fallquist Brothers, Pullman, Wash.

CASE THRESHING OUTFIT FOR SALE BY Herman Mennrich, Odessa, Wash.

STOVE REPAIRING 128

WRITE MYER RUBENS, SPOKANE, ABOUT stove repairs, welding broken parts, nickle plating.

FUR-BEARING ANIMALS 170

SILVER-BLACK 1922 FOXES, FROM PROlific registered and pedigreed Prince Edward Island stock for sale. Sylvan Fox Ranch, Lamont, Idaho.

SILVER AND CROSS FOXES FOR SALE. William Rambo, 407 Sprague, Spokane.

PETS—Dogs, Birds, Etc. 171

PUREBRED AIREDALE PUPS, ELIGIBLE TO register; bargain prices. Loyd S. Weeks, Carter, Mont.

BEAUTIFUL WHITE COLLIE PUPPIES; reasonable prices. Urbandale Farm, Oakley, Idaho.

FOR SALE—FINE FOX HOUNDS, PUPS. Stamp. Hugh Morrison, R. 8, Spokane, Wn.

WHITE COLLIE PUPS, BEST OF BREEDING. Beulah W. Soults, Eugene, Ore.

RABBITS and HARES 173

RABBIT MAGAZINES—RABBITCRAFT, OUTdoor Enterprises, Pet Stock Journal, Poultry and Pets, and National Fancier, collection, 50c coin. Harvey Norris, Goldendale, Wash.

POULTRY 174

PULLETS—1500 APRIL AND MAY HATCHED White Leghorn pullets for sale at attractive prices; hatched from thoroughbred Hollywood and Tancred strains; sired by cockerels 250 to 290 egg strains. We ship at three months of age and guarantee satisfaction or you may return the birds in 3 days. We can give you quality and service. Queen Hatchery, Seattle, Wash.

CERTIFIED WHITE LEGHORN BABY chicks; booking orders now for summer and fall delivery; safe arrival live, vigorous chicks guaranteed; no money in advance; pay on delivery. Established 1898. Sonoma county farm bureau accredited hatchery. Must Hatch Incubator Co., 445 Seventh st., Petaluma, Cal.

BUFF LEGHORNS; OLD AND YOUNG stock of my championship strain; thousand to select from. R. Stromquist, Tigard, Ore.

POULTRY (Continued) 174

WHITE LEGHORN HENS, $1 EACH; 1000 two-year-old "Henacres" hens, clean, healthy, heavy laying, selected stock must go to make room for our pullets. Also 1000 yearling hens at $1.50 each. These hens will make good breeders for 1923. Orders accepted for ten or more at above prices. July or August delivery. Satisfaction guaranteed. Free catalog. "Henacres," the Inland Empire's greatest poultry farm, Box A, Prosser, Wash.

TRY OUR PARCEL POST PACKAGE—KEEP the old hen busy. We will ship you first-class baby chicks, postpaid to your door, direct from the hatchery and guaranteed all alive. Price, $4.50 per 25; $8 per 50. For delivery April, May or June. Order now. The White Hatchery, Petaluma, Cal.

WHITE LEGHORN BABY CHIX FOR SUMmer and fall months from stock accredited by Sonoma County Farm bureau. We guarantee safe arrival. Write for prices and literature. The Pioneer Hatchery, 422 Sixth street, Petaluma, Cal.

S. C. WHITE LEGHORN COCKERELS FOR breeding; extra select March hatched from high record O. A. C. stock; not excelled for egg production. Corvallis Poultry Farm, Corvallis, Ore.

BABY CHICKS — WE GUARANTEE OUR chicks to be from the highest producing hens in Petaluma. Write for further information. The White Hatchery, Petaluma, Cal.

DOLLARS FOR YOUR EGGS—WE PAY THE top market prices for your eggs and poultry. Daily cash remittances. Western Produce Co., Spokane.

FANCY WHITE WYANDOTTE COCKERELS, $2.50; hatching eggs, two dollars setting. H. L. Lamon, American Falls, Idaho.

FORD'S BRED TO LAY S. C. WHITE LEGhorns; 2-year-old breeding hens, $1 each. W. A. Ford, Umatilla, Ore.

LIVE STOCK 177

LARGE, HEAVY PRODUCING HOLSTEINS for sale at all times in car lots; tuberculin tested; 150 to 200 head always on hand; well marked heifer calves from registered sires and heavy producing dams; crated for shipment anywhere, $25 f. o. b. Levinson & Balmeill, Yakima, Wash.

SHIP US YOUR POULTRY AND LIVE STOCK. We pay top market prices. Light veal, fat, fancy, 12½c; dressed block hogs, 14c; spring chickens, 1 to 1½ lbs., 18c; 1½ lbs., and over, 22c; hens, light, 14c; heavy, 17c. Prompt returns. John Lewis & Co., Spokane, Wash.

GET ROYAL OAK REGISTERED HAMPshire Dawn sheep. The premier mutton sheep. Rams and ewes for sale. Order rams early. Lloyd Millhallen, Corvallis, Ore.

DUROC BARGAINS—WEANED PIGS OF BEST breeding, $12; boar and sow, $22; boar and two sows, $32; not related. All registered and crated. Shadeland Farms, Amity, Ore.

REGISTERED SHORTHORN BULL, 4 YEARS old; from the famous Chalmers herd; will sacrifice. Alone and unable to handle him. Mrs. N. O. Anderson, Skamania, Wash.

WE PAY TOP PRICES FOR YOUR LIVE OR dressed veal, hogs and poultry. Your check by return mail. Shipping tags on request. M. & J. Packing Co., Spokane.

WILL SELL 30 HEAD OF REGISTERED Shropshire rams. Write McK. Edwards, Valley, Wash.

FOR SALE—HEREFORD BULLS, GOOD ones. Platt Bros., Genesee, Idaho.

FOR SALE—REGISTERED SHROPSHIRE rams. Write Walter Scott, Scotts Mills, Ore.

SWISS MILCH GOATS, FRESH DOES AND kids. Mamie Rand, E1024 Decatur, Spokane.

TOGGENBURG MILCH GOATS; 4 AND 5 QT. strain, $30. Goat Ranch, Banks, Idaho.

HARNESS and SADDLERY 189

SEND FOR FREE HARNESS AND SADDLE catalog today; cut out the middleman, buy direct from the manufacturer. Lowest prices in the west; satisfaction guaranteed. Established 1881. Write Pierce Harness Co., Dept. T, Spokane, Wash.

JOB PRINTING 372

GUARANTEED BETTER BUTTER WRAPpers: 100, 60c; 250, $1.25; 500, $2.25; 1000, $4; printed to order. Home Specialty Co., Middleton, Idaho.

HANDSOME BUTTER WRAPPERS, FIFTY cents per hundred. Try sample order. Eagle, Eden, Idaho.

MATERNITY HOMES 497

MATERNITY HOSPITAL; STRICTLY PRIvate; doctor in attendance; prices reasonable. Mrs. Elizabeth Peel, matron, W1324 Broadway, Spokane.

BUILDING MATERIAL 588

TO PATCH A HOLE OR BUILD A HOME, use Perfection Plaster wallboard. Easily handled with hammer and saw; fireproof, waterproof. Western Wallboard Co., Seattle, Wn.

BUILDERS, CONTRACTORS, HOME OWNERS, write for free 1922 catalog. Tacoma Sash & Door Co., Tacoma, Wash.

SEEDS. 620

SEEDS FOR SALE—VETCH, FALL RYE, gray oats, black oats, clovers, rye grass, pasture mixtures, rib grasses, etc. Shipments anywhere, promptly. Brownsville Warehouses, Brownsville, Ore.

NURSERY STOCK 621

GROW BUREAU OF PLANT INDUSTRY'S new pedigreed variety Washington asparagus; best in the world. Ask for literature and terms. Home Nursery, Richland, Wash.

CABBAGE PLANTS, LEADING VARIETIES, 500, $1.50, postpaid; 1000, $2.25, express; satisfaction guaranteed. Ray Parks, Bancroft, Idaho.

FARM LANDS FOR SALE 651

7000 ACRES SEQUIM LAND SETTLEMENT project, containing the finest berry and dairy land in the state, now offered for settlement at attractive prices and terms. Free booklet. Thos. G. Mortland, Sequim, Wash.

FARM LANDS FOR SALE (Continued) 651

IRRIGATED FARMS FOR SALE—160-ACRE farms, improved or unimproved; 30 to 160 acres irrigable land on each parcel; near Lethbridge, in sunny southern Alberta, can be bought for $15 to $40 an acre. No need for pioneering. Well settled country, good roads, railways, schools, telephones; agreeable social conditions; fertile land; success of irrigation farming here already demonstrated; irrigation system being constructed under government supervision. Water available in 1923. Write for information concerning crops grown and description and location of farms to the province of Alberta, Irrigation Council, 12 Provincial building, Lethbridge.

CUTOVER LANDS, EASY TO CLEAR; $8 TO $20 per acre; 25 miles north of Spokane; on hard-surfaced highway; Great Northern and Milwaukee railways; excellent opportunity for dairying and stock raising, with Spokane markets and creamery near at hand. Will help the man who will live upon this land and agree to clear a part each year by giving lumber to help start his buildings, and a purebred Jersey bull to groups of farmers. Interest and payments low. Write Milan Farms Development company, Dept. T, Old National Bank bldg., Spokane, Wash.

BIG OPENING SALE OF YAKIMA VALLEY farm land, under an assessed state and government approved irrigation project; good, deep soil; close to town, railroads and state highway. We sell in tracts to suit purchaser at $25 per acre and up, on easy terms. Our many sales to farmers show that this land is a good investment. Western Lands, Inc., owners, 918 Green bldg., Seattle.

LOGGED-OFF LANDS IN STEVENS COUNTY, Washington, at greatly reduced prices. Most of land sells at from $5 to $20 per acre; thickly settled community, good schools, hard surfaced and paved roads to Spokane; best county in state for dairy and stock raising; most places water can be found at shallow depths. Write for folder. Phoenix Lumber company, Dept. T, Spokane, Wash.

THURSTON COUNTY—5000 ACRES, VERY fertile, level; fruit, berry and poultry lands; right at beautiful state capital. No extremes of temperature; no storms or floods, no irrigation; bumper crops; fine markets. 5 or 10 acre tracts; low prices and long term payments. Send for our valuable pictorial booklet. Norpia Realty Corporation, Olympia, Wash.

174 ACRES, ON KOOTENAI RIVER AND Great Northern; 94 bottom, 8 pasture, 18 fenced and cross-fenced; 3 plowed, 15 ready; ½ acre fruit, 4 cabins, team, harness, wagon, plow, harrow, tools, etc.; 2000 ft. lumber, 14 bales roofing, 6 windows, fine cattle or chicken ranch; fine government range. $4000. Chas. R. Scholz, owner, Ural, Mont.

DAIRY AND GRAIN FARM, 480 ACRES; 200 under plow; school adjoins; lots outside range, with running water; eighteen head milch cows and young stock; six head horses, all farming implements. Price $5000, half cash, balance easy. R. C. Wightman, Quincy, Wash.

960 ACRES AT $22.50; ALBERTA GRAIN AND stock ranch; northwest of Lacombe, on railroad under construction; no fall crops; full set good buildings; 190 acres broken; will subdivide; school, church, station, postoffice 1½ miles. Irving Jayne, Edwall, Wash.

BIG LUMBER CO. LAND SALE IN SKAGIT county; 40 acres, $1400; 20 acres, with new house, $1500. Lumber furnished for building. Lots of work for the settler; splendid district, roads, schools and towns. H. C. Peters, 726 3d ave., Seattle.

BEST BEAVERDAM SOIL IN AMERICA; sold in small tracts, by Long Island Gardens Co., Brownsmead, Oregon; reasonable prices, easiest terms; wonderful berry land; best shipping facilities, schools. Write for particulars.

290-ACRE FARM IN NORTHERN WHITMAN county; 160 summer fallow; fair buildings; water under pressure; family orchard; on county road; 1 mi. to warehouse. $17,000 will handle. P. O. Box 1034, Spokane.

BEAUTIFULLY LOCATED 153 ACRES BOTtom land; on county road; 50 in crops, timber, orchards; 8-room house; team, cow, chickens, implements. $6000; reasonable terms. Owner, Daniel Wilson, Boyds, Wash.

180 ACRES, MOSTLY ALDER CREEK BOTtom land; 30 clear; 1½ miles from Lane, on state highway; grows all crops. $16,500; 80 acres, $7500. C. M. Robison, Lane, Idaho.

15-ACRE POULTRY FARM, CHEAPLY IMproved; $1200; terms, or will sell 55-acre poultry and dairy, with or without stock. C. O. Johnson, R. 1, Medical Lake, Wash.

SELL YOUR PROPERTY QUICKLY FOR cash; no matter where located. Particulars free. Real Estate Salesman company, 501 Brownell, Lincoln, Neb.

HIGHLY IMPROVED 80-ACRE FARM; NEAR Tekoa, Wash.; level, first-class soil; 5 good springs; water in house. Owner, E604 21st ave., Spokane.

FOR SALE — RICH 226-ACRE, FULLY equipped, central Willamette valley farm. Price $18,080; good terms. 399 Beach street, Ashland, Ore.

A PRETTY 10-ACRE HOME OF BEARING fruit; overlooking beautiful Clear lake; snap at $5500. Write Box 135, Lakeport, Cal.

160 ACRES, ¼ MILE ADDIE; GOOD BUILDings; 10 acres cleared. $3000. $1200 cash, balance easy. Box 20, Addie, Idaho.

FARM LANDS—Wanted 654

WANT TO HEAR FROM OWNER HAVING farm for sale. Give particulars and lowest price. John J. Black, 80th street, Chippewa Falls, Wis.

FARMS WANTED — SELL YOURS QUICKLY for cash, no matter where. Particulars free. R. A. McNown, 310 Wilkinson bldg., Omaha, Neb.

FARM LANDS FOR RENT 657

300-ACRE PALOUSE FARM; EQUIPPED; terms. Owner, Box R, Latah, Wash.

FOR SALE OR EXCHANGE 702

FOR SALE OR EXCHANGE—200 ACRES stock and wheat ranch; fully equipped; stock, implements, growing crop; for small irrigated ranch. Anna Reynolds, Arbon, Idaho.

320-ACRE DAIRY OR STOCK FARM WITH abundant free range; in best clover belt of Montana for sale or trade. H. J. Vaughan, E3807 2d ave., Spokane.

NEW, UP-TO-DATE CAFE AND CONFECtionery; in good location; to sell for cash or trade for good farm. W. J. Scott, Pomeroy, Wash.

TO EXCHANGE—640-A. FARM IN ALBERTA, for small place or city property. E. M. Broughton, Kennewick, Wash. Route 1.

320-ACRE FARM, GOOD CROPS; SELL AT bargain, or trade for coast property. Ed Green, Soda Springs, Idaho.

FOR SALE OR TRADE—160 ACRES, PART irrigated; North Platte valley; cheap. B. S. Brown, Lingle, Wyo.

PIKE'S PEAK OR BUST

By LEWIS B. MILLER

Copyright 1921

SYNOPSIS.

Esau Haggerty, a strong man of mature years, and Orlando Medford, a young, slightly built and frail companion, have started from their Illinois home town for the great gold diggings of the west. Esau is pushing a provisions-laden wheelbarrow. Orlando is leading a cow. For three days they have been trudging slowly southwestward carrying out the determination crudely lettered on the side of the wheelbarrow, "Pike's Peak or Bust." Rain and snow impeded their progress, and Orlando falls sick and requires a couple of days to rest before proceeding. Then, with the village that is now Kansas City passed, they follow the Santa Fe trail westward, being but one of scores of outfits of various kinds headed for the fields of golden riches. Once again they stop for a good rest before plunging into the real wilderness, 700 miles of which is still ahead of them to be conquered by foot, cow and wheelbarrow. After several days' tramping, they pitch their tent across a little stream from the camp of a family by the name of Cooper, also headed for the gold diggings. In the party is the daughter of the Cooper family, Hazel, whom Orlando by chance met when both went to the stream for water and in whom he became at once greatly interested. He reluctantly joined Esau next morning for the day's travel, leaving the Coopers to follow later, but with the expressed hope that they would all meet again at the gold fields. It was several days later that Esau and Orlando met up with another strange party on the trail, several men with a push cart to haul their belongings to the diggings.

CHAPTER FOUR.

One Handcart and Its Crew.

The cart's two wheels were similar to wagon wheels, but not so heavy, more like buggy wheels. Balanced on the axle was a rather long, but not very deep box, which contained all that the party were carrying with them. Five men were in charge of the cart.

At its front were two short shafts, with a crosspiece connecting their ends. One man was between the shafts, grasping the crossbar and pushing against it. When going down hill he would hold back. Two other men were in front of the crossbar, pulling in harness. They had straps over their shoulders and around their breasts, and reaching back to the crossbar. A fourth man was on the cart, riding, and the fifth walked behind it, to push.

"Reckon we might as well spend the night here as somewheres further on," the man between the shafts presently announced. And the handcarters left the trail and moved toward the camp. The cart came to a standstill not far from the wheelbarrow.

"Well now, jest how fur has that two-wheel contraption traveled?" demanded Esau, as he stood with his hands on his hips, gazing at the cart.

"All the way from Michigan," answered the man who had been between the shafts. His name would prove to be Sanders.

"Oh, Michiganders, are you? From what part of the state?" Orlando inquired.

"Southern part, not very far from the Indiana line."

"And have you footed it all the way?" Esau wanted to know.

Sanders shook his head. "Not quite. We've footed it four-fifths of the way—and a little more. One of us rides all the time—except at hills. That is, we take turns at riding. Each of us rides about a fifth of the time."

Soon the newcomers were preparing to kindle another campfire, near their cart. But Esau stopped them:

"No use of that, as I can see. One fire will do for all. We'll be through cookin' by the time you boys gits ready to put on, anyhow."

"All right, then. We'll use your fire if you say so," a handcarter answered. "We'll hunt up some more wood for it, too."

"A little there. Help yourselves to that. And you'll find more dead wood down yonder along the branch," Orlando told them.

Some time later Esau turned to the men on the other side of the campfire. "Well, our bite's ready to be et, I believe. Won't you boys come around and have a snack with us?"

"No, we're obliged to you," Sanders answered. "We'll have supper cooked now in a few shakes of a sheep's tail. Put on the coffeepot, boys, some of you, and let's start that to boiling."

While Esau and his partner were eating, and the handcarters were cooking, they all chatted at a lively rate. Of course most of what they had to say was of their experiences since leaving home. Like nearly everybody else now traveling these prairie trails, the party from Michigan were on their way to the gold diggings.

"What! What's that you're drinking?" demanded Sanders, on seeing Orlando pour something from a big-mouthed bottle into a tin cup.

"We're milk drinkers, both of us," Esau informed him. "We fetched old Brindle along as much to give milk as to carry a pack. And we're both tickled to death that we brung her."

"That we are!" spake up Orlando. "And if you folks will get your cups ready, we'll divide with you."

"No, no! We're all pot-drainers here. It's little any of our crew cares for milk to drink when we can get some black stuff. But if you could spare us a little to put into our coffee, we'd pay you for it."

"Brindle belongs to Lando here—" Esau was beginning, when the cow's owner broke in:

"No milk to sell in this camp. But reach me a cup, if you've got a cup not in use."

One of the handcarters passed over a not very large tin cup, and Orlando filled it from a bottle. Not to be outdone in generosity, the handcart party now tried to divide about everything they had to eat with the wheelbarrow party.

Night soon came on, and Esau and Orlando sat up much later than usual, chatting with their fellow campers.

"How many miles a day do you boys commonly make?" Sanders inquired next morning while both parties were packing up and getting ready to travel.

Esau told him. And then one of the handcarters remarked:

"You two seem to be joggin' along at about our gait. What's to hinder us from all travelin' together?"

"Suits me to a dot, that does," Esau answered. And, after several others had approved the suggestion, Sanders announced:

"So it's start together, stop together, camp together, bunk together, hang together from now on to the end of the trail. And if your young partner here has another sick-abed spell, like the one you and him told us about last night, you won't have to push 'im along on your wheelbarrow. We'll take 'im aboard our cart."

"But I'm not expecting to have any other sick-abed spells," Orlando hastened to say. "Fact is, I wasn't more than half well when we started from home. Hadn't been very well all winter. I had the slow fever last fall, and didn't seem to get over it. But I'm feeling hale and hearty now. And I'm growing stouter every day of my life."

"He's right about gittin' stouter," his partner assured the others. "What did he up and do yisterday but grab a holt and push my wheelbarr' five or six miles before I could make 'im turn loose?"

Now one of the handcarters stepped between the shafts, and two others stationed themselves in front and buckled on their harness. Then the cart moved away toward the trail, with two men at its hind end, pushing. And close in the rear followed Brindle and the wheelbarrow. When the cart had reached the smooth road, where it ran easily, one of the pushers behind sprang upon it to ride.

After riding an hour or two, the man on the cart jumped down to relieve Sanders, who, this morning, was one of the team pulling in harness. But instead of mounting the cart, Sanders turned and called back:

"Hey there, you man with the one-wheel wagon! You've pushed harder than I've pulled this morning! So I want you to bounce up here and ride and let me try shoving your load along. I always did like to trundle one of those one-wheel concerns."

"You can trundle my wheelbarr' all you want to, and welcome, Mr. Sanders. But no ridin' for this boy, thanky. I started out to hoof it every step of the way from Illinois to Pike's Peak. And I'm jest bound to do it or bust! Only ridin' I've done so fur was on ferryboats, while we's crossin' streams too deep to ford."

When the wheelbarrow had overtaken him, Sanders put the strap over his head and grasped the handles. Esau tramped along by his side. A few miles farther on Orlando took the wheelbarrow's handles, leaving Esau the not very arduous task of driving Brindle. Esau grumbled sometimes, his grievance being that they were robbing him of the right to brag that he had pushed a wheelbarrow all the way from Illinois to the Rocky mountains.

When dinner time came, the two parties camped together by a little stream.

"Before long we'll arrive at Council Grove, on the Neosho. And that's the last ragged edge of civilization, so I've been told." All the party were sitting on the grass and Sanders was talking. "From there on we'll be journeying through a wild country, and there'll be more or less danger from redskins, I suppose. Then we'll have to decide whether to attach ourselves to some wagon train, or to brave it through on our own hook."

"To my way of thinkin', we'd better stick most awful tight to some long chain of wagons when we git as fur out as that," was the opinion of another handcarter. "Seven of us in this bunch, and all purty well armed, too, I'm guessin'. But we'd cut a shabby figger if a whole razzle-dazzle of redskins was to come whoopin' and swoopin' down on us."

"That we would!" spoke out Orlando. "And a big wagon train would be a lovely thing to have around us about that time. I've read how those plains Indians make their attacks. It must be something frightful, the way they circle a white party at full speed."

"They go at the business in their own savage way. But there'll be time a-plenty to decide how to travel when we reach Council Grove," Sanders remarked. "That's the place where the wagon trains all elect their captains—so they tell me."



"No ridin' for this boy, thanky."

Day after day the two parties continued their journey together. The whole seven agreed well enough. And the men from Illinois pronounced their tramping trip far more pleasant than when traveling by themselves.

At last they all arrived at Council Grove. Here they found a few trading houses, but little besides. A wagon train camped near by. It was from Santa Fe and on its way east. Plenty of wagons were traveling west, but there were usually no fewer than a dozen in a string. However, the party from Santa Fe reported everything peaceful along the wilderness trail. The plains Indians seemed thoroughly intimidated by the thousands of white people swarming across their hunting grounds.

But a question came up as to what the foot travelers should follow from here on. Most of the wagons went by way of the Santa Fe trail, which led southwestward till it struck the Arkansas. Afterward the gold seekers would follow up the Arkansas to the mountains. That insured them plenty of water.

However, there was another road, which split off from the big trail about a day's travel ahead. This new trail connected the Santa Fe trail with the Smoky Hill route. It ran almost due west to the Smoky Hill river, then followed up that stream.

After gathering all the information obtainable concerning the new route, the party returned to their camp to decide the matter. They were camped in some woods on the bank of the Neosho, not far from the trading houses. Sanders was provided with a traveler's guide—a book with folded maps in it. Spreading the map of the plains country on the grass, he invited all to approach and inspect it. At once the six men gathered around him. When everybody had examined the map, Sanders said:

"As you've all learned, I suppose, there's a road leading from Council Grove to the Kansas river. It crossed the river not far above Junction City, here, and there intercepts the main Smoky Hill trail."

"But that would be out of our way, wouldn't it? Junction City looks to be more north than anything else," said a handcarter.

"It is north—far north of where we want to go. And it would be at least a hundred miles out of our way—maybe a hundred and fifty. So I don't think we'd better consider that. But the road that branches off from the Santa Fe trail somewhere west of here is more on our course. I'm told that it leads nearly due west till it strikes the Smoky Hill river, here where the river bends farthest south. After that it follows up the river. It finally connects with the main Smoky Hill route five or six days' travel west of here. If we think it prudent to try the new route at all, that's undoubtedly our best way to get to it. But the first question to decide is: Shall we abandon the Santa Fe trail and try some road that we don't know anything about, and that nobody seems to know much about?"

"What's your opinion, Abe?" asked a handcarter.

"It's easy to be seen that this new road up the Smoky Hill river is a whole lot nearer than the Santa Fe trail," Sanders pointed out. "It appears to be almost a bee line from here to Pike's Peak."

"And the Santa Fe trail is anything else but a bee line," Orlando observed.

"That's right. If we follow the big trail we'll have to travel far south of our true course to touch the Arkansas, down here. And then, after winding as the river winds till we get to the mountains we'll have to travel north a good distance along the foot of the mountains. By heading due west from here, we save ourselves all that winding."

"Must be a safe road to travel, that Smoky Hill road," Esau remarked. "I'm told that four wagons left here a few days ago with the intention of follerin' that route."

"If there are four wagons on that road I'm in favor of trying it ourselves," Sanders now announced.

"We can tell for shore about that when we come to where the Smoky Hill trail branches off from the main trail," a handcarter suggested. "Tracks will tell the tale—the wagon tracks."

"Then, seems to me like, we'd better let the question rest till we come to the forks of the road," was Esau's opinion.

All agreed to this. And the matter was still in that shape when the handcart and the wheelbarrow rolled away from Council Grove next morning.

West by the Smoky Hill Route.

When at length the foot travelers came to where the Smoky Hill road branched off from the right-hand edge of the main trail they halted to decide which fork to follow. An examination of the new route convinced them that several wagons, doubtless the ones they had been told of, had recently traveled it. That decided the matter, and off the wheelbarrow and the handcart started, on this shorter route to the mountains.

Now the seven men found themselves in utter wilderness. And instead of the wide, hard-tramped Santa Fe trail, where one was seldom out of sight of a covered wagon, they were following only a dimly-marked, little-traveled road across the prairie. However, this was the only road from here to the mountains, and there was no great danger of missing it. Also the country was comparatively level, and the lack of a well-beaten trail, though it retarded the party's progress more or less, did not seriously interfere with their traveling.

Day after day the men with the handcart and the wheelbarrow pushed on into the desert-looking country. Since leaving the Santa Fe trail they had met nobody; nor had anybody passed them. And they saw few animals. Even the game seemed to have deserted this sun-parched region.

One morning the travelers started from a water pool by which they had camped. Till noon they pushed ahead, with only the gray-and-brown desert around them. When the time came to halt for dinner they looked in every direction for water, but could make out no sign of any stream. The country seemed very high, and as dry as ever—drier if possible.

All the party were somewhat thirsty from hard tramping. And there was no water in their water kegs. Never until now had they needed to carry water. And they fought shy of all unnecessary weight. Orlando and his partner had some milk in a bottle. That they shared with such of the handcarters as cared for milk. But there was not enough to quench their thirst.

It was a rather silent group of men that lay on the grass and rested after eating—what little they cared to eat. Brindle, too, seemed to be suffering from thirst. She cropped only a few bites of the dry grass, then dropped down with a sigh to rest.

"Well, boys, time for us to be on the march!" Sanders sat up to exclaim, ere they had been resting very long. "We must keep hoofing it as fast as possible,

(Continued on page sixteen.)

FAMILY CIRCLE

ALICE BARLAND
EDITORIAL CONTRIBUTOR

Experience Letters

From Our Family Circle Women

Dear Mrs. Barland: I am always interested in the Circle letters and those concerning the "raising" of children especially appeal to me.

There are so many problems to meet training children and one is hardly met before another arises in its place.

I use what I call the credit system with my girls, age 7 and 9 years. I make a chart blocked off like the good health charts to cover a period of six weeks. I give credits for doing dishes, brushing teeth, washing thoroughly, hanging up garments, obeying quickly, not quarreling and dressing neatly. At the end of the period the one having the most marks receives a prize and you can guess it is a pretty close race.

I was nearly disheartened with picking up clothes before I tried this system, but now it has become a habit for the children to hang up their clothing. The quarreling is the hardest of all habits to break and they get fewest marks for not quarreling of anything.

My baby of 20 months is inclined to be constipated and I find that a half cup or more of warm water relieves her in a little while. Some babies wouldn't take it, but it is such a simple remedy I thought to pass it on to other mothers. With kind regards to you and the Circle,

MRS. H. M. E.

Granger, Idaho.

Dear Mrs. Barland: I live out 150 miles from Spokane on a 3600-acre farm and stock ranch and I do get lonely sometimes.

We have a country club and meet Wednesdays all winter, taking our lunch with us. Each woman takes two kinds of food, so you see it isn't much work to get ready and sometimes we go 10 miles and stay all day.

The hostess prepares two warm dishes and coffee, and we meet at all the houses in the country and young and old attend, but when spring work begins we can't keep them going.

On one of our meetings a quilting brought us together, dinner at 1 o'clock and the quilt off the frames at 4 o'clock.

I wish you could have been with us and heard us discuss our experiences pro and con.

I lived in town eight years before I came here and I do miss the lodges, church and aid societies and such things very much.

MARGARET STONE.

Ephrata, Wash.

Dear Mrs. Barland: I wonder if all the readers appreciate the good things on the Circle page as much as we do. My husband asked me the other day what I did with all the good recipes that are printed from time to time. I told him I pasted them all in a note book and keep them with my other cooking recipes.

I came west a few years ago from Chicago when I was married, but I have not had time to get lonesome for my people back there. My little boy, a little past a year, is good company for me and with him it is impossible to get lonesome.

Having been raised in the city it has been somewhat hard to get used to the ways of the country, especially the cooking. I am trying to be as economical as I can and instead of buying new flannel for my baby's night gowns I make them out of old undershirts and they are nice and warm. I make rompers out of the backs of his daddy's overalls and sometimes out of old shirts. I make him nice warm caps out of old woolen socks. I never did these things in Chicago, but went to the store and bought new material.

MRS. G. W. J.

Idaho.

Dear Mrs. Barland: I see the request of Mrs. S. C. N.'s for instructions how to smoke hams and bacon without a smokehouse.

I think if she would try a bottle of liquid smoke to be had at any drug store, directions on the bottle, she would never want a smokehouse.

A READER.

Wash.

Home Recipes

To make rose beads: Gather as many rose leaves as you can pack into a five-pound lard pail and select fragrant roses. Put the leaves twice through a meat grinder, using one of the coarse disks. Select a very rusty old tin pail or can and put the ground leaves in it and set away, covered lightly for a couple of days, stirring them from the bottom several times. On the third day put the leaves through the grinder again a couple of times and set away for another couple of days, stirring as before. On the following day put on the very fine disk and grind the leaves three times and set away till the next day, when they should be like black putty. If they are not like putty, so you can mold, grind them again and leave another day, but they should not need any more time. The rusty can or pail supplies the necessary iron needed to make the mixture black and it will not become so unless the iron is supplied.

When the leaves have become black and like putty they are ready to mold into beads. They must be measured in something carefully if one is to have beads uniform in size; a very tiny thimble is the best. One should have long hatpins or fine knitting needles ready and after measuring a thimbleful of the mixture remove it and roll in the palm of the hand till perfectly round, then pierce it evenly through the middle with a hatpin and slide it along to make room for the rest and continue till all your paste is made into beads. If you don't have time to mold all of them at one time cover the mixture and do it later. Do not cover air tight, though, as the leaves may mold. Just cover with a paper or a cloth to keep the air from drying the surface into a crust.

The beads will shrink about three-fourths and should be left alone till they are quite hard, then move them gently along on the pin, as they will rust and stick fast. If you keep your rose beads in a box with a tight cover when you are not wearing them they will retain the fragrance for years.

ALICE W. BARLAND.

Salt beads: One quarter pound of cornstarch thoroughly blended with an equal amount of water and into this put a bit of dye or water color paint. Use the shade desired and care must be taken about getting the beads too strong in color, as the dye cooks up darker than it seems to be. Having this mixture in readiness, pour into a bright pan one-half cup of table salt and heat it. Gradually stir the cornstarch mixture into the hot salt, stirring constantly till stiff.

Have a pincushion and plenty of pins convenient and as you mold the beads stick on the pins, not allowing to touch.

Boles, Idaho. E. J.

Maple nut ice cream, made with canned milk: Five cans of milk, two eggs, two tablespoons of mapleine, two full cups of fine sugar, one cup of English walnuts, cut fine, one-half can of water.

Break eggs into one can of milk, beat three minutes, add sugar and flavoring, stirr well, then add the rest of milk and freeze. Put nuts in after cream starts to freeze. This makes one gallon of ice cream.

MRS. D. W. F.

Just Folks.

Popularity is a mixture.

Make Doubt a servant.

Comparisons are dangerous.

Overdoing is not doing more.

Delay often cures an easy belief.

The best is costly; the poorest yet more costly.

Say what you will, but will to say it.

Discount the loudest calls.

There may be more satisfaction in not understanding.

Naming discouragement encourages discouragement.

A score of years or so ago two men in a similar line of industry came into one of the cities of the Pacific northwest. One was skilled in his business, was a master workman at his trade and turned out a superior product and the other had not mastered the details of the trade. He frankly admitted he could not personally make an article as good as his competitor.

Today the man who had personally mastered the details of his trade is hanging onto the fringes of his business. For all I know, that business may be on its last legs. The second man, who could not personally compete with his rival in the production of the article, has built up a great institution that is growing with leaps and bounds. The second man had the executive ability to employ personal masters of detail under him. The first man did not have that ability.

I have no reason to doubt the soundness of the requirement that every future executive should be conversant practically with the details of the business, should, in fact, if possible, be a master in the making of the article, and yet here is a case where a man has made a great success without being a master of the details.

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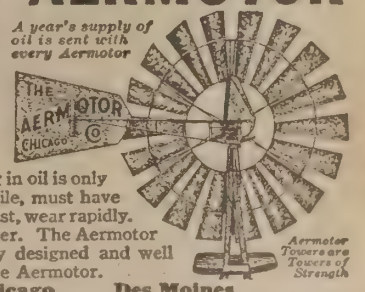
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High Points in News of the Week

The situation with reference to the railroad and coal strikes continued to be the center of interest in the United States last week. Up to this writing comparatively little progress has been made in the attempt to settle either. President Harding has taken a hand in the negotiations for settlement of both the railroad strike and the coal strike and, while he has probably succeeded in laying ground work on which settlements may sooner or later be effected, up to the opening of this week there was little tangible evidence on which to base a prediction of early peace.

No important railroad in the United States has ceased to operate, though in many instances branch and local passenger trains have been taken off in order to permit the more regular operation of the main line and through trains. While the situation in the Pacific northwest in a general way is better than that in the middle west or east, a considerable number of local and branch trains have been canceled. The actual operators of trains and workmen employed in keeping the tracks in condition have not gone on strike. Cancellation of trains is made in order to conserve equipment for the use of the main lines. The railroad shops where engines and cars are repaired and kept in running condition are nearly all closed or running with small crews of nonunion help. Some of the railroads report adequate help to keep their main line trains in operation for an indefinite period.

In some cases freight and express shipments of perishable products have been refused. The Great Northern has placed an embargo on fruit for long hauls in the Spokane district.

Hardly second in importance to the railroad situation is the coal situation. Nearly all of the principal coal mines of the United States have been closed since April or operating on a small scale. The available supply of coal is reduced to such a point that government authorities are taking steps to ration the remainder of it with a view to supplying railroads and essential industrial plants. Steps have been taken to increase the importation of coal from foreign countries, especially England, and sufficient is believed available from this source to serve certain of the Atlantic coast industrial centers. Last week President Harding urged all operators to reopen their mines and apply to the public for either union or nonunion help to work them under the protection of the government. This plan is being tried out for a period of two weeks, though it is apparent that there is little hope of being able to mine adequate qualities of fuel. President Harding had previously urged the coal mine owners and the striking workmen to submit their case to a board of arbitration composed of members selected by the workers, the employers and the government. This offer was refused by a sufficient number on both sides to make it impractical up to this time.

The president has had in conference with him during the last week leading members of his cabinet and leading representatives of both the striking workers and the operators of railroads and mines. It is probable that early this week, on the basis of the information that he has received from these sources, definite action will be taken under his direction looking toward the settlement of both strikes.

* * *

Statistics compiled by the department of agriculture indicate that the wheat crop of the entire world, exclusive of Russia, where reliable estimates are unavailable, will be a little larger this year than last year, though a little less than the average crop. The total for this year is estimated at 2,753,000,000 bushels. Last year it was 2,724,000,000 bushels, while the five-year average was 2,557,000,000 bushels. The 1922 acreage for the entire world is less than for 1921, being about 191,000,000 acres.

* * *

The Wisconsin state supreme court last week upheld the constitutionality of the Wisconsin law prohibiting the sale of filled milk. The decision was in a case brought by the Carnation Milk company to test the validity of the law, which was aimed largely against a product of that company in which coconut oil is substituted for the butterfat in milk. The court held that the law was valid on the ground that the legislature had power under the police clause of the constitution to prohibit the sale of a food product believed to be detrimental to the welfare and health of citizens of the state.

* * *

Whether or not Germany shall be granted a further extension of time for the payment of reparations installments is a question that still threatens to disrupt the harmony of the allies. Leaders in Great Braitain apparently are convinced that Germany is unable to pay and requires the extension to permit her to place her industrial life in a prosperous condition. France, on the other hand, apparently believes the request to be but a misrepresentation on the part of Germany and is standing firm in her demand that Germany be compelled to make immediate payment.

* * *

The records of the war finance corporation showed that on June 30 it had a total of $237,000,000 in loans outstanding, the greater part being for various agricultural purposes.

Plan Live Stock Reporting Work

A tentative program for the new live stock reporting service for range states under the United States bureau of agricultural economics and agricultural statistics was drafted recently at a session in Denver of statisticians, bureau chiefs, railroad men and agricultural and live stock men from virtually every state west of the Missouri river.

The new reporting service is one provided by a recen act of congress. Details for the manner of gathering and disseminating information by the bureau are now being worked out.

Information to Be Gathered.

Reports month by month and an annual report are proposed.

The annual report in January will show the head of live stock on farms and ranches, by age and class, with average farm value for each class. This is a continuation of the annual report heretofore made by the bureau, but giving further details.

Estimate of number of cattle and sheep (including lambs) in feed lots.

Revised final estimate of calf and lamb crop in range states for preceding year.

Revised estimate of wool production for preceding year.

Estimate of live stock losses from all causes for preceding six months.

Monthly reports will show railroad movement of stock.

Pasture and feed conditions.

Condition of live stock expressed in percentage of normal, and available contract prices in territory where there are no central market reports.

The July report will estimate the number of grass fat cattle coming to market from Kansas, Oklahoma, Texas, Montana, Wyoming, Oregon, Washington, western North and South Dakota; losses of cattle and sheep from all causes during preceding six months; number of California and Idaho lambs shipped; lamb crops of range states, and average weight per fleece and preliminary estimate of wool production.

The plan in general as developed by the conference includes a division of the range country into producing sections and the placing of a live stock expert in each division to assist in gathering information for the reports.

Farm Business and Markets Outlook

(Continued from page five.)

LATEST QUOTATIONS.

The Livestock Market.

SPOKANE, July 22.—Cattle—Prime steers, $6.75@8.00; good to choice steers, $5.75@6.75; medium to good steers, $5.25@6.50; fair to medium steers, $4.50@5.25; common to fair steers, $4.25@4.50; choice cows and heifers, $5.25@6.50; good to choice cows, heifers, $4.25@5.25; medium to good cows, heifers, $3.75@4.25; fair to medium cows, heifers, $2.75@3.75; canners, $1.50@2.75; bulls, $3@4.75; light veal calves, $7@8.50; heavy veal calves, $5@7; stockers and feeders, $4.75@5.

Hogs—Prime mixed, $11.25@11.85; medium, $10.25@11.25; heavies, $8.25@9.25; fat pigs, $10.25@11.25; stockers and feeders, $10.25@11.25.

Sheep—Prime lambs, $8@10; fair to medium, $7@8; yearlings, $7@8; wethers, $6.50@7.50; mutton ewes, $3@6.50; feeder lambs, $6@7.

PORTLAND, July 22.—Choice steers, $7.50@8.25; medium to good steers, $6.50@7.50; common to fair steers, $4@5.75; choice cows and heifers, $5.75@6.25; medium to good cows, heifers, $5.25@5.75; fair to medium cows, heifers, $4.50@5.25; common cows, $3.50@4.50; canners, $2@3.50; bulls, $3.50@4.25; choice dairy calves, $8.50@9; prime light calves, $8@8.50; medium to light calves, $7@8; heavy calves, $5@7.

Hogs—Prime light, $11.50@11.75; smooth heavy, 200-200 lbs., $10.50@11; smooth heavy, 300 lbs. up, $9@10.50; rough heavy, $8@10; fat pigs, $11.50@12; feeder pigs, $11.50@12; stags, subject to dockage, $5@8.

Sheep—Choice valley lambs, $8@9; medium valley lambs, $7.50@8; common valley lambs, $6@7; cull lambs, $5@6; light yearlings, $6.50@7.50; heavy yearlings, $5.50@6.50; light wethers, $.550@6.50; heavy wethers, $5@5.50; ewes, $2@5.

The Grain Market.

PORTLAND, July 22.—Wheat—Hard white, July $1.11; August, September, $1.10; soft white, white club, hard winter, northern spriug, July, $109; August, September, $1.05.

Oats—No. 2 white feed, July, $35; August, $32; September, $30.

Corn—No. 2 eastern yellow, shipment July, August, September, $30.

SEATTLE, July 22.—Wheat—Hard white, soft white, white club, hard red winter, soft red winter, northern spring, $1.12; eastern red Walla, $1.10; Big Bend Bluestem, $1.25.

PULLMAN, July 22.—Red wheat, 90c; white wheat, 93c.

DAYTON, July 22.—No. 1 club, $1; red, 97c.

DAVENPORT, July 22.—Bluestem, $1.12; Marquis, $1.08; Gold Coin, 90c.

Hay and Feed Grain.

PORTLAND, July 22.—Millfeed—Price f. o. b. mill: Millrun, ton lots, $34; middlings, $41; rolled barley, $37@39; rolled oats, $43; scratch feed, $50 per ton.

Corn—White, $37; cracked, $39 per ton.

Hay—Buying price f. o. b. Portland: Alfalfa, $16@16.50 per ton; cheat, $14; oats and vetch, $17; clover, $15; valley timothy, $18; eastern Oregon timothy, $21@22.

SPOKANE, July 22.—Wheat—Feed wheat, $44 per ton.

Oats—$40 per ton; steam rolled, $42.

Corn—$36 per ton; cracked corn, $38 ton.

Barley—$42; steam rolled, $44.

Bran and shorts—$34 per ton.

Alfalfa—$22 ton; timothy, $24 ton; mixed hay, $22 ton.

General Produce.

PORTLAND, July 22.—Butter—Cubes, 38c per lb.; prints, parchment wrapped, box lots, 46c; cartons, 47c. Butterfat, 46@47c delivered station; buying price, A grade, 44c.

Eggs—Buying price: Current receipts, 21c dozen, henneries, 28@34c dozen. Jobbing prices: Case count, 24@25c; candled ranch, 27c; selects, 29c. Association selling prices: Selects, 31c; browns, 30c; firsts, 28c; pullets, 27c.

Cheese—Tillamook triplets, price to jobbers, f. o. b. Tillamook, 26c; Young Americas, 27c; longhorns, 27c pound.

Poultry—Hens, 12@21c lb.; broilers, 20c; ducks, 15@22c; geese, nominal; turkeys, nominal.

Veal—Fancy, 13@13½c per pound.

Pork—Fancy, 15½c per pound.

SPOKANE, July 22.—Poultry—Fat hens, 17c lb.; light hens, 14c lb.; roosters, 8c lb.

Fresh ranch eggs—$6.50@8 case; no storage.

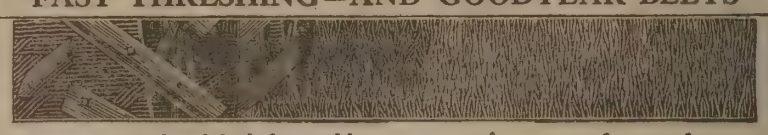
Butterfat—41c a pound.

Range of Live Stock Prices for the Week Ending July 19

CATTLE.	Chicago.	Spokane.	Portland.	N Salt Lake
Choice, prime heavy steers (1100 lb. up)	10.00@10.85	.....	.....	.....
Good heavy steers	9.10@10.10	.....	.....	.....
Medium heavy steers	8.25@ 9.40	.....	.....	.....
Common heavy steers	7.10@ 8.00	.....	.....	.....
Choice, prime light steers (1100 lb. dn.)	9.90@10.75	.....	.....	.....
Good light steers	9.00@10.00	.....	.....	.....
Medium light steers	8.15@ 9.35	7.25@ 8.00	7.25@ 8.50	6.75@ 7.25
Common light steers	7.00@ 8.50	5.50@ 7.50	5.50@ 7.50	5.25@ 7.00
Common to choice butcher heifers	5.25@ 9.00	4.00@ 6.75	4.50@ 7.00	4.00@ 6.00
Common to choice butcher cows	3.90@ 8.15	3.00@ 6.00	3.50@ 5.00	3.00@ 5.25
Bologna and beef bulls	4.40@ 7.00	3.00@ 4.75	3.50@ 4.50	2.00@ 3.00
Canners and cutters, cows and heifers	2.60@ 4.10	1.50@ 2.75	2.00@ 4.00	1.50@ 3.00
Canner steers	3.50@ 5.25	2.50@ 3.50	3.00@ 4.00	2.50@ 3.50
Medium to choice light veals	8.25@10.00	6.50@ 7.50	7.50@ 9.50	7.50@ 8.50
Common to choice heavy veals	4.00@ 7.75	4.00@ 6.50	5.00@ 7.50	.....
Common to choice feeders (1000 lb. up)	5.65@ 7.75	.....	.....	.....
Common to choice feeders (750-1000 lb.)	5.65@ 7.75	4.75@ 5.00	.....	.....
Common to choice stocker steers	4.75@ 7.65	.....	.....	.....
Com. to choice stocker cows, heifers	3.50@ 5.75	.....	.....	.....
HOGS.				
Top of market	11.05	11.85	12.00	10.50
Bulk of sales	8.40@11.00	10.50@11.75	11.00@11.75	9.75@10.25
Heavy (250 lb. up)	9.90@10.55	10.00@11.00	10.50@11.25	.....
Medium (200-250 lb.)	10.20@10.95	10.25@11.25	11.00@11.50	9.75@10.25
Light (150-200 lb.)	10.50@11.00	11.25@11.85	11.75@12.00	10.00@10.50
Light lights (130-150 lb.)	10.10@11.00	11.25@11.85	11.75@12.00	10.00@10.50
Smooth packing sows (250 lb. up)	8.00@ 9.25	8.75@ 9.50	8.25@10.00	.....
Rough packing sows (200 lb. up)	7.60@ 8.60	8.25@ 8.75	8.00@ 9.25	.....
Medium to choice pigs (130 lb. down)	9.25@10.60	10.25@11.25	11.50@12.00	.....
Stock pigs	.....	10.25@11.25	11.75@12.00	8.50@ 9.25
SHEEP AND LAMBS.				
Medium to prime lambs (84 lb. down)	12.50@13.75	7.50@10.00	7.00@ 9.00	8.00@11.00
Culls and common lambs	7.25@12.75	6.00@ 7.50	5.00@ 7.00	5.50@ 8.00
Medium to prime yearling wethers	8.75@12.00	6.50@ 8.00	6.00@ 8.00	5.00@ 6.00
Medium to prime wethers	6.25@ 9.25	6.00@ 7.50	5.00@ 7.00	4.00@ 5.00
Medium to choice ewes	5.00@ 8.15	4.50@ 6.50	3.50@ 5.00	3.00@ 4.00
Culls and common ewes	2.00@ 5.00	2.00@ 4.50	2.00@ 3.50	.....
Full-mouth to yearling breeding ewes	6.00@11.50	.....	.....	.....
Feeder lambs	11.75@13.00	6.00@ 7.00	.....	.....



FAST THRESHING—AND GOODYEAR BELTS



When he thinks of the belt troubles he put up with before he got his Goodyear Klingtite Belt, George F. Gerk, of Hillsboro, North Dakota, says he sometimes wonders how he ever got his threshing done.

Those ordinary belts—he tried many kinds of them—slipped and lost power, had to be limbered up every morning. They were short-lived, expensive and bothersome.

His Goodyear Klingtite Belt holds the pulleys in the slipless grip of its friction surface, works just the same one day as another, and distributes the load evenly. It requires no dressing, eliminates engine resetting, and needs no breaking in.

Goodyear Klingtite Belts are reliable, trouble-free and economical; they are made in endless type for threshing, silo-filling, feed-grinding, wood-cutting and other heavy duty, and in suitable lengths for lighter drives, like churning, cream separating, water pumping, wash machine and electric light plant drives.

They are sold by Goodyear Dealers everywhere and by many progressive hardware merchants. For further information about them, write to Goodyear, Akron, Ohio, or Los Angeles, California.

GOODYEAR

KLINGTITE BELTS

Copyright 1922, by The Goodyear Tire & Rubber Co., Inc.

Bits of Fun FOR Everyone

Dear, Dear!

"So that's the picture of the horse you used to ride to see your best girl, in the pre-flivver days, eh?"

"Yep, that's my sparkplug."

An Important Position.

Neighbor: "They tell me your son is on the college football team."

Proud mother: "It is quite true."

Neighbor: "Do you know what position he plays?"

Proud mother: "I'm not sure, but I think he's a drawback."—The Mill.

A Little Too Late.

The station master, hearing a crash on the platform, rushed out of his room just in time to see the express that had just passed through disappearing around the curve and a disheveled young man sprawled out perfectly flat among a confusion of overturned milk cans and the scattered contents of his traveling bag.

"Was he trying to catch a train?" the station master asked of a small boy who stood by, admiring the scene.

"He did catch it," said the boy happily, "but it got away again!"

A Young Plucker.

The old 'un: "Pluck, my boy, pluck; that is the one essential to success in business."

The young 'un: "Yes, of course, I know that. The trouble is finding some one to pluck."

Wouldn't Be Bullied.

"Here, boy," said the man to the boy who was helping him drive a bunch of cattle; "hold this bull a minute, will you?"

"Na," answered the boy; "I don't mind bein' a director in this company, but I'm darned if I want to be a stockholder."—Cartoons Magazine.

Rather Go Without.

Mr. McNab (after having his lease read over to him): "I will not sign that. I have na' been able tae keep Ten Commendments for a mansion in heaven, an' I'm no' gaun tae tackle about a hundred for twa rooms in the High street!"—London Opinion.

Wait a While Longer.

Charley Neidel: "The doctor says I will have to give up smoking."

Mrs. Charles: "Oh, dear! Can't you hold out until I have enough coupons for the parlor clock?"

Some Little Bossie!

This advertisement appeared in a newspaper the other day: "Wanted, a steady, respectable young man to look after a garden and milk a cow who has a good voice and is accustomed to sing in the choir."

Not Well Acquainted.

First Irishman: "And so yer name is O'Hare. Are yez related to Patrick O'Hare?"

Second ditto: "Very distantly. I was me mother's first child and Patrick was the 13th."

Engagements in France.

"Did you participate in many engagements while in France?" asked the interested old lady.

"Only five," replied the ex-A. E. F.er with becoming modesty.

"And you came through them all unhurt?"

"Not exactly," he returned sadly. "I married the fifth."

Doctor's Orders.

A tramp knocked at a kitchen door and said: "Please, kind lady, I'm a sick man. The doctor gimme this medicine, but I need something to take with it."

The lady was ready to help. "Poor fellow," she said, "do you want a spoon and a glass of water?"

The tramp answered: "No, mum, I wouldn't trouble you, but this medicine haster be took after meals. Have you got a meal handy?"

Latest High Class Patterns for the Home

Please order the patterns you desire at least two or three weeks before you wish to use them. Desiring to obtain the latest high-class patterns for its readers, THE FARMER has made arrangements to have them sent direct from the east, and under present mailing conditions it takes about that time for them to reach you.



4055. Junior Dress. Cut in 3 sizes: 12, 14 and 16 years. A 14 year size requires 4 yards of 32-inch material. The width of the skirt at the foot is 2¼ yards. Price 10c.

4038-3761. Lady's Costume. Waist 4038 cut in 7 sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. Skirt 3761 cut in 7 sizes: 24, 26, 28, 30, 32, 34 and 36 inches waist measure. The width of the skirt at the lower edge is 2½ yards. To make this dress for a medium size requires 4¾ yards of figured, and 2 yards of plain material 32 inches wide.

Two separate patterns 10c for each pattern.

4052. Lady's Dress. Cut in 7 sizes: 36, 38, 40, 42, 44, 46 and 48 inches bust measure. A 38-inch size requires 5 yards of 40-inch material. The width at the foot with plaits extended is a little more than two yards. Price 10c.

4043. Child's Dress. Cut in 5 sizes: 1, 2, 3, 4 and 5 years. A 3 year size requires 2¾ yards of 36-inch material. Price 10c.

4057. Girl's Dress. Cut in 4 sizes: 8, 10, 12 and 14 years. A 10 year size requires 4 yards of 32-inch material. Price 10c.

3867. Miss's Dress. Cut in 3 sizes: 16, 18 and 20 years. An 18 year size requires 3¾ yards of 54-inch material. The width of the skirt at the foot is 2 yards. Price 10c.

3821. Lady's Apron Dress. Cut in 4 sizes: Small, 34-36; medium, 38-40; large, 42-44; extra large, 46-48 inches bust measure. A medium size will require 5 yards of 36-inch material. Price 10c.

3848. Lady's House Dress. Cut in 7 sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. A 38-inch size requires 5 yards of 36-inch material. The width of the skirt at the foot is about 2 yards. Price 10c.

3859. Girl's Dress with Bloomers. Cut in 4 sizes: 4, 6, 8 and 10 years. An 8 year size requires 1¼ yards of 27-inch material for the bloomers, and 3 yards for the dress. Price 10c.

3481. Girl's "Underwaist and Knickers." Cut in 5 sizes: 4, 6, 8, 10 and 12 years. A 10 year size will require 2 5-8 yards of 36-inch material. Price 10c.

4041. Lady's Overblouse. Cut in 6 sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. A 38-inch size requires 2¾ yards of 32-inch material. Collar and cuffs of contrasting material require ¾ yard 40 inches wide. Price 10c.

4045. Lady's Negligee and Cap. Cut in 4 sizes: Small, 34-36; medium, 38-40; large, 42-44; extra large, 46-48 inches bust measure. A medium size requires 2 5-8 yards of 32-inch material. The cap alone requires ½ yard. Price 10c.

CATALOGUE NOTICE.

Send 12c in silver or stamps for our up-to-date spring and summer 1922 catalogue, showing color plates, and containing 500 designs of ladies', misses' and children's patterns, a concise and comprehensive article on dressmaking, also some points for the needle (illustrating 30 of the various, simple stitches) all valuable hints to the home dressmaker.

Please fill in this order and mail with remittance to:
PATTERN DEPT., PACIFIC NORTHWEST FARM TRIO, Spokane, Wash.

Enclosed find..... cents for which send me the following:

Pattern No..... Size ..... Pattern No. ..... Size.....

Pattern No..... Size ..... Pattern No. ..... Size.....

Name .....

Postoffice ..... State.....

R. F. D..... Box No..... St. No.....

Be sure to give the pattern number and the correct size.

Rx Red + Cross Ball Blue Dr. Wise.

First Aid for Laundry Troubles

If every wash-day is a day for the "Blues"—the *right* blue will send them scuttling away.

Red Cross Ball Blue

is the secret of successful washing;—Pure White, dazzling clothes that leaves the happy smile of satisfaction at the end of a day of hard work.

5 Cents. At Your Grocers'

AT YOUR SERVICE.
DEMPSEY
Hotel and Restaurant
(C. C. DEMPSEY & SONS)
UP TO DATE.
Opposite Union Station, Spokane.

In writing advertisers, be sure to say you saw their advertisement in The Washington Farmer.



The right fuel for warm weather

Pearl Oil, burned in a good oil cookstove, saves the housewife a lot of unnecessary drudgery.

No coal or wood to carry—no ashes to shovel out. A clean, cool kitchen, with all the heat concentrated directly under the utensils, where it is needed.

No trouble to operate an oil cookstove, if you buy only Pearl Oil—the clean, economical kerosene that is refined and re-refined by a special process.

Sold by dealers everywhere. Order by name—Pearl Oil.

STANDARD OIL COMPANY
(California)

PEARL OIL
(KEROSENE)
HEAT AND LIGHT
STANDARD OIL COMPANY (California)



June 18, 1922, Margaret Stockton was 11 years old. She took fifth and sixth grade work at school last term and next term she will take sixth and seventh grade work. Margaret lives in southeastern Washington, Walla Walla county.

Anna Mae Tarter of Grant county, Wash., also had a birthday June 18. She says she had a disappointment, too. She was going to Soap lake and then had to stay home. Anna Mae has a bantam hen with eight little chicks. Her cat ran away from home.

Idella Bernice Johnson has been helping her mother since school closed. She says she has picked six quarts of wild strawberries and mother has made four shortcakes. Her father gives her 5 cents for every glass full that she picks. Idella has good times on the beach of Whidby island, Washington, where she lives.

Wilbur Scott, an eastern Washington boy, wants to become a Corner cousin. Walter has a sister named Myrtle and a brother, Archie. He says there are 33 horses and several cows on their farm. We shall be glad to hear from Wilbur again.

When school starts again, Vernie Maurer will be in the fourth grade. Vernie was 9 May 8, 1922. She has a new baby sister named Marcella Ruby. Little sister has blue eyes and long brown hair. Marcella is an eastern Washington cousin. She thinks The Junior Farmer is the best paper she ever read.

Birthday Greetings

THURSDAY, July 27—Viola Mabie, 11 years old.

FRIDAY, July 28—Rolland Day, 10 years old.

SATURDAY, July 29—Zoe Ludwig, 11 years old; John Albert Malone, 10.

SUNDAY, July 30—Thelma Leonard, 11 years old; Ivan J. Putnam Jr., 10; Robert Parks, 9.

MONDAY, July 31—James Dicken, 11 years old; Constance Robinson, 11.

TUESDAY, August 1—Lottie McHargue, 8 years old; Floyd Sollie, 11.

WEDNESDAY, August 2—Mary Hofmeister, 11 years old; Doris Jackson, 11.

LETTERS WELCOMED BY AUNT NELLIE.

Among recent letters received by Aunt Nellie are those from cousins whose names follow. A few of these will be published each week in the regular edition of THE FARMER and others will appear from time to time in The Junior Farmer:

Velzia Stevens, Mida Plummer, Kathleen O'Meara, Wilma Johnson, Sibyl Keith, Hattie Johansen, Mildred Medley, Andy Koski, Alice Smith, Verona Martin, Edith Shaw, Mildred Eaton, Ruth Brown.

Gertrude Osterburg, Grace Swanson, Freeda Emert, Ruth Treadwell, Charlotte Treadwell, Martha Smith, Jessie Manis, Edith Case, Alvira Case, Billy Case, Leona Case, George Earhart, Violet L. Rees, Irene Clark, Carol Simerman, Lillian Dunning, Genevieve Gooby, Louise Vorla, Edna Amend, Marjorie Fike, Pauline Forsman, Ruth Otterstedt.

Irene Ione Torpa, George Davis, Mary Aharn, Melba Johnson, Isabell Ford, Winnifred Goodard, Astrid Larsen, Howard Swalling, Alice Bromley, Della Bromley, Alice Vance, Linnea Gord, Florence Fry, Ruth Hay, Melvina Hume, James Miller, May Dickenson, Alma Schneider, Elizabeth Cook, Harriet Cook, Carol Spencer.

BEDTIME STORIES

By THORNTON W. BURGESS.

BOBBY COON GETS A DUCKING.

Bobby Coon was strolling along on the bank of the laughing brook. He was trying to decide whether to go fishing or not. He dearly loves to fish, does Bobby Coon, and he sometimes goes fishing when he ought to be attending to other things. Now, while Bobby Coon loves to fish, he isn't like Billy Mink or little Joe Otter, who spend all their time in the water and catch fish by swimming faster than the fish can. Bobby has a long coat and he isn't any too fond of getting it wet. He catches fish from the shore. There isn't anything much quicker than Bobby's little black paw, when he sees a fish within reach.

But if Bobby Coon doesn't like to go in swimming he does like to play in and around the water, and so this bright, beautiful morning as he came down the laughing brook he stopped at every little pool to play. By and by his sharp eyes spotted something bright and shiny on the bottom of a tiny pool.

Now Bobby Coon can no more pass anything bright and shiny than he can pass a good meal when he sees it. He simply has got to have it. It doesn't make any difference what it is, he has got to have it. So, when he saw this something glittering and shining up at him from the bottom of the tiny pool he forgot all about fish.

First he plunged one arm in way up to the shoulder. It was of no use at all. The shiny thing was too far out from the bank. He waded in a little way, but still he could not reach it. Jolly, round red Mr. Sun, looking down from the blue sky, laughed at Bobby Coon's efforts and when he laughed the bright thing glittered more than ever, and the more it glittered the more Bobby Coon wanted it.

Bobby sat down on the bank to study how he could get his heart's desire, for it seemed to him now that he wanted that shiny thing more than anything else in the world. Presently he noticed an old log, half in the water and half on te shore. Bobby's eyes brightened. "If I get out on the end of that perhaps I can reach that shiny thing; I believe I can," said he to himself.

Very cautiously he crawled out on the old log. It wasn't a very big log and it was smooth and very, very slippery. As he got out toward the end of it it began to sink lower and lower in the water. Bobby's feet were wet, but he didn't mind that. eH was right over that shiny thing now. Hanging to the old log with his feet and



And right then the old log gave a sudden lurch.

one hand, he reached down, down till the tips of his fingers just touched the bright, shiny thing. And right then the old log gave a sudden lurch and, with a tremendous splash, in went Bobby Coon, head first.

Up on the bank Peter Rabbit and Jimmy Skunk and Unc' Billy Possum shouted and danced and threw up their hats. They had come along just in time to see Bobby Coon crawl out on the old log. Then one of them had slipped down and given the old log a push at just the right minute.

At first Bobby Coon was too mad to speak, but by the time he had blown all the water out of his nose and shaken it out of his ears and his eyes, he began to see the joke. Besides, he didn't know which of the three little scamps on the bank to blame, and he didn't want to quarrel with all three. So presently he joined in the laugh, too. And then, being in all over, there was nothing to prevent getting that bright, shiny thing. What was it? Why, nothing but a scrap of tin.

(Copyrighted by T. W. Burgess.)

Traffic Problems

(Continued from page three.)

association. Even buyers who come to Wenatchee points to purchase fruit for the eastern markets pay their commission voluntarily because they feel well paid in being relieved from worry about such details as the association handles. All growers as well as shippers are kept informed as to the number of cars which can be had throughout the season, the condition of the markets, and the crop and storage reports from different parts of the country.

"In fact we aim to give an all-around service to our members," said E. S. Booth, assistant secretary of the association. "But we handle no claims for shippers. Last winter we carried on a general rate inquiry through the help of O. B. Shay, one of our members who has had wide experience as a public accountant. Mr. Shay made a complete and clear analysis of the apple industry of the district, mainly for the purpose of determining the cost of production.

"The figures obtained showed the average production of apples in the valley to be 348 boxes to the acre. The average cost, including 8 per cent interest on investment, was found to be $1.40 per box. This estimate allows the grower a salary of $100 per month.

"Practically all of our officers are men who have either had experience in orcharding or are fitted for some particular line," continued Mr. Booth. "Our president and vice president both hold managerial offices in commercial fruit concerns here in the valley. Bert L. Baker, our secretary and treasurer, was formerly with the traffic department of two of our large railroads. All of the shippers or members either own orchards or are indirectly connected with the orcharding game in some way."

The affairs of the association are conducted by seven trustees, all of whom are members of different organizations in the valley, no two, however, being from the same concern. These trustees control the policy of the association and make all important decisions, especially in regards to spending the money. All technical work is handled by committees, made up of men especially fitted along certain lines. The traffic committee, for instance, is made up entirely of railroad men who are now in the fruit business. The claims committee is made up of men formerly in the claim department of different railroads. The water transportation committee comprises men who have made a special study of the export business, including the refrigerating of ships handling fruit.

"It is sometimes difficult to estimate the exact saving that has been made," said Mr. Baker, secretary of the association, "since a large part of the figures are based on the conditions as they might have been had the association never been organized. We are preparing for the worst this season, however, and we predict a shortage, which will be as bad as, or worse than the car shortage last year. Our greatest competitors for cars are the grape growers of California. Grape shipments come at the same time as do our apples of this district, and it makes a big difference in the number of cars we are able to obtain.

"It is our aim to ship the apples at the proper time in order that each variety may be consumed at its best stage. There are only a few large storage houses in the valley, and we are not fitted for holding our crop at home until it is ready to use."

Officers of the association are H. S. Crowl, president; C. T. Haskell, vice president; Bert L. Baker, secretary and treasurer; Edwin S. Booth, assistant secretary and treasurer.

The board of trustees are made up of the following men: H. S. Crowl, C. T. Haskell, J. M. Wade, J. A. Warman, S. H. Andrews, D. L. Oliver and J. H. Auvil.

LOWER WHEAT HANDLING RATE.

Announcement was made last week by the Portland dock commission of a reduced rate on wheat handling through the elevator at terminal No. 4.

Wheat received sacked and piled to be loaded on a vessel will be charged 90 cents a ton, instead of $1.10; wheat received in sacks that goes into the elevator to be bulked for loading takes a rate of 70 cents, as against 75 cents, and wheat received in bulk and loaded in bulk will be charged 50 cents a ton, whereas the charge has been 60 cents.

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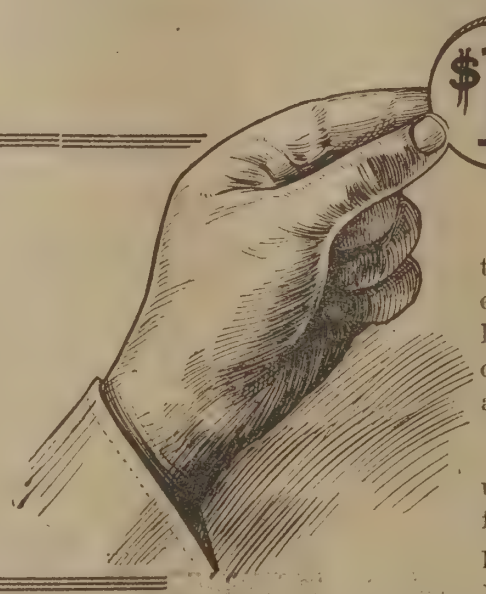
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Doctors Like the Guernseys

Ever notice what a grand little lot of doctors are breeding Guernseys in Washington? S'pose their observations of the value of Guernsey milk and their desire to increase the longevity of the race have anything to do with it?

Be that as it may, Dr. Park Weed Willis of Seattle is one of the best known Guernsey breeders in the Pacific northwest, and his herd has produced, among other notables, Sammamish Topsy, formerly northwest champion of all ages. Dr. A. Macrae Smith of Bellingham has not been in the game long, but he has been notably successful in the show ring, and recently made a class DD leader out of LaFrance of Bralee. Dr. W. E. Fordyce of Sunnyside owns a number of outstanding show winners and is doing splendid work in official testing. Dr. H. A. Wright of Seattle and his son, a graduate of Johns Hopkins university, are much interested, not only in breeding Guernseys, but also in some laboratory experiments to determine the relative value of Guernsey milk.

Two recent recruits to the ranks of Guernsey fans are Dr. J. F. Scott and Dr. Paul B. Cooper of Yakima. The former recently founded a herd for his lower Yakima valley ranch, and the latter intends to build up one on the old Schuler ranch, in the Naches valley. Both were buyers at the April sale of Wisconsin stock at Outlook, Dr. Cooper paying the top price, $700, for the 4-year-old Jewel of Elmwood, a great-granddaughter of Governor of the Chene. G. N. A.

A Good Sheep District

The Ellensburg district has long been known as well adapted for the raising of purebred sheep. Ernest W. Wilson is one of the many that find sheep raising a profitable combination with an alfalfa and grain farm.

Upon hearing of his success with the raising of Hampshire rams for range purposes, Albert Blastock, president of the American Hampshire association, decided to place part of his imported ewes at this farm.

Mr. Wilson has wintered 32 of these ewes and was successful in getting 150 per cent of lambs. Since they are being raised on a share basis Mr. Wilson will receive half of these lambs as his own stock. A heavy grain ration was fed as soon as the lambs were inclined to eat, and they were given plenty of hay and put on pasture as soon as it was ready. Five of the ram lambs averaged 119 pounds at 116 days old. Five ewe lambs averaged 101 pounds at 107 days. Practically all of the young animals made similar rapid gains and are expected to be in excellent condition in time to be sold for range purposes this fall.

Mr. Blastock keeps some of his ewes at two other farms in the United States on a similar basis, one in Kentucky and the other at Filer, Idaho. It is doubtful, however, if either of the other locations can show any better results than Mr. Wilson has shown on his 80-acre farm in Kittitas county.

Live Stock Fertilize the Farm

The value of raising live stock is not always measurable in dollars and cents, but is often shown in the increased productivity of the farm on which they are being raised. This is the case on the I. L. Jones 40-acre farm near Sunnyside, where 23 head of registered Shorthorns are kept and fed from the crops raised on the farm.

While alfalfa is the main crop, none is baled for market, but it is fed to the cattle. A 12-acre patch of corn is responding to the heavy application of manure from the feed lot. Although Mr. Jones has a 55-ton silo, only 2 1-2 acres were required to grow enough corn to fill it last year, the rest of the crop being allowed to ripen for feed as grain and as stover. No feed has been purchased for the last five years, with the possible exception of a few concentrates, and very little hay or grain has been sold.

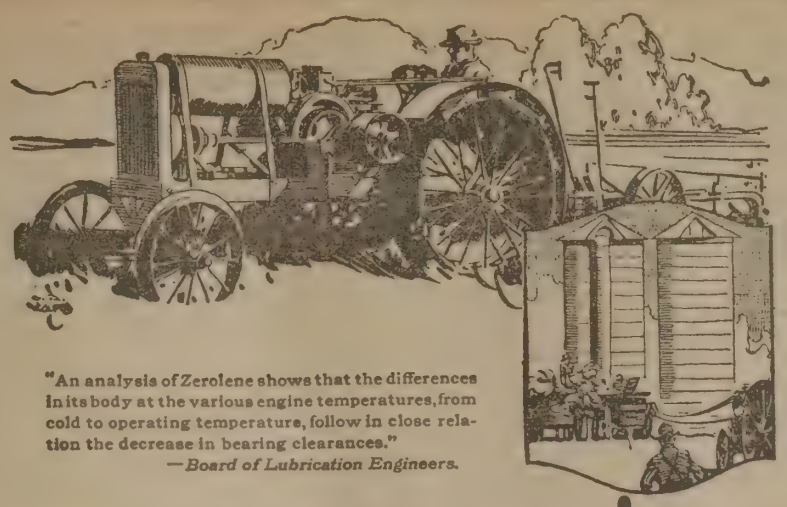
A feed lot is fenced off next to the barn lot, where the animals can feed from a large feed rack. Two pasture lots are located near the barn and house lot and are about two and three acres in size. The herd sire is a Gainsford Perfection bull and comes from the Hercules stock farm at Sprague.

A DEVELOPED PROJECT.

Of a total of 32,000 acres of land in the Yakima-Tieton irrigation project, there are only about 300 which have not been improved, according to Secretary Floyd Foster of the waterusers' association. The project has been for several years the leading one in the United States reclamation service in unit per acre production, and this report shows it to be more nearly fully developed than any other. Water rights remain to be applied for on only 14.6 acres, and the total farm area under water is about 30,000 acres. There is a net increase in area cropped this year of about 250 acres.

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Pike's Peak or Bust

(Continued from page ten.)

so as to find water before dark overtakes us. If we don't run across something to drink by camping time we'll have a mighty uncomfortable night."

"Umfortable's no name for it!" declared Esau. "Yes, let's be up and off."

In spite of the uneven road, the whole party were traveling faster than usual. The wheelbarrow was harder to push, and Orlando relieved Esau at its handles from time to time.

From the top of every rise all gazed ahead eagerly, in the hope of discovering some stream. But again and again they were disappointed. Everybody was suffering very much from thirst. That and the fact that they had eaten sparingly at noon caused some of the men to complain of a weakness in the knees. But, so far from stopping, they only pushed ahead the faster on that account.

"If we don't run across water anywheres else we ought to find plenty of it when we strike the Smoky Hill river again," Sanders called back, after examining his pocket map.

"How far before we strike it again?" Orlando called to know.

"That you can't prove by me. According to my map, the river makes a big bend to the south here. When we've crossed that bend, our road will follow along near the stream, I imagine. If it does that, we ought to strike the river by night."

They did come to the river, and that while the sun was still more than half an hour high. But only another disappointment met them. Up here, a good many miles above where they had first crossed it, the Smoky Hill river was only a dry channel. Till dusk the party followed the trail, which led usually not far from the river bank. Some hopes they had of discovering water. But all they found was a waterless channel, as dry as any desert.

A very gloomy and discouraged set of men went into camp on the river bank. They gathered a few sticks of driftwood and kindled a little fire, for warmth. So thirsty were they by this time that nobody cared for anything to eat.

When the men sitting around the little campfire had been silent for a good while, Sanders roused himself and said:

"Well, boys, there's something we've got to decide soon, and that is what to do next. Hasn't been any rain in this part of the country for nobody knows how long. The river has dried to dust, and all the other watercourses with it, perhaps. This route depends mainly on the Smoky Hill for water. And now that that has failed us, this is a dangerous road to venture on."

"What a pity we didn't foller the Santa Fe trail right on from Council Grove, instid of vencherin' off on this little-known and less-traveled route," remarked another of the handcart party.

"This is the very route for us," Orlando insisted. "I mean it would be if a protracted dry spell hadn't turned this whole country into a desert. One glance at the map will show anybody that we're on the shortest route to Pike's Peak. For foot pilgrims like us, cutting out 150 or 200 miles is well worth while."

"Oh, it's a way yonder the shortest road we can find. Not a doubt of that," spoke up a handcarter. "But sometimes the shortest road is the longest. And this is one of the times, I do believe. That old Santy Fe trail was a mighty smooth road, you recollect. Pullin' a cart or pushin' a wheelbarr' over it was dead easy. This road does fairly well in level country, but if we run afoul of some broken ground we may lose more time than we gain. These vehicles we're pullin' and pushin' will wear the life out of us. Even at the best we can't travel as many miles a day as we could ha' traveled on the big road. So we may be longer gittin' to the mountains than we would ha' been if we'd follered the crowd."

"Seems to me we'd better push up the river a piece," said another handcarter. "Even if we don't find water in the river itself, we're apt to run onto some spring-fed crick makin' into it. Anyhow, I'm willin' to risk it."

"So am I." Another of the handcart's crew was speaking. "Them wagons ahead of us must know of water, or they wouldn't keep on."

"If we're to go fu'ther, I'm for restin' a spell, and then travelin' sever'l miles tonight," Esau told them.

"Might be a good idee, that might," a handcarter remarked. "We could rest and sleep a few hours, and then crawl out of our blankets and hoof it ahead as long as we could stand the strain."

"That's the thing—the very thing to do," declared Orlando. "Moon rises about midnight now. After that we can see how to follow this dim road. We'd be apt to lose it in the dark."

"What do you say, boys?" demanded Esau. "I'm for quilin' down on our pallets and gittin' what sleep we can till moonup. After that we can roll ahead till we come to water."

"Suits me well enough," Sanders agreed. And, as none of the others had anything better to propose, that was the plan decided upon.

The night soon grew uncomfortably cool, and doubtless relieved the sleepers' thirst somewhat. They had to cover themselves well to keep warm. Finally the red moon stole up out of the dark prairie and began to shed some light.

Before the moon had climbed very high Sanders awoke. And at once he aroused the others. Almost in silence the whole party crept out of their beds. Shivering in the chilly night air, they began their preparations to travel.

Brindle was lying down, and Orlando drove her up. He and Esau soon had her saddle on and her pack on the saddle.

"Well, boys, if you're all ready to be movin', we air," Esau now called out.

"Roll on wherever you like! We'll soon be at your heels!" answered Sanders.

As the thirst-tortured, miserable foot travelers toiled on their way some of them called attention to the fact that the whole country seemed to be lifeless. Not a night bird uttered its cries, and no wolf could be heard to howl. Now and then, however, Brindle broke the midnight silence of the desert by lifting her head and pouring out a dreary bawl of distress.

At first the travelers shivered more or less from chilliness. But before tramping far they had warmed themselves. After resting and sleeping, everybody felt stronger. And they were traveling rather faster than they had been accustomed to travel.

"Boys," Sanders broke a lengthy silence to call out, "I'd feel lots better satisfied if I knew just how far this trail is leading us from the river—from that river bed." He was between the shafts of their cart, pushing against the crossbar.

"So would I," a member of the cart's crew answered, one of the two men pushing behind.

"My guess is that our road won't lead us any great distance from the river channel," Orlando called back. "People who've been traveling along here must have known where the water was."

"Yes, safe to say, they did. We all know thunderin' well where the water was! But who in blazes knows where it is?" growled a toiling handcarter, one of those in harness.

"Anyhow, we wouldn't dare part company with this road, with my wheelbarr' and your cart," Esau reminded them.

Sanders agreed with him. "Road's rough enough, without trying to roll these cumbersome contraptions across raw prairie."

But another handcarter said: "I'm half in favor of leavin' this cart by the side of the road while we strike out on a water hunt."

"We cain't afford to leave all our supplies unguyarded. No tellin' what would happen to 'em before we got back," Esau protested.

"Little good any cartload of stuff will do us after we've left our pore bones to bleach in this desert," grumbled another man.

"And little good it would do us to reach water if we found it only to die of starvation afterwards," commented Sanders. "We're traveling in the best direction to find water. And we're making pretty good progress just now. So I'm thinking we'd better keep pegging along. If we don't stumble upon something to drink by daylight we ought to discover it not long after sun-up."

Nobody answered. And for a good while the party trudged on in silence. But after an hour or more some of the men began to complain of feeling weak and weary. Now they called a halt, and threw themselves down on the grass by the roadside to rest.

(To be continued.)

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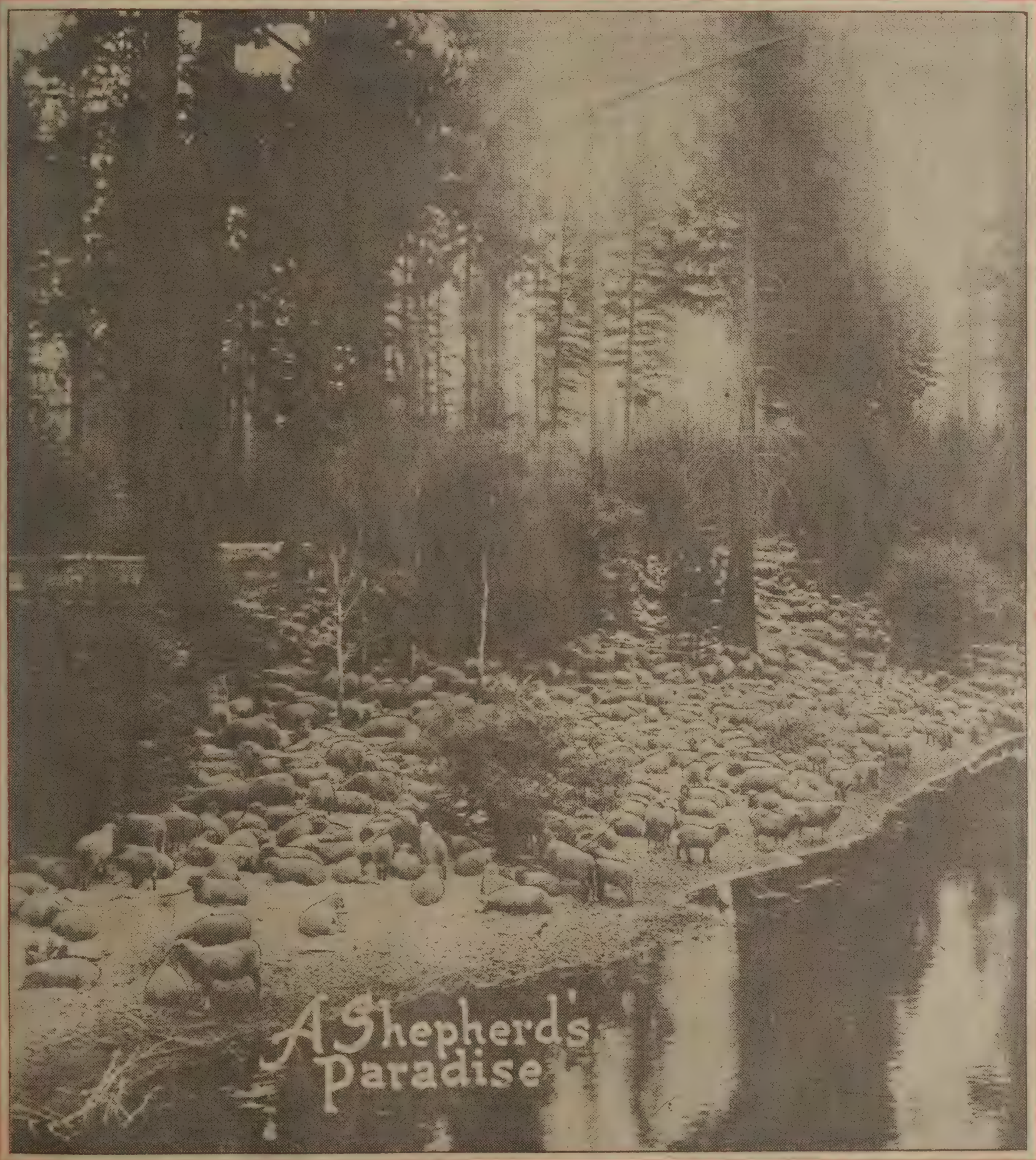
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THE WASHINGTON FARMER

ESTABLISHED 1894

SPOKANE. SEATTLE.



A Shepherd's Paradise

Law Permits Special Rates on Breeding Stock Shipments—Page 3

Poultry and Orchard

Make an Excellent Combination

BY RALPH ERSKINE.

Those who have the impression that a flock of hens do not go well with an orchard should visit the F. E. Fairbanks 10-acre orchard at Selah Heights, near Yakima.

His entire 10 acres are planted to orchard, but he has erected his own type of commercial laying house between two rows of trees. The building is 12 feet wide and 75 feet long, has an open front, low windows at the back, board floor, and most other conveniences of the modern laying house. The fact that it is built very narrow seems to have little effect on the flock of 250 White Leghorn hens, which are confined at all times.

"I believe the hens do better if kept up," said Mr. Fairbanks, "and it is much better for the orchard. They have shade in summer and can be let out occasionally in the evenings to pick up a few bugs, but it is not necessary and we prefer to cut their green feed and feed it to them in the house. I estimate that they produced a net income of $300 last year, and we bought all feed for them.

"It would pay to keep a flock of hens just for the manure, and I would prefer to get the fertilizer in this way than to buy commercial fertilizer. It is better for the land since the straw makes an excellent mulch. The dropping board must be cleaned daily, and the floors given new straw every two weeks."

Mr. Fairbanks has three registered Holstein cows, which he keeps in a feed lot, and only tethers them out occasionally. One of these cows, Diana, is of the Ormsby strain. He has a senior heifer calf from her which promises to be an outstanding individual. The herd bull, Sir Bessie, is from the former Marks herd, and he won first in his class at the Pacific International as a 2-year-old. He is now 4 years of age.

"I think that every orchardist should have from two to four cows," said Mr. Fairbanks, "since they can be kept in a small enclosure, and fed hay, and a small amount of green feed during the summer with but very little trouble. I also believe in raising my own calves, and have sold some for as high as $200, which more than pays for the expense of raising them."

Two Stamps for a Hide

To the Editor of The Washington Farmer: It would perhaps be interesting for some people to know how fast a farmer can make money. Therefore, I thought I would like to explain one instance that happened to me a few days ago.

I had a misfortune of having a cow bloated on green alfalfa, so I had to kill her. I had two men half a day to skin her and I sent the hide to a firm of Seattle. [illegible] days ago I received the returns and [illegible]ment for same. It reads as follows: Weight of hide 37 1-2 pounds at 3 cents per pound, $1.11; freight, $1.07. Enclosed please find stamps covering above. Regretting that the freight amounted to so much on the shipment and thanking you for the business."

Now it cost me to skin that cow, two men half a day, $4. I salted it and took it to town and received only 4 cents in stamps for the same, so you can figure out for yourself how profitable it is to be a farmer. The hide was O. K. and not one cut in it.

At that rate, how many hides will it take for a farmer for one pair of shoes? Something is wrong somewhere and there ought to be some way to handle those profiteers, and it looks like some of our representatives in office should help us farmers who need their help for protection so we can continue production, and there would be plenty for all of us to live on. MARTIN JOHNSON.

Neppel, Wash.

Dairy and Fruit Growing

L. H. Corle of Wenatchee is operating a small dairy in connection with a few acres of soft fruit on his 20-acre farm at Wenatchee. Mr. Corle first started operations with his eight acres of peaches, a small garden and three milch cows. He found that there was a good demand for milk for the city trade and he began increasing the size of his herd. It now consists of seven purebred Jersey cows, one Ayrshire and two grade cows.

"I find there is some demand for good milch cows among the orchardists of the valley," said Mr. Corle, "and I sometimes find it profitable to sell one of my fresh cows, since I am raising my heifer calves and adding them to the herd as they mature.

"I am selling 100 quarts of milk daily, but find it necessary to keep the cows in an enclosure, since I have no pasture for them. The cows do fairly well under the circumstances and we feed them plenty of grain and hay. We also cut green alfalfa and feed it to all the animals every morning."

One of the cows in the Corle herd, Queen Ruby, gives an average of 40 pounds of milk daily. She is 7 years old and was once sold for $500. Easter, another cow, who came originally from the Pool herd, is valued at $400. One purebred Ayrshire, Snow, comes from the VanTassel herd, and was at one time taken out with the show herd. The herd bull, Rachlyn Pilot Pedro, a well-proportioned Jersey, came from the J. C. Dilworth herd at Spokane. He is 8 years old and his calves show trueness to type and good conformation.

"We find that a small dairy pays well under such conditions," concluded Mr. Corle. "But there is an awful lot of work attached to it and a man has very little time to attend to an orchard as a side line. I am thinking some of selling either the cows or the orchard and spending my entire time on one line."

MRS. S. H. COTTLE, Quilcene, Wash.—We don't want to miss one number of the story running in The Washington Farmer.

SET NORTHWEST FRUIT SHOW DATE.

According to tentative plans, the Northwest Fruit exhibition, the first show of which was held at Seattle last year, will be held this year in that city, October 28-November 5. John Gellatly of Wenatchee is president of the exposition. It is announced that Mrs. Winnie Braden, who has been working throughout the state in the interest of better fair exhibits, will have charge of the exhibit of the fruit exposition.

Why We Now Have Fast-Time Farming

If necessary, a farmer must sacrifice speed to get thoroughness. In the new system of farming, speed and thoroughness are both to be had.

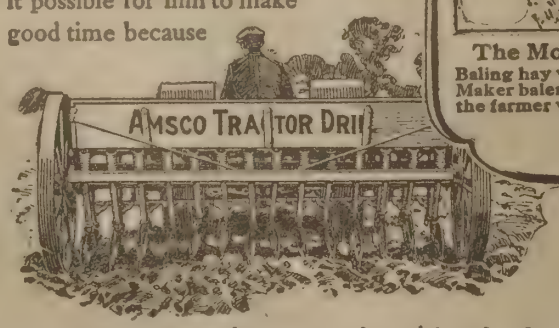
IT was once thought that it would be impossible to do farm work thoroughly if the tools traveled over the land any faster than a good team of horses could walk. However, the fast-running Fordson, coupled with Standard Fordson Equipment, does all kinds of field work much more thoroughly and at a higher rate of speed, and so this equipment has been responsible for the new term, "Fast-Time Farming."

To make full use of the high speed of the Fordson, it was necessary to use entirely new ideas in making tools. Take the AMSCO tractor drill, for example. The American Seeding Machine Company of Springfield, Ohio, had sixty years of experience to draw upon, but it was necessary to use entirely new principles in building this drill.

First, the frame had to be made so strong and durable that the rapid rate of travel could not overstrain it. Castings had to be made of tougher material. Each part had to be designed with a scientific accuracy that only years of practical experience could give.

The feed mechanism is so positive that there is practically no danger of inaccurate dropping, even when the tractor is operated at high speed or when the seed boxes are nearly empty. Furrow openers are designed to meet all soil conditions.

The man who drives a tractor is inclined to hurry through his work and the AMSCO tractor drill makes it possible for him to make good time because



every adjustment and every part is so carefully made that there is little likelihood of anything going wrong.

Everything considered, the designing of a drill for the fast-running Fordson was a more difficult task than designing a slower-moving tool, but it is safe to say that the results justify the statement that the AMSCO tractor drill fills its requirements perfectly. Its nation-wide popularity is based on its successful performance.



The World Famous Oliver No. 7
On thousands of farms, the world famous Oliver No. 7 has been the plowing partner of the Fordson from the beginning.



Oliver Single Bottom Sulky
For deep mouldboard plowing in trashy conditions with the Fordson. Similar in construction to world famous No. 7 gang.



Fordson Disc Plowing
Oliver Fordson special disc plows have set a new standard. They penetrate the toughest soils, yet are light running.



Roderick Lean Automatic Harrow
Fitting the Seed Bed the Fordson way with the Roderick Lean Automatic Tractor Disc—a special Fordson Harrow.



Good Work With Roller Pulverizer
Final Fitting of the seed bed with Fordson power and the roller pulverizer has meant more bushels for many farmers.



Roderick Lean "Cutmore" Mower
Attaches without changes to the Fordson. Power taken direct from drive worm. Makes a one-man outfit with Fordson.



The Amsco Two-Row Cultivator
Cultivating corn is easy for the Fordson farmer with the Amsco Cultivator—special for the Fordson. Made for hard work.



Money-Maker Ensilage Cutter
Fordson silo filling with the Money-Maker done quickly and cheaply. Strength and scientific design give perfect work.



The Money-Maker Hay Press
Baling hay with the Fordson and Money Maker baler is an important operation to the farmer with large hay acreage.



Wood Bros. Individual Thresher
The Wood Individual Humming Bird Thresher and Fordson make short work of threshing. All grain is saved.

Ford Dealers Everywhere Sell Standard Fordson Equipment

THE WASHINGTON FARMER

SUCCESSOR TO

Vol. 47. No. 5 THE RANCH PACIFIC DAIRYMAN HORN AND HOOF August 3, 1922

For Good Farming, Attractive Country Homes and Happy Country People

World Shippers of Apples Meet at Seattle

"The development of a system by which your apples can be loaded on a boat in Seattle and shipped through the Panama canal direct to European ports is of great importance to the industry," said J. L. Gibson of Liverpool, England, who was in attendance at the twenty-seventh session of the International Apple Shippers' association in Seattle last week. "It brings the fruit to us in better condition because there is less handling than when the boxes are shipped across the country by rail and then loaded on a boat at an Atlantic port. Water transportation also should be cheaper and that is one of the elements which must be considered in extending your market. We have been hearing a great deal about quality production, but that is becoming less of an element in marketing apples, because everybody is learning how to produce quality. The thing, then, that is going to have a large bearing on the marketing of apples will be the price at which the fruit can be delivered to the consumer.

"But, on the whole, properly regulated, water transportation is going to do a great deal to extend your apple markets. By proper regulation I mean the distribution of the shipments so that several boatloads of apples will not arrive in port at the same time and in such quantities that the markets can not absorb them."

W. T. Clark of Wenatchee gave an address on "How the Apple Industry Became Possible in Washington," and by Stephen I. Miller of the University of Washington school of business administration on "Economic Distribution." Mr. Clark emphasized the fact that the human element had been the greatest factor in the development of the apple orchards of Washington. It meant nothing to construct the irrigation plants and turn the water into the ditches, said Mr. Clark, until the settler went on the land and began to cultivate it. Most of them, he said, came with too little capital and were compelled to submit their wives and children to untold hardships of the desert while the orchards were being developed. The reason so many fine orchards are in Washington today, said he, is that the settlers were so poor they couldn't get away and had to stay and work.

Dean Stephen Miller of the University of Washington discussed "Economic Distribution." He said the evolution of marketing in the last 50 years points to the fact that successful marketing means bringing the producer and consumer closer together. Production, said Mr. Miller, is not ended until the product is delivered to the consumer, and great economic forces are forcing a recognition of that principle. He said the more intimately the producer is associated with the agencies which market his produce the better will be the quality and the greater the quantity. Natural conditions, he said, preclude the possibility of a monopoly of products of the soil because of producers' organizations, and those who fear such conditions do so without recognition of facts.

Raymond G. Phillips of Rochester, N. Y., secretary of the association, discussed in detail the result of a comprehensive survey of wholesale distribution of fresh fruits and vegetables made for the joint council of the National League of Commission Merchants of the United States, the Western Fruit Jobbers' Association of America and the International Apple Shippers' association.

The survey was conducted to ascertain the wholesale selling price of representative fresh fruits and vegetables, the amount paid for freight, the relation between freight charges and the wholesale selling value of the commodities handled and to show the importance of the factor of freight rates in both production and distribution.

Phillips said the rail tonnage of fresh, dried and canned fruits and vegetables increased from 4,582,573 tons in 1899 to 19,726,069 tons in 1919, or 4.3 times. Then the tonnage decreased to 17,252,471 tons in 1920 and to 16,468,498 tons in 1921, due to deflation in farm commodities following the World war and business depression coupled with inflation in transportation costs and other high fixed charges, according to Phillips.

"Freight rates as one of the most important of the fixed charges could not expect to remain pegged to the highest level in the history of modern railroading in this country, at what might be termed wartime levels, while price levels and other fixed costs were returning to prewar levels," said Phillips. "Freight charges must bear their share of deflation. The railroads, capital and labor must expect and be willing to bear their part in the readjustment."

J. A. Swalwell, president of the Union National bank, Seattle, gave an address on "Finance and Business." Mr. Swalwell spoke principally on financing farm crops and referred in a general way to international credits and finance.

In connection with farm produce marketing and financing, Mr. Swalwell said one fact which should be brought home to growers is that the cooperative producers' organizations should devote their energies first to provide facilities for the proper storage of their crops rather than trying to deal direct with the producer. One difficulty with farm marketing and finance, said Mr. Swalwell, is that there are insufficient facilities for storing crops, the result being that the farmers are forced to go on the market regardless of the demand for a particular commodity. Proper storage, he said, would make it unnecessary to force all the crop on the market at one time.

Mr. Swalwell pointed out that it is no longer possible for individuals or communities to live for themselves if there is to be permanent prosperity. The same principle, said he, applies to foreign relations, and the full degree of prosperity will not come until this country cooperates with and loans money to foreign countries worthy of credit so that more active trade relations may be opened.

"Scientific marketing of food products, connecting the producer and the consumer, will come eventually through college training of young men to be food distributors," F. William Morf of Chicago declared. He was elected president of the International Apple Shippers' association at the closing session of the shippers' convention.

"Farmer boys are going to college and coming out trained agriculturists," President Morf pointed out. "The same is true of the coming generation of food distributors. The boys who will take our places are getting scientific training for the job. With trained men on the producing and distributing ends of the food business, we ought to be able to evolve an efficient method of performing the service that must be given to link farmer and consumer.

"I believe so thoroughly in the food supply business that I am in hopes my son will decide to make that his life work, either in the producing or distributing end."

Other officers included A. R. Curry, Seattle, vice president; George W. Davidson, New Orleans, treasurer; William L. Wagner, Chicago, E. T. Butterworth, Philadelphia, E. W. J. Hearty, Boston, E. E. Sampson, Yakima, and J. J. Castellini, Cincinnati, members of the executive committee.

Members of the International Apple Shippers' association represent a business of approximately $250,000,000. The largest delegation present at the Seattle Meeting, consisting of about 200 members, arrived by special train of 15 cars seven days out from Chicago, making stops at the apple-growing centers of this state. Upward of a thousand persons were in attendance at the meeting.

Delegates were present from all parts of the United States and from Canada and Great Britain. This was the first convention of the association held on the Coast. The convention was called to order by President E. T. Butterworth of Philadelphia.

The most striking event of the 27th annual convention of the International Apple Shippers' association, which closed Friday at Seattle, was the adoption of an international apple advertising campaign. This was brought about in connection with the announcement of the district advertising campaign started by the growers of north central Washington, under the name of "Eat Wenatchee Apples."

When the publicity division of the convention met Thursday afternoon Chairman Chester Franzell stated that in his opinion the most important thing for international apple shippers to do was to institute a persistent and intelligent campaign to increase the consumption of apples over the world. He called attention to the wonderful exhibit made by the Wenatchee district and to the advertising campaign which will be conducted by the growers of that vicinity. Mr. Franzell's suggestion met with unanimous approval and support on the part of the members of the publicity division. A large number of delegates supporting the proposition on the floor. It was the general opinion that the best thing for the association to do would be to organize an advertising department under the management of a competent and experienced advertising expert. A motion was unanimously adopted by the publicity division asking for an appropriation of $15,000 for that bureau.

Completion of the advertising plan by the Wenatchee growers was announced at the convention and included a systematic campaign covering three years, the money is coming in, and the apple growers are ready to go on what is said to be the first systematic attempt to give publicity to the apple industry, and the biggest growers' advertising campaign of the kind ever attempted. The campaign is being promoted by an organization known as "Eat Wenatchee Apples, Inc.," and one of the slogans is "You can eat 'em in the dark," an assurance of quality.

Three thousand five hundred apple growers in the Wenatchee valley, owning 40,000 acres of the best apple land in the world and producing more than 10,000,000 boxes of apples annually, have pledged their support to the advertising campaign. Finances are to be provided by contributions of three cents a box. The money is to be paid when the apples are marketed. Enough money is in sight now to start the campaign this fall.

Officers of the corporation are J. M. Wade, president; Conrad Rose, vice president; C. A. Leedy, treasurer; John Peterson and David McCoy, trustees. The move to organize the million-dollar campaign was started early in the year. Assisted by business men of Wenatchee, committees of growers worked through the valley from Wenatchee to the Canadian line, interesting virtually every apple producer in the effort to increase consumption of apples. The greater part of the money will be spent in newspaper and magazine advertising. As production in the Wenatchee district increases it is proposed to increase the advertising fund by 3 cents for each additional box.

One feature of the advertising program is an educational campaign among the dealers. They will be shown what varieties make the best sellers during different seasons in the year and the trade will be liberally supplied with recipes for cooking apples.

"Over in Wenatchee valley we think we have set a mark for the other communities to shoot at," said President Wade. "Never in the history of the agricultural industry has a group of growers attempted such a colossal publicity campaign. It is a community effort entirely and includes all the growers in the entire valley. The fact that 3500 growers from Wenatchee to the British Columbia line have been able to get together in this organization indicates something of the community spirit and pull-together attitude of the valley farmers. You can't beat a combination like that."

To Ship Breeding Stock

Law Permits the Giving of the Special Rates

When The Washington Farmer started its crusade for reduced freight rates on shipments of blooded stock for breeding purposes, intimations were heard in some quarters that the railroads were powerless to foster the live stock industry because they were prevented by "restrictive legislation." The truth is that there is nothing in the law to prevent their giving the desired special rates tomorrow if they were so disposed. We state that on authority of Chairman Charles C. McChord, of the interstate commerce commission, in the following letter to U. S. Senator Miles Poindexter of Washington:

Honorable Miles Poindexter, United States Senate: I have your letter of the 26th ultimo enclosing a letter addressed to the editor of The Washington Farmer, and clippings from that publication. You request that information be furnished which may be of use to the farmers who are interested in the shipment of blooded stock to Washington state.

This commission has no authority to prescribe reductions in rates except after a formal investigation, and any order issued by us after such a formal investigation can not be made effective within 30 days from the date of our order.

Carriers, however, may establish reductions in rates on the 30 days' notice required by section 6 of the act without prior approval from us. This notice may be waived, but any action looking to the establishment of rates on short notice must be made by the carrier.

I might add that if the carriers in this instance file applications requesting permission to establish reduced rates on blooded live stock effective on short notice, such applications will be given immediate consideration.

CHARLES C. McCHORD, Chairman.

Two courses of action are outlined in Chairman McChord's letter. The first contemplates the possibility of an application to the interstate commerce commission by a shipper. In that case the commission could prescribe reductions in rates only after a formal investigation.

The second course of action would be a voluntary reduction of rates by the railroads. As the chairman of the commission points out, the roads "may establish reductions in rates on the 30 days' notice required by section 6 of the act without prior approval from us."

If the railroads want to, they can post 30 days' notice of their intention to grant the desired special rates for the benefit of the live stock industry, and at the expiration of the 30 days can put the reduced rates into effect without prior approval from the interstate commerce commission. This last action undoubtedly would be satisfactory to the live stock men of the Pacific northwest, so there is nothing to intimations that "restrictive legislation" is preventing the railroads doing the broad, far-seeing and beneficial thing of fostering the live stock industry.

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We guarantee every subscriber against loss through dishonesty or swindle by any advertiser in this publication; we do not attempt, however, to adjust trifling differences between subscribers and honest, responsible bankrupts. Complaints must be sent to us within 30 days from the date of the transaction and the subscriber must have mentioned The Washington Farmer when writing the advertiser. This guarantee applies to live stock, except that we will not be responsible for claims for damages on account of diseases in stock sold through these columns.

Our Taxes Must Come Down!

Attention is directed to the article by L. M. Livengood this week dealing with the excessive burden of taxation in Washington. Mr. Livengood's statistics emphasize what we have been saying for many months—that there is urgent need of retrenchment all along the line, from the smallest districts to the state government.

In that connection, we reiterate—the way to retrench is to retrench—to cut down expenditures and reduce appropriations and not to hunt for new methods of extracting additional taxes from the public. It would be dangerous for our people to begin a tit-for-tat conflict to lay additional tax burdens upon this class or that class of producers or business men.

Some persons in the towns and cities are saying, unwisely, that the thing to do is to tax the farmer more and thus reduce the burdens of the city taxpayer. But the farmer can say, with equal or greater force, that his tax burdens are more than he can bear and that heavier taxes should be laid upon the towns and cities.

Relief is not to be found in that manner. What is needed is retrenchment that will trim down the taxes of all classes of producers and business men, rather than the searching out of new ways of providing additional tax money to be expended by the legislature and other tax spending bodies.

"Splitting" of the Dollar

The "splitting" of the dollar in the boxed apple industry is explained in an interesting way in Part Three of the report of the joint commission of agricultural inquiry. This federal commission made a survey of 9476 cars of various fruits and vegetables arriving at the great markets of New York, Chicago, Philadelphia, Boston and Pittsburgh. The survey included 1406 cars of boxed apples. This fruit brought at wholesale $2,829,245. Of that sum, $1,022,388, or 36.23 per cent, went for transportation charges; $197,229, or 6.99 per cent, went for miscellaneous handling costs. The receiving distributors' gross profits were $67,388, or 2.14 per cent; and the shippers received $1,542,240, or 54.64 per cent.

This does not mean that the producers received that sum and that percentage, for out of them must be deducted the unknown profits of the apple buyers or brokers who were the shippers.

Unfortunately the commission's report does not show what these apples brought at retail and therefore fails to disclose the total price paid by the actual consumers.

These figures do show, however, that after the loaded cars were turned over to the railroad company, a little more than 43 per cent of the wholesale price went for freight rates and miscellaneous handling costs. The receiving distributors' gross profits of 2.14 per cent do not seem excessive and are surprisingly low in view of the prevailing belief that much higher profit was taken by wholesale distributors and commission men.

The foregoing deals only with the 1406 cars of boxed apples. As to the total of 9476 cars of various products, the report shows that the shippers got 59.64 cents of the dollar, the railroads 32.76 cent, the various handling incidentals 4.43 cents, and the distributors 3.17 cents.

Establishing a Sales Agency

A statement by President J. R. Howard of the American Farm Bureau federation in connection with the recent merging of the farm bureau's cooperative fruit growers' organization and the North American Fruit exchange expresses some sound reasoning. In part he says:

"After a thorough examination of the field the Federated Fruit Growers decided that, rather than go through the dangerous and expensive early processes of getting together from various sources men with thorough knowledge of and experience in the various departments of marketing, and welding them into a cohesive, capably functioning organization, it would be far better if they could acquire as a nucleus some of the few national distributing companies now successfully operating."

It is, indeed, a difficult matter to get together a group of men who are at once honest, capable, experienced and cooperatively minded for the formation of a marketing agency. There are, to be sure, instances in which this has been done successfully. Often cooperative ventures have failed, or nearly so, because of failure to get together this class of men in a "capably functioning organization."

One of the most successful cooperative marketing organizations in the west is the United Dairy Associations of Washington, headed by President J. A. Scollard. This organization followed what President Scollard pleases to term "diluted cooperative methods." That is, it utilized outside capital and outside experience in launching its marketing activities. It wisely put into its agreement a provision that as soon as the farmers themselves developed their organization sufficiently and acquired adequate experience in the intricate problems of selling, the "diluted" feature of the organization would be eliminated and its future activities conducted along purely cooperative lines.

There is much in the new fruit marketing merger to give courage to the fruit growers of the Pacific northwest and of the United States as a whole. As those closely connected with the deal say, the North American Fruit exchange has been operating as a nation-wide nonspeculating sales service for many existing growers' exchanges for more than 10 years. It has approached the same ideals of service and economy that actuated the American Farm bureau in forming the Federated Fruit Growers. It is a successful marketing organization and if properly directed in the future should do much toward placing the fruit marketing business of the orchardists of the United States on a sound, stable basis.

Look Out for Barn Fires

Sometimes in his anxiety to get his crop of hay into the mow before it is properly cured, especially if it contains clover or alfalfa or while it is in a wet or damp condition, the farmer is willing to take a chance with the inviolable laws of nature, hoping that it will not heat. It is an acknowledged fact that combustion will take place in hay not properly cured and this is the cause of many barn fires. Do not build hay or straw stacks near the farm buildings so that in case they do catch fire they will endanger your property.

State Farm News

Everett will stage something new in the history of county fairs in Washington. A live stock show, which will include over 100 purebred animals, will be held under canvas in Everett October 12, 13 and 14. The only other exhibits that will be shown at this event will be the special tent where industrial products will be displayed by different concerns of Everett. This, of course, is a side issue, but the townspeople as well as the entire county intend to make this event an annual affair.

* * *

Chinook Segis Pontiac Jay, a young Holstein bull of Washington State college dairy herd, has been sold to the new bull association at Preston, Idaho, which is undertaking to raise the standard of dairy stock in that district. His dam's record was 555.33 pounds of butterfat.

* * *

The Skagit county fair will be held this year at Burlington from August 14 to 19, inclusive. The live stock men, dairymen, poultrymen, potato growers and seed producers are all cooperating to make this the biggest and best fair yet held in the county. Practically all of the above organizations are organized and have expressed their willingness to do their share to help the event along. A good racing program has been secured and the concessions promise to be of the better type.

* * *

The Farmers' Union Warehouse company of Colton has elected John M. Reisenauer, Charles Semler, A. J. Reisenauer, George Druffel and B. F. Druffel as trustees. The officers are J. M. Reisenauer, president; George Druffel, secretary, and J. E. Block, manager. The company has made extensive improvements in the elevator.

* * *

Pierce county club members have organized a county-wide association for the purpose of unifying the work of all clubs in the county. Special emphasis will be placed on the program to be held for club members at the Pierce county farm bureau picnic at American lake August 10. They expect to get 80 per cent of all club members to complete the year's work and complete a report for same. Morril Delano was elected president; Lens Sanders, treasurer, and Wilfred Orly, secretary.

* * *

One hundred acres of wheat burned on the V. H. Rogers farm, near Mayview, July 22, the fire originating from a hot box on the header of a combined harvester. The machine was destroyed. It was owned by J. L. Horrell, who farms the place. The estimated yield was 30 bushels to the acre.

* * *

Five cows owned by Thomas Cunningham of Castle Rock produced over 50 pounds of butterfat during the last month, and 13 of his cows produced more than 40 pounds, his herd making one of the best records of any of the herds in the Lewis-Cowlitz Cow Testing association. Other Cowlitz county cows producing more than 40 pounds of butterfat were those owned by H. A. Tyrell, four; C. S. Houpt, two, and J. G. Smith, two.

* * *

The Snohomish county fair will be held at Granite Falls October 28, 29 and 30.

* * *

That the use of water on gravel soil will increase strawberry production has been demonstrated by F. W. Nye of Grand Mound, who harvested 250 crates of berries to the acre, while the crops on adjacent farms ran from 75 to 150 crates to the acre. Nye used a sprinkling system to keep his land moist.

* * *

For a reported consideration of $20,000 Judge W. M. Pemberton of Bellingham has purchased the Ira H. Hunsaker ranch, five miles west of Prosser, through the Yakima Ranches company. Eighty acres of Bellingham property figured in the deal as part payment.

* * *

There are nine spray machines being used by potato growers in Skagit county for the prevention of late blight. These are mostly the four row, traction-power type and the Bordeaux mixture is used for spraying.

Five growers are leaving a few of their rows for a trial with dust spray, with which C. H. Bergstrom is working to ascertain the difference between that and the liquid spray. Some interesting results should be ascertained when the crops are harvested this fall.

* * *

A stock company has been formed at Chelan, capitalized at $7550, to hold a Chelan county fair. This will be a permanent organization and the first fair will be held next fall. It is planned to make apples the main exhibit, but there will be all kinds of farm produce and live stock, and it is hoped to hold a race meet.

* * *

Further damage from beaver colonies has been reported from the Touchet district, where they are reported to be damming streams and causing fields and gardens to overflow.

* * *

Fred Hill, a 10-year-old club boy of Elbe, Pierce county, has an exceptional garden which produced $7 worth of green onions from three rows 80 feet long. His pea vines are nine feet high. The entire garden is irrigated from a near-by creek, which Fred dammed up himself. Aside from the garden Fred owns a fine stand of bees and Toulouse geese.

* * *

The amount of cherries from the Wenatchee station greatly exceeds the estimate made at the beginning of the season and by the close of the season will be double the movement of cherries from this point last year. It was estimated that 140 cars of cherries would be shipped from Wenatchee this season, but, according to the record of Great Northern Car Inspector Mickel, 107 cars of fruit have moved from there so far. The best offer one local dealer said he had obtained this season was $1.75 f. o. b. Wenatchee, which would not net him a profit after the initial cost of the fruit, labor, boxes, shrinkage and brokerage charges had been deducted.

Coming Events of Interest

Aug. 3—Skagit county pioneers picnic, LaConner.
Aug. 10—Pierce county farm bureau picnic.
Aug. 10-12—Old settlers' picnic, Ferndale.
Aug. 14-19—Skagit county fair, Burlington.
Aug. 19-20—Ninety-first division reunion, Seattle.
Aug. 28-Sept. 2—Southw't Wash. fair, Chehalis-Centralia.

FARM BUSINESS AND MARKETS OUTLOOK

The rail strike is the factor of biggest potential importance in the markets for farm products at the present time.

Combined receipts of cattle at seven markets during the last eight years have increased from an average of 150,000 head during the second week in July to over 300,000 head during the second week in October.

Choice and prime steers trended higher last week, reaching a new top of $10.85 at Chicago.

A ten-year average shows that combined receipts at the 11 leading markets have declined rather steadily from 462,000 during the third week of July to 312,000 head during the second week in September.

Trade sentiment has it that the range lamb movement is behind schedule, but the figures give the contrary impression.

Wool dealers who hold most of the supply not yet in manufacturers' hands are not making concessions because their stocks can not be replaced in the country on a lower basis.

The long awaited export buying of wheat has started at last with sales of about 8,000,000 bushels in three days recently. Great Britain and Italy were the chief purchasers. A shortage of empty cars is reported in the southwest and in parts of the middle west.

Corn exporters have bought freely in the last few days and domestic shippers to the deficiency states have been active.

Although feed markets are quiet, the heaviest movement of wheat feed for months is reported from Minneapolis.

Egg receipts are falling off, but weather has favored production and arrivals remain heavy enough to provide a small surplus for storage.

Butter prices have again declined, reaching a new low point for the season.

Rail Strike and the Markets

The factor of biggest potential importance in the markets for all farm products at the present time is the rail strike. Thus far it has exerted but little effect beyond slowing down the movement and increasing the time in transit. The immediate trend of prices will be uncertain as long as this cloud overhangs. With the government taking a hand the dispute will be brought to a head sooner than otherwise.

A transportation tieup will mean low prices for farm products in producing sections and high prices in consuming centers where but few producers within trucking distance can take advantage of them. Commodities of which large amounts are now in storage would be least affected. Severe losses on live stock and other perishables would occur similar to those which took place in April, 1920. Any advance at the central markets will be more than compensated for by a severe drop later on when the products backed up on the country begin to move.

Increase in Cattle Supply

Combined receipts of cattle at seven markets during the past eight years have increased from an average of 150,000 head during the second week in July to over 300,000 head during the second week in October. The number slaughtered does not show such great expansion since feeders take a bigger slice, but October cattle and calf slaughter at all markets on the average exceeds that of July by 20 to 25 per cent.

In spite of alleged cattle shortage receipts in the last three months have been running above the average. Last week approximately 210,000 head arrived at the seven leading markets compared with an average of 180,000 head for the corresponding week. Kansas City reported the heaviest run in eight months indicating a rapid movement from Kansas and Oklahoma pastures and also from Texas. Scattered reports from the northwest have indicated that range cattle would move later than usual, but such observations are not comprehensive enough to be final. A few rangers have shown up already at Chicago which is earlier than they appeared last year or two years ago.

Choice and prime steers trended higher last week, reaching a new top of $10.85 at Chicago with an $11 sale expected at any time, but other grades, which means practically everything selling below $10, worked slightly lower. The spread widened likewise in cows and heifers, but she-stuff will become plentiful during the fall and is encountering more competition right along from grass beef. Bulls are numerous at present, especially bolognas. Good butcher bulls are benefiting by relatively high prices for finished steers. The dressed veal market declined during the last week and calf prices sagged toward the close.

Lower prices on grassy steers have made fleshy feeders a more attractive purchase and a few are going out to be fattened for the fall market. Feeder values this fall will average much higher than last year although there may be some decline from the prevailing level. With rangers coming the selection available is better.

Decrease in Hog Receipts Due

After running above the average since the last of April, receipts of hogs at the leading markets dropped down to normal proportions for a short time, but have increased again in the last few days. A ten-year average shows that combined receipts at the eleven leading markets have declined rather steadily from 462,000 during the third week of July to 312,000 head during the second week in September. If a similar decrease of approximately 30 per cent occurs this year it is logical to expect higher prices for good hogs.

Packing sows now compose a large proportion of the supply with an unusually wide spread of $4 between common packing sows and choice light hogs. The average cost of droves at Chicago has been pulled down to the lowest since last February with the top still in the vicinity of $11. Apparently many sows bred for fall farrow are coming to market now.

Foreign buying of hog products and lard picked up decidedly in the last week, suggesting that an increase may take place as usual during the late summer and fall. Clearances are moderately heavy and a larger movement abroad can be looked for later. Stocks of hog meats in storage in the United States on July 1 were 20 per cent below the five-year average. Stocks of lard were about 12 per cent above the average for that date.

Lamb Run Exceeds Expectations

Receipts of sheep and lambs last week were approximately 20 per cent above the average for the corresponding week, and largest for that week with one exception in the last eight years. Trade sentiment has it that the range lamb movement is behind schedule, but the figures give the contrary impression. On the average, receipts of sheep at the seven leading markets have more than doubled from the end of July to the first of October. The percentage of feeders increases, but an increase of 20 to 25 per cent in the supply for slaughter occurs also. Dressed lamb prices declined last week and values on the hoof followed suit.

Feeders are buying about as many thin lambs at nearly as high prices as they did two years ago when disastrous losses resulted. Many lambs are already contracted for at $10 per hundred pounds on the range compared with $8 to $9 earlier in the season. This year the range lamb producer is getting the velvet, reversing the situation of last year when their lambs went into feedlots at prices much less than subsequent developments indicated they were worth.

Horse Run is Lighter

The run of horses declined about 30 per cent at Chicago last week, but demand was indifferent and prices were unchanged. Rugged workers find the broadest outlets, although strike developments were not encouraging to buyers. Scarcity of choice drafters insures a good reception for all that arrive. Blemished stock moves at ridiculously low prices considering marketing costs.

Wool Prices Holding Firm

A dull period in the wool market generally results in a material decline in prices, but such has not been the case recently. Wool dealers who hold most of the supply not yet in manufacturers' hands are not making concessions because their stocks can not be replaced in the country on a lower basis. The fact of a prevalent scarcity explains the behavior of the market. The London auction opened firm to higher last week while the recent sale at Hull was slightly lower on merinos, but higher on crossbreds than the preceding auctions.

Buying of lightweight goods at the opening of the American Woolen company has been leisurely, but it is reported that the output of 12 of its mills has been sold.

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Exporters Buying Wheat

The long awaited export buying of wheat has started at last with sales of about 8,000,000 bushels in the last three days. Great Britain and Italy were the chief purchasers. Germany is making a start also.

According to the department of agriculture the total yield in 13 countries of Europe and one of North Africa, for which estimates are available, will be 889,714,000 bushels, compared with 1,016,083,000 bushels last year, and 1,040,606,000 bushels during the five pre-war years 1909 to 1913. The crop in other European countries is known to be light so that the requirements of importers in the next eight months are large. If buying for this purpose reaches the volume expected it will mean the purchase of an average of 1,500,000 to 2,000,000 bushels daily in North America right along. Besides the foreign demand, mills are absorbing a fair share.

Conditions varied from fair to good in Russia and were slightly below average in Spain, while they were poor in Africa. Crop failures were reported in South Africa and Egyptian wheat was slightly below average. Rains, cold weather and snow were said to have proved beneficial in Australia.

Corn prospects were described as fair in Jugo-Slavia and Italy, good in Rumania and below average in Spain. Wet weather has delayed corn in Argentina.

Europe's sugar beet crop prospects were reported to be good, Germany showing improvement in June and France promising a larger yield than last year. Brazilian sugar cane was said to be in good condition.

The estimated wheat production of Poland was placed at 44,300,000 bushels, 25 per cent more than last year's harvest, in a recent cablegram from the international institute of agriculture at Rome, the department added, but in Algeria, Morocco and Tunis the crop showed a reduction of 52 per cent to 29,800,000 bushels.

Poland's barley crop was estimated at 201,500,000 bushels, 21 per cent more than last year, while that of the other countries was placed at 43,200,000, or 49 per cent of last year's yield.

Receipts at primary markets have trebled in three weeks and, with the possible exception of last year, are the largest for this season in at least 12 years in spite of interference by the rail strike and the coal shortage which is retarding the movement of cars and checking threshing in certain sections. A shortage of empty cars is reported in the southwest and in parts of the middle west.

The spring wheat crop is practically safe. Black rust will continue to do a little damage and under suitable conditions might do considerable harm, but it is doubtful if the reduction in the crop will be more than the average deterioration at this season which has already been discounted in the government's July 1 estimate. This will mean a final yield of 250,000,000 bushels or more.

Corn, Oats and Rye

Corn is encountering a broad demand. Exporters have bought freely in the last few days and domestic shippers to the deficiency states have been active. But receipts at primary markets last week were the largest for the corresponding week in the last dozen years and prices were practically unchanged.

The crop has improved since July 1 and, barring frost or other damage, can easily reach 3,000,000,000 bushels again.

New oats are already arrinving at middle western markets, most of them being light in weight like the old crop. Some improvement in the new crop has taken place in the northern states so that the final yield may be up to the average. Stocks of old oats remain heavy and, with the movement of new oats starting, prices dropped to the lowest level in years. An upward trend is improbable even with rail troubles looming up.

Rye is selling at a discount of about 30 cents below wheat at Chicago and 60 cents at Minneapolis. The carryover of old rye is larger than usual and one of the biggest crops ever harvested is coming on. Prices are apt to be low compared with wheat all season.

CASH GRAIN MARKETS.

The cash grain prices for the week ending July 26 follow:

CHICAGO—Wheat—No. 2 red, $1.09 1-4@1.12 1-4; No. 3 red, $1.06 1-2@1.10 1-2; No. 2 hard, $1.11@1.15. Corn—No. 2 mixed, 64 1-4@64 1-2c; No. 3 mixed, 63 1-2@64c; No. 2 yellow, 64@65c; No. 3 yellow, 63 3-4@64 1-4c; No. 2 white, 64@64 3-4c; No. 3 white, 63 3-4@64c. Oats—No. 2 white, 33 1-4@37c; No. 3 white, 32 1-2@34 3-4c. Rye—No. 3, 78@83 1-2c. Barley—50@66c.

Deferred Shipment Feeds at Discount

Although feed markets are quiet, the heaviest movement of wheat feeds for months is reported from Minneapolis. The rail strike is sustaining the market for prompt shipment, but prices for deferred shipment are at a discount of $1 to $2 below prevailing prices. Cottonseed meal for shipment by December is $4 to $6 cheaper than old crop meal.

Prices per ton (100 pound bags) in carlots—Chicago: Bran, $19.50; standard middlings, $20.50; flour middlings, $26.50; cottonseed meal, 36 per cent, $45.50; 43 per cent, $50; hominy feed, $26; gluten feed, $29.85; old process oil meal, $47.50; tankage, $55.00.

Hay Prices Stable

Hay markets are quiet with good quality hay readily absorbed and prices inclined to harden slightly. Receipts of new hay are increasing. Old hay commands a premium although most of the new hay is of good quality.

Prices per ton in carlots—Chicago: No. 1 timothy, $22@25; No. 2, $21@24; No. 3, $12@17; No. 1 light clover mixed, $21@24; No. 1 clover, $14@17; No. 1 clover mixed, $16@19; upland prairie, $14@18; midland prairie, $12@16; rye straw, $12.50@13.50; oat and wheat straw, $9@11.

New Low in Egg Market

Egg prices dropped to a new low figure for the season in the last few days. Receipts are falling off, but weather has favored production and arrivals remain heavy enough to provide a small surplus for storage. In the preceding years storage holdings have generally ceased to increase in the last half of July, but they do not decrease much as a rule before the middle of September. The decline is believed to have about run its course.

Cheaper Butter Stimulates Buying

Butter prices declined last week reaching a new low point for the season. Receipts are gradually declining, but remain considerably heavier than the average for this period of the year. Although storage holdings are above the average, operators were willing to accumulate the lower priced goods to bring down the average price on butter put away when the market was four or five cents higher. The net increase in cold storage holdings at the four leading cities each day of the last week ranged from 600,000 to 1,000,000 pounds. At the lower level of prices consuming demand also has been estimated so that the market is gaining stability and values are believed to be at or very near bottom.

Prices on 92 score fresh butter on July 26 were:

Chicago, 32 1-2c; New York, 34 1-2c; Boston, 35 1-2c; Philadelphia, 35c; San Francisco exchange quotation, 41c.

With good weather for heavy production of high quality cheese and with distributing markets well supplied, cheese prices declined further last week. Lower quotations failed to stimulate buying to a noticeable degree, most of it being on a hand-to-mouth basis. City markets are only slightly higher than prices quoted in the country. Cheese distributors are looking for lower prices and they are waiting as long as possible to take advantage of the decline.

Prices on No. 1 American cheese on July 26 were:

Chicago—Twins, 18 1-2@19c; S. Daisies, 18 1-2@19c; D. Daisies, 18 1-2@19c; Young Americans, 19@19 1-2c; Longhorns, 19@19 1-2c; square prints, 20@20 1-2c.

Potato Shipments Heavy

Potato shipments from the producing sections continue to run substantially above the average for this season of the year. Supplies are coming from as far north as Minnesota, although the intermediate states including Virginia, Kansas, Maryland and New Jersey are the leading shippers. Prices are down nearly 50 per cent compared with six weeks ago and the trend is slightly lower. Sacked early Ohios are quoted at $1 to $1.35 per 100 pounds at Chicago, those from Nebraska selling at the top.

(Continued on page sixteen.)

Club Boys Are Showing Their Fathers a Thing or Two in Better Hogs



By NORA GARVIN.

Joel Yelton of Spangle, Spokane county, has an advantage over most other club members. His father, W. A. Yelton, is the local club leader in the Spangle community. Nevertheless, it took Joel to prove that some club boys can show their fathers a thing or two.

When Joel first entered the club work two years ago he went right into the purebred hog business. His father thought this rather unnecessary, but let the boy raise what he desired while he continued with scrubs. Joel fed and cared for his purebreds while his father cared for his scrubs. When asked why he didn't go into the purebred business as his son had done the father said: "Oh, my hogs are just as good as his." But they weren't! For when it came time to butcher them Joel's father, to his great surprise, found that his son's animals outweighed his in every instance.

Since that time the father has been a great booster for purebred stock, but it took his own son to point the way.

But that was not all. Last year when W. J. Green, Spokane county club leader, visited the Yelton home he told Joel the value of raising pasture in connection with his purebred hogs. Joel was so impressed that he decided to put in a small plot of ground on their dry-land farm to sweet clover.

He planted one-sixth acre to sweet clover during the last 10 days of May in 1921. He sowed it with a hand drill and planted the seed 18 inches apart, then innoculated it with alfalfa soil. He cultivated it twice during the summer months. For three months two hogs fed on it that year, and the clover grew so high that it wasn't much good. Two calves were turned into it and later a sow and her litter.

This year the clover came up again and Joel had to "borrow" some of his father's stock to help use it up. He let his eight 150-pound shoats feed to their hearts' content in the field with three young calves and then for an hour each day turned in nine of his father's milking cows.

Asked if he had noticed any particular effect the pasture had had upon his cows, Mr. Yelton said: "I should say I have. Why, those cows have been increasing their production steadily since going into pasture, although I haven't kept a record of it. I can notice the difference every day."

Mr. Yelton has been so convinced as to the value of this pasture that this year he himself planted seven acres to Grimm alfalfa, sweet clover and dry land alfalfa and will study the crops to see which does the best. Other farmers in the community are watching with interest the results of the experiments made by father and son.

Last year at Spangle there was scarcely any interest shown in purebred stock by farmers. Since the pig club was formed and registered Durocs secured for the club members there is altogether a different feeling on the part of the farmers toward the hog industry.

"The other day I met the banker on the street," said W. J. Green, county club leader, speaking of a visit to Spangle, "and he said to me: 'Where can we get some registered sows? I could place 40 right now with the farmers if I could get them.' Of course the high price of pork this year has added a tax upon the pork production, but the interesting feature is that all the farmers are trying to get the kind of hogs the boys are raising."

The effect of club work upon certain communities is seen in other parts of Spokane county. A year ago a pig club was started at Latah by Mr. Green, with five boys purchasing registered Duroc Jerseys. The boys made a fine showing with their animals and farmers, noticing this, are anxious to get some of the same stock. As a result there has been a big demand for good hogs in their vicinity.

"The important thing about that, as I see it," said the local leader at Latah, "is the fact that before the boys took hold our community was not a hog community at all, but now every one is anxious to get the best stock possible. Sixty registered gilts have been placed in Latah alone, following the advent of club work."

At Elk, where very little dairying was carried on, a dairy club has been formed this year and good grade cows secured for the 10 club members signing up for the work. After the farmers had seen what their children were doing—how they were weighing and testing the milk and keeping accounts of feed and other costs—they decided to buy some good breeding stock. Immediately after, two registered bulls were purchased and are now in use in the community.

Death Stares Travelers in the Face

Encumbered with luggage and live stock, their tongues parched and the terror of impending death from thirst in their bleary eyes, a group of 10 men hold a council under the scorching rays of the desert sun. It is two days since the last waterhole was passed. Heaven only knows how far ahead the next one is. They have already been 50 hours without a swallow. To delay in deciding the next step means certain death in the wilderness.

What shall they do? Forge ahead into the unknown waste? Return, with the utmost speed of famished beast and famished man? Turn to page 12 and read the decision in Lewis Miller's gripping story, "Pike's Peak or Bust."

This is one of Miller's greatest stories, and our readers who followed "Trappers of the Ozarks," "A Crooked Trail" and "Big Smoke Mountain" know what that means. Do not make the mistake of waiting a few weeks to begin reading "Pike's Peak or Bust," but get it now before you lose a copy of the paper. If you once start it we know you will continue it to the last sentence of the last chapter.

Planning for Community Fairs

Mrs. Winnie Braden of Portland, Oregon state exhibit agent, who since March 15 has visited nearly every county in Washington promoting community fairs, held her last public gathering in Spokane county.

Some of the counties in which Mrs. Braden conducted meetings included Cowlitz, Lewis, Thurston, Pacific, Clallam, King, Pierce, Whatcom, Skagit, Snohomish, Chelan, Douglas, Walla Walla, Adams, Stevens, Spokane, Kittitas, Yakima, Benton and Franklin. In many instances, when a meeting was announced, the county agent from an adjoining county would come with a delegation—that is, whenever a schedule could not be arranged for his county. Attendance at these meetings varied from a small committee of the fair board and department heads, to meetings of as many as 65 or more farmers.

"The most important part of the community fair and the thing upon which the success of the fair depends, it seems to me," Mrs. Braden said, "is the adoption of the standard score card. This card has been worked out by the department heads at Washington State college and covers every product to be exhibited. It may be secured from the college direct or from the county agent."

Mrs. Braden in her meetings throughout Washington outlined for those present a schedule of work. "The first thing to do," she said, "is to get the organization work taken care of. Appoint a large committee to be in general charge of the fair. To get the interest of every one behind it, choose a representative from every line of work carried on in your locality—a merchant, a banker, a live stock breeder, a farmer, a fruit grower, or whatever else there may be. Later an executive committee of three should be chosen who would be responsible for the actual work of conducting the fair.

"Then select the place and decide on the time. As soon as the committee knows the time, start in work at once. Appoint superintendents for the various departments in order that they may be on the job during the season."

State Farm Bloc

By W. H. Paulhamus

To the Editor of The Washington Farmer: I am delighted with the sentiment expressed in your editorial, suggesting the advisability of the "state farm bloc."

As a former member of the Washington state senate, it did not take me long to ascertain that every other industry in the state is looking after its own particular interests better than the farmers.

Of late years there has been a farmers' lobby that undoubtedly has been helpful, but the average party organization man is too often convinced that his first duty is to follow the lead of the senate or the house organization, and my experience is that the average house or senate organization is usually developed for selfish purposes.

The farming industry is deeply concerned in many problems that can best be regulated by legislative action.

Of the many items, one of extreme importance is the elimination of "oiled milk." this oiled milk industry is extremely dangerous from many standpoints and I am hopeful that the next session of the Washington state legislature will prohibit the manufacture or sale of it.

I appeared before the committee on agriculture several years ago, urging that at that time they pass a law precluding the manufacture of filled milk, but did not succeed in having it eliminated.

If the Washington state farm bloc should prove of as much value to our state as has the farm bloc in the United States senate we should all be very thankful.

In my judgment the senators from every western state should line up with the farm bloc, so as to defend the interests of the west against the unsatisfactory domination of the large interests controlled in a few states of the east.

W. H. PAULHAMUS.

Puyallup, Wash.

The Guernsey Breed Is Rapidly Becoming Popular With the Club Members of Washington



Here is a picture of some of the members of the Yakima Guernsey club and the young animals that they received at a public picnic and drawing early in the summer. The animals came largely from Wisconsin, and were sold to the club members at cost, being selected by the members by lot. There are 21 members of the club, but only a part of them are in the picture. From left to right they are: Virgil Lajambe, Francis Bohlke, Carlyn Winger, Fred Keith, Cecil Wilkins, Herbert Short, Delos Clement, Walter Scott, Herschel May, Kenneth Cochrane.

Others who received heifers are Jesse Heers, William Heers, Esther Bohlke, Charles Bohlke, Chester Schlien, Roscoe Angel, W. F. Saar, Charles Bell, McClellan Brown, Cecil Lightburn and Mark Myers.

Taxpayers Should Organize

Unity of Action Is Essential to the Reduction of Taxes

By LESTER M. LIVENGOOD,

Attorney and Manager Spokane County Taxpayers' Economy League.

The census of 1910 caused Washington citizens to swell with pride. All over the United States this state was pointed out as one of the fastest growing states in the Union. No such feeling was engendered when the results of the 1920 census were made known. A drop in population increase from 120.4 per cent to 18.8 per cent, and in valuation from 281.45 per cent to 30 per cent, is enough to cause even the most easy-going citizen to stop and consider what is wrong, for these things do not happen without causes.

The sad part of it is that the very people elsewhere in the country whom we are trying to bring here with their capital and industry know what is wrong and are staying away, although it seems that a great part of our citizens have not yet learned what is wrong with us. Prospective capital and citizens who alone can provide the means for our future development are aware of the fact that in the face of the conditions above described the people of this state have added over $41,000,000 to their tax burden since 1910, an increase of 152 per cent, in addition to over $40,000,000 federal income and profits taxes added mostly since that time. They know that increases in public expenditures must be kept proportionate to increased production and wealth if any community is to prosper and grow and that Washington is long past the margin of safety in this respect.

A Question of Prosperity.

The taxpayers of Washington are at last awakening to the seriousness of the situation. It is no longer a question of stinginess or looseness in public expenditures, but a question of the prosperity and growth of this state. Once a taxpayer realizes the situation the battle for tax reduction is half won, because it is due to the taxpayer himself and his apathy toward the situation that these increases have been allowed year after year. The next question that arises is, how can the taxpayer act to accomplish this tax reduction which is so necessary and urgent? If he will look about him he will see that every class of citizen actuated by selfish motives has an organization to accomplish its purposes, usually at the expense of the taxpayer. Only by united action and intelligent consideration of the question can the taxpayer protect himself.

Every county in the state of Washington should have a tax league and every league should be a member of the State Federation of Taxpayers' Associations, which coordinate the efforts of all county leagues in matters of state concern. The state league will have a representative of the taxpayers at the legislative session this winter, and the taxpayer will for once have an inning and know what is going on. Tax leagues have been organized in the following 14 counties, to the writer's knowledge, and probably in a number of others of which he has not been informed:

King, Pierce, Lewis, Grays Harbor, Clarke, Thurston, Snohomish, Yakima, Walla Walla, Okanogan, Whitman, Lincoln, Grant, Spokane.

The tax league in Seattle, known as the Voters' Information league, has made a wonderful record within a year and has over 10,000 members. Last year it secured a reduction of 14 per cent in the Seattle tax levy and has accomplished many items of tax reduction. This is used merely as an illustration of what can be done when the taxpayer makes up his mind to act. Rural residents, if organized, could do much to influence taxation in a similar way.

Any county desiring assistance in organizing a tax league will be assisted gladly by the state league officers. An inquiry addressed to the writer, 1305 Old National Bank building, Spokane, will put the nearest officer of the league in touch with that county.

The time for the taxpayer to act is now. The budgets will be made up in August and September, and that is when the law provides hearings for the taxpayer to make his objections. Tax leagues should be organized and study these budgets at the earliest possible moment and be prepared to demand tax reduction intelligently at the final budget hearing in October.

One of the Old Ones

The Cashmere Fruit Growers' union is among the oldest organizations of its kind in the locality, having been operating since February, 1907. It now has a membership of 40 growers. It is purely a cooperative organization which grades, packs and markets its own fruit.

A large warehouse at Cashmere which measures 72x560 feet contains six large grading machines, and can use 135 workers at full capacity. This part of the building is housed on the second floor while the storage space is in the basment, which has a capacity of 233 cars of apples. Last year 312 cars of apples were graded, packed and sold from the warehouse.

"Our apples are all pooled and sold on a government valuation," said J. E. McClimans, manager of the organization. "We handle only pears and apples; the pears making only a small percentage of the shipment. We are beginning, however, to handle spray material and box shooks for our members.

"Our plan of handling the crop is to let the grower put all his attention on the growing and picking of his apples while all grading and packing is done at the central plant. This allows for a more uniform pack, and slightly cheaper overhead."

This organization is now affiliated with the Wenatchee Cooperative Growers' association.

Officers of the Cashmere Frut Growers' union are F. H. Moses, president; Charles Joy, vice president; M. L. Simond, secretary. The board of nine directors are Moses Joy, F. S. Burges, E. W. Burges, W. E. Hinman, Charles Ott, D. L. McCory, C. M. Erickson and E. Gould.

Clover Experiments

Using Commercial Fertilizer in Addition to Barnyard Manure

In the spring of 1921 the county agent recommended to T. A. Garrett of Auburn, Wash., that he try some commercial fertilizer in addition to his barnyarn manure to help him get a stand of clover. Accordingly some plots were laid out in 1-10 acre sizes, trying out superphosphate, muriate of potash and a mixture of the two. One plot was left untreated between the phosphate and the potash plots.

The whole field of two acres was seeded to red clover and timothy, using oats as a nurse crop. During the growing season of 1921 there was only a slight noticeable difference on the oats in the different plots, except on the manured portion. One-half of all the plots were manured at the rate of 15 tons per acre and the oats on the manured plot was much heavier and darker green than on the other half not manured.

After the oats were taken off, however, the clover began to show up and the different plots were distinctly visible. Those plots that had received an application of phosphate had a much better stand and the young clover plants grew much faster than on any of the other plots.

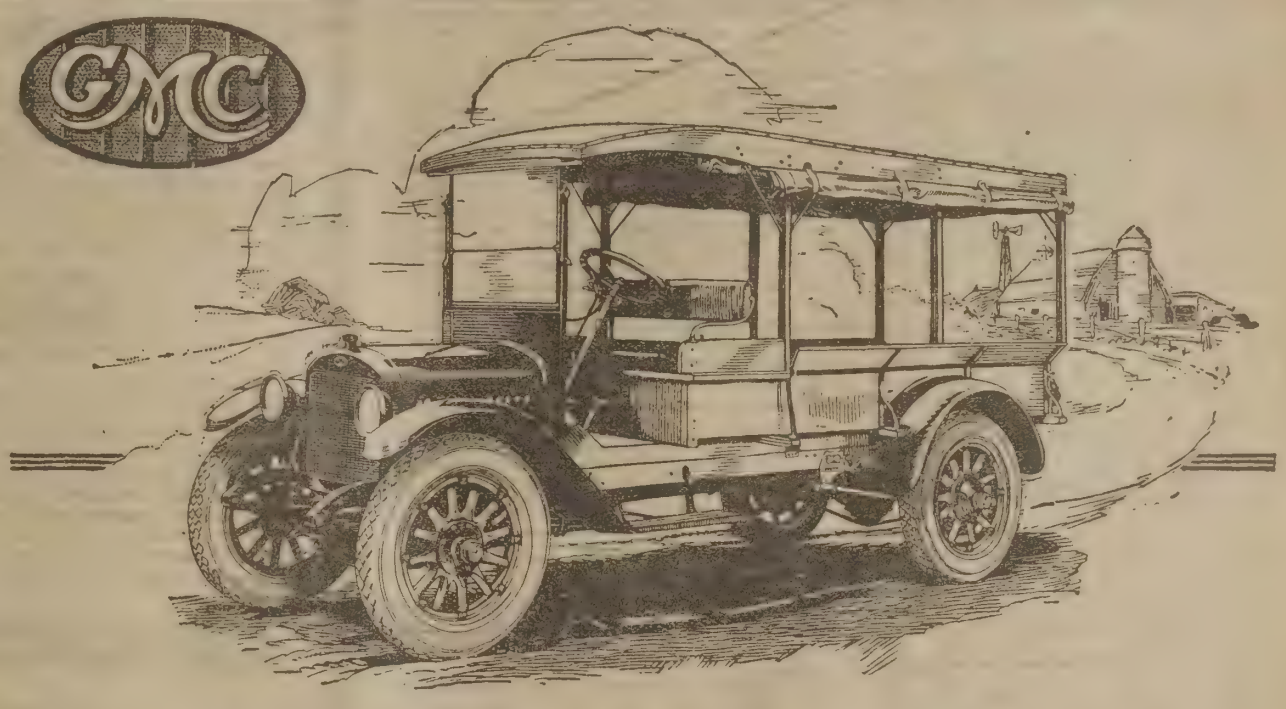
The differences were noticeable all during the winter and spring of 1922, and when haying came the phosphate and check plots were cut and weighed separately. The potash plot was no better than the check plot. The mixture of potash and phosphate plot was just about as good as the phosphate plot. The check plot yielded 4060 pounds of cured hay of poor quality to the acre. The phosphate plot yielded 8240 pounds of cured hay to the acre.

Here was a difference of over two tons of hay from the use of 300 pounds of acid phosphate. The cost of the material was $8.75 and allowing $1.25 for getting it to the farm and putting it on the land, the total cost is only $10 an acre. The value of the increased hay yield for one year only at the rate of $10 per ton for hay is $20. This makes a net return of $10 per acre by the use of acid phosphate.

A. B. N.

CANNERIES CONTRACT FOR PEARS.

According to N. H. Massie, secretary of the Washington county farm bureau, 75 per cent of the Bartlett pear crop has been contracted to cannery interests.



A "Jim-Dandy" Truck

Model K-16 One Ton

It's a Jim-Dandy! That's the universal opinion of the GMC one ton truck.

Fast on the road, powerful in the hard going and economical all the time, this sturdy honest-to-goodness truck is just a "Jim-Dandy" for the farm.

It will haul produce, stock, milk and any other kind of load better and cheaper than a motor truck has ever done before.

For this GMC has improvements which are away in advance of ordinary motor truck construction and which make possible more continuous haulage, lower operating and lower maintenance costs. Such features as Removable Cylinder Walls, Pressure Lubrication, Removable Valve Lifter Assemblies and Instantaneous Governor, are all designed to produce the kind of performance that is vital to the success of a motor truck on the farm.

Model K-16 is a real motor truck, built entirely of truck units—no passenger car parts used.

In addition it is built in the most approved designs of motor truck construction. For instance, this one ton truck has Magneto Ignition, admittedly the most reliable type.

The Ignition is simple, just four wires leading from the Magneto to the spark plugs and all in the open where it can be readily inspected.

The Model K-16 also has Electric Lights, Starter and Generator with a Storage Battery built especially for motor truck use and of extra capacity. The wiring is all carried in metal conduits and is entirely separate from the Ignition System.

Demountable Rims, Cord Tires, Pressure Gun lubrication of the chassis. Extra Switch for spot light and Interchangeable Brake Rods are other GMC refinements.

No truck of like quality has ever been offered at as low a price as this chassis—$1295 at the factory.

Write for an illustrated booklet "Motor Trucks on the Farm."

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1 Ton $1295, 2 Ton $2375
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General Motors Trucks

LIVESTOCK AND DAIRY

Watering the Hogs

By W. H. UNDERWOOD.

On every farm where hogs are raised there should be some economical way provided to furnish pure, clean water for the animals at all times. Sloppy food does not answer for both food and drink. Where slop is fed like a thick mush, as it should be, the hogs will seek drinking water between feeds, and if the slop is too watery the animals will in their endeavor to pick out the solids swallow more of the liquid than is good for their digestion.

The old idea that hogs do not require much water is an erroneous one. If they are placed where they can obtain a plentiful supply of fresh, clean water they will drink a great quantity of it during the day and especially in the evening. If the hogs are watched when they are eating it will be noticed that they eat a while and then run and take a few swallows of water, after which they go back to the feed. They will go back and forth to a hog waterer many times a day. It is astonishing to find how much water they will drink when they can get all the good, clean water they desire, and there is a great deal of satisfaction with their improved health and the way they grow and put on flesh.

When a lad I remember I had to carry the wash water to the hogs every wash day. Why the poor animals had to drink the soapy mess I was at a loss to know. I didn't think the soap was very agreeable or beneficial to them. Now I know it is not. Yet many farmers seem to think that anything is good enough for a hog, but the best breeders have learned that the filthy habits of the hog are the result of the improper care of man and that swine are not naturally as unclean as they have been accused of being. If he is given the right kind of a chance the hog will easily prove to any one that he is just about as clean in his eating and drinking and sleeping as any other animal on the farm.

There is too much dependence on surface water for hogs and other stock too. Ponds, unless they are fed by good springs, become stagnant and especially is this true in the summer time. Such water is bad. The water obtained in ditches and other small streams is little better. All such water sources are prolific breeding places for the germs that bring on some of our most troublesome swine diseases. To permit the hogs to use such water the year around is simply playing with death.

Good wells furnish the cleanest water for stock of all kinds. The farm that does not have a plentiful supply of well water or live spring water for the animals maintained thereon can not expect the best results. To be sure a little money is saved for a while, but it is certain to be wiped out by losses from diseases that follow the use of bad water. To try to get along without a good supply of pure, clean water is poor economy.

Some way should be arranged to get the water to the animals with the least labor and loss of time. Many an hour I've spent carrying water to hogs in pails. It's a mean, nasty job. I was small then and I'm pretty sure that the hogs didn't get any more water than was good for them. I poured the water right into the trough. At least I aimed to. The hogs climbed over each other and into the troughs. Sometimes I got a whole pailful of water into the trough but usually it was poured over the heads of the hogs and wasted.

The farm of today should have up-to-date waterworks. A gasoline engine is a fine thing to use to pump the water into the tanks, from which it can flow into automatic waterers, where the animals can secure good, clean water at any time. And the saving of a few hogs that may be lost through disease from using unclean water will more than pay for the whole arrangement. There are several makes of automatic hog waterers on the market and those who neglect such means of insuring the health of their hogs are practicing poor economy.

LIFE PRESERVERS FOR LIVE STOCK

By DR. E. E. WEGNER, W. S. C.

DIGESTIVE TROUBLES, ARTICLE IV.

Choking.

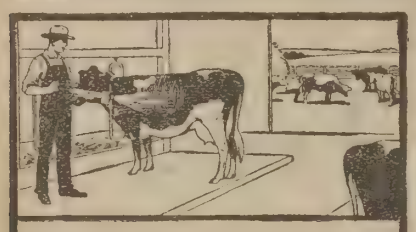


This is the first difficulty that is encountered by the digestive tract if we exclude tooth and mouth troubles. This is a very common cause of anxiety for the owner and is many times more troublesome than dangerous. The amount of danger that results depends upon the cause. If it is due to a paralysis of the gullet the danger is great and the chances of recovery are very small, though some cases do respond to treatment. Other times the cause is an injury to the gullet or oesophagus which has left an inflamed area, which in healing has caused the opening through the tube to be smaller in size than normal. This causes difficulty in getting the food past this point and such animals are frequent chokers. It may also lead to more difficult conditions, such as an enlargement just above the narrow portion in which food materials are prone to lodge. Conditions such as the above are very hard to cure and many can not be treated successfully even by operation; this is particularly true when the diseased portion is within the chest cavity.

More commonly chokes are of two kinds. The most common results from the animal trying to swallow something that is too large to go through the oesophagus (such as apples, potatoes, pieces of carrots and other roots). Again, we see grain chokes where the gullet is filled with some of the common grains, such as oats, wheat, barley, etc. In these cases the tube is usually filled for a considerable distance and at times the obstructing mass can be felt from the outside of the neck. Particularly in the small animals we find chokes that result from the animal trying to swallow some object that has sharp points upon it, such as pieces of bone or in cases of puppies anything that they are playing with.

Animals that are choked are usually considerably concerned about it, as they refuse to notice the customary commands and prefer to stand quietly with the head lowered and extended, and while not in pain they are noticeably bothered. They can not swallow, and foam and saliva drools from the mouth as fast as it accumulates. They may make swallowing movements but produce no results; they may wrench as if they were attempting to vomit, but this produces no effect, either, and the animal stands in a helpless condition anxiously awaiting relief from some other source. Cattle may bloat very quickly because they can not belch up the gas that accumulates in the paunch, and this in some cases causes death before they are relieved.

When potatoes and such objects are



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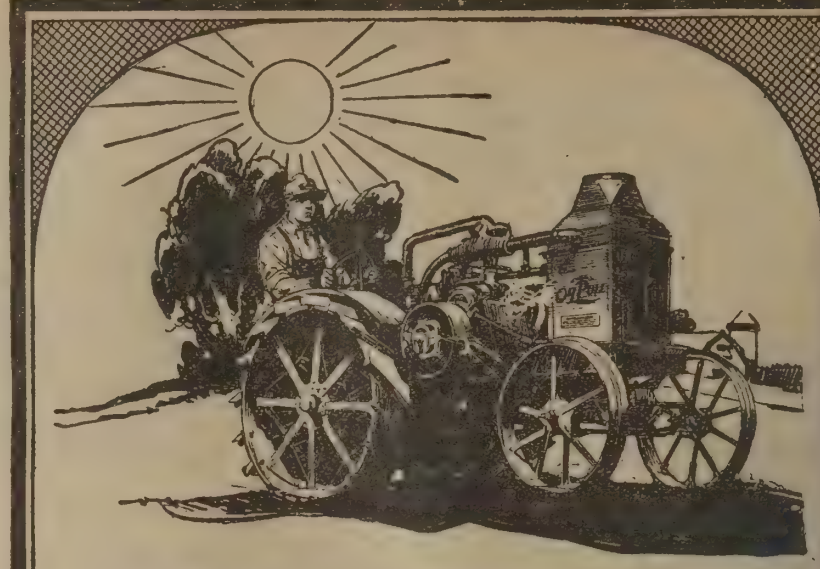
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If you want further proof, see the local Advance-Rumely dealer. In the meantime, please write in for a copy of our widely read booklet, "Triple Heat Control."

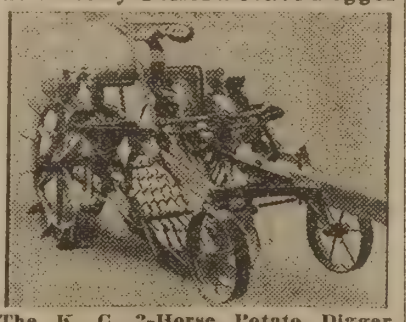
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within the gullet they may be felt when they are in the region of the neck, but lower down of course this is impossible. When such objects are near the throat they may be reached by inserting the hand down into the mouth and through into the gullet; they are difficult to grasp even then and to succeed at all the object must be pressed forward from the outside and into the hand that is within. Failing this, the object may be pushed down if there is suitable instrument for that purpose. This should be smooth, flexible, but moderately stiff, so that it will follow the gullet, but not injure it. The use of broom handles and garden hose is positively dangerous, as they are liable to injure the wall of the oesophagus, and when this is done there is grave danger of causing the animal's death.

Fluids to soften the mass or lubricate the gullet must be used very sparingly or they will fill the gullet and pass into the windpipe and to the lungs, where they may cause pneumonia. Grain chokes sometimes are relieved without treatment by massage of the filled portion through the side of the neck, but if this fails the stomach tube may be passed and many times succeeds in getting the mass broken up so that it will pass on.

Never try to break a solid object by striking it through the wall of the neck, as the danger of seriously injuring the surrounding tissues is too great. Operations on the oesophagus are the last resort. We hesitate to open this tube, as it is very hard to get it to heal, though in some cases it must be done. The rumen, or paunch, of cattle sometimes have to be punctured to relieve the bloat that accompanies the choking.

The difficulty with home treatment is that there are no suitable instruments about for use in such an emergency. The ones mentioned above have been used, but they are attended with serious danger. Better try to massage the grain away and break it up from the outside or pass the hand down into the mouth through the throat and grasp the object if possible.

VETERINARY

By DR. S. B. NELSON.

Cystic Ovaries—I have a 6-year-old cow that came fresh last June and she has never come in heat since. C. H.
Clarkston, Wash.

I would rather judge that your cow needs an examination of the ovaries to find cysts, that is probably the cause of the trouble. If they are, it can be remedied by breaking the cysts about every 10 days.

For Heaves—I have a horse that has the heaves. Have tried several kinds of hay to stop his coughing without success. He is fed oats, home grown hay and alfalfa. He started coughing about five months ago. J. D.
South Prairie, Wash.

If possible, cut out feeding alfalfa to your horse. Cut down the amount of hay that you feed him one-half, at least, then give him two ounces of Fowler's solution of arsenic on his feed morning and evening, every week or 10 days. Give him a rest, then repeat.

Cow Pox—My cow has hard lumps coming on her udder near the base of the teats mostly between the hind ones. The lumps first form with a red surface, very firm and hard, later forming a scab over the surface with no discharge and seemingly not sore. C. C.
Mica, Wash.

I think that your cow has cow pox, and I would suggest that you wash the udder with a two per cent solution of lysol before and after every milking and then apply a little zinc oxide ointment to the sores after every milking.

Horse Coughs—I have a horse that coughs badly at times. Will cough sometimes for three or four minutes at a time. Sometimes has a gurgling sound in his throat. He acts as though there might be something in his throat, but I can detect nothing wrong. He is running on new pasture of clover, orchard grass and timothy; is in good flesh and a hearty eater. J. S.
Portage, Wash.

Try giving your horse a rounding teaspoonful of mustard mixed with his feed once daily for a few days. This has been recommended quite highly by certain people in chronic trouble.

Pigs Have Scabs—I have about two dozen pigs two months old that have something like a scab or mange and they stop growing right away. After they had that for a week they began to cough. I am feeding wheat chop and they run on green wheat and barley pasture. A. L. P.
Dot, Wash.

It is possible that your pigs have one of two diseases. The scab disease may be due to the bacillus necro-phorus, and the scabs that they make may be treated by painting with iodine once daily. The other disease may be parasitic and be due to the intestinal worm ascaris lumbricoides, which is one of the intestinal parasites in pigs and which, in one of its stages, passes through the lungs and may cause the cough and even the thumpy condition of the sides. There is hardly any satisfactory medical treatment for this, but the preventive treatment should be kept in mind, which is to keep the very young pigs pretty well confined to clean and sanitary farrowing pens and to keep them away from the dirt pen or hogyard with wallows in it until they reached a good size, as in these places they are likely to come in contact with the ascaris eggs. When the pigs are ready to be moved, take them to fields or pastures that are as free from this as possible. They should be kept away from these possibly infected yards until they are three months old. Another thing to keep in mind is to clean the sides and udder of the sow from dirt before she is placed in the farrowing pen.

Caked Udder—What can be done for a cow that has a caked udder? L. S.
Locke, Wash.

The symptoms and extent of the trouble of your cow are not very definitely given, but the general treatment for caked udder is to allay the inflammation by hot applications. One of the best hot applications is hop leaves which have been picked to pieces and put in a bandage covering the udder, keeping it hot with hot water. The bandage would be tied up over the back, and there should be four holes for the teats to come through so that milking could be done without disturbing the poultice. You will find it to advantage to decrease the amount of feed you are giving the animal, see that the bowels are normal and then give her a tablespoonful of extract of phytolacca in a little water morning and evening for several days.

Warts—I have two cows that have warts on their teats. T. A. B.
Spangle, Wash.

Use the following treatment for the warts: Chloral hydrate, 1 1-2 dram; acetic acid absolute, 1 1-2 dram; salicylic acid, 1 dram; spirits of ether, 1 dram; collodion, 4 drams. Make this into a mixture and apply to the warts night and morning after milking.

Lump on Neck—We have a mule that has a big lump on his neck the size of a cabbage. We have treated it with liniment, but it does no good.
Snake River, Wash.

If the swelling is hard it might be a tumor, if it is soft or doughy, it may be an abscess. I think it will be safe to make an incision at the very lowest edge of the lump, pretty deep, and see what you find. If it is an abscess, it should be cut so as to give it a large, free opening. It had better be filled with cotton which has been dipped in tincture of iron, and the packing left in for 24 hours, after which it should be painted with tincture of iodine. If it is a tumor it will have to be removed and treated very much the same as the inside of an abscess.

Warbles—Please tell me what to do for a cow that has some sores on her back. When they started they were little lumps. After a while they broke out and some pus came out and they got as wide as a nickel. C. H. H.
Hartford, Wash.

It is quite possible that your cow is suffering from warbles. Squeeze the pus out of the abscess and if the larva is present, destroy it so that it can not bury in the ground and pupate and later grow into the gad fly. Prevention is the best remedy for overcoming this. The eggs are laid during the last part of June, July and August. During this time it is well to keep the parts where the cow can reach with the tongue covered with an oily substance such as fish oil mixed with a little tar.

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POULTRY AND RABBITS

The Color Test

In Determining Laying Qualities

The yellow pigment or color observed in the skin, beak, shank and other parts of the body of the hen of the yellow-skinned varieties is the same as that which causes the yellow color found in the yolk of the egg. When a hen is not laying this color is stored up in the body tissues and is readily seen, says a bulletin discussing experiments in poultry culling. When however, the hen begins to lay all the pigment of the feed is required for the eggs, and hence it is diverted from the exterior body tissues to the fat globules of the egg yolk. If this visible pigment is not continually renewed it fades, leaving the various parts white or bleached.

When a yellow-skinned pullet begins to lay the color first fades from the vent, disappearing in a few days. The eyering or the edges of the eyelids bleach a little slower than the vent. The earlobes of the white lobed varieties are next to lose their creamy color, followed by the lower and upper halves of the beak. The color leaves the corners of the mouth or base of the beak first, gradually fading toward the tips, disappearing from the arch of the upper mandible last. From four to six weeks' production will usually eliminate all color from the beak, says Loyal F. Payne, author of the Kansas bulletin reporting the investigations. The shanks are the last to lose their color, fading first in front and retaining longest the color just below the feather line at the rear of the hock joint. Normally four to five months' laying will completely bleach the shanks.

When a hen stops laying the yellow color reappears in each of the above regions in the same order in which it disappeared; that is, in the vent, eyelids, lobes (if white), beak and shanks, returning, however, much faster than it disappeared.

Color observations should always be made in daylight, artificial light being unsatisfactory. The order of the most common breeds according to the rapidity with which the color fades is as follows: Leghorns, Wyandottes, Plymouth Rocks and Rhode Island Reds.

Color changes are perhaps affected by more conditions than any other set of characteristics. For example, the feed, range, size and age of the birds, thickness of skin, management, vitality and amount of color normally carried in different strains, influence fading and should be considered in culling. Many of the white varieties that have been bred for exhibition purposes show very little yellow pigment whether laying or not. The amount of pigment originally carried in a strain of hens can be determined in a measure after they have been laying some time, by observing the amount of pigment carried in the shanks of related males, preferably brothers.

When culling white-skinned birds such as the Orpingtons, Sussex and Dorkings, or the dark-shanked breeds, such as the Langshans or Andalusians, no attention can be given to color changes. Birds of these breeds are judged by the molt and other factors, all of which factors are applied to the yellow-skinned varieties as well in a complete culling system.

Willapa Poultrymen Organize

Forty poultrymen representing ownership of 7000 hens recently perfected the organization of the Willapa Valley Poultry association, voted to incorporate and made tentative arrangements for part-time employment of a man to handle collection and candling of members' eggs. V. L. Swartz, perhaps the most intensive poultryman and "little lander" in the county, is president of the association; C. E. Lambert is vice president; Z. B. Shay, secretary-treasurer, and Frank Griffin and Anton Christen, trustees. Its territory includes Frances, Leban, Menlo, Raymond, Willapa and South Bend, and its purpose is not only to handle eggs for members, but also to assist them in cooperative purchases of feed.

In spite of the fact that hens in commercial flocks have increased remarkably in the last two years, the local demand for eggs is still not satisfied by the local supply, and no difficulty whatever is anticipated in marketing more than 300 dozen daily, which association members will produce. In fact, it is stated on the authority of County Agent J. R. Beck that the number of laying hens in Pacific county could be doubled without overburdening the local market.

PULLET LAYS 159 EGGS.

Barred Rock pullet No. 88 is leading all the White Leghorn pullets in the third western Washington experiment station egg-laying contest. At the end of the first six months this pullet had laid 159 eggs, equalling the record of last year's winner for the first six months.

Build on the Strain

There are limitations to the general principle that like begets like. It is, however, a fairly safe generalization to follow. If a flock of poultry is the result of systematic, pure breeding for a considerable number of generations back, the offspring of that flock, in a given season, will be very much like its parents.

It is hardly practical for the average farmer with his multitudinous duties of many natures to carry out a systematic and persistent upbuilding process in his flock. But great improvement may be made by only a moderate application of the principle above stated. If there is a hen in the flock that is known to be a good producer, a little careful breeding may work wonders in the future flock of the farm. This hen is perhaps the first one off the roost in the morning, and the last one on at night. She is perhaps the greatest rustler in the entire flock. Hers is perhaps the brightest eye. She perhaps lays an egg of good size as well as more frequently than the other hens of the flock. If so, she is a good foundation on which to begin to build up the flock.

The introduction of a cock bird or a cockerel of the same breed and of a known high-producing strain is the first step. Until the next breeding season do not crowd this extra good hen into heavy laying, but keep her in the most vigorous physical condition possible. Set her eggs in the spring and watch her offspring carefully. Her daughters will undoubtedly be comparatively high producers. But in her sons will perhaps lie the greatest power of transmitting to the next generation her known excellent qualities. Save from among them the most perfect in form and vigor and mate him the following season with unrelated hens of known high-producing quality.

There are many fine points in the breeding of poultry for high production, but for the average farmer the foregoing should insure sufficient improvement to make its practice worth while.

Urges Simple Equipment

"You can head into my place any time you get ready to start such a demonstration," said O. H. Belknap of Chinook when W. D. Buchanan, state poultry extension specialist, told a group of 25 or 30 egg producers of the Peninsula of his plans for establishing cooperative farms where, with the assistance of the extension service, considerable attention will be paid to trap-nesting. Mr. Belknap already has done considerable trap-nesting, and this Mr. Buchanan commended, saying that it will be valuable to the community as a basis for future operations.

The Belknap plant was one of several on the Peninsula which the group visited on an excursion late in May, and except for the fact that they found the owner working as hard, caring for 600 layers, Mr. Buchanan said, as he did when he was caring for 1800, the general plan of the establishment was given the company's "okeh." Too many "furbelows" on the floor and around the yard—a matter in which even experienced poultrymen often err—was given as the expert's diagnosis of the difficulty, and members of the group were warned to keep their equipment and their methods of operation just as simple as possible and still have them efficient. The Belknap flock is a vigorous one, and the songs of its busy workers punctuated the lecture on feeding which was given, appropriately enough, in the feed room itself.

WHEN PROTEIN IS NOT NEEDED.

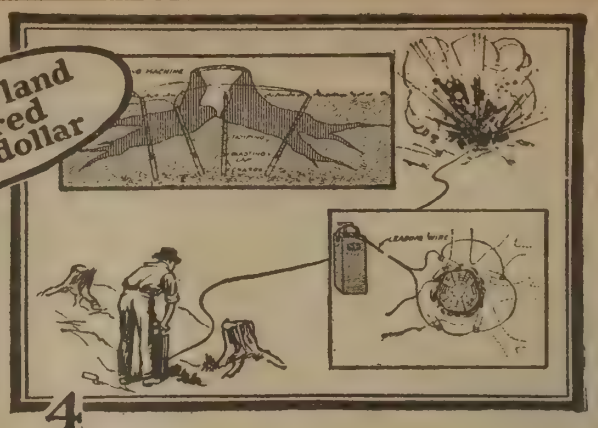
The average poultryman finds it a real problem to keep pullets from laying before they are five months old, but it can be done by keeping protein in animal form away from them in ever decreasing quantities, as the egg-producing period approaches. They grow much more slowly as they reach maturity than they did as young chicks, hence protein is unnecessary.

FISH IN POULTRY RATION.

Fish make very fine poultry feed, but always remember that it's very rich. W. D. Buchanan, state poultry specialist, says that he would want his hens to run about a mile to catch the fish, and that they had plenty of green feed to go with them

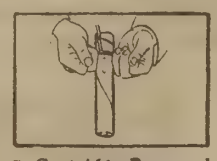
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It has been estimated that during the last three years black-stem rust has caused a loss of 150,000,000 bushels of grain valued at $200,000,000 in seven of the middle western grain-producing states.



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THERE are two methods of firing a dynamite charge: (1) by means of cap and fuse, or, (2) by means of electric blasting caps and blasting machine.

When the cap and fuse method is used, the blaster must remember that the fuse burns at the rate of 32 to 40 seconds per foot, and must allow ample length of fuse to enable him to retire to a safe point before the explosion. Six inches of fuse out of the bore hole should be sufficient.

When blasting hollow stumps, better results will be obtained if separate charges are placed under the stump and its main lateral roots. These are fired at one time through the use of electric blasting caps and an electric blasting machine. This method can also be used, of course, to fire a single charge.

Pacific Stumping Powder, the new du Pont Farm Dynamite, has greatly reduced the cost of clearing land. 130 1¼x8 inch sticks cost but 50 cents more than 85 1⅜x8 inch sticks of standard stumping powders. As they do the same work, stick for stick, the farmer will blast ½ more stumps per dollar.

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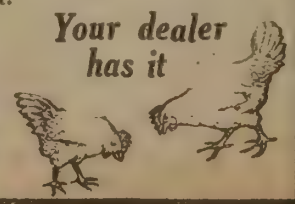
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ORCHARD AND GARDEN

Comb Honey

How to Prepare for the Markets

By GEORGE W. YORK.

As it will soon be time to put the new honey crop on the market, it may be well to suggest a few directions that might be followed with profit to the producers of comb honey. Another article will give instruction about extracted honey.

As soon as removed from the hive supers, the wood frames surrounding the honey should be carefully scraped of any bits of wax or propolis that may have been left on by the bees. The beautiful comb of honey in a clean, white frame of wood makes a very attractive picture, and is also tempting to any one who sees it in a grocery store.

There are on the market several styles of folding cartons, in which to put each comb of honey. One side of the carton has a circular piece cut out, perhaps two inches in diameter. This permits the honey to be seen, and when these cartons are neatly printed with the producer's name, and possibly a little information on the use of honey as a daily food, they make a very desirable way in which to offer comb honey to the public.

Where considerable of this kind of honey is to be sold, it should be put in new wooden cases holding either 12 or 24 of the small squares of honey. Sometimes one edge of the case has a glass front so the honey can be seen without opening the case. This can be used on the grocer's or other retailer's counter until all the honey is sold out of it.

If it is desired to ship these cases of comb honey, it is well to put say, six or eight of them in a crate, having a solid box bottom into which put about six inches of straw or hay, which will serve as a sort of cushion for the bottom two cases to rest upon. If this crate is then supplied with a handle near each top corner, by nailing a narrow board on each side about 12 inches longer than the crate so they will extend six inches at each end, you will have an ideal way of shipping comb honey safely.

Such crate will not be rolled around, and if marked "Fragile—Handle With Care" it will always be carried nicely between two freight handlers. Almost every other way of shipping comb honey has resulted in broken combs, a sticky mess and much loss. It pays to use every precaution so that when transporting comb honey it shall "go through" in good condition.

Why Thin Fruit?

Because It Increases Crop Value

By ELWIN G. WOOD.

No one will question that thinning increases materially the size of the fruit, but too many people have the erroneous yield. Relieved of the burden of producing such a large number of fruits, the tree has a surplus of food material. This nourishes the remaining fruits so well that they increase in size enough to bring the bulk of marketable fruit up to, and in many cases beyond, what it would have been had the tree not been thinned at all, or even poorly thinned. When the influence on annual bearing is considered, there is no doubt left but that for a period of years, other things being equal, a thinned tree will produce more extra fancy and fancy fruit than an unthinned tree of the same age and size growing beside it will produce of extra fancy, fancy, C grade, jumbles and culls.

It is also true that when only parts of a tree are heavily loaded the fruit will be small if not thinned. Each large limb of a tree is more or less an individual unit in that respect.

The percentage of extra fancy grade is materially increased when the fruit is thinned to only one in a place. It prevents a great many blemishes caused by limb rubs, leaf scratching, and the rubbing or pressing of the fruit together. This is especially true of pears. Last summer a high percentage of the low grade pears was due to this cause. In almost every place where the cheek of a pear pressed against another in the cluster there was a black spot sufficient in many cases to keep it from going into the fancy grade.

Fruit thinned to one in a place has a better chance to color up. The sunshine and air has a chance to reach the entire surface, giving higher and more uniform colors, and avoiding the uncolored spots resulting from one specimen shading another. Advantage in color is also secured by thinning the fruit heavier in the more densely shaded portions of the tree, and by thinning from the underside of the limbs, giving preference to the fruit that is more advantageously placed with reference to receiving the sunshine. The same factors which increase the percentage of extra fancy reduce the percentage of C grade.

Thinning decreases materially the percentage of culls and jumbles. This must necessarily follow from the fact that it increases the size, reduces the blemishes resulting from limb rubs, and increases the color. Another important factor in reducing the culls is the assistance that thinning affords in the control of pests and disease.

With the fruits thinned to one in a place they are more easily and completely covered with spray, giving a considerable advantage in the control of pests and disease, especially the codling moth. A second way in which thinning may be made a help in the control of codling moth is by picking and destroying all wormy

(Continued on page fourteen.)

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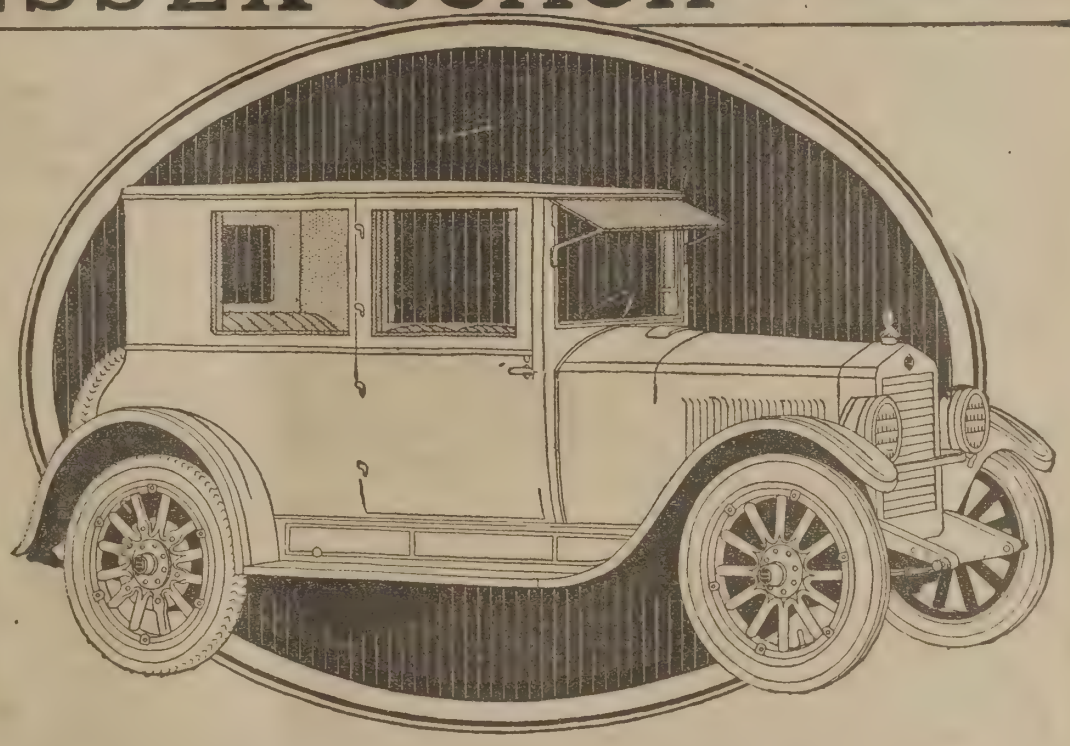
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PIKE'S PEAK OR BUST

By LEWIS B. MILLER

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SYNOPSIS.

Esau Haggerty, a strong man of mature years, and Orlando Medford, a young, slightly built and frail companion, have started from their Illinois home town for the great gold diggings of the west. Esau is pushing a provisions-laden wheelbarrow. Orlando is leading a cow. For three days they have been trudging slowly southwestward carrying out the determination crudely lettered on the side of the wheelbarrow, "Pike's Peak or Bust." Rain and snow impeded their progress, and Orlando falls sick and requires a couple of days to rest before proceeding. Then, with the village that is now Kansas City passed, they follow the Santa Fe trail westward, being but one of scores of outfits of various kinds headed for the fields of golden riches. Once again they stop for a good rest before plunging into the real wilderness, 700 miles of which is still ahead of them to be conquered by foot, cow and wheelbarrow. After several days' tramping, they pitch their tent across a little stream from the camp of a family by the name of Cooper, also headed for the gold diggings. In the party is the daughter of the Cooper family, Hazel, whom Orlando by chance met when both went to the stream for water and in whom he became at once greatly interested. He reluctantly joined Esau next morning for the day's travel, leaving the Coopers to follow later, but with the expressed hope that they would all meet again at the gold fields. It was several days later that Esau and Orlando met up with another strange party on the trail, several men with a push cart to haul their belongings to the diggings. The two parties agree to travel together the rest of the journey. To save time they leave the Santa Fe trail and take a short cut that will save them more than 100 miles. But to their great distress they find themselves many miles out in a waterless, sun-scorched desert, with death from thirst staring them in the face.

CHAPTER V.

Starving on the Smoky Hill Route.

For perhaps half an hour they rested, almost in silence. By that time they had not only regained part of their strength, but most of them had begun to shiver in the raw night air. So, of one accord, they rose up and moved on.

Mile after mile the seven men left behind them. Once warmed up and under way, they rattled along at a good speed. When at last the dim moonlight brightened into daylight, all were of the opinion that they had traveled 18 or 20 miles since that midnight start.

Now the sun, a red coal of fire, popped up out of the desert; and its rays fell upon the little party still pushing along, wearily but doggedly. As soon as there was light enough, they gazed ahead and all around. But not a sign could they discover of any stream that would afford them water. Even that river of sand was nowhere in sight.

Still the worn-out wayfarers drove themselves forward. Not till the sun was nearly two hours high did they halt to rest. Brindle stood with drooping head. So exhausted did she appear that Orlando relieved her of the two parts of her pack. And not long after that she dropped down to rest. Like the men, Frisk stretched himself at full length on the grass.

Not till they had been resting for a good while did any of the party begin to talk.

"Well, boys, the country still looks a little drouthy hereabouts," Sanders remarked, in what was intended to be a cheerful, jovial tone.

One or two grunted something in reply. And at least one man groaned. Esau raised himself to his elbow to say: "Now bobs up that same question ag'in: What're we goin' to do next?"

"I don't know what the rest of you boys have in mind. But I vote to push on a few miles further," Sanders answered. "We can rest a while here, and then make several miles before the sun grows very warm."

"To my way of thinkin', we'd better take the back track while we can, and as quick as we can," spoke out one of the handcart's crew. "If we don't, my word for it we'll leave our poor bones to bleach in this desert."

Esau objected: It's a long, long tramp back to water. Ten chances to one we'll fall by the wayside if we start back."

"Abe, about how fur would you say we've tramped since we left that water hole yisterday mornin'?" demanded a handcarter.

Sanders weighed the matter. "Jake, here's my guess. We traveled about 25 miles between daylight and dark yesterday. And we must have put some 30 miles behind us since moon-up."

"Which amounts to 55 miles," said Orlando. "And, if we turned back, that would be 110 miles without water. I don't believe we can make it back."

"I know we cain't make it back; or as good as know it," declared Esau. "So we'd better push right on, I say."

"And so say I," Sanders agreed. "Just bound to be water somewhere ahead. This desert we're in can't last forever."

"But it may be a hundred miles yet to the fur edge," objected one of his party.

"Yes, or 200—or 500," another man put in. "The fu'ther we go, the worse the country seems to dry up. Don't look to me like it's rained here in a coon's age. This desert may hold out all the way to the mountains."

"But those wagons are ahead of us," Orlando reminded them. "They can't travel without water any better than we can. They must have found water by this time."

For a good while the discussion continued. Should they turn back and try to reach the water they knew was behind, but far behind? Or would it be better to keep tramping toward the water they hoped was not far ahead? Sanders told of a man he had heard of who, lost somewhere on these western plains, had taken the back track, only to die of thirst. But his partner, more resolute, had kept right on and found water within a few miles.

This, together with the fact that those wagons were still ahead, caused the party to decide to push on westward. And as soon as they had rested they were up and tramping again.

The day proved warm, but the thirst-tortured foot travelers kept going as fast as their strength would permit. A few were discouraged, but others were hopeful that they would soon find themselves in sight of some stream. For perhaps two hours they tramped on without a halt.

At last, when the sun was high in the heavens, they looked from the top of a rise and discovered some conspicuous object ahead. At first they were uncertain as to what it was, but, on coming nearer, they made out a covered wagon.

"That must be one of the wagons that passed on only a day or two before us," a handcarter surmised.

As they approached the wagon, they could see that it had been abandoned. Very lonely and deserted it appeared, as the party marched up to it. The wagon stood by the side of the road, with some ox yokes lying close by; but no sign of a camp was visible.

"Now what—what does this mean?" exclaimed Orlando.

It was Sanders that answered: "To me there's only one thing it can mean. Fellows with this outfit lost hope of getting to water with it. Maybe their team got too weak to pull the wagon. So they took their steers loose and traveled on without it.

"They must ha' saw starvation on their trail, and was tryin' to outrun it," was Esau's comment. "And we may have to—have to do likewise; leave everything, turn ourselves foot-loose and travel for our very lives."

The whole party halted by the wagon. On examining its contents, they found the usual miner's outfit of provisions, tools and bedclothes.

"They don't seem to have taken anything with them," observed Orlando.

"Guess they was so hard put to it for water they 'lowed they'd better save their lives first and their other things after'ds," somebody else remarked.

"The wagon itself is a big, heavy thing, but they didn't have much of a load," a handcarter said. "I'm wonderin' did they foller the road from here on, or did they just strike off across the country? And did they drive their work cattle as they went? Or did they turn 'em loose to save theirselves if they could?"

"Nobody knows about that," Sanders answered. And one of his party said: "No more reason for them fellers to be skeered, whoever they was, than the' is for us to be skeered, as I can see. We'd better be hustlin' from here before it's everlastin'ly too late."

But Orlando spoke up: "The men with this wagon didn't know any more about this trail than we know, I'm safe to say. There may be worlds of water less than five miles ahead."

"Wish to the good Lord I thought so! It's more likely to be 50 miles ahead—or a 150," grumbled a handcarter.

"Fur or nigh, we'd better be makin' tracks in some direction," declared Esau.

"One thing we can be sure of, boys," Sanders told them. "Desperate as these fellows were, they didn't turn back. They thought they had a better chance to find water ahead than behind. Of course they might have been mistaken. But we started to travel west till noon; and I say let's keep right on till then."

One or two of the handcart's crew grumbled, but nobody offered any serious objection. So the whole party were soon following the road again.

For another hour they pushed on doggedly, traveling as fast as their failing strength would let them. From every high point they gazed ahead eagerly in quest of watersigns, but only to be disappointed. And the further they went the more silent and gloomy the whole seven became.

At last, from the top of a rise, they discovered another object in the dim distance.

"Must be another deserted wagon," a handcarter called out.

"Looks to me like I can see the thing in motion!" Esau presently exclaimed.

"It is in motion," Sanders declared.

"Yes, I can make out that it's moving—moving this way," Orlando called to those behind. "And I'm pretty sure that it's a covered wagon—another covered wagon."

"No doubt about it now! It is a covered wagon!" somebody shouted, a few minutes later.

Not a little excited, the whole party quickened their pace. And all eyes were fixed on that approaching wagon and team.



"Men, I've thought of something."

It was the usual canvas-covered wagon, and in time they could see that it was drawn by three yoke of oxen. Later three drivers could be made out, one on the off side and two on the near side. All the drivers were on foot, tramping along by the team.

As the two parties came near together, it was easy to discover that something was seriously wrong with both the drivers and their oxen.

All the men were bareheaded, with bloodshot eyes and tangled hair. One had a whip, and the others were using their hats to urge the team forward. The oxen themselves—the lead yoke were really cows—had a wild-eyed, frightened look. All of them, both men and animals, seemed to have caught a glimpse of death somewhere in the desert beyond, and they were fleeing from it in terror.

When the two parties were not many yards from each other, one of the three drivers called out, almost shouted:

"For the Lord's sake, fellers, what're you makin' this a way fur? Air you huntin' a place to leave your bones?"

"No water ahead, then?" demanded Sanders, though it was a useless question.

"Water! Water in this God-forsaken country?" exclaimed another of the wild-eyed men, with a hollow laugh. "It's—it's a thousand miles to a puddle hole! Nothing but starvation and death the way this cursed trail leads!"

"How long have you men been driving?" questioned Sanders, after the two parties had come to a standstill.

"How long have we been drivin'? How long hain't we been drivin'?" exclaimed the wagoner who had first spoken. "We've been goin' study for a year or two, seems to me like! We've druv most of the night! Only stopped now and then to let our work cattle rest a minute. Oh, we've had a terrible time of it, I can tell you!"

"You fellers certainly look like you've seen a ghost, or looked old grim death in the face!" declared a handcarter.

Now Sanders was asking: "How did you ever manage to travel so far into this dried-up region? How could you go without water so long?"

"Why, we carry a little water barrel in our wagon; and we'd filled that at the last watering place," one of the strangers explained. "We drunk out of that and watered our oxen out of it till yesterday noon. By that time there wasn't a drop left. We pushed on several miles further. But the longer we traveled in that direction the drier things looked. So we just had to turn back. We rested till about sundown, and then struck back this way. And this way we've been traveling ever since. Have you fellows got any water with you? Even one good swallow would go down mighty nice just now."

Sanders answered: "Boys, wish to my soul I didn't have to tell you. But not a drop of water can we rustle up. We travel as light as we can, of course. Have to. For that reason we left the last water with our water kegs empty. We haven't had a drink since yesterday morning. You three men have drank since we did. We've been pushing ahead hard, too, in the hope of reaching some stream—some stream with water in it."

"Men, you're on the wrong scent! You'll never find it—never find water in this direction!" declared one of the strangers, a young fellow named Holloway. "We've followed this road all of 30 miles beyond here, and every inch of it is as dry as dust. You'd better strike straight back, and be mighty quick about it!"

"We'll have to turn back now! Not a doubt of that!" Esau was speaking to his partners. "All the time I've been for pushin' ahead. 'Lowed we's jest bound to find water before long. But if it's 30 miles ahead yit——"

"Not 30 miles to water!" broke in one of the ox drivers. "Thirty miles ahead and then not a drop! You'd be crazy as bedbugs to keep on the way your noses are p'inted!"

"But it's—it's 60 or 70 miles back to water. Every inch of 65 miles, I'd say," Sanders reminded them. "And I'm wondering—I'm wondering if we can hold out to reach it. I doub't if any of us have got the strength. I doubt it very much."

"But we're bound to reach it! We've jest got to, I tell you! Only chance for us and our oxens!"

"Those oxen will never be able to travel 60 miles further and drag that big wagon. I'd turn 'em foot-loose and give the poor fellows a chance for their lives," Orlando advised.

"That may be what we'd better do," admitted one of the drivers.

And young Holloway answered: "I'm pretty sure that's what we'll have to do. If we don't, they're likely to drop down under their yokes before many miles."

"Yes, and some of us human critters is likely to wilt down in the road before many miles. Me for one," a handcarter declared.

It was Sanders that answered: "You never said a truer word, Jake. I'm as big and husky as any of you; and I count myself as good a man as anybody in this outfit. But I doubt mightily if I've got strength enough left in me to drag myself back over the long sixty-five miles without water and food. Of course we have plenty to eat. But who can eat when thirst is gnawing the very insides out of 'im?"

"But we've got to make it back, Abe! No other hope for us!" a handcarter exclaimed, excitedly, in shrill tones. "It's do or die with us! Yessirree! It's make it back or leave our pore bones out here for the turkey buzzards to pick and the coyotes to gnaw! It's—it's death to lose a minute! We'd better leave everything right here, and git back the best way we can and the quickest way we can! Start this minute, I say, and——" He turned as if about to act upon his own advice.

"Hold on! Hold on there, Mark!" called out Sanders. "Let's not lose our heads at the outset. If we do, that will be the end of us. I'll tell you. Let's all sit down here in the shade of this wagon and look the situation straight in the face. If we ever wriggle out of this tight scrape, we've got to do it by—by using our thinking machines."

"That's not a bad idea," Holloway answered. "Though I don't see a thing we can do but run for our lives—run like scared rabbits."

Finally the whole party of 10 consented to seat themselves in a circle; though more than one grumbled at losing time that ought to have been spent traveling.

"If we only had a little water, we could give it all to one man, and let him hurry back and come to meet us with a water supply," somebody remarked. "He'd be lots stronger——"

"But we haven't any water, little or much, so it's time wasted to talk about that," Sanders broke in. "But it may be a good idea to let one man go on ahead of the others. That is, if anybody feels pretty vigorous—able to take a 60 or 70 mile tramp, let 'im speak out."

Silence followed this appeal. Now that they were down, all realized how nearly exhausted they were.

At last Orlando spoke: "Worst trouble is, if any of us could make it back to water, he'd be too nearly dead when he

got there to turn and come this way to meet the rest of our party."

"That's right," said a handcarter nodding. "And yet if he didn't come nobody would come. Be nobody else there to send."

"That's where the rub lies. That's the hard part of it," admitted Sanders. "A fellow strong enough to make it back to water would have himself; but I don't see how he could turn a hand to save the rest of us."

"Then what's to be done?" demanded one of the handcart's crew, in tones that trembled with dread.

Nobody answered at first. But finally Sanders spoke: "I see but one way for us. We'd better leave everything right here, wagon, cart, wheelbarrow and all; and we'd better turn every animal footloose. They're likely to wander about till they die, but that can't be helped. We'll at least give 'em a chance. As for us men, we'd better rest a few hours if we can without chewing our tongues, and then start back. Let's try to keep in the road, everybody. It will mean death to get out of it. But we'd better not try to keep together. I mean, let the ones that can travel fastest not wait for the others. The strong can't help the weak by staying with 'em. But they can help 'em by hurrying on and coming back to meet 'em with water."

"But how'll they fetch back water? What'll they carry it in?" demanded Esau.

Nobody answered at first. But presently a handcarter said:

"There comes the hard part. We've got a water kag, but—"

"But a water kag's a powerful onhandy thing to pack," suggested one of the wagoners.

"Speshly sixty-five miles, and on foot," spoke up Esau.

"Guess we'd better have one, though, and take turns at carrying it. That's our—our only chance," Sanders told them. "And we'd better stuff something into our pockets to eat; whatever we've got that won't have to be cooked. We're not hungry now. Or at least we don't feel hungry. But we will feel it the minute we drink—as hungry as wolves."

After that followed a silence. Somebody suggested that they ought to rest and

(Continued on the following page.)

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HONEY—NEW EXTRACTED, TWO SIXTY-pound cans, $10. J. M. Ruyts, Buhl, Idaho.

MISCELLANEOUS—FOR SALE 60

SASH AND DOORS—O. B. WILLIAMS CO., 1943 First ave. So., Seattle. Chicken house sash, 20" wide by 25" high, 80c; a dozen different sizes in stock for immediate shipment. Skylights for chicken houses, 36"x40"; price, glazed, $2. This is the size recommended by the Western Washington experiment station. We carry them in stock for immediate shipment. Sash and doors for all purposes at lowest prices. All orders receive prompt attention. Our large illustrated catalog No. 35, showing full line of building material and built-in fixtures for the home, free on request. O. B. Williams Co. Established 1899.

CALIFORNIA DIGEST—A WEEKLY MAGAzine, honestly, completely, impartially portraying resort, climatic, soil, weather, rainfall, irrigation, transportation, manufacturing, business, crop, investment, pleasure conditions, all sections of state; reliable, authentic. Year, $2. Sample, 10c. Digest Pub. Co., 1315 27th st., Sacramento, Cal.

SACKS—SECOND-HAND GRAIN AND SPUD, correctly sorted and graded; also pipe, new and second hand, any size; standard roofing paper at a big saving; pumps, engines, belting, cables, etc. Alaska Junk Co., Inc., S120 Adams st., Spokane, Wash.

KENTUCKY TOBACCO, NATURAL LEAF; mild and mellow smoking, 10 lbs., $2.50; 20 lbs., $4. Send no money, pay on arrival. Farmers' Tobacco Union, Sedalia, Ky.

FARMERS' WANT ADS

This is the farmers' "want," "sale" and "exchange" department for small advertisements of farmers, including live stock and poultry.

Advertising rates for ads running 1 to 3 times, 10c per word per insertion, with a special rate to Farmer subscribers, as follows: Ads running 4 to 12 times, 9c per word per insertion; ads running 13 times or more, 8c per word per insertion.

All commercial and land advertising 10 cents per word each insertion. Open also to nonsubscribers.

In using these columns advertisers must observe: (1) No advertisements will be inserted for less than $1.00. (2) Every word, number and initial, including name and address, must be paid for. (3) New advertisements, changes of copy or cancellations must reach general office, Spokane, Wash., 10 days in advance of publication date. (4) Cash must accompany order.

Above rates include insertion in The Washington Farmer, The Idaho Farmer and The Oregon Farmer, which constitute the Pacific Northwest Farm Trio, 46 Review Building, Spokane, Wash.

MISCELLANEOUS—FOR SALE (Continued) 60

CORN HARVESTER CUTS AND PILES ON harvester or winrows; man and horse cuts and shocks equal corn binder; sold in every state; only $25 with fodder tying attachment. Testimonials and catalog free showing picture of harvester. Process Harvester Co., Salina, Kas.

FOR SALE—ON ACCOUNT OF FINISHING school, we desire to sell our retail dairy business, consisting of 35 cows, with ensilage and other feed; rent barns, fully equipped. Taylor Bros., Corvallis, Ore.

WALL BOARD—WRITE FOR SAMPLE OF Washington plaster wall board; won't warp, won't burn. Manufactured by Washington Building Products company, 6851 E. Marginal Way, Seattle, Wash.

NATURAL LEAF TOBACCO, CHEWING, 5 pounds, $1.75; 15 pounds, $4; smoking, 5 pounds, $1.25; 15 pounds, $3. Send no money, pay when received. Farmers' Tobacco Association, Paducah, Ky.

GRAIN BINS—SPOKANE CULVERT AND Tank Co. Metal grain bins, four 1000, ten 2000 bushels; all for $2500, f. o. b. Washtucna; first class condition. Bassett Hardware, Washtucna, Wash.

HOMESPUN SMOKING TOBACCO; MILD AND mellow; 10 lbs., $1.50; 20 lbs., $2.75; delivery guaranteed. We furnish free recipe for preparing. Smoking Tobacco Exchange, Sedalia, Ky.

NATURAL LEAF TOBACCO, CHEWING, 5 lbs., $1.75; 10 lbs., $3; smoking, 5 pounds, $1.25; 10 pounds, $2. Send no money, pay when received. Tobacco Growers' Union, Paducah, Ky.

TOBACCO — KENTUCKY'S PRIDE; EXTRA fine chewing, 10 lbs., $3; smoking, ten lbs., $2; twenty, $3.50. Farmers' Club, Mayfield, Ky.

MISCELLANEOUS. 61

YUBA TRACTOR TO TRADE FOR HORSES. H. L. DeWolfe, Helix, Ore.

WILL TRADE FIRE WOOD FOR HAY. P. N. Andriesen, Rainier, Wash.

MISCELLANEOUS—Wanted. 63

HIDES—WE BUY HIDES OF ALL KINDS. Write for prices and tags. Hibbard-Stewart Co., Hibbard bldg., Seattle.

WOOL—WE BUY WOOL AND PELTS. WRITE for prices and tags. Hibbard-Stewart Co., Hibbard bldg., Seattle.

MACHINERY—For Sale 93

FOR SALE—ONE 18-FOOT CATERPILLAR, self-propelled combine harvester, 55 h. p. motor; also one 12-20 Yuba tractor; attractive prices and reasonable terms for quick sale. B. Johnson, 622 Douglas st., Wenatchee, Wash.

CASE THRESHING OUTFIT FOR SALE BY Herman Mennrich, Odessa, Wash.

AUTOMOBILES—FOR SALE. 112

SCHOOL BUSES, ON ONE-TON CHASSIS; seating capacity, 18 to 25, $800, $1000, $1200; sold on terms to suit purchaser. Oldsmobile Motor company, Oldsmobile distributors, 1229 First ave., Spokane, Wash., 1000 E. Pike st., Seattle, Wash.

STOVE REPAIRING 128

WRITE MYER RUBENS, SPOKANE, ABOUT stove repairs, welding broken parts, nickle plating.

FUR-BEARING ANIMALS 170

SILVER AND CROSS FOXES FOR SALE. William Rambo, 407 Sprague, Spokane.

PETS—Dogs, Birds, Etc. 171

BEAUTIFUL WHITE COLLIE PUPPIES; reasonable prices. Urbandale Farm, Oakley, Idaho.

FOR SALE—FINE FOX HOUNDS, PUPS. Stamp. Hugh Morrison, R. 8, Spokane, Wn.

WHITE COLLIE PUPS, BEST OF BREEDING. Beulah W. Soults, Eugene, Ore.

RABBITS and HARES 173

FINE SPECIMENS GIANT, CHECKEREDS, grays; pedigreed. Flemish Rabbitry, Halsey, Ore.

POULTRY 174

WHITE LEGHORN HENS, $1 EACH; 1000 two-year-old "Henacres" hens, clean, healthy, heavy laying, selected stock must go to make room for our pullets. Also 1000 yearling hens at $1.50 each. These hens will make good breeders for 1923. Orders accepted for ten or more at above prices. July or August delivery. Satisfaction guaranteed. Free catalog. "Henacres," the Inland Empire's greatest poultry farm, Box A, Prosser, Wash.

PULLETS—1500 APRIL AND MAY HATCHED White Leghorn pullets for sale at attractive prices; hatched from thoroughbred Hollywood and Tancred strains; sired by cockerels 250 to 290 egg strains. We ship at three months of age and guarantee satisfaction or you may return the birds in 3 days. We can give you quality and service. Queen Hatchery, Seattle, Wash.

CERTIFIED WHITE LEGHORN BABY chicks; booking orders now for summer and fall delivery; safe arrival live, vigorous chicks guaranteed; no money in advance; pay on delivery. Established 1898. Sonoma county farm bureau accredited hatchery. Must Hatch Incubator Co., 445 Seventh st., Petaluma, Cal.

TRY OUR PARCEL POST PACKAGE—KEEP the old hen busy. We will ship you first-class baby chicks, postpaid to your door, direct from the hatchery and guaranteed all alive. Price, $4.50 per 25; $8 per 50. For delivery April, May or June. Order now. The White Hatchery, Petaluma, Cal.

WHITE LEGHORN BABY CHIX FOR SUMmer and fall months from stock accredited by Sonoma County Farm bureau. We guarantee safe arrival. Write for prices and literature. The Pioneer Hatchery, 422 Sixth street, Petaluma, Cal.

S. C. WHITE LEGHORN COCKERELS FOR breeding; extra select March hatched from high record O. A. C. stock; not excelled for egg production. Corvallis Poultry Farm, Corvallis, Ore.

BUFF LEGHORNS; OLD AND YOUNG stock of my championship strain; thousand to select from. R. Stromquist, Tigard, Ore.

POULTRY (Continued) 174

BABY CHICKS — WE GUARANTEE OUR chicks to be from the highest producing hens in Petaluma. Write for further information. The White Hatchery, Petaluma, Cal.

DOLLARS FOR YOUR EGGS—WE PAY THE top market prices for your eggs and poultry. Daily cash remittances. Western Produce Co., Spokane.

FORD'S BRED TO LAY S. C. WHITE LEGhorns; 2-year-old breeding hens, $1 each. W. A. Ford, Umatilla, Ore.

LIVE STOCK 177

LARGE, HEAVY PRODUCING HOLSTEINS for sale at all times in car lots; tuberculin tested; 150 to 200 head always on hand; well marked heifer calves from registered sires and heavy producing dams; crated for shipment anywhere, $25 f. o. b. Levinson & Balmeili, Yakima, Wash.

SHIP US YOUR POULTRY AND LIVE STOCK. We pay top market prices. Light veal, fat, fancy, 12½c; dressed block hogs, 14c; spring chickens, 1 to 1½ lbs., 18c; 1½ lbs., and over, 22c; hens, light, 14c; heavy, 17c. Prompt returns. John Lewis & Co., Spokane, Wash.

GET ROYAL OAK REGISTERED HAMPshire Dawn sheep. The premier mutton sheep. Rams and ewes for sale. Order rams early. Lloyd Millhallen, Corvallis, Ore.

DUROC BARGAINS—WEANED PIGS OF BEST breeding, $12; boar and sow, $22; boar and two sows, $32; not related. All registered and crated. Shadeland Farms, Amity, Ore.

REGISTERED SHORTHORN BULL, 4 YEARS old; from the famous Chalmers herd; will sacrifice. Alone and unable to handle him. Mrs. N. O. Anderson, Skamania, Wash.

WE PAY TOP PRICES FOR YOUR LIVE OR dressed veal, hogs and poultry. Your check by return mail. Shipping tags on request. M. & J. Packing Co., Spokane.

REGISTERED SHROPSHIRE SHEEP FOR sale; several yearling and 2-year-old rams; reasonable prices. C. W. Dwigan's herd, R. S. Waddell Motor A, Eugene, Ore.

WILL SELL 30 HEAD OF REGISTERED Shropshire rams. Write McK. Edwards, Valley, Wash.

FOR SALE—HEREFORD BULLS, GOOD ones. Platt Bros., Genesee, Idaho.

SWISS MILCH GOATS, FRESH DOES AND kids. Mamie Rand, E1024 Decatur, Spokane.

TOGGENBURG MILCH GOATS; 4 AND 5 QT. strain, $30. Goat Ranch, Banks, Idaho.

HARNESS and SADDLERY 189

SEND FOR FREE HARNESS AND SADDLE catalog today; cut out the middleman, buy direct from the manufacturer. Lowest prices in the west; satisfaction guaranteed. Established 1881. Write Pierce Harness Co., Dept. T, Spokane, Wash.

JOB PRINTING 372

GUARANTEED BETTER BUTTER WRAPpers: 100, 60c; 250, $1.25; 500, $2.25; 1000, $4; printed to order. Home Specialty Co., Middleton, Idaho.

FURRIERS 429

BEAUTIFUL FURS MADE FROM BLACK, white or blue Flemish Giants; registered stock. Orr's Rabbitry, 3902 No. Gove, Tacoma, Wash.

MATERNITY HOMES 497

MATERNITY HOSPITAL; STRICTLY PRIvate; doctor in attendance; prices reasonable. Mrs. Elizabeth Peel, matron, W1324 Broadway, Spokane.

PERSONAL 537

WANTED—TO CORRESPOND WITH LADY under 50, with some means; interested in poultry farm in Boise valley; object matrimony. H 1, Idaho Farmer, Spokane.

BUILDING MATERIAL 588

TURNS PLASTERING INTO PLAY—PERFECtion plaster wall board can be nailed on just like lumber, and makes a perfect plaster job. Western Wallboard Co., Seattle, Wash.

BUILDERS, CONTRACTORS, HOME OWNERS, write for free 1922 catalog. Tacoma Sash & Door Co., Tacoma, Wash.

SEEDS. 620

SEEDS FOR SALE—VETCH, FALL RYE, gray oats, black oats, clovers, rye grass, pasture mixtures, rib grasses, etc. Shipments anywhere, promptly. Brownsville Warehouses, Brownsville, Ore.

NURSERY STOCK 621

GROW BUREAU OF PLANT INDUSTRY'S new pedigreed variety Washington asparagus; best in the world. Ask for literature and terms. Home Nursery, Richland, Wash.

FARM LANDS FOR SALE 651

IDEAL FARM AND HOME—100 ACRES, IN beautiful Tualatin valley, 15 miles to Portland, Ore., on paved highway; good water; city market; electricity; interurban station at front door; town one mile; all cultivated, level, well drained, fertile loam soil; good buildings, large trees around house; ideal home location! country life with advantages of nearby city. Advantage of best grammar and high schools. This is an investment, located close to Portland. In a few years can be subdivided at large profit. Price is reasonable to close estate. Address owner, M. M. Gillette, 407 Platt building, Portland, Ore.

DAIRY FARM, 165 ACRES; 40 ACRES UNDER cultivation; 3½ miles from Vader; ½ mile from school; good buildings; water piped to house and barn; telephone; 12 cows, team, farm machinery; $3500 federal farm loan; will sell with or without stock and equipment; will trade for city property or suitable acreage; priced right. Wm. Hogan, Vader, Wash.

7000 ACRES SEQUIM LAND SETTLEMENT project, containing the finest berry and dairy land in the state, now offered for settlement at attractive prices and terms. Free booklet. Thos. G. Mortland, Sequim, Wash.

EXCELLENT OPPORTUNITY FOR SETTLERS and also for loggers or millmen; finest soil and water; close to live seaport; cheap; splendid dairy, berry, fruit section. H. E. Scholz, Menlo, Pacific county, Wash.

FARM LANDS FOR SALE (Continued) 651

IRRIGATED FARMS FOR SALE—160-ACRE farms, improved or unimproved; 30 to 160 acres irrigable land on each parcel; near Lethbridge, in sunny southern Alberta, can be bought for $15 to $40 an acre. No need for pioneering. Well settled country, good roads, railways, schools, telephones; agreeable social conditions; fertile land; success of irrigation farming here already demonstrated; irrigation system being constructed under government supervision. Water available in 1923. Write for information concerning crops grown and description and location of farms to the province of Alberta, Irrigation Council, 12 Provincial building, Lethbridge.

CUTOVER LANDS, EASY TO CLEAR; $8 TO $20 per acre; 25 miles north of Spokane; on hard-surfaced highway; Great Northern and Milwaukee railways; excellent opportunity for dairying and stock raising, with Spokane markets and creamery near at hand. Will help the man who will live upon this land and agree to clear a part each year by giving lumber to help start his buildings, and a pure-bred Jersey bull to groups of farmers. Interest and payments low. Write Milan Farms Development company, Dept. T, Old National Bank bldg., Spokane, Wash.

EQUIPPED ALBERTA DIVERSIFIED RANCH; 70 head cattle, horses and machinery; 1120 acres of the best black loam soil in Alberta; 240 acres in small grain; 1000 acres tillable; 2 good springs, fair house and outbuildings; good barn, 75x90; land fenced and cross-fenced; 18 miles south of Calgary; 1¼ miles from station and close to Dominion highway; school across the road. This is an ideal diversified or dairy ranch. Price $45,000, with $10,000 cash, balance on easy terms at 6 per cent. T. C. McCaustland, 602 Sprague ave., Spokane, Wash.

60-A. IMPROVED FARM; NEW 4-ROOM house, barn, other buildings; half cultivated; oats, clover, timothy, potatoes, truck; fenced, cross-fenced; several tons hay, plenty water; 7 cattle, team, harness, implements, household goods, Ford car, 80 chickens, some fruit; 1½ miles railroad, postoffice; school across road; everything goes, $4000. Owner, F. L. Stephenson, Garwood, Idaho.

BIG OPENING SALE OF YAKIMA VALLEY farm land, under an assessed state and government approved irrigation project; good, deep soil; close to town, railroads and state highway. We sell in tracts to suit purchaser at $25 per acre and up, on easy terms. Our many sales to farmers show that this land is a good investment. Western Lands, Inc., owners, 918 Green bldg., Seattle.

THURSTON COUNTY—5000 ACRES, VERY fertile, level; fruit, berry and poultry lands; right at beautiful state capital. No extremes of temperature; no storms or floods, no irrigation; bumper crops; fine markets. 5 or 10 acre tracts; low prices and long term payments. Send for our valuable pictorial booklet. Norpia Realty Corporation, Olympia, Wash.

174 ACRES, ON KOOTENAI RIVER AND Great Northern; 94 bottom, 8 pasture, 18 fenced and cross-fenced; 3 plowed, 15 ready; ½ acre fruit, 4 cabins, team, harness, wagon, plow, harrow, tools, etc.; 2000 ft. lumber, 14 bales roofing, 6 windows, fine cattle or chicken ranch; fine government range. $4000. Chas. R. Scholz, owner, Ural, Mont.

ON ACCOUNT OF OLD AGE MUST SELL 680 acres; 540 plow land; 200 can be irrigated; fine buildings; splendid well running water; 3 miles from railroad; 4 from Fowler, Mont.; oil well; one half oil lease and 120 acres of crops; fine condition; all go with land for $25 acre. C. A. Sluys, care Roy Smith, Route 3, Everson, Wn.

960 ACRES AT $22.50; ALBERTA GRAIN AND stock ranch; northwest of Lacombe, on railroad under construction; no fail crops; full set good buildings; 190 acres broken; will subdivide; school, church, station, postoffice 1½ miles. Irving Jayne, Edwall, Wash.

CALIFORNIA STOCK RANCHES. 4 kinds of acorns for hogs. Plenty of grass and water. 50-in. rainfall, mild climate. 160 acres up. Prices $6 per acre up, as per improvements. No trades, easy payments, liberal terms. E. D. Baker, Nashmead, California.

BIG LUMBER CO. LAND SALE IN SKAGIT county; 40 acres, $1400; 20 acres, with new house, $1500. Lumber furnished for building. Lots of work for the settler; splendid district, roads, schools and towns. H. C. Peters, 726 3d ave., Seattle.

BEST BEAVERDAM SOIL IN AMERICA; sold in small tracts by Long Island Gardens Co., Brownsmead, Oregon; reasonable prices, easiest terms; wonderful berry land; best shipping facilities, schools. Write for particulars.

290-ACRE FARM IN NORTHERN WHITMAN county; 160 summer fallow; fair buildings; water under pressure; family orchard; on county road; 1 mi. to warehouse. $17,000 will handle. P. O. Box 1034, Spokane.

SELL YOUR PROPERTY QUICKLY FOR cash; no matter where located. Particulars free. Real Estate Salesman company, 501 Brownell, Lincoln, Neb.

HIGHLY IMPROVED 80-ACRE FARM; NEAR Tekoa, Wash.; level, first-class soil; 5 good springs; water in house. Owner, E604 21st ave., Spokane.

160 ACRES, ¼ MILE ADDIE; GOOD BUILDings; 10 acres cleared. $3000. $1200 cash, balance easy. Box 20, Addie, Idaho.

FARM LANDS FOR RENT 657

DAIRY RANCH, JOINING LIVE TOWN. FOR rent; stock and equipment for sale. Address Mrs. J. DePuy, Bonners Ferry, Idaho.

IRRIGATED LANDS—For Sale 663

IRRIGATED LAND FOR SALE IN SOUTHERN Alberta; having bumper crops this year. Write for prices and particulars. Apply W. M. Harris Agency, Ltd., Lethbridge, Alta.

FOR SALE OR EXCHANGE 702

FOR SALE OR TRADE FOR COAST PROPerty; 3½ acres, well improved, out of limits; 10 minutes' walk from bank; near school; excellent Jersey, splendid mare, chickens, implements, young orchard; ideal for poultry and berries. Trade, $3500; cash, $2800. P. A. Peterson, route 1, Kennewick, Wash.

FOR SALE OR EXCHANGE—320 ACRES mixed farm, with equipment, stock and crop; four miles nearest town; school close by; all fenced; good water. For particulars apply in English or German to John Lustig, Bethune, Sask., Canada.

FOR SALE OR EXCHANGE—600 ACRES IN central Oregon; 40 acres irrigated, balance to be irrigated in 1924; will exchange for land in Washington or Canada. For particulars address B. F. Wilhoit, owner, Prineville, Ore.

80 ACRES, INCLUDING FARM MACHINERY and stock; 17 head registered and high grade Holsteins; ideal potato and lettuce soil; priced short time, $15,000; would trade land for land near Boise. Jas. A. Black, Kuna, Idaho.

320-ACRE FARM, GOOD CROPS; SELL AT bargain, or trade for coast property. Ed Green, Soda Springs, Idaho.

IMPROVED MINNESOTA FARMS FOR SALE or exchange. O. J. Bylsma, Lynden, Wash.

Pike's Peak or Bust

(Continued from the preceding page.)

take the animals out and let them rest. But all were so much excited over their desperate situation that they finally decided to travel a few miles toward water first. At once the men with the wagon began to unyoke their work cattle.

"You're goin' to turn old Brindle loose, I reckon, air you?" said Esau to his partner

"I don't think so. I'll strip off her pack and her saddle; but I'll keep the rope on her horns and drive her as I go. At least I'll drive her as long as she can travel and as long as I can travel. You'll leave your wheelbarrow just where it is, I suppose?"

"As good a place as any. Don't know whether I'll ever git back to it or not. Don't see how I can unless it rains. If I never come back——"

"Boys," Sanders here called out, "I've just thought of something. "There's some travel on this road all the time. We may meet wagons. If we do, we'll turn 'em back. And, of course, they'll give us a ride."

"Wouldn't it be a glorious thing if we could meet somebody?" exclaimed a handcarter.

"And let's hope whoever we meet will have a kag of water with 'em," spoke up somebody else.

And another man added: "Make it a bar'l while you're wishin'. I could dreen a kag or two myself."

"Wishin' ain't water," one of the drivers was saying, when Orlando, who was stripping the pack from Brindle, paused to call out:

"Men, I've thought of something. Seeing my mining tools—my pick and shovel—suggested it. Ten of us here, and plenty of tools to dig with. Why couldn't we pick out a place and dig to water?"

"Well now, I'm wondering if we could!" exclaimed Sanders. "Why didn't we think about that sooner?"

"Yes, that's worth thinking about," called out Holloway, now busy unyoking the wheel oxen.

"But diggin' for water is powerful uncertain business," another of the wagon drivers suggested.

"No uncertainer than trampin' a hundred and thirty miles without water," somebody else spoke up.

However, Orlando's suggestion appealed to all of them. Suspending their preparations to travel, the 10 men quickly grouped themselves together again.

"But where would we dig?" somebody wanted to know.

"Lowest place we could find would be the best place, I'd say."

"Now who knows but what we could dig in the river bed and strike water?" exclaimed Esau.

And Sanders added: "Nearly all these dried-up western streams have water under their sand beds if you dig deep enough, I've heard tell."

"That river bed back yander didn't look to me like it had ever seen water."

"But it had—of course it had! Scads of it!" exclaimed somebody. "Looks are deceptive. Everybody knows that."

"But it's a long, long ways back to the river bed. We've traveled nobody knows how many miles since we parted company with the river," another reminded them.

"But if the map Mr. Sanders showed us is right, the river can't be more than a few miles south of here." Orlando made that remark.

"If we strike off acrosst this desert without any road we'll soon find ourselves utterly lost. Then our bones will be dead shore to bleach out here," one of Sanders' party said. "Stick to the trail, I insist. Yes, stick to the trail."

But at this point Holloway spoke up: "This road can't be far from the river channel. Just a few miles back we passed close enough to see it, I recollect—to see the sun shining on the white sand. It looked so fearfully dry we never once thought of digging there for water, any of us. Guess that was an oversight of ours."

"How far back was it that the road passed in sight of the river channel?" demanded Sanders.

"About—about five miles," answered Holloway. And his two partners agreed with him that the distance was only five or six miles.

Sanders considered. "Then my judgment is that we'd all better make for that place and take everything with us. Even if we have to dig 25 or 30 feet, we can do it. And we can do that quicker and easier than we can hoof it 60 or 70 miles."

"That we can, Abe," agreed a handcarter. "Ten of us here. We can take turns at diggin'—what we couldn't do at trampin'. A few can dig or shovel out while the others rest."

"You're got the right pig by the ear now, boys, I'm thinkin'," one of Holloway's partners said. "Diggin' in the river bed is away yander our best show for water. I'm sorry we didn't think of that ourselves. Though it wouldn't ha' been as easy for three as it will be for 10."

Now Sanders added: "And the sooner we get to the river bed and get to digging the sooner we're likely to strike water."

Quickly the unyoked oxen were yoked again, and Brindle's saddle and pack were soon in place. At once the wagon was driven out of the road and turned. While that was being done, Esau began pushing his wheelbarrow west once more, and Orlando started his cow in the same direction. Close behind the cow and the wheelbarrow followed the cart, with three men pulling and two pushing. And bringing up the rear came the wagon. Two of the wagon party were walking and driving, but the third was riding inside.

(To be continued.)

Why Thin Fruit?

(Continued from page eleven.)

apples. This will certainly pay in the reduction of the second brood.

There are fewer windfalls and the pickers drop fewer fruits from thinned trees than from unthinned trees. This is due largely to the fact that when one apple in a cluster loosens and falls, or when one apple in a cluster is picked, it allows the others to settle together or shift position on the spur. This causes the entire cluster to drop off. The pickers lose time in trying to gather in whole clusters at once to prevent the remaining fruits from dropping.

Thinning prevents the breaking of many branches and limbs and makes propping unnecessary. Broken limbs are a serious loss because they mean the loss of revenue from the produce of these limbs for several years to come. When a limb breaks much of its fruit falls as a result and fruit below is also knocked off.

In the case of pears, at least, thinning hastens the date at which they may be picked. Pears are not allowed to ripen on the tree and are usually picked as soon as they reach the desired size of two and one-half to three inches in diameter. Well thinned trees can often be picked from one to two weeks earlier than trees which were not thinned. This gives the grower the advantage of higher prices on an earlier market.

There is as much, or more, labor saved in picking, grading and packing fruit from thinned trees as is used in thinning. Men like to handle large fruit and can pick, grade or pack more boxes in a day.

While the greatest value of thinning is in the effect on the present year's crop, it also increases the value of the orchard. Obviously, other things being equal, an orchard without broken limbs and bearing annually as a result of thinning is worth more than one which has not been so thinned. Thinning pays big dividends. When based on the cost of thinning it returns from 500 to 1000 per cent. Bankers should learn to know the value of thinning. Then they would not refuse to lend growers the money with which to hire it done on the grounds that it is not a necessary operation or does not pay.

Raising Seed Crop

Will Jennings of LaConner, Skagit county, is raising five acres of mangels and sugar beets for a seed crop and estimates the yield will be between one and a half and two tons to the acre.

The roots were planted on land which had been in wheat and vetch for two years in succession and last year's crop was not all taken from the ground, due to a large part of the crop lodging. The extreme dry weather is telling on this, as well as other crops on the place, and the yield would have been much better if there had been more rain.

Mr. Jennings also has a crop of cabbage which he is raising for seed, in spite of the fact that much of the crop was greatly damaged last winter by floods and severe weather.

No Bargain.

"Dear John," the wife wrote from a fashionable resort, "I enclose the hotel bill."

"Dear Mary," he responded, "I enclose check to cover the bill, but please do not buy any more hotels at this figure—they are cheating you."—Life.

Write US **Pelts** Ship US

WE ARE PAYING TOP PRICE.

Hibbard-Stewart Co.

Hibbard Building, Seattle.



SASH DOORS MILL-WORK

beautifully designed, carefully manufactured from best material, Direct from manufacturer at real money saving prices. Send today for 1922 FREE illustrated catalog. ROVIG LUMBER CO., 2201 First Avenue South, Seattle, Washington.

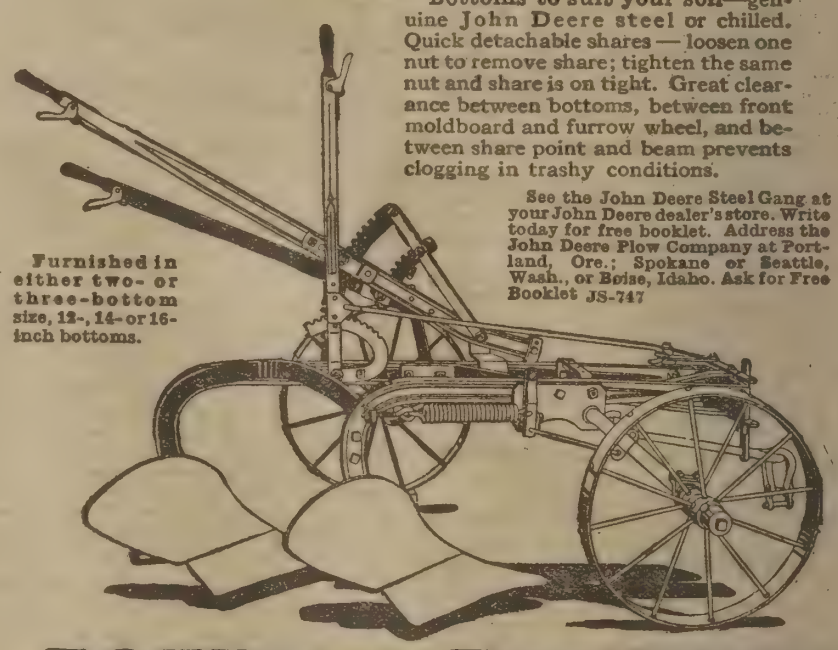
How Strong a Plow Do You Want?

A plow well suited to average conditions in the Middle West and East wouldn't have the required strength in the difficult plowing conditions of this section. Here, the rugged strength of all-steel construction is essential. To meet the requirement of extra strength, the **John Deere Steel Gang** was built.

It's all-steel — extra strong in every part without unnecessary weight. No castings to break. No pipes to bend. Extremely simple and compact — frameless — no unnecessary parts to get out of order. Beams guaranteed not to bend or break.

It's handy — even width of furrows on hillsides or around curves is controlled by means of a handy landing lever. Powerful springs make it easy to raise bottoms. Square corners can be turned without the raising of bottoms from the ground.

Bottoms to suit your soil—genuine John Deere steel or chilled. Quick detachable shares — loosen one nut to remove share; tighten the same nut and share is on tight. Great clearance between bottoms, between front moldboard and furrow wheel, and between share point and beam prevents clogging in trashy conditions.



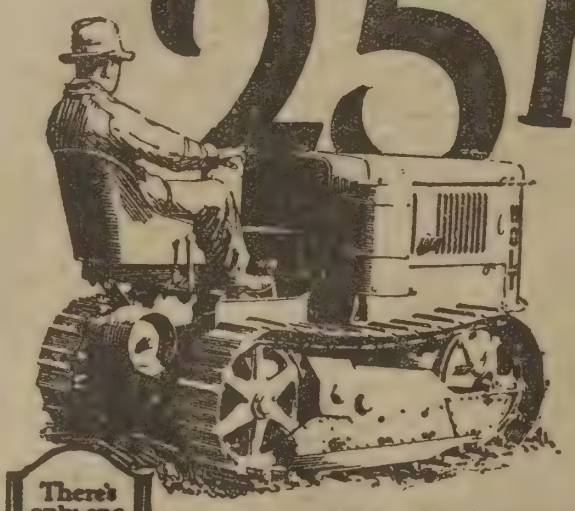
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FAMILY CIRCLE

ALICE BARLAND
EDITORIAL CONTRIBUTOR

Experience Letters

From Our Family Circle Women

Dear Mrs. Barland: I wonder how many mothers will agree with me that all babies are born good and obedient and if they are never allowed to disobey while they are still babies, say up to 6 or 8 years, that they stand an excellent show to become obedient and respectful sons and daughters.

We made it a rule in our home with our first child never to ask or tell him to do a task unless we intended to "see it through," and before the babies are a year old they must obey, even if the baking is delayed or a meal late. One day I spent nearly two hours with one of my children, 2 years old, before she would hand me the pencil I had asked for, instead of throwing it at me or on the floor. It was time well spent, for in the end I had conquered her stubbornness. There is a vast difference between stubbornness and persistence, one being a bad habit and the other a good one.

Some mothers think a child 1 year old is too young to discipline, but I think one should start with them at a day old, as they learn immediately whether mother will take them up whenever they cry.

I have found that by careful training and demanding obedience and good manners and consideration for others up to the time they are in the seventh or eighth year that children so trained do not need many severe punishments after that age. Good behavior has by that time become a habit with them.

As they grow older they should be given interesting things to do, work about the home and a real interest in the things pertaining to it and little by little certain responsibilities. In this way they can be kept close to father and mother.

It is hard sometimes to punish small children, but one need not be harsh and should never lose control of one's temper while punishing a child; if one must, put off the punishment for a while, never punish in anger. Never leave the impression that you are taking out some of your bad feeling on the child, but be sure you make him feel that it is love for him and a desire for his good that prompts the punishment.

Appeal to the pride of the older children, it will seldom be in vain. I often say to one of mine, "Would you let a thing like temper get the best of you? Show yourself stronger than your temper."

I have proved that studying for the children pays and have done a good deal of it and have tried to sift the practical from the superfluous. I would like to impress all young mothers with the fact that the study of child raising pays big.

My children are all so healthy, full of life and vigor, well trained, helpful and are hustlers at school. If mothers would only devote more time to the children while they are young and controlable there would be fewer regrets when the children are grown to young men and women.

Be chums with your children, enjoy their pleasures and try to understand their troubles, laugh and play with them even when you are too tired to "laugh straight."

I am a farm woman and not in the best of health. I do all my own work except when there is extra help in the fields during haying and harvest. I also do the family sewing and yet I have always found time to attend a pet bird's funeral, help rescue a hurt chicken or play a game with my youngsters. Often as I work I talk seriously with them about their conduct or their work at school or explain something that is troubling their young minds. I am sure no mother was ever loved more by her children. They bring everything to me, pleasures and sorrows alike. What more can a mother ask? Only that this beautiful confidence may continue till they are strong enough to decide serious questions for themselves. And even past that time I would have them feel always that they can "bring their troubles to mother" confident that they will find sympathy, help, understanding and encouragement.

MRS. B. M. C.

Dear Mrs. Barland: I read the Family Circle and like it. I am the mother of nine children from four to 19 years. In a recent paper Mrs. Breedlove asks how to get rid of the little bugs that collect on hams and bacon. I put powdered borax over the meat and they go away.

MRS. E. M. BABB.

Dear Mrs. Barland: I want to tell the sister how to smoke hams and bacon without a smokehouse.

I use a large box and take off the bottom to use for a lid. Turn the box upside down and put poles across near the top and hang the meat on them. Lay on the ground 3 or 4 lengths of stove pipe and place one end in a corner of the box. One can use an old tin oil can instead of the pipe by cutting a hole in both ends. Build a fire in one end of the can or pipe and apple wood is a good wood to use for smoking. It will smoke better if a small hole is left in the top of the box and a piece of pipe fixed so the smoke can pass through.

MRS. C. E. M.

Just Folks

Books either inspire or deaden.

Durable foundations are underground.

Anybody can disagree; only the wise agree.

To say yes may be the farthest from meaning yes.

Life's melodies come forth out of troubled waters.

You can hold onto a rough stick better than to a smooth one.

Americans are educated by jolts more than by rules and regulations.

Doing a little every day amounts to more than doing a lot now and then.

Psychology is a word that is handed about on every tongue these days. The psychology of the moment has become a Shibboleth. In my school days psychology was one of the hidden words of the inner circle of learning.

It is possibly better that psychology should come out of its cloisteral seclusion, shake itself in the open air, let the sunlight frighten out the moths from its hidden clothing and become a work-a-day factor in the daily life of the people.

And yet I am wondering if psychology has not gone to the other extreme of commonness and joined the ranks of the low-down white trash. Has not psychology, in a measure, become a trick performer? Has it not almost entered the ranks of the occult?

One would almost come to believe that the expenditure of a few dollars, the learning of a few devices, the opening of a few side doors into the "subconscious mind" would put any son or daughter of Adam into the selected ranks of successful business or professional life.

Psychological tricks may play a considerable part in current business and professional life, but they are tricks just the same, and every trick has its day.

There is gradually dawning on the minds of men that the so-called laws of the mind are of less vital importance than the so-called laws of the heart. Good will yet remains the greatest social factor in the world. Good will finds ways and means of reaching and moving other people when all the arts of the mind fail. The head should check up on the heart, but the heart does the business. Beware of too much checking up lest there is no business to do.

E A S

Your Health

By Royal S. Copeland, M. D., F. A. C. S.

A few days ago I read a very remarkable book about the heart. There were two or three statements which are worth repeating. They relate to murmurs and their importance to the victim of heart trouble.



Dr. Copeland.

There are endless numbers of persons living in daily fear of early death. They have been told that heart murmurs are present that unusual exertion may bring fatal results, and consequently the joy of life is gone.

In this book the author speaks of meeting an old man who said:

"Today is a very important anniversary in my life. It is just 50 years ago that I was rejected for life insurance on account of heart disease."

He speaks of a patient of his own in these words:

"I think the loudest aortic systolic murmur I ever heard was in an old lady, who, with the exception of rheumatism, had remarkably good health and who lived till she was 93."

One of the oldest men I ever knew personally retired from business when he was 35 and nursed a bad heart till he died of natural causes at the century mark.

I do not mean to intimate that heart disease should not be given serious attention. It must be considered, but it is decidedly unscientific to consider it apart from the general condition of the victim.

The author I have quoted says of these patients:

"One must never discourage these cases. A leaky ship will often make a long and successful voyage, and a heart with a leaky valve will often carry its owner to old age, and will help him to do much excellent work. If you tell such a man that he has incurable heart disease (he may happily be blessed with a saving skepticism) you will have done your utmost to insure the accuracy of your prediction, though your diagnosis may have been grievously wrong. There is no important organ of the body so susceptible to nervous and mental influence as the heart; hope will buoy it up to make renewed and often successful efforts; despair will kill it."

The great authorities warn against hopeless prognostications. One of them says:

"Let it always be remembered that frequently sound and healthy hearts show a murmur, and that it is necessary, therefore, to seek for other evidences on which to base a prediction."

The same writer says in effect: "Let no single symptom of heart trouble be the ground for forming an unfavorable opinion. The presence of a murmur has so oppressed the profession and the public that a vast amount of positive alarm is continually being done by taking too seriously the significance of this sign."

I am delighted with this writer because he is so optimistic and yet so sane. He says so truly:

"The business of a prophet is at all times dangerous and an unsatisfactory one, whether in medicine or in any other sphere; but, recognizing our fallibility, it is surely wiser and safer to err, like Balaam of old, on the side of blessing rather than of cursing, of optimism rather than of pessimism."

Let the victim of heart trouble have courage and renewed hope.



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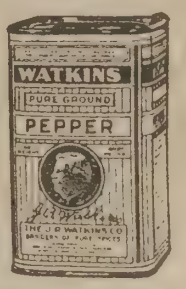
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High Points in News of the Week

Henry B. Spencer, former vice president of the Southern railway and general purchasing agent for the war-time railroad administration, Friday was appointed federal coal administrator for the duration of the present strike emergency by President Harding.

Mr. Spencer becomes administrative member of the distribution committee, which will control distribution of available coal supplies on a priority basis to essential industries and utilities.

With the announcement of creation of the coal administrator, confidence was expressed at the White House that production of coal, regardless of rail and mine strikes, eventually would be increased to the point where it would be adequate for the country's needs. President Harding felt so assured on this point, it was said, that he contemplated no further movement in the coal strike situation.

* * *

Official announcement was verbally made at the White House Friday that President Harding was prepared to submit formal proposals for settlement of the railroad strike to meetings of the railway executives and of the general strike committees of the shop craft unions.

The president, it was stated officially, believes that some of the difficulties in the way of an adustment of the trouble which has injured the nation's transportation system are "clearing away" as the result of the conference which he concluded shortly before the announcement was made.

President Harding began his conferences Thursday with T. DeWitt Cuyler, president of the American Association of Railway Executives. After Mr. Cuyler had left the White House Mr. Jewell, the shopmen's chief, and the presidents of the various shopcraft unions, arrived from Chicago and went at once into conference with Mr. Harding. They remained in session for a short while and then left the White House, but returned in the afternoon and spent more than three hours with the president. Mr. Cuyler also returned to the White House later in the evening.

The union heads who conferred were B. M. Jewell, head of the railway employees' division of the American Federation of Labor; W. H. Johnson, president international machinists; J. A. Franklin, boilermakers' union; M. F. Ryan, carmens' union; James Burns, metal workers' union; Edward Evans, electrical union, and Timothy Healy, stationary engineers' and oilers' union.

It is understood that the president wants the men to go back to work and the railroads to take them back with the understanding that rehearings will be given on matters already in dispute before the United States railroad labor board and with the further agreement that the seniority rights problem will be left for future determination.

All principal points in dispute are left to the United States railroad board to adjudicate. This is the essence of the compromise settlement drafted by President Harding and informally approved by the spokesmen of the contending parties.

At this writing, Monday, it is announced from Washington that peace terms already have been agreed to in the country-wide railway strike and formal ratification has been assured through President Harding's efforts, it was asserted tonight by a man in close official touch with the situation.

All that now remains before the strike which has cost the workers upward of $40,000,000 in wages passes into history, it was asserted, was the formal indorsement of the terms of settlement by the railway executives meeting in New York and the strike leaders who will convene in Chicago at the same hour.

* * *

Damage estimated at $1,000,000 resulted from rain, hail and wind storms that swept Nebraska and South Dakota and western Iowa Friday night and early Saturday.

There was no loss of life reported but heavy losses resulted from the destruction of farm property crops and railroad equipment.

* * *

Vice President Coolidge left Washington Saturday night from Boston, starting a trip that will occupy two or threee weeks and take him to the Pacific coast. The vice president plans to leave August 4 for San Francisco, where he will address the American Bar association convention August 10. The present itinerary of Mr. Coolidge calls for visits to Portland, Ore., and Seattle, but no speeches are planned. He will return east through Canada without making any stops.

* * *

Acting Secretary Roosevelt Saturday ordered Major General Lejeune, commandant of the marine crops, to send one officer and three or four enlisted marines into the Teapot dome naval oil reserve, Wyoming, at a place about 40 miles from Casper, to eject oil squatters who have begun drilling for oil.

* * *

Argentine wool clip, which begins in September, is expected to be the smallest in the 20th century, according to a survey issued by the commerce department. Sheep grazing in Argentina, the department found, has dropped from 74,380,000 in 1895 to 44,855,000 in 1918 and to between 25,000,000 and 35,000,000 at the present time.

* * *

The first appropriation out of $80,000 given to the new American fund for public service by Charles Garland, young Massachusetts heir, who is giving away his inherited fortune, will go to "the relief of starving miners in the western Pennsylvania coal fields." The appropriation, amounting to $2000, was authorized by the board of directors at their first meeting. Garland was present.

* * *

Whether the administration tariff bill will be enacted before the November election has again become the subject of private discussion at the capitol. There is a more or less general belief in the senate that the measure can not be brought to a final vote in that body before September 15, and there are those who believe the ironing out of difficulties between the senate and the house in conference will be so slow and tedious a process that it can not be completed before congress goes home for the fall campaign.

* * *

With the flood waters of Saturday receding, reports come of devastation to thousands of acres of Nebraska farm land, swept clear of all crops, thousands of head of live stock dead and property loss conservatively estimated at $1,000,000. Small streams, flooded by the cloudburst of Friday night, spread over Pierce, Wayne, Stanton and Cedar counties, inundating towns with from several inches to several feet of water and forcing citizens to flee to higher ground.

Holstein Prizes

Dr. David Livingston, superintendent of the Western State hospital at Fort Steilacoom, writes a letter to Governor Hart containing the following interesting information:

"You will no doubt be pleased to learn that the Western State hospital has been awarded the sum of $34.50 by the Holstein-Friesian Association of America, covering prize money won during the last fiscal year.

"The certificate accompanying the check says in part, 'It is becoming increasingly difficult from year to year to gain place among the prize winners, and you are to be congratulated on winning a portion of the prize money awarded.'"

READY TO LEND MONEY.

The Wool Growers' Service corporation, formed some time ago by the Washington Wool Growers' association, was ready to begin lending money to sheep men on July 1. Up to that time applications for loans totaling about $150,000 had been made.

Farm Business and Markets Outlook

(Continued from page five.)

LATEST QUOTATIONS.

The Live Stock Market.

PORTLAND, Ore., July 29.—Choice steers, $7.50@8; medium to good steers, $6.50@7.50; common to fair steers, $4@5.75; choice cows and heifers, $5@6.50; medium to good cows, heifers, $4.50@5; fair to medium cows, heifers, $3.50@4.50; common cows, $3@3.50; canners, $1.50@3; bulls, $3@3.50; choice dairy calves, $7.50@8; prime light calves, $7@7.50; medium to light calves, $6@7; heavy calves, $4@6.

Hogs—Prime light, $11.75@12.25; smooth heavy, 200 to 300 lbs., $10.50@11; smooth heavy, 300 lbs. up, $9@10.50; rough heavy, $8@10; fat pigs, $11.50@12; feeder pigs, $11.75@12.25; stags, subject to dockage, $5@8.

Sheep—East of mountain lambs, $10@11; choice valley lambs, $9@10; medium valley lambs, $8@9; common valley lambs, $6@8; cull lambs, $5@6; light yearlings, $6.50@7.50; heavy yearlings, $5.50@6.50; light wethers, $5.50@6.50; heavy wethers, $5@5.50; ewes, $2@5.

SPOKANE, July 29.—Prime steers, $6.75@8; good to choice steers, $5.75@6.75; medium to good steers, $5.25@6.50; fair to medium steers, $4.50@5.25; common to fair steers, $4.25@4.50; choice cows and heifers, $5.25@6.50; good to choice cows, heifers, $4.25@5.25; medium to good cows, heifers, $3.75@4.25; fair to medium cows, heifers, $2.75@3.75; canners, $1.50@2.75; bulls, $3@4.75; light veal calves, $7@8.50; heavy veal calves, $5@7; stockers and feeders, $4.75@5.

Hogs—Prime mixed, $11.25@11.85; medium, $10.25@11.25; heavies, $8.25@9.25; fat pigs, $10.25@11.25; stockers and feeders, $10.25@11.25.

Sheep—Prime lambs, $8@10; fair to medium, $7@8; yearlings, $7@8; wethers, $6.50@7.50; mutton ewes, $3@6.50; feeder lambs, $6@7.

The Grain Market.

PORTLAND, Ore., July 29.—Wheat—Hard white, $1.10; soft white, white club, hard winter, northern spring, $1.08; red Walla, $1.05.

Today's car receipts—Wheat, 34; flour, 5; hay, 15.

Grain futures bids: Wheat—Hard white, August, September, $1.10; soft white, white club, hard winter, northern spring, $1.08; red Walla, August, September, $1.05.

Oats—No. 2 white feed, August, $35; September, $33; No. 2 gray, August, $32; September, $31.

Barley—Brewing, August, $28; September, $28.50; standard feed, August, $26.50; September, $27.

Corn—No. 2 eastern yellow, shipment, August, $29.50; September, $29.50.

SEATTLE, July 29.—Wheat—Hard white, $1.16; soft white, white club, hard red winter, soft red winter, northern spring, $1.15; eastern red Walla, $1.12; Big Bend Bluestem, $1.15.

Yesterday's car receipts—Wheat, 17; corn, 13; hay, 3; flour, 4.

Hay and Grain Feed.

PORTLAND, Ore., July 29.—Flour—Family patents, $8 per bbl.; whole wheat, $7; graham, $6.80; bakers' hard wheat, $7.80; bakers' Bluestem patents, $7.60; valley soft wheat, $6.25; straights, $6.35.

Millfeed—Price f. o. b. mill: Millrun, ton lots, $34; middlings, $41; rolled barley, $37@39; rolled oats, $43; scratch feed, $49 per ton.

Corn—White, $37; cracked, $39 per ton.

Hay—Buying price f. o. b. Portland: Alfalfa, $16@16.50 per ton; cheat, $14; oats and vetch, $17; clover, $15; valley timothy, $18; eastern Oregon timothy, $21@22.

General Produce.

PORTLAND, Ore., July 29.—Butter—Cubes, extra, 38c per lb.; prints, parchment wrapped, box lots, 46c; cartons, 47c. Butterfat, 46@47c delivered station; buying price, A grade, 44c.

Eggs—Buying price: Current receipts, 19@21c doz.; henneries, 22@23c doz. Jobbing prices: Case count, 22@23c; candled ranch, 25c; selects, 28c. Association selling prices: Selects, 29c; browns, 28c; firsts, 26c; pullets, 24c.

Cheese—Tillamook triplets, price to jobbers, f. o. b. Tillamook, 26c; Young Americas, 27c; longhorns, 27c pound.

Poultry—Hens, 12@21c lb.; broilers, 18@20c; ducks, 15@22c; geese, nominal; turkeys, nominal.

Veal—Fancy, 13@13½c per pound.

Pork—Fancy, 15½@16c per pound.

SPOKANE, July 29.—Poultry—Fat hens, 17c lb.; light hens, 14c lb.; roosters, 8c lb.

Fresh ranch eggs—$6.50@8 case; no storage.

Butterfat—41c a pound.

Range of Live Stock Prices for the Week Ending July 26

CATTLE	Chicago.	Spokane.	Portland.	N.Salt Lake
Choice, prime heavy steers (1100 lb. up)	9.85@10.85			
Good heavy steers	8.85@10.00			
Medium heavy steers	7.90@ 9.00			
Common heavy steers	6.75@ 8.15			
Choice, prime light steers (1100 lb down)	9.75@10.75			
Good light steers	8.75@10.00			
Medium light steers	7.90@ 8.90	6.75@ 8.00	7.00@ 8.25	6.00@ 6.50
Common light steers	6.65@ 8.00	4.50@ 6.75	4.75@ 7.00	4.75@ 6.25
Common to choice butcher heifers	5.15@ 5.85	3.75@ 6.75	4.00@ 6.75	3.50@ 6.00
Common to choice butcher cows	3.90@ 8.15	3.00@ 5.75	3.50@ 6.00	3.00@ 5.25
Bologna and beef bulls	4.25@ 6.60	3.00@ 4.75	3.50@ 4.50	2.00@ 3.00
Canners, cutters, cows, heifers	2.60@ 3.90	1.50@ 2.75	2.00@ 3.00	2.00@ 3.00
Canner steers	3.50@ 5.25	2.75@ 4.00	3.00@ 4.50	2.50@ 4.00
Medium to choice light veals	8.00@ 9.75	7.00@ 8.50	7.50@ 9.50	7.50@ 8.50
Common to choice heavy veals	4.00@ 4.75	5.00@ 7.00	5.00@ 7.00	
Common to choice feeders (1000 lb. up)	5.65@ 7.75			
Common to choice feeders (750-1000 lb.)	5.65@ 7.75	4.75@ 5.00		
Common to choice stocker steers	4.75@ 7.65			
Common, choice stocker cows, heifers	3.50@ 5.75			
HOGS.				
Top of market	11.00	11.85	11.75	10.45
Bulk of sales	8.15@10.90	10.50@11.75	10.75@11.60	9.50@10.25
Heavy (250 lb. up)	9.75@10.50	10.50@11.75	10.50@11.25	9.00@10.00
Medium (200-250 lb.)	10.10@10.90	10.75@11.75	11.00@11.75	9.50@10.35
Light (150-200 lb.)	10.55@11.00	11.25@11.85	11.50@11.75	9.75@10.45
Light lights (130-150 lb.)	10.40@10.95	11.00@11.50	11.25@11.60	9.50@10.25
Smooth packing sows (250 lb. up)	8.00@ 9.00	9.00@ 9.50	8.75@ 9.50	
Rough packing sows (200 lb. up)	7.50@ 8.50	8.25@ 9.00	8.00@ 8.75	
Medium to choice pigs (130 lb. down)	9.50@10.60	10.25@11.75	11.50@12.00	9.00@ 9.25
Stock pigs		10.25@11.25	12.00@12.25	8.50@ 9.25
SHEEP AND LAMBS.				
Medium, prime lambs (84 lb. down)	11.50@13.50	8.00@10.00	7.50@ 9.00	9.00@11.00
Culls and common lambs	7.00@12.00	5.00@ 8.00	5.00@ 7.50	4.50@ 9.00
Medium to prime yearling wethers	8.00@11.50	7.00@ 8.00	6.00@ 8.00	4.50@ 6.00
Medium to prime wethers	5.75@ 9.00	6.50@ 7.50	5.00@ 7.00	3.50@ 5.00
Medium to choice ewes	3.00@ 7.85	4.50@ 6.50	4.00@ 5.00	3.00@ 4.00
Culls and common ewes	2.00@ 4.75	3.00@ 4.50	2.00@ 4.00	2.00@ 3.00
Full-mouth to yearling breeding ewes	5.00@11.50			
Feeder lambs	11.50@13.00	6.00@ 7.00		

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WRITING ADVERTISERS PAYS

The majority of our advertisers will send you, upon application, attractive catalogs, booklets and folders containing ideas and information of value to you. Why not act upon such offers in the issue which you are now reading? When you write please say, "I saw your ad in THE WASHINGTON FARMER."

Bits of Fun for Everyone

Wasn't Possible.

Shortly after Detroit's motor ordinance went into effect a motor cop hailed a lady driving a limousine on the boulevard and ordered her to report at 9 o'clock.

"The very idea, why?" exclaimed the lady.

"Im sorry, ma'am," insisted the bluecoat, "you were going 40 miles an hour."

"Impossible," exclaimed the lady indignantly; "why, I haven't been out an hour yet."

Or a Miracle Man.

She: "What would you call a man who hid behind a woman's skirts?"

He: "A magician."

Ikey Knew How.

A Hebrew small storekeeper, much to the astonishment of his neighbors, suddenly decorated his shop window with a gorgeous new blind. It was the sensation of the day, and few of his brethren failed to make some remark to him about it.

"Nice blind you've got there, Isaac," said one.

"Yes, Aaron."

"How much did it cost you, Isaac?"

"It didn't cost me anything, Aaron. My customers paid for it."

"What! Your customers paid for it?"

"Yes, Aaron. I put a leedle box on my counter, 'For the blind,' and they paid for it."

Sour Grapes.

'Tis better to have loved and lost than to win and be forever bossed.

Awful Predicament.

Roberts: "What's the matter? Finances bothering you?"

Richards: "Yes, I owe Rogers $5, and today I've got it, and he knows I've got it, and he knows I know he knows I've got it."—The American Legion Weekly.

Got Along Famously.

Tim: "How are you getting along at home while your wife's away?"

Jim: "Fine. I've reached the height of efficiency. I can put on my socks now from either end."

Limited.

"I knew a chap," said an artist, telling of some of his youthful experiences in the Latin quarter, "who painted the landscapes, and when opportunity offered he would make a little money to keep him going by decorating the walls of houses with rural scenes, highly colored in glaring tints, as if nature had turned color blind. There were always cows and always they were represented as standing up to their knees in water.

"'Why do you always put your cows in water?' some one asked.

"'Well,' confessed the artist, 'you see, I have never learned to paint hoofs.'"—Harper's Magazine.

Not Up on the News.

A traveling man one night found himself obliged to remain in a small town on account of a washout on the railroad, caused by the heavy rain, which was still coming down in torrents. The traveling man turned to the waitress with: "This certainly looks like the flood."

"The what?"

"The flood. You've read about the flood, and the ark landing on Mount Ararat, surely?"

"Say, mister," she returned, "I ain't seen a paper for three days!"—The Furrow.



Has proved a big success

It is light and pretty, has low heels, foot-form sole, fits high or low arch foot, used for street, house or dancing.

White, Black or Brown Kid	$6.00
Cheaper Grade	5.00
White Buckskin	7.00
Patent Colt	7.00
Grey Suede, Red or Green Kid	8.00

If your dealer cannot supply you write us direct. Send M. O. or we'll send C. O. D.

BURNS
Short Vamp Shoes
525-A South Broadway, Los Angeles, Calif.
Attractive proposition for dealers.

Read the "Want Ad" page this week for good offers of all kinds.

Latest High Class Patterns for the Home

Please order the patterns you desire at least two or three weeks before you wish to use them. Desiring to obtain the latest high-class patterns for its readers, THE FARMER has made arrangements to have them sent direct from the east, and under present mailing conditions it takes about that time for them to reach you.



4051. Misses' Dress. Cut in three sizes: 16, 18 and 20 years. An 18-year size requires 5 1-8 yards of 32-inch material. For trimming as illustrated 1 3-8 yards is required. Price, 10 cents.

3640-4046. A Good "Sports" Costume. Blouse 3640 cut in seven sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. It will require 3 1-8 yards of 36-inch material for a medium size. Skirt 4046 is cut in seven sizes: 25, 27, 29, 31, 33, 35 and 37 inches waist measure. A 29-inch size will require 4 3-4 yards of 40-inch material. With plaits extended lower edge of skirt measures 3 5-9 yards. Two separate patterns, 10 cents for each pattern.

4058. Girl's Dress. Cut in four sizes: 8, 10, 12 and 14 years. A 12-year size requires 5 1-4 yards of 32-inch material. Price, 10 cents.

3670. Lady's Dress. Cut in seven sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. A 38-inch size will require 5 1-2 yards of 40-inch material. The width of the skirt at the foot is about 2 yards. Price, 10 cents.

3432. Girl's Dress. Cut in four sizes: 6, 8, 10 and 12 years. A 10-year size will require 3 1-2 yards of 36-inch material. Price, 10 cents.

4061. Girl's Dress. Cut in four sizes: 4, 6, 8 and 10 years. A 6-year size requires 3 5-8 yards of 32-inch material. To trim as illustrated requires 3-4 yard of contrasting material. Price, 10 cents.

3861. Girl's Dress. Cut in four sizes, 2, 4, 6 and 8 years. A 4-year size requires 2 1-4 yards of 36-inch material. Price, 10 cents.

4066. Lady's House Dress. Cut in seven sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. A 38-inch size requires 5 3-8 yards of 32-inch material. The width of the skirt at the foot is 2 1-8 yards. Price, 10 cents.

3869. Lady's Apron. Cut in four sizes: Small, 34-36; medium, 38-40; large, 42-44; extra large, 46-48 inches bust measure. A medium size requires 3 7-8 yards of 36-inch material. Price, 10 cents.

4044. Set of Smart Sleeves. Cut in three sizes: Small, medium and large. To make one pair of sleeves like No. 1, will require 5-8 yard of 32-inch material. No. 2 requires 1 1-4 yards. No. 3 requires 1 3-8 yards. Price, 10 cents.

4047. Lady's Skirt. Cut in six sizes: 25, 27, 29, 31, 33 and 35 inches waist measure. A 29-inch size requires 3 yards of 40-inch material. If contrasting material is used for trimming 3-4 yard 12 inches wide will be required. Price, 10 cents.

3620. Girl's Dress. Cut in four sizes: 6, 8, 10 and 12 years. A 10-year size will require 3 5-8 yards of 27-inch material. Price, 10 cents.

CATALOGUE NOTICE.

Send 12 cents in silver or stamps for our up-to-date spring and summer 1922 catalogue, showing color plates, and containing 500 designs of ladies', misses' and children's patterns, a concise and comprehensive article on dressmaking, also some points for the needle (illustrating 30 of the various, simple stitches), all valuable hints to the home dressmaker.

Please fill in this order and mail with remittance to:
PATTERN DEPT., PACIFIC NORTHWEST FARM TRIO, Spokane, Wash.

Enclosed find..... cents for which send me the following:

Pattern No..... Size ..... Pattern No. ..... Size.....

Pattern No..... Size ..... Pattern No. ..... Size.....

Name .....

Postoffice ..... State.....

R. F. D..... Box No..... St. No.....

Be sure to give the pattern number and the correct size.

You Can Win a Walking Doll

Nothing will make any girl happier than one of our UNBREAKABLE WALKING DOLLS. The walking feature intensifies the attractiveness of the doll 100 per cent. Moreover, it is light in weight, has a soft body, and is well made from top to toe. It stands 13 inches high.

There are no springs or sharp edges in our walking dolls—the mechanism is all concealed in the body. OUR UNBREAKABLE WALKING DOLLS sleep, sit, stand, and when led by the hand they REALLY WALK WITH YOU.



A walking doll with sleeping eyes and real hair will be awarded to YOU in return for your services in securing nine 3-year subscription orders to your State Farm Magazine at the regular rate of 50 cents each, or $4.50 for the nine subscriptions. A little time spent securing subscription orders and one of these wonderful walking dolls will be your very own for keeps. Get busy now before some one else starts to harvest the orders in your neighborhood.

TheWashington Farmer
Review Building,
Spokane, Wash.



We were glad to get a little note from Ellen Nelson, a cousin who lives in Walla Walla county, Washington. Ellen waited a long time before she wrote to us this time. She says she went on a cattle tour and had a fine time.

A letter comes to us from Marie Thomas of Benton county, Washington. Marie has five brothers and two sisters and she is 9 years old. Her pets are a cat and two colts. Her friend, Josephine Herbert, is visiting at her home for a while this summer. Marie's birthday is April 17.

"We had a cloudburst here Monday, June 5, and the garden truck was nearly washed out," writes Grace Ross, a southeastern Washington cousin. "We live in a valley at the foot of some hills and the water ran off the hills." In two more months Grace will be a Corner graduate.

Birthday Greetings

THURSDAY, August 3—Marguerite A. Campbell, 10 years old; Lina E. Gardner, 11.

FRIDAY, August 4—Dorothy Coonrad, 11 years old; Lucille Crider, 11; Martha Ylonen, 7.

SATURDAY, August 5—Matilda French, 11 years old; Ellen Newton, 10.

MONDAY, August 7—Leeta Ball, 11 years old; Leona Ball, 11; Luther Burbank, 11; Walter Setters, 11; Irene Bernice Beardslee, 8.

TUESDAY, August 8—Lila Elliott, 11 years old; Matilda L. Guler, 11; Alice Knapp, 11; Anna Mantey, 10.

WEDNESDAY, August 9—Jimmy Betz, 10 years old.

LETTERS RECEIVED BY AUNT NELLIE.

Among recent letters received by Aunt Nellie are those from cousins whose names follow. A few of these will be published each week in the regular edition of THE FARMER and others will appear from time to time in The Junior Farmer:

Freeda Klippert, Mayme Kynse, Mildred Warehime, Lillian Peterson, Olive Laughlin, Frances King, Marion Hamilton, Thelma Raull, Ellen Lathrop, May Wuotila, Averill Paull, Pansy Green, Irene Ralph, Carl Julius, Lois McAlney.

Iva Lee Easterling, Martha Kokko, Lillie Puffert, Bernice Bahrs, Lyynie Kokko, Louis Geseler, Myrtle Nelson, Anne Palola, Dorothy Timm, Mildred Sherrod, Carol Meyer, Johnny Timm, Matilda French.

Genevieve Gooby, Loise Vorla, Edna Amend, Marjorie Fike, Pauline Forsman, Ruth Otterstedt, Irene Ione Torpa, George Davis, Mary Aharn, Melba Johnson, Elga Wint, Florence Uhlrich, Grace Gockley, Helen Richardson, Isabel Ford, Winnifred Goodard, Astrid Larsen, Howard Swalling, Alice Bromley, Della Bromley, Alice Vance, Linnea Gord, Florence Fry, Ruth Hay, Melvina Hume, James Miller, May Dickenson, Alma Schneider, Elizabeth Cook, Harriet Cook, Carol Spencer, Edna Schlien, Edna Johnson, John Ball, Leona Ball, Evelyn Cleman, Geneva Quicksall, Mary Sparks, Mae Moore, Ruby Ferrell, Ruth Gray, Berneal Kleinnecht, Mildred Page, Eunice Libbey, Helen Carlson, Henry Janssen, Annie Lloyd, Alene Hensley, Marie Amoruso, Mabel Olsen, Katie Harvey, Myrtle Matre, Marvin Lum, Mildred Cunningham, Eila Cunningham, Julia Gradisknik, Martha Hedlund.

BEDTIME STORIES

By THORNTON W. BURGESS.

THE NEATNESS OF BOBBY COON.

Bobby Coon yawned and stretched lazily. Then he climbed out of the doorway in the hollow tree which was his home. The Black Shadows had already crept far out from the Purple Hills, and looking up through the tops he saw a star winking at him. Bobby Coon winked back and then slowly climbed out of the hollow tree.

He had slept all day, for Bobby Coon often had rather sleep through the bright day and prowl around all night. The fact is, Bobby Coon is very apt to get into mischief. Somehow he can't seem to help it. If there is any mischief to get into Bobby Coon is pretty sure to be found right in the middle of it. So, because it is safer to go to forbidden places at night than in the bright light of the sun Bobby Coon prefers to sleep during the day.

When he had come down from the hollow tree Bobby Coon carefully brushed his handsome coat, waitcoat and trousers, and combed out his beautiful ringed tail. Then he washed his face and hands, for whatever faults Bobby may have, he is always neat. Yes, sir, there is no one in the Green Forest who is neater than Bobby Coon.

Bobby Coon looked quite the dandy as he started down the Lone Little Path to the Green Meadows and across to the Smiling Pool. There he found Little Joe Otter and Billy Mink just returned from a fishing trip. They were just preparing for a feast as Bobby came along.

"Hello Bobby Coon!" cried Little Joe Otter. "Come and have some fish with us."

Billy Mink didn't look at all pleased at Little Joe Otter's invitation, for Billy is inclined to be selfish, and what he can not eat himself he hides away. But he said nothing, merely reaching out for the largest fish for himself.

"Thank you," said Bobby Coon, "I believe I will."

Now Billy Mink and Little Joe Otter are not at all fussy about their food. It didn't trouble them a bit because there was dirt on the fish from dragging them up the bank, and the bits of dead grass and bark sticking to the fish they did not notice at all. But Bobby Coon did. Bobby is fussy, very fussy about his food. He took the fish given him and walked down the bank to the Smiling Pool.

Billy Mink and Little Joe Otter stopped eating to watch him. When he had found a comfortable place on the edge of the Smiling Pool Bobby Coon began to eat, but before he put it in his mouth each piece of fish was carefully washed.

"My aren't we nice?" jeered Billy Mink.

"Did you think that fish was poisoned?" demanded Little Joe Otter, scowling down at Bobby.

"What's good enough for us isn't good enough for him," broke in Billy Mink.

Bobby Coon looked up and grinned. "Nothing of the sort," said he. "I wash all my food. It doesn't matter where I get it, or what it is, if there is any water near I wash it. Honest, fellows, you don't know how much better it tastes!"

"Too much work," grunted Little Joe Otter with his mouth full.

Bobby just smiled and kept right on washing his food, and when he had finished he washed his hands and face.

(Copyrighted byThornton W. Burgess.)



Before he put it in his mouth each piece of fish was carefully washed.

You Get Your State News Quick

As a Result of Modern Publishing Facilities Used By Your State Farm Paper



THERE are many things which occur in your state which you naturally want to hear about as soon after they happen as possible.

That is one of the points at which your state farm weekly renders superior service.

The Washington Farmer's news gathering organization covers the whole state, so that a complete, accurate report of every event of interest to Washington farmers is sent to this paper without delay, in many instances being transmitted by telegraph.

After that the wonderful facilities and appliances of the modern publishing establishment are brought into play. By means of linotypes the news is set up in a fraction of the time it takes by older methods. The stereotype, a cast of solid metal from which the paper is printed, is next prepared to make the matter suitable for speedy printing. The reading and advertising matter being all assembled and ready, a flood of electric power is released and the great, modern rotary press prints, folds, counts, and staples 30,000 twenty-four-page copies of this magazine in a single hour. Addressing and mailing devices and finally the familiar automobile perform other features of the exacting work of speeding the news to you while that news is still fresh, interesting and worth while.

You don't have to wait a month, or even a fortnight, as this paper reaches you every week.

You might think that such SPEED in publishing would cost you more, just as the fast trains between many big cities are extra fare trains. However, such is not the case. Your state farm paper is one of the big bargains of the publishing world. Please help us keep it so by lending us a hand in our subscription work. Send in your own renewal at least 60 days in advance of the expiration date on the wrapper, and include the orders of your friends and neighbors with your own.

Washington Farmer's Subscription Rates

$1.00 for Five Years 260 Issues | 50c for Three Years 25c for One Year

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Aug. 3, 1922.

THE WASHINGTON FARMER.
Review Bldg., Spokane, Wash.

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I enclose herewith ..... for a .....year subscription to

The Washington Farmer

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If your subscription is already paid in advance it will be extended from the date to which it is paid.

High Record Holsteins

As a sort of benediction upon the annual convention of the Holstein-Friesian Association of America at Kansas City early in June, it was announced that the 50th cow of the breed had completed a record above 1000 pounds of butterfat in a year, and before the breed journal could get to press with the announcement, two more American cows had turned the trick, including William Todd & Sons' of the Yakima valley, Cascade Jessie. This makes a total of 55 at the last writing, as compared with only 12 cows of all other breeds which have achieved this high mark.

The list has been increasing with amazing rapidity within recent years. The first record above 1000 pounds was made in 1911, and except for two years, every year since that time has seen one or more completed. In 1921-22, 13 were chalked up, more than in any other two years, and in the first few months of the current year five have been added. The Holstein-Friesian World credits Idaho with breeding one 1000-pounder (Segis Pietertje Prospect) and Washington with developing two (Segis Pietertje Prospect and Queen De Kol Bonheur Pontiac), but this list must now be revised to include Cascade Jessie, and to give Washington one 1000-pound cow bred there and three developed. G. V. Leighton of Boise, Idaho, who bred "Prospect," is the only northwest man listed among the breeders of the big producers, and Carnation Stock farms alone of northwest breeders has developed two. William Todd & Sons should be credited, however, with breeding one and developing one.

NATIONAL AYRSHIRE MEETING.

At the annual meeting of the American Ayrshire Breeders' association at Devon, Pa., June 14-15, Paul O. Reyman of West Virginia, was reelected president for a second term. Four vice presidents were elected and the places of the nine directors whose terms had expired were filled, mostly by reelection. Secretary C. L. Burlingame was not only reelected, but a resolution of commendation was passed for the manner in which his office had been conducted. A new constitution was adopted, which gives the association more freedom of action. A registry fee of $50 was placed against imported cattle, which will be refunded for meritorious work in the show ring, paddock or pail.

Forty-two animals were sold at the national consignment sale for an average of $513. Just two of these were bulls, and each brought over $1000, so the average of the females was $485, with top price of $1500.

LEWIS GUERNSEY CATTLE CLUB.

Organization of a Lewis County Guernsey Cattle club at Chehalis, with Frank J. Saliger of Chehalis as president, gives organized representation within the county to all three of the leading dairy breeds, and is expected to develop a strong demand for fawn-and-whites. Large herds of Guernseys in that district there are none, that of H. R. & Carl Taylor of Chehalis being the largest. But the recent sale of 50 head from Wisconsin started several foundation herds, and interest in the breed is keen.

The breeders met at luncheon at the St. Helens, and later were addressed by County Agent R. G. Fowler and Secretary George Walker of the Southwest Washington fair. Other officers of the club are P. H. Thomsen, Centralia, vice president; H. R. Taylor, Chehalis, secretary-treasurer; and J. G. Haight, Chehalis, and J. Pettit, Centralia, members of the executive committee.

NEW BETTER-SIRES EMBLEM READY.

A new emblem of improved design for recognition of good work in improving live stock is ready for distribution by the bureau of animal industry of the United States department of agriculture. The certificate, which measures 8 1-2x10 1-2 inches, resembles a steel engraving and is suitable for framing. A person holding an old emblem and desiring to exchange it for a new one may do so by returning the old one to the bureau of animal industry. About 7800 of the old emblems have been issued to breeders and others working with the department in improving the utility value of farm animals, reducing the number of runts, and in other ways benefiting the live stock of the country.

BUYS GUERNSEY BULL.

Late in April B. M. Luck of Woodland, Wash., purchased from Calkins & Riggs of Daybreak farm, Brush prairie, Wash., the Guernsey bull, Carview Repeater Boy. His dam is on official test, with prospect of a 700-pound record. Mr. Luck has a fine herd of heavy producing grade Guernseys.

WILL ENTERTAIN CITY FOLKS.

Waikiki Jersey farm, on the Little Spokane river, north of Spokane, is inviting the general public, both the citizens of Spokane and the farmers of the territory tributary, to its first annual picnic, August 13. Waikiki is well known for its excellent Jerseys, from which it supplies a large number of retail customers in the city of Spokane with milk and cream. "We want our customers and their friends to come out to the farm and see our herd and the conditions under which their milk is produced and handled," says William Auld, manager of Waikiki. Mr. Auld estimates the crowd at this first picnic at 2000, and announces that the farm will supply the ice cream and milk, the visitors bringing their own basket lunches.

HAS FOUR PUREBREDS.

J. B. Vance, a Guernsey breeder of the Ahtanum valley, a few miles from Yakima, has four head of registered animals in his herd of 10 milk cows, and he expects to produce a high class herd in due course of time. The grade animals will only be kept until their place can be filled by the purebred heifers.

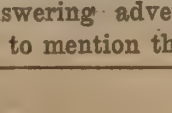
One of his best cows, Ruben's Pride a cow with her third calf, is a Canterbury-bred animal and has milked as high as 40 pounds of milk a day. Another cow, Elsie's Princess, of Yakima, is a 3-year-old and has produced 36 pounds of milk in 24 hours.

Mr. Vance has 40 acres, most of which is in cultivation, there being only five acres of permanent pasture. He believes in feeding grain in the summer as well as in the winter, and his cows show up well as a result.

V. M. CHASE, Yakima, Wash.—I left the farm about 15 years ago and of all the farm papers and magazines I have read I have found none that will keep the northwest farmer or city man in touch with the farming or stock raising industry as well as The Washington Farmer.

We Buy and Sell
Grade and Pure Bred Dairy Cattle.
We can save you money whether you wish to buy or sell. One or a carload.
Graham Livestock Co.
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LET THE LITTLE FELLOWS PAY OFF YOUR MORTGAGE.
Silver Fox Ranches Make Big Profits.
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All Pedigreed and Registered. Fully Guaranteed.
Full Particulars free. Write today.
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Royal Ranch Durocs
We are breeding fall gilts to farrow in Sept. that are sired by Royal Marker, a son of Pathmarker, the 1920 National Swine Show grand champion, and they will be bred to Sensation Supreme, a son of Great Orion Sensation, the 1919 and 1921 National Swine Show grand champion. Write for prices.
ROY SHUTWELL, Boise. R. 3. Phone 77R3.

Bred Duroc Gilts and weaning pigs. Great Wonder and Sensation breeding. All eastern bred stock. Satisfaction guaranteed.
S. D. CORNELL, Grandview, Wash.

CHOICE DUROC SPRING PIGS
Sensation and Pathfinder breeding; unrelated pairs; satisfaction guaranteed; papers furnished. Prices reasonable. Good references.
V. R. FISHER, Oxford, Idaho.

River Banks Better Berkshires
Won four grand championships, nine championships and twenty-eight first prizes at five leading fairs last fall. Let us quote you on spring pigs.
RIVER BANKS FARMS, Grants Pass, Ore.
CLYDE E. NILES, MGR.

BERKSHIRES Get imported Epochal blood combined with best of northwest. Choice weaned pigs, boars various ages.
E. V. ORFORD, Boise, Idaho.

Riverby Orchard Berkshires
Oldest established Berkshire herd in the northwest. Young pigs and bred sows for sale. Address
D. C. BUNN, Prosser, Wash.

Chester White Swine
Herd headed by Oregon Buster, grand champion Oregon State Fair and winter circuit, 1921. Fall gilts now offered.
CASS A. NICHOLS, Salem, Ore.

BIG TYPE POLANDS—Offering a nice lot of weaning pigs, either sex, at reasonable prices. We solicit club orders. Write us for information on gilts bred for Sept. farrow. Satisfaction guaranteed.
FRED D. ENTERMILLE, Baker, Ore.

Hampshire Sheep
A few well bred aged stud rams; also yearling stud rams and ewes.
DAVE WADDELL, Amity, Ore.

Hampshire Flock for Sale
Ten ewes and three lambs, good breeding. Priced for quick sale.
W. T. CLOAKE, Roseburg, Ore.

When answering advertisements don't fail to mention this paper.

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WAIKIKI JERSEYS
Federal Accredited Herd

PACKARD BULLS AT FORD PRICES

We have a number of excellent Jersey bulls fit for service and out of cows with high production records and gilt-edge breeding.

PRICES ARE LOW AND FAVORABLE.

TERMS WILL BE ALLOWED ON PART OF PURCHASE

PRICE TO RESPONSIBLE PARTIES.

WAIKIKI FARM, SPOKANE WM. AULD, Mgr.

Rambo's Bred Duroc Sow Sale
Aug. 17th, 1922

At the Clover Leaf Ranch, 3 miles west of the S. W. corner of Buhl, Idaho.

I will offer 20 head of tried sows and gilts bred for Sept. farrow to such boars as Orion Joe No. 363705, Wonder Sensation 1st No. 438523, and Giant King, No. 358977.

Also some open gilts and spring boars that are real herd boar prospects. This is your chance to get real foundation seed at your own price For catalog write

W. H. RAMBO, Owner, Buhl, Idaho.
E. J. FJELDSTED, Fieldman, Blackfoot.
COL. E. O. WALTER, Auctioneer, Filer Idaho.
J. E. NESSLY, Idaho Farmer Representative, Boise, Idaho.

Ruby Dell Guernsey Farm
Our herd has been in the winning wherever shown.
Senior herd sire, Francis May King (A. R.) he by Langwater Hambro (A. R.)
Junior herd sire, Rex of Willow Brook, he by Langwater Sunderland (A. R.)
Our herd matrons are cows with A. R. records from such noted sires as Langwater Hambro, Langwater Emigrant and first 5 daughters of Francis May King, to freshen with average records of 480.14 butterfat, at average age of two years and ten months; most of them double letter class.
Some splendid bull calves for sale of above breeding.
H. E. ANGEL, Mabton, Wash.

TEN MONTHS' OLD
GUERNSEY HEIFER
Sixteen tested dams average over 600 lbs. fat. $250. FOSHAY FARMS.
O. & M. L. VOGET, Hubbard, Ore.

Orchard Hill Farm Guernseys
"Home of high class Guernseys."
DR. PARK WEED WILLIS, Owner.
REDMOND, Wash.

Brown Swiss Stock Farm
Breeders of Brown Swiss cattle, the farmers' dairy cow. Young stock for sale.
THEO BRUGGER, Route 3, Gresham, Ore.

Holstein Bull Bargains
Three, 8 to 10 mo. old. One out of Jantlina Colantha Johanna, grand champion cow Oregon state fair, with 22-lb. record as junior 2-year-old. Both equally as well bred. One by a Pontiac sire. Write for full particulars and bargain prices.
W. MARTIN, Forest Grove, Ore.

Holstein Bulls sired by son of world record cow. from dams sired by brother to Segis Pietertje Prospect. Prices low.
H. R. BOOMER, Payette, Idaho.

Young Red Polled Bulls
By the champion sire of the northwest circuit, closely related to the world champion Red Polled cow.
F. H. PORTER, Halsey, Idaho.

Northwood Herd Milking Shorthorns
Improve your herd with a Shorthorn bull of the milking strain. Getting milk as well as beef. We have some choice bull calves for sale at farmer's prices from high record cows.
NORTHWOOD FARMS, Redmond, Wash.

OREGLOW JERSEYS
Register of Merit cows for sale, group priced low for quick removal, choice stock for foundation herd.
IRON MINE FARM, Oswego, Ore.
W. M. LADD, OWNER.
D. BROOKS HOGAN, MGR.

Young Jersey Bull Golden Glow's Chief breeding. Dam on official test and will make about 500 lbs. butter fat. Priced for quick sale.
M. G. GODWIN, Scotts Mills, Ore.

Fourth Gold Medal Jersey Bull
now in use in my herd. No other herd ever had so many. Young stock for sale.
ED CARY, Carlton, Ore.

Jersey Bulls at Bargain Prices
Send today for our special sale list of registered Jersey bulls from R. of M. dams. Easy terms, liberal credit.
WARREN GRAY, Box T, Jefferson, Ore.

Jerseys 797 lbs. of fat, the highest record 3-year-old tested in 1920 is dam of a high class young bull we have to offer.
J. J. VAN KLEEK & SONS, Box T.
BEAVERTON, ORE.

ST. MAWES JERSEY BULL.
Three nearest dams of sire averge 841 lbs. fat. Dam on test, milking over 40 lbs. a day. Priced right.
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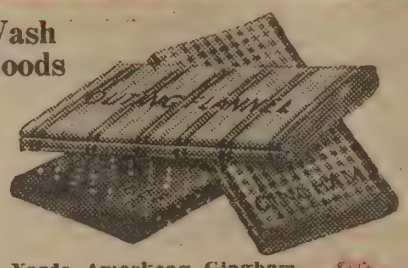
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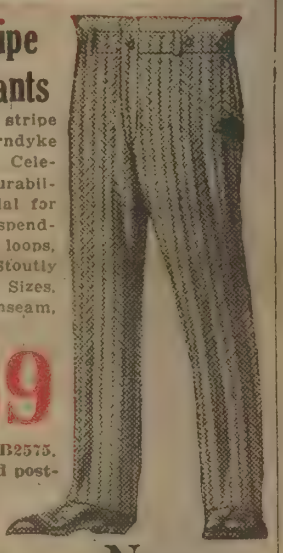
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Give Size.

This smart pump in sizes 2½ to 8. In black patent leather or mahogany calf-finish—a stunning one-strap model with imitation shield tip and medallion, effectively perforated. Has medium rubber heel. **Order patent leather by No. 53A72, order mahogany calf by No. 53A73. Send no money. Pay $1.98 and postage on arrival.**

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Always mention size.

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New Oxfords

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Give Size

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State Size



Wonderful work shoes for men. Has soft, strong uppers that resist barnyard acids. Solid leather insoles. All seams stitched with waxed thread. Strong leather soles. Wide widths. Sizes 6 to 11. **Order by No. 53A758. Order boys' sizes, 1 to 5½, by No. 53A554, price $1.89. Order little boys' sizes, 9½ to 13½, by No. 53A555, price $1.79. Send no money. Pay $1.99 and postage on arrival.**

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Wing Tip Style

This is the last than every up-to-date young miss prefers. A classy wing tip oxford with medallion tip and perforations around vamp and heel foxings. Made of excellent soft brown leather with sturdy, genuine oak soles. Rubber heels. Wide widths. **Order child's sizes, 8½ to 11, by No. 53A477, $1.59. Order misses' sizes, 11½ to 2, by No. 53A478, $1.79. Order big girls' sizes, 2½ to 8, by No. 53A479, $1.98. Send no money. Pay bargain price and postage on arrival. State size.**

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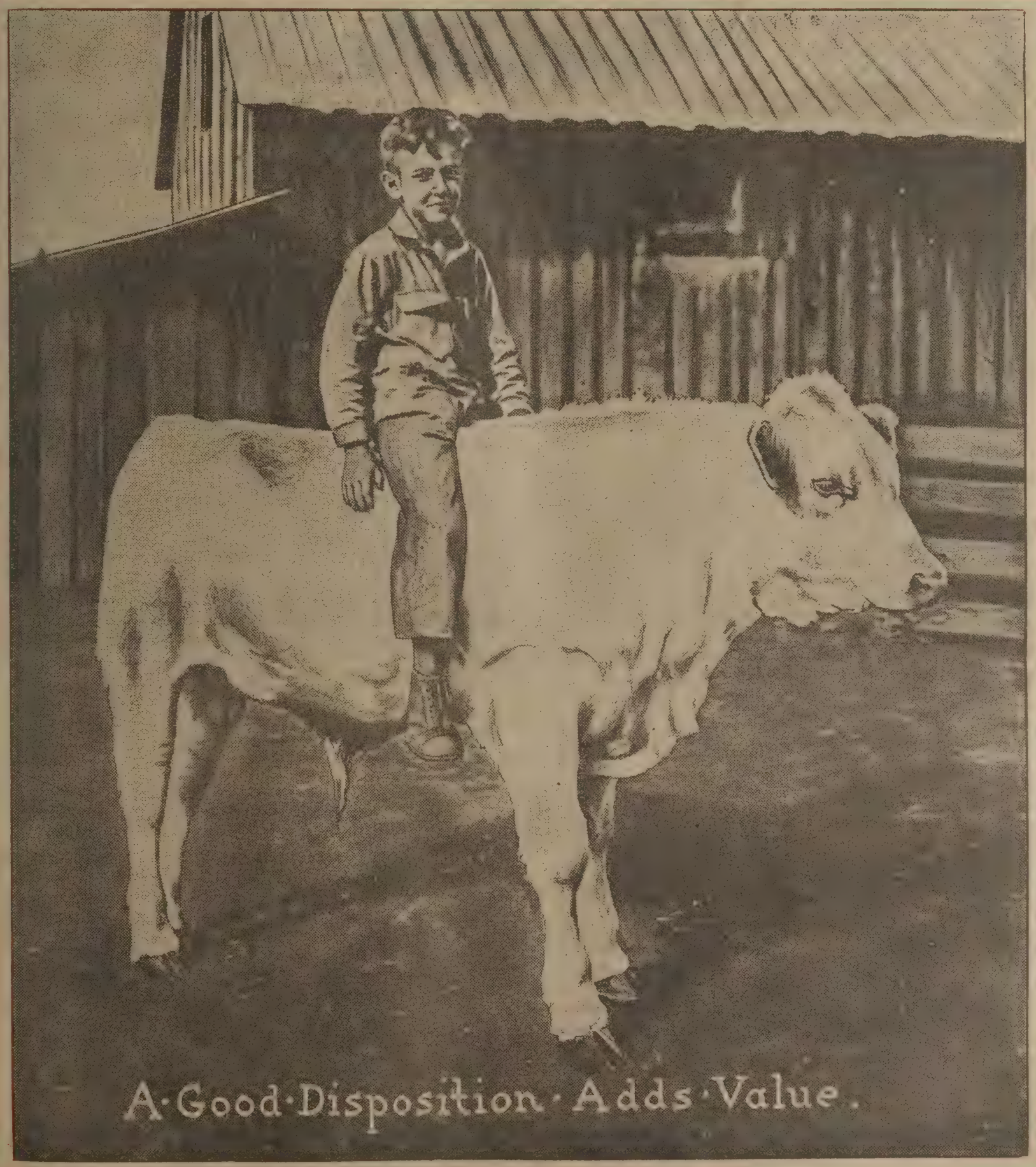
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AUGUST 10, 1922 Washington's Great Farm Magazine EVERY THURSDAY

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THE WASHINGTON FARMER

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A·Good·Disposition·Adds·Value.

The People Must Vote on the Thirty-Ten School Tax Bill—Page 6

Certified Seed

Industry Grows in Skagit County

A total of 62 acres of potatoes, 38 of which are to be certified for seed, is a good example of the hold the certified seed industry has in Skagit county. O. W. Eckman and By West of Mount Vernon are the owners of this particular acreage. While the main crop is for potatoes that will be sold as certified seed, there will be 14 acres of commercial potatoes which will include those sorted from the seed fields which are not true to seed type. Such will be sold in the fall for the early market, while the seed will be stored and graded during the winter and sold as ordered for immediate or spring delivery.

"We are trying to confine ourselves to three varieties," said Mr. Eckman. "The Burbanks and the Pride of Multnomah are the two that are in best demand for seed, while there is a difference of opinion as to the third. There are a number of growers who like the Netted Gem, but we also have a large acreage of the Earliest of All. There are also some that prefer the round white type, but the long white tubers have been found to bring the best returns and we advocate these for general farm use in any part of the country.

"We have in all about 20 varieties that we are raising on the farm each year, but these are partly for experimental purposes and partly to have a large collection for show purposes. There is very little sale for such varieties as the blue salad potato except for seed, but we like to have them in the show to add to the number of varieties. There are many other novelties that are grown for the same purpose.

"As for the seed for the commercial crops, there is little difference in the treatment or manner of planting from that of the certified crops. They are both graded carefully and treated before cutting. The patches are kept free from weeds and the odd varieties are rogued out of the patch as the crop is growing. It is with this point, however, that more attention is needed with the certified fields, since there must be no foreign varieties, diseased plants or other undesirable points. This inspection is all done, of course, by the state seed inspector, who looks the patch over while it is growing and again when the tubers have been dug."

Mr. Eckman told how the greater part of their potato land was rented each year in order to get land that had been in pasture for a number of years. "It would involve too much land and necessitate the keeping of a large number of cows if we were to farm on our own land entirely," he remarked, "and besides it would take too much time away from the potatoes."

There are about three types of soil used by the growers, sandy loam, peat and a combination of peat and sandy loam. In all cases the land is plowed in the fall if possible and the disk is used on the sod before the plowing begins, in order to keep the sod from turning under in large mats. It is much easier to cut the sod up and get the ground in a pulverized state if this is done. It is also easier to hold the moisture if the land is prepared in this manner, according to Mr. Eckman.

"As for digging, we find that it is economy to use the best machine digger that can be purchased," asserted Mr. Eckman. A good digger should go down just deep enough to get under the tubers, but not too deep. It is very seldom that a machine will injure more than 10 per cent of the potatoes, while in hand digging there are usually 25 per cent that are bruised or cut even with the best of help. A clean cut, such as are some times found when a machine is used, will not cause the tuber to rot as soon as will a puncture made by a digging fork. We find that it pays to get a machine into the patch and get them dug and the crop into the storage cellar before it is too late."

Potato Rows, North, South

R. D. Bates of Sedro-Woolley has a two and a half acre patch of potatoes that is making a very good showing. There are four varieties, the Pride of Multnomah, the Netted Gem, the Beauty of Hebron and the Rural New York. The Multnomahs will be saved for seed as well as some of the Netted Gems.

The entire patch is being sprayed with Bordeaux mixture, since Mr. Bates and a neighbor have purchased a spray machine in partnership. Two of the rows have been left to act as a check plot, while two more are being sprayed with powdered spray in order to see if there is any marked difference in the two treatments.

The rows were planted north and south to allow more sunlight to all parts of the plant than if they had been planted in rows running east and west. The patch was planted about May 1.

NEW FORM OF GRAPE CONTRACT.

Markets report the new form of contract in California grape futures. Shippers put up $200 per car which is matched with $200 on the part of the buyers. The $400 is placed in the bank in escrow.



For the Woman on the Farm

Chevrolet Four Passenger Coupé

$850 *f. o. b. Flint, Mich.*

Every farm should have two cars.

The farm car—usually an open touring model, is used for carrying milk cans, merchandise, etc., and is seldom in condition for going to church, shopping trips to town, or for making calls in the neighborhood.

Moreover, the farm family with only one car is at a great disadvantage. As a rule the family have disposed of their driving horse, so when the farmer is using the one car, the women and the children of the family must stay at home.

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Both of these cars have Fisher bodies, beautiful in line, finish, upholstery and interior appointments. The mechanical equipment is the same that has given the New Superior Chevrolet line such an excellent reputation and first place in the sale of standard fully equipped cars.

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THE WASHINGTON FARMER

SUCCESSOR TO

Vol. 47. No. 6 THE RANCH PACIFIC DAIRYMAN HORN AND HOOF August 10, 1922

For Good Farming, Attractive Country Homes and Happy Country People

Visit West Washington Stock Farms

Two Weeks' Tour of Education Covers Territory From Oregon to Canada

By RALPH ERSKINE

There is no record of any state in the Union ever holding a live stock tour that has extended across the entire state and made a two weeks' continuous trip in the cause of better live stock. The western Washington live stock men's demonstration tour, which was completed at Sumas August 4, was from Vancouver, Wash., at the southern part of Clarke county, to the Canadian border, including 79 of the leading herds in western Washington.

The statewide tour was instigated by Director S. B. Nelson of the extension service at the request of a number of farmers of western Washington. Such a tour, he said, could be put on in a way that would reach a large number of people, bring more breeders in touch with other live stock men and emphasize the value of the purebred sire, even when used on the average farm herd. The plans were carried out with the assistance of Don Magruder and C. M. Hubbard, both of the extension service, as well as the county agents in the various counties.

"Those who made the entire trip were more than repaid for their time and effort," said Dr. Nelson, "and they saw many good herds which they did not know were in existence. Many of the smaller herds were found making excellent records and many are lowering the cost of production by the use of better live stock or the practice of better feeding.

"Another point that can not be overestimated is the personal contacts on the tour. One breeder, for instance, upon seeing a herd of his chosen breed, remarked that he didn't know there was such a herd in that part of the country. He had lived in the district for over 10 years and had never found the time to see what his neighbor was doing."

The spirit in which the tour was supported in all counties was encouraging and at many towns banquets were given by the commercial clubs or farm bureau or other organizations. Here the local breeders had an opportunity to tell some of their own experiences and to hear talks by the specialists of the state college as well as prominent live stock men of the state.

The first stop was the farm of M. B. Cunningham, near Vancouver, Wash. There are only a few of the 40 head that are purebred, but Mr. Cunningham has been nsing a registered Holstein bull for the last 8 1-2 years. A daughter of the former herd sire is out of a cow that is seven-eighths Jersey, but she shows the color of the sire.

Chester White hogs constitute the live stock at Shoreacres farm, which is not far from the Cunningham place. Three brood sows and a boar are all of the herd at the present time, since the spring pigs have been sold. One of the sows shows exceptional quality. The boar is a well-proportioned animal, sired by an Ed. Shoel boar.

Must Make Good.

At Stickney Brothers a herd of purebred and high grade Jerseys was displayed, the herd having been bred up for the last 15 years. "We see to it that each new cow makes good or we don't keep her," said Mr. Stickney. "We have our own testing outfit and we run the samples about four times each year."

Seven of the Guernsey heifers in the grade herd of D. F. Marrow were from their one bull and have been found to produce a greater quantity of milk than their dams. Mr. Marrow has been breeding up his herd for the last 10 years with a registered bull.

At the "Daybreak farm" a real treat awaited every one. The splendid herd of registered Guernseys were in the pasture and Mrs. Riggs told how several foundation herds had been started from individuals sold from the "Daybreak farm." Some very typy animals were shown in this herd and practically all have made good records on official test. Importer Ivey's Masterpiece, one of the herd bulls, has stamped his characteristic top line on all of his offspring. Two other bulls are kept on the farm, one of which is of Langwater strain.

The H. A. Simmons herd of La Center contained some of the foundation cows of the M. S. Cunningham herd, the first herd on the tour. There are a bunch of splendid cows in this herd and the bull is owned in partnership with one of the neighbors.

A Shorthorn herd was a variation from the dairy herds and even the dairymen on tour showed much interest in the N. C. Hall animals on pasture at Ridgefield. Of the entire 80 head there are 25 that are registered milking Shorthorns. Some of these heifers are from the Clay family, which is considered among the best in the breed. The herd sire, Villager Sam, a son of Imported Villager, is of the milking strain. Some of his heifers from grade Holstein cows show a predominence of the characteristics of their sire rather than their dam. Some of the best milkers in the herd will give as high as six gallons of milk which will test around 6 per cent, according to Mr. Hall.

The Second Day Out.

On the second day the B. M. Luck herd of high grade Guernseys was seen at the first stop at Woodland. For the last 15 years this herd has been built up by the use of purebred sires, the first two of which were Jerseys. Since that time there have been three different Guernsey bulls and the best producers kept from the herd, until now there are some of the classiest Guernseys that one could ask for from a grade herd. The present herd bull, Carview Reporter Boy, is from the Langwater and May Rose breeding, and tipped the scales at 2150 pounds early this spring.

Thirty head of the 50 Holsteins at the John Bogart herd, also near Woodland, are registered animals. Eleven are from the H. C. Davis herd at Yakima, while three were purchased from the Mills herd at Chehalis.

The C. A. Bradt Guernsey herd at Kalama included 13 purebred cows which traced back to May Rose breeding. The old herd bull is Western General Pershing, but the new herd sire comes from a cow that made fifth in her class on official test. He has 15 crosses to May Rose. The animal is owned in partnership by Mr. Bradt and P. E. Todd.

At Kelso the herd of grade Jerseys owned by T. D. Gungan were in their stanchions. There are 57 mature cows, all of which show exceptional uniformity in their udder development. The herd sire, Bluster's Chief, is a grandson of Chief Engineer and his dam made a record of 665 pounds of fat as a 2-year-old and 700 pounds as a 3-year-old. He has 20 heifers in the herd. **Mr. Gungan has been breeding up with registered sires for 15 years.**

There were 18 head of cows and calves on the C. S. Houpt farm, near Castle Rock, all grade Jerseys except one registered cow and the two herd bulls. The young bull, St. Mawes Lad, is from the Hewitt farm in Oregon. An older bull, sired by Rinda Lad of S. B., showed splendid type and form. Although the cows are high grades they are the first cross with a registered bull. One of the heifers has a production record of 44 pounds of fat, while her dam as a mature cow produced only 34 pounds. Similar comparisons were pointed out with others in the herd.

A Herd From One Sire.

The striking feature of the G. H. Huntington herd of grade Holsteins, near Castle Rock, was the fact that 24 cows in the herd are from the old herd sire. The present herd bull is a 2-year-old that comes from the Bessie stock and promises to make a good increase in the production of the entire herd.

The last herd of the second day was that of J. H. Quick, also of Castle Rock, where there were 11 head of the 25 that were purebred Jerseys. This herd was started with Shorthorns 20 years ago, but was built up with good sires. Four years ago Mr. Quick bought two registered heifers and a bull of the St. Mawes strain and has bred up his present purebred cows from them. A new herd sire has been secured, is a grandson of Sophia 19th and is from the St. Mawes breeding on the dam's side.

On the third day the tour began with the Carl Laakso herd of grade Jerseys at Winlock, Lewis county. Here there were 40 head of cows which were being cared for by the two boys, Archie and Ano. It was interesting to note that the former herd sire was slaughtered before his real value was ascertained by the production of the daughters.

Poultry Farm Included.

A flock of White Leghorns on the John Annonem farm at Winlock was next inspected. There were a total of 2800 birds in all the houses and an average of 60 per cent was given as the production throughout the year. Mr. Annonem is also keeping a pen of breeders and will raise his own chicks.

From Winlock the cars went to the Al Neuerts farm, in the St. Urban district, where Mr. Neuerts kept the two association bulls. There are 21 dairymen in the community who own an interest in Cothilde Chimacum Springs Farm King Korndyke, the senior herd sire. He is a 4-year-old and has plenty of quality. An assessment of $25 is levied against each member and a fee of $10 is charged for nonmembers for service. There were eight cows and five heifers shown at this farm from some of the near-by herds in the association.

There were over 100 people at the picnic lunch in Alexander park at Chehalis at noon. The Lewis County Pure Breeders' association had charge of the program and O. O. Phelps called on Governor Louis F. Hart and Dr. S. B. Nelson for brief talks. Others also spoke.

Another glimpse at beef animals came at the J. A. Scollard home, a short distance from town. Two of the Aberdeen Angus herd bulls were brought out, Erickaman, a 2-year-od, and Blackmead 2d, a yearling. Both of these bulls, as well as the cows, were blocky and compact, a decided contrast to the dairy animals which had been the center of interest at most of the other farms. Mr. Scollard has 92 animals in the herd. He will have a show herd on the circuit this fall.

The herd bull at the A. T. Flagg herd of Jerseys near Chehalis comes from St. Mawes breeding and has 11 proven sons, seven of which are in Lewis county. He also has eight purebred daughters with average of 450 pounds each. Mr. Flagg is doing some constructive breeding and has a splendid herd of purebreds.

Grade and purebred Guernseys were found at the H. R. and Carl Taylor farm. This herd is being improved by the use of Chicona Berium, a son of Langwater Traveler, the well-known Guernsey bull with three nearest dams that averaged 718 pounds of fat.

The last herd of the day was that of Anton Adolphsen, also near Chehalis. Here there were 19 head of registered Jerseys of the St. Mawes and Hood farm strains. The sire is the same as that used in the Flagg herd.

In Thurston County.

On entering Thurston county, a visit was made at the A. E. Lundeen herd of purebred and grade Jerseys. The result of using a good sire was there self-evident. One 3-year-old purebred produced 444 pounds of fat in eight months, a decided improvement over her dam. Mr. Lundeen has a typical herd and is doing some construction work by the use of the cow testing association.

There were 13 head of purebred Holsteins on the Ed Cross farm, and a young bull calf who has 12 leading 1000-pound sires listed on his pedigree. "The best way to put butterfat into a herd is to use the best sire obtainable," said Mr. Cross. John Hegloff, owner of the next farm, is doing all he can to raise the standard of his herd by the use of Sir Tacoma Pontiac Violet, a grandson of King of the Pontiacs.

At the M. W. Brewer herd one cow produced 60 pounds of milk daily, while her granddam produced only 24 pounds. Dave Ellison's farm, in Mason county, was visited during the next morning.

The Grays Harbor Herds.

Going next into Grays Harbor county, the caravan stopped at Ed. Cavett's Holstein farm the home of Sir Bessie Fobes Tritomia. This bull has two world record daughters. There were 13 purebreds on the W. E. Macomber farm. Here the herd sire, Captain Butterboy Pontiac, is rapidly improving the production of the herd. A herd of Guernseys of the Langwater breeding were seen at the J. E. Olson farm.

Sixteen Milking Shorthorns of the General Clay breeding constitute the only herd of its kind in the county. The owner, Frank Glenn, has been building up this herd for six years. Robert Polson of Montesano showed the crowd his fine herd of Poland China hogs. Robert is a member of the county pig club, and his hogs are a good example of the work the club is doing.

The Aberdeen Chamber of Commerce gave a banquet for 65 people and called on some of the local breeders as well as the extension men for short talks.

Better Than in Holland.

"I find the American-bred Holstin cows produce more butterfat than did the cows in Holland when I was there," remarked Jake Kooy, at whose place the tour stopped early Friday morning. Mr. Kooy's bred sire is Bessie Fobes Tritomia, that comes from good foundation stock. Fifty of the daughters from the R. Arlands herd of Montesano are still in the county and producing good records. A few of these cows were found at the John Pierce farm, the next stop.

Three Jersey herds completed the program for the morning, those of J. H. Taylor, Montesano; E. L. Brewer and J. R. Martin of Satsop. "Such herds as these are a credit to any community," said Mr. Magruder, extension specialist. The foundation stock of the Taylor herd were Golden Massey Pope 3d, Gertie's Lily and Maiden's Duke Girletta. The Brewer and Martin herds are well known to all Jersey breeders of western Washington, as they include some fine show animals and excellent producers.

(Continued on page sixteen.)

Will Market Nebraska Wheat

By an arrangement just made the wheat in the pool of the Nebraska Wheat Growers' association will be sold through the new sales establishment ust organidzed at Minneapolis by the Northwest Wheat Growers' Associated.

This is the first year of operation for the Nebraska association and while at does not become a full member of the Northwest Wheat Growers' Associated, the state officers express much satisfaction over the sales connection recently made by the selling agency.

The Minneapolis sales agency of the Northwest Frowers will apply immediately for membership in the Minneapolis chamber of commerce. The wheat growers plan to make use of the chamber market but will not deal in futures, according to George C. Jewett, manager of the organization. Under normal conditions the grower members in the five states of Oregon, Washington, Idaho, Montana and North Dakota will produce 40,000,000 bushels of wheat. Approximately one-half of this amount will flow through the sales agency at Minneapolis and the other half will go to the Pacific coast, according to a statement made by Mr. Jewett.

Fred Jeklin, former manager of the Seattle office of the Washington Wheat Growers' association and recently of the London office of the Northwest Wheat Growers' association, has been made manager of the Minneapolis office.

Application for $9,000,000 to $11,000,000 are before the war finance board for moving the 1922 wheat crop of Washington, Idaho, Montana and North Dakota, according to a statement from Managing Director Eugene Meyer of the finance corporation.

This application is in addition to any local arrangements with the banks in the states benefited, such as those of Spokane, Portland and Seattle, which make loans to growers' associations.

The war finance board is asked to provide the Washington Wheat Growers' association with $2,000,000; the Idaho Wheat Growers' association, $1,000,000; the Montana Wheat Growers' association, $3,000,000, and the North Dakota Wheat Growers' association, $3,000,000 to $5,000,000.

This is the first move in a large way to finance the movement of the 1922 crop through the cooperative marketing agency. Funds are helpful at this period, when wheat is being hauled to the warehouses.

Defective Spark Arrester

One of the most frequent causes in fires in standing grain and grain that has been threshed by stationary outfits is the spark from the threshing engine. Investigation shows that in most all cases of fires from this cause a defective spark arrester is found or one that the wire mesh was not fine enough to break or hold the large clinkers. Be sure to make a careful examination of your engine stacks.

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Scientific Tariff Grows in Favor

The Associated Press reports that as the fight over tariff rates goes forward in the senate, sentiment in support of a scientific tariff continues to increase. Senator Frelinghuysen of New Jersey, an intimate friend of President Harding, has introduced a bill of that character. Senator Poindexter has declared his support of the principle, and now the Associated Press reports that Senator Keyes of New Hampshire and Senator Willis of Ohio, both republicans, announced their support of this reform in statements issued recently to the American Nonpartisan Scientific Tariff league.

This reform is needed, and once the public has attained it, will not be readily relinquished. It proposes to create a nonpartisan tariff commission that will be entrusted with administrative details of tariff rate making, substantially as the interstate commerce commission is empowered to make freight rates. In freight rate making, congress lays down the broad general policy of government regulation and the commission works out the details. It would be the same way with a scientific tariff law.

The benefits of the proposed reform would be two-fold. It would relieve congress of the almost impossible task of framing new tariff schedules, and it would impart flexibility to the tariff and timely adjustment of rates to changing conditions in world industry and markets.

It is true, as Senator Poindexter has pointed out, that the tariff question can not be permanently taken out of politics. The American people, through their congress, in the future as in the past, must decide whether they want a protective tariff or free trade, a tariff for revenue only, or a tariff on the principle of reciprocity; but when congress has declared a public policy and the president has approved its action, there should be in continuous session a body of experts, nonpartisan in composition, to apply the adopted policy and principle on a scientific basis.

Shortcuts to Economy

Frank Shipman, poultryman, uses discarded fish nets instead of wire netting and sphagnum moss for litter—by which you might know, if you were familiar with the locality, that he lives at Chinook, Wash., down on "the Peninsula," where such things are handy and cheap.

It's the ability to take advantage of just such short-cuts to economy and efficiency that often spells financial success for the poultryman, according to W. D. Buchanan, poultry extension specialist at the state college, who ought to know because he has tried it and succeeded. Shipman is caring for about 100 hens and is marketing about 2000 eggs each month—he sold 2200 the month before the Pacific county poultry excursionists called at the ranch, late in May.

Assistant Secretary Pugsley's Visit to the Pacific Coast

It was the privilege of the editor of The Washington Farmer to accompany C. W. Pugsley, assistant secretary of agriculture, on an automobile trip from Spokane to Pullman and return.

Mr. Pugsley is making a nation-wide tour in which he is interviewing the presidents and the extension department deans of agricultural colleges, as well as county agents, throughout the different states.

Mr. Pugsley gives one the impression of being a thoroughly western man of breadth and courage—two qualities which serve him in good stead in his work as assistant secretary of agriculture, especially during the present period of reorganization undertaken by Secretary Henry C. Wallace. The assistant secretary has had wide experience in agricultural thought and practice.

Born on an Iowa farm, he graduated from the University of Nebraska in 1906, and spent two more years on the home farm. He became an assistant professor of animal husbandry in the Nebraska university, then one of the heads of the department of agronomy and farm management, which was followed by professor of farm management.

He then returned to the University of Nebraska, where he became assistant professor of animal husbandry, professor of agronomy and farm management and director of agricultural extension, as well as state leader in demonstration, and boys' and girls' work. He was U. S. delegate to the International Institute of Agriculture at Rome in 1913, Nebraska member of the American commission for investigation of agricultural credit in marketing systems in Europe, a director of the National Farm association, chairman of the standing committee of extension work of the American Association of Agricultural Colleges and Experiment Stations, and later editor of the Nebraska Farmer.

This is Mr. Pugsley's first visit to the Pacific coast and he expressed warm appreciation of the progress made in agriculture in the new northwest.

The secretary, Henry C. Wallace, having a lifelong experience in farm paper business, with Assistant Secretary Pugsley going to the department of agriculture from the editor's chair of the Nebraska Farmer, and following Secretary Edwin T. Meredith with a remarkable success as an agricultural publisher, we have substantial ground to expect that the important knowledge along various farm lines stored in the U. S. department of agriculture will get out to the people in good, readable style. In fact, a nose for what the farm people want to read already is in evidence in the matter sent out by the press office of the department.

LOOKING INTO OTHER FARM FIELDS

A slump of 37,735,000 bushels in the total wheat yield of Belgium, Spain, Greece, Hungary and Poland was predicted to the department of agriculture by radiogram from the International Institute of Agriculture at Rome. The total yield for 1922 is estimated at 264,148,000 bushels, compared with 301,883,000 bushels last season.

* * *

A new element appears to have entered the milk field in Wisconsin. Condenseries are reported as being in the market again, and with prices which may attract milk now going to cheese factories. Furthermore, several brick cheese factories have closed on account of the milk supply having been taken away for shipping purposes.

* * *

What is stated to be a record shipment in dairy produce for Montreal left one day during last week when a single vessel carried away a cargo consisting of 55,354 packages of butter, of which 46,394 packages were shipped by Montreal exporters and 8960 packages by western houses. The total weight of the cargo was approximately 3,600,000 pounds and the value is estimated at about $1,150,000. A representative of the Saskatchewan Cooperative Creameries has just returned from Europe after having made arrangements to export the bulk of the company's butter from Regina to Great Britain direct and it is expected that between 25 and 30 carloads will leave Regina for the British isles this year. Four cars are already on their way to the Atlantic coast.

State Farm News

The fifth annual meeting of the Northwest Association of Horticulturists, Entomologists and Plant Pathologists closed at Yakima with the election of the following officers for the coming year: A. L. Lovett, entomologist, Oregon Agricultural college, president; D. F. Fisher, United States plant pathologist at Wenatchee, vice president, and C. C. Vincent, horticultural department, University of Idaho, secretary-treasurer. About 100 agricultural scientists from Washington, Idaho, Oregon, Montana and British Columbia attended the session. The next annual meeting is scheduled to be held in southern Idaho, the city to be selected later.

* * *

Farmers of the Tieton district in the Yakima valley are organizing a farm loan association, of which W. F. Hoyer is named chairman.

* * *

An enthusiastic meeting of farmers was held in Skamania county, Washington, at the home of Frank John, Stevenson, recently. The meeting was representative of berry growers and poultrymen. The necessity for organizing an association to boost the county berry growers, and to make plans for marketing their product, was discussed. A committee was appointed to formulate resolutions to complete an organization along the lines discussed and a date set for future meetings. The committee consisted of C. D. Walker, W. H. Grey and I. D. Brown, Mr. Grey to act as secretary pro tem.

* * *

Kittitas county poultrymen have organized and signed up 18,000 hens in the Washington Cooperative Egg and Poultry association, according to A. S. Brown, district manager of the association, whose headquarters are in Yakima.

* * *

The first solid carload of the 1922 apple crop was shipped from the Wenatchee Products company. It was billed to Minot, N. D., and consisted of Yellow Transparents, Duchess and Astrachans. It is unusual to begin shipments this early in the season in carload lots, although many summer apples are shipped in less than car lots at this time of year. The crop of early apples is said to be unusually large, as every tree seems to be loaded to capacity.

* * *

J. Harkema, a rancher, residing four miles west of Prosser, has shipped a ton of choice watermelons, part of them going to Seattle and part to Spokane.

* * *

Poultry and live stock and products of the soil will be shown in profusion at the Skagit fair this year and industrial exhibits promise to be more attractive than usual. Premium books are being distributed and show a greater variety of classifications and more attractive awards than in former years.

* * *

The storage capacity of the plant of the Washington Growers' Packing corporation at Vancouver will be doubled this year at a cost of about $8000.

* * *

Rebuilding the barns and the show pens at the Walla Walla fairgrounds, recently destroyed by fire, will be started immediately, it was announced by officers of the association. The fire will not be permitted to affect the fair next fall. The loss is estimated at about $15,000. Of this $10,000 will cover the stables, $2500 the two trotting horses burned and $2500 the hay, harness, racing equipment, etc.

* * *

The acreage of Spokane county seed potatoes will be nearly doubled this year, according to County Agent Virgil Patton. The big demand for Spokane county seed potatoes comes from the Yakima section.

* * *

Frank C. Nielson has succeeded P. S. Darlington as horticultural inspector at Wenatchee. Mr. Nielson has spent 20 years in the Wenatchee valley engaged in various employments connected with the growing of apples. He planted all of the Clark orchards west of the town, and had much to do with the Monitor orchards. Mr. Nielson for a number of years successfully operated his own orchards and in 1918 went to work for Mr. Darlington as deputy and continued in that capacity until his promotion.

* * *

F. C. Forrest, cashier of the First National bank of Pullman is the new chairman of the agricultural committee of the Washington Bankers' association.

* * *

C. Nyberg of Pacific, Wash., has a cow 3 1-2 years old that has had four calves inside of a year—two July 14, 1921, and two July 8, 1922. The cow was milked right along.

* * *

Grandview this year will try shipping out precooled cantaloupes, which is something new. Three-fourths of the cantaloupe tonnage, which will be from 200 to 300 cars, will be precooled and held under refrigeration for 36 to 48 hours at 33 degrees after harvest before shipment is made. The cantaloupes will then go out under ice.

* * *

The shipping of cherries is practically concluded in the Yakima valley. The total output is about 100 cars. Practically all the cherries grown are on trees along the roads and along property lines. Solid cherry orchards are very rare in the valley.

* * *

Ten and 15 tons of silage is a good production from one acre of ground even in the case of oats and peas, but Lee Lewis of Woodland tells one that seems to be the record.

"I could hardly believe it myself," said Mr. Lewis, "but I actually cut enough from one acre and a half of dike land to fill the silo, which is 10x30 feet. The crop was wheat and vetch and was seeded in October. It stood higher than my head and had to be forked back by hand before the next swath could be cut.

* * *

"We have had good results with vetch and oats for a hay crop and find that it is good for the soil as well as for the cows," remarked K. Jenny of the Sifton district, near Vancouver, Wash. "In most cases the hay crops are seeded in the fall in order to have the hay mature before the dry weather comes on. Spring wheat usually gives a smaller yield to the acre than the winter crops.

"Corn makes a fine silage crop, but we can not always depend on it. One year we tried oats alone and it would have done well except for the ensilage at the side which was affected by the newness of the silo. We feel, however, that oats and vetch or wheat and vetch make the best silage crops.

FARM BUSINESS AND MARKETS OUTLOOK

The trend of business and industrial affairs hinges on the outcome of present labor difficulties.

Recent observations indicate a larger range crop of beef than has been generally expected.

Railroads are only accepting hog shipments to eastern markets at the shipper's risk, so that eastern buying has been small, resulting in the sharpest drop in months.

Passage of the 33 cent per pound clean duty on wool in the senate has given the wool market a firmer tone.

The long expected export buying of wheat has started with sales at Chicago, New York and via the Gulf, totaling approximately 16,000,000 bushels.

Estimates upon the final yield now range around 825,000,000 bushels as there has been some improvement in spring wheat in the last month.

Primary receipts of corn last week were approximately 5,500,000 bushels compared with a ten-year average for that week of 3,800,000.

Egg prices dropped to the lowest level in six years last week.

The Business Outlook

The rail and coal strikes thus far have put 1,000,000 or more men out of work, caused a coal shortage which is curtailing operations of some of the big coal using industries and an advance in price to all consumers, increased the time of freight in transit—particularly important in the case of perishables, resulted in embargoes on certain lines and made a serious car shortage in the fall a practical certainty.

The government has taken a hand in both strikes through offering aid to mine operators who wish to reopen and through the declaration of a national emergency in transportation and issuance of priority orders on the part of interstate commerce commission. The latter, fortunately, place the important farm products in the preferred list. Government officials are active also in efforts to get the disputing parties to confer together, and some sort of settlement under which the strikers will go back to work may be reached at any time.

The trend of business and industrial affairs hinges on the outcome of those labor difficulties. Indications are numerous that if a satisfactory settlement is reached soon further expansion will take place, although there may be some changes in those industries taking the lead. The auto industry, which has been booming, reports a seasonal slump in orders and a dozen companies have announced price cuts within the last month. Building operations are falling off and the iron and steel mills are not so rushed as they were. As the pace slackens in these industries which have been taking the lead, others which have been lagging are expected to increase activity.

Financial conditions are highly favorable for a period of prosperity, as time money in the east is down to 3 3-4 per cent, the best commercial paper is quoted at 4 per cent and bankers' acceptances have been quoted as low as 3 per cent. Nor is the crop moving season expected to tighten the money market materially. The Federal Reserve ratio is at the highest since May, 1917, and Great Britain is adding to our gold supply through shipments sent to pay interest on her debt to our government.

All issues of Liberty bonds have been sold at the highest prices known and students of the bond market expect them to advance still further before fully discounting the era of low interest rates believed to be before us.

While the strike situation is a heavy drag on the domestic affairs, its effects are not necessarily lasting. The foreign muddle is not so easily or quickly remedied. Inflation in Germany continues and marks have reached a new low of 11 7-8 cents per hundred or about one two-hundredths of their par value. Drastic measures will be necessary to prevent a collapse in that country which would drag Austria and Bulgaria along. Italy also is weak financially and the budget of the French government is far from balancing.

Western Range Cattle Start

An advance guard of several hundred head of western range cattle, mostly in feeder flesh, arrived at Chicago in the last 10 days, so that the run appears to be starting according to the usual schedule. Recent observations also indicate a larger range crop of beef than has been generally expected.

Few choice or prime steers are left in the corn belt and prices on such have held firmly with an $11 top due at Chicago as soon as the right kind arrives. Yearlings are at a discount of 25 cents. With grassers and short-feds coming from all sections and eastern dressed beef markets receding, values on common, medium and good steers have continued to sag. Some of the intermediate sorts are as much as $1 lower than a month ago and it is probable that the decline has not ended. Most of the grass steers are bringing $8 to $8.75 at Chicago with a few going to killers as low as $6.50. Steers fed a generous corn ration on grass are cashing mostly at $9 to $9.75.

Feeder buyers are holding back expecting lower prices later on and more certain transportation conditions. With grass steers available, the selection is much better than a month go. Stocker and feeder cost this fall promises to average $1 or more higher than last year. Cattle prices in western Canada are extremely low, so that the duty of 30 per cent has failed to stop shipments. Chicago received several carloads on the feeder order last week and more are expected.

Unusual Conditions in Hog Trade

Receipts of hogs at 11 markets last week were 525,000 head, the largest for this season in at least 18 years, which is as far back as the records are available. The ten-year average for the corresponding week is 431,000 head.

Railroads are only accepting shipments to eastern markets at shipper's risk, so that eastern buying has been small. The result was the sharpest drop in months, put part of the loss has been recovered in the last few days, as the wide spread between eastern markets and Chicago stimulated the shipping demand and receipts have decreased.

Consumptive demand for fresh pork has declined, probably due to strike conditions, but the season during which both domestic and foreign distribution of cured hog meats and lard is at its best is near at hand and the foreign outlet has widened steadily for two weeks.

If hog receipts continue to run as large as they have been prices will not advance, but there is still time for the late summer bare spot and a smart upturn in values.

Trend in Lambs, Uncertain

Lamb prices dropped to the lowest level in a month last week, but recovered partly later in spite of a lower dressed lamb market. Eastern shipping orders were curtailed by the rail strike, while receipts were slightly above the average for the corresponding week. Since range lambs are playing a dominant role receipts are not dependable under present transportation conditions and the trend of prices is uncertain. Feeder lamb prices declined, but the movement countryward is too large and the price level too high for a healthy situation.

Receipts of horses at public stockyards in June were only 16,000 head, compared with a seven-year average for that month of 58,000 head. July is not doing much better. A few head of choice drafters sold near $300 at Chicago, but the bulk of the 1350 to 1500 pound chunks changed hands at $115 to $165.

Senate Vote Helps Wool Market

Passage of the 33 cent per pound clean duty on wool in the senate has given the wool market a firmer tone. Only small quantities are changing hands at present, as mills are fairly well supplied and are waiting the outcome of sales of cloth and of tariff legislation. Buying from the American Woolen company has been leisurely, but the output of nine of its mills has been sold. Woolens are in better demand than worsteds.

Stocks of wool in bond have increased heavily in the last six months and are much larger than the quantity imported in that time, as wool is being held to enter after the permanent tariff bill has been passed. A shortage of merino wools exists abroad and the committee which has had the disposal of the wartime accumulations of Australia and New Zealand in charge has reduced its holdings of crossbreds by 40 per cent. Since world consumption seems to be outrunning production, a shortage of the lower grades of wool is expected to develop eventually.

Buy 16,000,000 Bushels Wheat

The long expected export buying of wheat started last week with sales at Chicago, New York and via the Gulf totaling approximately 16,000,000 bushels. Fear of a rail tieup probably was a stimulating factor. Part of the buying was to fill old sales for early August shipment so that the amount of new business is unknown.

The rail strike has not affected the movement seriously, as primary receipts for the last week in July were 16,032,000 bushels, which is 40 per cent above the ten-year average for the corresponding week. The first week in August marks the high point in receipts as a rule. Car shortage reports are becoming more and more numerous and are apt to be a factor later.

Estimates upon the final yield now range around 825,000,000 bushels, as there has been some improvement in spring wheat in the last month. The Canadian crop is estimated unofficially at around 345,000,000 bushels, compared with 301,000,000 bushels last year. Canada's record crop in 1915 was 393,543,000 bushels. Based on present crop prospects and home consumption of about 825,000,000 bushels in the last twelve months, the United States and Canada together should be able to export approximately 500,000,000 bushels this year. This would provide about 2,000,000 bushels daily for the next eight months which is equal to the estimated daily import requirements of the wheat deficiency countries and possibly more than they can pay for. After that time southern hemisphere wheat will become available.

European crop yields are running below those of last year and an increase of 100,000,000 bushels in their import requirements over last year. At the same time conditions continue favorable not only in the United States and Canada, but in the other exporting countries of Argentina, Australia and India. Broomhall estimates surpluses in exporting countries in the next 12 months at 680,000,000 bushels and "effective demand" from importers at 656,000,000 to 672,000,000 bushels. Surpluses and import needs appear to be closely matched, but buyers are not aggressive and, for the time being, the trend of prices is apt to be in their favor.

Corn, Oats and Rye

Corn prices have been maintained, but not advanced, by huge sales for export in the last two weeks. Domestic consumers also have been buying freely. The prospect of another 3,000,000,000-bushel crop as shown by unofficial estimates was noticeable in the December delivery at Chicago which has declined about 10 cents a bushel from the high point of the season. Primary receipts last week were approximately 5,500,000 bushels, compared with a ten-year average for that week of 3,800,000 bushels. The visible supply at terminals is close to the largest on record for this season, but is decreasing rather rapidly.

Oats prices are low enough to have discounted most of the bearish conditions which include the large visible supply, the slow demand and the start of the new crop to market. Early threshing returns indicate a larger yield than expected earlier in the season, but unofficial estimates still point to a crop below the average in size. Canada has a big crop, but light crops in Europe may increase the export outlet this year.

Rye Surplus Is Big

Besides the large rye crop in the United States, Canada has a record crop and the prospective export surplus from North America promises to be the largest ever known. Prices remain at more than the average discount below wheat with further declines not unlikely. Germany is unable to buy freely, with marks near the zero point in value.

$11 for New Clover Seed

No official forecast of the clover seed crop has been made as yet, but the condition of clover is reported at about 10 per cent better on the ten-year average and the acreage is fairly large. The price of cash prime red clover at Toledo holds close to $13 a bushel, while $11 is offered for seed from the new crop to be delivered in October.

The range of cash grain prices for the week ending August 2 was as follows:

CHICAGO—Wheat—No. 2 red, $1.05@1.09 1-4; No. 3, $1.04 1-4@1.07 1-4; No. 2 hard, $1.06 1-2@1.11; No. 3, $1.05 1-2@1.09; No. 4, $1.06@1.08 1-2.

Corn—No. 2 mixed, 62 1-2@63 1-2c; No. 3, 62 1-4@63 1-4c; No. 4, 61 1-4@62 3-4c; No. 2 yellow, 63 1-4@64c; No. 3, 62 1-2@63 3-4c; No. 2 white, 62 1-4@64c; No. 3, 62@63c; No. 4, 61 1-4@62 1-4c.

Oats—No. 2 white, 34@39 1-2c; No. 3, 32 1-4@36 3-4c; No. 4, 32@35 1-4c.

Rye—74@76 7-8c.

Barley—55@62c.

Weak Spot in Feed Markets

After a fortnight of firmness the feed market has weakened and lost most of the recent gains. Demand for mill feeds is less urgent and flour mills are operating more extensively. Cottonseed meal has slumped sharply under heavy offerings of new crop meal at a big discount. Hominy feed is at the highest level of the year.

Prices per ton (100 pound bags) in carlots:

CHICAGO—Bran, $17; standard middlings, $20.50; flour middlings, $26; cottonseed meal, 36 per cent, $43; 43 per cent, $47; hominy feed, $26; gluten feed, $29.85; old process oil meal, $46.30; tankage, $55.

Hay Supply Increasing

Nearly all the old hay crop has been sold leaving an unusually light carryover. Receipts of new hay at markets near the producing sections are increasing and prices are slightly easier although the rail strike has stimulated buying. The market may sag a little lower.

Prices per ton in carlots: Chicago—No. 1 timothy, $18@20; No. 2, $15@17; No. 1 clover mixed, $14@16; upland prairie, $14@18; midland prairie, $12@16; rye straw, $12@13; oat and wheat straw, $8.50@10.50.

Butter, Eggs and Cheese

Egg prices dropped to the lowest level in six years last week. Weather favors maintenance of heavy production both here and in Canada. Receipts are dropping off rather steadily, but remain above the average for this season and storage holdings are still increasing. The increase in storage holdings at the four leading markets alone during July has been enough to make a total of 10,000,000 cases for the entire country on August 1, or 28 per cent higher than ever before known. The present price level for fresh eggs appears to have discounted these conditions, however, and an upward, rather than a downward, trend in fresh eggs is to be expected.

Lower prices for butter attracted extensive buying by storage operators last week and caused a sharp upturn in the market, but the tone remains unsettled. Receipts have decreased steadily for six weeks, but the total is above the average at this season and there is a large surplus if operators desire to store it. Domestic consumption of butter shows a big increase over last year

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Styles of American Cheese

The styles or shape in which American cheddar cheese is made are known commercially as Cheddars, Flats, Daisies, Young Americas, Longhorns and Square Prints. They differ not only in shape, but in size and weight and in the number packed in a box when sold. The standards for each style are as follows:

"Cheddars" are 14 1-2 inches in diameter and 12 inches high, weigh 65 to 66 pounds and are packed one in a box.

"Flats" are 14 1-2 inches in diameter and 5 1-2 inches high, and weigh 30 to 33 pounds. They may be packed one in a box, known as "singles," or two in a box, called "twins."

"Daisies" are 13 1-2 inches in diameter and 4 inches high and weigh 20 to 22 pounds. They may be packed one, two or three in a box known as "singles," "doubles" or "triples."

"Young Americas" are 7 inches in diameter and 7 inches high and weigh about 11 pounds, and are packed four in a box.

"Longhorns" are 6 inches in diameter and 12 inches high, weigh about 12 1-2 pounds each and are packed four in a box.

"Squares," as the name implies, are not round, but are 7 inches by 14 inches by 3 inches and weigh approximately 10 pounds each. They are generally packed two in a box.

Home Economists Meet

Delegates From 33 States and Canada Present

"All boys eat. In fact, most of them like to eat. So we used that as a starting point for our first unit, foods," said Mary Ruth Fisher in her talk on "Home Economics for Boys."

The 15th annual convention of the American Home Economics association held its sessions at the Oregon Agricultural college, Corvallis, last week.

Delegates from 33 states and Canada made up one of the largest national conventions of the times, including some 500 members. Students and alumni throughout the northwest were in attendance, staying at halls and sorority houses in order that they might get in closer touch with leaders of home economics.

The accomplishments of the association were told by Miss Mary Sweeny, president, in her address of welcome to the delegates.

Twenty-four states have affiliated with the national organization and more have expressed their intentions of doing so, according to the president. She stressed the need for getting in closer touch with the housewife and a better understanding of the homes.

"The greatest value of the home management course is that it raises standards, and helps the student to find herself and round her own development," declared A. Grace Johnson, professor of household administration at Oregon Agricultural college. "When the student completes the home management course, she should be expert in budgeting her time, her finances, and her energy."

The fundamental diet of the human race, breast milk, was emphasized by Dr. C. Ulysses Moore of Portland, specialist on children, in his appearance before the foods and nutritional section of the national home economics conclave.

He compared infantile death rates on different foods, showed the effects of breast feeding upon mother and child and outlined the method of securing breast milk and teaching the technic so that every child can be breast fed for nine months. Chemical and nonchemical constituents of an adequate diet were outlined and babyhood named as the age at which diet is the foundation for longevity, health and usefulness. Dr. Moore is considered an authority on children and diseases of children.

National councillors in attendance at the meeting are:

Mary E. Sweeney, president of the association, Michigan agricultural college; Lenna F. Cooper, Battle Creek sanitarium, Battle Creek, Mich.; Jenny H. Snow, supervisor household arts, Chicago; Grace Denny, University of Washington; Maude Murchie, state supervisor, teacher training courses in home economics, Sacramento; Alice F. Blood, Simmons college, Boston; Anna Richardson, federal board for vocational education, Washington; Ava B. Milam, dean of the school of home economics, Oregon agricultural college; Isabel Beiver, University of Illinois; C. F. Langworthy, United States department of agriculture, Washington, D. C.; Jessie White, acre, Utah agricultural college; Effie I. Raitt, University of Washington; Kate Bear, University of Arizona; Ruth Bickey, California; Miss Frances Swain, Chicago normal college, Chicago; Frances Kelly, Minnesota; Agnes Kewley, Utah agricultural college; Mrs. Myrtle G. Cole, North Dakota agricultural college; Gladys Brannegan, council to west central region.

Asotin's Harvest

Wheat Crop Better Than Expected

Harvest in Asotin county is proving an agreeable surprise, for wheat is yielding better than was expected when harvest began. Yields ranging from 16 to 36 bushels per acre are being reported and the general average is considerably above what was estimated before threshing began. On Anatone flats and in Cloverland the grain is turning out better than was expected

Ray Tuttle got 23 bushels per acre from one field and 18 bushels per acre from another and the quality is good. C. W. Steen got better than 25 bushels per acre from both Turkey Red and Hybrid, and the former tested 61 and the latter 60 pounds per bushel. T. W. Davis of Cloverland had a yield of 25 bushels. Frank Johnson of Cloverland had an average of 30 bushels for his crop, and one yield of 35 bushels in Cloverland was reported, but the name of the farmer who raised it was not obtained. J. W. Hollenback had a little better than 20 bushels per acre from his Turkey Red. H. D. Benedict got 21 bushels per acre and H. L. McMillan's crop averaged between 18 and 20 bushels. L. Morrow's farm in the Cloverland district had an average of 20 bushels for both Kanred and Turkey Red. D. Bolick had an average of 22 bushels. Frank Cliff had an average of 25 bushels per acre for his entire crop.

SEED POTATO DEMONSTRATIONS.

County Agent H. J. Plumb of Stevens county and Professor M. D. Armstrong, assistant horticultural specialist of Washinigton State college, are holding a series of meetings for demonstration of seed potato growing. Those yet to be held are:

August 10, Petts farm, 9 a. m.; community picnic. August 11, Olaf Rose farm, Marble valley, 9 a. m.; A. E. Skidmore farm, Orin, 2 p. m. August 12, J. M. Sholund farm, Narcisse, 9 a. m. August 14, M. G. Reber farm, Bossburg, 9 a. m.; C. H. Dotts farm, Flat creek, 2 p. m. August 15, John H. Kruse farm, Kelly Hill, 9 a. m. August 16, Rube Lont farm, Arzina, 8 a. m.; G. Jamison farm, Rice, 10:30 a. m.; W. A. Park farm, Daisy, 2:30 p. m.

SCHEDULE BEE DEMONSTRATIONS.

B. A. Slocum, bee specialist of the Washington State college extension service, will be in Yakima county August 12 to 14 to demonstrate methods of handling bees and cooperate with the beekeepers' association for better production. Arrangements are being made for holding four demonstrations at Parker, Toppenish, Wapato and Sunnyside respectively. The first two will probably be held on August 12 and the latter two on August 14.

The Thirty-Ten Bill

Will Be On the Ballot in November

Official announcement has been made by the secretary of state that the initiative petition for the 30-10 school tax bill has been found to contain 44,667 valid signatures, about 5000 more than necessary to insure the validity of the ballot in November. The measure provides that $30 shall be raised by state taxation for each school child in the state, $10 by county taxation for each child, and not to exceed a 17-mill levy voted in the local district. The measure is being sponsored by the state parent-teachers' association, representatives of which circulated the petitions. It is being strongly opposed by tax-reduction organizations.

At its meeting in Seattle recently the State Federation of Taxpayers' league voted unanimously against the measure and drew up the following 10 points in opposition to the measure:

1. That it is misnamed, being called an equalization measure, whereas it does not equalize the defects in the present school taxation system.
2. That it is unnecessary, inasmuch as no educational emergency exists at this time, and the school system of the state is one of the best, most costly and most efficient in the United States.
3. That it would not succeed in its professed purposes of giving relief to needy school communities, as only approximately 500 of the state's school districts need financial assistance, while 2100 do not.
4. That it would result in extravagance, and would be an extravagant measure.
5. That it would increase taxation by $3,750,000, while professing to reduce the taxes of local districts by a probable reduction in levies of such districts.
6. That it is based on a deception, professing equality for school children and justice for taxpayers, but giving neither.
7. That it would change the method of distribution of school tax funds from the pupil-attendance basis to a dual basis, depending on teacher and pupils.
8. That it would arrest the consolidation of country school districts.
9. That its effect would be to increase the funds available for teachers' salaries in rural districts, inasmuch as 65 per cent of the $3,750,000 additional funds raised would be utilized for teachers' salaries.
10. That passage of the measure would make continuance of the poll tax inevitable, to raise the additional $3,750,000.

These points were drafted by a committee consisting of Dr. S. B. L. Penrose, president of Whitman college and representative of the Walla Walla Taxpayers' league; E. D. Cowen of Tacoma, Pierce County Tax association; Jay Thomas, Seattle, of the Lower Cost of Government league; L. M. Livengood, secretary of the Taxpayers' Economy League of Spokane; Reuben W. Jones, secretary of the Seattle school board, and J. T. S. Lyle, Tacoma, president of the State Federation of Taxpayers' Leagues.

BIG LIVE STOCK SHOW PROMISED.

Southwest Washington fair officials report that there will be fully 350 head of stock on display in the live stock department this year when the fair opens at Chehalis-Centralia. One hundred four horses have been entered in the harness races and arrangements have been made for holding a horse show. Another new feature will be auto polo, substituting for the automobile races.



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Gravity System
Of Supplying Farm With Water

By L. J. SMITH, Head Department of Agricultural Engineering, Washington State College.

I am putting in a gravity water system. My well is 270 feet from where I must put my cistern. I want to run two pipes, one an inch pipe to carry water to the cistern, the other a three-quarter inch pipe to carry it back. My power for pumping is a windmill and my idea of using two pipes was to get away from pumping against the pressure of the water in the cistern. However, some who should know tell me it is only the height I raise the water that counts and if I run my upward pipe in at the bottom and curve up to top to empty there, I gain nothing. Would like to know also how to filter this water. I will use a check valve at the pump connection to keep water from coming back. The cistern is eight feet in diameter and nine feet deep.
Potlatch, Idaho. C. V. B.

There is no reason why you should go to the expense of putting in two pipes from your pump to your gravity tank. I would install a one-inch pipe between the pump and the tank which should be sufficient in size for the requirements of the average farm. It would take as much power for you to pump into the tank by means of one pipe and draw the water off by means of another as it would to use the single pipe, which latter, of course, is cheaper.

I would plan on running the pipe into the bottom of the cistern and to slope the bottom so that you can entirely drain out the cistern through the pipe. By this arrangement, if you keep the top of the tank tightly closed you can empty out the cistern four or five times a year and it likely would not be necessary for you to get into the cistern for years.

When you come to the point where you start digging deep to get the pipe under the bottom of the cistern, the easiest method for the last few rods would be to use an auger and bore a hole for the pipe. This would be considerably cheaper than digging so deep a ditch. Be sure that the pipe slopes continuously toward the pump in order that all the sediment may be removed upon draining.

I note your inquiry in regard to filtering the water. Unless you have reason to doubt the purity of your water supply, there is no necessity for installing a filter. It is not possible to filter water and remove bacteria except by a filter which requires at least 25 or 30 pounds pressure to force the water through the same. Such a filter would require removal about once a week for cleaning purposes and sterilizing, so you see that the filteration of water for bacteria is quite a complicated process and I would not attempt it except where absolutely necessary.

If you still think you should purify your water, kindly write me again and I will give you more complete details.

Hydraulic Rams
Farmer Has Good Luck With Two

Otto Tramm of Enumclaw, King county, Washington, has had exceptionally good luck with two hydraulic rams on his place two miles from town. They have been running for the last nine years, and the first repair work was done on them this winter.

In order to get a supply of drinking water it was necessary to go up the creek about 1000 feet, and erect a flume which carried the water to a small supply tank near the barnyard. This gave a five-foot fall, while the ram lifts the water 40 feet to the tank near the Tramm farm house. Since the supply was plenty large for the household they are supplying two of the neighbors with drinking water.

At the time the ram was installed Mr. Tramm went to a neighbor telling him of his plans to furnish a water supply for his home. The neighbor agreed to furnish half of the material for the flume and do half of the work of putting it up if he could have the privilege of using this supply to run a ram of his own, which would carry the water to his house near by. The plan was carried out and has worked very successfully. In spite of the fact that the rams themselves are not protected by fence or enclosure of any kind there has been but little trouble with the farm animals interfering with the rams or the supply.

Mr. Tramm felt that he could have secured a greater pressure by placing the main tank at a higher level, but if he had done so the ram would not throw as much water. With the 40-foot tank he has been able to supply all needs about the house and has not felt justified in making any change.

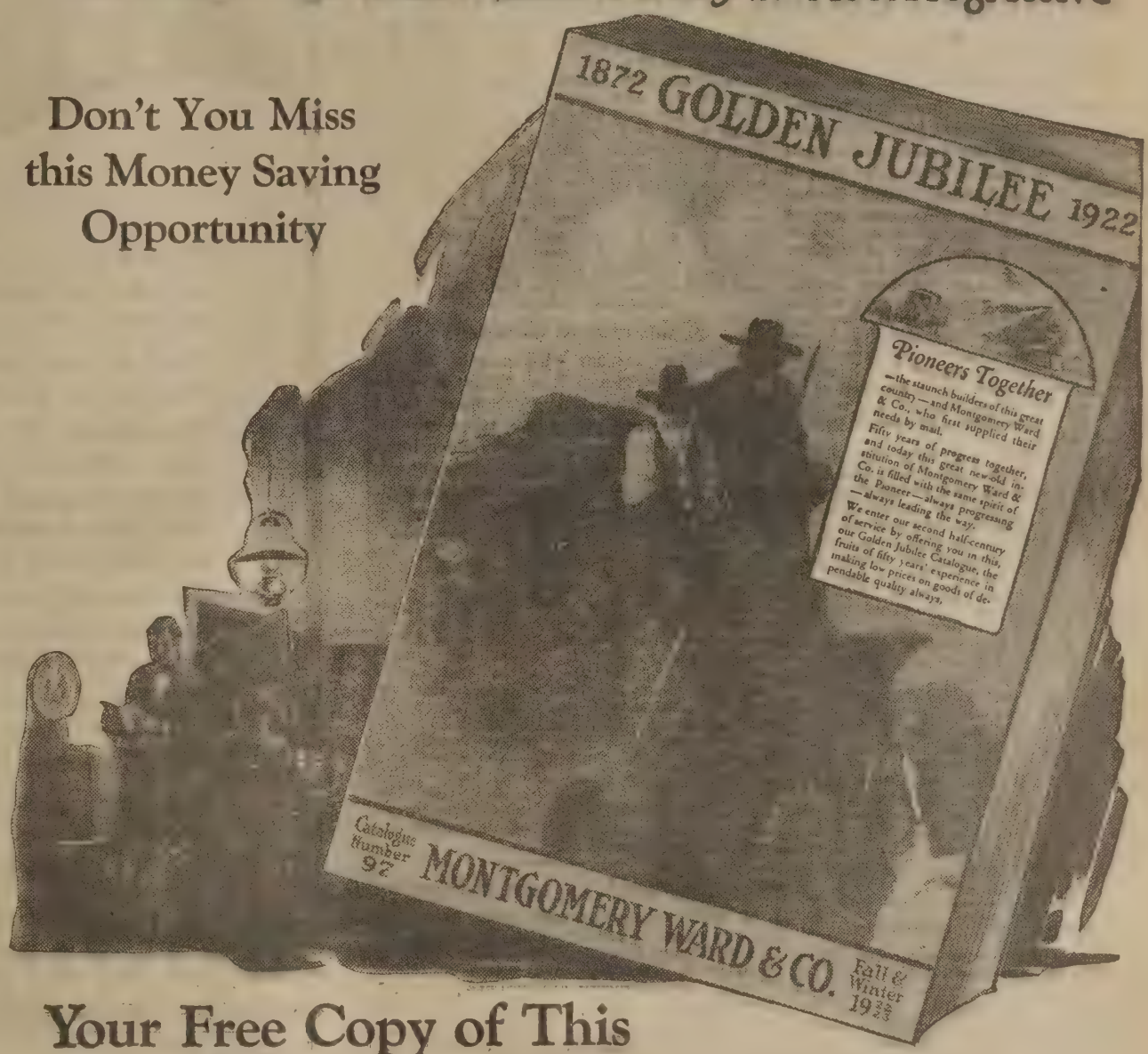
WAR FINANCE CORPORATION LOANS.

The War Finance Corporation announces a total of $748,706 of loans to country banks in Washington and Idaho. Of this amount over $86,000 has been repaid. The largest amount advanced to a single organization in the two states is that granted to the Okanogan County Live Stock association. Twelve loans were made, amounting to $156,915.

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LIVESTOCK AND DAIRY

The Farmer's Cow

By W. L. DAVIS,

In addition to the two well established types, the dairyman's cow and the beef raiser's cow, prominent practical farmers and agricultural educators have felt for a long time that there was a place and urgent demand for a general farmer's cow, a broad-backed, deep-bodied, mellow-fleshed cow, that would yield a reasonable amount of fairly rich milk, produce a calf which would grow into a good beef at 2 years old and herself possess the ability to fatten into a desirable butcher's animal when her period of usefulness as a milker had passed. Recently Alvin H. Sanders, editor of the Breeders' Gazette, has taken a very definite stand in favor of "the farmer's cow." When a man of Mr. Sanders' mature judgment and wide experience in the live stock world champions such a cause it is a practical guarantee that a real need exists.

Mr. Sanders does not take the radical view of some dual-purpose advocates, that there is no place for the specialized beef and dairy types. For the farms that are equipped to handle the specialized dairy cow or beef cow these highly developed types have a very real place which they will continue to hold. "But," says Mr. Sanders, "betwixt and between these two extremes lie a million farms that specialize neither in the one nor the other, and the failure of American cattle breeders to recognize broadly this actual condition explains why upon these million farms there are only nondescripts or scrubs of the worst sort to be found today. That is the whole truth, and the sooner this fact is recognized by all who have to do with molding public thought and sentiment upon such subjects the better for the future of American agriculture."

Mr. Sanders believes that the cow equipment needed on this general farm is not the highly specialized dairy cow or the highly specialized beef cow, but the right type of dual-purpose cow.

Pasture and Protection

Hog raisers may accomplish two desirable results by plowing up the barn lots at least once a year, says the United States department of agriculture. In the first place, hogs need good succulent pasture as much of the time as possible, and in the second place they need protection against internal parasites, such as roundworms, the eggs of which remain in the soil. Turning over the soil in the lots helps to get rid of the pests and the crop of forage makes it a profitable operation. In addition to providing cheap protein feed, pasture crops aid as a laxative and require the hogs to take a certain amount of exercise which is necessary to breeding animals and growing pigs.

Rye is probably the best crop to use for fall, winter and spring pasture for hogs. Throughout the corn belt it may be sown from August 20 to about October 1, depending on the latitude. In warmer climates the crop may be put in at various times up to as late as December. By putting in successive plantings from two to four weeks apart it is possible to have fresh pasture all the time. Seeding for pasture should be much heavier than for a grain crop, from three to four bushels per acre on a good soil. Pasturing can probably begin six weeks after seeding, and may continue, if the rye is not covered with snow, until the following April.

California to Compete

A California team will compete at the Pacific International Live Stock show in the stock judging contest for high school students, trained under the provisions of the Smith-Hughes vocational educational act. This information comes from R. A. Condee, chairman of the California high school judging committee and secretary of the Southern California Holstein Breeders' association. Mr. Condee wrote that his committee had unanimously decided that the high school judging team of California will attend the Pacific International. Five hundred dollars is offered by this show in prizes for high school teams trained under this act. There are a number of high schools in each of the northwestern states operating under the act and it is expected that competition will be very keen. The judging at the Pacific International will be under conditions similar to those governing the boys' and girls' clubs and the college students' judging contests. It is understood that the railways contemplate offering free transportation for each team and instructor attending the exposition.

Concrete Tank for Liquid Manure

A 2000-gallon concrete tank has been built and arranged to catch all the liquid manure from the dairy barn on the E. W. VanTassel Ayrshire farm at Wenatchee, Wash. The concrete gutters are extended through the barn lot and join at a point near the pit.

A pitcher pump is used to pump the liquid into a 200-gallon tank, which is hauled on a truck to the orchard and the manure sprinkled on the soil. Mr. VanTassel estimates that this form of manure is worth about $7 a load, based on the fact that all solid manure from the dairy herd is sold readily for $3 a ton at the farm. There is a waiting list of orchardists who want the manure and much more could be sold if it could be supplied.

For his own orchard Mr. VanTassel used an alfalfa cover crop, which is disked under every spring for a mulch. With this plan there is little use for the solid manure when the liquid can be supplied in large enough quantities to fertilize the crop.

Secret of Good Grain Silage

There are probably more failures with grain than with any other crop attempted for use as silage, but there is no really good reason why even grain can not be successfully "canned." The principal difficulty seems to be in getting it packed. It must be cut very fine, and to accomplish this the cutter knives should be changed and sharpened twice a day. Take full advantage of the packing effect of the fall and do not disturb the grain afterwards.

DAIRYING IMPROVES.

Dairymen in the 45 cow testing associations in the nine western states now own 9484 cows that have made more than 40 pounds of butterfat in a month. Not many years ago a 40-pound cow was a rarity. There is much room for improvement, however, in the general run of herds in all parts of the country, says the United States department of agriculture.

HOG TYING STEERS RECORD.

A new world's record for roping and hog tying steers was established during the second day of Cheyenne's frontier day exhibitions by Ben Johnson, Oklahoma horseman. Johnson accomplished the feat in 20 4-5 seconds, one-fifth of a second faster than the former record made by Fred Lowry in 1912, also of Oklahoma.

WILL EXHIBIT RED POLLED.

F. H. Porter, the well-known breeder of Red Polled cattle of Halsey, Ore., will exhibit a full herd of his favorite breed at the Oregon state fair and the Pacific International Stock show.


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Ask your dealer to sell you a full set.
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Read the "Want Ad" page this week for good offers of all kinds.

They Do Away With the Plow and Get Better Crops

By C. E. HILL, Superintendent Waterville Branch Experiment Station.

Henry Gall was one of 30 farmers who attended a demonstration of the double-rod weeder on the Waterville branch experiment station in May, 1921.

Farmers were given the opportunity at that time to look over the crop and fallow which were the result of the Waterville station's innovation in handling fallow ground without plowing. Mr. Gall grasped the idea of securing the firm, shallow, cloddy surface necessary for fall seeding at a minimum of cost, went home and put a good double cut-away disk to work on the balance of his summer fallow. It was a little late for ideal work in maintaining maximum early moisture, but Mr. Gall followed the disk with one operation of the light draft spring tooth harrow and one weeding with the double-rod weeder, at suitable intervals during the season. This latter work kept down weed growth and assisted in firming the ground.

With an absence of rainfall in the fall of 1921 and no precipitation whatever during the present crop season, Mr. Gall will harvest 25 bushels of Turkey red wheat from the unplowed fallow. This balance of the half section, early plowed and well worked, will yield approximately five bushels less.

No less striking results can be found on the farms of E. P. Hinderer of Supplee and Louie Brandt of Withrow, where the new practice is found in successful operation on large summer fallow and crop fields. Mr. Brandt's summer fallow can be seeded with absolute assurance of a stand when the proper season arrives, while his Turkey wheat grown on land similarly handled will compare favorably with Mr. Gall's. In this instance again the crop on the unplowed fields will outyield the earliest plowing on the same farm.

Mr. Hinderer is using a right lap to good advantage for the early work and his success in growing maximum crops at minimum cost under the new system has been outstanding. He harvested 23 bushels of Turkey per acre from a quarter in the fall of 1921, a rainless season—handled as fallow during 1920 without plowing. This was exactly the same yield of Turkey obtained on the same quarter, in 1915, a wonderful crop season, following early-plowed and well-tended fallow. This quarter is light, subject to blow, and the yield obtained is probably around the limit of production. Mr. Hinderer figures costs and concludes that he can handle 25 per cent more acreage on the winter wheat system under the new plan with a saving of at least $1 per acre. Mr. Gall maintains that a one-man, eight-horse outfit can do the necessary seasonable work on 500 acres of summer fallow ground.

Here is a method for this section which will control blow, conserve moisture, maintain the surface conditions which are so important for seeding in the fall, make possible the farming of good-sized acreages profitably and cut the cost of production. It does not call for additional expenditure in new machinery. A good double disk or right lap for the early work which is the foundation for success in any dry land fallow system, the light draft harrow and the double-rod weeder turn the trick. In heavy stubble or trash half the teeth can be removed from the harrow.

The extent of application of this change in farm practice will have to be worked out, but the Waterville branch experiment station has demonstrated its practicability on the lighter soils and larger acreages of this section for fall seeding. With the active assistance of the extension service it will mean greater assurances of winter wheat stands and added profits to the dry land wheat farmers of this plateau.

Yakima Dairymen

Have 400 Members in Association

The unusual success of the dairy associations in the counties of western Washington has been an incentive for the dairymen of the Yakima valley to form a similar organization which will help them to market their dairy products. The new association will be known as the Yakima Dairymen's association and is ready to begin operations with 400 members and 3000 producing cows.

The purpose of the association is to supply a good quality of milk and cream to the distributors who will bottle and sell it for the city milk trade. The newly created milk commission will regulate the price of milk and cream to be paid by the consumer as well as stipulating what the producer shall receive. The creameries, who, by the way, handle bottled milk for the city trade, will be assured of a more uniform supply of sweet and sour cream as well as milk.

Both the distributors and the producers are required to sign a three-year contract, which is drawn up before a notary to assure both parties that they may depend on the transaction for the stipulated time at prices that are fair to all concerned. It is estimated that the association will handle 75 per cent of the milk and cream used in the city of Yakima.

In selecting the milk commission of five members that would have charge of setting the price, one was chosen from the woman's clubs, one from the commercial club, another appointed jointly by the distributors holding contracts with the association, and one member from the association. The county agent was appointed as an exofficio member, making five members in all, the first two being selected to represent the public. The commission can be called for session by either party holding contract and it will be asked to collect any information to be had regarding the cost of production of milk or the distribution to the consumers. From information of this kind they will set a price that is considered fair to both the consumer and the producer and allow the dealer a reasonable spread for the handling.

The association has a utility plant at Yakima, where it can handle any surplus milk that may be had. It is equipped with a large receiving vat, a cheese vat, pasteurizer, separator, churn, boiler and cooling tanks. A testing room will also be installed. This plant is the property of the association and can be used in case there is a larger supply of milk than can be used by the general consumption. In case there is an oversupply of cream it will be churned and the butter shipped to the United Dairy association.

A receiving station is being established at Sunnyside, where cream will be gathered from as far as Prosser and Toppenish.

Officers of the association are: George V. Harris, Yakima, president; W. H. Shaver, Cowichee, vice president, and R. W. McKenna, secretary and manager. The directors are: Alec Todd, M. W. Poyner and F. A. Duncan of Yakima, the latter appointed by the state director of agriculture, as required by law; E. V. Taylor, Selah, and S. D. Cornell, Grandview.

FLOURING MILL BURNS.

The mill of the Portland Flour Mills company at Prescott, together with seven warehouses and one dwelling belonging to the same concern, was destroyed by fire late in July with an estimated loss of about $1,000,000.

SHIP CREAM TO TACOMA.

By shipping their cream to the Pierce County Dairymen's association, which maintains a pasteurizing station in Tacoma and has a market for more of the product than it has been getting, dairymen of the Big Bottom country in eastern Lewis county expect to save considerable over what it would cost to truck their output to Chehalis, and at the same time to realize the benefits of cooperative marketing through the United Dairymen. Ever since the Lewis-Pacific association started operating its plant a year ago, eastern Lewis county farmers have sought affiliation with it, but road conditions have proved an effective bar to truck shipment. Under the new arrangement the cream will be hauled by truck only from Randle to Morton, and will go from there to Tacoma by rail. Twenty-two dairymen signed the Pierce county contract before shipments started.



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POULTRY AND RABBITS

Poultry and Garden

When we first stopped at the farm of W. L. Willis of Mount Vernon we took it to be a poultry farm. Later, after we had seen his splendid fields of seed crops we wondered if this were not the main source of income. Finally when we asked him as to his principle industry he avoided our question for the simple reason that he does not emphasize either industry to the detriment of the other.

"We find it necessary to carry on some kind of intensified farming, since we are keeping such a large flock of chickens," he told us. "We could not raise oat or hay crops to any advantage, since the large quantity of manure would only cause the crops to lodge. Such plantings as garden crops will all respond readily to heavy applications of hen manure, and we are taking advantage of it. We find that the two work hand in hand with each other, each using a byproduct of the other to some extent."

The poultry plant consists of two large houses, with a total capacity of 7000 birds, but at present there are only about 5000 hens kept. The houses are all of the two-story type, which afford the birds the whole lower floor for dusting. This arrangement is considered necessary because there are some years when floods would endanger the birds if housed on the ground floor entirely.

"We need from 3000 to 4000 new birds each year to keep up the flock and this year we did some incubation," said Mr. Willis. "We have a breeding pen with some of our very best hens and cockerels and they are given free range about the farm. In this flock are the birds which were in the egg-laying contest at Puyallup last year. One of the birds was given third place in the contest, but judging from the size of her eggs she ranked second. We also have a high-class cockerel, for which we paid $100 and we have been offered the same price for the contest hen. There are only 15 hens in the breeding flock, but they are all trapnested and the eggs are hatched separately and the chicks toe punched as soon as hatched.

"There is a large quantity of manure each day from the poultry plant and we plan to have some place to distribute both summer and winter. This necessarily calls for some kind of intensive farming method that will make the best use of the ground. We have raised both garden and seed crops and find that a combination of both is best for our conditions."

Mr. Willis has five acres of rutabagas, from which he expects to harvest a ton of seed to the acre. The dry season has kept the growth down and prevented a duplicate of last year's yield, which was 2300 pounds to the acre. The seed was planted last September and the roots dug and stored in a cellar over winter and in the spring they are set out in the field and the seed is harvested the latter part of July. The stalks are cut with a corn knife and tied into bundles and shocked.

Table and sugar beets are planted in much the same way except that the seed is planted in May. One acre of beets from seed will plant five acres the following spring for the seed crop. The roots are pitted over the winter after the tops have been removed and they are set in the field as soon as the ground will permit, which is usually February or March. They are set in rows four feet apart, two feet in the rows.

Mr. Willis has two and a half acres of spinach, which he is letting go to seed. This is a one-year crop and is seeded the earliest possible time in the spring, the plants producing seed the same year. The rows are seeded somewhat closer than the root crops and hand-cultivation is practiced. When the plants have matured seed they are pulled and shocked on a frame, which is withdrawn, leaving the shock standing. Such a patch should produce a ton of seed to the acre, but the lack of rain will hold the crop back to about 1500 pounds this year.

Aside from the seed crops Mr. Willis is raising a quarter of an acre of asparagus, which will be set into the field next spring. The plants are now 2 years old and if planted early in the spring they may be cut for market, according to Mr. Willis. The heavy cutting, however, will not be made until the following spring, when the plants will be 4 years old. All of these plants were raised from seed which is found to be a very convenient and economical manner of getting an asparagus patch started.

A large patch of rhubarb is producing its second crop of stalks and is expected to produce a large crop next year. The whole field is fertilized heavily with hen manure and it is giving the plants a splendid start. Thorough cultivation is practiced after each application in order to work the manure into the soil. Mr. Willis is known to be the first man to ship a carload of rhubarb to the outside market from Mount Vernon.

Rabbits for Fur

While the raising of rabbits has proved to be a successful undertaking from the standpoint of breeding stock and meat, Mr. and Mrs. Orr of Tacoma, owners of "Orr's rabbitry," have found that the furs can also be utilized and made to produce a big part of the income.

With this purpose in mind they have been raising only the breeds that have the right kind of skins for making into furs. The solid colors are being bred, which are mainly the white, black and blue Flemish Giants. A few Steel Flemish are still kept, but it was these that produced the blue strains when crossed with the blacks. They are now being bred and are producing the solid blue color without further crossing.

Not only do the rabbits in the Orr rabbitry have the proper color, but they are all good sized rabbits. All young rabbits are kept with the doe until they are from 3 to 4 months old, when they are segregated and either butchered or kept for breeders. At the age of 7 months they have attained an average weight of 12 or 13 pounds. Such a good sized rabbit will have a skin that will measure 18x24 inches.

Rabbits from this rabbitry have for many years made names for themselves at the shows.

"The fur making part of the business is by far the most profitable phase that can be developed," said Mrs. Orr, "provided one can make up the furs himself and sell the finished product. It looks like a hard task to some people, but I do not find it any more difficult than some kinds of dressmaking. In fact, I maintain that any one who can make dresses for herself can make furs. It is mostly all hand work, anyway, and requires care. The machine can be used in the making of the linings which are used for the pattern on which to sew the tanned fur.

"We have made a variety of articles and find that they sell readily. For a lady's cape, which was made from white furs with a black border, it took 38 skins in all. The small black dots are sewed in from the under side to imitate erminett. One of the fur companies placed a valuation of $175 on it, saying that an article of similar quality could not be bought for less.

"As for the tanning, it pays better to send the dried skins to some company who makes a specialty of this work and have it all done at one time. The cost is small and it is finished in fine condition for working into anything that is needed. The skin from some rabbits makes stronger leather than one would imagine and we made some into a pair of moccasins that wear almost as good as some other kinds of fur."

Mrs. Orr utilizes all waste pieces of white fur into three-inch strips, which is taped and lined. This can be marketed at a neat price, especially when it has the black dots in it. Some of this which was made up last fall sold for $3.50 a yard.

As yet no furs have been clipped with the view of imitating seal. They are best with the fur in the natural stage, according to Mrs. Orr. This makes good collars and cuffs for ladies' coats and it will wear almost as well as some of the heavier furs.

In preparing the skins for keeping they are merely dried after being stretched on two sticks which are mounted on a short piece of spring wire to hold them apart and does not stretch them too much. It is best to dry in the shade and not attempt to apply any tanning preparation unless the work is to be done at home. The tanneries ask that none of the fat or surplus meat be removed, since this can better be done by machinery and at less danger to the skin.

Let's disarm the thermometer

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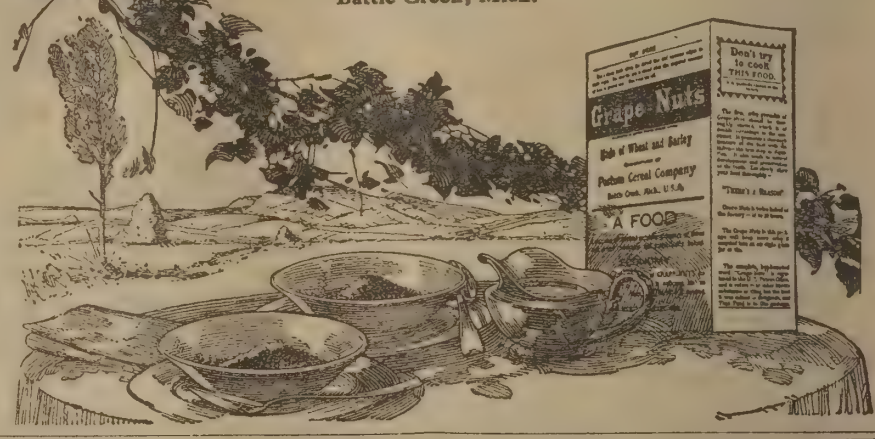
Grape-Nuts contains all the nourishment of whole wheat flour and malted barley, including the vital mineral elements and bran "roughage," and it is partially pre-digested in the long baking process by which it is made.

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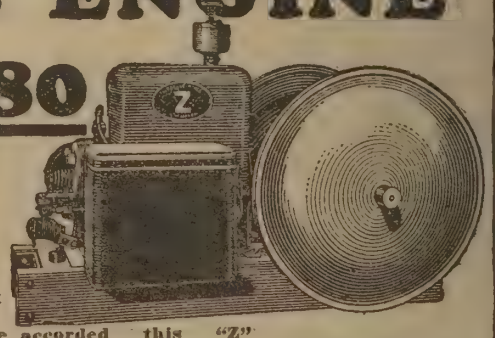
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LOOK AT THE GOOD FARM BARGAINS ON THE FARMERS' "WANT AD" PAGE THIS WEEK.

ORCHARD AND GARDEN

A World Record

Made by Queen Bee and Progeny

By GEORGE W. YORK.

When "world records" are referred to, one usually thinks of cows that have given an unusual quantity of milk or cream. But the "world record" that I want to speak of was made by a queen-bee and her progeny.

A beekeeper in Michigan had shipped to him by an Alabama bee and queen breeder 32 two-pound packages of bees, with a queen for each package, on April 15, 1921. One of the queens and packages of bees produced for him during the 1921 season 577 finished sections (or small bores) of comb honey, which he sold for $168. The beekeeper (Mr. Hamilton) says this particular queen kept 20 broodframes filled with brood during the honey storing season.

The foregoing record undoubtedly is a banner record of the kind, for the highest record I have ever seen reported, and that in a period of nearly 40 years, was 566 finished sections of comb honey by one colony of bees in a season, and that was reported many years ago by a New York state beekeeper.

What makes the latest report of 577 finished sections of comb honey unprecedented is the fact of its being produced by a two-pound package of bees and its queen.

Perhaps it is well to say here that this wonderful record was made by supplying the colony of bees with sections having combs at least two-thirds drawn or built out in advance, so that would be of great assistance to the bees.

Of course a queen that would keep 20 broodcombs filled with brood during the breeding season is a remarkably prolific queen, and no doubt deserves to be valued at $200, as she is being valued today. For the queen-breeder in Alabama who sold her with the two-pound package of bees in the first place has bought her back again, and is rearing queens for sale from her at $1 each, and some at $1.75 each. As it is possible to rear 2000 queens from one queen-bee during a single season, it is not at all surprising that this wonderful queen should be valued at $200, although that amount might seem to be rather high to a person not familiar with beekeeping and honey production.

Strawberry Plants

By DON B. WHELAN.

What is the matter with the strawberry plants when they turn yellow and die? This is a question that growers in different parts are asking this year. It seems to be a mysterious complaint, inasmuch as the cause of it can not be easily located. Some have laid the trouble to too much water, others to lack of it, while still others blame the use of too much fertilizer. The majority frankly confess their ignorance.

The real cause is a small bug with a sucking mouth that works near the surface of the ground. It punctures the stems and extracts the plant juices, causing first a yellowing and then a dried-up condition of the plant. This bug is known as the false chinch bug, and goes under the scientific name of "nysius ericae." It is a slender grayish-brown bug about one-eighth of an inch in length. During the winter it hibernates as an adult in rubbish and under leaves around the base of its food plants. As a rule they are found on many cultivated plants and weeds, but during a real dry season they confine their attacks more to the cultivated plants. They will feed on such weeds as pepper grass, shepherd's purse, Russian thistle and sagebrush.

Control of this pest can be accomplished by cleaning the rubbish from the field late in the fall to destroy their hibernating places. At the present time a spray composed of Bordeaux misture, to which nicotine sulphate has been added, is the best means of control known.

Red Spider

By C. C. VINCENT.

Owing to the dry spring and summer the red spider is extremely prevalent in many of our fruit sections. This mite is not only working on fruit trees, but is also found on many of our small fruits. The mites are doing considerable damage in that they feed upon the leaves, causing them to turn yellow, dry up and fall off. This condition not only reduces the crop for this year, but also weakens the vitality of the tree to such an extent that the crop is seriously affected the following year. Ralph Smith, recently entomologist of the Idaho State university, gives the following excellent advice concerning this pest:

"This is the commonest and the most destructive of the spider mites in Idaho. It commonly has been called the "red spider," but the predominating color usually is not red. The common name, two-spotted mite, is based upon the presence of two dark spots, usually readily distinguishable on the back of the full-grown mite. Aside from attacking all kinds of orchard and garden fruits, it is an important pest of many garden, truck and field crops. It is also a common pest of nearly all kinds of cultivated flowers, shrubs and shade trees. "The first indication of injury is the appearance of minute whitish flecks and fine webs on the leaves of the affected plants. With continued infestation the leaves usually turn grayish or yellow and lower surfaces become covered with numerous fine webs, under which the mites live. The webs collect particles of dust from the air and excrement from the mites, which gives the plants a dusty appearance. Eventually the foliage of infested plants becomes brittle and drops off.

"Mature mites pass the winter on vegetation and in trash surrounding the plants which they infest during the summer. They become active on the first warm days in early spring. Migration onto the fruit trees begins soon after the blossom buds commence to open, but it continues over a long period. Probably the greater number of mites go from surrounding vegetation to the fruit trees during May and the early part of June. Multiplication on the trees during the spring is very slow and studies show that serious infestations are not likely to develop before the first of July. During the later part of August and in September the mites commonly collect in depressions on the fruit of prunes and plums. Later they migrate to the bases of the trees, where they frequently make conspicuous web tents, from which they gradually disperse to near-by vegetation.

Control Measures.

"The destruction of fallen leaves and other vegetation, and subsequent cultivation of the soil in berry patches are effective measures for destroying the overwintering mites. Experiments in treating the surface soil about currant bushes with kerosene emulsion, miscible oils and lime-sulphur gave no better results than was obtained by spading the surface soil. In clean cultivated orchards surface cultivation in late fall and early spring as well as light cultivation during the summer months, apparently has retarded the development of infestations.

"When trees become seriously infested during the summer the liberal use of irrigation water tends to reduce the injury. Direct control in orchards consists in spraying as soon as infestations become apparent, using commercial lime-sulphur, 1 to 50. The lime-sulphur may be advantageously combined with one of the codling moth cover sprays. Atomic sulphur, soluble sulphur and wettable sulphur also have given good control. The sulphur sprays have given good results on small fruits. For small fruits which are soon to be picked the most satisfactory control has been to forcefully spray the plants with soapy water.

Calcium caseinate spreader adds very materially to the effectiveness of the sulphur sprays."





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For Pleasure, Not Money

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"We never sell any of our flowers. We don't raise them for that purpose and there is more pleasure in raising flowers when they are not commercialized." The remark came from E. Remy of Yakima upon being asked how he sold most of his flowers. "They have always been a source of pleasure with us and we enjoy having some flowers to give to our friends when there is an occasion that demands them.

"There are about 70 varieties of roses alone," said Mary Remy, the daughter, who has much of the responsibility of the garden and does a large part of the lighter work. "This is a good climate for roses, although there are seasons such as we had last winter that will cause some of the more tender varieties to winterkill. They will always come up again from the roots and with a little protection they would come through the winter uninjured.

"We have always made a specialty of roses and we find that the John Hopper is the best one to winter in this climate. We try to have as many kinds of flowers as possible in order to have them blooming at all times. The bulbs will bloom early in the spring and some of the annuals will bear late blooms. If one is going to raise bulbs of any kind they should not forget to mulch them well and to take them up every summer and plant again in the fall, Gladiola seem to be better adapted to this climate, although the tulips will do well here if taken care of."

Miss Remy has a collection of ferns from the neighboring wilds along the river and in the mountains. These she transferred by means of tin cars or in some cases by digging up as much of the dirt as possible from around the roots and wrapping in a newspaper. If not allowed to dry out they can be transferred a long distance in this manner and some rare specimens have been made to grow in the Remy yard.

Such flowers as the snapdragons and asters as well as other annuals are very good for cut flowers and they come at different seasons. The snapdragons can be grown to a good size and with long stems if the proper varieties are chosen and if the soil is well fertilized.

The soil in this neighborhood is a gravelly loam and responds well to barnyard manure or nitrate. Both are used in the flower gardens and something of the kind is necessary for best results. After each irrigation the rows are cultivated in order to save the moisture, and to keep down the weeds.

An interesting feature about the Remy home is a telephone pole that has been entirely covered with the growth of a trumpet vine which is over 10 years old. The fence in front of the house and next to the road is covered with crimson ramblers, which make an early bloom and create a beautiful effect.



The home flower garden and orchard on the Remy farm near Yakima. A large variety of perrenials and annuals are grown and a very beautiful effect is had at all times of the growing season.

Experimenting With Clover Crop

Leon H. Miller of the Rock Island district near Wenatchee has a 10-acre orchard on which he is trying out the continuous cover crop method of raising alfalfa.

This plan differs from that used in many other orchards in that the alfalfa is never plowed or disked under, but allowed to die down each fall. No attempt is made to incorporate the plants with the soil, but it is left to decay naturally and thus hold the moisture close to the surface.

By so doing the small roots of the trees are induced to feed close to the surface of the soil and they are not injured by cultivation. The best of the plant food is thus utilized as the vegetation decays and is deposited on or near the surface. Irrigation is also made easier and the vegetation works much similar to a blotter and draws the water from the ditches, thus saturating the whole surface.

Mr. Miller has two-thirds of the orchard planted to Winesaps and there are a few Delicious and Jonathans. A few trees of Yellow Transparents are growing near the house.

"I tried out an experiment with early and late thinning," said Mr. Miller, "and I am more than ever convinced that we should thin early if we are to get the maximum returns. I took two Yellow Transparent trees and thinned one in May and the other about the same time in June. The apples on the tree thinned in May are at least 50 per cent larger than in the case where they were thinned in June. I wish I had thinned the whole orchard a few weeks earlier."

Leaf Roller Control Work

Leaf roller control work in the Spokane district has not brought out anything strikingly new this year, according to H. E. Newman of Spokane, in charge of the work there. Results are very largely dependent upon the thoroughness of the work done and upon the weather. Dry weather is favorable to good control and if the grower is lucky enough to have such weather and does his spraying well he may get good results. Weather is a big factor, as rain is very adverse to effective work. The dormant spray with miscible oil is for the present season's crop, while the arsenate spray later will have the effect of reducing the infestation for the season following. Mr. Newman was formerly deputy horticultural inspector.

Good Sales Policy

Start on Reasonable Basis and Create a Demand

In a recent issue of The Oregon Grower, the official organ of the Oregon Growers' Cooperative association, M. J. Newhouse, assistant general manager, in discussing thep rune market, gives some valuable suggestions to producers of any kind of farm crop who desire to market them cooperatively.

Mr. Newhouse says that his association has made sales in more than 60 carload markets, representing every important center in England, central Europe, Canada and the United States. Individual growers could not possibly invade these widespread markets successfully.

Discussing the prices decided upon by the asociation a few weeks ago, Mr. Newhouse said that these prices were about what would give early and substantial sales. The prices were not as high as some growers might have desired, though it is apparent that most members of the association have accepted them as satisfactory. On this point, Mr. Newhouse utters this fundamental: "The problem at present is not how high we can sell a small portion of our crop, but how high we can sell the entire crop, which necessitates the taking of 30,000,000 to 35,000,000 pounds of additional prunes into old markets or into new markets which must be established this season."

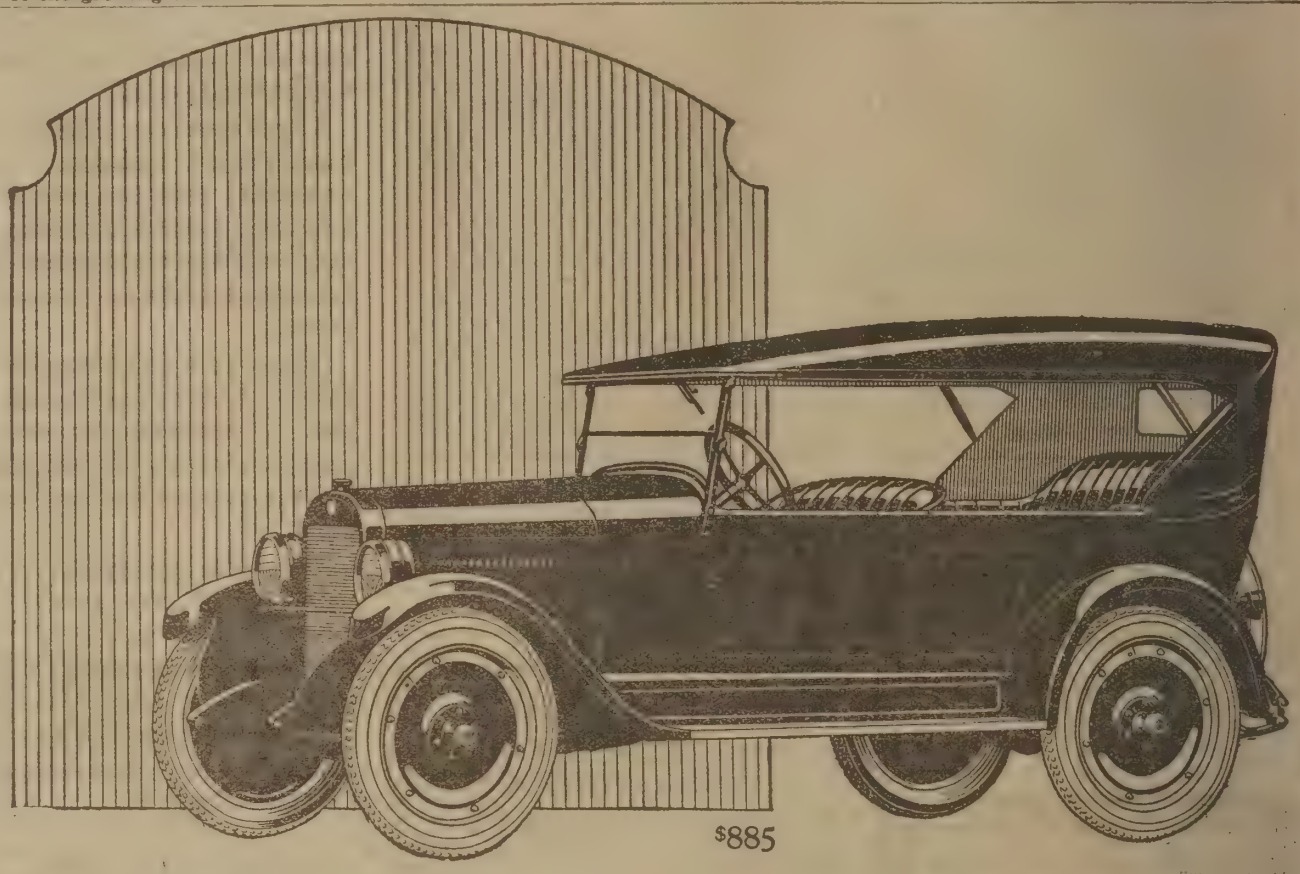
Again on this point, he says: "To start on a reasonable basis and create a demand is always good, conservative sales policy."

Cooperation must be conducted along strictly business lines. Theory will not get us anywhere. Sentiment is a fine thing and plays an important part in cooperation, but dollars and cents are the things that tell the story. Mr. Newhouse says: "The greatest objection to cooperative marketing in the northwest is the slow manner in which returns are made to the growers. The only way to have sure money for the growers upon or soon after delivery is to have actual sales contracts to take to our banks. In other words, the committee thought that large and early payment to the members was more of a factor to consider than comparative prices."

Cutting Down the Sick List

Three millions of people used to be ill in the United States all the time, stated Miss Mary Sutherland, state college extension specialist in nutrition, at Spokane recently. Owing to better knowledge of nutrition and to vigorous campaigns to promulgate this knowledge, 600,000 persons less are ill today.

Miss Sutherland is urging the housewife to plan the year-round food budget so as to insure sufficient consumption of the fruits and vegetables at all seasons. "There are too many colds; there are too many bad teeth," she said. In many of the common vegetables and fruits, as in milk, there is lime for the teeth and there are the protective vitamines.



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Cord tires, non-skid front and rear; disc steel wheels, demountable at rim and at hub; drum type lamps; Alemite lubrication; motor-driven electric horn; unusually long springs; clutch and brake action, steering and gear shifting, remarkably easy; new type water-tight wind-shield.

First among the virtues of the good Maxwell are the ruggedness and reliability which the farmer wants and needs in his motor car.

MAXWELL MOTOR CORPORATION, DETROIT, MICH.
MAXWELL MOTOR CO., OF CANADA, LTD., WINDSOR, ONT.

The Good

MAXWELL

Extracted Honey

When Marketing, Do It Right

By GEORGE W. YORK.

It will soon be time to think about putting extracted honey on the market. While not as much care is required in handling this kind of honey, compared with honey in the comb, still it is well to see that it is done right.

We will suppose that the honey has been extracted and strained in a sanitary way, and is ready to put up for market.

Now the question will arise at once as to the proper containers to be used. If sold in a wholesale way, there is nothing better than the 5-gallon tin cans with about a 4-inch screw cap opening on the top of each can. These cans are then put two in a box and shipped.

But for retailing extracted honey either small tin or glass containers will be used. On account of glass being more expensive than tin, and also because easily broken, more extracted honey is sold to consumers in tin.

Perhaps for quantities up to three pounds, glass containers may be used, and for larger quantities use tin cans or pails.

Honey in glass, of course, can be made more attractive than in tin as it shows so beautifully through the clear glass. But, really, after one has purchased a certain brand of honey once, it is not necessary to see it through the glass. In fact, it is unnecessary ever to see honey through glass. Most purchasers do not expect to see canned corn, peaches, apricots, etc., through glass. They buy all such canned goods in tin, without a thought of seeing before buying.

When selling honey in tin containers it should always be a fine product, and the cans neatly labeled. A name or brand should be adopted, so that purchasers will know what to ask for. Another thing: All honey sold under a certain name or brand should always be of the same color and flavor. In order to insure this it may be necessary to blend several flavors of honey, as do the large bottlers of honey. There would hardly be a sufficient quantity of any one kind of flavor of honey to bottle and sell the year around, but by making a blend, it has been found that ample supplies may be secured.

In these latter days, the tendency is to put up extracted honey in 5 and 10 pound tin cans and pails. As it keeps splendidly, it is more economical for a family to buy at least five pounds at one time. But always be sure to keep the unused part in the driest warmest place in the house. Never put honey in the ice box or cellar. The highest pantry shelf is a good place. Honey attracts moisture, and then sours, so look out for that.

A JOB FOR THE BEES.

Bees aid greatly in pollinizing fruit.

Farmers' Want Ads

HELP WANTED—MALE 3

WANTED — SALESMAN WHO CAN SELL high-grade, dependable nursery stock; several counties in Oregon, Wash., Idaho and Montana now open for assignment. Our selling contract will interest you. Address Albany Nurseries, Inc., Albany, Ore.

EDUCATIONAL 45

EARN MONEY QUICKLY—THERE'S NO LIMit to one's earning capacity in business. And this great business college after training you thoroughly places you in a paying position. Courses include banking, stenography, accounting, private secretarial. Write for free catalogue. Behnke Walker Business College, Portland, Ore.

FRESH FOOD PRODUCTS 51-1

WHITE ALFALFA, SWEET CLOVER honey; 1 60-lb. can, $7.50; 2 60-lb. cans, $14.50; six 10-lb. cans, $8.50; three No. 10 pails, prepaid, third zone, $5.50. Wells D. Rose, Sunnyside, Wash.

FINEST NEW HONEY, 60 POUNDS, $7.50; 2 cans, $14.40; add postage; 10 pounds, $1.90; 5 pounds, $1 prepaid; satisfaction guaranteed. Geo. Bancroft, Hermiston, Ore.

NEW CROP ALFALFA-SWEET CLOVER honey; 60-lb. can, $4.75; two cans, $9 f. o. b. Rigby. Heckman & Larsen Honey Co., Rigby, Idaho. Quality guaranteed.

NEW HONEY—ALFALFA AND SWEET CLOver; 1 60-lb. can, $7.50; two, $14.40; discount on large quantities. Ernest Sires, Yakima, Wn.

NEW LIQUIFIED CLOVER HONEY, 60 LBS., $5.75; two 60s, $11; twelve 5s, $7; six 10s, $6.75. Browne, Box 499, Twin Falls, Idaho.

3-POUND BOX ABSOLUTELY BONELESS codfish; fine white, new catch fish, delivered by mail, $1. Coffin Fish Co., Seattle, Wash.

NEW CROP PURE EXTRACTED HONEY, $6.50 per 5-gallon can; two cans, $12.75. Everett Sauter, Touchet, Wash.

HONEY—FRESH ALFALFA-SWEET CLOVer honey; one 60 lb. can, $7; two cans, $13.50. A. L. Traner, Touchet, Wash.

BEST ELBERTA AND CRAWFORD PEACHES. Write for prices. Stanley Arnold, Pateros, Wash.

HONEY—NEW EXTRACTED, TWO SIXTY-pound cans, $10. J. M. Ruyts, Buhl, Idaho.

MISCELLANEOUS—FOR SALE 60

NATURAL LEAF TOBACCO, CHEWING, 5 lbs., $1.75; 10 lbs., $3; smoking, 5 pounds, $1.25; 10 pounds, $2. Send no money, pay when received. Tobacco Growers' Union, Paducah, Ky.

KENTUCKY TOBACCO, NATURAL LEAF; mild and mellow smoking, 10 lbs., $2.50; 20 lbs., $4. Send no money, pay on arrival. Farmers' Tobacco Union, Sedalia, Ky.

TOBACCO — KENTUCKY'S PRIDE; EXTRA fine chewing, 10 lbs., $3; smoking, ten lbs., $2; twenty, $3.50. Farmers' Club, Mayfield, Ky.

FARMERS' WANT ADS

This is the farmers' "want," "sale" and "exchange" department for small advertisements of farmers, including live stock and poultry.

Advertising rates for ads running 1 to 3 times, 10c per word per insertion, with a special rate to Farmer subscribers, as follows: Ads running 4 to 12 times, 9c per word per insertion; ads running 13 times or more, 8c per word per insertion.

All commercial and land advertising 10 cents per word each insertion. Open also to nonsubscribers.

In using these columns advertisers must observe: (1) No advertisements will be inserted for less than $1.00. (2) Every word, number and initial, including name and address, must be paid for. (3) New advertisements, changes of copy or cancellations must reach general office, Spokane, Wash., 10 days in advance of publication date. (4) Cash must accompany order.

Above rates include insertion in The Washington Farmer, The Idaho Farmer and The Oregon Farmer, which constitute the Pacific Northwest Farm Trio, 46 Review Building, Spokane, Wash.

MISCELLANEOUS—FOR SALE (Continued) 60

SASH AND DOORS—O. B. WILLIAMS CO., 1943 First ave. So., Seattle. Chicken house sash, 20" wide by 25" high, 80c; a dozen different sizes in stock for immediate shipment. Skylights for chicken houses, 36"x40"; price, glazed, $2. This is the size recommended by the Western Washington experiment station. We carry them in stock for immediate shipment. Sash and doors for all purposes at lowest prices. All orders receive prompt attention. Our large illustrated catalog No. 35, showing full line of building material and built-in fixtures for the home, free on request. O. B. Williams Co. Established 1899.

CORN HARVESTER CUTS AND PILES ON harvester or winrows; man and horse cuts and shocks equal corn binder; sold in every state; only $25 with fodder tying attachment. Testimonials and catalog free showing picture of harvester. Process Harvester Co., Salina, Kas.

SACKS—SECOND-HAND GRAIN AND SPUD, correctly sorted and graded; also pipe, new and second hand, any size; standard roofing paper at a big saving; pumps, engines, belting, cables, etc. Alaska Junk Co., Inc., 8120 Adams st., Spokane, Wash.

WALL BOARD—WRITE FOR SAMPLE OF Washington plaster wall board; won't warp, won't burn. Manufactured by Washington Building Products company, 6851 E. Marginal Way, Seattle, Wash.

NATURAL LEAF TOBACCO, CHEWING, 5 pounds, $1.75; 15 pounds, $4; smoking, 5 pounds, $1.25; 15 pounds, $3. Send no money, pay when received. Farmers' Tobacco Association, Paducah, Ky.

MISCELLANEOUS. 61

$$ CASH—REAL MONEY—FOR YOU! $$ BIG new magazine wants a name. We will pay big money for it. Send your name and address today for instructions. Don't send us any money. This offer is free to all. Cash in on this. Address "Business," Box 637, Steubenville, Ohio.

YUBA TRACTOR TO TRADE FOR HORSES. H. L. DeWolfe, Helix, Ore.

MISCELLANEOUS—Wanted. 63

HIDES—WE BUY HIDES OF ALL KINDS. Write for prices and tags. Hibbard-Stewart Co., Hibbard bldg., Seattle.

WOOL—WE BUY WOOL AND PELTS. WRITE for prices and tags. Hibbard-Stewart Co., Hibbard bldg., Seattle.

MACHINERY—For Sale 93

FOR SALE—ONE 18-FOOT CATERPILLAR, self-propelled combine harvester, 55 h. p. motor; also one 12-20 Yuba tractor; attractive prices and reasonable terms for quick sale. B. Johnson, 622 Douglas st., Wenatchee, Wash.

CASE THRESHING OUTFIT FOR SALE BY Herman Mennrich, Odessa, Wash.

AUTOMOBILES—FOR SALE. 112

SCHOOL BUSES, ON ONE-TON CHASSIS; seating capacity, 18 to 25, $800, $1000, $1200; sold on terms to suit purchaser. Oldsmobile Motor company, Oldsmobile distributors, 1229 First ave., Spokane, Wash., 1000 E. Pike st., Seattle, Wash.

STOVE REPAIRING 128

WRITE MYER RUBENS, SPOKANE, ABOUT stove repairs, welding broken parts, nickle plating.

FUR-BEARING ANIMALS 170

SILVER-BLACK 1922 FOXES, FROM PROlific registered and pedigreed Prince Edward, Island stock, for sale. Sylvan Fox Ranch, Lamont, Idaho.

SILVER AND CROSS FOXES FOR SALE. William Rambo, 407 Sprague, Spokane.

PETS—Dogs, Birds, Etc. 171

BEAUTIFUL WHITE COLLIE PUPPIES; reasonable prices. Urbandale Farm, Oakley, Idaho.

FOX HOUNDS, PUPS, YOUNG DOGS. HARRY Hull, Oakland, Ore.

RABBITS and HARES 173

MAKE MONEY RAISING NEW ZEALAND Red rabbits; special prices, young and matured stock. East Larchmont Pet Stock Farm, R. 4, Box 49, Tacoma, Wash.

POULTRY 174

WHITE LEGHORN HENS, $1 EACH; 1000 two-year-old "Henacres" hens, clean, healthy, heavy laying, selected stock must go to make room for our pullets. Also 1000 yearling hens at $1.50 each. These hens will make good breeders for 1923. Orders accepted for ten or more at above prices. July or August delivery. Satisfaction guaranteed. Free catalog. "Henacres," the Inland Empire's greatest poultry farm, Box A, Prosser, Wash.

PULLETS—1500 APRIL AND MAY HATCHED White Leghorn pullets for sale at attractive prices; hatched from thoroughbred Hollywood and Tancred strains; sired by cockerels 250 to 290 egg strains. We ship at three months of age and guarantee satisfaction or you may return the birds in 3 days. We can give you quality and service. Queen Hatchery, Seattle, Wash.

CERTIFIED WHITE LEGHORN BABY chicks; booking orders now for summer and fall delivery; safe arrival live, vigorous chicks guaranteed; no money in advance; pay on delivery. Established 1898. Sonoma county farm bureau accredited hatchery. Must Hatch Incubator Co., 445 Seventh st., Petaluma, Cal.

WHITE LEGHORN BABY CHIX FOR SUMmer and fall months from stock accredited by Sonoma County Farm bureau. We guarantee safe arrival. Write for prices and literature. The Pioneer Hatchery, 422 Sixth street, Petaluma, Cal.

WHITE LEGHORN PULLETS, FEBRUARY hatched; now laying; excellent stock; will more than pay for themselves by first of year. Price, $1.50 each. Inquire at once. J. N. Campbell, Roseburg, Ore.

WHITE LEGHORN YEARLING HENS, $1.25 each; May pullets same price; little cockerels, 35c each. Mrs. Arp, St. John, Wash.

$65 BUYS 45 EVERLAY STRAIN S. C. BROWN Leghorns as am going out of business. E. J. Davis, Cambridge, Idaho.

POULTRY (Continued) 174

TRY OUR PARCEL POST PACKAGE—KEEP the old hen busy. We will ship you first-class baby chicks, postpaid to your door, direct from the hatchery and guaranteed all alive. Price, $4.50 per 25; $8 per 50. For delivery April, May or June. Order now. The White Hatchery, Petaluma, Cal.

BABY CHICKS — WE GUARANTEE OUR chicks to be from the highest producing hens in Petaluma. Write for further information. The White Hatchery, Petaluma, Cal.

DOLLARS FOR YOUR EGGS—WE PAY THE top market prices for your eggs and poultry. Daily cash remittances. Western Produce Co., Spokane.

BUFF LEGHORNS; OLD AND YOUNG stock of my championship strain; thousand to select from. R. Stromquist, Tigard, Ore

LIVE STOCK 177

WE GUARANTEE TO PAY THE HIGHEST market prices for your poultry and live stock. Owing to the constant changes in the market we are unable to quote prices in this paper from week to week. We will furnish tags and prices when you are ready to ship. Write us what you have to sell. Prompt returns. John Lewis & Co., Spokane, Wash.

LARGE, HEAVY PRODUCING HOLSTEINS for sale at all times in car lots; tuberculin tested; 150 to 200 head always on hand; well marked heifer calves from registered sires and heavy producing dams; crated for shipment anywhere, $25 f. o. b. Levinson & Balmelli, Yakima, Wash.

RAM BARGAINS—20 TWO-YEAR-OLD PURE-bred Lincolns. Few 3-year Cotswold, also Lincolns; sheared 20 lbs. to 25 lbs. $15 to $20 crated. Shipped now or fall. Shadeland Farms, Amity, Ore.

GET ROYAL OAK REGISTERED HAMPshire Dawn sheep. The premier mutton sheep. Rams and ewes for sale. Order rams early. Lloyd Millhallen, Corvallis, Ore.

REGISTERED SHORTHORN BULL, 4 YEARS old; from the famous Chalmers herd; will sacrifice. Alone and unable to handle him. Mrs. N. O. Anderson, Skamania, Wash.

WE PAY TOP PRICES FOR YOUR LIVE OR dressed veal, hogs and poultry. Your check by return mail. Shipping tags on request. M. & J. Packing Co., Spokane.

TYPY YOUNG HOLSTEIN BULL; LINE BRED to the wonderful old champion, Margie Newman; priced for quick sale. B. O. Case & Sons, Vancouver, Wash.

FOR SALE—REG. MILKING STRAIN SHORThorn bulls. Also a few females; best of breeding. DeGraaff Bros., Lynden, Wash. R. 1.

WILL SELL 30 HEAD OF REGISTERED Shropshire rams. Write McK. Edwards, Valley, Wash.

TOGGENBURG MILCH GOATS; 4 AND 5 QT. strain, $30. Goat Ranch, Banks, Idaho.

HARNESS and SADDLERY 189

SEND FOR FREE HARNESS AND SADDLE catalog today; cut out the middleman, buy direct from the manufacturer. Lowest prices in the west; satisfaction guaranteed. Established 1881. Write Pierce Harness Co., Dept. T, Spokane, Wash.

JOB PRINTING 372

GUARANTEED BETTER BUTTER WRAPpers: 100, 60c; 250, $1.25; 500, $2.25; 1000, $4; printed to order. Home Specialty Co., Middleton, Idaho.

MATERNITY HOMES 407

MATERNITY HOSPITAL; STRICTLY PRIvate; doctor in attendance; prices reasonable. Mrs. Elizabeth Peel, matron, W1324 Broadway, Spokane.

BUSINESS OPPORTUNITIES 516

$$ CASH—REAL MONEY—AND A STEADY job! $$. If you can write short stories, serial stories, news items, jokes—we want them every month, and will pay cash for them. For a big, new magazine. Get yourself in print. The opportunity you want. We don't want any money. We want the copy. Send your address today for instruction sheet. Address "Business," Box 637, Steubenville, Ohio.

TO TRADE—JEWELRY STORE AND MODern home for irrigated farm; will pay difference Z. M. Holcomb, Macksville, Kan.

BUILDING MATERIAL 588

FIX BROKEN PLASTER WALLS WITH PERfection plaster wallboard; nailed on like lumber; takes calcimine or paint; sample and booklet from Western Wallboard Co., Seattle, Wash.

BUILDERS, CONTRACTORS, HOME OWNERS, write for free 1922 catalog. Tacoma Sash & Door Co., Tacoma, Wash.

SEEDS. 620

SEEDS FOR SALE—VETCH, FALL RYE, gray oats, black oats, clovers, rye grass, pasture mixtures, rib grasses, etc. Shipments anywhere, promptly. Brownsville Warehouses, Brownsville, Ore.

NURSERY STOCK 621

NURSERY STOCK, ITALIAN PRUNE TREES and trees of all kinds. Berries and small fruits of all varieties. Buy direct and save 50 per cent. Brooks Nursery, Lafayette, Ore.

GROW BUREAU OF PLANT INDUSTRY'S new pedigreed variety Washington asparagus; best in the world. Ask for literature and terms. Home Nursery, Richland, Wash.

FARM LANDS FOR SALE 651

DAIRY FARM, 165 ACRES; 40 ACRES UNDER cultivation; 3½ miles from Vader; ½ mile from school; good buildings; water piped to house and barn; telephone; 12 cows, team, farm machinery; $3500 federal farm loan; will sell with or without stock and equipment; will trade for city property or suitable acreage; priced right. Wm. Hogan, Vader, Wash.

7000 ACRES SEQUIM LAND SETTLEMENT project, containing the finest berry and dairy land in the state, now offered for settlement at attractive prices and terms. Free booklet. Thos. G. Mortland, Sequim, Wash.

FARM LANDS FOR SALE (Continued) 651

IRRIGATED FARMS FOR SALE—160-ACRE farms, improved or unimproved; 30 to 160 acres irrigable land on each parcel; near Lethbridge, in sunny southern Alberta, can be bought for $15 to $40 an acre. No need for pioneering. Well settled country, good roads, railways, schools, telephones; agreeable social conditions; fertile land; success of irrigation farming here already demonstrated; irrigation system being constructed under government supervision. Water available in 1923. Write for information concerning crops grown and description and location of farms to the province of Alberta, Irrigation Council, 12 Provincial building, Lethbridge.

CUTOVER LANDS, EASY TO CLEAR; $8 TO $20 per acre; 25 miles north of Spokane; on hard-surfaced highway; Great Northern and Milwaukee railways; excellent opportunity for dairying and stock raising, with Spokane markets and creamery near at hand. Will help the man who will live upon this land and agree to clear a part each year by giving lumber to help start his buildings, and a pure-bred Jersey bull to groups of farmers. Interest and payments low. Write Milan Farms Development company, Dept. T, Old National Bank bldg., Spokane, Wash.

FRUIT RANCH; NEAR R. R. TOWN; 5½ acres bearing orchard; about 10 acres near beautiful Okanogan lake; schools, stores, churches; fine fishing, hunting; fertile loamy tillage; pasture; 5½ acres Spys, Newtowns, McIntosh Reds, Baxters, Kings, Baldwins, pears, plums, cherries, peaches; pleasantly located house; magnificent view; barn, poultry house. Owner has other interests. $2600 takes all, less than half down. G. Y. L. Crossley, Strout Farm Agency, W. Summerland, B. C., Can.

LOGGED-OFF LANDS IN STEVENS COUNTY, Washington, at greatly reduced prices. Most of land sells at from $5 to $20 per acre; thickly settled community, good schools, hard surfaced and paved roads to Spokane; best county in state for dairy and stock raising; most places water can be found at shallow depths. Write for folder. Phoenix Lumber company, Dept. T, Spokane, Wash.

VALLEY FARM LANDS AT ONALASKA, Wash.; productive silty clay loam, not gravelly, level, well watered; convenient markets, roads, etc.; 20 acres up, $15 to $50; small payments and $10 to $15 monthly; steady nearby employment assured purchasers. Salesman, Onalaska, or write Graham Land Co., 1008 American Bank bldg., Seattle.

BIG OPENING SALE OF YAKIMA VALLEY farm land, under an assessed state and government approved irrigation project; good, deep soil; close to town, railroads and state highway. We sell in tracts to suit purchaser at $25 per acre and up, on easy terms. Our many sales to farmers show that this land is a good investment. Western Lands, Inc., owners, 918 Green bldg., Seattle.

THURSTON COUNTY—5000 ACRES, VERY fertile, level; fruit, berry and poultry lands; right at beautiful state capital. No extremes of temperature; no storms or floods, no irrigation; bumper crops; fine markets. 5 or 10 acre tracts; low prices and long term payments. Send for our valuable pictorial booklet. Norpia Realty Corporation, Olympia, Wash.

960 ACRES AT $22.50; ALBERTA GRAIN AND stock ranch; northwest of Lacombe, on railroad under construction; no fall crops; full set good buildings; 190 acres broken; will subdivide; school, church, station, postoffice 1½ miles. Irving Jayne, Edwall, Wash.

CALIFORNIA STOCK RANCHES.
4 kinds of acorns for hogs. Plenty of grass and water. 50-in. rainfall, mild climate. 160 acres up. Prices $6 per acre up, as per improvements. No trades, easy payments, liberal terms. E. D. Baker, Nashmead, California.

BIG LUMBER CO. LAND SALE IN SKAGIT county; 40 acres, $1400; 20 acres, with new house, $1500. Lumber furnished for building. Lots of work for the settler; splendid district, roads, schools and towns. H. C. Peters, 726 3d ave., Seattle.

BEST BEAVERDAM SOIL IN AMERICA; sold in small tracts, by Long Island Gardens Co., Brownsmead, Oregon; reasonable prices, easiest terms; wonderful berry land; best shipping facilities, schools. Write for particulars.

GOOD STOCK RANCH; BEST RANGE ANYwhere; 320 acres flood-irrigated; $10,000; take western property to $5000 value. Long time on balance. A. Millard, Kinsey, Mont.

SELL YOUR PROPERTY QUICKLY FOR cash; no matter where located. Particulars free. Real Estate Salesman company, 501 Brownell, Lincoln, Neb.

HIGHLY IMPROVED 80-ACRE FARM; NEAR Tekoa, Wash.; level, first-class soil; 5 good springs; water in house. Owner, E604 21st ave., Spokane.

160 ACRES, IMPROVED; 60 UNDER CULTIvation; small timber; near railroad; good town, school; good roads. J. M. Finney, Harrison, Idaho.

FOR SALE BY OWNER—NO COMMISSIONS. Fine dairy farm, stock and implements; in Tillamook county. Address Box 123, Tillamook City, Ore.

RENT, SELL OR TRADE 2000-ACRE STOCK ranch; 100 acres irrigated; good location. Deal with owner. Box 545, Heppner, Ore.

160 ACRES, ¼ MILE ADDIE; GOOD BUILDings; 10 acres cleared, $3000. $1200 cash, balance easy. Box 20, Addie, Idaho.

FOR SALE—MY DAIRY RANCH NEAR COOS bay. H. W. Sanford, Sumner, Ore.

FARM LANDS—Wanted 654

WANT TO HEAR FROM OWNER HAVING farm for sale. Give particulars and lowest price. John J. Black, 80th street, Chippewa Falls, Wis.

FARMS WANTED — SELL YOURS QUICKLY for cash, no matter where. Particulars free. R. A. McNown, 310 Wilkinson bldg., Omaha, Neb.

IRRIGATED LANDS—For Sale 663

IRRIGATED LAND FOR SALE IN SOUTHERN Alberta; having bumper crops this year. Write for prices and particulars. Apply W. M. Harris Agency, Ltd., Lethbridge, Alta.

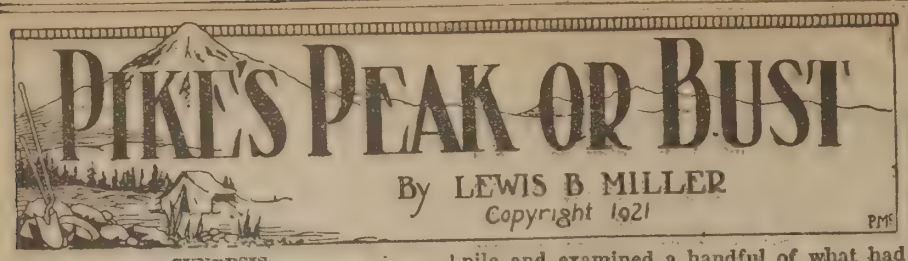
FOR SALE OR EXCHANGE 702

80 ACRES, OKANOGAN VALLEY; NEAR OROville; or will divide; under irrigation; in alfalfa; choice fruit land; a fortune for some one; good house, completely furnished; silo, stock and farm machinery; renter sick, must sell; will sacrifice any terms or trade; make offer. Owner, F. J. George, Everett, Wash.

320-ACRE FARM, GOOD CROPS; SELL AT bargain, or trade for coast property. Ed Green, Soda Springs, Idaho.

TO EXCHANGE—Real Estate 705

40 ACRES TO TRADE FOR SMALL TRACT close to town. Write Clara Lyness, Elk, Wash.



SYNOPSIS.

Esau Haggerty, a strong man of mature years, and Orlando Medford, a young, slightly built and frail companion, have started from their Illinois home town for the great gold diggings of the west. Esau is pushing a provisions-laden wheelbarrow. Orlando is leading a cow. For three days they have been trudging slowly southwestward carrying out the determination crudely lettered on the side of the wheelbarrow, "Pike's Peak or Bust." Rain and snow impeded their progress, and Orlando falls sick and requires a couple of days to rest before proceeding. Then, with the village that is now Kansas City passed, they follow the Santa Fe trail westward, being but one of scores of outfits of various kinds headed for the fields of golden riches. Once again they stop for a good rest before plunging into the real wilderness, 700 miles of which is still ahead of them to be conquered by foot, cow and wheelbarrow. After several days' tramping, they pitch their tent across a little stream from the camp of a family by the name of Cooper, also headed for the gold diggings. In the party is the daughter of the Cooper family, Hazel, whom Orlando by chance met when both went to the stream for water and in whom he became at once greatly interested. He reluctantly joined Esau next morning for the day's travel, leaving the Coopers to follow later, but with the expressed hope that they would all meet again at the gold fields. It was several days later that Esau and Orlando met up with another strange party on the trail, several men with a push cart to haul their belongings to the diggings. The two parties agree to travel together the rest of the journey. To save time they leave the Santa Fe trail and take a short cut that will save them more than 100 miles. But to their great distress they find themselves many miles out in a waterless, sun-scorched desert, with death from thirst staring them in the face. They meet a wagon party coming back famished, hurrying as best they can for the place they left the Santa Fe trail and water. The three parties hold a council and decide that the safest thing for them to do is to cut across the desert to the old dry Smoky river bed and dig a well in it for water. They hasten to put the plan to the test.

CHAPTER SIX.

Sixty-Five Miles to Water.

Not very fast did the little procession march. Thirst, which had also kept them from eating, had robbed the men of much of their strength. But they were more hopeful now, most of them, and trudged along determinedly, even if wearily and slowly. The cattle appeared even more jaded, dragging their feet and moving with drooping heads.

In the exhausted condition of the travelers, those five or six miles seemed several times as long. And very glad were they all when at last they found themselves where could be seen the white sands of the river bed shining in the sunlight.

"Looks mighty dry over yander. What'll we do—what in the blazes can we do if we dig and fail to strike water?"

All looked very solemn at Esau's question. But nobody answered. It was a situation the bravest of them did not like to discuss, or even to think about.

On coming to where the road ran nearest the river channel, they turned aside and struck across the prairie. The distance was not much more than a mile.

At length the whole party found themselves on the river bank. Unlike where they had first seen it, the river was wider and very shady here, with low banks. The wind-marked sands of its bed could not have looked drier if they had been a part of the great Sahara desert. So long had it been since water had flowed there that scarcely a trace of it remained.

No sooner had the procession halted than Esau, leaving his partner to unsaddle the cow, caught a pick and shovel out of the wheelbarrow and sprang down the bank. After him hurried all the handcarters, armed with similar tools, and also one of the wagon party—Holloway. The other men with the wagon stayed to unyoke and hobble and bell their work cattle.

Making their way across the deep, loose sands till out near the middle of the river bed, the men with shovels and picks found a low place and forthwith fell to digging.

"Boys," Sanders said, "we're none of us very strong just now. As not more than two can work at a time, we want to be ready to relieve one another promptly. We'll dig as fast as we can while we're digging, and shovel out as fast as we can while we're shoveling. As soon as a fellow feels too tired to work fast, he must climb out and let somebody else jump down. That way, it seems to me, we ought to get along fastest."

After marking out a large-sized circle, big enough for two men to work in, they began to shovel out the sand.

When the excavation was about a foot deep, the two shovelers stepped out of it, and two others stepped in, to relieve them. All except the men at work were sitting or lying on the sand, close by the big well. As yet the picks and mattocks had not been used, the surface being already loose enough to shovel.

When the well was about a yard deep, Orlando got up, approached the sand pile and examined a handful of what had been thrown out.

"No sign of moisture in that," he reported, as he flung the dry stuff from him.

"Not yet. But there's plenty of time for the moisture to show up," Sanders answered. "Nobody knows how far we'll have to dig, though."

"But s'posin' we fail to strike water at any depth, then what?" demanded somebody.

"Why, we'll just keep on digging, digging till we do strike water—or solid rock. Water or hard rock is the only thing that can stop us."

"If it's water that stops our digging, we'll be all right—all right," Esau Haggerty remarked. "But if it's a rock, God help us!"

In order that there might be plenty of room to work, the diggers had started their well about five feet in diameter. That was more convenient than a smaller hole in the ground would have been; but it also made more sand to shovel out. Only a very few minutes did it take for any digger to exhaust himself. And when he relinquished his shovel or mattock to another, he schambled out and threw himself down to rest.

Again and again those not actually at work caught up handfuls of sand, as it was shoved out, and squeezed it hard. At first, and for a good while after, it refused to cling together. But by the time the well was a deep as a man's head, the sand began to form a sort of ball in the hand.

"That—to me that's a right smart encouragin'," announced Esau, tossing away a handful that he had squeezed. "Not a great sight of dampness in it yit. But—but who knows—who knows what will be soon?"

In a remarkably short time the big well was deeper than a man's head. Now the digger who was being relieved had to be boosted while climbing out.

As the hole went down, the amount of moisture in the sand thrown out continued to increase. And the toilers needed something to encourage them; for the deeper the well sank the harder and heavier was the sand to shovel.

"Boys, do you know it's getting almost damp, this that I'm digging in now?" Abe Sanders looked up from the bottom of the well to say. "Last handful I squeezed had so much moisture in it I almost wanted to suck it."

Had they been able to lower the deeper well as fast as they had lowered the shallow one, their digging would soon have taken them into the river bed. But when the well's bottom was so low that a man found it hard to throw out a shovelful of moist sand, their downward progress was much slower.

Gradually the amount of moisture increased. In time some of the men, tortured by thirst, began to try to relieve their mouths with the moist sand. And Frisk, who now looked the picture of misery, was seen to approach the sand pile and lick it.

"No doubt about it now, I think, boys," Sanders told them, after being pulled and boosted out of the well. "We're going to find water at the bottom of this big hole."

"How deep do you reckon we'll have to dig for it, Abe?" inquired a handcarter.

"Hard to say as to that. But we ought to reach it in an hour or two more. That is, if we don't have a cave-in, or strike something so hard we can't pick through it."

"Reckon it'll be so deep we'll have to rig up a bucket and windlass?"

"Yes, we may have to do that—if we can. Not easy to make a windless where timber's as scarce as it is here. But guess maybe we can manage the business somehow."

At length the bottom of the big hole was so far down that throwing sand with a shovel was no longer possible. Now one of the men with the wagon suggested that they had some short planks; and that, by placing those across the well, they could use a rope and a bucket.

The planks were brought, two of them, and laid across the well's mouth, a little more than a foot apart. The wagon travelers also had a water bucket; and a rope was quickly tied to its bail. With a foot on each plank, Esau Haggerty stood over the well and let the bucket down. When it had been filled with sand, he drew it up, hand by hand, and passed it to somebody else to empty. Bucketful after bucketful was drawn up in this way.

Now the digging progressed very slowly. This was partly because what was dug up could not be drawn out fast; and partly because getting into the well and out was hard, and the men in the well could not be relieved as easily or as often as before. A man could hang by his hands to a plank's edge and drop into the well. But when he wanted to get out, he had to climb upon the shoulders of another man, then reach up his hands and be dragged out by men on top.

By this time all the men not actually at work were lying with their faces over the edge of the well, gazing down at the workers below. All were eagerly hopeful that before long some lucky stroke of the pick would show water.

In time the pick struck something that gave out a different sound.

"To me that sounds a right smart like gravel," somebody called out.

"And gravel it is; gravel it surely is," called up Holloway, the man who was using the pick.

"Mighty hopeful sign that is, boys," Esau told them. "Of course we could strike water in sand. But gravel is the common place to find it."

As bucketful after bucketful of sand and gravel came up, the gravel was found to be actually wet. Finally Holloway looked up.

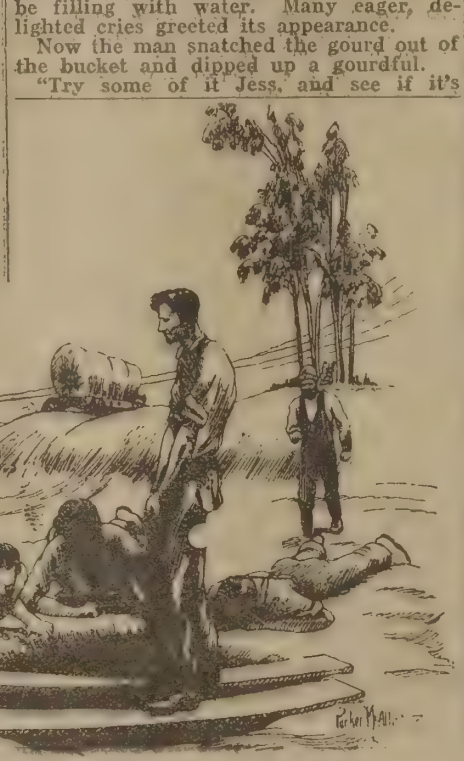
"Boys," he called, "some of you had better fetch our gourd. And next time the bucket goes up, send the gourd down. Going to be something to drink here pretty soon, or I'm the worst kind fooled."

As soon as somebody could go for it, the gourd was brought from the wagon and lowered with the bucket. Now all the men, tortured by thirst, gathered around the well's mouth and gazed down eagerly, expectantly.

And not long did they have to wait. Holloway laid aside his pick and, taking his shovel, set his foot on it and drove it deep into the gravel. When he had pried up the shovelful of gravel and thrown it aside, the hole left was seen to be filling with water. Many eager, delighted cries greeted its appearance.

Now the man snatched the gourd out of the bucket and dipped up a gourdful.

"Try some of it Jess, and see if it's good!" called down one of the wagoners.



Face down, watching the workers below.

"Good or what not, I want some of it—I'm dyin' for some of it!" declared a handcarter, who was gazing down.

Holloway held out the gourd to Sanders, the other man in the well. "Try it," he said.

"Why didn't you try it yourself first? But I'm too awful dry to stand on ceremony. Here goes!" Sanders seized the gourd and gulped the water down. "It's all right—you bet it's all right!" he cried.

Holloway drank all that he could dip up at once, then began to fill the bucket. When the vessel was about half full, he put the gourd in and called out:

"Up with it!"

The bucket was quickly drawn up, and the eight men on top eagerly gathered around it. Now man after man was given a gourdful. Somewhat muddy though it was.

While the men on top were drinking the men in the well, after lying down and quenching their thirst, were digging a larger, deeper hole in the well's bottom. When the empty bucket was let down again, it could be filled quickly, and was sent up promptly. While it was being emptied, the men in the well kept digging. When the bucket came down another time, there was a hole large enough to dip it in; and the water was running in faster than it could be dipped out.

As soon as his own thirst was partly quenched, one of the wagon party—his name was McKinley—hurried away to the wagon. Soon he was back, carrying a not very large pot, which he set down a few yards from the well's mouth. By this time Wallace, another man with the wagon, was going for an ox, and Orlando was hurrying toward Brindle.

All the cattle, of which there were seven, were standing or lying near the wagon; and most of them were bawling dolefully, miserably. For fear she would start off in quest of water, Orlando had fastened his cow to a stake. Now he jerked the rope loose and started toward the well, leading her. At first she moved slowly, reluctantly, and he had to get behind her and drive. But, on coming closer, she must have smelled the water, for she suddenly became another cow. Up went her drooping head and tail, and she was off at a gallop.

For a few yards Orlando tried to keep up with her; but he soon gave the rope a toss and let her go. She found a pot level full of water, and Frisk lapping out of it. In went her nose, and soon the pot was empty.

Now Esau seized her rope, dragged her away and held her fast. By the time the pot had been filled again, Wallace came leading an ox. This animal, too, broke into a run when he smelt the water. As soon as the pot was empty, he was forced away and Brindle was given another potful. By the time the ox had emptied the pot a second time, McKinley arrived with a cow. The lead team that pulled the wagon was a yoke of cows.

In this way, one at a time, all the animals were brought across the sand bed to the well and watered. But they were not permitted to drink all they wanted for a good while. Indeed, more than an hour passed before the last ox was turned loose to drink his fill. Even then two or three of the animals lay down on the sand, the water having made them sick. But the trouble soon passed, and when driven back to the bank all fell to grazing as if starved.

And the men were almost as hungry. After gathering up a few sticks of driftwood, which the river, in wetter days, had left here and there, they kindled their camp fires. The three wagon travelers had their fire by the wagon; but the men on foot kindled theirs near the shade of a lone cottonwood tree. All were very weary, as well as ravenously hungry. It was already understood that nobody would move from here till they had taken a long rest.

Their hunger satisfied, the foot travelers all lay down in the shade of the cottonwood and slept most of the afternoon. A hundred yards away the other party slept in the shade of their wagon. All were getting the sleep and rest they had lost the night before.

Late in the day Orlando awoke and sat up. There was a pleasant breeze now; and the noise it made among the cottonwood leaves sounded like a shower of rain. Seeing the three men with the wagon awake he got to his feet and strolled down the river bank to their camp. They were from Missouri, he soon learned.

"There were three wagons of us when we passed along here the first time," Holloway told Orlando.

"And what became of the other two?" the visitor inquired.

"Why, they thought it was so far back to water, they'd rather risk pushing ahead till they found it. They thought they could reach water sooner by going on than they could by turning back. And maybe they did. I certainly hoped they did. But the three of us with this wagon had had all we wanted of such a route. So we turned back and let the others drive on. We'd only got with 'em at Council Grove and didn't know 'em very well."

"I wonder if they've found water yet," young McKinley remarked. "If they haven't they must be suffering agonies from thirst by this time—them and their work stock."

"Just as we'd ha' been sufferin' if we had failed to dig up water here," observed Wallace.

Now Orlando inquired: "What do you know about the abandoned wagon we passed several miles back—before we met you?"

"Did you pass a wagon?" asked Holloway. "That must be one of the wagons we started from Council Grove with. Those men dropped behind. Their team had trouble keeping up with ours. We thought they'd overtake us at camping time. But we didn't see 'em, and we guessed they must have got discouraged over this desert country and turned back."

"So they abandoned their wagon, did they?" said Wallace. "Was their team close by?"

"We saw no team anywhere. We couldn't tell whether they took their oxen with them, or had turned them loose and the oxen had wandered away. They didn't turn back cast, men or oxen, or we'd have met them."

"And they didn't follow the road west or we'd ha' met 'em when we turned back," Wallace said.

"Then they must have struck off either north or south. More probably south toward the river bed," was McKinley's opinion.

"Let's hope they've found water," said Wallace.

Later Orlando remarked: "We've got

(Continued on page eighteen.)

FAMILY CIRCLE

ALICE BARLAND
EDITORIAL CONTRIBUTOR

Experience Letters

From Our Family Circle Women

Dear Family Circle: Many of you write me expressing concern in the rearing of your children and because I am so deeply interested in the young people I am minded to write this personal letter to you. Perhaps I can warn you against some practices and encourage others. I can not do less, as the subject is so near my heart.

I think I may help some of you by telling you of a family I have known very intimately since the two young people were married. There are four children, the oldest now almost 25 years old. The oldest and youngest are boys.

The parents of these children were convinced that children should be taught while young, to begin to do their own thinking and so when any of them had an idea they were given the means and permission to carry it out, providing it was reasonably practical and within their means.

They were frequently allowed to carry out their plans, even when it was quite certain that the outcome would not be pleasing to the children nor what they expected. These parents could have told the children how it would be, but they would not have been convinced, no more than are grownups often, when advised against certain things.

These parents reasoned that what the children learned by experience would be very profitable to them and the experience, being their own, would leave a deeper impression than if not allowed to try out their plans and told what the outcome would be. I am speaking of childish plans, you will remember, and not things of any vital importance to their welfare.

As little children the girls were allowed to choose the dress they wanted to wear, and as they grew old enough they were always consulted and taken along to choose their clothes when new ones were purchased. Suggestions along the line of good taste were given by the mother, but in a general way these girls had a chance to decide for themselves.

You can see how this system encouraged independent thinking or "using their heads." You can also see that it taught them early in life to be cautious about their selections because having once decided, even though against the advice of the mother, they had to abide by their choice and had no one on which to place the blame for their mistakes.

The boys were managed in much the same way. If they wanted to build something, and most boys are always wanting to do this, the materials were provided. I remember well when the oldest boy was not more than 4 we never could find a string because he was always using every one he could get to make fences by putting tiny sticks in the ground for posts and using the string to wind around in imitation of wire.

When the string question became serious his wise mother quietly purchased a ball of string for the child's express use. Inside his fenced inclosures the boy would build tents by spreading bits of cloth over little sticks, and the sticks were toothpicks, also provided for his use. Many happy hours were spent by him in this innocent amusement, carrying out ideas which he had received from some picture. At that time he had never seen a military camp nor any other kind.

The youngest is a boy and he, like the others, has had his chance to try out what he can do. He has always been intensely interested in watching men build houses and especially so in watching the electricians and when he was only 12 years old he asked his father if he might install some additional electric connections in different parts of the house. This father and mother pull together in the management of their children, and so the 12-year-old boy was given permission to go ahead and install the connections, and arrangements were made by the father so he could get from the store such things as he needed, as wire and fixtures. The boy put in a socket for the electric iron and the floor lamp, he also wired the fruit room of the basement, which had never been done. The work was inspected by the city inspector and pronounced perfect. Next, the same boy wired the entire summer cottage of his father, which passed inspection without a single change. From this on he had about all he could do vacations wiring other summer cottages. He is on the way to being a very expert electrician.

Supposing his father had paid no attention to his request to try out what he felt sure he could do, and had refused to supply him with the things necessary for him to work. Isn't it easy to see how bitter he would have been when his whole heart was set on doing a really useful and skillful piece of work? It takes very little to sidetrack children because they have a limited vision of the future. Perhaps this boy's whole life would have been changed and his interests diverted into channels where he would never have been successful had he been denied the practice in the work he loves.

You fathers on the farms, take your boys into consultation. Perhaps you don't know all there is to know about everything, even though you have been doing your work the same as your father did for years. I have received many ideas from the younger generation and, anyway, let me advise that you at least listen to what they suggest. Perhaps the idea won't work, but do give the boys a chance for a little independent thinking and give them the joy and satisfaction of putting their ideas into form.

The trouble with all of us is that we do not put ourselves into the other fellow's place. We do not give thought enough to the other fellow's viewpoint. I have seen the joy all taken out of the lives of some boys on a farm because the father would never pay any attention to their ideas, not even to consider them or talk them over with the boys. How can a father expect a boy to stay on the farm or to be a very enthusiastic worker if he is set to work like a machine to do the same things in the same way year after year?

And you mothers, if your girls want to change the furniture around in the living room let them do it. Perhaps the change will not be for the better and the girl will come to realize that after the change; if so, make it easy for her to acknowledge it and don't say, "I told you so."

Dear parents, let me ask you, is there anything in all this world dearer to you than your children's happiness, welfare and success in life? I am sure there is not. Then let me advise you, out of my more or less large experience and observation, that you think more and more about what will make for the best in the management of your children. It is as natural for a child to love his parents as for the sun to shine. Love and respect go hand in hand, therefore hold their respect and increase their love.

Don't imagine I am advising that children should always have what they ask for or be indulged in every sort of whim. I do not mean that, nor would I assume that you have so little judgment. What I am striving to impress is that children and older ones still in their teens should become part of the company, be given a chance to advance their ideas and to work them out. This should be done for their mental development as well as their happiness.

Dear fathers and mothers, keep close to your children; don't let them slip away. All too many are going swiftly and surely to their own destruction. I make this plea out of my deep desire for the good of all of you who make up my great Family Circle. Sincerely your friend,

ALICE W. BARLAND.

Just Folks

What would it mean for one to be deaf and dumb and blind for one hour each day? ?

It is not good for one to see too much, to hear too much or to speak too much.

There is a place for the chamber of silence among the affairs of men. Revelation comes out of the darkness and stars are seen from the depth of the well at midday.

Out of the solitude have come the deliverers of men. The burning bush is not on public exhibition. The still, small voice is heard in the darkness of the night.

The meditations of the heart are not carried on in the market place.

Digestion of thought as well as digestion of food is an unseen process.

Talk may easily weaken, while silence may as easily strengthen.

My grandfather's farm was on the rocky slopes of a New England mountain. Life, indeed, was a struggle for existence. My grandfather himself was a man of few words and much silence, but his smile of welcome stamped itself upon my memory ineffacably.

The ruggedness of austere life was his, and, as a rule, the hard conditions of life impressed themselves upon his features.

In more than one respect he was master of the situation. For example, instead of going to the shoemaker, he half-soled shoes of the family himself. In place of buying pegs, he made them. From the white birch trees in the farm wood lot he would saw disks from the trunk eight or 10 inches in diameter. The thickness of these disks formed the length of the peg. With a sharp knife he would channel disks one way and then channel them across. By splitting the wood along the channel each way he would have a pointed shoe peg.

He made his own buckets to catch the sap to make the maple sugar for the family use. From the sumach, he would make the spills through which the sap ran into the buckets, burning out the marrow of the sumach with a red hot iron.

Experiencing nothing of the levities of life himself, he was rather impatient at the exhibition of those levities on the part of the grandchildren.

I wondered what his thoughts might be as he sat beside the fireplace by the hour in silence. He defied the storms of life like the great granite boulders in his farm pasture. Without engineering instruments, he built the stone wall up the mountainside straight as an arrow, for a dollar a rod. His hours of forceful silence stamped themselves upon my memory.

Silence may be the cover for emptiness and ignorance. Silence may also be the token of knowledge deeper than words. Many years ago I read a book entitled "The Genius of Solitude." For several months I have been trying to get a copy of that book for a friend, but it seems to have faded from the book shelves. The big book sellers of eastern cities fail to find it for me. Its author was comparatively well known in his day, but now finds himself confined to a few lines in the encyclopedia. It is a great book on a popular subject. Bright volubility is more attractive. Probably it is better so; better to banish all silence than to be moping around without a thought worth while. Even a chatterer is better than a moper.

It yet remains to be said that intermittent periods of blindness and deafness and dumbness are not to be despised. The tower of Babel is not to be compared with Mount Sinai. The meditations of John Bunyan in prison outlast a thousand and one garrulous and popular authors. Dumbness has a virtue even as a medicine. Blindness is not necessarily the loss of sight, but the loss of the glare that prevents seeing. Deafness enables one to hear the still, small voice in the night time.

So, I repeat, periodic times of blindness, deafness and dumbness are good for the soul.

E. A. S.

Home Recipes

My Washing Fluid: One-pound can concentrated lye, 2 or 3 lbs. of salsoda or, if you can't get it use 1 lb. of common baking soda, 3 tablespoons of powdered ammonia, 3 tablespoons borax; dissolve the whole in 1 gal. of water and let stand a few minutes. Use about ½ cup in half a boiler of water for your boiling suds. A glass jug makes a fine container for this. As it freezes in the bottom of the vessel it must be stirred each time. Use the clothes stick for this.

MRS. J. C. G., Oregon.

Lemon Butter: Grated rind of 2 lemons, juice of 3, 1 lb. of sugar, 2 oz. of butter, 7 eggs well beaten. Put the sugar, butter and lemon juice on to heat in a double boiler and when it is boiling hot add the beaten eggs and stir till thick like custard and the last thing add the grated rind and pour into jelly glasses or jars.

E. H. CAREL, Idaho.

Potato doughnuts. Three medium-sized potatoes cooked and mashed, two eggs, one cup sugar, one-half teaspoon salt, two teaspoons baking powder, one-half teaspoon nutmeg and enough flour to make a stiff dough.

To the potatoes add the butter and beaten eggs, then add sugar, salt and nutmeg; mix baking powder with the flour, make the dough stiff and roll one-half inch thick. When fried roll in powdered sugar.

Washington. MRS. J. K. COOPER.

A Good Cake: Half cup butter (generous measure), 1 cup sugar, ½ cup milk, 3 eggs, 2 teaspoons baking powder, 2 cups flour, flavor as desired.

Cream butter and sugar, add 1 egg and beat 5 minutes by the clock, then another and beat and then the third. If milk is cold warm a little and sift together the flour and baking powder and put together by adding a little flour then a little milk and so on beating all the time. Bake in layers in a shallow pan. This way will actually take no longer than when the eggs are beaten separately and there will be fewer articles to wash.



2400 telephone wires in a cable little larger than a man's wrist.

Science keeps down costs

When the Bell System installed its first successful telephone cable, fifty wires was the largest number that could be operated in a single cable without "cross-talk" and other interference. Today it would require 48 cables of the original type to accommodate the number of wires often operated in one cable.

Without this improvement in cable, the construction of new underground and aerial lines would have cost the Bell System upwards of a hundred million dollars more than has actually been spent. In addition, the cost of maintenance would have been greater by eighteen million dollars a year. These economies in the Bell System mean a saving in telephone rates to each individual subscriber.

In all branches of telephone practice science has similarly contributed to economy. Even in such a comparatively small item as switchboard cords, improvements have reduced the cost of renewal by four million dollars a year.

Every new telephone added to the Bell System increases the usefulness of *all* telephones, but this multiplication tends likewise to increase the complications and the expense of service. The scientists of the Bell System, to offset this tendency, are constantly called upon to develop new devices which simplify complications and keep down costs.

By virtue of a united system the benefits of these improvements are shared by all subscribers—and the nation is provided with the best and cheapest telephone service in the world.

"BELL SYSTEM"

AMERICAN TELEPHONE AND TELEGRAPH COMPANY
AND ASSOCIATED COMPANIES

One Policy, One System, Universal Service, and all directed toward Better Service

High Points in News of the Week

The predicted settlement of the railroad strike through the personal intervention of President Harding did not materialize last week. It is problematic how early the strike will end, but the belief is expressed by persons close to the heart of the controversy that settlement will be effected without further tying up of the transportation of the country.

The outstanding development of last week was the submission by President Harding to railroad executives and employees of the president's recommendations as a basis of settlement. The unions accepted the suggestions. The railroad executives rejected them unanimously. The suggestions were three in number as follows:

"First, railway managers and workmen are to agree to recognize the validity of all decisions of the railroad labor board and faithfully to carry out such decisions as contemplated by law.

"Second, the carriers will withdraw all lawsuits growing out of the strike and the railroad labor board decisions which have been involved in the strike may be taken, in the exercise of recognized rights by either party, to the railroad labor board for rehearing.

"Third, all employees now on strike to be returned to work and to their former positions with seniority and other rights unimpaired. The representatives of the carriers and of the organizations especially agree that there will be no discrimination by either party against the employees who did not strike."

The employees accepted the recommendations on the assumption that the railway labor board would give them a speedy rehearing on the question of wages and working conditions. The employers rejected them on the ground that they could not restore seniority rights to striking employees without violating their faith with the new employees, to whom they pledged permanent positions.

The most significant feature is the first of the three proposals, namely, that both railroad executives and employees acknowledge the authority of the railroad labor board and abide by its decisions. The railroad executives have accepted that proposal. Hence, it is possible that the railroad executives may be compeled to accept the three Harding proposals by an official act of the board in the form of an order putting them into effect.

The railway executives declare that the strike has not badly crippled transportation, but that adequate freight and passenger service is being rendered. Nevertheless, many trains have been canceled and others are running badly off their schedules. The heads of employee organizations say that the strike is still thoroughly effective and that the roads can not continue long to operate successfully unless the 400,000 striking workmen return to work in the railroad shops. Representatives of other railroad unions, such as the engineers, firemen, conductors and so on, declare that as a result of inefficient and inadequate workers in the shops, train equipment, especially engines, is becoming unsafe for service. The four big brotherhoods last week in a public statement following a request that they be permitted a conference with President Harding, said that they feared their organizations would be drawn into the strike if settlement was not soon effected. Other union leaders said that violence on the part of guards about railroad property rendered the lives of their members unsafe, and that unless a settlement were reached or the guards removed there was likelihood that these unions, with an aggregate membership of 800,000 workers, would have to decline to render further service.

The railroad executives declare that they will be able to give continued satisfactory service in view of the fact that they are employing many new workers and that many of the strikers are returning individually to work. They report approximately 60,000 persons employed in shops, out of which 400,000 union men walked when the strike began.

* * *

Little change in the coal strike situation was evident during the last week. Under the direction of Administrator Spencer coal now available and that being mined and secured from foreign producing countries will be apportioned with a view to enabling essential industries to operate effectively. The rationing will be on the basis similar to war-time rationing of necessities.

* * *

Dr. Alexander G. Bell, inventor of the telephone, died last week. It is less than half a century since the invention, the patent for which he secured on his 29th birthday, was made. There are now over 13,000,000 telephone instruments through which billions of conversations are carried and by means of which much of the world's business is transacted. The telephone patent has been called the most important ever issued.

Visit West Side Stock Farms

(Continued from page three.)

The new herd bull at the W. J. Burns herd of grade Holsteins, in the Wynooche valley, was the center of interest. Mr. Burns also has three purebred heifers which have averaged 390 pounds for the year.

"It is useless to sell purebred stock to people who will not give them good care or become interested in their production," remarked E. L. Brewer, who spoke at the luncheon given at the Elma Commercial club that noon. "Proper care and treatment should be given, even when cows are dry, if they are expected to produce better returns when they freshen."

The last stop in the county was at the Johnson Brothers' farm, where they are raising purebred Shorthorns. Mr. Johnson is following a plan of fattening calves for veal, instead of keeping all animals to a mature age.

Back in Thurston County.

There were 40 grade Jerseys on the C. C. Aspenwall farm and Eminent of Ingleside heads the herd. One instance shows an increase of from 414 pounds of fat by the dam to 445 pounds by the daughter.

At Olympia the Thurston county farm bureau gave a banquet for the breeders of the community. The next stop was at the Cloverfields farm, where both Holsteins and Jerseys are being bred. An increase of 1 per cent in butterfat production has been secured in the last five years from the use of purebred sires. Mr. Eells, the farm superintendent, has found that there is special demand for both Jersey and Holstein milk and delivers both kinds.

See McGuire's Shorthorns.

The next stop was at Tenino at the J. D. McGuire herd of registered and grade Shorthorns. The top crosses from a registered bull have been carried out for the last six years. The herd sire was purchased at the Pacific International Live Stock exposition last fall. Mr. McGuire is fitting a herd of 15 animals to be taken out on the fall show circuit.

John Hackman, in the Nisqually valley, is milking 80 head of grade Holsteins and has used two purebred sires on the herd during the last six years with excellent results. A large part of the young animals were purchased from the A. L. Brown farm of the same locality.

The first stop in Pierce county was at the Western State hospital at Fort Steilacoom, where Governor Hart served a luncheon before taking the visitors through the barns in the afternoon. Governor Hart is building up a foundation herd which will be used to supply stock to the other state institutions. There are now only 21 grade cows left, which will be disposed of as they can be replaced. Two herd sires are Sir Pietertje Ormsby Blossom and Carnation King Matador Mutual, the former animal being sired by a bull who won first at the National Dairy show in 1912. The junior herd sire is a son of Carnation King Sylvia.

Perhaps the most interesting part of the visit to the hospital was the Bang herd, in which some excellent healthy calves are being raised from tubercular cows. The question arose as to why the state could keep tubercular animals when farmers are required to kill all reactors. Governor Hart explained that eight years ago Governor Lister started a herd of reactors, which he kept in quarantine by using the Bang method. All calves are taken from the cows at birth, and fed tubercular-free milk. In this way the state has been able to save some exceptional cows, and to give some advertisement to the breeder, who would otherwise have lost the animal because of being unable to quarantine on a small scale. All milk from the tubercular cows is pasteurized at a high temperature before being fed to the calves.

Sunday, July 30, was spent by the excursionists in or near Tacoma, from which the start on the second week was made Monday. A report of the second week's tour will be given in a later issue.

Urges Holding Grain

President George E. Marcy of the Armour Grain company issued a signed statement last week urging farmers to hold back their grain for reasonable prices and saying that as prices for grain go up, better business conditions throughout the whole country will follow. He says:

"An upward movement in grain prices is in prospect and the situation promises to be of such financial benefit to the American farmer that he in turn will be in a position to materially improve general business conditions.

"An orderly and gradual marketing of existing wheat stocks will end the present depressed price condition and there are tremendous economic factors at work to force a slower and more stable market.

"Settlement of the coal strike will result in decreased amount of rolling stock capable of moving grain to terminals and expected improvement in general business conditions should further affect the amount of equipment available.

"On the other hand, the demand promises to constantly get better.

"The American farmer holds the key to the situation. He sold his surplus grain last spring at high prices. Good crops and good supplies are in prospect."

Farm Business and Markets Outlook

(Continued from page five.)

and there is a probability of export demand with small imports at the present level of prices.

Prices for 92 score fresh butter on August 2 were:

Chicago, 33 1-2c; New York, 34 1-2c; Boston, 35 1-2c; Philadelphia, 35c.

Both country and distributing markets for cheese declined further last week, but the reductions were not enough to attract buyers on a large scale as many dealers are looking for a 16-cent level or lower in the country. Receipts of cheese are gradually decreasing and storage holdings are not excessive so that these expectations may not be realized. The embargo on perishable goods by one or two railroads may have interfered with trade from the south and southwest which usually begins to open up at this season.

Prices for No. 1 American cheese on August 2 were:

Chicago—Twins, 18 1-4@18 1-2c; S. Daisies, 18@18 1-4c; D. Daisies, 18@18 1-4c; Young Americas, 18 1-2@19c.

FRUITS AND VEGETABLES:

Potato prices declined further last week, but receipts have dropped approximately to normal size for this season and the slump should be checked soon. Virginia, New Jersey, Maryland and Kansas are the leading shippers. Kansas Irish Cobblers are quoted at $1.20 and Minnesota Early Ohios at $1.10 in the Chicago carlot market.

Shipments of new apples up to August 1 amounted to 3177 cars, compared with 1281 cars to the same date last year. Prices upon good Duchess and Transparent stock range from 50 cents to $1 a bushel wholesale in middlewestern cities.

The official forecast upon the commercial production of onions in seven intermediate states is 6753 cars. The acreage in 14 late producing states is estimated at 38,100 acres, compared with 35,200 acres in 1921. Total shipments of onions from producing sections up to August 1 amounted to 7630 cars, compared with 6783 cars to the same date last year.

Range of Live Stock Prices for the Week Ending Aug. 2

CATTLE.	Chicago.	Spokane.	Portland.	N Salt Lake
Choice, prime heavy steers (1100 lb. up)	9.85@10.85			
Good heavy steers	8.85@10.00			
Medium heavy steers	8.00@ 9.10			
Common heavy steers	6.75@ 8.15			
Choice, prime light steers (1100 lb. dn.)	9.75@10.65			
Good light steers	8.75@ 9.85			
Medium light steers	7.90@ 9.00	7.00@ 8.00	7.00@ 8.00	6.00@ 6.75
Common light steers	6.50@ 8.00	4.50@ 7.00	5.00@ 7.25	4.75@ 6.25
Common to choice butcher heifers	5.15@ 9.00	3.75@ 6.75	3.50@ 6.00	3.50@ 6.00
Common to choice butcher cows	3.90@ 8.15	3.00@ 6.00	3.00@ 5.50	3.00@ 5.50
Bologna and beef bulls	4.00@ 6.60	3.00@ 4.75	3.00@ 3.50	2.00@ 3.00
Canners and cutters, cows and heifers	2.60@ 4.10	1.50@ 2.75	1.50@ 3.00	1.50@ 2.75
Canner steers	3.50@ 5.25	2.50@ 4.00	2.50@ 3.75	2.50@ 3.50
Medium to choice light veals	8.50@10.50	7.00@ 8.50	6.50@ 8.00	7.50@ 8.50
Common to choice heavy veals	4.00@ 8.00	5.00@ 7.00	4.00@ 6.00	
Common to choice feeders (1000 lb. up)	5.50@ 7.75			
Common to choice feeders (750-1000 lb.)	5.50@ 7.75	4.00@ 5.00		5.00@ 5.50
Common to choice stocker steers	4.75@ 7.65			
Common to choice stocker cows, heifers	3.50@ 5.75			
HOGS.				
Top of market	10.75	11.85	12.25	10.40
Bulk of sales	8.00@10.70	10.75@11.65	10.50@11.75	9.50@10.25
Heavy (250 lb. up)	9.25@10.25	10.00@11.25	10.00@11.00	
Medium (200-250 lb.)	9.80@10.65	10.75@11.75	10.50@11.50	9.50@10.25
Light (150-200 lb.)	10.25@10.75	11.25@11.85	11.75@12.25	10.00@10.40
Light lights (130-150 lb.)	10.25@10.65	11.00@11.50	11.50@12.15	9.75@10.25
Smooth packing sows (250 lb. up)	8.00@ 8.80	9.00@ 9.50	9.00@10.00	
Rough packing sows (200 lb. up)	7.25@ 8.25	8.25@ 9.00	8.00@ 9.00	
Medium to choice pigs (130 lb. down)	9.25@10.50	10.25@11.25	11.50@12.00	
Stock pigs		10.25@11.25	11.75@12.25	8.50@ 9.25
SHEEP AND LAMBS.				
Medium to prime lambs (84 lb. down)	11.50@13.00	7.50@10.00	8.00@11.00	8.00@10.50
Culls and common lambs	7.00@11.75	5.00@ 7.50	5.00@ 8.00	4.50@ 8.00
Medium to prime yearling wethers	8.00@11.00	7.00@ 8.00	5.50@ 7.50	5.00@ 6.00
Medium to prime wethers	5.75@ 8.75	6.50@ 7.50	5.00@ 6.50	4.00@ 5.00
Medium to choice ewes	3.00@ 7.60	4.00@ 6.50	3.50@ 5.00	3.00@ 4.00
Culls and common ewes	2.00@ 3.75	2.00@ 3.50	2.00@ 3.50	2.00@ 3.00
Full-mouth to yearling breeding ewes	5.00@11.50			
Feeder lambs	11.50@12.50	6.00@ 7.00		

LATEST QUOTATIONS.

The Livestock Market.

PORTLAND, Aug. 5.—Cattle—Choice steers, $7.50@8; medium to good steers, $6.50@7.50; common to good steers, $6.50@7.50; choice cows and heifers, $5@5.50; medium to good cows, heifers, $4.50@5; fair to medium cows, heifers, $3.50@4.50; common cows, $3@3.50; canners, $1.50@3; bulls, $3@3.75; choice dairy calves, $8@8.50; prime light calves, $7.50@8; medium to light calves, $6.50@7.50; heavy calves, $4@6.50.

Hogs—Prime light, $12.50@13; smooth heavy, 200 to 300 lbs., $11.50@12.25; smooth heavy, 300 lbs. up, $10@11.50; rough heavy, $8@9.75; fat pigs, $12@12.50; feeder pigs, $12@12.50; stags, subject to dockage, $6@9.

Sheep—East of mountain lambs, $10@11; choice valley lambs, $9@10; medium valley lambs, $8@9; common valley lambs, $6@8; cull lambs, $5@6; light yearlings, $7@8; heavy yearlings, $6@7; light wethers, $6@7; heavy wethers, $5@6; ewes, $2@5.

SPOKANE, Aug. 5.—Cattle—Prime steers, $8@7.50; good to choice steers, $5@6; medium to good steers, $4.50@5; fair to medium steers, $4@4.50; common to fair steers, $3@4; choice cows and heifers, $5@5.50; good to choice cows, heifers, $4@5; medium to good cows, heifers, $3.50@4; fair to medium cows, heifers, $2.50@3.50; canners, $1.50@2.50; bulls, $2.75@4.50; light veal calves, $7@8.50; heavy veal calves, $5@7; stockers and feeders, $3.50@5.

Hogs—Prime mixed, $11.25@12; medium, $10.25@11.25; heavies, $8.25@9.25; fat pigs, $10.25@11.25; stockers and feeders, $10.25@11.25.

Sheep—Prime lambs, $8@10; fair to medium, $7@8; yearlings, $7@8; wethers, $6.50@7.50; mutton ewes, $3@6.50; feeder lambs, $6@7.

SEATTLE, Aug. 5.—Cattle—Weak; no receipts; prime steers, $7@7.50; medium to choice, $6@7; common to good, $5@6; feeders, $4@5; best cows and heifers, $4.75@5.25; common to good, $3.50@4; medium to choice, $4@4.75; canners, $1@2; bulls, $3@4.

Hogs—Steady; no receipts; prices unchanged.

The Grain Market.

PORTLAND, Ore., Aug. 5.—Wheat—Hard white, $1.09; soft white, white club, hard winter, northern spring, $1.07; red Walla, $1.04.

Grain futures: Wheat—Hard white, August, September, $1.09; soft white, white club, hard winter, northern spring, August, September, $1.07; red Walla, August, September, $1.04.

Oats—No. 2 white feed, August, $35; September, $33; No. 2 gray, August, September, $33.

Barley—Brewing, August, September, $29; standard feed, August, September, $27.50.

Corn—No. 2 eastern yellow shipment, August, September, $29.75.

SEATTLE, Aug. 5.—Wheat—Hard white, soft white, western white, hard red winter, soft red winter, northern spring, $1.12; western rd, $1.10; Big Bend Bluestem, $1.20.

Hay and Feed Grain.

PORTLAND, Aug. 5.—Millfeed—Prices f. o. b. mill: Mill run, ton lots, $31; middlings, $43; rolled barley, $37@39; rolled oats, $43; scratch feed, $49 per ton.

Corn—Wheat, $37; cracked, $39 per ton.

Hay—Buying price f. o. b. Portland: Alfalfa, $16@16.50 per ton; cheat, $14; oats and vetch, $17; clover, $15; valley timothy, $13; eastern Oregon timothy, $21@22.

SPOKANE, Aug. 5.—Wheat—Feed wheat, $40 per ton.

Oats—$40 per ton; steam rolled, $42.

Corn—$36 per ton; cracked corn, $38 ton.

Barley—$42; steam rolled, $44.

Bran and shorts—$32 per ton.

Alfalfa, $22 ton; timothy, $24 ton; mixed hay, $22 ton.

General Produce.

PORTLAND, Aug. 5.—Butter—Cubes, extra, 38c per lb.; prints, parchment wrapped, box lots, 46c; cartons, 47c. Butterfat, 46@47c; delivered stations; buying price, A grade, 44c.

Eggs—Buying price; current receipts, 19@20c dozen. Case count, 21@23c dozen. Jobbing prices: Case count, 21@22c; candled ranch, 25c; selects, 28c. Association selling prices: Selects, 29c; browns, 28c; firsts, 26c; pullets, 24c.

Cheese—Tillamook triplets, price to jobbers, f. o. b. Tillamook, 26c; Young Americas, 27c; longhorns, 27c pound.

Poultry—Hens, 18@22c lb.; springs, 20c; ducks, 15@22c; geese, nominal; turkeys, nominal.

Veal—Fancy, 14c per pound.

Pork—Fancy, 17½c per pound.

SEATTLE, Aug. 5.—Eggs—Select local ranch, white shells, cases included, 24c dozen; mixed colors, 23c dozen; pullets, 19@20c dozen. Cases returned to shipper 1c less.

Butterfat—F. o. b. Seattle: A grades, 47@49c lb.; raw milk, $1.90 per cwt.

Poultry—Hens, 4½ lbs. and up, 22c lb.; over 3½ lbs. and under 4½ lbs., 16c lb.; 3 to 3½ lbs., 13c lb; broilers, 1 lb. and heavier, 22c lb.; old roosters, 10c lb.; geese, fat, live, 18c lb.; geese, fancy dressed, 24c lb.; ducks, 3 lbs. and heavier, live, 16c lb.; spring ducklings, 3 lbs. and heavier, 20c lb.; turkeys, fat, dry picked, 12 to 15 lbs., 40c lb.; do live, fat, 7 to 10 lbs., 35c lb.; squabs, large, $3 per dozen; pigeons, $2.

SPOKANE, Aug. 5.—Poultry—Fat hens, 17c lb.; light hens, 14c lb.; roosters, 8c lb.

Fresh ranch eggs—$6.50@8 case; no storage.

Butterfat—41c a pound.

CHEVROLET PRICES REDUCED

Since the advertisement of the Chevrolet automobile appearing on page two of this paper was set up there has been a reduction in price. The new and correct prices being $525 for 5-passenger touring, $510 for the roadster, $860 for 5-passenger sedan, $840 for the 4-passenger coupe, $510 for the light delivery truck and $425 for the commercial chassis, f. o. b. Detroit.—Adv.

Bits of Fun for Everyone

Father's Chances.

She—I do wish you hadn't borrowed from father.

Her Suitor—Yes, I know, darling, but I had to. I was so anxious to get out of debt!—Bulletin (Sidney).

But Not Twice.

Young Mother—What in the world makes the baby cry so?

Ditto Father (wearily): I suppose he overheard me say that I managed to get a little sleep last night.—American Legion Weekly.

Something to Praise.

"You don't seem to think much of my car," said the owner of a dilapidated machine.

"I wouldn't say that," replied the tactful garage man. "What do you call this contraption here on the front of your radiator?"

"That's a figure of Mercury. I bought it for an ornament."

"Well, now, that's about as neat a piece of work as anything I every saw."—Birmingham Age-Herald.

Stop! Look! Listen!

"Is this a fast train?" the salesman asked the conductor.

"Of course it is," was the reply.

"I thought it was. Would you mind my getting out to see what it is fast to?"—Evansville Crescent.

He Won.

A young but exceptionally brilliant professor in a western college was dismissed from the faculty because of his inordinate betting. The president, interested in his career, secured him a position in an eastern college. To the president there he wrote: "The young man has a promising future, and anything you can do to cure him of betting will be a benefit to society."

The professor went east, and was cordially received. Conversation had proceeded but a few minutes when he said to the president, "I'll bet you $75 you have a wart between your shoulder blades."

The president hesitated. "Young man," he said, "I never bet; but just to teach you a lesson I will take you up."

He thereupon proved to the young man's satisfaction that he was in error, and the professor paid the $75.

The president wrote west relating the incident, concluding—"I hope that I have cured him."

The other wrote back: "I fear the case is hopeless. The very day he left here he bet me $100 that he could make you take off your shirt."—Judge.

Preparedness.

"Doctor, if there is anything the matter with me don't frighten me half to death by giving it a long, scientific name. Just tell me in plain words.

"Well, sir, to be frank, you are lazy."

"Thank you, doctor. Now, tell me the scientific name for it. I've got to report to the missus."—Birmingham Age-Herald.

Happy Suggestion for Uncle.

Little Spencer let no grass grow under his feet, when uncle came for a visit, before rushing up with this:

"Uncle, make a noise like a frog."

"Why?" asked the old man.

"'Cause when I ask daddy for anything he says: "Wait till your uncle croaks."—The Van Raalte Vanguard.

Latest High Class Patterns for the Home

Please order the patterns you desire at least two or three weeks before you wish to use them. Desiring to obtain the latest high-class patterns for its readers, THE FARMER has made arrangements to have them sent direct from the east, and under present mailing conditions it takes about that time for them to reach you.



4040-4048. Lady's Costume. Waist 4040 cut in six sizes: 34, 36, 38, 40, 42, and 44 inches bust measure. Skirt 4048 cut in six sizes: 25, 27, 29, 31, 33, and 35 inches waist measure. To make this dress for a medium size will require 9 1-4 yards of 32-inch material. The width at the lower edge is about 2 1-4 yards.

Two separate patterns, 10 cents for each pattern.

3654. Child's Dress. Cut in four sizes: 1, 2, 4, and 5 years. A 2-year size requires 2 3-4 yards of 27-inch material. Price, 10 cents.

4062. Girl's Bathing Suit. Cut in four sizes: 8, 10, 12, and 14 years. A 10-year size requires 3 3-4 yards of 32-inch material. For yoke and sleeve and skirt facing, 3-4 yard will be required. Price, 10 cents.

4050. Lady's Dress. Cut in six sizes: 34, 36, 38, 40, 42, and 44 inches bust measure. 38-inch size requires 5 5-8 yards of 32-inch material. The width of the skirt at the foot is 2 3-8 yards. Price, 10 cents.

3846-3843. Lady's Costume. Guimpe 3846 cut in seven sizes: 34, 36, 38, 40, 42, 44, and 46 inches bust measure. It will require 2 3-4 yards of 44-inch material. Skirt 3843 cut in four sizes: Small, 34-36; medium, 38-40; large, 42-44; extra large, 46-48 inches bust measure. A medium size will require 2 7-8 yards of 38-inch material. The width at the foot is 2 yards. Two separate patterns, 10 cents for each pattern.

4063. Boy's Suit. Cut in four sizes: 4, 6, 8, and 10 years. It will require 3 5-8 yards of 27-inch material for a 6-year size. Price, 10 cents.

4056. Girl's Dress. Cut in four sizes: 6, 8, 10, and 12 years. A 10-year size requires 3 yards of 40-inch material. Price, 10 cents.

3667. Lady's Porch or House Dress. Cut in seven sizes: 34, 36, 38, 40, 42, 44, and 46 inches bust measure. A 38-inch size will require 5 yards of 36-inch material. The width of the skirt at the foot is 2 yards. Price, 10 cents.

4065. Lady's Apron. Cut in four sizes: Small, 34-36; medium, 38-40; large, 42-44; extra large, 46-48 inches bust measure. A medium size requires 3 7-8 yards of 32-inch material. If made as illustrated, 1 3-8 yards of plain, and 2 1-2 yards of figured material 32 inches wide will be required. Price, 10 cents.

3684. Girl's Dress. Cut in four sizes: 4, 6, 8, and 10 years. A 6-year size will require 3 yards of 27-inch material. Price, 10 cents.

4067. Lady's Under Garment. Cut in four sizes: Small, 34-36; medium, 38-40; large, 42-44; extra large, 46-48 inches bust measure. A medium size requires 3 3-8 yards of 27-inch material. Price, 10 cents.

3634. Lady's Night Dress. Cut in four sizes: Small, 34-36; medium, 38-40; large, 42-44; extra large, 46-48 inches bust measure. A medium size will require 4 1-2 yards of 36-inch material. Price, 10 cents.

CATALOGUE NOTICE.

Send 12 cents in silver or stamps for our up-to-date spring and summer 1922 catalogue, showing color plates, and containing 500 designs of ladies', misses' and children's patterns, a concise and comprehensive article on dressmaking, also some points for the needle (illustrating 30 of the various simple stitches), all valuable hints to the home dressmaker.

Please fill in this order and mail with remittance to:
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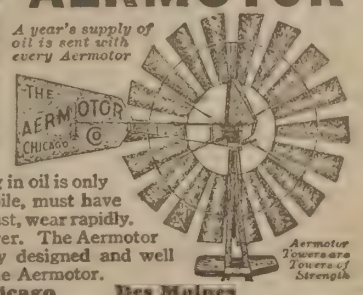
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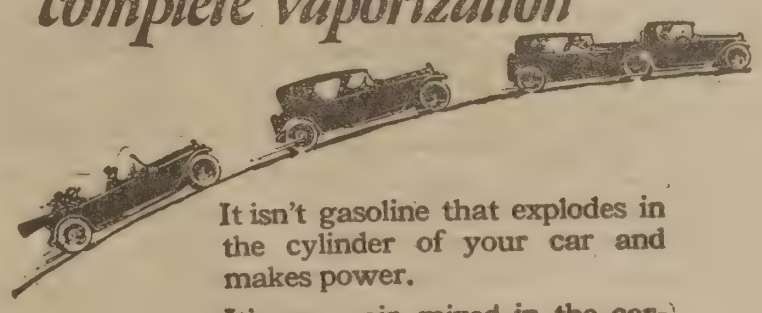
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RED CROWN GASOLINE

The Gasoline of Quality





On Faith Elm's last birthday she became a graduate of the Children's Corner, for then she was 12 years old. She is in the seventh grade. Her home is in Pierce county, in western Washington.

"I have three little rabbits, and they get out every day and I have to catch them. We have about 400 little chicks, 19 ducks and about 40 turkeys. My age is 11 years, and my birthday is August 5. Here is a riddle: Dresses upon dresses with not a stitch or a seam. An onion," writes Matilda French, who lives in Yakima county, Washington.

Birthday Greetings

THURSDAY, August 10—Frank Blackburn, 9 years old; Mabel D. Hayes, 11; Emil Hoveling, 10; Elinora McKillip, 11; Grace Marlatt, 10; Ellen Nelson, 10; Mildred Wuorinen, 11; Catherine C. Lenhart, 8; Vera Neff, 11.

FRIDAY, August 11—Eva Brown, 11 years old; Anna Bell Peters, 9; Orven Ware, 11.

SATURDAY, August 12—Edith Bell, 11 years old; Frances Higginbotham, 10; Martin Sather, 11; Clare Fuller Woodward, 8.

SUNDAY, August 13—Margaret Bradfield, 8 years old; Kenneth Dodge, 11; Wilba McInturff, 11; Hazel Niva, 11.

MONDAY, August 14—Ruby E. Hult, 10 years old; Joyce Matthews, 10; LeRoy Smith, 11.

TUESDAY, August 15—Clayton Dick, 10 years old; Ella Schrenk, 9; Alice E. Young, 10; Thelma McTavish, 8; Helen A. Tomlinson, 8.

WEDNESDAY, August 16—Margaret Wise, 11 years old.

BEDTIME STORIES

By THORNTON W. BURGESS.

BOBBY TAKES HIS OWN MEDICINE.

Bobby Coon had been out all night, and he was tired and so sleepy that it was all he could do to climb up to his home in the hollow tree. No sooner did he tumble into bed than he was fast asleep.

Now, Bobby Coon is a great practical joker. There is nothing he likes better than to play a joke on some of the little people of the Green Meadows and the Green Forest, and every night after he has filled his stomach he goes about playing tricks.

Ever since the morning when Johnny Chuck had slept until nearly noon because Bobby Coon had covered his doorway with hay so that no light could get down to his bedroom, and so he didn't know when to get up, Johnny had been trying to think of some plan to get even with Bobby Coon. He had called in Jimmy Skunk, who had spent all of one morning trying to find his own house, which Bobby Coon had buried in sand while Jimmy was out hunting for beetles. Suddenly they heard a sound in the big hickory which made



There wasn't a sign of any one anywhere.

Jimmy Skunk jump up and dance a jig.

"I have it!" he shouted. "Do you hear Drummer the Woodpecker? We'll get him to help us."

So it happened that Bobby Coon had not been asleep in his hollow tree more than half an hour when into his dreams broke the sound of knocking. Bobby waked up to murmur sleepily:

"Go 'way. There's nobody home."

But the knocking kept right on—ta, tap, tap. Bobby couldn't get to sleep again, try as he would.

"Go 'way, I say!" he called crossly.

The only reply was tap, tap, tap. Bobby crawled out of bed and climbed up to his doorway. When he stuck his head out the sun made him blink, and almost blinded him. He rubbed his eyes with both fists, and then he looked to see who had knocked. No one was to be seen. There wasn't a sign of any one anywhere. Could he have dreamed that some one was knocking? He must have. He took one more look around and then scrambled back to bed. No sooner had he begun to doze than there began a terrific noise—rat-a-tat-a-tat-a-tat-a-tat. It seemed as if it was right in his ear.

Bobby Coon was wide awake this time as he scrambled up to his doorway, and then he was mad way through. He knew now who was making such a racket; it was Drummer the Woodpecker. If he wanted to drum he could just go and find some other hollow tree! Bobby stuck his head out. No one was to be seen; but this time the noise didn't stop. Oh, my, no! It was louder than ever, but it came from the back side of the tree.

Bobby crept out and very quietly crawled around the tree, but when he got to the back side no one was to be seen and the rat-a-tat-a-tat-a-tat-a-tat was louder than ever and came from the front. Back went Bobby, with the same result as before. Then he lost his temper and scrambled 'round and 'round the tree as fast as he could, but never once did he catch sight of Drummer, who just went around the tree as fast as Bobby did, and all the time he kept up a terrific drumming.

Finally Bobby Coon stopped to get his breath. He happened to look down, and there he saw Johnny Chuck and Jimmy Skunk rolling over and over on the ground with laughter. Gradually Bobby Coon began to see the joke.

"I guess you fellows are even," said he. "Now, do let me sleep a little."

So, after a while, Jimmy Skunk and Johnny Chuck called off Drummer the Woodpecker and Bobby Coon went back to bed.

Copyright by T. W. Burgess.

Pike's Peak or Bust

(Continued from page fourteen.)

long, hard march ahead of us before we come to water again. That is, unless we dig another well in the river bed somewhere."

"How far do you reckon it is back to water from here?" asked McKinley. "Fifty or sixty miles?"

"Abe Sanders, with the handcart, declares we've tramped every inch of 65 miles since we left the last watering place."

"Sixty-five miles is a long, dry pull. You fellers on foot all figger on turnin' back from here, I 'low," remarked Wallace.

"Oh, indeed, we do! Indeed, we're going to take the back track! And how about you three men? Got enough of the Smoky Hill route, I'd guess."

"Enough for one lifetime. We're heartily sick of it, and disgusted with our fool selves for ever turnin' off from the Santy Fe trail, like we done. It's back to a watered country for us. In fact, we're so disgusted with this blasted desert, apt as not we'll turn round and mosey back to Missouri. Or at least that's how I feel about it."

"What! Are you as badly discouraged as that?" exclaimed Orlando. "We haven't even thought of going home. But we're expecting to follow a better watered route next time. The Santa Fe trail is supposed to be a hundred or two hundred miles longer than this. But it's the shortest road in the long run. We expect to stick close to that when we get back to it. But I wouldn't miss the trip to the Rocky mountains for anything."

"It's not recorded that we're going all the way back home," Holloway spoke up. "Five years ago this spring I started from Texas to California. But I never arrived there. We had a big drove of beeves that we couldn't get through, and we had to turn and drive 'em another direction. Of course I couldn't desert the outfit. So I've never set eyes on California; and there's no certainty that I ever will. But I've started to the Rocky mountains gold diggings, and I don't want to turn tail this time till I've dug up at least a little of the yellow metal."

"Well, I'm thinkin' you'll have to dig it up without me, Jess," said Wallace, in a tired way. "I've come near enough to leavin' my bones in this sunburnt desert. No more of that in mine. Barton county, Missouri, will be good enough for me hereafter."

So exhausted were all the travelers by their exertions and hardships that they spent not only the following night here, but another day and night. But early on the morning of the third day they were ready to get in motion again.

Knowing that a journey of 60 or 70 miles lay before them, through a waterless region, they made the best preparations possible. The men with the wagon filled their water barrel, and the foot travelers filled their water kegs, which were placed in the wagon. Last of all, they watered every animal from the well; and they themselves drank every drop they could swallow. Immediately after that they all set out, the wagon leading the way.

They were traveling the same road they had come, but in the opposite direction.

Steadily the two parties traveled till about the middle of the afternoon. Then they camped, by the roadside, turning their animals loose after giving each of them a bucketful of water from the barrel. There they rested and let the cattle rest and graze till the sun was setting. After that they got things in readiness and were soon rolling eastward again.

Till about midnight they kept in motion. Then they took out their animals for a two-hour rest and gave each another bucketful of water. That left but a little in the barrel and kegs for emergencies. At the end of the two hours they journeyed on till daylight, then camped for breakfast.

While eating they estimated that they had covered about 50 miles since leaving their camp by the well. That left them perhaps 15 miles yet to travel.

When at length they were moving once more, all were so weary, men as well as animals, that they seemed scarcely able to drag their feet along. The three wagoners were walking, to lighten their load. And even with that it seemed doubtful if some of their work animals would be able to keep the wagon going. So slowly did the travelers creep along that it was about the middle of the afternoon when they arrived at a creek with water in it.

Here they found some green grass; and here the whole party were glad to take another long rest.

During this time, or most of it, the men with the wagon were debating as to whether they should return home. Wallace was heartily in favor of retreating, McKinley undecided, and Holloway eager to push on to the mountains. Holloway owned the wagon and the two yoke of oxen; and there was much uncertainty as to what the three men would do. After dinner of the third day they yoked up and traveled on toward Council Grove, that matter being still undecided.

The foot travelers remained where they were till the following morning. After three whole days of resting, eating and sleeping, they had fully recovered from their hardships and starvation. At length they were in motion again and they followed the wagon party eastward, day after day.

(To be continued.)

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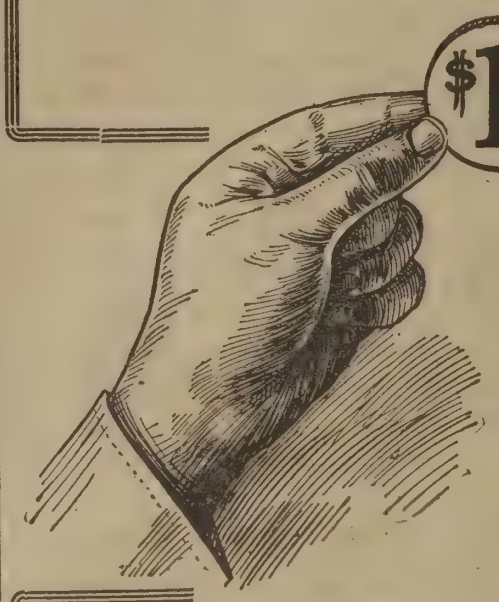


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News for Breeders

SOON SAW THE DIFFERENCE.

B. M. Luck of Woodland, a Guernsey breeder, has developed an exceptional herd of 29 cows by 15 years of breeding up with registered sires. The original herd, a bunch of grade Jerseys, was started by George A. Gay, and there were two different registered Jersey bulls used until the change was made a few years later by the present owner, who rents the farm from Mr. Gay.

"People don't realize what they can do with a pure bred bull," said Mr. Luck, "I could see the difference in the first cross when a better bull is used. I have eight daughters from the last herd sire, and they all show splendid uniformity and are good producers. They are seven-eighths purebred."

The present herd sire on the Luck farm is a 3-year-old of the Langwater and May Rose breeding. He was recently purchased from the Daybreak farm at Ridgefield, in Clark county, and is the sire of a number of heifers in that herd. When he first came to the farm in April he weighed 2150 pounds.

GUERNSEY TOUR IN PIERCE COUNTY.

Forty Guernsey fanciers held an interesting tour and visited a number of prominent herds in Pierce county on June 29. A total of six dairy herds were visited, and the party met at Paul's Pantry in Puyallup for luncheon. It was here that a meeting was held and the Pierce County Guernsey Cattle club organized. Immediately after the meeting the party adjourned to the local theater where a motion picture film, "Guernseys in America," was shown.

Officers of the new club are as follows: William Morris, Buckley, president; A. L. Johnson, Buckley, vice president; John Vernhordsen, Gig Harbor, secretary and treasurer; and Peter Gammeltaft, Roy, and J. A. Berg, Graham, were elected as extra members of the executive committee.

MAKES NEW RECORD.

Alpha's Lady May, a Jersey cow in the Barker Askew herd of Montesano, has made a new record of 12,751 pounds of milk and 713.40 pounds of butterfat in a year. During this time she carried a calf 225 days while on test and made an average test of 5.59. She was sired by Ferndale's Stoke Pogis and is out of Pogis' Lady Alpha. She is related to Rosaire's Olga Lad.

A CORRECTION.

J. H. Quick, a Jersey breeder of Castle Rock, asks that a correction be made to a recent report of his herd records in THE FARMER. The article gave a number of production records, which Mr. Quick says should have been mentioned as private tests instead of official records.

VETERINARY

By DR. S. B. NELSON.

Bitter Milk—I have a cow that came fresh in September and the cream and butter has a bitter taste and a bad odor. We set the milk in earthen crocks and keep well aired and sterilized. I am feeding wheat hay and give about six quarts of carrots at a feed once daily, also some potatoes and feed a little straw outdoors in the daytime. J. M. R.

Valleyford, Wash.

I would suggest that you give your cow one and one-half pounds of Epsom salts. Following this, wash the udder before and after milking with a 2 per cent solution of lysol. I would cut down some on the potatoes and if possible add a little grain.

Insufficient Nourishment—I have an old Jersey cow that has been out on pasture without shelter and with corn fodder beside for feed. She has been dry a month and we expect her to freshen the last of February. She came in from the pasture one night and we put her in the barn and fed her a half gallon of mill run soaked in water and all the bunch grass hay she wanted. She ate fine, but that night she lay down and can not get up now, but she tries to get up. She eats and drinks and her kidneys and bowels seem all right. She moves around the barn some in trying to get up. The trouble seems to be in her hind legs. We are keeping her blanketed. P. N. A.

Monse, Wash.

I am afraid that this is a case of insufficient nourishment for your cow during the time she is carrying her calf. The only thing I can suggest is that you continue to feed her mill-run and hay and she may gather enough strength to get up before she calves. If not, the chances are she will after she has freshened. Medicine will not do her any good.

No Sure Cure for Ringbone—Can you give me a sure cure for ringbone on a horse's hoof caused by an injury about 10 months ago? J. C.

Yakima, Wash.

I can not inform you of a sure cure for ringbone either caused by injury or from any other cause. I do not know of a sure cure for ringbone.

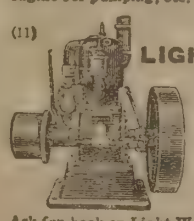
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Our Market Service, Page 5, Is Equaled by no Other in the West

Visit West Side Stock Farms

By RALPH ERSKINE

In a previous issue was published a report of the first week of the two weeks' live stock tour in western Washington under the auspices of the extension department of the state college. The second week began with an inspection of the animals at the western Washington experiment station at Puyallup, the excursionists having spent the first week visiting farms in Clarke, Cowlitz, Lewis, Thurston, Grays Harbor, Mason and Pierce counties. L. T. Oldroyd and H. E. McNatt took the crowd through the dairy barns at the station and emphasized the results of better breeding by the type of offspring. "Good producers come only from good foundation stock," said Mr. McNatt. "A purebred that does not come up to standard will never produce a good offspring."

Further proof that purebreds are a paying undertaking was brought out on the Tresch dairy farm at Puyallup. Mr. Tresch is keeping a commercial herd of registered animals. A real treat awaited the dairymen at the C. W. Orton farm at Sumner, where certified milk is being produced systematically and at a good profit to the owner. More than 100 gallons of this special milk is sold daily, most of it going to Seattle.

Another striking example of the value of a good sire came at the C. J. Lawson farm at Orting. A daughter produced 76 pounds more butterfat than did her dam. The tour then crossed into King county and was taken in charge by A. B. Nystrom, county agent.

At the C. J. Orton farm at Renton was another certified dairy. A new milk house had just been completed, but the equipment not yet moved. Five cows, all daughters of Yorick of the Willows, showed an increased yearly production of nearly $50 each above that of the average cow in the herd. These animals were purchased for $100 per head more than the average of the herd.

The Pacific Hog ranch, near Kirkland, was the first large hog farm listed on the tour. Here there are 6000 animals which are being fed in part on garbage from the city. Five hundred and twenty-five of the brood sows have been bred to farrow in the fall. There are a number of breeds kept, but no cross breeding is done except for meat production.

A Record Breaking Guernsey.

The Dr. Park Weed Willis herd of registered Guernsey cattle came next and the visit to Orchard Hill farm was one of the best of the day. While Sammamish Topsy, the highest producing Guernsey cow west of the Missouri river, was the main attraction, there were other individuals that demanded attention because of their exceptional quality and breed characteristics. The herd bulls are from Robinhood and King of the May breeding.

There were six purebred Jersey females at the E. W. Trezise farm near Tolt. Bessie, a 10-year-old cow, produced 419 pounds of fat, while Emma Foxy Fern made 700 pounds as a 7-year-old. The latter took second place in her class at the state fair last year. All cows of this herd are being milked only two times and will average 400 pounds on the mature cow basis.

After five years of breeding with a good sire, the Methow Valley Live Stock company of Tolt have secured seven daughters from the herd sire that will average 500 pounds of fat. In all cases the daughters

(Continued on page twelve.)

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THE WASHINGTON FARMER

SUCCESSOR TO

Vol. 47. No. 7 THE RANCH PACIFIC DAIRYMAN HORN AND HOOF August 17, 1922

For Good Farming, Attractive Country Homes and Happy Country People

U. S. Grain Growers Reorganize

New Board of Directors Takes Charge--Wallace and Hoover May Assist

An article in THE FARMER a few months ago reported the stormy session of the first annual convention of the United States Grain Growers, Inc., held in Chicago in March. At that convention a majority of about 54 per cent completely routed the minority of 46 per cent, keeping the control of the organization in the hands of the old line farmers' elevator companies. At that time the Chicago representative of THE FARMER was quoted as saying:

"It is simply a question of whether the United States Grain Growers are to market their grain cooperatively or whether they are to sell it through farmers' elevators by way of speculative channels, as some 5000 of these elevators have been doing for years."

Farm Bureau Disappointed.

That the action of the convention was highly disappointing to the American Farm Bureau federation, which had fathered the United States Grain Growers, Inc., was indicated by a formal statement of the bureau, in which occurred the following:

"The farm bureau has pledged itself to see that its members get improved methods of marketing. The farm bureau has sponsored, fostered and financed the United States Grain Growers, Inc., in an effort to secure harmony in the various grain marketing organizations. Whatever happens to the United States Grain Growers, the farm bureau will continue its earnest efforts to secure a more efficient system of marketing grain."

Since this convention it has been apparent that the United States Grain Growers has been making little or no progress, while the organizations based on the 100 per cent pooling idea have been advancing both in the middle west and the Pacific northwest.

Comes now the announcement by the farm bureau federation of a sweeping reorganization of the United States Grain Growers, Inc. That the reorganization is the direct result of the pledge of the farm bureau above quoted is indicated by the fact that it came about through the efforts of a special committee of the Midwest Farm Bureau federation.

Of the 19 members already appointed to the board of 21 directors only seven were members of the former board. Former President C. H. Gustafson, whose organization machine was winner by the small majority at the March convention, is not a member of the new board, his place being taken by E. H. Cunningham, secretary of the Iowa Farm Bureau federation. Howard Leonard, president of the Illinois Agricultural association, which association was a part of the defeated minority in the March convention, is a member of the new board.

Farm Bureau Makes Statement.

The following in brief is a statement issued by the farm bureau federation announcing the reorganization:

"The United States Grain Growers, Inc., was completely reorganized during a meeting of the board of directors in Chicago on August 4 and 5. The new board of directors is as follows:

"Howard Leonard, Eureka, Ill., president of the Illinois Agricultural association; John F. Boland, Webster Grove, Mo., president of the Missouri Farm Bureau federation; Ralph Snyder, Oskaloosa, Kan., president of the Kansas Farm Bureau federation; John G. Brown, Monon, Ind., president of the Indiana Federation of Farmers association; Charles W. Hunt, Des Moines, Iowa, president of the Iowa farm Bureau federation; O. E. Bradfute, Xenia, Ohio, president of the Ohio Farm Bureau federation; J. F. Reed, St. Paul, Minn., president of the Minnesota Farm Bureau federation; George McKerrow, Pewaukee, Wis., president of the Wisconsin Farm Bureau federation; E. H. Cunningham, Cresco, Iowa, secretary of the Iowa Farm Bureau federation; R. A. Cowles, Bloomington, Ill.; W. R. Crowther, Golden City, Mo.; T. I. Ferris, Pleasant Lake, Ind.; H. L. Keefe, Walthill, Neb.; A. J. McInnis, Dazey, N. D.; Charles B. Steward, Red Cloud, Neb.; Eugene Funk, Funks Grove, Ill.; Herman Danford, Washington, Ill.; B. F. Parmenter, Lincoln, Neb.; A. G. Burgeson, Douglas, N. D.

"Two places on the board of directors are vacant and will be filled later. Of the new board of directors, Cowles, Crowther, Ferris, Keefe, McInnis, Steward and Burgeson were members of the retiring board.

"The new board of directors elected officers as follows: President, E. H. Cunningham; vice president, H. L. Keefe; secretary, J. M. Mehl; treasurer, Charles E. Gunnels.

Only One Salaried Man.

"Secretary Mehl has been assistant to the president of the United States Grain Growers, Inc., since its incorporation. Mr. Gunnels is treasurer of the American farm bureau federation and is instructed by that organization to serve the grain growers without pay. Secretary Mehl receives a salary of $5000 per year. No other officer and no director of the United States Grain Growers, Inc., receives any salary. Per diem compensation for the directors was fixed at $10.

"The new board of directors elected an executive committee of three—E. H. Cunningham, R. A. Cowles and J. F. Reed—and vested in it broad powers for carrying on the affairs of the organization. The subsidiary United States Grain Growers' Sales company is controlled by this executive committee.

Advice on Financing.

"An advisory executive committee of three was appointed to advise on questions of finance and marketing. The members of this committee are: Bernard M. Baruch, financier, New York; Alexander Legge, president of International Harvester company, Chicago; Frank O. Wetmore, president of First National bank, Chicago. All three have accepted appointment on this committee.

"Secretary of Agriculture Henry C. Wallace and Secretary of Commerce Herbert Hoover were invited to serve as ex-officio members of the new board of directors, representing the public.

"The auditors' report on the financial affairs of the United States Grain Growers, Inc., on July 26, 1922, showed the total liabilities to be $394,582.75. Assets totaling $109,315.48 were reported, leaving a net deficit of $285.267.27.

"The Farmers' Finance corporation is in status quo.

A Farm Bureau Movement.

"The reorganization of the United States Grain Growers, Inc., was effected through the recommendations of the midwest farm bureau creditors committee. This committee consists of E. H. Cunningham, secretary of the Iowa Farm Bureau federation; W. S. Hill, president of the South Dakota Farm Bureau federation, and J. W. Coverdale, secretary of the American Farm Bureau federation. It was authorized on May 13 in a conference of the midwest farm bureau presidents and secretaries and has been at work ever since untangling the affairs of the farmers' cooperative grain marketing organization as disclosed in the first annual meeting in Chicago on March 21. The creditors' committee holds powers of attorney for most of the creditors who have claims against the United States Grain Growers, Inc. The plan for reorganization was worked out by the creditors' committee and submitted to a meeting of the midwest farm bureau presidents on August 3. The recommendations of the committee were unanimously adopted."

A Colville Valley Problem

Draining of River Creates Peculiar Condition of the Soil

By HENRY J. PLUMB, County Agent.

Undoubtedly the draining of the Colville river, coupled with the recent dry years, has brought a particular soil problem to the foreground.

The presence of alkali in the soils of the Colville valley has long been a matter of common knowledge but not until the moisture supply has been reduced to such a low point has this problem loomed up as serious. It is now regarded as one of the most pressing problems confronting the farmers of Stevens county at the present time.

The effect that alkali salts has on plant growth is a physical one. It reverses the osmotic action, by which plants get their moisture supply from the ground water, causing moisture to osmos from the plant interior outward rather than inward. It can be readily seen that the plant is thus robbed of its moisture supply.

A Scientific Problem.

A physical law controls this as osmotic action induced and caused by differences in concentration of different fluids causing them to flow through membranes always in the direction of the greatest concentration. In a normal soil the greatest concentration is on the inside of the root of the plant, but in an alkali soil this is usually reversed. Surrounding the roots of plants in alkali soils is soil water carrying salts. If the soil water is abundant the concentration of this soil water may be held down and the normal osmotic action takes place through the root walls into the plant. If, however, through any cause, the supply of soil moisture becomes restricted, it can be readily seen that the concentration of the soil water becomes greater than that of the sap of the plant and osmosis takes place from the plant outward, causing great injury.

Thus is explained the reason why the draining of the Colville river has brought this soil problem to the front and makes it a pressing one for solution. In former years when, before the draining of the river, there was always a superabundance of soil water, and the moisture supply was augmented by alleged wet seasons, the alkali problem was not serious. At the present time it behooves us to apply ourselves to the solution of this problem to the end that the Colville valley may be restored to its former high standard of productiveness, and placed permanently on the map as one of the richest agricultural regions in not only the state of Washington, but the whole northwest, and I personally would not hesitate to include the entire United States.

Sulphur Would Help.

One or two suggestions can be made at this time looking toward the solution of this problem. The application of sulphur in some form to the soil will assist. This is particularly true where we have the black alkali, as sulphur reacts chemically, changing the black alkali, which is comparatively insoluble, into the white alkali, which is soluble and may be leached out of the ground with water. The use of sweet clover as a forage and green manure crop will help; and the application of barnyard manure in large quantities, where this material is available, is a very good remedy.

An important suggestion, however, is that in order to augment the present moisture supply, dams be placed in the Colville river at intervals sufficient to retard the flow of the water and raise the water table. Sub-irrigation can then take place for a considerable distance from the river, just how far it will take place being problematical. These dams should be so constructed that they can be thrown wide open during the winter and spring months and the waters allowed to flow unretarded until all flood waters have passed off; they can then be closed and during the dry season the life giving water can sub out to supply the crops growing in the valley. This sub-irrigation should be supplemented wherever possible with irrigation on the higher ground lying more remote from the river. Numerous creeks entering the valley give opportunity in many places for such projects.

To sum up, it can be said that the recent dry years have greatly stimulated consideration of the problems of moisture for crop production with a consequent interest in irrigation. I do not hesitate to say that it is my opinion that every possible use will be made of available waters for irrigation purposes and that, as fast as it is possible to do the engineering work and make the installations.

Likes Alfalfa Cover Crop

"The main objection to vetch as an orchard cover crop is the fact that it becomes very dry when it goes to seed, and there is a greater chance of fire," remarked J. F. Wright, manager of the Wright & Day Land company orchard at Peshastin. "It is partly for this reason, and partly because an alfalfa crop needs no reseeding, that we use the latter method almost exclusively. Vetch is an easy crop to handle and it reseeds itself readily. The crop can be sown in the fall or spring as desired, but should be allowed to remain on the ground the first year."

Mr. Wright prefers fall disking, since it gives the vegetable matter a better chance to decay, but he considers it out of the question, since the ground must be disked again in the spring, and two diskings would cause the soil to pack. There are one or two trees in the Wright orchard which show a yellow color, supposedly due to the fact that a fir stump once grew on this spot. This, however, can be remedied by digging four large post holes and filling them with barnyard manure. When the irrigation waters run over these spots the food elements will be leached into the soil. Such a treatment will produce a great difference in the color and vitality of the tree within 10 days, according to Mr. Wright.

The Pipe Line Sprayer

One of the most interesting features of the coming summer meeting of the Washington State Horticultural society in Wenatchee August 18 and 19 will be the demonstration and discussion of the pipe line spraying system, which is becoming more and more popular in that district.

Visits will be made to several orchards in which this system has been installed. New ideas are being worked out by orchardists along this line, which will be explained and discussed by the visitors and by local officials as well.

Facts and figures on the costs of installation and operation of pipe spraying outfits are being collected by County Agent William Meikle and Soils Expert Roy Larsen. O. B. Shay sunk his sprayer half way under ground and spent $150 for pipe, which was all that his outfit cost for spraying a 20-acre tract. He saves that much each year on time and labor costs.

Other more elaborate plants cost as high as $1000 for 10 acres. One East Wenatchee orchardist, O. E. Etzkorn, attached his spray pump to an electric motor and uses some of the same power that operates his pumping plant. His power costs him nothing. He sprays his entire 20-acre orchard in two days himself, while it formerly took three men three days to do the job as well.

Much depends on the shape and location of the orchard as to costs of installation and operation, but generally speaking the saving in cost of operation will pay for the installation within two or three years.

The pipe spraying method originated in the Wenatchee district, but orchardists in the Yakima and other northwestern orchard sections are making inquiries and preparing to adopt the plan. Local horticultural authorities regard it as one of the most important progressive achievements of recent years. It is claimed that more thorough and efficient spraying is possible with a pipe line system than with the old moveable spray method.

THREE FULL SISTER GUERNSEYS.

The first prize 3-year-old at the Pacific International in 1920, a cow that finished an official record last November of 7811 pounds of milk and 365.86 pounds of butterfat as a senior 3-year-old, recently gave birth to her third heifer calf, full sister to the other two, at Ruby Dell Guernsey farm of H. E. Angel & Son, Mabton. She is Middledale Grace Darling, a daughter of Langwater Emigrant, out of another of his daughters, and the sire of her fine trio is France's May King, the only advanced registry bull in the Yakima valley. Her first daughter, Aloha Darling, has just completed a record of around 360 pounds of butterfat in class G, in the herd of Wallace & Fordyce. France's May King also sired Golden Rod of Olga, 12,190.6 pounds of milk, 535.82 pounds of butterfat in class D (state champion); Angel's Lila May, 9568.20 pounds of milk, 419.84 pounds of butterfat in class F; O. C. Butter Girl, 13,171.50 pounds of milk, 490.38 pounds of butterfat in class E; Georgia Dunn, 11,901.3 pounds of milk, 512.11 pounds of butterfat in class E, and Alga Dunn, 10,346.7 pounds milk and 442.06 pounds of fat in class G.

PROTECT BEES IN WINTER.

The department of agriculture is recommending the insulation of the bottom of beehives, as well as the tops and sides, as a means of maintaining proper heat during the winter months. A circular discussing the protection of bees in winter is being issued by the department and can be secured by addressing the division of publications at Washington, D. C.

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Fifty Million for Highway

Since 1893 Washington has expended $50,000,000 on state highways, as shown by a statement by Director L. D. McArdle of the state business efficiency department. That will be the grand total expended when the appropriations made by the last legislature are exhausted.

Three-fifths of the $50,000,000 total will have gone into construction and maintenance of the past four years. Appropriations made by the last legislature equal more than half the entire sum expended for state highways between 1893 and 1921. The last legislature appropriated nearly $18,000,000 and the legislature before it about $13,000,000.

This official statement from Olympia confirms the belief of The Washington Farmer, expressed when the pernicious Carlyon bill was before the people, that the state, without the Carlyon bill, would have all the funds that it could economically and advantageously spend upon its highways. There never was sensible justification for the proposal to lay a bonded debt of $42,000,000 on the taxpayers when, as THE FARMER pointed out, other sources totaled many millions of dollars annually, and the state was on the sound, safe basis of paying as it goes.

The Washington Farmer is for good roads and shall continue to work enthusiastically for them, but we do not believe in running recklessly into bonded debt with the inevitable wasting of a large part of the people's money. Moreover, we believe that it would be mistaken policy to spend such gigantic sums upon the limited mileage of paved state highways, which are used chiefly by tourists and pleasure-seekers. The first need is for better roads to enable the producers to take their products to market. Fortunately, the farmers and thoughtful people in the towns and cities voted down the Carlyon bill, a measure that was boosted by comparatively small groups of city boomers.

The Earnings of Railroads

Reports of 170 of the 201 class 1 railroads to the interstate commerce commission for June show that the roads were coming back to a more prosperous condition when the strike July 1 brought on renewed unsettlement. These 170 roads had a net operating income of $70,601,448 in June, an increase of more than 47% over the net operating income in June of last year. These earnings are sufficient to return the roads 4½% on their investment as fixed by the interstate commerce commission. To earn a 6% return the same roads would be required to earn $90,000,000 a month.

It is to the interest of farmers and other producers to see them earn good returns, for that will afford a basis for a demand for further reductions in freight rates.

Two Grain Marketing Systems

Government marketing of Canada's wheat crop is to be resumed. A dispatch from Ottawa, the Canadian capital, reports that the dominion government has been officially notified that Alberta and Saskatchewan have passed legislation for cooperation with a proposed dominion board to supervise the marketing of the 1922 crop. Canadian government officials indicated that federal action soon would follow, and that the marketing board would operate along the general lines of its predecessor in 1919, using existing grain-trade machinery for handling the crops. It is expected that the Canadian cabinet will promptly take up the appointment of the members of the marketing board.

This further experimentation with government marketing of a great product will be watched with interest by farmers of the United States. When we had government handling of the wheat crops in this country the results were not such as to excite enthusiasm among our producers. On this side of the line the government seems to have its hands as full as they should be, with all sorts of unsolved and conflicting problems. There appears to be no sentiment at all in the United States in favor of a revival of government marketing of grain.

At the same time, our growers are coming more and more to the conviction that there must be effective cooperative marketing to take the place of the old individualistic competitive system under which every producer was in competition with every other producer. Hence, the encouraging growth of cooperative wheat marketing organizations in the United States. The impression prevails on this side of the border that the producers, through their own cooperative organizations, can elect officers and managers who will be more capable of marketing their products in a broad and advantageous way than boards of politicians appointed by partisan state or federal government officials.

Perhaps it is just as well that the two systems should be tried, side by side—government marketing in Canada and cooperative marketing in the United States—so that a better comparison can be made of the two methods. In the end it will be results that will count. If the Canadian wheat growers should get better results under government marketing than American growers get under cooperative or individual marketing, we shall see renewed interest in the Canadian method.

A Forest Tragedy

He left his camp fire burning to see if the fire lookout would pick it up.
He did.
He thought this would be a good test to see if the district ranger was on the job.
He was.
He wondered if a fire would burn very fast in the dry forest.
It did.
He thought he could get away before the ranger could catch up with him.
He couldn't.
He thought he could bluff the judge at his trial.
He didn't.
He wondered if the judge would have the nerve to sentence him.
He did.
We wonder if he will put out his camp fire the next time he is in the forest.
He will.



English and Swiss producers have the Indo-China condensed milk market all to themselves, according to advices just received from American Consul Leland L. Smith, Saigon. The 19,000,000 people in that country have just begun to appreciate condensed milk. The consul states that 2,500,000 pounds were imported last year. Besides keeping better in that tropical climate, the natives prefer the sweetened condensed milk to the evaporated article.

State Farm News

Approximately 20 bushels of wheat to the acre will be the general average in Walla Walla county this fall, according to reports. Heavy land is yielding about 30 bushels on an acreage, but the light land yield is cutting down the general average. In the Waitsburg section the yield is below normal, due in part to a large amount of smut in the grain.

More than 600 acres in the Walla Walla and Milton-Freewater districts have been planted to prunes during the year, according to J. B. Wiley, district horticulturist. Within another year prune shipments will materially increase, he stated. Some apple growers have torn out apple trees and are replacing them with prune trees. The growers say the market for prunes is steadier and that they require less care. About 15 years ago scores of prune trees were grubbed out, prunes at that time being a drug on the market.

* * *

Secretary H. P. Vermilye of the Washington state fair has selected Charles H. Burnett of Hollywood farms as the poultry judge this year.

* * *

Organization of a hay sales agency sponsored by the county farm bureau has been perfected at Yakima, the name selected being Alfalfa Sales corporation. N. H. Massie, secretary of the farm bureau and temporary secretary-treasurer of the sales group, says the membership is small, but that the group has 250 cars of hay to sell.

Claude White of Grandview is president and members of the board of trustees in addition to White and Massie are G. F. Varnum, Mabton; Edward Flannigan, Wapato; J. F. Schreiner, Broadway; H. L. Hull, Tieton. One more member is to be chosen.

* * *

Hop growers met at Tampico recently and agreed to pay $1.25 a box for picking. Frank Eglin believes the market outlook for hops is not good and says $1.25 a box is all the growers can pay.

* * *

Two hundred opera chairs have been placed in the grandstand on the state fair grounds at Yakima. This section will be used for reserved seats. The racing stables were moved early in the summer in order to allow for an additional entrance at the north side of the grounds. This will relieve much of the congestion at the main gate. One additional entrance has been built at the street car gates, which will also help to handle the crowd. The races this year include many new features, including Roman chariot races with four horses abreast.

* * *

Ai Camp, pioneer farmer of LaCrosse, has purchased 416 acres belonging to Jim Kerns and will take possession this fall. The price was reported to be around $30,000.

* * *

Six acres of land surrounding the Covington house at Orchards, the oldest structure in the northwest, has been purchased by the Kalsus Historical society and will be turned into a public park. The Covington house, tradition says, was built in 1845 by the Hudson's Bay company. It is now owned by a group of native sons who bought it to preserve it. It was being used as a sheepfold when the move was started to save it from destruction.

* * *

The new water system at Coulee has been put in service. It is at the springs on the old Dan Paul homestead. The tank contains 50,000 gallons and is 70 feet from the ground and gives the town a fall of approximately 92 feet.

* * *

M. N. Lewis, federal hunter, who is stationed in the Egypt country north of Davenport to kill predatory animals, stood third on the list of federal hunters in the state in the number of coyotes killed during June, according to a report from Olympia. Mr. Lewis killed 16 coyotes during June. Thirty-nine coyotes have been killed by Lewis since he has been stationed in Lincoln county, May 1.

* * *

A large threshing machine, working on the farm of Robert Divers, near Goldendale, was wrecked August 5 by a smut explosion. In the ensuing fire the thresher, strawstack and 600 bushels of wheat were destroyed.

* * *

The second annual fair of the Neuwaukum Fair association will be a three-day fair at the farmers' picnic grounds September 28, 29 and 30, all day and evening. Harry Hagerman of Auburn is manager. Other officers elected were: President, J. W. Jones, Neuwaukum; vice president, Harold Hanson, Enumclaw; secretary and treasurer, W. J. Hann, Enumclaw; trustee, Ralph Hewitt, Neuwaukum.

* * *

Clarke county dairymen have formed a sales organization of their own, the Clarke County Dairymen's association. The new association is reported to have members in every part of the county.

* * *

The Biggam Fruit Growers' company has sold its warehouse to the Big Y company of Yakima and members of the company have signed up their fruit crops with the latter concern for the season. Growers in the Biggam neighborhood, in Benton county, organized three years ago, erected the warehouse and have been handling their own fruit.

* * *

E. W. Rau, living nine miles south of Tacoma, has a two and a half acre farm, with about 700 hens, but plans to make it 1000 hens for next winter. From these 700 hens he reports $300 net in March; taken the year through, his hens pay him a clear gain over all expenses of about $2 apiece.

* * *

At a meeting of Elberta peach growers held at Donald the Yakima valley Elberta peach crop was estimated at 500 carloads. A former estimate by these growers was 800 carloads, but one veteran grower said the peach drop has cut the former estimate 300 cars. Much of the fallen fruit has been found to be affected with "black centers."

* * *

The "Daybreak" dairy ranch of 320 acres, one of the most improved farms in Clarke county, and operated for a number of years by A. D. Calkins and Mrs. N. Riggs, near Pioneer, has been sold to Mr. and Mrs. Pircie of Upton, Wyo. The reported price was $45,000.

* * *

J. L. Jackson of the Tucannon river region, in the Blue mountains, reported that he had lost 95 sheep recently as a result of the activities of bears. These animals, he says, are rapidly increasing and are causing heavier loss to stockmen than ever before.

FARM BUSINESS AND MARKETS OUTLOOK

During the last few weeks reports of inability to obtain cars have been coming forward with increasing frequency. Some country elevators are closing because of inability to ship the grain which they have taken in already. The strike of railway shopmen in the last few weeks has aggravated the situation since the percentage of cars and locomotives in bad repair has increased and the roads have been unble to move freight with as much dispatch as usual.

Other causes were at work, however, and the shortage would have arrived eventually any way. The business revival has increased the retail and wholesale trade and enlarged the volume of goods moving through the channels of distribution. The building boom and enormous sales of automobiles are suggestive of the bigger load which has been placed upon the transportation system. In the week ending July 22 car loadings other than coal were only about 1 per cent less than during the record week of October 15, 1920.

The coal strike is the most serious factor in the situation. It has directly hampered some of the roads already and will increase the car shortage as soon as it is ended and coal production rises to meet the actual demand. Reserves of coal in all sections have been depleted, householders will try to lay in their winter supply and the movement to the northwest, which usually takes place during the summer, will become enormous in order to make up for lost time. Box cars are likely to be requisitioned for the purpose.

At the present time the railroads report some surplus box cars, but part of these are in bad order and others are remote from the sections where shortages exist. If business expands further during the fall, the crop movement confirms the estimated yields and the movement of coal reaches the high mark expected, it will not be surprising to see car orders each week exceeding the available supply 20 per cent or more.

EXPANSION IN CATTLE RECEIPTS.

The clause "at owner's risk" inserted in freight bills has deterred some cattle shippers and the movement of cattle put on the rails has been retarded by the strike, but receipts at the leading markets are running equal to or above the average for this season.

The western range movement is gathering volume slowly as roads in the northwest need coal, but Montana, the Dakotas and Canada were represented at Chicago, St. Paul, Omaha and Sioux City last week. The pilgrimage from the southwest is in full swing and is bringing a raft of inferior stuff to St. Louis and Kansas City.

A fancy load of steers probably would bring $11 at Chicago, but the position of medium and common grades is not strong and the plainer the cattle are the more likely they are to sell lower later on. She stuff of all kinds was relatively scarce last week, but the trend is toward a larger supply and greater competition from low grade steer beef. Bulls, on the other hand, were numerous, as it is the weeding out season on the range.

Cattle feeders have not begun an aggressive purchasing campaign, but the movement is up to or above normal in spite of the rail strike, and the scarcity of suitable cattle. A big corn crop, an abundance of fall pasture and roughage and the profitable outcome of recent feeding operations promise to maintain a broad outlet for thin steers this fall.

HOG MARKET COLLAPSES.

Hog prices suffered the severest drop in months last week. Receipts at the leading markets are the largest ever seen at this season and 35 per cent above the ten-year average for the corresponding period. In addition, the strike situation has affected the demand for pork, prices on all hog products being at a low level.

Fear of a rail tieup may be causing shippers to rush to market, but it begins to look as though hog production was increased a year or so ago much more than has been generally believed and that the increase is being concentrated on the market at the present time in the form of heavy barrows and discarded brood sows.

Stocks of hog meats on August 1 at the 11 leading packing points amounted to 269,526,000 pounds, compared with a five-year average on that date of 356,377,000 pounds. Stocks of lard were 101,391,000 pounds, compared with an average of 89,375,000 pounds. In spite of heavy hog slaughter during July, the increase in hog meat holdings was less than the average for that month while the decrease in lard was considerably greater than the average, showing that consumption is heavy. In part the rapid rate of distribution is at the expense of price, as packers have been forcing the market. They report that export buying has broadened materially.

LAMB MARKET RECOVERS.

Lamb prices advanced toward the close of last week, although the total supply at market points was fairly liberal. Rail conditions are interfering with the range lamb movement. The supply at eastern points is expected to be more uniform hereafter and natives are becoming less numerous at all points. The country demand for thin lambs and breeding ewes shows no abatement.

STRONG TONE IN WOOL.

Moderate sales of wool were reported last week at steady prices and mills generally are showing more interest. Sentiment in the trade is rather strong, the outcome of tariff legislation being the biggest uncertainty. The American Woolen company opened additional lines of men's wear at prices ranging from 10 cents a yard higher to 22 1-2 cents lower than a year ago, although wool prices are much higher. The volume of orders for cloth obtained is reported to be satisfactory. The series of auctions of colonial wools at London closed with prices 5 to 10 per cent higher than the previous series. British interests bought 70,000 bales and the continent 62,000 bales, while Americans bought only 1000 bales.

Scoured basis:

Oregon eastern No. 1 staple, $1.30@1.35; fine and fine medium combing, $1.20@1.25; eastern clothing, $1.10@1.15; valley No. 1, $1.07@1.10.

Territory—Fine staple choice, $1.30@1.35; 1-2 blood combing, $1.10@1.15; 3-8 blood combing, 88@93c; 1-4 blood combing, 75@78c.

The government estimated the total wheat crop as of August 1 at 805,000,000 bushels, a loss of 12,000,000 bushels during July. An increase of 15,000,000 bushels in the spring wheat yield was more than offset by a decline in winter wheat. Last year's crop was 795,000,000 bushels, and the average for the five years, 1916 to 1920, was 799,000,000 bushels.

MOVEMENT EXCEEDS AVERAGE.

Receipts of wheat at primary markets since the new crop season started on July 1 total 52,232,000 bushels. This is much less than the movement of 79,541,000 bushels during the corresponding period last year, but it is substantially above the ten-year average of 38,373,000 bushels. Farmers evidently are not holding wheat. Recent statements by Julius Barnes and George Marcy, two of the most prominent men in the grain trade, to the effect that "an orderly and gradual marketing of existing wheat stocks will end the present depressed price conditions," are significant in this connection.

Prices reached a new low for the season last week, due to heavy receipts and slow foreign demand. Mills have expanded operations one-third since new wheat started to move. Total sales for export in the last two weeks amount to around 20,000,000 bushels, but part of these transactions were merely the purchase of actual grain to fill contracts made several months ago, so that the amount of new business is in doubt.

It is believed that about 50,000,000 bushels will be needed to take care of August and September shipments abroad. Since the heavy movement of winter wheat is believed to be nearly over, especially if the car shortage becomes more acute, there is a possibility that enough wheat may not arrive at terminals in the next six weeks or so to satisfy both domestic and foreign needs.

CORN CROP ANOTHER BUMPER.

The government's forecast on the corn crop was 3,017,000,000 bushels, indicating another bumper yield. If the weather is as favorable in the next month as it has been recently the final outturn may yet exceed that of last year at 3,080,000,000 bushels. The record yield was 3,151,000,000 bushels in 1920.

The oats crop improved in July and the August 1 estimate was 1,251,000,000 bushels. Counting farm reserves of old oats, the total farm supply would be about 100,000,000 bushels more than last year.

CHICAGO.—Wheat—No. 2 red, $1.09@1.10; No. 3, $1.07 1-2@1.09; No. 4, $1.06 1-4@1.07 1-4; No. 2 hard, $1.08 1-2@1.10 3-4; No. 3, $1.06@1.08 1-2. Corn—No. 2 mixed, 61@63 1-2c; No. 3, 61@62 1-2c; No. 2 yellow, 62 3-4@64c; No. 3, 62@63 1-2c; No. 2 white, 61@63 1-4c; No. 3, 61 3-4c; No. 4, 61 1-2@61 3-4c. Oats—No. 2 white, 32 3-4@38c; No. 3, 31 3-4@35c; No. 4, 31 1-2@32 3-4c. Rye—74 3-4@75 1-2c. Barley—54@61c.

BRAN MARKETS AT LOW POINT.

Bran prices lost the recent $3 gain and are back to the low point of the summer. Cottonseed meal also is selling at the lowest point of the season. Wheat feeds may go a little lower, especially if weather is favorable for fall pasture, but a drastic loss does not appear probable.

Prices per ton (100 pound bags) in carlots: Chicago—Bran, $17.25; standard middlings, $19.50; flour middlings, $25; cottonseed meal, 36 per cent, $40; 43 per cent, $44; hominy feed, $25; gluten feed, $29.85; old process oil meal, $48; tankage, $55.

HAY CROP A RECORD BREAKER.

New crop hay predominates and prices are much lower than for old crop, but are comparatively steady upon good hay. Receipts of low grades are large. The total crop is estimated at 110,000,000 tons, the largest on record and about 8,000,000 tons above the average. In addition, pastures are excellent in almost all sections.

Prices per ton in carlots: Chicago—No. 1 timothy, $20@22; No. 2, $16@19; No. 3, $13@16; No. 1 light clover mixed, $18@19; No. 1 clover mixed, $15@18; upland prairie, $14@18; midland prairie, $12@16; rye straw, $11@12; oat and wheat straw, $8@10.

EGG PRICES RECOVER SLIGHTLY.

Fresh egg prices have worked a little higher in the last ten days, but hold within a narrow range. Quotations on storage eggs are gradually declining. The preliminary report on storage holdings on August 1 showed 10,133,000 cases, compared with a seven-year average on that date of 6,698,100 cases. This means nearly 50 per cent more storage eggs than usual to be worked off during the fall and winter. Egg consumption is slightly above the average of recent years, but the increase is smaller than the increase in production. Receipts of poultry are expanding and prices are working lower. The season in which frozen poultry is stored will soon be here and storage operators expect to buy cheaply.

Latest quotations: Chicago—Eggs—Fresh firsts, 19@20 1-2c; ordinary firsts, 18@18 1-2c. Live poultry—Hens, 16@22 1-2c; broilers, 24c; springers, 27c; roosters, 14 1-2c; ducks, 22c; geese, 14@21c; turkeys, 25c.

BUTTER STRENGTHENED.

The gradual decline in receipts of butter which has been under way since the middle of June finally reached the point where the supply of fine butter was not larger than the demand, which is unusually broad at the present level of prices, and the market became firm. Some butter is still going into storage. Storage holdings on August 1 were 102,822,000 pounds, compared with 82,838,000 pounds last year and a five-year average of 97,027,000 pounds. It is possible that the market has seen its worst, although no pronounced upturn is probable in the next few weeks. Low grade butter is abundant and not moving freely.

Prices on 92 score fresh butter on August 9 were: Chicago, 31 1-2c; New York, 33 1-2c; Boston, 35c; Philadelphia, 33 1-2c.

CHEESE TRADE IMPROVES.

Cheese trade was more satisfactory, both in country markets and at distributing points, last week. Prices were slightly higher in some cases, with a further advance expected. Stocks in distributive channels are said to be cleaning up. Buying was mostly on the hand to mouth order, especially in the east, but a few large sales were made at Chicago. Receipts at the leading markets declined slightly, but were considerably higher than a year ago. Co'd storage holdings on August 1 were 46,560,000 pounds, compared with a five-year average of 54,368,000 pounds.

Prices on No 1 American cheese on August 9 were: Chicago—Twins, 19@19 1-2c; S. Daisies, 18 1-2@19 1-4c; D. Daisies, 18 1-4@19c; Young Americas, 19 1-2@20c; Longhorns, 19 1-2@19 3-4c; square prints, 20 1-2@21c.

FRUITS AND VEGETABLES.

The decline in potato prices seems to have run its course as prices are a little firmer. Carlot shipments are the smallest in many weeks, but home grown potatoes are abundant everywhere and many are being sent to consuming centers in small lots. The crop of white potatoes is estimated at 440,000,000 bushels, compared with a record crop of 442,000,000 bushels in 1917. The sweet potato crop is of record size, making the total supply of both kinds the largest ever known.

The commercial apple crop is estimated at 33,400,000 barrels, compared with 21,200,000 barrels last year and an average of 26,800,000 barrels in the five years, 1916 to 1920. The 1920 crop was only 33,905,000 barrels.

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Range of Live Stock Prices, Week Ending Aug. 9

CATTLE.	Chicago.	Spokane.	Portland.	N. S. Lake.
Choice, prime heavy steers (1100 lb. up)	10.00@10.75			
Good heavy steers	9.15@10.25			
Medium heavy steers	8.15@ 9.35			
Common heavy steers	6.50@ 8.25			
Choice, prime light steers (1100 lb. d'n)	10.00@10.75			
Good light steers	9.15@10.15			
Medium light steers	8.00@ 9.25	6.50@ 7.50	6.75@ 8.00	6.25@ 7.00
Common light steers	6.40@ 8.15	4.00@ 6.50	4.50@ 6.75	4.75@ 6.25
Common to choice butcher heifers	5.15@ 9.00	3.50@ 6.00	3.75@ 6.00	4.00@ 5.50
Common to choice butcher cows	4.00@ 8.35	3.00@ 5.00	3.00@ 4.75	3.00@ 5.00
Bologna and beef bulls	3.70@ 6.50	2.75@ 4.50	3.00@ 3.75	2.00@ 3.00
Canners and cutters, cows and heifers	2.90@ 4.15	1.50@ 2.50	1.50@ 3.00	1.50@ 3.25
Canner steers	3.75@ 5.00	2.50@ 3.75	2.75@ 3.75	3.00@ 4.00
Medium to choice light veals	9.00@10.75	7.00@ 8.00	6.50@ 8.00	7.50@ 8.50
Common to choice heavy veals	4.00@ 8.25	5.00@ 7.00	4.00@ 6.00	
Common to choice feeders (1000 lb. up)	5.50@ 7.65			5.00@ 5.50
Common to choice feeders (750-1000 lb.)	5.40@ 7.65	3.50@ 5.00		
Common to choice stocker steers	4.75@ 7.65			
Com. to choice stocker cows, heifers	3.50@ 5.50			
HOGS.				
Top of market	11.00	12.00	13.00	10.25
Bulk of sales	7.00@10.80	11.00@11.85	11.25@12.50	9.50@10.00
Heavy (250 lb. up)	8.00@10.10	10.00@11.50	10.50@11.50	
Medium (200-250 lb.)	8.65@10.85	11.00@12.00	11.25@12.25	9.25@ 9.85
Light (150-200 lb.)	9.25@10.90	11.25@12.00	12.50@13.00	9.50@10.00
Light lights (130-150 lb.)	9.25@10.90	11.00@11.85	12.00@12.50	9.75@10.25
Smooth packing sows (250 lb. up)	6.90@ 8.60	8.75@ 9.25	8.75@ 9.50	
Rough packing sows (200 lb. up)	6.50@ 8.00	8.25@ 8.75	8.00@ 8.75	
Medium to choice pigs (130 lb. down)	9.00@10.60	10.25@11.25	12.00@12.50	
Stock pigs		10.25@11.25	12.00@12.50	8.50@ 9.25
SHEEP AND LAMBS.				
Medium to prime lambs (84 lb .down)	11.40@13.10	7.50@10.00	8.50@10.00	9.50@10.50
Culls and common lambs	7.75@11.75	6.00@ 7.50	5.00@ 8.50	5.50@ 9.50
Medium to prime yearling wethers	8.25@11.00	7.00@ 8.00	6.00@ 8.00	4.50@ 6.00
Medium to prime wethers	6.00@ 8.75	5.50@ 7.50	5.00@ 7.00	4.00@ 5.00
Medium to choice ewes	3.25@ 7.65	3.50@ 6.00	3.00@ 5.00	3.00@ 4.00
Culls and common ewes	2.00@ 4.00	2.00@ 3.00	2.00@ 3.00	2.00@ 3.00
Full-mouth to yearling breeding ewes	5.00@11.50			
Feeder lambs	11.60@12.60	6.00@ 7.00		

LATEST QUOTATIONS.

The Live Stock Market.

PORTLAND, Ore., Aug. 12.—Cattle—Choice steers, $7.25@8.25; medium to good steers, $6.50@7.50; common to good steers, $6.50@7.50; choice cows and heifers, $.25@5.75; medium to good cows and heifers, $4.25@5; fair to medium cows and heifers, $3.50@4.25; common cows, $3@3.50; canners, $1.50@3; bulls, $3@3.75; choice dairy calves, $8@8.50; prime light calves, $7.50@8.50; medium to light calves, $6.50@7.50; heavy calves, $4@6.50.

Hogs—Prime light, $12@12.25; smooth heavy, 200 to 300 pounds, $10.50@11.50; smooth heavy, 300 pounds up, $10@10.50; rough heavy, $7@9; fat pigs, $11.50@12; feeder pigs, $11.50@12; stags, subject to dockage, $6@9.

Sheep—East-of-mountain lambs, $10@11; choice valley lambs, $9@10; medium valley lambs, $8@9; common valley lambs, $6@8; cull lambs, $5@6; light yearlings, $7@8; heavy yearlings, $6@7; light wethers, $6@7; heavy wethers, $5@6; ewes, $2@5.

SPOKANE, Aug. 12.—Cattle—Prime steers, $6@7.50; good to choice steers, $5@6; medium to good steers, $4.50@5; fair to medium steers, $4@4.50; common to fair steers, $3@4; choice cows and heifers, $5@5.50; good to choice cows and heifers, $4@5; medium to good cows and heifers, $3.50@4; fair to medium cows and heifers, $2.50@3.50; canners, $1.50@2.50; bulls, $2.75@4.50; light veal calves, $7@8.50; heavy veal calves, $5@7; stockers and feeders, $3.50@5.

Hogs—Prime mixed, $11@11.75; medium, $10@11; heavies, $8@9; fat pigs, $10@11; stockers and feeders, $10@11.

Sheep—Prime lambs, $8@10; fair to medium, $7@8; yearlings, $7@8; wethers, $6.50@7.50; mutton ewes, $3@6.50; feeder lambs, 6@7.

(Continued on page twelve.)

LIVESTOCK AND DAIRY

San Juan Wool

Pool Shipment of 46,897 Pounds

There was a total of 46,897 pounds of wool shipped from the San Juan islands as a pooled shipment from the growers early in July. The shipment was a result of a cooperative movement among the many wool growers, who are found on practically all of the larger islands in San Juan county. Wool buyers had offered to buy the product from the farmers, but there were many who felt certain that a better price could be obtained by the united effort.

Roy Madden was immediately appointed temporary chairman for the wool growers of the county, who hope later to organize themselves as a wool growers' association. Through the assistance of Mr. Madden the entire county was solicited and practically 90 per cent of this season's wool crop secured for the shipment. The recent returns from the shipment indicate that the men have averaged approximately 24 1-2 cents a pound for their wool after deducting all expenses. This figure was 10 cents more per pound than was offered at any point in San Juan county. The wool was handled by a sales agency controlled by the farmers, but which works in conjunction with the government warehouse at Portland. The wool is graded and put into bins, from whence it is sold between September 1 and February 1 of each year, which is the same time that wool sales are made on the Boston market. The pool, however, is sold direct to the mills instead of through agencies, as heretofore has been the case.

Farmers have already begun to receive statements concerning their shipments, which when signed and returned are good for 60 per cent of their shipment based on the price of the Boston wool market at the time of shipment. In this way the men are able to cash in a large part of their wool crop, the balance of which will be paid upon the sale of the entire pool.

LIFE PRESERVERS FOR LIVE STOCK

By DR. E. E. WEGNER, W. S. C.

DIGESTIVE TROUBLES—ARTICLE V.

Since the stomach of the horse is comparatively small and the foods are not retained there for any great length of time,



but pass through rather quickly, there is not as much trouble there as there is in some other parts of the digestive tube. It is true that the foods are mixed with the gastric juices in the stomach and that some digestion goes on there, but the stay there is relatively short, as may be supposed when we remember that the stomach holds about three and one-half gallons. We may be sure, then, that the first part of the meal has passed on before the last of it has entered the stomach, as there is not room enough for the entire quantity at one time.

Fermentations may take place in the stomach with the resulting accumulations of gas, and since the horse can not readily belch or vomit, this is a very serious thing. In other animals this is not likely to be serious unless it forms very rapidly, but in the horse it is always dangerous. The animals manifest indications of abdominal pain and may make attempts to belch or vomit, but usually with only very little result, though they may expel some material through the nose and it can be seen as soiling on the nostril. This appearance is an indication of extreme danger, as when vomiting occurs the stomach is likely to be torn and if this is the case the result is most certain to be fatal, though some times this has occurred without bad results. The most certain method of correcting this trouble is the passage of the stomach tube and if the veterinarian has been called he will in all probability pass the tube at once, when the gas can escape quickly and the serious part of the trouble is over. Lacking such service a drug should be given that will stop the fermentation, such as turpentine or one of the coal tar products, lysol or creolin, well diluted with water. It may be difficult to get the animals to swallow when the stomach is distended and for this reason the tube is much to be preferred.

Overloading the stomach or so-called impaction is another grave stomach trouble and this occurs from the ingestion of substances that have a tendency to form into a solid mass, such as finely broken chaff or materials of a similar nature; this may also be caused by overloading with whole grains, such as wheat, etc., and it causes a very serious condition, as the whole mass is unable to move forward and remains as a heavy, solid mass in the stomach. The stomach tube is the most useful instrument in the treatment of this condition, as it can be used to inject fluids and soften the mass and to wash out quantities of the materials within the stomach. In the absence of the veterinarian and the stomach tube the use of drugs to keep down fermentation and oils to induce the passage of the materials backward is in order, but it is well known that many animals die from the effects of impaction of the stomach, though if early and suitable treatments are administered recovery may take place.

Animals with distended stomachs are prone to stretch the abdomen and sometimes sit up like a dog; they may also have the appearance of being distended well forward and not back in the flank, where the bloat is usually found.

Most of the stomach troubles are serious and are likely to be of short duration, causing the death of the animals if relief is not rather quickly given.

Cows Bring Profit

"I raised 60 bushels of wheat to the acre last year, but I don't consider it as much as what I received from the herd of cows," said H. C. Stroops of Oak Harbor. "It would be difficult to estimate such a return because the animals were turned onto the stubble after the hay was taken off and there is some of the waste grain that can be fed. The pasture was only about 10 acres and they were confined to this a big part of the time."

Mr. Stroops told how he had succeeded with alsike for a hay and pasture crop on a four-acre field. The seed was put in as a spring crop and contained a mixture of red clover, timothy and alsike, seven pounds of each. Although the second crop is usually the best, the first season's cutting was approximately four tons, according to Mr. Stroops.

FORECASTS ON ONION CROPS.

The August 1 forecast of the onion crop of the seven states of New Jersey, Washington, Texas, Iowa, Kentucky, Virginia and Maryland is 6753 carloads

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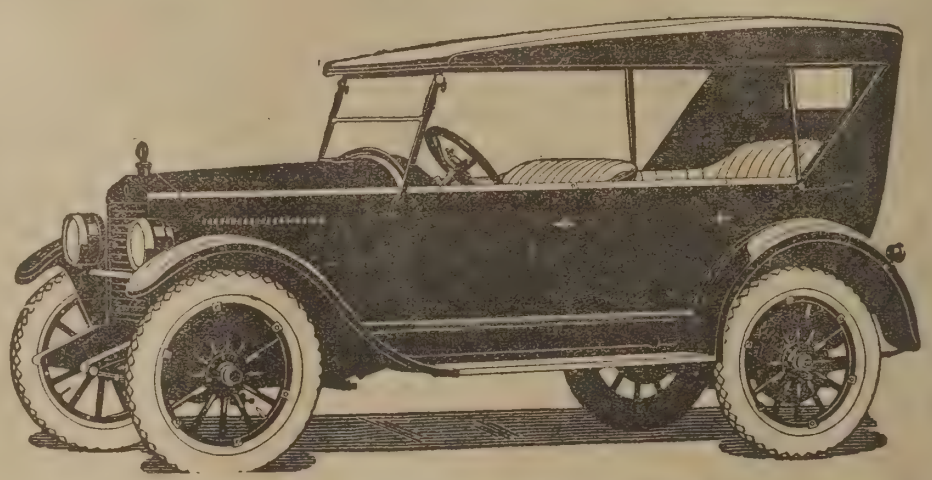
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POULTRY AND RABBITS

Chinese Eggs

Over 11,300,000 Imported Into This Country Last Year

Charles A. Robertson of the American Consulate at Shanghai, after studying the statistics of Chinese egg exports to the United States, reaches the conclusion in a report to the department of commerce that the Chinese egg has invaded America for good.

"While China's egg business experienced a period of prosperity during the war," he says, "with a return now to normal conditions the demand still continues, which would indicate that Chinese eggs have made good. During the war a great trade in the export of fresh eggs grew up, and the profits were so great that the exporters did not even trouble to insure the cargo, as they could easily afford to suffer the loss of an occusational shipment. Over 11,308,000 fresh eggs came int othe United States last year from China; also millions of pounds of frozen eggs, egg albumen and yolk. Eggs, fresh and preserved, and products play an important part in the export trade of China."

The development of this business puts a vital problem squarely before the egg producers of the United States.

Green Feed

No Limii Should be Placed on the Amount in Summer

By W. D. BUCHANAN.

Many poultrymen overlook the importance of green feed during the summer weather. Some depend on grass or grain pasture, not stopping to think that pasture during the summer months is likely to be dry and tough. Growing alfalfa, or in some sections, second growth clover, is the only green pasture that can be depended upon.

Then it must be remembered that chickens will not range far in hot weather. Even where there is plenty of shade they can not be depended on to forage far enough for green feed. It is necessary to cut alfalfa, clover, kale or other green feed, and feed it in a house or under a shed. No limit should be put on the amount of green feed fed in summer.

A lack of green feed in the ration of growing pullets will show up in pale shanks, lack of vigor and indigestion, terminating sometimes in partial or complete paralysis. Stinting the green feed in laying flocks is likely to result in smaller eggs, decreased egg production and an early fall molt. All this, in spite of the fact that green feed is the cheapest feed that the farm produces.

Indicates Poisoning

By W. D. BUCHANAN.

My chickens act as if there were something in their throats, but there isn't. They keep swallowing, then open their mouths and close their eyes and throw their heads. It seems to be a cramp in their necks. They live about 12 hours. I have cured some of them by pouring coal oil in their mouths. I feed them wheat and some corn and they have free range. What is wrong and what can I do for them? MRS. G. L. M.

The trouble in your flock would appear to be due to some source of poisoning. The most common sources are salt put out for live stock, arsenic secured from rat poisons, some forms of tree sprays and nitrate of soda used as a fertilizer. Ptomaine poisoning, resulting from ptrid meat or milk would have a similar effect. Seek out the cause and remove it. Then give the flock a dose of epsom salts, one ounce to a gallon of water.

The American Blue Rabbit

By DAN SIZEMORE.

The first American Blue rabbit was exhibited by Judge Lewis H. Salisbury at Los Angeles, Cal., 1917. It reaches the frying age as quickly as any other breed and its beautiful silky blue fur can be used either long or clipped. Its type is different from any other rabbit. Its front quarters are much narrower than the hind quarters, the latter being large. This breed is considered one of the best meat types in existence. It has a small head, short ears, fine bones, heavy hind quarters and very small stomach. They will weigh about 5 1-2 pounds at 4 months and dress a high percentage net meat.

DOUBLE EGG BAGS.

By W. D. BUCHANAN.

Two years ago my wife said she had a hen that was laying two eggs a day. In the fall she killed a hen with two well-developed egg bags. Last year she killed three with double egg bags. This year out of three hens killed, two had two egg bags. The question is, have we something new in the hen line?

P. W. C.

The right ovary and the right oviduct of the hen are formed at the same time as the organs on the left side, but degenerate usually during embryonic life. If they remain at all, it is only as functionless rudiments. If you have hens with both ovaries functioning you have something decidedly unusual. It would not necessarily follow that they would lay two eggs a day.

MAY BE INDIGESTION.

We have a turkey hen, 1 year old, which is very poor in flesh and droopy. The upper half of her beak is much too long, probably because of lack of use. Her head has not the color it should have, but is a blackish pink and scaley. She refuses to climb on a roost or in a tree at night. She is not lousy and I fear that she may have tuberculosis.

Dayton, Wash. MRS. W. J. L.

You may have diagnosed the trouble correctly, though it might be due to so-called blackhead or merely to indigestion. If the turkey is thin, it would be best to kill her and burn the carcass. If it is indigestion, a tablespoonful of castor oil would help.

Help Your Hens Grow Feathers by Feeding

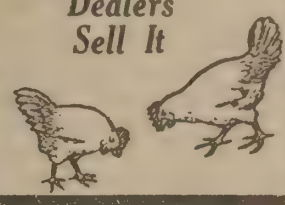
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ORCHARD AND GARDEN

Cover Crops

Critical Period for the Orchard

By O. M. MORRIS, Head Horticultural Department, Washington State College.

The extreme drought of this summer is causing some of the orchards that were planted to cover crops this spring to show the effects of the growth of the cover crop. This effect is usually most pronounced in orchards in which nitrogen fertilizer was not used during the winter. The orchards are passing through the critical period of the establishment of a cover crop. Fall-planted vetch is dying rapidly and will soon cease to draw on the moisture supply in the soil. This crop can usually be kept on the ground with best results. Any attempt to plow or disk it into the surface soil will expose the soil and cause the water to evaporate more than if the vetch be left on to dry and shade the surface.

Spring-planted vetch is nearly all in full bloom or past by this time and in orchards where the vetch is drying rapidly, it will usually be found to use less water during the rest of the summer than will be given off by the soil if any attempt is made to plow this under or disk it into the soil. The best practice that can be followed is to leave the vetch to dry on the surface, even though the trees show the effects of shortage of water. It would be better to do some summer pruning and heavy thinning of the fruit rather than to turn the cover crop under with deep plowing.

Clover planted for cover crops has by this time made most of its growth. Some of it is dry now and in orchards where most of the clover has completed its growth and seems to be drying down, this clover will use but little more water and will save more by shading the soil, if there is a good stand, than can be saved by any process of working it into the ground. If the drought on the trees is becoming severe and they are not in a condition to admit of summer pruning, then the best that can be done often will be to plow this under, but such plowing should be just as shallow as possible and still turn the clover under. Any deeper than that will tend to expose the soil and cause it to dry more rapidly than if the clover were left on the land.

Practically all of these cover crops planted slow down in their water use as they attain maturity and probably use no more water than the soil would give off if these cover crops were plowed under.

I have been able to find many case in which it proved helpful to allow the cover crop to remain on the ground in order to save water. As long as these cover crops remain green and vigorous they can grow in as dry or drier soil than can an apple tree and whenever the tops are cut down a new growth starts making new demands upon the soil moisture supply. The apple tree can often be given a light summer pruning and thinning of the fruit to a very great advantage in saving it from drought.

Nitrogen Fertilizing

By R. R. SNOWDEN.

The action and interdependence of the fertilizer elements are becoming better understood each season, and especially is this true of the element nitrogen, which is, after all is said, the most important of them all. It is an established fact that nitrogen can not properly function unless accompanied by an adequacy of each of the other plant food elements. Indeed, in the absence of any one necessary element, it can not function at all, so that in order to get the best action of nitrogen even in the most available form—towit: A nitrate, the soil must be balanced.

It has been learned experimentally that a goodly supply of decaying organic matter in the soil enhances the value of even nitrate nitrogen. The carbon dioxide produced by the organic matter in the process of decay seems to be necessary to profitable production. This organic matter is best obtained from plowing under cover crops of various kinds. A legume cover crop will of course furnish some nitrogen, but owing to certain agencies in the soil it is not always reliable as a source of supply of that element. And in the early spring, when the stored up plant food in the tree is used up the rootlets are not sufficiently active and the nitrifying bacteria are more or less dormant before the soil warms up. It is then that nitrate of soda is especially needed in order to be ready to continue the supply of immediately available nitrogen when that stored up in the plant is used up.

As suggested before, a deficiency of any necessary element becomes a limiting factor. When people permit the extra demand caused by greater production to exhaust one or more of the plant food elements additional use of the nitrate fails to give results and the farmer may conclude that the continued use of nitrate of soda has "killed the soil," when, as a matter of fact, if he would discover the real limiting factor and remove it by adding more of the deficient element, production would continue unabated.

Twenty-Year Old Trees

C. W. Babcock of Cashmere has an orchard of 20-year-old trees, which have about reached their maximum production. The crop is estimated to run approximately 25 boxes to the tree this year. The varieties are principally Delicious, Winesaps and Jonathans. There are a few Yellow Newtowns and Spitzenburgs.

Mr. Babcock feels that his trees do not have quite enough room since they are an average distance of 25 feet apart. They would produce much better, he thinks, if they were about 30 feet apart with no fillers. The trees will average about 70 to the acre with the present system of planting. Some of the trees have been wired to brace the limbs and prevent their breaking when heavily loaded with fruit. This system was used several years ago, but Mr. Babcock feels that it is much better to prune the trees and thin the crop so that no bracing will be needed.

CANNING COMPANY SELLS.

The Puyallup and Sumner Fruit Growers' Canning company was recently sold and will be known in the future as the Pacific Northwest Canning company. Men who compromise this new company include W. G. Allen of Salem, Ore., manager of Hunt Brothers' Packing company at Salem, H. G. Bradt, California, and W. J. Vary of Puyallup, who has been superintendent of the cannery until a few months ago.

It is understood that the new company will handle products of the Puyallup and Sumner Fruit Growers' association. All brands and advertising rights used by the former company is included in the sale. Mr. Vary has been appointed to act as general manager for the new canning company.

Congress appropriated $10,000,000 during the war to import

Nitrate of Soda

into the United States to be sold to farmers at cost. It would not have done so had it not realized how necessary it was to have Nitrogen. NITRATE OF SODA is as necessary now as it was then. If you do not understand what Nitrogen does and why Nitrate Nitrogen is preferable send for my Bulletin, "Common Sense About Nitrogen."

Dr. William S. Myers, Director
25 Madison Avenue New York



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New Peoria disc shoedrills bring full, even stands. The patented disc shoe cuts trash, stalks, hard ground; shoe opens furrow; seed dropped evenly on packed seed bed; every seed covered, safe from wind and birds; all seeds germinate, sprout, grow, head out and ripen uniformly.



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A new Peoria will not only bring you increased yields but it will also save you money on seed. Our new catalogue gives users' own testimony on these points and the satisfaction the New Peoria gives. Your neighbors will tell what it has done for them, too.

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Please have your New Peoria drill man call on me. Also send by return mail free catalog and 1922 prices. This is not an order and does not obligate me to buy.

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R. F. D. ..... State .....

Read the "Want Ad" page this week for good offers of all kinds

Whitewash Recipe

An old recipe for whitewash, issued by the bureau of lighthouses of the United States department of commerce, said to be very good for outdoor exposure, is as follows:

Slake half a bushel of unslacked lime with boiling water, keeping it covered during the process. Strain it and add a peck of salt, dissolved in warm water; three pounds of ground rice put in boiling water and boiled to a thin paste; half a pound of powdered Spanish whiting and a pound of clear glue, dissolved in warm water; mix these well together and let the mixture stand for several days. Keep the wash thus prepared in a kettle or portable furnace, and when used, put it on as hot as possible with painters' or whitewash brushes.

SECRET OF GETTING EGGS.

The whole secret of getting eggs, after you have the right kind of birds, lies in how you feed and house them.

Farmers' Want Ads

HELP WANTED—Female 1

WANTED BY WIDOWER WITH TWO CHILdren; housekeeper, children no objection. Write Mrs. Chas. Bartlome, Richfield, Idaho.

HELP WANTED—MALE 3

WANTED — SALESMAN WHO CAN SELL high-grade, dependable nursery stock; several counties in Oregon, Wash., Idaho and Montana now open for assignment. Our selling contract will interest you. Address Albany Nurseries, Inc., Albany, Ore.

HELP WANTED GENERAL 5

RAILWAY MAIL CLERKS, GOVERNMENT clerks and carriers wanted. List of positions free. Write Mokane Institute, Dept. B21, Denver, Colo.

SITUATIONS WANTED—Male 21

HIGH CLASS MAN, SINGLE, WITH COLLEGE training, lifetime experience with stock; seven years feeding, testing and showing purebreds, wants place as dairy herdsman or farm manager. First class proposition only. Box 5, care Oregon Farmer, Portland.

EDUCATIONAL 45

EARN MONEY QUICKLY—THERE'S NO LIMit to one's earning capacity in business. And this great business college after training you thoroughly places you in a paying position. Courses include banking, stenography, accounting, private secretarial. Write for free catalogue. Behnke Walker Business College, Portland, Ore.

FRESH FOOD PRODUCTS 51-1

WHITE ALFALFA, SWEET CLOVER honey; 1 60-lb. can, $7.50; 2 60-lb. cans, $14.50; six 10-lb. cans, $8.50; three No. 10 pails, prepaid, third zone, $5.50. Wells D. Rose, Sunnyside, Wash.

FINEST NEW HONEY, 60 POUNDS, $7.50; 2 cans, $14.40; add postage; 10 pounds, $1.90; 5 pounds, $1 prepaid; satisfaction guaranteed. Geo. Bancroft, Hermiston, Ore.

NEW CROP ALFALFA-SWEET CLOVER honey; 60-lb. can, $4.75; two cans, $9 f. o. b. Rigby. Heckman & Larsen Honey Co., Rigby, Idaho. Quality guaranteed.

POPULAR BRAND HAPPY HOME HONEY—One 60-lb. can, $7.50; two cans, $14.50; six 10-lb. pails, $8.50; comb honey prices on request. H. N. Paul, Mabton, Wash.

NEW CROP ALFALFA-SWEET CLOVER honey, clean and sanitary. 60-lb. can, $7.50; 2 60-lb. cans, $14.50; at Sunnyside. S. King Clover, Sunnyside, Wash.

DELICIOUS NEW CLOVER HONEY. 60 pounds, $5.50; two 60s, $9.75; six 10s, $6.75; 12 5s, $7. Agents wanted. Browne. Box 499, Twin Falls, Idaho.

NEW HONEY—ALFALFA AND SWEET CLOver; 1 60-lb. can, $7.50; two, $14.40; discount on large quantities. Ernest Sires, Yakima, Wn.

SMOKED SALMON, 5-POUND BOX, $1.25; salt salmon bellies, 5 pounds, $1.25, delivered by mail. Coffin Fish Co., Seattle, Wash.

HONEY — FRESH ALFALFA-SWEET CLOVer honey; one 60 lb. can, $6.50; two cans, $12.75. A. L. Traner, Touchet, Wash.

NEW CROP PURE EXTRACTED HONEY, $6.50 per 5-gallon can; two cans, $12.75. Everett Sauter, Touchet, Wash.

BEST ELBERTA AND CRAWFORD PEACHES. Write for prices. Stanley Arnold, Pateros, Wash.

HONEY—NEW EXTRACTED. TWO SIXTY-pound cans, $10. J. M. Ruyts, Buhl, Idaho.

MERCHANDISE 59

ARMY GOODS. FIELD SHOE, $3.65; OFficers' dress, $3.95; russet, $4.25; wool breeches, $1.95; khaki, 95c. Price lists furnished. Walker's Army Store, 501½ Trent, Spokane.

MISCELLANEOUS—FOR SALE 60

KENTUCKY TOBACCO—3 YEAR OLD LEAF. Don't send a penny, pay for tobacco and postage when received. Extra fine chewing, 10 lbs., $3; smoking 10 lbs., $2.50; medium smoking, 10 lbs., $1.25. FARMERS' UNION, Hawesville, Ky.

FOR SALE—70 SINGLE COMB ANCONA hens, 1 and 2 years old, $1 each; a light saddle horse, gentle, $25; a Queen incubator, can., 275 eggs, good as new, $25; order from this ad. John C. Holden, F. T., Lapwai, Idaho.

HOMESPUN SMOKING TOBACCO: MILD AND mellow; 10 lbs., $1.50; 20 lbs., $2.75; delivery guaranteed. We furnish free recipe for preparing. Smoking Tobacco Exchange, Sedalia, Ky.

NATURAL LEAF TOBACCO, CHEWING, 5 lbs., $1.75; 10 lbs., $3; smoking, 5 pounds, $1.25; 10 pounds, $2. Send no money, pay when received. Tobacco Growers' Union, Paducah, Ky.

TOBACCO SPECIAL — SWEATED LEAF, chewing select, 3 pounds, $1; 10, $3; chewing-smoking, 10, $2.50; good smoking, 10, $2; regular, $1.50. Co-operators, Murray, Ky.

KENTUCKY TOBACCO, NATURAL LEAF; mild and mellow smoking, 10 lbs., $2.50, 20 lbs., $4. Send no money, pay on arrival. Farmers' Tobacco Union, Sedalia, Ky.

TOBACCO — KENTUCKY'S PRIDE; EXTRA fine chewing, 10 lbs., $3; smoking, ten lbs., $2; twenty, $3.50. Farmers' Club, Mayfield, Ky.

FARMERS' WANT ADS

This is the farmers' "want," "sale" and "exchange" department for small advertisements of farmers, including live stock and poultry.

Advertising rates for ads running 1 to 3 times, 10c per word per insertion, with a special rate to Farmer subscribers, as follows: Ads running 4 to 12 times, 9c per word per insertion; ads running 13 times or more, 8c per word per insertion.

All commercial and land advertising 10 cents per word each insertion. Open also to nonsubscribers.

In using these columns advertisers must observe: (1) No advertisements will be inserted for less than $1.00. (2) Every word, number and initial, including name and address, must be paid for. (3) New advertisements, changes of copy or cancellations must reach general office, Spokane, Wash., 10 days in advance of publication date. (4) Cash must accompany order.

Above rates include insertion in The Washington Farmer, The Idaho Farmer and The Oregon Farmer, which constitute the Pacific Northwest Farm Trio, 46 Review Building, Spokane, Wash.

MISCELLANEOUS—FOR SALE (Continued) 60

SASH AND DOORS—O. B. WILLIAMS CO., 1943 First ave. So., Seattle. Chicken house sash, 20" wide by 25" high, 80c; a dozen different sizes in stock for immediate shipment. Skylights for chicken houses, 36"x40"; price, glazed, $2. This is the size recommended by the Western Washington experiment station. We carry them in stock for immediate shipment. Sash and doors for all purposes at lowest prices. All orders receive prompt attention. Our large illustrated catalog No. 35, showing full line of building material and built-in fixtures for the home, free on request. O. B. Williams Co. Established 1899.

CORN HARVESTER CUTS AND PILES ON harvester or winrows; man and horse cuts and shocks equal corn binder; sold in every state; only $25 with fodder tying attachment. Testimonials and catalog free showing picture of harvester. Process Harvester Co., Salina, Kas.

SACKS—SECOND-HAND GRAIN AND SPUD, correctly sorted and graded; also pipe, new and second hand, any size; standard roofing paper at a big saving; pumps, engines, belting, cables, etc. Alaska Junk Co., Inc., S120 Adams st., Spokane, Wash.

FOR SALE OR EXCHANGE — 50-LIGHT Acetylene Lighting system complete. Cost $900. Also deep well pump with jack. Cost $150. Will sell singly or exchange for young live stock. Box 87, Route 2, Sheridan, Ore.

WALL BOARD—WRITE FOR SAMPLE OF Washington plaster wall board; won't warp, won't burn. Manufactured by Washington Building Products company, 6851 E. Marginal Way, Seattle, Wash.

NATURAL LEAF TOBACCO, CHEWING, 5 pounds, $1.75; 15 pounds, $4; smoking, 5 pounds, $1.25; 15 pounds, $3. Send no money, pay when received. Farmers' Tobacco Association, Paducah, Ky.

MISCELLANEOUS. 61

YUBA TRACTOR TO TRADE FOR HORSES. H. L. DeWolfe, Helix, Ore.

MISCELLANEOUS—Wanted. 63

COTTONWOOD BOLTS WANTED. LARGE and small quantities. Tell us what you have. F. S. Harmon Co., Tacoma, Wash.

HIDES—WE BUY HIDES OF ALL KINDS. Write for prices and tags. Hibbard-Stewart Co., Hibbard bldg., Seattle.

WOOL—WE BUY WOOL AND PELTS. WRITE for prices and tags. Hibbard-Stewart Co., Hibbard bldg., Seattle.

MACHINERY—For Sale 93

FOR SALE—ONE 18-FOOT CATERPILLAR, self-propelled combine harvester, 55 h. p. motor; also one 12-20 Yuba tractor; attractive prices and reasonable terms for quick sale. B. Johnson, 622 Douglas st., Wenatchee, Wash.

AUTOMOBILES—FOR SALE. 112

SCHOOL BUSES, ON ONE-TON CHASSIS; seating capacity, 18 to 25, $800, $1000, $1200; sold on terms to suit purchaser. Oldsmobile Motor company, Oldsmobile distributors, 1229 First ave., Spokane, Wash., 1000 E. Pike st., Seattle, Wash.

STOVE REPAIRING 128

WRITE MYER RUBENS, SPOKANE, ABOUT stove repairs, welding broken parts, nickle plating.

FUR-BEARING ANIMALS 170

SILVER AND CROSS FOXES FOR SALE. William Rambo, 407 Sprague, Spokane.

PETS—Dogs, Birds, Etc. 171

BEAUTIFUL WHITE COLLIE PUPPIES; reasonable prices. Urbandale Farm, Oakley, Idaho.

FOX HOUNDS, PUPS, YOUNG DOGS. HARRY Hull, Oakland, Ore.

POULTRY 174

WHITE LEGHORN HENS, $1 EACH; 1000 two-year-old "Henacres" hens, clean, healthy, heavy laying, selected stock must go to make room for our pullets. Also 1000 yearling hens at $1.50 each. These hens will make good breeders for 1923. Orders accepted for ten or more at above prices. July or August delivery. Satisfaction guaranteed. Free catalog. "Henacres," the Inland Empire's greatest poultry farm, Box A, Prosser, Wash.

PULLETS—1500 APRIL AND MAY HATCHED White Leghorn pullets for sale at attractive prices; hatched from thoroughbred Hollywood and Tancred strains; sired by cockerels 250 to 290 egg strains. We ship at three months of age and guarantee satisfaction or you may return the birds in 3 days. We can give you quality and service. Queen Hatchery, Seattle, Wash.

CERTIFIED WHITE LEGHORN BABY chicks; booking orders now for summer and fall delivery; safe arrival live, vigorous chicks guaranteed; no money in advance; pay on delivery. Established 1898. Sonoma county farm bureau accredited hatchery. Must Hatch Incubator Co., 445 Seventh st., Petaluma, Cal.

WHITE LEGHORN BABY CHIX FOR SUMmer and fall months from stock accredited by Sonoma County Farm bureau. We guarantee safe arrival. Write for prices and literature. The Pioneer Hatchery, 422 Sixth street, Petaluma, Cal.

FOR SALE—WHITE LEGHORN COCKERELS, top notchers. It's money saved to drop us a card stating what you wish. No money till you are satisfied. River View Yards, Box 108, The Dalles, Ore.

BABY CHICKS — WE GUARANTEE OUR chicks to be from the highest producing hens in Petaluma. Write for further information. The White Hatchery, Petaluma, Cal.

DOLLARS FOR YOUR EGGS—WE PAY THE top market prices for your eggs and poultry. Daily cash remittances. Western Produce Co., Spokane.

BUFF LEGHORNS; OLD AND YOUNG stock of my championship strain; thousand to select from. R. Stromquist, Tigard, Ore.

WHITE LEGHORN YEARLING HENS, $1.25 each; May pullets same price, little cockerels, 35c each. Mrs. Arp, St. John, Wash.

$65 BUYS 45 EVERLAY STRAIN S. C. BROWN Leghorns as am going out of business. E. J. Davis, Cambridge, Idaho.

LIVE STOCK 177

WE GUARANTEE TO PAY THE HIGHEST market prices for your poultry and live stock. Owing to the constant changes in the market we are unable to quote prices in this paper from week to week. We will furnish tags and prices when you are ready to ship. Write us what you have to sell. Prompt returns. John Lewis & Co., Spokane, Wash.

LARGE, HEAVY PRODUCING HOLSTEINS for sale at all times in car lots; tuberculin tested; 150 to 200 head always on hand; well marked heifer calves from registered sires and heavy producing dams; crated for shipment anywhere, $25 f. o. b. Levinson & Balmelli, Yakima, Wash.

RAM BARGAINS—20 TWO-YEAR-OLD PURE-bred Lincolns. Few 3-year Cotswold, also Lincolns; sheared 20 lbs. to 25 lbs. $15 to $20 crated. Shipped now or fall. Shadeland Farms, Amity, Ore.

REGISTERED SHORTHORN BULL, 4 YEARS old; from the famous Chalmers herd; will sacrifice. Alone and unable to handle him. Mrs. N. O. Anderson, Skamania, Wash.

WE PAY TOP PRICES FOR YOUR LIVE OR dressed veal, hogs and poultry. Your check by return mail. Shipping tags on request. M. & J. Packing Co., Spokane.

TYPY YOUNG HOLSTEIN BULL: LINE BRED to the wonderful old champion, Margie Newman; priced for quick sale. B. O. Case & Sons, Vancouver, Wash.

PURE REGISTERED TOGGENBURG DOES and bucks of the very best milk strains at reasonable price. M. Montchalin, Carson, Wash.

WILL SELL 30 HEAD OF REGISTERED Shropshire rams. Write McK. Edwards, Valley, Wash.

GOOD HAMPSHIRE HOGS REASONABLE; aged boar cheap. Merryvale, Barlow, Ore.

200 YOUNG REG. HAMPSHIRE EWES; BARgain. C. E. Cleveland, Stanfield, Ore.

FOR SALE — 150 YOUNG COARSE WOOL ewes. Young Bros., Auburn, Wash.

FOR SALE—90 HEAD OF RANGE CATTLE. S. Carlisle, Pocatello, Idaho.

HARNESS and SADDLERY 189

SEND FOR FREE HARNESS AND SADDLE catalog today; cut out the middleman, buy direct from the manufacturer. Lowest prices in the west; satisfaction guaranteed. Established 1881. Write Pierce Harness Co., Dept. T, Spokane, Wash.

HAY FOR SALE. 200

ALFALFA HAY, GUARANTEED QUALITY; prompt shipment; buy direct and save money. Prices upon application. Ernest T. Freepons, Walla Walla, Wash.

JOB PRINTING 372

GUARANTEED BETTER BUTTER WRAPpers: 100, 60c; 250, $1.25; 500, $2.25; 1000, $4; printed to order. Home Specialty Co., Middleton, Idaho.

MATERNITY HOMES 497

MATERNITY HOSPITAL; STRICTLY PRIvate; doctor in attendance; prices reasonable. Mrs. Elizabeth Peel, matron, W1324 Broadway, Spokane.

PERSONAL 537

FARMER, 47, WOULD CORRESPOND WITH woman 30 to 35, object, matrimony. H-2, Oregon Farmer, Spokane.

LADY, 44 YEARS OLD, WOULD LIKE TO correspond with man; object matrimony. Box 4, Pocatello, Idaho.

BUILDING MATERIAL 588

TO PATCH A HOLE OR BUILD A HOME, use Perfection Plaster wallboard. Easily handled with hammer and saw; fireproof, waterproof. Western Wallboard Co., Seattle, Wn.

BUILDERS, CONTRACTORS, HOME OWNERS, write for free 1922 catalog. Tacoma Sash & Door Co., Tacoma, Wash.

SEEDS 620

SEEDS FOR SALE—VETCH, FALL RYE, gray oats, black oats, clovers, rye grass, pasture mixtures, rib grasses, etc. Shipments anywhere, promptly. Brownsville Warehouses, Brownsville, Ore.

NURSERY STOCK 621

NURSERY STOCK, ITALIAN PRUNE TREES and trees of all kinds. Berries and small fruits of all varieties. Buy direct and save 50 per cent. Brooks Nursery, Lafayette, Ore.

FARM LANDS FOR SALE 651

720-ACRE STOCK RANCH: IN ADAMS CO., Idaho; all fenced; 325 acres cultivated; 320 acres scales six million feet yellow pine timber; well located; 2 houses, machinery, fine pasture; forest reserve range; running water; fish and game; all or part, at $25 per acre. Owner, Thomas Mackey, Blythe, Cal.

ON ACCOUNT OF OLD AGE MUST SELL 680 acres; 540 plow land; 200 can be irrigated; fine buildings; splendid well running water; 3 miles from railroad; 4 from Fowler, Mont.; oil well; one half oil lease and 120 acres of crops; fine condition; all go with land for $25 acre. C. A. Shuys, care Roy Smith, Route 3, Everson, Wn.

FOR SALE—56 ACRES DESIRABLE RANCH; well improved; berries; one of the beauty spots of Orcas island; 6 acres apples and pear orchard; stock, farm implements, household goods; ; well arranged house; hot and cold water; bathroom. Address M. M. Cush, Deer Harbor, Wash.

EXCELLENT OPPORTUNITY FOR SETTLERS and also for loggers or millmen: finest soil and water; close to live seaport; cheap; splendid dairy, berry, fruit section. H. E. Scholz, Menlo, Pacific county, Wash.

10 ACRES, NEAR KENNEWICK, WASH.; close 2 railroad stations; bungalow; 80x21 chicken house; strawberries, asparagus, alfalfa. $4500; terms. J. R. Everson, Kennewick, Wash.

160 ACRES, NEAR OROFINO; BUILDINGS, orchard, water, pasture, field; good road. $3200. Henry Losth, Orofino, Idaho.

ONE OF THE BEST STOCK RANCHES IN the Okanogan country, for sale or rent. W. M. Hudson, Riverside, Wash.

FARM LANDS FOR SALE (Continued) 651

IRRIGATED FARMS FOR SALE—160-ACRE farms, improved or unimproved; 30 to 160 acres irrigable land on each parcel; near Lethbridge, in sunny southern Alberta, can be bought for $15 to $40 an acre. No need for pioneering. Well settled country, good roads, railways, schools, telephones; agreeable social conditions; fertile land; success of irrigation farming here already demonstrated; irrigation system being constructed under government supervision. Water available in 1923. Write for information concerning crops grown and description and location of farms to the province of Alberta, Irrigation Council, 12 Provincial building, Lethbridge.

IDEAL FARM AND HOME—100 ACRES IN beautiful Tualatin valley, 15 miles to Portland, Ore., on paved highway; good water; city market; electricity; interurban station at front door; town one mile; all cultivated, level, well drained, fertile loam soil; good buildings, large trees around house; ideal home location; country life with advantages of nearby city. Advantage of best grammar and high schools. This is an investment, located close to Portland. In a few years can be subdivided at large profit. Price is reasonable to close estate. Address owner, M. M. Gillette, 407 Platte building, Portland, Ore.

CUTOVER LANDS, EASY TO CLEAR; $8 TO $20 per acre; 25 miles north of Spokane; on hard-surfaced highway; Great Northern and Milwaukee railways; excellent opportunity for dairying and stock raising, with Spokane markets and creamery near at hand. Will help the man who will live upon this land and agree to clear a part each year by giving lumber to help start his buildings, and a pure-bred Jersey bull to groups of farmers. Interest and payments low. Write Milan Farms Development company, Dept. T, Old National Bank bldg., Spokane, Wash.

BIG OPENING SALE OF YAKIMA VALLEY farm land, under an assessed state and government approved irrigation project; good, deep soil; close to town, railroads and state highway. We sell in tracts to suit purchaser at $25 per acre and up, on easy terms. Our many sales to farmers show that this land is a good investment. Western Lands, Inc., owners, 918 Green bldg., Seattle.

320 OR 640, SELL ALL OR HALF; BUY half, lease other term years; nearly 400 acres plowed, more can; 195 summer fallow; house, 3 barns, spring water; all fenced; $35 acre; $2500 cash, balance one-third crop until paid; can irrigate all; some timber; lies nice; good grain-alfalfa section; six miles Goldendale. No trades. Oscar Nelson, Goldendale, Wash.

DIVERSIFIED FARM BARGAIN—$8500; 220 acres, 12 mi. from Spokane center. 100 a. cult., good soil, no rock; 40 a. good timber; creek; fair bldgs; orchard. I am offering this at a bargain price. Whoever gets this farm gets it cheap, and a farm home that is pleasantly situated close to a growing city. Owner, 317 Hyde Bldg., Spokane.

YAKIMA VALLEY IRRIGATED 80-ACRE tract, can be bought by responsible farmer with necessary equipment on 20-year contract at 6 per cent. $250 per acre. Best alfalfa, potato, or grain land in the west; good, fair buildings, ready for possession. THE BIG BEND LAND COMPANY, Spokane, Wash.

960 ACRES AT $22.50; ALBERTA GRAIN AND stock ranch; northwest of Lacombe, on railroad under construction; no fail crops; full set good buildings; 190 acres broken; will subdivide; school, church, station, postoffice 1½ miles. Irving Jayne, Edwall, Wash.

CALIFORNIA STOCK RANCHES.

4 kinds of acorns for hogs. Plenty of grass and water. 50-in. rainfall, mild climate. 160 acres up. Prices $6 per acre up, as per improvements. No trades, easy payments, liberal terms. E. D. Baker, Nashmead, California.

BIG LUMBER CO. LAND SALE IN SKAGIT county; 40 acres, $1400; 20 acres, with new house, $1500. Lumber furnished for building. Lots of work for the settler; splendid district, roads, schools and towns. H. C. Peters, 726 3d ave., Seattle.

BEST BEAVERDAM SOIL IN AMERICA; sold in small tracts, by Long Island Gardens Co., Brownsmead, Oregon; reasonable prices, easiest terms; wonderful berry land; best shipping facilities, schools. Write for particulars.

7000 ACRES SEQUIM LAND SETTLEMENT project, containing the finest berry and dairy land in the state, now offered for settlement at attractive prices and terms. Free booklet. Thos. G. Mortland, Sequim, Wash.

GOOD STOCK RANCH; BEST RANGE ANYwhere; 320 acres flood-irrigated; $10,000; take western property to $5000 value. Long time on balance. A. Millard, Kinsey, Mont.

SELL YOUR PROPERTY QUICKLY FOR cash; no matter where located. Particulars free. Real Estate Salesman company, 501 Brownell, Lincoln, Neb.

160 ACRES, IMPROVED; 60 UNDER CULTIvation; small timber; near railroad; good town, school; good roads. J. M. Finney, Harrison, Idaho.

BEAUTIFUL 286-ACRE FARM HOME 25 miles west Spokane. For particulars, write G. A. Peterson, N4717 Adams St., Spokane, Wn.

160 ACRES, ¾ MILE ADDIE; GOOD BUILDings; 10 acres cleared. $3000. $1200 cash, balance easy. Box 20, Addie, Idaho.

TRACT AND SMALL DAIRY, WITH GOOD paying milk route; price reasonable. J. W. Sharp, Moscow, Idaho.

FOR SALE—MY DAIRY RANCH NEAR COOS bay. H. W. Sanford, Sumner, Ore.

FARM LANDS—Wanted 654

WANTED—TO HEAR FROM OWNER OF land for sale. O. K. Hawley, Baldwin, Wis.

FARM LANDS FOR RENT 657

FARM FOR RENT. STOCK AND EQUIPment for sale. 200 acres near Goldendale. Good water. Edward Abeling, Goldendale, Wn.

IRRIGATED LANDS—For Sale 663

IRRIGATED LAND FOR SALE IN SOUTHERN Alberta; having bumper crops this year. Write for prices and particulars. Apply W. M. Harris Agency, Ltd., Lethbridge, Alta.

FOR SALE OR EXCHANGE 702

STOCK RANCH, EASTERN ORE., PRICED right; 840 acres, fully equipped; trade for farm west Cascades, low altitude, Ore. or Wash. State price, full particulars first letter. Owner, Box 224, Fossil, Ore.

STOCK AND POULTRY RANCH, 380 ACRES, large barn, two houses, 175-foot poultry house, brooder, orchard, running water. Box 453, Olympia, Wash.

40 ACRES IRRIGATED, IMPROVED; $1500 will handle, or trade for town or Coast property. Chas. E. Davis, owner, Fruitland, Idaho.

320-ACRE FARM, GOOD CROPS; SELL AT bargain, or trade for coast property. Ed Green, Soda Springs, Idaho.

640-ACRE WHEAT RANCH, UNDER COLUMbia basin project. D. Cottingham, Big Bear Lake, Cal.



SYNOPSIS.

Esau Haggerty, a strong man of mature years, and Orlando Medford, a young, slightly built and frail companion, have started from their Illinois home town for the great gold diggings of the west. Esau is pushing a provisions-laden wheelbarrow. Orlando is leading a cow. For three days they have been trudging slowly southwestward carrying out the determination crudely lettered on the side of the wheelbarrow, "Pike's Peak or Bust." Rain and snow impeded their progress, and Orlando falls sick and requires a couple of days to rest before proceeding. Then, with the village that is now Kansas City passed, they follow the Santa Fe trail westward, being but one of scores of outfits of various kinds headed for the fields of golden riches. Once again they stop for a good rest before plunging into the real wilderness, 700 miles of which is still ahead of them to be conquered by foot, cow and wheelbarrow. After several days' tramping, they pitch their tent across a little stream from the camp of a family by the name of Cooper, also headed for the gold diggings. In the party is the daughter of the Cooper family, Hazel, whom Orlando by chance met when both went to the stream for water and in whom he became at once greatly interested. He reluctantly joined Esau next morning for the day's travel, leaving the Coopers to follow later, but with the expressed hope that they would all meet again at the gold fields. It was several days later that Esau and Orlando met up with another strange party on the trail, several men with a push cart to haul their belongings to the diggings. The two parties agree to travel together the rest of the journey. To save time they leave the Santa Fe trail and take a short cut that will save them more than 100 miles. But to their great distress they find themselves many miles out in a waterless, sun-scorched desert, with death from thirst staring them in the face. They meet a wagon party coming back famished, hurrying as best they can for the place they left the Santa Fe trail and water. The three parties hold a council and decide that the safest thing for them to do is to cut across the desert to the old dry Smoky river bed and dig a well in it for water. They hasten to put the plan to the test, with the result that at no great depth they reach water. After a long rest, they fill their kegs and turn back for the old Santa Fe trail, some inclined to give up the journey to the gold fields, others determined to get to Pike's Peak or bust.

CHAPTER SEVEN.

A Big Wagon Train for Santa Fe.

When at last they arrived at the Santa Fe trail the wagon track showed that Holloway's party had traveled on toward Council Grove.

"They concluded to take the back track, after all," Orlando remarked.

"Yes, they went on. Guess that's the last we'll ever see of them," surmised Sanders.

While the foot travelers were camped for dinner, here at the forks of the road, several wagons arrived from the east. This party had fully intended to turn off on the Smoky Hill route. But, learning what they could expect in that direction, they promptly changed their minds and kept to the main trail.

Their noonday rest ended, the men with the handcart and the wheelbarrow followed the wagons. And they passed them an hour or two later. The trail was now leading toward the southwest. After the lonely route they had been on for days this great, much-traveled road seemed liked civilization, even though it was leading them through a wilderness.

Some time during the afternoon the foot travelers met a wagon train of perhaps 30 wagons. These, they learned, were coming from Santa Fe. And from the next high point they could make out another wagon train ahead. That one was much longer, and was traveling toward the mountains. Late in the day they overtook it.

This train, they soon found, numbered nearly 150 wagons. The wagons were traveling in two strings of equal length. The strings were rumbling along side by side, near each edge of the broad road. Some of the teams were mules, but most of them were oxen. Nearly all the wagons were huge freight wagons, with wide tires. Each wagon was drawn by 10 mules or 12 oxen.

The foot travelers pushed in between the two sections of the wagon train; but, after that, they traveled only as fast as the wagons. Long they had been hearing of these great trains that followed the Santa Fe trail, but this was the first one they had ever seen.

All the drivers, each with a long-handled whip, were tramping along by the slow-moving teams. Guiding Brindle to one side, Orlando was soon walking near one of the drivers. From this man he learned that this train was bound, not for the gold fields, but for the old-time destination of wagon trains crossing the plains—Santa Fe. The wagons were loaded with goods, 6000 pounds each. Some of the wagons would not unload at Santa Fe, but would travel on to Chihuahua, Mexico.

"Do you think there's any danger from Indians now?" the young cow driver ventured to inquire of the ox driver.

"Well, no; I ruther reckon not. Certainly not on this part of the trail. So many people travelin' this trail now it's got the red devils kind of—kind of flabbergastered, they say. Don't know what to make of it all, the red varmints don't. Chances air they didn't s'picion the' was so many white folks on earth. But they're likely to get over that any day. And when they do, look out! If they strike at all, they'll strike sudden and strike devilish hard, these plains redskins will. That's their way of doin' things. I know. For I've been traipsin' this old trail, off and on, for 23 years now, goin' on 24."

"You have! Have you ever been in a fight with the Indians? I mean in a wagon train that was attacked by them?"

"Well, I reckon I have—I ruther reckon I have! Seven times, to my recollection, they've attacked us in force; usually 200 or 300 strong. And when—"

"Did they circle round you, like I've read that they attack wagon trains?"

"That's what they done. That's jist precizely what they done, young man. They circled the whole wagon train on their horses, ever' last one of 'em goin' as fast as his pony could clatter. 'Bout all you could see of any of 'em was a head and a laig, or maybe only a laig. And ev'ry red devil of 'em was lettin' fly arr's as fast as his bow could twang. Some shot over their horses' necks, but most of 'em shot under. Of course their main purpose in ridin' so fast was to keep our bullets from hittin' 'em."

"And could you ever hit any of 'em in spite of that?"

"Couldn't we, though! You bet your Sunday breeches we could! Not as many as we wanted to hit, of course. Mighty doggoned hard to plug a flyin' laig or a flyin', bobbin' head with a rifle bullet. Still, our boys could do that very trick now and then. More commonly, though, some of us would knock over the redskin's pony first. Then, when the painted varmint scrambled out from under and started to run, every rifle gun on that side would crack loose at 'im. Mighty seldom one got away."

"You whipped 'em off every time, I suppose.

"That's what we done. But they al'ays managed to kill a few of us and wound some more. Not half as many, though, as we killed and wounded of them."

"What would you do if redskins should approached and attack this train now?"

"Well, first thing, the captain—we've got a captain, you know. Most of the big wagon trains has got captains. They elect 'em at Council Grove, goin' west. That's been the custom for many years—ever since I've been on the trail. And that's why the place is called by that name; because they hold a meetin', or council, there to elect a captain."

"Yes, I've read about that."

"Well, as I started to say, if we was to diskiver a big bunch of redskins makin' at us to attackt us now, first thing on docket the captain would give orders to corral our wagons. I mean we'd circle 'em, and then stop so's to leave the near fore wheel techin' the off hind wheel of the next wagon ahead. That would put all our teams inside the circle. That way we'd have our teams safe, and our wagons to fight behind."

"It must be pretty exciting, when several hundred yelling, yelping savages are circling a wagon train as fast as they can ride."

"That's a fact, if the' ever was one! As I mentioned before, I've been in seven big fights with the savages, all told. Of course I wasn't as bad skeered in the last fight as I had been in the first. Jist the same, though, I couldn't keep from feelin' a little shaky in the knees, even the last time."

"It's something a fellow would never get used to, I suppose."

"Hardly. Of course them seven big fights I spoke uv ain't all the fights I've been in with redskins. How many little scrimmages I've had a fist in I don't recollect. Lost count years ago. Used to be a wagon train couldn't cross the plains without havin' trouble two or three times. Instid of attackin' the whole train in force, the redskins would come in little bunches and dash yellin' among the work animals at night. They'd shoot the night herders or chase 'em away, and then they'd stampede our stock—scatter 'em fur and wide. And that would cause us no end of trouble."

"Lay by till—till we could scour the country for miles in every direction and round 'em up."

"Could you always find them?"

"Most of 'em. Redskins would'nt chase 'em many miles off. Commonly it would take us a week or so to hunt 'em up and drive 'em back. That way we'd lose lots of time. You see—"

"What's the matter yonder?"

"Why, we've come to a campin' place, and the cap'n's give orders to corral our wagons. You see the lead wagons turnin' out now. If you'll watch a few minutes you'll learn jist what we'll do if a big gang of redskins was to come chargin' and screechin' t'wards us. We do the same thing every night, except that we leave a little openin' in the corral, and take our work stock out through that. Of course we have to water our teams, and then the herders drive 'em out to grass."

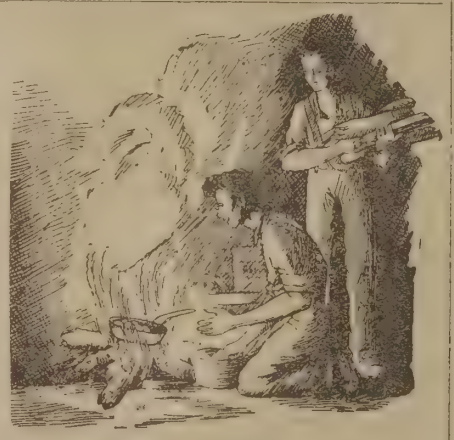
Now the foot travelers stopped and stood watching the 150 wagons form themselves into a big circle—more accurately an ellipse. Even if there was no known danger at present, the captain evidently thought it just as well to be ready for an attack. When stopped for the night, the wagons made almost a complete enclosure, and the long teams were inside. However, the oxen were soon unyoked and the mules unharnessed; and after that they were let out through a narrow opening. A few hundred yards away was a pond covering an acre or two. And to the pond they were allowed to go for water. That done, they were placed in charge of the night herders and driven farther out to graze.

The foot travelers had been invited to camp with the wagon train, and they now stopped their cart and wheelbarrow not many yards from the wagon corral. After removing Brindle's pack and packsaddle, Orlando led her away to the pond. At the same time he was carrying their water keg, to bring back water for cooking and other camp purposes.

While the cow was drinking, out in the pond, Orlando was filling his water keg, at one edge. The pond was so shallow at the edge that he could not sink the keg into it, but had to use a cup. While he was there numbers of other men came, all with water kegs or water buckets. He chattered a little with some of them, and found what they had to tell him very interesting.

On returning to camp he hobbled Brindle, belled her and turned her loose to graze. By this time many of the travelers, each with a sack of some kind, were scattering over the surrounding plain, picking up buffalo chips. There being no timber here, some substitute had to be found for wood. Not a buffalo could be seen now. But evidently those plains cattle had been here in large numbers, and that within a year or two. This pond must have been a favorite watering place for them.

For a few days the foot travelers had been resorting to the same fuel. It could be picked up everywhere, but in abundance only in the vicinity of water. They had found the stuff rather sorry to cook with.



They baked a skilletful of biscuits.

But now, by watching these experienced plains travelers, they learned now to burn it to better advantage. After seeing how the teamsters prepared for their fires, the foot travelers gathered some chips in sacks and prepared to use them.

The handcart party would have one fire and Esau and Orlando another. And some digging was necessary before the fires could be started.

For every vessel they expected to put on the fire a round hole was dug in the ground, from four to six inches deep. That is, if they wanted to fry meat or cook flapjacks, they dug the hole just a little smaller than their frying pan. So small that the pan would rest on the edges of the hole and not on the fire itself. Then they dug another hole for their camp pot. Between the holes, which were only two or three inches apart, a passageway was cut, so that the fire could spread from one hole to another. The chips were sorry fuel at the best, and it was important that everything to be cooked should be ready before the fire was actually lighted. The fire would scarcely be hot enough to bake bread in their little skillet, so they would have to be satisfied with flapjacks cooked in their frying pan.

Esau had gathered the chips while his partner was milking Brindle, and the two had cooked supper together. After eating they visited several near-by camps. There they chatted with the teamsters and heard them relate their experiences in this western country. The great camp was a lively, noisy place, and a cheerful one, in spite of the fact that most of the camp fires had been allowed to go out as soon as the cooking was ended. It was late when the visitors returned to their own camp and went to bed.

Next morning they were up rather early. The two got things ready and cooked breakfast, kindling another chip fire in their cooking holes. After breakfast Orlando walked out and found Brindle, unhobbled her, led her to camp and milked her. She was permitted to graze a while longer, however. Her owner strolled over and chatted with some of the wagon drivers. The men themselves were ready to travel, but would not start for an hour or two. Their oxen and their mules had no feed but the grass, and could not drag those wagons without plenty of time to rest and graze.

"Well, goin' to jog along with us today?" one of the teamsters wanted to know.

Orlando shook his head. "Guess we'll have to push on faster than you people will care to drive. I'm sorry, too. I'd love to keep company with such a big train as this. The wilderness we're in doesn't seem a wilderness while one is part of such a great caravan as you have here."

"That's right. Not much chance to suffer with lonesomeness while you're in this big bunch. You're havin' a mighty long tramp, seems to me like."

"It is rather long. But we've got used to tramping and don't mind it. Of course I have things easier than my partner does. But even he stands the trip well enough and never complains. We're all right, now that we've got our muscles hardened. When we first started—but I see my partner's getting ready to roll out. So guess I'd better go back and saddle up and pack up. We may be detained somewhere, and see you again. But, whether we do or not, good luck to you."

"The same to you, and plenty uv it!" answered the teamster.

The handcarters were now ready, and as soon as her pack was on the cow the party of seven moved away. On reaching the top of the next rise they looked back, to see the herders pushing the big drove of work cattle toward camp. After that the rise hid the great corral of white-topped wagons from view and the foot travelers saw the train for Santa Fe no more.

The handcart and the wheelbarrow were now in the buffalo country, and the party began to catch sight of little droves of the animals, but always at a distance. The many wagons rumbling along here had doubtless frightened them back from the trail. Other game was also more or less scarce along this great highway. But the foot farers, by sending out hunters while in camp, were able to supply themselves with fresh meat. They were now out on the high plains, where was neither tree nor bush nor shrub. Their sole dependence for fuel was on buffalo chips, which could be picked up everywhere. Finally, after days of steady traveling, the party found themselves at the Arkansas river.

This was a broad stream, with low banks and a sandy bed. The water at this time was scarcely a foot deep anywhere, but spread out, in most places, from bank to bank. Indeed, the stream was shallow enough everywhere for a wagon, or even a wheelbarrow, to ford it.

It would not be necessary for these travelers, bound for Pike's Peak as they were, to cross the river. But for a long distance their road would lead near it and parallel to it. There were numerous creeks running into the Arkansas, and those on the north side would have to be forded.

After coming close to the river the great trail kept most of the time in sight of it, and oftener not far from the north bank. There was little timber along the stream, only a cottonwood tree or bush now and then, and an occasional cottonwood grove.

The party with a handcart and the wheelbarrow first sighted the wide sheet of water not long after dinner time. And when the hour arrived to halt for night they made their camp by a few trees on the river bank. Instead of gathering buffalo chips, as they had been doing for a week or two, they now sought fuel from a different source.

While tramping along near the river during the afternoon they had noticed an occasional chunk or other small piece of driftwood floating downstream.

"I'm sick and tired of them half-done flapjacks!" a handcarter exclaimed, on catching sight of the driftwood. "They keep me with the heartburn half the time. Let's bake some shore 'nough bread tonight. I want to see how skillet bread tastes one time more."

"So do I, Bill; so do I," declared another of the handcart's crew. "I've never had half enough to eat since we struck the buffalo chip country. Let's camp early tonight and ketch plenty of driftwood, and try to git one good meal."

Others agreed with him. And not long after the party had gone into camp Orlando pulled off his boots and socks and rolled up his pantaloons. The handcarter who hadn't had enough to eat was doing likewise. Soon the two bare-footed, bare-legged men were down the bank and starting into the river.

"Better look sharp for quicksand, boys!" Sanders called after them. "They say this stream is mighty bad for sand bogs!"

"We'll look sharp—won't we, though!" called back Orlando, who was already a few yards out in the shallow water.

Now the two men moved on toward midstream, followed by Frisk, and wading slowly and cautiously.

"You're all right while you keep movin'," the handcarter remarked. "But if you stop a few seconds you can feel the sand

(Continued on page sixteen.)

FAMILY CIRCLE

ALICE BARLAND
EDITORIAL CONTRIBUTOR

Experience Letters

From Our Family Circle Women

Dear Mrs. Barland: I have been a reader of the Family Circle for a long time and enjoy it and receive much help from it. We live on a farm and although we are having rather hard times I like the country best and wouldn't care to live in the city.

I am always busy and never lonesome. We have a girl and boy, 4 and 1 year and I am very much interested in child training.

I raise chickens and flowers and sometimes help with the cows in the busy season and I love it all and the children enjoy it with me. I patch and mend and take delight in making over and using odds and ends. Recently I made some pretty dresses and aprons out of flour sacks, using the blaket stitch in black and applique work for trimming.

I try to be saving and make the most of everything without spending more time than the thing is worth, for I count my time valuable. MRS. A. F., Idaho.

Dear Mrs. Barland: I have had spendid success in waxing flowers by using the common white wax or paraffin. I cut up the wax and melt it in a deep can and when melted I set it in hot water. Dip the flower in this and if a large flower, as roses, dip several times. Hold in the hand till the wax hardens, so the flower will hold its shape. Care must be taken that the wax isn't too hot or the flower will turn brown. With a little practice one can prepare them so they will be very natural. JEANNETTE NOYES.

Dear Mrs. Barland: As the season advances many an old hen will find her way into the stew kettle and I have an excellent way of roasting the same. After the bird is drawn and washed loosen the skin over the breast bone and with the hand work under the skin up to the neck and under the legs and wherever it can be loosened. Stuff this large pocket as well as the inside of the fowl. Cut a piece of muslin and sew over the gap, wrap the legs in pieces of muslin and roast, basting often.

The stuffing will steam the bird as tender while roasting as when stewed.

Sharon, Wash. MRS. A. K. S.

Dear Mrs. Barland: Flowers may be preserved by dipping in melted paraffine or parowax. It must be quite hot, so the coating on the flowers will not be too heavy. They will look like wax flowers, though the colors will not be quite so bright as natural. This may be too late for the "June graduate," but it may be of help to some one. E. M. M.

Dear Mrs. Barland: Will some one please tell me how to tan a calf skin so it will be leather. H. M.

Centralia, Wash.

To Normal Weight

Campaign Among School Children

From communities here and there in Spokane county Miss Inez Arnequist, county home demonstration agent, reports striking results of the campaign to bring to normal the underweight child.

Weighing of the children systematically, with accurate record of weights and dietary changes effected, have usually been the first steps effected. Introduction of the glass of whole milk at morning and afternoon recesses and of the hot noon lunch have been possible through the wholehearted cooperation of strong community leaders, earnest community organizations and the public schools, Miss Arnequist stated. "The women have taken hold of the problem wonderfully," she added.

The primary aim has been to reach the child who is 7 per cent below the normal weight for one of his age and height. Such children medical science pronounces to be at the danger line. Nutrition classes are formed to include such children and marked changes in dietary and rest habits have been effected.

The method of providing the milk for underweight children has varied with community conditions. Usually, said Miss Arnequist, children are not encouraged to bring it individually from home, their aversion to carrying the heavy and breakable bottle dampening their ardor for the end in view. The general policy has been to appoint a community leader in the work, with two assistants, and not infrequently some local body undertakes to stand responsible for the milk supply. In other cases individual mothers have given their time and efforts in numbers and in concerted efforts that have kept the milk supply and the materials of the hot lunch forthcoming. The serving of the latter has been variously managed, sometimes through rotating committees of mothers, sometimes under direction of the teacher. In larger schools the food is handled most easily by selling and daily punching tickets.

"Almost invariably we find that the child who is underweight is interested in his own standardization," said Miss Arnequist. "Each child is given a score card to be kept by the cooperating mother, who finds it a useful check on the meals she offers from day to day, as well as on what her child is actually eating."

Results have indicated, she stated, that a death blow will never be struck at undernourishment until a hot dish at the noon lunch is possible in rural schools generally.

Scales, costing an average of $36, have been contributed by various means. In some communities funds for them have been obtained by giving dinners or socials; in some the Red Cross has furnished the scales for the work.

Your Health

By Royal S. Copeland, M. D., F. A. C. S.

We hear much about the power of mind over the body. We ought to hear more about the influence of the body over the human mind.



Dr. Copeland.

The mind can not function without a proper supply of pure blood. When one feels dull and weak, sleepy and lazy the blood is filled with toxins, the poisons of lowered elimination. One can not be forceful, full of "pep" if his body is not sound and strong.

Eat regularly, but moderately. Eat to live—do not live to eat.

Get enough sleep, and remember the old adage:

"All work and no play makes Jack a dull boy."

It takes courage to fight the battle of life. The more of this important element you have the better fitted you are for the contest that comes to all of us in this strenuous age. We can not have courage without physical strength. I do not refer to brute courage, but to the splendid courage of mind and soul which can not exist without physical strength.

We have here an unbroken circle: Physical strength depends on right living and right thinking, but you can not think rightly unless your body is under control. You can not control thought, but you can control your body. When your body is under control your thinking will be of the right order.

When we clearly understand that the human mind can not function as it should if there is poor health it will be easier to clear away the mental cobwebs.

I can not refrain from another reference to the great importance of localized infections, such as are found in the teeth, tonsils and other organs. Nothing is more essential than the early discovery of any source of infection, and the removal of the dangerous cause. Diet, exercise and proper living generally will be of little avail if you have within your body a factory which is producing poison all the time. This poison is taken up by the blood and carried to all the tissues of the body. Naturally, the delicate and sensitive cells of the brain suffer from the effects of these harmful substances.

We can not disregard the effects of hte body on the mind. In every case of mental distress or disturbance the physical basis should be sought, found and removed.

Just Folks

To save is to go without.

Growth is the best freedom.

Confession may be confusion.

Travel dulls as well as sharpens.

Words get sick from abusive use.

Disposition grows upon what it is fed.

A real duty does not have to be explained.

A right guess is better than a wrong conclusion.

It is better to be top-heavy than not to have any top at all.

To grow into riches and authority is far different from having riches and authority conferred upon you.

People are depleted persons.

Passive agreement does not amount to much.

Conventional excuses do not generally deceive.

Favorite advice backs up your own opinion.

To control is a bigger thing than to destroy.

A losing fight may show no signs of feebleness.

There are fortunate as well as unfortunate mistakes.

A lot of things hide themselves under the cloak of education.

The same conditions may either close or open the door of opportunity.

Whatever your religious faith, accountability to God remains fundamental.

Parents who are in the limelight are handicapped in the training of their children.

Continuous work may be too continuous and intermittent work may be altogether too intermittent.

Accepting the situation may be very near to mastering the situation. E. A. S.

New Way to Keep Your Kitchen Cool All Summer

I have discovered a new kind of heat that dispenses entirely with coal and wood. It burns 95 per cent air and 5 per cent kerosene. The device is installed in one minute in any cook stove, heater or range. This new invention is already sweeping over the country like wildfire. It eliminates hours of work, perspiration and drudgery for the housewife in sweltering summer kitchens. Just turn a valve and you have plenty of heat for cooking or baking. Another turn and the heat is off.

It fits any stove without change of parts—simply sets in the firebox. It generates its own gas from kerosene. I will send an attractive booklet to any one who writes for it. I am making a special introductory offer, including a thirty-day free trial plan. I am looking for good live local distributors. Just write me and I will tell you how you can earn $500 a month easily. Request my sales plan. Address your letter to me personally, B. M. Oliver, 2121-H Oliver Bldg., St. Louis, Mo.—Adv.



Just What You Want

may be offered in this week's want ads at a bargain. It's a good idea to look them over every week



Look at this shingle a moment

You will see little holes, or pores, through which flowed the sap in the living tree. In new shingles much of this natural oil is still present. But if roofs are left unprotected, the weather dries out the wood, causing it to warp and crack.

You can keep *your* shingles "alive"—by treating them with ORONITE SHINGLE OIL. It penetrates the wood fibre, fills the pores, and retards evaporation of natural oils. Rain cannot easily soak in, nor can sun or wind effectively attack roofs or shingled side walls treated with this excellent preservative.

Our agent, near you, has formulas for mixing ORONITE SHINGLE OIL with colors. Have him show you how easily it may be applied.

STANDARD OIL COMPANY
(California)



ORONITE
SHINGLE OIL

High Points in News of the Week

The question in the minds of the American people today is the same as that of last week, but is being asked with more wrinkles in the brow: Is the country's business going to be paralyzed by a complete or nearly complete tieup of the railroads resulting from a walkout of the employees, 400,000 of whom are already on strike and the balance of which are being drawn daily closer to the edge of the strike precipice?



A second question little less important is: Must a considerable part of the people of the United States go cold this winter and must employment in industrial plants be curtailed because of a coal shortage due to the long-continued coal strike?

The answer to neither question may be given at this writing with absolute certainty, but a blanket answer may be given that already industry is suffering a degree of paralysis as a result of the strikes in the coal mines and the railroad shops. While there is a constant claim on the part of the railroad executives, and others who are in the habit of whistling as they pass graveyards that they know are peopled by ghosts, that the railroads are able to operate adequately under present conditions with partial crews in the shops, it is becoming daily more and more evident that the shopmen's strike is badly crippling train service.

Shippers of perishable crops, including the fruits of the northwest, are on the anxious seat. Meetings of fruit growers and fruit organizations are being held this week in this territory in the hope of exercising some influence on somebody that may have some power to provide cars and engines and workmen to operate them. The wheat grower is alive to the fact that if the wheat can not be moved the price will be adversely affected.

But there is a chance, and possibly a good chance, that before long the coal mines will be operating again and the railroads all running again and business in general picking up in consequence. In fact, it is freely predicted by those in position to know the situation that the coal strike will be settled within a short time. Negotiations have been going on between mine operators, mine workers and government representatives for several weeks, with the result that the situation is fairly hopeful.

In the railroad strike, however, there appears more of a fight-to-a-finish spirit on both sides. There is much more involved in the strike than the question of wages, working conditions or the bugaboo of seniority rights of workmen. Organized railroad workers declare that the opposition of the railroad executives is due to a determination to wipe out the unions. Railroad executives declare that they are resisting because their roads can not be operated profitably under the conditions laid down by the workers. In what was looked upon as a final proposal last week, President Harding urged the strikers to return to work and the employers to accept them, leaving to the railway labor board the question of whether or not the workers would be reinstated with their seniority and pension rights and also providing a rehearing of the wage scale question by the board.

The railroad executives accepted this proposal conditionally, the condition being that they take back enough striking workers to fill their ranks, leaving the 60,000 or more shopmen employed since the strike in their present positions. The strikers at this writing have not made public their replies to the proposal, but it is understood that they are flat refusal to accept.

The latest development is a conference between the railroad executives and officers of the four big brotherhoods of railway workers (not on strike) with a view to working out a plan for arbitrating the seniority question, which is the one now standing in the way of a settlement of the strike. It is reported at this writing that this conference offers hope of success. It is believed that an arbitration plan approved by the big brotherhoods would be accepted by the striking shopmen. The results of the conference and the plan worked out are being laid before President Harding, who is known to be favorable to arbitration as a general policy where disputes can not be settled by the disputants. The peculiar situation is that both railroad executives and empioyees are refusing to abide by the decision of a board that is given authority by act of congress to pass upon such disputes. The explanation is that there is no provision in the law for inflicting a penalty on those who do not abide by the board's decision. This fact led last week to speculation as to whether or not President Harding would call upon congress this week for legislation to put teeth into the law so that both sides would have to abide by its decisions. Indications now are that no such legislation will be asked. The president has power in an emergency to take over and operate both coal mines and railroads in the name of the general welfare, and there is some likelihood that this will be done soon if success does not crown efforts at a peaceful settlement. Several middle western governors last week officially asked the president to take this step, but it is known that he is averse to it, and will adopt this method only as a last resort.

Take it all in all, the situation at the beginning of this week is perhaps a little less gloomy than a week ago, though any hour may bring the collapse of negotiations. Likewise, any hour may bring announcement of agreement.

* * *

Under the supervision of the department of commerce, of which Herbert Hoover is secretary, steps have been taken to prevent increases in coal prices and to apportion the coal throughout the states on an equitable basis with a view to serving the needs of industry and the general public as fully as the limited supply of fuel may do.

* * *

The United States senate last week adopted a clause in the tariff bill providing for a flexible tariff schedule. The provision would authorize the president to decrease or increase tariffs under certain regulations up to July 1, 1924. Tariffs will be provided in the bill now before congress, however, the idea being that the president shall be empowered to alter rates from time to time as conditions may appear to warrant.

* * *

Though too late to do grain crops any appreciable benefit, at least on the east side of the Cascades, rains that fell generally throughout the northwest last week served good purposes. Pastures, gardens, some fruits and other small crops were helped, while the forest fires situation was greatly relieved, though the fires were not all wiped out. With seasonable weather from now on it is likely that little additional destruction of timber will be recorded.

* * *

The American Bar association, in session at San Francisco last week, adopted a resolution favoring the prohibition of the manufacture and sale of pistols except for governmental use. The resulution declared that the pistol no longer has a useful purpose to serve, and that it is the cause of much crime.

* * *

King George of England last week signed the treaty for the reduction of naval armaments. Ratification is still to be given by France, Italy and Japan, though there is thought to be no likelihood that any of these nations will fail to ratify.

* * *

The situation between Great Britain and France is still tense as a result of differences of opinion on the question of leniency toward Germany in the matter of reparations payments. England favors extension of time in which Germany may make payments that are due, while France clings to the desire to make Germany toe the mark in fulfilling the provisions of the peace treaty.

* * *

Lord Northcliffe, publisher of the London Times, one of the most noted journalists of the age and one who did much to arouse England to the necessity of strenuous methods of warfare against Germany when his country's cause seemed hopeless, died last week.

Visit West Side Farms

(Continued from page two.)

of the grade cows are better than their dams.

A trip through the Carnation farm barns and pastures came immediately after lunch and everything was explained in detail as the crowd went along. A group of mature cows in one lot had been selected, keeping only those that produced 1000 pounds and better yearly. In the test barns were cows that were being milked three and four times a day, while in the commercial barn the animals were milked only twice daily. Each cow's name and record was placed above her stall.

The two herd bulls are full brothers and are known as the Matador brothers. Matador Segis Walker, however, is a year younger than his brother, Segis Matador Walker.

The dam of the present herd sire at the Tualco Valley farm at Monroe, owned by Dr. H. K. Stockwell, has a record of 22,012 pounds of butter. She is also the dam of the world's record cow in class, Cascade Blossom. Ten of the bull's daughters are in the Stockwell herd and have exceeded the production of their dams at the same age.

At the Glenwood farms, near Snohomish, owned by Ed Hoem and A. H. Buck, the 5-year-old herd sire has two full sisters with over 1000-pound records. All of his heifers are producing more milk than did their dams.

There are four daughters of Lishman's Son, the senior herd sire, on the Valley Gem farm at Arlington, that show the wonderful prepotency of this animal. The herd is owned by J. E. Wrage and G. H. Grew, who have developed some typy Guernseys, many of which are on official test. The entire herd is being milked three times a day and has produced an average of 995 pounds of milk and 47.2 pounds of fat per cow per month.

F. O. Coe, also of Arlington, has an exceptional herd of grade Jerseys, which have been tested in the cow testing association for the last six years. The herd bull, Eminent Ferndale King, is a distinct Island bred animal and shows much quality.

At Hans Thompson's place was a herd of grade Guernseys which Mr. Thompson is breeding up with a registered bull from the Valley Gem farm. "I believe in using the best bull I can get," said Mr. Thompson, "and then I can raise all the heifer calves and get good cows as a general rule. I aim to have all the mature cows producing around 300 pounds of fat or I don't keep them."

Practices Line Breeding.

Dr. E. E. Heg's farm at East Stanwood was the last stop of the day. Dr. Heg has been doing line breeding on Sir Johanna Ruth Fayne and has 10 daughters of this breeding in the herd. One of the most interesting animals in the herd are Tyee Hiske Fayne, who produced 25,213 pounds of milk and 889 pounds of butter in 305 days. Tyee Sir Johanna, the herd bull, won first in his class at Portland last year.

The entire trip through Snohomish county was planned by W. D. Love, the county agent.

At Mount Vernon the members of the Skagit County Live Stock association held a banquet for about 75 people, the program being carried out by H. K. Willis, their president.

The tour through Skagit county brought out 35 cars at the first stop, the H. S. Ruley's Jersey farm. This was a well-selected bunch of Jerseys that showed the effects of proper care and management. One of the old cows made a record of only 211 pounds and after she had been sold for beef her daughter by the former herd sire produced 375 pounds in 237 days. The present herd sire is Bluster's Lad, a son of Engineer's Bluster.

Princess Fayne Johanna, one of the registered Holsteins in the Youngquist Brothers' herd of Mount Vernon, made a record of 401 pounds of butter in 112 days. She was the highest cow on semi-official test for the months of April and May. The best cow in the herd for her age is Vernway Pontiac Segis De Kol, a daughter of the herd sire. She freshened as a senior yearling and made 577 pounds of fat in 349 days.

Tom Lockhart exhibited eight cows from the herd that had reacted to the tuberculin test. Since these were all exceptional individuals, Mr. Lockhart placed them in quarantine. All of the animals were apparently healthy and one grade cow produced 676 pounds of fat.

The cow testing association records showed that one generation in the F. J. H. Gallicher herd had made an increase of 100 pounds more than the dams, due to the use of a good bull. This figure was estimated for the general average of the herd.

A poultry flock at the A. R. Besgrove farm gave a little variety to the program

(Continued on page fifteen.)

Farm Business and Markets Outlook

(Continued from page five.)

The Grain Market.

PORTLAND, Aug. 12.—Grain futures: Wheat—Hard white, soft white, while Club, August, September, $1.08; hard winter, northern spring, August, September, $1.06; red Walla, August, September, $1.03.

Corn—No. 2 eastern yellow shipment, August, September, $23.75.

MINNEAPOLIS, Minn., Aug. 12.—Wheat—Cash, No. 1 northern, $1.16⅝@1.25⅝; September, $1.08⅝; December, $1.06¾; May, $1.10¼.

Corn—No. 3 yellow, 55½@56c.

Oats—No. 3 white, 26½@27½c.

Barley—41@51c.

Rye—No. 2, 70¼c.

Flax—No. 1, $2.44½@2.48½.

Hay and Feed Grain.

PORTLAND, Aug. 12.—Millfeed—Prices f. o. b. mill: Mill run, ton lots, $31; middlings, $43; rolled barley, $36@38; rolled oats, $44; scratch feed, $48 per ton.

Corn—White, $37; cracked, $39 per ton.

Hay—Buying price f. o. b. Portland: Alfalfa, $18@18.50 per ton; cheat, $15; oats and vetch, $17; clover, $18; valley timothy, $18; eastern Oregon timothy, $20@21.

SPOKANE, Aug. 12.—Wheat—Feed wheat, $40 per ton.

Oats—$40 per ton; steam rolled, $42.

Corn—$36 per ton; cracked corn, $38 ton.

Barley—$42; steam rolled, $44.

Bran and shorts—$32 per ton.

Alfalfa, $22 ton; timothy, $24 ton; mixed hay, $22 ton.

General Produce.

PORTLAND, Aug. 12.—Butter—Cubes, extra, 39@40c lb.; prints, parchment wrapped, box lots, 46c; cartons, 47c. Butterfat, 46@47c; delivered stations; buying price, A grade, 44c.

Eggs—Buying price: Current receipts, 20@21c doz.; henneries, 23@24c doz. Jobbing prices: Case count, 22@23c; candled ranch, 25c; selects, 28c. Association selling prices: Selects, 29c; browns, 29c; firsts, 27c; pullets, 25c.

Cheese—Tillamook triplets, price to jobbers, f. o. b. Tillamook, 26c; young Americas, 27c; longhorns, 27c pound.

Poultry—Hens, 13@22c; lb.; springs, 20c; ducks, 15@22c; geese, nominal; turkeys, nominal.

Veal—Fancy, 14@14½c per pound.

Pork—Fancy, 17c per pound.



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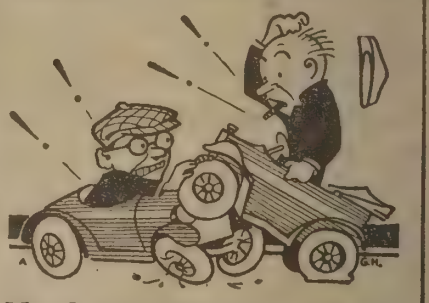
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Just What You Want

may be offered in this week's want ads at a bargain. It's a good idea to look them over every week

Bits of Fun FOR Everyone

Concentration Gets the Answer.

An absent-minded man returned home one evening, and sat down in a chair to think. He had decided to do something and could not for the life of him remember what it was.

He sat and sat. Time passed. Still the elusive thing evaded him, but he determined that this time he would not be beaten, and that he would not give up. One o'clock chimed.

At 2 o'clock he suddenly gave an exclamation of delight.

"Ah!" he cried, "I remember at last. I had decided to go to bed early!"

The Main Thing.

An old darky got up one night at a revival meeting and said: "Brudders and sisters, you knows an' I knows dat I ain't been what I oughter been. Ise robbed henroosts, an' stole hawgs, an' tole lies, an' got drunk, an' slashed folks wi' mah razzah, an' shot craps, an' swore; but I thank the Lord der's one thing I ain't nebber done; I ain't nebber lost mah religion."—The Furrow.

Mighty True.

"This setting down and folding our arms and waiting for sumthing tew turn up, iz just about az rich a spekulashun az goin' into a 400-acre lot, setting down on a sharp stone, with a pail between our knees, and waiting for a cow tew back up and be milked."—Josh Billings.

His Wife, Perhaps.

The man who had struck one of those rare not-so-very-prohibition parties and didn't want to leave it, had made two unsuccessful attempts to get into the telephone booh, the third time negotiating it like a ferry going into a strange slip. He dropped his nickel in.

"H'llo, h'llo, h'llo," he cried. "Say, gimme Line's Busy, thassa good girl. H'llo, whassat? Line's busy?? Aw right."

He staggered out.

"Lord knows I tried to get her anyway," he murmured.—American Legion Weekly.

Signing Up the King.

Two fishmongers having shops directly across the road from each other, strove hard all the time to outstrip each other in the matter of display signs.

One day a sign appeared above the window of one of the rivals: "We serve the King."

Not to be outdone, the merchant on the opposite side of the road hoisted a sign the following day which read: "God save the King."—Dry Goods Economist.

No Limitations.

The wealthy city man had taken a fancy to visit his village birthplace.

"Ah me, there is the little red schoolhouse, and yonder is the old church. How

The Difference.

There's a difference between notoriety and merit. A thousand dollars' worth of roses will barely fill a room with perfume, but with a dollar's worth of fried onions you can scent up a whole block.—Nuggets.

Taking No Chances.

The wife of the great botanist beamed at him across the supper table. "But these," she exclaimed, pointing to the dish of mushrooms that had been set before her, "are not all for me, Aristotle, are they?"

"Yes, Mabel," he nodded. "I gathered them especially for you with my own hands."

She beamed upon him gratefully. What a dear, unselfish husband he was! In five minutes she had demolished the lot.

At breakfast the next morning, he greeted her anxiously. "Sleep all right?" he inquired.

"Splendidly," she smiled.

"Not sick at all—no pains?" he pressed.

"Why, of course not, Aristotle," she responded.

"Hurrah!" he then exclaimed. "I have discovered another species of mushrooms that isn't poisonous."—Pittsburgh Chronicle-Telegraph.

Latest High Class Patterns for the Home

Please order the patterns you desire at least two or three weeks before you wish to use them. Desiring to obtain the latest high-class patterns for its readers, THE FARMER has made arrangements to have them sent direct from the east, and under present mailing conditions it takes about that time for them to reach you.



3746. Ladies' dress. Cut in seven sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. A 38-inch size will require 4 3-4 yards of 44-inch material. The width of the skirt at the foot is about 2 1-4 yards. Price 10 cents.

3685. Misses' dress. Cut in three sizes: 16, 18 and 20 years. An 18-year size requires 4 7-8 yards of 38-inch material. The width of the skirt is 2 3-4 yards. Price 10 cents.

3312-2939. An "up-to-date" frock. Waist 3312, cut in seven sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. Over dress 2939, cut in seven sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. To make the waist will require 2 1-2 yards of 36-inch material. The over dress requires 3 1-2 yards of 40-inch material. Two separate patterns, 10 cents for each pattern.

4093. Child's coat. Cut in four sizes: 6 months, 1 year, 2 and 3 years. A 2-year size requires 1 5-8 yards of 40-inch material. Price 10 cents.

3993-3837. A pretty cape "suit." Cape 3993, cut in four sizes: Medium, 38-40, and large, 42-44 inches bust measure, for ladies, and 14 and 16 years for misses. Dress 3837, cut in seven sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. It will require eight yards of 36-inch material for a medium size, for cape and dress. The width at the foot is about two yards. Two separate patterns, 10 cents for each pattern.

3788. Ladies' apron. Cut in four sizes: Small, 34-36; medium, 38-40; large, 42-44; extra large, 46-48 inches bust measure. A medium size requires 5 1-4 yards of 36-inch material. Price 10 cents.

4081. Ladies' house dress, cut in seven sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. A 38-inch size requires 5 3-4 yards of 32-inch material. The width at the foot is 2 5-8 yards with plaits extended. Collar and cuffs of contrasting material require three-fourths yard 32 inches wide. Price 10 cents.

3723. Girl's dress. Cut in four sizes: 4, 6, 8 and 10 years. An 8-year size requires 3 3-4 yards of 27-inch material. Price 10 cents.

3646. Girl's dress. Cut in four sizes: 4, 6, 8 and 10 years. An 8-year size requires 3 1-4 yards of 27-inch material. Price 10 cents.

4084. Girl's dress. Cut in four sizes: 8, 10, 12 and 14 years. A 10-year size requires 2 1-8 yards of 32-inch material for the blouse and 2 5-8 yards for the skirt. Price 10 cents.

4071. Ladies' blouse. Cut in seven sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. A 38-inch size requires 3 1-2 yards of 32-inch material. Price 10 cents.

4101. Dress accessories. Cut in three sizes: Small, medium and large. To make No. 1 for a medium size will require 1 1-2 yards; No. 2 will require 1 1-4 yards; No. 3 also 1 1-4 yards, of 32-inch material. Price 10 cents.

Fashion Book Notice.

Send 12 cents in silver or stamps for our up-to-date fall and winter 1922-1923 book of fashions, showing color plates and containing 500 designs of ladies', misses' and children's patterns, a concise and comprehensive article on dressmaking, also some points for the needle (illustrating 30 of the various, simple stitches), all valuable hints to the home dressmaker.

Please fill in this order and mail with remittance to:
PATTERN DEPT., PACIFIC NORTHWEST FARM TRIO, Spokane, Wash.

Enclosed find..... cents for which send me the following:

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Pattern No..... Size ..... Pattern No. ..... Size.....

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R. F. D..... Box No..... St. No.....

Be sure to give the pattern number and the correct size.

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New Lamp Burns 94% Air

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A new oil lamp that gives an amazingly brilliant, soft, white light, even better than gas or electricity, has been tested by the U. S. Government and 35 leading universities and found to be superior to 10 ordinary oil lamps. It burns without odor, smoke or noise—no pumping up, is simple, clean, safe. Burns 94% air and 6% common kerosene (coal-oil).

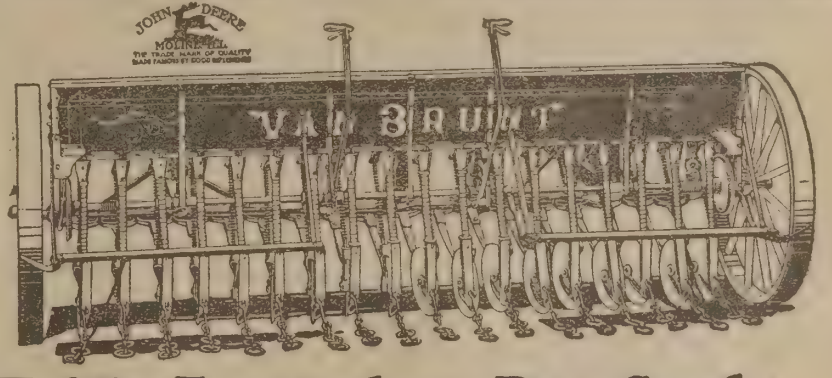
The inventor, W. W. Johnson, 31 N. Fifth St., Portland, Ore., is offering to send a lamp on 10 days' FREE trial, or even to give one FREE to the first user in each locality who will help him introduce it. Write him today for full particulars. Also ask him to explain how you can get the agency, and without experience or money make $250 to $500 per month.—Adv.



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Kernels of every size and kind can be planted at regular distances apart, the desired quantity per acre, in trenches of uniform depth, and without bruising or cracking the seed, with the

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VAN BRUNT GRAIN DRILL
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Van Brunt features compel accuracy and provide a wide range of adjustment. The adjustable gates of the Van Brunt double-run feed, together with the multiple gear construction, make it possible easily to adjust drill to plant 48 different quantities of grain—wheat, 16 to 258 pounds per acre, and other grains in proportion. No wire reducers or other contrivances are required.

Operates on steep hillsides without axle end-play, and the grain cannot shift to one side, leaving part of the box empty. *The grain box will not sag*, even after years of use—it is trussed to the frame and axle at five points.

The frame is angle steel, reinforced. The Van Brunt is built like a steel bridge—it cannot buckle or sag. Frame is supported on long, strong wheel hubs.

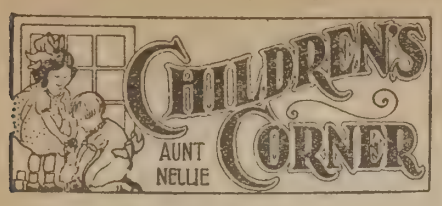
Gears always in mesh—no sudden jerks to strip them. They are self-aligning, dirt-proof, and are provided with spring relief—obstacles pass through without breaking or damaging the gears.

Guaranteed disc bearings; tilting levers for adjusting position of furrow openers to cut deep or shallow; single discs, double discs or hoe furrow openers.

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JOHN DEERE
THE TRADE MARK OF QUALITY MADE FAMOUS BY GOOD IMPLEMENTS



We are glad to hear from another new cousin in southern Washington, Walla Walla county. This letter is from Helen A. Tomlinson, who is 7 years old. August 15, 1922, she will be 8.

May 14, Nina Downing had a birthday party and received some nice presents. She is 11. Her home is in the Big Bend country, eastern Washington. She helps care for 70 little chickens and enjoys doing it. Next year at school she will take seventh grade work. We are glad to hear from Nina.

A letter comes to us from Okel Sperline in Chelan county, Wash. Okel says she was ill for a few weeks and that is why she waited so long to write to us. Her papa and brothers are picking cherries. Okel will be a sixth grade student at school next term.

Bernice Williams, a southwest Washington girl, sends this joke:

Teacher—Jennie, how do you plant potatoes?

Jennie—In the ground.

Bernice is in the sixth grade at school. She has a little calf.

Clara Breitmeir lives in southern Chelan county, Wash., near the Wenatchee river. She will be 8 years old July 11, 1922. She says they have a nice crop of apples this year. Clara's pets are a dog, a cat and some little chicks.

Dorothy Timm writes from Lincoln county, Washington. Dorothy is going to have her picture taken soon and send us one, maybe. Here is a riddle: What is a valuable book? The full pocketbook.

Here are the grades that Adelaide Sanborn got in four of her examinations: Spelling, 97; arithmetic, 99; geography, 96, and language, 96. Adelaide is 11 years old and her birthday is March 3. She passed into the sixth grade this year. Her home is a 42-acre farm in northwestern Washington. Her father has three cows, a yearling calf and 37 chickens. Adelaide goes to school in the bus with 49 other children.

LETTERS WELCOMED BY AUNT NELLIE.

Among recent letters received by Aunt Nellie are those from cousins whose names follow. A few of these will be published each week in the regular edition of THE FARMER, and others will appear from time to time in The Junior Farmer.

Evelyn Glenn, Alice Branscom, Goldie Richardson, Stella Huffman, Marie Thornton, Elwood Smith Guffer, Harold Puffert, Elva Woods, Paul Gribbin, Anna Jakiewiez, Elsie Stark, Christian Larsen, Lottie McNeil, Chloe Lane, Martha Slikker, Grace Middleton.

Dorothy Timm, Cora Demmitt, Josephine Herbert, Christina Olson, Catherine C. Lenhart, Anna Thornton, Lois Fisher, Helen Owen, Lucy Chrisman, Jennie Erickson, Violet L. Rees, Iva Harriet Hixson, Frances Letford, Gladys Wildanen, Maybelle Russel, Helen Prouce, Ramona Payne, Jeannette Simpson, Hazel and Ray Liebl, Irene Creswell, Ruth Fletcher, Viva Powe, Evelyn Conawert, Evelyn Hall, Joyce McDonald, Lars Udd, Jennie Rector, Eva Panvola, Lalla Paavola, Esther Duchow, Leo Abonen, Arvo Ahonen,, Arthur Cartwright, Robert Afton Stevens, Olive M. Willard, Hilma Albert, Zoe Ludwig, Adelaide Sanborn, Marie Wyatt, Johnnie Swinger,

Faith Elm, James Aubrey Randolph, Sibyl Keith, Sylvia Harris, Myrtle Violet Sisk.

Frances Bruce, Robert Bruce, Lena Bailey, Henrietta Vander Yacht, Vera Tillotson, Dorothy Peterson, Cornelia Strahm, Marie Strahm, Wilma Woodruff, Kenneth Strong, Helen Demaris, Lorene Demaris, Frances Greely, Mary Gesler, Louise Gesler, Thelma Amon, Leroy McClain, Alice Sandstrom, Ida Smalley, Clara Beardslee, Bernice Beardslee, Jennie Beardslee, Ellen Wagner, Bessie Wagner, Edna Leege, Minnie Pitan, June Johnson, Leta Ruby Harrell, Dorothy Galbraith, Evelyn Lindt, Magdalene Lindt, Edgar Lund, Alice Crockett, Agnes Husby, Marjorie Cannon, Julia Emma Rainbolt.

BEDTIME STORIES

By THORNTON W. BURGESS.

JOHNNY CHUCK GETS UP LATE.

"It must be I've waked up early," said Johnny Chuck, rolling over and looking up the long hall which led from his bedroom up to his doorway. The hall was dark, it certainly must be that he had waked very early. He yawned sleepily, stretched, and then curled up for another nap. By and by Johnny Chuck opened his eyes once more. It was just as dark as before. "What ails me to keep waking up in the night like this?" said Johnny, "I never have before. And, my goodness, how hungry I am!"

Just then Johnny heard a sound that made him sit up so suddenly that he bumped his head, for the roof of his bedroom is very low.

"Ouch!" cried Johnny Chuck.

Then he hopped out of bed and without waiting to wash his face or comb his hair he started up the long hall toward his front door. He had heard Sammy Jay laughing fit to kill himself, and he knew that Sammy Jay never, never would be out there laughing in the night. It was still dark in the hall and outside he could still hear Sammy Jay laughing. What could it mean?

Finally Johnny Chuck reached his doorway. It was all covered up with hay and that was why the hall was dark. Johnny pushed the hay out of the way and stepped out. The bright sunlight made him blink. Sammy Jay screamed louder than ever with laughter. Johnny blinked and blinked and Sammy Jay laughed and laughed. Johnny looked upat olly, round, red Mr. Sun. He was almost overhead. Usually he was just beginning to climb the blue, blue sky when Johnny Chuck came out for his breakfast.

"Oh, you sleepy head!" shouted Sammy Jay.

Johnny Chuck looked sheepish, but he couldn't say a word, for here it was the middle of the day and he hadn't had breakfast yet.

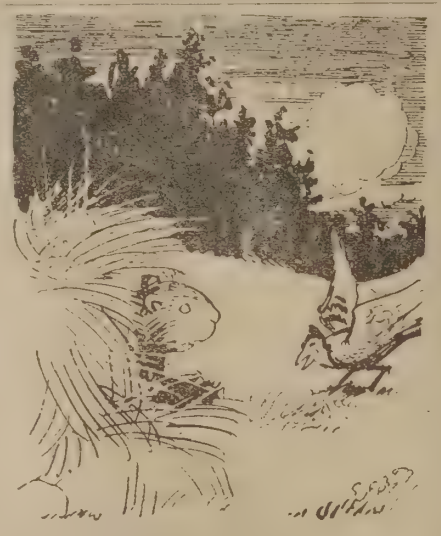
Just then along came Jimmy Skunk. Jimmy looked most disreputable. He certainly did. His clothes were tumbled and rumpled and dirty. And Jimmy was so sleepy that he could hardly keep his eyes open. Evidently he had been out all night.

"Have you seen anything of my house?" asked Jimmy Skunk.

"What!" exclaimed Johnny Chuck.

"I asked you if you had seen anything of my house; have you?" replied Jimmy Skunk crossly, for he was very, very sleepy.

Johnny stared at Jimmy for a full minute. "Are you crazy, Jimmy Skunk?" he asked. "How should I see anything of



Sammy Jay screamed louder than ever with laughter.

your house when I've just got up? Besides, houses don't run away."

"Mine has," replied Jimmy mournfully. "And I want to find it and go to bed," he said.

Sammy Jay, who had been listening, laughed louder than ever, and even Johnny Chuck smiled. "Wait till I get something to eat and then I will help you find your house," said he.

So Johnny Chuck got something to eat and then he followed Jimmy Skunk up the Crooked Little Path to the top of the hill.

"Right here's where I left my house, but now it isn't here," said Jimmy mournfully.

Johnny Chuck looked around. No house was to be seen. He idly began to kick a pile of sand. "Ouch!" he cried as his toe hit something hard. Then he began to dig away the said, and there was a stone filling up the doorway of Jimmy Skunk's house. Together they pulled it out and Jimmy Skunk crept in, almost too sleepy to say thank you. "I wonder who did it?" said Johnny Chuck. Then he found a footprint. A great light broke over Johnny Chuck.

"Bobby Coon has been playing tricks on us!" he exclaimed. "Just you wait. Bobby Coon, you'll have to take your own medicine yet!"

Birthday Greetings

THURSDAY, August 17—Wilma Dwire, 9 years old.

FRIDAY, August 18—Roy Prater, 9 years old.

SATURDAY, August 19—Wilma Edberg, 11 years old; Helen Flork, 11; Virgil Hanins, 11.

SUNDAY, August 20—Raymond Polly, 11 years old.

TUESDAY, August 22—Bessie Cyran, 11 years old; Sylvia Nasi, 10; Beryl Snyder, 10.

WEDNESDAY, August 23—John Hundt, 11 yeasr old; Grace Stewart, 11; Eva Worster, 11.

Kitchen Conveniences

Some interesting work has been carried on in the way of a testing circle in Grays Harbor county by Miss Mabel Webber, with the assistance of the community project leaders. The plan is to try out different kitchen conveniences and report the results in a general meeting when all the members are present.

Such articles as steam pressure cookers, dustless mops, egg beaters, can openers, dish drainers, etc., are distributed. Each woman upon taking any one of these articles agrees to give it a thorough trial for a certain period of time. When the period is up a meeting is held and a report is given on each article which demonstrates the value of this article in the home. A considerable saving of time is accomplished, since each woman does not have to try out each article, but relies on the results of her neighbors.

One woman found that she saved 410 steps in the preparation of a meal by the use of the kitchen utility table.

Another woman found that a bread mixer was a "friend indeed," for it gave her lame left arm a vacation from the usual kneading.

"I am going to have one of those hand vacuum cleaners if we have to sell a cow," said another housewife. But her husband said that would not be necessary, since he believed it would save enough labor to pay for several cows in the course of time.

"The boys are going to make me a utility table like the one I tried out in the circle," is the report of another woman.

Some of the small articles are accepted very readily and many of the women are able to pick out the best of each kind and thus save many bad experiences in trying out such articles as they might pick up at the stores. In some cases the women do not buy a similar article to the one they have tried out, but, on the other hand, some of their neighbors will purchase one of the same kind.

The articles are the property of the county home demonstration agent's office, since they have been donated by different merchants in the county for demonstration work. In some cases results will show up a year or two later. Whenever a demonstration of this kind is held in any community the reports for the different articles are kept by the community leader and can be referred to at a later date by any one wishing information about any particular article.

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The Washington Farmer
Review Building,
Spokane, Wash.

Visit West Side Livestock Farms

(Continued from page twelve.)

and brought out the fact that the use of the best possible sires bring results that are worth the extra trouble and expense.

After the picnic lunch at Pete Omdahl's farm the visitors were told of the improvement of the animals of the herd. One cow, a granddaughter of a grade Shorthorn cow, has a record of 371 pounds of fat, while another of similar ancestry has a record of 352 pounds. Mr. Omdahl has 63 head of animals in the herd, of which 25 are purebred.

The Nels Anderson herd of Shorthorns, near the Omdahl farm were being bred up by the use of a registered sire. This herd consisted of over 200 head and is one of the largest in western Washington.

There was a big difference in the appearance of two calves in the Noble Brothers' herd of Guernseys near Edison. One was from a cow that had received the proper attention before calving, while the other had received only poor care. The entire herd shows the result of good management and breeding. A new herd bull has recently been purchased. He is of the Langwater Traveler breeding and is out of a 457-pound cow that had but three-quatters of a udder.



A group of the workers who helped to make the tour a successful undertaking. Reading from left to right: H. B. Carroll Jr., county agent of Whatcom county; Dr. S. B. Nelson, director of the extension service; C. M. Hubbard, live stock specialist; William D. Love, county agent of Snohomish county, and Lincoln Lounsbury, extension news editor of the extension service.

Fifty head of registered Holsteins on the A. J. Lawson farm showed uniformity of type and the entire herd was being tested each month in the cow testing association. Three daughters of the same dam show from 50 to 100 pounds increase for butterfat production.

C. H. Bergstrom planned the trip through the county, after which it was turned over to H. B. Carroll Jr., the county agent of Whatcom county, who completed the trip the following day.

The Last Day.

On the morning of the last day there were nearly 75 people who started out from Bellingham. The first stop was made at the David McLeod Jersey farm a short distance from town. Here there was a gold medal cow, Double St. Mawes, and an 18-year-old animal that made 10-700 pounds of milk and 592.19 pounds of fat in a year. This record was made at the age of 16 1-2 years. This cow is a half sister to two gold medal cows and is a grand dam to the herd sire.

The VanHorn poultry farm has a modern laying house, which was designed by the owner. The yearly records, which have been kept for the last 17 years, show a gradual increase in the production of eggs and has now reached an average of 192 eggs per hen. Line breeding has been carried out with excellent results.

Traveling toward Ferndale, the expedition stopped at another poultry farm, that of B. Hillier, who has a large commercial flock. Private records have been kept for the last two years on a pen of 970 breeders. From this pen there were two exceptional hens that made 302 and 206 eggs, the latter record being made in 11 months. No hens are kept in the breeding pens that will not produce 180 eggs a year.

J. A. Porter, a Jersey breeder near Custer, had a neat herd of grade animals, which he had been testing in the cow testing association for the last four years. All of the records, which he read to the crowd, showed an increase since the first year of the test, running from 30 to 134 pounds per cow. This increase has been possible because of the better feeding and management that goes with the testing work wherever taken up.

The first herd of Ayrshires seen on the entire tour was that owned by William Lauckhart, near Lynden. This herd was started with only a few head at an early date and was increased and selected until it reached 30 animals. This was during the war and the labor question forced Mr. Lauckhart to sell off all but eight head. One of the cows has a record of 655 pounds of butterfat as a 4-year-old.

A picnic lunch was held at the Berthusen grove. The farm bureau donated the coffee and ice cream. Dr. Nelson gave a short talk regarding the results of the tour and the benefits of better live stock.

Some striking figures were given at the Leonard Koole farm, where Louis Zweegman pointed out each cow as he gave her testing association record. "The high cow in the herd," he said, "gave 441 pounds of fat and a net profit of $74 for the entire year, while the second highest produced 241 pounds and returned a net income of $44. The former cow made her profit at a cost of 16 1-2 cents a pound of fat, while the latter showed a cost of 18 1-2 cents." Mr. Sweegman is doing his own testing and feels that it is more than worth while.

At the farm of Andrew Benson & Son was a herd of registered Holsteins which had made some good records on official test. A number of the dams and daughters were cited to show the increase of milk and fat production of the daughters over their dams. This was due to the use of the herd sire that had a good record behind him.

"It was my object to get the best individuals that could be had and I started in to increase the production of the grade animals," remarked R. I. Tanner, Jersey breeder of Sumas. "I decided to get a few purebreds and bought one cow from Oregon for $800. It seemed like a lot of money, but later I refused $2000 for one of her daughters. This $800 animal is now a gold medal cow and could not be bought at any price.

There were 60 head of registered and grade Guernseys in the J. O. Anderson herd at Sumas, all of which had been in the county cow testing association. One record of 710 pounds of fat was made by a junior 3-year-old and the grade cows made as high as 450 pounds even while the grass was poor. The best investment ever made on the farm was the shipping of the best cow in the herd to be bred to a Langwater bull, according to Mr. Anderson.

At Milky Way Farm.

A. T. Smith of the Milky Way farm at Sumas told how the herd of registered Holsteins had been selected for size and conformation as well as high records. Twenty head of these cows averaged 19,000 pounds of milk in a year, and the entire herd is said to be one of the highest producing herds in the west. The herd sires are both junior yearlings, one being sired by the herd bull in the Bishop herd and the other by a son of Spring Farm King Pontiac.

There were 55 cars during the last day and about 250 persons. For the entire tour the number was estimated at over 1000.

FRUIT EXPOSITION POSTPONED.

Announcement is made that the second annual Pacific northwest fruit exposition has been postponed from the original dates of October 28-November 5 to November 11 to 19. The exposition is held in Seattle, at the Bell street terminal, where more room will be available than at the arena, where it was previously planned to hold it.

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URBANA ILL

Pike's Peak or Bust

(Continued from page ten.)

crawlin' right out from under the soles of your feet."

"It won't do to stand still long. I've already discovered that," answered Orlando.

When out in midstream the two men stopped, not far apart. That is, they stopped moving along. But they had to keep stepping about constantly to prevent their feet from getting fast. A piece of drift wood was in sight, not far upstream, and they were waiting for it. When it came near, Orlando seized it.

Other chunks and sticks kept floating down, drifted all the way from the mountains, doubtless, and the fuel catchers moved back and forth, snatching them up from the current. Orlando was the first to get his arms full, and then he waded away toward the north bank with it. Not till each of them had lugged two armfuls of wood ashore were they ready to pull on their boots again.

But before doing that they threw off their clothes and were soon rolling and splashing in the deepest part of the shallow stream. Swimming was out of the question, but they could at least have a good bath. Their example was contagious, and the whole party were presently stripped to the skin and splashing about in the water. Most of them, not content with washing themselves, also took occasion to wash out their underclothes and shirts. These, when the bathers went ashore, they spread on the grassy bank to dry.

"Don't know whether this wood's much better than dry buffalo chips or not," Esau remarked, after the party had kindled their campfire. "Makes more smoke than heat, seems to me like."

"It is pretty soggy firewood, Esau," his partner admitted. "But that can't be helped, as far as I can see. Only chance for it to get here is by drifting. And you couldn't expect it to drift all the way down here from the mountains without becoming more or less watersoaked. If it could lie in the sun and wind for a few days—"

"But we hain't got time to hang around here for a few days and wait for this wood to dry out," Esau declared, positively.

"Of course not. But maybe the fire will dry it out."

"It will dry it out," Sanders spoke up. "Has to dry it out before it can burn it. That's why our fire start off so lazily."

In spite of their soggy wood the travelers managed to cook themselves a fairly good supper. In addition to other things, each of the parties succeeded in baking a skilletful of biscuits. And by keeping the rest of their wood near the campfire during the night they had better heat to cook breakfast by.

Now the seven footmen journeyed on, day after day. The trail kept always close to the Arkansas, which insured them an abundance of water. Also, as on their first night near it, they obtained most of their fuel from the river. Here, as farther back, the great road was teeming with immigrants. Many thousands of them were toiling along it, nearly all toward the mountains. Sometimes the foot travelers, pushing ahead as fast as possible, would pass more than a dozen wagon trains in a day. Other wagons, moving faster, passed them. There was also a number traveling with wheelbarrows, a larger number with handcarts, and still others in various makeshift ways. And, of all the thousands, every one seemed eager to reach the scene of the great gold excitement.

But, in the midst of it all, the two men from Illinois and the five from Michigan made a party of their own. They traveled by themselves and usually camped by themselves. Now and then, however, they spent a night with other travelers.

Once they camped near a rather large handcart party. There were about 20 of the carts, which had started from a point on the Mississippi. Some of the handcarters were from Missouri, the others from across the river in Illinois. This party was headed, not for the Pike's Peak country, but for California. They expected to go by way of Santa Fe and then on by the southern route, through Arizona.

(To be continued.)

Grain and Hay Show

The dates for the second annual Northwest Grain and Hay show at Pendleton, have been set for September 18-23. Last year the greatest lot of threshed wheat was assembled there that was ever shown at one exhibition in the northwest. Montana, Idaho, Washington and California joined Oregon in participating in the show.

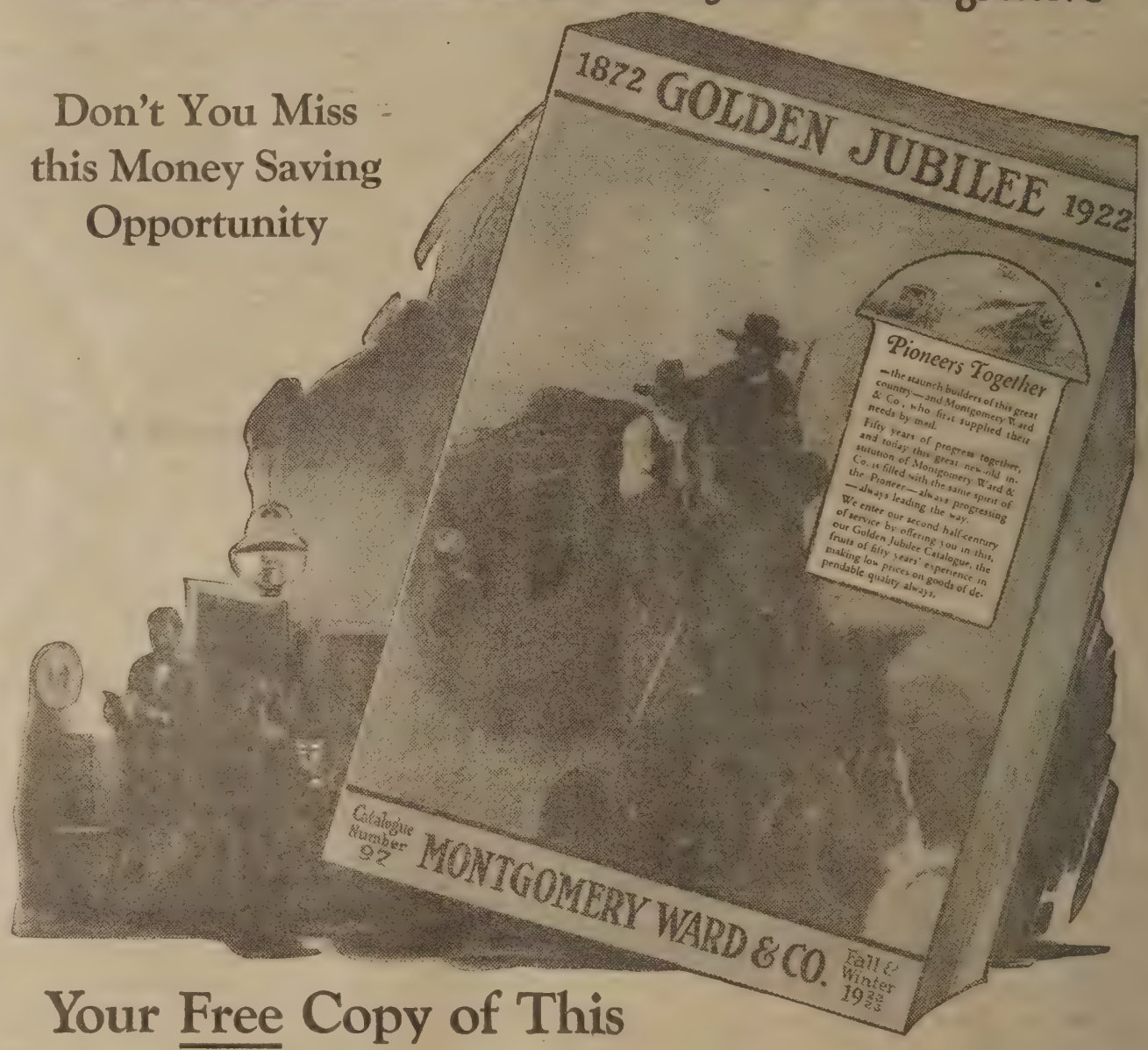
Most of the prizes were won by eastern Oregon. Gilliam county was among the prize winners, John Denison of Condon winning prizes in three different classes.

This year the management hopes to make the show better than its first attempt. The building in which the show is housed is rather unique. It takes four carloads of baled alfalfa to make the sides and ends and 16,000 square feet of canvas is used for the roof.

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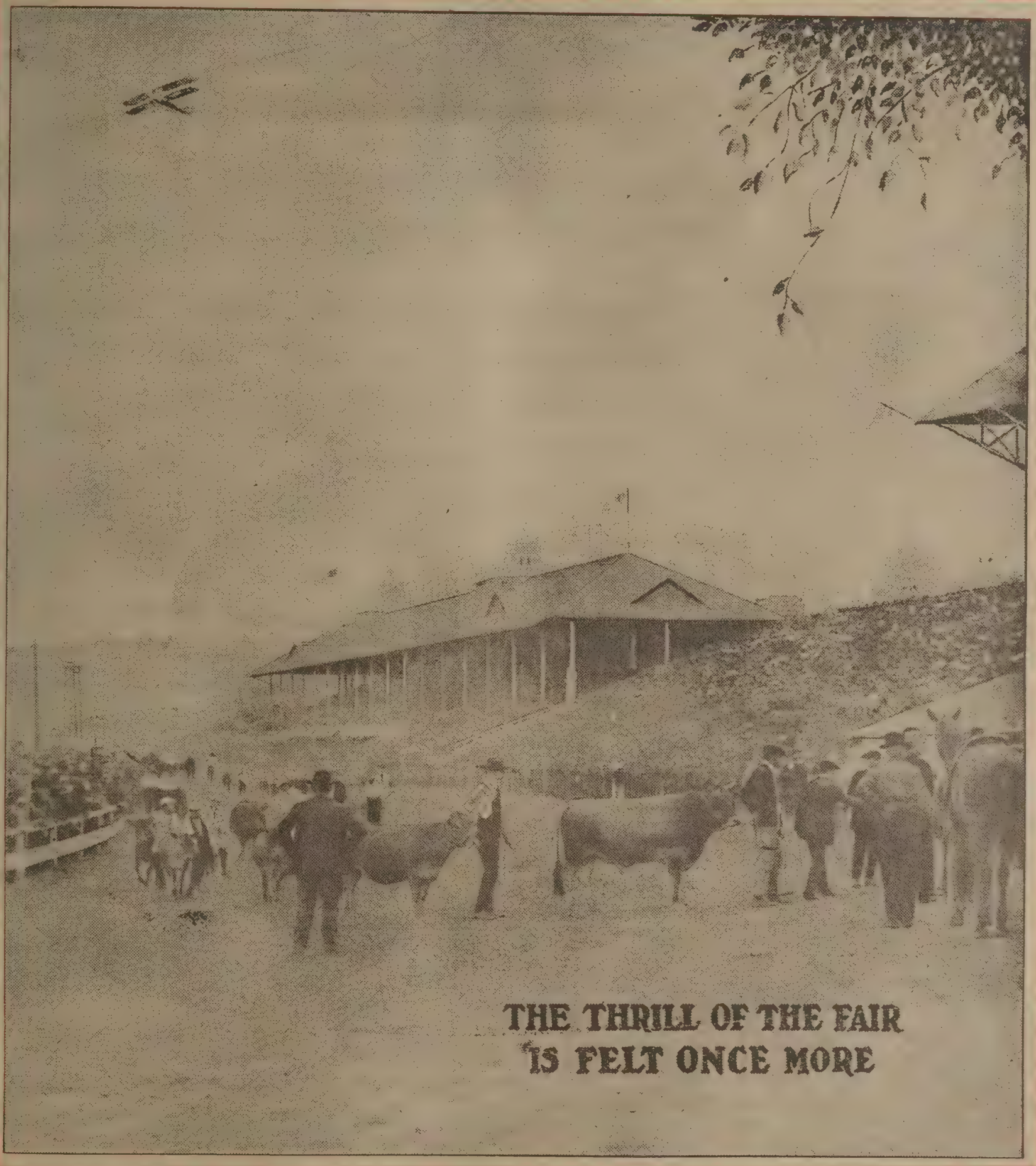
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AUGUST 24, 1922 Washington's Great Farm Magazine EVERY THURSDAY

THE WASHINGTON FARMER

ESTABLISHED 1894 SPOKANE. SEATTLE.



THE THRILL OF THE FAIR IS FELT ONCE MORE

The Farmer and His Wages

In the course of a talk before an eastern farm bureau recently Secretary of Agriculture Wallace said:

"It is worth while to compare wages in the organized industries with the wages received by the farmer, as represented in the price he gets for the things he grows. The value of income, whether it be in the form of wages or of money received for sales of products, is represented not in dollars and cents, but in what that income will buy by its purchasing power.

"Take the average wage received by the coal miner for mining a ton of coal. In 1913 this wage per ton would buy 1.1 bushels of corn in Iowa; in 1921 it would buy 2.5 bushels of corn in Iowa. In 1913 the ton wage would buy .7 of a bushel of wheat in North Dakota; in 1921 .9 of a bushel. In 1913 it would buy 4.7 pounds of cotton in Texas; in 1921 8.5 pounds. In 1913 7 pounds of hog in Nebraska; in 1921 14 pounds. In 1913 .8 of a bushel of potatoes in New York; in 1921 1.2 bushel. In 1913 11 pounds of sheep in Wyoming; in 1921 18 pounds. In 1913 1.6 bushels of oats in Illinois; in 1921 3.1 bushels. In 1913 2.4 pounds of butter in Missouri; in 1921 3.2 pounds.

"Taking the average yearly earnings of railroad employees, we find that in 1913 the yearly wage would buy 1492 bushels of corn in Iowa, and in 1921 4112 bushels. It would buy 1028 bushels of wheat in North Dakota in 1913; in 1921 1466 bushels. In 1913 it would buy 6449 pounds of cotton in Texas, and in 1921 13,934 pounds. It would buy in 1913 102 hundredweight of hogs in Nebraska, and in 1921 237 hundredweight. It would buy 148 hundredweight of sheep in Wyoming in 1913, and in 1921 296 hundredweight. In 1913 it would buy 1087 bushels of potatoes in New York; in 1921 1916 bushels. In 1913 2174 bushels of oats in Illinois; in 1921 5109 bushels. In 1913 3309 pounds of butter in Missouri; in 1921 5285 pounds.

"In 1913 the freight revenue per ton mile received by the railroads would buy 1.4 bushels of corn in Iowa; in 1921 this revenue per ton mile would buy 3.1 bushels of corn in Iowa. In 1913 1 bushel of wheat in North Dakota; in 1921 1.1 bushel. In 1913 6.1 pounds of cotton in Texas; in 1921 10.5 pounds. In 1913 10 pounds of hogs in Nebraska; in 1921 18 pounds. In 1913 1 bushel of potatoes in New York; in 1921 1.5 bushel. In 1913 14 pounds of sheep in Wyoming; in 1921 22 pounds. In 1913 2.1 bushels of oats in Illinois; in 1921 3.9 bushels. In 1913 3.1 pounds of butter in Missouri; in 1921 4 pounds.

"In 1913 the price of a ton of coal f. o. b. the mine would buy 2.4 bushels of corn in Iowa; in 1921 6.2 bushels; in July, 1922, 9.3 bushels. It would buy in 1913 1.7 bushels of wheat in North Dakota; in 1921 2.2 bushels; in July, 1922, 4.4 bushels. In 1913 it would buy 10.4 pounds of cotton in Texas; in 1921 21.1 pounds; in July, 1922, 22.9 pounds. In 1913 16 pounds of hogs in Nebraska; in 1921 36 pounds; in July, 1922, 53 pounds. In 1913 1.8 bushel of potatoes in New York; in 1921 2.9 bushels; in July, 1922, 4.7 bushels. In 1913 24 pounds of sheep in Wyoming; in 1921 45 pounds; in July, 1922, 70 pounds. In 1913 3.5 bushels of oats in Illinois; in 1921 7.7 bushels; in July, 1922, 14.2 bushels. In 1913 5.4 pounds of butter in Missouri; in 1921 8 pounds; in July, 1922, 16.1 pounds.

"In fairness it should be noted that before the corn, wheat, hogs, sheep, cotton, butter or other farm products get to the consumer's table, a good deal has been added to the price the farmer receives. This margin between the farmer and the consumer has considerably increased during the last eight years, but it is also fair to note that a good deal of this increase has been due to the increase in the wages paid the people who handle these products. What these figures show is that the wages of the farmer, as represented by the prices paid for his crops, are lower than his wages were before the war, measured in purchasing power, while the wages of the workman, and especially in organized industries, are considerably higher than they were before the war, whether measured in dollars and cents or in purchasing power. The purchasing power of the wages of the railway employee in 1921 was 51 per cent greater than in 1913. The purchasing power of the wages of the coal miner in 1921 was 30 per cent greater than in 1913. The purchasing power of the farm hand who works for wages in 1921 was 4 per cent less than 1913, while the purchasing power of the farmer himself was, on an average, from 25 to 45 per cent less than in 1913.

"In short, the farmers of the country, numbering almost one-third of our entire population, have borne altogether the heaviest burden of deflation. They have endeavored to get relief by all lawful means. They have appealed to the administration, to congress and to every other agency which they thought might be able to help them, but while making these efforts to avoid their heavy losses they have not struck. They have not created disorders. They have kept on producing and in the face of extraordinarily low prices have this year grown one of the largest crops in our entire history. The farmer believes in law and order. He believes in government. He belives in fairness between man and man. He believes in working hard and producing efficiently.

"If other groups would do as the farmer has done, our economic troubles would soon be over. Prices would soon be adjusted to their normal relationships. There would be work for everybody

"But there are too many people who seem to be thinking only of themselves and how they can profit at the expense of the community at large, and especially at the expense of the farmer. The farmer is sick and tired of this sort of business. He is disgusted with these recurring disputes between capital and labor, especially as connected with the essential industries. He sees no reason why such disputes can not and should not be settled in an orderly and lawful way and without the interruptions of service which cost him so dearly."

THE PRICE OF AN AUTOMOBILE.

One of the leading automobile manufacturers stated recently that during the month of June farmers throughout the United States bought approximately twice as many automobiles of his make as did any other class of citizens. Another manufacturer reported the farmer in second place as the buyer of automobiles of his make. While there may be many things that the farmer buys, a reduction in the price of which would be of greater benefit to him, it is significant that considerable reductions have been made by automobile manufacturers during recent weeks. Reductions announced by several manufacturers run all the way from $10 to as high as $300, depending upon the make and style of the machine. These reductions no doubt have enabled many farm families to buy cars who otherwise would have postponed purchase indefinitely.

FAIR AT SALT LAKE.

The Utah state fair will be held this year October 2-7 at Salt Lake city.

Visit Shorthorn Herds

The first annual Yakima Valley Shorthorn Breeders' association tour, held August 15, brought out a gathering of over 40 people interested in developing the breed's interests in the valley.

The first two stops were at Frank and Ethan Taylor's, some good calves being shown the visitors at the former place. Six especially fine heifers, sired by Lilou Lad, he by Gainsford Perfection, were inspected at the latter stop. These heifers were out of Henry Delaney cows. From there the pilgrims journeyed to Clarence Baker's, Sunnyside, where another good lot of calves, sired by Beau Cumberland, were shown. Several of the older cows in this herd were sired by a Golden Goods bull.

I. L. Jones of Grandview is the lucky owner of Lilou Lad, mentioned above, and is using him on his breeding cows. Lilou Lad's calves stamp him as a real sire. Mr. Jones' present calf crop, sired by Beau

(Continued on page twenty-three.)



Steadfast as the Oak Tree—Time's Judgment on the Colt "Gas Well"

THE oak tree is a living symbol of solidity, sturdiness and durability.

Only after an amazingly long and sturdy existence does it bow to the will of Time.

Having read about the marvelous COLT Lighting and Cooking Plant, you doubtless have wondered how *permanent* it is. How long it will continue to shed its incomparably beautiful white light. How long your wife will have that delightful city convenience of cooking, ironing and heating water by Carbide Gas. How simple will be its operation. How economical. How much attention will be required. How often you will have to call for service, replace parts and units, mend and repair. *In a word, how will the COLT weather the Test of Time.*

Let COLT users speak. They know. They speak from experience—*long* experience. And there are legions of them. Altogether close to a half million farmers and others in rural communities light and cook with this wonderful, non-poisonous Carbide Gas. Here are three letters out of scores that testify to the oak-like durability and sustained perfection of the COLT.

Twenty-four years' Service, practically no repairs

April 28, 1919.

J. B. Colt Co., New York City.

Gentlemen: — Answering your letter of recent date, will say: We have used your Colt Generator for about twenty-four years. It is a 200-light machine and we have 200 lights hanging on it. The Generator has given us the best of service in all this time. The machine has been doing its work at practically no cost to us for repairs of any kind. Very truly yours,

(Signed) P. R. JOHNSON.

There is the test of time.

Another letter from Bradford Norman, 5 West Marlborough Street, Newport, R. I., reads:

"J. B. Colt Co., New York, N. Y.
"Dear Sirs:

"Will you please send me one felt filter for my machine? This machine was installed over twenty years ago and has given perfect satisfaction during that time and the above order is the first expense outside operating (an occasional drum of carbide) that I have had to make."

The test of economy—less than one dollar in twenty years for part replacement!

After Ten Years, Works Like New

Cheapest and Best Farm Light

Shiloh, Ohio, May 22, 1920.

To whom it may concern:—

Ten years ago I had a J. B. Colt lighting system installed in my former home at Lexington, O., for which we used continuously during that time for both lights and cooking, and never cost one penny for repairs, to-day my younger brother lives there and it works as well as the day it was installed.

One year ago I purchased the farm where I now live, and one of the first things I did was to buy another J. B. Colt light plant and have it installed. I have my house and barns both lighted with it and wouldn't do without it for several times the cost, after ten years use I figure it the cheapest and best light for the farmer.

Very Respectfully Yours,
C. K. INK, Shiloh, Ohio

The Final Test

The Government needs for its beacon lights at the entrance of harbors and along rocky ocean shores the most dependable and economical lighting system it can procure. What light is used? CARBIDE LIGHTING! What generators? MOSTLY COLTS!

Simplicity and Economy

Feed the generator Carbide once in a while and run water into the water chamber—that's all you need do. The machine makes the gas automatically. *No continual replacement of parts and power units. No service necessary. Your Colt is a lifetime investment in reliability, simplicity and economy.*

The COLT comes from factory to farm—sold direct to you by COLT solicitors—no distributors or dealers to take a profit. This applies everywhere. A substantial saving here.

Don't Invest in Any System Until You Have Heard the Full Story of COLT

An investment in better light, better cooking, comfort, convenience and happiness indoors is the best investment you can make—*Get the FULL STORY of the COLT before you make that investment.* Send post card to address below today.

PAY IN A YEAR

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J. B. COLT COMPANY

30 East 42nd St., New York 8th and Brannan, San Francisco

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Oldest and largest manufacturers of Carbide Lighting-and-Cooking Plants in the World

CARBIDE LIGHTING-AND-COOKING PLANTS

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THE WASHINGTON FARMER

SUCCESSOR TO

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For Good Farming, Attractive Country Homes and Happy Country People

Skagit County Fair Sets 1922 Standard

West Side County Opens Season at Burlington With One of the Best Expositions in Its History

By RALPH ERSKINE

It takes good weather, a well-balanced entertainment program and clean concessions as well as a good live stock show to bring out a large attendance and make any fair a success. The Skagit county fair at Burlington last week had all of the above qualifications and was pronounced by far the best fair that has ever been staged in the history of the association.

The live stock department drew animals from other counties and states as well as attracting many local breeders. The great difficulty this year was in finding stall room for all comers and there were a number of horse entries that were turned away. Stalls were set up all along one side of the two live stock buildings for the overflow of the cattle barn and some were housed in an annex at the rear. Next year the association intends to have plenty of room for all comers.

"The association received splendid cooperation from departmental superintendents," said W. J. S. Gordon, secretary of the fair, "and without such dependable aid it would have been impossible to put on a successful fair." A list of these departmental heads and the board of directors follows:

The horse department, Dr. C. S. Phillips; cattle, Thomas G. Lockhart; swine, sheep and goats, Oliver Currier; poultry, C. L. Murdey of Mount Vernon, and agriculture and farm products. E. D. Hunter of Burlington. The board of directors are: Nels Anderson, Bow; W. S. Deighton, Mount Vernon; Pete Omdahl; A. P. Johnson, Bow; W. E. Jennings, LaConner; E. G. Ludwick, Sedro-Woolley; T. G. Lockhart, Mount Vernon; D. M. Donnelly, J. H. Gould, Burlington; W. J. S. Gorgon, Mount Vernon; Dr. C. S. Phillips, Mount Vernon, and E. L. Wilson, Burlington. The ladies' auxiliary department was made up of Mrs. George A. Pringle, Burlington, president; Mrs. W. E. Jennings, Mount Vernon, vice president, and Mrs. W. L. Jackson, Burlington, secretary.

Good Poultry Show.

Although there were not quite the same number of birds in the poultry department as there were last year, the quality of the exhibit is said to be superior to any show ever held in the county. There were 440 chickens, 34 ducks, 9 turkeys and 4 geese, as well as a large display of rabbits. Many of the birds came from local poultrymen, but the show also attracted out-of-town breeders.

Some of the outstanding poultry awards were: Champion pen of old birds, a pen of Rhode Island Reds owned by Mrs. J. C. Boyce, Seattle; champion young pen, Mrs. Joe Bronsel, Mount Vernon; best hen, R. C. Simpson of Seattle, on a Buff Orpington. Best cock was won by J. C. McKennedy of Mount Vernon, while the best cockerel award went to Carl Carpenter of Mechias. Mrs. Bronsel had the best pullet of the show.

The Live Stock Show.

The live stock department of the fair this year was better in quality of the stock as well as there being a larger number of entries. There were four dairy breeds, the largest representation being in the Holstein classes. There was also some keen competition in the Jersey classes. Dr. McRae Smith of Berlingham entered his herd of Guernseys in competition with local herds and the Ayrshires came from the E. W. VanTassel herd at Wenatchee. George S. Bulkley of the Carnation company judged the classes of dairy breeds.

Holsteins—There were 68 head in the Holstein show, which made a strong exhibit of this breed. All of the classes were well filled, especially the class of senior heifer calves, which had 18 individuals. George S. Bulkley, who judged all dairy cattle, said that it was one of the strongest classes he had ever seen at a small fair and was certainly a credit to the community.

The senior and grand champion bull honor went to William Bishop of Chimacum, Jefferson county, on Skagit Korndyke Vale Pietertje. This animal is a five-year-old, a grandson of King of the Pontiacs and Sadie Vale Concordia, the first 30-pound cow. The bull has a wonderful conformation, shows a great capacity and has exceptionally fine handling quality.

Lee Brothers won the silver cup offered senior grand champion cow, Duchess Nena Mechthilde. She is a 4-year-old and out of the same dam as Nena Newman Cornucopia, the former world's champion 3-year-old for milk production. The animal won her placing on her excellent dairy type and conformation and a well-formed and well-placed udder.

Other breeders who deserve mention here are the following, who brought out some of their young Holsteins and a few to fill some of the older classes: Dr. E. E. Heg & Sons of East Stanwood; Youngquist Brothers of Mount Vernon; R. E. Waugh of Burlington; A. J. Lawson of Blanchard; F. N. Gallacher of Mount Vernon; Tom Lockhart of Mount Vernon, and the Northern State hospital at Sedro-Woolley.

Lee Brothers won the silver cup offered for the best senior dairy herd in the show. The cup was given by the Carnation stock farms.

Guernseys—The Guernsey classes were filled by five breeders: Enos Barrett, H. H. Anderson, J. M. Miller, Johnson Brothers and Dr. A. McRae Smith, all being local breeders except Dr. Smith, who is of Bellingham.

The junior and grand champion bull was Faircrest LaFrance's Rival, an 8-month-old calf from the Dr. Smith herd. He is a son of LaFrance of Bralee, the senior and grand champion female. Mr. Bulkley, when placing the animals, said that it was a very unusual occurrence that an animal so young be placed above an older animal, but the quality and type of the young bull was outstanding. The senior champion bull yas Chicona Lucifer, a 6-year-old animal in the Miller herd. This animal was grand champion last year at the same fair. Mr. Miller showed 11 head of his registered Guernseys, which showed splendid dairy type and quality.

Ayrshires—All of the Ayrshire classes were filled by E. W. VanTassel of Wenatchee. His junior yearling bull, Peter Pan's Choice, wan grand champion and Glen Garry's Scottish Queen was senior and grand champion female. She is 7 years old. The dam of the grand champion bull holds ninth place in the 3-year-old class with a record of 13,740 pounds of milk and 533.5 pounds of butter. All of the animals in this herd show excellent type and quality.

Dual Purpose Breeds.

Red Polled—The Red Polled classes were filled by the F. H. Porter herd of Halsey, Ore. In this herd were 15 animals, which filled all of the classes listed. The senior and grand champion bull, Peach Knot, is a 4-year-old animal from the Jean Duluth herd of Minnesota.

Milking Shorthorns—There were two herds of milking Shorthorns exhibited, namely, the 13 head from the Northwood farms at Redmond and the 15 head from the E. C. Truesdale herd at Chehalis. The former herd had the grand champion bull, Gretna Challenger, a typy 4-year-old animal, and the senior and grand champion female, Lilly L. 3d, one of the foundation cows.

The animals in the Truesdale herd won several firsts and seconds and some of the group classes. It is interesting to note that there was but $6.50 difference in the prize money awarded. Both of these herds showed fine milking Shorthorn characteristics and had some excellent classes.

In the Beef Barns.

Aberdeen Angus—The beef breeds were represented by outside breeders as well as local herds. The Aberdeen Angus were shown by J. A. Scollard of Chehalis, who brought out his show herd of typy animals. His senior and grand champion bull, Ericaman C. B. 5th, was in splendid condition and made a fine showing. Rose of Rosemere 8th was senior and grand champion female. She is a 2-year-old, a very typy individual. There were 11 head entered in these classes.

Shorthorns—One herd of Shorthorns was shown, four head form J. H. Hulbert's farm at La Conner. The grand champion bull was Premier Champion, a junior yearling, while Hercules Violet 2d, also a junior yearling, was grand champion female.

No Herefords were shown.

A Great Horse Show.

The horse show was a creditable exhibit and was made up entirely of animals from local farmers. Most of the entries were high grade mares from farmers who showed from one to four head with perhaps one or two head of colts. There were 20 different exhibitors in all and the quality of stock which they brought out was far superior to anything ever shown in the county before.

There were 50 head of horses shown, some of which were entered as teams. The mare and colt classes, however, made up the greater part of the show. Dudley Kroumar, the 5-year-old Percheron stallion owned by J. H. Hulbert of Laconner, was the sire of 13 out of the 14 colts shown.

"We could have had twice the number of horses this year if we had had the room for them," said Dr. C. S. Phillips, who was in charge of the horse department. "We were actually surprised to know that there were so many horses of show type in the county. Next year we expect to have more room and a larger display for all classes of live stock."

Four Swine Breeds.

There were four breeds of hogs shown, Poland China, Berkshire, Chester White and Hamshire. Henry Vercoe and C. C. Woolen of Burlington showed the Poland Chinas, the former having the largest number and taking the highest awards. Thomas Lockhart and J. E. Perin showed the Berkshires, the former getting grand champion sow and Perin taking the sweepstakes on a senior yearling boar. C. L. Murdey of Mount Vernon was the only exhibitor in the Chester White breed and took all awards in the classes filled. William Joyce showed his herd of Hampshire hogs and took all of the awards in that breed.

Small Sheep Show.

The classes in Shropshire sheep were filled by William Schroder of Mount Vernon, who also took the sweepstakes on his exhibit. Thomas Lockhart showed part of his flock of Hampshires and took the grand champion ram and ewe awards.

Agricultural Products.

The agricultural exhibits were especially good this year and excelled last year's display in the quality of the products and the beauty of arrangement. The individual farm displays were shown as a new feature and brought out a number of additional entries. First prize in this class was won by H. L. Willis of Mount Vernon, while the Mount Vernon Garden company took second and Mrs. S. P. Walsh of Anacortes third. The Northern state farm at Sedro-Woolley sent in a very complete display in this class and took fourth place. C. J. Johnson of Mount Vernon won the special prize of $20 for the best sheaf of oats.

The Skagit Valley Seed Growers' association fitted up a special booth displaying their seed crops; showing all of the seeds that are being produced in the county under a five-year contract.

The Fruit Show.

The fruit exhibit was very good this year and in spite of the late season there were a large variety of apples and pears shown. The early apples were particularly good. There was also a fine exhibit of soft fruits, such as berries, cherries and others, that went to show what interest was taken in the varieties in the county.

There was a large variey of grains dislayed in different parts of the building, but there was one booth fitted up by the help of a number of farmers and E. D. Hunter, the county horticultural inspector. This display contained varieties of oats, barley, rye and wheat, all of which had been collected this year.

Extension Service Display.

A booth was fitted to show the work

(Continued on page twenty.)

Fairs for Washington Folks to Attend

The first fair of the season in this state was held last week, the Skagit county fair at Burlington. Others follow in rapid succession, inviting the people of the state to take leave of their many duties for a few days and mingle with their friends, enjoy the entertainment and store away information that will be of value throughout the coming and future years. The following list of fairs and shows was compiled by the extension service of the state college:

FAIR.	PLACE.	DATE.
Skagit county	Burlington	Aug. 14-19
Southwest Washington	Chehalis	Aug. 28-Sept. 2
Interstate	Spokane	Sept. 4-9
Grays Harbor county	Elma	Sept. 5-9
Walla Walla agricultural	Walla Walla	Sept. 11-15
Kittitas county	Ellensburg	Sept. 14-16
Community	Tolt	Sept. 14-16
Mabton hay	Mabton	Sept. 14-16
Prosser corn and hog	Prosser	Sept. 14-16
Frances community	Frances	Sept. 16
Clallam county	Port Angeles	Sept. 14-16
Halls lake community	Snohomish county	Sept. 15-17
Washington state	Yakima	Sept. 18-23
Willapa community	Willapa	Sept. 22-23
Tenino community	Tenino	Sept. 22-23
Bothell community	Bothell	Sept. 25-27
Spurgeon creek community	Thurston county	Sept. 26
King county	Newaukum	Sept. 28-30
Schneiders prairie	Thurston county	Sept. 28
Stevens county	Colville	Sept. 26-29
Snohomish county	Granite Falls	Sept. 25-30
Whatcom county	Lynden	Sept. 25-30
Yelm community	Yelm	Sept. 28-30
Cowlitz county	Woodland	Sept. 27-30
Cranberrian community	Long Beach	Sept. 29-30
Klickitat county	Goldendale	Oct. 4-7
Western Washington	Puyallup	Oct. 2-7
South Bay community	Thurston county	Oct. 3
Menlo community	Pacific county	Oct. 5-7
Pend Oreille county	Dalkena	Oct. 5-7
Snohomish county breeders'	Everett	Oct. 12-14
Chinook community	Pacific county	Oct. 6-7
Wahkiakum county	Skamokawa	Oct. 12-14

In addition to the foregoing there are many smaller events the dates and places of which have not become available. There are also the two great winter live stock shows and the three neighboring state fairs in which interest is keen:

Idaho State	Boise	September 25-30
Oregon State	Salem	September 25-30
Montana State	Helena	September 25-30
Western Royal Live Stock	Spokane	Oct. 28-Nov. 2
Pacific International	Portland	November 4-11

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We guarantee every subscriber against loss through dishonesty or swindle by any advertiser in this publication; we do not attempt, however, to adjust trifling differences between subscribers and honest, responsible bankrupts. Complaints must be sent to us within 30 days from the date of the transaction and the subscriber must have mentioned The Washington Farmer when writing the advertiser. This guarantee applies to live stock, except that we will not be responsible for claims for damages on account of diseases in stock sold through these columns.

Prepare Ye the Way

Who shall come forth as the commanding leader of the agricultural industry of the state of Washington?

The morals as well as the economics of farming must be united in that leadership. Understanding and courage must unite in placing the agricultural industry of the state upon the high stand where it belongs.

That leader must be able to say "no" and stick to it, as well as to say "yes" with the crowd.

Following an unalterable purpose, that leader must vary his program from day to day, from year to year—no man is wise enough to map out the agricultural program in America for the next five or 10 years.

Bedrock knowledge is necessary in such a leader, but bedrock courage is yet more necessary.

That leader will warn against obvious failures in farming as well as quicken enthusiasm toward successful farming.

That leader will formulate policies which will protect the unwary, as well as to formulate other policies which will limit the power of farm lords.

These policies will have to receive the support of the voters at the polls, become laws of the state, but some one of paramount ability and honesty of purpose must initiate them, must fight for them, must gather the hosts to their support.

The coming leader of the agricultural industry in the state of Washington must not be an office-seeker nor an office accepter; he must possess persuasiveness as well as courage; he must smile when another would get mad; he must devise more than one way to the desired end; the vision of the future must lighten his way through the darkness of the present; he must even put apart from his soul the pride of martyrdom.

Shall we look with searching eyes for the coming leader of the agricultural industry in the state of Washington? Shall our prayers be unceasing that he may appear and shall his disciples go forth two by two without scrip or purse?

You may say that this is wholly impracticable and visionary, that the genius of the day is the highly-paid promoter and publicity agent, that even the missionary is worthy of his hire.

So be it!

But tell me when gold inspired unselfishness. Tell me when mother-love has been born of shekels.

All the institutions, even the most beneficent in their origin, finally settle down to more or less of barter and trade. But no beneficent institution was ever born of barter and trade.

Who shall lead the farmers of the state, not primarily into wealth, but into the way of joyful serving, into the way of happy homes, into the way of community helpfulness, into the way of neighborly cooperation?

Some things always are to be added when a worth-while work has been accomplished, but those same things do not establish the work.

We have yet to see the commanding leader of the agricultural industry in the state of Washington. He will not appear until his need is uppermost. The way must be prepared for him. Forerunners will preach his coming in the desert land.

This is as it has been and that which has been, it is that which shall be.

False prophets may appear, but in the ripeness of time the true leader will come forth, for farming is a part of God's business.

More Than a Good Time

The fair offers to those who attend much more than a good time. It offers this, to be sure, but in addition there is the opportunity to grasp new ideas that may be applied to farm life the coming year with worth-while benefit.

It is thrilling to see the airplane loop the loop; to see the big tractor pull up the steep incline and turn on a spot little larger than itself; to see the sheep dog drive a herd of his charges before the grandstand in the live stock parade. But these thrills are more or less temporary in their value. The thing of value is the idea that can be carried home and applied in one way or another to better living.

It may be that the dairyman will discover a better method of milking his cows than he has formerly used. He may get an idea for greater convenience and sanitation in his barn.

The housewife may see a demonstration of a labor saver that she can buy reasonably or make easily that will save her many steps during the year or enable her to get her work done in fewer hours so that a little more time can be spent in rest or reading.

It may be that the boy or girl will see something that will give a stimulus that will follow them throughout their entire lives. Ideas of how the farm and its work may be made more enjoyable and worth while may be grasped with the result that these boys and girls will see the desirability of remaining on the farm and developing modern homes for the future, rather than leaving for the city where opportunities are much less golden than they appear.

Go to the fair! Take the entire family! Live at the hotels if you want to; take your camping outfit if you prefer. But go to the fair! Take enough time off from your work to make it a period of recreation and education.

The Farmer's Automobile

In Europe few low-priced automobiles are made and only the man of means is able to own his own motor car. Over there cars are confined almost exclusively to pleasure uses, while in the United States the motor car has come to be regarded as an economic necessity. In the United States automobiles are owned and enjoyed by all classes of our citizenship—by the farmer as well as by the banker, by the wage earner as well as by the manufacturer.

The result is that five-sixths of all the registered motor cars and trucks in the world are in use in the United States. A recent statement by the U. S. department of commerce shows that 10,448,632 motor cars and trucks are registered in this country, while in all foreign countries combined there are only 2,081,784. Canada, with a registration of 463,848, is the next largest user, followed by Great Britain and Ireland with 463,600, France with 235,948, Germany with 91,390, Australia with 84,000, Argentina with 72,206 and Italy with 53,600. In the United States there is one car registered to every 11 of the population; in Canada, one to every 21, and in Great Britain and Ireland, one to every 110 persons.

There is, however, another reason than the financial one for the much higher percentage of cars in this country than in Europe. European countries are small and farmers and other producers have relatively short hauls to market and over good roads. In France and other western European countries the farmers congregate in villages and seldom live directly upon their holdings. There is not, therefore, the necessity of a frequent trip to town for supplies, repairs, etc.

Public opinion, moreover, is a factor in this matter. In France and Belgium, for instance, a farmer who would buy an automobile would be looked upon by his neighbors as reckless and extravagant. In the United States the purchase of an automobile is usually good business by the American farmer. It is a great time-saver as well as a means of pleasure for the farmer and his family on Sundays and holidays.

Of course there are instances where the buying of an automobile by some farmers is an act of bad judgment. But in this matter, as in all other human relations, circumstances alter cases. What is extravagant for one person may be good business for another, but in the aggregate the automobile has become a valuable aid to the farm and brings with it the added benefit of making the farm home more attractive to the farmer's wife, daughters and sons.

State Farm News

According to the report of County Agent A. E. Lovett to the Yakima county commission, Lovett, home demonstration agent; Edna M. Ladwig and County Club Agent E. C. Scott, in July spent more than half the time in the field and made 140 visits, received 81 personal calls at headquarters, answered 104 telephone calls and reached 349 persons in the county.

The seriousness of the red spider invasion of county orchards was the outstanding feature of the field report. Lovett says that he has sent for a specialist from the government entomology department to help work out some control for this new pest.

* * *

During a cow testing association tour held by County Agent A. B. Nystrom of King county, the visitors were shown a purebred Holstein bull with nine daughters that averaged over 500 pounds of fat for the year. The bull is owned by the Methow Valley farm.

* * *

Several live stock breeders met at Garfield recently and formed the Garfield Live Stock association. The association will hold a stock show in October.

The following officers were elected: J. H. McCroskey, Garfield, president; Dr. W. N. Divine, Elberton, vice president; Dr. A. P. Galbraith, Garfield, manager; A. P. Johnson, Steve Shoemaker, George Imler, J. E. Thimble, George Ickez, Robert C. McCroskey, H. S. Curtis, William Duling, Charles Walters, Clarence Kribel, Howard Webster, George Draper, J. E. Love, R. V. Perringer, L. P. Sain and Nat Williamson, directors.

* * *

Prices for packing pears, which are being harvested throughout the Yakima valley, will be 5 cents a box, the labor committee of the Yakima Traffic and Credit association has announced.

* * *

The Daybreak Dairy ranch of 320 acres, one of the most improved farms in Clarke county, owned and operated for a number of years by A. D. Calkins and Mrs. N. Riggs, near Pioneer, has been sold to Mr. and Mrs. Pircie, proprietors of the Hotel Upton at Upton, Wyo. The consideration was $45,000, eastern income property at Upton, Wyo., being taken in exchange.

* * *

Eighteen bushels to the acre on 140 acres of hybrid No. 143 was the first yield to be reported in the Pullman vicinity this year, coming from the Gordon Klemgard farm, west of Pullman.

* * *

Wilbur claims to be the only town of its size in eastern Washington to own and operate a municipal farm. The city purchased 140 acres in 1898 and part of the property has been used for a fairground.

In 1911 the city seeded 31 acres and since that time the returns have made the farm a profitable asset. A smaller field in the property has also been cultivated.

* * *

County Agent Oldroyd of Pierce county reports that 60 cows are being tested for butterfat production at Gig Harbor. The work is being performed by C. A. Barker, principal of the grade school. Three of the cows under test will go to the butcher.

* * *

Another trainload of Yakima valley lambs started for Chicago market August 10. The Yakima Sheep company loaded eight cars at Cle Elum, Kemp & Pryor added six cars to the train at Yakima, and 17 more were consolidated at Toppenish, being shipped by William McGuffie and N. Jenses. The train left that point with 31 cars and a tourist sleeper which will be used by the shippers.

* * *

According to an announcement of the Cowlitz Produce company of Winlock a carload of Winlock eggs will be shipped every eight days to the Hawaiian islands, under contract, and under the trade mark of "Winlock Eggs."

* * *

New fruit storage and shipping warehouses, having a capacity of more than 600 carloads, are being built in north central Washington this season. In Wenatchee the Fruit Growers' Service company is building a 50x90-foot warehouse, consisting of two stories and basement. This will have a capacity of 70 carloads of apples. At Omak a new one-story frame warehouse 50x130 feet is being built. A similar structure is being erected at Omak by Keller & Peterson. At Okanogan, Clair Ward, who represents G. M. H. Wagner & Sons, is building a 50x90 warehouse, with a capacity of 50 carloads.

Three new warehouses are being built at Chelan station, where more building activity is noted than at any other point in the entire district. One of the buildings is a brick structure 50x154 feet. The Lake Chelan Fruit Growers are building a modern warehouse of brick and concrete, 50x126 feet. The Isenhart Bros. company is also building a brick and concrete warehouse at Chelan station.

FARM BUSINESS AND MARKETS OUTLOOK

Cattle Supply at High Mark.

The rail strike undoubtedly is retarding the movement of cattle to market, nevertheless receipts at the seven leading markets last calendar week were the largest of the year and 15 per cent above the average for the corresponding week in the last eight years. The run of southwestern grassers at Kansas City is extremely heavy and the first good sized run of western rangers of the season arrived at Chicago and Omaha.

All classes of steers declined slightly under the heavy run, the loss being greatest on lower grades. Shortfeds are meeting competition from the best rangers.

In the last few days receipts have dwindled again, due, it is reported, to the rail situation and prices have hardened, the top at Chicago again reaching $10.85, the high point of the year. If the rail strike is settled it is likely to mean a sudden increase in receipts. Quite aside from this factor further increase in receipts is probable in the next two months if events follow a normal course.

Cows, heifers and bulls fluctuated while light vealers advanced to the highest prices of the summer at Chicago

Cattle Feeders Buying Briskly.

Cattle feeders are buying more briskly every week. The movement from the twelve leading markets in the five weeks ending August 5 totaled 241,472 head, compared with 126,262 in the same period last year and 178,929 two years ago. In 1917, 1918 and 1919 the movement to the country at this season was about as heavy as at present. Most of the western rangers thus far have been only in feeder finish and Canadian cattle have found the same outlet. These arrivals have increased the available supply of well bred thin steers materially. It is reported that an unusual amount of direct buying on the range is under way at prices around $6 to 6.50 per 100 pounds. A profitable outlet for thin steers throughout the fall is probable.

Hog Market Unstable.

The hog market rallied early last week due to light receipts, but the demand is spasmodic and most of the advance was lost again. Choice light hogs have fluctuated most owing to uneven shipping demand. Receipts at the eleven leading markets last week equaled the previous record for the corresponding period in previous years running back to 1906.

Smoked meats and lard are being moved in to consumption fairly rapidly. Stocks are not extremely heavy, but with fresh receipts of hogs of exceptional size, the total supply of hog meats available is considerably above the average for this season of the year. Foreign buying is fairly broad and if German financial affairs were in better shape, this outlet would broaden still further, as foreign stocks are reported to be light.

Hog prices are due for a sharp decline from the present level in about two months. The course of the market meanwhile may be either up or down depending upon the volume of receipts.

Thin Lambs Outsell Fat Ones.

Top prices on feeder lambs were higher than on fat lambs at Chicago during part of last week. The same thing occurred in the early fall of 1920 with a price level not much higher than at present and the results were disastrous. Thus far, however, the number taken out has not kept pace with the same period two years ago. Shipments of feeders from the 12 leading markets in the five weeks ending August 5 totaled 194,898 head, compared with 128,454 head in the corresponding period last year and 282,027 head two years ago.

For the last four weeks receipts of sheep and lambs have been below the average for the corresponding period in previous years. This may have been due to a retarded movement because of rail conditions on the long haul from the range states, to the movement of thin lambs being late in reaching the flood tide stage, to small size in the range crop or to other causes. As long as conditions remain as abnormal as at present, price trends will be uncertain, but if receipts continue to fall below normal and feeders continue rampant to get into the lamb feeding game, lower prices on finished stuff are unlikely.

Horse Markets More Active.

Horse markets have been more active recently, although prices have not responded much. Eastern cities are buying with fair freedom, the lumber sections are after big horses and a prospect of resumption of coal mining has improved the demand for horses as well as mules. Farm prices as reported each month by the department of agriculture have advanced about eight per cent in the last few months.

CHICAGO.—Good and choice drafters, $200@300; common and medium drafters, $100@200; 1350 to 1550 pound chunks, $110@170; good and choice wagon horses, $100@165; farm chunks, $75@150.

Wool Market Strengthens.

The wool market is becoming active again and the amount changing hands at seaboard markets is fairly large. Mills have covered their needs for about three months ahead and are buying leisurely, but more or less steadily. Prospects of a high permanent tariff are favorable which means a continued strong situation for the domestic clip.

The woolen goods market is in good shape in spite of strike conditions. Mills have had enough coal thus far so that there has been no curtailment from that cause.

Wheat Needs Foreign Outlet.

Foreign buying of the United States wheat surplus has failed to reach the breadth expected and the lack of this outlet has been mainly responsible for the decline in wheat prices practically to the "dollar" mark at Chicago and Minneapolis.

Receipts at primary markets since the new crop started to move have been about one-third larger than the average for the corresponding period in past years. Since this is normally the season of largest sales, the burden has been unusually heavy. Domestic mills are grinding about 12,000,000 bushels weekly, compared with approximately 8,000,000 bushels at the end of June. Flour production in the week ending July 29 amounted to 2,489,000 barrels compared with an average of 2,100,000 barrels in the corresponding week in the four preceding years. While the increase has been marked there is no extensive buying of flour for later requirements so that mills have not been contracting wheat freely for future use.

Expansion in the export outlet has been much less satisfactory than in the milling demand. July exports from the United States were approximately 17,000,000 bushels. August promises to exceed that figure, but the amount is much less than at this time last year

Foreign finances are in a deplorable state and this is the chief limiting factor in the demand from abroad. There is every indication that foreign needs are large—as large as or larger than the surpluses available for export, but since the European harvest is now under way and since Argentina still has a small balance to ship, the amounts immediately necessary from North America have not been as large as the amount of surplus wheat pressing on the market.

Eventually, Europe must come to North America and the time is believed to be not far away. "Dollar wheat" may mark the turning point. It would be useless to look for a pronounced upturn in prices, however, in view of the impaired finances of central Europe with the German mark at nearly 1000 to a dollar. Canada has even more surplus wheat than the United States and harvest is starting in that country. The plan to handle the crop through a special wheat board has been abandoned so that Canada will soon be a serious competitor.

Corn Distribution Is Enormous.

The rate of distribution of corn continues far above the average. Receipts of corn in the last four months have been far above normal for the corresponding period. At the same time more than the usual decrease has taken place in the visible supply at terminals so that the latter is no longer burdensome.

Corn prices have declined about 10 cents a bushel in the last two months. The improvement in the crop prospect and the slump in wheat values were responsible. The price is not as low as at one time last fall, but seems to be on solid bottom in view of the breadth of demand. Hot, dry weather has damaged the crop recently.

Oats Movement Below Average.

Receipts of new oats at primary markets are increasing, but the movement thus far has been matetrially below the average for the corresponding period in previous years. The price is the lowest in years and producers are selling reluctantly.

Cash grain prices—The range of cash grain prices for the week ending August 16 follows: Chicago—Wheat: No. 2 red, $1.02 1-4@1.09 1-2; No. 3 red, $1.00 1-2@1.08 1-4; No. 2 hard, $1.03@1.10 1-2; No. 3 hard, $1.03@1.09 1-4. Corn: No. 2 mixed, 60 1-4@62 1-2c; No. 3 mixed, 60 1-4@62c; No. 2 yellow, 62 1-4@63 3-4c; No. 3 yellow, 61@62 1-4c. Oats: No. 2 white, 31@34 1-2c; No. 3 white, 29 3-4@34c; No. 4 white, 29@32c. Rye: No. 3, 71 1-4@75 3-4c. Barley: 48@59c.

Feed markets are quiet with buying limited to immediate needs. Cottonseed meal from the new crop is being offered at $3 below prompt shipment price. The linseed meal market is weak.

Prices per ton (100 pound bags) in carlots: Chicago—Bran, $17.25; standard middlings, $20; flour middlings, $26; cottonseed meal, 36 per cent, $39; 43 per cent, $43; hominy feed, $25.50; gluten feed, $29.80; old process oil meal, $47.50; tankage, $55.

Light Receipts at Hay Markets.

Hay prices are steady as a result of light receipts. Demand is light as forage and pastures are generally abundant, although some sections are in need of rain.

Price per ton in carlots: Chicago—No. 1 timothy, $24@25; No. 2, $21@23; No. 3, $18@20; No. 1 light clover mixed, $23@24; No. 1 clover, $15@17; No. 1 clover mixed, $15@18; upland prairie, $14@18; midland prairie, $12@16; rye straw, $10.50@11.50; oat and wheat straw, $8@10.

Egg Markets Improving.

Conditions in the fresh egg market are improving and prices in the last few days have been stronger than for several weeks. Receipts are only about one-third as large as at the high mark of the season with a further contraction of 15 or 20 per cent in prospect in the next six weeks. The direction of the current of storage egg movement is now out-bound.

CHICAGO.—Eggs—Fresh firsts, 22@22 1-2c; ordinary firsts, 19@20c. Live poultry—Hens, 23c; broilers, 24 1-2c; springers, 27c; roosters, 15c; ducks, 21c; geese, 14c; turkeys, 25c.

Butter Market Breaks and Rallies.

An increase in receipts of butter and issuance of a report showing 20,000,000 pounds or 25 per cent more butter in storage on August 1 than last year caused prices to drop to a new low for the year last week, but most of the loss was recovered before the close. The seasonal decrease in production is taking place, although the movement into storage remains fairly heavy. In spite of heavy production the increase in storage stocks during July was slightly less than the five-year average increase for that month, showing that butter is going into consumption rapidly.

Prices for 92 score fresh butter on August 16 were: Chicago, 33 3-4c; New York, 34 3-4c; Boston, 36c; Philadelphia, 35 1-2c.

Cheese Holdings Below Average.

Receipts of cheese increased last week to the largest in a month and a half and embargoes on perishable goods on some of the railroads interfered with distribution so that prices weakened. Large blocks of cheese could only be moved at concessions, as dealers lacked confidence. The decline is not expected to extend far.

Prices for No. 1 American cheese on August 1 were: CHICAGO.—Twins, 19@19 1-2c; S. Daisies, 19@19 1-2c; D. Daisies, 18 1-2@19c; Young Americas, 19 1-2@20c; Longhorns, 19 1-2@19 3-4c; Square Prints, 20 1-2@21c.

Fruits and Vegetables.

Carlot shipments of potatoes in the week ending August 12 totaled 4341 cars, compared with 3860 cars in the same week last year, 3006 cars two years ago and 2942 cars three years ago. New Jersey is by far the leading state at present, but shipments are increasing from Kansas, Minnesota, Idaho and Colorado. Prices on Early Ohios range from 90 cents to $1.10 per 100 pounds, sacked, on the Chicago carlot market.

The detailed forecast on the apple crop shows 13,437,000 barrels in the boxed apple states, compared with 13,819,000 barrels last year. The barrel shipping states are credited with 19,965,000 barrels, compared with 7,385,000 barrels last year. The carlot movement of apples this year up to August 12 amounts to 4787 cars, compared with 2472 cars last year, the increase being entirely from the barrel shipping states.

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Live Stock Prices for the Week Ending August 16

	Chicago.	Spokane.	Portland.	N. S. Lake.
CATTLE.				
Choice, prime heavy steers (1100 lb. up)	10.00@10.85	.....	.....	.....
Good heavy steers	9.00@10.25	.....	.....	.....
Medium heavy steers	8.00@ 9.25	.....	.....	.....
Common heavy steers	6.50@ 8.25	.....	.....	.....
Choice, prime light steers (1100 lb. d'n)	10.00@10.85	.....	.....	.....
Good light steers	9.00@10.25	.....	.....	.....
Medium light steers	8.00@ 9.10	6.50@ 7.50	7.00@ 8.25	6.50@ 7.00
Common light steers	6.40@ 8.10	4.00@ 6.75	5.00@ 7.00	4.75@ 6.75
Common to choice butcher heifers	5.00@ 9.00	3.50@ 6.00	3.75@ 6.00	3.75@ 5.75
Common to choice butcher cows	3.90@ 8.35	2.75@ 5.00	3.00@ 5.00	2.75@ 5.00
Bologna and beef bulls	3.65@ 6.50	2.75@ 4.50	3.00@ 3.75	2.00@ 3.00
Canners and cutters, cows and heifers	2.50@ 4.15	1.50@ 2.50	1.50@ 3.00	1.50@ 3.25
Canner steers	3.75@ 5.00	2.00@ 3.50	2.00@ 3.50	2.50@ 3.50
Medium to choice light veals	9.00@12.00	7.00@ 8.50	7.00@ 8.50	7.50@ 8.50
Common to choice heavy veals	4.00@ 8.50	5.00@ 7.00	4.00@ 6.50	.....
Common to choice feeders (1000 lb. up)	5.50@ 7.75	.....	.....	.....
Common to choice feeders (750-1000 lb.)	5.40@ 7.50	3.50@ 5.00	.....	4.00@ 5.50
HOGS.				
Top of market	10.75	12.00	12.25	9.50
Bulk of sales	7.35@10.70	9.25@11.75	9.75@12.00	9.00@ 9.40
Heavy (250 lb. up)	8.25@10.00	10.00@11.25	10.00@11.00	8.50@ 9.00
Medium (200-250 lb.	9.00@10.65	10.50@12.00	10.50@11.50	8.75@ 9.25
Light (150-200 lb.)	9.50@10.75	11.00@12.00	11.00@12.25	9.15@ 9.50
Light lights (130-150 lb.)	9.35@10.65	10.75@12.00	11.00@12.00	9.00@ 9.50
Smooth packing sows (250 lb. up)	7.25@ 8.40	8.50@ 9.25	8.75@ 9.50	.....
Rough packing sows (200 lb. up)	6.75@ 8.00	8.00@ 8.75	7.00@ 9.00	.....
Medium to choice pigs (130 lb. down)	9.00@10.50	10.00@11.00	11.50@12.00	.....
Stock pigs	.....	10.00@11.00	11.50@12.00	8.50@ 9.25
SHEEP AND LAMBS.				
Medium to prime lambs (84 lb. down)	11.40@12.85	7.50@10.00	8.00@11.00	8.50@10.75
Bulls and common lambs	7.75@11.50	5.50@ 7.50	5.00@ 8.00	6.00@ 8.50
Medium to prime yearling wethers	8.50@11.00	7.00@ 8.00	6.00@ 8.00	5.00@ 6.00
Medium to prime wethers	6.00@ 8.75	6.00@ 7.00	5.00@ 7.00	4.00@ 5.00
Medium to choice ewes	3.25@ 7.65	4.00@ 6.00	3.50@ 5.00	3.00@ 4.00
Culls and common ewes	2.00@ 4.00	2.00@ 4.00	2.00@ 3.50	.....
Full-mouth to yearling breeding ewes	5.00@11.25	.....	.....	.....
Feeder lambs	11.50@12.50	6.00@ 7.00	.....	.....

LATEST QUOTATIONS.

The Live Stock Market.

PORTLAND, Aug. 19.—Cattle—Choice steers, $7.75@8.25; medium to good steers, $7.25@7.75; common to good steers, $6.25@7.25; choice cows and heifers, $5.75@6.25; medium to good cows and heifers, $4.75@5.50; fair to medium cows and heifers, $4@4.75; common cows, $3.50@4; canners, $2@3.50; bulls, $3@3.75; choice dairy calves, $9@9.50; prime light calves, $8.50@9; medium to light calves, $7.50@8.50; heavy calves, $4@7.50.

Hogs—Prime light, $13@13.25; smooth heavy, 200 to 300 pounds, $11@12; smooth heavy, 300 pounds up, $10@11; rough heavy, $7@9; fat pigs, $11.50@12.50; feeder pigs, $12.50@13; stags, subject to dockage, $6@9.

Sheep—East-of-mountain lambs, $10@11; choice valley lambs, $9@10; medium valley lambs, $8@9; common valley lambs, $6@8; cull lambs, $5@6; light yearlings, $7@8; heavy yearlings, $6@7; light wethers, $6@7; heavy wethers, $5@6; ewes, $2@5.

SPOKANE, Aug. 19.—Cattle—Prime steers, $6@7.50; good to choice steers, $5@6; medium to good steers, $4.50@5; fair to medium steers, $4@4.50; common to fair steers, $3@4; choice cows and heifers, $5@5.50; good to choice cows and heifers, $4@5; medium to good cows and heifers, $3.50@4; fair to medium cows and heifers, $2.50@3.50; canners, $1.50@2.50; bulls, $2.75@4.50; light veal calves, $7@8.50; heavy veal calves, $5@7.50; stockers and feeders, $3.50@5.

Hogs—Prime mixed, $11.25@12; medium, $10.25@11.25; heavies, $8.25@9.25; fat pigs, $10.25@11.25; stockers and feeders, $10.25@11.25.

Sheep—Prime lambs, $8@10; fair to medium, $7@8; yearlings, $7@8; wethers, $6.50@7.50; mutton ewes, $3@6.50; feeder lambs, $6@7.

The Grain Market.

PORTLAND, Ore., Aug. 19.—Cash wheat—Hard white, soft white, white Club, hard winter, $1.05; northern spring, $1.03; red Walla $1.

Grain futures: Wheat—Hard white, soft white, white Club, hard winter, August, September, October, $1.05; northern spring, August, September, October, $1.03; red Walla, August, September, October, $1.

Oats—No. 2 white feed, August, $32; September, October, $31; No. 2 gray, August, $31; September, October, $30.

Barley—Brewing, August, $29; September, October, $28; standard feed, August, $27.50; September, October, $27.

Corn—No. 2 eastern yellow, shipment August,

(Continued on page twenty.)

Orchardists Hold Double Session

Demonstrations in Orchards Studied in Leading Fruit-Producing Districts

The annual summer session of the Washington Horticultural association was held last week in two sections, the first two days being in and around Yakima and the last two being in and around Wenatchee. Speaking programs were held, with visits of inspection of several orchards in both districts for object lessons and observation of results of particular methods in orchard practice.

One of the points impressed upon growers by Edwin Smith of Wenatchee was that there was little prospect for much influence on the apple market by foreign demand this year, owing to the inability of foreign countries to purchase heavily. He declared that the United States was the market for northwestern apples and other fruits.

F. A. Wiggins of Toppenish declared that the east was awakening to the necessity of producing fruit of a quality capable of competing with the northwest fruit, and that nothing short of the best efforts on the part of westerners would prevent serious inroads on the market by eastern products.

Mr. Wiggins and other speakers urged a united advertising campaign for all northwestern apples with a view to increasing the already great popularity of this product.

Statistics on production per acre and per tree in the Wenatchee and Yakima districts were presented by E. G. Wood, extension horticulturist of the Washington State college. When 12-year-old trees produce only three-fourths of a box of apples more than they did when nine years old, there is something wrong, he declared. When hay is cut in the orchard, the increase in yield is checked at nine years of age, and without special attention to orchard fertility and proper use of the cover crop the trees reach their maximum production at 12 years and it is difficult after that to prevent decrease in production.

Orchards visited in the Yakima valley included those of Arthur Karr, Howard Wright, J. S. Kloeber and William McGonagle, in addition to a number of orchards where soft fruits predominate.

The Yakima sessions were attended by a considerable number of visitors from Wenatchee, as well as other parts of the state, though attendance apparently was reduced by uncertain railroad conditions. A considerable number of Yakima orchardists made the journey across the mountains to Wenatchee for the sessions there.

In that valley the orchardists made special studies of fertilization methods and heard Roy Larsen, soil specialist, explain the demonstrations. Mr. Larsen took them to a dozen of the demonstration orchards and pointed out the difference in growth between fertilized and unfertilized trees, also between those fertilized with different materials and methods.

Among the orchards visited were a number of the American Fruit Growers' properties, where Regional Supervisor Earl Barnhill carefully went over the methods employed in building up these orchards to their present high state of perfection and production.

The fact is that most of the orchards purchased by the American Fruit Growers in this district three years ago last spring had been neglected and allowed to run down, which made them appear unattractive to the average orchard buyer. But the men who conduct the destinies of this organization were looking for just such orchards, if made up of the proper varieties, with good soil, and if they could be purchased below the regular market price.

The American Fruit Growers employed their own horticultural experts. In fact, every one of their superintendents are experienced and trained horticulturists, but they also took full advantage of the work being done by Roy Larsen and County Agent William Meikle, to say nothing of the state department of horticulture and the U. S. pathologists in the district.

The result of three years cultivation, pruning, spraying, thinning and fertilization is a complete transformation in all their properties. From what were regarded as among the poorest orchards in the district, they have been brought up to the very highest standard, ranking among the best producers here.

Other orchards where fertilization was studied are the Thayer & Gellatly property of 26 acres in East Wenatchee, the O. T. Clawson orchard near Wenatchee and the R. G. Graham orchard above Cashmere. The Thayer & Gellatly orchard has been fertilized consistently for several years and has been brought to a high state of production, almost every kind of fertilizer known having been used.

The C. T. Clawson orchard is notable because a large number of Delicious trees 14 years old were dug up and moved last winter, yet they have survived and are bearing a heavy crop. The trees were planted too close together, so Mr. Clawson took up each alternate tree and set it out elsewhere.

The Captain Graham orchard is one of the show places of the valley. The owner was master of steamships on the Pacific for many years, and he still maintains the same kind of "ship-shape" order on his orchard that he did on board his vessels. Fertilization has been his hobby and the results are apparent in yields of approximately 1000 boxes per acre for the past three seasons.

Thins the Thinned.

Another phase of recent orchard practice that the visiting growers studied was radical thinning. John R. Peters of Sunnyslope is the chief apostle of heavy thinning. It is said of him that he will go to an orchard that has already been thinned to the last degree, and take off one-half the remaining apples. And then the owner will have more boxes in the fall than he estimated at thinning time.

Growers were skeptical about the Peters thinning system two years ago, but when he took them out to his own orchard and thinned tree after tree exactly according to his "gospel," they saw that he had the courage of his convictions. And in the fall, he invited the same growers to come and see the results of his work. They were all convinced, for each tree had a limit crop of apples, all of large size and mostly extra fancy.

Visiting orchardists admitted that the fruit on the trees that have been severely thinned is larger and of better quality generally than they have seen in any other district. Mr. Peters claims that fewer apples on a tree will develop more perfectly, will be freer from worms and will color up better than if the apples are crowded. And his theories are backed up by growers who have adopted his plan.

Pipe Spraying System.

The third and most interesting development which was shown to visiting orchardists, for the first time in many cases, was the pipe system of spraying. On the William Moss orchard on Sunnyslope was seen the first pipe system successfully installed and operated in the Wenatchee district. The plan is simplicity itself and it operates successfully.

A tank and engine is installed at the proper point, preferably near the center of the tract, and pipes are laid so as to reach every row. Valves are placed so that only the pipe in use is connected with the engine. The nozzles are attached to the pipe by means of long hose. Careful estimates are to the effect that a saving of one-half is effected by the pipe system, over the movable sprayer system. In addition to this saving, the orchard is kept in better condition, ditches are not filled up, and branches not broken as is the case when a sprayer is driven through the rows.

A favorite plan is for the orchardist to operate one nozzle, with another played by his hired man, while the wife attends to the engine and tank. This requires little actual work. Such a team can spray an orchard in less than one-half the time required with the same force under the old method.

Among the speakers at both Yakima and Wenatchee were E. G.Wood, horticultural specialist of the Washington State college, who called attention to the fact that apple trees in the state are often planted too close together. He favored from 30 to 35 feet as the proper distance instead of from 20 to 25 as is the usual practice. As orchards get older, the trees will crowd each other and must be thinned out. He gave figures to show that production decreases rapidly in orchards planted 75 trees to the acre after 15 to 18 years.

Howard Wright of Yakima, former president of the association, narrated the results of his recent trip to Europe studying market conditions there. He held out little hope that Europe would be able to absorb many American box apples this season, owing to financial and industrial conditions.

D. F. Fisher, U. S. pathologist of Wenatchee, gave an interesting demonstration of the adbantages of oiled paper wraps. E. J. Newcomer of Yakima spoke on the relation of atmospheric temperature in the spring to the calyx spray, and W. D. Whitcomb, U. S. entomologist, talked of the relation of the growth of apples to the cover spray.

Wheat Market Depends on Many Factors

By Gilbert Gusler.

Will the surplus wheat in the principal exporting countries be sufficient to meet the needs of the importing nations in the next 12 months? The conventional remark that "World conditions establish wheat prices" implies that this ratio between the supply of surplus wheat and the demand for it by importers determines the world level of wheat values which sets the prices at terminal markets and then on back to the country elevator, mill or loading station.

Estimates are at variance as to just how much wheat the importing countries will need. European crop reporting systems are woefully inadequate, so that official estimates have not been made in many important countries and those which have been made public lag two to four weeks behind the actual facts, which are changing constantly with the weather.

European Need Is Greater.

The available material as assembled from a variety of sources, including comprehensive private foreign crop reports, points to a yield per acre about equal to or slightly below the average, whereas last year's crop was above the average. The loss compared with last year appears to be about one bushel per acre in European countries, which usually have a joint acreage of about 100,000,000 acres. In addition there is a slightly smaller acreage than last year. These conditions point to a total yield in the chief importing area of 100,000,000 bushels less than that of last year, with a possibility of even greater loss. This means that if all other conditions remain the same, import requirements will be increased 100,000,000 bushels over the preceding 12 months.

An analysis made by the department of commerce shows that wheat consumption in central and western Europe fell off sharply in the early years of the war, but that it has increased rather steadily from 1,200,000,000 bushels in 1917 to 1,850,000,000 bushels in 1921, when it was still about 150,000,000 bushels below the pre-war normal. If another increase in consumption occurs in the present year it will necessitate a further addition to the amount which must be imported.

But there are counter influences. Oriental countries, which were heavy importers last year, have better crops and are not expected to take so much this year. Russia, which has been an importer in the last 12 months, is expected to take care of its own needs, although recent reports have been rather pessimistic. Europe substitutes rye for wheat and the rye acreage is larger than a year ago, both in Europe and North America. Last and most important is the European pocketbook, which may not permit the purchase of all the wheat needed. Germany, Austria, Italy and France all could use large quantities of outside wheat, but their finances are in a deplorable state and are apt to be the limiting factor. Under the circumstances a further increase in per capita consumption looks doubtful, especially since the use of substitutes is already being extended.

Summarizing the situation, the conditions as outlined point to some increase in import needs. This may be estimated conservatively at 5,000,000 to 75,000,000 bushels. Last year world imports were approximately 645,000,000 bushels. If the increase indicated above occurs it will means 700,000,000 to 725,000,000 bushels for the present year. Broomhall apparently expects greater limitation due to financial conditions and places the "effective demand" from importers at 656,000,000 to 672,000,000 bushels for the present year. Broomhall apparently expects greater limitation due to financial conditions and places the "effective demand" from importers at 656,000,000 to 672,000,000 bushels.

What Is the Supply?

So much for the demand. To supply it, reliance must be placed in the surpluses of the United States, Canada, Argentina, Australia and India with small amounts from the Balkans.

This year's crop in the United States and the carryover of old wheat makes a total supply about the same as a year ago, so that if domestic consumption is not larger than last year there should be about the same amount for export in the year ended July 1, 1922. But last year's crop is believed to have been underestimated. Using average domestic disappearance in the last seven or eight years, our exportable surplus from this year's supply would be only about 215,000,000 bushels.

Canada has the second largest crop on record, present prospects indicating a yield of about 345,000,000 bushels, which means an exportable surplus of 255,000,000 bushels.

So far as Argentina, Australia and India are concerned it is necessary to assume average crops, since they are now some distance from maturity, and even the acreage has not been reported upon. Conditions as a whole in those countries are fairly favorable, however, so that the assumption looks safe.

The average crop in India in the last seven years has been about 325,000,000 bushels in round numbers, of which approximately 25,000,000 bushels have been exported. Argentina has raised 165,000,000 bushels and exported 100,000,000 bushels, while the Australian crop has averaged 105,000,000 bushels, with 60,000,000 bushels sold abroad.

The combined export surplus from the five countries for the present year, as arrived at in this way, amounts to 655,00,000 bushels. In addition, a small amount may be available from Rumania and Bulgaria, in the Balkan region. Those countries exported about 6,000,000 bushels last year and reports indicate that they may do better this year. Manchuria and Siberia are expected to furnish some wheat to other oriental countries. Altogether the exportable surpluses from the harvests in the 1922-1923 crop year add up to about 675,000,000 bushels. This is slightly less than the estimated import requirements.

If importing countries take the full amount credited to them and the exportable surpluses do not exceed the foregoing estimates, then the difference must be made up by cutting into the carryover at the end of the crop year.

The Annual Carryover.

There is always some old wheat on hand in all countries when the new harvest starts. A few producers hang on and there is enough in distributive channels to keep the stream moving. A careful analysis shows that the carryover or remaining exportable surplus on July 1 this year in the five chief exporting countries was approximately 170,000,000 bushels, compared with an average of about 177,000,000 bushels. The figures for this year, however, include an allowance of 25,000,000 bushels in India, which has prohibited exports, and 40,000,000 bushels in Argentina and Aus-

(Continued on page twenty.)

Taxes Must Be Reduced

Another step in the state-wide effort for the reduction of taxes in Washington was made recently when representatives of a considerable number of county taxpayers' associations met in Seattle and completed the formation of a State Federation of Taxpayers' associations. J. T. S. Lyle of Tacoma is president, with Frank M. Dallam Jr. as assistant to the president and field director.

In a public statement Director Dallam declared it to be the purpose of the federation to bring about establishment of business methods in the conduct of all public offices with a view to sweeping reduction in governmental cost. The federation has outlined five proposed laws, looking toward this improved business policy in state, county and local government. These proposals are:

(1) A budget law that shall apply to every official who spends public money and that shall hold him personally liable for any expenditure in excess of his budget estimate made prior to the period during which the spending occurred. This proposed budget law would also require the different counties to classify their county roads and to adopt a road building program in connection with the budget, requiring that all road money be expended in exact accordance with such prearranged program.

(2) A "pay as you go" plan in all bond issues, requiring that all bond issues be serial in type with provision that instead of the entire bond issue becoming due at the expiration of a given period of time, such as 20 years, part will fall due each year or each five years, with provision made for raising the money to pay off each part respectively. It is estimated by the federation that the serial bond plan, if now in effect, would save as high as $2,500,000 annually in bond interests in this state.

(3) A law to require all divisions of government to standardize their publicly owned automobiles and to fix a limit of price which may be paid for such automobile and to provide a penalty for private use of one by the officer to whom it is given for use in the conduct of his official business.

(4) A measure providing that the consolidated election law shall apply to all counties in the state.

(5) A measure requiring that automobile license plates shall be issued by each county auditor direct to the applicant at the time application for license is made. This measure is estimated to save a considerable amount in the cost of temporary cardboard number plates and in the cost of mailing the permanent plates from the state capital.

The State Federation of Taxpayers' associations is conducting a state-wide campaign for the organization of county taxpayers' leagues or associations and their affiliation with the state federation. A strong appeal is being made to the people of the state generally to join their home county associations and take part in the movement for bringing about lower taxes.

Vetch in Wheat

Results in an Unwarranted Dockage

By H. J. PLUMB, County Agent.

It has come to the attention of the county agent's office at Colville that some wheat buyers are docking farmers on their wheat because of the presence in that wheat of vetch seed. This practice is wrong.

Vetch seed can be readjly and easily separated from the wheat. The machine necessary for this purpose is an inexpensive affair and requires no power to operate it, it being simply a spiral enclosed so that the mixed vetch and wheat can simply be poured into the top and the vetch seed rolls out at one hole at the bottom and the wheat slides out of another.

This spiral works on this principle. The vetch being a round seed and somewhat heavy, rolls to the outside of the spiral as it descends through, while the wheat being oblong and flattened slides through from the top to the bottom and remains in the center of the machine, the vetch seed coming out of a hole on the outside of the machine and the wheat coming out of the center of the machine.

To dock a grower for the presence of such a mixture is wrong for several reasons. First, the vetch seed is worth so much more per pound than the wheat that it really makes the grain more valuable than it would be without it being present. The vetch seed is worth about from 15 to 20 cents per pound, while the wheat is worth much less.

A second reason why this practice is detrimental is that it discourages a very good cultural and grawing practice recommended by the county agent's office; namely, the practice of sowing vetch with wheat and rye for the improvement of the ground. Vetch, being a legume, incorporates nitrogen into the soil, an element found inadequate in so many soils of this county. A sowing of 20 to 30 pounds of vetch and two or three pecks of wheat or rye per acre will result about as follows: If the crop is cut for hay, it will be a most excellent feed crop, as the feed value of vetch is superior to that of alfalfa. If the crop is cut and threshed the presence of the vetch straw will greatly enhance its food value and the presence of the seed in the wheat ought to add to its value instead of detracting from it.

This office urges the sowing of vetch and rye or vetch and wheat as a feed crop, a silage crop or a grain crop. The plowing under of such a crop as a green manure would prove highly beneficial, especially on some of our alkali soils.

Candidates for Congress

The following is a complete list of the candidates for nomination at the September primaries for United States senator and representatives in congress from this state. The letter D means democratic, R republican and F-L farmer-labor. The filings closed at Olympia August 12, 30 days before the primary election, which will occur on Tuesday, September 12:

United States Senator.

C. C. Dill, Spokane (D); Austin E. Griffiths, Seattle (R); Miles Poindexter, Spokane (R); Mrs. Frances C. Axtell, Bellingham (R); James Cleveland Longstreet, Port Townsend (D); George H. Stevenson, Seattle (R); Lyman Seelye, Bellingham (D); George D. Lamping, Seattle (R); James A. Duncan, Seattle (F-L); Lee Tittle, Yakima (R).

Representatives.

First District—Philip Tindall, Seattle (R); John F. Miller, Seattle (R); H. Alvin Moore, Seattle (R); James W. Bryan, Bremerton (R); Fred N. Nelson, Bremerton (F-L); Edgar C. Enyder, Seattle (D); Thomas Jefferson Casey, Seattle (R).

Second District—Nelson J. Craigue, Everett (R); Lindley H. Hadley, Bellingham (R); P. B. Tyler, Everett, (F-L); Charles A. Turner, Everett (R); Minerva E. Troy, Port Angeles (D); Fred A. Clise, Mount Vernon (D).

Third District—O. M. Nelson, Montesano (R); Albert Johnson, Hoquiam (R); J. M. Phillips, Aberdeen (F-L).

Fourth District— Charles R. Hill, Colfax (D); John W. Summers, Walla Walla (R).

Fifth District—J. Stanley Webster, Spokane (R); Harry J. Vaughan, Spokane (F-L); Fred Schade, Spokane (D); Sam B. Hill, Waterville (D).

SNOHOMISH LIVE STOCK SHOW.

The Snohomish County Breeders' association is making a new venture this fall in holding its first annual live stock show. The event will be at Everett, October 12-14. H. K. Stockwell is president of the association and C. H. Brewe is secretary. The purpose of the show is to stimulate the breeding of a better class of live stock and the upbuilding of live stock and the dairy industry of the county. Breeders from outside of the county are invited to show their live stock. Club members will take an active part in the show. Dairy products exhibit will also be included.

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LIVESTOCK AND DAIRY

How to Cooperate

Eighteen Fundamentals Laid Down

W. F. Schilling, president of the Twin Cities Milk Producers' association of Minneapolis and St. Paul, also vice president of the National Milk Producers' association, has for several weeks been busily engaged in dairy organization work along cooperative lines in the middle west. The Twin Cities association, of which Mr. Schilling is president, is reported to handle the largest single pool of milk in the world, and is looked upon as an outstanding example of successful cooperative marketing. In his organizing work, Mr. Schilling lays down 18 fundamental points for the officers and members of cooperative organizations to bear in mind. In brief they are:

1. The first duty is to restore confidence in cooperation, mistakes of the past having made many producers suspicious.
2. Representatives from each bank in the district to be organized should be called into conference and the cooperative plan laid before them in its entirety.
3. Many meetings of locals throughout the district should be called so that the actual producers may know exactly what the objects and methods of the organization are and get acquainted with the officers.
4. Officers must keep the members thoroughly advised of the program and tell them the absolute truth. In this way only can confidence and loyalty be maintained.
5. The general business public should be informed of the objects and methods of the cooperative organization.
6. None but the most capable and honest solicitors should be employed to secure memberships.
7. Members must stick together, for dissension is sure to be used by the organization's enemies to help break it.
8. The support of the farm bureau and other like organizations should be secured.
9. Farmers around condensary territory or around privately owned milk plants must be thoroughly organized.
10. At least 75 per cent of the milk produced in the district should be under contract before operation is begun.
11. Complete harmony must be maintained with dealers and customers until the organization has a plant of its own with capacity for handling its own products.
12. Expenses must be kept down. Payment to members must be made promptly in order to maintain their confidence.
13. There must be harmony and loyalty among all officers of the organization.
14. Complaints should be aired in membership meetings, but never on the outside where non-members or the opposition may make use of such dissatisfaction.
15. Officers should draw reasonable salaries for their services. Relatives of officers should not be employed.
16. Definite and regular reports should be made to the members showing the operation of the organization and the results secured.
17. Officers must remember that the organization is for the profit of the members at large and not for the officers or a particular group.
18. It must be remembered constantly that the organization must render real public service as well as bring profit to the members if its existence is to be justified.

No "Best Breed"

By A. B. NYSTROM.

Which is the best all-around purpose cow, the Jersey, Shorthorn, Ayrshire or Holstein? I have the Shorthorn and Jersey and have them now under the testing association, and feel just a little unsatisfied with their test. Some of my Shorthorns will produce 40 pounds of butterfat when fresh and the others from 23 pounds up. Three Jerseys produce 48 pounds when fresh, the others about 25 and 30 pounds. Is that a good yield for one month? Also will a cow so vary in her test? For instance, a cow testing 6 per cent last month on a larger flow of milk and this month on a smaller flow tested 5. The pasture hasn't been so good the last month. Would it decrease their test?
W. F. W.

There is no "best breed" of dairy cattle except as they satisfy the individual desires of the person raising them. There are good individuals in all breeds, and to be sure, there are poor producers in all breeds. Many competitive tests have been conducted to determine the relative merits of the different breeds. In some cases one breed comes out ahead and in others another breed wins. So much depends on the individual cows selected for such tests that conclusions can not be drawn that will apply to the breed as a whole. No one should feel satisfied with the production of his herd, or even an individual cow, until he knows that further improvement is not possible. There are many cows that give from 50 to 70 pounds of fat a month in all breeds, and keep it up for eight or nine months, and then drop off to 30 to 40 pounds the remainder of the lactation period. Such cows are sure to make a profit to the owner. You should not be satisfied until your whole herd has reached that production. High production can be obtained by any dairy breed so long as you select fairly good cows to start with and use a purebred bull that comes from a line of high producers.

No doubt your test of 6 per cent represents only one or two days' milk. In such a case it is not surprising that there is a variation of 1 per cent in the test from one month to the next. Poor pasture will cause a slight decrease in the test, but usually there is a more decided decrease in the amount of milk rather than the test.

Milking Machine Sterilizer

A 12-ounce can of ordinary bleaching powder, 50 pounds of common salt, and clean water are the ingredients which go to make up a cheap and effective sterilizing solution used by the New York agricultural experiment station for keeping the tubes and teat cups of milking machines in a sanitary condition. The bleaching powder is mixed with one gallon of water in a two-gallon covered crock, just enough water being added at first to make a paste. The rest of the water is then added and the mixture stirred thoroughly. The clear solution is the part to be used.

After preparing the stock solution, 50 pounds of salt are placed in a 20-gallon water to within six or eight inches of the top. One quart of the sterilizing solution is then added. The mixture is now ready to receive the milker tubes and teat cups, which should be kept in the solution between milkings. One pint of the stock solution should be added once a week during the winter and twice a week during warm weather, and fresh water and salt added when needed to maintain the original water level.

Experience With Milk Fever

A treatment for milk fever was tried, almost accidentally, but seeming wonderful success, by Ed Rogers of Monmouth, Ore., recently. Mr. Rogers is owner of Lad's Likeness, a Jersey cow that is starting on a record which gives promise of being the most remarkable ever made. She was started on official test on April 22. She went down with milk fever 12 hours after calving. A veterinarian was not at once available and, although her udder was inflated, as is recommended by the best veterinary scientists, she continued to grow worse. Mr. Rogers has an "electric blanket," with fine wire woven all through it, for sick room uses. This he put on the cow and turned on the power from his farm lighting and power plant. When he did so the cow's nose was cold, her eyes glassy and she was almost rigid. The blanket was left on for 45 minutes, when warmth had returned and she was greatly improved. It was then taken off for an hour and then put on again for 15 minutes, with further improvement, and Likeness was soon eating again and showed no further effects of the fever. She is a great feeder and is eating normally and milking around 80 pounds a day. If there is any virtue in the treatment, Mr. Rogers wants other breeders and dairymen to have the knowledge of it, and thinks it worth trying.

Commenting on this care, Dr. S. B. Nelson of the veterinary department of THE FARMER said: "It may be that heat given to the body from the electric blanket might have some regulating effect on the animal to overcome the trouble. We used to sweat them several years ago and some of them recovered. However, most of them died."

THE MARKET FOR FURS.

The fur trade has developed extensively within the last 25 years, and in this period the United States has grown to be the largest fur market and fur consuming country in the world.

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Two Purebreds

Take Places of Eighteen Scrubs

There were once 18 grade bulls in the St. Urban district, Lewis county, while today there are two registered bulls owned by a bull association. It is estimated that fully a thousand dollars in feed alone has been saved during the last year by the elimination of the grade bulls.

The senior herd sire, Clotheda Chimacum Spring Farm King Pontiac, a 4-year-old, comes from the A. E. Smith herd at Sumas. He is a double cross on the Rag Apple Korndyke strain, and his get shows that he has good prepotency. He is kept at the Al. Neuert farm.

While there are a large number of grade cows in the association, there are 32 purebreds, and it is the aim of all the members to increase the fat production and at the same time hold up the milk flow if possible. All outside members are charged a fee of $10, while each share holder bought one share in the association, which cost him $25. So far there are only three daughters from the association bull, but his bull calves show excellent type. All members have found the plan to be very satisfactory, and seem to have found no inconvenience in bringing their cows to this farm which is centrally located.

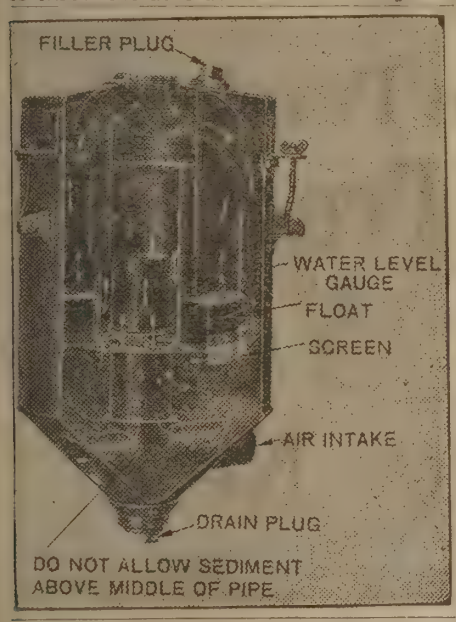
All herds with the exception of one have been given the tuberculin test, and so far there have been no reactors found.

Clean the Air

By PROFESSOR L. J. SMITH, W. S. C.

Not so many years ago, in the drier portions of the country, a brand new tractor would have its cylinders wear so badly out of round that reboring was necessary in two seasons. It was such a serious matter that it often came to a lawsuit against the tractor firm. Then we woke up to the fact that each season a tractor breathes in hundreds of thousands of cubic feet of air laden with dust and dirt that cut the pistons and rings and cylinders to pieces.

What was the remedy? Why, wash the air. Get rid of the dust before it enters the carburetor. The first idea was to remove the objectionable dust by a centrifugal air cleaner, which was supposed to throw the dust down into a fruit jar at



the bottom. Many tractors installed this type of air cleaner. It was better than none, but was not very efficient, and still the cylinders went bad. Then came a new idea for cleaning the enormous quantity of air that the tractors must inhale to produce power. The air was drawn through a given amount of water and the dust was left behind, that is, probably well over 95 per cent.

The figure shows a sectional view of a well-known and very good air washer. The air enters at the bottom, rises above the water line and beneath a float which has a hollow tube above the water line. The air then turns downward, as shown by the white arrows, and passes through the water up around the float. A fine screen is often attached to the bottom of the float to break up the air bubbles. Just before passing out at the top on its way to the carburetor, the air passes between baffle plates which take the surplus moisture out of the air.

Actual power tests show that the air cleaner does not cause the engine to lose power, but, if anything, to gain a slight amount of power because of the moist air.

The water should be changed once or twice a day to remove the accumulated sediment.

The time will doubtless come when automobiles will be equipped with air cleaners for certain parts of the country.

A third type of air cleaner is now on the market. It uses waste oil to remove dust, and will be taken up in a later article.

STATE FAIR JUDGES.

Secretary H. P. Vermilie of the state fair has announced his selection for live stock judges for the fair this fall as follows: Holsteins and Ayrshires, Axel Hansen, Minneapolis; Guernseys and Jerseys, George P. Grout, Duluth; beef cattle, J. L. Smith, Spokane; horses, George Wilson, Wilbur; sheep, O. V. McWhorter, Boise; dogs, Jack Bradshaw, Los Angeles.

Goes Back to Sheep

On a small promontory, separated from the mainland and Oak Harbor by only a small neck of land, is the home of Alfred Maylor, who has cleared nearly 170 acres of the entire 355. At first the farm was devoted entirely to sheep raising, but in 1916 there was so much loss from dogs that the entire lot was sold. A mere handful were retained, however, as a farm flock to keep in connection with a few dairy cows. Since the wool market is looking better Mr. Maylor has decided to increase his flock of sheep and keep fewer dairy cows.

"I feel that there are about the same profits to be made from sheep as from cows," said Mr. Maylor, "and they do not require as much labor. We have, of course, an unusual condition that is hard to equal, since we need not fence the fields which border on the salt water. The pasture is the best, and we can raise excellent hay in a normal season. This year the yield was almost up to normal in spite of the dry season and it is a good quality of mixed timothy and clover."

Mr. Maylor seeded 17 acres of winter barley last fall and it was in the shock by the middle of July, thus getting it out of the way for the spring grain crops. Winter wheat and vetch have also made good showings, and is found to be a splendid crop to build up the soil, which has been in grain for a number of years.

Should Test Every Cow

Princess Fayne Johanna, one of the registered Holsteins in the Youngquist Brothers' herd at Mount Vernon, made a record of 401 pounds of butter in 112 days. She was the highest cow on semi-official test in the state for April and May.

"An interesting thing about her is the fact that we did not think she would make any kind of a record until her half sister took sick and we had to take her off test," said Mr. Youngquist. "This goes to show that every cow in the herd should be tested in order that no good ones be passed up or any poor ones kept where they do not belong. There is no one who can tell what a cow will do until she is tried out."

Another animal in the herd, Vernway Pontiac Segis De Kol, a senior yearling, made a production of 577 pounds of butter in 349 days. She is the best for her age in the herd. The Youngquist Brothers have been breeding registered cattle for the last five years, a few grades having been in the herd prior to that time.

Give the Calf a Start

"All of our calves are fed whole milk for the first two months of their lives and then they are given skimmed milk as long as they will take it," said A. M. Gormley, farm manager of the Carnation Stock farm at Tolt, King county. "They are kept in the barn until they are old enough to be turned out in the pasture lots a few hours each day. We believe that it pays to keep the calves growing and give them good shelter. One of the best practices is to feed plenty of grain just before the cow freshens. This is the most critical periods of a cow's life and she should have feed enough for her own body as well as for the growing calf."

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The New Oakland Six

POULTRY AND RABBITS

Culling the Flock

Culling is but one of several necessary phases of successful poultry management, says H. E. Cosby, extension specialist in poultry husbandry at the Oregon Agricultural college in a recent bulletin. It has no more relative importance than proper feed and feeding methods, freedom from external and internal parasites, time of hatching, good housing facilities and other factors.

Careful, systematic culling of the entire flock will not transform poorly housed, lousy, crowded and improperly fed hens into high producers. Culling is profitable only when the flock has and will continue to receive uniform and sensible care. Accuracy in culling depends upon the judgment of the poultryman, and his judgment must be based upon definite knowledge relative to the management of that flock during the preceding year. Any factor, such as moving the flock, sickness, forcing under lights, partial molt, crowding, or change in feed or feeding methods, if not taken into consideration will result in many errors of judgment. Many profitable hens have been sold as culls, not that the methods of culling as herein described were at fault, but because the poultryman failed to consider all the characteristics of the hen and the care she had received. A daily egg record of the flock during the preceding seasons discloses the care the flock has received and is a valuable asset in doing intelligent, accurate culling.

Culling should begin at the time eggs are selected for incubation; weak, malformed and undesirable chicks should be culled when transferring from the incubator to the brooder; chicks that are of low vitality should be culled as soon as discovered during the developing period, and pullets that are a few months later in starting to lay than the average of the flock should be culled. Culling should be a continuous 365-day watching for unprofitable hens.

In addition to continuous culling of low-producing hens, one or more systematic examinations of the entire flock should be made from June to August, inclusive. The select breeding hens may then be chosen from the number remaining after the August culling, preferably between September 15 and October 15.

If more culling were done during the growing period there would be less to be done with hens that have been kept a year or more at a loss. It isn't number of hens that pay, it is the kind.

Vigor is the very foundation of a successful poultry business. An active disposition, bright, clear eye, and well-worn toenails indicate health. Small, weak, deformed, inactive hens with long beaks and heads lack vigor and should be culled. Hens with baggy abdomens have broken down and become very fat; when they stop laying they seldom start again, and the death rate is very high.

Hens that are large, coarse, and have small sunken eyes are big eaters, poor layers, and rightly belong to the "beef" class.

A laying hen removes the fat from the skin. In yellow-skinned breeds the same pigment that colors the yolk of the egg colors the vent, eye ring, beak, skin and shanks. As the hen starts laying this yellow pigment begins to disintegrate, break up and disappear. The different parts of the body fade out white in proportion to the amount of fat stored in those parts, the kinds of feed fed, the weight of the body, the size of egg laid and the length of the production period.

The skin around the vent is first to whiten, then the eyelids, the ear lobes, the beak, and last the shanks. When a hen stops laying the color returns in the same order that it leaves, only very much more rapidly. The loss of yellow color in the shanks indicates a long laying period, which varies from three to six months, dependent upon the breed, the rate of production, size of egg and kind of feed. The presence or absence of yellow pigment in the vent, eyelids, ear lobes and beak denotes a shorter laying or resting period, varying from a few days to four or five weeks.

Sick hens and hens in a dry yard, fed little or no yellow corn and green feed, will have faded beaks and shanks, even though not laying.

The person culling a flock of Orpingtons, Minorcas, Dorkings or breeds which do not have yellow skin must disregard yellow-pigment indications and make the selection on the value of the other characteristics.

It is not using the best judgment to cull on yellow pigment alone.

Precautions to Observe.

Culling is an intelligent comparison between hens of the same flock which have had equal opportunity to lay so far as housing, feeding and management are concerned. There is no set rule or rules that will apply to all flocks, because it is a matter of intelligent judgment based upon management of the flock.

It is not safe to judge a hen solely by any one of the indications previously discussed. Such procedure will result in untold errors. Only when all indications are applied to each hen can intelligent judgment be passed.

Unless hens have been kept under conditions favorable to egg production no one can do accurate culling work. Parasitic infection, improper feed or irregular feeding methods, poor housing conditions, crowding and forcing for egg production at some season of the year will cause many otherwise good hens to be classed as culls. There are culls that are so because of poor inherent ability to produce and there are hens easily mistaken for such because of the poor care they have received.

Give the questionable hen the benefit of the doubt, in culling for egg production, but not in selecting breeders.

Watch Out for Pests

By W. D. BUCHANAN, Poultry Extension Specialist, Washington State College.

Readers of THE FARMER should be on the lookout for troubles that are always present in the good old summer time; that is, unless they have been anticipated and prevented.

One of the troubles is mites, and mighty are the mites during hot weather. A new now. Cylinder oil, mixed four of oil to pests. Even the fact that it is cleaned every day does not prevent them. If it has been treated with carbolenium it may be free for years. If it has not been treated it should be thoroughly sprayed now. Cylinder oil, mixed four of oil to one gallon of crude carbolic acid makes a good spray. I mean the oil drained from your car!

Lice are also plentiful during the summer. They lay more eggs than the chickens and produce more young. A hot summer day, on the other hand, is an ideal time to get rid of them. Make a solution of four gallons of water and four ounces of sodium fluoride, having the water blood heat.

Grasp the hens by the wings and dip in the solution, taking care not to hold the head under more than a second. Add to the solution as needed. If the dipping is well done, and no birds are missed, it will not be necessary to repeat the treatment for a year. Sodium fluoride is poison, so don't leave the solution standing around for the chickens or cows to drink.

A scarcity of green succulent feed is also a drawback during summer. Plan to have green growing alfalfa or kale or mangels, or some other equally succulent feed. This is especially important for the growing pullets. If compelled to eat dry fibrous grass or grain as a substitute they will probably get leg weakness or partial paralysis.

WATER BAGS IN BIRDS.

By W. D. BUCHANAN.

We have found a bunch of water bags in two young cockerels that we recently dressed. One had several bags that were half the size of an egg and the other had two bags of pink looking water around his entrails, to which the bags seem to be attached. They were fat and apparently healthy. Can you tell me what is wrong and what to do for others affected the same way? D. R. WOOD.

Concrete, Wash.

I am unable, without making a physical examination of the birds, to locate the cause or prescribe a remedy for the trouble, if trouble it is. If the remainder of the flock is in good condition I would pay no attention to it. If, however, you kill a sickly bird affected in this way I would advise sending it to your state experiment station.

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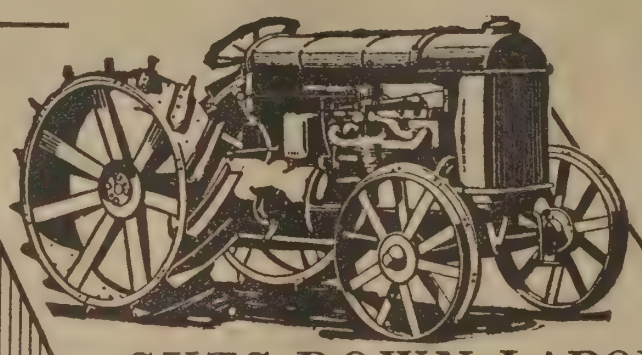
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Ten Acres Squash

Favors Planting on Higher Spots

A number of farmers in the Coupeville district of Island county have found Hubbard squashes to be a profitable crop. One advantage in their favor is the fact that they are a cultivated crop which makes a good rotation with wheat or hay.

F. W. Krueger of Coupeville has 10 acres of squash planted this year. While there is said to be little difference in the kind of soil which is best adapted for squash, there is a marked difference in favor of the higher spots, which seem to produce better growth because of their being warmer during the early part of the season. Mr. Krueger has tried out several kinds of fertilizers, but finds that there was very little difference between any of the trials, but the best squash were produced on the lighter soils, which warm up earliest.

"I tried storing my squash until the late winter months," said Mr. Krueger," and find that it more than paid for my trouble. I built a regular squash cellar in which I stored the squash in layers, and covered each layer with enough straw to keep them from touching. They were piled about eight feet high in this manner and the cellar banked up entirely frost proof. I found that practically all the squash kept in good condition until January, when they were sold on the Seattle market. At this time squash sell for a better price, and I was able to make up for the extra time and expense required for storage."

Mr. Krueger has tried other varieties, but finds the Hubbard to be in best demand on all markets, and one of the easiest varieties to raise. Aside from squash he has a few acres of wheat and a crop of field peas. The rotation of squash, however, may come after any kind of a farm crop, but usually follows wheat in order to get the land clean-cultivated for the eradication of weeds.

Feeding the Bees

By GEORGE W. YORK.

After the surplus honey season is over the first thing to be done with the bees is to see whether each colony has a good queen, for it is the young bees that are reared after September 1 that are likely to live over the succeeding winter, and not the bees that are in the hive during July and August.

For fairly safe wintering there should be about three quarts, or 15,000, young bees in each hive. Then for winter stores there should be from 40 to 50 pounds of honey and sometimes even 60 pounds might not be found too much. In case the bees do not use all their allowed stores during the winter, they probably will need it in the spring, before a new crop of honey is secured.

For fall feeding for winter stores, if necessary, ordinary white granulated cane sugar is all right. Dilute it at the rate of one quart of sugar to one pint of boiling water. Dissolve thoroughly and feed while warm.

As a fall feeder probably most beekeepers prefer a friction top pail or can. First puncture the top with enough nail holes so that the contents of sirup may be taken by the bees in about 48 hours or less. The pail or can may be filled with the prepared feed, the perforated friction top cover put on, and then the full can or pail inverted right down on the brood frame top bark. An empty hive super should then be put on the hive, deep enough so that the feeder will be entirely covered when the regular hive cover is put on the super.

The feeding should be done as rapidly as the bees will take the sirup, and all feeding completed at least by October 15.

In case any colony should be found without food during the winter, a rather soft sugar candy can be made and given them. One recipe takes six pounds of granulated sugar, three-fourths pounds of glucose, three-fourths quart of hot water, with one-sixth teaspoon of cream of tartar.

The glucose can be put into the water at once and then the sugar added only as rapidly as it will dissolve, as by doing so it is not so likely to be scorched. The cream of tartar is added as the whole contents of the vessel comes to the boiling point. As soon as it is boiling well it should be removed, and be constantly stirred till rather thick, when it can be poured into a mold.

A very convenient form into which it can be poured is an ordinary brood frame (a wired one preferred). Simply fasten a very thin board to one side of the frame, then lay it down and pour in the thick, warm sirup. When the candy has cooled sufficiently the thin board can be taken off, as the wire will hold the candy cake in the frame.

To feed it to the bees, simply remove a frame of empty comb from near the center of the brood chamber and put the candy frame in its place, being careful to see that it is next to the cluster of bees. This feeding should be done during the warmest part of the day in winter.

If two frames of candy are desired just double the recipe.

Stationery Spray Machine

Ed Eells is installing a stationary spray machine in his apple orchard near Cashmere, Wash.. Pipes are laid about the orchard so as to allow for the spraying of five trees from each spray hydrant. One hundred feet of hose will be used, which can be dragged in four directions from the point where it connects to the pipe. Two thousand five hundred feet of pipe will be used on the entire 10 acres of orchard.

An ordinary spray machine will be equipped with two supply tanks and a tractor will be used to supply the power. In this way 400 gallons of spray mixture can be used at one spraying without refilling, and can be applied with greater force, since more power can be secured with a larger engine.

One advantage to this system is that there will be no packing of the soil from the wheels of the spray machine, and there will be less wear on the spray machinery from hauling it over irrigating ditches. The work can be done by one man if necessary, since he can start his engine and then attend to the spray hose until the tank is empty. After refilling he can continue the process until the orchard is finished.

The only disadvantage seems to be that the larger amount of hose must be dragged about by the one doing the spraying. This is considered much harder work than if one were to use a shorter length of hose attached to a movable rig, such as is commonly done in most orchards. Mr. Eells prophesies that within five years there will very few portable spray rigs in the Wenatchee valley.

TO PREVENT SPREAD OF PESTS.

A freight car fumigating house, having a capacity of 14 railway cars at a time, has been completed and put into operation by the federal horticultural board, United States department of agriculture. It is a part of the chain of fumigation houses maintained to prevent the entry of the pink bollworm of cotton into this country.

Preparing for Fruit Display

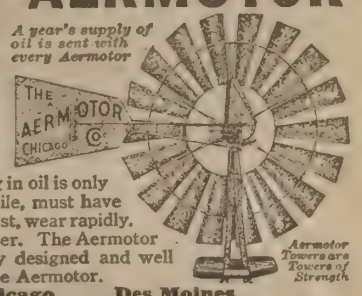
"Uniformity of size and color can best be attained by selection from one tree instead of picking from several," says W. L. Close, horticultural inspector. "It is well to select the trees best suited for exposition purposes early and give these trees special care in thinning and watering.

"Where the specimens appear perfect in every way they can be favored by removing some of the surrounding foliage in order that the fruit may color in a uniform manner."

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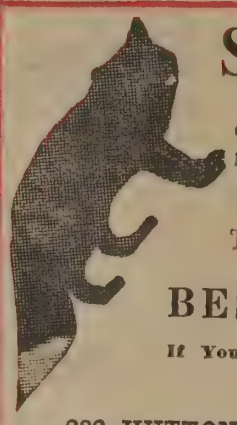
DEMPSEY Hotel and Restaurant
(C. C. Dempsey & Sons)
UP-TO-DATE
and
AT YOUR SERVICE.
Opposite Union Station.
Spokane, Washington.

THE FAIRS of 19

They are educational in nature and the exhibits will p

Washington State Fair
Yakima, Sept. 18-23

Oregon
Salem, S



Silver Fox Bree

Do you know that our gove dustries? Such men as J. P. money in the silver fox indus

THE ROOSEV
They Have No Superiors.
See Fox

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UNITED STATES SI
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DELCO-LIG
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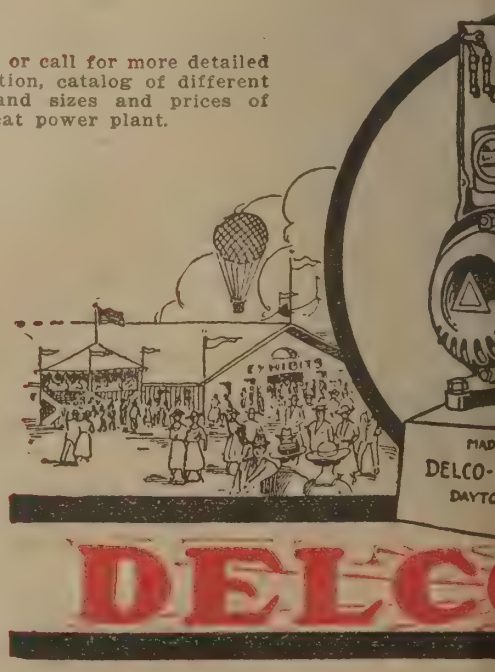
THE name DELCO-LIGHT your headquarters while your parcels, give directions a uine as DELCO-LIGHT'S po

This is your great opportun LIGHT. It is recognized as th and success. DELCO-LIGHT mill, separator, corn sheller a willing at the turn of the swit DELCO-LIGHT banishes drud churning, cleaning, washing a floods your home with brighte electric lights to your chicken

Increase your profits—enjo city—the DELCO-LIGHT way fits of this tireless worker.

Any dealer o demonstrate w your mind not possessing this

Write or call for more detailed information, catalog of different styles and sizes and prices of this great power plant.



DELC

E YOUR AFFAIR

and instructive. Well worth while to attend all you can.

Idaho State Fair
Boise, Sept. 25-30

Interstate Fair
Spokane, Sept. 4-9

ive BIG RETURNS



s as one of the leading live stock in-
rd and King Alfonso of Spain have invested their
pair of breeders now from

AIN of MORMON FOX

Purebred Registered Animal, Fully Guaranteed.
Interstate Fair and visit the

RUCTED RANCH EVER BUILT

, on Apple Way.
Exceptionally Large on the Investment
nvestigate.



RMS CORPORATION
SPOKANE, WASH.

l Be Your Friend
g the Fair

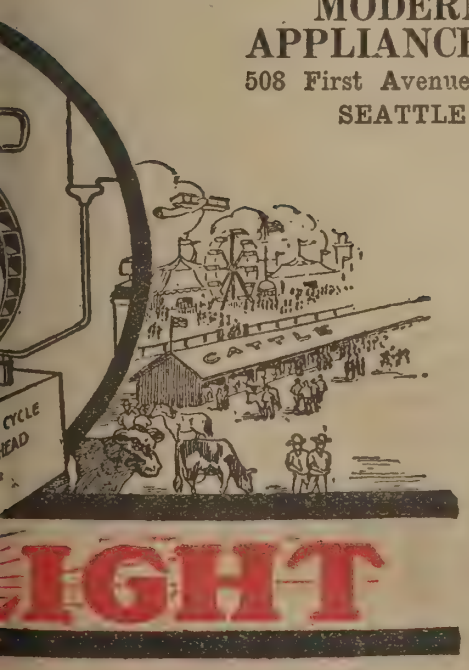
ore means Welcome—make it
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your home life happy.

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veniences that rival those of the
125,000 farms enjoy the bene-

ll always gladly
you. Make up
go by without

MODERN
APPLIANCE CO.
508 First Avenue South
SEATTLE



IGHT

The Palace

CORNER MAIN AVE. AND POST ST.
Spokane's Cash Store for All the People



SEE THE FAIR!

TRADE and SAVE AT THE PALACE

Bigger, better, more spectacular than ever will be the Spokane Interstate Fair and Live Stock show held here during the week of September 4th to 9th.

The Palace is making great preparations for this week.

We will have on hand our complete new fall and winter stock of wearables for men, women and children, sturdy and stylish shoes, hosiery, underwear, warm bedding, furnishings, household goods of all kinds, including furniture, rugs, draperies, crockery and dinnerware, also trunks and luggage goods.

The Palace is strictly a one-price store, doing business on a cash basis.

Those who trade here save money—and that's why we invite you to visit us during Fair Week.

Washington State Fair

YAKIMA
SEPT. 18 to 23

For premium list write H. P. Vermilye, Secretary-Manager State Fair, Yakima, Wash.

Drive your machine to Yakima and spend the week in the Fairgrounds, where you will find a free camp site with shade and all sanitary conveniences.

SHOWING OF LIVE STOCK WILL BE THE BEST THE STATE HAS EVER SEEN. AUTOMOBILE AND AUTO POLO RACES, RUNNING AND RELAY RACES. THE HARNESS RACES are all filled with horses from California to Edmonton. There are to be Roman chariot and standing races by thoroughbred horses that were the champions of the United States last year, and are worth going across four states to see.

Dr. Carver's horses, ridden by a young lady driving from a platform 40 feet high, will sure give you a thrill. The Dog Show is slated for 200 dogs.

FLIES FLEE from "WOOD-LARK" REPELLENT



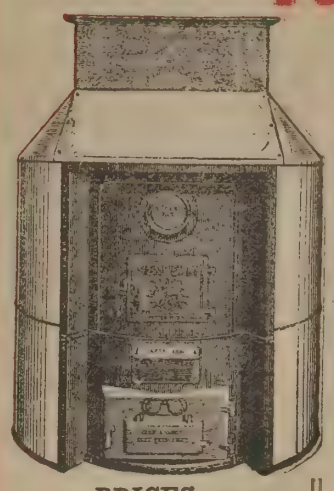
1 qt., ..75¢
½-gal. $1.25
1 gal. $2.00

ORDER FROM YOUR DEALER.

If he hasn't it we'll send you a gallon, charges prepaid, for $2. Postage stamps accepted.

Clark, Woodward Drug Co.
PORTLAND, OREGON.

Why SUNBEAM PIPE and PIPELESS FURNACES Are Better



—Because They Have the Following Features:

Solid cast, oxidized register.
Extra large warm air outlet gives greatest volume warmth.
Oversize casings insure perfect warmth in every room.
Full length cast smoke pipe extension.
Large radiator provides greatest radiating surface. Double-seal joints.
Enlarged radiator opening insures perfect combustion and fuel economy.
Large combustion dome insures perfect combustion. Radiator properly supported.
Big feed door (same on all sizes) makes firing easy.
Two-piece fire pot with wide cut joints will outlast a solid pot twice its weight.
The short feed section makes firing easy.
The "Sunbeam" vapor pan provides humidity.
The high, roomy ash pit provides greater capacity for ashes. Is easily cleaned.
Full width ash pit door makes removal of ashes easy.
Every joint in castings and casings is sealed air tight. "Sunbeam" furnaces do not smoke.

PRICES.

18-inch (5 rooms) ..$150
20-inch (7 rooms) ...$175
22-inch (10 rooms) ..$200
24-inch (larger houses) $235

JAMES SMYTH
Plumbing & Heating Co.
S173 POST ST., SPOKANE. TEL. RIV. 313.
See our display at the Fair.



Enjoy the Fair in Walk-Over Shoes

Fifty Styles for Fall, Specially Priced $6.00 to $7.50

If you are planning to attend the Fair be sure to come in and have your size registered so that you may know the joy of correct fitting shoes. If unable to come in for personal attention send for fitting chart and have your feet fitted the Walk-Over way.

This ad saves you 10 per cent on a pair of Walk-Over Shoes if used Sept. 4th to 11th. Bring or mail it in.

SHUART'S WALK-OVER BOOT SHOP
719 Riverside Ave., Spokane.

Bigger Than Ever!

See the greatest fair in the West. Entertainment and education for old and young. Something doing every minute.

HORSE RACING—Rain or Shine

Every Afternoon—Evenings by Electric Light

PUYALLUP
Oct. 2d to 8th

Between Seattle and Tacoma—two hard-surfaced highways into each. Motor busses running every few minutes day and night.

Western Washington Fair

W. H. Paulhamus, President.

Last year's attendance over 100,000

Fertilizing Clover

Superphosphate Has Good Result

By A. B. NYSTROM, King County Agent.

In the spring of 1921 the county agent recommended to T. A. Garrett of Auburn that he try some commercial fertilizer in addition to his barnyard manure to help him get a stand of clover. Accordingly some plots were laid out in 1-10 acre sizes, trying out superphosphate, muriate of potash and a mixture of the two. One plot was left untreated between the phosphate and the potash plots.

The whole field of two acres was seeded to red clover and timothy, using oats as a nurse crop. During the growing season of 1921 there was only a slight noticeable difference on the oats in the different plots, except on the manured portion. One half of all the plots were manured at the rate of 15 tons per acre and the oats on the manured plot was much heavier and darker green than on the other half not manured.

After the oats was taken off, however, the clover began to show up and the different plots were distinctly visible. Those plots that had received an application of superphosphate had a much better stand and the young clover plants grew much faster than on any of the other plots.

The differences were noticeable all during winter and spring of 1922, and when haying came the plots were cut and weighed separately. The potash plot was no better than the check plot. The mixture of potash and phosphate plot was just about as good as the phosphate plot. The check plot yielded 4060 pounds of cured hay of poor quality to the acre. The phosphate plot yielded 8240 pounds of hay to the acre.

Here was a difference of over 2 tons of hay from the use of 300 pounds of acid phosphate. The cost of the material was $5.25 and allowing $1.25 for getting it to the farm and putting it on the land, the total cost is only $6.50 an acre. The value of the increased hay yield for one year only at the rate of $10 per ton is $20. This makes a net return of $13.50 per acre by the use of acid phosphate.

Cold Storage

A Little Journey to the Market

The total capacity of cold storage plants in the United States is estimated at approximately 500,000,000 cubic feet. This would be equvalent to a space about 1 1-3 miles square and 10 feet high.

The impression is given that cold storage is undesirable from the farmer's viewpoint, but it would be as futile to argue that the canning of foods is objectionable and should be abandoned.

It preserves the surplus of perishable and semi-perishable products, such as butter, eggs, cheese, meats, poultry, fruits and vegetables produced in large quantities at certain seasons of the year until the market will absorb them. It tends to keep prices down in the seasons of light production, but purchases for storage sustain prices in the periods when production is far in excess of immediate consumptive needs.

Local markets in producing sections use cold storage while assembling enough volume for economical shipment. It is used while these perishable products are being transported to the consuming market and while they are being distributed. Without it the variety of foodstuffs in the large centers of population would be decidedly limited.

Cold storage is of two kinds, refrigeration in which the temperature is kept above but close to the freezing point, and freezing in which the temperature may be reduced close to the zero point. Freezing plants are used when meats and poultry are to be preserved for several months.

The department of agriculture reports each month the cold storage holdings of various products. In any consideration of the available supply and the rate of consumption, these storage reports are quite important.

A Good Jersey Herd

There are several herds of Jerseys in Whatcom county, but there are few that can beat the records made by R. I. Tanner of Sumas. In his herd are three daughters of Rosaire's Olga Lad, with some of the blood also of St. Mawes Blossom. Poppy's Koffee Rosaire, one of the cows in the herd, won a silver medal as a two-year-old with a production of 527 pounds of fat. The following year she produced 675 pounds, thus winning a second silver medal. As a 5-year-old she won a gold medal by producing 739 pounds and as a 7-year-old she had a production of 674, which made her another gold medal.

"I was critized for paying $800 for a heifer calf some years ago," said Mr. Tanner, "but I would not sell her now at any price because she has made me two silver and two gold medals and is still milking in fine shape. I refused $2000 for one of her heifers and I turned down an offer on two of her calves.

"Two other cows in the herd have made gold medals, Susie Pearl of Scampoeg making 740 pounds of fat as a mature cow and Rosaire's Olga Gem, that produced 827 pounds. It has always been my object to produce the best under the conditions, but I soon found that I could not get far with grades, so I began to look for purebred animals. Now there are only three grade cows in the herd."

Most of the foundation stock of the Tanner herd has been secured from Oregon herds. The herd average has run very high, making 827, 740 and 764 pounds for the past three years, respectively.

Appeal Filled Milk Case

Attorneys of the Carnation Milk company announce their purpose to appeal the "filled milk" case to the United States supreme court. As we previously advised our readers, the Wisconsin legislature passed a law at the last session prohibiting the manufacture and sale of skimmed milk and vegetable oil compounds. The Carnation company contested the legality of the law in the state courts of Wisconsin, and lost. Now an appeal is to be taken to the supreme court of the United States, but Deputy Attorney General Hoyt of Wisconsin declares that "this appeal will not prevent law enforcement here, unless an injunction is secured from the United States court. As far as this court goes, the decision is final." Mr. Hoyt added that the Wisconsin court decision sustained completely the validity of the law. Both the decision of the court by Judge Crownhart and the concurring decision of Judge Rosenberry sustained contentions based on the deceptive nature of filled milk, and inferior nutritional value. The decision of the majority of the court, by Judge Crownhart, goes further and sustains the law as to protection of the reputation of the dairy industry of Wisconsin.

J. Q. Emery, dairy and food commissioner of Wisconsin, declared that the "effect of the decision of the high tribunal on the 'filled milk' case is that the law is sustained and will be enforced."

Sell Guernseys at Snohomish

A sale of 36 Guernsey cattle was held at Snohomish, August 7, by the Snohomish County Guernsey Breeders' association, all of which brought fair prices and went largely to breeders in the county. While there were only 15 registered animals in the sale, the grade cows and heifers were of a high standard.

In order to induce more of the smaller herd owners to buy purebred bulls the sales committee made a special condition which allowed grade or scrub bulls to be accepted at one-half the price bid on any purebred bull. No grade bull, however, was to be accepted at a value greater than $60, and provided such bulls had been used for 3 months as herd bulls.

The top animal, a 6-year-old, consigned by F. J. Jenner of Oso, Wash., was bought by Henry Steve of Marysville for $231.

The sale was cried by D. P. Funk of Monroe, while W. H. Clark of Monroe acted as clerk. Charles H. Grew of Arlington, partner with J. E. Wrage of the Valley Gem Farms, was sales manager.

You Make Your Land More Valuable by Building Up the Home Town

The closer your land is to a good town the more money it will bring when placed upon the market. We all know that. About the first thing the owner tries to do when you dicker for a piece of land is to justify the high price he is asking by pointing out how close the land is to town and the good roads leading to it. He knows this is the most appealing argument he can put up.

Land close to town and adjoining good roads is not only desirable because crops can be marketed with the least trouble and expense, but there are many other advantages as well—including schools, churches, doctors and shopping privileges.

The conclusion is plain. Do what you can to build up the stores and institutions of your home town and you will benefit not only in the increased value of the land you own, but also in many other ways.



You may pay more for the Hupmobile than for a lighter, smaller car—but you are money in pocket at the end of the year.

Farmers who buy the Hupmobile, after a period of motor car experience, find the Hupmobile is a better business proposition.

Its savings for them—its actual earnings—more than offset the larger outlay in the beginning.

Such an investment, when it can be made, is good business.

Simply because the Hupmobile *is* such an investment, its numbers on the farms of America are increasing year by year.

Big corporations employ fleets of Hupmobiles for their reliability and low costs

The Hupmobile is manufactured by an old, well established company, known all over the world for the quality of its product

Touring Car, $1150; Roadster, $1150; Sedan, $1785; Coupe, $1635; Roadster-Coupe, $1335. Cord Tires on All Models. Prices F. O. B. Detroit---Revenue Tax Extra.

Hupp Motor Car Corporation, Detroit, Michigan

Hupmobile

Proves Value of the Sire

"One of the best hopes of the dairyman is a good purebred sire," remarked A. E. Smith of Sumas, of the Milky Way farm, where 40 head of registered animals are kept. "We have demonstrated the value of the sire to our own satisfaction and we have developed cows with good size and conformation. If the average farmer takes a good sire with the right conformation he can breed up some good stock from ordinary cows, provided they are strong animals. The one precaution to take is to get a sire that has a better production record than do the cows in the herd."

Mr. Smith has two herd sires: Korndyke Chimacum Hartog, a son of Spring Farm King Pontiac, the former herd sire, and King Pontiac Maun Ormsby, sired by Greenbank Sir Ormsby Hengerveld, the Bishop herd bull, at Chimacum. There are 20 head of cows in this herd that will average 19,000 pounds of milk in a year. It is said to be one of the highest producing herds in the west.

PREVENT ANOTHER CROP.

Even though the weeds took your garden, cut them down before they go to seed, thus avoiding a repetition next year.

THE POINT IS, GET HIM.

The motto of hunters in the United States biological survey is "If you are sent after an animal, bring him in."

Farmers' Want Ads

HELP WANTED—MALE 3

WANTED — SALESMAN WHO CAN SELL high-grade, dependable nursery stock; several counties in Oregon, Wash., Idaho and Montana now open for assignment. Our selling contract will interest you. Address Albany Nurseries, Inc., Albany, Ore.

HELP WANTED GENERAL 5

RAILWAY MAIL CLERKS. GOVERNMENT clerks and carriers wanted. List of positions free. Write Mokane Institute, Dept. B21, Denver, Colo.

SITUATIONS WANTED—Male 21

HIGH CLASS MAN, SINGLE, WITH COLLEGE training, lifetime experience with stock; seven years feeding, testing and showing purebreds, wants place as dairy herdsman or farm manager. First class proposition only. Box 5, care Oregon Farmer, Portland.

EDUCATIONAL 45

BEHNKE-WALKER BUSINESS COLLEGE of Portland; one of the largest institutions of its kind in America; guarantees a position to every graduate. Enroll now for fall term. A few months training under expert instructors and you are ready to enter business and win. Behnke-Walker graduates are always in demand. Write today for our free success catalogue. Address Behnke-Walker Business College, Fourth, near Morrison, Portland, Ore.

FRESH FOOD PRODUCTS 51-1

"HONEY BRAND" HONEY — ALFALFA, sweet clover product; pure, light, thick, good flavored; gives satisfaction wherever used; 1 60-lb. can, $7.50; discounts on larger orders. Write for circular and prices in pails. Oliver Sires, Wapato, Wash.

HONEY—400 TEN-LB. PAILS CHOICE ALfalfa, sweet clover honey; also 60-lb. cans and 5-lb. pails; discount on five-case orders or more. Write for prices and sample. Wm. R. Sires, Wapato, Wash.

WHITE ALFALFA, SWEET CLOVER honey; 1 60-lb. can, $7.50; 2 60-lb cans, $14.50; six 10-lb. cans, $8.50; three No. 10 pails, prepaid, third zone, $5.50. Wells D. Rose, Sunnyside, Wash.

FINEST NEW HONEY, 60 POUNDS, $7.50; 2 cans, $14.40; add postage; 10 pounds, $1.90; 5 pounds, $1 prepaid; satisfaction guaranteed. Geo. Bancroft, Hermiston, Ore.

NEW CROP ALFALFA-SWEET CLOVER honey; 60-lb. can, $4.75; two cans, $9 f. o. b. Rigby. Heckman & Larsen Honey Co., Rigby, Idaho. Quality guaranteed.

POPULAR BRAND HAPPY HOME HONEY—One 60-lb. can, $7.50; two cans, $14.50; six 10-lb. pails, $8.50; comb honey prices on request. H. N. Paul, Mabton, Wash.

NEW CROP ALFALFA-SWEET CLOVER honey, clean and sanitary. 60-lb. can, $7.50; 2 60-lb. cans, $14.50; at Sunnyside. S. King Clover, Sunnyside, Wash.

NEW HONEY, FINE QUALITY ALFALFA, sweet clover; 60-lb. can prepaid second zone, $7.79; two cans, $13.50; 3 10-lb. pails prepaid second zone, $4.70. Harry Fisher, Prosser, Wn.

DELICIOUS NEW CLOVER HONEY, 60 pounds, $5.50; two 60s, $9.75; six 10s, $6.75; 12 5s, $7. Agents wanted. Browne. Box. 499, Twin Falls, Idaho.

HONEY — WHITE CLOVER EXTRACTED; none better; two sixty-pound cans, $10. J. M. Ruyts, Buhl, Idaho.

3-POUND BOX ABSOLUTELY BONELESS codfish; fine white, new catch fish, delivered by mail, $1. Coffin Fish Co., Seattle, Wash.

NEW HONEY—ALFALFA AND SWEET CLOver; 1 60-lb. can, $7.50; two, $14.40; discount on large quantities. Ernest Sires, Yakima, Wn.

HONEY — FRESH ALFALFA-SWEET CLOver honey; one 60 lb. can, $6.50; two cans, $12.75. A. L. Traner, Touchet, Wash.

MERCHANDISE 59

ARMY GOODS. FIELD SHOE, $3.65; officers' dress, $3.95; russet, $4.25; wool breeches, $1.95; khaki, 95c. Price lists furnished. Walker's Army Store, 501½ Trent, Spokane.

MISCELLANEOUS—FOR SALE 60

TOBACCO—"OLD KAINTUCKEE" NATURAL leaf, the best that skill can produce; a rich, natural brown, well ripened and fire cured. I want every one to try a sample pound; none but the best at 50c pound, postpaid. Mention whether chewing or smoking. R. E. Acree, Obion Valley Tobacco Farm, Pryorsburg, Ky.

KENTUCKY TOBACCO—3 YEAR OLD LEAF. Don't send a penny, pay for tobacco and postage when received. Extra fine chewing, 10 lbs., $3; smoking 10 lbs., $2.50; medium smoking, 10 lbs., $1.25. FARMERS' UNION, Hawesville, Ky.

FARMERS' WANT ADS

This is the farmers' "want," "sale" and "exchange" department for small advertisements of farmers, including live stock and poultry.

Advertising rates for ads running 1 to 3 times, 10c per word per insertion, with a special rate to Farmer subscribers, as follows: Ads running 4 to 12 times, 9c per word per insertion; ads running 13 times or more, 8c per word per insertion.

All commercial and land advertising 10 cents per word each insertion. Open also to nonsubscribers.

In using these columns advertisers must observe: (1) No advertisements will be inserted for less than $1.00. (2) Every word, number and initial, including name and address, must be paid for. (3) New advertisements, changes of copy or cancellations must reach general office, Spokane, Wash., 10 days in advance of publication date. (4) Cash must accompany order.

Above rates include insertion in The Washington Farmer, The Idaho Farmer and The Oregon Farmer, which constitute the Pacific Northwest Farm Trio, 46 Review Building, Spokane, Wash.

MISCELLANEOUS—FOR SALE (Continued) 60

SASH AND DOORS—O. B. WILLIAMS CO., 1943 First ave. So., Seattle. Chicken house sash, 20" wide by 25" high, 80c; a dozen different sizes in stock for immediate shipment. Skylights for chicken houses, 36"x40"; price, glazed, $2. This is the size recommended by the Western Washington experiment station. We carry them in stock for immediate shipment. Sash and doors for all purposes at lowest prices. All orders receive prompt attention. Our large illustrated catalog No. 35, showing full line of building material and built-in fixtures for the home, free on request. O. B. Williams Co. Established 1899.

CORN HARVESTER CUTS AND PILES ON harvester or winrows; man and horse cuts and shocks equal corn binder; sold in every state; only $25 with fodder tying attachment. Testimonials and catalog free showing picture of harvester. Process Harvester Co., Salina, Kas.

SACKS—SECOND-HAND GRAIN AND SPUD, correctly sorted and graded; also pipe, new and second hand, any size; standard roofing paper at a big saving; pumps, engines, belting, cables, etc. Alaska Junk Co., Inc., 8120 Adams st., Spokane, Wash.

WALL BOARD—WRITE FOR SAMPLE OF Washington plaster wall board; won't warp, won't burn. Manufactured by Washington Building Products company, 6851 E. Marginal Way, Seattle, Wash.

NATURAL LEAF TOBACCO, CHEWING, 5 pounds, $1.75; 15 pounds, $4; smoking, 5 pounds, $1.25; 15 pounds, $3. Send no money, pay when received. Farmers' Tobacco Association, Paducah, Ky.

HOMESPUN SMOKING TOBACCO: MILD AND mellow; 10 lbs., $1.50; 20 lbs., $2.75; delivery guaranteed. We furnish free recipe for preparing. Smoking Tobacco Exchange, Sedalia, Ky.

NATURAL LEAF TOBACCO, CHEWING, 5 lbs., $1.75; 10 lbs., $3; smoking, 5 pounds, $1.25; 10 pounds, $2. Send no money, pay when received. Tobacco Growers' Union, Paducah, Ky.

KENTUCKY TOBACCO, NATURAL LEAF; mild and mellow smoking, 10 lbs., $2.50; 20 lbs., $4. Send no money, pay on arrival. Farmers' Tobacco Union, Sedalia, Ky.

TOBACCO — KENTUCKY'S PRIDE; EXTRA fine chewing, 10 lbs., $3; smoking, ten lbs., $2; twenty, $3.50. Farmers' Club, Mayfield, Ky.

MISCELLANEOUS—Wanted. 63

HIDES—WE BUY HIDES OF ALL KINDS. Write for prices and tags. Hibbard-Stewart Co., Hibbard bldg., Seattle.

WOOL—WE BUY WOOL AND PELTS. WRITE for prices and tags. Hibbard-Stewart Co., Hibbard bldg., Seattle.

AUCTION SALES 78

BIG TYPE POLAND CHINA AT AUCTION—Oregon state fairgrounds, Friday, September 29. Entire herd owned by S. D. Steffy, Newberg, Oregon. Show winners, brood sows, service boar and young stock. Catalog giving full details is being published Send to E. A. Rhoten, Salem, Oregon, sales manager, and one will be forwarded.

MACHINERY—For Sale 93

FOR SALE—ONE 18-FOOT CATERPILLAR, self-propelled combine harvester, 55 h. p. motor; also one 12-20 Yuba tractor; attractive prices and reasonable terms for quick sale. B. Johnson, 622 Douglas st., Wenatchee, Wash.

AUTOMOBILES—FOR SALE. 112

SCHOOL BUSES, ON ONE-TON CHASSIS; seating capacity, 18 to 25, $800, $1000, $1200; sold on terms to suit purchaser. Oldsmobile Motor company, Oldsmobile distributors, 1229 First ave., Spokane, Wash., 1000 E. Pike st., Seattle, Wash.

AUTO TRUCKS—For Sale 115

2½-TON NASH QUAD TRUCK, ABSOLUTELY new; must be sold at once. The motor drives on four wheels, making it the most powerful truck built. Personal reasons make it necessary for us to dispose of this truck immediately, before we have even had a chance to use it. The first person to offer us just one-half what it cost us can have it. Write us if you are interested. C. V. Allen Motor Co., 3005 Colby ave., Everett, Wash.

STOVE REPAIRING 128

WRITE MYER RUBENS, SPOKANE, ABOUT stove repairs, welding broken parts, nickle plating.

FUR-BEARING ANIMALS 170

SILVER AND CROSS FOXES FOR SALE. William Rambo, 407 Sprague, Spokane.

PETS—Dogs, Birds, Etc. 171

GENUINE TOY FOX TERRIER PUPPIES; real ratters; also canary birds. Lida Harrington, 2022 E. Couch st., Portland.

BEAUTIFUL WHITE COLLIE PUPPIES; reasonable prices. Urbandale Farm, Oakley, Idaho.

FOX HOUNDS, PUPS, YOUNG DOGS. HARRY Hull, Oakland, Ore.

POULTRY 174

PULLETS—1500 APRIL AND MAY HATCHED White Leghorn pullets for sale at attractive prices; hatched from thoroughbred Hollywood and Tancred strains; sired by cockerels 250 to 290 egg strains. We ship at three months of age and guarantee satisfaction or you may return the birds in 3 days. We can give you quality and service. Queen Hatchery, Seattle, Wash.

CERTIFIED WHITE LEGHORN BABY chicks; booking orders now for summer and fall delivery; safe arrival live, vigorous chicks guaranteed; no money in advance; pay on delivery. Established 1898. Sonoma county farm bureau accredited hatchery. Must Hatch Incubator Co., 445 Seventh st., Petaluma, Cal.

BABY CHICKS — WE GUARANTEE OUR chicks to be from the highest producing hens in Petaluma. Write for further information. The White Hatchery, Petaluma, Cal.

DOLLARS FOR YOUR EGGS—WE PAY THE top market prices for your eggs and poultry. Daily cash remittances. Western Produce Co., Spokane.

POULTRY (Continued) 174

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PIKE'S PEAK OR BUST

By LEWIS B MILLER

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SYNOPSIS.

Esau Haggerty, a strong man of mature years, and Orlando Medford, a young, slightly built and frail companion, have started from their Illinois home town for the great gold diggings of the west. Esau is pushing a provisions-laden wheelbarrow. Orlando is leading a cow. For three days they have been trudging slowly southwestward carrying out the determination crudely lettered on the side of the wheelbarrow, "Pike's Peak or Bust." Rain and snow impeded their progress, and Orlando falls sick and requires a couple of days to rest before proceeding. Then, with the village that is now Kansas City passed, they follow the Santa Fe trail westward, being but one of scores of outfits of various kinds headed for the fields of golden riches. Once again they stop for a good rest before plunging into the real wilderness, 700 miles of which is still ahead of them to be conquered by foot, cow and wheelbarrow. After several days' tramping, they pitch their tent across a little stream from the camp of a family by the name of Cooper, also headed for the gold diggings. In the party is the daughter of the Cooper family, Hazel, whom Orlando by chance met when both went to the stream for water and in whom he became at once greatly interested. He reluctantly joined Esau next morning for the day's travel, leaving the Coopers to follow later, but with the expressed hope that they would all meet again at the gold fields. It was several days later that Esau and Orlando met up with another strange party on the trail, several men with a push cart to haul their belongings to the diggings. The two parties agree to travel together the rest of the journey. To save time they leave the Santa Fe trail and take a short cut that will save them more than 100 miles. But to their great distress they find themselves many miles out in a waterless, sun-scorched desert, with death from thirst staring them in the face. They meet a wagon party coming back famished, hurrying as best they can for the place they left the Santa Fe trail and water. The three parties hold a council and decide that the safest thing for them to do is to cut across the desert to the old dry Smoky river bed and dig a well in it for water. They hasten to put the plan to the test, with the result that at no great depth they reach water. After a long rest, they fill their kegs and turn back for the old Santa Fe trail, some inclined to give up the journey to the gold fields, others determined to get to Pike's Peak or bust. Esau and Orlando, a little later, come upon a great wagon train of freighters out on the prairie and accompany them until they reach the Arkansas river. They continue alone, finally entering the open buffalo coutnry.

CHAPTER EIGHT.

Fording a Sea of Buffaloes.

At length the party of seven arrived at a little trading post—the first they had seen since passing Council Grove. An Indian trader, with a small stock of goods, mostly ammunition, had put up a sod house in a little grove of cottonwoods on the river bank. His house was surrounded with a stockade. He was there mainly to trade with the Indians, he told the travelers. But since the great tide of immigration had set in toward the gold diggings he was selling considerable quantities of powder and lead and caps to white men.

Night was nigh, and the foot travelers went into camp almost against the stockade, and in the edge of the grove. After supper the trader came out of his sod house and sat by their camp fire for an hour or longer. He informed the party that when trading with Indians he never permitted any of them to enter his enclosure. The gate was kept shut and barred. Through a hole in the stockade the goods were passed out and the pay taken in. Most of the pay was in buffalo robes, and all of it in skins of some kind.

Many thousands of immigrants had already marched by here on their way to the mountains, he told the campers. And, from what he had learned, vastly greater numbers would be sure to follow if the gold excitement kept up.

Next morning, the handcart and its fellow traveler, the wheelbarrow, moved on up the Arkansas. And so they continued to do day after day.

For a good while the wayfarers had been catching sight of little droves of buffaloes from time to time. But it was always from some high point. As yet the hunters they sent out had not been able to kill any, probably because they never ventured far enough from the trail. That was partly from lack of time and partly because lurking redskins might be waiting there to surprise stragglers. But at last, about the middle of a forenoon, the seven men looked ahead and saw the whole country, on both sides of the river, black with buffaloes. The animals were on their yearly migration northward.

As the little party of footmen neared the great drove Brindle gazed at them with wild, frightened eyes, and Frisk barked at them. Even the men themselves viewed that mighty throng of wild cattle with something akin to awe. For the trampling of so many hoofed feet kept up a dull but continuous roar. The buffaloes were moving and grazing at the same time. Mingled with the roar of their hoofs was the bellowing of the bulls. Indeed, those huge, shaggy fellows seemed to be trying themselves to see what an uproar they could make. Many of them, paired off, were engaged in furious battles. And others, facing each other, were pawing up the dust and making the whole plain resound.

"Reckon it's safe for us to vencher in among all that swarm of wild brutes?" questioned Esau. His words were addressed to Sanders.

"Why, yes; I rather guess it will be. They'll be apt to open a way for us when we come to 'em."

"But what if they get scared and stampede while we're among 'em?" suggested Orlando.

"They wouldn't be likely to crowd too close to us, I'm guessing."

"But if they got too bad skeered they might run right over us. And if they done that they'd tromp us all to mincemeat," protested a handcarter.

"Chances air we can tell what they're goin' to do when we git clost to 'em," Esau remarked. "But if they don't sidle away from us purty skittish-like, don't know but what I'll be in favor of callin' a halt right here till some wagons happens along. A wagon train will split a way through 'em if anything can."

"If they don't open a road for us of their own accord we can learn 'em good manners by pluggin' a few of 'em with lead," a handcarter suggested.

"No, let's not try that. That's too dangerous—altogether too dangerous," objected another man. "If there's anything that would start 'em to runnin' pell-mell, helter-skelter, that would be the thing."

"But we've got to shoot some of 'em, boys," Sanders reminded his partners. "We're just bound to lay in a supply of dried buffalo meat; and the time to do that is while we're close to this big herd. If we miss the present chance it's little we'll have to live on while we're mining. Little meat, I mean. Our supply of bacon wouldn't last hungry men very long when they're digging early and late."

"That's right," agreed Orlando. "For my part, I brought only bacon enough in old Brindle's pack to make grease to fry my other meat in—the meat I kill."

"That part's all right. I'm heartily in favor of loadin' up with plenty of dried buffalo meat." Esau was speaking. "But I'm not in for tryin' any butcher business while we're passin' through that whoppin' big drove. No tellin' what kind of a rumpus they'd kick up if we got 'em started good. Them crooked-back beasts looks danger's to me—downright danger's."

And Sanders answered: "Guess maybe it would be just as well to hold off till we arrive at the far edge of the herd. In fact, that would probably be safer."

The foot travelers were now within 200 or 300 yards of that vast, loud-voiced drove. As had been expected, the buffaloes parted when the cart and the wheelbarrow came close. But they opened only a narrow passageway, perhaps 300 yards wide. The travelers moved right on into the drove, though some of them did so with fear and trembling. For by the time they had marched 100 or 150 yards into the opening a handcarter said in tones that quavered and were pitched unusually high: "Boys, I ruther reckon this here's all right—what we're doin'. But for the life of me I cain't help feelin' a little—a little juberous. Ruther reckon I must feel a heap sight like pore old Pharyoh felt, him and his army, when they marched into the split-wide-open Red sea after the children of Isr'el. It was resky—downright resky. And so's what we're doin' this minute, I 'low. It's—it's shaky business. But I can stand it if the rest of you boys can. Yes, sir! I'll never be the first to flinch and holler stop."

"Oh, we'll pull through all right! Yes, we'll make it through safe enough, I've no doubt," Sanders answered, in light tones. But it could have been noticed that even he looked a trifle uneasy as he glanced around, and that his tones betrayed some nervous tension.

"Now that we've venchered in, ruther reckon we might as well keep moseyin' along and push through to the open country as soon as we can," Esau observed.

And a little later somebody else said: "About as safe to keep straight on now as it would be to turn back. If any of you doubts what I say, jest right-about-face and look behind us."

All eyes were turned at once, and everybody saw that the buffaloes were fast closing up the passageway. Already there was only a narrow lane scarcely as wide as the trail itself, through that trampling, bellowing host. And a few minutes after, when the nervous handcarter turned his head again, it was to exclaim: "The Red sea has already shut together on Pharyoh—has already swallered up Pharyoh! We're fordin' the Red sea!"

Once more the other six men looked back, to see that they were now completely surrounded by buffaloes.

On the little band of footmen marched, with their cart and their cow and their wheelbarrow, through that trampling, bellowing throng of crooked-backed cattle. And they could not help feeling few and weak and insignificant in the midst of those millions of wild brutes.



Orlando's eyes happened to wander to the far side of the camp.

"Gee whillikins! Did anybody ever see the like," exclaimed a handcarter, after they had been marching through that brown, restless sea for nearly half an hour. "Must be a million of these hump-shouldered critters!"

"Worse than a million! Million on millions of 'em!" declared the man tramping between the handcart's shafts.

Brindle, with her wild eyes and with her head held high, was marching along at a brisk gait. She did not seem to feel her pack, and she was in no need of urging now. Frisk, too, seemed very much impressed with the strangeness of his surroundings. He had ceased to bark, and kept very close to Esau and Orlando. His bristles remained up, he kept glancing about him uneasily, and from time to time he uttered low growls, scarcely audible above the general uproar.

As the seven men marched along, the buffaloes kept opening a way for them. But the passage was opened rather grudgingly; nor did it appear to be as wide as at first. Indeed, the nearest buffaloes seemed now but little more than 100 yards away, and within easy rifle shot. More than once Orlando, who was carrying his gun on his shoulder, pointed it towards the big game and took aim. But the gun was not cocked, and he had no serious thought of firing. None of the party had the courage to shoot and risk starting a stampede among that innumerable throng of wild beasts.

Finally Sanders exclaimed: "Boys, it's getting along toward dinner time! And I'm beginning to feel just a little bit hungry."

"Powerful sight of good eatin' here," Esau suggested. "All we need to do is to camp, kill and cook and then cram our carcasses till we're fit to bust."

"Bein' as we're where we air, and got around us what we have got, I couldn't—couldn't work up much appetite to eat here. Too much—too all-fired much like kindlin' a camp fire in a powder house," declared the timid handcarter.

Dinner time though it was known to be, nobody insisted upon halting for dinner. None of these travelers had ever been very close to a buffalo until that day; and as they pursued their way through the throng they gazed at the animals wonderingly. Most of the brutes had shed their winter coats. But their heads and necks and shoulders were still shaggy, only the hinder parts of their bodies being bare, or almost bare. Awkward and ungainly they appeared, and they did not seem capable of any considerable speed. Most of the bulls—all that were full-grown—were of huge size and of fierce aspect. And they were as warlike as they looked, for some furious battles they were waging among themselves.

At last, after perhaps an hour of steady marching, the travelers reached the far edge of this uncountable drove. As they emerged from among those plains cattle and saw open country ahead of them again, more than one man might have been heard to draw a long breath of relief. Indeed, all of them felt greatly relieved that they had passed through the peril without any trouble.

"Boys, now's the time to capture a mess of fresh beef. And here's the best place to dry all the meat we want to carry with us," Sanders told his fellow travelers, as soon as they were well clear of the drove.

"Jest for all the world what I was thinkin'" answered Esau.

And Orlando called out: "Yonder's the Arkansas ahead! And the trail leads rights along its bank, I can make out. Yes, and I see a little drove of cottonwoods that we can camp under for shade while we're drying our meat."

"That's what!" exclaimed a handcarter. "And if we want to barbecue any meat, we can fish driftwood out of the Arkansas for fire. 'Tain't the best fuel anybody ever seen, that driftwood ain't, but it' ll beat buffalo chips all holler."

The whole seven agreed that this was the very place to lay in a supply of meat. And a little farther on they turned out of the trail and marched over to the river bank. There, among some cottonwood trees and bushes, they went into camp. Now that moving stream of buffaloes was but little more than half a mile away.

"Jest looky yander, boys! You cain't see no end of 'em!" called out Esau, after he had removed the strap from his shoulders and let down the handles of his wheelbarrow. He was pointing to some hills on the far side of the river. Down those slopes thousands of the brown beasts were still moving.

"My stars! What goshens of good beef is goin' to waste here!" exclaimed a handcarter. "Sech a lot of steaks—sech a lot of fine, juicy steaks, and not a soul to eat 'em!"

"Somebody to eat one, and a mighty thick one at that," announced Esau. "Pushin' a wheelbarr' all the way from Illinois to the Arkansas gives a feller a starvin' good appetite."

"I'll bet it does! I'll just bet a button it does that very thing!" Sanders was speaking. "Same way with pushing and dragging this old gocart of ours all the way from Michigan to the present camp. But we'd better hustle out, quick as ever we can, and lay in a supply of fresh meat. If we're too slow about it that live stream may run dry before we get a drink."

Ere long began the excitement of making ready for a buffalo hunt; this party's first buffalo hunt. Brindle had been tied securely to a bush. And now Orlando, after putting fresh caps on his rifle and six-shooter, as the others had done, was soon following his party to attack that marching army of big game.

Near the point where the first animals were coming up the river bank was another little cluster of cottonwoods—a few trees and numerous bushes. Toward that grove the hunters moved. When once among the bushes there they found themselves within shooting distance of the nearest buffaloes.

"What's the best kind to shoot for beef?" questioned Orlando, in rather cautious tones.

Sanders paused in his preparations to fire and answered: "They say any cow is good, but a half-grown heifer makes away yonder the best eating."

Presently the cracking of rifles, little more than a faint popping out in this open country, began to be heard among the cottonwoods. Some of the hunters killed their game outright, while others only wounded theirs. One or two, owing to nervousness, missed their live targets altogether. Those who had only wounded animals ran out and finished them at close range with shots from their six-shooters. And those who had missed shot again, as soon as they could reload their rifles. When it was over, all had brought down a buffalo apiece.

Being thoughtful, sensible men, most of them, they killed one animal each for meat, and to be able to say they had killed a

buffalo. After that they were well content to let the others go in peace.

As the hunters rushed out of hiding the nearest buffaloes retreated. Soon all the men were at work removing the skins from their game and cutting up the carcasses. There was more meat than could be used, and they would save only the best.

When the game had been cut up in pieces, ready for carrying, three of the hunters returned to camp. There, with an ax, they cut some slim cottonwood poles. On those poles, working in pairs, they carried their meat to camp. There they laid it on the skins or on the grass until they could cut it into strips for drying.

While one or two were starting a fire of twigs and buffalo chips, others, barefooted and barelegged, were wading out into the shallow river, where they captured driftwood and carried it ashore. With this, aided by some dry limbs found in the grove, they quickly had a good camp fire burning.

Now they put on two skilletfuls of biscuits, seasoned with buffalo tallow, to bake. On those and on broiled buffalo steaks they all made a hearty meal. After eating they rested a while.

When well rested they fell to work with their knives and sliced their meat into long, rather thin strips. Some of these they strung on strings of buffalo hide, stretched from cottonwood to cottonwood, and left to be dried by wind and sun. Other strips they thrust through with sticks. The sticks were then laid in forks, so that the meat would hang over the fire. There the heat and smoke would dry it fast.

"All of it would dry quicker if we had it over a fire," somebody suggested.

"That it would—to be sure it would," admitted Sanders. "But barbecued or smoked meat soon gets very tiresome if you make a steady diet of it. I know. I've tried eating it often—barbecued beef. A little now and then goes down all right. But too often or too much, thank you."

The meat hanging in the sun dried as fast as could be expected. But the party had to remain in camp for a few days before all they would need would be dry enough to pack away. The great stream of buffaloes continued to flow by; but it was now a mile or more east of the campers.

While the footmen were busy with their meat drying, great numbers of other travelers passed by, moving in every possible way. Once, not long before sunset, a wagon train went into camp on the river bank, only about half a mile below.

After supper Orlando and Esau strolled down there. And almost the first people they saw were three men they knew—Holloway, Wallace and McKinley.

"Well, you didn't let that little dry spell on the Smoky Hill route send you back home, after all, I see!" Esau called out, on recognizing the three men at their camp fire.

The wagon party sprang up. "Why, hello there, Haggerty! No, we made up our minds to keep a-comin'," Wallace answered. "For my part I own up I was in the notion to march straight back to old Barton county. But the boys here talked me into goin' ahead. I'm mightily afeared we're all on a fool's airnd. But reckon maybe I can stand it if Jess and Tom can."

"I'd started for Pike's Peak; and even if we did get a little bit thirsty when we strayed off on the wrong road, that didn't discourage me," Holloway spoke up. "I've got a miner's pan there in the wagon, and I don't want to sneak back home without getting the pesky thing wet."

"That's just the way I feel about this trip," Orlando assured them. "It will take a lot to turn me back."

The visitors soon seated themselves, and they and the campers began to exchange experiences. But Orlando's eyes happened to wander toward the far side of the camp. At once he sprang to his feet.

"Believe I see somebody else over yonder that I know. Guess I'll step over and make sure," he remarked, by way of excusing himself.

Passing by a number of camps that had no special interest for him, he had soon stopped at a particular wagon and was greeting the Cooper family. They gave him a warm welcome.

"So you didn't get to the mountains ahead of us, after all," Mrs. Cooper remarked, when the visitor had been given a box to sit on.

"No, ma'm. Fact is, we've lost a lot of time from traveling. Two days we've been camped here already, drying buffalo meat. And we lost nearly two weeks, all told, back toward Council Grove. We're trying hard—"

"Nearly two weeks! How did you come to lose so many days?" asked Cooper.

"We tried the Smoky Hill route—that's how."

"And why didn't you keep on on the Smoky Hill route?" Cooper's wife wanted to know.

"Well, after tramping a straight stretch of 60 or 70 miles without water we thought we had a good excuse for taking back track."

"Sixty or 70 miles without water! Why, how in the world did you live through it?" questioned Hazel, eagerly.

"Oh, people can live a good while without water—when they have to. We trail trampers were still pushing ahead as fast as we could. But when we met a wagon with three men, all three walking and driving for life, then we called a halt."

"And did you have to travel all the way back without water?" asked Hazel's mother.

The visitor shook his head. "We thought at first we'd have to do that, or try to. Chances are we'd have died by the roadside, most of us. But instead of that we dug for water and found it—dug in the sandy bed of the Smoky Hill river. And even after that we nearly traveled ourselves to death getting back to a watering place. The men we met driving for life are camped over yonder now."

"Oh, was it you that had that experience with Holloway and his partners?" asked Cooper. "I spent a few minutes at their camp last night and heard 'em telling about what a terrible time they had. They were talking to some other men when I stopped there, and I didn't hear all of their story."

For an hour or so longer the circle around the Cooper's camp fire chatted, the visitor giving all the details of his party's experience in the waterless region, and the family relating their own experiences since he had seen them.

"You fellows were lucky to scramble out of your scrape as easily as you did," Cooper remarked.

"How much longer do you expect to remain in camp here?" Mrs. Cooper inquired, when the young fellow had stood up to go.

"Till our buffalo meat gets thoroughly dry. About one more day ought to be long enough, we think. Two at the outside."

"Reckon maybe we ought to dry some meat in the sun," Cooper said. "We ran onto some buffaloes two or three days ago and most of us killed one apiece. My folks and I cut up the one I killed and we kept it over a slow fire all that night. Next morning it was as dry as need be."

"Well, if we don't see you before we roll out in the morning, you're likely to overtake us again before many days, I suppose," Mrs. Cooper was speaking.

"Yes. Our party ought to come up with you in three or four days at the longest. But I'll see you again before you start in the morning. And Esau will come with me, I guess. Don't s'pose he knows you're here."

Now the visitor returned to his own camp. But after breakfast next morning both he and his partner strolled down to see the Coopers. They found the family ready to start and helped the man to yoke his oxen.

The young man made excellent use of the time allowed him. And when at length the wagon train was starting, he congratulated himself that he and the girl were already pretty good friends.

"I'm expecting to see you again in a few days," he told her. "We ought to overhaul you before very long."

"I hope so. I'm sure I hope you will," she answered shyly, at the same time giving him a half smile and a timid glance from her dark eyes.

The family climbed up and disappeared into their big wagon. But Orlando and Esau tramped along by the wagon till they arrived at their own camp. And more than once on the way Hazel raised the canvas and looked out to say something, or to answer her admirer's questions. When the two men had turned aside, Orlando stood gazing after the wagon train. And he continued to gaze till the last wagon had disappeared.

After the long wagon train had crept beyond his range of vision Orlando busied himself about the camp for a while. First he walked out a few hundred yards to where Brindle was grazing and examined her foot. At the time of stopping here she had shown some signs of becoming lame.

(Continued on page twenty-two.)

Bits of Fun for Everyone

No Chance.

"What were your father's last words?"

"Father had no last words. Mother was with him to the end."—Wag Jag.

Both in the Swim.

"My daughter sprang from a line of peers," said the ardent father.

"Well," said her feller, "I jumped off a dock once myself."—The Naval Monthly.

Agreeable.

"If I lend you $10, what security will you be able to give me?"

"The word of an honest man."

"All right, bring him along, and I'll see what I can do for you."—Banther.

Judging by His Wife.

Housewife—I'll not give you anything. Do you know who I am?

Tramp—No, mum.

Housewife—Well, I'm a policeman's wife, and if my husband were here he would take you, and quickly, too.

Tramp—I believe yer, mum. Your husband ud take anybody.—The Bulletin (Sydney).

Competitors.

Two little English girls were quarreling over the success of their fathers.

"My father can preach better than yours because he is a bishop," said the first.

The second little girl could not answer her back, but she suddenly recovered and said: "Well, anyhow, we've got a hen in our yard which lays an egg every day."

'That's nothing," said the bishop's daughter; "my father lays a cornerstone every week."—The Van Raalte Vanguard.

War Will Follow.

The Microbe—Who are the new bugs that just came into our milk can?

The Bacterium—Probably some more strained relations.—Stanford Chaparral.

A Frameup.

"I'm sorry to have to do this," said little Johnny, as he spread the jam on the baby's face, "but I can't have suspicion pointing its finger at me."—Everybody's Magazine.

Ins and Outs.

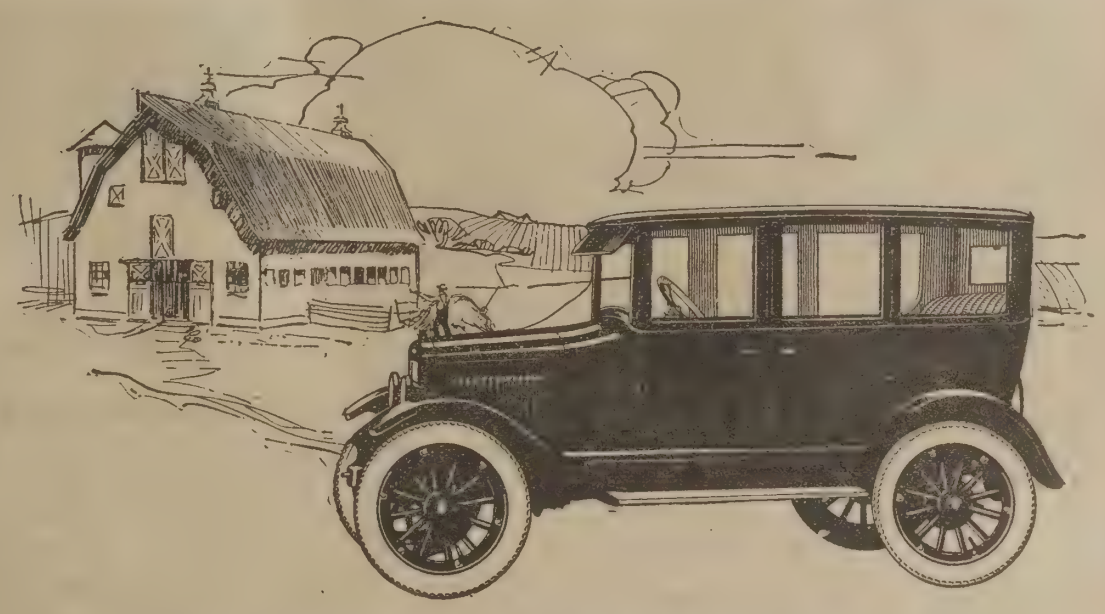
"Business ain't nothing like the army," complained an old-timer. "In a business office you walk right into the room marked 'General,' but you gotta keep out of the one with 'Private' on the door."—The American Legion Weekly.

Why They Went.

As the Sunday school teacher entered she saw leaving in great haste a little girl and her smaller brother.

"Why, Mary, you aren't going away?" she exclaimed in surprise.

"Pleathe, Miss Anne, we've got to go," was the distressed reply. "Jimmy swallowed hith collection."—Boston Transcript.



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THE wonderful dependability of the Overland Sedan makes it the ideal car for the American farm.

Every riding and driving convenience is yours in this beautiful car. It comes completely equipped with electric starter, lights, battery, demountable rims and regular three-speed transmission.

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FAMILY CIRCLE

ALICE BARLAND
EDITORIAL CONTRIBUTOR

Experience Letters

From Our Family Circle Women

Dear Mrs. Barland: I find so many good things in the CIRCLE that I want to pay a few of my debts to it. I want to thank Mrs. C. F. L. for her fritter recipe which I have wanted for a long time and which is fine.

To keep vegetables fresh when one has no cooler, use a container, preferably glass or crockery. Put just enough water in the vessel to keep the roots of the vegetables covered and stand them upright and cover and keep in a cool, dark place. I take a whole bunch of celery just as it comes, place it in a glass jar with a wide mouth and put in water enough to come up well over the root. Then I make a cone of paper and slip over the whole thing, crushing the paper firmly around the bottom of the jar. The celery will grow and blanch beautifully and I have kept a bunch two weeks this way. Asparagus will keep a week or more this way and grow and be more tender and crisp.

Leave the foliage on such vegetables as radishes, putting just the tips in the water and if badly wilted, sprinkle with cold water. Any kind of vegetable of this sort can be kept this way, taking care to keep only the roots in the water. The darker the place the better. I have kept a cabbage this way for a week and greens washed and sprinkled and covered tightly and put in a cool place will be as crisp as when fresh cut by the next day.

We have taken THE FARMER ever since it was printed and before it had its present name.—Mrs. J. J.

Dear Mrs. Barland: I am like hundreds of other farmers' wives. I live 30 miles from a railroad and there is very little except work in our lives. And yet I feel as you do about the beauties of our wonderful country and its privileges. There are very few who do not get mail every day, no matter how remote we are from the railroad.

This valley where we live is beautiful and rich. We came here seven years ago and put all the savings of years into this place and we have lost out. Drought and high prices have been too much for us and we are only one of many in like circumstances. The mortgage holders are closing out one after another and our time will come. But if we can only have our health I do not fear.

I started this letter to tell you how much I appreciate your talks; they have the true friendly ring to them and I will say in he words of the soldier boys, "Carry on." The poor mothers get discouraged and need the friendly talks you know so well how to write.

It is well, as you say, to take time to enjoy the sunsets. Some are very beautiful and when I look on them I seem to hear the words: "At even time there shall be light," and I think the dark valley which we must all pass through will be lightened by a glow from the other shore.

I will close with a good remedy for burns. There is nothing better than to apply common baking soda, wet with lime water. It is well to have some such remedy prepared. Take a lump of lime the size of an egg, put it into a glass jar, cover it with water and let it settle. To use, wet the soda in this and apply as soon as possible and it will take out the pain and is something so easy to have on hand.—Mrs. C. T. C.

Dear Mrs. Barland: I take the greatest interest in the Family Circle page and after reading "Columbine's" letter and noting her wish that more young girls would write I have taken courage to do so.

I am 18 and an "honest to goodness" farmer. I stay in town and attend high school during week days, but I feel 100 per cent better when I cross the city limits on Friday nights.

It is one of my favorite pastimes to get lost in the sweet apple blossoms and sit and daydream. The roan and buzz of the city gives me a repugnance for it. The saying, "What is so rare as a day in June?" should have "in the country" added to it.

I do not milk cows and such work unless dad is gone, but I do pick cherries, now hay, drive derrick and countless other things and enjoy it much more than my necessary housework.

We have no time to get lonesome, mother, dad and I. When one has 100 acres of fruit land it keeps one busy cooking for hired men and doing other odd jobs. I style myself professor of odd jobs, because I have done most everything, from feeding the cattle to painting. Don't misunderstand me, my dear readers, I mean painting my nephew's wheelbarrows.—Elsie Schwald, Oregon.

Dear Mrs. Barland: I am only 15 years old, but I enjoy the Family Circle and I, too, would like to have more girls write. I would like to correspond with "Columbine."

I live on a large farm on the Columbia river and I have a pony to ride. We have lots of fruit and good swimming and boat riding. We live just across the river from the Colville Indian reservation.—Olive M. Willard.

Dear Mrs. Barland: You said when we have anything good, to send it in. I want to say a word to lighten the separator work. To those who don't have a good deal of milk, strain into the separator can and put in about one-third as much cold water. In a couple of hours you can run off the milk and the cream will come last, pure and sweet. Then just wash the can for the next batch and all is done. No worry these hot days and I assure you that you will get all the cream from the milk. Try it, you tired, busy housewives, and see the difference.

As a last word will say take that separated milk, put in a little flour for your pet lambs and see them smile and grow fat.—Mrs. Jennie Hain.

Here are some things which relieve whooping cough and will no doubt be good for those which accompany colds so common with children.

One mother says eucalyptus oil did wonders for her children. She says: "The odor is so strong that they often object to it so I rub it on the soles of their feet and a little on throat and chest and when I put them to bed I pull the bed clothing close about their necks to shut out the odor. When I had fixed them up this way they would often sleep all night without coughing." MRS. K. E. K.

Another—Take half a glass of sorghum and stir into it half a teaspoon of soda and let ferment for 24 hours, then give a little frequently to children with whooping cough. This will shorten the duration of the disease. MRS. L. L.

Montana.

Home Recipes

Grape Juice—Bring to a boiling point 25 pounds of grapes, one pound of sugar and one quart of water. Squeeze through a jelly bag and return the juice to the kettle with four pounds of sugar. Boil well for 15 minutes, bottle and seal.—Mrs. I. J. H., Washington.

Pear Butter—A long time ago there was a request about putting up pears which are blown from trees before they are ripe. I will tell how I saved mine. Pare and core the pears and cook as for canning. Then put through a fruit press or a colander and add spice to taste and sugar. Sometimes I use only cinnamon and sometimes I add clove and nutmeg. Another way to save the pears is to cut in halves and core, but do not peal. Put in a pan and sprinkle with quite a good deal of sugar and cook in a slow oven for half a day or all day till they are a light brown and the juice like sirup.—Mrs. B. S., Wash.

Spiced Pickles—Put fresh cucumbers into fruit jars or stone crocks, make a brine of 1 gallon of boiling water, 1 cup of salt, allowing enough to cover the pickles. Scald this same brine and pour over for nine mornings, then wash cucumbers and cover with spiced vinegar to taste, pouring it over hot and seal. I add a piece of alum to keep pickles firm.

I make some pickles by adding to the cucumbers small onions and bits of cauliflower. I pour the hot brine over these for two or three mornings, then mix with the cucumbers and add spiced vinegar same as for the cucumbers alone. This is an old and tried recipe.—A Subscriber, Oregon.

Drying Prunes—Put them in boiling water for two or three minutes in which has been added one teaspoon of baking soda to a gallon of water. Remove from the water and place on shallow dishes and place to dry in a rather high temperature which should be lowered after a few hours. I start mine in the baking oven and afterward remove to the warming oven. I do not remove the seed or use any sugar, and they are like those we buy in the stores when dried this way. Plums can be dried the same way, only being so juicy they require longer to dry.—Mrs. Hattie McClure, St. Maries, Idaho.

Soap from cracklings, No. 2: I use all kinds of clean fat scraps, rinds, etc., unless the cracklings have been put through a lard press, and in that case there will not be enough fat to make it worth while to use them.

Five pounds of cracklings (if very fat 4 1-2 will do), one can of lye, three gallons of rain water. I put all this together in a five-gallon coal oil can and set it on the stove where it will boil slowly. It should become soap in four or five hours and when finished will drip from the ladle like thick sirup. It is best to test some in a small dish to see if it is solid soap; if there is water in it continue to cook longer. Set aside until next day to cool and then cut into cakes.

It should be thoroughly dry before using, as it improves with age. This recipe has been in the family for years and I make all the laundry soap I use. MRS. J. E. H.

Idaho.

To Can Fresh Milk—Put the milk on stove and bring to a boil; be very careful not to scorch it. Scald your jars and fill with the milk and put on the rubbers and caps and cook just a few minutes in the jars in hot water. Tighten the caps and set in a cool place. I have kept milk canned this way for months and it was just as good as the day I canned it. This is a good plan for people who keep but one cow.—Mrs. E. B., Oregon.

Just Folks

There is something in trying to make of each day the whole of life.

The evening and morning make up a complete day.

When the day is done the books are balanced. They may be and they may not be opened again.

There is nothing necessary that is carried over from the evening to the morning.

Every morning is the joyous dawn of a new life; and the evening satisfies with the joy of the harvest.

There is no magic about the morning miracle of work and the evening miracle of rest. It is simply the beginning and the ending of the chapter.

Plan for the new chapter always, but let it always be a new chapter.

Let the freshness and vigor of youth enter into every morning. Let the ruggedness of action characterize the midday. Let the graciousness of age close the chapter at night. So shall growing content come with the days; so shall new visions enter into the years; so shall there be light at eventide.

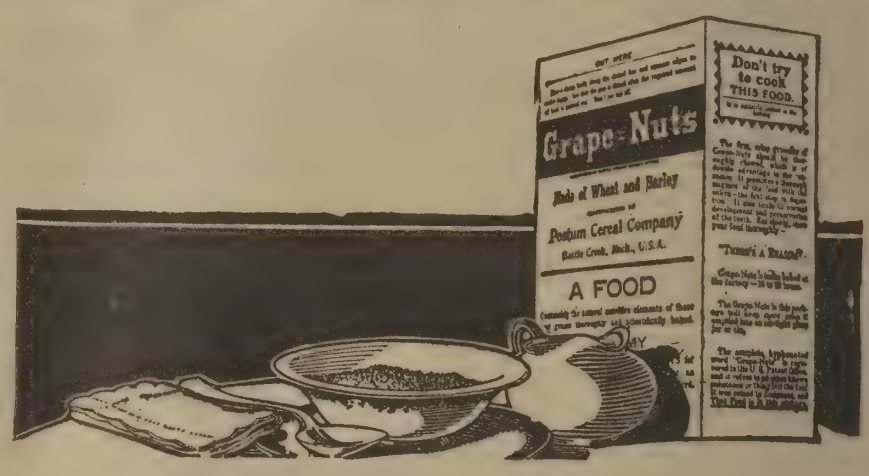
This is no new philosophy of life. It is as old as the Bible.

"And God said, Let there be light: and there was light. And God saw the light that it was good: and God divided the light from the darkness. And God called the light day, and the darkness he called night. And the evening and the morning were the first day."

And the other five days of creation, composed of the evening and the morning, each told its own completed story. It will be noticed that it was not the morning and the evening that made the first day in the drama of creation, but it was the evening and the morning that made up the day. It is the evening that makes the morning worth while. Results tell the story of the day. The morning, of itself, has no results. It is the beginning, it is opportunity, it is a prophecy. But the fruitage of the day is in the evening. The evening is the crowning of the day, not merely the ending of the day. The dawn of the morning may be inspiring, but it is the inspiration of promises, not the golden fruitage of fulfillment. There is nothing to mar the beauty of the morning promises, but they are mere promises, like the colors in the rainbow.

The evening may bring forth its record of achievement, as well as the tale of broken promises, show the stains of labor on its hands, may wish that much of the day had been otherwise, and yet, through it all, if the purpose was straight, its look was upward and onward, if failure only stirs to greater endeavor, and if the evening brought forth a day's work that was worth while, something added to life, something on which to base greater attempts, something to cheer the soul and make it more ready for another evening to come, then the satisfaction of the evening will outlast all the rainbow promises of the morning.

EAS



No heat with this summer meal

A DISH of crisp, delicious Grape-Nuts, with cream or milk (some berries or fresh fruit, too, if you like) is cooling to serve, cooling to eat and cooling to digest—with a charm of flavor and goodness that rouses appetite enthusiasm. No preparation, no cooking—no heating of the body afterward, as heavy, starchy meals do—but well-rounded nourishment for every bodily need.

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Your Health

By Royal S. Copeland, M. D., F. A. C. S.

What does the human body need in order to be healthy?

First, the body must have fresh air. Therefore, every room you occupy should be adequately ventilated. Fresh air never hurts any one.



Dr. Copeland.

The reason persons unaccustomed to drafts catch colds is because the regulatory apparatus, that is, the skin, has lost its natural protective power. The result is their bodies become chilled, and as a consequence, the resistance is lowered. This permits the germs they have harbored in their noses and throats to become active. Become accustomed to cool temperature and fresh air. Wear only a moderate amount of clothing, and have it fit loosely, and your body will soon learn to react to changes in temperature, and in this way to protect itself.

Of course, when overheated, you should not sit in a draft or in the cold without some additional covering. When your body is in vigorous action it must get rid of the excessive heat produced. Just as an engine in operation becomes overheated, so does the body become overheated. The body gets rid of this excessive heat by dilating the bloodvessels in the skin and by pumping the blood from the internal organs into the skin to cool. Then it is pumped back into the internal organs to perform its usual function. The more violent the exercise the greater the dilation of the bloodvessels in the skin and the more forceful the heart action. If you cease vigorous exercise and sit in a cool or drafty place before your body can readjust itself, your blood will be too quickly cooled in the dilated bloodvessels and you will become chilled and your resistance will be lowered.

You would not think of putting cold water into an overheated engine, because it would crack the cylinders or do some other harm. Be as considerate of your body.

You should get ample rest and sleep. Eight hours out of 24 is a safe average. We should get sufficient recreation, but we must not sacrifice our sleeping time to gain it.

Do not overeat. Overeating is absolutely injurious. Eat slowly and enjoy your food. Meat once a day is usually sufficient. Let your diet be a mixed diet—that is, a diet consisting of vegetables, cereals, milk and its products, as well as meat. Prefer the coarse foods, such as whole wheat and rye bread, unpolished rice, whole corn flour, etc. Do not eat heavily when overtired or when mentally overwrought.

Wash your face and hands before each meal. When possible, rinse your mouth before and after meals. Bathe frequently. Keep your teeth, gums and tongue clean.

ANOTHER USE FOR LEMONS.

Sometimes, when water is allowed to stand in a glass for several days, we find it has left a mineral deposit on the inside of the glass, which is very difficult to remove by ordinary method. Try a piece of lemon for scouring off this rough, gritty film.

RETAIN THE BERRY FLAVOR.

Practice washing the cherries before pitting, strawberries before hulling, etc., thereby retaining the flavor and juices that would be lost if the fruit were washed after pitting or hulling.

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4087. Sleeveless garment. in four sizes: 4, 6, 8 and 10 years. A 6-year size requires 1 3-4 yards of 27-inch material. Price 10 cents.

4097. Ladies' dress. Cut in six sizes: 36, 38, 40, 42, 44 and 46 inches bust measure. A medium size requires 5 1-4 yards of 32-inch material. To make underbody, sleeve facings and vest portions of plain material as illustrated 1 1-4 yards 40 inches wide will be required. The width of the skirt at the foot is 2 3-8 yards. Price 10 cents.

4092. Boys' suit. Cut in four sizes: 2, 3, 4 and 5 years. A 3-year size requires 3 1-4 yards of 32-inch material. Price 10 cents.

3769. Little tot's dress. Cut in four sizes: 1, 2, 4 and 5 years. A 4-year size requires 2 1-4 yards of 40-inch material. Price 10 cents.

3702. Girl's dress. Cut in four sizes: 8, 10, 12 and 14 years. A 10-year size will require 3 1-4 yards of 40-inch material. Price 10 cents.

4089. Girl's dress. Cut in four sizes: 6, 8, 10 and 12 years. A 10-year size requires three yards of 32-inch material. For collar and sleeve facings as illustrated in large view five-eighths yard of 32-inch material is required. Price 10 cents.

3764-3761. An up-to-date model. Waist 3764, cut in seven sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. Skirt 3761 cut in seven sizes: 24, 26, 28, 30, 32, 34 and 36 inches waist measure. To make the dress of one material will require 8 3-4 yards of 32 inches wide. If made as illustrated in the large view 3 1-8 yards of figured and 3 3-4 yards of plain material will be required 42 inches wide. Two separate patterns, 10 cents for each pattern.

4079. Misses' dress. Cut in three sizes: 16, 18 and 20 years. An 18-year size requires five yards of 32-inch material. The width of the dress at the foot with plaits extended is 2 3-4 yards. Price 10 cents.

3834. Ladies' under garment. Cut in four sizes: Small, 34-36; medium, 38-40; large, 42-44; extra large, 46-48 inches bust measure. A medium size requires 2 1-4 yards of 36-inch material. Price 10 cents.

3715. A popular undergarment. Cut in four sizes: Small, 34-36; medium, 38-40; large, 42-44; extra large, 46-48 inches bust measure. A medium size will require 2 1-8 yards of 36-inch material. Price 10 cents.

3658. A practical seamless apron. Cut in four sizes: Small, 34-36; medium, 38-40; large, 42-44; extra large, 46-48 inches bust measure. A medium size will require 2 5-8 yards of 36-inch material. Price 10 cents.

3882. Ladies' house dress. Cut in seven sizes: 36, 38, 40, 42, 44, 46 and 48 inches bust measure. A 38-inch size requires five yards of 36-inch material. The width at the foot is about two yards. Price 10 cents.

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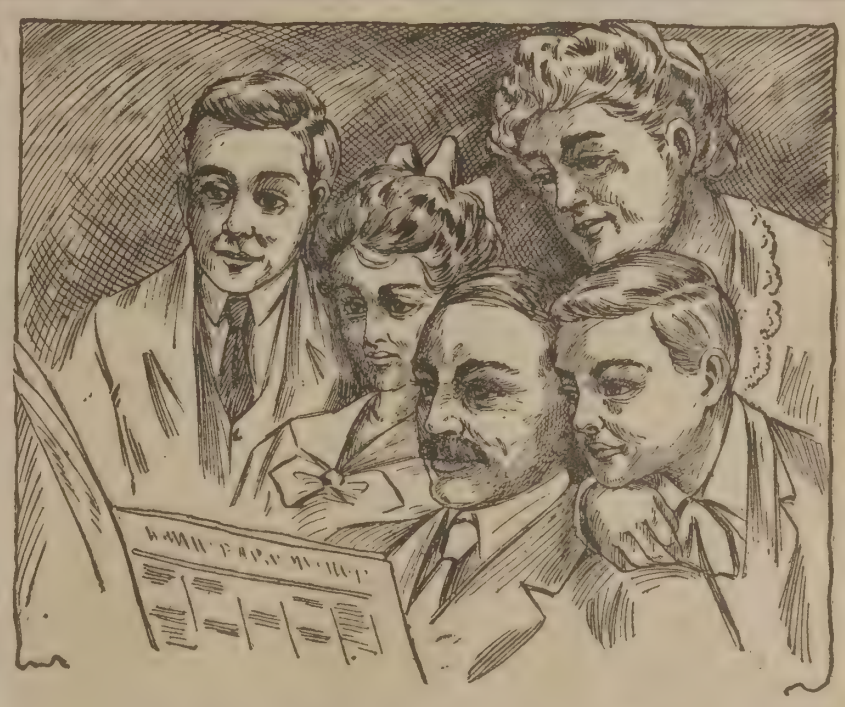
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If your subscription is already paid in advance it will be extended from the date to which it is paid. Aug. 24, 1922.

High Points in News of the Week

The two outstanding features in the strike situation last week were the intervention of the five big brotherhoods of railway employees in an attempt to end the strike of the 400,000 railroad shop workers and the appearance of President Harding before a joint session of congress with a message reviewing the entire strike situation and suggesting certain legislation with a view to improved industrial relations.

Probably the action of the railway brotherhoods is more important from the standpoint of its immediate effect than is the address by the president. These brotherhoods include organizations such as those of the engineers, firemen, conductors, and so on, which are not on strike, but which have been threatened with being drawn into it if settlement is delayed much longer.

At this writing the terms of the proposed settlement as drawn up by the five brotherhoods have not been made public. They have, however, been presented to the officials of the striking shopmen and to the railroad executives. It is understood that the terms are acceptable to the strikers. The railroad executives are holding sessions discussing the proposals and have promised to give a definite answer early this week.

There is little information available upon which to base a prediction as to the likelihood of the success of the plan, but the continuation of negotiations after several near breaks, with the threat of complete railroad tieups, strengthens the hope that an agreement will yet be reached to avoid complete paralysis of transportation.

Numerous organizations and massmeetings of producers and shippers have been held during the last week, resulting in a flood of telegrams to the president and others in positions of authority to do everything possible to bring about an early settlement to avoid losses of perishable products that can not be shipped even with the partial tieup now existing. Fruit growers of the Pacific northwest and of Pacific coast as a whole have held numerous meetings and have sent urgent appeals to the president.

President Harding in his message to congress took up not only the railroad strike, but the coal strike as well. Probably one of the most important recommendations that he made was that a government agency be established with sufficient federal capital to buy and sell enough coal to stablize the coal market by insuring equitable distribution of the supply and prevent extortionate prices. The president emphasized the basic principle of the right of any man to work unmolested. He declared in favor of such modifications of the present law as to enable the government to compel both railroad operators and railroad workmen to abide by findings of the railroad labor board in such cases as the present one. He, however, made no recommendations for speedy action on any of these points with a view to settlement of the present industrial disturbances, but looked rather to the future, apparently in the belief and hope that the present strikes would be ended through existing means.

* * *

Much improvement was seen last week in the coal situation. Settlement of the strike was effected in a large percentage of the coal mining regions, with prospects for settlement in others. Negotiations for a complete reopening of all the mines that have been idle or operated only partially since last April are under way. Some are already operating. Indications are that operation will be restored sufficiently to avoid the coal famine that has been threatened since the strike was called. Continuation of a possible extension of the railroad strike, however, would render the settlement of the coal strike only partially effective in bringing relief.

* * *

After several months of debate the senate last Saturday passed the administration tariff bill by a large majority vote. The measure now goes to a joint conference committee made up of five senators and five members of the house of representatives. This committee will endeavor to harmonize the differences between the tariff rates adopted by the lower house and those included in the senate bill just passed. The senate fixed much higher rates on many articles than did the house. One important feature of the bill is a provision that the president shall have authority to increase rates from time to time as occasion seems to warrant. It has been estimated that this tariff bill, if allowed to stand as passed by the senate, will raise $400,000,000 in revenue the first of the year. This is said to be $500,000 more than that raised by any other tariff bill in the country's history.

With the tariff bill now out of its way until the conference committee reports, the senate is expected to take up next the soldier's bonus bill. While it is expected that the bonus bill will cause long debate, it is freely predicted that the measure will be passed. It has already been passed by the lower house of congress, but with no provision for raising the money. President Harding has repeatedly made it known that he will not sign any bonus measure which does not include within itself provision for raising the necessary funds with which to pay the soldiers. He has designated the sales tax as the method which he favors for raising the money. As it seems hardly probable that the senate and house will adopt this method, it seems correspondingly improbable that the president will sign the bill. If he fails to do so, the question arises whether or not both houses will be able to pass it over his veto. Ability to do so seems unlikely.

* * *

One million boxes of apples are scheduled to go by ocean steamers to American and foreign markets this season, according to an agreement which has been made between northwestern apple growers and the port of Seattle. Recently an intercoastal steamship with refrigeration left for the Atlantic seaboard with fruit, reindeer meat from Alaska, frozen fish, eggs and poultry. En route south the vessel picked up California citrus fruits and other perishable products. Formerly all this tonnage moved to New York and other eastern centers by train.

Last year when the railroads were hard pressed to furnish refrigerated space for the movement of 32,541 carloads of apples the growers took advantage of the cold storage space, enough for 2000 tons, and this seems to have been a leader for the rapid increase in the movement of this fruit in refrigerated ocean vessels.

Farm Business and Markets Outlook

(Continued from page five.)

September, October, $28.

SEATTLE, Aug. 19.—Cash wheat—Hard white, soft white, western white, hard red winter, soft red winter, northern spring, $1.05; western red, $1.03; Big Bend Bluestem, $1.20. Hay and grain, unchanged.

MINNEAPOLIS, Aug. 19.—Wheat—Cash, No. 1 northern, $1.07 1-4@1.13 1-4; September, $1.02 1-4; December, $1.01 7-8; May, $1.06 3-4.

Corn—No. 3 yellow, 56@56 1-2c.

Oats—No. 3 white, 46 5-8@49 1-2c.

Barley—38@48c.

Flax—No. 1, $2.38 1-2@2.39 1-2.

DAVENPORT, Wash., Aug. 19.—Bluestem, $1.10; Marquis, $1.05; Gold Coin, 93c.

POMEROY, Wash., Aug. 19.—Turkey red, 93c; hybrid, 88c.

DAYTON, Wash., Aug. 19.—Club wheat, 94c; red, 91c.

RITZVILLE, Wash., Aug. 19.—Bart, $1.10; red, 96c; fife, 90c.

ODESSA, Wash., Aug. 19.—Marquis, Bluestem and Bart, $1.09; Turkey red, 96c; Jones fife, 92c.

WALLA WALLA, Aug. 19.—Bluestem, Turkey red, Bart and Club, 89c.

Hay and Feed Grain.

PORTLAND, Ore., Aug. 19.—Millfeed—Prices f. o. b. mill; mill run, ton lots, $31; middlings, $43; rolled barley, $36@38; rolled oats, $44; scratch feed, $48 per ton.

CORN—White, $37; cracked, $39 per ton.

HAY—Buying price, f. o. b. Portland: Alfalfa, $18@18.50 per ton; cheat, $15; oats and vetch, $17; clover, $18; valley timothy, $18; eastern Oregon timothy $20@21.

SPOKANE, Aug. 19.—Alfalfa, $22 ton; timothy, $24 ton; mixed hay, $22 ton.

Wheat—Feed wheat, $40 per ton.

Oats—$40 per ton; steam rolled, $42.

Corn—$36 per ton; cracked corn, $38 ton.

Barley—$42; steam rolled, $44.

Bran and shorts—$32 per ton.

General Produce.

PORTLAND, Ore., Aug. 19.—Butter—Cubes, extras, 37@38c lb.; prints, parchment wrapped, box lots, 44c; cartons, 45c. Butterfat, 44c delivered; station buying price, A grade, 42c.

EGGS—Buying price: Current receipts, 22@23c dozen; henneries, 25@26c dozen. Jobbing prices: Case count, 23@24c; candled ranch, 26c; selects, 29c; browns, 29c; firsts, 27c; pullets, 25c.

Cheese—Tillamook triplets, price to jobbers, f. o. b. Tillamook, 26c; young Americas, 27c; longhorns, 27c pound.

Poultry—Hens, 14@22c lb.; springs, 20@22c; ducks, 15@22c; geese, nominal; turkeys, nominal.

Veal—Fancy, 15@16c per pound.

Pork—Fancy, 17@17 1-2c per pound.

SEATTLE, Aug. 19.—Eggs—Select local ranch, white shells, cases included, 24c per doz.; mixed colors, 23c per doz.; pullets, 19@20c per doz. Cases returned to shipper 1c less.

Butterfat—F. o. b. Seattle: A grade, 45c per lb.; raw milk, $1.90 per cwt.

Poultry—Hens, 4 1-2 lbs. and up, 22c per lb.; over 3 1-2 lbs and under 4 1-2 lbs., 15c per lb.; 3 to 3 1-2 lbas., 10c per lb.; 1922 broilers, 1 lb. and heavier, 20c per lb.; old roosters, 10c per lb.; geese, fat, live, 16c per lb.; do fancy dressed, 22c per lb.; ducks, 3 lbs. and heavier, live, 12c per lb.; spring ducklings, 3 lbs. and heavier, 18c lb.; turkeys, fat, dry picked, 12 to 15 lbs., 40c per lb.; do live, fat, 7 to 10 lbs,. 35c per lb.; squabs, large, $3 per doz..

SPOKANE, Aug. 19.—Poultry—fat hens, 17c lb.; light hens, 14c lb.; roosters, 8c lb.

Fresh ranch eggs—$6.50@8 case; no storage.

Butterfat—40c a pound.

Wheat Market Outlook

(Continued from page six.)

tralia, which is larger than most estimates, so that the total carryover or surplus of old wheat, after all, may be only 130,000,000 to 140,000,000 bushels. If it develops that a further reduction is to be made in the coming year it means a strong statistical situation, which should maintain a fairly satisfactory price level.

Trend Seems Upward.

So far as the local influences go, a severe car shortage, which is certain to occur this fall, will help to sustain the market to the extent that it prevents farmers from selling. Furthermore, the general trend of prices seems to be toward a higher rather than a lower level. This factor can't be counted upon for much help, however.

It must be understood that this analysis is tentative, which is the best that ever can be done at this time of the year. The crop estimates for Canada and the United States are most dependable, but even they are subject to change and the amount needed for home use is another variable. Crops in the southern hemisphere may exceed or fall below the average and the world outlook will be changed accordingly.

A still longer view is not so hopeful for the wheat grower. Russia was formerly the chief exporter, but her place has been taken by expanded production in other countries. Last year even India sent practically no wheat abroad and the Balkan states shipped only about one-tenth of the amount they exported annually before the war. But North America, Argentina and Australia were able to meet the import needs of the world. Eventually Russia will come back, the Balkans will return to normal production and India will be in the exporting game at least in a small way. When these conditions arrive, either a lower world price level or decreased production in North America and the southern hemisphere is in prospect.

WIND DAMAGES FRUIT.

A report from Kennewick says that the high windstorm of August 19 did much damage to the fruit crop of that section, especially to the Bartlett pears. A large percentage of the pears were blown from the trees, suffering damage which makes them of comparatively little value for shipping. Damage to apples is reported to be much less.

Skagit County Fair

(Continued from page three.)

that is being done by the county agricultural agent, C. H. Bergstrom, showing such work as seed treatment, potato spraying and fertilizer demonstrations. The extension service of the state college had two booths in which they showed many phases of farm problems and their suggested solution, including a model bull pen and a wooden hoop silo. The White Bonanza and Victory oats were shown as a result of a five-year trial on the J. H. Hulbert farm at Laconner. Three varieties made an increase of 8.8 bushels per acre over Swedish Select oats.

The woman's department brought out a large variety of articles made and used in the home, the exhibits coming from all parts of the county. The largest division was the culinary section, which is the biggest display of this kind that has ever been shown in the history of the fair. "It goes to show that the women are taking a greater interest in the products of the kitchen and in showing other women what they can do," said Mrs. Jackson, secretary of the department, "than they have ever done before. The collection of canned goods shows that there is a larger variety of canned fruits and meats being put up and that the tables of the people are being better supplied."

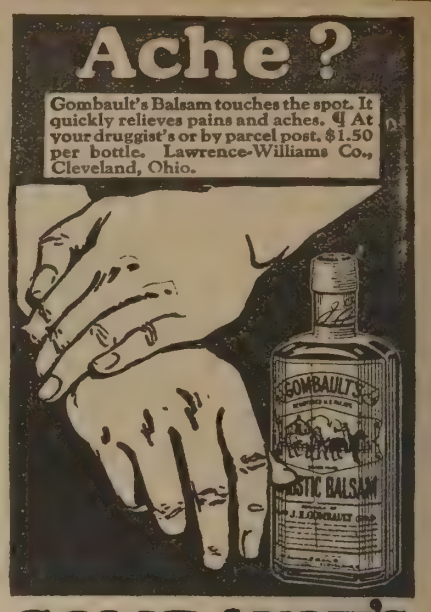
One of the new features of the show this year was the rest room, where the Federated Women's Clubs served tea and wafers to the ladies and milk to the babies every afternoon. Miss Mary Sutherland gave talks on nutrition and told how the state college could help them in such work. Many women and a few men went to her for advice and to secure bulletins on different subjects.

The varieties of flowers seemed to be more varied than in the past and the competition was very keen.

The educational exhibit was far superior to anything ever shown in Skagit county before.

The needlework compared very favorably with all departments and included classes of articles made by women over 60 years and some of the ages were as high as 90. The Northern State hospital entered a practical exhibit of work that was done by the inmates. It covered a large variety of household articles.

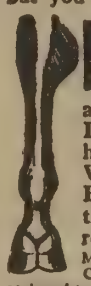
The art division included hand-painted pictures and painted china, all of which was new work and none that had been carried over from last year.



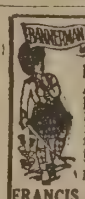
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Farm Lands for Sale
Read our "Want Ad" Page for good offers this week.



Fifteen miles from town, up in the mountains to Okanogan county, Washington, lives Coral Randall Meyer. This is the first time she has written to the Corner. Her birthday was July 25, when she was 11 years old. She has one sister and one brother, named Helen and Tom. She has three cats, named Polly, Babe and Bird. She also has a saddle pony. Her name is Croppy because she has real short ears. She is white. They have a 200-acre farm.

Mildred Sherrod writes in behalf of her friend who wishes to join the Corner. Your friend would be a graduate member if she joined, Mildred, as she is over 12 years old. She is welcome. We should like to hear from her, too. Mildred lives in Whitman county, Wash. They have 17 horses, two cows and about 200 chickens.

Johnny Timm wishes to join the Corner. He is 11 years old, his birthday is February 6. He has two cats, one black and one yellow, and four cows, a black one, a yellow one and white one, and the other one is red. Quite a combination, Johnny! He has a pony that is black and white, with a white star on his forehead. The pony is named Blacky. They have seven pigs, a big red one, one little black one, and the rest are red and black, all on their farm in Lincoln county, Wash.

We are glad to hear from our little cousin, Beth, who lives in Okanogan county, Washington. (What is your last name, Beth?) The last day of school Beth attended a picnic which was held in a big grove. The high school boys played against the grades. Beth will be a fifth grade student next year.

We have an interesting letter from a cousin who signs her name as "Dorothy." (What is your last name, Dorothy?) This cousin says she has been reading the Children's Corner in THE FARMER with interest and finally decided to write. She is visiting with her auntie and grandma in Yakima county, Washington. She also has an Aunt Nell in Yakima county. Recently she went to a circus and saw the biggest elephant in the world, a great, big one. Dorothy likes to help get supper.

A cousin who lives in Malaga, Washington, near the Columbia river, writes the following: "I was 9 years old June 29, 1922. I go to the Stewart Hill school. I am in the fourth grade. My school is out now." (In some way we have loss track of your name, little cousin. Will you write and tell Aunt Nellie what it is?)

Zoe Ludwig writes to correct a mistake that was made in publishing her birthday. The paper said her birthday was July 11, but it is July 29 and she was 11 years old this last birthday. Zoe's home is in Yakima county, Washington.

In Sunday school Marie Wyatt belongs to the Tulip circle. This is our first letter from Marie and in it she says: "I am 7 years old. My birthday is October 26. I have brown eyes and brown hair. I have three little kittens, Muff, Tabby and Beauty. I shall be in the third grade next year. Laura Brand let me see her Junior Farmer. There are many mosquitoes down here. I put salt water on the mosquito bites. This town is not very big. All it has is a schoolhouse, church, a store and about 20 houses. There is a depot, a pump house and a big water tank." Marie's home is in eastern Washington.

We are glad to hear from Mildred Miller, who was 11 years old March 16, 1922. Her home is a 40-acre farm in southwestern Washington, Clarke county. They have 2 horses, 7 cows, 20 chickens and 4 cats. Mildred's pets are a cat and a kitten. She missed a year of school on account of her eyes. She is in the third grade.

Birthday Greetings

FRIDAY, August 25—Naomi Dodge, 11 years old; Marguerite Duffy, 10; Pearl Hink, 11; Etta Jane Pickle, 11; Edwin Pietila, 4; Helen Wayne, 10.

SATURDAY, August 26—Ruth Brown, 9 years old; Dortha Malone, 8; Wilma Pittman, 11; Kenneth Sieveke, 7.

SUNDAY, August 27—Evelyn Cannon, 11 years old; Emma Webb, 11.

MONDAY, August 28—Claire Hemstead, 9 years old; Thelma Melger, 10; Dale Early, 6; Graham Spencer, 11.

TUESDAY, August 29—Esther Wick, 11 years old; Gladys Wigen, 11.

WEDNESDAY, August 30—Maxine Chiles, 11 years old; Ernest Farrell Critfield, 11; Cora Turner, 10.

LETTERS WELCOMED BY AUNT NELLIE.

Among recent letters received by Aunt Nellie are those from cousins whose names follow. A few of these will be published each week in the regular edition of THE FARMER and others will appear from time to time in The Junior Farmer:

Ruby Terrell, Esther Simila, Mildred Miller, Lucille Worth, Frances Worth, Grace Gockley, Inez Brown, Mildred Sly, Leona Hagerty, Muriel Washburn, Reuben Scheller, Anna Gesler, Evelyn Holmes, Bertha Holmes, Ida May Riley, Merle Phillips, Geneva Phillips, Dorthy Malone, Margaret Irwin, Theodore Olson, Genevieve Warren, Dorothy Loomis, Theodore Paul, Irene Swegle, Maude A. Yates, Gladys Main, Hannah Carlson, Grace Carlson, Ida Hanstad, Lillian Cochran, Lillian Carlson, Clara H. Breitmeier, Eunice Knight, Lauretta La Follette, Violet Sherwood, Myrtle Nelson, Ellen Keranen, Clara Hyrkas, Florence Arneberg.

SEWING AND MANUAL TRAINING.

By Ida Paul.

In our school the sixth, seventh and eighth grade girls all have to take sewing, and the boys in those grades have manual training. I am in the seventh grade.

Who likes riddles? I have nearly 90 or 100 riddles here at home.

Why don't they collect fare from the policemen on the electrics? You can't collect nickels from coppers.

When does a man look like a cannon ball? When he looks 'round.

Street car conductor—How old are you, little girl?

Little girl—I'm paying full fare, so it isn't necessary for you to ask impertinent questions.

BEDTIME STORIES

By THORNTON W. BURGESS.

BOBBY COON HAS A GOOD TIME.

Sing a little, dance a little, have a little fun;
Stars are all awinking, for the night has just begun.

Bobby Coon looked up and winked back at the stars as he sang. His stomach was full, for he had just filled it down at the Smiling Pool with fish that Billy Mink and Little Joe Otter had invited him to share with them. Bobby strolled along lazily through the Green Meadows. What should he do next? He didn't need or want anything more to eat. Presently he met Jimmy Skunk.

"Hello, Jimmy! Come on have some fun," said Bobby Coon.

But Jimmy had had no invitation out to dine, and he was hungry, so he kept right on his way looking for beetles.

Pretty soon along came Reddy Fox. But Reddy was hungry, too, and he wouldn't



Bobby Coon shoved his hands in his pockets and strolled up the Lone Little Path.

stop to play. Then Hooty the Owl flew over as softly as a shadow, but Hooty also was hunting for something to fill his stomach. It was of no use; no one had time to play so early in the night.

Bobby Coon shoved his hands in his pockets and strolled up the Lone Little Path. Presently he came to Johnny Chuck's house. There was the yellow mound on which Johnny Chuck used to sit each day and watch the world go by. Bobby stopped to listen at the open door. He could hear Johnny Chuck snoring in his bedroom way down below.

A twinkle of mischief came into Bobby Coon's eyes. Not far away stood a stack of Farmer Brown's hay. Bobby went over and got an armful. He came back and dropped it over Johnny Chuck's doorway. Then he brought another and another. After that he hunted until he found Johnny Chuck's back door. He covered that up in the same way.

"Now," said Bobby Coon, and his eyes twinkled more than ever, "Johnny Chuck won't know when to wake up, and perhaps he'll sleep all day tomorrow."

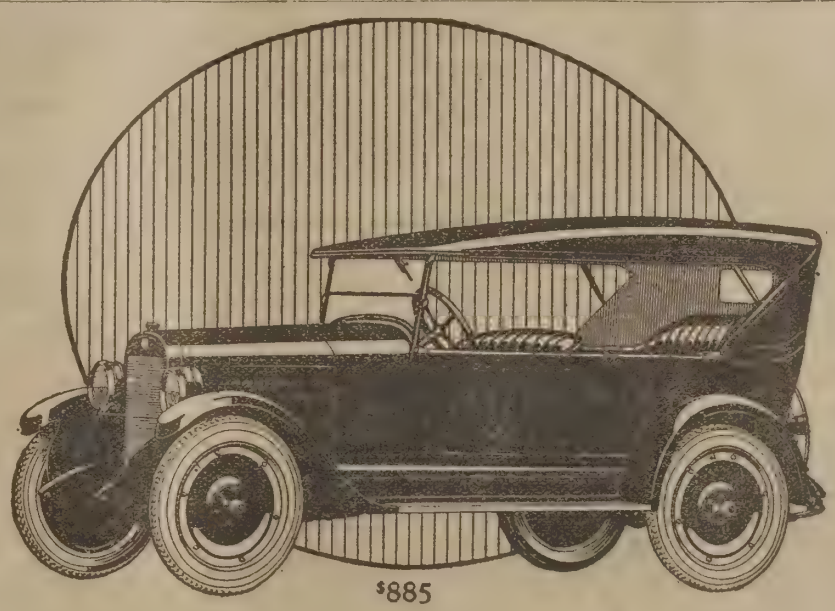
Then Bobby Coon shoved his hands in his pockets once more and started on up the Lone Little Path, and from there he went up the Crooked Little Path to the top of the hill. On the way he passed Jimmy Skunk's house. He knew that Jimmy was out hunting for something to eat. His eyes began to twinkle again, and he chuckled as he saw a stone just big enough to fill the doorway of Jimmy Skunk's house. Bobby Coon tugged and pulled and pushed until he got the stone in place. Then he packed sand all around it and over it.

"When Jimmy Skunk comes home he'll think his house has run away," chuckled Bobby Coon as once more he started on his way.

So he wandered on all the bright moonlit night, getting into more and more mischief, and when the little stars began to wink out one after another Bobby Coon turned his steps toward the old hollow tree where his home is, so tired and sleepy that he could hardly get there.

Sing a little, dance a little, have a little fun;
Stars are—

Bobby Coon was fast asleep before he could finish.



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Horse Heaven Project

Approval of a $32,000,000 bond issue for the Horse Heaven irrigation project by the superior court at Prosser, Wash., is announced by John L. Etheridge, manager of the Morris Brothers corporation, which has underwritten the issue. Sale of $28,000,000 of the bonds to defray construction cost was also authorized, and Howard S. Amon, local contractor, has agreed to take bonds in this amount as payment for handling the work.

Sale of the bonds would begin simultaneously on September 15 by 56 bond houses in eastern cities and by Morris Brothers corporation in Portland, Etheridge stated. The bonds bear interest at the rate of six per cent per annum and mature serially from 1923 to 1951. They will be offered to investors at par.

Construction work on the irrigation project would begin in less than 60 days, Amon stated, and would be completed by 1925. The Horse Heaven district comprises 340,000 acres lying between the Columbia and Yakima rivers in Eastern Washington. Water will be brought to the land from the eastern slope of Mt. Adams through more than 100 miles of open canal, five miles of tunnel and eight miles of dual wood pipe syphon.

Seed Crops on Dairy Farms

The Youngquist Brothers of Mount Vernon are raising a few seed crops in addition to their dairy business, a few miles west of town. Silage and hay crops are, of course, necessary and it is but little extra work to put attention on special crops and they usually bring a better price.

Ten acres of Red Rock cabbage is under cultivation and will be sold on a special market. Two and a half acres of table beets will be ready to harvest this fall and three and a half acres of Bloomsdale spinach have also been grown. In addition to the above crops there are 10 acres of Sweedish Select oats, which will probably be harvested for seed oats.

Washington Eggs in New York

Significant is the report of sales of eggs in New York a few days ago, when Washington eggs sold at 12 cents to 14 cents per dozen higher than eggs from the middle west, A. S. Brown, branch manager of the Washington Cooperative Egg and Poultry association at Yakima, points out. On August 10 50 cases of northern Indiana firsts sold in New York at 28 cents per dozen. Middle western extras sold at 29 cents and 31 cents, while Pacific coast white extras were selling at 40 cents and 42 cents.

Thus, northwestern eggs, like northwestern apples, are bringing a premium on the far eastern market, due to the ideal climatic conditions under which they are produced and to the careful handling and grading, says Mr. Brown.

In the Repair Shop

By PROFESSOR L. J. SMITH, W. S. C.

Few people realize the value of kerosene in removing rust or loosening rusted parts of machines. If parts have rusted solidly together, puts rags soaked in kerosene over the parts so that the kerosene can follow the joints; or, better, put the parts into a pan of kerosene, and the next morning the parts will be loose. Many good mechanics keep a pan of kerosene in the shop for this express purpose.

No farm repair shop is complete without a hack saw. It is one of the cheapest and most useful of tools. Scarcely a month goes by on a busy farm where it does not pay for itself many times over. The 10-inch blade is the most common size. It is best to buy fine and coarse toothed blades, the coarse for cutting cast-iron and the fine for steel and piping.

Mix wood ashes and salt; add water to form a paste and plug the crack. The mixture will harden and plug the crack effectively.

Pike's Peak or Bust

(Continued from page seventeen.)

The long journey was wearing her hoofs thin. After that he inspected all the strings of sunning meat, to learn how fast it was drying. Finally he seated himself on the ground, with his back against Brindle's packsaddle, and sat gazing across the river at the hills beyond.

"Where are all the rest of our bunch?" he now demanded of Esau, the only other person in camp.

"Well, four of 'em shouldered their guns and went huntin' not long ago. Wanted to shoot some more buffaloes, they said. Sanders didn't go with 'em. 'Lowed he'd take a stroll. He tramped away over the hills to the north."

"How happens it that you didn't join the hunters?"

I ain't much given to huntin' jest for the fun of huntin'. It ain't any pleasure to me to shoot some pore, dumb creecher and watch it struggle and die. I've killed one buffalo, and that satisfies me; at least till we're in need of meat ag'in."

"Just how I feel about the matter, Esau. The way some of these fellows treat those poor, stupid animals seems almost a crime to me. They shoot 'em down just as if it were fun to watch something gasp and die."

"They shorely do, Lando. It's a crime, as you say. A crime they'll have to answer fur in the Jedgment Day, I'm thinkin'."

"Yes. And more than that, they'll have to suffer for it before the Judgment Day, in my opinion. Cruel things happen to cruel people. But I'm going to have to kill one more buffalo, I believe. If I do, though, it will be the biggest, toughest old bull I can single out."

"Old bull! What do you want to kill a bull fur?"

"To peel off his hide to make some boots for Brindle. She's still a little tender-footed. You notice how Mr. Cooper had some of his oxen shod?"

"Yes; and other teamsters the same way. Dippin' their hoofs in hot taller is said to toughen their feet."

"I've heard of that. And I may use it first. That will be easier on her than wearing heavy boots, if it will work. We've got some buffalo tallow here. And I might as well try the experiment right now, I'd guess."

A few minutes later he had the tallow in their camp pot and on the fire. When it had melted and was hot enough, he carried it out to where the cow was grazing. There he lifted up one of her feet and let it down in the pot till her hoof was about half submerged in the grease. After that one had soaked till the cow seemed uncomfortable, he treated the other hoofs in the same manner.

"I'm thinkin' I'd better lay in some bull hide anyway, while I'm where it's plentiful. Don't s'pose I'll have to shoot a bull. I can find one that other people have already shot," he told Esau on returning to camp.

"Don't you 'low that hot taller you've been usin' will cyore her tender-footedness?"

"It will help a little, I guess. But I don't see how it can cure it, Esau. When an animal travels every day, its hoofs wear faster than they grow, till they wear to the quick. That's what's the matter with Brindle. I examined her feet carefully. If we could let her rest for a week or two, she'd get all right. But we can't take that time now. So the only other thing to do is to stop the wear by shoeing her."

"Reckon that's about so," said Esau, turning away.

(To be continued.)

R. W. M'KENNA RESIGNS.

Announcement is made at Yakima that R. W. McKenna, manager of the Yakima Dairyman's association, the cooperative marketing organization there, has tendered his resignation. Difference of opinion between Mr. McKenna and the board of directors on vital policy matters are given as reasons for the resignations.

YOUR THRESHING—AND GOODYEAR BELTS



Goodyear Klingtite Belt in threshing service on the farm of Jalmer Herre, Halstad, Minnesota

At the height of his threshing, Jalmer Herre, of Halstad, Minnesota, took time last season to tell many of his neighbors how much better his new Goodyear Klingtite Belt was performing than any belt he had ever had in twenty years of farming.

"There isn't a sign of slippage," he said. "No matter how heavy the straw, the belt delivers the full engine power, and there is no jamming of the feeder. Where I used to have daily troubles with ordinary belts—slippage, jamming, re-setting and overheating—the job is pushed through now at top speed."

Goodyear Klingtite Belts are the pulleys in a slipless grip. They work the same in all weather, do not shrink, are subject to a minimum of stretch, require no belt dressing, need no breaking in, and wear with the lasting strength of their special ply construction.

Goodyear Dealers everywhere, and many progressive hardware merchants besides, sell Goodyear Klingtite Belts, in endless type and in suitable lengths. For further information, write to Goodyear, Akron, Ohio, or Los Angeles, California.

GOODYEAR

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"OILINESS"~what it means to trucks & tractors

"'Oiliness' is the ability of a lubricating oil to cling evenly to bearing surfaces, at the same time offering in itself a minimum of frictional resistance."

— Board of Lubrication Engineers.

"Oiliness" in engine oil can't be seen — but is *felt* when your tractor steps into full-rated draw-bar pull — is *heard* when your truck engine hums along with heavy loads.

Zerolene has "oiliness." It clings to bearing surfaces evenly, and at the same time splashes freely — you get *all* the power the engine is rated to deliver.

Stability — Purity

The ideal truck or tractor oil must penetrate easily the smallest bearing clearances at all operating temperatures — and it must have stability. Zerolene penetrates, and has the stability to resist engine heat.

The unexcelled purity of Zerolene results in a harmless deposit of carbon of a soft, flaky nature, most of which is blown out with the exhaust. Zerolene minimizes engine troubles and assures longer useful service for your equipment.

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STANDARD OIL COMPANY
(California)

The Standard Oil ZEROLENE For Motor Cars

more power & speed ~ less friction and wear ~ thru *Correct Lubrication*

Visit Shorthorn Herds

(Continued from page two.)

Cumberland, was voted a typy lot by the visitors. A senior bull calf, by the above sire, is especially pleasing. J. E. Forsell of Grandview, is another breeder with good calves by Bean Cumberland.

The next two stops were at the homes of Hercules Baby Beef club members, near Sunnyside. Young Homes showed the visitors an especially attractive grade steer, in nice condition, well balanced and smooth. The Turner lad also led out one nice steer. It will be recalled that the Hercules Baby Beef club, initiated through the cooperation of F. M. Rothrock of the Shorthorn association, was formed with the ideas in mind of increasing interest in cattle feeding in the Yakima valley; in order to demonstrate more fully the value of the purebred sire in the production of market cattle, and with the additional thought in mind that a certain few of the club members would become sufficiently interested in good cattle as to purchase a registered bred heifer for next year's club work.

After enjoying the picnic dinner, served by the breeders' wives, a speaking program was given. County Agent Lovett called on Duncan Dunn, who gave an interesting talk on live stock conditions and the future of the Shorthorn cattle industry. A. E. Lawson, Shorthorn fieldman, dwelt on the value to the breeders of each showing a few head of breeding stock at the state fair in order to advertise their stock.

C. M. Hubbard, state college live stock specialist, pointed out the value to the breeders and visitors of the breed tour as a means of stimulating interest in the breed and developing team work among the breeders. He also emphasized the value to the Yakima valley farmers of seeding pastures which will not bloat. He suggested timothy, clovers and blue grass as a good type of mixed pasture which had been demonstrated to be successful and to have a large carrying capacity. He stated that the best land would give good returns from the proper type of pasture and that the extension service eypects to put on a number of demonstrations of the carrying capacity and returns possible from mixed pastures.

The next stop was at David Van Nostern's at Alfalfa. The bull in service, bred by Duncan Dunn, is siring some nice young stock.

William Mulhall of Toppenish is using a double standard polled Durham bull on his herd and again the visitors' eyes were pleased with a nice string of likely calves.

The last place visited on the tour was the well-known Dunn ranch at Wapato, where the breeding herd with calves by Cupbearer of Millhills and Escana Clipper were inspected. Three especially good young bulls were led out for the club judging contest, with the breeders participating in the placing. The winning bull was exceptionally pleasing in stylish carriage, masculinity, depth of body, mellowness of flesh, smoothness and quality.

The outstanding features of the tour were the excellent 2-year-old heifers at Ethan Taylor's; the good calves seen in the herds visited; the good young bulls at Duncan Dunn's, and the interest taken by the breeders and visitors who voted it a most pleasant and profitable day. Over 40 people were out for the tour.

IS FOUR-YEAR-OLD CHAMPION.

G. T. Morocco Duchess, owned by Jay P. Graves, Waikiki farm, is the new junior 4-year-old register of merit champion Jersey of Washington. Her record exceeds that of her stablemate, Meysie's Fern Lassie, by 10.04 pounds of fat. Duchess started test at 4 years and 4 months of age and in 365 days produced 16,125 pounds of milk and 813.10 pounds of butterfat. She made the 50-pound list every month.

HEIFERS BEAT THEIR DAMS.

All of the seven Holstein heifers from the herd bull on the Methow Valley Live Stock company farm, near Tolt, show uniformity and the characteristics of their sire. They will average 500 pounds of fat and over, accordingto C. A. Cushing, the farm manager, and all have made better records than their dams, which are grade animals. The entire herd made the highest record in the Snoqualmie testing association last year.

BUYS NEW HERD SIRE.

John Ellingsen of East Stanwood, Snohomish county, has purchased a new herd bull for his herd of 25 grade Holstein and Ayrshire cows. He is a son of the herd bull at the state college, Segis Pontiac Acme. Mr. Ellingsen expects to increase the production of the herd by the use of the new sire and the present indications are that some good heifers will be the result.

All Steel and All Plow



Furnished in either two- or three-bottom size, 12-, 14- or 16-inch bottoms.

No Matter How Many Horses Are Used nor How Hard the Soil Is

—the John Deere Steel Gang stands the strain. It is the simple, compact, all-steel plow—the strongest plow of its type—built especially for difficult plowing conditions of Pacific-Coast states. No castings to break; no pipes to bend; no unnecessary parts to get out of order; beams guaranteed not to bend or break—there are extra years of good service in this plow.

It's a handy plow — you can turn square corners without raising the plows from the ground. Easy to raise or lower bottoms — powerful springs have almost the effect of power lift. Even width of cut can be maintained on hillsides or around curves by means of landing lever.

Bottoms to suit your soil — genuine John Deere steel or chilled; quick detachable shares — loosen one nut to remove share; tighten the same nut, and share is on tight. Great clearance at all vital points to prevent clogging in trashy conditions.

See the John Deere Steel Gang at your John Deere dealer's, and write today for free booklet on this plow. Address John Deere Plow Company at Portland, Ore.; Seattle or Spokane, Wash., or Boise, Idaho. Ask for Booklet JS847

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Breeders' Department

TYPE PRODUCTION

SEE OUR EXHIBIT OF

WAIKIKI JERSEYS

Federal Accredited Herd

at the

Spokane Interstate Fair, Sept. 4 to 9

PACKARD BULLS

at

FORD PRICES

We have a number of excellent Jersey bulls fit for service and out of cows with high production records and gilt-edge breeding.

PRICES ARE LOW AND FAVORABLE

TERMS WILL BE ALLOWED ON PART OF PURCHASE PRICE TO RESPONSIBLE PARTIES

WAIKIKI FARM, SPOKANE WM. AULD, Mgr.

HAMPSHIRES

Heart o' the Valley Ranch

NOW OFFERING

BRED FALL GILTS FOR SEPTEMBER AND OCTOBER FARROW.

Sired by Model Defender, grand champion boar Pacific coast, 1921.

CHEROKEE LAD AND GEN. TIPTON BREEDING.

HAYS & HARTER

Grants Pass, Ore.

Ruby Dell Guernsey Farm

Our herd has been in the winning wherever shown.

Senior herd sire, Francis May King (A. R.) he by Langwater Hambro (A. R.)

Junior herd sire, Rex of Willow Brook, he by Langwater Sunderland (A. R.)

Our herd matrons are cows with A. R. records from such noted sires as Langwater Hambro, Langwater Emigrant and first 5 daughters of Francis May King, to freshen with average records of 480.14 butterfat, at average age of two years and ten months; most of them double letter class.

Some splendid bull calves for sale of above breeding.

H. E. ANGEL, Mabton, Wash.

St. Mawes Trio

2 months' old bull from R of M. dam.
1 heifer, 3 months.
1 heifer, 2 months.

SHADILANE FARM, North Powder, Ore.
W. O. CHRISTENSEN.

Milking Shorthorn Bull

Dropped August 27, 1921. A show bull of much quality. Sired by Foothills Corporal, grand champion Pacific International stock show, 1919. His weight, 2400, and is of richest milking strain, being by Corporal Clay, dam Glenrose Pearl. Calf's dam a good producer. $125 for quick sale.

KIRTLAND FARMS, Central Point, Ore.

Jersey--Gold and Silver Medal Sire

Ashnook Farm offers a few heifers and young bulls, sired by the gold and silver medal sire, Silver Chimes, of S. B., sire of ex-world champion heifer, Silver Chimes Gwendola, and 20 register of merit daughters, and more qualifying.

DEL PERKINS, Carlton, Ore.

MILKING SHORTHORNS

A few cows, also young bulls, by the great sire, Peerless Knight, carrying 93¾ per cent blood of the champion milch cow, Rose of Glenside.

J. E. DANILLS, Murphy, Ore.

TWO JERSEY BULL CALVES

From high producing registered stock; very choice breeding. $25 each f. o. b. McMinnville. First dropped June 20, 1922; second July 29. EDWIN WAGNER, McMinnville, Ore.

Guernseys

Two excellently bred May Rose registered sires from high producing dams; one seven months and one thirteen; old enough for service. Priced so farmers can afford to own.

NOBLES BROS., Bow, Wash.

Young Holstein Bulls

Bessie and other best blood lines. Priced for quick sale.

JOHN BOGART, Woodland, Wash.

Indian City Berkshires

Big type, superior quality.

DR. W. J. KEYES, 202 Fernwell Bldg., SPOKANE, WASH.

B. F. WATSON, Herdsman, Rockford, Wash.

Holstein Bulls at Farmer Prices

Sired by son of former world's champion and out of cows that make good at the pail.

S. D. CORNELL, Grandview, Wash.

River Banks Better Berkshires

Won four grand championships, nine championships and twenty-eight first prizes at five leading fairs last fall. Let us quote you on spring pigs.

RIVER BANKS FARMS, Grants Pass, Ore.
CLYDE E. NILES, MGR.

LET THE LITTLE FELLOWS PAY OFF YOUR MORTGAGE.

Silver Fox Ranches Make Big Profits.

Finest Quality Imported Prince Edward Island Stock.



All Pedigreed and Registered. Fully Guaranteed.

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United States Silver Fox Farms Corp.
200 Hutton Bldg. Spokane, Wash.

BIG TYPE POLAND CHINAS.

Weaned pigs sired by state fair winner. Also young boars at express prepaid prices. My pigs make good from California to Alaska.

H. J. STILLINGS, Hermiston, Ore.

RICHARDS CHAMPION DUROCS

We still have all our champion show herd that won so many champion and first prizes at the big fairs and stock shows of the northwest last year, also 200 spring pigs and a few bred gilts, all Big Type and the best we ever raised, sired by our grand champion herd boars and out of Big Type sows. All are for sale, prices very reasonable. Satisfaction guaranteed. Write us.

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Virginia. Jesse S. Richards, Mgr. Idaho.

"The home of Champion Durocs."

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EXPERIMENT STATION
URBANA ILL

Lowest Prices in America Guaranteed

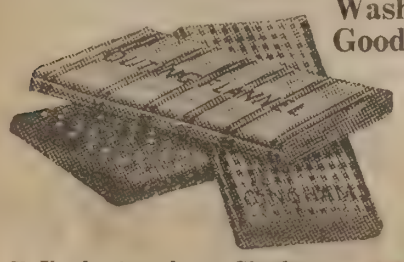
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5 Yards Amoskeag Gingham, 32 inch 99c

An almost unheard of price for this famous gingham. Latest plaid, check and striped patterns in all desired colors, all fast and yarn-dyed. **Order by No. 54F3414. Send no money. Pay 99c and postage on arrival.**

10 Yards Fancy Outing Flannel $1.25

Ideal weight for nightgowns and undergarments. Comes in all colors, 26-inch width. State pattern and color. **Order by No. 54F3425. Send no money. Pay $1.25 and postage.**

10 Yards 36-inch Percale, only $1.49

Very choice patterns in fast colors. In white, gray, Calcutta and indigo blue with neat stripes or dots. State color and pattern. **Order by No. 54F3406. Send no money. Pay $1.49 and postage on arrival.**

WOMEN'S OXFORDS
Unbelievably Low Priced Here



$1.98

Women's oxfords in gun metal or calf-finished leather. Made with imitation shield tip and medallion perforated stay and circular foxing. Has medium pointed toe. Sizes 2½ to 8, wide widths. **Order gun metal by No. 54A69. Brown calf, No. 54A70. Send no money. Pay $1.98 and postage on arrival.**

Brown Leather Work Shoe for Men

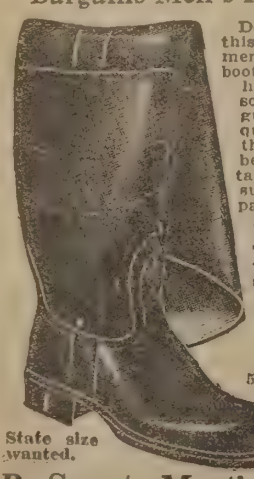


$1.99

State Size

Splendid brown ooze leather work shoes. Heavy, durable uppers; extra strong solid oak leather soles; leather insoles; low broad leather heels; leather loop pull-strap and reinforced leather back stay. Roomy last. Sizes 6 to 12. **Order by No. 54A758. Send no money. Pay $1.98 and postage on arrival. Order boys' sizes, 1 to 5½, by No. 54A554. Price $1.89. Order little boys' sizes, 9 to 13½, by No. 54A555. Price $1.79 and postage on arrival. Mention size.**

Bargains Men's Hip Boots



Don't fail to make this big saving on men's pure gum hip boots: friction lined; heavy corrugated sole and heel; guaranteed first quality. Made of the very best rubber. Usually retailed at $5. Be sure to order your pair while this great saving offer lasts. Sizes 7 to 12. Wide widths. No half sizes.

$2.79

Order by No. 54A949. Send no money. Pay $2.79 and postage on arrival.

State size wanted.

Rich Black Sateen Apron

This apron represents not only a neat saving but a charming style for house wear. Send for your size today — quick!

$1.79

The material is an excellent soft, lustrous black sateen with collar, cuffs and pockets of good grade fancy cretonne. Pockets are a novelty basket design with applique flower trimming. The same effect is carried out on one side of waist. Designed with wide self material sash belt all around. Big value. **Order by No. 54E5098. Send no money. Pay $1.79 and postage on arrival. Money back if not satisfied.**



Durable Outing Bal

Men's and boys' scout shoe of soft, pliable brown leather. Absolutely guaranteed barnyard proof; reliable, sturdy soles; low, broad leather heels; leather insoles; reinforced leather back stay. Guaranteed to stand hardest wear. Wide widths. Sizes 6 to 12.



$1.99

Be Sure to Give Size.

Order by No. 54A733. Send no money. Pay $1.99 and postage on arrival. Order little boys' sizes, 9 to 13½, by No. 54A565. Price $1.79. Order big boys' sizes, 1 to 6, by No. 54A564. Price $1.89. Pay bargain price and postage on arrival.

SEND NO MONEY WITH ORDER

Soft Kid Slipper
Black or Brown

$1.59



Always mention size.

Soft kid leather slipper, stylish strap model with two buttons. Medium round toe. Cushion insoles. Medium rubber heels. Solid leather soles. A bargain at our slashed prices. Sizes 2½ to 8. Wide widths. **Order black by No. 54A228. Order brown by No. 54A229. Send no money. Pay $1.59 and postage on arrival.**

1 Dozen Work Gloves, 99c

Regulation stout canvas work gloves, with elastic knitted wristlets. Generously sized.



Order by No. 54B2835. No money now. Pay 99c and postage for one dozen pairs on arrival.

Very Richly Embroidered Gabardine DRESS

$2.98



Sharood especially recommends this pretty model. A becoming style that is going to be very popular this fall. Has wide, flowing sleeves, two new fashion panels. Handsomely embroidered at top and waist. Women's and misses' sizes 16 to 44. **Order brown by No. 54E5519. Navy by No. 54E-5518. Send no money. Pay $2.98 and postage. Money back if you're not satisfied. State size wanted.**

Mention Size and Color Wanted

BLACK or BROWN KID HI-CUT



Give Size

Send for this handsome rich kidskin shoe in black or brown. Note the medium toes with pretty imitation perforated tips, the perforation around vamp and on lace stays. Very popular model and really a sensational bargain now. Durable, flexible soles. Sizes 2½ to 8. Wide widths.

$1.98

Order black by No. 54A122. Pay $1.98 and postage on arrival. Order brown by No. 54-A103. Pay $1.98 and postage on arrival.

Men's, Boys' and Little Boys' Gun Metal Blucher

$1.79 Up



Give Size.

Don't fail to take advantage of this splendid offer in a practical blucher. Sturdy dress shoe for men, boys and little fellows, of heavy, genuine gun metal veal uppers and solid leather soles. Low, broad heels. Be sure to get your order in at once. Big value. **Order men's sizes, 6 to 11, by No. 54A674. Price $1.99. Order little boys' gun metal blucher, sizes 9 to 13½, by No. 54A590. Pay $1.79 and postage on arrival. Order same style for big boys' sizes, 1 to 5½, by No. 54A589. Pay $1.89 and postage on arrival. Always mention size.**

STRAP PUMPS
Patent or Mahogany

$1.98



Give Size.

This smart pump in sizes 2½ to 8. In black patent leather or mahogany calf-finish—a stunning one-strap model with imitation shield tip and medallion, effectively perforated. Has medium rubber heel. **Order patent leather by No. 53A72, order mahogany calf by No. 53A73. Send no money. Pay $1.98 and postage on arrival.**

New Oxfords

$1.98



Give Size

Women's black patent leather or mahogany calf-finished oxford, with imitation shield tip and medallion, perforated vamp, imitation circular foxing and lace stay perforated. Medium rubber heel and medium narrow toe. Sizes 2½ to 8. **Order patent leather by No. 53A64. Mahogany calf by No. 53A65. Send no money. Pay $1.98 and postage on arrival.**

Popular Stitchdown Dark Brown Oxfords

$1.98

Give Size



Classy stitchdown Oxford for women. Wonderfully comfortable and stylish. Uppers of dark mahogany leather. Smooth leather insoles. Flexible stitchedown oak outsoles. Low rubber heels. Sizes 2½ to 8. Wide widths. **Order by No. 54A268. Send no money. Pay only $1.98 and postage on arrival.**

Not Retreaded

Brand New Standard Tires
Guaranteed 6000 Miles



30x3 size Now only

$6.48

Fresh stock of heavy non-skid tires of live rubber. Generously oversize. 6,000 guaranteed, but often give 8,000 to 10,000 miles. Choice of non-skid or rib-tread in 30x3 size. Others are non-skid. Pay only bargain list price below and postage on arrival.

BARGAIN PRICE LIST.

No. 54D40—30x3	$6.48
No. 54D41—30x3½	$7.69
No. 54D42—32x3½	$9.98
No. 54D43—31x4	$10.98
No. 54D44—32x4	$12.79
No. 54D45—33x4	$12.98
No. 54D46—34x4	$13.98

GUARANTEED INNER TUBES.

No. 54D20—30x3	$1.09
No. 54D21—30x3½	$1.39
No. 54D22—32x3½	$1.19
No. 54D23—31x4	$1.69
No. 54D24—32x4	$1.79
No. 54D25—33x4	$1.79
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AUGUST 31, 1922. Washington's Great Farm Magazine EVERY THURSDAY

THE WASHINGTON FARMER

ESTABLISHED 1894 SPOKANE. SEATTLE.



What Can We Do to Reduce Our Tax Burden?---Page 3

Improve Poultry

Breeders Lay Plans for Upbuildiny

Fifty representative poultrymen of the state, the majority from western Washington, met at Seattle last week at the call of Superintendent W. A. Linklater of the western Washington experiment station to work out plans for the improvement of the poultry industry of the state. The meeting was called at the suggestion of Director S. B. Nelson of the state college extension service and W. D. Buchanan, poultry specialist.

Accredited Hatcheries.

One of the most important committees appointed was the one that dealt with the establishment of accredited hatcheries. This idea has been tried out in other states and is welcomed by both the poultrymen and hatchery owners of Washington. Recommendations returned by the committee were:

First, that all fowls to be used as breeders be found healthy by an inspector appointed by the state college.

Second, that all eggs used for hatching shall average 24 ounces to the dozen and have a minimum weight of 22 ounces. All eggs shall be from well-developed and fully matured females.

Third, that all males to be used as breeders be approved as to vigor and size, be free from foreign color, be at least 8 months of age, and for the 1924 season all males be from trapnested hens that have records not less than 225 eggs for a year.

Fourth, no artificial morning light shall be permitted earlier than 6 o'clock prior to December 15 and no lighting during the breeding season that will tend to make more than a 12-hour day.

Fifth, all eggs set shall be of a standard size, shape and color and are to have the proper shell texture.

Sixth, green feed shall be fed in abundance to birds in the breeding pens.

Seventh, grain shall comprise 50 per cent of all concentrates fed.

The reports as read aroused considerable discussion by those attending the convention, but they were all adopted and the committee authorized to continue and have power to take any action deemed necessary to carry out the plan.

The committee on trapnested records recommended that if some way could be found to finance the cost of inspection, the state college would be asked to do the clerical work and records be made on different flocks, which would then be classed as accredited. Definite plans, however, were not drawn up, but the committee was given the power to draw up plans for financing the movement.

Increased Production.

With the above committee was combined another committee on increased production. The reported returned indorsed several movements that tended toward increased production and suggested that an increase of five eggs per hen per year be set as a standard if the entire state was included, while an increase of 20 eggs be called for in case of limited areas, which would include a large number of commercial flocks.

The committee favored the use of cockerels from trapnested dams as being the quickest means of obtaining such an increase. Sanitation in the rearing of chicks was suggested, as well as proper feeding and management. The culling of young stock before they went into the laying house and continuous culling of the laying flock during the laying season were recommended. It was also suggested that the hatchability of eggs should be raised and the percentage of pullets increased to at least 40 per cent of all chicks hatched.

Dr. Nelson suggested that before any definite plan for the accrediting of trapnest records be tried for the entire state that one or two counties take up the work as a demonstration in order to show the value of the plan for other counties to follow.

The committee on trapnested records was invited to meet with the conference of agricultural agents at Puyallup on September 12 to discuss their plans with those present.

Advertising.

The committee on increased consumption and advertising reported the following suggestions, which were adopted:

First, that in order to increase the consumption of surplus eggs at home the pullet egg be spoken of as a 20-ounce egg, thus dropping the word, "pullet," entirely.

Second, that the pullet egg be advertised as the 20-ounce egg to let the public know of its real value and its superior flavor.

Third, that the state college be asked to help in the advertising campaign.

Fourth, that all poultrymen in the state be asked to contribute $1 each to the general fund.

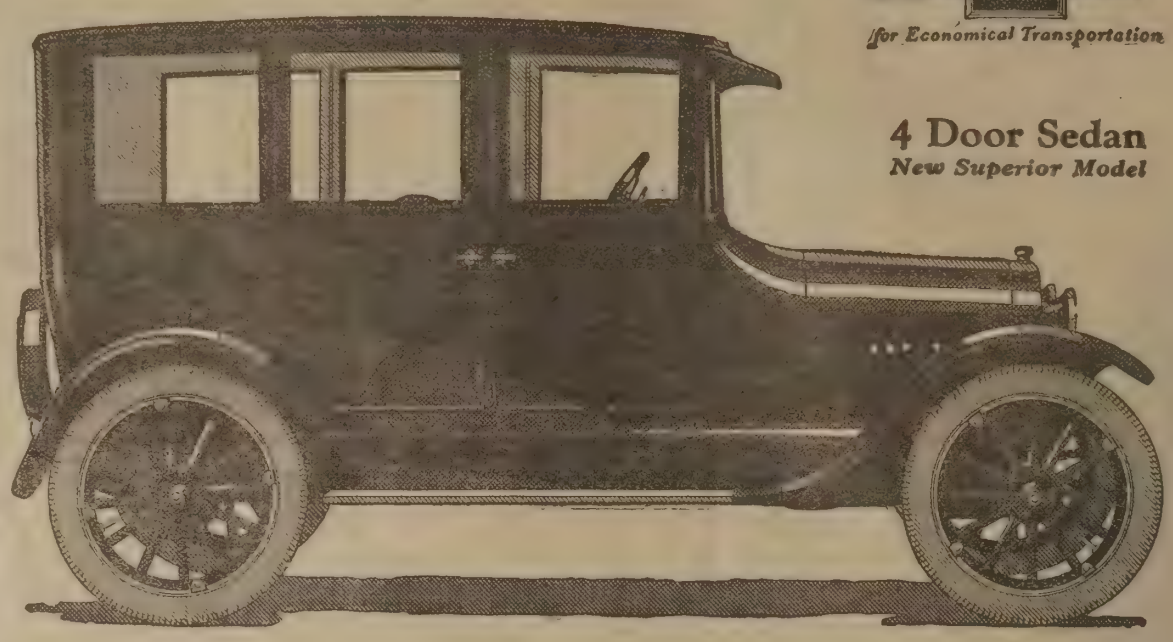
Sanitation of Yards.

The committee on sanitation of yards and the control of infection among growing stock reported as follows:

First, that new ground be used every

(Continued on page twelve.)

CHEVROLET
for Economical Transportation



4 Door Sedan
New Superior Model

The World's Lowest Priced High-Grade All-Year Sedan

The Ideal Family Car

$860

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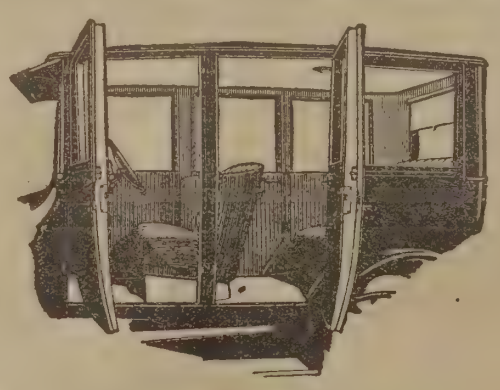
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THE WASHINGTON FARMER

SUCCESSOR TO

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For Good Farming, Attractive Country Homes and Happy Country People

Dairymen Menaced by "Filled Milk"

Wisconsin Supreme Court So Finds in Its Decision Sustaining State Law Prohibiting Manufacture and Sale of Milk Compounds

Evidently the Carnation Milk company is not at all assured that the federal courts will reverse the decision of the Wisconsin supreme court in its recent decision sustaining the state law which prohibits the manufacture and sale of "filled milk." Should the federal court sustain the Wisconsin decision it would further establish the validity of the Wisconsin law, as well as the validity of similar laws in other states, and in addition would give important aid in the enactment of a national law like the Voigt bill, which already has been passed by the national house of representatives.

Here is a news item that will be of marked interest to our dairy producers:

MADISON, Wis., Aug. 23.—A long court battle by the Carnation Milk company against the state filled milk bill ended today in the withdrawal by the company's attorneys of their petition for rehearing of the case as recently decided by the Wisconsin supreme court.

The company is understood to have agreed to refrain from further distribution of filled milk in the state.

Following the recent decision of the state supreme court it was announced that the company would carry the case to the federal high court. Steps in this direction were retracted today in the withdrawal of the petition for rehearing. Assurance was given R. M. Hoyt, assistant attorney general, that the case would not be appealed.

The state commissioner of markets is preparing to enforce the decision, which prohibits within the state the manufacture and distribution of milk compounds of skimmed milk and vegetable oils.

The supreme court based the right of Wisconsin to prohibit the sale of these milk compounds on the police power of the state and declared the law valid for three reasons:

1. Because the law is intended to prevent fraud and deception.
2. Because it protects public health and welfare.
3. Because it promotes the general prosperity by preserving a great industry of the state.

Justice Charles H. Crownhart, who wrote the Wisconsin decision and the accompanying statement of fact, said: "It will be seen that the compounds have been considered inimical to public welfare by a large portion of the people of this country."

He pointed out that 35 states had adopted standards for condensed or evaporated milk; that the manufacture and sale of filled milk had been absolutely prohibited in New Jersey, New York and Wisconsin; that five other states had prescribed standards for condensed or evaporated milk that in effect prohibit filled milk, and that three states had passed laws which permit filled milk to be sold as "imitation milk."

"The compounds," he said, "are in exact imitation of the genuine evaporated milk. They are produced and sold by the manufacturer cheaper than the genuine. They are susceptible of being sold to the public for the genuine at the same price. They are, therefore, capable of being used for fraudulent purposes and to deceive purchasers."

"If used as a substitute for milk, the public health may be impaired, not because the compounds are in themselves deleterious, but because they lack in certain food elements essential to a well-balanced dietary."

The justice quoted the advertisements of coconut oil compounds which spoke of a "delicious and nutritious new milk product," "Prepared in the rich dairying districts of Indiana and Wisconsin," "Animal fats extracted and then enriched with sweet edible, highly refined coconut oil."

"Other advertisements," Justice Crownhart declared, "are equally well balanced to convey the idea to the public that pure, fresh cow's milk from Wisconsin has been enriched and improved by the injection of sweet, edible, highly refined coconut fat."

Justice Crownhart maintained that the power of the state could be exercised for the prosperity and for the "preservation of a great industry of the state against injury in markets outside." He referred to Florida's winning fight to defend her great orange industry.

In regard to Wisconsin's right to protect her dairy industry he said: "The principle of allowing these compounds to be manufactured and sold followed to its logical conclusion will lead from 'filled' milk to 'filled' butter, from 'filled' butter to 'filled' cheese, and finally we have the 'synthetic' cow taking the place of the domestic animal of the farm. A great industry of a state will decline, a victim of national advertising of cheap and deceptive substitutes."

Justice Crownhart also referred to the Voigt filled milk bill now before congress, which had passed the house, 250 to 40.

On the reopening of the hearings by the senate subagricultural committee on the Voight bill, J. D. Miller, vice president of the Dairymen's League Cooperative association and member of the executive committee of the Milk Producers' federation, discussed the claim of the filled-milk manufacturers, that these compounds would afford a way of marketing large quantities of skimmed milk which now goes to waste.

"The great volume of skimmed milk produced in this country is on farms where the whole milk is hand separated and the butterfat shipped away," said Mr. Miller. "Such skimmed milk," he declared, "could not be utilized by condenseries owing to distance, but serves a very useful function by feeding to calves, hogs and chickens. Another part of the skimmed milk supply is created by local creameries who make up a large percentage of the skimmed milk into cottage cheese and sell back to the farmers great volumes of this for home feeding.

"The waste in skimmed milk," said Mr. Miller, "occurs in those factories close to metropolitan consuming centers and so far away from the farmers that freight rates would absorb the value of the skimmed milk if returned to the farms. But an increasing amount of skimmed milk in such case is being used to make casein and cottage cheese."

Mr. Miller also showed that there is an amount of skimmed milk in every can of condensed whole evaporated milk equal to that in every can of the same size of filled milk, and no possible additional market can be afforded farmers for skimmed milk that is not already provided by the condensed and evaporated milk. He also directed attention to the testimony of the filled milk manufacturers that only an inconsiderable amount of skimmed milk is bought as such by them, their practice being to purchase the whole milk and separate it, emulsifying the skim with the foreign vegetable fat within an hour after commercial separation takes place. He then showed that the filled milk serves as a vehicle to market the coconut fat rather than the whole milk and referred to the evidence of the opposition to prove that filled milk can be wholesaled at 3 cents a can cheaper than the wholesaling price of evaporated milk. He then cited the profit incentive to retailer as one of the reasons why the compounds are pushed into consumption in preference to the whole evaporated milk.

Emphasizing the possibilities of fraud, Mr. Miller read into the record a statement from Commissioner Berne A. Pyrke of the New York bureau of farms and markets, stating that coconut oil in large quantities was being shipped into New York state presumably to be manufactured into filled milk. The statement said that investigations by the New York authorities and the analyses of more than 50 samples had showed that products consisting of coconut oil and skimmed milk were being sold for genuine evaporated milk. Already more than $3000 in fines had been collected and other prosecutions were pending in that state. Mr. Miller declared that in 1920 a market for approximately 6,000,000 pounds of butterfat in the form of evaporated milk had been lost to the farmers of the United States by the blending of coconut oil with skimmed milk in the production of compounds sold in the semblance of milk.

Do You Want Taxes Lowered?

By LESTER M. LIVENGOOD, Attorney and Manager Spokane County Taxpayers' Economy League

About 75 per cent of the total taxes levied in the state of Washington for collection this year are local taxes—not state taxes. That is, they are taxes to pay the costs of government in cities, counties and local districts. Therefore, tax reduction, like charity, should begin at home.

The days from now until sundown on the first Monday in October are days in which the farmer and all other taxpayers must do some hard work if relief is to be felt from the high-tax burden now being carried. Just why the first Monday in October is a vital day in this tax reduction movement will be explained in another article, which will discuss a second method of securing reduction in taxes. In the meantime, another date should be borne in mind, namely, September 12, the date of the primary election, when the voters will weed out most of the aspirants for public offices. There remains yet a little more than one week during which the farmers who want their taxes reduced may question candidates for office to find out just what they intend to do to reduce taxes.

The Spokane County Taxpayers Economy league some time ago submitted to all candidates for offices in that county a list of questions that may well be applied by any taxpayer to any candidate for office in any county in the state. These questions are as follows:

To County Candidates.

"What experience have you had that in your opinion especially qualifies you for the office which you are seeking?

"On what classes of property do you pay taxes?

"Do you think it possible to reduce the tax burden?

"Do you think it necessary to reduce the tax burden?

"If your answer to the last two questions above are in the affirmative, have you a specific program for the reduction of taxation? What is it?

"Do you believe that public employees should receive higher or lower pay for the same kind of work than private employees?

"If elected to the office you seek will you endeavor to secure the cooperation of, and actively cooperate with, the officials associated with you in reducing public expenditures?

"If elected do you feel that your obligation as a servant of the public will be discharged because you keep within your budget, or do you believe that you are obligated to the people to save as much of your budget as possible for return to the current expense fund?

"Would you, if elected, consider yourself morally obligated to the public to keep within the confines of your yearly budgets, providing unforseen emergencies do not occur during your tenure of office?

"Are you in favor of a budget system for city, county and school governments?

"Because your predessor employed a certain number of people in the office to which your aspire will you consider this justification to continue the same number, or will you, if elected, go over in detail the actual needs of the office for the purpose of eliminating unnecessary employees, if there be any, and choose your employees because of their special fitness for the work, as would be done in a private business?

"Do you believe that the expense of your office and the number of employees should contract with the slowing-up of the business of the office as quickly and responsively as the expense of a private business would respond to a like condition?

"Do you regard it an evil practice to promise jobs to political supporters to secure election to the office to which you aspire, the needs of which office it is impossible to know until one is actually in the office?"

To Legislative Candidates.

"Will it be your purpose, if elected to the legislature, to stand determinedly for reduction of taxation?

"If you are in favor of reducing taxes would you insist that this be done by a general reduction of expenditures or would you endeavor to accomplish tax reduction by shifting the tax burden from one kind of property to another or from one class of citizens to another?

"Have you a definite plan or argument to bring before the legislature to effect a reduction of the tax burden? If so, please state what it is.

"Will you stand firm in the determination to reduce taxes in spite of all demands of the log-rollers?

"Are you in favor of an executive budget system for this state?

"If you are, will you do everything you can to have the legislature amend its rules and pass such legislation as may be necessary to provide an executive budget system for this state?"

Prospects for Fairs Are Excellent

Secretary H. P. Vermilye of the Washington state fair is enthusiastic over the outlook for this event, which will occur at Yakima, September 18 to 23. Not only are the prospects excellent for a live stock show even superior to the great display of a year ago, but indications are that the exhibits of other farm products will equal, if not surpass, those those of any previous year.

Secretary Vermilye expects about 12 county exhibits of produce to be on hand when the doors open. Among those expected to have exhibits are: Benton, Kitsap, Lewis, Mason, Klickitat, Grays Harbor, Pierce, Walla Walla, Skagit, Jefferson, Kittitas, Snohomish and Clarke.

Those who attended the fair last year will remember the overflow in the live stock department, especially in the dairy sections, where tents had to be pressed into service to accommodate a number of herds. This year, notwithstanding the prospects of a greater show, there will be room for all, since a new barn, 40x224 feet, has been erected. It is the same size as the other barns and completes the set, until future developments demand additional increase in space.

An additional 200 feet of unloading platform has been erected, doubling the capacity for handling the live stock at the cars.

Miscellaneous features of the fair will be equal to anything heretofore shown, including the women's department, the club work, the poultry show, machinery and farm equipment, the government display and the entertainment program on the race track and before the grandstand.

Spokane Interstate Fair

President T. S. Griffith announces a preliminary sale of 56,000 tickets to the Spokane Interstate fair, which holds forth the week of September 4-9. He announces also prospects for one of the best fairs in the history of the organization. Especially is there promise of a high-class live stock show. Entries in nearly all divisions are satisfactory. This is especially so in the cattle department. There will be strong shows of both dairy stock and beef breeds. The strongest Hereford show for several years is promised, with three or four of the most widely known herds of the Pacific northwest entered.

The fair this year will be notable for the exclusion of the game of chance and kewpie doll attractions. So much dissatisfaction has been expressed in recent years over the methods followed by these concessions that the management this year has ruled them out entirely. A higher class of entertainment and midway program has been prepared. Taken as a whole, the outlook for the 1922 fair is excellent.

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Can Rural Schools Be Improved Without More Money?

Before the people of Washington state vote on the 30-10 plan for helping struggling rural schools, it will be well to consider experiments conducted for the last year in an isolated school in Warren county, New Jersey. The 30-10 plan, which will be passed upon by the voters of this state in November, would increase to $30 the sum appropriated by the state for the education of each child in the common schools, whether that child is in a city school, a town school, a prosperous rural school or a remote and poor country school. The state now appropriates $20 and the county $10, which latter would remain unchanged.

This difficult problem of rural education has been under intensive study by educational experts of Columbia university, the greatest teachers' college in the world. As a result of these studies, Dr. Dunn, of Teachers' college, Columbia, believes that the problem of the country school can be solved by the same methods that have brought progress in teaching in the cities and towns.

Forty-four pupils attended the experimental schoolhouse in Warren county, which was seven miles from a trunk line railroad, two miles from a postoffice and out in the open country. A single teacher was required to instruct eight grades. There are still 200,000 similar rural schools in the United States, but Columbia educators hope to cut that number to 40,000.

New and startling methods were introduced in this experimental country school. Many of our readers still have depressing memories of the rigid discipline that was maintained in their childhood in the rural schools, and even in the schools of the towns and cities. A large part of the time, thought and labor of the teacher was concentrated on the impossible task of trying to keep little, restless bodies still. It was counted a grave misdemeanor for a child to follow its natural bent and draw a picture on a slate or a piece of paper.

In the experimental school in New Jersey, unrestricted movement about the room is permitted, and the problem of getting results with a single teacher in a school of forty or forty-five pupils seems to have been solved by the installation of pupil-helpers for the teacher and the application of the "automat" idea of teaching the children to gain a large part of the education themselves from the school library.

These experiments and other studies seem to prove that the long cherished belief that the country children are more healthy than city children is a delusion. Professor Thomas W. Wood of the Eyesight Conservation Council of America, who is interested in the experiment, says that 87 per cent of the pupils in rural schools in New York state have health defects as opposed to 72 per cent of unhealthy city children. "In the United States," Dr. Wood says, "15,000,000 of the 24,000,000 school children have bodily defects."

So oppressing are the faults of country schools, the experts say, that much of the congestion of the city is due to the inability of the rural schools to make country life attractive. Efforts are now being made through meetings at Columbia university of such educators as Miss Charl C. Williams, recent president of the National Education association; Mrs. Katherine Cook of the federal bureau of education, and Dr. Kenyon L. Butterfield, president of the Massachusetts Agricultural college, to bring about reform and settlements in rural education.

Before jumping at hasty conclusions it will be well for the educators of Washington and other states of the northwest to follow closely these interesting and up-to-date investigations by the leading educators of the nation. It is an easy way to call for more money, but is that the best way at this juncture? President S. B. L. Penrose of Whitman college, Walla Walla, says that in 1921 only California and Nevada slightly surpassed Washington in expenditure per school child. Washington was ahead of all the other states and far ahead of most of them. Dr. Penrose says: "We spent $97.85 last year per school child, twice what we spent in 1912, while Massachusetts spent $82.54, Minnesota $88, Virginia $33.83, and the average for the United States in 1918 was $49.12 per child."

The Washington Farmer wants to see better rural schools. It wants the children of the remote districts to have the best opportunities that can be afforded. It is deeply interested in this important and difficult problem, but it wants the fullest results with the means that are available. Would it not be wiser to get in closer touch with the progressive movements in other states, to study the new methods of getting better results with the same expenditure, apply those improved methods, and then consider the advisability of raising still more money?

Testing Pays Coin of the Realm

Again the public sale demonstrates, in two different sections of western Washington, the value of cow-testing association records of production to the owner of a dairy herd. William Wyatt of the White River Valley association obtained an average of $154 each for 24 cows with records, at public sale, and $126 per head for 26 equally good looking cows without records. Wyatt's herd was one of grade Holsteins, as was that of J. B. Ebinger of Ford's Prairie, whose dispersal sale at Elma July 26 average $123. The average grade Holstein in this section of the state brings from $50 to $75, but the fact that these cows of Ebinger's had been tested for a year in the Grays Harbor County association and showed average annual production of 350 pounds of fat each, made them worth $50 to $75 more per head to the dairymen who attended the sale. There was not one of the hard-headed farmers who crowded the ring-side but knew a cow's certified ability to produce 300 to 450 pounds of butterfat in a year was worth dollars and cents to him—and was willing to pay for the certification. The method of grading cows by owner's estimate is rapidly falling into the discard.

LOOKING INTO OTHER FARM FIELDS

Farm women enrolled in agriculaural extension poultry clubs last year raised 2,083,127 standard-bred chickens. They received for chickens and poultry products sold $1,617,047.83, in addition to the supply produced for home use.

* * *

The total crop of cranberries of the country last year was close to 400,000 barrels. It looks now as if it would be over 450,000 barrels this year.

* * *

Addressing 5000 farmers at East Lansing, President David Friday of the Michigan Agricultural college announced that he would ask an appropriation of $2,000,000 from the next legislature with which to carry on experimental and extension work in agricultural lines. He said that through this channel he hopes to increase the annual income of Michigan agriculture $50,000,000 within five years.

State Farm News

Plans for an ambitious potato and corn show in Yakima in November or December are under way, according to A. E. Lovett, county agent. "We expect to make this show one of the largest and one of the most valuable from an educational standpoint ever held in the northwest," said Mr. Lovett.

"It is hoped that arrangements may be made for sufficient prizes to encourage one exhibition of commercial potatoes and seed potatoes from an exceptionally large area of the northwest. A large number of comparative displays for educational value will be arranged and potato erperts will be present to give information on all phases of potato growing and seed selection."

* * *

The Grant Orchards Unit of the Wenatchee District Cooperative assocication has been organized among growers who formerly dealt through Spokane Fruit Growers. There are about 15 orchards represented and they will produce approximately 50 cars of apples this year.

* * *

Naches valley residents are planning to put on a community fair. The date has not been set, but it is thought it will be held the last of October. At a meeting held recently by the Naches Community club an organization was completed to take charge of the preliminaries. A. M. Otto has been made chairman of the executive committee and will be assisted by J. R. Reynolds, Earl Bailey and William McCullough.

It is planned to divide Naches valley into three districts and to award prizes for displays on the point system. The district receiving the most points will be awarded a special trophy cup.

* * *

That there is money in the culture of raspberries has been demonstrated by Jacob Gushwa at Prosser, who owns a seven-acre tract across from the Riverview school grounds. From one-fifth of an acre Mr. Gushwa has taken 99 crates and estimates that he will pick at least 40 crates more.

* * *

During the fiscal year ended June 30 state inspectors in the Yakima valley of Washington inspected nearly 3400 cars of fruit and vegetables, divided as follows: Potatoes, 1556 cars; apples, 1583 cars; pears, 159 cars; onions, 74 cars; peaches, 14 cars; strawberries and cherries, each three cars, and asparagus, one car. The United States department of agriculture cooperated in this inspection service.

* * *

The Pierce County Guernsey Cattle club has been organized, with a membership of 35. The officers include president, William Morris of Buckley; vice president, A. O. Johnson, Buckley; secretary-treasurer, John Vernhardson, Gig Harbor.

* * *

F. J. Sievers of Pullman, head of the soils department of the Washington State college, is a member of the party of government and state officials studying alkali and drainage conditions in the Yakima valley. There is a mass of data on irrigation and drainage which if analyzed might be placed in such shape that the farmers might make use of it. This is one of the things which his department is arranging to do. Drainage and irrigation studies have in the past concerned themselves too much with the surface, he says, and the need is to know what is going on below in the soil.

* * *

Provision of a combination drinking foundation for dogs and bath for birds was made in the will of Mrs. Lizzie Swetland, filed at probate and designating $300 for the foundation, which is to be located at a central position in Vancouver, Wash.

* * *

Charles H. Greely, president of the Ridgefield State bank, has the largest potato ranch in that section of the state. It is about four miles east of Ridgefield, in the Pioneer locality, along the Pacific highway, a paved road. He has 187 acres in potatoes, half of the acreage being certified seed stock.

* * *

Harry H. Collier of Tacoma has been secured to judge the poultry exhibit at the Grays Harbor county fair to be held at Elma the first week of September.

* * *

Members of the Walla Walla farm bureau have announced that they will open a public market this fall. J. D. Tuke, secretary, said the bureau is negotiating for a site at Second and Poplar streets. The market has been incorporated under the name of the Producers' Public Market. It is capitalized for $30,000.

* * *

Fruit Inspector Mills states his estimate of the 1922 apple crop for the White Salmon district is 500 cars, against 750 for last year.

* * *

Agreements have been made between the apple growers and the port of Seattle whereby 1,000,000 boxes of this year's apple crop will move to American and foreign markets by steamers. Of the 1921 crop 375,000 boxes were shipped by boat and in 1919 only 2000 boxes were handled over Seattle docks.

* * *

L. M. Rowe, prune grower of the Wapato district, has completed the harvesting of his Tragedy prune crop. His yield this year was 4400 boxes, which is slightly less than last year.

* * *

The railroads report a total of 950 cars in fruit shipments from the Yakima valley since July 1.

* * *

The fourth annual orchard excursion will be held at Wenatchee September 8. This is known by many as the "Orchardist day" and it is held annually as a general get-together meeting of all orchardists of north central Washington, with outside districts invited as guests.

* * *

Trout lake farmers interested in the dairy industry and the breeding of better stock are making efforts to interest dairy owners in the White Salmon valley in the movement. The Klickitat Holstein-Friesian Breeders' association at Trout Lake recently entertained dairy farmers from the White Salmon valley. Farmers belonging to the association have purchased a number of purebred Holstein-Friesian cows and other young stock which were inspected. Officials of the association predict that in a few years only purebred stock will be found in the Trout lake valley. Officers of the stock association are: W. A. Elmer president; Sanford Peterson, vice president, and F. A. Schnike, secretary-treasurer.

FARM BUSINESS AND MARKETS OUTLOOK

The agricultural balance was badly disturbed during the period from early 1919 to the middle of 1920 in which grain prices ruled relatively high compared with live stock values. The reduction of flocks and herds and of feedlot operations was accelerated by the conditions incident to deflation.

Eventually the pendulum swung to the other side of the perpendicular. Grain and forage prices dropped to a point which made the production of meat, dairy products, eggs and poultry more profitable than the sale of feeds as such. The recovery in hog, cattle and lamb prices in the last year made the ratio still more attractive to the stockman.

Now the pendulum appears to be swinging in the other direction. Generous crops assure a continuance of relatively low feed costs during the coming year. But live stock production shows evidence of stimulation in every form. Greatest expansion has occurred in hogs and poultry, taking the country as a whole. It takes longer to breed the increase in cattle for either beef or dairy. Sheep population estimates show more severe reduction than any other class, making overproduction of cattle and sheep more remote. The feeding industry is more or less distinct, however, and the number of thin steers and lambs which may be taken out for feeding is more elastic than the total population of those classes. Overproduction of feed cattle and lambs may occur ahead of the increase due to more extensive breeding operations. Because of excessive zeal to get into the feeding game, prices paid for raw material may be higher than succeeding markets for finished animals would justify.

The live stock industry may always be characterized by alternate periods of expansion and contraction, but if each individual producer watches for signs that his field is being overworked or underworked, a greater measure of stabilization can be attained. While Pacific northwestern markets have to import meat, especially pork, from the middle west, it is doubtful if any curtailment of production is advisable.

Cattle Prices Up Again.

The railroad strike was responsible for a lighter run of cattle last week which advanced top steers at Chicago to a new high for the year of $10.95 and caused a small upturn all along the line with the exception of common steers and butcher stock. There is a generous percentage of shortfeds and steers that have had a good deal of corn grass and, so that strictly grassers are hardest to move. An advance in dressed beef prices in the east in spite of large receipts in the week previous helped the market along. Veal calf prices advanced toward their usual pinnacle at the end of August and early September.

Seven leading packing points received 1,269,000 head of cattle in the last six weeks compared with average receipts of the preceding eight years. The supply does not indicate shortage. Ordinarily from the middle of August to the middle of October weekly receipts at these points increase more than 50 per cent. If cattle have been held back by the strike, as reported, a big increase later on is indicated. Feeder buyers will take a big fraction of the increment, but the supply for slaughter has not attained the high mark of the year.

The flood of grassers at southwestern markets is steadily rising in spite of rail obstructions. Few good western rangers have appeared as yet. The cause of the delay is in doubt.

Large Feeder Shipments.

Shipments of stocker and feeder cattle from the 12 leading markets in the week ending August 12 were the largest since the close of last November. Rail conditions were said to be discouraging, but there is no sign of it in the movement. Prices advanced slightly with fat classes. A slightly lower market may develop when interruptions to rail traffic cease, but with an abundance of feed and other conditions fairly favorable, no serious decline is in prospect. Thin cattle prices are on a more reasonable basis than prices for lambs.

Hog Supply Remains Heavy.

Notwithstanding interference with rail shipments receipts of hogs at the 11 leading markets last week were the largest in three weeks, and again were the largest for the corresponding week as far back as the records go. In the last eight weeks arrivals at these markets totaled 4,162,000 head compared with a 10-year average of 3,498,000 head in the corresponding period. At the same time weights are running about 4 per cent above normal for this season.

Within a month new crop hogs will begin to show up. It is too late to expect much of an advance in the meantime and the rail situation is too uncertain to be sure of the immediate trend. The probable winter level is now the center of attention. Packers are predicting $6 hogs at Chicago. This figure may not be reached, but prices probably will go at least $1.50 lower than they now are before the winter level is reached and in view of the increase in production, occasional dips may go close to the packer guess.

Fresh pork prices were higher last week and the lard supply is moving out steadily. In the first three weeks of August over 55,000,000 pounds of lard and 48,000,000 pounds of hog meats were cleared for export. Stocks in storage are decreasing more rapidly than the average at the corresponding period in the past. Continental exchange rates appear to be on a basis making purchases impossible, but packers report a fairly satisfactory demand although at low prices.

Lamb Receipts Falling Behind.

Receipts of sheep and lambs at the seven leading markets in the last six weeks totaled 1,162,000 head compared with average receipts of 1,227,000 head in the same period of the preceding eight years. Under present conditions the cause of the loss remains uncertain. The railroad situation is a factor, but the small range lamb crop reported last spring and severe liquidation of cornbelt flocks a year ago may be even more important. Most of the range lambs thus far have been below standard finish, thus helping the market for fat native lambs. Feeder lambs are still being sought actively at high prices. Shipments from the 12 leading markets in the week ending August 12 were the largest since last December.

Uncertain railroad conditions injured the horse market last week. The supply was not heavy, but buyers for all classes were cautious, the interest of loggers subsided and even the prospect of reopening coal mines failed to bring new orders. Chicago prices follow:

Good and choice drafters, $200@300; common and medium drafters, $100@200; 1350 to 1550 pound chunks, $110@175; good and choice wagon horses, $100@165; farm chunks, $75@150.

Wool Dull but Firm.

Demand for wool is rather slow as this is normally a dull period of the year, but dealers are not sacrificing holdings and prices if anything are stiffening. cast Indian wools which are now coming in free will be dutiable under the proposed permanent tariff and an effort is being made to rush them in ahead of its passage.

Wheat Sales Exceed Average.

In spite of apparent obstacles receipts of wheat at primary markets last week were the largest for the corresponding week with but two exceptions in a dozen years and about 40 per cent above the average. Cars were stored in the southwest before threshing started otherwise the movement would not have been so heavy. Most of these cars have not been used so that lighter receipts from that section are probable, but spring wheat is beginning to move freely and the total supply promises to continue generous.

Canadian wheat will be a factor in the market in a few weeks. That country is the principal competitor of the United States for the export trade and Canada's surplus is even larger than our own. The plan of a national compulsory pool of the Canadian crop to be handled by a wheat board has been abandoned so that the crop will not be held back except as individual producers decide to do so.

What Will Europe Do?

European buying revived suddenly at the low point last week but has tapered off again. Every sign indicates a need for more wheat than last year but the persistent purchases of large amounts from day to day which featured the market last year when August exports set a record of 67,000,000 bushels are not in evidence. Central European countries are in bad shape financially with German marks down to 1330 to a dollar and Austrian kronen at around 60,000 to a dollar and both fluctuating at a rate which makes business next to impossible. France, Italy and Belgium are affected by this situation, but sterling exchange is within 1 cent of the highest point in several years.

The delay in buying at present means a more concentrated demand later, but Europe apparently is acting on the theory that their own import needs for wheat are no more urgent than the necessity of exporting countries to find a market for their surpluses. There is also a hint in their recent attitude toward wheat that Europeans are fearful of a crash of some sort and do not wish to be caught with heavy commitments when it comes.

Statistically, the position of wheat is stronger than usual. It will be made still stronger or weakened depending upon whether the yields of the harvest in the southern hemisphere which will occur in December and January are below or above the average. Broomhall estimates the Argentine acreage at 12 per cent larger than last year which will make it about equal to the average.

Drought Scare in Corn.

Hot, dry weather over the cornbelt caused more or less damage during the past week, but scattered rains have occurred in the last day or two and the loss may not amount to more than the normal deterioration during August.

Oats Movement Below Normal.

In the first three weeks of the new oats crop year receipts at primary markets fell nearly 20 per cent below the 10-year average for the corresponding period. The extremely low prices is anything but attractive and there are reports of replacing oats with wheat in the rotation.

Cash Grain Prices.

The range of cash grain prices for the week ending August 23 follows: Chicago—Wheat: No. 2 red, $1.00½@1.05; No. 3 red, 99¼c@$1.03¾; No. 2 hard, $1.01½@1.07. Corn—No. 2 mixed, 60¾@63¾c; No. 3 mixed, 61½@63½c No. 2 yellow, 61¼@64½c; No. 3 yellow, 60¾@64c; No. 2 white, 60¾@63¾c; No. 3 white, 60½@63c. Oats—No. 2 white, 31¼@35c; No. 3 white, 30@34*c No. 4 white, 30@33¼c. Rye—No. 3, 69@71½c. Barley—50@@58c.

Clover Seed Market Declines.

No forecast has been made of clover and timothy seed production for this year, but the estimate of a large acreage and high yield of hay seems to justify expectation of a heavy seed crop. The weather until the last week has been favorable and progress reports have been optimistic. Harvest is about to begin. Since speculators and dealers must carry the seed sold in the next few months until the big consuming demand develops next spring, trade sentiment which is now mostly bearish is an important factor in making the fall market. The price has dropped $3 or more below the early summer level for prime red clover. The timothy seed crop is estimated at 5 to 15 per cent less than last year.

Feed Markets Steady.

Prices on most feeds are steady. The northeast is buying wheat feeds as recent price levels at milling centers seem to be attractive, bran being cheaper than coarse grains on a pound basis. Oil meals are quiet at unchanged prices.

Prices per ton (100-pound bags) in car lots: Chicago—Bran, $17; standard middlings, $19; flour middlings, $24.50; cottonseed meal, 36 per cent, $39; 43 per cent, $43; hominy feed, $25; gluten feed, $29.85; old process oil meal, $46; tankage, $55.

Wide Spread in Hay Prices.

Light receipts of good quality hay are sustaining the market for the good grades, but poor hay is in excess of the demand, even at a heavy discount. No. 2 timothy is quoted $1 to $4 below No. 1 prices. Clover and heavy clover mixed are hardest to move.

Prices per ton in car lots: Chicago—No. 1 timothy, $22@23; No. 2, 17@19; No. 3, $14@16; No. 1 light clover mixed, $19@21; No. 1 clover, $15@17; No. 1 clover mixed, $16@18; upland prairie, $14@18; midland prairie, $12@16; rye straw, $10.50@11.50; oat and wheat straw, $8@10.

Egg Market Gains Strength.

The egg market is showing more strength than at any time in several weeks. Receipts have dropped off rapidly recently, although rail conditions may have been a factor, which will mean an increase later on. Storage holdings are now being fed upon the market. The trend of prices is likely to be upward from this time on, but any advance will be gradual, owing to excessive storage stocks which must be absorbed.

Receipts of dressed poultry at the five leading markets in the first 31 weeks of this year, together with receipts in the same period of the three preceding year, are as follows: 1922, 110,290,145 pounds; 1921, 85,532,570 pounds; 1920, 82,779,199 pounds; 1919, 104,660,270 pounds.

Poultry handlers are expecting a big run this fall. Prices have declined recently and a further loss is probable in the next month or six weeks, by which time the storing season will begin. Receipts will more than treble in the next three months if the usual course is followed.

Since those who stored butter and eggs this year and poultry last winter have been in a losing game, they will probably be very cautious when the poultry storing season begins this fall and will wait for a low price level.

Quotations: Chicago—Fresh firsts, 22 1-2@23c; ordinary firsts, 20@21c. Live poultry: Hens, 22 1-2c; broilers, 24c; springers, 24c; roosters, 13 1-2c; ducks, 22c; geese, 18c; turkeys, 25c.

Butter Prices Boosted.

Light receipts were the primary cause of a gain of 1 to 2 cents in butter prices last week. This is the normal period for an advance to begin, as the storing season generally ends by the middle of September and the daily additions to storage stocks are relatively small. Hot, dry weather has damaged pastures and reduced production as well as lowered the average quality, while the rail situation is blamed for retarding shipments to markets. Export inquiries helped the upturn along.

Prices for 92 score fresh butter on August 23 were: Chicago, 34c; New York, 36c; Boston, 36 1-2c; Philadelphia, 36 1-2c.

Lower Prices for Cheese.

Cheese prices declined at country markets and distributing points last week, but at the lower level confidence returned and buying broadened, although hot weather reduced the consuming demand. Receipts in the leading cities showed a marked decline. The improved tone in the butter and egg markets was a factor in restoring the market to health.

(Continued on page twelve.)

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Range of Live Stock Prices, Week Ending Aug. 25

CATTLE.	Chicago.	Spokane.	Portland.	N. S. Lake.
Choice, prime heavy steers (1100 lb. up)	10.15@11.00			
Good heavy steers	9.10@10.50			
Medium heavy steers	8.00@ 9.35			
Common heavy steers	6.25@ 8.25			
Choice prime light steers (1100 lb. d'n)	10.00@11.00			
Good light steers	9.00@10.50			
Medium light steers	7.85@ 9.35	6.35@ 7.50	6.75@ 8.25	6.35@ 7.25
Common light steers	6.00@ 8.10	4.00@ 6.50	4.50@ 6.75	6.35
Common to choice butcher heifers	4.85@ 9.25	3.25@ 6.00	3.50@ 6.50	3.50@ 5.75
Common to choice butcher cows	3.75@ 8.50	2.50@ 4.75	3.00@ 5.25	2.50@ 5.00
Bologna and beef bulls	3.65@ 6.65	2.75@ 4.50	3.00@ 3.75	2.00@ 3.00
Canners and cutters, cows and heifers	2.50@ 3.90	1.50@ 3.00	2.00@ 3.00	1.50@ 3.25
Canner steers	3.75@ 4.75	3.00@ 3.75	2.00@ 3.50	2.50@ 3.50
Medium to choice light veals	10.50@13.00	7.00@ 8.50	7.50@ 9.50	7.50@ 8.50
Common to choice heavy veals	4.50@ 8.50	3.00@ 7.00	4.00@ 7.50	3.50@ 7.50
Common to choice feeders (1000 lb. up)	5.50@ 8.00			
Com. to choice feeders (750-1000 lb.)	5.40@ 7.75	3.00@ 5.00		3.50@ 5.50
Common to choice stocker steers	4.75@ 7.50			
Com. to choice stocker cows, heifers	3.50@ 5.50			
HOGS.				
Top of market	10.00	12.00	13.25	9.60
Bulk of sales	7.00@ 9.95	9.75@11.75	10.50@12.50	9.00@ 9.50
Heavy (250 lb. up)	7.75@ 9.55	10.75@11.50	10.00@11.25	8.50@ 9.25
Medium (200-250 lb.)	8.65@ 9.90	11.50@12.00	11.00@12.50	9.00@ 9.50
Light (150-200 lb.)	9.10@10.00	11.25@11.75	12.50@13.25	9.25@ 9.60
Light lights (130-150 lbs.)	8.90@10.00	11.00@11.50	12.00@12.50	9.00@ 9.50
Smooth packing sows (250 lb. up)	6.75@ 8.40	8.50@ 9.00	8.00@ 9.00	
Rough packing sows (200 lb. up)	6.50@ 7.75	8.00@ 8.50	7.00@ 8.00	
Medium to choice pigs (130 lb. down)	8.25@10.00	10.00@11.50	11.50@12.50	
Stock pigs		10.00@11.00	12.50@13.00	8.50@ 9.25
SHEEP AND LAMBS.				
Medium to prime lambs (84 lb. down)	11.75@13.00	8.25@10.00	8.00@11.00	9.00@10.75
Culls and common lambs	8.50@12.00	6.00@ 8.50	5.00@ 8.00	5.00@ 9.00
Medium to prime yearling wethers	8.75@11.00	7.00@ 8.00	6.00@ 8.00	4.50@ 6.00
Medium to prime wethers	6.00@ 8.75	6.50@ 7.50	5.00@ 7.00	4.00@ 5.00
Medium to choice ewes	3.50@ 7.75	4.00@ 6.50	3.50@ 5.00	3.00@ 4.00
Culls and common ewes	2.00@ 4.00	2.00@ 4.00	2.00@ 3.50	2.00@ 3.00
Full-mouth to yearling breeding ewes	5.00@11.75			
Feeder lambs	11.50@12.75	6.00@ 7.00		

LIVESTOCK AND DAIRY

Fatten Calves

Best on Farms Where Born

"Weaning, shipping, dehorning, castrating, and suddenly changing your calves from grass to dry feed is very hard on them and checks gains completely for three to six weeks," said W. H. Peters, chief of the animal husbandry division, Minnesota University farm, before an audience of live stock men attracted to the farm by the Cattle Feeders' day.

"This problem plus the problem of securing good calves at a reasonable price," he added, "would seem to warrant the statement that baby beef production is best adapted to the method whereby the calves are grown on the same farm on which they are to be fattened. They can be castrated when young, and if they are dehorned at all they can be dehorned with caustic also when young, then started on grain in the fall before they are weaned and can be fattened with less risk and a good deal less feed than when they are purchased on the open market in the fall.

"However, when the calves brought to University farm got settled down and started to feeding well they made gains almost as fast as the older cattle and required only two-thirds as much feed to make 100 pounds gain as is usually required by two or three year old cattle.

"The calves appeared to be growing rather than fattening until they had been on feed about 130 days and weighed from 700 to 800 pounds. From then on they seemed to fatten rapidly and at the close of 106 days showed a good deal of finish. We believe that the average feeder of baby beef should figure on about a 200-day feeding period in order to make certain of a satisfactory finish on the calves."

LIFE PRESERVERS FOR LIVE STOCK

By DR. E. E. WEGNER, W. S. C.

DIGESTIVE TROUBLES, ARTICLE SIX.

Small Intestines.



This part of the digestive tract is not so often the seat of trouble as several other portions, largely because the food materials do not stay in this portion very long, but pass rather quickly from the stomach to the large intestines. It is true that a great deal of the absorbtion takes place here, but even so the foods pass through in a relatively short time. This is especially true of water, which passes almost directly to the caecum from the stomach, a distance of about 75 feet, through the small intestines.

Because the foods pass so rapidly there is seldom gas formation, as this occurs usually where the foods lie for a while in one spot. There is seldom constipation noted here, as the foods are of semi-fluid mass and unlikely to be come impacted. Occasionally, however, the small intestines are the seat of cramps or spasms in the muscular walls and this, of course, is the cause of violent pains that come and go at intervals. Animals suffering from this trouble may appear quite well and suddenly manifest evidence of very acute pains which causes them to draw up the abdomen, bring the feet together, bend the knees and then drop to the ground, rolling in pain. They may get temporary relief as suddenly as the attack appeared and seem to feel quite well again, only to have the attack renewed in a few minutes. This may continue for some time and is one of the very painful kinds of digestive troubles, though the deaths from this alone are not great.

The causes are allowing an animal to drink great quantities of cold water when the animal is warm or sometimes giving foods to which the animal is unaccustomed. All of these things should be avoided.

Knots or Twists.

Another cause of grief in the small intestines are knots or twists that occur. The small intestines are very loosely arranged in the left side of the abdomen and there is no arrangement for keeping them in their proper place as rigidly as most other portions are accustomed to being kept. For this reason they move about quite freely and at times become looped about another portion in such a way that the part can not become freed. This knot or twist interferes with the blood supply and with the passage of food material and is always fatal unless the knot slips out and frees the trapped portion. Treatment of this condition is very difficult and a diagnosis is also very hard, as it is so hard to locate the part that is in trouble. An operation is the only hope and abdominal operations on the horse are not practical in most cases.

Other conditions that are serious are a telescoping of the bowel when one portion passes into the part just ahead of it, like a telescope that is being shortened up. This, too, is almost impossible of diagnose, since a manipulation of the entire bowel is impossible and it may be very easily overlooked. When it is diagnosed it can only be corrected by an operation, and then if it has been present for any great length of time the damage done is very likely to result in a fatality.

Troubles of the great bowel will be the subject of the next article and it is probably most important of any portion of the digestive tract.

Prices for Reactors

In the campaign for the eradication of tuberculosis in cattle being carried on by the United States department of agriculture, the states and counties, one of the most important economic considerations is the salvage, at a fair price, of the animals that react to the test. Up to a year and a half ago a large percentage of the reactors that were passed by the inspectors is perfectly fit for food did not bring a fair price, because some buyers took an unfair advantage of the seller and profited unreasonably.

The department of agriculture through the bureau of animal industry and the packers and stockyards' administration has been looking into this matter for a year or more, taking it up with packing concerns, commission men and organizations interested in the marketing of live stock. As a result much better prices are now being paid. Reports to the department show that the prices being paid for such cattle in various parts of the country are getting very close to the prices paid for the same class of cattle on the regular market. A special traveling inspector now spends all his time visiting live stock markets, noting prices that are being paid for reactors and insisting that buyers who are discriminating against them pay a fair price.

Carcasses of reactors that have been passed by the federal inspectors are worth as much and are as wholesome as any other carcasses. There is no warrant for price discrimination against them. Many of the leading packers at the big markets and a large number of the smaller concerns on many markets now see the justice of this view, with the result that reactors are now selling at more nearly fair prices.

The department has compiled figures on the prices received for reactors in a number of states for 1921 and 1922, and in several of them the increase in average price has been considerable, in a few instances reaching more than 100 per cent. In Kansas the average price paid for these cattle rose from $16.52 to $34.26; in Minnesota from $17.74 to $24.48; in Missouri from $15.60 to $31.93; in Wisconsin from $16.09 to $26.25, and in Vermont, where only one firm had been handling them previously, from $5.61 to $16.29. In 18 states, including the live stock and dairy states of the middle west and a number of eastern states, the average price paid increased about $3 a head. The department expects that continued efforts on the part of the bureau and the packers and stockyards' administration will result in still better prices for reactors.

Packers, commission men and live stock exchanges are getting behind the movement for better prices since they have been impressed with the fact that the encouragement of the work of tuberculosis eradication means more and better business in the future. The Institute of American Meat Packers passed a resolution calling upon the members to pay as much for reactors as for untested cattle of the same quality.

In connection with this discussion of prices, it is well to keep in mind, according to department officials, that the area method of eradicating the disease has an additional advantage in that more reactors are available from one place at one time and, consequently, can be shipped at less expense and can be handled more economically at the yards and in the packing house.

VETERINARY

By DR. S. B. NELSON.

Sow Unable to Stand.—My 2-year-old sow took sick about a week ago and is now unable to stand. She eats and drinks well and does not seem to be in pain. We have been feeding her fresh alfalfa and bran. The young pigs took sick after the sow. They are 8 weeks old. Can you suggest a cure for these? W. K.

I would suggest that you give the sow two or three ounces of castor oil, following this with 10 grains of potassium iodine in her feed once daily.

Since you only state that your pigs took sick, without giving any symptom, I can not be of any service to you there.

Warts on Teats—I have a cow whose teats are just covered with warts. There are so many of them it is hard to milk her. Is there a remedy? B. R.

Wart treatment: Chloral hydrate, 1 1-2 dram; acetic acid, absolute, 1 1-2 dram; salicylic acid, 1 dram; spirits of ether, 1 dram; collodion, 4 drams.

Hair Comes Off—I have a 2-year-old female dog that had pups last January. About the time she weaned them an irritation started inside her hind legs and the hair came off. It spread over her stomach and sides and she scratches continually. J. H. C.

I would suggest that you try an application of sulphur and coal oil. Make it about as thick as a cream soup and apply to the affected part. Put a bandage around the dog's mouth for a while so that she can not lick it off.

Needs Careful Examination—I have a 6-year-old horse that seems to be troubled with colic and it comes on every once in a while. She rolls up on her back, then on her chest and puts her front feet out in front of her, then sticks out her nose and rolls her lip up and looks around at her sides. C. B.

There are possibly three things that your horse needs. First, to have her teeth examined and cared for, if necessary. Second, she is probably affected with a catarrh of the stomach. She should be examined to determine if this is the case. Third, she should be put on a definite system of feeding and tonic treatments. This will depend upon what the veterinarian finds upon examination. I think you can get fine service in this respect at the College of Veterinary Science at Pullman.

Goiter.—I have a 2 weeks' old calf that was born with a goiter, but it is not so very large. Is there anything I can do to remove it? T. A. D.

Omak, Wash.

Paint the goiter once daily with tincture of iodine.



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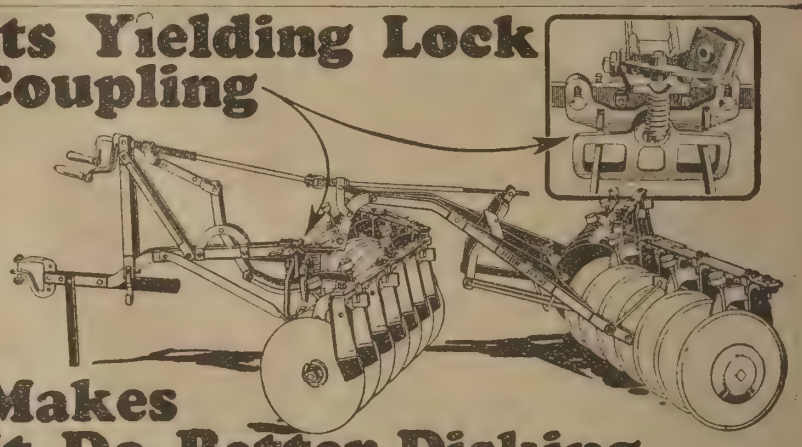
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POULTRY AND RABBITS

Breeding, Not Breed

A great many persons probably for the first time are considering buying a few fowls, and they are studying the breeds. They are writing to the poultry departments of the experiment stations and they are asking extension lecturers and poultry breeders the question, what is the best breed? Some of them will go to the fall fairs, look over the exhibits and propound the query to the owners of the birds and they will go home with a good deal of information as to the general characteristics of the breeds on exhibit—their shape and size, color, etc.

The breed question worries the beginner considerably, and some who are more than beginners are often confused at the mass of conflicting testimony.

Technically there are not so many breeds, but there are some 121 varieties, the number of breeds being 38, as recognized by the Standard of Perfection, and there are others not in the Standard. For instance, the Plymouth Rocks, as follows: Barred, White, Buff, Silver, Penciled, Partridge and Columbian. They are all the same in shape. If their feathers were all taken off they would look alike. The color makes the variety. It is the same with other breeds. There are eight varieties of Wyandottes.

The beginners, or a large proportion of them, want to begin in the producing business; they want to produce eggs, and they honestly seek the breed or variety that will produce the most eggs, and they don't care much as to color of feather.

The truth is the breed counts for comparatively little. There are good and poor layers in all breeds. It is the breeding that counts.

This needs to be iterated and reiterated. The beginner should go to the man who has been breeding for eggs and buy his stock from him. He should select his stock on the basis of trapnest records rather than show records and fancy points. There are plenty of breeders now who are trapnesting and using as breeding stock only those fowls that have high records. The purchaser should satisfy himself that the breeder he buys from has been following this system of breeding. This is the best way to begin.

Don't be continually changing the breed; change the breeding or the breeder. In other words, choose stock that has been bred to lay rather than bred for color of feather. Keep at it along this line year after year, and if it is not possible to trapnest, purchase males from trapnested, high-producing stock.

Avoid Early Laying

Early maturity, not early egg production, is desirable. The first business of the poultryman is to bring his pullets to maturity at 5 1-2 to 6 months, when they may properly begin to lay. Put them in the laying house at 5 1-2 months of age, but if they are not mature, carry them until they have reached 6 months before allowing them to lay. Otherwise they will molt later on. If their combs begin to get too red as they near maturity cut down the amount of protein in the feed. In doing so feed more carbohydrates, for they can use lots of energizing food, and putting on a little fat before they begin to lay might prove advantageous.

"After a pullet has started to lay it is too late," says W. D. Buchanan, poultry specialist, "but if you start in time you can keep her from it until she is at least 5 1-2 months old, provided you have her under control in a limited run. The way to do it is to watch her comb, and to keep reducing the protein if necessary until there is none in her feed except that in the grain and its byproducts. A Leghorn pullet should weigh 3 1-2 pounds before she lays an egg. Early eggs (peewees) are hard to market; they lead to an early molt, and to such reduction of vigor that you never get a consistent lay. An early layer is never as rugged as she would have been if held to maturity. The pullet approaching the laying period naturally slows down in activity, just as does any adult. Hence the poultryman must double his efforts to keep her active, and this means double the depth of the litter, which makes her work and hence turns all the protein to body building."

Destroying the Chicken Louse

The chicken louse seldom causes trouble where the poultry is given the right kind of care. Lice thrive on the negligence of the keeper of the birds. Just a little well-directed care will make it impossible for the pests to operate. The same is true of mites. But woe to the flock whose owner is careless and who thereby allows conditions to prevail that are suitable for the breeding and operation of these pests.

The natural remedy for the chicken louse is dust. The louse breathes through the pores of the skin and the closing up of these pores with dust kills the louse. If the fowls do not have access to a dusting place in the yard or fields, a box of dry earth must be provided. On account of their irritating nature sulphur, pyrethrum or lime added to the dust will make it more effective. Sometimes it may be necessary to dust the fowls by hand, but this is usually considered impracticable. Sulphur and slaked lime make a good dust powder. A good powder may be made by mixing crude carbolic acid, 90 to 95 per cent strength, with enough plaster of paris to make a dry powder that will work thoroughly into and among the feathers. Sodium fluoride is a good powder. It suffocates the louse.

How to Avoid Colds and Roup

The cold nights will soon be here. With them will come colds and roup in the poultry flock, unless prompt measures are taken to prevent them. In about nine cases out of 10 these troubles come from a lack of fresh air in the poultry house or coop. The chickens will not take cold just because the weather is cold. They are more likely to take it when they are too closely crowded together in a small coop with little ventilation. They become overheated at night and when the cold air strikes them in the morning they catch cold. Give them an open shed to roost in and spread the perches not less than 18 inches apart. With plenty of fresh air, which is only secured in an open-front house with wide-apart roosts, the flock will suffer little or none from colds and roup. The fresh air treatment is the only sure preventive or cure.

For healthy hens and the largest number of eggs

FEED LILLY'S BUTTERMILK EGG MASH

High in lactic acid and protein.



Dealers Sell It

LILLY'S



How did your neighbor's last bargain tire turn out

PROBABLY you know at least one car-owner who is always on the look-out for the cheapest tires he can find. He likes to get them by mail or at a sale or at some place where they have big red bargain signs over the door.

It would be fine if he could get "the edge" in every tire trade.

But the dealer can't afford to let him have it.

* * *

Even if a man saw any slight percentage in tire shopping at all—it disappeared when the "Usco" brought the price down.

A *standard* product—and the dealer sells it with pride.

A *good* tire. The dealer has no desire to trade you into a larger profit for himself.

An out-in-the-open tire. The dealer sells you confidence, not price. He wants you satisfied with performance and value. The only way he knows to get your business is to deserve it.

This is the "Usco" idea.

* * *

Compared with the ten-minute thrill of the bargain appeal, the "Usco" is just plain common-sense.

No tax charged on this

30×3½ "USCO"



United States Tires are Good Tires

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United States Tires

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Fifty-three Factories — *The Oldest and Largest Rubber Organization in the World* — *Two hundred and thirty-five Branches*

ORCHARD AND GARDEN

Combating Blight

Many Precautions Must Be Taken

Pear and apple blight is caused by a bacterial organism, a parasite quite unlike insects and fungi. It attacks principally the apple, pear and quince. A very light infection that soon dies out may occasionally be found on stone fruits and on service berry, hawthorn and some other pomaceous shrubs. It never attacks willows, poplars and other wild plants that are not related to the apple.

The blight germs gain entrance to the trees in several ways, pointed out in a recent Montana experiment station bulletin as follows: (1) Through wounds made by pruning tools, cultivators, etc.; (2) through bites of insects, particularly the green aphis; (3) through the open flower, to which it is carried by bees, ants and other insects, and, as has recently been shown, by the wind. When once the germ gains entrance it multiplies rapidly and works downward through the bark, but may not cause any visible effect until weeks after the infection has taken place, so that the grower is badly deceived as to just when the disease was acquired.

The Symptoms.

The following symptoms are very characteristic, continues the bulletin. If the infection begins in a flower cluster or in the end of a shoot, as it usually does, the leaves first wilt and droop, then turn brown in the apple and nearly black in the pear. Soon they become dry, hard and brittle. The bark of the affected twig likewise becomes slightly darkened in the apple and nearly black in the pear. The line between the diseased and the healthy bark is not sharp and distinct during the growing season, so that it is often difficult to determine just how far the disease has progressed; and it is usually farther than an inexperienced person would suppose. On cutting into the diseased bark one finds the inside at first pinkish in color instead of a healthy green, but when it has been diseased for a few weeks it becomes darkened through to the wood, which remains nearly white and normal. This is essentially a bark disease and will continue, in susceptible varieties, to run down the limbs and trunk into the roots, sometimes killing the tree outright in a single season. It practically ceases to spread downward at the end of the growing season and becomes dormant during the winter, but with the opening of spring activity is renewed and another stretch of bark is killed. This continues until the tree is completely overcome. Sometimes the attack begins in the water-sprouts at the base of the tree. Under these circumstances it reaches the roots in a few weeks, where it can not well be treated, and the case becomes practically hopeless.

Vigorous Trees Affected.

There is a general impression that plants or animals that are very vigorous resist disease better than those that are generally unhealthy and stunted. This certainly is not the case with apple and pear blight. In slow-growing trees the disease makes but moderate progress downward through the bark and generally dies out without reaching the larger limbs, while in very rapidly growing, vigorous trees it progresses rapidly, sometimes running through the bark from the tips to the roots in a single season.

Often there may be seen on the blighted leaves and branches, and especially on the blighted fruits, a yellow exudate in tiny droplets, or even in larger quantities running down the tree. This contains enormous numbers of the germs of the disease and is freely visited and eaten by ants, wasps, bees and probably other insects, that carry it to other trees, especially to the flowers, where a fresh attack begins. A single bee may thus infect several hundred flowers during the season, and a swarm of bees could infect many thousands. This accounts in most cases for the very extensive and sudden attacks that many orchards have suffered.

When the healthy leaves have fallen in the autumn, those on the diseased twigs and branches still cling to the tree, where they are very conspicuous. At this time also the diseased bark has turned quite dark, especially in the pear, and the line between it and the healthy bark is more sharp and distinct than during the summer season. Here, in the deeper layers of the bark, in the line between the diseased and the sound tissues, the bacteria that causes the blight live over winter. On the assumption that they do not live over in the ground or anywhere else excepting the region just indicated, the following treatment is advocated by the United States department of agriculture and by many of the experiment stations, and is extensively practiced by orchardists with some measure of success.

Cut Out Affected Part.

In a single sentence we can say that the only known method of curing a blighted tree is to cut out and burn all affected parts. This seems simple enough, but there are important details that determine between success and failure. As a matter of fact, very few inexperienced men are successful, largely because they will not pay close enough attention to these important details. The following rules should, therefore, be thoroughly mastered and rigorously followed.

1. See that no blight is allowed to winter over in the trees. The best time of the year to cut it out is late fall or early winter.

2. In the dormant season the blighted branch should be cut off about a foot below any visible portion of the disease; in the summer two or three feet below. If this necessitates cutting off a larger limb, this should be done. It is this rule that is transgressed most often and with the most serious consequences.

3. After each cut the saw or shears must be disinfected. The disinfectant can best be carried in a milk bottle attached to the belt, and can be applied with a swab. Small corrosive sublimate tablets (four to a pint of water) make an excellent disinfectant. A 5 per cent solution of carbolic acid is also good.

4. Burn all diseased parts promptly after cutting. In summer this must be done the same day, otherwise insects crawling over them during the night may become carriers of the germs. In winter it is necessary to burn them before the first warm days of spring, but many have neglected this rule to their sorrow.

5. Inspect every tree carefully after the orchard has been gone over. Even an expert, when cutting out blight, has to do this two or three times to get every case, and a case or two left may ruin the whole campaign by starting the blight in the blossoms the next season.

6. Orchards in infested districts should be kept free from water-sprouts at the foot of the trees, and from suckers and fruit spurs on the main limbs; otherwise the bacteria, entering through these tender parts, will quickly reach the roots or the trunk.

7. Anything that favors a rapid, succulent growth of the tree makes it more susceptible to blight. It is, therefore, most important that blighted orchards should have no more tillage and water during the first half of the growing season than are absolutely necessary to the making of the crop. Barnyard manure should be applied only to the more resistant varieties.

8. Kill the green apple aphis. Observation and experience have convinced us that the winged adult of this insect is the most important carrier of the blight after the bees stop working in the flowers. Thorough spraying with tobacco extract for the green aphis should greatly reduce the spread of blight during the summer.

Why Did We Fail?

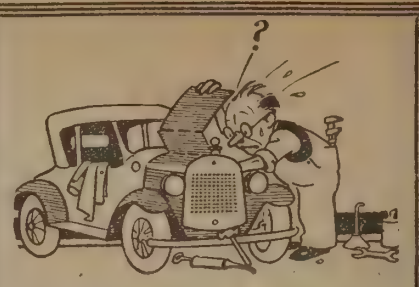
It does no good to lock the stable after the horse is stolen, but if you expect to have another horse later, now is a good time to get a lock and resolve to keep out the next horse thief. Just so, it does no good to spray the apple after the worm is safely inside the fruit, or to spray for any other pest that has done his damage and gone beyond the reach of your poison mist or dust. But it is a fine time to take stock of conditions, discover wherein you failed in your endeavors or lack of endeavors and resolve to put up a battle in the right way and at the right time the coming season.

A bulletin gives the following pointers with reference to combating pests:

There is no single remedy for all plant troubles. First determine what you must spray for and then use the formula that fits your case.

Distinguish between insect injury and

(Continued on page twelve.)



Tell Miller Your Troubles!

Miller has that auto part you want, and can get it to you in a jiffy at a 50 to 70 per cent saving! The "House of a Million Parts" is just what the name implies—any part for most any car. Factory inspected and guaranteed USED axles, transmissions, springs, shafts, gears, bearings, magnetos, ignition systems or the motor complete. If you want a NEW part—we have it. This largest concern of its kind on the Pacific coast will ship you an auto part for less on the day we receive your order. Send in this ad with your order, then we will prepay shipment.

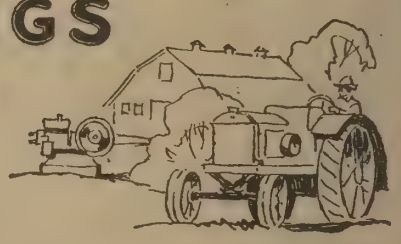
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WE ARE PAYING TOP PRICE.
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When you write to advertisers be sure to state that you saw their advertisement in this paper.

McQUAY-NORRIS
PISTON RINGS
PISTONS
PINS





Is your gas power machinery wasting money that could be saved by installing them?

Every motor—whether it is your automobile, tractor, truck, engine or pump—has three vital units. They are the piston rings, pistons and pins. It's the condition of these three units which determines the motor's power and economy.

If they are worn, full power and economical operation in that motor are impossible.

Wear in these three units many times causes farmers to sacrifice a good car or tractor or engine, when, if they had renewed them, the machine would have given satisfaction for a long time more.

When you realize the load these three units carry, it's easy to understand why they wear. They have to seal the combustion chamber, withstand the force of every explosion and the stopping and starting of the pistons as they shoot up and down their cylinders. It is not strange that they wear and when they do the motor gets noisy and wasteful. It frequently causes sacrifice of a good car or tractor that would have given much longer satisfactory service if these worn parts had been replaced.

Send for our Free Booklet, "To Have and to Hold Power," which explains the whole subject of motor wear and its correction.

ADDRESS DEPT. BD

McQUAY-NORRIS MANUFACTURING COMPANY, ST. LOUIS, U. S. A.

Pistons and Pins
McQuay-Norris *Wainwright* Pistons and Pins—gray iron pistons as light in weight as safety permits—specially designed for replacements—available in standard sizes and over-sizes—also in semi-finished form 75-thousandths over-size—pins of special hardened steel, ground to exceptional accuracy.

$1.25 Per ring — LEAK-PROOF — an exclusive two-piece design preventing loss of gas and compression. Gives equal pressure at all points on cylinder walls. For all piston grooves except top, which should have Supercyl. Each ring packed in a parchment container.

$1.00 Per ring — Supercyl—Keeps lubricating oil out of combustion chamber. Collects excess oil on each down stroke of piston and empties on each up stroke, which ordinary grooved rings cannot do. Each ring packed in a parchment container.

50c Per ring — *JIFFY-GRIP* ring. Non-butting joint, which can be fitted closer than ordinary step cut—velvet finish—quick seating. "Seats in a jiffy." To keep them clean and free from rust, each ring is packed in an individual glassine envelope.

Snap Rings —of the highest grade. Raised above the average by McQuay-Norris manufacturing methods. Their use insures all the satisfaction possible for you to get from a plain snap ring. They are packed twelve rings to the carton and rolled in waxed paper.



2306-F

FARMERS' WANT ADS

This is the farmers' "want," "sale" and "exchange" department for small advertisements of farmers, including live stock and poultry.

Advertising rates for ads running 1 to 3 times, 10c per word per insertion, with a special rate to Farmer subscribers, as follows: Ads running 4 to 12 times, 9c per word per insertion; ads running 13 times or more, 8c per word per insertion.

All commercial and land advertising 10 cents per word each insertion. Open also to nonsubscribers.

In using these columns advertisers must observe: (1) No advertisements will be inserted for less than $1.00. (2) Every word, number and initial, including name and address, must be paid for. (3) New advertisements, changes of copy or cancellations must reach general office, Spokane, Wash., 10 days in advance of publication date. (4) Cash must accompany order.

Above rates include insertion in The Washington Farmer, The Idaho Farmer and The Oregon Farmer, which constitute the Pacific Northwest Farm Trio, 46 Review Building, Spokane, Wash.

HELP WANTED—MALE 3

MEN WANTED AT ONCE TO FILL GOOD POsitions. You can qualify in few weeks. Experience unnecessary. Free employment department. Write for free catalogue 100-B, and rates. Modern Automobile and Tractor Schools, W1803 Third ave., Spokane, Wash., or 700 Mercer st., Seattle.

WANTED — SALESMAN WHO CAN SELL high-grade, dependable nursery stock; several counties in Oregon, Wash., Idaho and Montana now open for assignment. Our selling contract will interest you. Address Albany Nurseries, Inc., Albany, Ore.

WANTED—MEN WITH HORTICULTURAL experience to sell our dependable nursery stock; have select territory for immediate acceptance. Write for particulars. Capital City Nursery Company, 426 Oregon bldg., Salem, Ore.

WANTED—WITH HOLSTEIN COWS, A dairyman, single, that is capable of feeding, milking and weighing for test; steady work. W. E. Boner, Joseph, Ore.

HELP WANTED GENERAL 5

RAILWAY MAIL CLERKS, GOVERNMENT clerks and carriers wanted. List of positions free. Write Mokane Institute, Dept. B21, Denver, Colo.

EDUCATIONAL 45

BEHNKE-WALKER BUSINESS COLLEGE of Portland; one of the largest institutions of its kind in America; guarantees a position to every graduate. Enroll now for fall term. A few months training under expert instructors and you are ready to enter business and win. Behnke-Walker graduates are always in demand. Write today for our free success catalogue. Address Behnke-Walker Business College, Fourth, near Morrison, Portland, Ore.

FRESH FOOD PRODUCTS 51-1

"HONEY BRAND" HONEY — ALFALFA, sweet clover product; pure, light, thick, good flavored; gives satisfaction wherever used; 1 60-lb. can, $7.50; discounts on larger orders. Write for circular and prices in pails. Oliver Sires, Wapato, Wash.

HONEY—400 TEN-LB. PAILS CHOICE Alfalfa, sweet clover honey; also 60-lb. cans and 5-lb. pails; discount on five-case orders or more. Write for prices and sample. Wm. R. Sires, Wapato, Wash.

WHITE ALFALFA, SWEET CLOVER honey; 1 60-lb. can, $7.50; 2 60-lb. cans, $14.50; six 10-lb. cans, $8.50; three No. 10 pails, prepaid, third zone, $5.50. Wells D. Rose, Sunnyside, Wash.

FINEST NEW HONEY, 60 POUNDS, $7.50; 2 cans, $14.40; add postage; 10 pounds, $1.90; 5 pounds, $1 prepaid; satisfaction guaranteed. Geo. Bancroft, Hermiston, Ore.

NEW CROP ALFALFA-SWEET CLOVER honey; 60-lb. can, $4.75; two cans, $9 f. o. b. Rigby. Heckman & Larsen Honey Co., Rigby, Idaho. Quality guaranteed.

NEW CROP ALFALFA-SWEET CLOVER honey, clean and sanitary. 60-lb. can, $7.50; 2 60-lb. cans, $14.50; at Sunnyside. S. King Clover, Sunnyside, Wash.

NEW HONEY, FINE QUALITY ALFALFA, sweet clover; 60-lb. can prepaid second zone, $7.79; two cans, $13.50; 3 10-lb. pails prepaid second zone, $4.70. Harry Fisher, Prosser, Wn.

DELICIOUS NEW CLOVER HONEY, 60 pounds, $5.50; two 60s, $9.75; six 10s, $6.75; 12 5s, $7. Agents wanted. Browne. Box 499, Twin Falls, Idaho.

POPULAR BRAND HAPPY HOME HONEY—One 60-lb. can, $6.50; two cans, $12.75; six 10-lb. pails, $7.50; comb honey prices on request. H. N. Paul, Mabton, Wash.

SMOKED SALMON, 5-POUND BOX, $1.25; salt salmon bellies, 5 pounds, $1.25, delivered by mail. Coffin Fish Co., Seattle, Wash.

HONEY — WHITE CLOVER EXTRACTED; none better; two sixty-pound cans, $10. J. M. Ruyts, Buhl, Idaho.

NEW HONEY—ALFALFA AND SWEET CLOver; 1 60-lb. can, $7.50; two, $14.40; discount on large quantities. Ernest Sires, Yakima, Wn.

HONEY — FRESH ALFALFA-SWEET CLOVer honey; one 60 lb. can, $6.50; two cans, $12.75. A. L. Traner, Touchet, Wash.

MERCHANDISE 59

ARMY GOODS. FIELD SHOE, $3.65; Officers' dress, $3.95; russet, $4.25; wool breeches, $1.95; khaki, 95c. Price lists furnished. Walker's Army Store, 501½ Trent, Spokane.

MISCELLANEOUS—FOR SALE 60

SASH AND DOORS—O. B. WILLIAMS CO., 1943 First ave. So., Seattle. Chicken house sash, 20" wide by 25" high, 80c; a dozen different sizes in stock for immediate shipment. Skylights for chicken houses, 36"x40"; price, glazed, $2. This is the size recommended by the Western Washington experiment station. We carry them in stock for immediate shipment. Sash and doors for all purposes at lowest prices. All orders receive prompt attention. Our large illustrated catalog No. 35, showing full line of building material and built-in fixtures for the home, free on request. O. B. Williams Co. Established 1899.

TOBACCO—"OLD KAINTUCKEE" NATURAL leaf, the best that skill can produce; a rich, natural brown, well ripened and fire cured. I want every one to try a sample pound; none but the best at 50c pound, postpaid. Mention whether chewing or smoking. R. E. Acree, Obion Valley Tobacco Farm, Pryorsburg, Ky.

KENTUCKY TOBACCO—3 YEAR OLD LEAF. Don't send a penny, pay for tobacco and postage when received. Extra fine chewing, 10 lbs., $3; smoking 10 lbs., $2.50; medium smoking, 10 lbs., $1.25. FARMERS' UNION, Hawesville, Ky.

CORN HARVESTER CUTS AND PILES ON harvester or winrows; man and horse cuts and shocks equal corn binder; sold in every state; only $25 with fodder tying attachment. Testimonials and catalog free showing picture of harvester. Process Harvester Co., Salina, Kas.

SACKS—SECOND-HAND GRAIN AND SPUD, correctly sorted and graded; also pipe, new and second hand, any size; standard roofing paper at a big saving; pumps, engines, belting, cables, etc. Alaska Junk Co., Inc., S120 Adams st., Spokane, Wash.

WALL BOARD—WRITE FOR SAMPLE OF Washington plaster wall board; won't warp, won't burn. Manufactured by Washington Building Products company, 6851 E. Marginal Way, Seattle, Wash.

NATURAL LEAF SMOKING TOBACCO—5 lbs., 75c; 10 lbs., $1.25; 20 lbs., $1.75. Cash with order. United Farmers, Mayfield, Ky.

TOBACCO — KENTUCKY'S PRIDE; EXTRA fine chewing, 10 lbs., $3; smoking, ten lbs., $2; twenty, $3.50. Farmers' Club, Mayfield, Ky.

MISCELLANEOUS—FOR SALE (Continued) 60

HOMESPUN SMOKING TOBACCO: MILD AND mellow; 10 lbs., $1.50; 20 lbs., $2.75; delivery guaranteed. We furnish free recipe for preparing. Smoking Tobacco Exchange, Sedalia, Ky.

NATURAL LEAF TOBACCO, CHEWING, 5 lbs., $1.75; 10 lbs., $3; smoking, 5 pounds, $1.25; 10 pounds, $2. Send no money, pay when received. Tobacco Growers' Union, Paducah, Ky.

NATURAL LEAF TOBACCO, CHEWING, 5 pounds, $1.75; 15 pounds, $4; smoking, 5 pounds, $1.25; 15 pounds, $3. Send no money, pay when received. Farmers' Tobacco Association, Paducah, Ky.

MISCELLANEOUS—Wanted. 63

HIDES—WE BUY HIDES OF ALL KINDS. Write for prices and tags. Hibbard-Stewart Co., Hibbard bldg., Seattle.

WOOL—WE BUY WOOL AND PELTS. WRITE for prices and tags. Hibbard-Stewart Co., Hibbard bldg., Seattle.

AUCTIONEERS 75

LIVE STOCK AUCTIONEER—SALES CONducted anywhere. Write for dates and terms. U. S. McFaddin, 1307 Maxwell, Spokane.

AUCTION SALES 78

BIG TYPE POLAND CHINA AT AUCTION—Oregon state fairgrounds, Friday, September 29. Entire herd owned by S. D. Steffy, Newberg, Oregon. Show winners, brood sows, service boar and young stock. Catalog giving full details is being published. Send to E. A. Rhoten, Salem, Oregon, sales manager, and one will be forwarded.

STOVE REPAIRING 128

WRITE MYER RUBENS, SPOKANE, ABOUT stove repairs, welding broken parts, nickle plating.

FUR-BEARING ANIMALS 170

SILVER AND CROSS FOXES FOR SALE. William Rambo, 407 Sprague, Spokane.

PETS—Dogs, Birds, Etc. 171

FOR SALE—TWO THOROUGHBRED AIREdale pups, $25 each; will exchange for shotgun, good condition. M. Woodcock, Route 4, Yakima, Wash.

BEAUTIFUL WHITE COLLIE PUPPIES; reasonable prices. Urbandale Farm; Oakley, Idaho.

FOX HOUNDS, PUPS, YOUNG DOGS. HARRY Hull, Oakland, Ore.

POULTRY 174

WHITE LEGHORN HENS, $1 EACH; 1000 two-year-old "Henacres" hens, clean, healthy, heavy laying, selected stock must go to make room for our pullets. Also 1000 yearling hens at $1.50 each. These hens will make good breeders for 1923. Orders accepted for ten or more at above prices. July or August delivery. Satisfaction guaranteed. Free catalog. "Henacres," the Inland Empire's greatest poultry farm, Box A, Prosser, Wash.

PULLETS—1500 APRIL AND MAY-HATCHED White Leghorn pullets for sale at attractive prices; hatched from thoroughbred Hollywood and Tancred strains; sired by cockerels 250 to 290 egg strains. We ship at three months of age and guarantee satisfaction or you may return the birds in 3 days. We can give you quality and service. Queen Hatchery, Seattle, Wash.

CERTIFIED WHITE LEGHORN BABY chicks; booking orders now for summer and fall delivery; safe arrival live, vigorous chicks guaranteed; no money in advance; pay on delivery. Established 1898. Sonoma county farm bureau accredited hatchery. Must Hatch Incubator Co., 445 Seventh st., Petaluma, Cal.

WHITE LEGHORN BABY CHICKS, FROM free range Hoganized stock; breeding flocks inspected by Sonoma county farm bureau; accredited hatchery inspector. Full count and safe arrival guaranteed. For price write to Lafranchi Hatchery, Petaluma, Cal.

WHITE LEGHORN BABY CHIX FOR SUMmer and fall months from stock accredited by Sonoma County Farm bureau. We guarantee safe arrival. Write for prices and literature. The Pioneer Hatchery, 422 Sixth street, Petaluma, Cal.

FOR SALE—WHITE LEGHORN COCKERELS, top notchers. It's money saved to drop us a card stating what you wish. No money till you are satisfied. River View Yards, Box 108, The Dalles, Ore.

PUREBRED SINGLE COMB BLACK AND White Minorcas; pullets and cockerels from the best eastern and western blood; ten and twelve weeks old, $1.75 and up. J. E. Richardson, Route 2, Prosser, Wash.

PUREBRED BABY CHICKS FOR 1923. Leghorns, Reds, Barred Rocks, White Rocks, Minorcas, Anconas. Free catalog. Booking orders now. C. N. Needham, Salem, Ore.

BABY CHICKS — WE GUARANTEE OUR chicks to be from the highest producing hens in Petaluma. Write for further information. The White Hatchery, Petaluma, Cal.

DOLLARS FOR YOUR EGGS—WE PAY THE top market prices for your eggs and poultry. Daily cash remittances. Western Produce Co., Spokane.

$65 BUYS 45 EVERLAY STRAIN S. C. BROWN Leghorns as am going out of business. E. J. Davis, Cambridge, Idaho.

ALLEN'S ROCKS AND LEGHORNS WIN, LAY and pay. Write your wants. D. W. Allen, La Conner, Wash.

LIVE STOCK 177

WE PAY TOP PRICES FOR YOUR LIVE OR dressed veal, hogs and poultry. Your check by return mail. Shipping tags on request. M. & J. Packing Co., Spokane.

TOP FANCY LIGHT VEAL, 12½C. JONES AND Williams, S101 Division st., Spokane, Wash. Prices subject to fluctuations.

REGISTERED GUERNSEY BULL, 3 YEARS old; good breeding; for sale. Hugo Engler, Ridgefield, Wash.

FOR SALE—REGISTERED HOLSTEIN BULL, 1 year old; champion of Minnesota state fair. F. Borik, Corvallis, Ore.

LIVE STOCK (Continued) 177

WE GUARANTEE TO PAY THE HIGHEST market prices for your poultry and live stock. Owing to the constant changes in the market we are unable to quote prices in this paper from week to week. We will furnish tags and prices when you are ready to ship. Write us what you have to sell. Prompt returns. John Lewis & Co., Spokane, Wash.

LARGE, HEAVY PRODUCING HOLSTEINS for sale at all times in car lots; tuberculin tested; 150 to 200 head always on hand; well marked heifer calves from registered sires and heavy producing dams; crated for shipment anywhere, $25 f. o. b. Levinson & Balmelli, Yakima, Wash.

SIR AAGGIE RAY APPLE JOHANNA BEAUty; a real bull; never bred to a cow the second time to get with calf. Wm. Gordon, Woodland, Wash.

O. I. C. WEANED PIGS; BEST BREEDING; excellent type. The kind I put over 200 lbs. at six months; $10 each; registered and crated. A. T. Hemphill, Friday Harbor, Wash.

PURE REGISTERED TOGGENBURG DOES and bucks of the very best milk strains at reasonable price. M. Montchalin, Carson, Wash.

WILL SELL 30 HEAD OF REGISTERED Shropshire rams. Write McK. Edwards, Valley, Wash.

FOR SALE—15 HEAD REGISTERED JERseys; St. Mawes breeding. H. D. Sears, Enumclaw, Wash.

200 YOUNG REG. HAMPSHIRE EWES; BARgain. C. E. Cleveland, Stanfield, Ore.

FOR SALE — 150 YOUNG COARSE WOOL ewes. Young Bros., Auburn, Wash.

FOR SALE—90 HEAD OF RANGE CATTLE. S. Carlisle, Pocatello, Idaho.

REGISTERED YOUNG O. I. C. PIGS FOR sale. Dr. Will, Puyallup, Wash.

HARNESS and SADDLERY 189

SEND FOR FREE HARNESS AND SADDLE catalog today; cut out the middleman, buy direct from the manufacturer. Lowest prices in the west; satisfaction guaranteed. Established 1881. Write Pierce Harness Co., Dept. T, Spokane, Wash.

HAY FOR SALE. 200

ALFALFA HAY, GUARANTEED QUALITY; prompt shipment; buy direct and save money. Prices upon application. Ernest T. Freepons, Walla Walla, Wash.

FAIRS 370

PACIFIC INTERNATIONAL LIVE STOCK EXposition, Nov. 4 to 11, 1922. Entries close noon, October 10. Send for premium list. O. M. Plummer, general manager, 211 Northwestern Bank bldg., Portland, Ore.

JOB PRINTING 372

GUARANTEED BETTER BUTTER WRAPpers: 100, 60c; 250, $1.25; 500, $2.25; 1000, $4; printed to order. Home Specialty Co., Middleton, Idaho.

MATERNITY HOMES 497

MATERNITY HOSPITAL; STRICTLY PRIvate; doctor in attendance; prices reasonable. Mrs. Elizabeth Peel, matron, W1324 Broadway, Spokane.

PERSONAL 537

FARMER, 37, WOULD CORRESPOND WITH lady, 35; object matrimony. H 3, Washington Farmer, Spokane.

BUILDING MATERIAL 588

LUMBER, MILLWORK, READY-CUT HOUSES, barns; material lists estimated. Send 10c for plan book. Local Keystone Lumber Co., Dept. F, Tacoma, Wash.

FIX BROKEN PLASTER WALLS WITH PERfection plaster wallboard; nailed on like lumber; takes calcimine or paint; sample and booklet from Western Wallboard Co., Seattle, Wash.

BUILDERS, CONTRACTORS, HOME OWNERS, write for free 1922 catalog. Tacoma Sash & Door Co., Tacoma, Wash.

SEEDS 620

VALLEY COUNTY WINS FIRST SEVEN world prizes. Timothy, 7c; timothy-alsike, mixed, 10c. M. Meador, Norwood, Idaho.

WHITE CLOVER SEED, 50C LB.; SAMPLE ON request. Pioneer Farm 1847, Carlton, Ore.

NURSERY STOCK 621

NURSERY STOCK, ITALIAN PRUNE TREES and trees of all kinds. Berries and small fruits of all varieties. Buy direct and save 50 per cent. Brooks Nursery, Lafayette, Ore.

BULBS—NARCISSUS, DAFFODILS, CROCUS, iris, tulips, jonquils, 35c per dozen, mixed. Mrs. Mary Insel, Shelton, Wash.

FARM LANDS FOR SALE 651

BEAUTY, QUALITY, INDEPENDENCE—FORty-three acres; seventeen fine river bottom orchard; choice apples, walnuts, pears, cherries; twenty-five acres timber pasture; modern bungalow, beamed ceiling, well furnished; fireplace, bath, toilet, water system, packing plant, barn, feed, horses, tools, implements; three thousand dollar fruit crop; worth twenty thousand. Eleven thousand takes the whole business. Address A. T. Lawrence, Roseburg, Ore.

FOR SALE—CHOICE 360 DIVERSIFIED farm near Cottonwood, Idaho; 330 cultivated; good bldgs.; timber; water; 30 bushels common yield; $100 acre; terms. Frank C. Greene, Cheney, Wash.

EXCELLENT OPPORTUNITY FOR SETTLERS and also for loggers or millmen; finest soil and water; close to live seaport; cheap; splendid dairy, berry, fruit section. H. E. Scholz, Menlo, Pacific county, Wash.

7000 ACRES SEQUIM LAND SETTLEMENT project, containing the finest berry and dairy land in the state, now offered for settlement at attractive prices and terms. Free booklet. Thos. G. Mortland, Sequim, Wash.

SACRIFICE—80 ACRES, WELL IMPROVED; lies level; running water; 60 ready fall seeding; 10 alfalfa, 10 tame pasture; easy terms. $12,000. Box 502, Toppenish, Wash.

FARM LANDS FOR SALE (Continued) 651

SACRIFICE SALE—CENTRAL BRITISH COlumbia stock ranch, 813 acres deeded land; lease of 320 acres; lease can be increased if necessary; 150 acres alfalfa; 150 acres timothy; 75 acres pasture for milch cows, balance has small timber; 80 acres which is with lease, sown to timothy; total, 455 acres, cleared, all under ditch; rest can be put under. Place has first water record, unlimited range adjoining ranch for one thousand cattle. Good water on range; good buildings; all fenced; 120 cattle, 20 horses, 40 sheep, 47 pigs, 90 hens, all kinds of machinery, all for $62 per acre; one-half cash, balance can be arranged. W. A. Hall, Granite hotel, Seattle, Wash.

EQUIPPED STOCK RANCH—480 ACRES; 200 acres best of bottom land, in timothy, clover and grain; 80-acres timber, and balance pasture; adjoining free outside range, 20 miles square; large creek through place, from which most of meadow can be irrigated; improved with 2 houses, large stock and hay barn, baled hay barn, feed barn for range cattle; water piped to buildings from spring; personal property consists of 8 horses, 1 colt, 21 head of cattle, 10 hogs, chickens, four-horse engine, cream separator and complete farming and blacksmith outfit. Price $30,000, and very easy terms. G. M. Pinkerton, care of Lincoln Trust Co., Spokane.

IRRIGATED FARMS FOR SALE—160-ACRE farms, improved or unimproved; 30 to 160 acres irrigable land on each parcel; near Lethbridge, in sunny southern Alberta, can be bought for $15 to $40 an acre. No need for pioneering. Well settled country, good roads, railways, schools, telephones; agreeable social conditions; fertile land; success of irrigation farming here already demonstrated; irrigation system being constructed under government supervision. Water available in 1923. Write for information concerning crops grown and description and location of farms to the province of Alberta, Irrigation Council, 12 Provincial building, Lethbridge.

CUTOVER LANDS, EASY TO CLEAR; $8 TO $20 per acre; 25 miles north of Spokane; on hard-surfaced highway; Great Northern and Milwaukee railways; excellent opportunity for dairying and stock raising, with Spokane markets and creamery near at hand. Will help the man who will live upon this land and agree to clear a part each year by giving lumber to help start his buildings, and a purebred Jersey bull to groups of farmers. Interest and payments low. Write Milan Farms Development company, Dept. T, Old National Bank bldg., Spokane, Wash.

160 ACRES; ON IMPROVED ROAD; 40 ACRES hay, horses, tools, furniture, machinery, potatoes, turnips, garden included if taken now; joining 117 acres government land, which can be had as preemption; sub-irrigated by creek; easy reach R. R. town; level and gently rolling tillage; estimated 75,000 ft. timber; house, with magnificent view distant mountains; two barns, 50-ft. hay shed. Owner unable to operate. $4000 takes all; only $1000 needed. Fred Cook, Strout Farm Agency, Smithers, B. C., Can.

BIG OPENING SALE OF YAKIMA VALLEY farm land, under an assessed state and government approved irrigation project; good, deep soil; close to town, railroads and state highway. We sell in tracts to suit purchaser at $25 per acre and up, on easy terms. Our many sales to farmers show that this land is a good investment. Western Lands, Inc., owners, 918 Green bldg., Seattle.

FOR SALE ON TIME—MY FARM, ONE MILE east of Hooper, on Palouse river; forty acres in alfalfa, orchard and truck; six-room house, big barn; will take house and lot in town, or small acreage as first payment; must be close to school. All the time you want on balance. L. C. Huffman, Hooper, Wash.

BIG LUMBER CO. LAND SALE IN SKAGIT county; 40 acres, $1400; 20 acres, with new house, $1500. Lumber furnished for building. Lots of work for the settler; splendid district, roads, schools and towns. H. C. Peters, 726 3d ave., Seattle.

SELL YOUR PROPERTY QUICKLY FOR cash; no matter where located. Particulars free. Real Estate Salesman company, 501 Brownell, Lincoln, Neb.

WINTER SHEEP RANGE FOR LEASE; 40,000 acres, western Franklin county; fine grass, 3 springs, lake, corrals. The Big Bend Land company, Spokane, Wash.

NORTHERN IDAHO FARMS, WESTERN OREgon timber lands; some good buys. Address B. Hanson, Medimont, Idaho.

147 ACRES, FAIR BUILDINGS; SPRING WAter; some timber. $1200; terms. F. T. Drumhiller, Careywood, Idaho.

TRACT AND SMALL DAIRY, WITH GOOD paying milk route; price reasonable. J. W. Sharp, Moscow, Idaho.

160 ACRES, NEAR OROFINO; BUILDINGS, orchard, water, pasture, field; good road. $3200. Henry Loseth, Orofino, Idaho.

EIGHTY ACRES, TWENTY-FIVE DOLLARS per acre; some timber; good roads, schools, stores; terms. H. S. Howe, Vaughn, Wash.

FOR SALE—MY DAIRY RANCH NEAR COOS bay. H. W. Sanford, Sumner, Ore.

FARM LANDS FOR RENT 657

FOR RENT OR SALE—DAIRY OR STOCK ranch; 240 acres; 50 in hay; free range; good proposition. Box 82, Springston, Idaho.

IRRIGATED LANDS—For Sale 663

IRRIGATED LAND FOR SALE IN SOUTHERN Alberta; having bumper crops this year. Write for prices and particulars. Apply W. M. Harris Agency, Ltd., Lethbridge, Alta.

TWENTY ACRES IN ALFALFA; IRRIGATED; government project; 1½ miles from good town. Write for particulars. W. C. Dyer, Hermiston, Ore.

FOR SALE OR EXCHANGE 702

TAKEN UNDER FORECLOSURE—NINE HUNdred acres very productive grain and hay land; level, partly irrigated; running water; some buildings; close to range; perfect title; easy terms. Thirty-five dollars per acre. Might consider some clear property in exchange. R. P. Hunter, Ogden, Utah.

TO EXCHANGE—160 ACRES; 80 IN CULTIvation; 10 in bearing orchard; fair set farm buildings; mail route; 6 miles from Sheridan, Ore.; want stock merchandise, city property, business property, smaller farm up to $10,000. Price $16,000; some terms. H. W. Bundy, McMinnville, Ore.

FOR SALE OR EXCHANGE—320-ACRE DIversified farm; near Spokane; 150 acres cult.; more tillable; good bldgs.; plenty of water; partly subirrigated; soil, black loam; want small farm. Price $15,000. W. Price, Greenacres, Wash.

TO EXCHANGE—Real Estate 705

FOR TRADE—40 ACRES, IRRIGATED; IMproved; plenty water; ½ mile county seat; want western Oregon or dry farm. Box 373, Vale, Ore.



SYNOPSIS.

Esau Haggerty, a strong man of mature years, and Orlando Medford, a young, slightly built and frail companion, have started from their Illinois home town for the great gold diggings of the west. Esau is pushing a provisions-laden wheelbarrow. Orlando is leading a cow. For three days they have been trudging slowly southwestward carrying out the determination crudely lettered on the side of the wheelbarrow, "Pike's Peak or Bust." Rain and snow impeded their progress, and Orlando falls sick and requires a couple of days to rest before proceeding. Then, with the village that is now Kansas City passed, they follow the Santa Fe trail westward, being but one of scores of outfits of various kinds headed for the fields of golden riches. Once again they stop for a good rest before plunging into the real wilderness, 700 miles of which is still ahead of them to be conquered by foot, cow and wheelbarrow. After several days' tramping, they pitch their tent across a little stream from the camp of a family by the name of Cooper, also headed for the gold diggings. In the party is the daughter of the Cooper family, Hazel, whom Orlando by chance met when both went to the stream for water and in whom he became at once greatly interested. He reluctantly joined Esau next morning for the day's travel, leaving the Coopers to follow later, but with the expressed hope that they would all meet again at the gold fields. It was several days later that Esau and Orlando met up with another strange party on the trail, several men with a push cart to haul their belongings to the diggings. The two parties agree to travel together the rest of the journey. To save time they leave the Santa Fe trail and take a short cut that will save them more than 100 miles. But to their great distress they find themselves many miles out in a waterless, sun-scorched desert, with death from thirst staring them in the face. They meet a wagon party coming back famished, hurrying as best they can for the place they left the Santa Fe trail and water. The three parties hold a council and decide that the safest thing for them to do is to cut across the desert to the old dry Smoky river bed and dig a well in it for water. They hasten to put the plan to the test, with the result that at no great depth they reach water. After a long rest, they fill their kegs and turn back for the old Santa Fe trail, some inclined to give up the journey to the gold fields, others determined to get to Pike's Peak or bust. Esau and Orlando, a little later, come upon a great wagon train of freighters out on the prairie and accompany them until they reach the Arkansas river. They continue alone, finally entering the open buffalo coutnry.

They pass through a tremendous herd of buffaloes, pitch camp on the bank of the Arkansas river, kill a buffalo each and spend a few days drying the meat for future use. While there a wagon train with which the Cooper family is traveling comes up and camps, giving Orlando a chance to get a little better acquainted with the daughter, Hazel. They part with the hope of meeting again in a few days somewhere along the trail.

CHAPTER NINE.

Rolling Back Toward the States.

Not very much later Orlando buckled on his six-shooter, shouldered his gun and set off down the river. After an hour or two he returned, dragging half of a bull hide by the tail.

"It was just as I thought," he told his partner. "I found a tough-looking old bull that somebody had killed this morning or yesterday, and all I had to do was to relieve 'im of part of his hide. It ought to make fine sole leather. Seems a full half an inch thick. Guess I'd better put the boots on Brindle and let 'em dry in that shape."

"That will be best, I've no doubt. I'll help you whenever you're ready to put 'em on, Lando."

A little later the two approached the cow, carrying four pieces of the bull hide. Having set the cow's foot in the middle of one piece, they turned up the edges, made holes in the folds with the little blade of a pocketknife, and passed a buckskin string through all the holes.

"Mr. Cooper has had a lot of experience with this kind of shoeing. He says the important thing is to draw your puckering string tight enough, but not too tight," Orlando remarked.

"Only common sense, that is. Tight enough not to slip down, and loose enough not to bind her laig."

When the first boot had been tied on as they thought it ought to be they proceeded to protect her other feet in the same way. Brindle went to grazing as soon as they turned her loose.

"They're not overly purty, them there bull-hide boots," commented Esau.

"No. And she seems a little awkward in 'em. But she'll get used to wearing boots, I've no doubt. And if they'll save her feet, it's little any of us care about looks out here. I've heard of puss in boots, and that was a fable. But here's Brindle in boots, and that's a fact."

Now, leaving the cow to get accustomed to her new foot covering, and the new foot covering to dry in shape to fit the cow's feet, the two returned to their camp under the cottonwoods.

"When are we going to move on from here, Esau? Tomorrow, or after dinner today?"

"Tomorr' mornin' is what we've been talkin' all the time."

"Our meat is so nearly dry, and Brindle is shod. It seems to me we could roll on a few miles further today just as well as not. A fellow grows pretty tired, hanging around the same old camp so long."

"Oho! What's your hurry now? You've never been in sech a fidge before, as I recollect."

"The sooner we get to the gold country the better chance we'll have to find some gold left to dig up. And besides, I'm anxious to see the Rocky mountains."

"Oh! And so it's the mountains, is it? Do you know, when you first mentioned the matter, I was a right smart s'picious it might be that little Cooper gal that was tollin' you along. But, of course, if it's the mountains, they'll be waitin' for us when we git there. Safe thing to figger on that. Funny mistake I made, though, wasn't it?"

"What mistake?"

"Why, thinkin' it was that little black-eyed miss that was draggin' you west by the hair of the head. But since you up and tell me it's the gold and the mountains you're dyin' to see, I know I was mistaken."

Orlando blushed a little. "Why couldn't it be all three pulling me along at the same time?"

"It could, Lando boy. To be shore it could! Why didn't I have gumption enough to think of that?"

"But I'm serious about wanting to reach the gold country as soon as possible. Every day we've been lying here 1000 to 2000 people have passed us. And just about all of 'em are headed for Pike's Peak. This is only one route, too. There's another road leading up the Republican river and a third road up the Platte. And, of course, there may be still other routes by this time that we've never even heard tell of."

"That's so, Lando. That's all so. And every route is alive with people tryin' hard to reach the gold diggin's. Yes, it does shorely stand us in hand to git to the Rockies the first minute we can. If our meat seems dry enough to pack away and our hunters show up from their huntin' in time, we may try to cover a few miles this evenin'."

The hunters failed to return till late, and not till the following morning did the foot travelers find it convenient to break camp. But they were all well rested by this time and were up before daylight. Orlando milked Brindle while his partner was putting on some bread to bake. Each man broiled his own meat. Immediately after eating they began to pack up. When the sun rose from behind some hills it discovered the wheelbarrow and the handcart rolling briskly westward along the great, dusty trail.

The weather was now wonderfully fine, with cool broozes most of the time, and sunshine from a cloudless sky. After a few days' rest the footmen tramped faster than usual. Brindle in boots, as Orlando called her, seemed a little awkward at first, but she soon became accustomed to the bull hide. Numbers of those slow-moving ox wagons, which had passed the party of seven in their meat camp, were overtaken and left behind by this day's march. Orlando looked often for one particular wagon, which he would recognize among many others. But he was both disappointed and relieved not to discover it. His relief grew out of the reflection that, if his party overtook the Coopers now, they would pass them at once and leave them behind again.

Heretofore all the wagons the foot party had seen, except an occasional string returning from Santa Fe, were headed toward the mountains. But about the middle of this forenoon they met a long train moving eastward. Having seen them in the distance, and having noticed that they were not freight wagons, all had been speculating as to what this meant. And now they stopped the first driver.

"Hey, there! How comes this? You're p'inted in the wrong direction!" Esau called out, gaily.

"Am I? You won't say so three or four weeks from now. By that time you'll have your eyes open, all you fellers that's headed west," was the growled-out answer.

"Did you dig up all the gold you wanted?" inquired Orlando.

"Gold!" The man laughed half scornfully, half bitterly. "You can find as much gold right out here on these bald plains as you can in the Rocky mountains! I'll eat all the gold you'll dig up there!"

"If there's no gold in the Rockies, how happens it that so many people believe there is?" demanded Sanders. "Where do all those reports of rich gold discoveries come from?"

"Where do all lyin' reports come from? The devil knows—I don't! But they're lyin' reports, jest the same."

"How about all the thousands of other people that have rolled on out there? Air they disapp'inted too?" questioned Esau.

"Disapp'inted ain't no name for it! They're out-and-out disgusted, most of 'em."

"But they're not comin' back?"

"Ain't they? You jest wait a few hours and see how many more you'll meet! This whole Santy Fe trail, and every other road to the states, will soon be black with 'em. You'll hear 'em howlin' before you come in sight of 'em, and they'll elbow you out of the road."

After not a little more talk of the same discouraging kind the east-bound party drove on toward the states, and the handcart and the wheelbarrow rolled on toward the mountains. But it might have been noticed that the foot travelers did not step quite so briskly as before.

"Well, that's a little bit disheart'nin'!" Esau called to the handcarters, soon after the tail of the wagon train had been passed.

"You're right. The kind of talk I don't like to hear, that is," admitted Sanders.

"But we mustn't let ourselves be put out of heart by it," Orlando hastened so say. "For my part, I've tramped all the way out here to see the Rocky mountains and to dig for some gold. And I don't want to go back home without doing both. I've never yet set eyes on any real mountains and I want to see those ahead of us, whether there's any gold in 'em or not."

"Well, can't say that I've hoofed it all these hundreds of miles just to look at the scenery," answered the unsentimental Sanders. "I'm on my way to the mountains in the hope of lugging a pocketful or two of the yellow metal back home with me. Of course, though, the mountains will be interesting to look at while we're there."

Not long after this conversation the party came to where the trail crossed a good-sized creek, with running water in it. There were no buffaloes here now—live ones. But evidently many had been here recently. For the creek, which had a quicksand bottom, was crowded, both above and below the wagon crossing, with dead buffaloes. They had bogged in the quicksand and been sucked down till they were drowned.

To Orlando, at least, that was an unpleasant sight and he was glad when they had left it behind. Some timber grew along the creek, and brush and logs had been chopped and thrown in, till there was now a safe crossing for wagons where the road crossed.

The east-bound teamster's prediction that other people would be met rolling east soon proved true. During this day's march the party on foot met many wagons, all returning from the scene of the gold excitement. Every driver seemed to wear a scowling face, and many of them were cursing the country. A few admitted that there was probably a little gold in the mountains, but not enough, they insisted, to pay for the digging. They declared that most of the miners were not washing out gold dust enough to purchase the food they ate.

By the time they had talked with a dozen or more of such disappointed gold seekers the little west-bound party were feeling gloomy and discouraged. They tramped ahead doggedly, in silence. But certainly they did not move with the same enthusiasm with which they had started out in the morning. However, their courage revived somewhat after a time, and they began to joke a little. Now they accused one another, banteringly, of looking "down in the mouth," or of dragging their feet.

Late in the day they parted company with the main Santa Fe trail, which here crossed the Arkansas, and then wound away through many sand hills toward the southwest. The road followed by the gold seekers kept on up the Arkansas, and on the same side. The stream changed its course here, and they were now traveling north of west instead of south of west, as heretofore. Even this branch road was old and well-beaten, however. For it led to Bent's Fort, an Indian trading post established higher up the Arkansas, perhaps 30 years before.

For two or three days the seven men tramped on, meeting all the time great numbers of disappointed gold seekers. Late one afternoon they camped near a good-sized creek, with cottonwood timber along the banks. At some recent time a big green tree had been blown down, perhaps 200 yards above the road. And it was near that big tree trunk that the foot party stopped their wheelbarrow and handcart. Many other travelers had camped here, as was indicated by the camp fire ashes. Also the big cottonwood log was pretty well covered over with rudely carved names and dates—messages, perhaps, that passing travelers had left for later-coming friends to read.

On the far side of the creek, as the party had discovered, was another camp—a big camp with many wagons in it. From this side it was concealed by the timber along the stream. But immediately after supper, which was eaten before sunset, Orlando crossed the creek and went for a stroll through that other camp. He was half hoping to find somebody there.

And he was not disappointed. For at one edge of the camp he came upon the Cooper wagon, with the Cooper family near it. All of them gave him a warm welcome, except the one he was interested in. She greeted him shyly, but with a smile that meant she was at least pleased to see him again.

The family were on the point of sitting down to supper, and they urged him to stay and eat with them. He declined, and started off for a stroll about the camp, after promising to return later. Before he had gone far Cooper called to him that he had some more acquaintances close by and pointed out their wagon. The young fellow turned toward it, and was soon greeting Holloway and his partners.

From these men he learned that while all the wagons in this particular camp were journeying toward the mountains there was another camp close by, with three or four times as many wagons in it. And all the people with those wagons were returning from the Pike's Peak country.

CHAPTER 10.

A Gloomy Prospect.

After chatting with Wallace and Holloway for a few minutes, Orlando strolled back to his own camp, to let his fellow campers know whom he had found. A little later he and his whole party, leaving Frisk and Brindle to look after their camp by the log, crossed the creek for a visit with the other travelers, known and unknown.

Many of the people there, they soon found, were silent and gloomy. But others were very noisy. The gloomy persons were those traveling toward the mountains. The noisy ones were on their way back to the states. Darkness had settled down, and some of the disappointed gold seekers were in almost every camp. Most of them were bitterly denouncing the country they had turned their backs on, and some were cursing it loudly.

"Biggest fraud that ever was perpetrated on a passle of gullible, thick-skulled folks like us!" declared a stalwart traveler whom Orlando found at the Cooper campfire, on returning there. This man was one of the leaders of the east-bound caravan. "Fact is," he went on, in the same resentful tones, "all the gold ever washed out in them Rocky mountains was brung from Californy and planted thar."

"It was!" exclaimed Orlando, incredulously. "But how—how do you know that?"

"How do I know it, young chap? Why, ever'body out thar knows it by this time! Sharpest, dirtest humbug I ever heared tell uv!"

"But who would play such a trick? And what was their object?" Cooper wanted to know.

"Why, a bunch of fellers that think

(Continued on page thirteen.)

Bits of Fun FOR Everyone

Baby Alarm Clock.

One day young aunty was left in charge of the small apartment and the two children.

"I'm going into the kitchen to prepare baby's milk, Bobby," she said importantly; "you be sure to call me when he wakes up."

"Oh, you'll hear him for yourself," flung Bobby; "that kid turns himself on the minute he wakes up—he's his own alarm clock!"

A Fast Journey.

An Irishman was handling dynamite in a quarry. He let a stick drop, and the whole box went up, taking Mike with it. The quarry boss came around later and said to another Irishman:

"Where is Mike?"

"He's gone," replied Pat.

"When will he be back?" asked the boss.

"Well," replied Pat, "if he comes back as fast as he went, he'll be back yesterday."

New Memory System.

"How is it you have such a good memory, Norah?" her mistress inquired.

"Well, mum, I'll tell ye. Since me childhood never a lie have I told, and when ye don't have to be taxin' yer memory to be rememberin' what ye told this one or that, or how ye explained this or that, shure ye don't overwork it, an' it lasts ye, good as new, till ye die."—Christian Advocate.

Equal to Anything.

"You are not alarmed by the flapper?"

"No," said Mr. Grumpson.

"And you even tolerate jazz?"

"Yes. This country survived sidewhiskers, hoop-skirts, bustles and free silver. I don't propose to lose confidence in its recuperative powers this late in the day."—Birmingham Age-Herald.

The Witch.

Conductor—Pardon me, madam, but your girl seems more than 12.

Her Mother—Conductor! Would you take me to be the mother of a girl that age?

Conductor—Lady, don't tell me you're her grandmother!—Sydney Bulletin.

"The Mercury Went Down."

Little Girl (rushing into doctor's office)—Please, doctor, come at once to father. Mother's taken 'is temperature an' it's gone down.

Doctor—That's all right, my dear—that's splendid.

"'Tain't all right, it's gone right down. He's swallered it.—Punch.

FAMILY CIRCLE

ALICE BARLAND
EDITORIAL CONTRIBUTOR

Experience Letters

From Our Family Circle Women

Dear Mrs. Barland: I find the Circle letters so very interesting that I can not keep quiet any longer. I find so many helps in them every week. You must have a great store of patience, Mrs. Barland, to attend to the problems of so many women coming to you with their cares. We all have them to meet and overcome. It is so good of you to help us and you seem to understand.

I am wondering if the Family Circle women would like to write and tell what they are especially interested in, such as books, music, flowers or whatever it happens to be. I love music and the violin is my favorite instrument. It seems to me to be a thing of understanding and responds to one's feelings whether they be songs or tears. I love my violin as if it were human.

I love books, too. They are friends that are always welcome and never intrude. I love flowers, too, and often am impressed with the goodness of God, who gave us so many beautiful things. I wish you could see the beautiful bunch of roses that friend husband gave me last evening.

But I must not take any more space, only to say if any of the circle sisters care to write to me I shall be glad to answer.

Corvallis, Ore. MRS. DESSIE HOOVER.

Dear Mrs. Barland: Let me help you make butter. Perhaps I am as much of a crank on keeping things clean as your mother was, but she had the right idea. Instead of setting the butter away till the next day before working it over to pack or to be printed I let it stand only an hour or so, then print and wrap it and put it away in a cool place. I use a barrel churn and I wash the butter in the churn till there is no more milk in it, then I salt it and churn it 10 or 15 minutes, till it is formed into a solid, smooth mass, when I set it aside and let it rest for an hour or two, but not till the next day, as it gets so hard and is slow to work up again.

My butter used to be streaked before my neighbor taught me this way. If butter isn't salted too much it will keep better and be sweeter.

A drop of carbolic acid in little chicks' drinking water will stop white diarrhea.

A lump of blue stone the size of hen's egg dissolved in a quart of water will remove warts from cow's teats, applied twice a day. We use this with good success. SUBSCRIBER.

Washington.

Dear Mrs. Barland: I have been a reader of THE FAIMER for three years and always turn first to the Circle.

We live on a dry ranch, 20 miles from Boise, and I like it very much out here. We raise wheat and corn, but our wheat was a failure this year. We have 16 acres of the finest kind of corn.

I put in my time with my poultry; I have 180 turkeys and 400 chickens, mostly Barred Rocks, though I did hatch 100 White Leghorns for winter layers.

We have no children of our own, but keep my nephew with us during the summer months.

I have many recipes which are good and I will send some in to the paper. Yours truly, MRS. B. S.

Idaho.

Dear Mrs. Barland: I have been reading the Family Circle with interest for some time and thought I would write today.

I am a young wife of 22 and I have two little boys and they are a great pleasure to me. I have been married four years and four months; we live on a farm seven miles from town and we have 480 acres, from which we have taken but two loads of wheat since we were married. We have found it hard to make a living. We have nine head of horses and six head of cattle and we have to buy feed for them.

I came from North Carolina, where they have lots of rain and it is very discouraging out here where there is no rain and where we can not raise fruit and where we must pay so much for wheat we buy.

Can some one tell me what to do to get rid of worms that are in my house; they get in the flour and rolled oats and they are in the chopped oats in the grannery and are so thick in the feed that my husband can not feed it to the horses.

They even get into my clothes' closet, though I have cleaned it thoroughly and disinfected it. They are a small brown worm, with short hair all over them.

Montana. A NEW SISTER.

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Your Health

By Royal S. Copeland, M. D., F. A. C. S.

When a disease is due to a known germ and runs a definite course, we speak of it as an acute infectious disease. Examples of such diseases are the contagious diseases of childhood and pneumonia and influenza In the same category is rheumatic fever.



Dr. Copeland.

There are a lot of other factors which may have something to do with rheumatic fever. It may well be that exposure to cold and dampness lowers the resistance and leaves the body in condition to be attacked successfully by the germs of disease.

Unlike some doctors, I doubt if red meat and heridity have anything to do with the disease.

Excessive fatigue and lack of nourishing food may prepare the way. I have known several doctors who have worn themselves out during an epidemic and who have gone without proper food. The penalty they paid was rheumatic fever.

A sore throat may be the first symptom of trouble. Headache, lassitude and nosebleed may appear before oint pains are noticed.

Fever, definite pain in one or two joints and then redness, swelling and tenderness of several joints may come.

The victim of rheumatic fever should go to bed and keep absolutely quiet. Fresh air and frequent baths are desirable.

The sore joints are so painful that the weight of the bed clothes hurts. A support must be devised to keep the blankets from resting on the sore places.

Warm cotton wrapped about the joints and bound in place will promote the comfort. Immobilize the joint by firmly bandaging it.

Hot applications, rubbing the affected parts with oil of wintergreen, alcohol or chloroform liniment may help.

The family doctor will prescribe the remedies to control the disease, and relieve the pain.

Pickle Recipes

Dill pickles; to prepare commercially: Select cucumbers three to four inches long and pack them into a keg barrel, or large crock, about three or four inches deep. Over this place a handful each of peach and grape leaves, three or four horseradish leaves and a little piece of the root of the latter and a handful of dill, taking out the real coarse stems, using the rest just as it grows. Add another layer of the cucumbers, covering with leaves, etc., till the container is nearly full, having the last layer of the leaves and dill. Cover with a clean cloth and weight down with a heavy weight and cover with the following brine: With what is called the one-half granulated stock salt make a boiled brine strong enough to hold up an egg and float it easily. Allow this to cool, then mix with an equal amount of clear cold water, pour it over your pickles, tie a cloth carefully over the container to exclude dust and set the container out in the sun, the hotter the better.

In a few days the cucumbers will start to ferment and they will continue to do so till the pickles have turned clear in color and grown tender, when they will be ready for use, having made their own vinegar.

They can now be put away in the cellar, but they must be looked into from time to time and any mold or scum removed and the cloth under the weight must be taken off and washed or, better still, a new clean one put on. I have kept them till April without their being soft. If you do not have enough cucumbers to fill the container at one time you can add more as you pick them, covering with brine as at first. MRS. FRANK H. FINCH.

Leese, Wash.

Sweet pickles, easy to make: One gallon good vinegar, one cup sugar, one-half cup mustard, one-fourth ounce of saccharine, a little horseradish if desired, 5 cents' worth each of whole cloves, allspice, pepper and cinnamon.

Take the salt, sugar, mustard and enough of the vinegar to make a paste and put in a three-gallon jar, then add the rest of the vinegar and stir in the spices; wash cucumbers and put in the jar as you get them. All ingredients are used cold and if you do not wish the mustard add white mustard seed instead. MRS. WM. T.

Weiser, Idaho.

A splendid meat pickle: For 100 pounds of meat take nine pounds of salt, three pounds of brown sugar, one pint molasses, two ounces saltpeter, two ounces soda, six gallons of water, mix, heat and skim. When cold pour over the meat. Leave the hams in this brine four weeks and the side meat one week. When smoked a few days it will be almost as good as that we buy at markets. MRS. J. SCHWARTZ.

Oregon City, Ore., Route 2.

Dill pickles No. 2; said to keep till used: Use fresh, crisp cucumbers, any size or all sizes, wash and pack in a crock or keg. To each gallon of pickles add one pint of salt. Put on dill, all but the root, two inches thick and weight well, so they will make their own brine. When ready for use freshen to taste. I use two fresh waters and give them two days' soaking. Pour over weak vinegar, hot or cold; if hot is used they will be ready for use sooner.—(A French recipe.)

Just Folks

Noise is largely a smoke screen.

There is a poverty that commands.

Thinking and dreaming are different.

Occupation is the largest word in life.

The more you see, the less you believe.

Compromise and the United States congress should not mean identically the same thing.

To do the right thing as near as you can see it, regardless of consequences, may be the surest way of getting out of a difficult situation.

The ambition of higher education is to develop leadership—leadership in law, medicine and theology; leadership in finance and statecraft; leadership in applied science and in applied sociology; leadership in education itself.

There must be leadership among men, and it is better to have trained than untrained leadership.

Many are being trained for leadership who are not to the manner born. Others are being trained for leadership who will misuse that training to the prejudice of the common folk with whom they come into contact. Power tends to despotism. Unchecked leadership ranges from snobbishness to downright despotism and oppression. Unhallowed leadership robs the widow and the orphan. Avaricious leadership, for its own profit, arouses special prejudices on the part of the many.

It is as necessary for the people to control the leaders as for the leaders to control the people.

The motives that actuate home-loving and home-keeping hearts are as essential to the stability of government as the high wisdom of the schools. It is necessary for the politician to put his ear to the ground to hear the murmuring of the common folk, but it is just as essential that those murmurings and whisperings and mutterings shall be respected as the basis upon which all government is established. The unexpressed desires of the good father and the good mother in the helpful home may be interpreted into the highest political wisdom.

Justice is not finally defined in the books; justice is defined in the hearts of the common people.

Dissect joy and you take the laughter out of it; dissect patience and it becomes unbearable; dissect ambition and it loses its power.

The higher schools do a lot of dissecting.

Some years ago I was walking through the administration buildings of one of our state educational institutions. Before we reached the campus the man who was with me said, "You see the tin cans and the rubbish on the vacant lot we are passing; you see signs of unattractive homes; you see the weeds along the walk:. We are about to enter upon the campus where the students are taught to look upon landscape gardening; where beauty, as well as utility, is impressed upon the students. If this institution, with its campus, has no influence 20 rods away from its boundary, how can we expect single students coming from the institution to have influence upon communities?"

It is by the neighborly spirit that people are made better, not by precept merely. The development of the neighborly spirit wells the fountain of truest wisdom; from that neighborly spirit are to be derived the arts of true government.

Yet, who ever heard of the University of the Neighborly Spirit? E. A. S.

GOOD THINGS TO EAT.

Farm housewives last year either sold or put on their pantry shelves 1,335,000 containers of jelly, 9,500,000 cans of fruit and vegetables and 715,000 pounds of poultry and meat, canned according to methods demonstrated to them by extension agents.

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High Points in News of the Week

The outstnding developments in the railroad strike situation last week were, first, the apparent complete failure of the arbitration attempt of the five big railroad brotherhoods that are not on strike; second, the apparent determination of both the railroad executives and the striking shopmen to fight it out to a finish, and third, the preparation of a measure for quick passage by congress authorizing the president to take charge of and operate any or all railroad lines that were not able to render adequate service under private operation.

President Harding, while asking that such legislation be enacted, continued to express the belief that the successful operation of the roads would yet be brought about without the government actually taking charge and operating them.

The situation showed no improvement last week, notwithstanding the declaration of the railroad executives that they had increased the number of shop workers on western railroads by more than 30,000 during August, making a total of nearly 90,000 employed at the present time. These roads were employing approximately 160,000 men in these positions prior to the strike.

Leaders of the shopmen's organization declare that railroad equipment is rapidly becoming unserviceable, due to inadequate and inexperienced help in the shops, and their contention appears to be borne out by the facts that railroad accidents show an increase, that trains as a rule re running on irregular schedules, that inadequate cars are available in western territory for handling the crops and that additional trains are being cancelled from time to time.

The situation in the Pacific northwest with reference to handling the fruit crop, as well as the grain crop, is becoming alarming. It has been estimated that not more than 10 per cent of the refrigerator cars necessary for the adequate handling of the fruit crop of these states is available and that insufficient trains are being operated to utilize even the available supply efficiently. Fruit growers continue to bombard persons in authority with appeals that something be done to make the shipment of fruit possible.

Reports from many localities indicate that grain storage is already proving inadequate because of the inability to ship the usual amount.

* * *

Government operation of the hard coal mines is also a possibility with a measure being made for consideration by congress giving the president the power to operate them if he deems it wise. Legislation is also being considered giving the government power to control the distribution and price of coal with a view to the greatest possible efficiency in supplying the needs of industry and preventing profiteering on the part of coal mine owners and dealers. No definite action has yet been taken on President Harding's recommendation that a government coal distributing agency be created with capital sufficient to purchase and resell a large enough percentage of the available coal to guarantee price stability. Settlements in the soft coal fields have reached a point where many of the mines are able to resume operation with production of quantities of coal approaching normal output.

* * *

While considerable curtailment of industry has been in evidence, the most striking instance is that of the announcement by Henry Ford last week that on September 16 the Ford Motor company plants in Detroit and all the Ford assembling plants throughout the country would be closed because of inadequate coal supplies. Mr. Ford said that by that date all the company's reserves of fuel would be exhausted with only enough left to keep the furnaces and ovens in condition throughout the winter or until such time as adequate coal made reopening of the plants possible. The shutdown of these plants would lay off about 105,000 men, not including those indirectly affected, such as men working in other industries furnishing supplies to the Ford company.

* * *

Indications are that France will take individual action against Germany to insure receipts of adequate reparations payments. Germany's latest guarantees of payment have proved unsatisfactory to France, notwithstanding the urgent argument of England that they be accepted. France doubts the ability of the German government to deliver the specified amount of coal and timber products if the industrialists of Germany should refuse to do so. The action of France is a great disappointment to England, and is evidence of a wide split in the relationships of the two countries. If France clings to her present apparent determination her next step will be the occupation of the Ruhr coal producing region and the operation of the coal properties under her own military supervision. Such action may easily lead to international complications that in turn may easily prove the match setting off another war of greater or less dimensions. Russia, for example, is understood to look with great disfavor on further occupation of German territory by the French army.

* * *

Probably before this item reaches the readers the senate will have voted upon and in all probability have passed the soldier bonus bill, which is scheduled to be voted upon this week. As previously stated, the measure, if passed in the form approved by the house of representatives several months ago, will likely be vetoed by President Harding. The bill passed by the house contained no provision for raising the money with which to pay the bonus. President Harding has indicated that he can approve no bill without some provision for raising the funds, prefering the sales tax for this purpose. Whether or not the senate and house can pass the measure over his veto by the two-thirds majority remains a question to be answered.

* * *

The total national debt at the last report was a little under $23,000,000,000. It was almost $26,600,000,000 when it was at its peak. The reduction, aside from the sales of war materials and property, amounting to $1,400,000,000, has been accomplished by the application of about $1,000,000,000, which has been carried as a balance in the treasury, but became usable with lessened expenditures; the payment of about $200,000,000 by foreign governments on their accounts, and $1,000,000,000 by foreign governments on their accounts, and $1,000,000,000 derived from taxation, in three years, 1920-21-22.

Over $2,000,000,000 in Victory 4 3-4 per cent notes have been refunded at 4 1-2 and 4 1-4 per cent, and the policy has been to distribute these over a series of years from 1926. Treasury notes to the amount of $2,200,000,000, which make part of the refunding plan, to carry along debt that can not be repaid from current receipts, will be falling due in 1924, 1925 and 1926.

Farm Business and Markets Outlook

(Continued from page five.)

Prices for No. 1 American cheese on August 23 were: Chicago—Twins, 20@20 1-2c; single daisies, 20@20 1-2c; double daisies, 20c; Longhorns, 20@20 3-4c; young Americas, 20@20 1-2c.

Fruits and Vegetables.

Carlot shipments of potatoes up to August 21 totaled 58,594 cars, compared with 50,632 cars in the same period of 1921. The weekly movement is about 4000 cars in addition to large local supplies which are coming into consuming centers. New Jersey is the chief shipper at present, with Idaho, Minnesota, Colorado and New York following in order. Early Ohios No. 2s are quoted at 65 to 70 cents per 100 pounds f. o. b. Nebraska shipping points. Most Idaho shipments have been rolling unsold.

Apple shipments for the season up to August 21 were 6057 cars, compared with 3273 cars last year. New York, California and Michigan are the leading shippers. Prices are ranging from 40 cents to $1 a bushel in midwestern markets, compared with $2 to $3.50 at this time last year.

LATEST QUOTATIONS.

The Live Stock Market.

PORTLAND, Ore., Aug. 26.—Cattle—Choice steers, $7.75@8.25; fair to good steers, $7.25@7.75; fair to medium steers, $6.25@7.25; common to fair steers, $4.50@6.25; choice cows and heifers, $5.50@6; medium to good cows, heifers, $4.50@5; fair to medium cows, heifers, $3.75@4.25; common cows, $3@3.50; canners, $1.50@2.50; bulls, $3@4.50 choice dairy calves, $9.50@10; prime light calves, $9@9.50; medium to light calves, $8@9; heavy calves, $6@7; common heavy calves, $4@6.

Hogs—Prime light, $11.25@11.75; smooth heavy, 200 to 300 lbs., $10@11; smooth heavy, 300 lbs. up, $9@10; rough heavy, $7@8.50; fat pigs, $11@11.50; feeder pigs, $11@11.50; stags, subject to dockage, $6@8.50.

Sheep—East-of-mountain lambs, $10@11; choice valley lambs, $9.50@10.50; medium valley lambs, $8@9; common valley lambs, $6@8; cull lambs, $5@6; light yearlings, $7@8; heavy yearlings, $6@7; light wethers, $6@7; heavy wethers, $5@6; ewes, $2@5.

Spokane, Aug. 26.—Cattle—Prime steers, $6@7.50; good to choice steers, $5@6; medium to good steers, $4.50@5; fair to medium steers, $4@4.50; common to fair steers, $3@4; choice cows and heifers, $5@5.50; good to choice cows, heifers, $4@5; medium to good cows, heifers, $3.50@4; fair to medium cows, heifers, $2.50@3.50; canners, $1.50@2.50; bulls, $2.75@4.50; light veal calves, $7@8.50; heavy veal calves, $5@7.50; stockers and feeders, $3.50@5.

Hogs—Prime mixed, $10@11; medium, $9@10; heavies, $7@9; fat pigs, $9.44@10.50; stockers and feeders, $9@10.25.

Sheep—Prime lambs, $8@10; fair to medium, $7@8; yearlings, $7@8; wethers, $6.50@7.50; mutton ewes, $3@6.50; feeder lambs, $6@7.

The Grain Market.

PORTLAND, Ore., Aug. 26.—Cash wheat: Hard white, soft white, western white, $1.10; hard winter, northern spring, $1.08; western red, $1.05.

Grain futures—Wheat: Hard white, August, September, $1.10; October, $1.09; soft white, western white, August, $1.10; September, $1.09; October, $1.08; hard winter, northern spring, August, September, $1.08; October, $1.07; western red, August, $1.05; September, October, $1.04.

Oats—No. 2 white feed feed, August, $32; September, October, $31; No. 2 gray, August, $32; September, October, $31.

Barley—Brewing, August, September, October, $29; standard feed, August, $27.50; September, $27; October, $26.

Corn—No. 2 eastern yellow, shipment August, September, October, $28.50.

MINNEAPOLIS, Minn., Aug. 26.—Wheat—Cash, No. 1 northern, $1.04@1.10; September, $1.02⅛; December, $1.03; May, $1.07½.

Corn—No. 3 yellow, 56½@56¾c.

Oats—No. 3 white, 28¾@30¾c.

Barley—40@51c.

Rye—No. 2, 65⅛@65⅝c.

Flax—No. 1, $2.18½.

SEATTLE, Aug. 26.—Cash wheat: Hard white, $1.10; soft white, western white, hard red winter, soft red winter, northern spring, $1.08; western red, $1.06; Big Bend Bluestem, $1.17. Hay and grain, unchanged.

Hay and Feed Grain.

PORTLAND, Ore., Aug. 26.—Millfeed—Prices f. o. b. mill: Mill run, ton lots, $31; middlings, $43; rolled barley, $36@38; rolled oats, $44; scratch feed, $48 per ton.

Corn—White, $37; cracked, $39 per ton.

Hay—Buying price f. o. b. Portland: Alfalfa, $18@18.50 per ton; cheat, $15; oats and vetch, $17; clover, $18; valley timothy, $18; eastern Oregon timothy, $20@21.

SPOKANE, Aug. 26.—Wheat—Feed wheat, $40 per ton. Oats—$40 per ton; steam rolled, $42. Corn—$36 per ton; cracked corn, $38 ton. Barley—$42; steam rolled, $44. Bran and shorts—$32 per ton.

Alfalfa—$22 ton; timothy, $24 ton; mixed hay, $22 ton.

General Produce.

PORTLAND, Ore., Aug. 26.—Butter—Cubes, extras, 37@38c lb.; prints, parchment wrapped, box lots, $44c, cartons, 45c. Butterfat, 44c delivered; station buying price, A grade, 42c.

Eggs—Buying price: Current receipts, 24c per dozen; henneries, 27c per dozen. Jobbing prices: Case count, 24@25c; candled ranch, 27c; selects, 29c; association selects, 31c; association browns, 31c; association firsts, 29c; association pullets, 26c.

Cheese—Tillamook triplets, price to jobbers, f. o. b. Tillamook, 26c; Young Americas, 27c; longhorns, 27c pound.

Poultry—Hens, 13@22c lb.; springs, 21@23c; ducks, 15@22c; geese, nominal; turkeys, nominal.

Veal—Fancy, 16c per pound.

Pork—Fancy, 16c per pound.

SEATTLE, Aug. 26.—Eggs—Select local ranch, white shells, cases included, 30c per doz.; mixed colors, 28c per doz.; pullets, 19@20c per doz. Cases returned to shipper, 1c less.

Butterfat—F. o. b. Seattle: A grade, 45c per lb.; raw milk, $1.90 per cwt.

Poultry—Hens, 4½ lbs. and up, 22c per lb.; over 3½ lbs. and under 4½ lbs., 15c per lb.; 3 to 3½ lbs., 10c per lb.; 1922 broilers, 1 lb. and heavier, 20c per lb.; old roosters, 10c per lb.; geese, fat, live, 16c per lb.; do fancy dressed, 22c per lb.; ducks, 3 lbs. and heavier, live, 12c per lb.; spring ducklings, 3 lbs. and heavier, 18c lb.; turkeys, fat, dry picked, 12 to 15 lbs., 40c per lb.; do live, fat, 7 to 10 lbs., 35c per lb.; squabs, large, $3 per doz.; pigeons, $2; guineas, $9 per dozen.

SPOKANE, Aug. 26.—Poultry—Fat hens, 17c lb.; light hens, 24c lb.; roosters, 8c lb.; spring chickens, 18c lb.

Fresh ranch eggs—$6.50@8 case; no storage. Butterfat—40c a pound.

Why Did We Fail?

(Continued from page eight.)

fungous diseases and between the work of chewing insects and sucking insects.

Stick to the standard spray formulas.

Do not try to improve on standard formulas by mixing in other ingredients or by using the sprays stronger than recommended.

Arsenicals are stomach poisons and will not kill sap sucking insects.

Generally speaking, the older the insect the harder it is to kill.

Spray before the damage is done, but do not spray unless you know it is necessary.

Spray so as to cover every surface. Direct particular attention to the underside of the leaves.

Do not sacrifice efficiency by trying to economize on spray materials. Spraying is cheap insurance, but only when it is properly done.

Many sucking insects are greasy and hard to wet and often hide out of reach. If a few are missed so fast as to undo the effects of spraying.

High pressure creates a better mist and results in more thorough application of the spray.

Strain the spray materials to avoid clogging nozzles.

Mix Bordeaux in wooden buckets or barrels. It corrodes metal containers.

Do not depend on a spray pump too small for your work.

Wash out the pump and hose after each day's work. Some spray materials corrode metal and rot hose.

Improve Poultry Industry

(Continued from page two.)

year for the runways for the chicks.

Second, that the ground used one year should be turned under and cropped the following season with some kind of a cultivated crop.

Third, that land to be used for runways be allowed to lie idle for at least one year before being used again for chicks.

Fourth, that gravel should be used about the brooder to effect better drainage of the soil.

Fifth, that the movable brooder house is a useful part in a solution of the problem of sanitation of the runways.

The entire report was adopted unanimously.

A vote of thanks was issued to Dr. Nelson, W. A. Linklater, Mr. and Mrs. George Shoup and W. D. Buchanan for their effort in calling the meeting and assisting in putting the work over. A plan to call another convention to meet with the Washington Egg and Poultry association at their annual meeting next January was indorsed.

Approve Ford Offer

Following a visit last week from Chester H. Gray of the American Farm Bureau federation the Spokane county farm bureau adopted a resolution approving the Ford offer for the Muscle Shoals power and nitrate project in Alabama. The indorsement is based largely upon the fact that the state of Washington should use more fertilizer and upon the belief that the operation of the property as provided in the proposed contract would result in plentiful fertilizer at reasonable prices.

Mr. Gray is now touring the country in the interest of the bill introduced by Senator Ladd of North Dakota providing for the lease of the Muscle Shoals project to Mr. Ford. The American Farm Bureau federation is urging congress to adopt the measure.

Of such vital interest is this bill to the farmers of Washington that The Washington Farmer, in its next issue, will give a comprehensive discussion of the measure as presented by Mr. Gray, outlining the arguments of the farm bureau in favor of it.

JUDGES FOR NORTHWEST FRUIT.

Judges for the second annual Northwest Fruit exposition, to be held in the arena here from October 28 to November 5, inclusive, have been named as follows: Professor O. M. Morris, Washington State college, Pullman; J. D. Duke, Walla Walla; Professor W. S. Brown, Oregon Agricultural college, Corvallis; Sam Miller, Milton; Professor O. C. Vincent, University of Idaho, Moscow; M. L. Dean, Wenatchee, and J. L. Stahl of the western Washington experiment station, Puyallup.

FRUIT RATES REDUCED.

Rates on fresh fruit, apples and vegetables from Idaho, Washington, Montana, Oregon and Utah to Bisbee, Douglas and Nogales, Ariz., have been ordered reduced by the interstate commerce commission to the approximate levels of similar rates applying to El Pasco, Texas. The base rate fixed on apples moving from the northwest to the Arizona cities is $1.40 1-2 per hundredweight.

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Judge Griffiths says: "Rural prosperity is the bedrock of our national well being.

"The farmer's power, or the farm bloc, in congress is here to stay.

"Formerly farmers were, in general, political sheep led to slaughter. Today they feel and express in united action the effect of a generation of education from state agricultural schools and federal cooperation.

"This evolution is logical and right.

"By early training, natural sympathy and as farm owner, I may be relied upon to advocate the agricultural interests of our state and nation.

"Land redemption is a state and national duty and must have aid as a state and national policy."

Be sure to vote at the primaries.

Pike's Peak or Bust

(Continued from page ten.)

hey'll make their pile by havin' that God-forsaken rattlesnake patch up thar fill up with people, like Californy filled up. And they've made the thing go, too—you bet your breeches they have! They've got the people out thar by the tens of thousands a'ready, and thousands more air on every road. But that's all the good their shenanigan will do 'em, blast their tricky pickchers! Lots of the folks has already found out how they've been fooled, and are moseyin' back home. And what's left will soon find out. By winter time only fellers out thar will be them that cain't git away. And chances air they'll starve to death by spring if they don't freeze to death or eat their boots."

Long and loudly the stalwart visitor talked in the same strain. Indeed, he talked so long that Mrs. Cooper and Hazel left the campfire and disappeared back in the darkness. Orlando supposed they had gone off to bed and he was much disappointed. Not yet had he found an opportunity to say anything to the girl. Leaving the big man abusing the mountain country, Orlando wandered away to visit other campfires.

By those he heard the same kind of talk, and even worse. Or at least, there being no women present, it was more profanely expressed. Some of the disappointed gold seekers seemed to be in every camp of the west-bound travelers. And they were doing their utmost to keep anybody from going on. One man explained this by declaring his determination that others should not be fooled as he himself had been fooled.

Finally, much out of heart, Orlando started back to his own camp. But, while passing the Cooper wagon, he turned aside and stopped there. The big man was gone at last, but Cooper and his wife and Hazel were sitting by the fire. All appeared gloomy and much discouraged. They were silent now, but evidently they had been consulting, for Cooper said: "I'm mighty bad out of heart myself. And we're thinking a right smart about turning back. From what these folks tell us that have been there it's worse than useless to venture any further. And now's the best time to make the trip east, everybody says. By pushing through, we ought to reach the settled country before the worst heat of summer sets in. But if we wait till July or August, this whole region will be a desert, like you found the Smoky Hill road. In fact, after we leave the Arkansas we may have to travel a hundred miles without water, and without much grass, maybe. So it seems to me that, as we're on a wild-goose chase, anyhow, we'd better get back to the states while going's good."

"But couldn't we go back in the fall, after the weather turns cool, pappy? That is, if we have to go back," suggested Hazel.

"Yes. It seems to me that would be far better time," Orlando hastened to say.

"No, that wouldn't do at all," the man answered, slowly, thoughtfully. "It takes a long while for an ox team to cross these plains. And winter sets in almost immediately after the hot, dry weather ends. It must be something frightful to cross this high, bald region in cold weather. We've seen how even the spring winds can blow out here. The winter winds must sweep the whole country furiously. And the only thing we'd have to burn would be those tarnation buffalo chips."

"Yes. And they'd be a little worse than nothing in cold weather," his wife remarked.

"But why couldn't you stay at the mountains till spring, and then start back to the states? That is, if you didn't like the country," urged Orlando. "Worlds of tim-

(Continued on the following page.)

Latest High Class Patterns for the Home

Please order the patterns you desire at least two or three weeks before you wish to use them. Desiring to obtain the latest high-class patterns for its readers, THE FARMER has made arrangements to have them sent direct from the east, and under present mailing conditions it takes about that time for them to reach you.



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3824. Ladies' negligee. Cut in six sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. A 38-inch size requires 3 1-2 yards of 36-inch material. Price 10 cents.

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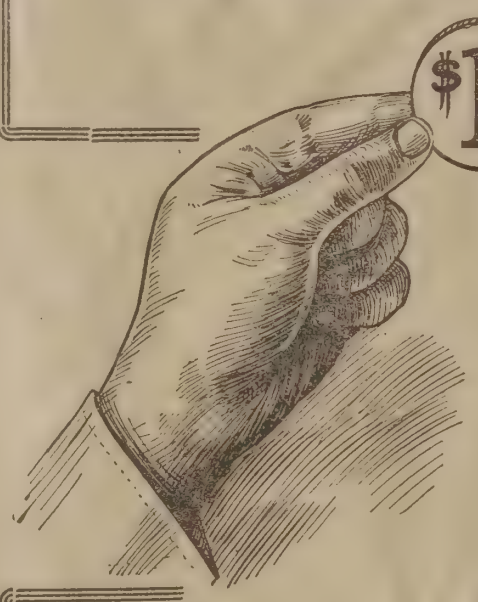
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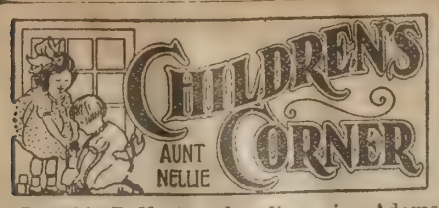
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If your subscription is already paid in advance it will be extended from the date to which it is paid. Aug. 31, 1922.



Donald DeHart, who lives in Adams county, Washington, writes, "I would like to join the Cousin's Corner. I am nine years old. My birthday is September 2. I have six pets, two dogs, one cat and three pigeons.

Gladys Stone says it is so hot in Whitman county that she had to lie down a while before she finished writing to us. Gladys' birthday is September 12, 1922. She will be 11 years old.

Watermelons, muskmelons, beans, corn, lettuce and peas are the things that James Aubrey Randolph planted in his garden this year. His pets are four rabbits and a little White Leghorn chicken. Almost every afternoon James goes swimming in the creek. This cousin's home is in Spokane county, Washington. (If, when you send your picture, you request that it be returned we shall try to see that you get it.—Aunt Nellie.)

Five-year-old Raymond Larson lives in Douglas county, Washington. His father has 800 acres of wheat in this year. Raymond says they have a great many horses, cattle and pigs, but not very many chickens. When is your birthday, Raymond?

Margaret Hunter writes from Spokane county, Washington, that she has a bunny named Polly, a cat, three calves, two horses, named Frank and Snuke, and a whole lot more. Margaret is in the sixth grade; she is 11 years old, and her birthday is April 21.

In Lewis county, Washington, they have every kind of bird and animal we've ever hear of there being around here. Esther Simila sent us the names of all of them. She has a black and white cat. Her cousin is visiting her now. Don't all the cousins love to be out in the woods in the summertime!

Esther Simila of Lewis county, Washington, writes to the Corner. Esther's school starts September 5 and she says she is glad that it is going to. It rained all day where Esther lives the day she wrote to us. Here is a joke: A merchant came to call on a farmer and the farmer's little son answered his knock at the door. "Dad's down to the pig pen doctoring a sick shoat," said the boy. The merchant started toward the pig pen, but was halted by the boy, who called after him: "Pa's the one with the hat on." (Many thanks for the sweet peas, Esther. They were very pretty.—Aunt Nellie.)

Birthday Greetings

THURSDAY, August 31—Elna Early, 9 years old; Myrtle Matre, 10; Emma Rennick, 9; Carl Sieveke, 9; Inez Smelcer; Patricia Stuhr, 7; Edith Unwin, 11; Zetha Faye Wheeler, 10; Laila Paavola, 8.

FRIDAY, September 1—Matilda Arnold, 11 years old; Evelyn Hilding, 10; Emma Jeske, 11; Jenny Johnson, 10; Annie Schilbeff, 10.

SATURDAY, September 2—Ethel Boawn, 11 years old; Gudveig Hammervold, 10; Peggie Morrison, 8; Donald De Hart, 10.

SUNDAY, September 3—Thelma Lough, 11 years old; Anna Smith; Raymond Smith, 10; Genevieve Gooby, 11.

MONDAY, September 4—Ruth M. Carlin, 11 years old.

TUESDAY, September 5—Alvin Healy, 11 years old; Alice Hutsell, 11; Mildred Naught, 11.

WEDNESDAY, September 6—Beulah Arrand, 11 years old; Thelma Baker, 10; Wilma Grace Cross, 9.

LETTERS WELCOMED BY AUNT NELLIE.

Among recent letters received by Aunt Nellie are those from cousins whose names follow. A few of these will be published each week in the regular edition of THE FARMER and others will appear from time to time in The Junior Farmer:

Frances Flanik, Lena Bailey, George Knapp, Kirstine Hansen, Paul Gribbin, Grace Middleton, Dorothy Peterson, Roberta Carter, Nina Hoikka, Lillie Puffert, Ethel Boawn, Wanda Scoggin, Gladys McFall, Iva Easterling, Peter E. Kragt, James Patterson, Hilda Patterson, Viola Waggoner, Ethel Stiltner, Dorothy Lowe.

BEDTIME STORIES

By THORNTON W. BURGESS.

WHO'S A COWARD?

Unc' Billy Possum had made a lot of friends in the Green Forest and on the Green Meadows. It was getting so that most of his neighbors smiled whenever they saw the rough-coated little fellow coming their way. This was partly because he had learned politeness in his old home way down in "ol' Virginny" and partly because he attended to his own affairs. He never interferred with other people. Sammy Jay, wh ois quite a danday, used to make fun of Unc' Billy because he never brushed his hair or kept his coat smooth, and Reddy Fox always sneered at Unc Billy if he had a chance. But Reddy Fox hasn't any friends, anyway, so this really didn't matter. Nobody paid any attention to him until one day he said that Unc' Billy was a coward.

Jimmy Skunk heard him and Jimmy walked right up in front of Reddy, for though Reddy is much bigger, Jimmy isn't the least bit afraid of him.

"What do you know about it?" demanded Jimmy.

"I—I—well, what does he hide so all day for?" asked Reddy weakly.

"Because he sleeps days and hunts nights," replied Jimmy. Then he shook his fist in Reddy's face. "If he was half as much a coward as you are, Reddy Fox, I wouldn't have him for a partner."

"Pooh!" said Reddy. "It's easy enough for you to say that he isn't a coward, but he's got to prove it before I'll believe it."



"Who's a coward?" demanded Unc' Billy.

Unc' Billy Possum grinning down at him.

"He probably doesn't care whether you believe it or not," said a voice from a little way up the hill. Reddy looked up to see Peter Rabbit grinning at him. Now Reddy is quick-tempered and he sprang at Peter, but Peter wasn't there. He had ducked into a hole between the roots of a tree and the entrance was too small for Reddy to get in.

Reddy Fox is fine to see;
Bright his coat is as can be!
But his heart is black, I fear,
So watch out when Reddy's near.

Peter certainly was saucy, and it made Reddy all the madder to have Jimmy Skunk laugh. But when he heard a cracked little "Tee-he-he" and looked up to see Reddy was so mad that he fairly danced up and down.

"Come on down here, you coward!" he shouted, shaking his fist at Unc' Billy.

"Who's a coward?" demanded Unc' Billy.

"You are!" shouted Reddy.

Just then there was the patter of feet up the hill, and all looked up to see Bowser the Hound coming in that direction. Unc' Billy grinned.

"Now, sah, we'll see who's the coward. Yo'alls can run faster than Ah can, but Ah'm goin' to come down out of this tree right smart, and we'll see who dares wait longest for Bowser the Hound," and suiting the action to the word Unc' Billy dropped out of the tree right beside Reddy Fox.

(Copyrighted by T. W. Burgess.)

Pike's Peak or Bust

(Contniued from the preceding page.)

ber out there, I'm told, for fuel or anything else."

Cooper answered: "Yes, no end of timber up in the mountains, I guess, if we could get it out. But what could we live on? Our supply of provisions would be used up before spring, and we'd stand a good chance to starve. They say that's a desert country up there most of the year. There'd be little or no grass for our stock. And when winter set in they'd die of starvation. You men with your wheelbarrow and your pushcart might be able in the spring to work your way back to God's country. But what could I do, with this big wagon of mine and no oxen to pull it?"

Much more talk of the same kind the young visitor listened to. Indeed, he heard little else. It was late when he returned, silent and gloomy, to his own camp.

There he found Esau and the five handcarters, all sitting by their fire. They, too, had been listening to the same kind of discouraging talk, and all were feeling and showing the effects of it.

"Looks to me like we've been sold—mighty bad sold, every mother's son of us," a handcarter was grumbling.

"Not much doubt of that, I guess," Sanders admitted wearily. "And to me it looks now like we'd better swing round and strike back for home while we can."

No conclusion had been reached when the party of seven crawled into their beds.

When morning dawned, the situation looked brighter to Orlando. But not so to the others. All the handcarters went aside and held a consultation.

When they had returned, Sanders expressed their decision: "Well, boys, it's the back track for us. We've started out on a fool's errand, it seems, and the sooner we acknowledge the corn and get headed for home the better for all of us. It's not what I like to do—not by a jugful. But there are times when a fellow can't do what he wants to and this seems to be one of the times. What you boys got in mind to do?"

"Seems to me like we'd jest as well turn back, too," Esau answered. But he looked worried. "What's yo'r notion, Lando?"

"The fact is, I don't want to go back at all. I started out to see the Rocky mountains, and I'd like to see 'em before I return home. But of course!——"

"What's a few rough, bare, rocky old hills?" exclaimed a handcarter. "They're mighty good for a feller to leave his pore bones on, and that's all. Better save yourselves while you can, you two fellows, and save yourselves the rest of a long, hard trip."

But Sanders spoke: "You two boys decide the matter for yourselves. I'm not going to try to persuade you, one way or the other. If you make up your minds to turn back, though, let's travel back together, I say. We've all got along swimmingly coming, and I'm sure we will going home."

"Yes. If me and Lando strikes back at all we want to go as you handcarters goes," Esau assured him. "For my part, I'm thinkin' we'd jest as well p'int our noses t'wards sun up. But I'm goin' to leave the whole matter to Lando. If he says roll straight ahead, straight ahead we'll roll, even if we have to mosey on by our two lonesome selves. And if he says turn back, why, we'll turn back. But let's make up our minds here and now, and once for all. What says you, Lando boy? Blurt it out quick!"

"If I said what I want to say it would be to drive ahead. But—"

"If you keep on west you'll have only the two of you for comp'ny," a handcarter, who had just come up the creek bank, now told him. "I walked out to where I could see. Nearly 60 wagons in that string that was headed t'wards the mountains last night. But they all seem to be travelin' t'other way this mornin'."

Orlando stood gazing at that noisy, rumbling train. Wagon after wagon toiled up the creek bank, then crawled away eastward across the plain. Already a long string of them was stretching out in that direction. Presently he caught sight of a three-yoke team and a wagon he had been watching for, but in his heart had hoped not to see. It was Cooper's.

Now he spoke: "As I said, I don't want to back track at all. I hate to think of such a thing. But, as matters stand now, and as everybody else seems to be going back, I—I guess we might as well—go with the crowd." The words seemed almost to choke him, and he turned away.

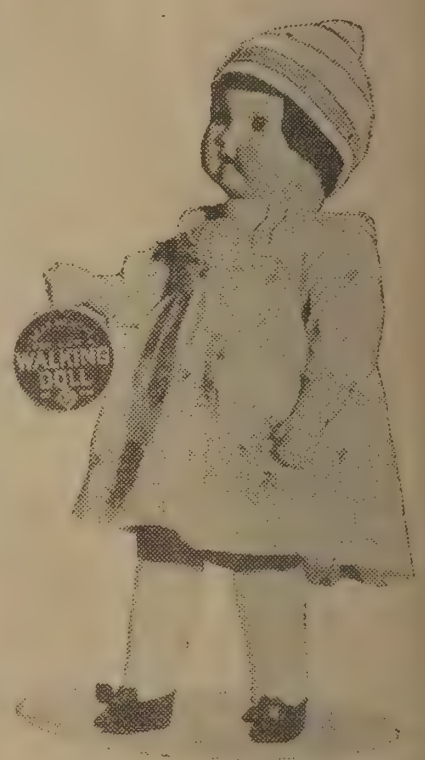
"All right, boys!" sang out Esau. "That settlers the matters, and we're with you! It's back, back, back to old Illinois for us!"

Their camp things were soon packed away. And a few minutes later the handcart, the brindled cow and the wheelbarrow were all following the dusty trail behind the wagon train, and all crawling along toward the rising sun and civilization.

A gloomy little party of trail trampers it was, the party that trudged along behind that far-strung-out wagon train during the forenoon of the day they turned their

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The Washington Farmer

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steps eastward. Seldom did any of them speak, and then only a few words. While journeying toward Pike's Peak, they had overtaken and passed every big wagon train they had seen. Now those wagons ahead moved fully as fast as any of the seven men cared to march.

"Well, boys, no use to look so blue about it!" Sanders finally called out, in what was intended to be jovial tones. He was between the cart's shafts. "We've had a bully good trip—no denying that! Of course we all hoped we'd be carrying back some of the yellow metal when we traveled home. But that wasn't to be; that's never to be. It's something, though, to be able to say that we've crossed the great plains, and seen a million head of buffaloes, and killed a few—"

"But we haven't crossed the plains! We never even came in sight of the far edge!" Orlando spoke up, half resentfully.

"Well, no. We can't say we've crossed all of 'em. Several hundred miles in fact," Sanders answered. "We've seen the Santa Fe trail and the big wagon trains that travel it; seen 'em and traveled with 'em and camped with 'em. Yes, we've seen enough and learnt enough to be well paid for leaving home."

In spite of his bitter disappointment over having to turn back without seeing the Rocky mountains, Orlando found himself feeling rather cheerful. Indeed, though he talked as little as any of them he was doubtless the most cheerful member of his party.

The reason was not far to seek. He knew just where to locate it. The ninth wagon in that wagon train ahead, counting from the rear end, was Cooper's. And in that wagon's capacious depths rode, he was well aware, a certain shy little maid who already largely monopolized his interest. Only the fact that the Coopers were now traveling eastward had induced him to turn his back on the Pike's Peak country and its gold diggings.

Not till the afternoon drive did he find an opportunity to get near the interesting part of the train. Then, by gradually pushing Brindle ahead of the wheelbarrow and the handcart, he finally brought her up alongside of Cooper's wagon. Seeing the head of the family tramping by his three-yoke team the young man had in mind to drive on and talk to him. But now the wagon cover was raised at the near side, and Hazel peeped shyly out from under it. She nodded and smiled, but waited for Orlando to speak. And she had not long to wait.

"Are you glad to be on your way back to Missouri?" he inquired, after greeting her.

"Indeed I'm not! Indeed I'm not, Mr. Medford! I think it's a shame to tear up and leave home for a trip to the Rocky mountains; and then, just because a lot of somebodies we never heard tell of have soured on the country out there, we have to turn round and go traipsing back! I don't like it at all!"

Orlando was delighted. "No more do I!" he assured her, with much emphasis. "When we were setting out from home I told everybody that I was off to dig for gold, but that if I got to cross the great plains and view the mountains I wouldn't complain if I didn't make more than ordinary wages. And here, now, just look at what I'm doing! I haven't glimpsed either a grain of gold dust or the tiptop of Pike's Peak, or any other peak! And I'm tramping back to Illinois without actually crossing the plains. Makes me feel like a gump, such as this does!"

"Then why on earth are you going back?" the girl exclaimed, in great surprise. "I wouldn't if I didn't have to. But I can't travel on. A girl can't travel on by herself. You could, though, it seems to me. But I suppose your partner, Mr. Haggerty, insisted upon turning back."

"No. He rather thought it would be better, but he left the whole matter to me to decide."

"He did! Then I can't understand why you said turn back. I wouldn't if I'd been a man and had such a chance. Indeed I wouldn't! But maybe you were afraid of starving or freezing to death out there."

"Not for a minute! I never once doubted that we could take care of ourselves in the mountains, Esau and I. There would be game a plenty and—"

"Then—then it puzzles me why you didn't decide to drive on."

"But—but"—the young man was blushing now—"but you folks had turned back. You were not driving on," he blurted out, desperately.

Now it was the girl's turn to blush. And she did it prettily, her eyes going down at the same time. At last she understood that this young trail-tramper had turned his back on the gold diggings just because she was traveling east. And it was easy to see that she was well pleased.

When at length, after an embarrassing silence, she spoke again, it was to say: "Seems to me we all ought to wheel round and roll on toward the mountains, even yet."

(To be continued.)

MAKE TEN A. R. RECORDS.

During the year 1921 10 A. R. records were made by Guernseys at Chicona farm, owned by A. L. Gile of Chinook, which averaged 11,192.95 pounds of milk and 558.35 pounds of fat. Six 2-year-old records averaged 10,721.03 pounds of milk and 529.98 pounds of fat and two 4-year-old an dtwo mature records averaged 600.89 pounds of fat. Beauty of Chicona, with a record of 742.69 pounds, became second cow in class BB and state champion in class B. Derinna of Chicona, with a record of 630.73 pounds, became state champion senior 2-year-old, and Hermosa of Chicona, with 607.75 pounds, became state champion in class AA. The first four daughters of Langwater Traveler to complete A. R. work averaged 551.73 pounds of fat as 2-year-olds, and two of these records were made in double letter classes. All but one of the 10 A. R. records mentioned were made by Guernseys bred at Chicona farm.

A Hampshire County

By C. M. HUBBARD, W. S. C.

Kittitas county is admirably adapted to the raising of high-class live stock, be it horses, cattle, sheep or swine. This is so not only from the standpoint of its splendid pastures, hay and grain crops, but also from the standpoint of cool summers, which are always ideal for the proper development of young stock. Consequently, as time passes, this valley becomes more prominent as one of the potential breeding grounds for registered live stock.

The Hampshire sheep breeders of the Kittitas valley are working in harmony for the interests of their breed and their second annual tour recently, the only one of its kind in the northwest, was a complete success. It was well attended and the interest ran high for a more growthy lot of lambs of better breed type would be hard to find. An exceptionally growthy lot of 60 range ram lambs are consigned to the second annual Hampshire ram sale to be held at Ellensburg September 2, among them several splendid stud ram lambs.

The tour started at Roland Newman's, a club member, at Thorp. Roland showed the visitors triplets, two rams and a ewe, half brothers and sister to last year's Washington and Oregon state fairs champion ram lamb raised on his place. The two lambs are typy and weigh 160 pounds each. They promise to look mighty good at the Yakima fair. The next stop was at W. L. Coburn's, whose lambs were typy. Verbal Hall, last year's winning sheep club member, showed the crowd a splendid growthy ewe lamb.

S. P. Wippel, the veteran breeder of the valley, swears by the Hampshire. The visitors were especially pleased with the size and development of his most forward lambs. Harold Wippel, his son, has developed the largest ram lamb in the valley and he looks good for the state fair. Paul Wippel, another club member, has some especially typy ewe lambs out of the Blastock ewes.

Ernest Wilson's flock was next on the itinerary. Not only is Ernest interested in Hampshires and developing good ones, but Mrs. Wilson also can tell a good one and her interest in the flock is second only to her husband's. The lambs here were typy and husky, with several of the good ones rapidly rounding into state fair caliber. Wilson has around 20 ewes imported by Blastock in his flock.

Raymond Jeffries showed the crowd three even sets of twins from his three club ewes, one of the ewe lambs being the most forward of any in the valley, with a back that would do credit to a yearling.

The last stop of the day was at Carrol Robinson's where another good ewe lamb was brought out. This is Carrol's first year in club work.

Each year the Kittitas valley Hampshire breeders and club members take a nice bunch of lambs to the state fair. Last year their typy, growthy lambs were the feature of the sheep show. Competition will be still keener this year and they will have to show against expert fitters of life-time experience, but wherever the ribbons are placed they will not need to be ashamed of their showing. Several near 200-pound lambs will again be in evidence.

Ernest Wilson was again elected president and S. P. Wippel secretary-treasurer of the local Hampshire association. The state college extension service is cooperating with the breeders and club members in every possible way in order to build up a strong Hampshire interest in this valley so admirably adapted to the work. The breeders, club members and County Agent W. L. Davis are to be congratulated on the rapid progress being made.

THE VALUE OF PUREBREDS.

W. J. Orton of Renton, King county, in the spring of 1921 purchased five Guernsey heifers sired by Yorick of the Willows. When these heifers freshened they produced an average of 8277 pounds of milk a year and 393.8 pounds of fat. The entire herd averaged 317.2 pounds of fat. At this rate a gain of from $30 to $45 a month was made on each cow, according to the price of butterfat, over a grade herd.

The price of these five heifers was approximately $100 more than the value of the average cow in the herd. Mr. Orton pointed out that it should take but two or three years for such cows to pay for themselves by their increased production.



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Registered Cotswold Sheep and Angora Goats
Due to failing health I am offering my entire flock of fine Cotswold sheep and Angora goats, including the noted buck, Cicero, No. 33350, that has such a heavy shearing record and is sire of all my younger stock. Write for prices on lots.
Sheep for Sale
16 purebred and registered rams, one and two year olds.
30 registered ewes, one to five year olds, inclusive.
10 registered ewe lambs.
Registered Goats for Sale
Bucks—30, one to three years old, inclusive; 20 March kids, sired by Cicero.
Does—50, one to five years old, inclusive; about 15 doe kids.
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Finest Quality Imported Prince Edward Island Stock.

All Pedigreed and Registered. Fully Guaranteed.
Full Particulars free. Write today.
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Highland Grove Holsteins
Choice bulls and heifers for sale of the blood lines that made Highland Grove Farm famous as the home of world and state records and superb type. Our cattle have sold for the biggest prices ever paid in the west. Enjoy our prosperity with us by investing in these young animals for your foundation stock. Terms to suit purchasers, 6 per cent interest.
Highland Grove Farm
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Holstein Bulls sired by son of world record cow, from dams sired by brother to Segis Pietertje Prospect. Prices low.
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Herd headed by Mina's Lord 89413, by Royal Edward 324529. This bull is a three-year-old, and stood first at the Boise state fair, 1921. Also have some young cows bred to this bull for sale. Write for terms.
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By the champion sire of the northwest circuit, closely related to the world champion Red Polled cow.
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Our herd has been in the winning wherever shown.
Senior herd sire, Francis May King (A. R.) he by Langwater Hambro (A. R.)
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Some splendid bull calves for sale of above breeding.
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1 bull calf, 2 months old, by a son of St. Mawes Lad, and out of a register of merit dam.
1 heifer calf, 2 months old. 1 heifer calf 3 months old. All St. Mawes breeding.
SHADILANE FARM, North Powder, Ore.
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MAPLE RIDGE JERSEY FARM
offers strongly bred St. Mawes bull from R. of M. cow, sired by St. Mawes Susy Olga's Lad, whose three nearest dams average 841 lbs. fat. Priced right.
J. C. BROWN & SONS. Shedd, Ore.

Fourth Gold Medal Jersey Bull
now in use in my herd. No other herd ever had so many. Young stock for sale.
ED CARY, Carlton, Ore.

Jerseys 797 lbs. of fat, the highest record 3-year-old tested in 1920 is dam of a high class young bull we have to offer.
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Heart o' the Valley Ranch
NOW OFFERING
BRED FALL GILTS FOR SEPTEMBER AND OCTOBER FARROW.
Sired by Model Defender, grand champion boar Pacific coast, 1921.
CHEROKEE LAD AND GEN. TIPTON BREEDING.
HAYS & HARTER
Grants Pass, Ore.

River Banks Better Berkshires
Won four grand championships, nine championships and twenty-eight first prizes at five leading fairs last fall. Let us quote you on spring pigs.
RIVER BANKS FARMS, Grants Pass, Ore.
CLYDE E. NILES, MGR.

Riverby Orchard Berkshires
Oldest established Berkshire herd in the northwest. Young pigs and bred sows for sale. Address
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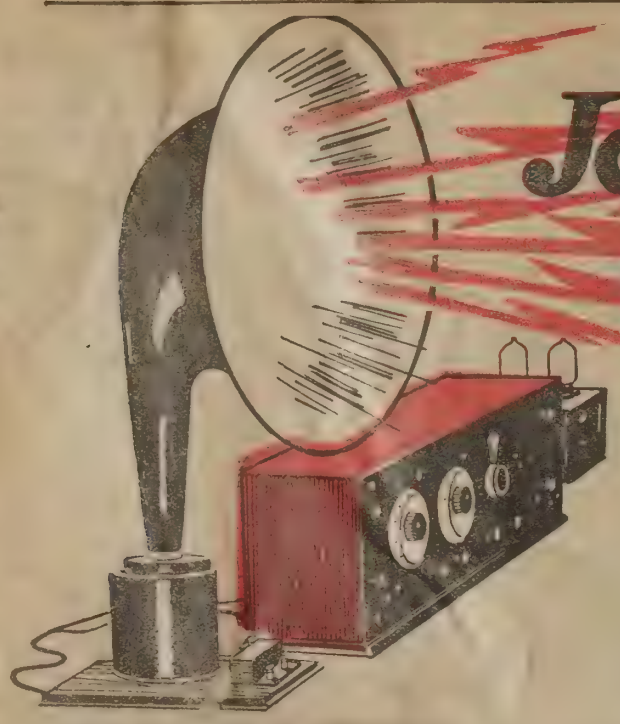
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Chester White Swine
Herd headed by Oregon Buster, grand champion Oregon State Fair and winter circuit, 1921. Fall gilts now offered.
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BIG TYPE POLANDS—Offering a nice lot of weaning pigs, either sex, at reasonable prices. We solicit club orders. Write us for information on gilts bred for Sept. farrow. Satisfaction guaranteed.
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Jones' broadcasting economy bargains

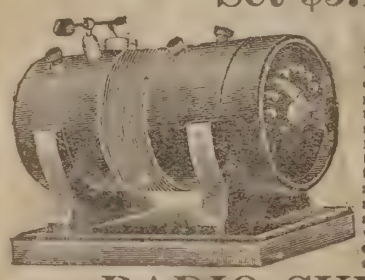
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Complete stocks of new fall goods await your order here. Our big new building is full of merchandise bargains to supply your every need. Special purchases, quantity buying and vigilant watching of market trends enable us to offer more value than ever before.

For over forty years Jones Cash Store has held a foremost place among farmers of the northwest as a store of economy. Clothing, groceries, shoes, farm implements and supplies, everything for farm or home, are listed in our new fall catalogue No. 320-23, at prices that are impossible of duplication. Send for your copy now. Use the coupon or drop a postal—have this dictionary of low prices on hand for all your needs.

Below are shown a few items selected from our thousands for special fall use. Radio, carrier of outside life to farm homes, should be in everybody's house. Jones', with characteristic leadership, offers wonderful bargains in all kinds of Radio receiving sets. Some are listed on the left—a hint of our great variety!

Jones Little Wonder Radio Set $5.15



This little set, although simple, is a wonder, and will do everything that any other crystal set will do, no matter how large. Has tuning coil operated by switch lever on top and finely finished crystal detector. Requires no battery—simply connect your antenna and ground wire and hook on your phones and it will operate anywhere from 16 to 20 miles, depending on climatic conditions.

RADIO SUPPLIES

Antenna Wire

No. 14 bare copper antenna wire. Per 100 feet..... 48c

Vacuum Tubes

Radiotron Detector Tubes..... $5.00
Radiotron Amplifying Tubes..... $6.45

Murdock Head Phones

Genuine 2000-ohm Murdock double head phone set, price..... $4.95

Single Head Phones

1000-ohm single head phone set, price..... $2.95

RADIO "B" BATTERIES

The best "B" batteries on the market. Fresh, new stock.

22½-volt, 6 taps, 5 positive, one negative, size 5x2½x3; 15 cells, price..... $1.80

45-volt, 11 taps, 10 positive, one negative, size 10x3½x3 inches 30 cells. Price..... $3.95

Magna Vox Loud Speaker

Radio Magnavox is a sound magnifier made on the electro-dynamic principle. Attached to a two-stage amplification set, it reproduces sound which may be heard a considerable distance. Price..... $42.50

Binding Posts

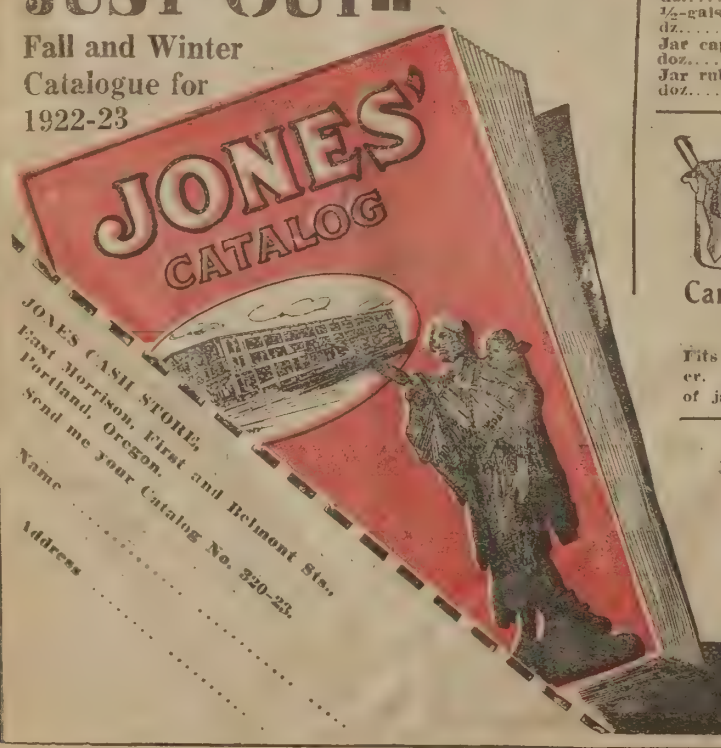
Nickel plated brass with machine screw and one nut. Per dozen..... 30c

Contact Points

Metal top, perforated, nickel plated binding posts. Price, per dozen..... 50c

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Fall and Winter Catalogue for 1922-23



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Portland, Oregon.
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Address .....



Our Whitehouse Flour

Made from hard wheat.

Per 49-lb. sack..... $1.90
Per bbl. 4 sacks..... $7.30

SUGAR

Pure Cane Sugar

100-Pound Sack . . . $7.20

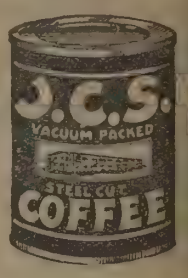
"J. C. S." Coffee

Vacuum Pack Steel Cut Coffee.

3-lb. can..... $1.15
5-lb. can..... $1.85

"M. J. B." Coffee

5-lb. can..... $1.85





Crisco

6-lb. can..... 78c
9-lb. can..... $1.99



Crystal White

6 bars for..... 25c



Jones Leader

6 bars for..... 25c

COCOA

Pure cocoa at a bargain price. Per pound..... 9c

Cround Sweet CHOCOLATE

Per pound..... 18c



Beans

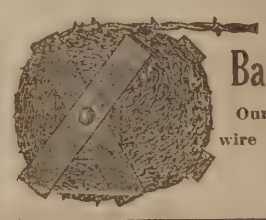
Small white beans, 5 pounds..... 45c

Honey

Pure honey in quart jars. Quart jar..... 55c

Rice

Broken head rice. 5 pounds..... 30c



80-Rod

Barbed Wire

Our special barbed wire on 80-rod spools

$3.10



Men's Work Shirts

Our "Hardwear" heavy blue cheviot work shirt. Made for extra hard wear and service. Sizes 14½ to 17. Price..... 98c



Roofing "Jocasto Brand"

Sanded surface, per roll 108 square feet.

$1.75



6-cup size

ALUMINUM PERCOLATOR

Highly polished alumnium. An attractive design, highly polished aluminum percolator, ebonized handle and aluminum container for coffee grounds. Guaranteed to give perfect satisfaction $3.05

Mason Fruit Jars

Pints, dz..... 78c
Quarts, dz..... 95c
½-gals., dz..... $1.35
Jar caps, doz..... 26c
Jar rubbers, doz..... 5c



Canning Racks 53c Each

Fits any wash boiler. Fits all sizes of jars and glasses.

Aluminum Ware Sauce Pans

With Cover.

4-quart actual capacity..... $1.20
6-quart actual capacity..... $1.50



Aluminum Preserving Kettle

3 quarts... 85c
4 quarts... $1.00

Iron Waffle Iron

Ball joint, ring socket, two-piece style. Price..... $1.85

Rubber Boots

Black Short Gum Boots. Good heavy weight. Big value. Size 6 to 11. Pair... $3.35

All Red Pure Gum. Best quality. All red. Sizes 6 to 11. Pair. $4.79



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THE WASHINGTON FARMER

ESTABLISHED 1894

SPOKANE. SEATTLE.



FARMING ON THE RESERVATION

Farm Bureau Wants Muscle Shoals Project Developed--Page 9

Drains Land

Was Under Water Three Years

The value of draining a piece of land is well demonstrated in the case of G. C. Towne of the Thrift community, Pierce county. Some of his best land has been under water for the last three years, due to the clogging up of an old blind ditch, which has been in operation for nearly 40 years.

By opening up the ditch early this spring the land was drained, and a crop of oats seeded about June 20. The crop is not making a very good showing this year, due to the effects of the standing water on the soil, and the late planting. By next year Mr. Towne expects a better return from all crops on this soil.

An acre of Gold Coin potatoes was also planted in this soil, which are making a fair showing under the conditions. They were planted May 17, and since the tubers had already started to sprout, Mr. Towne did not think best to treat the seed, under the conditions Careful selection, however, was given the seed before planting, and as a result there is very little disease in the patch.

Tieton Growers Organize

Clifford Kail is president and general manager and R. C. Sherman is secretary-treasurer of a new cooperative marketing organization at Yakima, the Tieton Fruit Growers, which is in active operation this season and the members of which represent 300 acres of orchard property, producing 55,000 boxes of apples and pears. In addition to the two officers mentioned, Clyde Shelton, H. L. Hull, E. F. Linse and J. C. Hayner are directors. Warehouse facilities have been secured and a warehouse superintendent will be hired. The organization will pack fruit, assist in selling it and handle supplies for members, who, however, have the option this year of selling through other channels. It is on a stock-sharing basis.

GOVERNMENT FAIR EXHIBITS.

The southwest Washington and western Washington fairs have been added to the exhibit list of the United States department of agriculture and will have exhibits this year intended to inform the public of the work that is being accomplished by the department in the interest of agriculture. As heretofore, exhbits will be shown also at the Washington and Oregon state fairs and at the Pacific International. The department has been a fair exhibitor for years, but beginning in 1921, a new plan was begun of having local departmental officials take charge of all work in connection with exhibits at state and regional fairs in the western states, instead of having it handled from Washington, D. C. The department committee for the states of Oregon and Washington consists of John D. Guthrie, United States forest service, chairman; A. C. Rose, bureau of public roads, and Stanley G. Jewett, biological survey, all of Portland.

SALE OF CANNERIES.

The Puyallup and Sumner Growers' Cannery company properties have been sold at public auction by Receiver William N. May to G. H. Bradt of San Francisco for $270,000.

Mr. Bradt is vice president of the Pacific Northwest Cannery company, which is this year operating the local plants under lease from the receiver.

The sale includes the cannery at Sumner, the new and old canneries at Puyallup and the plant at Loveland, Col.

The Pacific Northwest Cannery company, which becomes owner of the properties, is now operating plants at Albany and McMinnville, Ore.

"This purchase by us will insure the continuation of the plants at Sumner and Puyallup and the development of the fruit industry in this section," Mr. Bradt said.

SOME CUCUMBER!

Charles Brooks, living in Ferry county across the river from Jerome, Stevens county, recently sent to The Washington Farmer a cucumber measuring within an inch of four feet in length. At the stem end it was about one inch in diameter and tapered to about three inches at the thickest part. It resembled a snake in shape, being coiled about once and a half and having a slightly striped appearance. While Mr. Brooks did not indicate the variety of cucumber, it is probable that it is a rather uncommon kind known as the Snake or Serpent variety because of its peculiar shape and appearance. Mr. Brooks grows a patch of them every year, using what are needed for the table and feeding the others to the hogs. A four-foot one is said to be not unusual in his patch.

SPOKANE DISTRICT APPLES.

Approximately 2500 freight cars will be needed during October and November to ship apples grown in the Spokane district to eastern markets, according to figures compiled by the Spokane Chamber of Commerce.

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THE WASHINGTON FARMER

SUCCESSOR TO

Vol. 47. No. 10 THE RANCH PACIFIC DAIRYMAN HORN AND HOOF September 7, 1922

For Good Farming, Attractive Country Homes and Happy Country People

Southwest Washington Fair Wins Over Rain

By HORACE ADDIS and GEORGE N. ANGELL

With the biggest and best balanced live stock and poultry shows in recent history and with every other department crowded to its utmost capacity the Southwest Washington Fair association last week staged its most successful exposition, from the exposition standpoint. The weather man, however, was most unkind, for while Monday and Tuesday, the opening days, proved unusually "brite an' fare," rain fell on Wednesday, Thursday and Friday, the three biggest days of the week, and the total attendance for the week was far below what Secretary George R. Walker had every reason for expecting. And the worst of it was that the showers came in the late afternoon or at night, outside of the required hours for collection of rain insurance.

Except for one or two breeds of live stock, the fair was more than usually representative of the farming resources of the big district from which it draws both displays and attendance. From Canada to the valleys of Oregon, and from Pacific county to eastern Lewis the exhibits poured in, necessitating last moment accommodations which merely emphasized the need for more buildings. Their quality was perhaps better than ever, but early reports of the excellence of the show could not overcome the constant threat of rain. Even the races were called off on Thursday, and after the heavy shower of late Friday afternoon, Chehalis-Centralia Day, the concession men and racetrack followers were a disgruntled lot.

Many special features were provided. Governor Louis F. Hart appeared in the grandstand on Thursday, though he had already become a familiar figure at the live stock barns, for his interest in the state Holstein herd. Other officials and prominent men of the state were there in numbers.

THE AGRICULTURAL DISPLAY.

Agricultural hall again housed a big variety of interesting exhibits. Occupying one end was a large showing of articles made by patients at the Western State hospital and of flowers and plants grown by them. In another corner were the grains and grasses which grow to perfection in Lewis county and tray fruit exhibits more than double those of last year, arranged by Superintendent Theo Albert, and in still another, under the care of Mrs. J. W. Watson, cut flowers and potted plants alluring in their beauty. There were at least one-third more individual exhibits here than a year ago, and one came all the way from Randle, in eastern Lewis county. The honey display, in charge of Elzy Fifer, was twice its usual size, due largely to the participation of J. J. Mahoney's Superb apiary of Elma. Fifer and Mahoney are both United States veterans' bureau "trainees" and the later took all but one first in the division. The St. Urban grange booth was the only one prepared this year. The many exhibits of feminine skill in the culinary, art, photography and fancy work departments attracted its admirers, and the better babies contest was as popular as ever.

THE POULTRY SHOW.

The poultry show was not only the largest ever seen at this fair, but also one of the biggest ever held in the state. More than 1000 birds were on display from Alberta, Canada, to the Willamette valley, Oregon, and the balance between the breeds was well preserved. Every coop was filled, and with the feed manufacturers' exhibits housed in the new addition connecting the poultry building with that for manufacturers, the exhibit presented a greatly improved appearance. Superintendent Thomas P. Horn was assisted by Fred A. Johnson of Tacoma, who was also one of the largest exhibitors, with 80 birds. He won on several breeds, but his best showing was in White Leghorns, where he "whipped the class." On dark Plymouth Rocks Jacobsen's poultry yard of Tacoma lost only one first in the classes entered. H. H. Collier of Tacoma took every first on Buff Rocks and the St. Helens Incubator company did well with White Rocks. The Boyce Seed company of Seattle showed several varieties, but their outstanding fowls were Buff Orpingtons. A. W. Wade of Marysville ranked with Johnson in the number exhibited and beat the Rhode Island Red class. Altogether, it was a well-mixed show. Barred Rock classes, with 106 birds, were strongest, but several others were very well filled. W. M. Coates judged.

Among other exhibitors than those mentioned were Charles Bylsma and El Retiro farm, Seattle; Mrs. Stenna O. Bach, Olympia; Jack Bertram, Lents, Ore.; H. H. Collier, H. K. Carter, J. M. Harris, A. L. King, Ray Leftwick, Miller Brothers, J. H. Nichols, C. C. Page, E. A. Randall and Trutype farm, Tacoma; Cowherd's duckery, Ferndale; Harold R. Demmon, Portland; Wilbur Hosmer, E. D. Hosmer and Hugh Hosmer, Sherwood, Ore.; Mrs. H. C. and Margaret Kleinsmith, Hoff, Ore.; Harry Silton, Beaverton, Ore.; Robert Johnson and John O. Badger, Toledo; Edward H. Knickerbocker, Mrs. H. F. Seale, Rochester; T. F. Shay, Willapa; James J. Scanlon, Lakeview; Mildred Tucker, Klaber; F. H. Torrey, Edmonds; B. J. Burton, Curtis; C. E. Mayhew, Winlock; John Kinder and James Horne, Galvin; A. M. Starr, Coaldale, Alberta; Kenneth Kilbourne, Nellie B. Sturdevant and W. H. Hurd, Chehalis; Lawrence Ward, F. L. Thornbury, J. H. Coffer, A. J. Goelitzer and Ella M. Lammers, Centralia; Harold Badger, Mrs. A. J. Long, C. M. Le Baron, Dave Mathis and R. C. Simpson.

THE COMMERCIAL SHOW.

A liberal education was to be had for the seeking in the big building under the grandstand, where commercial exhibits vied with educational in attractiveness. From bachelors' buttons to grand pianos and from soup to coffee, all the manufactured articles were there, and the range of educational exhibits was much larger than in previous years. Boys' and girls' club exhibits and contests held the visitor's interest at the north end, the Sunshine Sewing club of Ethel and the combined clubs of Dryad and of Boisfort occupying most of the space. The latter club had the outstanding display, though the Dryad clubs won many prizes and the splendid garden exhibit of Frank Knizek, a Dryad boy, won much comment. Outside clubs participating were those from Cowlitz, Grays Harbor, Thurston and Clarke counties. F. L. Audrain, state club leader, was in charge.

THE SCHOOL DISPLAY.

Interesting displays of the work of Lewis county school boys and girls, from primary to high schools, were in charge of Miss May Meighen, county superintendent. The work of the lower grades was best represented in the Pe Ell, McCormick, Wallville and Union school exhibits, while that of older pupils, particularly in manual training, was surpassingly well shown by the general exhibit of the Doty schools. The latter won first prize, with Pe Ell second, and McCormick received honorable mention. Others participating were Brim, Crawford and Napavine, Crawford winning first among one-room rural schools and Union second. The state school for girls maintained a home-cooking lunch counter and sold many articles from their big booth. Boys of the state training school school showed garden and dairy products and flowers from their garden, pastry from their kitchen and shoes from their shop; the Campfire Girls' articles made at Camp Sealth, and the Lewis-Pacific Dairymen's association Darigold products. The Red Cross maintained a rest room and the Lewis County Anti-Tuberculosis league attracted much attention with its "birds-eye view of Healthland and the Child Health railroad," running a daily train schedule from "Bathtubville" at 7 a. m. The entire south end of the building was occupied by the United States government exhibit, seen at Chehalis for the first time in its entirety under the combined management of the biological survey, forest service and bureau of public roads. Never has the state college more interestingly illustrated its work than in the six large booths in charge of W. W. Underwood, assistant county agent leader. Each booth taught many lessons and attracted much attention, but perhaps the most popular was that which showed the layout of a model 40-acre farm for western Washington, with rotation of crops clearly pictured. Twelve of these booths were prepared by the college in cooperation with the extension service and will cover 20 fairs in Washington this season.

THE LIVE STOCK SHOW.

The live stock show was not only far the largest, but decidedly the best in average quality that this excellent fair has ever had. Among the dairy breeds there was scarcely a poor animal and nearly all were well fitted as well as good individuals. A few of the beef animals were not in show condition, but most of these had been brought to put in the Shorthorn sale and were not shown. There were plenty of Shorthorns, Angus and Herefords fitted to show in the greatest live stock shows anywhere. County Agent Fowler ably superintended the show.

The actual figures tell the story in language more eloquent than any other form. They show that there were 97 Jerseys, 66 Holsteins, 55 Guernseys, seven Ayrshires and two Brown Swiss. In the beef breeds the Shorthorns led, with 79 of the beef strain and 45 milking Shorthorns. There were 29 Aberdeen Angus, 20 Herefords and 38 Red Polled. Only eight head of horses were shown and part of these were grades. The 268 sheep made up a show such as this fair never tried to care for before. These figures include about 30 head of Angora goats, shown by William Riddell & Son of Monmouth, Ore. Hogs totaled 107, among which O. I. C.'s or Chester Whites predominated. Hog pens were once more filled as in the old days. The grand total reached 835, which is fully 250 more than a year ago, and that was considered a big show. More barn room seems absolutely necessary, and, if finances will admit, a new beef barn, on practically the same plan as the well-lighted and convenient new dairy barn, will be built.

THE DAIRY CATTLE

Professor E. B. Fitts, extension specialist of Oregon Agricultural college, judged all dairy breeds, while Howard Hackedorn, head of the animal husbandry department of Washington State college, performed the same task for the beef breeds. A. E. Lawson, northwest representative of the American Shorthorn association, placed the ribbons on Red Polls.

Jerseys.

The Jersey show was not only a little larger than any previous one, but local breeders were especially proud of the fact that it was made up mostly of Lewis county cattle. Erickson Brothers of Yakima showed here for the first time with a well-fitted herd of excellent type, and A. M. Starr of Coaldale, Alberta, showed

(Continued on page eleven.)

Where Hope Springs Eternal



"It just can't last. Give us just one year of the kind of crops we used to grow and we can pull out. If we can only have the moisture we have as fine a country as there is in the world."

In some such words as these Mrs. Rhoda E. Davie of Bailey, 21 miles southwest of Ephrata, in Grant county, expresses some of the hope that springs eternal in the human breast and enables farmers to endure year after year of drought and crop failure.

Mrs. Davie lives in one of the sections of Washington that have endured several years of drought, following upon several years of excellent crops. She homesteaded in 1908, where she now lives, being induced to settle there by the enormous crops of corn, rye, hay and other products that she saw when she visited that neighborhood. For several years she and her neighbors were successful, but about 1916 an evil jinx began a crusade that has lasted up to the present time. One of her mistakes, as she puts it herself, was the plowing up of 100 acres of her place. Since the native bunch grass sod was broken the evil spirit got in his work and the 100 acres began to blow, rendering the growth of useful plants almost impracticable, not only on the 100 acres, but on the adjoining lands as well.

Live stock is the thing that appealed and continues to appeal to Mrs. Davie and her son. They have, in addition to her home place of 320 acres, about 7000 acres of pasture land under lease. At the present time they have allowed their herds to decrease in numbers until they have only about 36 head of cattle and 20 head of Percheron horses They declare there is no profit in either cattle or horses at the present time, and they are making no effort to increase their stock.

A well 211 feet deep, dug part way and drilled the rest, furnishes a supply of excellent water which, by means of a 20,000-gallon reservoir and a pump, operated by a gasoline engine, permits a limited amount of irrigation for orchard, shade trees, garden and flower yard.

Naturally Mrs. Davie is enthusiastic for the Columbia basin. It would be the salvation of her country in times of short precipitation like the last few years.

The pictures herewith do not indicate a striken country. Mrs. Davie is shown in her dooryard surrounded by flowers and vines, the result of the native soil and sunshine, with the artificial application of water from the 211-foot well. But note the gunnysacks that fence out the soil that blows from that 100 acres that she broke. She is a rancher of pioneer type. She hauls Russian thistles with a four-horse team, strung out, as skilfully as her hired hands will haul alfalfa when she gets her land watered. In one of the pictures she is shown mowing one of the good crops of rye that she grew prior to the coming of the jinx, about 1916. She was thinking of those days of bountiful yields of feedstuff when she declared that the present cropless period "just can't last." No hoodoo can long hold out against her courage.

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Orchards Have No Appeal

Railroad employees from Tacoma who had been laid off by the railroad because of the strike came to Yakima a few days ago to get work picking fruit. They met with a fruit grower on the street and, as he needed pickers, he took them to his ranch. Here they bethought themselves to inquire about the wages and learned that the pay was $3 a day. "That is with board, is it not?" said one. "No, you board yourself," was the grower's reply.

This very much amused them and they nearly split their sides laughing over what they thought ridiculously low wages which the growers had the nerve to offer. Their merriment having somewhat subsided, they inquired if it were eight hours, and were told that fruit pickers work 10 hours. "Work 10 hours, and for $3? I should say not!"

And with that they were off to town, declaring they would take the night train to Seattle. "They don't know what work is, anyway," commented the grower.—News item, Yakima Herald.

Comment on the foregoing is superfluous.

Weak Defense for "Filled Milk"

Manufacturers of "filled milk" honestly admit that this product is deficient in certain nutrients, particularly as a diet for babies and children, but say they are not selling filled milk as diet for children, but as a wholesome product for adults, chiefly to be used as a cooking material.

Advocates of the Voigt bill, now pending in congress, to prohibit interstate commerce in this new product make the effective reply that there are several million illiterate and foreign mothers who can not read English, who are therefore unable to read the labels on the filled milk can, and who would feed it to their infants if its sale is legalized.

The New York Journal of Commerce grants that there "seems to be warrant for this criticism and that every effort should be made to guard against any such danger as it indicates." That newspaper, however, opposes the Voigt bill, and says that "proper labeling, if that is not now employed, and education of the consuming classes on the subject suggest themselves as remedies," and that "there are many food products on the market that are not suitable for infants, yet are regularly given them."

It strikes THE FARMER that that is a weak defense. It would take tremendous effort and years of education to bring these illiterate and foreign mothers up to the point where they would understand that filled milk is not proper food for their children.

If, as the New York paper suggests, there are many food products on the market that are not suitable for infants, yet are regularly given them, effort should be made to reduce their number rather than to increase it by the addition of another such product.

Should Keep Faith on the Question of Japanese Immigration

The Washington Farmer, as our readers know, has long been convinced that Japanese immigration and increasing possession of the best agricultural lands of the Pacific coast states is a grave menace to the nation, and particularly to the farm producers of the Pacific northwest.

As one of the leading influences for more effective laws to curb that danger, THE FARMER confesses its disappointment with the record and attitude of one of the candidates for United States senator, George B. Lamping of Seattle.

Mr. Lamping is port commissioner of Seattle, and when running for the office was emphatic in his professions for restriction of the Japanese danger. His campaign slogan then was "Save the Port of Seattle from the Japs."

But it is now recalled that at the last session of the legislature he appeared before the house committee that had charge of the anti-alien land bill, the measure designed to save the soil of this state from Asiatic possession, and spoke in opposition to it. He said that he was speaking for the Seattle port commission and protested that if the legislature passed the anti-alien land bill the Japanese steamship lines would remove their trade from Seattle to Vancouver, B. C.

"I know whereof I speak," said Mr. Lamping. "If this bill goes through the Japanese will immediately take their business away from Seattle."

It now transpires, though, that Mr. Lamping is again soliciting votes on the Japanese issue. In a recent speech near Olympia he attacked the four-power treaty of the Washington disarmament conference, terming it a Japanese victory, declaring that it would prevent legislation for the exclusion of Asiatics, and further said that as a member of the Seattle port commission he had seen the evil of Japanese "peaceful penetration" of western Washington.

The Washington Farmer is disappointed with Mr. Lamping's flopping back and forth on this important issue. It recognizes the right of any one to change his mind on public questions, but when a politician is first for one side and then the other, and then back to his first position when he is seeking votes, his course is not calculated to inspire confidence in his dependability.

LOOKING INTO OTHER FARM FIELDS

Although a greater part of the inhabitants of the Red Sea district of Arabia are herdsmen and shepherds, deriving a constant supply of milk from the flocks and herds, condensed milk is always in demand, particularly in the larger cities, Consul C. M. P. Cross, Aden, reports to the department of commerce.

* * *

The ancient Damascus oasis of Syria still bears abundantly, and now modern commercial methods are employed in cultivatinng the fruit trees which have been blooming there for centries. Apricots constitute the most important fruit crop, Consul Charles E. Allen, at Damascus, informs the department of commerce.

* * *

The Canadian apple crop this year will be approximately 3,573 barrels, or slightly over 88 per cent of last year's yield, which was 4,046,813 barrels. This estimate shows an increase over the 1920 yield, which was 3,382,540 barrels.

* * *

Poor wheat crops in France and an estimated shortage in the next wheat harvest of about 2,000,000 tons have resulted in the passage of a law authorizing the baking and sale of "war bread," says Consul Sample B. Forbus, Paris. The law specifying the use of substitutes for wheat flour in bread making was passed July 15.

* * *

The soy bean is rapidly taking a place as a major crop in the farming systems of the corn belt, replacing oats to a considerable extent and taking part of the corn acreage, says the department of agriculture.

* * *

In June 4,816,770 pounds of condensed milk were exported, less than half of the June, 1921, movement, which was 8,060,056 pounds. The movement from January 1 to July 1 was 35,005,074 pounds, compared to 49,376,657 pounds in 1921.

State Farm News

Diversified farming is more profitable than wheat raising, according to Lincoln Huot, an old-time wheat farmer in the Klickitat valley.

Huot has 10 acres of watermelons and cantaloupes, which are of large size and have a quality and flavor much better than were formerly shipped to the local market. He also has several acres given over to the cultivation of berries, tomatoes, corn and other field crops, and reports a yield of four tons of oat hay per acre.

Huot also maintains 11 cows, ships cream to Portland, besides having a number of head of cattle to be turned off for beef. He expects to market 50 tons of melons this year, which will bring him a gross return of $2000.

* * *

Prune picking, packing and shipping started August 21 in the Walla Walla valley. Three carloads of prunes were shipped from Freewater to New York and Chicago. This is a week behind last year's fruit harvest. The crop this season is estimated at between 300 and 500 carloads.

* * *

Kentucky Wonder beans increased in yield about 100 per cent as the result of recent rains, say officials at the Ferndale Canning company, where the beans are now being received in large quantities. The Burpee bean crop, because of the lack of rain, fell short of expectations, but the present yield is doing a lot to make up for the deficit.

Ninety persons are busy putting the beans through the cannery. This force and possibly more is considered necessary for another 60 days.

* * *

Approximately $10,350 represents the value in pork consumed by the inmates of the state penitentiary at Walla Walla since the first of the year. Between 350 and 400 hogs are kept at the prison farm at all times, where the pork is produced.

* * *

Columbus O. Barnes, engaged in truck farming and gardening for 40 years on the Little Klickitat river, near Goldendale, says the soil on the creek bottom is especially adapted for raising cabbage. He raises his crop with very little irrigation and in spite of the last dry season a good many heads of cabbages in his patch will weigh 15 pounds and several thousand heads will be obtained off each acre of ground. Barnes has also made a success of growing the ever-bearing strawberries and will supply the Goldendale market with fresh strawberries until the late fall frosts.

* * *

The Yakima Meat company has announced that they will enlarge their packing plant at a cost of $125,000. They will also increase their capital stock from $200,000 to $500,000. The Guaranty Trust company of Yakima has underwritten first mortgage bonds of $150,000 for the improvement work, the securities to be 15-year bonds drawing 7 per cent interest.

* * *

County Engineer Schwarz of Clarke county has started a survey on the Washougal drainage project for the purpose of enlarging the original project.

* * *

Indications that the peach crop of the Wenatchee valley this season will bring a lower price than last year are seen in replies to inquiries sent out by dealers to ascertain the state of the market. The opening price last year was 75 to 90 cents. The opening prices this year will be about 45 to 55 cents, in the opinion of dealers. Heavy crops in nearly all the eastern sections are cited as one reason.

* * *

But few horses in Walla Walla county are kept to other than work purposes, according to a census of the horse population made by County Assessor A. H. Johnson. There are 9250 horses in the county and of this number 7783 are work horses.

* * *

J. H. Kelly, manager of the newly organized Grays Harbor Pig company, has announced the lease of 400 acres of logged land between Montesano and Brady for hog ranch purposes. Another tract of 600 acres adjoining, belonging to the Grays Harbor Lumber company, has been obtained in case of need.

The company will start fencing and erection of the necessary buildings at once, Mr. Kelly announced. The old Morgan-Ninemire packing plant in Aberdeen has been obtained for the purpose of slaughter and curing.

* * *

The Oroville cannery started the season's run August 11.

* * *

The Yakima Dairymen's association has voted an increase in capitalization from $30,000 to $50,000 and a change in the bylaws whereby the shares of stock are to be $10 instead of $50. Guy C. Findley is the newly elected manager.

* * *

The people of the Tieton View community have organized for the community fair to be held in September. The date set was September 15, the Friday preceding the Washington state fair.

* * *

Work has begun on the first four miles of the Toppenish-Fort Simcoe road, covering the distance between Toppenish and the McKinley school. It is expected the work will be completed before the beginning of bad weather in the fall.

* * *

According to published figures last year the railroads carried 1,034,315,000 passengers, while automobiles are estimated to have carried 6,990,862,000. The railroads carried 1,642,251,000 tons of freight and the motor trucks 1,430,000,000 tons.

* * *

The department of agriculture will need the assistance of county commissioners in cherry-growing districts to successfully combat the cherry maggot invasion, Director E. L. French says. The department has begun enforcing rigid quarantine against infected cherries sent to state canneries and has checked the importation of maggots. But the pests were brought into the state without warning and escaped to orchards near the canneries and then to adjoining lands.

Serious efforts should be made next spring to spray all infected or threatened areas, Director French says. The department will do what it can, but the cooperation of counties where the maggots have appeared is urgently requested. Fruit growers have been asked to see that county commissioners, in making up their budgets, provide for this work.

FARM BUSINESS AND MARKETS OUTLOOK

Receipts of cattle at the seven leading markets last week were approximately 275,000 head, the largest with one exception in the corresponding week in at least eight years. The eight-year average for that week is 216,000 head. While prime and choice grades are scarce, there is a high percentage of shortfeds in the run and the number of grassers is steadily increasing. Marked expansion in the western range movement has occurred in the last few days. Dry weather in Kansas, Nebraska and Oklahoma is hastening shipments from that section and many are being forwarded to Chicago.

Prime steers reached a new high mark of $11 at Chicago, but everything grading good or less is 25 to 50 cents lower. With the exception of a few grain fed cows and heifers all grades of butcher she stock declined fully as much as steers. Attracted by the high price level of the previous week large receipts of calves arrived and the market lost some of its recent bloom.

How much further increase in the supply of cattle arriving weekly is to take place before the autumn maximum is reached is the important question in the trend of the market. Usually the peak of the movement arrives in October. The eight-year average for the largest week is 311,880 head.

Keen Demand for Feeder Cattle.

The combined movement of stocker and feeder cattle from the 12 leading markets each week indicates a keen demand from all the feeding sections. The abundance of Kansas grassers is making it easy to satisfy this demand although prices show relatviely greater trength than the lower grades of beef steers. Until the last few days most of the western rangers as well as Canadians arriving in middle western markets have gone into feedlots. Bulk of the purchases are being made at a range of $6.25 to $7.25 at Chicago and Kansas City with a few choice fleshy steers quoted considerably higher.

Hog Market a Contrary Affair.

The hog market is maintaining its record of the past year in running contrary to general expectancy. Instead of a bulge in prices in August and early September, due to extremely light receipts, prices have declined over $1 in the last month and receipts are as large as 30 days ago. Low grades of heavy hogs are practically the cheapest in 10 years.

The total supply at the 11 markets continues to set new records for the corresponding season right along and average weights are running about as high as ever known since records have been maintained. In addition to thi supply of pork, packers are vending last winter and spring's accumulation of hog product ahead of the arrival of the new crop of hogs.

It is too late for much of an upturn in prices even if a brief bare spot should develop of which there is no evidence at present. The last crop of hogs has lasted much longer than expected and in view of the decline in prices which has been taking place and the abundance of feed on farms new crop hogs are expected to show up early.

Stocks of lard on August 1 were 144,000,000 pounds compared with 194,000,000 pounds. The decrease in holdings during July was nearly 11,000,000 pounds compared with an average decrease of 1,700,000 pounds in the same month in the past five years. Stocks of frozen pork, pickled pork and dry salt pork in storage on August 1 totaled 684,000,000 pounds compared with a five-year average on that date of 648,000,000 pounds. The decrease during July was practically the same as the five-year average.

These facts in connection with the unusually heavy slaughter for that month points to a rate of consumption materially above the average.

Lamb Run Falling Behind.

Receipts of lambs have shown but little change in the last five weeks. Normally at this season there is a rapid increase. Arrivals last week at the seven leading markets totaled about 185,000 head compared with an eight-year average for the correponding week of 308,000 head. These things seems to verify early season estimates of a small crop. Dressed lamb trade was not robust last week, but the light supply, together with a keen demand for feeder lambs and breeding ewes, maintained the price level on the hoof. Choice fat lambs at Chicago are quoted up to $13.15 while choice western feeder lambs are being bought as high as $13.

Horse Market Stagnant.

The supply of horses at Chicago was a slim affair last week, but outside of orders for a few choice drafters priced as high as $300 per head and choice wagon horses, demand was at low ebb and a clearance could only be affected at reduced prices. Combined receipts of horses at public stockyards in July amounted to only 17,000 head compared with 11,000 last year and an average of 81,000 head in the same month during the six preceding years.

Wool Market Moderately Active.

Seaboard wool markets are reported to be moderately active with prices firm with the exception of fine combing wools which have eased slightly. The dull season in wool manufacturing generally lasts until after Labor day, and the wool tariff still is a matter of conjecture. Foreign markets have been strong and the impression is widespread that an eventual shortage impends.

The Boston market is quoted as follows: Scoured basis—Oregon, eastern No. 1 staple, $1.25@1.28; fine and fine medium combing, $1.15@1.20; eastern clothing, $1.05@1.12; valley No. 1, $1.07@1.10 Territory—Fine staple, choice, $1.27@1.32; ½ blood combing, $1.10@1.15; 3-8 blood combing, 88@89c; 1-4 blood combing, 75@78c.

Wheat Market Still Lagging.

Wheat prices have been moving over a narrow range in the past week. Exporters and millers have been making purchases on the breaks, but do not follow the market on upturns as receipts which have declined about 25 per cent from the high point of the season remain considerably above the corresponding period in previous years.

A 10-year average shows that the peak of the movement to primary markets has been reached around the last week in September or the first week in October when winter wheat is still moving freely and the spring wheat movement is at its height. In addition to the big run of spring wheat the market must still bear the brunt of the Canadian movement. Harvest is progressing in that country, but the receipts at Canadian terminals are only about half as large as they will be during the fall months.

Export buying of wheat remains below the volume expected, although clearances have practically trebled in the last month. Shipments from the Argentine and Australia have dropped to the smallest since the first of the year. European buyers are working on a hand to mouth basis, presumably in the belief that this will enable them to fill their needs at a lower average price than through the accumulation of a surplus at European ports. They are taking mostly Canadian wheat which is about 6 cents cheaper than United States wheat.

It is possible that India will release wheat for export before long, but the ban on export is still in effect and prices are above an exporting basis. The surplus of that country is variously estimated at from 20,000,000 to 50,000,000 bushels.

Keen Demand for Cash Corn.

Damage reports were numerous from Nebraska, Kansas and Oklahoma and parts of other states, but the total reduction in the corn crop prospects compared with the government's August 1 estimate is not much over 100,000,000 bushels. The greatest source of strength in the market is the excellent demand for cash corn which has been absorbing receipts above the average right along

There is nothing urgent in the demand for oats. Receipts since the new crop started to move have been falling behind the average for the corresponding season, but stocks at terminals are large and are gradually increasing, although much less rapidly than at this time last year.

Cash Grain Prices.

The range of cash grain prices for the week ending August 30 is as follows: Chicago—Wheat: No. 3 red, $1.04@1.06; No. 2 hard, $1.01½@1.07¼; No. 3, $1.03¾@1.06; No. 2 northern, $1.05@1.19; No. 3, $1.21½@1.25. Corn—No. 2 mixed, 60¾@63c; No. 3, 60½@62¼c; No. 2 yellow, 61¼@63½c; No. 3, 61@63c; No. 2 white, 60¾@63¼c; No. 3, 60 3-4@62 3-4c. Oats—No. 2 white, 33 3-4@36c; No. 3, 33 1-2@34 1-2c. Rye—No. 3, 68 1-2@70 1-2c. Barley—52@58c. Clover—$12@16. Timothy—$4@5.

Timothy Seed Crop Shows Decline

The timothy seed crop is estimated by the department of agriculture to be 5 to 15 per cent less than that of last year. Both the acreage and the yield per acre are smaller than a year ago. Clover seed markets have been stronger in the last week, although the outlook for a good crop is favorable. Since July 1 receipts of timothy seed at Chicago have been 3,704,000 pounds compared with 5,466,000 pounds in the same period a year ago and 1,590,000 pounds two years ago. Receipts of clover seed this year total 1,375,000 pounds against 3,504,000 pounds last year and 1,430,000 pounds two years ago.

Feed Demand Sluggish.

The southwest is showing interest in the bran market, but otherwise the demand for feedstuffs is negligible, although prices are practically the lowest of the season. Flour mills are said to be storing feeds instead of selling at the prices offered. Cottonseed meal stocks at mills are about twice as large as at this time last year. The high price for flaxseed compared with other grains is expected to bring an early movement after harvest. With the demand full, prices for linseed oil meal are weak.

Prices per ton (100-pound bags) in carlots—Chicago—Bran, $17@17.50; standard middlings, $18.50@19; flour middlings, $23@25; cottonseed meal, 36 per cent, $39; 43 per cent, $43; hominy feed, $25; gluten feed, $29.85; old process oil meal, $45; tankage, $55.

Receipts Rule Hay Market.

Hay markets are irregular, some being strong and others weak, depending upon the volume of receipts. Demand at all points is dull. Some hay is going into storage, but dealers avoid all but the low grades which are selling at big discounts in consequence.

Prices per ton in carlots—Chicago— No. 1 timothy, $18@19; No. 2, $14@17; No. 3, $12@14; No. 1 light clover mixed, $15@18; No. 1 clover mixed, $13@15; upland prairie, $16@18; midland prairie, $12@17; rye straw, $10.50@11.50; oat and wheat straw, $8@10.

Egg Markets Advance.

Egg prices have advanced about 30 per cent from the low day of the year. Dry, hot weather and the moulting season have reduced production so that the supply of fresh eggs is inadequate to consumptive needs and 10,000 to 12,000 cases are being withdrawn from storage daily at the four leading markets. The poultry market is working lower. A rather large carryover of storage poultry is expected when the new storing season starts and in addition it is generally believed that receipts this fall and winter will be 25 per cent larger than a year ago. Spring chickens held until later in the fall will gain in weight, but the increase may be more than offset by a decline in the price obtained.

Latest quotations—Chicago—Eggs: Miscellaneous, 23½@24½c; dirties, 18@19½c; checks, 17@18½c; fresh firsts, 25@25½c; ordinary firsts, 22@22½c; hens, 17@21½c; springers, 23½c; roosters, 14c; ducks, 19@21c; geese, 18c; turkeys, 25c.

Butter Market Is Firm.

Delayed shipments of butter arrived on distributing markets early last week, but the increase was absorbed with only a small decline in price and the market was firm at the close. Production is believed to be falling off rather steadily, although there is some irregularity in the changes in arrivals at the leading markets from week to week. Owing to hot weather the percentage of undergrades is excessive. Consumptive demand is highly satisfactory on the whole and the position of the market is strong.

Prices on 92 score fresh butter on August 30 were: Chicago, 35½c; New York, 38c; Boston, 37½c; Philadelphia, 38½c; San Francisco, 44c.

Cheese Market Steady.

Country cheese markets changed but little last week and prices at distributing points are comparatively steady with more confidence shown. Slight accumulations are being made from week to week in cold storage holdings, but production is steadily shrinking and these will soon cease. No decline of consequence in values is in prospect.

Prices on No. 1 American cheese on August 30 were: Chicago—Twins, 19 1-2@20c; S. Daisies, 20@20 1-2c; D. Daisies, 20@20 1-4c; Y. Americas, 20@20 1-2c; Longhorns, 20@20 3-4c; Square Prints, 21@21 1-4c.

Fruits and Vegetables.

Potato markets have shown a little more strength in the last week. The total carlot movement remains large and consuming centers report large arrivals of near-by stock. northern round whites are beginning to show up. New Jersey is the principal shipper with Idaho, Minnesota, Colorado and Utah following in order.

Apple markets continue weak with the carlot movement about 60 per cent larger than a year ago, New York, California and Michigan leading. Good apples are quoted at 50 cents to $1 per bushel in midwest consuming markets.

The August forecast of onion production for 14 late states places the total at 26,602 cars of 500 bushels each compared with 16,879 cars in 1921.

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Range of Live Stock Prices, Week Ending Aug. 30

CATTLE.	Chicago.	Spokane.	Portland.	N. S. Lake.
Choice, prime heavy steers (1100 lb. up)	10.00@10.95			
Good heavy steers	9.00@10.25			
Medium heavy steers	8.00@ 9.25			
Common heavy steers	6.25@ 8.00			
Choice, prime light steers (1100 lb. d'n)	9.85@10.85			
Good light steers	8.75@10.00			
Medium light steers	7.85@ 9.00	6.50@ 7.50	7.00@ 8.25	6.25@ 7.00
Common light steers	6.00@ 7.85	4.00@ 6.50	4.50@ 7.00	4.50@ 6.50
Common to choice butcher heifers	4.85@ 9.00	3.50@ 6.00	3.50@ 6.50	3.25@ 5.50
Common to choice butcher cows	3.65@ 8.00	2.75@ 5.00	3.00@ 5.50	3.00@ 4.75
Bologna and beef bulls	3.75@ 6.50	2.75@ 4.50	3.00@ 4.50	2.00@ 3.00
Canners and cutters, cows and heifers	2.50@ 3.75	1.50@ 2.50	1.50@ 2.50	1.50@ 2.75
Canner steers	3.75@ 4.50	2.50@ 3.50	2.75@ 4.00	2.75
Medium to choice light veals	10.00@12.00	7.00@ 8.50	8.00@10.00	7.50@ 8.50
Common to choice heavy veals	4.25@ 8.00	5.00@ 7.50	6.00@ 8.00	
Com. to choice feeders (1000 lb. up)	5.75@ 8.00			
Com. to choice feeders (750-1000 lb.)	5.50@ 7.75	3.50@ 5.00		4.50@ 5.50
Common to choice stocker steers	4.75@ 7.50	3.25@ 4.75		
Com. to choice stocker cows and heifers	3.50@ 5.50			
HOGS.				
Top of market	9.85	11.25	11.75	9.00
Bulk of sales	9.50@ 9.75	10.25@11.15	10.50@11.50	8.00@ 8.60
Heavy (250 lb. up)	7.70@ 9.35	9.25@10.50	10.00@11.00	7.75@ 8.25
Medium (200-250 lb.)	8.70@ 9.70	10.25@11.00	10.50@11.25	8.00@ 8.50
Light (150-200 lb.)	8.25@ 9.85	10.50@11.25	11.25@11.75	8.25@ 9.00
Light lights (130-150 lb.)	8.75@ 9.70	10.25@11.15	11.25@11.75	8.25@ 9.00
Smooth packing sows (250 lb. up)	6.50@ 7.45	8.25@ 9.00	8.00@ 9.00	
Rough packing sows (200 lb. up)	6.00@ 6.85	7.50@ 8.25	7.00@ 8.00	
Medium to choice pigs (130 lb. down)	7.25@ 8.75	9.50@11.00	11.00@11.50	
Stock pigs		9.50@11.00	11.00@11.50	8.50@ 9.25
SHEEP AND LAMBS.				
Medium to prime lambs (84 lb. down)	12.00@13.25	9.00@10.00	9.00@11.00	10.00@11.00
Culls and common lambs	8.50@12.10	7.00@ 9.00	5.00@ 9.00	7.00@10.00
Medium to prime yearling wethers	8.75@11.25	7.00@ 8.00	6.00@ 8.00	5.00@ 6.50
Medium to prime wethers	6.00@ 9.25	6.50@ 7.50	5.00@ 7.00	4.00@ 5.00
Medium to choice ewes	3.50@ 7.65	3.00@ 6.50	3.00@ 5.00	3.00@ 4.00
Culls and common ewes	2.00@ 4.00	2.00@ 3.25	2.00@ 3.00	2.00@ 3.00
Full-mouth to yearling breeding ewes	5.00@11.75			
Feeder lambs	11.50@13.00	6.00@ 7.00		

LATEST QUOTATIONS.

The Live Stock Market.

PORTLAND, Ore., Sept. 2.—Cattle—Choice steers, $7.75@8.25; fair to good steers, 7.25@7.75; fair to medium steers, 6.25@7.25; common to fair steers, $4.50@6.25; choice cows and heifers, $5@5.50; medium to good cows and heifers, $4@4.50; fair, medium cows and heifers, $3.50@4; common cows, $3@5; canners, $1.50@2.50; bulls, $3@4; choice dairy calves, $9.50@10; prime light calves, $9@9.50; medium to light calves, $8@9; heavy calves, $6@7; common heavy calves, $4@6.

Hogs—prime light, $10@10.50; smooth heavy, 200-300 pounds, $9@10; smooth heavy, 300 pounds up, $8@9; rough heavy, $6@8; fat pigs, $10@10.75; feeder pigs, $10@10.75; stags, subject to dockage, $5@7.

Sheep—East-of-mountain lambs, $10@11; choice valley lambs, $9.50@10.50; medium valley lambs, $8@9; common valley lambs, $6@8; cull lambs, $5@6; light yearlings, $7@8; heavy yearlings, $6@7; light wethers, $6@7; heavy wethers, $5@6; ewes, $2@5.

SPOKANE, Sept. 2.—Cattle—Prime steers, $6@7.50; good to choice steers, $5@6; medium to good steers, $4.50@5; fair to medium steers, $4@4.50; common to fair steers, $3@4; choice cows and heifers, $5@5.50; good to choice cows and heifers, $4@5; medium to good cows and heifers, $3.50@4; fair to medium cows and

(Continued on page twenty.)

Indians Will Hold Fair

Spokane Tribe Will Offer Proof of Their Advancement

After the Whitman massacre near Walla Walla in 1847, Cushing Eells and Elkanah Walker and their heroic wives abandoned the mission among the Spokane Indians and fled for safety to the Willamette valley. They were despondent and felt that their seed had fallen on stony ground and that nearly nine years of mission labors had gone for naught. But they had taught the Spokanes how to grow wheat and oats and vegetables, and a smattering of that knowledge of agriculture remained with the tribe through all the succeeding years.

Six hundred and sixty-eight Spokane Indians are now gathered on the Spokane reservation and will hold their ninth annual Indian fair at Wellpinit, September 14, 15 and 16. Willpinit is the seat of the Indian agency and is about 45 miles from the city of Spokane. The Indians have their own fair grounds and buildings and the fair is managed by an association of officers and directed as any other county or local fair. It has committees on agricultural exhibits, domestic art and science, horse racing, athletic sports and baseball, dance pavilion and entertainments, and grandstand and parking of autos.

The premium list offers prizes for the best peck of wheat, of oats, of barley and of corn; the best sheaf of wheat hay, oat hay, alfalfa, and timothy; the best peck of potatoes, carrots, beets, turnips and rutabagas; the best cabbage, cauliflower, pumpkin, squash, watermelon, muskmelon, cucumbers; the best plate of one-half dozen peaches, of one-half dozen apples, of one-half dozen plums, of one-half dozen pears. Then there are prizes for chickens, geese, ducks and turkeys; for the best mare and colt; for the best colt under six months; for the best cow and calf; for the best calf; for the best sow and pigs; for the best shoat; for the best work team and wagon; for the best driving team, buggy or hack; for the best driving team, wagon or hack; and for the best saddle horse.

The Indian women are not ignored. Prizes are offered for the best collection of canned fruits, of canned vegetables, for bread and cake, for beadwork, for the best pair of hand-made gloves, the best pair of moccasins, the best piece of needlework on buckskin, the best hand-made quilt, the best made lady's waist, the best crocheted yoke, the best piece of tatting, the best collection of house plants and the best collection of cut flowers.

Every afternoon at 2 p. m. an interesting program of races and other attractions is started in front of the grandstand. These comprise Indian pony races, foot races of various kinds, including races by boys and girls under 14, basketball games, exhibition of bucking broncho riding, etc.

This is followed at 4 p. m. by dancing at the auditorium, and historical Indian dances at the Indian village. These late afternoon programs are varied from day to day with historical Indian sports and historical reproduction of Indian customs.

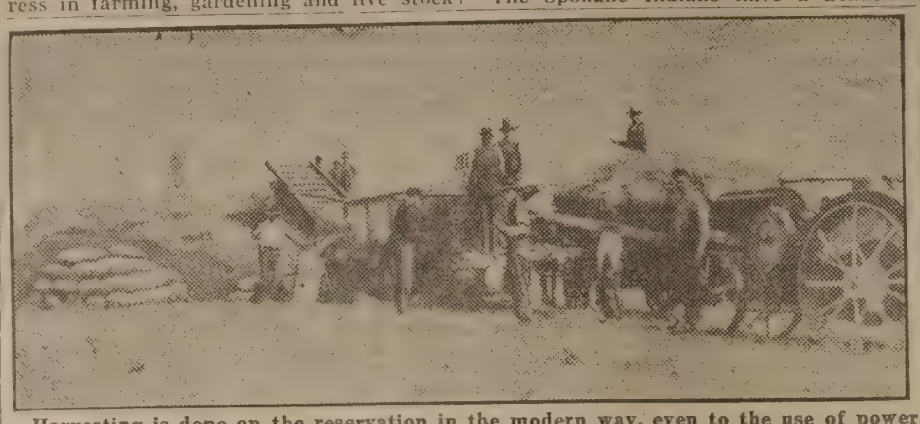
The Spokane Indian agency organization is under the direction of Superintendent O. L. Babcock, who has an administration force of about 20, including an instructor in farming. There are two Indian day schools on the reservation and several public schools, the latter taking care of the children of white settlers, of Indians who have acquired citizenship, and of agency employees. The Indian schools have about 20 pupils each. One teacher and one housekeeper, man and wife, direct each school. One-half of the school day is devoted to book learning and one-half to industrial training. The school year runs from September to June.

The government also maintains a hospital with 30 beds and an agency physician. The Indians are very nearly self-supporting, as the agency is issuing only 35 rations and that number is being steadily cut down.

On the reservation are two Presbyterian churches and one Catholic church. The Indians are well civilized and there is little tepee life. They live for the large part in small box houses, but there are a number of very good dwellings on the reservation.

The officers of the fair association will welcome white visitors and the Indian exhibitors are justly proud of their progress in farming, gardening and live stock production. Three Indian policemen are on duty, but their labors are said to be very light, as the crowds are well behaved and good-natured, and the superintendent and other agency officials are resolute in preventing sales of liquor.

The Spokane Indians have a beautiful and diversified reservation of 82,000 acres, drained by the Spokane and Columbia rivers. It is largely forest land, and the government has a sawmill to supply its Indian wards with lumber. Sixty-five thousand acres are allotted to individual Indians, of which about 45,000 acres will eventually be put under cultivation.



Harvesting is done on the reservation in the modern way, even to the use of power machinery, as shown in the above picture. This snapshot and that shown on the cover page this week were taken by Frank W. Guilbert of the Spokane County Good Roads association. The cover page picture shows Mr. Obad Williams and family in their grain field.

BIG GRAIN FIRMS UNITE.

The Northern Grain & Warehouse company, one of the leading grain exporting concerns of Portland, has been amalgamated with E. A. Strauss & Co. of London, New York and San Francisco. It was announced that as a result of the new arrangement the two concerns would retain their identity as separate corporations, but that the Portland company would secure the advantage of having the backing of Strauss & Co., a $3,500,000 concern, in its operations in the northwest. The local corporation will also have the advantage of direct representation in Europe, New York and San Francisco through the offices of Strauss & Co.

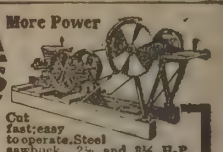
THE SMALL BEGINNING.

Grass grows from the roots upward.

SCOLLARD REELECTED PRESIDENT.

At a meeting of the directors of the United Dairy association in Seattle, J. A. Scollard of Chehalis, president of the Lewis-Pacific Dairymen's association, was reelected president of the state body. This is his fourth successive year as head of the organization.

OTTAWA BUZZ SAWS More Power



$69.50 2½ H-P F.O.B. Factory

Cut fast; easy to operate. Steel sawbuck. 2½ and 3½ H-P. ready to mount on skids or wagon. Small additional cost for built-in magneto. Shipped direct from Factory and Nine Branch Houses.

3½ H-P. $89.50
4 H-P. 96.50
5-7-10-12 H-P at Proportionately LOW PRICES.

WOOD NEEDED for coal is scarce. Make Big Money from your wood lot.

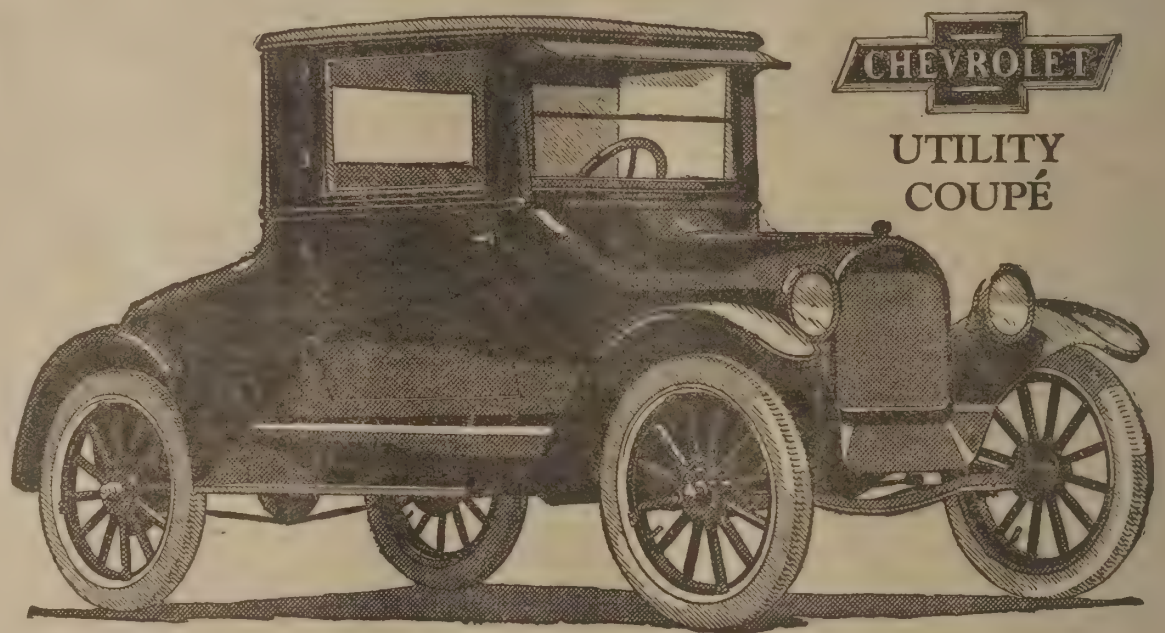
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UTILITY COUPÉ



The Lowest Priced
High Grade Closed Car

$680

f. o. b. Flint, Michigan

This is the car for the country.

No new model Chevrolet has ever met with such quick success with farmers. It is just what they have long wanted—a high-grade closed car at a surprisingly low price.

Like every other Chevrolet model it offers unmatchable VALUE.

The high-grade Fisher Body is practical as well as handsome. The extra large, heavy plate-glass windows afford clear vision on all four sides.

The mammoth rear compartment with locking cover contains 14 cu. ft. of space for luggage, packages, produce and merchandise of all kinds.

The upholstery is in gray whipcord—wide, comfortable, well-sprung seat and back—easily kept clean. Equipment includes standard three speed transmission, vacuum feed, cord tires.

The chassis is the Superior Chevrolet with that celebrated valve-in-head motor, which has been an important factor in giving us first place in sales of standard equipped automobiles.

No matter what car you own or think of buying, you owe it to yourself to see this all-weather Utility Coupé and COMPARE IT for value and low mileage costs.

Farmers know car value. That is why they are buying this model by the thousands.

BODY BY FISHER

Chevrolet Motor Company, Detroit, Michigan
Division of General Motors Corporation

World's Largest Manufacturer of Low Priced Fully Equipped Automobiles

5,000 Dealers and Service Stations Throughout the World

Applications will be Considered from High Grade Dealers in Territories not Adequately Covered

"Standard"
PLUMBING FIXTURES.

"Standard" kitchen sinks, "yard stick high," provide comfort and prevent back strain. How high is yours?
Write for catalogue
Standard Sanitary Mfg. Co., Pittsburgh
San Francisco, 149-155 Bluxome St.; Los Angeles, 216-224 S. Central Ave.; Seattle, 1714 L. C. Smith Bldg.

LIVESTOCK AND DAIRY

Pasture and Grain

Recent reports from Minnesota cow testing associations show that it is profitable to feed dairy cows some grain in addition to pasture during the summer months. Many dairymen contend that the pasture should furnish sufficient feed. Cows producing a pound of fat or less daily are usually able to obtain enough food on pasture, provided the pasture is not overstocked or dried up. Dr. C. H. Eckles, chief of the dairy division of the University of Minnesota, recommends the following schedule for summer feeding, when pastures are abundant:

Jersey or Guernsey producing—
20 pounds milk daily, 3 pounds grain
25 pounds milk daily, 4 pounds grain
30 pounds milk daily, 5½ pounds grain
35 pounds milk daily, 7 pounds grain
40 pounds milk daily, 8 pounds grain

Holstein or Ayrshire producing—
25 pounds milk daily, 3 pounds grain
30 pounds milk daily, 4 pounds grain
35 pounds milk daily, 5½ pounds grain
40 pounds milk daily, 7 pounds grain
50 pounds milk daily, 8 pounds grain

E. A. Hanson, dairy specialist with the agricultural extension division, reports that 300 cows fed grain while on pasture averaged 301.9 pounds of butterfat in a year, the average yearly feed cost being $49.35. Seven hundred cows fed pasture only averaged only 237.6 pounds of butterfat, the average yearly cost being $41.87.

Conclusions to be drawn from this report:

Gain in annual fat production, lbs...	64.3
Value of fat at 40 cents a pound.....	$24.71
Increase in yearly feed cost with summer grain	7.28
Net gain	$17.43

Mr. Hanson summarizes the advantages of summer feeding as follows:

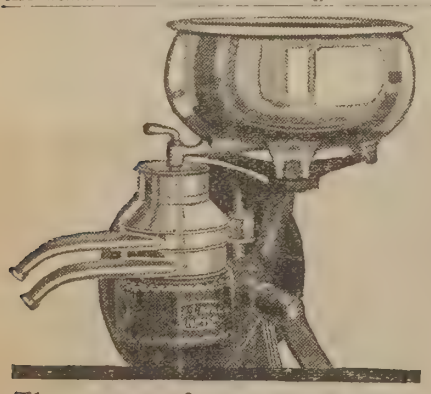
Tends to maintain production during slack pasture season.

Increases total yearly production.

Cows fed grain plus pasture will be in higher condition of flesh, giving them an advantage over cows poor in flesh, for fall freshening and winter production.

Ensilage the Year Around

Oats and vetch for August feeding when the grass gets short, and sunflowers "canned" in October—this is the silo program of the Bues Brothers of Menlo, Pacific county, who thus have ensilage for their cows the whole year around. Sunflower silage has given them the least trouble of any they ever handled, and their "secret" of success is a plug at the bottom of the silo which permits draining off the excess "juice." Usually this is left open about two and one-half days. Sunflower heads ought to be a good 50 per cent mature, they believe, before cutting, and the stalks should lie on the ground for a week or 10 days before ensiling. In Pacific county sunflowers have matured satisfactorily in 1921 and 1922 when planted on May 31 and May 24, respectively, but earlier in May is regarded as a better date, if possible. "Cows will eat twice as many sunflowers, in weight, as oats and vetch, and I think there is as much nourishment in them," one of the brothers testified. "I never had a cow get sick on them, and in fact, I have used it as a tonic for sick cows. My stock do not like to change from sunflowers to oat silage." Mr. Bues took 42 loads—about 42 tons—of sunflowers from two acres, but he manured heavily (24 loads) to get that production.



The cream of cream separator prosperity goes to De Laval users

There was never greater need than right now for the best separator, one which skims cleanest, has greatest capacity, turns easiest, requires the least care, and produces the most perfect product. In all these respects the De Laval has no equal. Take nothing for granted, simply let it be demonstrated to you. See the local De Laval agent or address the nearest general office.

De Laval Pacific Company
61 Beale Street San Francisco, Cal.



LIFE PRESERVERS FOR LIVE STOCK

By DR. E. E. WEGNER, W. S. C.

DIGESTIVE TROUBLES. ARTICLE VII.

Large Bowel.



This portion of the digestive tract is noted for the troubles that may arise within its confines, and of these many are of a very serious nature. It is the seat of these grave troubles because the materials in the digestive tube remain here for a considerable length of time and when such a condition occurs there is always a chance for trouble to develop. The exact nature of these troubles and the location must be ascertained early if the greatest good is to be done in treatment.

The first part of this portion is the caecum, a blind pouch about three or four feet long and approximately 10 inches in diameter, with both the entrance and exit openings at the base, or upper posterior end. Food entering here is supposed to pass downward from the base to the apex and back again to the base to get out. This arrangement is a dangerous one, as there is always danger of a stoppage occurring, or a stagnation in the blind end. This is not always apparent, either, and may not be attended by symptoms of impaction or stoppage of the bowels, since food materials may pass into the base of the caecum and out again without going into the blind anterior end. Food materials may stay there for many days and the bowels appear to operate properly, when at the same time there is a serious condition present. Animals may appear to suffer from an unnatural looseness of the bowels and the owner may feel sure that that is the principal trouble, when in reality the opposite is the case. That is, the animal is seriously ill with impaction of the caecum and the owner, thinking that it is suffering from diarrhoea, because some fluid materials are discharged from the rectum. Only a careful manipulation through the rectum will serve to show what the actual condition is and this must be done by one who is well acquainted with the position and consistency of the various organs.

Animals suffering as above may have been ill for several days eating very sparingly, lying down most of the time, drinking very little water, pawing at times and altogether acting as though they were suffering from a serious case of indigestion. As the time goes on the symptoms become more pronounced as the animal becomes more uncomfortable as inflammations develop, and if relief is not given the animals die after a lingering illness.

Purgatives may be administered and these appear to operate properly, but all this material is passing by the real trouble and leaving the animal no better than before the treatment was given. The treatment of these cases offers very considerable difficulty to any one and unless the treatment is commenced early and followed up consistently there is poor chance of success. Your veterinarian would probably prefer a course of stimulation rather than a course of strong and drastic purgation, since the latter course weakens the animal very quickly, while the stimulation, with fluids to help soften the mass, is most likely to prove successful.

The feeding of the patients during and after attacks of indigestion is a very important part of the care and treatment, since there is great danger of doing fatal harm. There is always a tendency for owners to try to get their animals to eat at the earliest possible moment of convalescence, and, while this may be an indication of humane sentiments on the part of the owner, it is not good nursing, as a small amount of food given too soon may be the cause of an early funeral. Keep the feed away from the patient until it is distinctly hungry and then give food in small amounts and of a kind that the animal is accustomed to. Overfeeding and constantly suggesting feed to an animal that is just getting over an attack of indigestion is a serious mistake.

WOLVERINE!
The 1000 Mile Shoe
Wears Longer—Stays Soft

We purchased a shipment of Wolverine Shoes about two years ago and they gave us the best wear of any shoes we have ever handled. In fact two of our customers are just discarding shoes purchased from that lot and are demanding the same shoe again.
R. L. Fuller & Co.
Barto, Miss.

The Only Shoe That—
—will always stay soft and pliable after wetting.
—has leather that is doubly tanned—both vegetable and mineral tannage—our secret process.
—is made wholly of special horse hide leather that will outwear any other known shoe material.



The Plowboy
Made by Specialists

We are specialists. We make workshoes *only*. And no other shoe is made like the Wolverine. After every soaking it always dries out soft as new buckskin, and as comfortable.

No other shoe we know of will do this. It is due to our own exclusive, secret, double-tanning process.

We take selected horse hide, the toughest, longest-wearing leather known. This is the leather that formerly went to Europe to make expensive Cordovan shoes and Cossack saddles. The Wolverine is the only workshoe we know that is made of this quality leather.

We tan it in our own tannery by our secret process. We give it the pliable softness of buckskin. Yet by this process we retain all the toughness of the horse hide and even increase its extreme durability. It wears and wears and wears.

Such a shoe is amazing. Yet by the operation of our own tannery we effect economies that bring you the Wolverine at a very modest price.

WOLVERINE
Comfort Shoe



This Wolverine is so pliable and soft you can double it up like a moccasin. It wears like iron but you'll hardly know you have a shoe on, it is so soft and easy.

For tender feet, or where you do not encounter wet weather, wear this Comfort Shoe. A blessing to the feet.

A Wolverine for All Work

There is a Wolverine shoe for every kind of work. Soft, flexible shoes for field and shop; heavy, hi-cut, leg-protecting shoes for teamsters, lumbermen, oil men; every one made wholly of our double-tanned, soft horse hide that always outwears other leather and always stays soft.

The Plowboy model shown is designed especially for plowing. It is high enough to keep out dirt, low enough for coolness. Like all Wolverine shoes it is so soft and comfortable you can walk in it all day without tiring. Wherever comfort and long, long wear are wanted Wolverine are the shoes to wear.

If your dealer cannot supply you, write direct to us. Send the coupon for catalog.

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Please send me name of nearest Wolverine dealer and free catalog.

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Shall Ford Develop Muscle Shoals?

American Farm Bureau Federation Urges Congress to Accept His Offer

IMPORTANT PROVISSIONS OF FORD OFFER.

Period of lease, 100 years.
Payment for plants, $5,000,000.
Objects, the utilization of water power for generation of electrical energy and manufacture of fertilizers or explosives.
Maximum water power available, 600,000 horsepower.
Minimum nitrogen production guaranteed, 40,000 tons annually.
Maximum profit allowed on fertilizer manufactured, 8 per cent of cost.
Cost of production to be ascertained by committee representing the government, the Ford company, the farm bureau, the grange and the farmers' union.
Entire project to be turned over to the government within five days if needed for war purposes.

In the opinion of Chester H. Gray, a director of the American Farm Bureau federation and connected with the federation's legislative department, there are three possible courses of action that may be taken in the matter of the Muscle Shoals power and nitrogen project:

(1) The government might develop and operate the project; (2) the government might accept the offer of Henry Ford for its development and operation; (3) the plants already built there might be junked and the development of the project indefinitely or permanently postponed.

The American Farm Bureau federation is making a nation-wide campaign in favor of the acceptance of the Ford offer for the purchase of the nitrate plants and a 100-year lease on the water power available. Mr. Gray is now in the Pacific northwest, representing the farm bureau and urging the people of this section to recommend to their senators and congressmen the acceptance of the Ford proposition.

Farm bureau leaders give as their reasons for supporting the Ford plan that there is no other plan under contemplation and no other offer made that offers any reasonable assurance of development of the project; that if developed under the Ford plan the project would afford a large supply of fertilizers for the agriculture of the country at reasonable prices; that it would furnish much electrical energy for the operation of industries throughout all the southeastern and many of the Atlantic coast states, and that the successful development of the project would prove an excellent demonstration of the possibilities of similar development in the Pacific northwest and other sections of the country where waterpower is available but not yet utilized.

History of the Project.

After many months of consideration the senate committee having before it all propositions for the development of Muscle Shoals, declined to recommend any of them. The result was that Senator Norris of Nebraska introduced a bill providing for government development of the project and that Senator Ladd of North Dakota introduced another bill providing for the acceptance of the Ford offer.

Muscle Shoals consists of a long rapids in the Tennessee river, in the northern part of Alabama, possessing enormous water power possibilities. The two-fold object of its development is the generation of electrical energy for industrial uses and operation of plants for the fixation of nitrogen for use in fertilizers or explosives.

During the war the government began development of the project for the purpose of supplying explosives for war purposes. The two plants so built and temporarily operated are wholly inadequate, additional plants and dams across the river being necessary if the project is to be developed. One part of the government's development consists of what is called the Gorgas steam power plant 80 miles away from the Muscle Shoals power site, built to operate the plants pending the completion of the necessary dams, which were never completed.

Opposition to the Plan.

Opponents of the Ford plan base their opposition on three principal points, says Mr. Gray:

(1) That the 100 years that the lease would run is too long;

(2) That the $5,000,000 which would be paid for the plants as they now stand is not enough, and

(3) That the Gorgas plant, being so far away from the site of the development, should not be included in the deal.

In discussing these points of opposition Mr. Gray declares that a shorter period than 100 years is not adequate to permit the development of the project on on the scale proposed. Early costs and early overhead expenses would be so great as to constitute a great risk on the part of the Ford company, unless a long period of time followed, during which profitable operations were possible, he says, and points out that since the present water power act limiting leases to 50 years was enacted there has not been a single water power dam of consequence built, but that most such development occurred under the old law, which permitted 99-years leases. Provision is made in the bill whereby, should the Ford company fail in any respect to carry out its contract with the government, the contract could be declared void and the property revert back to the government.

The Cost of the Property.

Regarding the charge that $5,000,000 is not enough for the property, Mr. Gray declares that it is not so much the amount received for the plants that interests the American people as it is the possibility of cheap electrical power and a plentiful supply of fertilizers at reasonable cost. The cost of plants built by the government during the war period of exhorbitant expenditures approximated $80,000,000, which means that the $5,000,000 offered by Mr. Ford is but about 6 per cent of the original percentage of the present value of the plant. Mr. Ford's offer requires the government to complete the present partially constructed dam and to build a second dam farther up the river, and requires the Ford company to build a third dam still farther up stream for the impounding of flood season water, so as to enable the company to operate the entire system throughout the entire year at peak capacity. Mr. Ford guarantees to produce 40,000 tons or more of fixed nitrogen every year to be put upon the open market and sold for fertilizer at prices not to exceed 8 per cent of the cost of production. This amount of nitrogen is sufficient to manufacture about 1,600,000 tons of fertilizers as used on the soils of this country. It is an amount equal to about one-fifth of all the fertilizers now being used.

A bill creates a commission of nine members, whose duty it will be to ascertain the costs of production of this nitrogen, the costs so ascertained to be the basis on which the profit of not to exceed 8 per cent shall be calculated. This commission shall consist of one member of the bureau of markets, two of the American farm bureau, two of the national grange, two of the farmers' union and two representing the Ford company. Each of these organizations, with the exception of the Ford company, shall nominate several candidates for membership on the commission. The president of the United States shall select from these the mem-

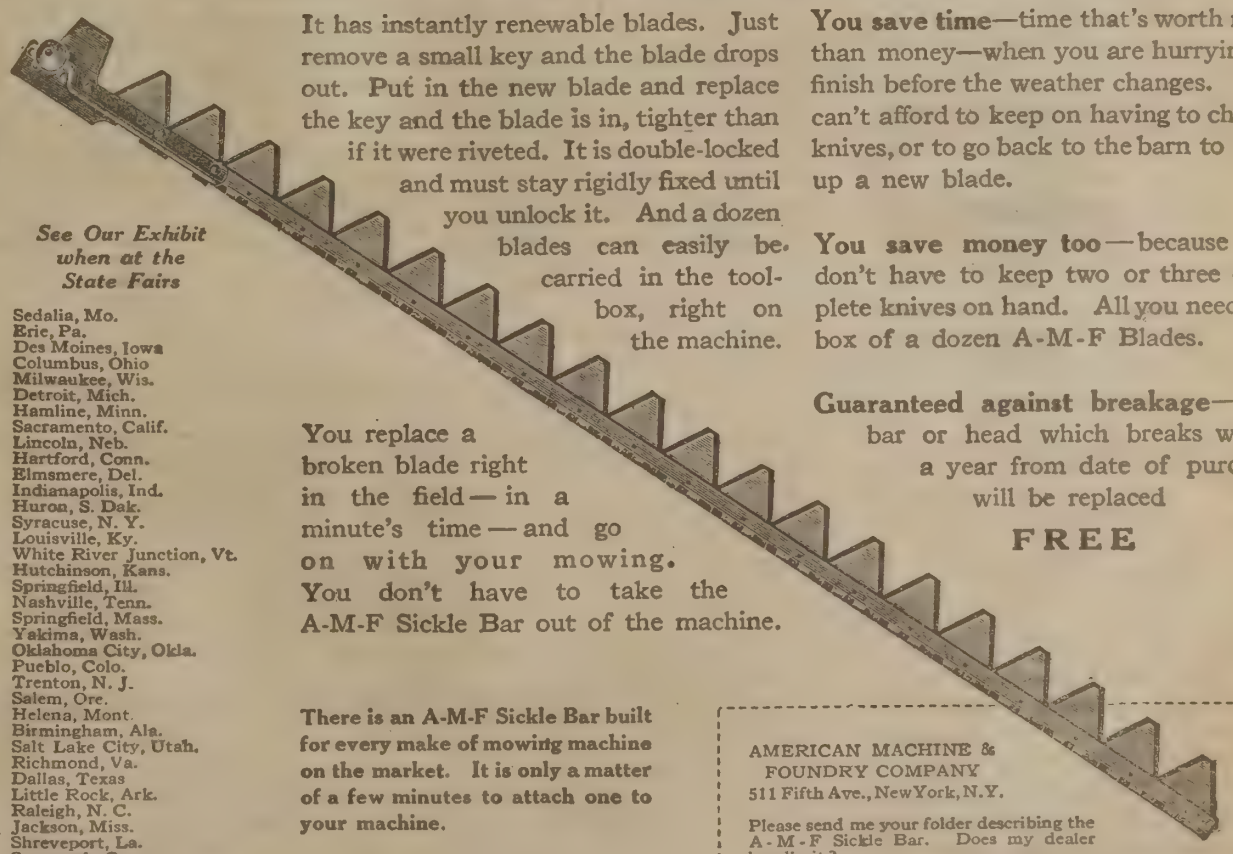
(Continued on page fifteen.)



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Now Is the Time to Kick on Taxes

By LESTER M. LIVENGOOD, Attorney and Manager, Spokane County Taxpayers' Economy League

As stated in last week's article, about 75 per cent of all the tax money collected in Washington is for local purposes, not for state purposes. Therefore, how to go about reducing local taxes is the subject of this article.

The average taxpayer does his kicking against high taxes when he receives his tax statement, six months too late to be of any use.

The law provides a fixed time of the year when the expenditures for the coming year must be determined and the levies fixed to raise the funds. Orderly procedure requires such a course. If the taxpayer is too busy with his own affairs to take an interest in tax reduction at the time of year that the law provides for that very purpose, he should pay his taxes with a smile, no matter how confiscatory they may be.

Act Now or Hold Your Peace.

Now is the time of year when the taxpayer can work with the hope of accomplishing something. The public officials all over the state are making up their estimates of expenditures for next year and will publish them early this month. After they are published the total amount can not thereafter be raised, but it can be reduced.

The law provides that public hearings, at which any taxpayer may object to any of the proposed expenditures, shall be held the first Monday in October and that immediately thereafter the tax levies be fixed by the proper officials.

What Can Be Cut Out?

It is the duty of the taxpayers to scrutinize these estimates in detail to see whether they are padded, whether exorbitant salaries and wages are being paid, and whether, considering the results attained, the people are getting a dollar's worth of service for every dollar spent. That is considering the operation of the local governments from an efficiency standpoint. The next point involves the taxpayers themselves, and that is a survey of the proposed expenditures to see what services, in whole or in part, can be dispensed with as luxuries in times of stress. This is where the rub comes. We have become accustomed to our local governments performing service after service for us that we would not have dreamed of expecting 10 years ago. Taxes have kept on going up because every year the taxpayers demand new services of their governments. Now we have reached the point where nobody will invest capital here or bring in new industries until taxes go down enough for them to earn a fair return for their labors. But while we realize that taxes must come down we childishly try to cling to the luxuries we have become accustomed to and which have brought up the tax burden.

To get down to brass tacks, if the taxpayers want results they must study their local tax budgets as published and see to it that they are reduced by every possible dollar that can be saved without serious reduction in government efficiency.

How to Study a Budget.

How to study local budgets is a question often received. I will outline the most simple procedure consistent with securing results.

In order to learn whether the taxpayer's money is being wasted the public records must be carefully studied. The expenses of the various taxing districts are required by law to be classified under a standard classification. A table that will be useful in every county for studying these costs can be made by any one familiar with figures and bookkeeping. Each county office or institution or department of expenditure should be analyzed separately, the expenses listed as to salaries, printing, etc., down one side of the table and column headings for the following at the top: (1) The 1921 expenditures, (2) the 1922 appropriations, (3) the 1923 estimates, and (4) the expenditures for the same items 10 years ago. A comparative table such as this will show how costs are increasing within the last three years and also what services we are buying that we did not think we needed 10 years ago. A study should also be made of the efficiency with which the various offices are handled to supplement the proposed expenditures. Schools and roads consume the greater part of the tax money and, therefore, will demand the most careful study to see what can be curtailed without doing any serious harm. We have become so used to demanding everything that other communities of many times our wealth have that desirability of the expenditure must no longer be the deciding factor, but rather the ability to pay.

When the taxpayers have gone over the local budgets during the early part of September and have found expenditures they believe that can be reduced or cut out entirely they should arrange meetings with the public officials and endeavor to get the latter to make the reductions. The average public official is as much interested in the taxpayer as the taxeater if he is convinced that the taxpayer is aroused and demanding economy and efficiency.

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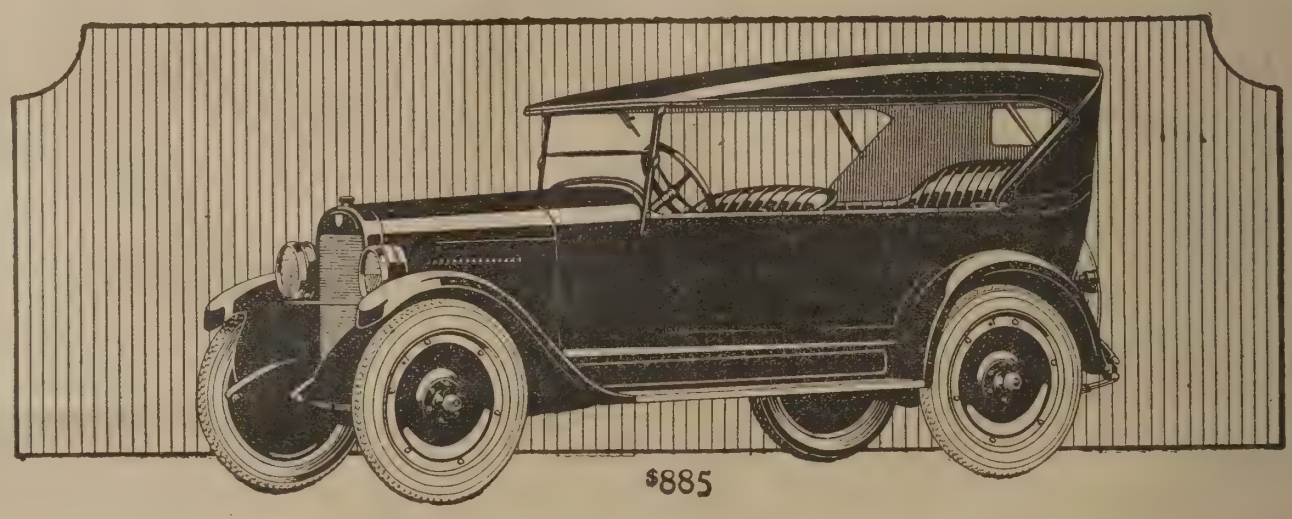
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The Good
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Southwest Washington Fair Wins

(Continued from page three.)

12. N. C. Sears was the largest winner, with junior champion bull and heifer and first young herd, calf herd and get of sire. Senior and grand champion bull went to N. C. Sorensen on Firwood Noble, a bull of his own breeding, now 3 years old, that has got better each year he has been shown. Erickson's senior and grand champion cow is about as typy as possible, and she had to be to defeat the splendid cows in the same class and on down the line. The awards:

Bulls, 3 years or over—1, N. C. Sorensen, Chehalis, on Firwood Noble (senior and grand champion); 2, Grant Gleason, Chehalis, on Julia Winkle Lad; 3, Erickson Bros., Yakima, on Sultan Olga Boy; 4, A. Adolphsen, Chehalis, on Mauna Loa of Waikiki; A. M. Starr, Coaldale, Alta., on Mr. Hornblow, Two-year-old—1, Erickson Bros. on Raleigh's Fancy Lad; 2, Sears on Champion of Midfield; 3, Gleason on Goldie's Dexter Pogis; 4, Starr on Ferncliff Pogis. Yarling—1, Sears on Fussy's Fern Noble 35th (junior champion); 2, Erickson Bros., on Sultan's Bonnie Lad; 3, Starr, on Blow Knight; 4, Sorenson' on Firwood Rosaire's St. Mawes; 5, Morton, on Firwood St. Mawes Lad. Senior calf—1, Starr on Pretty Jim Starr; 2, Floyd Morton, Winlock, on St. Mawes King's Pogis; 3, William Rinta, Chehalis, on Jersey's King William; 4, Eino Laakso, Winlock, on Grand Dale's King George; 5, Sears on Midfield's Manilla. Junior calf—1, Sears on unnamed; 2, Erickson Bros. on Sultan's Lad of J. H.; 3, Starr on Mr. Starr's Pogis; 4, Morton on St. Mawes King Oronoko; 5, Dan Bush, Chehalis, on Firwood Diploma's St. Mawes.

Females, cow 4 years or over—1 and 2, Erickson Bros. on Sultan's Violet Rose (senior and grand champion), and Sultan's Figgis of J. H.; 3, Adolphsen on Cowslip's Pretty Maid; 4, Sorensen on Gwendola Rosaire; 5, Sears on Curtis Rose. Three-year-old—1, Adolphsen on Flossy Massey Polo; 2, Sears on Star of Yewloa; 3, Morton on St. Mawes Fussy's Rozella; 4, Starr on Mildred Starr. Two-Year-old—1, Sorensen on Firwood Poppy; 2, Erickson Bros., on Olga's Pet; 3, Sears on Cicely's Golden Dawn; 4, Adolphsen on St. Mawes of Oak Springs Lily; 5, Sorensen on Firwood St. Mawes Chimes. Senior yearling—1, Erickson Bros. on Sultan's Vesta Lass; 2 and 3, Sears on St. Mawes Mary Olga and St. Mawes Flora Oonan; 4, Starr on Hornblow's Starr; 5, Adolphsen on St. Mawes of Oak Springs Lydia. Junior yearling—1 and 4, Erickson Bros. on Flower's Lassie and Miss Olga's Figgis; 2 and 3, Morton on St. Mawes King's Countess, and St. Mawes Golden Pogis Wyona; 5, Sorensen on unnamed. Senior calf—1, Sears on unnamed; 2 and 4, Adolphsen on unnamed; 3, Morton on St. Mawes Combination Maid; 5, Gleason on unnamed. Junior calf—1 and 3, Sears on St. Mawes Cicely Winkle (junior champion) and unnamed; 2, Erickson Bros. on Raleigh's Maid of J. H. 2d; 4, Sorensen on unnamed; 5, Starr on Coaldale Golden Starr.

Aged herd—1, Erickson Bros.; 2, Sorensen; 3, Sears. Young herd—1, Sears; 2, Erickson Bros.; 3, Starr. Calf herd—1, Sears; 2, Ericksen Bros.; 3, Starr, Calf herd—1, Sears; 2, Erickson Bros.; Bros.; 3, Starr. Produce of dam—1, Sorensen; 2, Erickson Bros.; 3, Sears.

Holsteins.

But for the fact that Carnation stock farms sent 24 head and the Western State hospital at Steilacoom 13, the Holstein exhibit would have been a small one. The industry in Lewis county was not adequately represented, W. A. Hamilton & Sons of Chehalis, with 11 head, being the largest local exhibitors. Competition between Carnation and the state herd was extremely lively, the final score being eight blues for the former and seven for the latter. The best tussle of the entire show was that for first aged cow, won by Tom Nisbet's great entry, which then went on to senior and grand champion, with the state's junior champion a real contender. Matador Segis Walker 6th won handily highest honors on bulls, and the state's son of the $106,000 bull was a satisfactory junior champion. The awards:

Bulls, 3 years or over—1, Carnation Stock Farms, Seattle, on Matador Segis Walker 6th (senior and grand champion); 2, Tom Nisbet, Chehalis, on Glencoe Perfection; 3, St. Urban Holstein association, Winlock on Sir Clothilde Chimacum; 4, W. A. Hamilton & Sons, Chehalis, on The King of Chimacum; 5, S. L. Beck, Chehalis, on Sir Mercedes Wayne Sarcastic. Two-year-old—1, State hospital on Sir Pietertje Ormsby Blossom; 2, Hamilton on The King of Chimacum 2d. Yearling—1, Western State hospital, Steilacoom, on Carnation King Matador Mutual (junior champion); 2, Carnation Stock Farms on Colantha Walker Matador. Senior calf—1 and 4, Western State Hospital on Stellacoom Sir Ormsby Veeman and Steilacoom Cascade Molly De Kol; 2, 3 and 5, Carnation Stock Farms on Ensign Matador Model Abbekirk, Caranation King Topsy De Kol and Carnation Segis Walker Veeman. Junior calf—1, 2 and 4, Carnation Stock Farms on unnamed; 2, State hospital on unnamed; 5, Mat Kohtala, Centralia, on unnamed.

Females, cow 4 years or over—1, Nisbet on Inka Grace of Wayne (senior and grand champion); 2, Carnation Stock Farms on May Walker Skylark; 3, Hamilton, on C. K. K. S. V. Burke De Kol; 4, Chris Hendrichsen, Onalaska, on Nisqually Olga Johanna; 5, State hospital on Bessie Pearl Tritomia. Three-year-old—1 and 2, Carnation Stock Farms on Queen Bonheur Pontiac De Kol and Carnation Matador Queen. Two-year-old—1 and 2, Carnation Stock Farms on Matador Oregon Mechthilde and Carnation Matador Ada Segis; 3, State hospital on Steilacoom De Kol Colantha; 4, Hamilton on Newaukum Burke Segis; 5, Nisbet on Newaukum Lunde Segis. Senior yearlings—1, 2 and 3, Carnation Stock Farms on Carnation Matador Coquette, Carnation Matador Nena and Carnation Matador Wietske; 4, Hamilton on Newaukum Jessie Jelkje; 5, Nisbet on Kitsap Molly Segis Walker. Junior yearling—1, State hospital on Steilcoom Bonnie Ormsby Lass (junior champion); 2 and 4, Carnation Stock Farms on Carnation Matador Christmas and Carnation Matador Sylvia Lizzie; 3 and 5, Hamilton on Newaukum De Kol Segis and unnamed. Senior calf—1 and 3, State hospital on Steilacoom Molly Ormsby Hengerveld and Steilacoom Blossom Zanke Mercedes; 2, Nisbet on Olympic Greenbank Queen; 4, Carnation Stock Farms on Carnation Sylvia Perfect Johanna; 5, Hendrichsen on unnamed. Junior calf—1, Hamilton on unnamed; 2, State hospital on Steilacoom Jewel Pontiac Korndyke; 3, Hendrichsen on unnamed; 4 and 5, Carnation Stock Farms on Carnation Matador Newman and unnamed.

Aged herd—1, Carnation Stock Farms; 2, State hospital; 3, Nisbet. Young herd—1, State hospital; 2, Carnation Stock Farms. Calf herd—1, State hospital; 2, Carnation Stock Farms. Get of sire—1 and 3, Carnation Stock Farms; 2, State hospital. Produce of dam—1, Carnation Stock Farms; 2, State hospital; 3, E. A. Donaldson, Adna.

Guernseys.

The splendid size and quality of the Guernsey show reflected the remarkable development of this breed in this territory. In 1920 there was one lonesome Guernsey on the grounds; this year there were four herds, totaling 55 head—all, however, from outside the county. A. L. Gile of Chinook was heaviest winner, taking

(Continued on page fourteen.)



The picture shows the boys of the Jersey bull calf club as they were lined up in the show ring. Floyd Morton is at the head; William Rinka, second; Eino Laakso, third; Charles Rinta, fourth, and Archie Laakso, fifth. The boys judged Jersey cows, and the one having made the most improvement in his calf since the organization of the club was presented with a Jersey heifer by the Lewis County Jersey club, besides the prizes won in the club calf class and the open Jersey class. The picture was taken by Demonbrun.



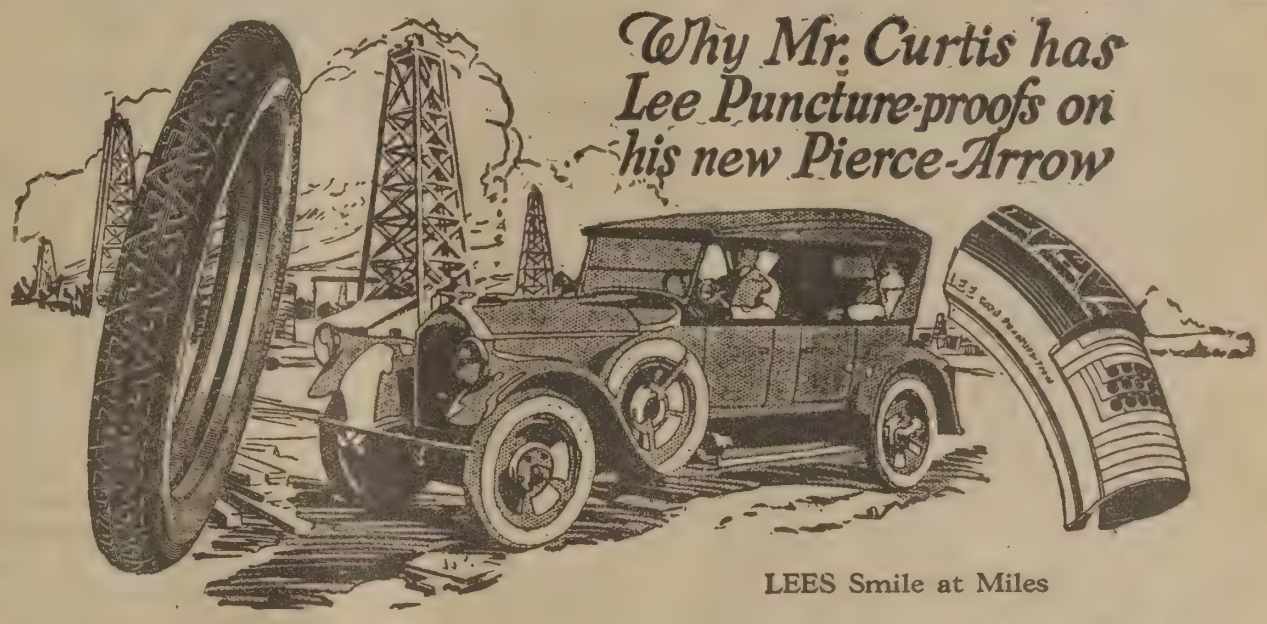
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IN this letter, Mr. Ed. T. Curtis, of Curtis & Wells, Kansas City Live Stock Commission Merchants, sums up the feeling of security enjoyed by Lee Puncture-proof tire users, everywhere.

Lee Puncture-proofs are the only pneumatics especially adapted to automotive equipment on the farm. Every farm vehicle, including passenger car and truck, is used for business, and it has long ago been proven that every business car gains efficiency from Puncture-proof tire equipment.

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POULTRY AND RABBITS

Efficient Producer

Investigations lead the farmer to consider which is the most efficient producer—the cow, the hog, the sheep, the beef animal or the hen. In other words, which animal produces the most human food for every pound of feed eaten?

If we take the total product, the cow will, of course, produce more food than any other animal. The product of the milch cow is measured by several thousand pounds in a year. But a pound of milk can not be compared with a pound of meat or of eggs, either in food value or in market value. The reason is that the cow is thrifty and adds considerable water to the milk. In 100 pounds of milk there are only 14 pounds of solids. There is more or less moisture in all animal products. In eggs, for instance, there is some 66 per cent of moisture and in meats there is considerable moisture. The total product, therefore, is not a good basis on which to figure. The solids in the food, or that which remains after the moisture is extracted, is a better basis.

Dr. Jordan of the New York experiment station some years ago, in comparing a Leghorn hen, weighing 3 1-2 pounds and laying 200 eggs in a year, with a cow that weighs 1000 pounds and produces 7000 pounds of milk, said:

"If you take the dry matter of the hen and compare it with the dry matter of the eggs she lays in a year there will be 5 1-2 times as much dry matter in the eggs as in her whole body. The weight of the dry matter in a cow's body will be to the weight of the dry matter in the milk as 1 to 2.9. In other words, based upon the dry matter, the hen does nearly twice as well as the cow. I suspect that the hen is the most efficient transformer of raw material into the finished product that there is on the farm. Her physiological activity is something remarkable, so in that particular the hen stands in a class by herself."

It is another question, of course, as to what kind of live stock or fowls eat the most feed to produce a given amount of product. This varies with different classes of stock and also with different individuals of the same kind of stock. A flock of fowls at one of the experiment stations produced in a year an average of 180 eggs per hen weighing 22 pounds. In this case it required four pounds of feed to produce a pound of eggs, not counting the green feed. This means, roughly, that a pound of feed costing about 3 1-2 cents produced 5 cents' worth of eggs, with eggs at 30 cents a dozen.

Good laying hens, therefore, are efficient and profitable transformers of raw material into finished food product, and they should be given every consideration when the question of supplying foods is being discussed.

As to the relative value of different kinds of food, the campaign literature is not always to the point. Many writers and speakers refer to calories and compare different foods on the basis of heat units. That is one function of foods, to produce heat in the body. But foods must furnish materials for building and repairing bodily tissue. They must furnish bone and flesh to cover the bone. The material for building up and keeping up the body is more important than the material for furnishing the heat, because it is more costly. The heat-producing elements, which are the starches, come from such foods as corn, which has a high percentage of heat-producing elements. The flesh-forming elements are not so abundant. They comprise about 10 per cent of the corn, while there is some 80 per cent of the heat-producing compounds. The feeder must purchase meat foods and other high-priced foods that are rich in protein or flesh formers to make the balanced ration.

So it is not a question altogether or primarily of heat units or calories; it is more a question of protein and protein compounds, and also of mineral matter. If we want heat units we eat corn and fats; if we want flesh formers we eat lean meats and eggs.

There are many things in foods that chemistry does not tell us about. They tell us, for instance, that there is a certain amount of protein in certain foods, but then what is protein? It is made up of other compounds the functions of which have not been clearly defined. Why, for instance, does protein from grains give a certain result, and the protein from meat give another result in egg production? When the chemists can tell us all about the different compounds of protein and their functions in human food we will be better able to decide on the comparative merits of different kinds of food.

Meantime the high nutritive value of the egg is properly appreciated. They constitute the only nourishment in certain hospital cases, and the egg has not a high caloric value. It nourishes the body; the heat units can be secured from cheaper foods.

Young Turkeys Die

By W. D. BUCHANAN, Poultry Extension Specialist, Washington State College.

Can you tell me what the matter is with half-grown turkeys that droop around for from 12 to 24 hours and then die? No other sign of ill health.

Mount Vernon, Wash. MRS. C. B. M.

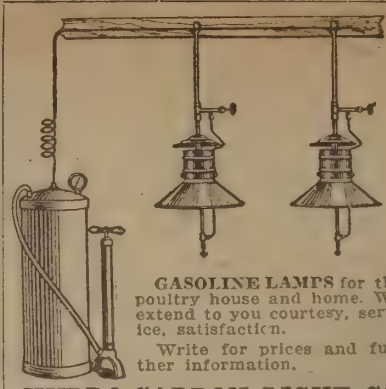
Young turkeys sometimes droop and die from mites if closely housed, and from lice if the mother happens to be badly infested. There is a disease known as blackhead which causes them to droop in this way, but they usually last a week or two. This disease is usually accompanied by a greenish-white or yellowish-green diarrhea. There is said to be no cure for it, but feeding lightly dry grain and giving plenty of range certainly tends to prevent it. The trouble might be due to spoiled or putrid milk. If so, a dose of epsom salts would help. Use one ounce to a gallon of water. If lice are present, powder with sodium fluoride.

Keep Only Vigorous Pullets

Whether we can pick out the pullets that are the best layers or not is a question, but any poultryman can do a little culling that will eliminate some poor layers. There are always some pullets in every flock at this season of the year that show marked lack of vigor, and they should be mercilessly culled. It does not require an expert to do culling of this kind. Those showing decided lack of development, or the runts, as they are called, should be given short shift. Cull for vigor or apparent vigor. Don't feed high-priced feed to the runts.

FEED THE MITES OIL.

Round roosts are all right for young chicks—the round roost is the natural one. But round or square, and no matter how clean you keep them, mites will gather unless they are regularly sprayed. A good shingle oil applied twice a year, has been found to be one of the best mite preventatives on the market, according to the state college authorities.



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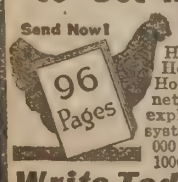
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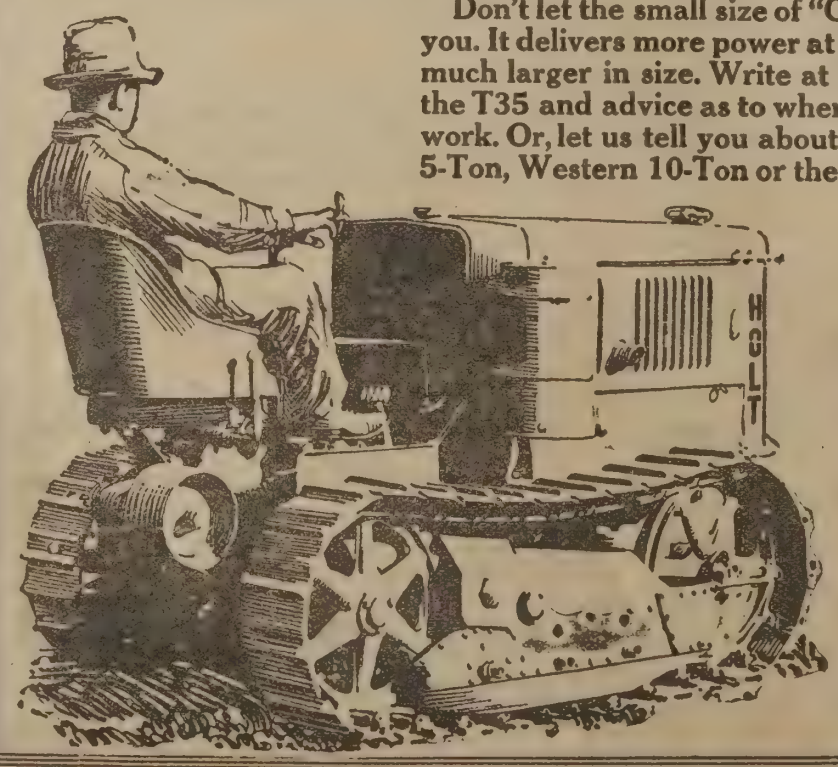
Endurance

There's only one Caterpillar Holt builds it

"Caterpillar" T35 Tractor conclusively proves that neither power nor endurance need be sacrificed to produce a tractor of small size and light weight. The T35 weighs but 4000 pounds and measures only 48 inches wide, yet it has 15 drawbar horsepower and maintains the same high standard of economy, dependability and endurance that have always marked Holt products. Better qualities of steel, improved methods of heat-treatment, advanced design, enabled Holt to make this achievement—the supreme small tractor.

Other factors contributing to T35 endurance are the exacting standards of accuracy in workmanship; the perfect system of lubrication—full force-feed for the motor, oil baths for gears, Alemite fittings in place of grease cups; complete enclosure of all working parts from dust and dirt; simplicity; easy accessibility; numerous other features.

Don't let the small size of "Caterpillar" T35 Tractor mislead you. It delivers more power at the drawbar than many tractors much larger in size. Write at once for full information about the T35 and advice as to where you can see it on display or at work. Or, let us tell you about larger "Caterpillar" Tractors—5-Ton, Western 10-Ton or the big-power 75.



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ORCHARD AND GARDEN

Makes Orchard Pay

West Side Man Prunes Carefully

The fact that a West Side orchard can be made a paying undertaking is being demonstrated by G. S. Ford of Gig Harbor, who has 10 acres of Italian prunes and practically the same acreage of apples. Careful pruning methods have been carried on in this orchard ever since it has been producing a crop.

Mr. Ford believes in the use of spray to keep out insect pests and fruit diseases. He has a large power spray machine and sprays for codling moth, brown rot and other diseases.

The entire 10 acres of prunes are the Italian variety, and are planted on the hexigon plan, the trees being 16 feet apart, thus making 195 trees to the acre. The trees are 30 years old and the orchard has received clean cultivation, which is done with the tractor in order to conserve moisture. Cultivation is stopped, however, when the fruit has formed. This allows the wood to harden and food material to go to fruit instead of being used for twig growth, according to Mr. Ford.

Mr. Ford has about 500 White Plymouth Rock hens, which are housed in the orchard to furnish fertility to the soil. This method has, however, resulted in the supply of a large amount of nitrogen, which has furnished a good growth of foliage on all prune trees. There seems to be something lacking in the growth of the fruit itself, according to Mr. Ford, and he intends to move the hens and plant the entire orchard to vetch, which will be plowed under in the early spring to supply humus.

In addition, Mr. Ford intends to prune the trees heavily this winter, which will result in larger sized fruit the following year. There is a disadvantage to heavy pruning, however, inasmuch as the wood growth continues until late in the fall and sometimes winter-kills badly. This can be partly checked by stopping cultivation in midsummer.

Practically all the prune crop is handled on the farm by means of a prune drier, which dries 6000 pounds a day.

At one corner of the apple orchard Mr. Ford is erecting a storage house, which will measure 24x40 feet. This house is built after government specifications, having double walls covered with tar paper to keep out moisture and extreme temperatures. Ventilation is furnished by means of large cracks in the floor, and ventilators at the roof. The house will have a capacity of 3000 boxes.

The packing room is being built at one end of the building and will measure 12x24 feet. All of the fruit will be brought in to this part of the building, sorted and packed before being stored in the main house.

Mr. Ford expects to handle his entire crop in this building, part of which will be stored until midwinter.

Cutting the Vines

There has been some discussion among growers of strawberries as to whether the cutting of the vines after the crop is off will make a marked difference in the successful crop. J. W. Peterson of Edgewood, Pierce county, is trying out an experiment to determine if there is any difference in the yield the following year when the vines are cut at different times during the summer.

"It is the custom to cut the vines immediately after the crop is taken off," said Mr. Peterson, "but some growers argue that it makes little difference and that it is just as well to wait until a month later. I am making the test on a patch of one-half acre of Marshlls, five rows of which were cut immediately after the crop had been harvested and the remaining three rows were cut a month later with the exception of one row, which was left for a check row."

The demonstration is being carried out under the direction of M. D. Armstrong, the extension horticulturist of the state college, who told Mr. Peterson that the question of the check row made very little difference with the trial. The fact is well known that cutting the vines has a great influence on the plants and puts them in better shape for the following season.

Mr. Peterson reports the strawberry crop as being as good as any in that section of the county this year, which was approximately 200 crates to the acre. This is considered about half a crop and is due largely to the dry weather.

INCREASES BERRY PRODUCTION.

Speaking of the benefits of the complete commercial fertilizer for berry crops, J. A. Buckley of Rochester, Thurston county, Washington, says that by the use of a fertilizer testing 3-10-4 (nitrogen, phosphorus and potash) he produced 250 crates to the acre during the short season. Similar crops on nonirrigated, untreated land in the section are reported as producing from 150 to 200 crates to the acre.

Constant Cultivation

"It is the general opinion of the people in the lower valleys that we 'hill billies' can not raise berries," remarked G. C. Towne of the Thrift community in Pierce county. "We have, however, succeeded in raising an excellent crop of raspberries, and believe that with proper cultural methods we can produce as good yields as are obtained in the lower valleys."

"We already have one acre of red raspberries, the larger part of which are Cuthberts, but we intend putting in another acre next spring. We will also put in an acre each of logans and blackberries. We are using all of our own plants for setting, since they are all in good shape in spite of the dry weather.

"As for production, we estimate that the Cuthberts produce all the way from one to two tons to the acre, while the Antwerps will yield nearly four tons to the acre. All of the canes have grown to a great height, some of them being over eight feet tall.

"Both the cane growth and the berry yield has been due largely to the constant cultivation of the entire patch. We find that one cultivation will almost double the size of the berries in 24 hours," said Mr. Towne. "The soil is a sort of a clay loam with very little, if any, gravel spots. We have not fertilized heavily as yet, but have used some barnyard manure with excellent results."

Trees Are Often Crowded

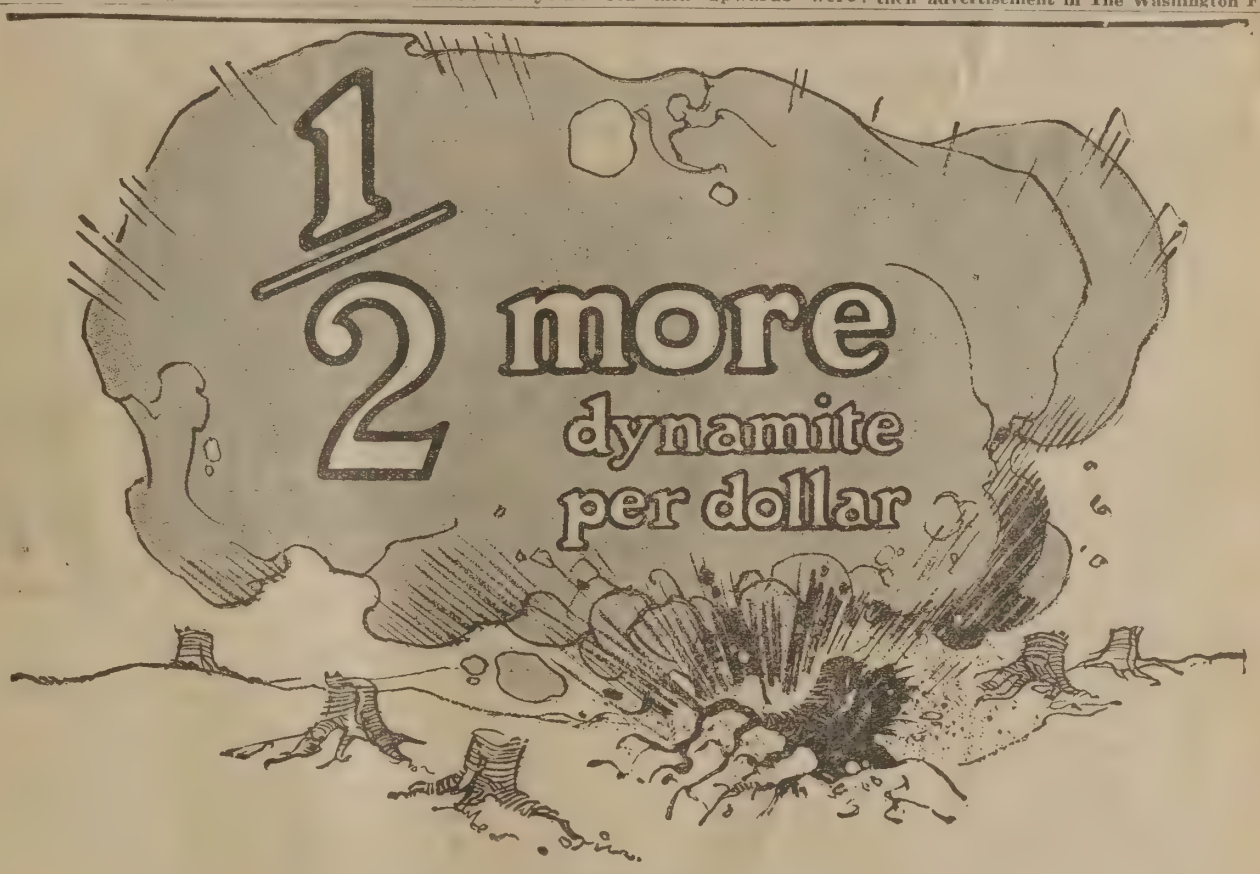
Soil Expert Roy Larsen and County Agent William Meikle of Wenatchee, in following up the work of the recent state horticultural summer meeting, have been holding demonstrations to impress upon the growers the necessity for thinning out their orchards, either by severe pruning or by taking out some of the trees. Orchards 15 years old and upwards were visited where the trees are from 22 to 25 feet apart and the trouble from crowding was pointed out. On the other hand, the Dr. Ford orchard, on Red Apple road, was used as a demonstration of what can be done with trees 40 feet apart. This orchard is now yielding as much as the best average tract, though only containing about 40 trees per acre. They have spread sufficiently to cover the entire ground.

Figures prepared by County Agent Meikle show that over 2500 tons of fertilizer have been used on Wenatchee valley orchards, costing the growers $200,000. This is one of the best investments they have made, in Mr. Meikle's opinion.

OIL PAPER WRAPS.

Two cars of oil fruit wraps have just been sold to Yakima fruit growers. The two cars represent a total of 80,000 pounds and nearly every shipper in Yakima made a purchase to test the merits of this fruit wrap. It is claimed that these wraps offer a solution for many of the problems of fruit storage. It not only prevents scald, but it is claimed fruit with the oil wrap can be held in storage without deterioration for six months to a year longer than with the ordinary fruit wraps.

In writing advertisers, be sure to say you saw their advertisement in The Washington Farmer.



Save Money

on your land-clearing this fall!

DU PONT CHEMICAL ENGINEERS have cut your land-clearing costs by producing Pacific Stumping Powder, the cheapest and best farm dynamite yet made. Use it and save money.

Equal approximately in strength to any standard stumping powder, stick for stick. Non-headache. Non-freezing. And for 50 cents more than the cost of 85 sticks of a standard stumping powder you get 130 sticks of Pacific Stumping Powder—one-half more per dollar.

Go to your hardware dealer or general store and order your fall supply—and remember that you can blast stumps with Pacific Stumping Powder in any season of the year.

Write for free booklet "The Development of Logged-off Lands", a complete manual covering the latest blasting methods.

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Spokane Seattle Portland

Ask your County Agent how the Federal Farm Loan System will help you clear your land.

NON-HEADACHE DU PONT NON-FREEZING

PACIFIC

STUMPING POWDER

Southwest Fair Wins

(Continued from page eleven.)

eight blues. W. O. Reith of Astoria, Ore., won four, also senior and grand champion bull on a dandy 2-year-old. Three animals, all famous for both type and production—Jewel of Rose City, La France of Bralee and Sammamish Topsy—ranked one, two, three in the aged cow class, the first mentioned becoming grand champion. The junior female championship went to Gile also, while that on bulls was taken by a son of La France, owned by Dr. A. Macrae Smith of Bellingham. The awards:

Bulls, 3 years or over—1, A. L. Gile, Chinook, on Chicona Buster; 2, Dr. Park Weed Willis, Seattle, on Chicona Hero; 3, Dr. A. Macrae Smith, Bellingham, on Glendale May King. Two-year-old—1, W. O. Reith, Astoria, Ore., on Glenwood Sequel's Lad (senior and grand champion). Yearling—1 and 3, Willis on Chicona Victory and Glenwood's Jolly Tar of Orchard Hill; 2, Reith on Squire's Noble Lad of Willowood; 4, Gile on Chicona Pete. Senior calf—1 and 3, Smith on Fircrest of France Rival (junior champion) and Fircrest Leader; 2, Reith on Willowood Buttermaker; 4, Gile on Chicona Luke. Junior calf—1, Smith on Fircrest French Boy; 2, Reith on Willowood Bill Chene; 3 and 4, Gile on unnamed and Sir Frederick on Pleasant View; 5, Willis on Topsy's Captain Barlow of Orchard Hill.

Females, cow 4 years or over—1, Gile on Jewel of Rose City (senior and grand champion); 2, Smith on La France of Bralee; 3 and 4, Willis on Sammamish Topsy and Sammamish Roxy; 5, Reith on Elaine of Chicona. Three-year-old—1 and 3, Reith on Lily's Blossom of Willowood and Billy's France Lucy of Chicona; 2, Willis on Katydid of Orchard Hill. Two-year-old—1, Smith on Fircrest Prexy Maid; 2, Gile on Belladonna of Chicona; 3 and 4, Reith on Rose Girl of Oregon and Sequel's Lady of Willowood; 5, Willis on Glenwood's Fireply of Orchard Hill. Senior yearling—1, Gile on Doris of Chinook (junior champion); 2 and 3, Smith on Fircrest La France Pride and Fircrest May Blossom; 4, Reith on Billy's Alma Chene of Willowood; 5, Willis on Glenwood's Bright Light of Orchard Hill. Junior yearling—1, Gile on Sunlight of Chicona; 2 and 3, Smith on Wanda Topsy of Orchard Hill and Flossy Topsy of Orchard Hill; 4, Reith on Butter Girl of Willowood. Senior calf—1, Reith on Jewel Chene of Willowood; 2 and 4, Gile on Diana of Chicona and Lavinia of Chicona; 3, Willis on May King's Golden Glow of Orchard Hill. Junior calf—1, Reith on Billy's Alma Chene of Willowood; 5, 3, Gile on unnamed; 4 and 5, Smith on fircrest Merry Dame and Fircrest Little Jewel.

Aged herd—1, Gile; 2, Reith; 3, Smith. Young herd—1, Gile; 2, Smith; 3, Reith. Calf herd—1, Gile; 2, Willis. Get of sire—1, Gile; 2, Reith; 3, Smith. Produce of dam—1, Reith; 2, Gile; 3, Smith.

Ayrshires.

With the exception of one cow and a baby calf, E. W. VanTassell of Wenatchee was the only exhibitor. His herd was in charge of H. Howland and showed the result of careful fitting. They made a distinct addition to the great dairy show. Senior and grand championship on bull went to Queen's Scotland Cavelier and the same honor on cow went to the grand matron, White Muriel of South Farm. Both junior champions are of VanTassel's own breeding, the bull being Wenatchee Snow King and the heifer Wenatchee Cherry.

THE BEEF CATTLE SHOW.

With not only the largest beef cattle show, but with more quality than ever before, the necessity for a new barn was emphasized. The old horse barn was utilized and two tents were required to hold the overflow. Shorthorns had the largest numbers, and, while some of the sale cattle were hardly in condition, some of the best Shorthorns the fair has ever seen were shown. Most notable was J. D. McGuire's great young bull, Hercules Model, that was made junior and grand champion.

Shorthorns.

Bulls, 3 years or over—1, George Bertrand, Castle Rock, on Max Mill Criterion (senior champion); 2, W. W. Sharp, Stettler, Alta., on Lancaster Pride; 3, J. D. McGuire, Tenino, on Mayflower King. Two-year-old—1, Sharp on Royal Lancaster. Yearling—1, McGuire on Hercules Model (junior and grand champion); 2, Bertrand on Criterion 2d. Senior calf—1, Bertrand on Criterion 3d; 2 and 3, Sharp on Lancaster Earl and Beaufort Chief. Junior calf—1 and 2, McGuire on Oak Grove Perfectio and Oak Grove King; 3, Sharp on Lancaster Comet; 4, Bertrand on Criterion 4th.

Females, cow 4 years or over—1 and 2, McGuire on Hercules Rosalind and April Hopes; 3, C. B. Schmidt, Olympia, on Roselawn Pansy; 4 and 5, Bertrand on Roan Welcome 8th and Bessie Lass. Three-year-old—1 and 2, McGuire on Roan Lady and Escana Lady; 3 and 4, Bertrand on Cornerstone Mysie and Chief's Jewel. Two-year-old—1, Sharp on Craven Mysie (senior champion); 2, McGuire on Chief's Hope; 3, Bertrand on Daisy Velveteen. Senior yearling—1, Sharp on Beauty Anoka (junior and grand champion); 2, McGuire on Hercules Missie 3d; 3 and 4, Bertrand on Red Velveteen and Walsome Velveteen. Junior yearling—1 and 5, McGuire on Mayflower Rose and Mayflower Hope; 2, Bertrand on Erma Criterion; 3 and 4, Sharp on Wimple's Maid and Kilbane Beauty 12th. Senior calf—1 and 4, Sharp on Columbia's Pride and Kilbane Beauty 14th; 2, McGuire on King's Hope; 3, Bertrand on Roan Welcome 32d; 5, Schmidt on Roselawn Snowball. Junior calf—1 and 2, McGuire on Oak Grove Melba and Oak Grove Lady; 3, Bertrand on Daisy Criterion 2d.

Aged herd—1, Sharp; 2, McGuire; 3, Bertrand. Young herd—1, McGuire; 2, Sharp; 3, Bertrand. Calf herd—1, McGuire; 2, Sharp; 3, Bertrand. Produce of dam—1 and 2, McGuire; 3, Bertrand.

Herefords.

The Hereford show was a good one, with competition strong between a Canadian herd and one from Oregon. Alberta Panama 2d, belonging to Boggs & Sons of Daysland, Alberta, was a worthy senior and grand champion bull, while Bonny Lady Panama, senior and grand champion female from the same herd, could have competed creditably in a larger show.

Bulls, 3 years or over—1, O. A. Boggs & Sons, Daysland, Alta., on Alberta Panama; 2, Diamond B Ranch, Lowell, Ore., on Don Fairfax. Two-year-old—1 and 2, Boggs on Alberta Panama 2d (senior and grand champion) and Melrose Perfection. Yearling—1 and 2, Boggs on Dudley's Panama (junior champion) and Alberta Panama 3d. Junior calf—1 and 2, Diamond B Ranch on Oregon Gomez and Choice Gomez.

Females, cow 4 years or over—1, Boggs on Miss Panama; 2, Diamond B Ranch on Pearl Fairfax. Three-year-old—1 and 2, Boggs on Bonny Lady Panama (senior and grand champion) and Lady Panama 2d. Two-year-old—1, Diamond B Ranch on Betty Blanchard 35th; 2, Boggs on Miss Fairfax Panama. Senior yearling—1, Diamond B Ranch on Ilkah Fairfax. Junior yearling—1 and 2, Boggs on Miss Columbus Panama (junior champion) and Lady Panama 3d; 3, Diamond B Ranch on Lady Pesold. Junior calf—1, Boggs on Miss Panama Perfection; 2, Diamond B Ranch on Lady Gomez.

Aged herd—1, Boggs; 2, Diamond B Ranch. Get of sire—1 and 2, Boggs. Produce of dam—1 and 2, Boggs.

Aberdeen Angus.

Two herds of Aberdeen Angus, both extremely well fitted, gave a representation of the black breed to be proud of. That the local herd of J. A. Scollard could secure a fair share of the ribbons against the great McGreggor herd of Brandon, Manitoba, is greatly to its credit.

Bulls, 3 years or over—1, J. D. McGregor, Brandon, Man., Can., on Pride 2d of Page (senior and grand champion); 2, J. A. Scollard, Chehalis. Two-year-old—1, Scollard. Yearling—1, Scollard; 2, McGregor. Senior calf—1, McGregor; 2, Scollard. Junior calf—1, McGregor, on Blackbird McGregor (junior champion); 2, Scollard.

Females, cow 4 years or over—1, McGregor; 2, Scollard. Three-year-old—1, McGregor; 2, Scollard. Two-year-old—1, McGregor on Kamara of Glencarnoch (junior champion); 2, Scollard; 3, McGregor. Senior yearling—1, Scollard on Blackcap of Broadmeade (junior champion); 2, McGregor. Junior yearling—1, Scollard; 2, McGregor. Senior calf—1, McGregor; 2 and 3, Scollard. Junior calf—1, McGregor; 2, Scollard.

Aged herd, young herd, calf herd and get of sire—1, McGregor; 2, Scollard. Produce of dam—1, Scollard; 2, McGregor.

Milking Shorthorns.

Milking Shorthorns had no less than four exhibitors. The Northwood herd, from Redmond, Wash., was best fitted and won the lion's share of blues, but this dual purpose breed made a show to be proud of.

Bulls, 3 years or over—1, Northwood farm, Redmond, on Gretna Challenger (senior grand champion). Two-year-old—1, Northwood farm on Northwood Defender; 2, E. C. Truesdell Centralia, on Fancy Jeweler. Yearling—1, Northwood farm on Northwood Pride; 2,

(Continued on page twenty.)

Paying Positions GUARANTEED

ENROLL NOW
For
BUSINESS COLLEGE

Make yourself a winner by taking a business college course at the great Behnke-Walker Business college. We have graduated thousands and NOT ONE GRADUATE IS OUT OF EMPLOYMENT who wishes to work. We give every graduate a position.
WRITE FOR SUCCESS CATALOGUE.

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PORTLAND, ORE.

In writing advertisers, be sure to say you saw their advertisement in The Washington Farmer.



"It's a Truck *All* Through"

Built entirely of truck parts, fast, staunch and enduring, the Model K-16 One Ton GMC truck is always ready to travel.

Every unit in it is of extra size and is designed for truck use only. That is why it lasts indefinitely under the hardest usage.

That is what makes it a "Jim Dandy" for the farm. It has the ruggedness, the power and the simplicity that makes it deliver more continuous haulage than other trucks over the roughest roads and under the severest hauling conditions.

This GMC has a number of exclusive improvements that both increase its operating efficiency and reduce the time and expense of maintenance. Such features as Removable Cylinder Walls, Pressure Lubrication, Removable Valve Lifter Assemblies and Instantaneous Governor Action help to produce a new and better kind of motor truck operation.

It has radius rods—recognized as essential to enduring truck construction—which take the driving thrust and absolutely keep the brake adjustment fixed whether the truck is loaded or empty. It has magneto ignition, recognized as the simplest, most reliable type.

It has both pump and thermo-syphon cooling. It has electric lights and starting equipment—separate from the ignition and wired in metal conduits. It has pressure chassis lubrication, demountable rims, cord tires and every other refinement essential to a high grade, dependable motor truck.

Write for an illustrated booklet "Motor Trucks On the Farm."

A "Jim-Dandy" Truck
Model K-16 One Ton
$1295
Chassis Only—At the Factory

GMC Chassis list at factory as follows: One Ton, $1295; Two Ton, $2375; Three and One-half Ton, $3600; Five Ton, $3950; tax to be added

GENERAL MOTORS TRUCK COMPANY—*Pontiac, Mich.*
Division of General Motors Corporation
Dealers and Service in Most Communities

General Motors Trucks

Shall Ford Develop Muscle Shoals?

(Continued from page nine.)

bers of the commission. Before such appointees can act they must be confirmed by the United States senate. Should any of these organizations cease to exist without legal successor during the lifetime of the lease or should such organizations fail to make nominations for membership to the commission, the secretary of agriculture shall make such nominations.

Regarding the Gorgas power plant, Mr. Gray justifies its inclusion in the deal on the ground that it is necessary to permit the Ford company to begin operation of the present plants at once without waiting for the completion of the dam that will later make water available.

Mr. Gray expressed the opinion that the senate probably will reach a vote on this measure early this fall.

HELP WANTED—MALE 3

MEN WANTED AT ONCE TO FILL GOOD POsitions. You can qualify in few weeks. Experience unnecessary. Free employment department. Write for free catalogue 100-B, and rates. Modern Automobile and Tractor Schools, W1803 Third ave., Spokane, Wash., or 700 Mercer st., Seattle.

WANTED — SALESMAN WHO CAN SELL high-grade, dependable nursery stock; several counties in Oregon, Wash., Idaho and Montana now open for assignment. Our selling contract will interest you. Address Albany Nurseries, Inc., Albany, Ore.

WANTED—MEN WITH HORTICULTURAL experience to sell our dependable nursery stock; have select territory for immediate acceptance. Write for particulars. Capital City Nursery Company, 426 Oregon bldg., Salem, Ore.

WANTED—WITH HOLSTEIN COWS. A dairyman, single, that is capable of feeding, milking and weighing for test; steady work. W. E. Boner, Joseph, Ore.

FRESH FOOD PRODUCTS 51-1

"HONEY BRAND" HONEY — ALFALFA, sweet clover product; pure, light, thick, good flavored; gives satisfaction wherever used; 1 60-lb. can, $7.50; discounts on larger orders. Write for circular and prices in pails. Oliver Sires, Wapato, Wash.

HONEY—400 TEN-LB. PAILS CHOICE ALfalfa, sweet clover honey; also 60-lb. cans and 5-lb. pails; discount on five-case orders or more. Write for prices and sample. Wm. R. Sires, Wapato, Wash.

WHITE ALFALFA, SWEET CLOVER honey; 1 60-lb. can, $7.50; 2 60-lb. cans, $14.50; six 10-lb. cans, $8.50; three No. 10 pails, prepaid, third zone, $5.50. Wells D. Rose, Sunnyside, Wash.

NEW HONEY, FINE QUALITY ALFALFA, sweet clover; 60-lb. can prepaid, second zone, $7.29; two, $12.75; not prepaid; 3 10-lb. pails, prepaid, second zone, $4.25. Harry Fisher, Prosser Wash.

POPULAR BRAND HAPPY HOME HONEY—One 60-lb. can, $6.50; two cans, $12.75; six 10-lb. pails, $7.50; comb honey prices on request. H. N. Paul, Mabton, Wash.

FINEST NEW HONEY, 60 POUNDS, $7.50; 2 cans, $14.40; add postage; 10 pounds, $1.90; 5 pounds, $1 prepaid; satisfaction guaranteed. Geo. Bancroft, Hermiston, Ore.

NEW CROP ALFALFA-SWEET CLOVER honey; 60-lb. can, $4.75; two cans, $9 f. o. b. Rigby. Heckman & Larsen Honey Co., Rigby, Idaho. Quality guaranteed.

NEW CROP ALFALFA-SWEET CLOVER honey, clean and sanitary. 60-lb. can, $7.50; 2 60-lb. cans, $14.50; at Sunnyside. S. King Clover, Sunnyside, Wash.

DELICIOUS NEW CLOVER HONEY, 60 pounds, $5.50; two 60s, $9.75; six 10s, $6.75; 12 5s, $7. Agents wanted. Browne, Box 499, Twin Falls, Idaho.

NEW HONEY—ALFALFA AND SWEET CLOver; 1 60-lb. can, $6.50; two, $12.75; discount on large quantities. Ernest Sires, Yakima, Wn.

3-POUND BOX ABSOLUTELY BONELESS codfish; fine white, new catch fish, delivered by mail, $1. Coffin Fish Co., Seattle, Wash.

HONEY — FRESH ALFALFA-SWEET CLOVer honey; one 60 lb. can, $6.50; two cans, $12.75. A. L. Traner, Touchet, Wash.

HONEY — WHITE CLOVER EXTRACTED; none better; two sixty-pound cans, $10. J. M. Ruyts, Buhl, Idaho.

COMB HONEY AT $4.40 PER 24-LB. CASE, express not prepaid. G. I. Folsom, Route 1, Prosser, Wash.

MISCELLANEOUS—FOR SALE 60

SASH AND DOORS—O. B. WILLIAMS CO., 1943 First ave. So., Seattle. Chicken house sash, 20" wide by 25" high, 80c; a dozen different sizes in stock for immediate shipment. Skylights for chicken houses, 36"x40"; price, glazed, $2. This is the size recommended by the Western Washington experiment station. We carry them in stock for immediate shipment. Sash and doors for all purposes at lowest prices. All orders receive prompt attention. Our large illustrated catalog No. 35, showing full line of building material and built-in fixtures for the home, free on request. O. B. Williams Co. Established 1899.

CORN HARVESTER CUTS AND PILES ON harvester or winrows; man and horse cuts and shocks equal corn binder; sold in every state; only $25 with fodder tying attachment. Testimonials and catalog free showing picture of harvester. Process Harvester Co., Salina, Kas.

SACKS—SECOND-HAND GRAIN AND SPUD, correctly sorted and graded; also pipe, new and second hand, any size; standard roofing paper at a big saving; pumps, engines, belting, cables, etc. Alaska Junk Co., Inc., S120 Adams st., Spokane, Wash.

KENTUCKY TOBACCO—3 YEAR OLD LEAF. Don't send a penny, pay for tobacco and postage when received. Extra fine chewing, 10 lbs., $3; smoking 10 lbs., $2.50; medium smoking, 10 lbs., $1.25. FARMERS' UNION, Hawesville, Ky.

WALL BOARD—WRITE FOR SAMPLE OF Washington plaster wall board; won't warp, won't burn. Manufactured by Washington Building Products company, 6851 E. Marginal Way, Seattle, Wash.

HOMESPUN SMOKING TOBACCO: MILD AND mellow; 10 lbs., $1.50; 20 lbs., $2.75; delivery guaranteed. We furnish free recipe for preparing. Smoking Tobacco Exchange, Sedalia, Ky.

NATURAL LEAF SMOKING TOBACCO—5 lbs., 75c; 10 lbs., $1.25; 20 lbs., $1.75. Cash with order. United Farmers, Mayfield, Ky.

TOBACCO — KENTUCKY'S PRIDE: EXTRA fine chewing, 10 lbs., $3; smoking, ten lbs., $2; twenty, $3.50. Farmers' Club, Mayfield, Ky.

FARMERS' WANT ADS

This is the farmers' "want," "sale" and "exchange" department for small advertisements of farmers, including live stock and poultry.

Advertising rates for ads running 1 to 3 times, 10c per word per insertion, with a special rate to Farmer subscribers, as follows: Ads running 4 to 12 times, 9c per word per insertion; ads running 13 times or more, 8c per word per insertion.

All commercial and land advertising 10 cents per word each insertion. Open also to nonsubscribers.

In using these columns advertisers must observe: (1) No advertisements will be inserted for less than $1.00. (2) Every word, number and initial, including name and address, must be paid for. (3) New advertisements, changes of copy or cancellations must reach general office, Spokane, Wash., 10 days in advance of publication date. (4) Cash must accompany order.

Above rates include insertion in The Washington Farmer, The Idaho Farmer and The Oregon Farmer, which constitute the Pacific Northwest Farm Trio, 46 Review Building, Spokane, Wash.

MISCELLANEOUS—FOR SALE (Continued) 60

NATURAL LEAF TOBACCO, CHEWING, 5 pounds, $1.75; 15 pounds, $4; smoking, 5 pounds, $1.25; 15 pounds, $3. Send no money, pay when received. Farmers' Tobacco Association, Paducah, Ky.

NATURAL LEAF TOBACCO, CHEWING, 5 lbs., $1.75; 10 lbs., $3; smoking, 5 pounds, $1.25; 10 pounds, $2. Send no money, pay when received. Tobacco Growers' Union, Paducah, Ky.

MISCELLANEOUS—Wanted. 63

HIDES—WE BUY HIDES OF ALL KINDS. Write for prices and tags. Hibbard-Stewart Co., Hibbard bldg., Seattle.

WOOL—WE BUY WOOL AND PELTS. WRITE for prices and tags. Hibbard-Stewart Co., Hibbard bldg., Seattle.

AUCTIONEERS 75

LIVE STOCK AUCTIONEER—SALES CONducted anywhere. Write for dates and terms. U. S. McFaddin, 1307 Maxwell, Spokane.

AUCTION SALES 78

BIG TYPE POLAND CHINA AT AUCTION—Oregon state fairgrounds, Friday, September 29. Entire herd owned by S. D. Steffy, Newberg, Oregon. Show winners, brood sows, service boar and young stock. Catalog giving full details is being published. Send to E. A. Rhoten, Salem, Oregon, sales manager, and one will be forwarded.

MACHINERY—For Sale 93

BUFFALO PITTS 30-50 SEPARATOR; CASE 12-60 engine, good shape; cheap or trade for dairy cows. S. T. Allgood, Route 2, Sandy City, Utah.

STOVE REPAIRING 128

WRITE MYER RUBENS, SPOKANE, ABOUT stove repairs, welding broken parts, nickle plating.

FUR-BEARING ANIMALS 170

SILVER AND CROSS FOXES FOR SALE. William Rambo, 407 Sprague, Spokane.

PETS—Dogs, Birds, Etc. 171

FOR SALE—YOUNG AIREDALE BLACK and tan mother, $10; pups, male, $10; female, $5. F. M. Rankin, 5704 Powell Valley road, Portland.

BEAUTIFUL WHITE COLLIE PUPPIES; reasonable prices. Urbandale Farm, Oakley, Idaho.

POULTRY 174

WHITE LEGHORN HENS, $1 EACH; 1000 two-year-old "Henacres" hens, clean, healthy, heavy laying, selected stock must go to make room for our pullets. Also 1000 yearling hens at $1.50 each. These hens will make good breeders for 1923. Orders accepted for ten or more at above prices. July or August delivery. Satisfaction guaranteed. Free catalog. "Henacres," the Inland Empire's greatest poultry farm, Box A, Prosser, Wash.

PULLETS—1500 APRIL AND MAY HATCHED White Leghorn pullets for sale at attractive prices; hatched from thoroughbred Hollywood and Tancred strains; sired by cockerels 250 to 290 egg strains. We ship at three months of age and guarantee satisfaction or you may return the birds in 3 days. We can give you quality and service. Queen Hatchery, Seattle, Wash.

CERTIFIED WHITE LEGHORN BABY chicks; booking orders now for summer and fall delivery; safe arrival live, vigorous chicks guaranteed; no money in advance; pay on delivery. Established 1898. Sonoma county farm bureau accredited hatchery. Must Hatch Incubator Co., 445 Seventh st., Petaluma, Cal.

POULTRYMEN — SEND EIGHT TWO-CENT stamps for special three months trial for the best and oldest exclusive poultry journal in the west. The articles and advertisements are of special interest to poultry breeders. Northwest Poultry Journal, Salem, Oregon.

WHITE LEGHORN BABY CHICKS. FROM free range Hoganized stock; breeding flocks inspected by Sonoma county farm bureau; accredited hatchery inspector. Full count and safe arrival guaranteed. For price write to Lafranchi Hatchery, Petaluma, Cal.

WHITE LEGHORN BABY CHIX FOR SUMmer and fall months from stock accredited by Sonoma County Farm bureau. We guarantee safe arrival. Write for prices and literature. The Pioneer Hatchery, 422 Sixth street, Petaluma, Cal.

FOR SALE—WHITE LEGHORN COCKERELS, top notchers. It's money saved to drop us a card stating what you wish. No money till you are satisfied. River View Yards, Box 108, The Dalles, Ore.

PUREBRED BABY CHICKS FOR 1923. LEGhorns, Reds, Barred Rocks, White Rocks, Minorcas, Anconas. Free catalog. Booking orders now. C. N. Needham, Salem, Ore.

BABY CHICKS — WE GUARANTEE OUR chicks to be from the highest producing hens in Petaluma. Write for further information. The White Hatchery, Petaluma, Cal.

DOLLARS FOR YOUR EGGS—WE PAY THE top market prices for your eggs and poultry. Daily cash remittances. Western Produce Co., Spokane.

ALLEN'S ROCKS AND LEGHORNS WIN, LAY and pay. Write your wants. D. W. Allen, La Conner, Wash.

LIVE STOCK 177

LARGE, HEAVY PRODUCING HOLSTEINS for sale at all times in car lots; tuberculin tested; 150 to 200 head always on hand; well marked heifer calves from registered sires and heavy producing dams; crated for shipment anywhere, $25 f. o. b. Levinson & Balmelli, Yakima, Wash.

WE PAY TOP PRICES FOR YOUR LIVE OR dressed veal, hogs and poultry. Your check by return mail. Shipping tags on request. M. & J. Packing Co., Spokane.

TOP FANCY LIGHT VEAL, 12½C. JONES AND Williams, S101 Division st., Spokane, Wash. Prices subject to fluctuations.

40 ANGORA GOATS, MOSTLY NANNIES, good condition; $2.50 each. Thos. Carmichael, Gaston, Ore.

LIVE STOCK (Continued) 177

WE GUARANTEE TO PAY THE HIGHEST market prices for your poultry and live stock. Owing to the constant changes in the market we are unable to quote prices in this paper from week to week. We will furnish tags and prices when you are ready to ship. Write us what you have to sell. Prompt returns. John Lewis & Co., Spokane, Wash.

REGISTERED JERSEY BULL, 3 YRS.; SURE breeder; fine individual, $150. Box 54, Route 2, Spokane.

WILL SELL 30 HEAD OF REGISTERED Shropshire rams. Write McK. Edwards, Valley, Wash.

FOR SALE—15 HEAD REGISTERED JERseys; St. Mawes breeding. H. D. Sears, Enumclaw, Wash.

BROWN SWISS FOR SALE—6 HEAD REGistered. Wm. Jacobs, R. 6, Albany, Ore.

200 YOUNG REG. HAMPSHIRE EWES: BARgain. C. E. Cleveland, Stanfield, Ore.

FOR SALE — 150 YOUNG COARSE WOOL ewes. Young Bros., Auburn, Wash.

FOR SALE—90 HEAD OF RANGE CATTLE. S. Carlisle, Pocatello, Idaho.

REGISTERED YOUNG O. I. C. PIGS FOR sale. Dr. Will, Puyallup, Wash.

HARNESS and SADDLERY 189

SEND FOR FREE HARNESS AND SADDLE catalog today; cut out the middleman, buy direct from the manufacturer. Lowest prices in the west; satisfaction guaranteed. Established 1881. Write Pierce Harness Co., Dept. T, Spokane, Wash.

HAY FOR SALE. 200

ALFALFA HAY, GUARANTEED QUALITY; prompt shipment; buy direct and save money. Prices upon application. Ernest T. Freepons, Walla Walla, Wash.

FAIRS 370

PACIFIC INTERNATIONAL LIVE STOCK EXposition, Nov. 4 to 11, 1922. Entries close noon, October 10. Send for premium list. O. M. Plummer, general manager, 211 Northwestern Bank bldg., Portland, Ore.

JOB PRINTING 372

GUARANTEED BETTER BUTTER WRAPpers: 100, 60c; 250, $1.25; 500, $2.25; 1000, $4; printed to order. Home Specialty Co., Middleton, Idaho.

MATERNITY HOMES 497

MATERNITY HOSPITAL; STRICTLY PRIvate; doctor in attendance; prices reasonable. Mrs. Elizabeth Peel, matron, W1324 Broadway, Spokane.

BUILDING MATERIAL 588

TO PATCH A HOLE OR BUILD A HOME, use Perfection Plaster wallboard. Easily handled with hammer and saw; fireproof, waterproof. Western Wallboard Co., Seattle, Wn.

BUILDERS, CONTRACTORS, HOME OWNERS, write for free 1922 catalog. Tacoma Sash & Door Co., Tacoma, Wash.

SEEDS 620

WHITE CLOVER SEED, 50C LB.; SAMPLE ON request. Pioneer Farm 1847, Carlton, Ore.

NURSERY STOCK 621

NURSERY STOCK, ITALIAN PRUNE TREES and trees of all kinds. Berries and small fruits of all varieties. Buy direct and save 50 per cent. Brooks Nursery, Lafayette, Ore.

FOR THE BEST IN PEONIES, IRIS, GLADIoli, perennials and Dutch bulbs for fall planting, write for free descriptive catalogue. Kimberly Nurseries, Kimberly, Idaho.

BULBS—NARCISSUS, DAFFODILS, CROCUS, iris, tulips, jonquils, 35c per dozen, mixed. Mrs. Mary Insel, Shelton, Wash.

FARM LANDS FOR SALE 651

FARM FOR SALE TO HIGHEST BIDDER—90 acres rich subirrigated bench land; close to Post Falls; 24 miles from Spokane; close to paved highway; 25 acres best varieties apples and peaches; 15 acres grain, more can be put in cultivation; unlimited outside range; small buildings; spring water; 1922 crop reserved; receive bids up to Oct. 1; bids must be accompanied by 10 per cent price bid. Reserve right to reject any or all bids. See Schilling, Grand View Fruit Farm, Post Falls, Idaho.

LOGGED-OFF LANDS IN STEVENS COUNTY, Washington, at greatly reduced prices. Most of land sells at $5 to $20 per acre; thickly settled community, good schools, hard surfaced and paved roads to Spokane; best county in state for dairy and stock raising; most places water can be found at shallow depths. Write for folder. Phoenix Lumber company, Dept. T, Spokane, Wash.

LAND FOR SALE—160 ACRES OF FINE farming land; 15 miles from Port Townsend, Jefferson county, Washington; near school and town; about 6 acres cleared; price $25 per acre. For particulars write Thomas J. Dundon, Ishpeming, Mich.

7000 ACRES SEQUIM LAND SETTLEMENT project, containing the finest berry and dairy land in the state, now offered for settlement at attractive prices and terms. Free booklet. Thos. G. Mortland, Sequim, Wash.

COAST RANCH FOR SALE—312-ACRE STOCK ranch; 25 acres slashed and in grass; house, barn, small orchard; 20 goats, 40 sheep, 10 head cattle; good hunting, fishing; terms. Alep Dowell, Mercer, Ore.

SACRIFICE—80 ACRES, WELL IMPROVED; lies level; running water; 60 ready fall seeding; 10 alfalfa, 10 tame pasture; easy terms. $12,000. Box 502, Toppenish, Wash.

20 ACRES; BIG HOUSE, OUTBUILDINGS; splendid location; city water; highway; cheap. Write for particulars. Norman Barney, Coeur d'Alene, Idaho. Route 2.

648-ACRE STOCK RANCH; SOUTHEAST IDAho; owner. Box 125, Freewater, Ore.

FOR SALE—MY DAIRY RANCH NEAR COOS bay. H. W. Sanford, Sumner, Ore.

20 OR 40 ACRES IMPROVED KENNEWICK land. Write Jacot, Finley, Wash.

FARM LANDS FOR SALE (Continued) 651

IRRIGATED FARMS FOR SALE—160-ACRE farms, improved or unimproved; 30 to 160 acres irrigable land on each parcel; near Lethbridge, in sunny southern Alberta, can be bought for $15 to $40 an acre. No need for pioneering. Well settled country, good roads, railways, schools, telephones; agreeable social conditions; fertile land; success of irrigation farming here already demonstrated; irrigation system being constructed under government supervision. Water available in 1923. Write for information concerning crops grown and description and location of farms to the province of Alberta, Irrigation Council, 12 Provincial building, Lethbridge.

CUTOVER LANDS, EASY TO CLEAR; $8 TO $20 per acre; 25 miles north of Spokane; on hard-surfaced highway; Great Northern and Milwaukee railways; excellent opportunity for dairying and stock raising, with Spokane markets and creamery near at hand. Will help the man who will live upon this land and agree to clear a part each year by giving lumber to help start his buildings, and a purebred Jersey bull to groups of farmers. Interest and payments low. Write Milan Farms Development company, Dept. T, Old National Bank bldg., Spokane, Wash.

VALLEY FARM LANDS AT ONALASKA, Wash.; productive silty clay loam, not gravelly, level, well watered; convenient markets, roads, etc.; 20 acres up, $15 to $50; small payments and $10 to $15 monthly; steady nearby employment assured purchasers. Salesman, Onalaska, or write Graham Land Co., 1008 American Bank bldg., Seattle.

BIG OPENING SALE OF YAKIMA VALLEY farm land, under an assessed state and government approved irrigation project; good, deep soil; close to town, railroads and state highway. We sell in tracts to suit purchaser at $25 per acre and up, on easy terms. Our many sales to farmers show that this land is a good investment. Western Lands, Inc., owners, 913 Green bldg., Seattle.

DAIRY FARM, 3 MILES FROM MARKET, coast and creamery; over 100 acres bottom land and 200 acres upland; fair buildings; 30 head cows, horses, hogs, poultry. $22,000 and $3000 will handle. A splendid opportunity for man with helping family. Farm will easily pay for itself. H. W. Tabor, Reedsport, Ore.

CALIFORNIA STOCK RANCHES, IN MENDOcino county; 4 kinds of acorns for hogs; plenty of grass and water; 50-in. rainfall; mild climate; 160 acres up. Prices $6 per acre up, as per improvements. No trades; easy payments; liberal terms. E. D. Baker, Nashmead, Cal.

CALIFORNIA FARMS—DELIGHTFUL LIVING conditions where farming pays; 10 to 20 acres is plenty; raising fruit, vegetables, poultry, grain, alfalfa, hogs, or dairying. Tell us what you want. Write free information dept., California Farm Lands Bureau, 1 Merritt Bldg., Los Angeles, Cal.

FOR SALE—450 ACRES DAIRY AND DRY stock farm; 150 acres cleared, balance seeded; all fenced; 100 a. bottom land; running water; good buildings; near paved road; $5000 down, balance on easy terms; will lease to responsible party. J. M. Dempsey, owner, Auburn, Wash.

BIG LUMBER CO. LAND SALE IN SKAGIT county; 40 acres, $1400; 20 acres, with new house, $1500. Lumber furnished for building. Lots of work for the settler; splendid district, roads, schools and towns. H. C. Peters, 726 3d ave., Seattle.

EIGHTY-ACRE RANCH, WELL FENCED; IN best condition for big crops; good house, bearing orchard, berries; 2½ miles to cream station; possession this fall. M. A. Tryon, owner, Hazelton, Idaho.

WINTER SHEEP RANGE FOR LEASE; 40,000 acres, western Franklin county; fine grass, 3 springs, lake, corrals. The Big Bend Land company, Spokane, Wash.

SELL YOUR PROPERTY QUICKLY FOR cash; no matter where located. Particulars free. Real Estate Salesman company, 501 Brownell, Lincoln, Neb.

FOR SALE—QUARTER SECTION, STEVENS county; partly cleared; good water. Further particulars address W. G. Bannerman, Chewelah, Wash.

TWO STOCK RANCHES; SMALL CASH PAYment; twenty years on balance; no agents. Box 21, Route 1, Central Point, Ore.

147 ACRES, FAIR BUILDINGS; SPRING WAter; some timber, $1200; terms. F. T. Drumhiller, Careywood, Idaho.

FARM LANDS—Wanted 654

WANT TO HEAR FROM OWNER HAVING farm for sale. Give particulars and lowest price. John J. Black, 80th st., Chippewa Falls, Wis.

FARMS WANTED — SELL YOURS QUICKLY for cash, no matter where. Particulars free. R. A. McNown, 310 Wilkinson bldg., Omaha, Neb.

WANTED—TO RENT STOCK OR GRAIN farm, by experienced farmer. Box 156, Northwood, N. D.

FARM LANDS FOR RENT 657

FOR RENT OR SALE—DAIRY OR STOCK ranch; 240 acres; 50 in hay; free range; good proposition. Box 82, Springston, Idaho.

DAIRY RANCH, HALF MILE TOWN. FOR particulars and terms, write W. D. Pearce, Plummer, Idaho.

IRRIGATED LANDS—For Sale 663

IRRIGATED LAND FOR SALE IN SOUTHERN Alberta; having bumper crops this year. Write for prices and particulars. Apply W. M. Harris Agency, Ltd., Lethbridge, Alta.

TWENTY ACRES IN ALFALFA; IRRIGATED; government project; 1½ miles from good town. Write for particulars. W. C. Dyer, Hermiston, Ore.

SUBURBAN TRACTS—For Sale 672

SUITABLE FOR RETIRED FARMER; WITHin 3-mile circle of Spokane; on paved highway; strictly modern 8-room house; fireplace, built-ins and hot water heating plant; 20 lots, subirrigated; black soil; cabin with fireplace, garage, chicken houses. Price reduced to $5000 cash; $6000 terms. Mrs. James, Box 276, Spokane.

FOR SALE OR EXCHANGE 702

TAKEN UNDER FORECLOSURE—NINE HUNdred acres very productive grain and hay land; level, partly irrigated; running water; some buildings; close to range; perfect title; easy terms. Thirty-five dollars per acre. Might consider some clear property in exchange. R. P. Hunter, Ogden, Utah.

FOR SALE OR EXCHANGE—320-ACRE DIversified farm; near Spokane; 150 acres cult.; more tillable; good bldgs.; plenty of water; partly subirrigated; soil, black loam; want small farm. Price $15,000. W. Price, Greenacres, Wash.

PIKE'S PEAK OR BUST

By LEWIS B. MILLER

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SYNOPSIS.

Esau Haggerty, a strong man of mature years, and Orlando Medford, a young, slightly built and frail companion, have started from their Illinois home town for the great gold diggings of the west. Esau is pushing a provisions-laden wheelbarrow, Orlando is leading a cow. For three days they have been trudging slowly southwestward carrying out the determination crudely lettered on the side of the wheelbarrow, "Pike's Peak or Bust." Rain and snow impeded their progress, and Orlando falls sick and requires a couple of days to rest before proceeding. Then, with the village that is now Kansas City passed, they follow the Santa Fe trail westward, being but one of scores of outfits of various kinds headed for the fields of golden riches. Once again they stop for a good rest before plunging into the real wilderness. 700 miles of which is still ahead of them to be conquered by foot, cow and wheelbarrow. After several days' tramping, they pitch their tent across a little stream from the camp of a family by the name of Cooper, also headed for the gold diggings. In the party is the daughter of the Cooper family, Hazel, whom Orlando by chance met when both went to the stream for water and in whom he became at once greatly interested. He reluctantly joined Esau next morning for the day's travel, leaving the Coopers to follow later, but with the expressed hope that they would all meet again at the gold fields. It was several days later that Esau and Orlando met up with another strange party on the trail, several men with a push cart to haul their belongings to the diggings. The two parties agree to travel together the rest of the journey. To save time they leave the Santa Fe trail and take a short cut that will save them more than 100 miles. But to their great distress they find themselves many miles out in a waterless, sun-scorched desert, with death from thirst staring them in the face. They meet a wagon party coming back famished, hurrying as best they can for the place they left the Santa Fe trail and water. The three parties hold a council and decide that the safest thing for them to do is to cut across the desert to the old dry Smoky river bed and dig a well in it for water. They hasten to put the plan to the test, with the result that at no great depth they reach water. After a long rest, they fill their kegs and turn back for the old Santa Fe trail, some inclined to give up the journey to the gold fields, others determined to get to Pike's Peak or bust. Esau and Orlando, a little later, come upon a great wagon train of freighters out on the prairie and accompany them until they reach the Arkansas river. They continue alone, finally entering the open buffalo coutnry.

They pass through a tremendous herd of buffaloes, pitch camp on the bank of the Arkansas river, kill a buffalo each and spend a few days drying the meat for future use. While there a wagon train with which the Cooper family is traveling comes up and camps, giving Orlando a chance to get a little better acquainted with the daughter, Hazel. They part with the hope of meeting again in a few days somewhere along the trail. They do meet again, and, meeting a large number of discouraged prospectors returning, the Coopers, the handcarters and the wheelbarrow pilgrims decide to turn back for home, too, though both Hazel and Orlando want to continue the journey. Hazel declares that she believes they ought to reconsider and go on to the Pike's Peak country.

CHAPTER TEN (Continued).

Headed for the Mountains Again.

"Exactly what I've been thinking!" Orlando exclaimed, with no little enthusiasm. "I can't well march back by myself, though. If you folks would drive west again, believe I could persuade Esau to do the same, and maybe the handcarter's crew."

Before the girl could reply her mother raised the wagon sheet, nearer the fore end, and glanced out. After greeting the young man tramping along by the wagon and commenting upon how healthy he was looking, she said: "It does seem too bad that all of us have bundled up and traveled hundreds of miles toward Pike's Peak, and are now on our way home without catching even a glimpse of the peak. It's—it's almost ridiculous."

"Then why, oh why, didn't you say so, ma, when pappy asked you?" demanded her daughter, in reproving tones.

"Well I—I don't just know. All a body could hear then was, 'Turn back, turn back, turn back, before it's everlastingly too late!' That big crowd of disappointed gold seekers must have stampeded us with their loud talk, so that we lost our heads."

"Just what happened! Yes, that's exactly what happened, Mrs. Cooper," agreed the young man. "We all made a tremendous mistake. Not a doubt of that in the world."

Here Hazel spoke again: "Guess pappy must be thinking the same thing. While we were rolling west he was cheerful and lively—joking with us most of the time. But since we've started home it's little he's had to say. Just look at 'im now! He keeps away up there by the middle oxen, like he was afraid some of us would speak to him."

Orlando glanced first at the girl and then ahead at her father. What she had said was plainly true. The man, far toward the front, was trudging along by his team in moody silence.

By this time the younger Cooper children—those that were in the wagon—all had their heads out from under the wagon cover, and all were declaring themselves much disappointed at having to turn back without seeing the mountains.

Soon the cow driver said: "I'm going to talk with your father a minute."

Urging Brindle to faster gait, he soon came up with the wagon driver.

"Well, Mr. Cooper, do you enjoy rolling east as well as you did rolling west?" was the way he opened the conversation.

The bearded ox driver started and turned quickly, in surprise. "Well, no; cain't truthfully say that I do. Fact is, I don't like this turning back at all—not I. And the further I travel in this direction the more disgusted I feel about it. Not my way to start into a thing, and then turn tail before I carry it through."

"Then what made you turn back?"

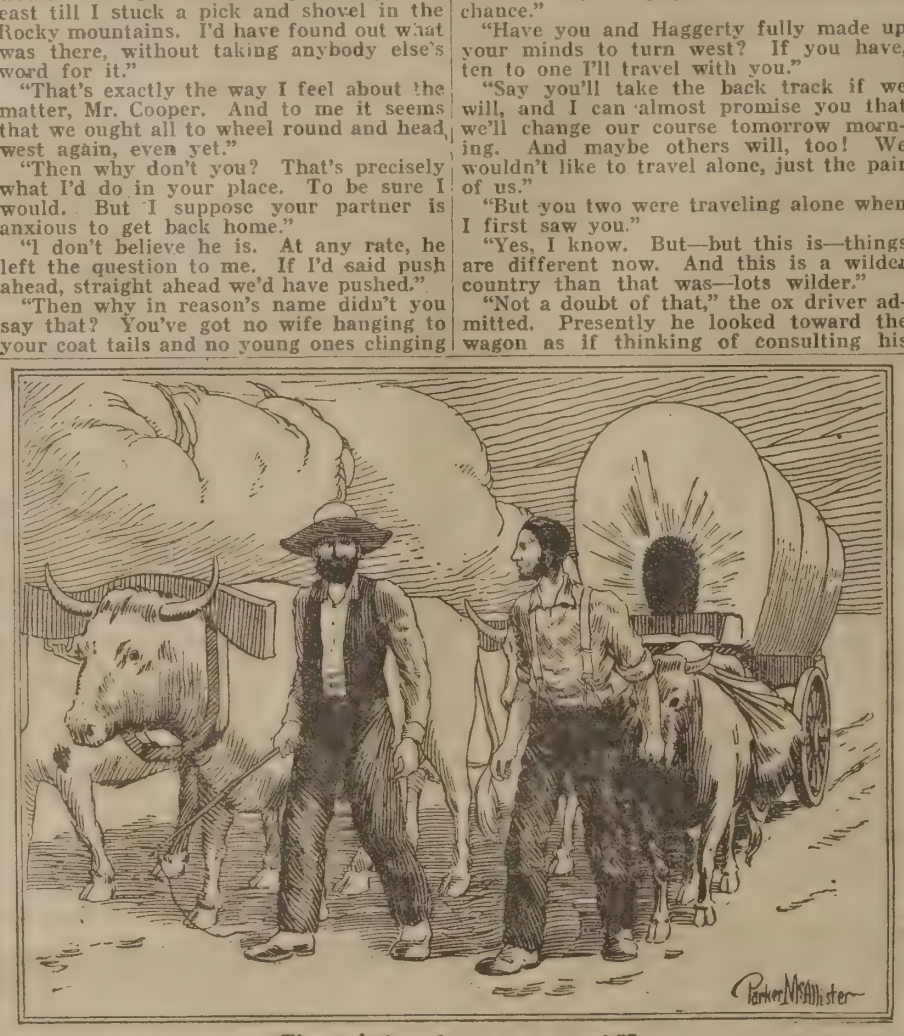
"Well, that seemed the only safe thing to do. When you've got a wife and half a dozen little shavers hanging to your coat tails, like I have, you cain't do just as you want to. You've got to look out for them first, last and all the time. I didn't care to take my family to where they'd be in danger of starving. If I'd been footloose, like you and your partner, nobody would ever have seen me point my nose east till I stuck a pick and shovel in the Rocky mountains. I'd have found out what was there, without taking anybody else's word for it."

"That's exactly the way I feel about the matter, Mr. Cooper. And to me it seems that we ought all to wheel round and head west again, even yet."

"Then why don't you? That's precisely what I'd do in your place. To be sure I would. But I suppose your partner is anxious to get back home."

"I don't believe he is. At any rate, he left the question to me. If I'd said push ahead, straight ahead we'd have pushed."

"Then why in reason's name didn't you say that? You've got no wife hanging to your coat tails and no young ones clinging



Then what made you turn back?"

to your breeches' legs. You could have seen all that's to be seen and made all that's to be made, and that without risk to anybody but yourselves. No danger of you two men starving out there, I reckon."

"Not a bit! Of course not! And there wouldn't be any danger that your family would starve, either. Every man I've talked with told me there's game everywhere in the mountains, as well as out on the plains. People can't well starve where they can get plenty of meat to eat."

"Hardly. Or at least my folks wouldn't. We've got a good supply of flour in the wagon there, as well as beans and peas and dried fruit and such like."

"Then I can't make out that there was any more real reason for you to turn east than there was for Esau Haggerty and me."

"Well, maybe not. But—but don't you s'pose the game all disappears in the winter while the mountains are buried deep in snow?"

"What if it does? Only one place for it to go, and that's to the valleys. And what would hinder us from killing it there? I'm told there are deer and elk out there, and mountain sheep and mountain goats and bears. One fat bear ought to supply a family with meat during the worst of the winter weather. And then I've been told there are buffaloes in the mountains—some that stay there all the time. With all that game to eat, we'd be sure of a living, even if we didn't dig up a penny's worth of gold."

"Does look that way, don't it? Wouldn't be surprised, after all, if I didn't make a mistake when I took the back track like I did."

"I'm pretty sure we all made a mistake. And for my part, I'm thinking we'd better correct our mistake by turning squarely around and marching west again. Chances are Esau and I will do that thing when morning comes."

"Just what I'd do if I was in your boots. Why don't you?"

Orlando blushed in spite of himself. It was embarrassing to tell this blunt, unsentimental immigrant that he, Orlando, was traveling east because the immigrant's daughter was traveling east.

"But—well, you see, the—the fact is, we've got acquainted with some—some nice people on the road; and—and it would be most everlastingly lonely for us to—to be traveling one direction while they're traveling another. If we could—could get up a party, now, I'd jump at the chance to turn back—turn toward the mountains any minute. Wouldn't I, though?"

Cooper glanced at the stammering, embarrassed young foot traveler. Whether he divined the truth would be hard to say. Presently he turned, cracked his whip over the oxen, then tramped on in silence for a little while. Now he was gazing ahead.

"As far as I'm concerned, it wouldn't take much to make me strike back toward the mountains again," he finally announced. "That is, if the folks there in the wagon"—and he jerked his head backwards—"will say yes to it."

"From the way they all expressed themselves to me a few minutes ago, my guess is that they'll say yes, and jump at the chance."

"Have you and Haggerty fully made up your minds to turn west? If you have, ten to one I'll travel with you."

"Say you'll take the back track if we will, and I can almost promise you that we'll change our course tomorrow morning. And maybe others will, too! We wouldn't like to travel alone, just the pair of us."

"But you two were traveling alone when I first saw you."

"Yes, I know. But—but this is—things are different now. And this is a wilder country than that was—lots wilder."

"Not a doubt of that," the ox driver admitted. Presently he looked toward the wagon as if thinking of consulting his family at once. But, instead of doing so, he glanced at the sun, then said:

"Soon be camping time now. We'll all talk things over tonight; and you needn't be surprised if you find us ready to travel the other way with you when morning comes. It does seem like a wild-goose chase for us to journey as far west as we've journeyed, and then turn east before we even catch a glimpse of a mountain."

"All right, Mr. Cooper. My partner and I will be with you when you're ready to right-about-face. I'm almost sure of that. Going to drop back now and talk to him a few minutes."

Pulling on Brindle's rope, he brought her to a standstill. Not till the wheelbarrow had overtaken him did he let her move on. They were now at the rear end of the wagon train.

"Drive this cow of mine a spell, Esau. I want to push the wheelbarrow till camping time. My arms need a little stretching."

"Just as you feel like, Lando, boy." And, without another word, Esau relinquished his burden.

Now the two tramped along side by side. After a good while the younger man broke the silence: "Esau, have you any iron—any kind of iron?"

"Cain't say as I have. What do you want with it?"

"I don't want it. You need it yourself. Need it right away, too. But your pick will do. That's the only use you'll ever have for a pick, anyhow."

"What you talkin' about?"

"I mean you want to heat the point your pick red hot in our campfire tonig and then make some change in what's the side of your wheelbarrow. Wo you've got there don't fit the way you traveling now."

Esau grinned a sickly grin. "Not overly well," he admitted "Guess may I'd better let the—the tent cloth ha down low enough to hide it hereafter.

"No, that's not what you need. T a hot iron and change what you've there."

"Change it—how? Don't know as I ca

"Then I'll change it for you. I'll burn line through 'Pike's Peak or—' so as cross it out. After that I'll add two lett to your other word and make it re B-u-s-t-e-d. That's all you need, the w you're headed now."

Esau grinned again. But there was amusement in his grinning. "That'd some trouble—a right smart trouble little good," was all he answered.

"Trouble or what not, we've just got change something. What's on your wh barrow or our course. I, for one, am favor of changing our course when we out from tonight's camp."

"I'd jest as lieve as not. The mor think about what we're doin' the mea I feel over it. Take us all the rest of lives to explain to the folks back at ho why we started to Pike's Peak and tram as fur as we did, only to turn our tails fore we got there. Don't seem right to sech as that don't. And I'm lowin' it wo seem right to the other folks."

"No, it won't seem right to others. Es and what's more, it's not right. No do about that now. We made a mistake w we didn't push right ahead. But it' mistake that won't be hard to correct. haven't traveled very far today. Not far as usual. And tomorrow will ca us back to where we started from t morning, or even beyond."

"You believe, then, that we'd ought take the back track again?"

"I do, Esau. I certainly do. We hav seen what we started out here to see, we haven't done what we started out h to do. I want to view the shining mo tains, as they used to call the Rockies. I'd like to dig up some gold before I t my back on the gold country. We w have to travel alone if we head west aga

"Oh, that's not much better. We go if we want to, even if we do have travel by ourselves. And we can company, too. People aplenty rollin' t direction, even yit."

"Yes, I know. But for company it wo be better to travel with somebody w acquainted with."

"Don't see as that makes any great s of difference. Folks can mighty soon acquainted out here."

"I know. But if our handcart pa should decide to go with us, that would better than strangers. And then the Mr. Cooper. He said his whole family just about disgusted with themselves turning toward the states. He as g as told me, a little while ago, that if traveled west again they'd travel with

A light broke over Esau's sunbu countenance, quickly followed by a br grin.

"Oh, I see now! Yes, I see mig plain. And I understand why we're ch in' our course, me and you, every t the wind changes."

Orlando blushed guiltily. "Never n about what you see, Esau." The yo fellow grinned a sheepish grin "You altogether too much, anyhow. Your n shouldn't have been Esau. It ought have been Isee."

"Yes, I do see! You bet I do, La boy! It's not a hot iron we need in outfit. Not by a long shot! It's s black paint. With that you could p on one side of your pack—or both si

'A Sweetheart or Bust!'

We thought we was comin' out here to up some gold, me and you. But no thing! What we railly come fur wa rustle up a gal for Lando Medford. we'll do it, you bet! We'll ketch l blackeyes if we have to chase her all the high plains! Yes, we'll—"

But the young fellow, blushing laughing, made haste to say: "Let's for our handcart and its crew. I wan find out how their pulses beat by this t They've been looking glum all day. from the way they drag along, my g is that they don't feel any better this back-track business than you I do."

When the handcart, which was not behind, had overtaken the wheelbarrow the cow, Orlando said: "Mr. Sanders, I and I have decided that we took the wr road this morning—the wrong end of road. And we're thinking—thinking strongly of turning back west tomor morning. How do you feel about the a ter by now?"

"Well, Lando, I don't know what the of our crew think. For my part, thoug wouldn't take any great sight to make turn back with you. The further I tr in this direction the more foolish I It does seem childish to go back h and tell all the neighbors we got sc and turned tail before we caught eve glimpse of the gold mountains."

(Continued on the following page.)

Pike's Peak or Bust

(Contniued from the preceding page.)

"Why, of course it does. That's exactly the way I feel about it. And the sooner we correct our mistake, the better it seems to me," urged Orlando. "We can't camp right here. We'll have to keep on to the regular camping place and to water now. But suppose we say we'll all travel west from tonight's camp."

"That suits me well enough—just now at least. But let's not make up our minds yet. The boys and I will talk things over tonight and see what we think about it. Chances are, though, that we'll conclude to turn back with you. We'll let you know by morning."

They did so conclude, and that before they had finished eating supper. With this information Orlando hurried over to the Cooper wagon. There it was quickly decided that the family would join the west-bound party.

When morning came, not only the foot travelers and the Coopers set their faces toward the mountains, but most of the wagons that had turned east the day before again changed their course and traveled with them.

All that day the west-bound wagon train, led now by the cow and the cart and the wheelbarrow, rumbled along the dusty trail. When night settled down the wagons went into camp near the same creek by which they had camped two nights before. And the foot travelers kindled their campfire against the same big cottonwood log.

Scarcely had the party by the log begun to cook supper, when a visitor from one of the nearest wagons strolled over to their camp.

"Hello, there, Holloway!" Sanders called out, jovially. "We thought you traveled on east this morning. How comes it you're still with us?"

"Yes, we got to talkin' about you at dinner t ime, and sever'l of us agreed that your wagon was still in camp when most of the others rolled out west," Esau remarked. "Guess we must ha' been mistaken."

"No. My wagon's on its way back to Missouri."

"Then how does it happen that you're here?" questioned a handcatrer.

"Well, ever since we had to right-about-face on that dried-up Smoky Hill route, Wallace and McKinley have been wanting to go home. They got disgusted with the whole business there, and didn't care to risk some more of the same kind. They'd have traveled straight on from Council Grove, after we got back there, but they could not. The wagon and the two yoke of steers belong to me. McKinley didn't own any part of the outfit; and Wallace owned only the yoke of cows that we were working in the lead. So I managed to keep 'em traveling west till yesterday morning, when we all listened to that disguntled bunch and turned back from here. But last night, when I let it be known that I wasn't going to travel east any further, they were both bitterly opposed to heading west again."

"What ailed 'em?" questioned a handcarter.

"Well, the fact is, they were homesick, both of 'em. Wallace had never been away from home before and he didn't like roughing it. The hardships didn't trouble McKinley. He's been in California. Spent two years there. That was three or four years ago. Because of his mining experience I let 'im come along, though he didn't furnish anything—didn't have anything to furnish. But he has a girl back there in Barton county, and he must have got suspicious that somebody was trying to steal her while he was gone. Anyhow, the longer he stayed away the more anxious he was to get back to her."

"And how did you settle the matter?" questioned Sanders.

"No telling what we would have done. But in our party that turned east from here yesterday morning was a man that I'd got acquainted with. He had a wagon and team, and was traveling like Collins' sheep—in a gang of his own. His name's Givens. Yonder he stands—that very tall man. He's from Missouri, too—from down near Springfield. He had a wagon and two yoke of oxen, and I arranged with him to let me put my things in his wagon and travel with him. Then I told Wallace and McKinley they could take my wagon back to Missouri. Things didn't look any too encouraging out yonder, and I decided I didn't want any big outfit there to be bothered with. My wagon was too heavy for Wallace's yoke of cows. So I let 'im use one yoke of my steers. He promised to take care of 'em for me till I get back to Missouri, whenever that may be. My other yoke of steers I put to Givens' wagon. We don't need 'em in this plains country, but we may when we get to where we're going, especially if we try to take his wagon up into the mountains."

"Yes. From all I've heard tell, it's mighty rough out there. Most mountainyous countries is that, though," Esau remarked.

Rather early next morning the wagon train broke camp and rumbled away westward. And half an hour later the seven trail trampers followed. On overtaking the wagons they did not pass, as they could have done, but jogged along behind them. The reason was that they had heard reports, rather vague, of Indians on the war-path somewhere ahead.

Whether there was any truth in the reports or not, Orlando was very thankful for them. He had now many opportunities to get on friendly terms with Hazel Cooper. And he was not slow to take advantage of them. Indeed, it was surprising how many excuses he could find to visit the Coopers when they were in camp, or to drive his pack cow by the side of their wagon while the wagon was in motion. His own party teased him not a little and accused him of deserting them.

On their first day after leaving the big cottonwood log the foot travelers saw something they had never seen before, though they had long heard of such things. A graveyard in the air was what some of them called it. The trail, which here kept near the river bank, passed along the edge of a cottonwood grove. And up in those trees, secured to limbs, were various strange-looking objects. The Indians of this plains country, when one of their number died, would roll the body in a buffalo robe, lift it up into a tree top and fasten it there with buffalo thongs. This particular grove appeared to have become a regular burying place, for nearly every tree had from one to three or four of those hide-coffined bodies in it. Probably this tree-top burial, if burial it could be called, was to keep wolves from devouring the bodies. For any graves which the Indians could dig, with their sorry tools, would necessarily be very shallow.

While the handcart and the wheelbarrow were passing that strange burial place they met a large party returning from the mountains. A number of these men were on horseback. Perhaps from sheer recklessness, but more probably because they were out of humor over returning home empty handed, some of the horsemen pulled out their six-shooters and fired at those rawhide coffins. From long exposure to sun and wind, both the hides and their contents were very dry, and every time a bullet passed through one a fog of dust would fly out of it.

"That seems to me like foolishness, or something worse," Holloway remarked. His wagon was not far ahead. After jumping out to look at the tree-top graveyard, he was now tramping by the wheelbarrow.

"It's worse than foolishness. It's sacrilege," declared Orlando. "People ought to have respect for the dead, no matter whether red or white. All dead people are alike."

"Some folks don't respect anything, not even their own selves, and lease of all a dead redskin," a handcarter remarked.

"They'd be apt to respect those rawhide graves if there were any live Indians around here," Sanders said. "I've heard of white men that got themselves into serious trouble, even with friendly Indians, by disturbing their dead."

"Oh, what differ'nce does it make, after all?" somebody else wanted to know. "Them buffalo hides and what's in 'em will soon crumble to pieces and fall down, anyhow."

"But it's better to let 'em take their natural course," was Sander's opinion.

"That's the second strange burying place I've seen since leaving home," Holloway told them. "Not long after setting out, my partners and I came through the Osage nation. Near a little place called Osage

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Mission, where we crossed the Neosho, we saw an Osage gravegard. The people of that tribe lay a dead body on the ground, then build up a sod wall around it and roof it over with sod. But there was no fence around the burying ground and the cows had horned those sod graves down, and maybe the hogs had rooted 'em to pieces, and we could see human bones scattered around many of the graves. After once burying an Osage, the other Osages don't seem to trouble themselves any more about 'em."

The ox teams were slow, and most of the foot travelers were impatient to reach the gold country as soon as possible. After three or four days, when it became known that the reports of Indian hostilities were groundless, the party of seven decided to leaves the wagons and journey on alone.

Orlando, though he did not openly oppose it, regretted the decision very much. Not so much, however, as he would have regretted if his party and the Coopers had been traveling in opposite directions.

One morning he walked over to the Cooper wagon. By this time he and Hazel had become the best of friends.

"Well, little girl, our party have concluded that we must hurry on, now that there seems to be no more danger from redskins. I'm sorry, too. I wish we could have traveled together all the way to the gold diggings."

"So am I sorry, Lando, as sorry as can be," the girl answered, in her shy way.

"That's just what we would have done i ff'd had my say-so. As the matter stands, there's nothing for me and Brindle but to travel on with 'em. I'm expecting to see you again, though, after we arrive at the gold country."

"Maybe so. At least I hope so, Lando. But that must be a big country out there. We may not—may not drift together again. It's uncertain, of course."

"No, it's not uncertain—if we live. As you say, we may not 'drift' together again. But I'm not going to wait for any drifting together. I'll hunt you up."

"Oh, I wish you would—I do wish you would, Lando. hat would be nice of you. I'd appreciate that."

"Would you, little girl? All right. I'll find you. Yes, I'll hunt high and low and far and near till I discover you. Just as soon as I think you've had time to arrive there I'll begin to inquire for you."

"I'll be delighted if you will. Wish there was some way I could help you find—us. But I don't know how I could."

"Oh, I'll find you just the same. No doubt about that. Not many women and girls with these miners' wagons. I can soon hear of you when I begin to inquire. I'll keep things stirring till I locate you."

"I hope you will. I'll be glad to be found—the gladdest kind. You may be sure of that."

"I wish I could be altogether sure, Hazel. You won't forget me before I find you again, even if it takes a good while?"

"Of course I won't forget you! Do you think my memory is as sorry as that?" The girl laughed softly and a little reproachfully.

"I don't mean that you'll actually forget me. What I do mean is—Well, there'll be very few girls out there, and no end of young fellows—unmarried men. And they'll be swarming around you if you'll let 'em. I don't want you to like any of 'em better than you do me. You'll promise me that, won't you, Hazel?"

"Yes, if you want me to. I promise not to—to like anybody better than I like you."

"I don't—that's not just what I mean."

"That was what you said." The girl smiled prettily.

"Then I didn't say what I meant. I don't want you to like anybody as well—even half as well as you like me. Won't you promise me that, too, little girl?"

"I guess so, if you must have it that way. Now are you satisfied?"

"Don't know whether I am or not. What—"

"I mean I won't if you don't neglect me too long. But when you come to the mountains, those great mountains, and get excited over digging up gold, you'll forget there's such a girl in the world as little Hazel Cooper."

"No such thing! Not for a minute! The more gold I dig up the more I'll think of Hazel. What's the use of finding gold if it's only—only for yourself? So—so goodby till we meet again—meet in the gold country. And that won't be long."

They shook hands, and Orlando hurried back to his own camp. His party had already started, but were not yet out of sight. Brindle, saddled and packed, was grazing where he had left her. He was soon driving her toward the trail, and then along the trail in pursuit of his fellow travelers.

It was an hour later when he overtook the six men. As might have been expected, they received him with a shower of jokes. While those embarrassed him just a little, they displeased him not at all.

"'Lowed maybe you'd decided to swap us for better com'ny," Esau remarked, grinning broadly.

"Well, I didn't. But it wasn't because I wouldn't have liked to."

"Gals are most everlastingly skeerce in this part of the world. It's a wise idee to stick to one when you find her," commented a handcarter.

"Girls like that one back yonder are scarce in any part of the world," declared Orlando, with some heartiness. "At least they are in any part of the world where I've lived."

On the afternoon of this day the trail trampers came in sight of an Indian village. It was a rather large encampment, there being more than 200 wigwams in it. And the nearest was scarcely a hundred yards back from the road. Now the party halted till they could decide what to do.

"The fact that they've set up their lodges here by the big road seems to me pretty good evidence that they're entirely friendly," was Sanders' opinion.

"Jes how it looks to me," answered Esau.

The others agreed with them, and the travelers moved on. As they neared the village, numerous squaws and children came out to meet them. Most of the squaws had buckskins to trade. The white men stopped.

Among the redskinned crowd that surrounded the cart and the wheelbarrow was an old man, almost black, who could speak a few words of sorry English.

"What tribe?" Inquired Orlando.

(To be continued.)

Will Insure Grange Members

The national grange is planning to issue life insurance policies in connection with its regular membership. It will be handled on a flat rate and require only small additional fees for its members, according to A. S. Goss, master of the Washington state grange, who has just returned from a meeting of all state masters at Syracuse, N. Y.

"The death benefit policy will soon be ready for use by the grangers," said Mr. Goss, "but it will probably not be issued for more than $150 to start with. The policies will no doubt be enlarged as the conditions permit and it is the hopes of all that they will soon be managed on the same basis as any insurance company.

"There is also a plan to have a casualty department to cover automobile accidents. Since statistics show that the farmers as a whole are seldom envolved in mishaps of this kind, such insurance is estimated as costing only 25 per cent of the present rate charged the general public. The farmer is a careful driver as a general rule and he is less apt to take chances as will some of the other classes of drivers.

"Both of these movements are new, but the grange is anxious to develop a cooperative insurance," continued Mr. Goss, "and use its own funds for the benefits and as savings for its members. The sentiment at the recent meeting was unanimous in favor of a movement of this kind."

PUPILS TO PICK PRUNES.

That pupils may assist during prune picking time without loss of class work, two schools of Clark county opened early,



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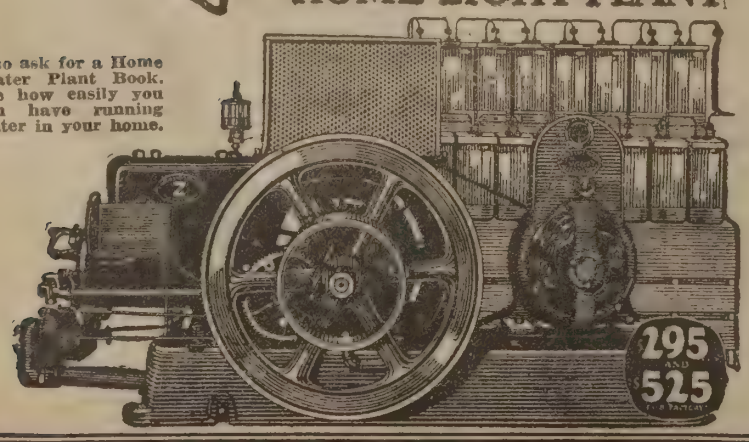
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FAMILY CIRCLE

ALICE BARLAND
EDITORIAL CONTRIBUTOR

Experience Letters

From Our Family Circle Women

Dear Family Circle: Let us have a little change from discussions about bringing up children, canning fruit, making cake and all the rest of the things we all should know about, and turn our attention to the greatest ship now afloat in the world. She is called the Majestic. One definition of majestic is, "having the quality of inspiring awe," and this great achievement surely does that.

This great ship was built by the Germans and named the Bismark and after the war was taken over by the British and rechristened.

It is difficult to realize the size of this great vessel. She is 956 feet long. The height of this floating palace is 104 feet from the bridge to the keel and equals the height of a 10-story building. Her three smokestacks tower 144 feet above the water and two railroad trains abreast could pass into any one of them. She has 48 boilers, with 240 furnaces, which supply steam to four turbine engines and these drive screws with 100,000 horsepower. But even with all this power it is most wonderful that this great ship can make such speed as she did on her recent maiden trip across the ocean. Her average speed was 22 knots an hour—on shore we say miles—and her fastest speed was a little better than 25 knots an hour.

There are nine steel decks and seven of these are for passengers. There is no reason for lack of exercise while making the ocean voyage for by walking four times around the promenade deck, which is glass enclosed, one has covered a mile. A walk through the corridors and public rooms is nine miles. Electric elevators carry people from deck to deck and a complete telephone system connects all parts of the ship with a "central." The ship is electric lighted, 15,000 bulbs being used in the lightning.

When fully equipped for sailing it carries 2,000,000 pieces of linen and 75 tons of dishes. A good sized city could safely embark, for this floating wonder has accommodations for 41000 passengers and requires a crew of 1000. Some day I hope to be a passenger and then I will tell you more. Sincerely yours.

ALICE W. BARLAND.

Dear Mrs. Barland: I enjoy the Family Circle and especially the articles on the rearing of children. Ours are quite young, all in the grammar grades. When they were small they cried very little, as they soon found out that crying got them nowhere.

I had a box for their toys and they learned early to put them into it when through playing, though I often helped.

It saves time to put the child's initials on the inside of their rubbers with ink and is a good plan to stretch a wire under the coat rack near the floor and fasten the rubbers to it with snap clothes pins.

Each child should have his own work to do and never be allowed to leave it unfinished. It is a good plan to make a list of the tasks each is to perform and stimulate a little rivalry as to how soon lines can be drawn through the completed tasks.

Children should be taught to respect each other's rights and the older ones should not abuse the younger ones, nor the younger impose upon the older. When these things happen I send the offender away by himself until all is calm and a pleasant smile must be the proof.

Children should be trained to govern their tempers from the start, for the habit of giving way to temper strengthens with every indulgence and if they do not get the better of temper while young they will be a slave to it all their lives.

It is most important that parents should get and keep the confidence and respect of their children. Answer all their questions truthfully, especially those concerning the mystery of life. If you do not do so they will be certain to hear it from some source and almost surely in a way to make it seem to them sort of vile. If the child is too young tell him what he is able to comprehend and that you will tell him more when he is older.

We do not allow trading among our children, as they generally expect to get a little more than is given.

I discourage tale bearing, as tattling leads into gossiping.

Most children will be neat if given a chance. Be sure that they have a handkerchief and that their clothes have no holes or rips in them.

An allowance is better than wages, as they will grow to expect wages and become unwilling to work unless paid for every thing they do.

Expect good behavior and don't be afraid to praise. Why should we expect good conduct from a child who is constantly scolded and told he never does anything right? Insist that the work he is set to do is well done and if he needs to be shown how to do it the best way is to take time to show him.

It is unfair to punish a child for impatience and for a fit of temper, then excuse ourselves for the same thing because we were "nervous."

So much for the children; now I wonder if the Circle readers could suggest some novel ways for our organization to raise funds. We have had a measuring party, requiring a payment of 5 cents for each foot and 1 cent added for each odd inch. We have had a shadow party, where the men bid on the ladies' shadow, starting at 30 or 50 cents, so to be sure two suppers would be paid for. We posted bills for a pie social, asking the ladies to bring a pie. At 10 cents a cut and with coffee at 5 cents we cleared a neat little sum for a new hall. MRS. F. E. K.
Washington.

Home Recipes

Mixed Pickles.—One quart of very small white onions, one quart of very small cucumbers, two quarts of string beans, three quarts of green tomatoes, sliced and chopped very coarse; one head of hard white cauliflower, torn into small pieces; one medium-sized head of hard white cabbage, chopped coarse. After all this is ready, mix through all this one-half cup salt and set away for 24 hours.

Then mix together six red peppers, chopped coarsely, four tablespoons of mustard seed, two tablespoons of celery seed, two tablespoons of whole allspice, two of cloves, one large cup of sugar, two-thirds cup of best ground mustard. After 24 hours drain the chopped pickles and stir the spices and the chopped peppers all together, cover with best cider vinegar and cover and set on stove to simmer till tender. Stir to avoid sticking. A. W. B.

Tomato Catsup.—Very fine. Cook one gallon of ripe tomatoes tender, strain them and cook again until they are thick. About 15 minutes before taking off put into a muslin bag a small level teaspoon of cayenne pepper, one tablespoon of mustard seed, one tablespoon of whole allspice, one-half tablespoon of whole cloves, tie securely and allow to cook and at the same time add a heaping tablespoon of sugar, one teacup of vinegar and one level tablespoon of salt or a little more to taste. Bottle or put away in sealed jars. A. W. B.

Rabbit ears: Five cups flour, one teaspoon salt, one egg, one tablespoon lard, one cup sour milk or enough to make a stiff dough.

Cut the dough into several pieces, roll each piece out as thin as pie crust or about one-fifth of an inch thick, cut into fourths and fry in hot lard on both sides a light brown. Sour cream may be used in place of lard and milk. These are very good served with any fruit. MISS M. H.
Washington.

Sweet cucumber pickles: Wash and wipe dry 300 little cucumbers and put into a large dish, sprinkle all through them two-thirds cup of salt, then turn over them a kettle of boiling water, taking care that the cucumbers are well covered with it, and let stand till the water is cold. Remove from the brine and drain well, then put them in a crock. Add to one-half gallon of cold vinegar four tablespoons, heaping, of mustard and the same of salt and sugar and one-half cup of mixed spices for pickling and turn this over the cucumbers and weight down, so all will be under the vinegar, and set in a cool place. Next weigh out three pounds of sugar and each morning add a handful of sugar to the crock of pickles, stirring well, till the three pounds is used. If you follow this recipe, especially regarding the adding of the sugar each morning, you can not help but have fine pickles.

MRS. C. A. RATHBUN.

To dry prunes: Add one teaspoon of baking soda to one gallon of boiling water and put the prunes into this, leaving for two or three minutes; remove from the water and place to dry in a rather high temperature; after a few hours the temperature can be lowered. I do not remove the seed or use any sugar, as I think it mostly wasted when washing. When dried this way they are like those dried in the store. Plums can be dried the same way, only they have more juice and require more time to dry.

MRS. HATTIE M'CLURE.
St. Maries, Idaho.

Soda crackers: To 14 cups of flour add one cup of shortening, four teaspoons of cream of tartar, two teaspoons of soda; rub these well into the flour and add three cups of water, work thoroughly and beat with the rolling pin, roll thin and sprinkle with salt lightly, rolling it slightly into the dough, cut into squares and bake in a quick oven. One-half this recipe makes enough for an ordinary baking.

I am very thankful for the Family Circle. I am the mother of two little children and am interested in child training, and I am grateful to you, Mrs. Barland, for the interest you take in our welfare.
Your friend, MRS. G. G. M.
Lind, Wash.

Just Folks

"You have one of the best minds in the class, and yet you have the poorest lessons. You should be ashamed of yourself." So said the professor to a classmate of mine.

He was a bright young man; he came from a good family; he mingled in so-called good society. It was easy for him to learn. He was affable and had the manner of an aristocrat, without being especially a snob. He had the best ability to "put over" the poor lesson of any student that I have ever seen, and could do it with most of the teachers.

This young man after graduation studied law and opened an office in his native town. He did not get very far in his practice, but he was picked up and made a private secretary to a United States senator from the state. As far as I know, he fulfilled his office creditably, and later became a high officer in the United States senate itself. He was good at social functions. He could make arrangements for a junketing tour of a senatorial committee in fine fashion. He could escort a senator home from an evening party in a most unobstrusive way.

He had the ability to be a brilliant man; he became a well-known lackey.

Some one might call his life a failure, but he dressed well, had a good salary, mingled with the upper class and occupied a position probably envied by a large number of young men.

This classmate of mine died a number of years ago in the prime of his life. I know nothing of the particulars of his last days.

As a contrast, the valedictorian of my class was a brilliant student. He pored over his lessons. He was a pleasant and unassuming young man. He delved in books to the detriment of his health, and only a few years after his graduation his was an untimely grave. His days were unfulfilled. His overindulgence in books, his unchecked ambition as a student, prevented the realization of the fine manhood which was in him.

"You pays your money and you takes your choice."

I have sometimes thought that the school should impress upon its students more of the checks and balances of life, drill them better in the evils of underdoing and of overdoing as well. The obligation of the boy or the girl to the home is as important as his obligation to his teacher and to his school. The one balances the other.

Social responsibility, drilled into a young man or a young woman, is a wonderful flywheel to the human machine. Deprivations are just as important as privileges. Not to be able to take that high rank in studies, for reasons of health or finances, may mean more to the right kind of a boy or girl than to attain that high rank.

It is all as you look at the thing; it is all as it is drilled into you to look at it. The last word in education has not yet been said.

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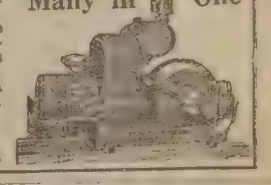
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Oil an Aermotor once a year and it is always oiled. Every moving part is completely and fully oiled. A constant stream of oil flows on every bearing. The shafts run in oil. The double gears run in oil in a tightly enclosed gear case. Friction and wear are practically eliminated.



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High Points in News of the Week

The most drastic action in the present railroad strike since its beginning early in July was taken last Friday, when the federal court in Chicago issued an order forbidding the striking railroad shopmen and officers and sympathizers interfering in any way whatever with the operation of the railroads. The order is effective until September 11, when a hearing will be held to determine whether or not it shall be made permanent. The application for the order was made in person by United States Attorney General Daugherty, who declared that the underlying principle involved was the "survival and supremacy of the United States government" over any organization or group of persons interfering with a fundamental industry, the operation of which is essential to the welfare of the people at large.

The order apparently goes so far as to forbid the officers of the striking railroad shopmen to direct the strike and also forbid the use of funds of organized labor in promoting the strike.

In arguing for the order, Attorney General Daugherty declared that the strike was called and is being conducted in protest against an order of the United States railway labor board and that it is, therefore, to all intents and purposes, a violation of an order of the government itself. He declared that he was not bringing the action as an attack on the labor unions as such, but that the action of the strikers and their sympathizers required that they be "corrected and restrained." On this point the attorney general said:

"Never while the labor unions limit their activities to legitimate acts and lawful pursuits, not injurious to society, at least while I speak and to the extent that I can speak for the government of the United States, shall a blow be struck at them.

"But it may be understood that so long and to the extent that I can speak for the government of the United States I will use the power of the government of the United States within my control to prevent from destroying the open shop. When a man in this country is not permitted to engage in lawful toil, whether he belongs to a union or not, with full protection and without interruption, the deathknell to liberty will be sounded and anarchy will supersede organized government."

Emphasizing the duty of the government to take such action as will insure operation of the railroads, the attorney general said:

"Shall the American people suffer? "Shall property be destroyed; shall commerce be destroyed; shall laws be broken? Shall society be disorganized; shall prosperity and all labor cease and the poor be in want because employers and employees engaged in interstate commerce, obligated to the government and to the people of the United States by a greater obligation than that which rests upon any other set of men in the country, because of a dispute between them, refuse to obey the law? No! the answer is by the government, that if they can not agree others will be given the privilege and protection of performing this service who will agree with the government and obey the laws of government."

Unquestionably the court order has brought the strike situation to a crisis. From many sources come threats of a nation-wide strike of all organized labor as a protest against what labor leaders declare to be attempted coercion of the railroad strikers, as well as action denying to strikers certain of their fundamental rights. Leaders in the strike movement and in sympathetic labor organizations have at all times since the strike began, declared themselves opposed to violence of any kind, but have at all times stood upon the principle that the shop crafts unions were within their rights in striking. Following the issuance of the order the executive committee of the railway employees department of the American Federation of Labor issued a statement reading in part as follows:

"The officials of these organizations have done everything possible since the beginning of the strike to maintain a peaceful suspension of work," the statement said.

"Considering the difficulties of preserving perfect order in any group of 400,000 men engaged in a struggle for a decent livelihood, it must be admitted that the strike has been a remarkable demonstration of the lawabiding character of the workers involved.

"It is unfortunate that, in a suit for the announced purpose of preventing lawlessness, the attorney general's office has prepared and on hasty consideration has entered an order which, unless carefully interpreted, might be read as a flagrant violation of constitutional rights of American citizens, as repeatedly affirmed by the supreme court of the United States.

"Apparently either haste or failure to use the English language with precision has led to the drafting of an order which, read too literally, would deny the right of free speech by communication of any sort, or just lawful association, to men engaged in the peaceful legal conduct of their business."

President Gompers of the American Federation of Labor declared:

"This injunction is a most outrageous thing, a process of the manufacturer of radicalism and bolshevism in this country. I am sure the result of this injunction will only be so solidify the men (meaning the striking shopmen) and to strengthen the support of public opinion behind them. While the action amounts to a confession that the strike is to be successful, it is strange that all powers of the government should be brought to force before the surrender of rights by the men, when not one move has been made by the government to enforce decisions of the railroad labor board when 92 railroads in separate cases have violated its orders."

The executive council of the American Federation of Labor meets on September 9 and President Gompers said he would place before the council more than 200 communications from organized labor throughout the country, requesting the federation to sponsor a general strike in sympathy with the shopmen.

Up to this writing there has appeared no clear indication as to the lines to be followed by either side. General defiance of the injunction has been widely expressed in labor circles, while government authorities declare that every power of the government will be brought into play to maintain the orderly and efficient operation of the railroads.

The situation can hardly be termed a hopeful one, though some hope is still expressed that a settlement of the controversy may be reached without its being fought out to a point of collapse of one side or the other with the public distress that would inevitably follow a long drawn out paralysis of industry. While the hearing for a permanent order against the strikers does not occur until early next week, the present week is likely to see important developments in the matter.

The association of railway executives issued a statement last week that they now had employed in the railroad shops about 300,000 men, or only about 75,000 fewer than were employed before the strike was called. B. M. Jewell, head of the striking shopmen, declared that the strike was not only holding its own, but that the number of strikers was being increased every day. The court order issued in Chicago was based largely on the demand that men desiring to work in the shops be permitted to do so without interference and that railroad equipment be untampered with by strikers and their friends.

* * *

The soldiers' bonus bill was passed by the senate last week by a vote of 47 to 22. Considering the absent senators whose postiion on the bonus is known, it is stated that 35 senators are opposed to the bill, or a sufficient number to prevent its passage over the president's veto, should he veto it. Treasury officials expressed the opinion that the president would veto the bill on the ground that it did not make proper provision for raising the nearly $4,000,000,000 that will be required to pay the bonuses. The Smith-McNary reclamation bill was attached to the bonus bill as a rider, being incorporated as a land settlement provision. This is the measure creating a revolving fund of $350,000,000 for the reclamation of the arid and swamp land of the country. Should President Harding veto the bill it will kill the Smith-McNary bill as well for this session of congress.

Southwest Washington Fair Wins

(Continued from page fourteen.)

Truesdell on Walgrove Protector. Senior calf—1, Northwood farm on Northwood Surprise (junior champion); 2, C. B. Schmidt, Olympia, on Robin Hood; 3, Truesdell on Wynooche Jeweler. Junior calf—1, Truesdell on Roan Jewel 2d; 2, Northwood farm on Northwood Cyrus; 3 and 4, Bertrand on Criterion 5th and Criterion 6th.

Females, cow 4 years or over—1, Northwood farm on Lily L. 3d; 2 and 3, Truesdell on Fancy Question and Foothills Mayflower; 4 and 5, Schmidt on Minerva Queen and Island Queen. Three-year-old—1, Northwood farm on Lady Susie 3d (senior and grand champion); 2, Truesdell on White Missie; 3 and 5, Bertrand on Golden Pride 3d and Craiglea Betty; 4, Schmidt on Minerva's Queen 2d. Two-year-old—1, Northwood farm on White Princess; 2 and 3, Truesdell on Roan Jewel and White Jewel; 4, Bertrand on Molly Mistleto. Senior yearling—1, Northwood farm on Northwood Susan; 2, Truesdell on Maude Jewel; 3, Bertrand on Betty Criterion. Junior yearling—1, Truesdell on Ora Jewell; 2 and 3, Northwood farm on Northwood Winnie and Northwood Rose; 4, Schmidt on Roselawn Pride; 5, Bertrand. Senior calf—1, Northwood farm on Northwood Susan 2d (junior champion); 2, 3 and 4, Truesdell on Anna Jewel, Miss Jewel and unnamed; 5, Bertrand on Cup King's Pride. Junior calf—1, 2 and 5, Truesdell on unnamed; 3 and 4, Bertrand on Bonnie Criterion and unnamed.

Aged herd—1, Northwood; 2, Truesdell. Young herd—1 and 2, Truesdell. Calf herd—1, Truesdell. Get of sire—1 and 2, Truesdell; 3, Bertrand. Produce of dam—1 and 2, Northwood farm; 3, Truesdell.

Red Polled.

Red Polled were represented with two herds. While the F. H. Porter herd, from Halsey, Ore., was much the better fitted and took most of the blues, there were extra good individuals in both herds.

Bulls, 3 years or over—1, F. H. Porter, Halsey, Ore., on Peach Knot (senior grand champion); 2 and 3, L. K. Cogswell, Chehalis, on Noel

(Continued on page twenty-two.)

How to Get FREE Traps-Guns

Special Plan for getting all or large part of your **trapping outfit FREE** and for buying your supplies cheapest. Write for **FREE** subscription to Trapper's Exchange, magazine of trapping secrets. Biggs Pays Highest Prices for Furs. **Write today. E. W. BIGGS & CO., 276 Biggs Bldg., Kansas City, Mo.**

Farm Business and Markets Outlook

(Continued from page five.)

heifers, $2.50@3.50; canners, $1.50@2.50; bulls, $2.75@4.50; light veal calves, $7@8.50; heavy veal calves, $5@7.50; stockers and feeders, $3.50@5.

Hogs—Prime mixed, $10@11; medium, $9@10; heavies, $7@9; fat pigs, $9@10.50; stockers and feeders, $9@10.25.

Sheep—Prime lambs, $8@10; fair to medium, $7@8; yearlings, $7@8; wethers, $6.50@7.50; mutton ewes, $3@6.50; feeder lambs, $6@7.

The Grain Market.

PORTLAND, Ore., Sept. 2.—Cash wheat—Hard white, Bluestem, Bart, $1.20; soft white, $1.08; western white, $1.07; hard winter, $1.05; northern spring, $1.06; western red, $1.02.

Grain futures: Wheat—Hard white, Bluestem, Bart, September, $1.20; October, $1.18; soft white, September, $1.08; October, $1.06; western white, September, $1.07; October, $1.05; hard winter, September, $1.05; October, $1.04; northern spring, September, $1.06; October, $1.04; western red, September, $1.02; October, $1.01.

Oats—No. 2, 36-pound naturals, September, $30; October, $29.50; No. 2, 36-pound clips, September, $29; October, $28.50; No. 2, 38-pound naturals, September, $30.25; October, $30.

Barley—44-pound minimum, September, $28; October, $27; 40-pound minimum, September, $27; October, $26.25.

Corn—No. 2 eastern yellow, shipment September, $28.75; October, $28.50.

SEATTLE, Sept. 2.—Cash wheat—Hard white, soft white, western white, hard red winter, soft red winter, northern spring, $1.03; western red, $1.01; Big Bend Bluestem, $1.15.

Hay and Feed Grain.

PORTLAND, Ore., Sept. 2.—Millfeed—Prices f. o. b. mill: Mill run, ton lots, $29; middlings, $41; rolled barley, $36@38; rolled oats, $42; scratch feed, $48 per ton.

Corn—White, $35; cracked, $37 per ton.

Hay—Buying price, f. o. b. Portland: Alfalfa, $18@18.50 per ton; cheat, $15; oats and vetch, $17; clover, $18; valley timothy, $18; eastern Oregon timothy, $20@21.

SPOKANE, Sept. 2.—Wheat—Feed wheat, $40 per ton.

Oats—$40 per ton; steam rolled, $42.

Corn—$36 per ton; cracked corn, $38 ton.

Barley—$42; steam rolled, $44.

Bran and shorts—$32 per ton.

Alfalfa, $22 ton; timothy, $24 ton; mixed hay, $22 ton.

General Produce.

PORTLAND, Ore., Sept. 2.—Butter—Cubes, extras, 37@38c lb.; prints, parchment wrapped, box lots, 44c; cartons, 45c. Butterfat, 44c delivered station; buying price, A grade, 42c.

Eggs—Buying price: Current receipts, 26c per dozen; henneries, 29@30c per dozen. Jobbing prices: Case count, 27@28c; candled ranch, 32c; selects, 33@34c; association selects, 33c; association firsts, 31c; association pullets, 28c.

Cheese—Tillamook triplets, price to jobbers, f. o. b. Tillamook, 26c; Young Americas, 27c; longhorns, 27c pound.

Poultry—Hens, 13@22c lb.; springs, 21@23c; ducks, 15@22c; geese, nominal; turkeys, nominal.

SEATTLE, Sept. 2.—Eggs—Select local ranch, white shells, cases included, 30c per dozen; mixed colors, 29c per dozen; pullets, 18@20c per dozen. Cases returned to shipper 1c less.

Butterfat—F. o. b. Seattle: A grade, 45c per lb.; raw milk, $1.90 per cwt.

Poultry—Hens, 4½ lbs. and up, 22c per lb.; over 3½ lbs. and under 4½ lbs., 15c per lb.; 3 to 3½ lbs., 10c per lb.; 1922 broilers, 1 lb. and heavier, 20c per lb.; old roosters, 10c per lb.; geese, fat, live, 16c per lb.; do fancy dressed, 24c per lb.; ducks, 3 lbs. and heavier, live, 15c per lb.; turkeys, fat, dry picked, 12 to 15 lbs., 30c per lb.; do live, fat, 7 to 10 lbs., 25c per lb.; squabs, large, $3 per dozen; pigeons, $2; guineas, $9 per dozen.

SPOKANE, Sept. 2.—Poultry—Fat hens, 17c lb.; light hens, 24c lb.; roosters, 8c lb.; spring chickens, 18c lb.

Fresh ranch eggs—$6.50@8 case; no storage.

Butterfat—40c a pound.



Time-tried Drills

NO MATTER how cleverly a grain drill is designed, how beautifully it is finished, no matter what claims are made for it, the stand of grain that follows its use is a sure indication of its worth. A drill that has been marketed successfully year after year for generations *must have earned* a reputation for good work, lasting service and genuine value. It can be depended upon to sow evenly, accurately and at a uniform depth.

Hoosier, Empire Jr. and Kentucky

More than 50 years ago these names were introduced to grain farmers of the world. These were good drills then. Since that time the constant effort to improve them never has been relaxed. They stand today at the top of the list—light in draft and weight, convenient to use, and with a well-earned reputation for dependable, lasting service.

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See the **McCormick-Deering Dealer.**

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Your Health

By Royal S. Copeland, M. D., F. A. C. S.

I used to have a teacher who was always
undering:
"Order is heaven's first law!"
We never knew what
meant by this com-
and, admonition or
rning—whatever it
as. Personally, I al-
ays thought it was
me kind of a threat
the impending wrath
outraged providence
It must be that the
portance of order is
mething particularly
served by teachers
cause the other day
teacher said to me:
"Have you ever writ-
n on the value of or-
Dr. Copeland.
rliness and system? Happiness depends
it."



Dr. Copeland.

I have been thinking about this conver-
tion. The more I think about it the more
believe the teacher is right.
A well-ordered life, systematic perform-
nce of duty, having your belongings in
rder, neatness of person and clothing, un-
iling devotion to duty—all these things
ave their effect on happiness and health.
Most of us live busy lives. Some of us
re overbusy attempting to do too much.
almost every such life a rearrangement
f the daily program will give abundance
f leisure. Indeed, it can not be said that
earrangement is needed, because this word
nplies there has been some sort of "ar-
ngement," when, as a matter of fact,
here has been no arrangement at all.
It is perfectly amazing what an amount
f completed work can be turned out by
ne who systematizes his undertakings. An
efficiency expert"—and I am not over-
keen about "efficiency experts"—would revolutionize the activities of many a man.
It makes me sad to see great men of affairs wearing themselves out needlessly. The world needs these men. But they are doomed to short careers unless they care for their bodies. Unless they can systematize their efforts, and get time for recreation in this way, they must do less work.
My old teacher is right—"Order is heaven's first law!"

Bits of Fun for Everyone

His Annual Bath.

Once a year the newsboys of London are given an outing some place on the Thames river, where they can swim to their heart's content. As one little boy was getting into the water his little friend said:
"Johnnie, you're pretty dirty!"
"Yes," replied Johnny, "I missed the train last year."—Exchange.

How Did He Know?

"How do you like your new car?" asked the small car driver.
"Great," replied the big six driver. "It runs so smoothly you can't feel it. Not a bit of noise, you can't hear it. Perfect ignition, you can't smell a thing. And speed—why it whizzes! You can't see it."
"Must be some car," ventured the S. C. D. "Can't feel it, can't smell it, can't hear it, can't see it! How do you know it is there?"

Starting Young.

A small boy who as sitting next to a very haughty old lady in a crowded train kept sniffling in a most annoying manner. At last the lady could bear it no longer and turned to the boy:
"Boy, have you got a handkerchief?" she demanded.
The small boy looked at her for a few seconds and then, in a dignified tone, came the answer:
"Yes, I have, but I don't lend it to strangers."—Los Angeles Times.

When the Storm Broke.

First gentleman—Did you get home last night before the storm?
Second gentleman—That was when it started.

Had Committed Something.

She—I'm afraid, Don, that I will never see you in heaven.
He—Great guns! What have you been doing now?—Sour Owl.

Latest High Class Patterns for the Home

Please order the patterns you desire at least two or three weeks before you wish to use them. Desiring to obtain the latest high-class patterns for its readers, THE FARMER has made arrangements to have them sent direct from the east, and under present mailing conditions it takes about that time for them to reach you.



4080. Misses' Dress. Cut in 3 sizes: 16, 18 and 20 years. An 18-year size requires 6 3-8 yards of 32-inch material. The width of the skirt at the foot is about 2 1-4 yards. Price 10c.
3686. Lady's Dress. Cut in 6 sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. A 38-inch size will require 4 7-8 yards of 42-inch material. For panel, collar and cuffs of contrasting material 1 3-8 yards is required. Price 10c.
4088. Girl's Dress. Cut in 4 sizes: 6, 8, 10 and 12 years. A 10-year size requires 2 1-8 yards for the guimpe and 2 1-4 yards for the dress of 32-inch material. Price 10c.
4070-4046. Lady's Costume. Waist 4070 cut in 6 sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. Skirt 4046 cut in 7 sizes: 25, 27, 29, 31, 33, 35 and 37 inches waist measure. The width at the foot with plaits extended is 3 5-8 yards. To make the costume for a medium size will require 8 3-8 yards of 40-inch material.
TWO separate patterns, 10c FOR EACH pattern.
3401. A Dainty Frock. Cut in 4 sizes: 6, 8, 10 and 12 years. A 10-year size will require 4 7-8 yards of 27-inch material. Price 10c.
3827. Boy's Suit. Cut in 4 sizes: 2, 4, 6 and 8 years. A 4-year size requires 1 3-4 yards of 27-inch material for the blouse and 1 1-8 yards for the trousers. Price 10c.
3885. Child's Romper Suit. Cut in 4 sizes: 2, 4, 6 and 8 years. A 4-year size requires 2 7-8 yards of 32-inch material. Price 10c.
4091. Girl's Dress. Cut in 4 sizes: 2, 4, 6 and 8 years. A 2-year size requires 1 1-2 yards of 32-inch material. Price 10c.
4073. Lady's Blouse. Cut in 6 sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. A 38-inch size requires 2 7-8 yards of 32-inch material. To make collar of contrasting material 32 inches wide, 1 7-8 yards is required. Price 10c.
4075. Lady's Skirt. Cut in 6 sizes: 25, 27, 29, 31, 33 and 35 inches waist measure. A 27-inch size requires 3 yards of 40-inch material. The width at the foot is 2 5-8 yards. Price 10c.
3868. Lady's Apron. Cut in 4 sizes: Small, medium, large and extra large. A medium size requires 2 1-2 yards of 36-inch material. Price 10c.
3750. Lady's House Dress. Cut in 7 sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. A 38-inch size requires 6 yards of 36-inch material. Width of skirt at lower edge is 2 yards. Price 10c.

Fashion Book Notice.

Send 12c in silver or stamps for our up-to-date fall and winter 1922-1923 book of fashions, showing color plates, and containing 500 designs of ladies', misses' and children's patterns, a concise and comprehensive article on dressmaking, also some points for the needle (illustratinp 30 of the various, simple stitches), all valuable hints to the home dressmaker.

Please fill in this order and mail with remittance to:
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Enclosed find..... cents for which send me the following:

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Pattern No..... Size ..... Pattern No. ..... Size.....

Name .....

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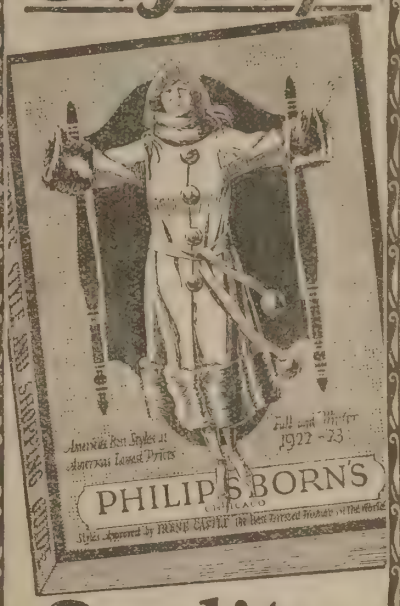
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Goldie Mae Green, who lives in Lincoln county, Washington, says she has a pony named Foxy, two cats and a dog named Shep. Goldie is 11 years old and her birthday is February 15.

Four little baby pigs are some of the pets belonging to Ruby Terrell, a central Washington girl. Ruby lives on a ranch and her father has 80 hogs. Besides the pigs, Ruby has other pets—two cats, a dog, a canary and two hens.

Frances Fishback, who lives in Lewis county, Washington, has a good line of jokes. "I hear George was operated on," said a friend. "What did he have?" "Money."

This is what Johnnie Swinger says in his letter: "I have moved down to the river. We are working for a lady this summer. The river surely came up this spring." Johnnie lives in Okanogan county, Washington.

Birthday Greetings

THURSDAY, September 7—Jennie Jensen, 11 years old.

FRIDAY, September 8—Delia Andersen, 11 years old; Muriel Hanson, 11; Mildred Medley, 10; Alice Smith, 11.

SATURDAY, September 9—Arlene Nehr, 11 years old; Goldie Richardson, 11; Francis Schreck, 11; Henry Wertemberger, 11.

SUNDAY, September 10—Thelma Ensley, 11 years old; Genevieve Isom, 11; Aune Joutsen; Harry Long, 11; Thelma Amon, 10; Dolly Gifford, 10.

MONDAY, September 11—Ferne Daugherty, 11 years old; Donna Farmer, 10; Viino Hanki, 9; Christina Otterson, 10; Marcus Ruth, 11.

TUESDAY, September 12—Gladys Irene Stone, 11 years old; Gladys Tuttle, 11.

WEDNESDAY, September 13—Olga Foster, 11 years old; Gerald Stover, 8.

LETTERS WELCOMED BY AUNT NELLIE.

Among recent letters received by Aunt Nellie are those from cousins whose names follow. A few of these will be published in the regular edition of THE FARMER and others will appear from time to time in The Junior Farmer:

Emrose Corbin, Annie Mae Wyatt, Ivan Schafer, John Thaden, Esther Viola Miller, Annie Thompson, Marie Albin, Margrit Norberg, Bessie Oswalt, Oren Cramar, Amy Dicken, Donald DeHart, Thelma Ashworth, Wilba McInturff, Lucille Harcing, Berniece Bahrs, Leda Harrell, LeRoy Miller, Joseph Halstead, Orson Ellithorpe, Joe Byrns Bishop, Ida Richardson, Pauline Brandt, Luella Jones, Edna Amend, Jeanette Olsen.

BEDTIME STORIES

By THORNTON W. BURGESS.

WHAT HAPPENED TO UNC' BILLY.

Reddy Fox had called Unc' Billy Possum a coward. Now that is a very dreadful thing to call any one, for no one likes a coward. But Unc' Billy Possum had just grinned and then he had dropped down from the trees beside Reddy Fox and had invited Reddy to wait for Bowser the Hound, who was coming down the hill. Reddy didn't know what to do. There was Bowser in plain sight, and Reddy was afraid, very much afraid. But if he should run before Unc' Billy Possum did he would prove that he was the coward. And, of course, all the little people of the Green Forest and the Green Meadows would know all about it, for Peter Rabbit and Jimmy Skunk had heard Unc' Billy, and at that very minute were watching from safe hiding places.

"Bow, wow, wow!" roared Bowser the Hound in his deepest voice.

Reddy shivered and began to back away. and I simply can not stay any longer. Unc' Billy just grinned. "What makes yo' all's so uneasy?" he asked.

"Bow, wow, wow!" roared Bowser again and began to run straight toward them, with his mouth wide open.

Reddy could stand it no longer. "I—I—I really would like to stay with you, Mr. Possum, but Granny Fox is waiting for me, Granny wouldn't like it." Reddy shouted the last words over his shoulder as he started for the Green Meadows at the top of his speed.

"Now who's a coward?" shouted Peter Rabbit and Jimmy Skunk together. Reddy Fox gritted his teeth, but he kept right on running. He didn't even turn to see what became of Unc' Possum.

Now when Reddy started to run Unc' Billy might have climbed a tree, but he didn't. What do you think he did? Why, he just fell over in a heap right in front of Bowser the Hound! Jimmy Skunk almost stopped breathing when he saw him fall and Peter Rabbit clapped both hands over his eyes as Bowser the Hound stopped right by Unc' Billy Possum. He didn't want to see what was going to happen to Unc' Billy.

Bowser the Hound stopped and sniffed at Unc' Billy.

"What's this? What's this?" said Bowser, for he had never seen Unc' Billy Possum before.

Unc' Billy lay there just as if he were dead. Yes, sir, there didn't seem to be any life in Unc' Billy at all. He lay there with his eyes closed and just as limp as a rag. Bowser rolled him over and pulled him this way and pushed him that way, but still Unc' Billy didn't move.

"Huh! Must have frightened him to death," said Bowser. "I'll go on and teach



Unc' Billy Possum lay there just as if he were dead.

Reddy Fox a lesson, and then I'll come back and take this fellow back home to show my master."

So with one more sniff Bowser the Hound started on after Reddy Fox. Peter Rabbit and Jummy Skunk came out of their hiding places and stood looking down at Unc' Billy.

"Don't drop salt water all over my nice clothes," said a voice as Peter wiped his eyes.

Peter was so startled that he almost knocked Jimmy Skunk over. There lay Unc' Billy grinning at him and slowly winking one eye.

"Did yo' see me fool him?" asked Unc' Billy as he scrambled to his feet. And to this day Bowser the Hound wonders what became of Unc' Billy Possum.

Southwest Washington Fair Wins

(Continued from page twenty.)

and Major. Two-year-old—1 and 2, Cogswell on Jerry Prince Rose. Yearling—1, 3 and 4, Cogswell on Romeo, Roscoe and Fancier; 2, Porter on Treston 6th. Senior calf—1 and 2, Porter on Salem (junior champion) and Hanon. Junior calf—1, Porter on Treston 7th; 2 and 3, Cogswell on George Washington and Sir Lewis.

Females, cow 4 years or over—1, Porter on Pansy (senior and grand champion); 2, 3 and 4, Cogswell on Rose May, Prim Rose and Hattie. Three-year-old—1, Porter on Violet; 2, Cogswell on Sweet Rose. Two-year-old—1 and 2, Porter on Rhoda and Pansy 7th; 3 and 4, Cogswell on Hortense and Orting Peach. Senior yearling—1, Porter on Peonia 3d; 2, Cogswell on Orting Phyllis. Junior yearling—1 and 2, Porter on Jennie and Novice; 3, Cogswell on unnamed. Senior calf—1, Porter on Pascola (junior champion); 2 and 3, Cogswell on Lady Verna and unnamed. Junior calf—1, Porter on Friette; 2 and 3, Cogswell on Narcissa and Moss Rose.

Aged herd—1, Porter; 2 and 3, Cogswell. Young herd—1, Porter; 2 and 3, Cogswell. Calf herd—1, Porter; 2, Cogswell. Get of sire—1 and 2, Porter; 3, Cogswell. Produce of dam—1 and 2, Porter; 3, Cogswell.

HORSES.

Percherons were the only breed shown. J. D. McGuire, Tenino, won first, and the Hannaford Percheron Horse company of Bucoda second on stallions, and L. P. Schumacher, Chehalis, first on mare.

THE SHEEP SHOW.

While this fair has had carloads of sheep in previous years, never before did half as many of the woolly coats invade the grounds. To take care of them taxed the capacity of the pens and the ingenuity of the management. Every sheep was cared for, but if they continue to come in such numbers a sheep barn or greatly enlarged and improved pens are necessary. Rambouillets, Shropshires, Hampshires, Orford Downs, Southdowns, Cotswolds, Lincolns and Romeys were all well represented. Most of them were well fitted and worthy specimens.

Rambouillets.

Yearling ram—1, Ed Schoel, Albany, Ore.; 2, S. E. Stewart, Aldergrove, B. C.

Ram lamb—1 and 2, Schoel; 3, Stewart.

Ewe, 2 years or over—1 and 3, Schoel; 2, Stewart. Yearling ewe—1 and 2, Schoel; 3, Stewart. Ewe lamb—1, Schoel; 2 and 3, Stewart.

Flock—1, Schoel; 2, Stewart. Flock bred by exhibitor—1, Schoel.

Pen of lambs—1, Schoel; 2, Stewart.

Champion ram and champion ewe—Schoel.

Shropshires.

Ram 2 years or over—1, F. T. Fox, Silverton, Ore.; 2, S. E. Stewart, Aldergrove, B. C.; 3, Felzer Bros., Tangent, Ore. Yearling ram—1 and 2, Felzer Bros.; 3, Stewart. Ram lamb—1, Felzer Bros.; 2, Fox; 3, Stewart.

Ewe 2 years or over—1 and 3, Fox; 2, Stewart. Yearling ewe—1, Felzer Bros.; 2, Stewart; 3, Fox. Ewe lamb—1 and 3, Fox; 2, Stewart.

Flock—1, Fox; 2, Stewart; 3, Felzer Bros. Flock bred by exhibitor—1, Felger Bros.; 2, Fox. Pen of lambs—1, and 2, Fox; 3, Felger Bros.

Champion ram and champion ewe—Fox.

Cotswolds.

William Riddell & Sons, Monmouth, Ore., the only exhibitors, filled all classes and received first in every class; second in all except 2-year-old and yearling ram and pen of lambs, and champion ram and ewe.

Lincolns.

Ram 2 years or over—1 and 2, Wm. Riddell, Monmouth, Ore.; 3, E. E. Stewart, Aldergrove, B. C. Yearling ram—1 and 3, Wm. Riddell; 2, Stewart. Ram lamb—1, Wm. Riddell Jr., Monmouth, Ore.; 2, Stewart; 3, Wm. Riddell.

Ewe 2 years or over—1 and 3, Wm. Riddell; 2, Stewart. Yearling ewe—1 and 3, Wm. Riddell; 2, Stewart. Ewe lamb—1 and 3, Wm. Riddell; 2, Stewart.

Flock—1 and 3, Wm. Riddell; 2, Stewart. Flock bred by exhibitor—1 and 3, Wm. Riddell; 2, Stewart. Pen of lambs—1, Wm. Riddell; 2, Stewart; 3, Wm. Riddell Jr.

Champion ram and champion ewe—Wm. Riddell.

Southdowns.

Ram 2 years or over—1 and 3, J. G. S. Hubbard Sons, Monroe, Ore.; 2, S. E. Stewart, Aldergrove, B. C. Yearling ram—1 and 3, Stewart; 2, Hubbard. Ram lamb—1 and 2, Stewart; 3, Hubbard.

Ewe 2 years or over—1 and 3, Stewart; 2, Hubbard. Yearling ewe—1 and 2, Hubbard; 3, Stewart. Ewe lamb—1 and 2, Hubbard; 3, Stewart.

Flock—1 and 3, Hubbard; 2, Stewart. Flock bred by exhibitor—1 and 2, Hubbard. Pen of lambs—1, Stewart; 2, Hubbard.

Champion ram—Hubbard. Champion ewe—Stewart.

Dorset Horns.

F. T. Fox, Silverton, Ore., the only exhibitor, filled all classes and received first in every class; second in every class except flock and pen of lambs; third in every class except yearling ram, flock and pen, and champion ram and ewe.

Hampshires.

J. G. S. Hubbard & Sons, Monroe, Ore., the only exhibitors, filled all classes and received first and second in every class and third in every class except pen of lambs; also champion ram and ewe.

Oxford Downs.

F. T. Fox, Silverton, Ore., the only exhibitor, filled all classes and received first in eve class; second in every class except flock and p of lambs; third in every class except yearli ram, flock and pn, and champion ram and ew

Romneys.

Ram 2 years or over—1 and 3, F. T. F Silverton, Ore.; 2, H. S. Currie, Steveston, B Yearling ram—1, Currie; 2 and 3, Fox. R lamb—1, Currie; 2 and 3, Fox.

Ewe 2 years or over—1, Currie; 2 and Fox. Yearling ewe—1 and 2, Fox; 3, Curr Ewe lamb—1 and 2, Fox; 3, Currie.

Flock—1 and 3, Fox; 2, Currie. Flock br by exhibitor—1 and 3, Fox; 2, Currie. Pen lambs—1, Fox; 2, Currie.

Champion ram and champion ewe—Fox.

THE HOG SHOW.

With the great show herd of Chest Whites of Ed Schoel of Albany, Ore., add to the local exhibit, the hog show was o of the real attractions of the fair. Wh the white hogs were much the most num ous and averaged a little higher in th fitting, there were good exhibits of Pola Chinas and one good little lot of Ber shires.

Chester Whites.

Boars, 1 year or over—1, O. O. Phelps, Drya 2 and 3, Ed Schoel, Albany, Ore.. Senior pig 1, Schoel; 2 and 3, J. H. West, Centralia. Jun pig—1, Schoel; 2 and 3, West.

Females, sow 1 year or over—1 and Schoel; 3, West. Senior pig—1, Schoel; West; 3, Phelps. Junior pig—1 and 2, Scho 3, West.

Champion boar—Phelps. Champion sow Schoel.

Poland Chinas.

Boars, 1 year or over—1 and 3, Foulger Bryant, Centralia; 2, J. F. Torgeson, Suv Ore. Senior pig—1 and 2, Foulger & Bryant; C. R. Foster, Chehalis. Junior pig—1, Fost 2, Foulger & Bryant.

Females, sow 1 year or over—1 and 2, Fo ger & Bryant. Senior pig—1 and 2, Foul & Bryant. Junior pig—1 and 2, Foulger Bryant; 3, Foster.

Champion boar and champion sow—Foul & Bryant.

Berkshires.

J. C. Lammers, Centralia, exhibited a sen sow pig and junior sow and boar pigs and w awarded all prizes in the classes in which exhibited.

LITTLE BY LITTLE.

Minutes make hours; pennies make d lars.



Maybe that hill is not there, after all—

VERY often the hill we seem to be climbing is made out of the common mistakes of diet which starve tissues and nerves and slow down energies.

How smooth and level the path seemed to be when we were younger.

Simple, natural food may level that hill to a smooth path again.

Why not try it?

Begin today with a dish of Grape-Nuts with cream or milk—and fresh or preserved fruit added if you like.

Keep on with this crisp, delicious, strengthening food in place of heavy, ill-assorted, starchy breakfasts and lunches—and see if the old-time zest and speed on the old-time level path doesn't come back again.

Grape-Nuts —THE BODY BUILDER

"There's a Reason"

Made by Postum Cereal Company, Inc., Battle Creek, Michigan

News for Breeders

SHORTHORNS LEAD IN TEST.

Shorthorn men, who have always claimed that their breed was not only profitable as beef cattle, but profitable at the milk pail as well, are enthusiastic over figures from cow testing associations of Wisconsin, the premier dairy state of the country. In one particular testing association Shorthorn cows ranked first and second, respectively, in a recent test. One Shorthorn herd was the high herd of the entire association. The winning cow was a grade animal and in nine months had produced 431 pounds of butterfat. In her eighth month she produced 60 pounds. The second high cow is also a grade Shorthorn. Several of these cows have produced over 400 pounds of fat in 10 months, and several have made over 50 pounds of fat in single months.

RESULTS FROM PUREBRED BULL.

"Almost any kind of a dairyman can raise a fair herd from a registered bull, but no farmer today can afford to take chances with a grade bull," remarked C. S. Houpt of Castle Rock to a representative of THE FARMER. There are 18 head of grade cows and calves in the Houpt herd and the purebred herd bull is sired by Rinda Lad of S. B. and is from a cow with a record of 901 pounds of fat. One of the mature cows in this herd produced 44 pounds of fat for one month, while her daughter, with her second calf, produced 45 pounds. Other instances of this kind demonstrate the increased production which can be had by the use of a registered bull, and Mr. Houpt is well pleased with the first cross from this bull.

GO INTO SHORTHORN BUSINESS.

John Napier and Thomas Wills, better known among their friends in the live stock industry as Jack and Tom, respectively, have graduated from the class of herdsmen and have become breeders of Shorthorn cattle. For years Mr. Napier has been superintendent of the Hercules Shorthorn farm of F. M. Rothrock at Sprague, while Mr. Wills is equally well known as a Shorthorn herdsman, having been for several years with Duncan Dunn at Wapato. Together they have taken possession of a 3000-acre ranch north of Sprague and have stocked it with about 30 head of purebreds. Of this number, 12 are heifers from the herd of Albert Owes of Amber, all daughters of Superb Boy and bred to Hercules Imperial. The herd includes also 15 females from the ranch of Richard Newman, also of Amber.

A GOOD JERSEY HERD.

There are 18 cows, six of which are purebred Jerseys, on the E. W. Trezise farm at Tolt, King county. Emma Foxy Fern, a 7-year-old animal sired by Emminent Oxford's Majesty, has a record of 700 pounds. She took second in her class at the state fair last year. Another made 299.8 pounds of fat in nine and three-quarters months as a senior yearling. This is estimated to be equivalent to 500 pounds of fat as a mature cow. The herd bull, Foxy Fern's Olympia Lad, a 2-year-old, is a half brother to the other herd sire, that is out of Emma's Foxy Fern. All of the cows in the Trezise herd have been selected, and there are none that will not make 400 pounds of fat on a mature cow basis, milking two times a day.

AYRSHIRES ON ANNUAL TOUR.

Twenty head of the Ayrshire herd belonging to E. W. VanTassel of Wenatchee are now making their annual tour of the fairs of the Pacific northwest. The first two stops were the Skagit county fair and the British Columbia exposition at Vancouver. Others that are being made are the Spokane Interstate, the Montana state, the Washington state, Oregon state, the Western Royal and the Pacific International. Already a large number of prize ribbons have been won by this show herd, which is the most widely known herd of this breed in this territory.

WOULD BE A HERDSMAN.

After a successful season last year as a fitter and shower of Shorthorns for a lad of so few years, Ernest Cranke, son of Harry C. Cranke of Moscow, Idaho, is this year going onto the fair and show circuit as a Hereford herdsman. At the age of 13 years he last year fitted and showed four Shorthorns belonging to Cranke & Son. He is now a member of the A. B. Cook staff at Townsend, Mont., studying the art of fitting and showing under the leadership of James Campbell, one of the well-known herdsmen of the northwest.

WAIKIKI WINS IN CANADA.

Waikiki farm, Spokane, which sent its show herd of 28 Jersey cattle to Vancouver, B. C., to compete in the 1922 show there, duplicated its winnings of last year, capturing not only a large share of the top prizes, but the trophy cup for best Jersey herd. The herd won 16 firsts, 11 seconds and 5 thirds. It will return to Spokane in time for the Spokane Interstate, and from these will make the usual Pacific northwest fair circuit.

Warranted to Give Satisfaction.

Gombault's Caustic Balsam



Has Imitators But No Competitors

A Safe, Speedy and Positive Remedy for Curb, Splint, Sweeny, Capped Hock, Strained Tendons, Founder, Wind Puffs, Skin Diseases, Parasites and Thrush, and Lameness from Spavin, Ringbone and other Bony Tumors.

Removes Bunches from Horses or Cattle.

For Human Use Caustic Balsam has no equal as a Liniment and Counter-irritant for Inflamatory and Muscular Rheumatism, Sore Throat and Chest Colds, Growths and Stiff Joints.

A Perfect Antiseptic—Soothing and Healing if applied immediately to Burns, Bruises or Cuts.

Every bottle will give satisfaction. Sold by Druggists or sent by parcel post on receipt of price $1.50 per bottle. Send for descriptive circulars and testimonials.

The Lawrence-Williams Co., Cleveland, O.



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TRADE MARK REG. U.S. PAT. OFF

Reduces Strained, Puffy Ankles, Lymphangitis, Poll Evil, Fistula, Boils, Swellings; Stops Lameness and allays pain. Heals Sores, Cuts, Bruises, Boot Chafes. It is a SAFE ANTISEPTIC AND GERMICIDE

Does not blister or remove the hair and horse can be worked. Pleasant to use. $2.50 a bottle, delivered. Describe your case for special instructions and Book 5 R free.

ABSORBINE, JR., antiseptic liniment for mankind, reduces Strains, Painful, Knotted, Swollen Veins. Concentrated—only a few drops required at an application. Price $1.25 per bottle at dealers or delivered.

W. F. YOUNG, Inc., 371 Temple St., Springfield, Mass.

FLIES FLEE from "WOOD-LARK" REPELLENT



1 qt., ..75c
½-gal. $1.25
1 gal. $2.00

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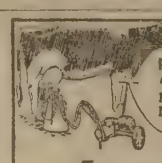
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BLACK LEG 100% PROTECTION FOR LIFE from *one* vaccination with Cutter's Liquid or Solid Blackleg Aggressin. Absolutely safe. Cutter's Solid Aggressin Injectors work just like Blackleg Pill Injectors. If Cutter's Aggressin is unobtainable locally, write

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SHARPLES PORTABLE MOTO MILKER

NEVER HAS HURT A COW
Inexpensive Operation—Long Life
INVESTIGATE
SEND FOR CATALOG

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112 MARKET STREET SAN FRANCISCO, CAL.

AT YOUR SERVICE.
DEMPSEY
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(C. C. DEMPSEY & SONS)
UP TO DATE.
Opposite Union Station, Spokane.

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LET THE LITTLE FELLOWS PAY OFF YOUR MORTGAGE.
Silver Fox Ranches Make Big Profits.
Finest Quality Imported Prince Edward Island Stock.



All Pedigreed and Registered. Fully Guaranteed.

Full Particulars free. Write today.
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When answering ads, please don't fail to mention this paper.

15 Head — GUERNSEY SALE — 15 HEAD

3 Cows, 5 Bred Yearling Heifers, 1 Yearling Bull, 1 Two-Year-Old Heifer, 4 Heifer Calves and 1 Bull Calf

Offering the yearling bull sired by Jolly Fermain, who two years ago was grand champion at Pacific International; also 2-year-old heifer sired by Alma's Glen of Mound City and a half-sister to Janis of Sequoia, who last year produced 846 pounds of butterfat.

Sale to be held Thursday, September 14, at 10 o'clock, Tillamook county fairgrounds, Tillamook, Oregon.

JUDGE HOMER MASON, Consignee. COL. HUGHES, Auctioneer.

HOLSTEINS AT AUCTION
Forest Grove, Oregon
Friday, September 15, 1922

20 head cows, herd bulls, bred heifers and young stock, both sexes, entire herd of registered Holsteins owned by W. Martin, including show winners, A. R. O. cows and show prospects, a very attractive lot. Some of the cows are fresh, others in various stages of lactation. They are large, have straight top lines, well balanced udders, nicely marked, and of popular breeding. The senior herd bull is Hollywood King Pontiac, a grandson of King of the Pontiac and Sir Johanna Ruth Fayne. The junior herd sire is Aaggie Colantha Gerben, winner in the show ring at Oregon state fair and Pacific international.

Sale will be held on the Martin and Forbes farm near Forest Grove, starting immediately after lunch at noon on the farm.

Terms of sale: Credit can be arranged with owner by responsible parties. If you want credit, arrange for same before bidding.

The catalog gives details and can be had upon request to owner or sale manager.

W. MARTIN, Owner, Forest Grove, Ore.
E. A. RHOTEN, Sale Manager, Salem, Ore.
COL. J. W. HUGHES, Auctioneer, Forest Grove, Ore.

Foundation Holstein Herd
at Extremely Low Price

Six cows, or four if preferred, and the great bull, Hollywood Lilith Phoebe Veeman, that has two world record sisters and great backing. He is four years old, gentle, easy to handle and a proven sire of show quality.

Thos. Carmichael
Gaston, Ore.

Young Holstein Bulls
Bessie and other best blood lines. Priced for quick sale.
JOHN BOGART, Woodland, Wash.

Holstein Bulls at Farmer Prices
Sired by son of former world's champion and out of cows that make good at the pail.
S. D. CORNELL, Grandview, Wash.

Ruby Dell Guernsey Farm

Our herd has been in the winning whereever shown.

Senior herd sire, Francis May King (A. R.) he by Langwater Hambro (A. R.)

Junior herd sire, Rex of Willow Brook, he by Langwater Sunderland (A. R.)

Our herd matrons are cows with A. R. records from such noted sires as Langwater Hambro, Langwater Emigrant and first 5 daughters of Francis May King, to freshen with average records of 480.14 butterfat, at average age of two years and ten months; most of them double letter class.

Some splendid bull calves for sale of above breeding.

H. E. ANGEL, Mabton, Wash.

Rose City Guernseys
Bull calf, old enough for light service, sired by Langwater Khedive 51925, whose 12 nearest dams average over 700 lbs. fat; a son of Langwater Steadfast, that sold for $25,000 and is the outstanding bull of the breed. Calf's dam, Oregon Queen, 67837, has record of 544.56 lbs. fat, class CC. A few other well bred young bulls.
W. A. GOODIN, Cornelius, Ore.

Orchard Hill Farm Guernseys
"Home of high class Guernseys."
DR. PARK WEED WILLIS, Owner.
REDMOND, Wash.

GUERNSEY BULL CALF
31 tested dams average over 600 lbs. fat. Dam now on test. $150, express prepaid to your express office.
FOSHAY FARM.
O. & M. L. VOGET, Hubbard, Ore.

Brown Swiss Stock Farm
Breeders of Brown Swiss cattle, the farmers' dairy cow. Young stock for sale.
THEO BRUGGER, Route 3, Gresham, Ore.

Reg. Shorthorn Cattle For Sale
Herd headed by Mina's Lord 89413, by Royal Edward 324529. This bull is a three-year-old, and stood first at the Boise state fair, 1921. Also have some young cows bred to this bull for sale. Write for terms.
W. E. MILLS, Wilder, Idaho.

MILKING SHORTHORNS.
A few cows, also young bulls by the great sire, Peerless Knight by Beau of Glenside, carrying 93¾ per cent blood of the champion milch cow, Rose of Glenside.
J. E. DANILLS, Murphy, Ore.

Jersey--Gold and Silver Medal Sire
Ashnook Farm offers a few heifers and young bulls, sired by the gold and silver medal sire, Silver Chimes, of S. B., sire of ex-world champion heifer, Silver Chimes Gwendola, and 20 register of merit daughters, and more qualifying.
DEL PERKINS, Carlton, Ore.

Jersey Bulls at Bargain Prices
Send today for our special sale list of registered Jersey bulls from R. of M. dams. Easy terms, liberal credit.
WARREN GRAY, Box T, Jefferson, Ore.

Silver Medal Jerseys
Young bulls out of heifers qualifying for silver medals with first calf, and will make their sire a silver medal bull.
JOHN KOPLIN, Gaston, Ore.

Foundation Ayrshire Herd
To start a herd, I will sell together 3 heifer calves and bull, all 6 months old; high class; excellent breeding.
J. U. SMITH, Rt. 1, Newberg, Ore.

HAMPSHIRES
Heart o' the Valley Ranch
NOW OFFERING
BRED FALL GILTS FOR SEPTEMBER AND OCTOBER FARROW.
Sired by Model Defender, grand champion boar Pacific coast, 1921.
CHEROKEE LAD AND GEN. TIPTON BREEDING.
HAYS & HARTER
Grants Pass, Ore.

Indian City Berkshires
Big type, superior quality.
DR. W. J. KEYES, 202 Fernwell Bldg., SPOKANE, WASH.
B. F. WATSON, Herdsman, Rockford, Wash.

River Banks Berkshires
Long, smooth, deep, grand champion kind. Strong in the blood of most popular families of nation.
RIVER BANKS FARMS, Grants Pass, Ore.
CLYDE E. NILES, MGR.

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120 EGGS AND THE HEN IS JUST PAYING A PROFIT—

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AUTHORITIES estimate it takes 90 eggs a year to cover the "keep" of a commercial hen—and 120 eggs to make just a profit. But—there's the rub! How are you going to get the extra eggs—the eggs that make the big bank-book difference between just a *profit* and a *just* profit?

The average hen under natural range conditions will produce only about 75 eggs a year. Yet *proper feeding and care* have developed commercial flocks that average 120 to 150 eggs a year per hen. Some flocks will range even higher.

It's all a matter of feed and care. The feed must be clean, tasty, varied. The elements of an egg are derived from many sources. Therefore, the greater the variety of feed ingredients the better. SURELAY contains a dozen tested ingredients balanced and blended according to the famous Sperry formula. It is made so good, so uniform, so tasty, that every time Mrs. Hen takes a peck at it she is eating something that goes into the making of an egg.

You know that Nature provides each hen with a certain number of embryonic ova. These are minute yolks which, under ordinary conditions, will take the hen a number of years to produce. But that isn't very profitable. So it is your job as a poultryman to secure the most eggs in the least time—and keep the hen in *good health* all the while.

SURELAY will give every hen in your flock an opportunity to pay not only her board bill but pay *you* a profit. This prime quality feed calls the "egg-making department" to order—makes it produce—and keeps the hen in "fine fettle" all the time.

Ask your dealer for Sperry SURELAY in the yellow-striped bag; and send for "Makes Hens Happy"—a practical guide to more eggs and more money. Simply clip the coupon and mail today.

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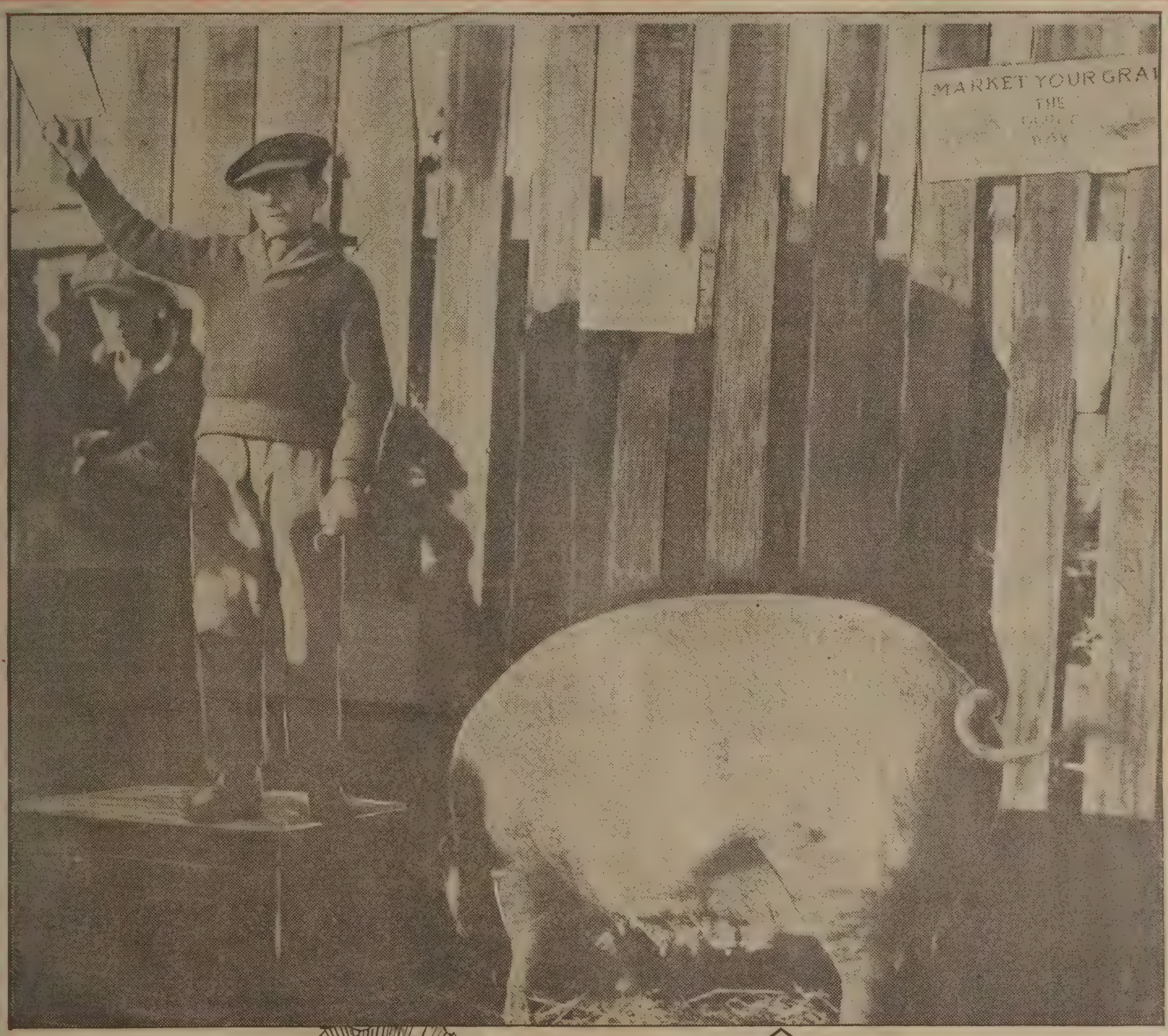
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THE WASHINGTON FARMER
ESTABLISHED 1894
SPOKANE. SEATTLE.



CLUB BOY -HIS OWN AUCTIONEER

Prospects for Reclamation Are Promising—Page 6

Best Crops

Adapted to Western Washington

Those who did not have an opportunity to visit the western Washington experiment station at Puyallup during the Farmers week will be interested in the following crops that were shown as being the best adapted to that part of the state.

A five-acre pasture has been maintained for nine years and will be kept in pasture continually without being plowed up. Each year the field is gone over with a spike-tooth harrow and a small amount of clover and grass seed scattered. The new grass seed keeps the weeds from growing and the harrowing puts the top soal in fine condition.

A number of trails of vetch and oats, which were sown in the spring brought out the fact that 50 pounds of vetch and 90 pounds of oats was the best mixture if to be used as a hay crop. It comes in later than a fall sown crop, yet the later is considered the best for a crop of green feed. The common vetch and the Sparrowbill oats were used in this trial.

A mixture of Rosen rye and common vetch sown in the fall, produced the highest silage yield to the acre, 11 tons, while Brown Squarehead and vetch came next with 10 tons. Hanchen barley is preferred because of its high yield and brittle beards, which break off when threshed. It often tests 52 pounds to the bushel. Mainstaff oats showed good results for forage while Sparrowbill is considered better for a grain crop.

The cereal nursery showed how new vaieties were tried out in small one-rod rows. Each variety that made a good showing is planted again the following year while the poor ones are discarded. Over 70 varieties of grasses and clovers are grown in rows to let any visitor see what some of the more uncommon crops will do in this climate. Tall oat grass made a very good showing and Mr. McCollam made the statement that it was not grown enough in western Washington. It makes an enormous hay crop, comes early, stays late and will improve both the hay and pasture meadows.

The fertilizer trial plots brought out the fact that cow manure and superphosphate made the most profitable yields, while the complete fertilizer produced slightly better crops, but at a greater cost. The plots were on upland soil and were planted to clover and grass, oats and field peas.

On the bottom soils cow manure was also found very beneficial because it furnished bacterial stimulation to the dead muck deposits. On the sandy loams the cabbage crops were increased by hen manure, the potatoes by sheep manure and the potato crops by superphosphate. Potash was not found to be needed on the sandy bottom soils. The addition of stable manure on the muck lands has been found to furnish a stimulating effect, which is thought to be due to the addition of bacteria which helps decompose the humus matter. Much soil is known to be a dead soil and that accounts for its ready response to bacteria.

Want Good Laws

N. H. Massie, secretary of the Yakima county farm bureau, is chairman of a committee for farm bureau officials to formulate a program of legislation desired by the organization for presentation to the next legislature. The committee proposes to raise a fund of $5000 to finance the fight for needed laws. The movement was launched at the recent Pierce county farm bureau picnic, which was attended by representatives of Pierce, Skagit, Whatcom, Mason and Yakima counties.

"Our plan is," said Mr. Massie, "to call on all farm bureau organizations in the state to work out, in their board meetings, some of the things that they think should be presented to the next legislature. Each county unit will present its recommendation to our committee, which will meet in Yakima September 19. A program of desired legislation will go out of this committee to the state farm bureau legislative committee and be acted upon early in November."

Taxation reform, legislation to allow municipalities with electric power developments to sell power to farmers along their transmission lines and a means of getting cheap power to settlers were among the measures discussed at the meeting. G. A. Mansfield, president of the Oregon state farm bureau, made an address at the meeting, in which he pointed out that the farmer must spend some money to get what he wants in the way of legislation.

Talks by R. M. Turner of the state college extension service and E. L. French, state director of agriculture, were also on the program.

The afternoon program consisted of short talks by political candidates. The whole program had to be carried on under cover, but the "million dollar" rain on that day did not dampen the spirit of the farm bureau.

In the evening, however, business men came out for the chicken dinner, which was served by the ladies of the farm bureau. The chickens were supplied by the Washington Egg and Poultry association, while the butter and cream were given by the Pierce County Dairymen's association. In spite of the rain, a large crowd heard the speakers.

Cement Monuments

By L. J. SMITH,

Head Department of Agricultural Engineering, Washington State College.

I would like to know the proportions used in making cement monuments, also what they put in to make them dark. Where, also, could I get the letters to put in the forms? Would also like to know if brick can be made successfully at home on a small scale.—H. C., Goldendale, Wash.

I presume you are referring to concrete monuments to mark corners on land, in which case a mixture of one part of cement to two and a half parts of sand and five parts of gravel would make a good strong mixture which would stand indefinitely.

If you are referring to monuments for gravestones, that is another matter. In that case I would make the mixture much finer, using one part of cement to three parts of sand and not using any gravel at all. If you wish to make them dark you can mix in with the cement dry before you add water any proportion of drying powders such as are used for painting, such as red ochre or burnt umber or lamp black or any of the dry powders that are used for those purposes. I would first try out a certain amount so that you can figure out just what you would want to use to get the most attractive results.

In regard to letters to put in the forms for monuments, you can procure any size and variety from any of the foundry equipment companies.

Bricks are made of concrete, but I would not advise any one making small concrete bricks of the ordinary size for house construction. It is far cheaper in every way to use the standard 8x8x16 concrete block. The face of this block can be made if one desires it so that it will have the appearance of making the wall of blocks smaller than 8x8x16.

Ships Berries East

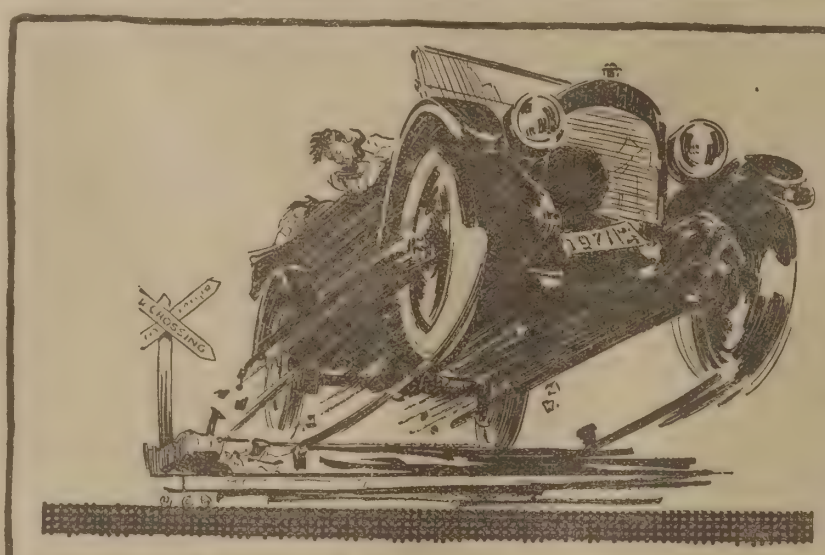
Three cars of Cuthbert raspberries were shipped to the Atlantic coast from the Washington Berry Growers' association of Sumner. F. H. Krugg, sales manager of the organization, reports that the berries were well ripened when loaded in the cars, but that all three cars arrived in splendid condition. The shipments were made to Pittsburgh, Boston and New York and the association received a government report on the New York and Boston cars which showed that there was only an occasional trace of mold in some of the top layers of fruit.

"The fact that we can ship our fruits to these points and have them arrive in good condition shows that we have found a solution to the shipping problem and that our pre-cooling system is a decided success," said Mr. Krugg. In past years we have had to confine our shipments to such points as Montana, the Dakotas and other states within the same radius.

"All fruit shipped was in a riper condition than any of the fruit that was shipped last year and we are rather optimistic as to the results of such long distance shipments. We feel certain that with better market prices in the eastern states we can make a good profit from our fresh fruit and use only the surplus berries for canning.

GRANGERS AT STATE FAIR.

There will be a special booth at the Washington state fair at Yakima this fall operated in the interests of the grange. The committee in charge of the booth consists of I. L. Hoops, Andrew Slavin, L. J. Lebert, H. O. Aikin and E. T. Barnett. Those in charge will disseminate information concerning the valley and the booth will be a rest room for grange members and their families.



The Designer Expected This!

No one knows better than the car designer how destructive are the forces of *shock, vibration, heat, cold, moisture, dust, oil, sudden starts* and *jarring, crashing stops.* No one realizes more keenly the superlative importance of correct design as well as quality in all parts of a motor car.

So, when 200 builders of cars and trucks choose Willard Threaded Rubber Batteries as standard, original equipment, it means an overwhelming endorsement of Willard design as well as Willard quality.

Ever since you began driving a car you've been piling up in your mind evidence of Willard quality, Willard stamina, Willard ability to keep you out of battery trouble! You *know* that a Willard, with Threaded Rubber Insulation, will cost you less "in the long run"—and mighty little, if any more, at the start!

Now the point is: Have you nailed down your determination with spikes of steel? Do you *know* that, when the time comes, you're going to buy a Willard Battery on your own judgment—and not be led aside by somebody who isn't going to have to *live* with the battery as *you* will? In other words, CAN YOU MAKE YOUR DECISION STICK? *That's* the question.

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Mueller
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Nash
Nash Six
Nelson
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THE WASHINGTON FARMER

SUCCESSOR TO

Vol. 47. No. 11 THE RANCH PACIFIC DAIRYMAN HORN AND HOOF September 14, 1922

For Good Farming, Attractive Country Homes and Happy Country People

Interstate Fair Is Interstate for Sure

Three States and Canada Compete in One of Association's Best Events

If the early fairs of the Pacific northwest circuit, including the Spokane Interstate fair, had been held during the month of July, they would have been worth millions of dollars to the farmers of this territory, for if there is any sure way to break a long dry spell it is to put on a fair. The first one in the northwest this year, an Oregon event, brought the first rain since spring; the Southwest Washington fair in August brought another good downpour; the Interstate fair last week showed a net result of a couple of days' good precipitation.

In spite of the rain of the second and third days of the fair at Spokane, the event was one of the best in the association's history and had an attendance well above that of a good many years, especially last year, reaching more than 100,000. Those who were scared out by the rain early in the week or who absented themselves for other reasons missed an excellent fair. Those who came looking for 10-cent kewpie dolls that they could secure for $2 or $3 no doubt were disappointed, for no classes were included in this year's catalogue for the kewpie. There was, however, a good entertainment program, including races, auto polo, Boy Scout drilling, features of many kinds and numerous side shows.

Entertainment features are, however, only the tail of the fair kite. They are essential, but a good kite would not get very far from friend earth without body and wings to catch the wind. The Spokane Interstate fair had a first-class set of wings in one of the best agricultural exhibits in recent years and a live stock show second to none in the last decade, if ever.

Both President T. S. Griffith and Manager W. G. Hannam express gratification over the success of the fair and are laying plans already for the 1923 event, which will be the 30th for the association.

The Agricultural Display.

There were approximately 30 excellent exhibits of counties, granges, communities and individual farms. Any one of them would have been a good miniature fair in itself. Taken all together, they were immense. Asotin county pinned on the blue ribbon for the best general agricultural display, being awarded first for the most artistic arrangement, first on vegetables and root crops and third on grasses and forage crops. Much of the credit for this winning belongs to County Horticulturist Isaman. Whitman county, the world's premier wheat-growing county, naturally took first place in grain, with Lewis county, Kootenai county and Idaho county all of Idaho, second, third and fourth. Kootenai, Lewis and Nez Perce counties of Idaho ranked first, second and fourth, respectively, in the division of grains and grasses, with Asotin county third. Benewah, Lewis and Idaho counties, in Idaho, were second, third and fourth to Asotin in vegetables and root crops.

There was perhaps less competition in individual exhibits of fruits and various vegetables and other crops this year than on previous occasions, though the show in this regard was good.

One of the striking exhibits of the agricultural building was that of the Kelly gardens, owned by A. A. Kelly, the superintendent of the agricultural division of the fair. It was not, however, entered in competition.

Future issues of THE FARMER will report other features of the agricultural show.

The Poultry Show.

Under the management of D. F. Mitchell, superintendent, and A. C. Dowd, secretary, the poultry division put on an excellent exhibition. Nearly all of the prominent breeds were entered and, together with a strong showing of rabbits and a liberal sprinkling of pigeons, bantams, geese, turkeys and so on, filled the poultry tent well to its limits. The average farmer would get his gun and go shooting if he found a fox in his poultry house, but no casualties resulted from the fact that two fox breeders had excellent displays of silver foxes housed in the poultry tent.

The Extension Tent.

One of the most popular stations on the fairgrounds was the tent housing well-arranged exhibits by the state college extension service. Poultry, pure foods (demonstrated by the state department of agriculture), home conveniences, dress forms, seed treatment, modern housing, farm mechanics, orchard methods, crop rotation and numerous additional features under the supervision of college experts, filled this tent. The state college also had a model poultry house on the fair grounds under charge of Professor R. V. Mitchell, head of the college poultry department. It was the mecca for hundreds of farmers and poultrymen.

Boys' and Girls' Clubs.

Total enrollments at the club camp were greater than any year previous. In all there were 130 boys and girls registered.

The first three days, Monday, Tuesday and Wednesday, were given over to contests between club members in Spokane county. One of the most interesting features of these was the active part which local leaders took in the work.

Spokane county members who, aside from winning county championships, were also awarded district championships, which include a trip to the state fair at Yakima this year to compete for state honors, include the Elk dairy team, the Rockford canning team, Selena Dena of the Sunset sewing club, Paul Cordill of the Cheney poultry club, and Lester Hartley of the Cheney pig club. Alfred Pease of Usk, Pend Oreille conty, won the district garden club contest.

The canning contest between the Oregon and Idaho teams, proved to be the most interesting of Intestate events. The Twin Falls county team composed of Leona Stoddard, Elizabeth Miller and Ruberta Siver, and chaperoned by A. I. O'Reilly, county club leader, represented Idaho and won over the Oregon champion team by a margin of four points. Audrie Weinkie, Elizabeth Dunning and Elizabeth Fehrnvacher, made up the Oregon team, which came from Portland. Mr. and Mrs. H. C. Seymour accompanied them. Mr. Seymour is Oregon state club leader.

Benton county has four interstate champions as a result of the fair. They, together with their projects are: Mert Lampson, poultry, made the highest score of any boy or girl in the club work, winning the silver loving cup, presented by The Washington Farmer. His score was 98. The others are: Kathryn Brand, bread baking; Everitt Terril, bee, and Lorain Engels, potato. Everitt made the second highest percentage of any one present, 95.

King county had a representative in the interstate contests in Helen Rosarre of O'Brien. She scored 94 in her garden work. Carl Rosenszweig of Spokane county won out in the beef cattle contest.

One group of boys, the Richland potato club of Spokane county, got together and made up an exhibit of grains, grasses, fruits, vegetables and other products which they grew themselves, and entered the open classes. They received first prize on fruits and fifth on vegetables, which totaled $47.50.

Chrissie Keuster of the Bear Creek dairy club of Spokane county, won the dairy cattle judging contest and was awarded a registered Holstein bull calf donated by John L. Smith of Spokane. Chrissie was a member of the dairy team which last year represented the state of Washington at the National dairy show at St. Paul.

I. C. Smouse, a club boy from Cheney, Wash., won first prize of $20 in the free-for-all judging contest.

Jack Adams, 11 years old, son of D. C. Adams, local club leader at Sunset, Spokane county, won more prize money than any other club member present. Jack showed his purebred Duroc Jersey hogs and in competition with many breeders and club boys as well, made a total of $69—$50 as a result of showing in the open classes and $19 in club work.

C. L. Chambers, field agent of extension methods, as they affect boys' and girls' club work, who is visiting from Washington, D. C., was in attendance at the club camp each day.

The Live Stock Show.

Every department of the live stock show was strong. The Interstate fair has never had a better dairy show nor a better hog show. Not for years has the horse show been up to the high standard of this year, and it is seldom that either the sheep or the beef cattle department has reached the standard in numbers and excellence of 1922. Perhaps the outstanding feature was the extent of the field from which the entries came. In no sense was the Spokane Interstate fair a local show. The Inland Empire contributed heavily, but Canada, Oregon, Idaho and western Washington were strongly represented. Especially was the West Side strong in the dairy division, several of the purple ribbons being won by champion Coast animals.

The Herefords.

In the beef barns the most admired herd was probably the Hereford string of O. A. Boggs & Sons of Daysland, Alberta. Their aged bull and cow that were made grand champions were outstanding, winning easily over good contenders in the Methow Valley and Diamond B. ranch herds.

Group of three bulls—1, O. A. Boggs & Sons, Daysland, Alberta, on Alberta Panama. Alberta Panama 2d and Dudley's Panama; 2, Methow Valley Live Stock Co., Winthrop, Wash., on Chewuch Panama 14th, Commander Jr. and Sir Radio; 3, Diamond D Ranch, Lowell, Ore., on Don Fairfax, Choice Gomez and Oregon Gomez. Group of two bulls—1, Boggs on Alberta Panama and Alberta Panama 2d; 2 and 3, Methow Valley Live Stock Co. on Chewuch Panama 14th and Commander Jr. and Beau Sunshine and Sir Radio.

Bulls: Three years or over—1, Boggs on Alberta Panama (senior and grand champion); 2, Diamond B Ranch on Don Fairfax. Two-year-olds—1 and 3, Boggs on Alberta Panama 2d and Melrose Perfection; 2, Methow Valley Live Stock Co. on Chewuch Panama 14th. Senior yearling—1, Methow Valley Live Stock Co. on Beau Stewart. Junior yearling—1 and 3, Boggs on Dudley's Panama and Alberta Panama 3d; 2, Methow Valley Live Stock Co. on Commander Jr. Senior calf—1, Methow Valley Live Stock Co. on Prince Perfect. Junior calf—1 and 3, Methow Valley Live Stock Co. on Beau Sunshine (junior champion) and Sir Radio; 2 and 4, Diamond B Ranch on Oregon Gomez and Choice Gomez.

Females: Three years or over—1 and 2, Boggs on Bonnie Lady Panama (senior and grand champion) and Miss Panama; 3, Methow Valley Live Stock Co. on Jeannette 2d; 4, Diamond B Ranch on Pearl Fairfax. Two-year-olds—1, Methow Valley Live Stock Co. on Florence Debonair; 2, Diamond B Ranch on Betty Blanchard 5th; 3, Boggs on Miss Fairfax Panama. Senior yearling—1, Diamond B Ranch on Illah Fairfax. Junior yearling—1 and 2, Boggs on Panama Lady 3d (junior champion) and Miss Columbus Panama; 3 and 4, Methow Valley Live Stock Co. on Princess Lilly and Blossom's Joy. Senior calf—1 and 3, Methow Valley Live Stock Co. on Lady Annabel and Miss Frances; 2, Boggs on Miss Panama Perfection; 4, Diamond B Ranch on Lady Gomez.

Groups: Aged herd—1, Boggs; 2, Methow Valley Live Stock Co.; 3, Diamond B Ranch. Yearling herd—1, Boggs; 2, Methow Valley Live Stock Co. Calf herd—1 and 2, Methow Valley Live Stock Co. Get of sire—1, Boggs; 2 and 3, Methow Valley Live Stock Co.

The Shorthorns.

The Shorthorn show was good. Day & Rothrock led in the winnings, though yielding many top points to G. N. DeLay of Hot Lake, Ore.; W. A. Heater of Sublimity, Ore., and C. H. Craig & Son of Lowden, Wash., including senior champion bull to Heater and senior and grand champion cow to DeLay. The Rothrock string was made up of all young animals, headed by Hercules Conqueror, a junior yearling that was made grand champion.

Group of three bulls—1, Day & Rothrock, Spokane, Wash., on Hercules Conqueror, Hercules Radiance and Hercules Bandmaster; 2, G. N. DeLay, Hot Lake Ore., on Village Reserve, Hercules Cornerstone and Linden Laddie; 3, W. A. Heater, Sublimity, Ore., on Gainford Modus, Gainford Silvertip and Little Gainford. Group of two bulls—1, Day & Rothrock on Hercules Conqueror and Hercules Bandmaster; 2, Heater on Gainford Silvertip and Little Gainford; 3, C. H. Craig & Son, Lowden, Wash., on White Sultan and Fancy Boy.

Bulls: Three years or over—1, Heater on Gainford Mocus (senior champion); 2, DeLay on Village Reserve. Two-year-olds—1, DeLay on Hercules Cornerstone. Junior yearling—1, Day & Rothrock on Hercules Conqueror (junior and grand champion); 2, DeLay on Linden Laddie. Senior calf—1 and 2, Day & Rothrock on Hercules Bandmaster and Hercules Radiance; 3, Heater on Gainford Silvertip; 4, Craig on Fancy Boy; 5, DeLay on Missie's Villager. Junior calf—1, Craig on White Sultan; 2 and 3, Heater on Little Gainford and Gainford Nugget; 4, DeLay on Royal Villager.

Females: Three years or over, with calf at side—1, DeLay on Dunbro Maid; 2, Heater on Signet's Memory 7th. Three years or over—1 and 2, DeLay on Scottish Jane 4th (senior and grand champion) and Ruberta's Missie. Two-year-olds—1, Heater on Memory's Roan Lady; 2, DeLay on English Lady 21st. Senior yearling—1 and 2, Day & Rothrock on Perfection's

(Continued on page ten.)

Seattle Milk Shippers Win

Violated No Law in Spirit or Fact in Milk Price Case

Members of cooperative organizations drawn up under the new cooperative marketing act have been watching with interest for the action of the Seattle court on the demurrer in the case, which has involved seven members of the executive committee of the Seattle Milk Shippers' association who were charged with conspiracy to fix milk prices in Seattle. Superior Judge Calvin S. Hall sustained the association's demurrer at the hearing in Seattle September 5 and 6. The case was brought early in the summer by Malcolm Douglas, prosecuting attorney.

In his memorandum decision Judge Hall says regarding the case, "The information charges the defendants were combining to fix the price of their own milk by threatening not to furnish their milk to any distributors who supplied such milk to dealers who sold it for less than 11 cents per quart. There is no charge that 11 cents a quart is an unreasonable or extortionate price, and in the absence of such charge it must be presumed that it is a reasonable price.

"Trade or commerce is exchange of commodities, and the fixing of a fair price is not only not injurious to trade or commerce, but is the greatest encouragement and aid thereto, and it is just as essential to trade and commerce that the producer receive a reasonable price for his milk as it is that the consumer be charged only a reasonable price for the same. Anything else is unfair to one or the other, and, therefore, injurious to trade or commerce. If the state should allege and prove that the price fixed, that is, 11 cents a quart, is extortionate or unreasonable and that the defendants combined to fix such a price generally in the city of Seattle, then, in my opinion, a crime would be charged both under the common law and under our statute. As the information does not contain these necessary allegations the demurrer is sustained."

This case, which can yet be appealed to higher court, is significant because it is thought to be the first case coming into courts regarding an organization founded under the new cooperation marketing act. The Seattle Milk Shippers' association has for more than a year been operating in the city of Seattle, taking the place of the former Seattle milk commission.

Prior to its organization, however, milk had sold on the Seattle market at almost any price as a result of price cutting among the small retail grocers of the city.

"If all dealers were allowed to continue the cutting of prices and selling their products indiscriminately a price cutting war would follow which would eventually result in decreasing the price of milk to the producer," said C. B. Scollard, secretary of the association. "The dairymen of King county feel that it is absolutely necessary to maintain a uniform price everywhere, and they have received the cooperation of the distributors as a general rule. Most of the dairymen are carrying on a losing business in the production of milk at present prices, and it behooves the city consumers to see that the farmer gets something near cost of production for his product."

The Cover Page

"Gosh, I felt funny," confessed Chester Murphy of Sunnyside upon descending from the auction block after disposing of one of his purebred Duroc Jersey sows for the highest price obtained in the sale of the Yakima Valley Duroc Jersey Breeders' association last spring. Chester is a member of the far-famed Sunnyside Pig club. He is shown on the cover page in the act of selling his sow.

And who wouldn't feel funny if he had a prized sow in the ring and she wasn't going very high and the auctioneer lay down on the job and made you get up there and sell her yourself? It was a case of "When a feller needs a friend" all right, but Chester, being Irish, is resourceful, and he "got away with it" in good shape, the sow bringing $80. His tongue limbered up after he got off the block, and it took him no time at all to offer I. F. Kneeland of Sunnyside, buyer of his sow, $25 for pick of the coming litter.

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Idle Lands Should Be Developed

We hope that Secretary Wallace has been misquoted or misunderstood by the Washington correspondent who reports that the secretary of agriculture is opposed to the reclamation of arid or swamp lands. This correspondent quotes him as saying that with the steady increase in population the day will come when cultivation of great areas now idle will be an economic necessity, but the secretary thinks that day is far distant. For the present, in his view, it would be wiser for the nation to make the most of what it already has instead of expanding to wider fields.

If Secretary Wallace said that, he is pitting himself against the long-standing policy of this nation. The homestead law was enacted to bring under cultivation great areas then idle. If Secretary Wallace's policy had prevailed in the past there would have been no homestead law; there would have been no opening of Indian reservations; there would have been no donation land act for the Pacific northwest, which brought about the settlement of this great region; President Jefferson would not have made the Louisiana purchase, nor would he have sent Lewis and Clark to explore the Pacific northwest; the United States would have stopped at the Mississippi river, and the vast region west of that great stream would now be possessed by Great Britain, Mexico and other foreign governments. If that narrow policy had prevailed 60 or 70 years ago the men and women who possess the farms, orchards and gardens of the Pacific northwest would never have been given access to them.

There seemed much greater reason for stopping the agricultural growth of the nation a hundred years ago or 50 years ago than is now in evidence. Then the population was small and the land areas were vast and largely unappropriated by settlers. But it is different today. The population has grown to 110,000,000; the homestead lands are practically gone, and it is entirely apparent that if the sons and daughters of American farmers are to have any part of the opportunity that was given to their fathers and mothers it must come from the irrigation of arid lands, the drainage of swamp areas and the clearing of logged-off regions.

THE FARMER repeats that it hopes Secretary Wallace has been misquoted. We do not like to think that the great agricultural department of this nation is headed by a man of the narrow vision and false understanding of national needs and aspirations that the interview under consideration would make him appear to be.

Coming Trade of the Pacific

It is high time that the Pacific Northwest should wake up to the possibilities of the Pacific ocean trade. To be posted on the developments and to do a lot of preparatory work in the way of ascertaining what kind of trade can be carried on profitably between the Pacific coast and the Orient, is a different matter from organizing trading companies at once. This preliminary educational work is important.

John A. Fowler, U. S. trade commissioner with headquarters in Manila, who was in Portland the other day, would go father, declaring: "Now is the time when the business men of the United States should reach out and obtain a share of the big business that is developing in the Philippines, Siam, Dutch East Indies, French Indo-China and other countries in that section of the globe."

Robert Dollar, the well-known business man of the Pacific coast, also declares: "I have always known there was a future for the United States in trade on the Pacific, and it is a marvel to me how that trade has grown already, although only the surface has been slightly scratched."

This whole question is one of vital interest to the farmers of the Pacific Northwest, for farm products must make up a large part of this future trade of the Pacific.

Tried Out Commercial Fertilizer

At least one King county farmer has found it pays to use commercial fertilizer on his clover field. T. A. Garrett was induced by County Agent A. B. Nystrom to put superphosphate on his clover field at the rate of 200 pounds per acre, at a cost of $5.25, allowing 75 cents for putting it on.

Mr. Garrett was somewhat skeptical at first, but he was finally induced to try the experiment. The fertilizer was placed on the field last year and a plot left without any to be used as a check plot.

The crop has just been harvested this season, and the results show that the yield of the test plot was 4060 pounds of cured hay per acre, while that of the phosphate plot yielded 8240 pounds to the acre. The difference in favor of the phosphate plot was slightly over two tons. At $10 a ton there is a gross increase of $20 per acre, or a net profit of $14 per acre in favor of putting superphosphate on that west-side soil.

Care and Feeding Pay

Care and feeding are important in successful dairying.

If you can increase the production of a cow 65 per cent by attending to these details, it would certainly seem worth while to do so. This is what C. J. Lawson of Alderton, Wash., reports that he did. In five years he increased the fat production of one cow from 150 pounds to 230 pounds.

The rest of the herd made practically the same increase, he says, and that this was due largely to the good feeding and care of the herd. All cows in the herd were grade Holsteins and Guernseys.

LOOKING INTO OTHER FARM FIELDS

Eggs, butter and poultry dealers in Kansas City have made formal complaint to the interstate commerce commission against the service given country shippers by the American Express company, and charges assessed for transporting goods, and asked relief from present existing conditions.

* * *

The Texas farm bureau has been successful in lining up more than 5000 acres to be planted in Bermuda onions this fall.

* * *

According to reports received by the United States department of agriculture, there have been 143,212 muskrat skins shipped from Alaska since December 1, 1921. This is almost as many as were shipped during the entire year of 1919.

* * *

It is estimated that the motor-driven vehicles in the United States have a power equal to that of more than 300,000,000 horses, while the total number of horses and mules in the country is less than one-tenth that figure.

* * *

Vegetables grown in the United States in 1921 had an estimated value of $1,104,000,000, according to the United States department of agriculture. The total value of truck vegetables produced for sale, often called the commercial crop, was estimated by the department at $227,000,000.

State Farm News

An excellent crop of Minnesota 13 corn is growing on the John Sinn farm near Duvall, King county. The entire patch was planted from home-grown seed, which Mr. Sinn selected in the field just before harvesting last year. The crop will in all probability produce 15 or more tons of silage to the acre. Mr. Sinn raises practically all of his cow feed on the farm, including an excellent grade of alfalfa hay. The only feed bought is mill run and oil meal. He milks 18 high grade Holstein cows, there being approximately 25 head of animals on the place.

* * *

Chris Unger, a dairyman located near Duvall, King county, is erecting a 60-ton wooden hoop silo, under the direction of A. B. Nystrom, county agent. Mr. Unger has four acres of wheat and vetch, which will be used to fill the silo when it is finished. He keeps 21 cows.

* * *

Farmers of eastern Klickitat county, who purchased a warehouse at Roosevelt 14 years ago, have found the investment profitable. The farmers' warehouse has paid for itself and last year a $2000 cash surplus was distributed to shareholders. Standard warehouse charges are collected and any profits accrued are paid to shareholders either in cash or stock in the concern.

* * *

Nearly 500 carloads of prunes had been shipped out of the Walla Walla district up to September 3.

* * *

The Oroville cannery has been putting up between 500 and 600 cases of tomatoes daily. The yield this year is good, 30 tons to the acre not being unusual, and the quality is superior to former years. The plant is giving employment to more than 50 men, women and boys.

* * *

Vancouver's big horticultural event, the annual prune harvest festival, will be held October 19, 20 and 21.

* * *

More rutabagas are being grown in the Granger, Outlook and Sunnyside districts this year than usual. Small fields, one or two acres or more in extent, may be seen through this section of the lower Yakima valley.

* * *

The new high school gymnasium and auditorium at Endicott, erected at a cost of $30,000, will be used this fall.

* * *

The Libby cannery at Yakima put up 350 tons of spinach this year, 50 per cent more than in 1921, and canned Royal Anne cherries from Yakima, Wenatchee, Lewiston and Hood River at the rate of 40 tons per day during July. The company brought cherries from Wenatchee by truck in nine hours, three tons to a load, for 50 cents per ton less than it would have cost to ship by rail. The prevailing price was 7 1-2 cents a pound, as compared with 6 cents last year.

* * *

The state capitol committee at Olympia accepted the bid of the Saginaw Timber company for the purchase of a quarter section of timber near Saginaw, in Grays Harbor county, for $40,000. The timber is part of the state capitol building grant.

* * *

The 1922 crop of sugar beets in Yakima will be unsurpassed, it is predicted from present indications, but even so, the product of 3500 acres will not run the Utah-Idaho Sugar company's plant at Toppenish more than 60 days, and this is only one of three expensive plants in the valley. Farmers were quite dissatisfied with the price offered—$6 per ton—and plantings not made by the company were extremely limited.

* * *

Five cars of poultry, valued at $30,000, have been shipped from Bellingham and Lynden this summer by the Washington Cooperative Egg and Poultry association.

* * *

Plans are being made by the San Juan county game commission to install a trout hatchery on the H. D. Pike farm, near East Sound, Orcas island. The location is considered ideal for the purpose. A special meeting of the commission at Grays Harbor was attended by B. M. Olmstead of East Sound and E. C. Bonn of Seattle, a representative of the state fish and game department.

* * *

The fruit movement for the Yakima valley for the week ended September 2 amounted to 714 cars, according to railroad officials. This brings the season's shipment to 2243 cars.

* * *

Based upon estimates returned by shippers of the California Fruit Growers' exchange, California will ship during the season, November 1, 1922, to October 31, 1923, approximately 51,340 carloads of oranges, lemons and grapefruit.

* * *

Interesting dairy club contests will take place at the Washington state fair, according to E. C. Scott, county club agent of Yakima, who is outlining the county contest. Five dairy clubs in Yakima county, of which three are Guernsey clubs and two are Holstein clubs, will compete in a county contest at the fair on Monday, September 18. The district contest is Wednesday, September 20, and the state contest on Thursday.

The two Holstein clubs of the Ahtanum and of Moxee will be in the county contest, as also will be the three Guernsey clubs of Granger, Sunnyside and Mabton. The Grandview and Mabton districts are combined in one club. Leaders of the Guernsey clubs are: D. H. Clement, Granger; A. L. Wallace, Sunnyside; H. E. Angel, Mabton M. W. Poynor is the leader of the Ahtanum club and W. R. Duffield of the Moxee club.

Besides the members of the standard clubs there are scattered over the county boys who are carrying on dairy work. In the Grandview district there is a group of unattached boys who have Holstein heifers. Three boys at Naches have Guernsey heifers, one at Terrace Heights and four in the McKinley district on the reservation.

Counties taking part in the district contest are: Yakima, Benton, Kittitas, Klickitat, Columbia, Walla Walla, Franklin and Chelan. The district beef club contest takes place on September 20 and the state contest on September 22. The district pig club contest is scheduled for September 19 and the state contest on September 21.

The special dairy judging by the club boys, one from each county, will take place on September 21. The winner in this contest will go to the National Dairy show at St. Paul in December.

FARM BUSINESS AND MARKETS OUTLOOK

Frequent predictions on the market page of higher prices on prime beeves have been verified right along. Values reached a new top of $11.25 at Chicago last week. On the midwestern markets baby beeves are more numerous than a few weeks ago so that heavy cattle are commanding a moderate premium.

Although there is a scarcity of finished steers, receipts of other grades are abundant enough to make the total supply above the average for the corresponding period of the year. Combined receipts at seven leading markets since January 1 are 6,034,000 head compared with a seven-year average during the same season of 5,897,000 head.

Although total supply figures do not suggest scarcity, the western range movement is running considerably behind that of last year. Present arrivals from that section show desirable finish and are increasing the competition which short-feds must encounter. Southwestern pastures are disgorging and shipments from Kansas, since the grass season started, have been larger than in the corresponding period of last year in line with the larger movement of thin cattle into that section last spring.

Dressed trade is holding up well on the better grades of beef, but the outlets for the product of common and medium steers will be filled to capacity most of the time in the next three months. Prime and choice steers are not believed to be numerous in feed lots, so that these grades will remain in a strong position, although the present price level appears to have largely discounted the situation.

Feeder Buyers Continue Active.

Combined shipments of stocker and feeder cattle from the 12 leading markets in the five weeks ending August 26 were 400,688 head compared with 303,110 head in the corresponding period a year ago and 215,004 head two years ago. Both of the latter years, however, were below normal so that the amount of increase shown this year is not as great as it first appears.

A few feeders are buying fleshing steers for a short turn before the present price level on prime and choice grades disappears. Bulk of the inquiry, however, is for steers in ordinary flesh. A moderate demand exists also for the light weights which cornbelt specialists in recent years have found profitable because of low initial cost.

Further Decline in Hog Prices on Horizon.

Receipts of hogs at the 11 leading markets last week were approximately 455,000 head, the largest on record for the corresponding week with a single exception, and 25 per cent above the 10-year average. During the same 10 years, the first week in September, which includes the Labor day holiday, has averaged the lightest of the season. A slight letup occurred again this year, but prices are still sagging. As soon as new crop hogs begin to show up in large numbers, as they will do in the next five or six weeks, prices upon bacon and butcher grades are due for a further decline.

With an abnormally heavy supply of hogs of above average weight coming to market each week and a fairly large stock of lard and cured meats in storage to be merchandised, consumptive demand has been fully satisfied. Storage stocks of lard at the seven leading packing points declined 18,000,000 pounds in August compared with an average decrease of 14,600,000 pounds in the same month in the preceding five years. Stocks of hog meats declined only 9,000,000 pounds compared with a five-year average decrease of 52,000,000 pounds. Clearances of lard and hog meats for export each week have been holding above the prewar average.

Receipts of Lambs Below Normal.

Receipts of sheep and lambs at the seven leading markets last week increased more than 15 per cent over the previous week. The total, however, was only 216,000 head compared with an eight-year average for the corresponding week of 344,000 head. The shortage is primarily in western range lambs which have the right of way at this season. From January 1 to August 26 combined receipts at the seven markets were 5,952,000 head compared with a seven-year average of 6,442,000 head in the corresponding period.

Western ranchers are having an inning this year and regaining some of the loss of a year ago when feeder lambs purchased around $8 or less lost money for the grower, but returned enormous profits. Selected lots of feeder lambs sold last week at Chicago as high as the top on the fat lamb market. In the last eight weeks total shipments countryward from the 12 leading markets were 354,088 head compared with 299,022 head in the same period last year and 690,335 head two years ago. It is too early to tell how large the total movement into cornbelt feed lots will be during the season as a whole although thus far it has not been excessive.

Strike Settlement Helps Horse Market.

Settlement of the coal strike finally gave aid and comfort to the horse market as demand has practically doubled in the last two weeks. Coal concerns are buying rugged workers. Up to $225 was paid at Chicago for such horses weighing around 1650 pounds and the demand for still heavier weights was greater than the supply. Prices were not altered materially, but a clearance of previous accumulations was effected.

Activity Expected in Wool Market.

Now that Labor day is past, more activity is expected in the wool market as some of the mills which have been operating on part time are expected to resume on a full time basis. Demand for wool has been somewhat irregular recently, but prices were firm last week even on fine staple, which weakened temporarily under competition from foreign wools. The new clip in Australia will be ready for market in a few weeks, the first auction sale being scheduled at Adelaide on September 22.

Wool consumption during May, according to the department of commerce, was 43,602,000 pounds compared with 36,048,000 pounds in April and 41,442,000 pounds in May, 1921. Wool has been moving from exporting to importing countries at unusual speed in the last eight months. The available records show an increase of over 100 per cent above a year ago.

Expansion Due in Wheat Movement.

Receipts of wheat at primary markets increased last week after a decline of several weeks' duration. The increase was primarily at spring wheat markets, the movement to which will rise to flood tide around the end of September. Although the tariff prevents Canadian wheat from coming into the United States, except in small dribbles, our own markets are feeling the pressure of Canadian wheat marketings through competition for the export trade. Receipts daily at Winnipeg have been running below 500 cars daily, thus far, but can be expected to increase to 1000 to 1500 cars within a few weeks.

Wheat Statistics Less Bullish.

The statistical position of wheat has been weakened recently. Unofficial estimates upon the crop in the United States are about 7,000,000 bushels more than a month ago and private surveys in Canada suggest that a yield in that country around 20 per cent higher than the last official figure and even larger than the 1915 crop. If these are verified they will practically fill the possible gap between export surpluses and import requirements. Crops above the average in Australia and the Argentine are in prospect although the weather in both countries is treacherous and disaster may occur before the harvest, due three or four months hence.

Europeans are displaying no anxiety over future supplies. Presumably they are drawing heavily upon home grown grain and will make up by increased purchases of foreign wheat later in the season. In spite of the absence of aggressive foreign buying clearances have more than doubled in the last five or six weeks. Last year, however, the United States alone exported about 135,000,000 bushels of wheat during July, August and September. This year, the total is not apt to erceed 75,000,000 bushels in the same interval.

Settlement of the troublesome German question would undoubtedly help the wheat market. Events now in the making may likewise improve the Italian situation, which country also needs more wheat than last year. Great Britain is in much better position financially to buy than a year ago.

Flour mill operations, according to latest reports, were above the average for the corresponding period in previous years. Around 12,000,000 bushels of wheat are being ground each week.

Recently the absence of aggressive demand has been the principal factor in the trend of the market. With a substantial increase in the supply, including both United States and Canadian wheat, not far distant, a slightly lower price level will not occasion surprise. It is believed, however, that the demand also is due for some expansion before long, and that present prices are not much above the level at which the bulk of the crop can be merchandised.

Corn Crop Loses Ground.

Dry, hot weather which has continued throughout August in some of the important corn growing sections caused a loss in the crop prospect of a little less than 200,000 bushels, according to comprehensive unofficial reports. The total yield on the basis of the present promise is about 7 per cent less than last year's harvest. Considering the size of the crop, the export demand, the rate of domestic distribution, the decline in farm stocks of old corn and the visible supply, the corn market is in a stronger position than any of the other coarse grains.

Receipts of corn at primary markets were heavy again last week, but were absorbed without a material decline in price.

Oats Movement Falling Behind.

Movement of oats from farms to primary markets in the last four weeks was the smallest for the corresponding season since 1911. The decline is too great to explain on the grounds of a small crop as the yield is considerably larger than last year, although below the average of recent years. Presumably the extremely low price is a factor. Because of light receipts and the strength in the corn market, oats prices have been comparatively stable in the last week or two and no decline of consequence is probable.

Cash Grain Markets.

The range of cash grain prices for the week ending September 6 is as follows:

Chicago—Wheat: No. 2 red, $1.02 3-4@1.05; No. 2 hard, $1.00 3-4@1.07. Corn: No. 2 mixed, 61 1-2@63c; No. 3, 61 1-2@62 1-4c; No. 2 yellow, 62@63 1-2c; No. 3, 63c; No. 2 white, 61 3-4@63c; No. 3, 61 1-4@62 1-2c. Oats: No. 2 white, 33 3-4@37 1-2c; No. 3, 32 1-2@36 1-2c; No. 4, 35 1-2c. Rye: No. 3, 69 1-4@69 1-2c. Barley: 51@60c.

Feed Market Stronger.

With flour mills storing wheat feeds instead of forcing them upon the market, prices show more strength than a week ago, although the upturn has been small. Dry weather in the southwest is providing a good market in that section at the present time. Corn feeds show little change recently, but both cottonseed meal and linseed meal seem to be feeling the effect of the new flax and cotton crop movement.

Prices per ton (100-pound bags) in carlots: Chicago—Bran, $17.50; standard middlings, $18.25; flour middlings, $24.50; cottonseed meal, 36 per cent, $37.50; 43 per cent, $51.50; hominy feed, $24.50; gluten feed, $29.85; old process oil meal, $42; tankage, $55.

Hay Markets Unchanged.

The hay market is a stereotyped affair with a fair demand for best grades and very limited demand for low grades even at big discounts.

Prices per ton in carlots—Chicago—No. 1 timothy, $18@19; No. 2, $14@17; No. 3, $12@14; No. 1 light clover mixed, $15@18; No. 1 clover, $14@16; No. 1 clover mixed, $13@15; upland prairie, $16@18; midland prairie, $12@17; rye straw, $10.50@11.50; oat and wheat straw, $8@10.

Sharp Rise in Egg Markets.

Although a moderate upward trend in the egg market was expected during the late summer months, the advance of 50 per cent in values in the last few weeks was distinctly surprising. Receipts have fallen off sharply and daily withdrawals from cold storage at the four leading markets are averaging about 25,000 cases.

Poultry prices have changed but little recently, but the demand does not look broad enough to absorb the heavy autumn run without a further decline.

Butter Market in Strong Position.

Dry, hot weather in some of the principal butter producing sections has reduced the market supply materially in the last two weeks and prices have shown a pronounced upward trend. Fancy butter particularly has been scarce. A small amount has been withdrawn from cold storage, although this movement is not of much consequence as yet. The statistical position of the butter market is fairly strong since the total supply in storage is not extremely heavy and consumptive demand is considerably above the average. Prices are about 15 per cent higher than at the low time of the season a few weeks ago.

Prices for 92 score creamery butter on September 6 were:

Chicago, 37 1-2c; New York, 39c; Boston, 38 1-2c; Philadelphia, 39 1-2c.

Cheese Market Unsettled.

Distributing markets for cheese opened steady last week as the result of strength at country points, but toward the close of the week sales declined to small volume and an uneasy, unsettled tone was in evidence. Only twins were quoted lower, however. There is no special surplus of cheese on the market, but dealers are anxious to effect a clean up. A few June twins and daisies were sold at Chicago last week at 20 1-2@21c. Eastern markets have been steady to firm recently with demand principally for New York state cheese. Philadelphia reports very light stocks on hand. With the butter and egg market strong and receipts of cheese falling off, the trend of the market is apt to be toward a higher level.

Prices for No. 1 American cheese on September 6 were:

Chicago—Twins, 20@20 1-4c; S. Daisies, 20@20 3-4c; D. Daisies, 20@20 1-4c; Young Americas, $20@20 1-2c; Longhorns, 20 1-2@21c; Square Prints, 21@21 1-2c.

Fruits and Vegetables.

Potato prices declined again last week. Total carlot shipments in the United States are running much above the average for the corresponding season. The movement in the week ending September 2 was 4100 cars compared with 2836 cars last year, 3445 cars two years ago and 2814 cars three years ago. Early Ohios are bringing 85c to $1.10 per 100 pounds with rurals at $1.15 on the Chicago market.

Extremely low prices have checked the move-

(Continued on page twenty.)

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Range of Live Stock Prices, Week Ending Sept. 5

CATTLE.	Chicago.	Spokane.	Portland.	N. S. Lake.
Choice, prime heavy steers (1100 lb. up)	10.35@11.25			
Good heavy steers	9.35@10.50			
Medium heavy steers	8.00@ 9.50			
Common heavy steers	6.25@ 8.15			
Choice, prime light steers (1100 lb. d'n)	10.15@11.10			
Good light steers	9.25@10.35			
Medium light steers	7.90@ 9.35	6.50@ 7.50	6.75@ 8.25	6.25@ 7.00
Common light steers	6.00@ 8.00	4.00@ 6.50	4.00@ 6.75	4.50@ 6.50
Common to choice butcher heifers	4.75@ 9.40	3.50@ 6.00	3.75@ 6.25	3.50@ 5.50
Common to choice butcher cows	3.65@ 8.10	2.75@ 5.00	3.00@ 5.50	2.75@ 5.00
Bologna and beef bulls	3.65@ 6.60	2.75@ 4.50	3.00@ 4.00	7.50@ 8.50
Canners and cutters, cows and heifers	2.60@ 3.75	1.50@ 2.50	1.50@ 2.75	1.50@ 3.25
Canner steers	3.75@ 4.50	2.50@ 3.50	3.00@ 4.00	2.75@ 3.75
Medium to choice light veals	10.75@12.75	7.00@ 8.00	8.00@10.00	7.50@ 8.50
Common to choice heavy veals	4.25@ 7.75	5.00@ 7.50	4.00@ 7.00	
Com. to choice feeders (1000 lb. up)	5.75@ 8.00			
Com. to choice feeders (750-1000 lb.)	5.50@ 7.75	3.50@ 5.00		4.50@ 5.50
Common to choice stocker steers	4.50@ 7.50			
HOGS.				
Top of market	9.90	11.00	10.50	9.25
Bulk of sales	6.40@ 9.80	8.75@10.75	8.75@10.25	8.25@ 8.75
Heavy (250 lb. up)	7.70@ 9.30	9.00@10.00	8.00@ 9.50	
Medium (200-250 lb.)	8.50@ 9.80	9.50@10.50	8.50@10.00	8.25@ 9.00
Light (150-200 lb.)	9.15@ 9.85	10.00@11.00	9.50@10.50	8.75@ 9.25
Light lights (130-150 lb.)	8.35@ 9.75	9.50@10.50	9.75@10.25	8.50@ 9.00
Smooth packing sows (250 lb. up)	6.40@ 7.50	7.50@ 8.00	7.00@ 8.00	
Rough packing sows (200 lb. up)	6.00@ 6.75	7.00@ 7.50	6.00@ 7.00	
Medium to choice pigs (130 lb. down)	7.25@ 8.50	9.00@10.50	10.00@10.75	
Stock pigs		9.00@10.25	10.00@10.75	8.50@ 9.25
SHEEP AND LAMBS.				
Medium to prime lambs (84 lb. d'n)	11.75@13.00	8.00@10.00	8.00@11.00	8.50@11.00
Culls and common lambs	8.00@11.75	6.00@ 8.00	5.00@ 8.00	6.50@ 8.50
Medium to prime yearling wethers	8.50@11.50	7.00@ 8.00	6.00@ 8.00	5.50@ 6.50
Medium to prime wethers	5.75@ 9.25	6.00@ 7.50	5.00@ 7.00	4.00@ 5.00
Medium to choice ewes	3.00@ 7.50	3.50@ 6.50	3.50@ 5.00	3.00@ 4.00
Culls and common ewes	2.00@ 4.00	2.00@ 3.50	2.00@ 3.50	1.50@ 3.00
Full-mouth to yearling breeding ewes	4.75@11.75			
Feeder lambs	11.50@13.00	6.00@ 7.00		

Hope Grows for Reclamation

Pacific Northwest Men Head Committees in Congress

With Congressman Smith of Idaho heading the house committee on irrigation and Senator McNary of Oregon heading the senate committee on irrigation of the senate, positions of great strategic importance, the outlook for the development of the arid lands of the west and the swamp lands of the south would seem to be bright. Of old, watchmen stood upon the towers of the city walls. The cry arose from the city darkness, "Watchman, what of the night," Fortunate to some if the response from the watch-tower floated down, "The dawn breaketh in the east."

To the older citizens of the Pacific northwest who have watched and waited for so many years, who have promoted conventions and publicity and experimentation to demonstrate the magic power of water upon the desert, whose hearts have sometimes grown sick with "a hope long deferred," this word of promise of the coming of a new and better day will bring renewed hope and courage. Both Smith and McNary know the problem; both are earnest and tireless and put achievement above office-holding. Both are devoted to the northwest, and while generously and conscientiously promoting reclamation by drainage in the south and elsewhere, and irrigation in the Pacific northwest, they can be depended on to protect the interests of the Pacific northwest.

It is strange that public opinion and congressional votes in New England and some other parts of the east should be so ill informed and so provincial in the matter of the development of the west. They seem to think of the matter as one calling for heavy eleemosynary contribution out of their pockets for the benefit of a few remote settlers from which they will receive no personal return. One is reminded of the colonial attitude of England in pre-revolutionary days, in which it was assumed that the colonies existed for the sake of the mother country and that they were the legitimate objects of exploitation. There is a woeful lack of the proverbial Yankee shrewdness in the policy of eastern opposition to western development. They should remember, first, that "swarming" comes periodically in the east and always has and will till the "jumping off place" has been reached, and that it is their children—the children of the east—that will be provided for by the opening up of new lands. Japan is on the outlook for her new swarms. Germany was grabbing every where for colonial outlets. Why should not the densely populated east, with eye cast ahead, be providing by every means, in our west and in our south, for the inevitable multitudes? Virgin lands can now come only from the reclamation of arid deserts and malarial swamps.

They should remember, second, that our pitifully diminishing white farming population warns us of a day not far distant, when pressure for a national food supply will be a serious problem to the manufacturing and commercial regions already congested and already menaced by high cost of living, strikes, lockouts, lack of housing facilities and unemployment.

They should remember, third, that here in the west is a great present market and a greater potential market for the very things through which they earn their bread and butter. Michigan representatives foolishly opposing western expansion were brought slap up against the tremendous western demands for automobiles and trucks, their chief home products.

They should remember, fourth, that even in the case of the agriculturists of the east versus those of the west, they are not in violent competition but are rather supplementary. The intensive agriculture of the east does not rival the extensive agriculture of the west. Even in the case of fruits, in the main there is little competition.

They should remember, fifth, that it is not a gift but a loan that is sought, principal and interest both to be repaid, and in the development the taxpaying power of the west and south will develop far and away beyond any temporary financial loss (if there were any) caused by the advance of the nation's credit to the enterprise.

And they should remember, sixth, and last, that in no real way can the repayment of the soldier come about so usefully to the soldier boy and to the nation as through reclamation with preferential rights to the ex-service man.

McNary has been criticized for "tacking on" a reclamation amendment to the bonus bill, as though it were not germane. It is germane to the high purpose of the measure. There are those of short sight and weak purpose who think that a little ready cash, soon to be spent, is the aim and measure of the "bonus bill." It would be a poor solution of the problem if that were all. But could we, with any temporary relief which may be determined upon, make provision that tens of thousands of strong, ambitious young men who served in the war should enlist in the ranks of our farming population and should have the chance of reclaiming lands, of establishing homes thereon, of building up farm homes and a competence, the blessing would rest not only upon themselves and their families, but upon the nation, already blessed by their past service and sacrifice.

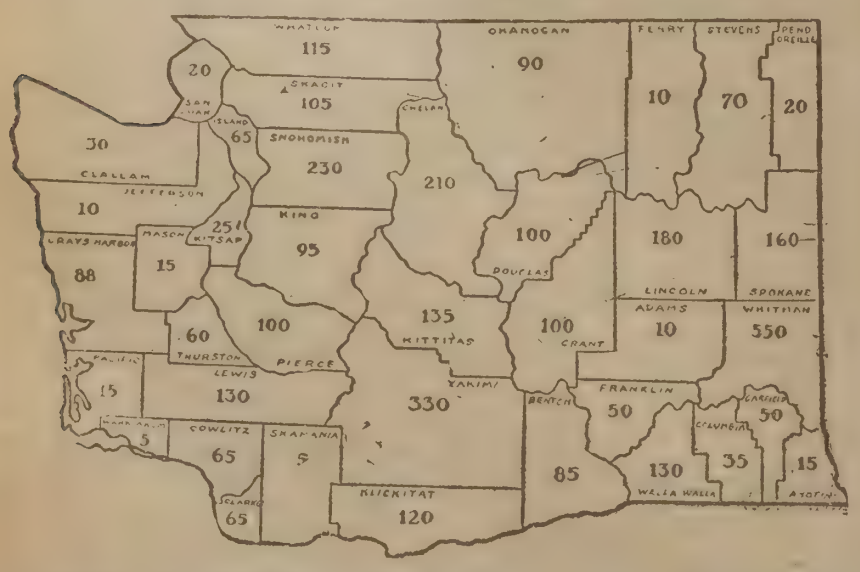
W. J. Bryan

YAKIMA IS PROSPERING.

Never since the war, in the opinion of local business men and impartial outside observers as well, has the Yakima valley generally been in better shape. Building of all kinds is active; the United States reclamation service will spend $1,500,000 on the dam at Rimrock within the next two years, when water will be available for 250,000 acres more land than is now irrigated; banks at the county seat hold $1,000,000 more deposits than a year ago—a total of nearly $9,000,000—and it is expected that 5000 carloads more freight will move out of the territory in 1922-23 than in 1921-22. Commercial travelers still point to Yakima as the best town in the territory, and it is predicted, in short, that unless strike conditions prevent the marketing of its crops, Yakima will experience a healthy boom this fall.

Tractors Are Widely Distributed

By L. J. SMITH, W. S. C.



The accompanying illustration is the first map ever published showing the number and location of tractors in the state of Washington. The figures given by counties are in round numbers. They were taken from data compiled early in the year 1922. The figures show that there are nearly 2500 tractors in this state. Whitman county, the great grain county of the state, has over one-fifth of all the tractors. Yakima comes second and may catch up with Whitman. A large number of tractors on the West Side are owned by lumbermen. By another year the state will likely own 3000 tractors.



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What that quality is, has been proved by the public over a period of nearly a quarter of a century.

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Never before has Goodyear value been so great.

Goodyear Means Good Wear

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When a Stevens barrel is bored or drilled, the final reaming cuts away *less than one-half of a thousandth of an inch.*

For rifling Stevens uses a special process, slow scraping system removing *less than the thirtieth part of a thousandth of an inch* with each pass of the rifling cutter. A slow method—but when finished a Stevens barrel is *accurate.*

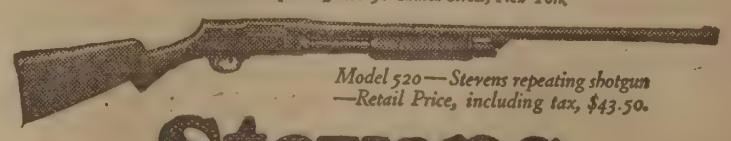
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—Retail Price, including tax, $43.50.

Stevens

Read the "Want Ad" page this week for good offers of all kinds.

Sulphur the Wonder Worker on Alfalfa

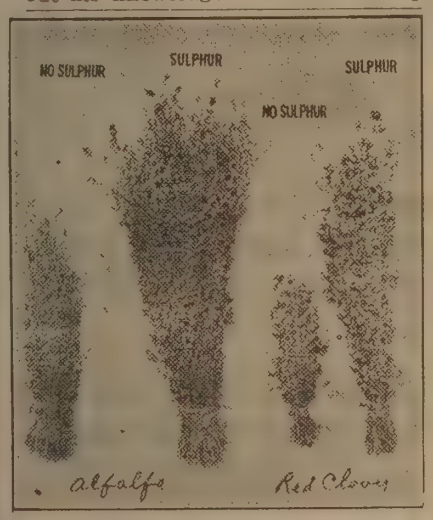
Small Applications Give Enormous Increases on Many Western Soils

Like begets like to to a certain extent in breeding, but it was hardly to be expected that "yellow dust" from a sulphur mine would beget "yellow dust" in the bank. That's the way it appears to be working out for the alfalfa growers. The whys and wherefores aren't all worked out as yet, but the fact remains that increases of 1000 per cent have occurred and that those of 100 per cent are common where sulphur has been applied to alfalfa.

Sulphur has long been accepted as one of the so-called "essential" elements. Every one of them must be present in the soil in sufficient quantity if any crop is to make a normal growth. The trouble with sulphur was that every one thought there was plenty of it in practically all soils.

Almost over night chemists found out that their old methods of analysis were faulty, and that plants actually contained much larger amounts of sulphur than was previously supposed. It was just about as rude an awakening as a man with a joint bank account with his wife, finding out that she had been spending $100 a week when all along he thought it was only $25.

To carry the illustration further, our rudely awakened husband starts investigating and finds that his wife has been spending it all along without his knowledge. He checks it up



How sulphur increases yield of Alfalfa and Red Clover.

and finds that she can't get along on any less. He must either put more money in the bank or quit trying to support such a profligate wife.

Mr. Alfalfa Grower loved his crop like our friend of financial comparison loved his wife, and so he put a little sulphur in his soil bank, rather than give her up.

The results of the use of sulphur in many instances sound more like fiction than sound agriculture, but the fact remains that in few instances has any sort of material been added to the soil that has resulted in so large net gains. To think of 100 pounds of anything giving over 1000 pounds of something else makes you feel like claiming Missouri as your native state. And yet, just such results have come from the use of the "yellow dust" from Texas on alfalfa.

Sulphur as a plant food has a life history somewhat like ammonia. One has to be oxidized to a nitrate, the other to a sulphate. In both cases it is our unseen friends, the soil bacteria, that perform these specific tasks. How they do it is really another story, for it is the crop above ground that brings in the money, and in which the farmer is most interested.

What does sulphur actually do to the plant and to the soil? In the first place sulphur enters into the composition of the plant just the same as nitrogen or phosphoric acid do. If there is a lack of sulphur the whole plant is small in size, the leaves pale in color and the root system correspondingly ill developed.

In the soil it may operate directly or indirectly or as a soil conditioner, or all three combined. Where there is an actual poverty of sulphur in the soil or where the sulphur present is bound up in unavailable combinations the sulphur acts directly in supplying a definite need.

Again there may be no especial lack of available sulphur and the sulphuric acid formed in the soil through the oxidation of sulphur tends to liberate and render available other forms of plant food which cause increased growth.

Many western soils give a pronounced physical response to the application of sulphur. Heavy adobe and gumbo soils are rendered granular and open. The soil becomes better ventilated and the activities of the soil bacteria are greatly increased. The tilth of the soil and its moisture-absorbing capacities altered so that the beneficial results of its application may be due to a combination of causes.

The source of the sulphur used in many of the tests has varied considerably. Acid phosphate, which contains its sulphur as calcium sulphate; gypsum, which likewise contains its sulphur as calcium sulphate; ammonium sulphate, iron sulphate and free sulphur have all been used. No doubt exists but that it is the sulphur in all of these materials that has given the uniformly good results. From the practical standpoint the use of free sulphur presents the greatest economies. Sulphur as obtained from the mines in Texas runs over 99½ per cent pure. One hundred pounds of free sulphur is the equivalent of about 600 pounds of gypsum, 800 pounds of acid phosphate or 350 pounds of sulphate of ammonia as far as the content of sulphur is concerned. In most cases any of these materials are carried a considerable distance from the point of manufacture to the consumer, so that from the standpoint of freight charges, the pure sulphur is without a competitor.

The residual effect, or the extent to which the influence is exerted over several years after the sulphur-carrying materials are applied, is greatly in favor of the pure sulphur. Ofttimes the pure sulphur makes its most pronounced increase the second year. In this connection it may be that the use of inoculated sulphur, rather than the crude will prove advantageous.

Sulphur applied to soils is changed over to sulphuric acid or sulphates before it becomes of benefit to the plant. Inoculated sulphur is richly impregnated with the bacteria necessary to perform this important work. Since many soils are not supplied with these organisms, it would appear the part of wisdom to supply them by using inoculated sulphur. Experiments have shown that even where soils had a pronounced natural capacity for oxidizing sulphur that the inoculated sulphur was much more quickly converted.

In the east where sulphur is used extensively against potato scab the inoculated form gives much more uniform results and better control. Inoculated sulphur is essentially an agricultural product, designed for action in the soil, and carrying soil bacteria. In view of its universal superiority for agricultural uses it would appear the part of sound wisdom to use the inoculated sulphur on alfalfa.



Loading sulphur at the Gulf, Texas, mines of the Texas Gulf Sulphur company, the world's largest producers of sulphur.

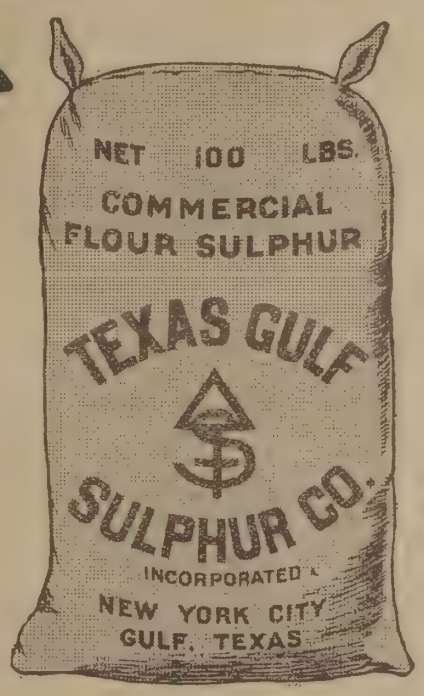
"Best for Alfalfa"

TEXAS GULF SULPHUR

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A better sulphur at a better price direct from the mines of the Texas Gulf Sulphur Co., the world's largest producers of sulphur. In order to fully serve the alfalfa growers in this territory we have established a warehouse in Portland, Oregon, from which we will make quick shipments of the genuine Texas Gulf Sulphur in any quantity. You will find the product, the price and the service right in every respect. No matter where you have been securing sulphur in the past you will find it greatly to your advantage to place your order with us this season.

Contains 99½% Pure Sulphur



Packed in 100 lb. Burlap Bags

Your Choice of Three Forms:—

Crude Sulphur—

Lump sulphur, 99½% pure, for those who prefer to do the grinding.
In bulk or 150 lb. bags

Flour Sulphur—

Ground to extreme fineness, ready for immediate application to the soil. This product is so finely ground that it is in every respect equal to special brands for which high prices are commonly charged.
In 100 lb. burlap bags

Inoculated Sulphur—

An exclusive Texas Gulf product. Specially ground flour sulphur inoculated with sure-acting oxidizing bacteria which make the sulphur quickly available for plant food. As commercial sulphur is apt to be inert in the soil and its full effects are usually not noted until the second season, we advise the use of Texas Gulf Inoculated Sulphur where quick action is needed, and especially for late applications. In any event, test it on an acre or two this season and compare results.
In 100 lb. burlap bags

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We will gladly cooperate with him and with you in handling club orders. Naturally, you can save money by joining with your neighbors and making up a carload order.

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Send us a night letter, *charges collect*, tonight. Tell us your alfalfa acreage, the kind and amount of sulphur you will require, the name and address of your county agent or dealer. Address as below. We will promptly quote prices which will delight you.

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LIVESTOCK AND DAIRY

Nine Dairy Rules

To know a thing and practice it is far different from simply knowing it. Probably more or less of these dairy rules, perhaps all of them, are known by dairymen in general.

The question arises, how many of them do they practice?

These rules are laid down by Mark H. Keeney, the dairy specialist of the New Jersey College of Agriculture. Here are the nine rules laid down by Mr. Keeney. If they meet with your own experience perhaps it might be a good idea to paste them in your scrapbook and then not to forget the scrapbook entirely:

1. Feed all the roughage a cow will clean up. Part of it should be a legume, such as clover or alfalfa.
2. Feed some succulent feed, such as silage or roots.
3. Feed a balanced ration.
4. Feed grain in accordance to milk production; for a Holstein or Ayrshire, approximately one pound of grain for each four pounds of milk; for a Guernsey or Jersey, about one pound of grain for each three pounds of milk. A variety of grains in the mixture is desirable.
5. During short pastures supplement with silage or some green feed, together with some grain.
6. Feed and milk regularly.
7. Supply an abundance of pure, fresh water at all times.
8. Give access to salt daily.
9. Purchase grain feeds on the basis of their protein and energy content and not alone on just the cost per hundredweight.

Millions for Hogs

Four million dollars were paid out for live hogs that came from the Dakotas and Nebraska to the three markets of Portland, Spokane and Seattle during 1921. Mr. Pierson, president of the Portland Union stockyards, says even more than that will probably be paid to swine breeders of the middle west by Coast packers during 1922. For more than a year these markets have at almost all times paid a higher price for hogs than has been paid at Chicago, which is the great central market, where prices generally reach their peak and all the others get their cue as to prices.

At the present range of prices hogs can be fed at a profit. It is unlikely that the farmers of the northwest will supply all the hogs wanted by the packers of the region for many years. As long as they do not, prices are going to remain high; probably above those at Chicago. Even at a lower range, hogs can be "stubble fed" and grown as a byproduct on dairy ranches and still yield a nice margin of profit. But as long as this shortage keeps prices up there is no reason why the northwest wheat grower and dairyman should not have almost that entire $4,000,000 now annually going farther east for hogs. Bringing them from afar, at the present high freight rates, reduces the profits for both farmers and packers.

The Portland Union stockyards has C. M. McAllister in the field, with his contagious smile and his hog enthusiasm. He has an entire moving picture outfit, with views of some of the great sires and brood sows, and other films showing how cholera and other swine diseases are met and conquered. But Mack can only hit a few of the high spots. An evening with him is worth while. But farmers need not wait for him. A little thought shows the mistake that is being made in not raising more hogs. If the herd is not too large and at least a part of the hog's living is made on waste, it is easy to reduce the herd or go out of the business entirely, if prices go down. This is so because of the hog's prolificacy and early readiness for market, which makes it easy to build up or reduce a herd.

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VETERINARY

By DR. S. B. NELSON.

Catarrh—What is the trouble with my mare? About two months ago she had the distemper and since has had a yellowish green discharge running from her nostrils and has an awful foul breath. She is fat and eats well. SUBSCRIBER.
Spokane.

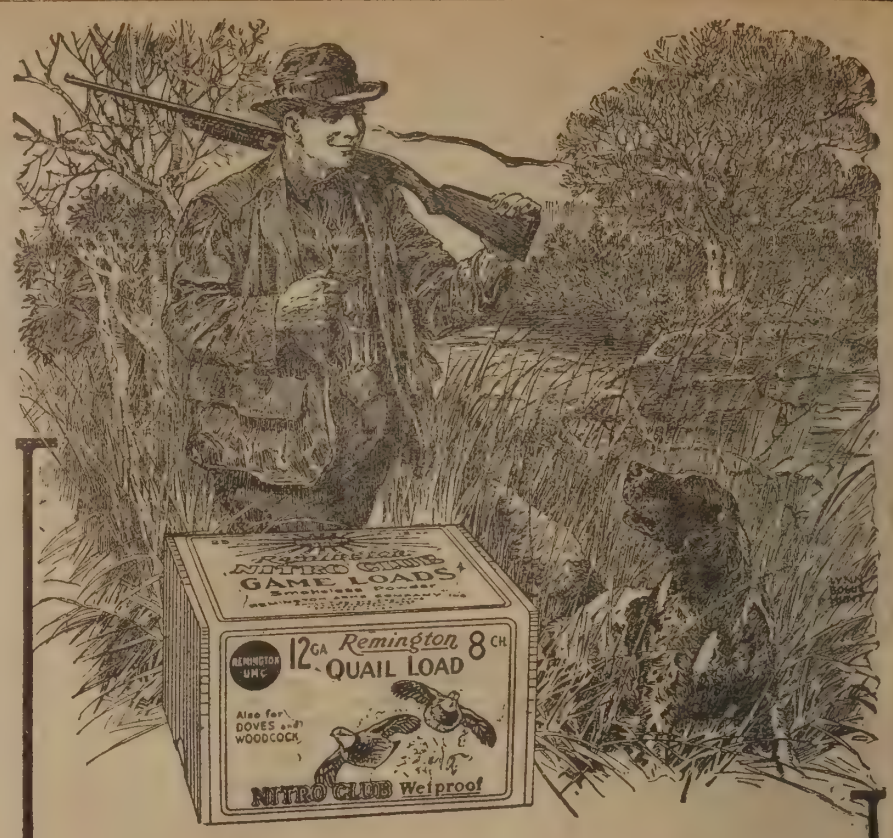
Your horse is probably suffering from a catarrhal condition of the mucous membrane of the air passages in the head. A careful examination should be made of the animal to see whether this is just a local trouble in the air passages or whether there is an infection of the cavities of the head. In the latter case it would be necessary to determine which sinus or cavity is affected and that should be opened by taking out a part of the bone and keeping it constantly cleaned out until it heals. You need a surgeon's services in performing the operation for you. If it comes from the mucous membranes the injection of an astringent solution may be of value. A very good solution to use is zinc sulphate, one drachm; glycerin, one ounce; water, two quarts. You would need to use some kind of a container like a hot water bag or pail to which is attached a rubber tube and the rubber tube inserted in the nostril a little way and the other nostril open so that the solution may filter through the head and out the other nostril or the mouth. Will probably have to be treated daily or every other day for some time.

Infected Udder—I have an 8-year-old cow that gives six gallons of milk. I believe she caught cold about a week after freshening. One teat is all right, but the others give stringy milk which has a queer odor. What will clean out her udder?
Renton, Wash. SUBSCRIBER.

Wash the udder in hot salt water before milking. After milking inject the udder with a 2 per cent solution of boracic acid. Be sure to sterilize the teat by dipping it into iodine before the injection is made. Sterilize the injecting instrument by boiling or wash it out with a 10 per cent solution of carbolic acid. Later wash it with hot water. After the udder is injected, give it a gentle massage and then milk it clean. Once daily apply the following mixture to the udder: Soap liniment, six ounces; tincture of iodine, two ounces.

Wound Does Not Heal.—About 10 days ago one of my cows injured her teat at the end. Since then I have had to use a silver teat tube to get the milk. It seems that it is time for the wound to heal. The milk in that quarter is failing and apparently will dry up. I massage the udder at each milking and get all the milk. Is it probable that this quarter will be good when the cow freshens again?
Renton, Wash. A. C. T.

As soon as the wound is healed I would suggest that instead of using a dilator, that after you milk the cow, if it is possible to milk her, you insert a catgut string. Cut off a piece about two or three inches long and make a knot in one end; then place the string in a 10 per cent solution of carbolic acid for a while, after which take hold of it by the short end below the knot and dip it in boiling water. Dip the teat in tincture of iodine and then push the string into the teat until you reach the knot. Leave the string in the teat until the cow is milked the next morning, bathe the udder with hot water before milking, so as to stimulate the flow of milk. This will soften the udder and take out the soreness.



What Game Are You Going After

TELL any sportsman that there are 3000 different shotgun loads scattered about the country—and you are likely to get an amazed smile.

He knows that there are only about *twenty* different kinds of game to be *taken with shells.*

Evidently there is a lot of shell-making going on that doesn't serve anybody.

* * *

With the inspiration of *common-sense,* Remington announced last May the new

Remington Game Loads

Specific loads for *specific* game, in *12, 16* and *20* gauge.

Furnished exclusively in "Nitro Club" *Wetproof,* with the finest of American smokeless powder, and shot.

A contribution to ammunition service *for all time.*

When you are going after	Ask for the REMINGTON
BRANT	Brant Load or Heavy Duck Load
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DUCK	Duck Load Heavy Duck Load or Brant Load
FOX	Goose Load
GOOSE	Goose Load
GROUSE	Grouse Load or Squirrel Load
PARTRIDGE	Grouse Load or Duck Load
PHEASANT	Grouse Load or Duck Load
PLOVER	Snipe Load Quail Load or Dove Load
PRAIRIE CHICKEN	Grouse Load
QUAIL	Quail Load or Dove Load
RABBIT	Rabbit Load Squirrel Load or Dove Load
RACCOON	Goose Load
RAIL	Snipe Load or Quail Load
SNIPE	Snipe Load
SORA	Snipe Load
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TURKEY	Goose Load
WOODCOCK	Snipe Load or Quail Load

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The Game Laws for Washington

The department of agriculture has summarized the game laws with which hunters, trappers and fishermen in Washington should be familiar as follows. The summary is given in Farmers' Bulletin No. 1288:

Open Season.

West of Cascades—Deer, bear and upland game birds, open seasons fixed by county game commissions.

Ducks, goose, brant, coot, black-bellied and golden plovers, Wilson snipe or jacksnipe, yellowlegs—Oct. 1-Jan. 15.

Rail—Oct. 1-Nov. 30.

East of Cascades—Deer, bear and upland game birds, open seasons fixed by county game commissions.

Duck, goose, brant, coot, Wilson snipe or jacksnipe, black-bellied and golden plovers, yellowlegs—Oct. 1-Dec. 31.

Rail—Oct. 1-Nov. 30.

County game commission, with consent of director of fisheries and game, may shorten, close, or open season and fix bag limits on upland game. Communicate with county game commission at county seat, or supervisor of game and game and fish, Seattle.

No Open Season.

Moose, elk (1925); fawns, caribou, mountain sheep, mountain goat, squirrels (gray, black, fox), and dove; swans, wood duck, eider duck, auklets, auks, bitterns, little brown and sandhill cranes, fulmars, grebes, guillemots, gulls, herons, jaegers, loons, murres, petrels, band-tailed pigeon, puffins, shearwaters, terns, and all shore birds (except Wilson snipe or jacksnipe, black-bellied and golden plovers, and yellowlegs).

No open season on waterfowl on Columbia or Snake rivers or within one-fourth mile of their shores in counties of Benton, Columbia, Douglas, Franklin, Garfield, Grant, Kittitas, Klickitat, Walla Walla, Whitman and Yakima.

Hunting and Fishing Licenses.

Nonresident or alien: Hunting and fishing, state, $10; fishing, county, $2.50. Resident: state, $7.50; county $1.50 (issued by county auditors). Aliens must have permit to carry firearms. No license required of women and persons under 16 to fish, if residents.

Bag Limits and Possession.

For bag limits on deer, bear, and upland game birds, communicate with county game commission at county seat, or supervisor of game and game fish, Seattle. Twenty ducks, geese, brant, golden plovers, and yellowlegs, Wilson snipe a week (week ends at midnight Saturday), but not more than 8 geese, 8 brant, 15 in all of plovers and yellowlegs a day; 30 ducks, geese, brant in possession; 50 sora and 25 in all of other rails, coots and gallinules. Possession during close season permitted upon filing with county game commission description and number of each kind of game, which may be tagged or stamped by commission for identification, but migratory birds shall not be possessed longer than the first 10 days after close of open season.

Sale.

Sale of all protected game prohibited.

Export.

Export of all protected game prohibited except nonresident licensee may export one day's limit of game birds upon attaching an affidavit that they were lawfully killed by himself and are not being exported for sale.

Large Producers Take Notice

Summer receipts of the Yakima branch of the Washington Cooperative Egg and Poultry association are only about 250 cases per week, though 422 cases per week were received during the peak in mid-June and until recently a carload was sent out every 10 days. Some of the birds have been molting and the hot weather cut down production, but Manager A. S. Brown looks for a big increase in the fall after the low point has been passed about October 1. "For this reason," said he, "a large percentage of the members are small flock owners, keeping 50 to 150 hens. When they joined they indicated a determination to increase the size of their flocks several fold, otherwise they would not have been admitted, for it is not to the interest of the small producer to join. I expect an increase of 75 to 100 per cent in receipts, and we figure on signing up about 125,000 hens out of a possible 150,000. We now have about 55,000, owned by 225 members."

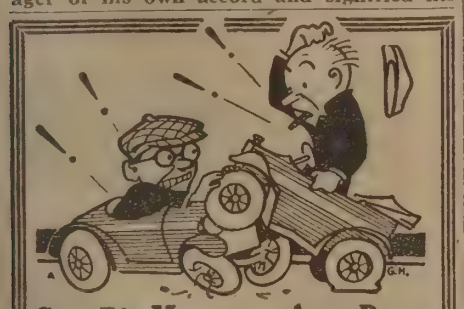
One encouraging feature of the association's growth is that the big producers of the valley are beginning to realize that the organization is doing valuable work in stabilizing the market and standardizing the output and are lending it their support. In fact, the biggest producer in the district, who until recently has not admitted that the association was of any value to him, recently sought out the manager of his own accord and signified his intention of affiliating with it. "I made no effort to convert this man," said Brown. "He has convinced himself, and he will be all the more valuable to us on that account. In fact, I have endeavored all the way through to make the organization sell itself. Ninety-five per cent of the members who come to me with romplaints of one kind or another go out of that door satisfied, after they have followed their own eggs through the warehouse. They believe we are trying to give them a square deal, and they treat me like a gentleman. Together, we have been up against two hard propositions, climatic conditions new to me (Brown is from Seattle) and ideas of grading new to them. I've been hammering hard on proper handling—on getting the eggs out from under the old hen and into the basements where milk and butter are kept, and on getting them to market in the afternoon. The results are beginning to show in the candling, which has improved 25 per cent in a month. In fact, poultrymen are beginning to realize that the egg is a perishable product, rather than one which can be held like potatoes or hay."

Local trade has been good this summer; in fact, the association is selling practically all of the high-grade eggs on the Yakima market. For a time sales were slow, due to difference of opinion as to value, but quotations are now close together and the trade really prefers a candled article.

Since the association's birth story was told in THE FARMER early this spring poultrymen of Kittitas county sent a large delegation, headed by County Agent W. L. Davis, to Yakima to investigate its operation and decided to affiliate with it. In a few days' work near Ellensburg Manager Brown recently signed nearly 2000 hens, and he expects to sign 3000 or 4000 more from there. Their product will be shipped to Yakima for sale just as are lower valley eggs at present. Seventy-five per cent of the association's receipts come from below Union gap, and General Agent H. M. West of the O.-W. R. & N. has recently installed a twice-a-week refrigerator car service, which is a great improvement over the old method of shipping by truck. After being assembled, eggs are shipped under one name to save freight, and they are delivered at the association's platform thoroughly chilled and free from dust. The organization's new location, one block north of the one where it started business, is not regarded as permanent, but it will answer all immediate needs. "We'll have to have a poultry dressing station and cold storage plant some time," said the manager, "but that's for the future."

FARM BUREAU HANDLES COAL.

The Spokane county farm bureau is planning this year to secure about 100 carloads of coal for its members at a total cost of about $30,000. Some of this coal has already been distributed at $11 a ton, or about $3 per ton below the current retail price. Last year the bureau handled about 50 carloads at a cost of approximately $15,000. T. S. Brown is secretary and has charge of this phase of its work.



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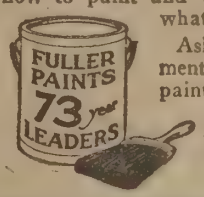
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Interstate Fair Is Interstate for Sure

(Continued from page three.)

Lady and Hercules Matchless 3d; 3, DeLay on Village Missie; 4, Heater on Memory's Snow Drift; 5, Craig on Fair Rose. Junior yearling—1 and 2, Day & Rothrock on Hercules Topsy 5th and Hercules Jasmine 2d; 3, Heater on Thistle Bloom 2d; 4, DeLay on Scottish Jane 5th. Senior calf—1 and 2, Day & Rothrock on Hercules Sylvia 3d (junior champion), and Hercules Missie 5th; 3 and 5, Delay on Scottish Jane, 6th; and Village Duchess D; 4, Heater on Memory's Roan Beauty.

Groups: Graded herd—1, DeLay; 2, Heater. Yearling herd—1, Day & Rothrock; 2, DeLay. Calf herd—1 and 2, Day & Rothrock; 3, DeLay. Get of sire—1 and 2, Day & Rothrock; 3, DeLay.

The Aberdeen Angus.

Two good herds of shiny, blocky blacks divided the Aberdeen Angus honors. One championship, senior and grand champion bull on Ericman CB 5th, a 2-year-old, went to J. A. Scollard of Chehalis, the other championships going to Congdon & Battles of Yakima. While competition was limited to two herds, the best show of Doddies in the recent history of the fair was staged.

Bulls: Group of three—1, J. A. Scollard, Chehalis, Wash., on Ericman CB 5th, Blackmead 2d, and Heathermead 4th; 2, Congdon & Battles, Yakima, Wash., on Queenmere 18th, Prideman CB 18th, and Queenmere 15th. Group of two—1, Congdon & Battles, on Prideman CB 18th and Queenmere 15th; 2, Scollard, on Blackmead 2d and Heathermead 4th. Three years or over—1, Congdon & Battles, on Blackbirdman CB 5th. Two-year-olds—1, Scollard, on Ericman CB 5th (senior and grand champion). Junior yearling—1 and 2, Congdon & Battles, on Queenmere 15th and Prideman CB 18th; 3, Scollard, on Heathermead 4th. Senior calf—1, Scollard, on Ericmead. Junior calf—Congdon & Battles, on Queenmere 18th (junior champion); 2, Scollard, on Blackcap 67th.

Females: Three years or over—1, Congdon & Battles, on Ridgelawn Barbara 2d (senior and grand champion); 2, Scollard. Two-year-olds—1, Congdon & Battles, on Queen Rosemere 13th; 2, Scollard, on Rose of Rosemere 8th. Senior yearling—1, Congdon & Battles, on Erica CB 4th (junior champion); 2, Scollard, on Blackcap of Broadmead. Junior yearling—1, Congdon & Battles, on Queen of Rosemere 15th; 2, Scollard. Senior calf—1, Congdon & Battles, on Barbara CB 2d; 2 and 3, Scollard.

Groups: Aged herd—1, Congdon & Battles; 2, Scollard. Yearling herd—1, Congdon & Battles; 2, Scollard. Calf herd—1, Scollard. Get of sire—1, Congdon & Battles; 2, Scollard.

The Holsteins.

The dairy cattle show was a free-for-all, with strong competition in every breed shown except the Ayrshires. The two chief competitors in the Holsteins were John L. Smith of Spokane and the Western State hospital of Steilacoom. The former's herd took all champions but one, junior heifer going to the hospital herd on a beautiful junior yearling. Hazelwood Heilo Butter King, now a junior yearling that last winter as a senior calf won the grand championship at the Western Royal, was made junior champion bull, but gave way to the aged bull, Segis Pietertje Clothilde for the grand championship. The University of Idaho, the State College of Washington and Sudhoff Brothers of Spokane fared well in the winnings, the university herd having probably a little the better of the secondary winnings.

Bulls: Three years or over—1, John L. Smith, Spokane, Wash., on Segis Pietertje Clothilde (senior and grand champion); 2 and 3, University of Idaho, Moscow, on Matador Violet Idaho and King Segis Violet Posch Idaho; 4, Sudhoff Bros., Spokane, on Idaho Hengerveld Belle Fayne. Two-year-olds—1, Western State hospital, Steilacoom, Wash., on Sir Pietertje Ormsby Blossom. Senior Yearling—1, Western State hospital, on Carnation King Matador Mutual. Junior yearling—1, Smith, on Hazelwood Heilo Butter King (junior champion); 2, University of Idaho, on King Posch Segis Idaho. Senior calf—1, Western State hospital, on Steilacoom Sir Ormsby Veeman; 2, Smith, on Hazelwood Stella Champion; 3, University of Idaho, on Idaho Matador Conqueror; 4, State College of Washington, Pullman, on Chinook Piebe Adam. Junior calf—1 and 4, Smith, on Hazelwood Sir Bessie Segis and Hazelwood Heilo Homestead; 2, State College of Washington, on Chinook Piebe Excellent; 3, Western State hospital, on Steilacoom Sir Pontiac Blossom.

Females: Three years or over—1 and 3, Smith, on Hazelwood Ormsby Butter Girl and Lady Bracelet Jewel; 2, University of Idaho, Segis Walker Colantha; 4, Western State hospital, on Bessie Pearl Tritomia. Two-year-olds—1 and 3, Smith, on Hazelwood Leda Heilo Korndyke (senior and grand champion) and Hazelwood Johanna Skylark; 2, State College of Washington, on Hazelwood Heilo Josephine Ormsby; 4, Western State hospital, on Steilacoom DeKol Colantha. Senior yearling—1 and 2, Smith, on Hazelwood Bessie Pauline Heilo, and Hazelwood Ormsby Heilo Duchess; 3, State College of Washington, on Hazelwood Heilo Aaggie DeKol; 4, University of Idaho, on Idaho University DeKol Korndyke Violet. Junior yearling—1 and 4, Western State hospital, on Steilacoom Bonnie Ormsby Lass (junior champion), and Steilacoom Ormsby Sadie Vale; 2 and 3, Smith, on Hazelwood Ormsby Homestead and Hazelwood Heilo Fobes Tritomia. Senior calf—1 and 4, Western State hospital, on Steilacoom Molly Hengerveld Ormsby and Steilacoom Blossom Zanke Mercedes; 2 and 3, Smith on Hazelwood Ormsby Duchess and Hazelwood Heilo Posch Ormsby. Junior calf—1, Western State hospital, on Steilacoom Jewel Pontiac Korndyke; 2 and 4, Smith, on Hazelwood Heilo Butter Girl and Hazelwood Bessie Pauline Posch; 3, State College of Washington, on Chinook Piebe Dora.

The Jerseys.

The Interstate has never had a better showing of Jerseys. Half a dozen breeders fought out a hotly contested show, with the four champion ribbons going to four different herds. Glen Tana farm, Spokane, started it by taking senior and grand champion on its aged bull, Glen Tana Perfection. Midfields farm, Winlock, grabbed the junior championship on the senior yearling bull, Fussy's Fern Noble 35th. Erickson Brothers took the senior and grand champion ribbon for females home to the Yakima valley on Sultan's Violet Rose, while the state college won junior female champion on Waikiki's Pilot Mary, the animal that, as a junior calf, was grand champion at the Pacific International last winter. While Waikiki farm, Spokane, carried away no purples, its entries were crowding the winners in nearly all classes and captured their share of firsts.

Bulls: Three years or over—1, Glen Tana Farm, Spokane, Wash., on Glen Tana Perfection (senior and grand champion); 2, Ericson Bros., Yakima, Wash., on Sultan's Olga's Boy; 3 and 4, Waikiki Farm, Spokane, on Sultan of Rockland and Count's Foxy Lad of Waikiki. Two-year-olds—1, Waikiki Farm, on Belle's Pilot of Waikiki; 2, Ericson Bos., on Raleigh's Fancy Lad; 3, Midfield's Farm, Winlock, Wash., on Champion of Midfields; 4, Dewey Rodgers, Spokane, Wash., on Glen Tana Morocco Fancy. Senior yearling—1, Midfields Farm on Fussy's Fern Noble 35th (junior champion); 2, Glen Tana Farm, on Glen Tana Morocco Wonder; 3, Waikiki Farm, on Waikiki Oxford Count; 4, Ericson Bros., on Sultan's Bonnie Lad. Junior yearling—1, Waikiki Farm, on Waikiki Jolly Rioter; 2, Julius H. Zodrow, Chewelah, Wash., on Linger Longer Prince. Senior calf—1, University of Idaho, on Idaho Baronet Hero; 2, Glen Tana Farm, on Glen Tana Morocco Jimp; 3, W. H. Hamann & Son, Buckeye, Wash., on Glen Tana Morocco Pollux; 4, H. T. Skeels & Son, Addy, Wash., on Esther Fair Oxford. Junior calf—1, Midfields Farm, on unnamed calf; 2 and 3, Glen Tana Farm, on Glen Tana Morocco Sultan and Glen Tana Morocco Majesty; 4, Waikiki Farm, on Waikiki's Genesta Pilot.

Females: Three years or over—1, Ericson Bros., on Sultan's Violet Rose (senior and grand champion); 2, University of Idaho, on Owlet's Louise of Waikiki; 3, Glen Tana Farm, on Glen Tana Sibyl 2d; 4, Waikiki Farm, on Oxford Bessie of Waikiki. Two-year-olds—1, Glen Tana Farm, on Glen Tana Dorothy; 2, Ericson Bros., on Olga's Pet; 3, Midfield Farm, on Cicelys Golden Dam; 4, University of Idaho, on Waikiki Altamont Maid. Senior yearling—1 and 4, Waikiki Farm, on Waikiki Pilot's Duchess and Waikiki's Foxy Prince; 2, Ericson Bros., on Sultan's Vesta Lass; 3, Midfields Farm, on St. Mawes Merry Olga. Junior yearling—1, State College of Washington, on Waikiki's Pilot's Mary (junior champion); 2, Ericson Bros., on Miss Olga Figgis; 3, Midfields Farm, on Sweetheart's Image; 4, Waikiki Farm, on Foxy Coquette of Waikiki. Senior calf—1, University of Idaho, on Idaho Torono Charity; 2, Midfields Farm, on unnamed calf; 3, Ericson Bros., on Sultan's Majesty Lass; 4, Glen Tana Farm, on Glen Tana Morocco Lady. Junior calf—1, Midfields Farm, on unnamed calf; 2 and 3, Waikiki Farm, on Waikiki's Morocco Beauty and Waikiki's Hazelwood; 4, Glen Tana Farm, on Glen Tana Morocco Fairy.

Groups: Graded herd—1, Glen Tana Farm; 2, Ericson Bros.; 3, Waikiki Farm. Young herd—1, Midfields Farm; 2, Waikiki Farm; 3, Glen Tana Farm. Calf herd—1, Midfields Farm; 2, Glen Tana Farm; 3, Waikiki Farm. Get of sire—1, Midfields Farm; 2, Glen Tana Farm; 3, Waikiki Farm. Produce of cow—1, Glen Tana Farm; 2, Ericson Bros.; 3, Midfields Farm.

The Guernseys.

Guernseys are not well known to the regular visitors at the Spokane Interstate—that is, they were not until this year. A barnful of the tan and whites this time almost necessitated standing-room-only signs occasionally as the crowds gathered to admire them. Several of the most prominent breeders of the Pacific northwest, nearly all from outside the Inland Empire, competed, among them three leading west Washington herds and one of Oregon. Nobody offered any serious complaint when La France of Bralee of the A. MacRae Smith herd of Bellingham received the grand championship ribbon in the female competition. Judges may differ as to relative merits of animals, but none deny that La France is a great little show cow. Smith also won the grand championship in bulls on a senior calf, Fircrest LaFrance Rival. The senior champion bull was shown by W. O. Reith of Astoria Ore., while Chicona farm, Chinook, Wash., received the purple for junior champion heifer.

Bulls, Three years or over—1, Chicona farm, Chinook, Wash., on Chicona Buster; 2, E. S. Fordney, Addy, Wash., on Chicona Noble Boy; 3, Orchard Hill Farm, Redmond, Wash. on Chicona Hero; 4, A. MacRae Smith, Bellingham, Wash., on Glendale's May Time. Two-year-olds—1, W. O. Reith, Astoria, Ore., on Glenwood Sequel Lad of W. W. (senior champion). Senior yearling—1, Orchard Hill Farm, on Glenwood's Jolly Tar of O. R. Junior yearling—1, J. C. Odell, Valleyford, Wash., on Amy's King; 2, Reith, on Squire's Noble Lad of W. W.; 3, Orchard Hill Farm, on Chicona Victory; 4, Chicona Farm, on Chicona Peter. Senior calf—1 and 4, Smith, on Fircrest LaFrance Rival (junior and grand champion) and Fircrest Leader; 2, Chicona Farm, on Chicona Luke; 3, Reith, on Willowwood Butter Maker. Junior calf—1, Smith, on Fircrest French Boy; 2, Chicona Farm, on unnamed; 3, Orchard Hill Farm, on Topsy's Captain Barlow of O. N.; 4, Reith, on Willowwood Belle Chene.

Females: Three years or over—1, Smith, on LaFrance of Bralee (senior and grand champion); 2, Chicona Farm, on Jewel of Rose City; 3, Orchard Hill Farm, on Sammamish Roxie; 4, Reith, on Elaine of Chicona. Two-year-olds—1 and 3, Reith, on Rose Girl of Oregon, and Sequel's Lady of Willowwood; 2, Smith, on Fircrest Pretty Maid; 4, Orchard Hill Farm, on May King's Fire Fly. Senior yearling—1, Chicona Farm, on Doris of Chicona (junior champion); 2 and 3, Smith, on Fircrest LaFrance Pride and Fircrest May Blossom; 4, Orchard Hill Farm on Glenwood's Bright Light of O. H. Junior yearling—1 and 4, Orchard Hill Farm on Wanda Topsy of O. H. and Flossie Topsy of O. H.; 2, Chicona Farm on Sunlight of Chicona; 3, Reith on Butter Girl of Willowood. Senior calf—1, Reith on Jewel Chene of Willowwood; 2 and 3, Chincona Farm on Lavinnia of Chicona and Diana Chicona; 4, Orchard Hill Farm on May King's Golden Glow of O. H. Junior calf—1 and 2, Chicona Farm on unnamed; 3 and 4, Smith on Fircrest Golden Girl and Fircrest Merry Dame.

Groups: Graded herd—1, Chicona Farm; 2, Smith; 3, Reith. Young herd—1, Chicona Farm; 2, Smith; 3, Reith. Calf herd—1, Chicona Farm; 2, Orchard Hill Farm. Get of sire—1, Smith; 2, Chicona Farm; 3, Reith. Produce of cow—1 and 2, Smith; 3, Chicona Farm.

The Ayrshires.

Two entries of the state college of Washington were the only competitors of the herd of E. W. Van Tassel of Wenatchee, Wash. All awards were taken by Van Tassel except 1st senior bull calf, Chinook Cavalier Karton (junior and grand champion) and 3d, senior heifer calf, Chinook Cavalier Elsie, the two state college entries. Van Tassel's championships were won as follows: Queen Scotish Cavalier, senior champion bull; Glengary's Scottish Queen, senior and grand champion cow, and Wenatchee Blossom, junior champion heifer. The Van Tassel herd of about 20 head contains only three of last year's show string.

The Horse Show.

The horse show this year was a revelation. Not for several seasons has this division compared favorably with the showing of tractors and self-propelled farm implements. This year, however, there was a showing of both that seemed clearly to indicate that there is a big place in farming operations for both the power machine and the horse.

The Shires.

The Shire show was largest, with several competitors. The string of M. W. and H. W. Merritt and that of Mr. and Mrs. W. A Clark were most notable, though the University of Idaho took the female grand championship

Stallions: Four years or over—1, W. A. Clark, Latah, Wash., on Eureka Nig 2d (senior champion); 2, A. B. Skidmore, Plummer, Idaho, on General Leonard Wood. Three-year-olds—1, Skidmore, on Teddy R; 2, H. W. Merritt, Rosalia, Wash., on Blue Ribbon Winner. Two-year-olds—1 and 3, H. W. Merritt, on Forest Prince (junior and grand champion) and, Mills Billie; 2, W. A. Clark, on Mack. Yearlings—1, H. W. Merritt, on Sir Gould; 2, Mrs. W. A. Clark, on Bardon Menestrel 2d. Colt—1, W. A. Clark, on Rothwell Forester 2d; 2, M. W. Merritt, Rosalia, Wash., on Irving Washington.

Mares: Four years or over—1, University of Idaho, on Sylvia Best (senior and grand champion); 2, M. W. Merritt, on Martha Washington; 3 H. W. Merritt, on Lady Victor Rose; 4, W. A. Clark, on Colony Heorine. Three-Year-olds—1, W. A. Clark, on Evalend's May Queen. Two-year-olds—1, W. A. Clark, on Mary Pickford. Yearlings—1, Mrs. W. A. Clark, on Colony Missie (junior champion); 2, H. W. Merritt, on Nancy Lee; 3, Skidmore, on Maud Shotkin. Colt—1, Mrs. W. A. Clark, on Lorna Doone; 2, H. W. Merritt, on Princess Victoria. Mare and colt—1 and 3, W. A. Clark; 2 and 4, H. W. Merritt. Groups: Get of sire—1, M. W. Merritt; 2, W. A. Clark. Produce of mare—1 and 2, Mrs. W. A. Clark; 3, M. W. Merritt; 4, Skidmore. Carload lot—1, M. W. Merritt.

The Percherons.

The Percheron show was not large, but was of good quality. The championships went to four different breeders.

Stallions: Four years or over—1, Whitman & Sievers, Rosalia, on Donland (senior champion). Two-year-olds—1, University of Idaho, on Grand Sultan (junior and grand champion); 2, A. H. Poston & Sons, on Stadicona. Yearlings—1 and 2, C. E. Thayer, Waverly, on Taco and King. Under one year—1, University of Idaho, on Brilliant Kurdes.

Mares: Four years or over—1, Thayer, on

(Continued on page fourteen.)

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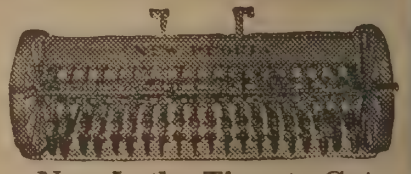
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The Grays Harbor County Fair

The occasional showers that occurred on the two opening days of the Grays Harbor county fair at Elma made but little impression on the immense crowds that came from all parts of the county as well as from towns in other parts of the state. The fair was held from September 2 to 6 in order to include Labor day and give many townspeople who take that day off an opportunity to attend the races. The plan was indeed a success because there was a much larger attendance than has ever been known in the history of the institution. And the visitors were not the only ones who turned out strong in support of the county fair, but the exhibits came from all parts of the county, thus representing all districts better than has been known for many years. The agricultural products were especially well prepared and came from all districts in the county except one.

"We are more than well pleased with the turnout this year," remarked C. H. Palmer, secretary of the fair, "and believe it is partly due to the fact that we have tried to give the people more than their money's worth. The entire fair is larger than it has ever been in the past and there is also a better quality of exhibits than we have ever had before."

New Poultry Building.

In order to make room for all of the entries that were expected, the fair association voted funds for a new poultry building, the same size as the cattle barn. The finished structure housed all of the poultry exhibits with the exception of a few crates of ducks and geese which were placed outside. The old poultry building was used for the dog show, which was made up largely of local stock.

The poultry show this year was housed in the new poultry building and was larger by about 200 birds than it was last year and there was also a higher quality of entries. Chris Danials of Elma the new superintendent, introduced a new class of utility birds which called for a double system of judging. They were first looked over by George R. Shoup of the western Washington experiment station and classed according to their ability as producers, after which H. H. Collier of Tacoma judged them for type. Mr. Collier judged the main show exhibits, which consisted of nearly 900 birds. A. A. Turango of Elma won the coveted Kenworthy cup which was offered for the utility class.

The races were first class and, with the exception of one rainy afternoon, the weather was ideal. The commercial exhibits were well displayed and there was a clean bunch of concessions.

In addition to the regular routine, a Holstein sale was held. This was the dispersal sale of the H. O. Kjelland herd from North Bend, Ore., which will be reported later.

As a means of getting the exhibitors and business men together, a banquet was put on in the Methodist church on Monday night, the third day of the fair. The dinner was financed by the business men of the county. There were a number of interesting talks by prominent breeders as well as representative men from different towns of the county.

Communities Compete.

The displays in the agricultural building were unusually interesting this year, since they were made up by a number of community organizations, such as parent-teachers' associations and community clubs. Farm produce came from every section of the county but one, and W. L. Cox, secretary of the department, said that this is the first time the county has been so well represented since the first year of the fair.

The fruits took up a large part of the space and consisted largely of apples and pears of many varieties. The potatoes came from a number of individual growers, most of whom were farmers. There were some, however, from the certified seed growers in the county, which added to the quality and size of the show. The cabbage and rutabagas shown were exceptionally well developed for the poor growing seasons. Many of the crops were grown on upland soils.

The Summit and Montesano Garden clubs each put on a neat exhibit showing that they had not been idle during the summer. Two other club exhibitors were from the Oxford and Montesano potato clubs. These were not large displays, but they were very good and showed that the boys knew how to grow potatoes. Five boys of the county bee club put on a display of honey which was a credit to any honey producers.

Aside from the individual entries of honey there were three displays from individual apiaries, in which were many kinds of honey, but that made from the fireweed was the most attractive because of its being very clear. Two show cases were filled with many home-made dishes in which honey was used in the place of sugar.

The art building was filled with garden and potted flowers as well as art and sewing. The latter, however, took up all of one side, whlie part of the center was devoted to home canned goods. Another section was filled with cakes, cookies and other such articles from the kitchen.

The woman's department extended to the next building, where the club girls showed their sewing and canning work. The clubs entered were: Fairview, Wishkah, Wynoochee, Silver Star, Oakville and Montesano.

The public schools of the county also showed their exhibits in the building, two of which consisted of furniture made by the manual training classes.

The Live Stock Exhibits.

The cattle show was made up largely of Jerseys and beef cattle, while there were some local Holsteins entered for competition. The greater part of the space formerly devoted to the latter breed was occupied by the 45 head which were in the Kjelland sale.

The junior and grand champion bull, a senior calf, was from the Jim Carstairs herd of Elma. The senior and grand champion female was won by A. A. Seibert of Elma on Pauline Vicroy De Kol, the only aged cow entered in the show.

The Jerseys.

John R. Martin of Satsop won the junior and grand champion honors with Oxford Fern Theater Cup, the 10-month-old bull that was added to the herd this spring. The grand champion female award went to the A. M. Starr herd, which came from Coaldale, Alberta. The young heifer, Starr's Golden Miltie, was an extremely outstanding calf with an unusually well developed udder. Her high quality and typiness placed her above John Taylor's aged cow, Girletta's Lucy.

The special prize offered by the Aberdeen Chamber of Commerce for the champion producing dairy cows of Grays Harbor county was won by A. A. Seibert of Elma, with Pauline Viceroy De Kol. The grand champion Jersey in this class was Gwendola Rosaire's Gertie, a senior yearling of the J. H. Taylor herd of Montesano. Mr. Taylor also took second prize and J. R. Martin's cow placed third.

The Beef Cattle.

The beef breeds were represented by Shorthorns and the dual purpose by Red Polled. There were two herds of the latter breed, namely, that of F. H. Porter of Halsey, Ore., and L. K. Cogswell of Chehalis. The Porter herd had the grand champion male an dfemale, while the 18 head in the Cogswell herd took a number of firsts and seconds, making the prize money about equal. The E. C. Truesdell herd from Centralia had no competition in

(Continued on page fifteen.)

GENERAL ADVERTISING.

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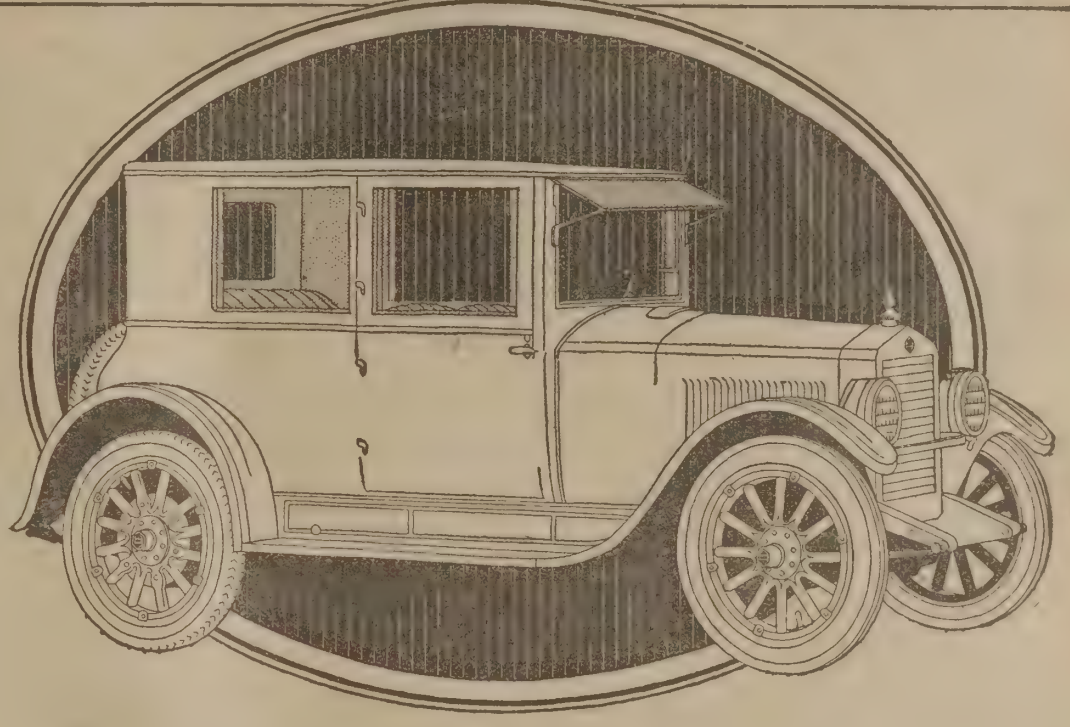
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POULTRY AND RABBITS

Best Mash

To Stimulate Egg Production

The best mash for stimulating egg production in hens of the general purpose breeds, such as the Plymouth Rocks and Wyandottes, according to experiments carried on by the United States department of agriculture, is one that is not so rich in corn meal and meat scrap as those frequently fed to Leghorns.

On the department's poultry farm at Beltsville, Md., the best results with general purpose hens were obtained with a mash containing only 18 per cent of meat scrap with considerable ground oats and wheat bran. The entire mixture is made up in the proportion of three parts of corn meal, one part of bran, one and one-half parts of meat scrap, one part of middlings, two parts of ground oats and 5 per cent of linseed meal. As a result of using this feed the hens produced a good yield of eggs, but did not become overfat and were in good breeding condition.

Leghorns and other breeds of the same type can use a heavier and more stimulating ration without endangering their physical condition and the hatching quality of the eggs. The mash that has been giving the best results with the department's Leghorn flock is made up of four parts bran, four parts middlings, 66 parts corn meal and 26 parts of meat scrap. Barred Plymouth Rock pullets fed on this heavy mash laid a few more eggs than pullets of the same breed fed on the first mash, but they suffered in health and their eggs were lower in fertility.

Among the vegetable proteins fed to poultry the department has found that gluten meal seems to be the best, although cotton seed and peanut meal are very satisfactory if supplemented with animal protein in the form of meat scrap, tankage, fish meal or milk, and with mineral salts. For good results the vegetable proteins should not exceed 10 per cent of the total mash. Tests have shown that a good grade of fish meal is practically as good as meat scrap or high-grade tankage.

Tuberculosis Takes Big Toll

Tuberculosis is one of the most costly diseases of poultry. Many a farm finds its hens unprofitable because of this malady, though the owner be unaware of it. Many a farm yard is infected with this disease, which spreads to the younger generation each year, the farmer or his wife wondering what is the reason they can not succeed with hens.

As tuberculosis progresses the liver becomes enlarged by the growth of the tubercles. It is not often that there will be found spots on the liver from other causes. The tuberculous spots are rather hard and gritty when touched with a knife, while other spots are soft. The symptoms are not always the same. While the disease usually affects the liver, sometimes it affects the intestines and may not be evident in the liver. It very frequently affects the intestines and often both liver and intestines. Sometimes the hen will be lame. There is usually a loss of flesh, but occasionally a fat hen will die of the disease. In the former case the hen becomes so emaciated before death that there is little flesh on the bones. In other cases the hen becomes filled with a watery fluid and the abdomen is full and hard. This is a dropsical condition frequently found.

There is no dependable cure for the disease when it once gets into a flock. Prevention is essential. When the disease has been in the flock for some time and the stock has no special breeding value the best plan is to kill off all the stock and start anew.

The remedial measures necessary will be indicated when it is understood that the bacilli pass through the fowl in the droppings. The intestinal wall breaks down when the tubercle becomes large and the germs are passed out in the excreta. A healthy fowl picking up feed that has come in contact with the infected droppings may take the disease. This is how the disease spreads in a flock and probably the only way, and is why the disease is confined largely to the digestive organs. Before other fowls, therefore, are put in the same house or same yards the ground must be thoroughly disinfected. They had better be left vacant for six months. If the direct rays of the sun can get at the ground the germs will be killed. The ground should be plowed or spaded up. The house should be sprayed as well as all drinking vessels and food troughs. In purchasing fowls it is a good plan to inspect the yards from which they come and not purchase any from a flock that has shown any suspicion of the disease.

The New Zealand Red Rabbit

By Agnes E. Brenner.

The New Zealand Red Rabbit made its first appearance during the year of 1909 and was a very poor looking specimen alongside of the beautiful rabbit we now have.

The origin of the New Zealand Red forms one of the most interesting chapters in the history of the rabbit family.

The first few specimens to be shown resembled an old dirty piece of canvas in color. Their type was also poor and many were covered with white hairs, some having considerable ticking on hind quarters and on top of back. The front legs had white bars and the hind legs on many specimens were entirely white. The ears were short, with ear lacing showing strong and large white circles around the eyes.

The New Zealand has made probably the greatest improvement of type and color of any rabbit in America. California contains the largest number of breeders. That is where the breed originated. Washington, Oregon and Oklahoma come next in number.

The New Zealand is not a fancy rabbit. Its type is ideal for meat and that is the reason for breeding it, but the public enjoys seeing them on exhibition and large classes are found at the shows.

The best age for fryers is from eight to 10 weeks. The meat is tender, white and delicious and has become a great favorite on the Pacific coast and other sections.

Half an Egg a Day

The per capita consumption of eggs in the United States is one-half an egg a day, as figured out by the United States department of agriculture. The department suggests that every one not only get his full share of egg, but eat the whole egg. This alone would double the demand.

More eggs have been laid this year than ever before. The total runs up to something like 22,000,000,000 eggs, an increase of 10 per cent since the armistice.

Increase of production is attributed by department marketing men to the fact that more hens are laying. There has been decreased consumption of poultry, and farmers have been compelled to keep their hens on the farm. Hens must eat, and to pay their board they must produce eggs. This is given as the chief reason for the increased production of eggs.

Free Book Tells How to Get More Eggs!

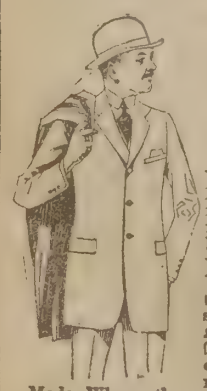


HOW to save feed and get double egg yield. How to cull out poor layers. How Mrs. Hume made $2000. How Mr. Luttrell makes $5 net profit per hen. This book explains Prof. Quisenberry's system now being used by 46,000 successful poultry raisers. 1000 money-making secrets.

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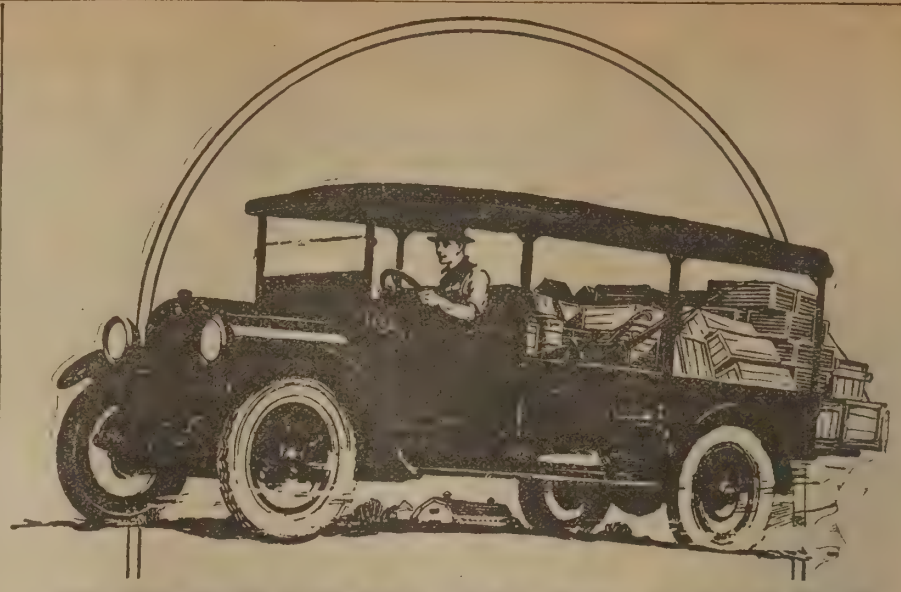
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The department editors of this paper are anxious to be of service to you. Do not fail to write to us if they can be of help to you.

ORCHARD AND GARDEN

Honey for Health

By GEORGE W. YORK.

It is only within recent years that the question of food has received due consideration as related to good health and longevity. For the reason that we have taken it for granted that three meals a day were a necessity, instead of inquiring into the scientific basis of its need in an analysis of the why and wherefore of human nutrition, we have overlooked its potential powers in building bodies for resistance to disease.

An eminent physician says that the body requires in its building at least 14 elements, and these must be supplied by the foods that the Creator has furnished us in their many and varied forms.

We classify these foods as proteids, carbohydrates, fats and sweets, in order that bone and tissue may be built, but the sweets that are given him usually are made of refined sugars and other denatured products, instead of nature's unadulterated sweets, such as honey and similar products.

Honey is one of the greatest foods that nature has to offer. It was known and used ever since history records, and the item, "a land flowing with milk and honey" was synonymous with prosperity and peace.

On analysis, we find honey contains dextro-glucose, laevo-glucose and mannite-glucose. It no doubt owes its flavor to the ethereal acids found in the various sources of supply.

The finest honey is probably found in Narbonne, France, from the fact that a splendid variety of white clover is grown in that district, and the color of the honey is a greenish white.

The ancient Briton used a drink called "mead" made of honey and water. The Romans made a mixture of honey, wine and boiled water, called "mulsum." It was used for embalming in Egypt.

Among the peoples of India it was considered a great compliment to present their guests with a drink composed of honey and milk.

The aborigines of Peru offered honey as a sacrifice to the sun.

Honey cakes are today one of the dainties offered to guests by the Abyssinians and Bulgarians.

I am sure that if parents only knew the high food value of that incomparable sweet called "honey" they would never allow their children any of the pernicious and vile concoctions to be found in stores and markets, but would see to it that honey be found on every table.

Irrespective of price, honey has no superior as a food, and when a child desires candy he should receive his sweets in the form nature has perfected it.

The housewife can use honey in anything and everything that requires sugar or sweets. What more can I add than this: First, flavor; second, food value; third, cheapness; fourth, the Ambrosia of Eden?

Elements of Fertility

Complete fertilizers, as shown to the fertilizer manufacturer and the consumer, are fertilizers containing nitrogen, phosphoric acid and potash.

There are three forms of nitrogen, as shown by chemical analysis, which are used in complete fertilizers: The nitric nitrogen, ammoniacal nitrogen, and organic nitrogen, says A. V. Ahmet, agricultural chemist of Tacoma, Wash. The nitric nitrogen is soluble and immediately avaliable to plant life. Ammoniacal nitrogen is converted into nitric nitrogen by the action of the bacteria and soil chemicals in a rather short period, in which form it is taken up by the tree or plant that is fertilized. Organic nitrogen is slower than either of the other two forms to become available, for in its decomposition it must change to the ammoniacal form and then to the nitric form of nitrogen.

There are three forms of phosphoric acid: Water soluble, citrate soluble and insolnble. In the use of the three forms of nitrogen and the three forms of phosphoric acid there is a continuing availability of plant food throughout the growing season.

Potash is all water soluble, the two standard forms being muriate of potash and sulphate of potash, with practically the same agricultural value. Potash in some form, either as it exists in the soil or as applied in the form of an artificial fertilizer, is essential to wood growth.

Nitrogen, phosphorus and potash are essential to vigorous development of trees and other plants. They all exist in all agricultural soils, but in varying ratios. One of the vital problems of fertility is determining the ratio in which they do exist and their respective availability, together with the requirements of the crop being grown. With this information they may be supplied where deficient or deficient in availability in the proportions in which they are needed for maximum results.

Budding and Grafting

By PROFESSOR O. M. MORRIS.

The common budding work is ordinarily done in midsummer, any time after the buds of the present season's growth are sufficiently matured. Peaches, cherries, plums and pears can usually be budded before the middle of the summer. Apples usually require a little longer time for the best maturing of the buds.

The bud is prepared for the setting by removing the leaf just at its base. The bud is removed by placing the edge of the budding knife about half an inch below the base of the bud and cutting up and slightly into the wood, and slicing out the surrounding bark containing the bud to about half an inch above the bud. This removes the bud, usually with a little wood under it; the entire piece removed is an oval or shield shape, with the bud in the center.

The stock is prepared to receive the bud by first having a perpendicular slit in the bark, and then a cross at the top of this slit, cutting through the bark, but no deeper into the wood than is necessary to make sure that you have passed through the bark. Lift the corners of the split bark. Place the lower end of the shield of bark around the bud in this opening, just under the two corners of the lifted bark, and above the bud downward in the slit of the bark on the stock. Push the bud down as far as it will go without further slitting the bark; then wrap with a light cord once below the bud about twice above, and tie it firm enough to hold the bark close. The string should be cut about 7 to 10 days after the bud is set.

In budding peaches, cherries and plums to start young trees, buds should be set as close to the surface of the ground as the work can conveniently be done. Seedlings that have started growth in the early spring should be ready for budding by the middle of summer and form the best trees. In pear and apple budding to form new trees, the seedlings are frequently a year and a half old before they are large enough to work well.

In budding into the top of trees to do top work, it is often necessary to cut into older wood, and great care is necessary in lifting the bark which has become old and stiff. No form of wax or covering other than the string is ordinarily required. The top of the seedling above the bud should be cut away the following winter, so that in the next spring this set bud may start to grow and form the new plant.

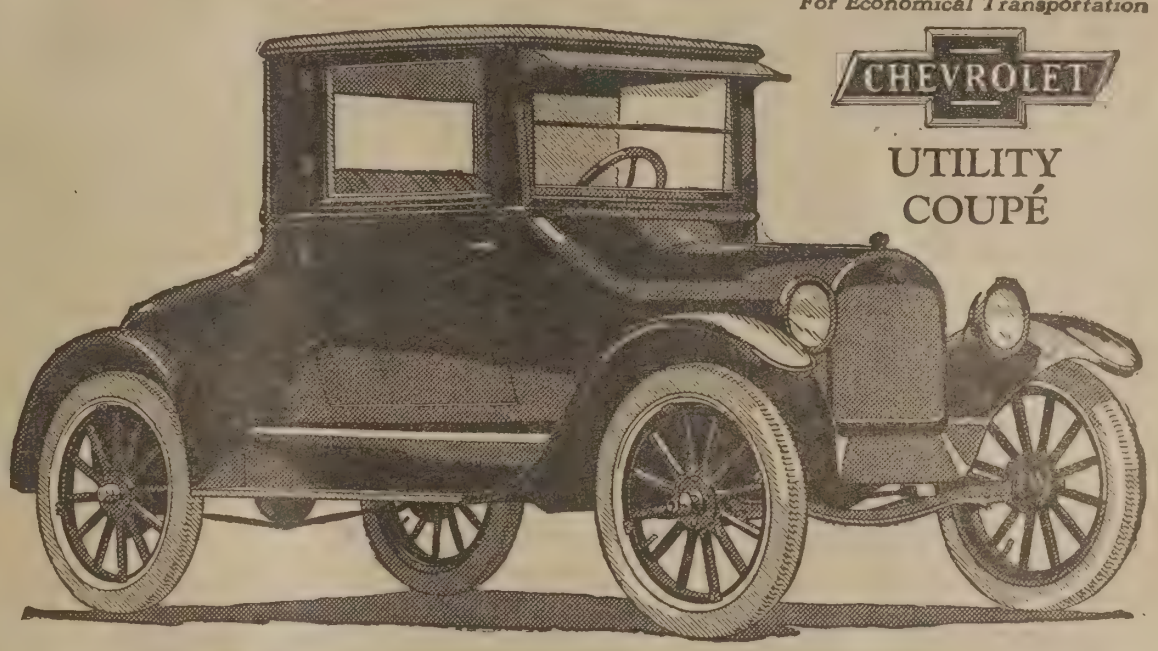
CRANBERRY GROWERS INCORPORATE.

The Pacific Cranberry Exchange has just completed its incorporation as a cooperative agricultural association, is the news from Ilwaco, Wash. Its officers are: J. S. Dellinger, president; L. W. Paul, vice president, and G. W. Hill, secretary. W. E. Schimpff, who served in the capacity of sales manager of the exchange last season, has been again engaged in that same capacity this year. Last year the total crop of cranberries grown on the Pacific coast was 33,000 boxes. This season the crop will not reach these figures, as the crop is spotted.

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The high-grade Fisher Body is practical as well as handsome. The extra large, heavy plate-glass windows afford clear vision on all four sides.

The mammoth rear compartment with locking cover contains 14 cu. ft. of space for luggage, packages, produce and merchandise of all kinds.

The upholstery is in gray whipcord—wide, comfortable, well-sprung seat and back—easily kept clean. Equipment includes standard three speed transmission, vacuum feed, cord tires.

The chassis is the Superior Chevrolet with that celebrated valve-in-head motor, which has been an important factor in giving us first place in sales of standard equipped automobiles.

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Applications will be Considered from High Grade Dealers in Territories not Adequately Covered

Interstate Fair Is Interstate for Sure

(Continued from page ten.)

Louise (senior and grand champion); 2, 3 and 4, University of Idaho, on Kurdes, J. E. Mary and Iris. Three-year-olds—1 and 2, University of Idaho on June and Joanna. Two-year-olds—1, H. C. Doepke, Fairfield, on June Waltz (junior champion.) Under 1 year—1, University of Idaho, on Brilliantine. Mare and colt—1, University of Idaho, on Kurdes and foal.

Belgians.

Stallions: Four years or over—1, J. A. Marion, Fairfield, on Successful (senior and grand champion).

Clydesdales.

All awards in this class went to Robert C. McCroskey of Garfield, Wash., the only exhibitor. His champions were: Senior and grand champion stallion, Meg's Chief, a three-year-old; junior champion stallion, Prince, a yearling; senior and grand champion mare, Faibholme Meg, an aged mare; junior champion mare, Bonnie Brae Jean, a two-year-old.

The Hog Show.

The hog show was outstanding. There were strong exhibitions of the five leading breeds, with honors about divided as to numbers between the Durocs and the Chester Whites. Fewer numbers, but as good quality, were shown in the Polands and the Berkshires, while J. M. Fruitts, the principal exhibitor of Hampshires, offered a creditable show of the belted breed.

Berkshires.

Boars: Senior yearlings—1, Indian City Farm, Spokane, Wash., Senior pig—1 and 2, Pearl Wood, Gervais, Ore. Junior pig—1, Pearl Wood.

Sows: Aged sow—1, Indian City Farm. Junior yearling—1, Orval R. Loe, Silverton, Ore.; 2, Indian City Farm. Senior pig—1, 2 and 3, Pearl Wood; 4, John F. Peterson, Silverton, Ore. Junior pig—1 and 2, James C. Bonner, Silverton, Ore.; 3, Loe.

Groups: Herd—1, Pearl Wood. Get of sire—Pearl Wood. Produce of sow—Pearl Wood.

Championships: Senior and grand champion boar—Indian City Farm, on Matchless Less Royal. Junior champion boar—Pearl Wood, on Producer 4th. Senior and grand champion sow—Indian City Farm, on Iowana Lenore 76th. Junior champion sow—Pearl Wood, on Festline Lady 2d.

Poland Chinas.

Boars: Aged boar—1, A. Kloppenburg, Spokane. Senior yearling—1, Emil O. Loe, Silverton, Ore. Junior yearling—1, Loe; 2, J. F. Torgason, Suver, Ore.; 3, Charles C. Glover, Spokane; 4, B. F. Kammerzell & Sons, Colfax, Wash. Junior pig—1 and 2, Loe; 3 and 4, Kammerzell.

Sows: Aged sow—1, Loe; 2, Kammerzell. Senior yearling—1 and 2, Loe; 3, Kammerzell; 4, Glover. Senior pig—1, 2 and 3, Loe. Junior pig—1 and 3, Loe; 2, James Mulkey, Silverton, Ore.; 4, Kammerzell.

Groups: Aged herd—1, Loe. Young herd—1 and 2, Loe; 3, Mulkey. Get of sire—1 and 2, Loe; 3, Mulkey. Produce of sow—1 and 2, Loe; 3, Mulkey.

Championships: Senior and grand champion boar—Kloppenburg, on Headliner. Junior champion boar—Loe, on Loe's St. Peter. Senior and grand champion sow—Loe, on Wonderful. Junior champion sow—Loe, on Miss Hunter.

Chester Whites.

Boars: Aged boar—1, Ed Schoel, Albany, Ore.; 2, C. M. Meenach, Sharon, Wash.; 3 and 4, H. S. Curtis, Palouse, Wash. Senior yearling—1, Schoel. Junior yearling—1, Schoel; 2, J. L. Davidson, Tekoa, Wash.; 3, Curtis. Senior pig—1 and 3, Meenach; 2, Schoel; 4, Curtis. Junior pig—1, Schoel; 2, Meenach; 3, Curtis; 4, Davidson.

Sows: Aged sow—1, Schoel; 2, Meenach; 3 and 4, Curtis. Senior yearling—1, Curtis; 2, Schoel; 3, Davidson. Junior yearlings—1, Curtis; 2 and 4, Schoel; 3, Meenach. Senior pig—1, Schoel; 2 and 3, Menach; 4, Curtis. Junior pig—1 and 2, Schoel; 3 and 4, Curtis.

Groups: Aged herd—1, Schoel; 2, Mennach; 3, Curtis. Young herd—1, Schoel; 2, Meenach; 3, Curtis; 4, Davidson. Get of sire—1, Schoel; 2, Meenach; 3 and 4, Curtis. Produce of sow—1, Schoel; 2, Meenach; 3 and 4, Curtis.

Champions: Senior and grand champion boar—Schoel, on Iowa Lad. Junior champion boar—Meenach, on Sharon Buster. Senior and grand champion sow—Schoel, on Oregon Queen. Junior champion sow—Schoel, on Buster's Vesta.

Duroc Jerseys.

Boars: Aged boar—1, Frank P. Busch, Johnson, Wash.; 2, S. D. Cornell, Grandview, Wash.; 3, Spokane County Farm, Spangle, Wash. Senior yearling—1, Cornell; 2, E. A. Goodhue, Spokane; 3, Harry Needham, Greenacres, Wash. Junior yearling—1, Cornell; 2, Edwin D. Pease, Usk, Wash.; 3, Busch; 4, Earl F. Harper, Johnson, Wash. Senior pig—1, H. W. Turner, Sunnyside, Wash.; 2, Brown & Adams, Spokane, Wash.; 3, Cornell; 4, Busch. Junior pig—1 and 2, Busch; 3 and 4, C. T. Brownell, Spokane.

Sows: Aged sow—1, 3 and 4, Cornell; 2, Harper. Senior yearling—1, Cornell; 2, Lester Hartley, Cheney, Wash.; 3, Pease; 4, Goodhue. Junior yearling—1, Brown & Adams; 2 and 3, Busch; 4, Harper. Senior pig—1, Cornell; 2 and 3, Brown & Adams; 4, Busch. Junior pig—1 and 2, Busch; 3, Harper; 4, Brown & Adams.

Groups: Aged herd—1, Busch; 2, Cornell; 3, Harper; 4, Needham. Young herd—1 and 4, Busch; 2, Cornell; 3, Brown & Adams. Get of sire—1 and 4, Busch; 2, Cornell; 3, Brown & Adams. Produce of sow—1 and 3, Busch; 2, Brown & Adams; 4, Harper.

Champions: Senior and grand champion boar—Busch, on Busch's Royal Pathfinder. Junior champion boar—Busch, on Skookum Pathfinder. Senior and grand champion sow—Brown & Adams, on Miss Millionaire Fashion Girl. Junior champion sow—Cornell, on Grandview Wonder Chief Girl 4th.

Hampshires.

Boars: Senior yearling—1, J. M. Fruitts, Cambridge, Idaho. Junior yearling—1 and 2, Fruitts. Senior pig—1 and 2, Fruitts. Junior pig—1 and 2, Fruitts; 3 and 4, Harold W. Hastings, Thornton, Wash.

Sows: Aged sow—1, Fruitts. Senior yearling—1 and 2, Fruitts. Junior yearling—1 and 2, Fruitts. Senior pig—1 and 2, Fruitts. Junior pig—1 and 2, Fruitts; 3 and 4, Hastings.

Groups: Aged herd—1 and 2, Fruitts. Young herd—1 and 2, Fruitts; 3, Hastings. Get of sire bred by exhibitor—1, Fruitts; 2, Hastings. Get of sire—1 and 2, Fruitts; 3, Hastings. Produce of sow—1 and 2, Fruitts; 3, Hastings.

Champions: Senior and grand champion boar—Fruitts, on Silver King. Junior champion boar—Fruitts, on Rambling Kid. Senior and grand champion sow—Fruitts, on Idaho Lookout. Junior champion sow—Fruitts, on Brush Up.

Sows and Litters.

First, C. M. Meenach, Sharon, Wash., on Chester White; 2, H. S. Curtis, Palouse, Wash., on Chester White; 3, S. D. Cornell, Grandview, Wash., on Durocs.

Fat Barrows.

Under six months—1 and 2, Orval R. Loe, Silverton, Ore., on Berkshires; 3, H. S. Curtis, Palouse, Wash., on Chester Whites. Three barrows under six months—1, Loe, on Berkshires; 2, Curtis, on Chester Whites. Three barrows over six months, and under one year—1 and 2, J. M. Fruitts, Cambridge, Idaho, on Hampshires. Champion barrow and champion pen of three—Fruitts.

The Sheep Show.

There was a good sheep show, but seemingly a little less interest than in some previous years. Nearly all the common breeds were shown. Awards were widely divided between exhibitors of the three Pacific northwestern states and Canada.

Hampshires.

Rams: Aged ram—1 and 2, J. M. Fruitts, Cambridge, Idaho. Yearlings—1 and 3, University of Idaho; 2 and 4, Fruitts. Lambs—1 and 3, University of Idaho; 2 and 4, Fruitts.

Ewes: Aged ewe—1 and 2, Fruitts; 3, Harold W. Hastings, Thornton, Wash. Yearlings—1 and 2, University of Idaho; 2 and 3, Fruitts. Lambs—1 and 2, University of Idaho; 3 and 4, Fruitts.

Flock—1, University of Idaho; 2 and 3, Fruitts. Pen—1, University of Idaho; 2 and 4, Fruitts; 3, Hastings. Champion ranm and champion ewe—University of Idaho. Best showing—University of Idaho.

Shropshires.

Rams: Aged ram—1 and 4, Floyd T. Fox, Silverton, Ore.; 2, Archie C. Stewart, Aldergrove, B. C.; 3, Felzer Bros., Tangent, Ore. Yearlings—1 and 2, Felzer; 3, Stewart; 4, Fox. Lambs—1, Stewart; 2 and 4, Fox; 3, Felzer.

Ewes: Aged ewe—1 and 3, Fox; 2, Stewart. Yearling—1 and 3, Stewart—2, Felzer; 4, Fox. Lambs—1 and 3, Fox; 2, Stewart; 4, Felzer.

Flock—1 and 4, Fox; 2, Stewart; 3, Felzer. Pen—1, Fox; 2, Felzer. Champion ram and champion ewe—Fox. Best showing—Fox.

Southdowns.

Rams: Aged ram—1 and 3, J. G. S. Hubbard & Sons, Monroe, Ore.; 2, Archie C. Stewart, Aldergrove, B. C. Yearlings—1 and 4, Stewart; 2, University of Idaho; 3, Hubbard. Lambs—1 and 3, Stewart; 2 and 4, Hubbard.

Ewes: Aged ewe—1 and 3, Stewart; 2 and 4, Hubbard. Yearlings—1 and 3, University of Idaho; 2 and 4, Hubbard. Lambs—1 and 3, University of Idaho; 2, Hubbard; 4, Stewart.

Flock—1 and 4, Hubbard; 2, University of Idaho; 3, Stewart. Pen—1, University of Idaho; 2, Stewart; 3, Hubbard. Champion ram—Hubbard. Champion ewe—Stewart. Best showing—Hubbard.

Oxfords.

Rams: Aged ram—1 and 2, Floyd T. Fox, Silverton, Ore.; 3, Spokane County Poor Farm. Yearlings—1 and 2, Harold W. Hastings, Thornton, Wash.; 3 and 4, Fox. Lambs—1 and 2, Hastings; 3, Fox; 4, J. G. S. Hubbard & Sons, Monroe, Ore.

Ewes: Aged ewe—1 and 3, Fox; 2 and 4, Hastings. Yearlings—1 and 4, Fox; 2 and 3, Hastings. Lambs—1 and 4, Fox; 2 and 3, Hastings.

Flock—1 and 4, Fox; 2 and 3, Hastings. Pen—1 and 3, Hastings; 2 and 4, Fox. Champion ram and champion ewe—Fox. Best showing, bred by exhibitor—Hastings. Best showing, owned by exhibitor—Fox.

Lincolns.

Rams: Aged ram—1 and 2, William Riddle & Sons, Monmouth, Ore.; 3, University of Idaho; 4, Archie C. Stewart, Aldergrove, B. C. Yearlings—1 and 2, Riddle & Sons; 3, Stewart; 4, William Riddle Jr., Monmouth, Ore. Lambs—1, Riddle Jr.; 2 and 4, Riddle & Sons; 3, Stewart.

Ewes: Aged ewe—1 and 3, Riddle & Sons; 2 and 4, Stewart. Yearlings—1, University of Idaho; 2 and 3, Riddle & Sons; 4, Stewart. Lambs—1 and 2, Riddle & Sons; 3 and 4, Riddle Jr.

Flock—1 and 2, Riddle & Sons; 3, Stewart; 4, Riddle Jr. Pen—1, Riddle & Sons; 2, Riddle Jr.; 3, Stewart. Champion ram and champion ewe—Riddle & Sons. Best showing—Riddle & Sons.

Cotswolds.

All awards in the Cotswold division went to William Riddle & Sons, Monmouth, Ore., the only exhibitors.

Romneys.

Rams: Aged ram—1, H. S. Currie, Steveston, B. C.; 2 and 3, William Riddle Jr., Monmouth, Ore. Yearlings—1, Currie; 2 and 3, Riddle Jr. Lambs—1, Currie; 2 and 3, Riddle Jr.

Ewes: Aged ewe—1 and 3, Riddle Jr.; 2, Currie. Yearlings—1 and 2, Riddle Jr.; 3, Currie. Lambs—1 and 2, Riddle Jr.; 3, Currie. Champion ram—Currie. Champion ewe—Riddle Jr.

Leicesters.

All awards in the Leicester division went to E. F. Hubbard, Corvallis, Ore., the only exhibitor.

Rambouillets.

Rams: Aged herd—1 and 3, C. H. Craig, Lowden, Wash.; 2, University of Idaho. Yearlings—1, University of Idaho; 2, and 3, Craig. Lambs—1 and 3, Craig; 2 and 4, University of Idaho.

Ewes: Aged herd—1 and 4, Craig; 2 and 3, University of Idaho. Yearlings—1 and 2, University of Idaho; 3 and 4, Craig. Lambs—1 and 3, Craig; 2 and 4, University of Idaho.

Flock—1, University of Idaho; 2 and 3, Craig; 4, Ed Schoel, Albany, Ore. Pen—1 and 3, Craig; 2, University of Idaho; 4, Schoel. Champion ram and champion ewe—University of Idaho. Best showing—Craig.

Dorsets.

All awards in the Dorset division went to

(Continued on the following page.)

Record Guernsey and Progeny Will Be Sold

A complete dispersal of the Dr. Park Weed Willis herd of Guernseys will be held November 22 at the farm at Redmond, in King county. This herd, which contains some of the best known blood lines in the breed, will be remembered, especially by Sammamish Topsy, that has a record of 629 pounds of fat as a 2-year-old and 831.58 pounds as a mature cow. This record is the highest for age of all Guernseys west of the Missouri river. She and several of her offspring will be sold in the sale, in which the entire herd of 41 head are offered. Only five are bulls, the rest being heifers and cows in milk. A son of Sammamish Topsy, Robin Hood, a great grandson of Imported King of the May, will be included. He is a 3-year-old and has produced 12 heifer calves out of 16. There will be three daughters of Sammamish Topsy and 12 granddaughters in the sale. The entire herd is government accredited and there are a number of cows that have A. R. records, while all of the cows have good production records. Dr. Willis is selling his herd with the intention of devoting his entire time to his professional practice.



The center of attraction in this picture is Sammamish Topsy, the high producing Guernsey cow. She is being inspected by a group of visitors on the west Washington live stock tour held recently. Her owner, Dr. Park Weed Willis, is at her head, proudly exhibiting her.



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Our agent, near you, will show you how easily ORONITE SHINGLE OIL may be applied — will give you color formulas, too, for decorative use.

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Fairs On This Week

A number of important fairs are on schedule for this state during the present week. Among them are the Walla Walla county fair, the Lewiston-Clarkston fair, in which the farmers of southeastern Washington are interested, the Kittitas county fair, the Prosser Hog and Corn show and the Clallam county fair.

Next week the Washington state fair is on the docket, along with a few small fairs in distant parts of the state that can not conveniently participate in the big event at Yakima. The prospects for the state fair are exceedingly bright. Owing to the inability to house all of the live stock last year, much additional barn room has been prepared for the 1922 entries, which are reported to exceed in numbers those of any previous Washington state fair. Every department promises interest up to the highest standards heretofore set and in many instances even more. Agricultural products, a poultry show, a women's department, boys' and girls' club work, farm machinery, modern household equipment, college extension service, federal exhibits and a program of entertainment said to be of high class will compete with each other for the interest of the crowds that unquestionably will attend if weather conditions are favorable. With the early fall rains apparently over, Secretary Vermilye and his associates in the conduct of the fair are enthusiastic over prospects.

Grays Harbor County Fair

(Continued from page eleven.)

the milking Shorthorns, since the W. H. Johnson herd of beef Shorthorns from Elma was judged in a class by themselves.

Club Entries.

There were 10 animals shown by the boys' and girls' calf clubs, consisting of Jerseys, Holsteins and Shorthorns. The champion ribbon went to Forth Twidwell of Elma for one of his Jersey calves. The boys also showed their animals in the open classes and made a creditable showing against the older breeders.

In the pig club entries Floyd Gouchnour of Montesano took first place in the market class with his Poland Chinas. In the brood sow class Robert Polson took first with a Poland China sow, while Walter Tournquist took second with the only Chester White in the club. There were nine Poland Chinas owned in the club.

There were five breeds of hogs shown in the barn, which was not large enough for all enteries, some being placed outside. Practically all of the classes in the different breeds, with the exception of the Chester Whites, were filled by the Grays Harbor Pig company, a newly organized concern which will operate an extensive hog farm on logged-off land between Montesano and Satsop. The company has just purchased a shipment of hogs from the Pacific Meat company of Seattle.

There was one stallion, a Belgian, shown by Fred Bleckschmidt of Elma, and D. S. Baker of Nisqually entered a span of mules. W. T. McDonald of Victoria, commissioner of agriculture for British Columbia, judged the live stock classes in all departments.

Interstate Fair Is Interstate

(Continued from the preceding page.)

Floyd T. Fox, Silverton, Ore., the only exhibitor.

Fat Sheep.

Middle wools: Yearling wether—1 and 2, University of Idaho. Wether lamb—1 and 2, University of Idaho; 3, Harold W. Hastings, Thornton, Wash. Pen of three yearlings—1 and 2, University of Idaho. Pen of three lambs—1 and 2, University of Idaho.

Long wools: Pen of three lambs—1, Hastings.

THE GOAT SHOW.

Angoras.

All awards in Angoras went to William Riddle & Sons, Monmouth, Ore., except third on buck lamb and second on yearling doe, which went to Louis Pierre, Rockford, Wash.

Milk Goats

Toggenburgs: Aged doe—1, D. F. Martin, Spokane, Wash. Yearling doe—1, Martin.

Toggenburg: Grades or crossbreds—Aged doe—1, L. R. Walker, Spokane; 2 and 3, Martin. Yearling doe—1, Walker; 2, Mrs. John Latshaw, Spokane; 3, Fred Kellam, Spokane. Doe kid—1, Martin; 2, Latshaw; 3, Kellam.

Saanen grades or crossbreds: Aged doe—1 and 2, Minnie L. Rand, Spokane. Yearling doe—1 and 2, Mrs. J. A. Ince, Yardley, Wash. Doe kid—1 and 2, Rand; 3, Rex Kellam.

The livestock judged were as follows: All beef cattle: Frank Brown, Carlton, Ore.; Percheron, Belgian and Clydesdale horses, Frank Brown, Carlton, Ore.; Shire horses, A. R. Galbraith, Garfield, Wash.; Guernsey and Ayrshire cattle, Prof. F. W. Atkenson, Moscow, Ida.; Holstein and Jersey cattle, George Bulkley, Seattle, Wash.; all hogs, Thomas W. Brunk, Salem, Ore.; all sheep, Prof. Howard Hackedorn, Pullman, Wash.; all goats, A. L. White, Spokane.

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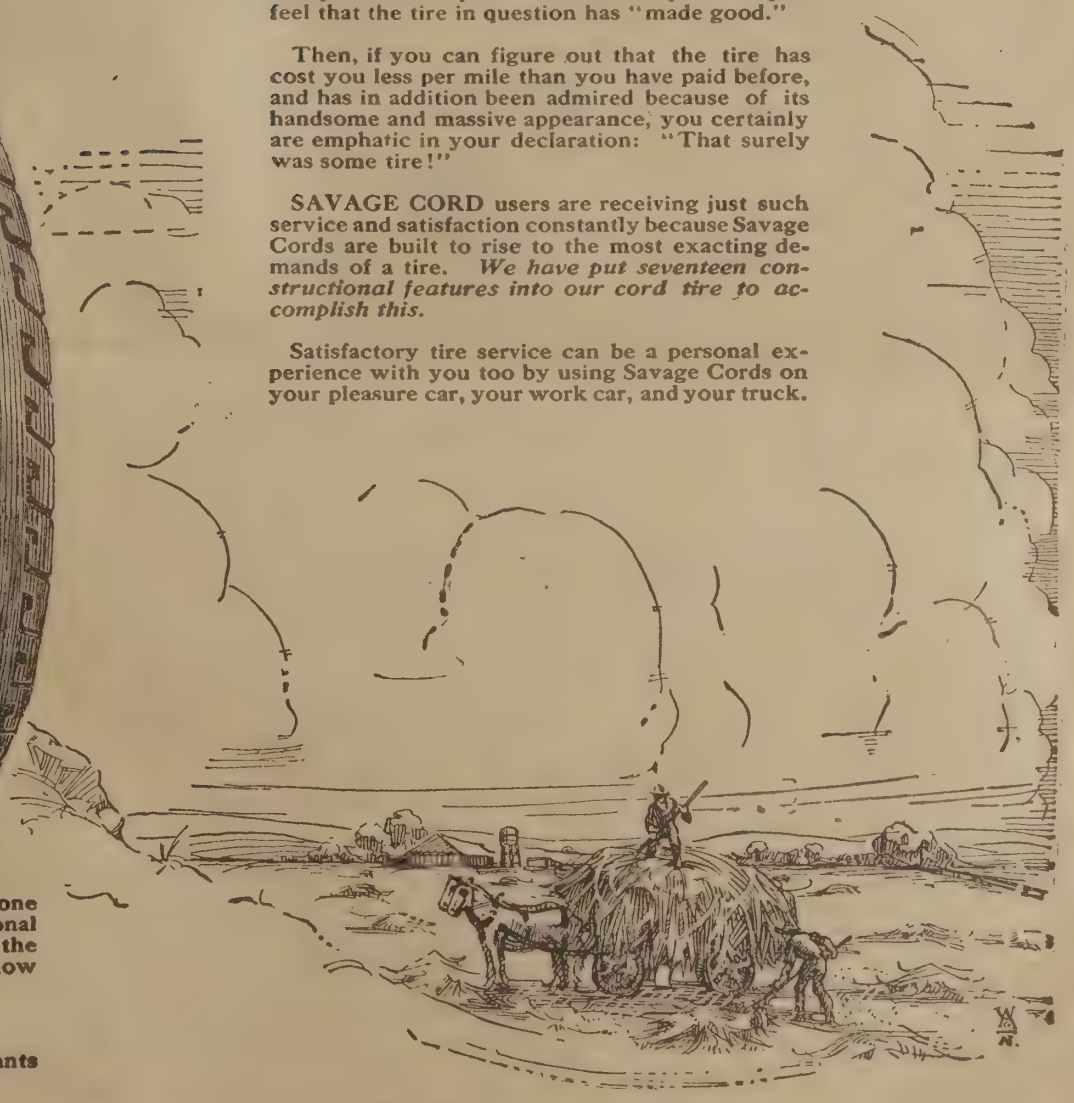
When you recall that much of the distance covered was over bad roads and through hard going, with perhaps a good deal of abuse because heavy loads and speed were necessary—then you feel that the tire in question has "made good."

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PIKE'S PEAK OR BUST

By LEWIS B MILLER

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PM

SYNOPSIS.

Esau Haggerty, a strong man of mature years, and Orlando Medford, a young, slightly built and frail companion, have started from their Illinois home town for the great gold diggings of the west. Esau is pushing a provisions-laden wheelbarrow. Orlando is leading a cow. For three days they have been trudging slowly southwestward carrying out the determination crudely lettered on the side of the wheelbarrow, "Pike's Peak or Bust." Rain and snow impeded their progress, and Orlando falls sick and requires a couple of days to rest before proceeding. Then, with the village that is now Kansas City passed, they follow the Santa Fe trail westward, being but one of scores of outfits of various kinds headed for the fields of golden riches. Once again they stop for a good rest before plunging into the real wilderness, 700 miles of which is still ahead of them to be conquered by foot, cow and wheelbarrow. After several days' tramping, they pitch their tent across a little stream from the camp of a family by the name of Cooper, also headed for the gold diggings. In the party is the daughter of the Cooper family, Hazel, whom Orlando by chance met when both went to the stream for water and in whom he became at once greatly interested. He reluctantly joined Esau next morning for the day's travel, leaving the Coopers to follow later, but with the expressed hope that they would all meet again at the gold fields. It was several days later that Esau and Orlando met up with another strange party on the trail, several men with a push cart to haul their belongings to the diggings. The two parties agree to travel together the rest of the journey. To save time they leave the Santa Fe trail and take a short cut that will save them more than 100 miles. But to their great distress they find themselves many miles out in a waterless, sun-scorched desert, with death from thirst staring them in the face. They meet a wagon party coming back famished, hurrying as best they can for the place they left the Santa Fe trail and water. The three parties hold a council and decide that the safest thing for them to do is to cut across the desert to the old dry Smoky river bed and dig a well in it for water. They hasten to put the plan to the test, with the result that at no great depth they reach water. After a long rest, they fill their kegs and turn back for the old Santa Fe trail, some inclined to give up the journey to the gold fields, others determined to get to Pike's Peak or bust. Esau and Orlando, a little later, come upon a great wagon train of freighters out on the prairie and accompany them until they reach the Arkansas river. They continue alone, finally entering the open buffalo coutnry.

They pass through a tremendous herd of buffaloes, pitch camp on the bank of the Arkansas river, kill a buffalo each and spend a few days drying the meat for future use. While there a wagon train with which the Cooper family is traveling comes up and camps, giving Orlando a chance to get a little better acquainted with the daughter, Hazel. They part with the hope of meeting again in a few days somewhere along the trail. They do meet again, and, meeting a large number of discouraged prospectors returning, the Coopers, the handcarters and the wheelbarrow pilgrims decide to turn back for home, too, though both Hazel and Orlando want to continue the journey. Hazel declares that she believes they ought to reconsider and go on to the Pike's Peak country. Orlando discusses it with others, with the result that most of the party decide to turn back toward the west. After a day or two they come upon a big Indian camp. The redskins flock about the caravan with curiosity. "What tribe?" asks Orlando of an old Indian.

CHAPTER ELEVEN.

At the Foot of Pike's Peak.

"Comanche—all Comanche," the aged warrior answered.

"Where are all your men—all your warriors?" Sanders questioned.

The old Indians pointed toward the south. "Go fight Texas white mens. Texas white mens bad—all bad," was the answer.

The deerskins were dressed, or tanned, and they appealed to the travelers, especially as they might need them to make clothes for themselves if they remained long in the mountains. The party had nothing to trade. But among their supplies each of them carried several pounds of sugar; and they soon learned that a very small cupful of it would buy a large, beautifully dressed buckskin. Though they really had no sugar to spare, the temptation was too great, and exchanges were soon being made. By the time the trading was finished, every white man owned one or more buckskins.

But the Comanches' hunger for sweets was far from being appeased. There was now a clamorous crowd of squaws and children around the little group, most of them eagerly holding up buckskins, and all of them crying, "Sooker! sooker!" The white party shook their heads vigorously and tried to move on. At first they had almost to force their way through the mob. Several little Indian boys sprang upon the cart, and one even perched himself on Esau's wheelbarrow. Still another leaped up and clung to the side of Brindle's pack, which caused her to try to run. All were unceremoniously pushed off.

Finally the travelers got clear of the red mob and hurried on, glad to escape from the clamor. Many of the children followed them a few hundred yards, and some of the boys for more than a mile.

"Well, we certainly did run onto some big bargains that pop," Esau remarked, when the village was out of sight and the last of the little, nearly naked Comanches had been left behind.

"Pity we didn't have a whole bar'l of sugar to swap. We could ha' loaded a wagon or two with buckskins," somebody else observed.

"Couldn't we, though?" a handcarter exclaimed. "It was almost a sin to cheat them pore heathen like we done."

Others made similar remarks; for all believed that they had obtained great bargains. They rolled their buckskins up among their bedclothes, and liked to look at them when they were in camp. But, after two or three days, they were not so sure of having cheated the Comanches.

By this time they were dividing their efforts between scratching themselves and denouncing the redskins, usually in very vigorous language.

The result of putting those deerskins in their packs with their bedding was that all of the travelers' clothes were soon infested with annoying and very loathsome live things.

On the party of seven marched, day after day. All were eager to reach the gold diggings, and were traveling as fast as they could stand to travel. Those vermin they had brought with their buckskins grew more numerous and more bloodthirsty with every mile. One or two men still kept up their denunciation of the Indians, but most of them, making the best of an unpleasant situation, were now joking and teasing one another about the way they had been "taken in."



A wild stampede began in the gambling house.

Not long after passing the Indian village the foot travelers came to Bent's Fort. This place had been established, perhaps 30 years before, by the Bent brothers, as a point for carrying on their trade with the plains Indians. It stood on a hill, some distance back from the road. The buildings were of adobes, or sun-dried bricks, and the whole was surrounded by adobe walls.

Not far from the trail, so the travelers noticed as they passed, were great piles of rusty irons. Apparently old, broken-down wagons had been left there for years, till hundreds of them must have accumulated. But fuel was scarce here, and the woodwork had all been burnt, leaving only the irons.

"A graveyard for old wagons," commented Orlando.

At last dim spots began to appear on the horizon ahead, visible only from high points. For a time these bore some resemblance to the edges of clouds. But Orlando, on the lookout for those very things, quickly discovered what they were.

"The mountains! The Rocky mountains at last!" he shouted.

After inspecting Orlando's discovery, the others agreed that they were now gazing upon either the Rocky mountains or some of the foothills. The sight encouraged them greatly, and they pressed forward with lighter steps.

When first discovered, the mountains must have been nearly a hundred miles away. Deep snow lay on their summits, which shone brightly in the sunshine. As the travelers drew nearer, the mountains seemed to rise higher.

"Now I understand why that range used to be called the Shining mountains," Orlando remarked one day, when they had halted for a brief rest on a high point.

Sanders answered. "I think it was the French who gave them that name. French traders and trappers and fur buyers were all over this western country a hundred years before an American ever set foot on it, I understand. I recollect seeing a copy of a very old map made by one of those Frenchmen. On it the Rockies were called 'Les Montagnes Brilliantes', which means the shining mountains."

Ere long, as they journeyed on, it seemed to the observers that those mountains could be only a few miles away. But, when night came, they appeared little nearer than when the travelers had started in the morning.

Higher and still higher rose those peaks, till the whole range became visible. Finally the seven men found themselves at the foot of the foothills. Here the trail they were following joined another trail from Santa Fe to Salt Lake. Northward the party turned here, and after that they traveled along the foot of the mountains.

Finally they began to catch sight of a conspicuous peak. Again the youngest member of the party was the first to notice it.

"Yonder's the famous mountain!" he called out to those behind. "The mountain discovered by Lieutenant Pike 53 years ago!" A reader from his childhood, Orlando knew more of this country's history and geography than did the rest of his party.

"Yes, reckon that must be the big mountain that's lent its name to this whole region," remarked a handcarter.

"If it is we'll soon be—we're almost already in the Pike's Peak country," Sanders observed.

Day after day the tramping party trudged along the foot of the range. They had abandoned the Arkansas when they headed north. But they found plenty of clear, cold water, in streams rushing down from mountain canyons; and also plenty of fuel for their campfires.

All this time the footmen had been passing numerous wagons that were headed toward the gold country. And they were meeting as many more, all rolling in the opposite direction. These latter were on their way back to the states. Most of the returning miners were bitter against the country that had disappointed them, and were not slow to utter what they thought. But the men with the handcart and the wheelbarrow had no intention of turning back again.

In time, after days of steady traveling, the seven men found themselves almost at the foot of Pike's Peak itself. Indeed, though actually a few miles to the west, the peak and its attendant mountains appeared almost to overhang the trail. Here the party halted and went into camp. And here they proposed to rest for a day or two, while they did some hunting and attended to a very important matter—important to them at least.

It was not long after noon when the wheelbarrow and the handcart camped, almost in the shadow of the famous mountain. Every man gazed up at its lofty, snow-hooded summit in awe, and more than one spoke of climbing it.

"Well, Esau, you've lived up to your hot iron," remarked Orlando. "More than a thousand miles from here you said it was Pike's Peak or bust. And now you and your wheelbarrow are both at Pike's Peak, and neither of you is busted."

And one of the handcart's crew added: "No, he ain't busted yit; but he came devilish nigh it, back yander where we all turned tail to the peak and started to run away."

"Well, I'm mighty glad I've landed here at last, and that I didn't keep on runnin' away," was all that the wheelbarrow pusher answered.

The party had traveled till past their usual dinner time, in order to reach the peak. After kindling a campfire on the bank of a creek and cooking and eating their dinner, they all lay down in the shade of some trees and rested; rested and slept as well as they could for scratching. Finally Sanders sprang up.

"Boys," he called out, "I've had enough of this eat-you-alive business! Enough and too much! Now for a good-old-time hog-killing—a hog-killing with the hogs left out! First we want a big fire."

Straightway all the party bestirred themselves. In a little while they had dragged or carried an abundance of dry wood to camp and piled it on their fire. And on top of the fire they placed pieces of rock, washed down by the stream from the mountains.

"Now grab your picks and shovels!" called out Sanders again.

Very soon he had them digging a hole in the ground, just a few feet back from the creek bank. When the hole was large enough and deep enough they fetched up water in their kegs and filled it.

That done, they shoveled up hot stones from the fire, carried them to the hole and dropped them into the water. The stones hissed and cracked and popped and sputtered angrily as they dived under. And the water gurgled noisily over them. More stones were thrown in, and still more, till the little pool was boiling like a dinner pot.

"Now we're good and ready for the scalding," their leader told them. "Off with your lousy duds, fellows, and be quick about it!"

"Here's where we get rid of our Comanche pets!" cried Orlando.

So, standing by that steaming, gurgling hole in the ground, every man of them began to strip off his clothes. And every time a garment was stripped off it was dropped into the bubbling pool. Nor did they pause till every man was stripped to the skin. With sticks some of the party now punched the clothes down and held them under the water.

"Fellers, lucky thing we got a good piece from the road to cut this caper," Esau told them. "I'm guessin' we fetch a funny figger, all seven of us standin' around this hole in the ground in our birthday clothes, like we air."

"Funny's no name for it!" exclaimed a handcarter. "I'll bet—I'll just bet a twist of terbacker we look like a passle of lunatics."

"That's what we do! Stark, ravin' lunatics!" declared somebody else.

When the clothes had boiled a few minutes they were lifted out of the water with sticks and laid on the grass not far away. Now all the quilts and blankets, with such other things as might contain vermin, were got ready. More hot stones were thrown in, to make sure that the water was hot enough, and the bedclothes pushed down after them.

When those had boiled sufficiently, they, too, were lifted from the pool and laid on the grass. As soon as cool they were wrung out and hung on bushes to dry.

Now, taking advantage of the fact that they had plenty of hot water, and that their clothes were already wet, the whole party gathered around that steaming hole in the ground and proceeded to give their clothes a thorough washing. After that they rinsed them in the near-by stream and hung them on limbs to dry. Later all bathed in the stream. But the water, flowing down from those snowy mountains, proved so cold that they were glad to get out and warm and dry themselves in the sunshine.

After that the seven remained in the shade for an hour or two, resting, till their clothes were dry enough to put on. A thorough job they had made of the boiling. Even these Comanche deerskins, the cause of all the trouble, had been dipped, for a few moments only, into the gurgling pool. Now the skins had to be rubbed while drying, to keep them from getting hard like rawhide.

When the travelers were clothed once more, and their buckskins were dry and soft, most of the men took up their guns, buckled on their six-shooters and set off hunting. Some returned with game, others empty handed. But, when night came, all slept at ease and without scratching. Nor were they troubled in that way again.

Though the scene of the gold excitement was known far and wide as the "Pike's Peak country," none of that much-sought metal had as yet been discovered in the vicinity of the peak itself. All the gold so far obtained had been washed out about 75 miles farther north. And it was in that direction that the stream of travel was now flowing.

After dinner the following day the seven wayfarers, feeling better for their rest and cleansing, packed up and set off northward again. The trail was still leading them near the foot of the mountains.

Often, as they toiled on their way, they met parties returning from the gold diggings. Naturally they inquired as to what was going on at the mines. But the news received through these disappointed gold seekers was so discouraging that nobody liked to listen to it. The brightest, most

(Continued on page eighteen.)

Not Mercy, but Justice

What does the animal ask of us? Not mercy. Never that. You and I alone of all God's creatures must pray for that. Give us justice, mutely plead the beasts of the field and the fowl of the air. Treat us as you would want to be treated were you in our places and we ask no more, says Dr. Francis H. Rowley.

How many of us have recognized humanity's debt to these lowlier creatures about us? How without the dog could man have herded the sheep and so passed into that pastoral stage that marked his forward march? How the fleece of the sheep has warmed him! How the milk of the cow has nourished him! How without the ox, the ass, the horse, could he have won from the soil its mighty harvests and built the cities and highways of the world?

That celebrated English poet will be remembered by these four lines of the "Ancient Mariner" long after all his fame as a scholar and thinker is forgotten:

He prayeth best, who loveth best
All things both great and small;
For the dear God who loveth us,
He made and loveth all.

HELP WANTED—MALE 3

MEN WANTED AT ONCE TO FILL GOOD POsitions. You can qualify in few weeks. Experience unnecessary. Free employment department. Write for free catalogue 100-B, and rates. Modern Automobile and Tractor Schools, W1803 Third ave., Spokane, Wash., or 700 Mercer st., Seattle.

WANTED — SALESMAN WHO CAN SELL high-grade, dependable nursery stock; several counties in Oregon, Wash., Idaho and Montana now open for assignment. Our selling contract will interest you. Address Albany Nurseries, Inc., Albany, Ore.

WANTED—MEN WITH HORTICULTURAL experience to sell our dependable nursery stock; have select territory for immediate acceptance. Write for particulars. Capital City Nursery Company, 426 Oregon bldg., Salem, Ore.

FRESH FOOD PRODUCTS 51-1

"HONEY BRAND" HONEY — ALFALFA, sweet clover product; pure, light, thick, good flavored; gives satisfaction wherever used; 1 60-lb. can, $6.50, two for $12.75. Write for circular and prices in pails. Oliver Sires, Wapato, Wash.

HONEY—400 TEN-LB. PAILS CHOICE ALfalfa, sweet clover honey; also 60-lb. cans and 5-lb. pails; discount on five-case orders or more. Write for prices and sample. Wm. R. Sires, Wapato, Wash.

WHITE ALFALFA, SWEET CLOVER honey; 1 60-lb. can, $7.50; 2 60-lb. cans, $14.50; six 10-lb. cans, $8.50; three No. 10 pails, prepaid, third zone, $5.50. Wells D. Rose, Sunnyside, Wash.

NEW HONEY, FINE QUALITY ALFALFA, sweet clover; 60-lb. can prepaid, second zone, $7.29; two, $12.75; not prepaid; 3 10-lb. pails, prepaid, second zone, $4.25. Harry Fisher, Prosser Wash.

POPULAR BRAND HAPPY HOME HONEY—One 60-lb. can, $6.50; two cans, $12.75; six 10-lb. pails, $7.50; comb honey prices on request. H. N. Paul, Mabton, Wash.

FINEST NEW HONEY, 60 POUNDS, $7.50; 2 cans, $14.40; add postage; 10 pounds, $1.90; 5 pounds, $1 prepaid; satisfaction guaranteed. Geo. Bancroft, Hermiston, Ore.

NEW CROP ALFALFA-SWEET CLOVER honey; 60-lb. can, $4.75; two cans, $9 f. o. b. Rigby. Heckman & Larsen Honey Co., Rigby, Idaho. Quality guaranteed.

DELICIOUS NEW CLOVER HONEY, 60 pounds, $5.50; two 60s, $9.75; six 10s, $6.75; 12 5s, $7. Agents wanted. Browne. Box 499, Twin Falls, Idaho.

NEW HONEY—ALFALFA AND SWEET CLOver; 1 60-lb. can, $6.50; two, $12.75; discount on large quantities. Ernest Sires, Yakima, Wn.

SMOKED SALMON, 5-POUND BOX, $1.25; salt salmon bellies, 5 pounds, $1.25, delivered by mail. Coffin Fish Co., Seattle, Wash.

HONEY — FRESH ALFALFA-SWEET CLOVer honey; one 60 lb. can, $6.50; two cans, $12.75. A. L. Traner, Touchet, Wash.

HONEY — WHITE CLOVER EXTRACTED; none better; two sixty-pound cans, $10. J. M. Ruyts, Buhl, Idaho.

COMB HONEY AT $4.40 PER 24-LB. CASE, express not prepaid. G. I. Folsom, Route 1, Prosser, Wash.

MISCELLANEOUS—FOR SALE 60

SASH AND DOORS—O. B. WILLIAMS CO., 1943 First ave. So., Seattle. Chicken house sash, 20" wide by 25" high, 80c; a dozen different sizes in stock for immediate shipment. Skylights for chicken houses, 36"x40"; price, glazed, $2. This is the size recommended by the Western Washington experiment station. We carry them in stock for immediate shipment. Sash and doors for all purposes at lowest prices. All orders receive prompt attention. Our large illustrated catalog No. 35, showing full line of building material and built-in fixtures for the home, free on request. O. B. Williams Co. Established 1899.

SACKS—SECOND-HAND GRAIN AND SPUD, correctly sorted and graded; also pipe, new and second hand, any size; standard roofing paper at a big saving; pumps, engines, belting, cables, etc. Alaska Junk Co., Inc., S120 Adams st., Spokane, Wash.

WALL BOARD—WRITE FOR SAMPLE OF Washington plaster wall board; won't warp, won't burn. Manufactured by Washington Building Products company, 6851 E. Marginal Way, Seattle, Wash.

NATURAL LEAF TOBACCO, CHEWING, 5 pounds, $1.75; 15 pounds, $4; smoking, 5 pounds, $1.25; 15 pounds, $3. Send no money, pay when received. Farmers' Tobacco Association, Paducah, Ky.

ALL WOOL KNITTING YARN FOR SALE, direct from manufacturer at 95c, $1.35 and $1.60 a pound. Postage paid on $5 order. Write for samples. H. A. Bartlett, Harmony, Maine.

NATURAL LEAF TOBACCO, CHEWING, 5 lbs., $1.75; 10 lbs., $3; smoking, 5 pounds, $1.25; 10 pounds, $2. Send no money, pay when received. Tobacco Growers' Union, Paducah, Ky.

FOR SALE—FAIRBANKS-MORSE HOME light plant; 32 volt, 40-light; first-class condition; replaced by power line; cheap. W. S. Dowd, Parkdale, Ore.

TOBACCO — KENTUCKY'S PRIDE; EXTRA fine chewing, 10 lbs., $3; smoking, ten lbs., $2; twenty, $3.50. Farmers' Club, Mayfield, Ky.

FARMERS' WANT ADS

This is the farmers' "want," "sale" and "exchange" department for small advertisements of farmers, including live stock and poultry.

Advertising rates for ads running 1 to 3 times, 10c per word per insertion, with a special rate to Farmer subscribers, as follows: Ads running 4 to 12 times, 9c per word per insertion; ads running 13 times or more, 8c per word per insertion.

All commercial and land advertising 10 cents per word each insertion. Open also to nonsubscribers.

In using these columns advertisers must observe: (1) No advertisements will be inserted for less than $1.00. (2) Every word, number and initial, including name and address, must be paid for. (3) New advertisements, changes of copy or cancellations must reach general office, Spokane, Wash., 10 days in advance of publication date. (4) Cash must accompany order.

Above rates include insertion in The Washington Farmer, The Idaho Farmer and The Oregon Farmer, which constitute the Pacific Northwest Farm Trio, 46 Review Building, Spokane, Wash.

MISCELLANEOUS—FOR SALE (Continued) 60

NATURAL LEAF SMOKING TOBACCO—5 lbs., 75c; 10 lbs., $1.25; 20 lbs., $1.75. Cash with order. United Farmers, Mayfield, Ky.

MISCELLANEOUS—Wanted. 63

HIDES—WE BUY HIDES OF ALL KINDS. Write for prices and tags. Hibbard-Stewart Co., Hibbard bldg., Seattle.

WOOL—WE BUY WOOL AND PELTS. WRITE for prices and tags. Hibbard-Stewart Co., Hibbard bldg., Seattle.

AUCTIONEERS 75

LIVE STOCK AUCTIONEER—SALES CONducted anywhere. Write for dates and terms. U. S. McFaddin, 1307 Maxwell, Spokane.

AUCTION SALES 78

BIG TYPE POLAND CHINA AT AUCTION—Oregon state fairgrounds, Friday, September 29. Entire herd owned by S. D. Steffy, Newberg, Oregon. Show winners, brood sows, service boar and young stock. Catalog giving full details is being published. Send to E. A. Rhoten, Salem, Oregon, sales manager, and one will be forwarded.

STOVE REPAIRING 128

WRITE MYER RUBENS, SPOKANE, ABOUT stove repairs, welding broken parts, nickle plating.

FUR-BEARING ANIMALS 170

SILVER AND CROSS FOXES FOR SALE. William Rambo, 407 Sprague, Spokane.

PETS—Dogs, Birds, Etc. 171

BEAUTIFUL WHITE COLLIE PUPPIES; reasonable prices. Urbandale Farm, Oakley, Idaho.

POULTRY 174

PULLETS—1500 APRIL AND MAY HATCHED White Leghorn pullets for sale at attractive prices; hatched from thoroughbred Hollywood and Tancred strains; sired by cockerels 250 to 290 egg strains. We ship at three months of age and guarantee satisfaction or you may return the birds in 3 days. We can give you quality and service. Queen Hatchery, Seattle, Wash.

WILLAMETTE VALLEY BARRED PLYmouth Rocks. Over fifteen hundred young birds in 1922; heavy laying strain, dark and beautifully barred; cock birds and cockerels for sale; only the very best allowed on the Dimick stock farm; bank references. F. C. Waldron, R. F. D. 2, Hubbard, Ore.

CERTIFIED WHITE LEGHORN BABY chicks; booking orders now for summer and fall delivery; safe arrival live, vigorous chicks guaranteed; no money in advance; pay on delivery. Established 1898. Sonoma county farm bureau accredited hatchery. Must Hatch Incubator Co., 445 Seventh st., Petaluma, Cal.

POULTRYMEN — SEND EIGHT TWO-CENT stamps for special three months trial for the best and oldest exclusive poultry journal in the west. The articles and advertisements are of special interest to poultry breeders. Northwest Poultry Journal, Salem, Oregon.

WHITE LEGHORN BABY CHICKS, FROM free range Hoganized stock; breeding flocks inspected by Sonoma county farm bureau; accredited hatchery inspector. Full count and safe arrival guaranteed. For price write to Lafranchi Hatchery, Petaluma, Cal.

WHITE LEGHORN BABY CHIX FOR SUMmer and fall months from stock accredited by Sonoma County Farm bureau. We guarantee safe arrival. Write for prices and literature. The Pioneer Hatchery, 422 Sixth street, Petaluma, Cal.

MORE CONTRACTS WANTED FOR NEXT season's eggs for hatching. Pearl guinea, S. C. Buff Orpington and Bronze turkey; 100-egg strain yearling toms for sale. Mrs. J. Wellborn, Warren, Ore.

FOR SALE—WHITE LEGHORN COCKERELS, top notchers. It's money saved to drop us a card stating what you wish. No money till you are satisfied. River View Yards. Box 108, The Dalles, Ore.

JERSEY BLACK GIANTS, AMERICA'S PREmier heavyweight fowl; Aug. 10th, 1922, admitted to standard; eggs and stock. C. M. Page & Sons, Box 877, Belmar, N. J.

PUREBRED BABY CHICKS FOR 1923. LEGhorns, Reds, Barred Rocks, White Rocks, Minorcas, Anconas. Free catalog. Booking orders now. C. N. Needham, Salem, Ore.

BABY CHICKS — WE GUARANTEE OUR chicks to be from the highest producing hens in Petaluma. Write for further information. The White Hatchery, Petaluma, Cal.

DOLLARS FOR YOUR EGGS—WE PAY THE top market prices for your eggs and poultry. Daily cash remittances. Western Produce Co., Spokane.

ALLEN'S ROCKS AND LEGHORNS WIN, LAY and pay. Write your wants. D. W. Allen, La Conner, Wash.

LIVE STOCK 177

WE GUARANTEE TO PAY THE HIGHEST market prices for your poultry and live stock. Owing to the constant changes in the market we are unable to quote prices in this paper from week to week. We will furnish tags and prices when you are ready to ship. Write us what you have to sell. Prompt returns. John Lewis & Co., Spokane, Wash.

LARGE, HEAVY PRODUCING HOLSTEINS for sale at all times in car lots; tuberculin tested; 150 to 200 head always on hand; well marked heifer calves from registered sires and heavy producing dams; crated for shipment anywhere, $25 f. o. b. Levinson & Balmeill, Yakima, Wash.

WE PAY TOP PRICES FOR YOUR LIVE OR dressed veal, hogs and poultry. Your check by return mail. Shipping tags on request. M. & J. Packing Co., Spokane.

TOP FANCY LIGHT VEAL, 12½C. JONES AND Williams, S101 Division st., Spokane, Wash. Prices subject to fluctuations.

REGISTERED YOUNG O. I. C. PIGS FOR sale. Dr. Will, Puyallup, Wash.

WANTED—REGISTERED BELGIAN STALlion. Box 91, Caldwell, Idaho.

LIVE STOCK (Continued) 177

SAVE THE CALVES—"SAVACALF," A POWerful germicide, is used for treating contagious abortion in cows. It drives the disease from those that have it, and prevents the clean herds from getting it. Simply mix it with the salt and treat the whole herd at once. Costs 25 cents per head per year. Every breeder should use it. $5 package postpaid. Absolutely guaranteed. Write for information. H. C. Babbitt, Boise, Idaho.

GOATS—ANGORA BUCKS OF QUALITY, priced to suit the times. Bartlett Johnston, Saginaw, Ore.

40 ANGORA GOATS, MOSTLY NANNIES, good condition; $2.50 each. Thos. Carmichael, Gaston, Ore.

REGISTERED JERSEY BULL, 3 YRS.; SURE breeder; fine individual, $150. Box 54, Route 2, Spokane.

WILL SELL 30 HEAD OF REGISTERED Shropshire rams. Write McK. Edwards, Valley, Wash.

250 A1 EWES AND LAMBS; BUTCHER'S prices. T. E. McBride, Hayden Lake, Idaho.

BROWN SWISS FOR SALE—6 HEAD REGistered. Wm. Jacobs, R. 6, Albany, Ore.

200 YOUNG REG. HAMPSHIRE EWES: BARgain. C. E. Cleveland, Stanfield, Ore.

FOR SALE — 150 YOUNG COARSE WOOL ewes. Young Bros., Auburn, Wash.

HARNESS and SADDLERY 189

SEND FOR FREE HARNESS AND SADDLE catalog today; cut out the middleman, buy direct from the manufacturer. Lowest prices in the west; satisfaction guaranteed. Established 1881. Write Pierce Harness Co., Dept. T, Spokane, Wash.

HAY FOR SALE. 200

ALFALFA HAY, GUARANTEED QUALITY; prompt shipment; buy direct and save money. Prices upon application. Ernest T. Freepons, Walla Walla, Wash.

CHOICE ALFALFA HAY, GREEN AND leafy; the kind that dairymen like to feed. Write for delivered prices. J. F. Jacobson, Kennewick, Wash.

FAIRS 370

PACIFIC INTERNATIONAL LIVE STOCK EXposition, Nov. 4 to 11, 1922. Entries close noon, October 10. Send for premium list. O. M. Plummer, general manager, 211 Northwestern Bank bldg., Portland, Ore.

SHERMAN COUNTY FAIR, MORO, ORE., OCT. 11-14, 1922. Write for premium lists. W. S. Carpenter, secretary, Moro, Ore.

JOB PRINTING 372

GUARANTEED BETTER BUTTER WRAPpers: 100, 60c; 250, $1.25; 500, $2.25; 1000, $4; printed to order. Home Specialty Co., Middleton, Idaho.

TANNING 425

ANY KIND OF HIDE TANNED WITH HAIR on, or for leather. Mohr, 321 Sprague, Spokane.

TAXIDERMISTS 426

WE MOUNT ANYTHING FROM A FLEA TO elephant. Mohr, 321 Sprague, Spokane.

FURRIERS 429

FURS TO ORDER, REPAIRED, REMODeled and for sale. Mohr, 321 Sprague, Spokane.

MATERNITY HOMES 497

MATERNITY HOSPITAL; STRICTLY PRIvate; doctor in attendance; prices reasonable. Mrs. Elizabeth Peel, matron, W1324 Broadway, Spokane.

PERSONAL 537

PROSPEROUS DAIRYING FARMER, BACHelor, 35, desires friendship with refined young woman, 25 to 35; object matrimony. F. B., Oregon Farmer, Portland.

WIDOW, 34, WOULD CORRESPOND WITH gentleman, means; object, matrimony. H 4, Washington Farmer, Spokane.

BUILDING MATERIAL 588

TURNS PLASTERING INTO PLAY—PERFECtion plaster wall board can be nailed on just like lumber, and makes a perfect plaster job. Western Wall Board Co., Seattle, Wash.

LUMBER, MILLWORK, READY-CUT HOUSES, barns; material lists estimated. Send 10c for plan book. Local Keystone Lumber Co., Dept. F, Tacoma, Wash.

BUILDERS, CONTRACTORS, HOME OWNERS, write for free 1922 catalog. Tacoma Sash & Door Co., Tacoma, Wash.

SEEDS 620

WHITE CLOVER SEED, 50C LB.; SAMPLE ON request. Pioneer Farm 1847, Carlton, Ore.

NURSERY STOCK 621

DUTCH BULBS AND PERENNIAL PLANTS for fall planting can be purchased with transportation paid to your door. Catalog on request. Kimberly Nurseries, Kimberly, Twin Falls county, Idaho.

NURSERY STOCK, ITALIAN PRUNE TREES and trees of all kinds. Berries and small fruits of all varieties. Buy direct and save 50 per cent. Brooks Nursery, Lafayette, Ore.

PANSY PLANTS FOR SALE—GET READY for summer flowers. For information write Nan Blair, R. 6, Box 428, Portland, Ore.

BULBS—NARCISSUS, DAFFODILS, CROCUS, iris, tulips, jonquils, 35c per dozen, mixed. Mrs. Mary Insel, Shelton, Wash.

FARM LANDS FOR SALE 651

FOR SALE—QUARTER SECTION, STEVENS county; partly cleared; good water. Further particulars address W. G. Bannerman, Chewelah, Wash.

80 ACRES IDEAL STOCK AND CHICKEN ranch on Boise project; two miles from Wilder; great sacrifice. P. G. Batt, Parma, Idaho.

648-ACRE STOCK RANCH; SOUTHEAST IDAho; owner, Box 125, Freewater, Ore.

FARM LANDS FOR SALE (Continued) 651

IRRIGATED FARMS FOR SALE—160-ACRE farms, improved or unimproved; 30 to 160 acres irrigable land on each parcel; near Lethbridge, in sunny southern Alberta, can be bought for $15 to $40 an acre. No need for pioneering. Well settled country, good roads, railways, schools, telephones; agreeable social conditions; fertile land; success of irrigation farming here already demonstrated; irrigation system being constructed under government supervision. Water available in 1923. Write for information concerning crops grown and description and location of farms to the province of Alberta, Irrigation Council, 12 Provincial building, Lethbridge.

CUTOVER LANDS, EASY TO CLEAR; $8 TO $20 per acre; 25 miles north of Spokane; on hard-surfaced highway; Great Northern and Milwaukee railways; excellent opportunity for dairying and stock raising, with Spokane markets and creamery near at hand. Will help the man who will live upon this land and agree to clear a part each year by giving lumber to help start his buildings, and a purebred Jersey bull to groups of farmers. Interest and payments low. Write Milan Farms Development company, Dept. T, Old National Bank bldg., Spokane, Wash.

FARM FOR SALE TO HIGHEST BIDDER—90 acres rich subirrigated bench land; close to Post Falls; 24 miles from Spokane; close to paved highway; 25 acres best varieties apples and peaches; 15 acres grain, more can be put in cultivation; unlimited outside range; small buildings; spring water; 1922 crop reserved; receive bids up to Oct. 1; bids must be accompanied by 10 per cent price bid. Reserve right to reject any or all bids. See Schilling, Grand View Fruit Farm, Post Falls, Idaho.

BIG OPENING SALE OF YAKIMA VALLEY farm land, under an assessed state and government approved irrigation project; good, deep soil; close to town, railroads and state highway. We sell in tracts to suit purchaser at $25 per acre and up, on easy terms. Our many sales to farmers show that this land is a good investment. Western Lands, Inc., owners, 918 Green bldg., Seattle.

DAIRY FARM, 3 MILES FROM MARKET, coast and creamery; over 100 acres bottom land and 200 acres upland; fair buildings; 30 head cows, horses, hogs, poultry, $22,000 and $3000 will handle. A splendid opportunity for man with helping family. Farm will easily pay for itself. H. W. Tabor, Reedsport, Ore.

CALIFORNIA FARMS—DELIGHTFUL LIVING conditions where farming pays; 10 to 20 acres is plenty; raising fruit, vegetables, poultry, grain, alfalfa, hogs, or dairying. Tell us what you want. Write free information dept., California Farm Lands Bureau, 1 Merritt Bldg., Los Angeles, Cal.

CALIFORNIA STOCK RANCHES, IN MENDOcino county; 4 kinds of acorns for hogs; plenty of grass and water; 50-in. rainfall; mild climate; 160 acres up. Prices $6 per acre up, as per improvements. No trades; easy payments; liberal terms. E. D. Baker, Nashmead, Cal.

450 ACRES DAIRY AND STOCK FARM; 150 cleared, balance seeded; all fenced; 100 bottom land; running water; good buildings; near paved road. $5000 down, balance easy terms; will lease to responsible party. J. M. Dempsey, owner, Auburn, Wash.

BIG LUMBER CO. LAND SALE IN SKAGIT county; 40 acres, $1400; 20 acres, with new house, $1500. Lumber furnished for building. Lots of work for the settler; splendid district, roads, schools and towns. H. C. Peters, 726 3d ave., Seattle.

7000 ACRES SEQUIM LAND SETTLEMENT project, containing the finest berry and dairy land in the state, now offered for settlement at attractive prices and terms. Free booklet. Thos. G. Mortland, Sequim, Wash.

EIGHTY-ACRE RANCH, WELL FENCED; IN best condition for big crops; good house, bearing orchard, berries; 2½ miles to cream station; possession this fall. M. A. Tryon, owner, Hazelton, Idaho.

SELL YOUR PROPERTY QUICKLY FOR cash; no matter where located. Particulars free. Real Estate Salesman company, 501 Brownell, Lincoln, Neb.

FOR SALE OR RENT—400-A. IRRIGATED stock and dairy ranch; with or without equipment, stock and hay. Box 192, Plains, Mont.

STOCK RANCH, 275 ACRES; 50 CULTIVATED; buildings, orchard, creek; on plank road; near school. Ira Boyer, Molalla, Ore.

FOR SALE—MY DAIRY RANCH NEAR COOS bay. H. W. Sanford, Sumner, Ore.

20 OR 40 ACRES IMPROVED KENNEWICK land. Write Jacot, Finley, Wash.

FOR SALE CHEAP—HEIR'S PROPERTY. BOX 15, Algona, Wash.

FARM LANDS—Wanted 654

WANTED—TO HEAR FROM OWNER OF land for sale. O. K. Hawley, Baldwin, Wis.

FARM LANDS—Wanted to Rent 660

FARMER, WITH OWN HELP, WANTS TO rent farm this fall or by March 1; on shares preferred. Address R. 2, Box 176-A, Puyallup, Wash.

IRRIGATED LANDS—For Sale 663

500 CATTLE, 1346-ACRE IRRIGATED RANCH; wish to sell half interest; purchaser must have not less than $20,000 cash; purchaser can have management if desired. J. L. Milner, Idaho Falls, Idaho.

TWENTY ACRES IN ALFALFA; IRRIGATED; government project; 1½ miles from good town. Write for particulars. W. C. Dyer, Hermiston, Ore.

FOR SALE OR EXCHANGE 702

TAKEN UNDER FORECLOSURE—NINE HUNdred acres very productive grain and hay land; level, partly irrigated; running water; some buildings; close to range; perfect title; easy terms. Thirty-five dollars per acre. Might consider some clear property in exchange. R. P. Hunter, Ogden, Utah.

MICHIGAN FARM FOR SALE OR EXCHANGE —100 acres, large house, barn, concrete walls; $3000; clear; will exchange for clear improved Pacific coast property. Owner, John Westenhaver, Vancouver, B. C. 2048 Stevens st.

FOR SALE OR EXCHANGE—SECTION FARM land near Tobison, Mont.; encumbrance, $2700. Owner, Albert Moog, R. 3, Santa Ana, Calif.

TO EXCHANGE—Real Estate 705

GOING TO CALIFORNIA, FOR SALE OR EXchange—All or part of 320 acres level land; suburban to Vancouver; city water; near electric car lines; can clear loan and assume mortgage on coast states improved country or city property. Owner, J. D. Westenhaver, 2048 Stevens st., Vancouver, B. C.

$35,000 WORTH CLEAR INCOME PROPERTY in Tacoma for good ranch, clear. Write owner, 3206 North 27th st., Tacoma, Wash.

Pike's Peak or Bust

(Continued from page sixteen.)

golden sunshine looks blue after passing through blue glass. So the trail trampers gave over making inquiries. Whatever might be the situation, they had fully made up their minds to push ahead and see it for themselves. And even the worst disgruntled of the returning miners admitted that some gold was being washed out.

Late in the afternoon of the fourth day—the fourth day following their halt at Pike's Peak—the handcart and the wheelbarrow arrived at a new, straggling town. This collection of log cabins and Indian wigwams, which had sprung up, like a mushroom, since the first gold discoveries, stood out on a barren plain, 12 or 15 miles from the mountains. It was built along a dry watercourse known as Cherry creek, at the point where Cherry creek joined the South Platte. Taking its name from the governor of Kansas—all this country, as far west as the line of Utah, was at this time part of Kansas territory—the town had been called Denver.

As the dusty pilgrims trudged along the dusty street they saw that this was already a bustling little place. There were perhaps a thousand white people here, and as many more Indians. The largest building, and the only large building, was the Denver house. This claimed to be a hotel, but did more business as a saloon and gamblers' den than in any other way. It was built of pine logs, with a roof and windows of canvas, and was more than a hundred feet long by nearly half as wide.

As the travelers passed in front of its open door they could see that its saloon and gambling place were filled with rough, swarthy men in rude costumes. Most of them wore buckskin pantaloons and moccasins, with woolen shirts and broad-brimmed slouch hats, and that had knives and six-shooters hanging at their belts.

About 300 log cabins were scattered over the plain, nearly half of them only roofless walls, and unoccupied. They had been put up the winter before for speculation. Of those somebody was living in a few had clapboard and a few more canvas roofs. But most of them were covered with logs, with a layer of grass and dried mud on top of the logs. The "cracks," or spaces between the wall logs, were chinked with wood and daubed with mud. And the chimneys were built up of sticks and mud.

Having obtained a fair view of the town, the foot party moved over to one side and camped at its outer edge, in a prairie-dog village. After preparing and eating an early supper, six of them started out to see what was to be seen. One of the handcarters, weary from tramping, had agreed to stay and help Frisk and Brindle to guard the camp.

Before going far the sightseers met a man and engaged him in conversation.

"Well, what's the latest word from the gold diggings? And is it sure that there's gold out here?" questioned Sanders.

"How long you fellers been in town?" demanded the stranger, after first emptying his mouth of a flood of tobacco juice.

"Just arrived a little more than an hour ago."

"Then you hain't heard how they've struck it rich over to the northwest of here?"

"Some people we met down the trail mentioned reports of rich gold discoveries over there. Are the reports true?"

"You bet your bottom dollar they air! Every word of 'em! About a month ago a feller named Gregory, a old Georgy miner, struck gold a-plenty. That was over t'wards the headwaters of Clear creek, some 40 miles from here. Been a mighty rush to that place since then. Thousands of people in that camp now. I've got a claim up thar, and I'm goin' to it in the mornin'. My pard's holdin' it down while I'm gone. Claims right clost around mine oin't payin' so overly much yit. But some of 'em, further down the gulch, is shorely pannin' out scads of dust. That's the place you fellers better make fur, as straight and as fast as you can hump yourselves. That is, if you're out here to mine it."

After asking several questions as to how to get to the new diggings, the party moved on, to explore what was some day to become, though they little suspected it now, the capital of a yet nuheard-of state and the chief city of the whole Rocky mountain region.

The new town in the wilderness was swarming with people. There were men here from every state in the Union; also Indians, Mexicans, half-breeds and trappers.The Mexicans were from the settled parts of New Mexico. They had come with pack train—burro trains—bringing meal and flour to sell. Besides the rude pine-log cabins, the party noticed numerous Indian wigwams. A large number of Indians were here—Arapahoes. Perhaps they were among the white people to shield themselves from the Utes, with whom they were constantly at war. Soon after leaving camp the newcomers passed by 30 or 40 of those wigwams. One squaw in particular they noticed. She had a pot on a fire, and was dressing a fat young pup, preparatory to stewing it.

Among other places the sight-seers noticed was a printing office. "The Rocky Mountain News" had been started here more than a month before.

Neither Esau nor Orlando drank or went into saloons. Nor did Sanders. But they all stopped at the door of the Denver House, to observe what was going on there. Three of the handcarters ventured inside.

It was a busy scene that the observers gazed upon from the doorway. The great room was without any floor but the ground.

While the three by the door were gazing curiously at the inside a man who had lost his last dollar to one of the gamblers, and had also taken several drinks suddenly jerked two six-shooters from their leather scabbards at his belt and began shooting. Most of the bullets passed through the canvas roof, but others flew in various directions.

Instantly a wild stampede began in the gambling house. Men came bursting out at the door, some with drawn revolvers in their hands. Pretty soon the space in front of the building was crowded with them.

The three handcarters who had gone in were among the last to rush out, having been several yards from the door. All of them were much excited and not a little frightened. There were too many drawn weapons here for safety, and the whole six now moved on till a prudent distance away.

While they were still standing there, wondering what else was to be seen, a shouting in another part of the town attracted their attention. People began to move with them. Presently they discovered the cause of this new excitement.

Two stagecoaches, each drawn by four mules, were coming in. They had started from Leavenworth, on the Misouri river, about a week before. Both were filled with passengers, most of whom, after they alighted, appeared not a little the worse for their 700-mile journey. Much of the time they had traveled day and night.

(To be continued.)

Home Recipes

Sour cream cake: One cup sour cream, one cup sugar, two cups flour, two teaspoons baking powder, two eggs, one-half teaspoon soda, a pinch of salt, flavoring. Beat eggs well, add sugar and beat in, then add the sour cream, to which has been added the soda. Sift the flour, measure and add the baking powder, then sift again and add to the mixture. Bake in a moderate oven either for a loaf or layer.

Burnt sugar cookies: One cup burnt sugar, one-half cup boiling water, mix and let cool. One cup lard or butter, one-half cup sour milk, one cup sugar not burnt, one teaspoon each of soda and baking powder, one teaspoon ginger or other flavoring, three or four eggs, flour enough to roll.

A READER.
Idaho.

Quick graham bread: Three-fourths cup brown sugar, two cups sour milk, one teaspoon soda, one teaspoon salt, three cups graham flour, one cup white flour, one teaspoon baking powder. Mix together and bake in a moderate oven. This makes one good-sized loaf. This is a quick help when one is short of bread.

Oregon. MRS. CHAS. NAHSS.

Grape juice: If the grapes are dusty wash carefully and mash them, stems and all, as well as you can and set away for a time in an earthern or granite dish till the juice begins to separate, then strain through a cloth, squeezing out all you can of the juice. Put in another cloth, but this time do not squeeze, but hang up and let all the juice drip that will. This removes all sediment and you have now pure grape juice. If you want it sweet add sugar to taste and put it through the cold pack process, same as for canning fruit. You will then have sterilized grape juice or wine. Use a thin sack for straining. It is necessary to strain twice if you want it clear.

MRS. MILLIE B. THOMAS.
Oregon.

To Corn Beef—For 100 pounds of beef take seven pounds of salt, one pound sugar, one ounce saltpeter and four gallons of water. Dissolve the saltpeter in a little hot water and add it and the salt and sugar to the water. Scald the barrel or crock, pack in the beef, and sprinkle over a little salt and then pour over the brine and weight the beef down, taking care to have every piece of the beef well covered with the brine.—Mrs. M. G., Idaho.

Butter scotch pie—One cup each of sugar and cold water, two eggs, two tablespoons flour, two tablespoons butter, one teaspoon vanilla. Mix sugar and flour, add butter and water, let come to a boil and add beaten eggs just before the boiling point is reached. MRS. L. BALSER.
Idaho.

To Remove Axle Grease—Rub the spot with the yolk of an egg and allow it to remain for about one hour or two, then wash out and it will be as nice as ever.—Mrs. S. E. L., Idaho.

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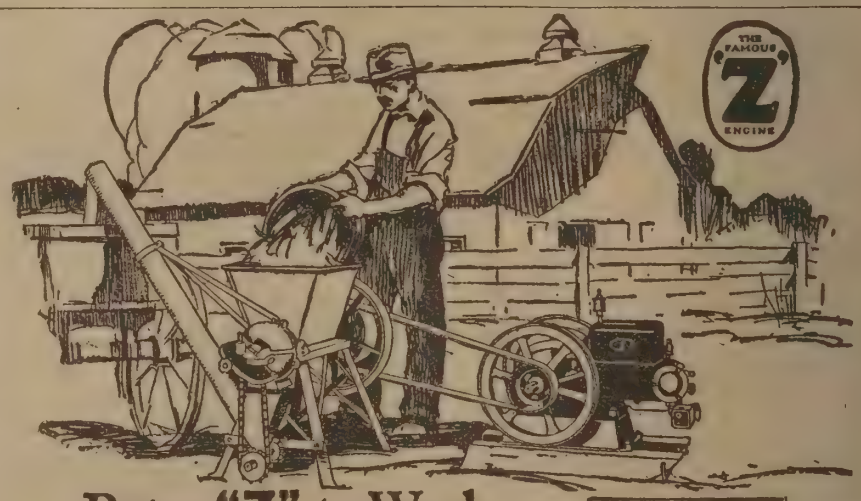
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FAMILY CIRCLE

ALICE BARLAND
EDITORIAL CONTRIBUTOR

Dear Family Circle: I wonder why it is that some of you readers write to me and want an answer at once and never give name and address. Some are of such a personal nature that I can not answer through the paper, so the writers never get an answer of any kind. I presume they feel neglected. Had they given address they would have had a personal letter at once.

In my mail today is a letter from a girl 17 years old asking a number of questions and she gives no address; she says she wrote last February and has not had an answer. As her questions are likely to interest some other young girls I will try to answer through the paper. Here is her letter. I will answer her questions one by one.

"Dear Mrs. Barland: When a girl is introduced to a boy and he says, 'I am glad to meet you,' what should the girl say? Should she say anything to the one who does the introducing?"

It is proper for the girl to bow and smile pleasantly and say, "How do you do, Mr. Brown," or whatever his name may be. Nothing need be said to the person doing the introducing.

"If I am at home and some of the neighbor girls are visiting me and my sweetheart calls and wants to meets these girls, what should I do so they may become acquainted?"

You should introduce your young man to your other guests at once. It would be very rude not to do so. If your girl friends are on the porch, as you say, you should say to the young man, "Come and meet my friends." Then go to them and the natural and easy way, where you are all about the same age, is to say, "Girls, I want you to meet my friend, Mr. Brown." Then say, "Miss Smith, Miss Jones, Miss Gray." It is not necessary to repeat the name of your friend, Mr. Brown, but you can do so and still be doing the correct thing. In an introduction of a man and a woman of about equal age and station in life the woman should be introduced to the man, not the man to the woman. In cases where an elderly person is introduced to a younger the older person's name should be mentioned first. When girls are introduced to other girls or women it is proper to say, "I am glad to meet you," and shake hands. One should always stand when being introduced unless one is a cripple or very old or for some reason it is inconvenient.

"If I am standing talking with Miss Jones, for example, and a young man I know stops to talk with me, but doesn't know Miss Jones, what should I do?"

You should introduce them at once, speaking the girl's name first. Like this, "Miss Jones, meet Mr. Smith," or "Miss Jones, this is Mr. Smith."

"Suppose a group of girls come to a place where I am well acquainted, but they are not, what shall I say? I can not say these are the Jones girls, for perhaps they all have a different name."

You should introduce each one separately. If there should be several girls from the same family you shouldn't say, "These are the Jones girls," but, turning to the eldest of them, say, "This is Miss Jones," then to the others and say "This is Miss Mary Jones and Miss Clara Jones." The oldest girl is always the Miss Jones, the others should be alluded to as Miss Mary and Miss Clara.

"My cousin came to visit us and went to church with me and we had to pass through the group of young people. My cousin was from far away and knew no one there. I was sure I shouldn't pass by and say nothing, so I did my best, but what should I have done?"

I believe in being natural and easy and in a case like that I think it the best way to stop in the group and turn in a natural and general way to them and say, "Good morning, everybody; this is my cousin, Bill Jones from Ohio; come and shake hands with him and make him welcome to our church." Then I would turn to those nearest to him and mention their names. If the group is large this is a better way than to go through the formality of a stiff introduction to each one. If he should remain for a time you could introduce him to one and another and they would then in turn pass along the courtesy.

"Should a girl sit on the right or left of a young man,"

Except when at table where meals are being served it makes no difference. When sitting at a meal the girl should be seated at the left of the man, so he can have a better chance to wait upon her by using his right hand. In walking on the sidewalk the man should always take the outside.

This young girl says: "I wish more of this kind of questions could be found in the Circle page. I think if they were it would save us girls lots of trouble and headaches. Please, girls, try to help carry this along, and Mrs. Barland, please give me your address in THE FARMER next week."

My poor little friend, it is a pity you should have a headache over these things, so write and ask me whatever troubles you. I will be glad to help you in any way. Look in the Home Recipes for those you ask for. Letters should be directed to me in care of this paper.

Dear Mrs. Barland: I am a girl of 17, with very dark brown hair and brown eyes and a dark complexion. My hair is soft and wavy, but dandruff is so bad that I can hardly keep it out of my eyes when I comb my hair. I wash my head twice a week, but that seems to make it worse.

Is there any way to cure dandruff? And what will take away tan and sunburn? Also what should be done to a hydrangea for indoors, Should one cut it off in the winter and put it in the dark? Your friend, BETTY.

Dear Betty: If you had given your address you would have had an answer personally. Try dipping your fingers, just the tips, in coal oil and rubbing into your scalp. Use a very little bit. The next day comb your scalp with a fine-tooth comb, taking care not to irritate or make your head sore, then wash it and if the dandruff returns do it again in about 10 days. I have known that to kill dandruff. It will come and go, it always has, and I presume we will just have to fight it as long as we have hair.

You can relieve sunburn by applying common sweet cream. It will cure itself in time. Tan can be faded a little by the use of lemon juice; let it dry in for a little while, then wash your face gently with first hot water, then cold and use a soft cloth. Finish with a dust of any good face powder.

The best way to take care of your hydrangea is to keep it growing in the house in the winter; then in the spring put the whole thing, tub and all, outdoors for the summer. Write again.

ALICE W. BARLAND.

Just Folks

A sermon I heard last Sunday was a sad disappointment. I had heard the minister preach before and knew him to be a good speaker, who was given to talk about live and important questions.

This time he had the uppermost subject of the day, one of extreme importance—the railroad strike.

Although he did not use the words, yet I came away from it summarizing the sermon in my own mind something like this: The only way to permanently settle the strike was for everybody to be converted and join the church. Somehow that did not give me very much hope or encouragement. I have no desire to dispute the preacher's conclusions, but how is that sort of general talk going to help us out of our present labor difficulties in this good year of our Lord 1922?

One of the biggest religious bodies of the country is in session this week while I am writing this. In preparation for that important gathering a committee submitted a statement embodying some of the things that should be considered by the church leaders. In that statement I find this:

"It should be recognized as an outstanding and pressing duty of the church to convince its members of the necessity of nothing less than a fundamental change in the spirit and working of our social and industrial life. This change can only be effected by accepting as the basis of all our religion the principle of cooperation in service for the common good in place of unrestricted competition for private or sectional advantage."

The next resolution calls upon all the members of the church "to be foremost, both by personal action and sacrifice, in maintaining superiority of the claims of human life to those of property. To this end it would emphasize the duty which is laid upon all Christians of putting human values first, of avoiding extravagance and waste and of upbuilding a high standing of honor and thoroughness in work. In a word, they must set an example in subordinating a claim for right to the call of duty."

Here certainly was something definite and sweeping in character to be done right here and now.

"A fundamental change in the spirit and working of our social and industrial life" is certainly not mincing words over the situation.

The "avoidance of extravagance and waste" is something that can be practiced now, and every time that it is practiced by those who sit in the seats of the mighty it takes the edge off some bitter social murmurings. Every time we are reminded of "the superiority of the claims of human life to those of property" we are brought back to fundamentals with a sharp jerk. And every time we are enjoined to subordinate "a claim for rights to the call of duty" we are brought face to face—every man, woman and child of us—to another fundamental in everyday life.

There are preachers and preachers, and there are churches and churches, and perhaps the trouble is as much with the one who hears as with the one who speaks. At any rate, the 46,000,000 church members of the country last year contributed nearly $500,000,000 to carry on their good work, and now it is up to the 50-odd millions of nonchurch members to contribute an equal amount and show equal results. EAS

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The lemon rinds left from making lemonade are splendid whiteners for anything grimey, from fine laces to dish towels. Add the rinds to the boiling water, let articles to be cleaned boil for 10 minutes, or until the grayish tinge has disappeared, then rinse and hang in sun to dry.

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High Points in News of the Week

Notwithstanding the general prediction that the federal injunction secured by Attorney General Daugherty against the striking railroad shopmen week before last would bring about an immediate crisis in the transportation situation, last week was perhaps the quickest and least eventful week since the nearly 400,000 shop workers went on strike the first of July.

The injunction, which was granted by a Chicago federal court and was made effective over the entire country, was admittedly a drastic one in its wording. On the face of the order it appeared that it was the intention of the government to forbid absolutely any activities of any kind whatsoever on the part of the officials of the shopmen's organizations in conducting the strike. It was interpreted by labor organization leaders to mean that they were forbidden to use any organization funds for supporting the strikers while they were idle, to make any statements advising the strikers or encouraging them, or in any way whatsoever, by word or act, assist them in making the strike effective. Violent protests were made from all quarters of organized labor to this seeming character of the order. Many other labor organizations not directly affiliated with railroad workers expressed sympathy for the latter in their strike and even went so far as to go on official record favoring a general strike of all organized labor as a protest against the drastic action.

However, Attorney General Daugherty early in the week issued a statement designed to make it clear that the injunction was not intended to abridge any of the constitutional rights of the strikers and their officers as individuals or of their organization, but that it was intended solely to prevent the destruction of life or property or the intimidation of other workmen employed in the railroad shops or other branches of the transportation business.

Apparently little action has been taken by the government during the last week toward enforcing the injunction. This is probably due to the fact that a hearing was scheduled for Monday of this week, September 11, at which it would be determined whether or not the injunction should be made permanent. The temporary order has been made effective for an additional 10 days while the case is being tried on the application to make it permanent. A peculiar situation has arisen, according to a report, that the railroad owners themselves are opposed to the injunction as issued by the federal court. This is declared to be on the grounds that government interference would prevent the railroads from fighting out the controversy in their own way. On the other hand, organized labor has taken the position that the injunction was a direct blow by the federal government at labor itself and constituted an act directly in favor of the railroads in the controversy.

So violent has been some of the objection to the action of the attorney general and the federal court that considerable talk has been heard in labor circles and an occasional labor resolution has been adopted favoring the impeachment of both the attorney general and the federal judge that issued the restraining order. President Gompers of the American Federation of Labor is quoted as having expressed willingness to aid in impeachment proceedings against them. At this writing it seems probable that the action taken Monday will be a vital one in the history of the case. If the injunction is simplified and made permanent it is probable that the government through the office of the attorney general will take active steps to enforce it. To what extent this action would tend to unite all the forces of organized labor for a possible nationwide walkout in sympathy with the striking railroad workers is problematic.

There appears to be a vigorous effort being made in some quarters toward settlement between individual roads and the shopment formerly working for them. It is declared on reasonably good authority that settlements are already in sight covering railroads with about 80,000 of the 230,000 miles that are directly affected by the strike.

* * *

A report from the national capital says that President Harding has made it definitely known that he will not sign the soldiers' bonus bill as passed recently by the senate. The measure is now in a conference committee between the house and the senate. As passed, it carried no provision for raising the money with which to pay the bonus, which is estimated to amount to between $3,000,000,000 and $4,000,000,000. The bill also carried as a rider the Smith-McNary reclamation bill, which provides for the creation of a revolving fund of $350,000,000 with which to start the development of arid and swamp lands throughout the country. This measure constitutes the soldier settlement feature of the bonus bill. It is now understood that even though the president vetos the bonus bill this reclamation measure will not be killed, but that it can again come up for consideration on its own merits.

* * *

A report from Detroit announced last week that the Ford Motor company's shops and assembly stations throughout the country would not be closed on September 16, as was previously stated. The report said that Mr. Ford had contracted for 4,000,000 tons of coal, which would permit a continuation of the firm's activities. He had previously announced that the shops would all close on September 16 because of inadequate coal to operate them.

* * *

Mrs. Warren G. Harding, wife of President Harding, is reported to be critically ill. At this writing considerable doubt is expressed as to the probability of her recovery, though she is reported to be considerably improved over her condition late last week.

* * *

Announcement is made at Paris that Monsieur Clemenceau, the war premier of France, will soon come to America for an extended tour with a view to cementing the friendship of the United States and France and to explain to the people of this country the reasons for the latter's action in standing out against more liberal terms to Germany in the matter of reparations.

* * *

The Western Pine Manufacturers' association announces that much better conditions exist in the lumber industry now than a year ago.

* * *

A conference committee of the senate and the house of representatives is now working over the tariff bill that has already been passed by both houses. The measure was greatly amended when passed by the senate and the effort is now being made to harmonize the differences of opinion between the house of representatives and the senate. It is expected that agreement will be reached and that the measure will be passed in its permanent form by both houses and sent to the president for his consideration within a week or possibly 10 days.

* * *

Both houses of congress have now passed a measure recommended by President Harding providing for the establishment of a federal coal agency with power to purchase and distribute sufficient coal during the present shortage to regulate the price and prevent profiteering. Secretary Hoover of the department of commerce has taken additional action looking toward the prevention of exorbitant coal prices. Nearly all of the coal mines have settled their strikes in many instances are now operating at nearly normal capacity. Owing to the fact, however, that the coal supply had been almost exhausted prior to the resumption of mining, and to the additional fact that transportation is greatly handicapped by the railroad strike, a semi-shortage of coal seems sure to exist during the present winter. A settlement of the rail strike, however, would likely make fuel conditions comparatively easy.

* * *

A report presented at the third assembly of the league of nations last week showed that the leading nations of the world are making a considerable reduction in armaments under the measures adopted at the arms conference in Washington last winter. The report did not cover the United States, since this country is not a member of the league of nations. It showed that Great Britain has made a reduction of about 55 per cent in naval tonnage, France 36 per cent, Italy 49 per cent and Japan 59 per cent. France is also reported to have reduced her standing army 200,000 men.

* * *

A county grand jury in Illinois last week returned indictment against 38 persons for criminal participation in or conspiracy to bring about the massacre of coal mine strikebreakers in Illinois two months ago. A considerable number of the indictments are on the charge of murder.

* * *

Lieutenant B. W. Maynard, known as the "flying parson" and noted as an aviator during the war and in special ventures since that time, was killed in a fair demonstration in Vermont last week, when his airplane fell a distance of 3000 feet. Three other persons were killed with him.

* * *

A report from Washington indicates that the measure introduced by Senator Poindexter and passed by the senate appropriating $100,000 for a thorough investigation of the Columbia basin by the government will soon be taken up and acted upon by the lower house.

* * *

Bernard M. Baruch, prominent New York financier and one who has been interested in the financing of the agricultural industry for several years, stated last week that the most important legislation now before congress is that dealing with the financing of the farmer. Mr. Baruch says that at least $200,000,000 should be provided for short-term credits to agriculture. He favors the conduct of this financial enterprise by a separate branch of the federal farm loan bank, wholly distinct and under separate direction from the regular long-time loans on farm land.

* * *

Lieutenant James H. Doolittle, an army aviator, flew from the Atlantic coast of Florida to the Pacific coast at San Diego, Cal., last week in 22 1-2 hours, the best record ever made for a coast-to-coast flight.

* * *

While cold rains and an occasional local frost visited the Pacific northwest last week other sections of the country were experiencing unusual heat. San Francisco reported a temperature of 91 degrees, the highest for the season. Chicago reported as high as 96 degrees.

Farm Business and Markets Outlook

(Continued from page five.)

ment of apples and markets have been more firm recently. Jonathans, Wealthies and Oldenburgs are quoted at $2 to $2.75 per barrel in the leading consuming markets.

LATEST QUOTATIONS

The Live Stock Market.

PORTLAND, Sept. 9.—Cattle—Choice steers, $7.50@8; medium to good steers, $6.75@7.50; fair to medium steers, $5.75@6.75; common to fair steers, $4@5.75; choice cows and heifers, $4.50@5; medium to good cows, heifers, $3.50@4; fair, medium cows, heifers, $3@3.50; common cows, $2@3; canners, $1.50@2; bulls, $3@4; choice feeders, $5@5.50; fair to good feeders, $4@5; choice dairy calves, $9.50@10; prime light calves, $9@9.50; medium to light calves, $8@9; heavy calves, $6@7; common heavy calves, $4@6.50.

Hogs—Prime light, $9.75@10.25; smooth heavy, 200 to 300 lbs., $9@9.50; smooth heavy, 300 lbs. up, $8@9; rough heavy, $6@8; fat pigs, $9.75@10; feeder pigs, $9.75@10; stags, subject to dockage, $5@7.

Sheep—East-of-mountain lambs, $10@11; choice valley lambs, $9.50@10.50; medium valley lambs, $8@9; cull lambs, $5@6; light yearlings, $7@8; heavy yearlings, $6@7; light wethers, $6@7; heavy wethers, $5@6; ewes, $2@5.

SPOKANE, Sept. 9.—Cattle—Prime steers, $6@7.50; good to choice steers, $5@6; medium to good steers, $4.50@5; fair to medium steers, $4@4.50; common to fair steers, $3@4; choice cows and heifers, $5@5.50; good to choice cows, heifers, $4@5; medium to good cows, heifers, $3.50@4; fair to medium cows, heifers, $2.50@3.50; canners, $1.50@2.50; bulls, $2.75@4.50; light veal calves, $7@8.50; heavy veal calves, $5@7.50; stockers and feeders, $3.50@5.

Hogs—Prime mixed, $9.50@10.50; medium, 8.50@9.50; heavies, $6.50@8.50; fat pigs, $8.50@10; stockers and feeders, $8.50@10.

Sheep—Prime lambs, $8@10; fair to medium, $7@8; yearlings, $7@8; wethers, $6.50@7.50; mutton ewes, $3@6.50; feeder lambs, $6@7.

The Grain Market.

PORTLAND, Ore., Sept. 9.—Cash wheat—Hard white, Bluestem, Bart, $1.20; soft white, western white, $1.09; hard winter, northern spring, $1.05; western red, $1.02.

Grain futures: Wheat—Bluestem and Bart, September, October, $1.20; soft white, September, $1.09; October, $1.07; western white, September, $1.09; October, $1.06; hard winter, September, $1.05; October, $1.03; northern spring, September, $1.05; October, $1.04; western red, September, $1.02; October, $1.

Oats—No. 2, 36-pound naturals, September, October, $20; 36-pound clipped, September, October, $29; 38-pound natural, September, October, $31.50.

Corn—No. 2 eastern yellow, shipment September, October, $29.

SEATTLE, Sept. 9.—Cash wheat—Hard white, soft white, western white, $1.08; hard red winter, $1.07; soft red winter, northern spring, $1.06; western red, $1.04; Bing Bend Bluestem, $1.20.

PULLMAN, Wash., Sept. 9.—Cash wheat—Red, 88c; white, 89c.

WALLA WALLA, Sept. 9.—Cash wheat—Bluestem, Turkey Red and Bart, 94c; club, 93c.

DAVENPORT, Wash., Sept. 9.—Cash wheat—Bluestem, $1.08; Marquis, $1; Gold Coin, 90c.

RITVILLE, Wash., Sept. 9.—Cash Wheat—Bart, $1.10; red, 94c; Fife, 88c.

DAYTON, Wash., Sept. 9.—Cash wheat—Club, 95c; red, 92c.

Hay and Feed Grain.

PORTLAND, Sept. 9.—Millfeed—Prices f. o. b. mill: Mill run, ton lots, $29; middlings, $41; rolled barley, $36@38; rolled oats, $42; scratch feed, $48 per ton.

Corn—White, $35; cracked, $37 per ton.

Hay—Buying price, f. o. b. Portland: Alfalfa, $18@18.50 per ton; cheat, $15; oats and vetch, $17; clover, $18; valley timothy, $17; eastern Oregon timothy, $20@21.

SPOKANE, Sept. 9.—Wheat—Feed wheat, $40 per ton.

Oats—$40 per ton; steam rolled, $42.

Corn—$36 per ton; cracked corn, $38 ton.

Barley—$42; steam rolled, $44.

Bran and shorts—$32 per ton.

Alfalfa, $22 ton; timothy, $24 ton; mixed hay, $22 ton.

General Produce.

PORTLAND, Ore., Sept. 9.—Butter—Cubes, extra, 37@38c lb; prints, parchment wrapped, box lots, 44c; cartons, 45c. Butterfat, 44c delivered station; buying price, A grade, 42c.

Eggs—Buying price: Current receipts, 28c per dozen; henneries, 30@31c per dozen. Jobbers prices: Case count, 29c; candled ranch, 32c; selects, 34c; association selects, 36c; association firsts, 35c; association pullets, 30c.

Cheese—Tillamook triplets, price to jobbers, f. o. b. Tillamook, 26c; Young Americas, 27c; longhorns, 27c pound.

Poultry—Hens, 12@22c lb.; springs, 18@22c; ducks, 15@22c; geese, nominal; turkeys, nominal.

Veal—Fancy, 15@15½c per pound.

Pork—Fancy, 14½c per pound.

SPOKANE, Sept. 9.—Poultry—Fat hens, 17c lb.; light hens, 24c lb.; roosters, 8c lb.; spring chickens, 18c lb.

Fresh ranch eggs—$6.50@8 case; no storage.

Butterfat—40c a pound.

turning prunes into money!

Prune growers combat eastern critics by putting in

THE DATE PRUNE

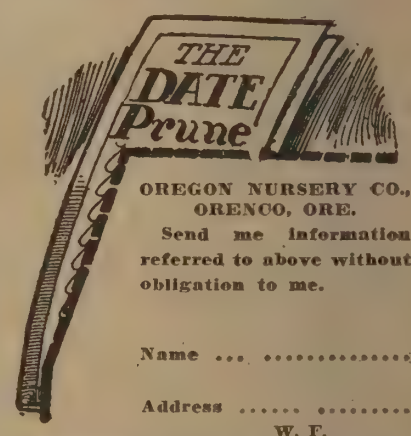
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Canada is the world's greatest producer of wheat—second only to the United States—yet only about 12% of the tillable area has been worked. Yields of 40 bushels of wheat per acre are not uncommon.

Oats have given as high as 100 bushels per acre, while 40 to 50 bushels per acre are ordinary yields; barley and rye in like proportion. Cattle and horses thrive on the native grasses which grow abundantly and corn and sunflower culture are highly successful.

Stock Raising, Dairying and Mixed Farming

secure for the industrious settler ample returns for his energy. Clearing the cost of one's farm with a single year's crop has an appeal, and has been done by hundreds of Western Canada farmers. Taxes only upon land (not on improvements). Perfect climate, attractive social conditions, good neighbors, churches, schools, telephones, excellent markets and shipping facilities make life happy as well as prosperous.

For illustrated literature maps, description of farm opportunities in Manitoba, Saskatchewan, Alberta and British Columbia, reduced railway rates, etc., write to

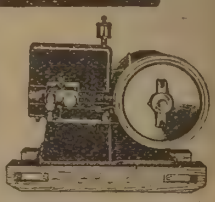
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New 1½ H.P. CUSHMAN

For Light Jobs

A little wonder—regular Cushman quality, but at a very low price. Horizontal design, hopper-cooled, fewer moving parts. A real no-trouble engine for pumping, etc.



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LIGHT WEIGHT 4 H. P.

For all power jobs up to 5 H. P. Weighs only 190 lbs. May be attached to binder and other machines to save a team. This engine is a necessity on every farm. Improved Throttling Governor insures very steady running and less gasoline used.

Ask for book on Light Weight Engines. If interested in Electric Lighting Plants, write for free book.

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415 E. Ash Street. Portland, Ore.

When answering ads, please don't fail to mention this paper.

Bits of Fun for Everyone

The Fatal Metaphor.

The young man was telling his sweetheart how he had been attracted to her.

"You were a lovely flower and I was a bee," he explained to her. "I was a mouse and you were a piece of cheese."

And then he wondered why she rose and left the room.—Exchange.

Wanted a Real Knockout.

The division was having maneuvers for the benefit of visitors' day and everything was being let loose at once. A pretty girl was eagerly watching the performance when a rifle volley crashed out. With a surprised scream she fell back into the arms of a young corporal who was standing just behind her.

"Oh, I beg your pardon," she gasped, blushing. "I was frightened by the rifles."

"Quite all right," replied the corporal. Then he added hopefully, "let's go over and watch the heavy artillery for awhile."—The American Legion Weekly.

And How He Is.

She—Have any of your boyish ambitions been realized?

Old Man—Yes; when my mother used to cut my hair I often wished I might be bald-headed.—Life.

Considered Abdominally.

A group of Atlanta porters were overheard discussing politics, and especially the relative merits of presidents of the United States, past and present. There was one autocrat, according to Roger T. Lively of the Atlanta Pullman office, who monopolized most of the conversation, embellishing his remarks with splendiferous words that probably neither he nor his audience understood.

"Ah tells you, gemmuns," said the authority, "Teddy Roosefelt was the mostest bellicose president whut we ever had."

Contemplative silence. Then from a dissenter:

"Brudder Johnson, you fergits Misto' Taft, doesn't you?—Pullman News.

Latest High Class Patterns for the Home

Please order the patterns you desire at least two or three weeks before you wish to use them. Desiring to obtain the latest high-class patterns for its readers, THE FARMER has made arrangements to have them sent direct from the east, and under present mailing conditions it takes about that time for them to reach you.



4114. Junior's dress. Cut in three sizes: 12, 14 and 16 years. A 14-year size requires 4 3-4 yards of 36-inch material. Price 10 cents.

4105. Girl's coat. Cut in four sizes: 6, 8, 10 and 12 years. A 10-year size requires 3 3-4 yards of 44-inch material. Price 10 cents.

3473. A good school costume. Cut in four sizes: 8, 10, 12 and 14 years. A 10-year size will require 2 1-8 yards of 42-inch material for the skirt, and 2 5-8 yards of 42-inch for the blouse. Price 10 cents.

3926. Misses' dress. Cut in three sizes: 16, 18 and 20 years. To make the dress for an 18-year size requires four yards of 44-inch material. The width at the foot is about 2 1-8 yards. Price 10 cents.

4073-4113. Ladies' costume. Blouse 4073, cut in six sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. Skirt 4113, cut in seven sizes: 25, 27, 29, 31, 33, 35 and 37 inches waist measure. To make the dress for a medium size and as illustrated requires 5 1-2 yards of 32-inch figured material and 3 1-8 yards of plain material. The width of the skirt at the foot is about 2 1-8 yards. Two separate patterns, 10 cents for each pattern.

4110-4013. Ladies' costume. Waist, 4110, cut in six sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. Skirt 4013, cut in seven sizes: 25, 27, 29, 31, 33, 35 and 37 inches waist measure. To make this design as illustrated for a medium size will require 8 5-8 yards of 32-inch material. With pointed outline 9 3-8 yards are required. The width of the lower flounce at the foot is 2 1-2 yards. Two separate patterns, 10 cents for each pattern.

4119. Girl's guimpe dress. Cut in four sizes: 4, 6, 8 and 10 years. A 6-year size requires 1 3-4 yards of 32-inch material for the dress and 1 3-4 yards for the guimpe. Price 10 cents.

3930. Girl's dress. Cut in four sizes: 4, 6, 8 and 10 years. A 6-year size requires 3 1-4 yards of 32-inch material. Price 10 cents.

4123. Ladies' dress. Cut in seven sizes: 36, 38, 40, 42, 44, 46 and 48 inches bust measure. A 38-inch size requires 7 1-2 yards of one material 44 inches wide. The width of the skirt at the foot is 2 1-8 yards. Price 10 cents.

4111. Two corset substitutes. Cut in four sizes: Small, 34-36; medium, 38-40; large, 42-44; extra large, 46-48 inches bust measure. A medium size requires three-fourths yard of 36-inch material for either style. Price 10 cents.

3971. Ladies' apron dress. Cut in four sizes: Small, 34-36; medium, 38-40; large, 42-44; extra large, 46-48 inches bust measure. A medium size requires four yards of 36-inch material. The width at the foot is about two yards. Price 10 cents.

3622. House or porch dress. Cut in seven sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. A 38-inch size will requires seven yards of 27-inch material. The width of the skirt at the foot is 2 1-2 yards. Price 10 cents.

Fashion Book Notice.

Send 12 cents in silver or stamps for our up-to-date fall and winter 1922-1923 book of fashions, showing color plates and containing 500 designs of ladies, misses' and children's patterns, a concise and comprehensive article on dressmaking, also some points for the needle (illustrating 30 of the various, simple stitches) all valuable hints to the home dressmaker.

Please fill in this order and mail with remittance to:
PATTERN DEPT., PACIFIC NORTHWEST FARM TRIO, Spokane, Wash.

Enclosed find..... cents for which send me the following:

Pattern No..... Size ..... Pattern No. ..... Size.....

Pattern No..... Size ..... Pattern No. ..... Size.....

Name .....

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Be sure to give the pattern number and the correct size.

Your Health

By Royal S. Copeland, M. D., F. A. C. S.

A short time ago I attended a medical convention. Men and women gathered from all over the country. For five days they attended sessions of the society, morning, afternoon and evening. One session lasted till after midnight.


Dr. Copeland.

What do you suppose these doctors talked about?

Of course, they read papers about operations and strange diseases, as well as about many common ailments. But what impressed me most were the many discussions over the prevention of disease. There were earnest, solemn conferences over the best and surest methods of keeping people well.

The doctors realize that most illnesses are due to preventable conditions. They feel it is their mission to wipe out disease. They take pride in the accomplishments of the profession in this direction.

Every speaker emphasized the relation of neglect to disease development. Of course, there are diseases which are violently contagious or infectious, but even these are dependent for their onset and development upon the lowered vitality of the victim. It is doubtful if a perfectly sound individual would yield to any disease.

A few weeks ago I happened to be in the midst of a terrific rain and wind storm. Thousands of trees were blown down in the country. In my immediate vicinity scores fell. Every fallen tree or broken branch that I saw showed some defect—rottenness at the heart, worm holes, decayed places.

The perfectly sound and hardy trees, even though they were bent almost to the ground, withstood the storm and proudly raised their heads.

It is this way with the human family. The storm of disease attacks the body, and if there is a defect it yields to the ravages of the ailment.

GENERAL ADVERTISING.

Stop Using Coal and Wood

New Discovery Replaces Old Method. An Entirely New Kind of Heat.

At last the housewife has come into her own. The world seems to be aiming to make every branch of her work lighter. And now comes a wonderful new invention which frees her entirely from one of the greatest of her drudgeries—heating and cooking with coal and wood.

This new device—the Oliver Oil-Gas burner—does away with all the muss and tiresome labor of using coal and wood to cook or to heat. Mr. B. M. Oliver of St. Louis has perfected a cooking and heating device that burns 95 per cent air and 5 per cent oil. Right at the turn of her wrist the housewife now has as much or as little heat as she needs—three times the heat of coal or wood if she needs it. And even in the summer she no longed need endure the sweltering kitchen that she dreads so much. The device sets right into the firebox of any stove or furnace without adjustment. If you will write to him at 2121-I, Oliver bldg., St. Louis, Mo., you will receive an attractive booklet free that tells all about it. Mr. Oliver is now making a special low price offer, including a thirty-day free trial. He is also looking for good, live distributors and will tell you how to earn $500 a month if you are interested and request his sales plans.—Adv.





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In writing advertisers, be sure to say you saw their advertisement in The Washington Farmer.

Dependable **Champions** For Every Engine Everywhere

Insure Your Engine



Champion Regular now 75c
Champion X . . . now 60c

Champion accuracy in construction assures absolute uniformity of spark in each cylinder; consequently a more perfect timing of the engine

Ask your dealer to sell you a full set.

CHAMPION SPARK PLUG CO. TOLEDO, OHIO



Ellen Nelson, who is 11 years old, waited a long time before she wrote to us this time. However, she does not want the cousins and Aunt Nellie to think she does not live in Washington any more. She has two friends, Howard and Helen Tomlinson, who like The Junior Farmer very much. Her home is in Walla Walla county. August 10 is her birthday.

We were glad to receive a letter from Verna Stevens, a Snohomish county (Wash.) cousin. Verna was 11 years old September 18, 1922, and she is in the sixth grade. Her school commenced September 3.

In a note from Hazel Schafer, written September 1, she says she is glad that school will start soon. Hazel's birthday is November 22. She lives in eastern Washington, Adams county.

March 15, 1922, Marion Lewis was 7 years old. Marion is a Whitman county (Wash.) cousin and she is in the second grade at school. She says school commenced early in September. She has two sisters and one brother.

From a farm in Spokane county, Washington, comes a letter from Elizabeth Milen, who is one of our new cousins. Elizabeth's birthday is April 14. She is 11 years old. The main product of the Milen farm is apples. Elizabeth likes the riddles and stories in The Junior Farmer.

From Grant county, Washington, comes a letter from Edna Amend. Edna says she has two kittens, but they are both so wild that she can't catch them. She also has a dog named Shep, but he is at the ranch in the hills. Shep is black and white. Every day Edna carries water to the chickens and sometimes she gathers the eggs. She has some flowers in bloom. They are ragged robins.

Martha May Jenkins, who used to live in Spokane county, Washington, now lives in Pierce county. This summer Martha raised 10 little Bantam chickens and she has a calf for a pet. She was 7 years old September 16, 1922. She says she misses her old playmates in Spokane county. Martha likes to have her mother read to her from The Junior Farmer.

BEDTIME STORIES

By THORNTON W. BURGESS.

UNC' BILLY CAUGHT AT LAST.

Unc' Billy Possum certainly is fond of eggs. And it is because of this fondness for eggs that the Green Meadows were thrown into great excitement late one afternoon. Just as the Black Shadows



"Well, well, I wonder what happened to this fellow?" said Farmer Brown's boy.

came creeping down from the Purple Hills Reddy Fox brought the news, and when he told it he grinned as if he enjoyed it, and was glad of it.

"Old Billy Possum is dead. I know it because I saw Farmer Brown's Boy carrying him home by the tail," said Reddy. "So you see he wasn't so smart as you thought he was," he added maliciously.

No one really believed Reddy Fox, for every one knows that he seldom tells the truth, but when Jimmy Skunk came mournfully down the Crooked Little Path and said that it was true, they had to believe it. Then everybody began to talk about Unc' Billy and say nice things about him and tell how much they had enjoyed having him live in the Green Forest since he came up from "ol' Virginny." That is, everybody but Reddy Fox said so. Reddy said that it served Unc' Billy right because he was of no account, anyway. Then everybody began to hoot and hiss at Reddy until he was glad enough to slink away.

And while they were all saying such nice things about him Unc' Billy Possum was being carried by the tail up to Farmer Brown's house. For once Unc' Billy had been too bold. He had gone up to Farmer Brown's henhouse before dark. Jimmy Skunk had tried to stop him, but he had heeded Jimmy Skunk not at all. He had said that he was hungry and wanted an egg and he couldn't wait till dark to get it. So off he had started, for Unc' Billy Possum is very headstrong and obstinate.

He had reached the henhouse and slipped inside without being seen. The nests were full of eggs, and soon Unc' Billy was enjoying his feast so that he forgot to keep watch. Suddenly the door opened and in stepped Farmer Brown's boy to get some eggs for supper. There was no time to run. Unc' Billy just dropped down in his tracks as if he were dead.

When Farmer Brown's boy saw him he didn't know what to make of him, for he had never seen Unc' Billy before.

"Well, well, I wonder what happened to this fellow?" said Farmer Brown's boy, turning Unc' Billy over with the toe of one foot. "He certainly is dead enough, whatever killed him. I wonder what he was doing in here?"

As they passed the woodpile he tossed Unc' Billy on the chopping block to wait while he gathered an armful of kindling to take to the house. When he turned to pick up Unc' Billy again Unc' Billy wasn't there!

Farmer Brown's boy dropped his wood and hunted everywhere, but not a trace of Unc' Billy could he find.

Birthday Greetings

THURSDAY, September 14 — Grace Grandstaff, 11 years old; Glennie Herin, 11; Irma McGloughlin, 7.

FRIDAY, September 15—Wayne Reeder; Esther Simila, 11 years old; Alvena Walter, 11.

SATURDAY, September 16—Martha May Jenkins, 7 years old.

SUNDAY, September 17—Margaret Littell, 11 years old; Tyyne Salmela, 9.

MONDAY, September 18—Verna Stevens, 11 years old.

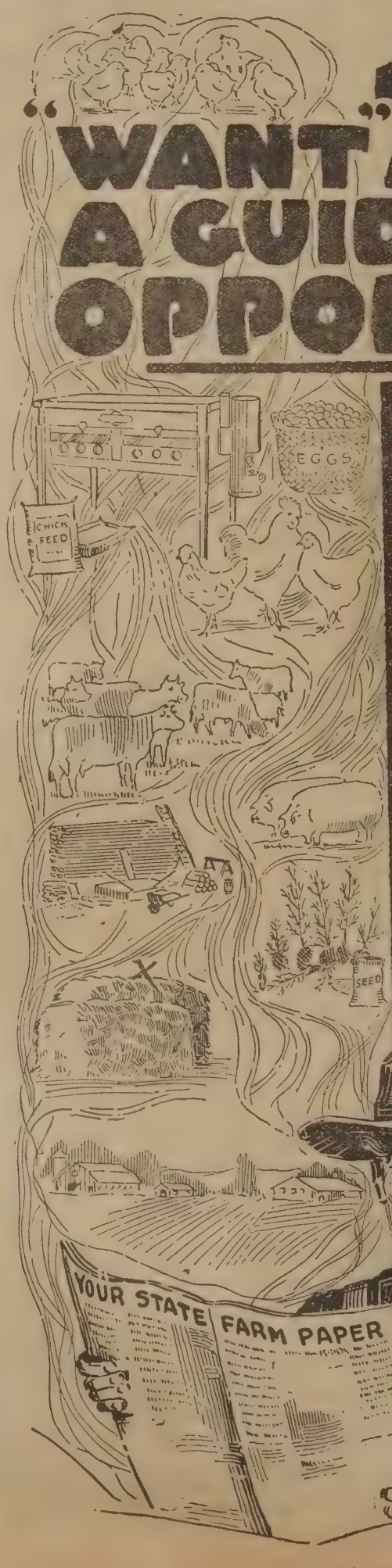
TUESDAY, September 19—Floyd William Beardslee, 7 years old.

WEDNESDAY, September 20—Ruth Heidegger, 11 years old; Keith Jones, 10; George Nelson, 11; Lester Requa, 11; Laura Thomas, 11; Dorothy Kimmel, 11.

LETTERS WELCOMED BY AUNT NELLIE.

Among recent letters received by Aunt Nellie are those from cousins whose names follow. A few of these will be published each week in the regular edition of THE FARMER and others will appear from time to time in The Junior Farmer:

Millie Le Bret, Phyllis March, Velzia Stevens, Carrie Buckels, Lillie Buckels, Violet Downey, Isabel Pettichord, Curtis Rose, Linnie Gammon, Phillis Patterson, Lilly Miller, Freda Steting, Sarah Wilhelm, Pauline Brandt, Luella Jones, Edna Amend, Annie Thompson, Jeanette Olsen, Martha Hedlund, Wilma Hasty, Shirley Hasty, Carrie Scott, Edrie Bradburg.



"WANT" AD COLUMNS A GUIDE TO MANY OPPORTUNITIES.

One of the Departments Which Make The Washington Farmer Valuable to Its Readers Is the "Farmer's Want Ads."

A great variety of offers appears under this heading. Here you find opportunities to buy poultry, pets, live stock, seeds, hay, machinery, fresh food products and many other articles. Here also you learn of farms for sale from primitive homesteads to highly developed fruit farms.

If you do not see the article or service advertised that you are interested in, a reasonable sum will permit you to insert an ad of your own and thus reach the man who has what you want or wants what you have.

Read and Use the "Want" Ad Columns. They Will Help You in Your Plans for Success

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I desire to take advantage of your Cooperative plan in securing new and renewal subscriptions.
I enclose herewith $..... for a ..... year subscription.
THE WASHINGTON FARMER.
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If your subscription is already paid in advance, it will be extended from the date to which it is paid.
Sept. 14, 1922.

These free booklets on Farm Sanitation

tell you how to prevent disease among livestock and poultry and describe in detail the many uses of

KRESO DIP No. 1

(STANDARDIZED)

Parasiticide and Disinfectant

No. 151—**FARM SANITATION.** Describes and tells how to prevent diseases common to livestock.

No. 157—**DOG BOOKLET.** Tells how to rid the dog of fleas and to help prevent disease.

No. 160—**HOG BOOKLET.** Covers the common hog diseases.

No. 185—**HOG WALLOWS.** Gives complete directions for the construction of a concrete hog wallow.

No. 163—**POULTRY.** How to get rid of lice and mites, also to prevent disease.

Write for these booklets.

Animal Industry Department

PARKE, DAVIS & CO.

DETROIT, MICHIGAN

KRESO DIP No. 1 IS SOLD IN ORIGINAL PACKAGES AT ALL DRUG STORES

$7.50 After 30 Days Free Trial

The Belgian Melotte Separator—with the wonderful Self-Balancing Bowl. No other like it.



60 days' free trial—then, if satisfied, only $7.50 and a few easy payments — AND — the wonderful Belgian Melotte Separator is *YOURS.*

No Money Down!

Catalog tells all—*write.*

Caution! U. S. Bulletin 201 shows that vibration of the bowl causes *cream waste!* The Melotte bowl is *self-balancing.* Positively cannot get out of balance therefore cannot vibrate, Can't remix cream with milk. *The Melotte has won 25 Grand and International Prizes.*

Catalog FREE

Write for new Melotte catalog containing full description of this wonderful cream separator and the story of M. Jules Melotte, its inventor. Don't buy any separator until you have found out all you can about the Melotte and details of our 15-year guarantee which is infinitely stronger than any separator guarantee. Write TODAY.

Runs so easily, bowl spins 25 minutes after you stop cranking unless you apply brake. No other separator needs a brake. Bowl chamber is *porcelain lined.*

The Melotte Separator, H. B. Babson, U. S. Mgr.
Dept. 3226 2843 W. 19th Street, Chicago, Ill.
2445 Prince St., Berkeley, Calif.

$10.00 Down Easy Payments



One Man Pulls 'Em Easy

Get New Reduced Prices on Hercules, the fastest, easiest-operating "One-Man" Hand Power Stump Puller made. Simple, double, triple, quadruple power—4 machines in one. Moves like a wheelbarrow. $10 down. Easy payments.

Send for Catalog No. 514

HERCULES MFG. CO.
CENTERVILLE, IOWA

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WRITE NOW FOR OUR MOST WONDERFUL AND BEAUTIFULLY ILLUSTRATED FREE BOOK

"OFFICIAL TRAPPING AUTHORITY"

ALBERT HERSKOVITS AND SON CAPITAL $2,500,000

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FREE BOOKS

We Buy and Sell

Grade and Pure Bred Dairy Cattle.
We can save you money whether you wish to buy or sell. One or a carload.

Graham Livestock Co.

E2605 Broadway, Spokane, Wash.
NEAR CARSTENS' PACKING PLANT.

Good Records Are Being Made

The first official record to be completed on the farm of Grant Nichols of Ellensburg gives his Jersey cow, Brown Lad's Cowslip, gold medal rank with the American Jersey Cattle club, on double letter production of 15,017 pounds of milk and 711.85 of butterfat. George Plunkett was herdsman during the entire test.

Two other good Jersey records and a new state Holstein record are reported in the July summary of official testing in Washington. Rosaire's Olga Gem, a mature cow owned by R. I. Tanner of Sumas, made the highest Jersey record reported during the last year and takes second place among Washington Jerseys. Her double letter production was 13,495 pounds of milk and 826.34 of butterfat. First place in the senior 4-year-old class of the 305-day division is taken by Double St. Mawes, owned by David McCleod of Bellingham, which made 683.53 pounds of fat from 10,636 of milk.

A new state record for junior 3-year-old Holsteins in the 365-day division was set by Carnation Matador Nora, owned by Carnation stock farms, which produced 25,747.6 pounds of milk and 86..503 of fat. In her first producing year this remarkable heifer made 677 pounds of fat from over 20,000 of milk, hence for a young thing her average is high.

Griffith Brothers of Dabob, S. D.; Cornell of Grandview and the Eastern state hospital at Medical Lake are the breeders who renewed work in July or took up official testing for the first time, according to the report, which shows the same number of herds on test as in July, 1921, with a slight increase in the number of animals.

Holsteins Will Sell at State Fair

The Washington State Holstein-Friesian association will hold a sale at the pavilion at the state fair grounds at Yakima on September 20. Since this will be during the fair, it will give the breeders a better opportunity to attend the sale and there is also the advantage of the consignor showing the animals before they are sold.

There will be 65 animals consigned to the sale from some of the most prominent herds of the state, including the following: Charles Eldridge, Thomas McGee and Thomas Yarr, Chimacum; Hollywood farm, Seattle; S. D. Cornell, Grandview; Lloyd Garretson, Grandview; Z. T. Parker, Toppenish; A. F. Barnard, Alfalfa; J. H. Sunnyside; G. D. Ames, Yakima; The Milky Way farm, Sumas; H. J. Evans, Ferndale, William Todd & Sons, Yakima; Yarr Brothers, Chimacum; L. G. Stickney, Prosser; F. L. Shannon, Walla Walla; Fred Howard, Yakima; William Bishop, Chimacum, and Robert Kooistra, Tolt.

The sale committee has made arrangements with Auctioneer George Gue to handle the sale.

BUYS FOUNDATION JERSEYS.

During the Southwest Washington fair William Cook of Shelton, Wash., purchased three young registered Jersey cows from N. C. Sorensen of Chehalis, Wash. Two of them are bred heifers by Firwood Gwendola St. Mawes, son of the ex-world record senior yearling heifer, Silver Chimes Gwendola. They are bred to Firwood Rosaire St. Mawes, a son of Gwendola Rosaire, dam of Silver Chimes Gwendola, and with a record herself of 919 pounds of fat. The other is by a full brother to Mr. Sorensen's gold medal cow, Dahlia Forest Girl. Mr. Cook is the man who bought the fine bull calf, U Tell Um, from N. C. Sears of Winlock, Wash., last fall, at the Puyallup fair. He has a good grade herd of Jerseys and believes the time has now come to go into purebreds.

TO DISPERSE GUERNSEY HERD.

On November 22 Dr. Park Weed Willis of Seattle will disperse his entire herd of Guernseys, on his farm near Redmond, Wash. This herd includes the famous cow, Samamish Topsy, with a record of 831.58 pounds of fat in a year, as well as a junior 2-year-old record of 629 pounds, which was for a long time the state record for all ages. Samamish Roxie, a half sister to Topsy, and a number of high-class animals are in the herd. There are a number of excellent A. R. record holders also. Over 40 granddaughters of Samamish Topsy are among the Guernseys to be sold and they are by a son that sired 12 heifers out of his last 16 calves. The herd is federal accredited.

CHEHALIS SHORTHORN SALE.

The Shorthorn sale at the Southwest Washington fair resulted in low prices. The cattle were practically all taken by local buyers and some new herds were started. Top price was only $210, for the extra good senior yearling, Maud Jewel, the buyer being George Dacres of Walla Walla, the only buyer from a distance. Other buyers were John K. Lovelace, Chehalis; C. G. Ingalls, Rochester; James A. Luman, Bucoda; N. C. Withrow, Centralia; W. Z. Hartman, Nisqually; J. S. Carstairs, Elma; A. B. Lyons, Mossy Rock, and William A. Wherret.

Breeders' Dept.

McBride's Jerseys

At Auction.

SHEDD, ORE. October 10, 1922.

Complete dispersal entire herd owned by Wm. McBride, Shedd, Ore., cows, heifers and the only

Medal of Merit Bull HOLGER

The sale also includes a number of daughters of Holger and cows carrying calves by this great proven sire.

Catalog giving details will soon be ready to mail. Send to sale manager and one will be mailed.

E. A. RHOTEN, Sale Manager, Salem, Ore.

FALK'S JERSEYS

AT AUCTION.

ALBANY, Ore. October 11, 1922.

Complete dispersal of herd of Jerseys owned by Ed Falk, Albany, Ore.

This is on the Hulbert farm and is the herd formerly owned by Mark Hulbert. This is the original home of Golden Glow's Chief, Pride Olga's Third King, and other noted sires and the foundation from whence came such cows as Vive La France, Lady Silken Glow, Frosty's Valinda, etc.

Many of the offerings are closely related to these great cows. Catalog gives details. Send name to sale manager for one.

E. A. RHOTEN, Sale Manager, Salem, Ore.
ED FALK, Owner, Albany, Ore.

MORTON'S JERSEYS

AT AUCTION.

WINLOCK, Wash., October 3, 1922.

Complete dispersal of herd owned by J. R. Morton, Winlock, Wash., including the sire White Spots Jersey King (St. Mawes breeding), whose offspring at the recent Southwest Washington fair made a sensational showing.

Also a nice lot of bred heifers, producing cows and young stock.

Send to sale manager for catalog giving details.

E. A. RHOTEN, Sale Manager, Salem, Ore.
J. R. MORTON, Owner, Winlock, Wash.

OREGLOW JERSEYS

Have moved from Iron Mine Farm to our new home. Few females and bull calves under 6 months for sale.

D. BROOKS HOGAN.

OREGLOW FARM, Boring, Ore.

MAPLE RIDGE JERSEY FARM offers strongly bred St. Mawes bull from R. of M. cow, sired by St. Mawes Susy Olga's Lad, whose three nearest dams average 841 lbs. fat. Priced right.

J. C. BROWN & SONS, Shedd, Ore.

Fourth Gold Medal Jersey Bull

now in use in my herd. No other herd ever had so many. Young stock for sale.

ED CARY, Carlton, Ore.

Jerseys 797 lbs. of fat, the highest record 3-year-old tested in 1920 is dam of a high class young bull we have to offer.

J. J. VAN KLEEK & SONS, Box T.
BEAVERTON, ORE.

Reg. Shorthorn Cattle For Sale

Herd headed by Mina's Lord 89413, by Royal Edward 324529. This bull is a three-year-old, and stood first at the Boise state fair, 1921. Also have some young cows bred to this bull for sale. Write for terms.

W. E. MILLS, Wilder, Idaho.

Northwood Herd of Milking Shorthorns

The general farmer's cattle are the kind that will produce milk and beef. Milking Shorthorns fill this requirement. We want to place out bull calves where they will improve the herd. We are pricing our calves within the farmer's means. Will give terms on satisfactory references. We solicit your inquiries.

NORTHWOOD FARMS.
Redmond, Washington.

Quality Ridge Angus

Well bred cattle for sale at all times at farmers' prices. A number of good bulls and heifers at present.

Satisfaction guaranteed.

J. A. HARRIS & SONS, Eden, Idaho.

Foundation Ayrshire Herd

To start a herd, I will sell together 3 heifer calves and bull, all 6 months old; high class; excellent breeding.

J. U. SMITH, Rt. 1, Newberg, Ore.

Foundation Holstein Herd

at Extremely Low Price

Six cows, or four if preferred, and the great bull, Hollywood Lilith Phoebe Veeman, that has two world record sisters and great backing. He is four years old, gentle, easy to handle and a proven sire of show quality.

Thos. Carmichael

Gaston, Ore.

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Choice bulls and heifers for sale of the blood lines that made Highland Grove Farm famous as the home of world and state records and superb type. Our cattle have sold for the biggest prices ever paid in the west. Enjoy our prosperity with us by investing in these young animals for your foundation stock. Terms to suit purchasers, 6 per cent interest.

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H. R. BOOMER, Payette, Idaho.

Young Red Polled Bulls

By the champion sire of the northwest circuit, closely related to the world champion Red Polled cow.

F. H. PORTER, Halsey, Ore.

CONSIGNMENT SALE REGISTERED STOCK

Holstein and Jersey cattle and Poland China and O. I. C. hogs. September 22, 1922, at Hog and Dairy show, Banks, Oregon. Free lunch and barbecue at noon. For catalog address

S. C. INKLEY, Banks, Ore.

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Silver Fox Ranches Make Big Profits.

Finest Quality Imported Prince Edward Island Stock.



All Pedigreed and Registered. Fully Guaranteed.

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United States Silver Fox Farms Corp.
200 Hutton Bldg. Spokane, Wash.

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About 20 registered ewes and ten lambs of excellent Hampshire blood lines, for sale at bargain prices, together or singly.

B. C. Altman, Gresham, Ore.

MAPLE LEAF CHESTER WHITES

Breeding stock and weanling pigs of both sexes. Chief Justice 2d, Big Buster, Buster Giant and other best blood lines.

ED SCHOEL, Albany, Ore.

O. I. C. SWINE

Choice weaned pigs, large, smooth, easily fattened. Shipped on approval.

RINGGOLD FARM.
J. H. WEST, Centralia, Wash.

O. I. C. PIGS

Four bred gilts and three March boars. Best blood lines, good individuals. Farmers' prices.

O. O. PHELPS & SONS, Dryad, Wash.

BIG BUSTER POLANDS

Have 7 real spring boar prospects by Big Buster. Out of Liberator Maid, Wonder Queen, Queen of the Clan and Daisy Buster. First check for $35 takes choice.

FRED D. ENTERMILLE, Baker, Ore.

Pedigreed Poland China

pigs, large type; 100 to 140 pounds. Get fall breeders now, either sex, $20, and $25, f. o. b. Tonasket, Wash.

H. M. HALL, Tonasket, Wash.

River Banks Berkshires

Long, smooth, deep, grand champion kind. Strong in the blood of most popular families of nation.

RIVER BANKS FARMS, Grants Pass, Ore.
CLYDE E. NILES, MGR.

Riverby Orchard Berkshires

Oldest established Berkshire herd in the northwest. Young pigs and bred sows for sale. Address

D. C. BUNN, Prosser, Wash.

Bred Duroc Gilts and weaning pigs. Great Wonder and Sensation breeding. All eastern bred stock. Satisfaction guaranteed.

S. D. CORNELL, Grandview, Wash.

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URBANA ILL

DOUBLE YOUR MONEY'S WORTH

Fine Fur-Trimmed Coat *for* Girls Only

$3.98



A sensational bargain—a handsome coat of Pressed Velour in navy blue or brown, regular $7 value. Has collar of genuine Kit Coney, which buttons snugly around throat. Belt all around, two novelty pockets and two buttons at back. Sizes 7 to 14 years. **Order Brown by No. 50E5595. Navy by No. 50E5596. Send no money. Pay $3.98 and postage on arrival.**

Order similar style with handsome plush collar, sizes 2 to 6. Order black by No. 50E-5581. Order brown by No. 50E5582. Price either color, $2.98. Send bargain price and postage.

Women's Soft Kid Slipper Black or Brown

$1.59



Always mention size.

Soft kid leather slipper, stylish strap model with two buttons. Medium round toe. Cushion insoles. Medium rubber heels. Solid leather soles. A bargain at our slashed prices. Sizes 2½ to 8. Wide widths. **Order black by No. 50A228. Order brown by No. 50A229. Send no money. Pay $1.59 and postage on arrival.**

Men's and Boys' Brown Leather Heavy Work Shoe

$1.98



State Size

Splendid brown leather work shoes. Heavy, durable uppers; extra strong solid oak leather soles; leather insoles; low broad leather heels and reinforced leather back stay. Roomy last. **Order men's sizes 6 to 12 by No. 50A758. Send no money. Pay $1.98 and postage on arrival. Order boys' sizes; 1 to 5½, by No. 50A554. Price $1.89. Order little boys' sizes, 9 to 13½, by No. 50A555. Price $1.79 and postage on arrival. Mention size.**

Wash Goods



5 Yards Amoskeag Gingham, 32 inch 99c

An almost unheard of price for this famous gingham. Latest plaid, check and striped patterns in all desired colors, all fast and yarn-dyed. **Order by No. 50F3414. Send no money. State pattern and color wanted. Pay 99c and postage on arrival.**

10 Yards Fancy Outing Flannel $1.49

Ideal weight for nightgowns and undergarments. Come in all colors, 27-inch width. State pattern and color. **Order by No. 50F-3413. Send no money. Pay $1.49 and postage for 10 yards on arrival.**

10 Yards 36-inch Percale, only $1.49

Very choice patterns in fast colors. In white, gray, Calcutta and indigo blue with neat stripes or dots. State color and pattern. **Order by No. 50F3406. Send no money. Pay $1.49 and postage on arrival for 10 yards.**

Very Richly Embroidered Gabardine DRESS

$2.98



Mention Size and Color Wanted

Sharood especially recommends this pretty model. A becoming style that is going to be very popular this fall. Has wide, flowing sleeves, two new fashion panels. Handsomely embroidered at top and waist. Women's and misses' sizes 16 to 44. **Order brown by No. 50E5521. Navy by No. 50E-5520. Send no money. Pay $2.98 and postage. Money back if you're not satisfied. State size wanted.**

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WOMEN'S BLACK KID HI-CUT



Send for this handsome rich kidskin shoe in black kid leather. Note the medium toes with pretty imitation perforated tips, the perforation around vamp and on lace stays. Very popular model and really a sensational bargain now. Durable, flexible soles. Sizes 2½ to 8. Wide widths.

$1.98

Order by No. 50A122. Pay $1.98 and postage on arrival.

Give Size

Men's, Boys' and Little Boys' Gun Metal Blucher

$1.79 Up



Give Size.

Mothers—Don't fail to take advantage of this splendid offer in a practical blucher dress shoe for men, boys and little fellows. **Order men's sizes 6 to 11 by No. 50A674. Pay $1.98 and postage on arrival. Order little boys' gun metal blucher, sizes 9 to 13½, by No. 50A590. Pay $1.79 and postage on arrival. Order same style for big boys, sizes 1 to 5½, by No. 50A589. Pay $1.89 and postage on arrival. Always mention size.**

Women's Calf-Finish Leather Oxfords

$1.98



Give Size.

Made with imitation shield and medallion-perforated vamp, perforated lace stay and circular foxing. Has medium rubber heel and medium pointed toe. Sizes, 2½ to 8, wide widths. **Order gunmetal by No. 50A69. Order brown by No. 50A70. Send no money. Pay $1.98 and postage on arrival.**

Women's Patent Leather or Brown Calf-Finished Flappers.

$1.98



Give Size.

This smart pump in sizes 2½ to 8. In black patent leather or brown calf-finish—a stunning one-strap model with imitation shield tip and medallion, effectively perforated. Has medium rubber heel. **Order patent leather by No. 50A72. Order brown calf by No. 50A73. Send no money. Pay $1.98 and postage on arrival.**

Patent Leather Oxford

$1.98



Give Size

Women's black patent leather oxford, with imitation shield tip and medallion, perforated vamp, imitation circular foxing and lace stay perforated. Medium rubber heel and medium narrow toe. Sizes 2½ to 8. **Order patent leather by No. 50A64. Pay $1.98 and postage on arrival.**

Men's and Boys' Scout Shoe



Reliable, sturdy soles; low broad leather heels; leather insoles; reinforced leather back stay. Guaranteed to stand hardest wear. Wide widths. Sizes 6 to 12.

$1.79 LT

Be Sure to Give Size.

Order by No. 50A733. Send no money. Pay $1.99 and postage on arrival. Order little boys' sizes, 9 to 13½, by No. 50A565. Price $1.79. Order big boys' sizes, 1 to 6, by No. 50A464. Price $1.89. Pay bargain price and postage on arrival.

Men's Special Hip Boots



Saving on men's pure gum hip boots; friction lined; heavy corrugated sole and heel; guaranteed first quality. Made of the very best rubber. Usually retailed at $5. Be sure to order your pair while this great saving offer lasts. Sizes 7 to 11. Wide widths. No half sizes. **Order by No. 50A949.**

$2.79

Give Size

Rich Black Sateen Apron



Amazingly low price for such truly splendid quality. Sharood is proud to recommend such a bargain to any woman who appreciates real value. And this apron represents not only a neat saving, but a charming style for house wear. Send for your size today—quick.

$1.79

The material is an excellent soft, lustrous black sateen with collar, cuffs and pockets of good grade fancy cretonne. Pockets are a novelty basket design with applique flower trimming. The same effect is carried out on one side of waist. A full cut, comfortable garment, which is just the thing for morning wear at home. Designed with wide self-material sash and belt all around. Big value. **Order by No. 50E5098. Send no money. Pay $1.79 and postage on arrival. Money back if not satisfied.**

Women's Popular Stitchdown Dark Brown Oxfords

$1.98



Give Size

Classy stitchdown Oxford for women. Wonderfully comfortable and stylish. Uppers of dark mahogany leather. Smooth leather insoles. Flexible stitched-down oak outsoles. Low rubber heels. Sizes 2½ to 8. Wide widths. **Order by No. 50A268. Send no money. Pay only $1.98 and postage on arrival.**

Not Retreaded

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30x3 size Now only

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Fresh stock of heavy non-skid tires of live rubber. Generously oversize. 6,000 guaranteed, but often give 8,000 to 10,000 miles. Choice of non-skid or rib-tread in 30x3 size. Others are non-skid. Pay only bargain list price below and postage on arrival.

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GUARANTEED INNER TUBES.

Now is your chance to buy extra thick, live rubber inner tubes at a big saving. Don't wait for tube prices to go up. How many shall we send? Give size wanted. No money now. Pay only bargain price and postage on arrival.

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No. 50D20—30x3	$1.09
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No. 50D22—32x3½	$1.49

Be Sure to Mention All Sizes, Colors, Etc., and Send All Orders From This Page to.. SHAROOD'S DEPT. 50 Minneapolis, Minn.

SEPTEMBER 21, 1922. Washington's Great Farm Magazine EVERY THURSDAY

THE WASHINGTON FARMER

ESTABLISHED 1894 SPOKANE. SEATTLE.



Next Week's Issue Will Contain a Comprehensive Report of the State Fair

Barnyard Golf Rules

By PROF. L. J. SMITH, W. S. C.

Will you please give me rules for "barnyard golf," the distance (standard) of pegs, size of pegs and slant of pegs and weight of shoes? F. L.
Stratford, Wash.

Twenty-one points shall constitute a game. (50 in the national.)

No shoe of freak design will be allowed. No toe or heel calk shall measure over three-fourths of an inch in length.

The distance from stake to stake shall be 40 feet.

At the beginning of a game first pitch shall be decided by toss of coin.

All equals shall be counted as ties. If both contestants have one shoe each an equal distance from the stake or against the stake, or ringers, they shall be counted tie, and the next closest shoe shall score. In case of all four shoes being tie, no score shall be recorded.

The closest shoe to stake shall score one point. If both shoes are closer than the opponents' they shall score two points. A ringer shall score three points. A ringer and a closest shoe shall score four points. A double ringer shall score six points. In case of each contestant having a ringer the next closest shoe shall score. If each contestant has a double ringer both double ringers are cancelled and no points scored. If a contestant shall have two ringers and his opponent one the pitcher having two ringers shall score three points.

Any shoe leaning against the stake shall have no advantage over a shoe lying on the ground and against the stake. All such shoes are ties. If a contestant has a shoe leaning against the stake it shall count only as a closest shoe

It is well not to count any shoe resting more than on agreed distance from the stake, say, 15 inches.

The stakes are one inch iron or three-fourths gas pipe. They project eight inches above the ground and slant one inch toward the other pitch.

Rules of the National Horseshow Pitchers' association, which are less simple than the above, may be secured by addressing the association at Akron, Ohio.

Grange Women Lend Aid

The ladies' auxiliary of the Snohomish County Pomona grange has been making a special effort to help the county orphanage and has done much sewing and has canned fruit, the proceeds of which is given to the institution. Each year a harvest dinner is held to raise money for the children and the whole neighborhood turns out with their support.

This work is entirely separate from the grange," said Mrs. G. Barker, who is master of the Snohomish County Pomona grange. "We have our grange work to look after besides, and it sometimes keeps us busy to do them both justice, but we feel that the auxiliary is well worth while and it is doing a good work."

Mrs. A. G. Ziebell, one of the main workers in her community, told how the women of the grange have been trying to create a better moral tone to the country life. "When we get together at any of our meetings, whether it be the auxiliary or the regular grange, we always enjoy ourselves and talk over plans for bettering conditions for our farm people. We have taken a determined stand in favor of the prohibition law and it is having the desired effect.

"There is also a movement on foot to group ourselves together for the purpose of buying our goods on the wholesale plan. We do not have a grange store in the county so we have formed buying clubs and have been able to save enough to make it worth while. We can in this way buy from the Associated Grange warehouse at Seattle, when with smaller shipments it would not be practical."

Mrs. Ziebell told how she had tried to buy some woolen blankets, but the price was so high that she made an effort to make them at home. She purchased some raw wool and some cards and combed the washed wool and made her own comforters at a great saving and yet she had an article that is good for a lifetime. This she said can be done on a small scale and only when circumstances permit, but it shows that there are ways to utilize some of the raw material at home and at a great saving of expense if one has the time to spare.

SET APPLE PACKING WAGE.

Apple packers this year will be paid 5 cents a box for their labor and sorters and pickers will receive between 30 and 35 cents an hour, according to a wage schedule announced by officials of the Spokane Valley Growers' union at Opportunity.

The union will employ between 150 and 175 people at its Millwood and Opportunity plants and the Opportunity plant will operate both day and night shifts.

PEACHES AT 60 CENTS.

The sale of three car lots of peaches at 60 cents f. o. b. is reported by Fred Eberle, manager of the horticultural union at Yakima.

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To write today for your free copy of this big Golden Jubilee Catalogue will mean a saving of many dollars to YOU this Fall.

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Fifty years' experience in manufacturing—in right buying—has gone into this book. Fifty years' experience in low price making is here at your service.

Write for this Catalogue. Know the right price to pay for everything you buy. Take advantage of the many big bargains it offers—the many, many things offered at less than market prices.

TO THE WOMAN: This free Catalogue offers you the newest styles, selected by our own Fashion Experts. And all the usual extra "style profit" has been eliminated from our prices.

It offers you everything for the home at a big saving: Rugs, Carpets, Curtains, Furniture, Home Furnishings of all kinds of standard quality at money saving prices.

TO THE MAN: Think of an all wool—virgin wool suit for less than $15.00. This is an example of our Golden Jubilee Bargains. Everything a man needs, to wear or to use, is offered at prices that mean many dollars saved.

FOR THE FARM: For fifty years the American Farmer and Montgomery Ward & Co. have helped each other. This book outdoes all our past achievement in making low prices for you.

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The Oldest Mail Order House is Today the Most Progressive

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THE WASHINGTON FARMER

SUCCESSOR TO

Vol. 47. No. 12 THE RANCH PACIFIC DAIRYMAN HORN AND HOOF September 21, 1922

For Good Farming, Attractive Country Homes and Happy Country People

What the War Did for the Palouse Country

By F. J. SIEVERS, Head Soils Department, State College

It is a fact well known to the economist and fully appreciated in general that the average farmer has had to depend on the increase in the value of the land for his profit. In other words, in the older sections of the country, where the land has been held in the same family for several generations, the total wealth is represented by the value of the land and improvements the same as it was when it was first brought under cultivation. There is practically no available cash. This is evidenced by the fact that when it became necessary to divide an estate among the children of even a small family the farm either had to be sold or otherwise divided into as many portions as there were heirs. Another interesting indication of the operation of this principle is found in checking over abstracts of title to property in any new section of the country. The mortgage held against farmers is nearly always as large as the security will permit, but we find that these mortgages increase in amount with every renewal or transfer. Since statistics show in general that the increase in valuation of the farmer's holdings are his only source of profit, the agriculture in any section of the country will prosper, as far as the general rural population is concerned, only so long as something justifies such increases in valuation. These increases are dependent either on a better net price for the marketed product, or on a greater production per unit of investment.

Better prices result from improved marketing conditions, such as more economical transportation, more efficient buying and selling agencies, etc., as well as a change of the form in which the products are marketed. Increased production per unit of investment may result from more intensive methods of tillage, better fertilization, proper crop rotations and improvements in management.

FROM GRAIN TO DAIRY FARMING

Under normal conditions, where the law of supply and demand is not artificially interfered with, any development that results in increased land values is generally led by a few far-sighted individuals and takes place very gradually. We find communities in the Mississippi valley where 40 years ago nothing but grain was marketed, that are today known the country over as leading dairy centers.

This development was not accidental nor entirely premeditated. It was the natural result of the farmer's effort to justify the price paid for his land under conditions of declining yields. Continuous cropping to small grain had depleted the soil of its available nitrogen, and clover was recommended to enrich the soil in this element of plant food. The farmer soon found that growing clover in a rotation with small grain gave him practically as large a yield of grain in one year as he had been accustomed to grow in two when he grew small grain only. Most of his clover was harvested and cured into a comparatively poor quality of hay, and this at a time when the prejudice against clover hay as a feed for horses was so pronounced that even a good quality product was not marketable. In other words, clover hay was so cheap that the old scrub cows, of which there were several on each farm, that had never been fed anything but straw during the winter months, were allowed to feed on these clover stacks. This change in ration increased the milk flow of even these scrubs to the extent that the farmer decided to keep enough cows to consume all of the clover hay. Before long he realized that his clover crop, marketed in the form of dairy products, produced for him greater returns than he got for his small grain in the rotation. This led to the introduction of more and better cows and a complete change in the general plan of farming. Primarily the clover was grown to make it possible to grow more grain, but eventually the clover crop became so profitable that it displaced the small grain in the rotation. The dairy cow was not introduced because any one particularly enjoyed milking, but she became popular as soon as she supplied the farmer with a means of converting his crops into a product that could be marketed at a greater profit. This justified an increase in the value of all land in that section suited to the growing of crops that could be converted into dairy products and again the farmer made his profit.

COULD NOT DISLODGE THE MODERN METHOD

This system of farming had become so well established up to the time that we went into the war that wheat, which once occupied a place of major importance, was now practically unknown. The strong appeal made by the nation at that time for the growing of more wheat caused many farmers in the dairy sections to seed a few acres to this crop. The last yield of wheat grown on that particulr portion of the farms about 40 years ago possibly produced at the rate of about 15 to 18 bushels per acre, but now, after dairying had been practiced for a period of years and the large amount of manure produced had been returned to the soil the farmer obtained, to his surprise, a yield of about 45 bushels per acre. In spite of this high yield, however, the valuation of his land had reached a figure where wheat growing was justified only on the basis of patriotism and not of profit with the result that with the war well over no further efforts were made to produce this crop.

BUT WHAT ABOUT THE PALOUSE COUNTRY?

This illustrates normal development as it influences land values. Let us turn for a moment to an illustration of abnormal development resulting from the war, an influence that prevented the ordinary laws of supply and demand operating freely.

The Palouse country, a region covering a portion of eastern Washington, eastern Oregon and western Idaho, is universally well known for its high yields of wheat. Here wheat is grown to alternate with summer-fallow, and under favorable seasonal conditions, 40-bushel crops are not uncommon. Under this system the land is cropped only once every two years. During the uncropped or summer-fallow year, the land is plowed in the spring and then surface tilled sufficiently often during the summer with a harrow or other similar surface-tilling implement to control weed growth and to maintain the mulch necessary for moisture conservation. Up to the time of the war, the farmer had developed this system of cropping and tillage to such a stage of efficiency that it was difficult, if not impossible to suggest methods of improvement. Men of vision that knew that the farmer in general must depend on increases in land value for his profits, began to look for something to assure such increases and thus offer some encouragement to posterity. When the government set the arbitrary minimum price on wheat during the war, which gave the farmer over 100 per cent above normal per bushel, the price of farm land also increased until at about the close of the war, land that had previously sold from $75 to $100 per acre could not be purchased for less than $150 to $200. This took care of the immediate situation, theoretically, at least, as far as the individual was concerned who maintained possession of his land and in a very practical and applied sense where it affected the farmer who sold out during this period.

There was no assurance, however, that the price of wheat would remain at the war figure, but instead, everything in the world indicated that this price, when again governed by the operation of the law of supply and demand, would rapidly find its pre-war level. Such a sudden reversal in conditions not only would mean a great disappointment to the farmer who did not sell his land when prices were up, but it spelled disaster for the man that invested during this period. Adjustments had to be made and that quickly, and it is due to the foresight of a few men of exceptional vision that this was possible.

McCROSKEY PLAYED A PROMINENT PART

In this respect the late Senator R. C. McCroskey of Garfield, Whitman county, did in no small way for the wheat farmer of the Palouse region what Governor W. D. Hoard of Fort Atkinson, Wis., did for the dairy industry of that state and adjoining territory. He was one of the largest and most progressive farmers in Whitman county, the county that has repeatedly ranked first in wheat production in the United States. By virtue of his position as a member of the board of regents of the state college, an office which he held for practically a quarter of a century, it was possible for him to inspire men in that institution with the fact that it was their opportunity as well as obligation to develop the details fundamental to a system of farming that would mean prosperity and permanency to the agriculture of the section under consideration. The Palouse was his home and he loved it. He had long recognized the fact that a decline in crop yields spelled disaster as far as the future of any agricultural region was concerned. It was also evident to him that crop yields under this alternate summerfallow system were only being maintained through greater effort in the tillage preparation of the soil and at the expense of a gradual drain on the plant food. Other sections of the country had been forced to make changes in their methods of farming to justify increases in valuation, but in many of these sections such changes frequently meant a change in the entire farming population. Many of the prosperous farming communities did not become so because the American farmer solved the problem, but largely because he felt it more profitable for him to sell out to farmers of more recent foreign extraction who had either learned better methods before they came across or otherwise had better methods handed down to them by their imported ancestors. Our American farmers have not always been ready to make the improvements in methods necessary to justify the greater investment, but they have been more ready to sell out to the foreigner so that they might move westward to take up cheaper land and thus be enabled to continue the more extensive and exhaustive methods they had been used to.

THE FUTURE DEMANDED AN IMPROVED SYSTEM.

To one who goes through the pioneering of a region and lives there the greater portion of his life and in the course of this period builds up a friendship among his farm neighbors with the hope that it will be lasting, the prospect of seeing such neighbors forced to sell out to some one better qualified to farm, but not to fill the neighbor's place in any other respect, is a rather gloomy one. To this class belonged Senator McCroskey and it was one of his main ambitions gradually to cause new methods to be introduced and adopted with the hope that the present population of the Palouse region might become permanently established. The future of the country demanded the establishment of better and more permanent homes and this development demanded faith in the possibilities of increased returns from the land.

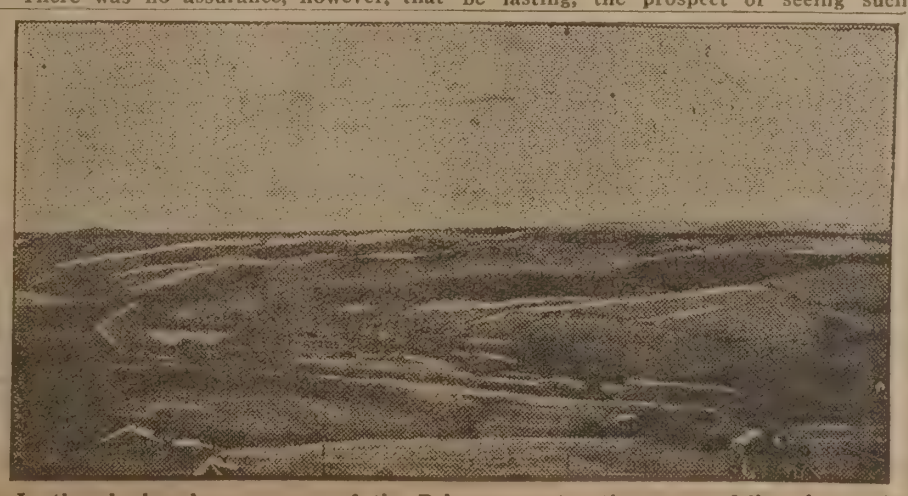
Here is where the war helped him out. Results from investigational work, conducted by the state experiment station, had shown that the summer-fallow system generally practiced, which required half of the land to lie idle every year on the supposition that it was necessary to conserve two years' moisture supply to grow one crop, was absolutely without foundation. It was found that the summer-fallow tillage in this region where summer rains are practically unknown and where wheat frequently makes its entire developement without receiving any precipitation during the growing season was practiced, not to conserve the moisture, but to make nitrogen available. Farmers had tried growing wheat continuously without summer fallow with unsatisfactory results. When an intertilled crop like corn was grown in place of the summer fallow there was no decrease in the yield of the succeeding wheat crop. The farmer, however, who was interested in nothing but wheat, argued that corn was poorly adapted both because of climate and topography. Legumes, like clover, alfalfa, sweet clover and peas, not only produced profitable yields when grown in rotation with wheat, but, if anything, had a beneficial effect on the yield of the succeeding wheat crop. The farmer, however, argued that it cost more to produce these legumes than they were worth (which was not true), that he had nothing to feed the crop to when he got it and that a legume sod when plowed up and seeded to wheat would cause the grain to "burn." There was considerable truth in the latter point, and when it is understood that burning here is caused by much the same condition that causes lodging—in the Mississippi valley—it will be readily understood that small grain will have that tendency when grown after a legume. In the corn belt this place in the rotation is always filled by corn, a crop that has no lodging or "burning" tendencies. In the Palouse this objection to the legume had to be overcome because these crops were so splendidly adapted and filled such an important place in maintaining the nitrogen supply in the soil which, due to the drain on this element resulting from the summer fallow system of tillage, was already becoming the limiting element of plant food. The investigators had found, however, that if wheat straw was applied to a legume sod before it was plowed up for wheat, this straw prevented the burning of the following wheat crop.

STRAW MUST NO LONGER BE BURNED IN STACK.

Wheat straw has always been produced in abundance, but none of it was returned to the soil because experience had shown that an application of this material under the summer fallow system invariably caused a decreased wheat crop the following year. The straw was consequently burned in the stack while the soils hungered for nitrogen and organic matter. By finding a place where straw could be introduced in the rotation system it served two purposes—both encouraging from the standpoint of permanent agriculture. In spite of all this evidence the farmer still persisted in cropping only one half of his land and in cropping that half to wheat only. He would have continued this practice for another considerable period had not the close of the war left him confronted with a real problem. He found himself farming $200 an acre land and growing crops that only justified a $100 an acre investment. He could not sell out without suffering a prohibitive loss of over 50 per cent on his investment nor could he continue to grow wheat in an alternate year summer fallow system and hope to meet his interest and taxes.

The result is that he is making over night, figuratively speaking, the adjustments in farming methods that ordinarily might have taken a period of 25 years. The

(Continued on page twenty-two.)



In the checkered appearance of the Palouse country the summerfallow brown is giving way to the green of forage crops.

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The New Tariff Schedule

While THE FARMER is not a partisan publication, it must, in all fairness, give credit to the agricultural bloc in congress for giving the country the fairest tariff bill that the agricultural interests have had in a generation. The Underwood tariff law, passed during the administration of President Wilson, put a large majority of agricultural products on the free list. The pending tariff bill, as now agreed to in conference between the house and the senate and practically assured of approval by President Harding, takes these agricultural products out of the free list and gives them the protection they deserve if the farmers of this country are to have a square deal in tariff legislation.

We give upon another page the agricultural schedule of the new tariff bill with comparisons of previous tariff laws on some items. It makes an interesting study and shows conclusively that the agricultural bloc has been faithful to the farmers' interests and has conducted an effective and winning fight against that element in both the democratic and republican parties which has been more concerned about protection for the great manufacturing interests of the east than with looking out for the rights and welfare of the producers on the farm.

At the same time the new law will put on the free list a number of commodities that are essential to the farmers. The new free list will include agricultural implements, including plows, tools, tooth or disk harrows, harvesters, reapers, agricultural drills and planters, mowers, horse rakes, cultivators, threshing machines, cotton gins, wagons and carts. Animals imported for breeding purposes may also be brought in free of tariff tax. Other commodities on the free list are binding twine, coal, petroleum and fuel oil, fertilizers, boots and shoes, all barbed wire, white arsenic and Portland cement.

THE FARMER is glad to commend the good work of the agricultural bloc, because that work has been closely in line with its own policy on the tariff question. This journal has held firmly to the doctrine of a square deal for the agricultural interests. It has insisted for years that, if the manufacturing interests are to have protection, the farmer must have his compensation in the way of adequate protection for his products. On the other hand, we have contended that, if agricultural products are to be put on the free list, then manufactures should go on the free list. What we have objected to is a lop-sided tariff law.

Study the Local Tax Budget

Under the requirements of the law the officials of tax levying organizations are now publishing their budgets for next year's expenses. These budgets are the basis on which the tax levies will be determined. They can not be increased after publication, **but they may be reduced.** That is the big point—they may be reduced. Whether or not they will be reduced depends on whether or not the taxpayers study these budgets carefully and demand reduction in items where reductions may be made without loss of efficiency in the department.

Public officers that levy taxes under these budgets should be the target for personal conferences from now until the first Monday of October. On that day a final public hearing is authorized by law, when massmeetings should be held with the taxing officials to discuss possible reductions. Every taxpayer should, between now and the first Monday in October, study his local budgets carefully and be present on that day to tell how and why reductions should be made. By that means real influence will be brought to bear to secure tax reduction.

Now is the time to act. Now is the time to kick—not next spring when the tax statements begin to arrive in the mail. There is no chance then of reducing the amount you have to pay. There is a chance now. Study the budget. Take it up with your local officials. Be present at the meeting Monday, October 2.

Community Spirit

Interest the young folks and you get the old folks, too. There is no doubt about that fundamental proposition.

There was a remarkable community gathering on the grounds and in the buildings of the Sunset Farm bureau of Spokane county the other day. It centered around the work of the boys' and girls' clubs. More than 200 persons were present from that community before the day was over. There was judging by the boys' clubs on sheep and pigs and cows, as well as judging of potatoes by the potato club. There were exhibits by the girls' sewing clubs, and there was an all-around good time.

It proved one thing—that the community had to be united or such an affair could not have been pulled off. It also proved that the boys' and girls' club work, when properly managed, can unite the community in cooperative work.

Ambitious Apple Trees

Ambition can be aroused in apple trees as well as in men. Give the trees plenty of good food and good care and they like to see how many apples they can yield. Their ambition, like all well-directed ambition, pays in the long run.

One apple grower figured out that on the average it cost him $1.94 per box during the years from 1912 to 1921 to produce apples, when the yield was 200 boxes per acre, while it cost but $1.01 when the yield amounted to 600 boxes per acre.

E. G. Wood, extension specialist at the state college, declares that with orchards nine years old or more no grower in the Wenatchee district or the Yakima valley should be satisfied with the condition of his orchard or with his management until his average annual production is over 600 boxes per acre.

LOOKING INTO OTHER FARM FIELDS

British Columbia probably will have 75 per cent of last year's apple crop, or 793,120 barrels (2,379,360 boxes), according to an official report from Ottawa. Wealthy and Wagener varieties will be very light; Delicious and Jonathans heavy.

* * *

A warning to food officials and consumers throughout the country has been issued by R. E. Rose, state chemist of the department of agriculture of Florida, concerning the consumption of immature oranges, which possibly might get into trade channels through coloring prior to sale. It is said that many packing houses are equipping themselves to color these immature oranges.

* * *

The production of lemons in Sicily is about 8,000,000 boxes per annum, each box containing 300 or 360 lemons, according to the American consul at Palermo, Italy. Of this amount approximately 20 per cent is exported to the United States.

State Farm News

Fruit growers in the Kettle Falls district are making arrangements to handle their fruit through an organization known as the Kettle Falls Growers, of which F. G. Carlisle is president and Lee Alloway secretary. The Kettle Falls growers are contracting individually with the warehouse company at Meyers Falls to handle, ship and market their fruit and the warehouse has contracted with the North American Fruit exchange to market the fruit on a consignment basis.

Several other concerns are also handling large quantities of the Kettle Falls and lower Columbia river tonnage and it is estimated that almost 200,000 boxes of apples will be shipped from the Columbia river valley this year.

* * *

Grain men at Pullman estimate that fully 50 per cent of the 1922 crop of wheat in the Pullman district has been sold and that the price has ranged from 85 to 92 cents a bushel.

* * *

C. A. Pratt, one of the original box factory men of the Pacific northwest, who was in Wenatchee recently on his way from Lake Chelan, is one of the two men who worked out the present box that is used all over the west. In fact it is the standard box all over the world at the present time for apples. He is also the man who shipped the first carload of box shooks into the Wenatchee valley. This was about 23 years ago.

The size of the box was decided upon by the Northwest Fruit Growers' association some 24 or 25 years ago, when at a meeting at Portland it was found desirable to standardize the apple box. Prior to that time each manufacture had a size of his own.

* * *

Reorganization of the Walla Walla County Cow Testing association shows that 300 cows have been signed up for next year, according to a report sent in by W. H. Talley, county agent. A. W. Kasten, vocational agriculturist of the Walla Walla high school, is superintendent and Joe Maher tester.

* * *

Nearly 600 cars of fruit from the Wenatchee district have been sold at prices regarded as more satisfactory than had been expected. According to a statement of Dwight L. Woodruff, general manager, the Wenatchee District Cooperative association has sold and booked for shipment 337 cars to 28 states.

Other sales have been made of upward of 200 cars by other organizations and firms. Jonathans and Winter Bananas constitute the bulk of the sales, although some Delicious are included. Prices for extra fancy Jonathans are reported at around $1.25 to $1.50 a box.

* * *

The prune crop in Clarke county this year will be between 8,000,000 and 10,000,000 pounds, according to W. H. Wood, manager of the Washington Growers' Packing corporation. This is slightly better than the average for the last 10 years.

This total includes about 2,000,000 pounds from trees just coming into bearing.

* * *

Hail in parts of the north central Washington district recently did damage that will cut down the total apple production about 887 cars, according to District Horticultural Inspector Frank C. Nielson's crop estimate. The hailstorm of August 30 did some damage in the vicinity of Omak, there being from 12 to 14 orchards seriously harmed and probably as many more damaged. There will be a cut in the Omak tonnage of approximately 5 per cent or 75 cars, Mr. Neilson's report indicates.

Hail damaged an area of about 200 acres at Manson. The Manson section, however, was not hit severely. Tonnage will be cut about 25 cars. About 20,000 boxes were damaged in orchards in Bridgeport and vicinity.

* * *

The Pend Oreille county commissioners have awarded to J. W. Rauch of Newport the contract to build two miles of permanent highway for $9990. The work is to be done north from Locke and is a continuation of the seven miles of road being built by the state this year.

* * *

Dr. H. A. Trippier, president of the Walla Walla County Fair association, who spoke at a recent commercial club luncheon, said that Walla Walla in three years had spent $340,000 for mules shipped in from the east and in the last year had spent more than $81,000 for beef cattle and more than $129,000 for hogs raised elsewhere. These sums, he said, could be kept in the community if farmers were given more encouragement in raising stock.

* * *

A new quarantine order has just been issued by E. L. French, director of agriculture, which is an amendment to quarantine No. 7, which prevents all shipments of currant or gooseberry stock. The new order, the amendment states, that since no white pine blister rust has been found on either currants or gooseberries, there seems to be little danger of spreading this disease by the shipment of plants from inspected and licensed nurseries. Shipments of plants may now be made when completely defoliated to points within the state of Washington. This provision, however, does not include the black currant, which is being taken out wherever found.

* * *

Farmers in Pend Oreille county have reduced the loss of wheat from smut from 25 per cent to 4 per cent by treating the seed with dry copper carbonate, according to County Agriculturist E. E. Hupp. Mr. Hupp is demonstrating this treatment to the farmers, who are using it for the first time.

* * *

At a meeting of the commissioners of Columbia county a program of economy was adopted which will reduce the taxes about $75,000 annually, says a Dayton report. The commissioners feel that with poor crops and low prices for all farm products the farmers can not afford to go through with the road construction program planned last year, nor pay the salaries they have been allowing the deputies of the several county offices.

The levies for road districts will be reduced from 2 to 4 mills, county agent work will be dispensed with, cars furnished county officers will be used for official business only, and the assessor will not be allowed an office deputy.

All permanent road construction will be suspended and but enough work done on the roads and bridges to make them safe for travel.

FARM BUSINESS AND MARKETS OUTLOOK

Scarcity of prime and choice steers lifted prices to a new high for the year of $11.35 at Chicago last week. Plenty of plain steers are arriving, however, so that the total supply of beef is ample. Chicago has had the largest run of "westerns" of the season and other points to which the range contributes were well supplied. The corn belt is sending a generous quota of medium and common grades of steers so that there is an abundance of low grade beef on the market and prices were lower on the hoof following a similar trend in the dressed beef trade. Combined receipts at the seven leading markets in the last five weeks have held consistently above the average for the corresponding period in previous years.

The stock prices behaved the same as in the steer market, "corney" cows and heifers being unchanged for the week while medium and common grades which made up the bulk of arrivals were lower. The culling out process is under way and in spite of the need for restocking, some western range cows and heifers are arriving and increasing the competition in this division. The veal calf market again reached a $13 level at Chicago for choice heavyweights. Receipts are seasonably small. Prices may go a little higher on vealers, but after another two or three weeks a downward trend will be probable.

Broad Demand for Feeder Cattle.

Combined shipments of stocker and feeder cattle from the 12 important markets during the week ending September 1 totaled 126,294 head, the largest for any single week since October last year and more than double the average for the corresponding week in the two preceding years. With grassers arriving in large numbers, the demand has been satisfied and at the close of last week values both at Chicago and Kansas City were easing slightly. Most of the feeders at Chicago and river markets are selling at a range of $6.25 to $7.25. A few are available at $5 and below, but such kinds are lacking in breeding, light in weight and extremely thin. Thus far, the season's movement to the country indicates an average supply of beef during the winter, although if the rate shown during the last week or two is maintained during the next three months, the number placed in feed lots will be above normal.

Another Record Supply of Hogs.

Receipts of hogs at the 11 leading markets in the week ending September 9 totaled 408,000 head, the largest on record for the corresponding week which in the past has averaged the smallest of the year. The 10-year average is 312,000 head. The decline in prices has been checked temporarily, but packers are as bearish as ever and unless a letup in the run comes, values will be hammered again at the first opportunity.

In spite of low prices for hog meats during the last month, stocks in storage at the six leading packing points declined only 9,000,000 pounds, the smallest decrease for August in at least eight years. The five-year average decreased 18,000,000 pounds compared with a five-year average of 14,600,000 pounds. With the large receipts of hogs during the month taken into consideration it is evident that consumption of hog meats and lard is at a rather high level, but not high enough to remove accumulations as fast as would be desirable in view of the big new crop of hogs which will begin to show up within a short time.

Lamb Receipts Continue Small.

Combined receipts of sheep and lambs at the seven leading markets in the week ending September 9 totaled approximately 180,000 head compared with an eight-year average in the corresponding week of 352,000 head. Prices have held at about the same level for several weeks as a result of unusual uniformity in the supply. The sheep population is known to be much below normal, but not until the last month or two has this fact been prominently manifested in the volume of market receipts.

Feeders are paying practically up to the fat lamb market for their raw material, but are unable to obtain a normal supply. Total shipments to the country from the 12 leading markets in the week ending September 1 were 86,539 head, the largest since last November. In the corresponding week last year 133,642 head were shipped out with 126,408 head two years ago.

Demand for Horses Doubled.

Horse markets are able to absorb about twice as many head as three weeks ago. Coal dealers and industries which were cramped by lack of coal have been able to enter the market again. Drafters eligible to sell above $225 at Chicago are readily absorbed and 1250 to 1400 pound chunks are about $10 per head higher than a month ago. All offerings are moving much more freely.

Better Tone in Wool Market.

Moderate buying of wool at seaboard markets continues with a better tone in the trade generally and prices steady upon domestic wools. Labor troubles in the textile trade have been settled for the most part and mills are fairly well supplied with orders for goods. Most of the clip is now in second hands. The tariff remains the most uncertain factor in the situation, the conference report calling for 31 cents per clean pound. Foreign markets show a slightly higher trend.

Wheat Export Sales Remain Small.

Until the last few days sales of wheat for export as reported to the grain trade from day to day have been running only 500,000 to 1,000,000 bushels daily, including both United States and Canadian wheat. Much more is being shipped on old sales, however, since actual clearances of wheat alone in the three weeks ending September 2 totaled 23,000,000 bushels. Adding the Canadian wheat exported and clearances of flour from day to day, the amount going out is fairly large although too small to remove the North American surplus before southern hemisphere wheat will again be an important factor. It is estimated that Argentina and Australia together have only about 20,000,000 bushels to ship before their new harvest, leaving the bulk of the demand to be supplied by North America in the next five months.

Flour trade has been rather dull right along, but flour production by United States mills in the last week reported upon amounted to 3,000,000 barrels compared with an average of 3,688,000 barrels in the corresponding week in the four preceding years. It is noteworthy also that in the nine weeks ending September 2 the total disappearance of wheat from primary markets into consumptive channels, both domestic and export, was 93,846,000 bushels compared with 107,123,000 bushels in the corresponding period last year and a 10-year average of 64,109,000 bushels.

Big Wheat Surplus.

Assuming average domestic consumption in the present crop year, the revised estimate in the United States points to an export surplus of 230,000,000 bushels. If home consumption is no larger than last year, the exportable surplus will be about 50,000,000 bushels more.

The official estimate on the Canadian crop has now been raised to 289,000,000 bushels, almost equal to the record crop produced in 1915. This means an exportable surplus from that country of approximately 300,000,000 bushels.

The total exportable surplus based on the foregoing is 530,000,000 bushels. The revisions in crop estimates in the last month have removed all bullishness from wheat statistics unless a crop failure occurs in Argentina or Australia, or both. Present prospects are for average crops in both countries.

The question now is at what level can these prospective surpluses be merchandised. In view of price levels upon other commodities, wheat at $1 a bushel can not be considered out of line to the foreign buyer. Nevertheless, values may sag below this figure for brief periods during the season of heavy movement in Canada.

Crop Estimates Revised.

The September estimate of the wheat crop made by the department of agriculture shows a gain of 14,000,000 bushels in spring wheat over the August returns. The total crop of both winter and spring is placed at 819,000,000 bushels compared with 795,000,000 bushels harvested last year. Taking stocks on farms, the visible supply and holdings by country mills and elevators into account, the total available supply in the United States on July 1 was practically the same as on the corresponding date a year ago.

The corn crop lost 142,000,000 bushels or nearly 5 per cent during August, due to hot, dry weather in Kansas, Nebraska and South Dakota. The estimated yield on September 1 was 2,875,000,000 bushels compared with 3,080,000,000 bushels last year. Since farm holdings are believed to be considerably smaller than at this time last year and since the visible supply at terminals is much smaller, the statistical position of corn is fairly strong. The increase in the hog population to be fattened this fall and winter and expansion in cattle feeding operations also give corn fundamental strength.

The September oats crop estimate was 1,255,000,000 or about the same as a month ago. Last year's harvest was 1,061,000,000 bushels. Barley was placed at 194,000,000 compared with 151,000,000 bushels a year ago. Besides the loss in corn during August, sorghum grains declined about 16 per cent, the September estimate being 96,000,000 bushels compared with 115,000,000 bushels a year ago. Flax was placed at 11,700,000 bushels compared with an average of 10,500,000 bushels in the six preceding years.

Coarse Grain Prices Doing Better.

Demand for cash corn continues brisk so that liberal receipts are being absorbed. Prices are up about 6 cents from the low point of a few weeks ago.

Oats prices have advanced about 5 cents from the low point as receipts have failed to show the usual increase following harvest. Arrivals at primaries in the week ending September 9 totaled only 4,665,000 bushels compared with a 10-year average for the corresponding week of 7,611,000 bushels.

Cash Grain Markets.

The range of cash grain prices for the week ending September 13 are as follows:

Chicago—Wheat—No. 2 hard, $1.02@1.04 1-2; No. 3, $1.01 1-4@1.03 1-4. Corn—No 2 mixed, 63 1-4@64c; No. 3, 62 1-4@63 1-2c; No. 2 yellow, 63 1-2@64 1-2c; No. 3, 62 1-2@64c; No. 2 white, 63 1-2@64 1-2c; No. 3, 62 1-4@64c. Oats—No. 2 white, 36@39c; No. 3, 34 3-4@38 3-4c. Rye—70 1-4@74 1-2c. Barley—55@62c.

Clover Seed Market Strong.

Clover seed markets advanced slightly in the last two weeks, due primarily to light offerings. Above $10 for prime red clover at Toledo, however, a great deal of seed is for sale and it is doubtful if values will get above that figure very far in the next few months. Reports upon the new crop are favorable for the most part.

Chicago—Per 100 pounds: Clover, $12@16.50; timothy, $4@5.10.

Feed Markets Inactive.

Feed markets are inactive as buyers are not purchasing beyond immediate needs and flour mills are storing wheat feeds instead of forcing them upon the market at low prices. Both cotton seed meal and linseed meal have lost considerable ground in the last few weeks.

Prices per ton (100-pound bags) in carlots—Chicago—Bran, $17.75; standard middlings, $18.75; flour middlings, $24; cottonseed meal, 36 per cent, $37; 43 per cent, $41; hominy feed, $24.50; gluten feed, $30.35; old process oil meal, $38.50; tankage, $55.

Crop Reduced Slightly.

The September estimate upon the hap crop was 109,000,000 tons compared with 110,000,000 tons a month ago and 97,000,000 tons harvested last year. Prices generally are weak, although receipts are small; they are equal to or slightly in excess of the demand. Buyers are not going beyond immediate needs.

Prices per ton in carlots—Chicago—No. 1 timothy, $19; No. 2, $15@18; No. 3, $10@14; No. 1 light clover mixed, $16@19; No. 1 clover, $13@16; No. 1 clover mixed, $13@16; upland prairie, $17; midland prairie, $12@14; rye straw, $10@11; oat and wheat straw, $8@9.

Big Decrease in Egg Stocks.

Cold storage holdings of case eggs on September 1, according to the preliminary reports of the bureau of markets amounted to 9,586,000 cases, the largest on record for the corresponding date. The five-year average is 6,794,000 cases. The reduction in holdings during August amounted to 639,000 cases, the largest on record for that month and compared with a five-year average decrease of 364,000 cases. Prices are about 50 per cent higher than the low point of the season.

Poultry prices are holding up unusually well in view of the increase in receipts at the leading markets as compared with preceding years and the prospect of a heavy run during the fall and winter months.

Butter Market Strong.

Butter prices advanced again early last week as hot weather continued to cut down production as well as to reduce the quality of arrivals and the percentage of fancy butter. Undergrades were not so scarce, however, and the result was a wider range of values. Storage holdings are decreasing, the decline at the four leading markets in the first seven days of September being over 1,000,000 pounds, whereas the decline throughout September a year ago was less than 200,000 pounds. In September, 1920, there was an increase of nearly half a million pounds. Cold storage holdings on September 1 in the entire United States amounted to 112,104,000 pounds compared with a five-year average on that date of 109,350,000 pounds. During August, storage stocks increased only 8,835,000 pounds compared with a five-year average increase in that month of 12,333,000 pounds.

Prices for 92 score creamery butter on September 13 were:

Chicago, 38 1-2c New York, 39 1-2c; Boston, 39c; Philadelphia, 40c.

Cheese Stocks Below Average.

Storage holdings of cheese in the United States on September 1 amounted to 53,500,000 pounds compared with 46,635,000 pounds a year ago and a five-year average on the corresponding day of 66,191,000 pounds. Receipts have been above the average in the last month. Nevertheless, the increase in storage holdings was only 7,213,000 pounds compared with a five-year average increase during August of 11,823,000 pounds. Cheese prices eased slightly toward the latter part of last week as buyers are only taking small amounts and trade was comparatively inactive. Sales to the south usually are of large volume at this season, but the strike, weather conditions and lack of prosperity on the part of southern farmers have prevented the usual fall increase in demand from this section.

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Range of Live Stock Prices, Week Ending Sept. 13

CATTLE.	Chicago.	Spokane.	Portland.	N. S. Lake.
Choice, prime heavy steers (1100 lb. up)	10.40@11.35			
Good heavy steers	9.15@10.40			
Medium heavy steers	7.90@ 9.25			
Common heavy steers	6.15@ 8.00			
Choice, prime light steers (1100 lb. d'n)	10.65@11.10			
Good light steers	9.00@10.15			
Medium light steers	7.75@ 9.10	6.50@ 7.50	6.75@ 8.00	6.50@ 7.25
Common light steers	6.00@ 7.90	4.00@ 6.75	4.00@ 7.00	4.50@ 6.75
Common to choice butcher heifers	4.75@ 9.35	3.50@ 6.00	3.50@ 5.75	3.50@ 5.50
Common to choice butcher cows	3.65@ 8.10	2.75@ 5.00	2.75@ 4.75	2.75@ 4.50
Bologna and beef bulls	3.65@ 6.35	2.75@ 4.50	3.00@ 4.00	2.00@ 3.00
Canners and cutters, cows and heifers	2.70@ 3.65	1.50@ 2.50	1.50@ 2.00	1.50@ 3.00
Canner steers	3.75@ 4.50	3.00@ 3.75	3.00@ 3.50	2.75@ 3.75
Medium to choice light veals	11.00@12.75	7.00@ 8.50	8.00@10.00	7.50@ 8.50
Common to choice heavy veals	4.25@ 7.50	4.00@ 7.50	4.00@ 7.00	
Com. to choice feeders (1000 lb. up)	5.65@ 8.00			
Com. to choice feeders (750-1000 lb.)	5.50@ 7.75	3.50@ 5.00	4.00@ 5.[illegible]	4.50@ 5.50
Common to choice stocker steers	4.35@ 7.25			
Com. to choice stocker cows, heifers	3.25@ 5.25			
HOGS.				
Top of market	9.80	10.50	10.25	9.00
Bulk of sales	6.80@ 9.70	9.25@10.25	9.00@10.00	8.00@ 8.75
Heavy (250 lb. up)	7.90@ 9.30	8.50@ 9.[illegible]	8.00@ 9.00	
Medium (200-250 lb.)	8.75@ 9.80	9.25@10.25	8.75@10.00	7.75@ 8.50
Light (150-200 lb.)	9.30@ 9.80	9.50@10.50	9.75@10.25	8.25@ 9.00
Light lights (130-150 lb.)	8.50@ 9.50	9.25@10.25	9.75@10.25	8.00@ 8.75
Smooth packing sows (250 lb. up)	6.75@ 7.75	7.00@ 7.50	7.00@ 8.00	7.00@ 7.50
Rough packing sows (200 lb. up)	6.25@ 7.25	6.50@ 7.00	6.00@ 7.00	6.50@ 7.00
Medium to choice pigs (130 lb. down)	7.50@ 9.25	8.50@10.00	9.75@10.00	
Stock pigs		8.50@10.00	9.75@10.00	8.50@ 9.25
SHEEP AND LAMBS.				
Medium to prime lambs (84 lb. d'n)	11.75@13.50	9.00@10.00	9.00@11.00	9.50@11.00
Culls and common lambs	8.00@12.00	6.00@ 9.00	5.00@ 9.00	6.00@ 9.50
Medium to prime yearling wethers	8.25@11.00	7.00@ 8.00	6.00@ 8.00	6.00@ 7.50
Medium to prime wethers	5.50@ 8.50	6.50@ 7.50	5.00@ 7.00	4.00@ 5.50
Medium to choice ewes	3.00@ 6.75	3.00@ 6.50	3.00@ 5.00	3.00@ 4.00
Culls and common ewes	1.50@ 3.50	2.00@ 3.50	2.00@ 3.00	2.00@ 3.00
Full-mouth to yearl. breeding ewes	4.50@11.50			
Feeder lambs	11.50@13.00	6.00@ 7.0[illegible]		

Kittitas Fair Larger, Better

High Class Exhibits and Good Weather Draw Crowds

By RALPH ERSKINE.

The grounds of the Kittitas county fair at Ellensburg had been greatly enlarged to make room for the new barns and pens which were necessary to accommodate all comers for this year's event, which took place September 14, 15 and 16. Two new hog and sheep barns had been erected and a double-sided shed set up for the beef classes. While the departments inside of the main exhibit building were not any larger in numbers of entries than they were in past years, there was a noticeable advance in the quality of almost every division.

The women's department boasted of a higher class of fancy work and home-made pieces, which were displayed in a very unique manner. The poultry show had about the same number of entries, but the birds had been picked over more carefully than ever before. The garden, grain and hay exhibits were all high-class and were representative of the main agricultural products of the county.

Good weather prevailed throughout the whole week and helped to swell the gate receipts and to insure a successful crowning ceremony of the country-wide elected queen of the fair, which was the main part of the program on the first night. Among the noteworthy visitors who attended during the three days were Governor Louis F. Hart and Congressman John W. Summers, both of whom were in town attending the good roads convention.

On the night of the second day of the fair a banquet was held in honor of the boys and girls' club members, who were addressed by prominent farmers and business men. The live stock parade through the center of town was a feature of the last day and all animals that could be led were taken out in the long line. Motor vehicles of all shapes and sizes were included, many of which were constructed for the occasion. The four-horse teams and prancing stallions, however, attracted the most attention.

The dairy show had a larger number of Jerseys than any other breed, there being 50 head in all. They came from the Nichols & Plunket, Leo Stevens and R. W. Woods herds. The special prize of champion bull of all breeds went to Nichols & Plunket on Majesty's Cowslip Noble, an outstanding individual with an excellent top line and a perfect conformation.

Loretta P. Olga 2d of the same herd won senior and grand champion female honors. She was a neat little 2-year-old with a typical Jersey head. The junior champion female was as equally outstanding as was the grand champion bull. She was a 9-month-old heifer, Precious Little Pearl, owned by Marie Tornay, a member of the calf club, who entered the calf in the open class.

There were 12 head of Holsteins from the H. E. Hansen herd who took all awards in the classes filled. His herd sire, a son of Judge Segis, was placed as junior champion. In the Guernsey classes Fred C. Drake won champion female on Princess Cathleen of Catherbury, a 4-year-old animal of splendid conformation. The junior champion bull ribbon went to the W. H. Jackson herd on Chicona Prince, a junior yearling. Drake, however, had grand champion, on Nanum Chief of Orchard Hill, an animal that traces back to the Dr. Willis herd at Redmond.

A new feature of the beef cattle department was the showing made by the Kittitas Hercules Shorthorn Baby Beef club, which brought out 15 animals, three of which were fitted by girls who won five of the first places. Nora Waite of Ellensburg had the champion steer and the champion pair of fat animals. In the class of individual steers she won second, Jessie Woodhouse third and Willie Waldron fourth. Harry Waldron took second in the pair of steers, with Meta Bennett third and Jessie Waldron fourth. There are eight members in the club, all of whom purchased their animals from the Hercules stock farm at Sprague.

In the regular classes of beef Shorthorns Roy Bowers took senior champion on Headlight, a 2-year-old polled bull. The junior and grand champion went to the Henry Wager bull, that was only 10 months old. He had just been purchased from Day & Rothrock to head the herd of beef animals.

J. Alva Bull of Ellensburg had the senior and grand champion female, Red Daisy, a 3-year-old, with a splendid frame and good udder. Thomas McKeman of Ellensburg won first on a junior 2-year-old heifer, Sweet Maid.

There were 24 horses in the show, which included many purebred animals, although grade mares were allowed to compete as farm work teams. The champion stallion of the show was the steel-gray Belgian owned by the West Side Horse club and is being cared for by Leo Stevens. A Clydesdale stallion owned by George Snodgrass won first in his class. Mr. Snodgrass also was the heaviest exhibitor of grade mares. L. J. Richards won first on geldings and first in the Shire mare and stallion classes. George Wilson of Rocklyn judged the horses.

There were some good Chester White classes, part of which were shown by the club boys of the county. The first and champion boar was Big Dollar, a 600-pound animal from the Steve Woodhouse farm. The champion sow was also in this herd, Yakima Queen, a 2-year-old from the Ames herd in the Yakima valley. The champion fat barrow of the breed was another one of the Woodhouse animals.

In the boys and girls' club classes Ward Rugh won first on his pen of four barrows under 6 months, while the first sow and first boar of the same age were shown by Leonard Newman of Thorp. Leonard took eight firsts on his herd, which included the herd classes.

The champion Berkshire boar was Lassier Leader, owned by Broadview Pig club. The champion sow was Silver Brook Beauty 2d, owned by Irwin Mills of Ellensburg. The best herd, a boar and three sows, was owned by Irwin Mills, a club member who showed in the open class, as well as the club entries. Helen Wilson, also a club member, won in the produce of sow class. Harold Wilson had the best boar pig under 6 months and Helen Wilson had the best gilt of the same age, in club classes.

Elmer Smith of Thorp had the only entry of Poland Chinas, of which there were four boars and a gilt.

In the sheep barns, the Hampshires had the greatest showing, part of which were shown by the club members. The champion ram lamb was one of Rowland Newman's entries, while the champion ewe was shown by Ernest Wilson. The first pen of lambs was won by Simon Wipple & Sons, while Ernest Wilson took second place.

In the club awards Rowland Newman won first on ram under 1 year and Clarence Wipple won on ewe of the same age and on ewe over 1 year.

Fred Wipple was the only exhibitor of Shropshires, having two pens of lambs.

UTILIZES HIS STRAW.

There is very little straw that goes to waste on the Pete Omdahl farm, near Sedro-Woolley. He has a 200-ton straw shed, into which all of his straw is stacked as it is threshed. Three sides of this building are boarded in, while one end is left open and serves as a feeding shed, where the entire herd may stand and eat what straw they desire during rainy weather. Mr. Omdahl feeds a quantity of hay, and believes that access to straw is beneficial to all mature animals. He finds that they consume a large quantity of this feed during wet weather.

TUBERCULOSIS TESTING.

Nearly 400 applications have been received by O. V. Patton, county agriculturist, who is directing the work of making tubercular tests of dairy cattle in Spokane county, in charge of L. V. Hardy of the United States bureau of animal industry. Applications for the test should be made to the county agent's office, courthouse, Spokane.

Are You Satisfied With Service Rendered by FARMER Advertisers?

As readers of THE FARMER know, this magazine aims to keep its advertising columns thoroughly reliable by excluding all announcements of doubtful character. It exercises such care in this respect that it is seldom a complaint is received. However, there is always the possibility that there may creep into the columns an advertisement of some firm which does not give entire satisfaction in its dealings with some subscribers.

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Oil Light Beats Electric or Gas

Burns 94% Air

A new oil lamp that gives an amazingly brilliant, soft, white light, even better than gas or electricity, has been tested by the U. S. Government and 35 leading universities and found to be superior to 10 ordinary oil lamps. It burns without odor, smoke or noise—no pumping up, is simple, clean, safe. Burns 94% air and 6% common kerosene (coal oil).

The inventor, W. W. Johnson, 31 N. Fifth St., Portland, Ore., is offering to send a lamp on 10 days' FREE trial, or even to give one FREE to the first user in each locality who will help him introduce it. Write him today for full particulars. Also ask him to explain how you can get the agency, and without experience or money make $250 to $500 per month.—Adv.

FROM a mountainous section of Colorado, especially hard on tires because "the roads are always full of rocks," comes the following testimony:

"One of our dealers drove in here recently from the country with four Red-Tops on an old Ford car, which he said had been on for over two years and he had given up figuring how far they had gone. 'The only trouble with the Red-Top,' he said, 'is if you ever sell a man you never get a chance to sell him again because the tire never wears out'."

Where the roads or the loads break down ordinary tires quickly, there its extra ply of fabric and the extra heavy tread place the Red-Top in a class by itself.

There's a Fisk Tire of extra value in every size, for car, truck or speed wagon.



Summer Fallow

Some Stevens County Results

"Where it is not possible to irrigate for grain in this county it is imperative to summer fallow," says Henry J. Plumb, who is county agent in Stevens county. Mr. Plumb adds that the importance of summer fallow lies in the fact that it conserves moisture, that by it nitrogen is liberated in the soil and made available for plant growth, that it enables the farmer to kill all the weeds and thus have the ground free from plant growth, which will compete for moisture with the grain crop.

Mr. Plumb backs up his statements by results obtained by farmers in Stevens county.

James M. Newhouse of Ford, Wash., is not only one of the best farmers in his community, but he is one of the best in Stevens county, from the standpoint of wheat growing. This year's crop is eloquent tribute to Mr. Newhouse's farming—a crop of Fortyfold wheat of outstanding quality, which will yield, conservatively figured, from 35 to 40 bushels per acre. When I visited Mr. Newhouse's farm early last spring he was plowing the ground for this wheat with a tractor, putting the plows down to a good depth and doing an excellent job of plowing. The harrows followed the plows immediately and thus began the cultivation of the summer fallow for this year's excellent crop. Later on in the season I was there and he had just finished cultivating the summer fallow with a weeder, and Mr. Newhouse told me he cultivated throughout the summer, at all times maintaining a dust mulch and never allowing a weed to even make a start. One can realize more fully the value of this practice to Mr. Newhouse when he is told his was practically the only crop in his neighborhood. His neighbors had as good land, but their tillage was faulty.

William T. Rader of Chewelah, who farmed the Paul Sheshetay place, an Indian-owned tract of land, reports results that are even more sensational and prove the value of summer fallow even more. Planting hybrid 128 last fall in a field part of which was summer fallowed and part of which remained in stubble throughout the summer (he stubbled wheat in on the stubble land) he reports a yield of 40 and a fraction bushels per acre on the summer fallow and 20 bushels per acre on the stubble ground. Ample evidence this, as there could be no other difference in the ground, as it was all in the same field and the same type of soil. It was all sown out of the same seed, therefore the seed could not account for it. We must give the summer fallow the credit for this difference in yield of over 100 per cent.

John Swan of Meyers Falls, whose farm lies about half way from Colville to Meyers Falls, had conspicuous success with his wheat this year, having the only crop between these two towns. It was hybrid 128 on summer fallow and yielded at the rate of 35 bushels per acre.

Herman Stone, a very good farmer of the Kelly Hill region, had very good results with summer fallow, his wheat yielding 10 bushels more on his summer fallow than it did on the spring-plowed ground.

E. G. Kohlsedt, near Colville, got 42 bushels per acre from his wheat on summer fallow.

Kjelland Sells Herd

The entire herd of Holsteins owned by H. O. Kjelland of North Bend, Ore., was sold at auction at the Grays Harbor county fairgrounds, Tuesday, the fourth day of the fair. There were 45 animals listed in the catalogue, and more than half the number were bid off to buyers from out of the county.

The sale brought a total of $6372, which made an average of $154. This figure was considered a good mark although many of the animals might have brought more. The top animal was Belle Sadie Vale, a 6-year-old cow, a daughter of Chimacum King Korndyke Sadie Vale. She is out of Chimacum Belle Fayne that traces back to Segis Korndyke Johanna De Kol. The animal was bid off to Thomas J. Owens of Kirkland for $370.

There were 16 head of the animals that were purchased by dairymen of Grays Harbor county, while 14 went to George Krause of Auburn and Thomas Owens bought nine. Charles E. Fisher of Thomas purchased three of the animals.

A list of the animals and their buyers are as follows:

Females: May Skylark Ormsby, $105; Canary Joh. Dakota Ormsby, $110; Buttermaker Colantha Queen, $105; Lady Bessie Joh. Ormsby, George Krause of Auburn, $110; Pauline De Kol Posch Gem., C. Weiks, Little Rock, Wash., $200; Snowflake Dakota Ormsby 2d, $105; Cornucopia Bessie 2d, Krause, $125; Belle Sadie Vale, $370; Bos Sadie Vale, Thomas J. Owens, Kirkland, $300; Fancilla Aaltje Surprise, $165; Dakota Marie Kaan 3d, Rufus H. Arland, Montesano, Wash., $155; Kaan Marie of Dakota, Krause, $50; Dakota Marie Segis Pontiac, Arthur L. Brown Hoyuiam, Wash., $175; Kaan Marie Barbetta, Krause, $120; Daisy Johanna Segis De Kol, Robert Thomason, Hoquiam, $135; Canary Johanna Dakota Ormsby 2d, Krause, $155; Pearl Grace De Kol, Thomas Owens, $300; Glenview Black Queen, Louis Larson, Elma, $160; Pleasant Grove Maid Colantha, Krause, $180; Pleasant Grove Beets Colantha, Ed Cavett, Oakville, Wash., $160; Countess Elgin Belle Pet 3d, Owens, $255; Ormsby Skylark Heng, Weiks, $180; Heng. Dakota Ormsby De Kol, Krause, $105; Terrace Hall Belle Burke, Krause, $105; Terrace Hall Colantha Pontiac, Cavett, $225; Terrace Hall Colantha Mercedes, Krause, $105; Terrace Hall Colantha Mercedes, Brown, $165; Kaan Marie Wa Wa Segis, $105; Krause Johanna Ormsby Burke, Owens, $160; Terrace Hall Lady Ormsby, D. A. Watson, Markham, Wash., $170; Terrace Hall Marie Burke, Arthur Benson, Hoquiam, $150; Terrace Hall Colantha Ormsby, Weiks, $155; Terrace Hall Johanna Ormsby, Owens, $200; Terrace Hill Skylark Surprise, A. L. Soule, Welma, $155; Terrace Hall Burke Colantha, Weiks, Little Rock, $160; Terrace Hall Sadie Vale Burke, Owens, Kirkland, $190; Terrace Hall Bessie Burke, Owens, $200; Terrace Hall Sadie Burke, Owens, $190.

Males: Terrace Hall Kaan Burke Segis, C. E. Fisher, Thomas, Wash., $40; Terrace Hall Burke De K., Fisher, Thomas, Wash., $100; Terrace Hall Canary Ormsby 2d, Charles Fisher, Auburn, $120; James Carstans & Sons, Elma, consigned an unnamed bull calf, $100, to C. E. Fisher, Thomas, Wash.

Likes Alfalfa Cover Crop

H. M. Gilbert, well known in the fruit industry of the Yakima valley, is using alfalfa as a cover crop and declares that he is through with clean cultivation and will never go back to it. There are, however certain difficulties to be overcome in this cover crop system. Mice, which inevitably come in where alfalfa is used as a cover crop, have to be fought vigorously with poison. Then there is the difficulty which the use of the cover crop entails in irrigating, which Mr. Gilbert overcomes by deeper ditches. He uses fertilizers extensively, having spent $5000 for that purpose this year. He favors sheep manure.



The New Oakland Six

The 1923 Oakland is Indeed The Ideal Farm Car

What other car, at anywhere near its price, even approximates the value of the New 1923 Series Oakland Six.

Visit an Oakland salesroom and examine its superior worth. Go over it point by point and your own sound judgment will convince you that here is automobile value without equal.

Note particularly its powerful, quiet, over-head valve, six cylinder engine, so good that *we guarantee its performance in writing for 15,000 miles.* See the unusually roomy body; the deep-cushioned, genuine leather seats. Examine the sturdy chassis construction—the deep frame, long buoyant springs, the size and strength of every moving part.

Consider the many unusual refinements that make country driving safer and more pleasant—the new dimming device, mounted on the steering wheel and controlled by the thumb while driving; the improved carburetor with automatic heat control; the door-opening curtains; the cowl ventilator and many other similar features.

These unusual features, coupled with the known high quality of its construction make this 1923 Oakland an ideal farm car—a car powerful enough to negotiate the roughest roads and the highest hills; sturdy enough to keep running year in and year out with a minimum of service attention; roomy enough for quick trips to market, loaded with grain or produce; economical enough in first cost and in maintenance to be practically indispensable.

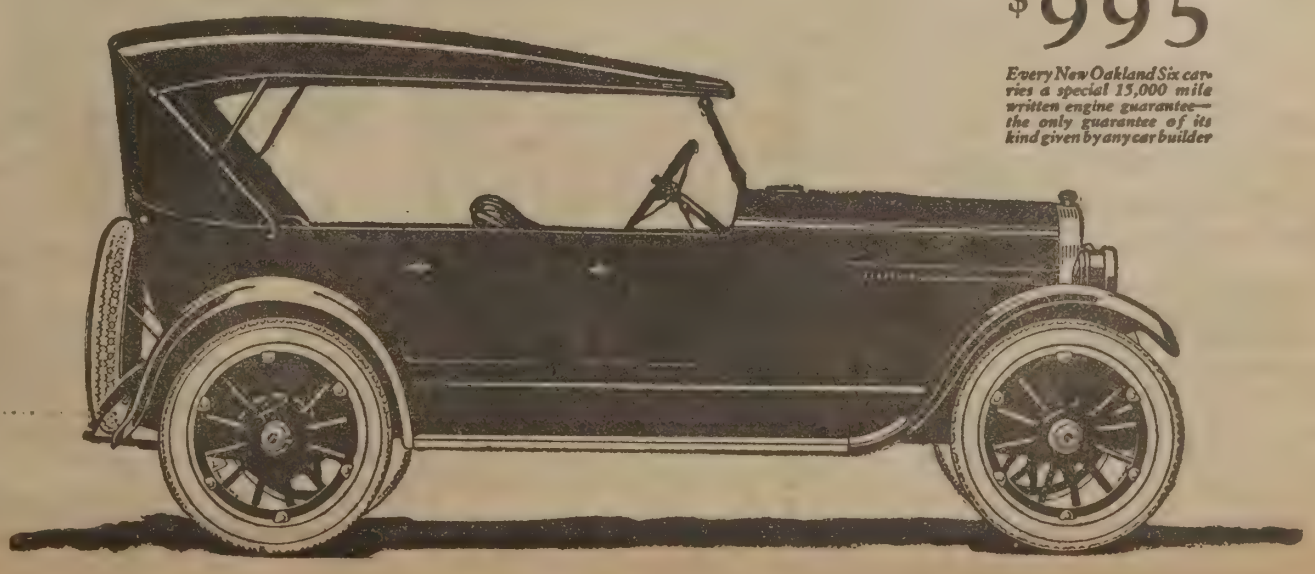
The more carefully you examine this New Oakland, the more certain you will be to buy it—not upon our word, but because of its own high quality, quality almost unbelievable in a car that is sold for only $995.

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Every New Oakland Six carries a special 15,000 mile written engine guarantee—the only guarantee of its kind given by any car builder



LIVESTOCK AND DAIRY

Making Silage

By A. B. NYSTROM.

Will you please tell me if it would be possible to cut up green corn fodder with an ensilage cutter and blow it into a barn, mixing a little hay with it, and have it keep, or would one be likely to lose their feed from spoiling and stand a chance of burning the barn by the fodder heating?—E. L. C., Kettle Falls, Wash.

The secret of making silage is to have all the air excluded, so that mold will not have a chance to grow. Mixing green corn fodder with dry hay will not do at all unless they were chopped up together, and tramped well into a silo. It would be necessary also to add water sufficient to insure perfect settling with no air pockets. Mixing the hay and green feed in a loft as you suggest would be sure to cause a spoiled feed, and may even cause spontaneous combustion.

Increased the Butterfat

Eight years ago Hans Thompson of Arlington purchased a Guernsey bull that was 31-32 purebred and he noticed that there was a decided rise in the fat content of the milk from the bull's daughters.

"In checking up our records in the county cow testing association," said Mr. Thompson, "we found that one of the old cows had a fat record of 351 pounds, while her daughter has a 206-pound production record as a 3-year-old. Another mature cow has a 338-pound record, while her daughter produced 361 pounds as a 2-year-old. With foundation stock of this kind in the herd I will raise all the heifer calves and get good cows as a general rule. All of the cows in the herd will average 300 pounds and more."

In 1912 this herd averaged 265 pounds of fat per cow. In 1917 the average had increased to 295 pounds and in 1921 average production per cow had reached 341 pounds. This increase is due largely to the use of a good herd sire.

Much Depends Upon Feed

One of the neatest Jersey herds to be found in Clarke county is that of the Stickney Brothers, northwest of Vancouver. While this is entirely a high-grade herd, with the exception of one purebred heifer, there is very little about any of the cows that would indicate they are not all registered animals.

All of the cows show a distinct Island type, and there is no animal in the herd that does not show the result of good feeding and attention. There have been three purebred bulls used on this herd in the last 15 years. Five of the original cows are still in the herd, and are still producing a good flow of milk. One cow, the grandmother of the herd, has 25 descendants that are now milking.

Both of the Stickney Brothers are careful feeders, and believe in giving all cows as much as they can handle while they are milking. "Much depends on the feed that a cow gets at the time of her first freshening," said one of the boys.

There is no manure wasted, since it is all stored under a manure shed, as it is wheeled from the barn daily. The shed, which measures 24x40 feet, was erected at the cost of $50, this being for lumber and other material only, all work being done by the owners themselves. This shed will hold the manure for the entire winter, provided too much bedding is not used. It is applied on the fields with a spreader at any time when the ground is not too soft.

VETERINARY

By DR. S. B. NELSON.

Dropsy.—What do you recommend for dropsy among cattle and how does it act on them? R. J.

A true dropsy is caused by weakness of the heart, kidney trouble or difficulty with the liver. You will sometimes find good results from giving sulphate of iron, one-half teaspoonful on the feed, for a number of days.

Leaky Teats—I have a cow that has leaky teats. Is there any remedy for this? J. M. I.

Try wrapping adhesive tape around the end of the teat. Use the type that is known as the electric tape. Tie it just tight enough to stop leaking, but not sufficiently tight to stop circulation. This may cause sufficient irritation and swelling so that the leakage will gradually be stopped.

Proud Flesh.—I have a 4-year-old colt that got her hind foot cut in barb wire and I thought it was getting along all right, but now there is proud flesh in it. What is best to do for it? J. B.
White Bluffs, Wash.

Probably the best way to remove the proud flesh is to use actual cautery with a hot iron, burning down the extra tissue, but not injuring the skin lining. After this use an astringent ointment, such as the benzoated zinc oxide ointment.

Horse Breathes Hard.—I have a horse that breathes hard and also makes a whistling sound. She also coughs a great deal and has a gurgling sound in her throat. When I ride her for a way her hard breathing seems to go away.
Cape Horn, Wash. R. W.

It is possible that your horse has either a bad laryngitis, or an infection in the nasal passages, a lessening of the breathing space in one of them, or a combination of both. I would suggest one dram of chlorate of potash in the drinking water morning and evening, and one dram of oil of eucalyptus in an ounce capsule, which should be filled with linseed oil and given to the animal. If you are not accustomed to giving animals medicine by capsules you can not use this remedy. It is practically the only way it can be given. In lieu of it you can give two drams of turpentine in a quart of water as a drench, but it is not as good.

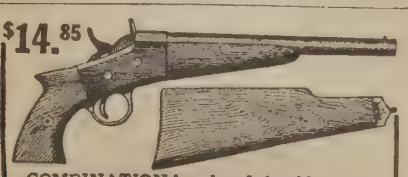
Use Salt Douche—I have a cow that had a bad udder last summer. The left hind quarter hardened and gave lumpy milk. I rubbed her and milked her frequently and she got all right until November when the other hind quarter became affected. She calved last March and has not got with calf since. She was a good milker before this trouble set in. She eats well and puts on flesh. P. P.

It may be well, because of the two difficulties your cow has, to consult a local veterinarian in order that he might give her a careful examination to see why she does not get with calf. In the meantime I would suggest that you douche her with a normal solution of salt water, using a little more than a level teaspoon of salt to a quart of water. It will take two or three gallons to douche her.

For the udder trouble try injecting her with a 2 per cent solution of boracic acid in water. Boil the water and add the boracic acid. Be sure to sterilize the teats well by dipping in tincture of iodine before inserting the tube of the injecting instrument. The instrument should be sterilized with boiling or washing out with a 10 per cent solution of carbolic acid and rinsing in boiling hot water. After the injection is made, massage the udder carefully so as to get the liquid into all parts of the udder and then milk it out thoroughly. Repeat in two or three days.


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Do Without It

When a frugal family finds its income comparatively low, the husband and wife, if of a wise and cooperative disposition, sit down at the table and figure out what they can afford to have and what they can not afford to have. They figure out carefully how much money they are going to have to spend after laying away a reasonable amount for the rainy day. Then if they discover that they can not have a new automobile, they do not buy a new automobile. If they decide they can not afford to put the new roof on their house that it seems to need, they patch up the old one for another season and make it do. If they decide that they can not have as many pairs of new shoes as they and the children could well make use of, they gather up the old ones and take them to town for repairing and save several dollars thereby. If they decide that they can not afford to keep a hired man or have the neighbor's girl come in to help the housewife with the family washing, they merely buckle down to a little harder work on their own part (if that is possible) and get along without the hired man and the hired girl.

In other words, the way to get along with the amount of money you have is to buy only those things that it will pay for. If you want to save money, do not spend all that you have or borrow some that you do not have with which to make purchases. One can not spend money and save it.

The taxpayers of this state are one big family. Unfortunately, this large family has not gathered itself about the table, figuratively speaking, to decide what it could get along without. In the main, it has purchased everything that it wanted, and dug down deep into its pockets to get the wherewithal with which to pay. It has taxed itself to the limit to raise the money. It has searched all its old clothes to see if it could not find a few more dollars with which to pay for things that it could have done without with not great discomfort. It has endeavored to shift the burden from one member of the family to the other without much success. This huge family is in a pretty mess, merely because it has insisted on having everything that it wants, forgetful of the fact that a day of reckoning is coming.

If we want to reduce our taxes, the way to do it is to quit spending. We must sacrifice some of our desires. We must get along even without some of the things that we have learned to consider necessities, but which, in fact, are not necessities. We can not shift the burden to anybody, because every taxpayer in the state is carrying a burden so big today that there is room for no addition. The only possible way of getting rid of our excessive taxes is to call a halt in public expenditures. And let us bear in mind that calling a halt, like charity, begins at home—right here in our own school district, our own road district, our own irrigation district, our own township, our own county.

Entire Family Is Interested

It is little wonder that the J. H. Quick Jerseys are doing so well when one learns that Mrs. Quick and the two boys as well as Mr. Quick himself devote the greater part of their time to the care of the animals. Mrs. Quick can be found about the barn at milking time and she knows the pedigree of any purebred animal in the herd. She can also tell what each cow tests because she attends to the testing herself.

For 20 years the Quicks have been breeding up a herd of grade Jerseys and four years ago they bought a few heifers of the St. Mawes strain. They increased the number from year to year and there are now 11 head of registered cows. The herd bull, St. Mawes Rosaire Boy, is a well-proportioned animal and only 6 years old. Mrs. Quick remarked that they had sold eight of his heifers to neighbors and there have been no dissatisfied customers.

"We have sold at least 16 grade heifers from the bull," said Mrs. Quick, "because we are trying to eliminate all but the purebred animals. There will be a number of new heifers this fall and by the time they are ready for service the new bull will be over a year old. This animal is only a 2-month-old calf from one of our herd cows and a grandson of Sophia 19th. He carries St. Mawes blood from his dam's side."

The plan of doing their own testing has been very successful in this herd and the Quicks have been able to weed out some of their heifers that have not been what they wanted to keep in the herd. On the other hand, they have been able to study the different matings and breed for production as well as type, which would be more difficult to do if the bi-monthly tests were not made.

PREDATORY ANIMALS DESTROYED.

A total of 2312 predatory animals were destroyed in the state of Washington during the year ended June 30, 1922, by federal and state agencies cooperating. In addition there were killed 245 unborn young, consisting of 228 coyote pups, 14 bobcat kittens and 3 cougar kittens. Of the adult animals destroyed 1770 were grown coyotes, 332 coyote puppies, 118 adult bobcats and 11 bears, the remainder being made up of foxes, mink, skunk, etc.

The average cost of taking each true predatory animal by Washington state hunters was $9.29, while the skins of 378 such animals were sold to fur dealers for an average price of $4.08 per skin, the proceeds being turned over to the state department of agriculture, the aggregate return being $1,547.92.

It is estimated the damage to live stock and poultry by bobcats and coyotes is $50 each per annum, while the damage by bear and cougar is estimated at $500 each per annum.

Daughters of Holstein Royalty

Two Holstein cows on whose forthcoming performances much attention will be centered—milk and butter champions in their respective states and both high in the annals of the dairy world—recently freshened and began again the daily round of producing milk. They are Segis Pietertje Prospect, world milk champion, owned by Carnation Stock farms of Seattle, and Stanhope Belle Johanna, fourth in the United States and sixth in the world, owned by H. G. Mullenhoff of Gresham, Ore. Each bore a heifer calf, Prospect's by her half brother, Matador Segis Walker, and Belle's by her own son, Segis Walker Matador Johanna. The latter bull is sired by Segis Walker Matador, a full brother to Matador Segis Walker, hence the two distinguished arrivals are closely related—second cousins, in fact. Stanhope Belle Johanna suffered from milk fever for several days after freshening early in July, hence failed to do herself justice the first month, but early in August she was producing 126 pounds of milk per day. Her owner, who expects to build his herd on the foundation of this cow's greatness, was delighted that the calf was a heifer—a fine, strong calf and the first heifer in six calves that the animal has produced. Segis Pietertje Prospect freshened early in August—too recently for any predictions as to her production. Her owners had hoped for a bull calf.

BLANTON JOINS TRACTOR FIRM.

A position in charge of the tractor department of the Hess Motor company has lured T. Y. Blanton from that of county agent in Cowlitz county, which he has occupied for about two years past. Cowlitz county was just coming to regard Blanton as permanent, after previous experience with two county agents who stayed only a few months each.

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Home of the Island Belle Grape

There are few horticulturists in the state of Washington that have not heard of the Island Belle grape. There are not many, however, who have had the opportunity to visit the home of this variety, on Stretch island, in Puget sound, in Mason county. The community is now known as Grapeview, but was formerly called Detroit. It is situated about 15 miles north of Shelton and 18 miles southwest of Port Orchard.



A general view of the Eckert grape farm and a picture of the 70-foot Niagara vine are shown above. W. O. Eckert stands in the barn door.

The W. O. Eckert farm has been producing grapes since it was first purchased by Adam Eckert in 1890, at which time he was on his way to California in search of a climate suitable for the growing of grapes. A vineyard in this vicinity showed up so well that he decided to go no further, but to locate. At that time the Concords were the only grapes known to do well in the Puget sound district and the first planting was of this variety.

One vine showed up unusually well and produced fruit that was far superior to the rest of the patch in size, color and flavor. No one could tell what this variety was, so it was named the Island Belle. That the new grape was worthy of recognition is shown by the fact that it has rapidly grown in the favor of all who have tried it and the demand for the plants has far exceeded the supply.

There are now between 8 and 10 acres of grapes on the Eckert farm, all of which are the Island Belle. The main patch is now nearly 30 years old and the vines are still bearing heavily. There is a small planting of vines which are 3 years old and will come into bearing next year.

No Trouble From Frost.

"Although the vineyard is planted on a west slope, there are a number of rows on top of the hill and thus exposed to the weather more than the others," said Mr. Eckert, "but as yet we have had no injury from freezing. Even in the coldest winters we have had no trouble and cold weather seems to have no effect on grapes in this location.

"We have a large plant fitted for the manufacture of grape juice and up until the last three years there was a good demand for this product. Lately, however, there seems to be very little demand for grape juice and we have been selling the grapes as fresh fruit. It takes more work to market the fresh fruit than it did when we were selling the juice, but we find that the Island Belle variety is a fine shipper. There is a tendency on the part of some growers to pick the fruit soon after it has colored, but the flavor does not develop until the fruit is fully ripe. It will hold up for some time after ripening and will stand being shipped better than some of the other grapes."

A Seventy-Foot Vine.

A few other varieties of grapes are grown in the Eckert vinyard, but more for home and trial purposes than anything else. One vine, a Niagara, was planted 12 years ago, next to the barn, and it has made an exceptional growth, due to the warmth that is drawn by the barn from the afternoon sun. A careful measurment of the vine would show a growth of 70 feet or more. Last year there were at least 20 baskets on this vine.

Mr. Eckert has other fruits on the farm as well as grapes, including 117 Bosc pear trees, apples and Cuthbert raspberries. The raspberries are planted in the home garden, but the apples and pears are grown for commercial crops. The King and Gravenstein apples have done particularly well, according to Mr. Eckert, and they sell well on the market. They both produce early fruit and are easy trees to take care of in an orchard.

Walnuts Do Well.

There are 10 English walnut trees which have been planted near the house. These produce a crop of nuts every year and the trees seem to thrive well under local conditions. One of the oldest trees has a spread of about 50 feet.

The dwelling house is located on a slight rise on the edge of the bank, overlooking the sound. There is an excellent view from this point and the shores of the opposite side of the inlet, which is a part of Pierce county, can be seen. A boat landing has been put in and affords a convenient outlet from the farm, but most of the travel is by way of a bridge built from the island to the mainland.

Would Organize to Cut Taxes

"The most essential thing in the fight for tax reduction is to organize and unite the taxpayers," says a statement issued by the State Federation of Taxpayers' Associations.

"The high tax rate is the result of indifference and carelessness on the part of the taxpayer. Whenever taxpayers generally inform themselves closely on legislative matters; when they study the methods of conducting governmental affairs; when they know as well as public officials how public funds are spent, and when they demand retrenchment, economy and wisdom in handling such funds, then the tax burden is going to be materially lessened.

"The principal function of the State Federation of Taxpayers' Associations is to organize taxpayers in each section of the state and then to coordinate the work of these local tax organizations. Seventy-five per cent of all money raised by taxation is expended for local purposes in conducting county, city and district government; hence, the greatest cut in taxes must be made in local expenditures.

"If the taxpayers remain unorganized they will continue to pay higher taxes each year, with the ultimate result of confiscation by taxation.

"Taxes can be reduced and will be reduced whenever the taxpayers demand it, if the demand is backed by sufficient organized voting strength and based upon knowledge of public needs. The taxpayers must first exercise good business judgment and then require public officials to conduct public affairs along sound business lines."

Pump for Farm Use

By L. J. Smith, Head Department of Agricultural Engineering, W. S. C.

We are on an 80-acre ranch and have to put in a pump, but don't know just what kind. We want one that can later pump water to a pneumatic tank. Well is about 30 feet deep. P. J.
Yacolt, Wash.

It depends a great deal upon what method of pumping you intend to use. If you are going to use a windmill for power I would buy a heavy type, submerged cylindered, well windmill, double acting force pump, which can be secured from any of the standard pump companies.

If the pump is going to be operated from engine power and by the use of a belt, then you need a regular standard working head. Some of these are equipped both for belt and windmill and hand power. These are connected to a cylinder just above or at the surface of the water. Many of the standard pump companies have all this equipment.

Utilizing Drainage Water

Utilizing drainage water for irrigating an additional 35,000 acres on the Wapato and Satus projects is part of the plans for reclamation on the Yakima reservation, according to L. M. Holt, supervising engineer. With that idea in view he is keeping close check on the discharge of the present drains and finds that the total at present is 1000 second feet, and that the total discharge for the month of July was 55,000 acre feet.

This means that the drainage canals on the reservation are delivering two-thirds as much water as is being diverted to irrigate the Wapato project. The peak of diversion at Union Gap is only about 1500 second feet, and only about a third of this amount is utilized in growing the reservation crops. The remainder is percolating through the light soil into the gravelly subsoil and is being carried away by the drains.

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Oakesdale Fair

Promises to Be Better Than Ever

The Live Stock and Farm Products association of Oakesdale will put on its fair this fall, October 6 to 7.

The Oakesdale fair was begun in 1907 and had a satisfactory growth until 1913 when it was discontinued during the war. It has now been revived. The object of the fair was to demonstrate local production, to enhance local value, to stimulate increased production and to furnish a means of construction among the rural and town people.

Prizes are being offered in all departments, and group displays will be featured prominently. Much expert stock is raised in the vicinity of Oakesdale and a display of real merit is expected.

A. G. Woodward is secretary and manager. The president of the association is R. V. Perringer of Belmont. S. R. Warwick is vice president R S Comiges, Thornton; Harry Goldsworthy, Rosalia; Burt Ellner and W R. Walker of Oakesdale, are directors, together with the president and vice president.

The department heads of the fair are as follows:

Horses and mules, Horace Comiges; cattle, J. F. McCroskey; sheep and swine, H. E. Kendall; poultry, W. H. Jones; grains and grass, Verne Corlette; fruits and vegetables, F. H. Brown; dairy, culinary and canned goods, Mrs. Nance and Mrs. Hansford; fine arts, Mr. E. S. Hawford and Mrs. H. N. Whitelaw.

The fair welcomes exhibits from any and all interested parties This is the only all-round fair of territory including Rosalia, Thornton, Garfield, Tekoa, Farmington and Latah.

Among the entertaining features will be an address by Dr. E. O. Holland, president of the state college of Washington, on Friday evening.

Adequate facilities for display of exhibits will be provided and the town is ready to welcome a large number of visitors.

The Washington Farmer is glad to make this announcement of the revival of the Oakesdale fair. It has confidence that it will more than live up to its former reputation.

Mason County Crops

"I find it a convenient method to grow oats and vetch together and thresh them for seed without making any attempt to separate them," said Frank Binns of Shelton, Mason county, to a representative of THE FARMER. "If the grains are in the right proportion to be seeded for hay or silage, it is an easy matter to dispose of all seed of this kind.

"This year there is some winter wheat mixed with the seed, but it does not hurt the mixture for a hay crop. The oats is the gray winter variety, while the vetch is both the winter variety and common vetch. About 20 per cent of the mixture is vetch. When seeding for hay, I like to seed about 125 pounds of the mixture to the acre."

Mr. Binns has never found it necessary to inoculate the soil for a vetch crop, but, on the contrary, says he finds that it makes its best yield on new land or on land that has just been manured. This, he says, may not be due to the soil bacteria, but it is very likely that some of the essential minerals are more abundant in the new soil. The supply of potash in the soil may be depleted to a great extent after the second or third year and thus make the difference in the yield.

"There is very little spring wheat planted on these upland soils in the county," said Mr. Binns. "I have seen some spring wheat planted in the fall, but it is hard to get it to come through the winter in the best condition for growing. The winter varieties all do well and will get a good start if seeded early enough in the fall.

"There have been times when we could not get winter grain seeded and we have had to depend entirely on spring-seeded crops, but they never produce as well as those seeded in the fall and allowed to grow all winter. Last fall I planted a small acreage of winter and it outyielded all the other grains, although they were all below normal this year.

Rye a Profitable Crop.

"Another crop that should be tried more in western Washington is rye. There are very few farmers who will give rye an even chance with other grains. They will plant it on ground that is either too dry or not suited to wheat or other crops. They seldom seed it on first-class ground.

"I had an interesting experience with a crop of rye and it has demonstrated to me that rye should have a place in the rotation plan of any farm. There was about three-quarters of an acre that I set aside for a crop of winter rye and I seeded it late in the fall. It came through the winter in fine shape and I began cutting it for the two horses and the herd bull, feeding it as green feed.

"These three head were fed from the middle of May until the first of August, from this patch alone and all the animals proved to be in excellent condition when we started to feed hay. I could not begin to feed this many animals on the same amount of land if it had been in pasture and it shows the value of a soiling crop if you can afford the time to cut some every day. There was, however, a small amount of vetch in the ground which had come up from seed which was lost from harvesting the previous crop. This goes to show that the two grains will make a good combination for pasture or soiling crops."

There are about 60 acres of land on the Binns farm and the greater part of it is planted to grain and hay crops. A small acreage is held each year for cultivated crops, such as potatoes, root and garden vegetables, in order to afford a rotation and make the best use of the fertility. Mr. Binns also finds it convenient to keep a few head of cattle to clean up the stubble land and he is breeding his milch cows to a Shorthorn bull in order to obtain a herd of grade beef animals, which he believes will pay best under the conditions on his farm.

TRANSPLANTS CORN.

A. E. Johnston of Gig Harbor finds that he can get corn to mature a week or two earlier if the seed is planted in pots in the house and transplanted after all danger of frost is past. Corn will respond to transplanting as well as will cabbage or other such crops, according to Mr. Johnston, and it should be set out in this manner by more home gardeners who wish to obtain an early maturing patch of corn for summer use.

Registered Herd

Should Be Acquired Gradually

By DON G. MAGRUDER.

A dairyman should, as soon as possible, buy one or more good registered dairy females and work gradually into a registered herd. However, there are some qualifications to be followed before entering the registered business. If you have had enough successful experience with a dairy herd that your losses from the common ailments of dairy cattle are reasonably low and if you have been in the habit of growing your heifers out well and getting reasonable production from your cows, according to their ability to produce, then go in for registered cattle. I do not say that you should not have registered cows unless you have these qualifications, but I do say that it will pay you to work gradually into a registered herd if you have these qualifications.

Even if you never sell a single male for breeding purposes, you will in the long run be ahead of what you will be with a grade herd.

You will get more profitable production on the average from the off-spring of your registered cows than from those of your grade cows because of the breeding back of them. The very fact that a cow is registered is a good evidence that excellent sires are in her ancestry. As a rule much better sires are used in registered herds than in grade herds. Furthermore, the females are culled closer in registered herds than in grade herds. It is too often true that a breeder sells a cow for breeding purposes to some careless buyer when she should go to the block, but the owner of a registered herd is more likely than the owner of the grade herd to know accurately the production of his individual cows and to get the poor ones out of his own herd. I doubt very much if the owner of registered cows is any more likely than the owner of grades to sell cull cows for breeding purposes instead of sending them to the block. Anyway, breeders of registered cows can not keep all of their good ones and you can get the good ones if you are careful in your buying.

You will not only get more profitable production from your herd as the registered heifers come on, but your herd will increase rapidly in selling value. Surplus registered females will sell for more than grades and when you finally decide to disperse your herd, your estate will be much greater if the herd is registered than if it is composed of grades.

The only expense which you will have to charge up against this registered herd, other than against a good grade herd will be the difference between the cost of your registered foundation females and the cost of grade females which would return you the same immediate profit. The cost of registering the heifers as they come on would amount to practically nothing compared to the value of the herd and the increased taxes are comparatively slight.

You need not count on the sale of breeding males, but any man can expect to sell some breeding males as his reputation as a breeder becomes established.

FOR FUTURE USES.

Take your notbook to the fair.



Costs Less by the Month and the Year; Does Better Work on the Farm

The Hupmobile record in any neighborhood shows what a good business proposition this car is.

Costs by the month or the year are lower—proven by the fact that large corporations operate business fleets of Hupmobiles in preference to lighter cars which cost less to buy.

The Hupmobile makes fewer trips to the repair shop. It misses fewer days at work. It goes farther on tires.

Invariably, the Hupmobile record is a story of continuous savings, that amount to actual earnings.

There is no speculation about the Hupmobile.

From first to last, it is a good investment for the farm.

The Beauty, the Comfort and Luxury of the Hupmobile, and its Driving Ease, Win a Woman's Heart

Touring Car, $1150; Roadster, $1150; Roadster-Coupe, $1335; Coupe, $1635; Sedan, $1785. Cord Tires on all models. Prices F. O. B. Detroit—Revenue Tax Extra

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POULTRY AND RABBITS

Questions Answered

By W. D. BUCHANAN, Poultry Specialist, State College of Washington.

Please tell me does the sodium fluoride dip affect the meat of fowls for table use?
Riverside, Wash. MRS. H. D.

Sodium fluoride will not affect the meat of fowls for table use unless they are used within a week after they are dipped. If used earlier than this they should be thoroughly washed. But there is no need of dipping birds that are intended for table use within a week, provided, of course, that they are not allowed to spread lice among fowls that are dipped.

NEED SEPARATE PENS.

I have about 120 Rhode Island Red pullets that had free range and now I must shut them in pens. They are 2, 3 and 5 months old. Would you advise me to put each group in a separate pen?
Concrete, Wash. D. R. H.

It would be much better to keep them in separate pens, as the 2 and 3 months old pullets should not be getting as much protein as the 5-month birds. After they are mature they may run together, provided, of course, that they are not crowded. If possible, let them have free range till they start to lay.

MAY HAVE TUBERCULOSIS.

We are losing our White Leghorn hens from some cause which we are unable to discover. They seem to be in good health until a few days before they die, when they begin to go lame and lose flesh. They eat good and do not appear to be sick in any way except that their combs turn dark. When they die there is a yellow fluid runs from their mouths. Will you please tell me what to do for them? J. L. A.
Deer Park, Wash.

I am unable to diagnose accurately the trouble in your flock. Hens do not lose much flesh in a few days, hence they must be ill before you notice them. If the hens get light, then lame and the comb shrivels and turns a dirty gray, I would suspect tuberculosis. If, however, the comb does not shrivel, but merely turns black and purple, and the hens get weak instead of lame, I would suspect that they are crop-bound or are suffering from ptomaine poisoning.

If you have reason, from the above, to suspect tuberculosis, post a sick hen, examine the liver and the intestines, especially the liver, and if covered with hard raised nodules, I would pronounce it tuberculosis and advise burning all affect hens. If you find, on the other hand, that they are crop-bound from too much crude fiber, give them a teaspoonful of sweet oil, and massage the crop gently. If it is ptomaine poisoning, give them a dose of castor oil or epsom salts and remove the cause.

HOW TO "PICK" GEESE.

Will you please send me any information you can about picking geese? When should they be picked and how? Also how should the feathers be prepared for pillows? About what are goose feathers worth a pound? MRS. C. C.
Nine Mile Falls, Wash.

The practice of picking live geese is slowly dying out, especially in the northern states. Where the practice is still followed the picking is done in late spring and early fall, but never in the breeding season, and never in cold weather. Feathers are supposed to be ripe for picking when the quills appear dry and do not contain blood. In plucking do not pull many feathers at one pull. It is best not to pluck the wing and tail feathers. If feathers showing stiff quills are picked, they must be stuffed before using for pillows. Live goose feathers vary in price from 30 to 80 cents a pound. White feathers are worth more than colored ones.

MARKET EGGS THE YEAR ROUND.

J. N. Cramer of Seattle, head of the sales department of the Washington Cooperative Egg and Poultry association, points out that egg production is not a seasonable industry, but lasts the year round, for there is not a day in the year but what the poultrymen have eggs to go on the market. He also finds that wherever the consumers become accustomed to graded eggs and their uniform good quality "they will have nothing else."

The Rabbit Game

Needs Common Sense and Energy

By HARVEY NORRIS.

Make a thorough study of the rabbit business before attempting to make your start. Buy a good book and send for several sample copies of the different rabbit magagines, making sure that you have your plans laid out beforehand.

Buy only good pedigreed stock from a breeder whom you know to be reliable and who has had experience in raising rabbits. You will buy pedigreed stock eventually, why not at the beginning? You will usually find the specialty breeder (a breeder who specializes on one certain breed) with the most carefully bred, highest grade stock. Pay a reasonable sum for your rabbits and don't expect a breeder to sell you a good rabbit for a "little or nothing." Avoid the rut of buying cheap priced stock. Cheap priced stock is usually cheaper than it is priced. Most beginners make the mistake of buying just common, mongrel meat rabbits, and this is the last thing a beginner should do. Rabbit breeders who deserve the name of rabbit breeders, hate mongrel stock. They deal with the purebred strain, for they know that they can make more money by selling the better specimens as breeders and the poorest as meat.

An important rule that is important: Never enter the rabbit game expecting to get rich quick and dreaming that you will not find much work. The rabbit game has no room for slackers and there is work and hard work for the breeder who is to make a success. As for getting rich quick, the rabbit business is like any other established business, not everybody can even make a success—it takes brains and energy. Do not let the get-rich schemes mislead you. The people who peddle all this "hot air" are the beginner's worst enemies. There are many beginners who have invested their capital on the basis of a get-rich scheme, peddled by some buy-back firm who makes it a business to dam the rabbit business by selling some beginners poor common stock for a high price and then signing a contract whereby he agrees to buy back the offspring at a certain fabulous price, which he alreadyknows he can not fulfill. There is nearly always a crook in his "crooked" contract where it will not necessitate his buying back the offspring. Many beginners are deceived in this way and most of them will quit the rabbit business in disgust and advise all other prospective beginners that there are nothing but crooks in the rabbit business and if they

(Continued on page fifteen.)

Stop Hatching Weak Chicks With Cheap Incubators

It's a shame to waste your time and eggs hatching weak, wobbly chicks in cheap incubators, when everyone knows that

Queen Incubators
Hatch Strong, Healthy Chicks—That Live and Grow!

A good incubator is the start to profitable poultry production—it's the cheapest thing you can buy.

One dealer who has sold Queen machines for 9 years says: "I can get hundreds of testimonials of stronger chicks and almost perfect hatches with the Queen."

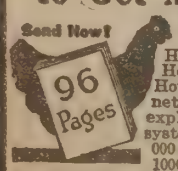
You, too, will hatch better chicks with a Queen Incubator and raise more of them with the Queen Brooder. Ask about the remarkable Queen Brooder Stove. If your dealer doesn't sell Queens, write us. Catalog free. (54)

QUEEN INCUBATOR CO.
Lincoln Nebraska

Queen Incubators are distributed by:
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The Routledge Seed & Floral Co., Portland, Oregon.
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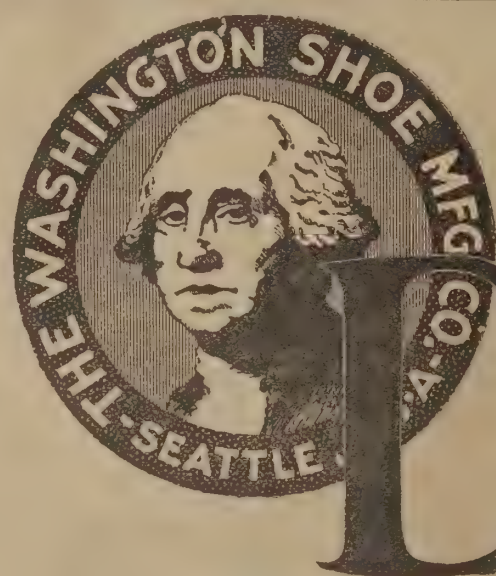
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Write Today! Simply send name, a postcard will do, for this 96-page free book, "Dollars and Sense." No cost, no obligation. However, if you enclose 25c, we will send you 25 colored celluloid leg bands to mark your best layers without using trap nests.
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Dry



All agree on this kind of prohibition ⤷ **Ball games can be "called" on account of weather. But not work! That must go on, rain or shine. And when it rains, working feet must be kept dry. That's the "dry law" for all those who would keep well. Shoes must NOT be affected by acid moisture of the barnyard. They must wear long for the man on the farm—through wet, acid and hard wear.** ⤷ **Meeting these requirements over a score of years for thousands upon thousands of farmers, Washington Dry Sox Shoes have achieved wide popularity.** ⤷ **Your dealer offers you them, because they are the most economical and profitable shoe investment you can make. Here's why! Dry Sox Shoes have features found in NO other shoes—this you already know. And then, dealers can carry a complete stock on a small investment. The nearness of our factory permits the filling in of broken lines on very short notice. Thus, there is avoided that customary heavy investment for reserve stocks against which prices charged customers must include interest, insurance, etc. Further, dealers can afford to sell on a much smaller margin of profit because stocks are turned oftener. These are things to consider. They mean substantial economies for you. Remember the name, "Dry Sox," so that you may obtain the same complete shoe satisfaction other farmers have long enjoyed.**

Washington
Dry Sox
KLIMATICALLY KORRECT SHOES FOR MEN

ORCHARD AND GARDEN

Soil Needs Humus

G. H. Jensen owns a small tract of berry land near Bellevue where he is raising berries, grapes and fruit trees. While the berry crop is largely raspberries, there are about three and a half acre that have been planted to loganberries and will soon be in bearing. Mr. Jensen raised most of the young plants himself and expects to put out more next year.

The grapes are the Island Belle, part of which have a crop this year. The patch is being enlarged as the new plants can be grown and the center of the rows are planted to such hoed crops as tomatoes, peas, beans or kale.

"The land is as heavily fertilized as can be supplied from what chickens and cows we have," said Mr. Jensen, but we feel that the soil is more in need of humus than fertilizer. A dust mulch is one of the best means for holding the moisture content, but there should be plenty of organic matter to aerate the soil. An abundance of straw in the hen house or when used for bedding in the cow stable will help greatly in returning vegetation to the soil and it should be used to a greater extent for all crops in this part of the county.

Yakima Has New Apple

An apple, new to this country, has been brought to Yakima from Paris, France, by H. M. Gilbert on his recent return from Europe. It is known as the Colville. On his last visit to France Mr. Gilbert was able to secure two trees in Paris.

He carried them with him on the remainder of his trip through Europe, the roots being wrapped in moist moss. On arriving here he had the trees set out on his ranch. The little trees are still sappy and have some green leaves, thus showing that they are alive.

According to Mr. Gilbert, the Colville apple is a yellow apple of the color of the Grimes, but averaging one-half larger, has a spicy flavor and is a long keeper. It keeps in common storage until May, and Mr. Gilbert says, was selling at 30 cents apiece in Paris.

Mr. Gilbert also saw the Colville apple seven years ago in Berlin, where it arrived packed in excelsior in 200-pound boxes, one box alone retailing for $40. It is grown in the Alps on trees that are trained to trellises, each tree being permitted to produce just a certain number of fruits.

Tent Caterpillars Do Damage

Tent caterpillars have caused considerable damage to orchards in some parts of Pierce and adjoining counties this season. In most cases they got a start in alder and other native growths and from there went to the orchard trees.

Commenting on the damage being done by this pest, Henry Huff, state horticultural inspector, said that it is a comparatively easy insect to control. If a lead arsenate spray is used just as the worms are coming out of the webs they will all be killed off in a short time. Spraying at this time will kill the worms and prevent the moths from coming out and laying eggs in clean areas.

"There is a parasite working on the caterpillar which was thought would eradicate it," said Mr. Huff, "but a careful examination this summer showed that it was not doing as much as was hoped. The only sure means is with the spray, which will kill the worms in your own orchard. There are very few eggs that are laid by the moths from other shrubs."

Fight Blister Rust

A seven-mile barrier which is entirely free from wild currants has recently been completed in the northern part of Whatcom county for the purpose of preventing the spread of the white pine blister rust, according to C. L. Robinson, supervisor of horticulture of the state department of agriculture.

A number of scouts have been working throughout the northern part of the state locating patches of black currants, which are now completely eradicated from Whatcom, Skagit, Snohomish, San Juan and Island counties.

No serious outbreak of the white pine blister rust has been found in these counties, and those in charge of the work expect the quarantine regulation to have its effect in the course of time.

There is, however, a new turn of affairs in Pacific county, where a few infestations of the blister rust is found in red currants. Mr. Robinson says that this may not cause a serious spread of the disease, but will necessitate an amendment to the state quarantine order to include Pacific county.

The former quarantine order, which prohibited the shipping of currants from any part of western Washington, has just been amended, and will allow shipments on stock from inspected and licensed nurseries. No black currants, however, will be allowed to be shipped.

Make Use of Certificate

Fruit shippers of Washington are making better use of the horticultural products inspection certificates, issued by the state department of agriculture, since they are now indorsed by the United States department of agriculture. One of these certificates is issued with each car of fruit after the district inspector has passed on the contents and designated its grade and condition. This inspection, however, is done only at the request of the shipper.

"Since the inspection service is now being handled in cooperation with the United States department of agriculture each district inspector is also an authorized agent of the federal government," said C. L. Robinson, supervisor of horticulaure of the state department of agriculture. "The certificate is, therefore, prima facie evidence in all courts of the United States. The certificate now has the federal stamp on it and prevents any necessity of inspection at the receiving end. It protects the shipper in both grade and quality and he can force collection on a contract shipment even if the market price drops $1 a box."

The inspection service may be had upon application from the shipper or the buyer himself, as is sometimes the case. The cost of this service is $5 for each car. The new feature of the certificate has called for a number of additional inspectors in the apple and vegetable producing sections of the state and all growers are reporting good results from the additional fee.

Red Spider Pest

Yakima orchardists are complaining of the red spider. E. J. Newcomer of the United States bureau of entomology, who has been studying the codling moth and its growth, has also been devoting some time to this pest. After trying many suggested remedies, he finds the sulphur paste spray with the addition of caustic fairly successful. He finds the use of lime-sulphur alone on apple trees has given 90 to 95 per cent extermination of the red spider.

WHERE IRRIGATION PAID.

F. W. Nye of Grand Mound states the following correction for the production of his berry crop on irrigated land. The article was printed in a recent issue of THE FARMER. On one acre of land watered by the Skinner system Mr. Nye produced 425 crates, while on the non-irrigated land he raised from 150 to 200 crates to the acre.

New Warehouses for Apples

Four new warehouses will be in readiness for the apple crop, by the Wenatchee District Cooperative association.

At Leavenworth a modern frost-proof tile warehouse, 60x82½ feet, two stories high, is being built.

At Chelan Falls a two-story brick warehouse, 60x60 feet, also will be built. The association has also bought the modern brick warehouse formerly owned by the Spokane Fruit Growers' association at Grant Orchards.

At Palisades the old unit warehouse has been taken over by the association to handle the tonnage in Moses Coulee.

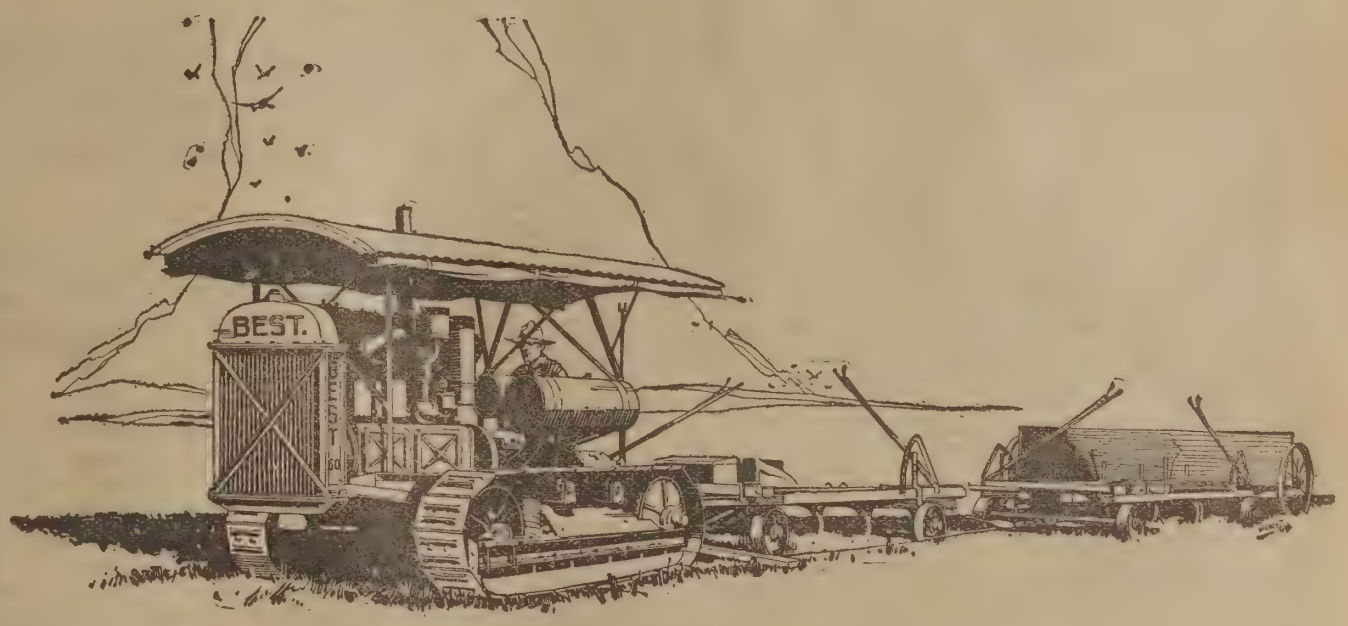
At Pateros a warehouse has been leased for the use of the Bridgeport and Methow valley growers.

Other storehouses are being prepared by the different fruit selling agencies.

PLUMBING



Ask for new catalogT of plumbing, heating and electrical supplies. Lowest prices; satisfaction guaranteed. We have sold plumbing for 19 years, and "EVERYONE KNOWS" STARK-DAVIS CO.
188 Fourth St., Portland, Ore.
See us about Alamo Lighting Plants.



What will a Tractor do?

If it's a Best Tractor it will do almost any power job and do it well—day in and day out—year after year—with a minimum of upkeep and depreciation.

Good tractors are one of the outstanding factors in increasing yields for the farmer. Plowing, cultivating and harvesting can be done so fast and so thoroughly, and with fewer hands, that the saving is the difference between profit and the even break. Then there are the numerous in-between jobs on all of which the Good tractor more than pays its way—in fact many Best owners have found a very profitable business in doing road and general contract work between seasons.

Best Tractors are not only a good investment this year; their long life and dependability keep them in service for many seasons, so that the first cost is spread out over several years, each year paying a profit.

Best Tractors are more than a combination of metals shaped and fastened together to specifications drawn to meet a price. They are the product of years of experience in building *successful tractors.* Experience that has developed a correct and balanced design—that has taught the use of special heat treated steel here—drop forgings there—anti-friction bearings at other places and so on. Just as a clean limbed horse comes into the thoroughbred class through careful breeding and rearing over a period of years—so Best Tractors have reached the top of tractor perfection.

There are two models of Best farm tractors, the "Sixty" and the "Thirty," Let us send you full information on both and the name of our nearest dealer.

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BEST TRACTORS

In God's Great Out-o-Doors

By G. L. NOBLE, Executive Secretary of National Committee on Boys' and Girls' Club Work

The accompanying article telling how a group of Chicago high school boys have taken up farming during the summer vacation, has two or three points of interest. It is not so much that any appreciable number of these boys will become farmers, as the importance of the fact that every bit of knowledge of farming and farming conditions gained by the young folks of the towns will enable them in after life to better understand the true relations between city and open country conditions. Moreover the eagerness with which these boys take up open country work may help the young folks of the country themselves to inquire if they are getting all that can be got out of life on the farm.—Editor.

A number of Chicago high school boys have taken up farming this summer to round out their education and training. They have gone back to the sod, and are willfully exposing themselves to actual farm work and farm conditions. Located at Edellyn farms, Thomes E. Wilson's estate at Lake Forest, Ill., they have pitched their tented camp and daily they apply themselves to the task alongside the other farm help.

There was a time when town and city boys looked upon all farm dwellers as the tail end of society—backwoodsmen; some were even unkind enough to call them "hayseeds" and "country jakes." They thought that the less education one had the better he could farm. But gradually a change has come about. The farmer is now considered a real business man who must apply a great deal of science to his operations in order to achieve success. The city boy, bred and born, who has grown up wholly in an atmosphere of artificiality, perchance in a cramped apartment with brick walls for prospect and garbage cans for retrospect, is coming to learn that there is great enjoyment and satisfaction in God's great outdoors, unstained by factory smoke or marred by the sound of grinding wheels.

It is here that they are studying some of the soil in which combinations are prepared which result in the green fields and mighty trees, the blossom and the fruit, and wheat, corn and all the rest for the sustenance and pleasure of man and beast.

These Chicago boys are not out on a lark for a few weeks of idle leisure at a Lake Forest country home. They are there to do a constructive work for the owner of the farm and for themselves. They want to become acquainted with actual farm conditions. And, speak it softly, the Thomes E. Wilson holding is one of the few country homes which is operated on an honest-to-goodness practical basis and which is paying its owner a profit as it progresses. The boys work from 7 in the morning until 4 in the afternoon each day, the remaining two hours until the supper gong rings being utilized in a lecture and study period to discuss the day's operations or perchance to learn the whys and wherefores of what they will do on the morrow.

"It is really surprising how the city boy takes to farming," said F. B. Post, instructor in agriculture at the Parker high school, who is in charge of the camp and who, incidentally, is the originator of the idea. "The boys learn quickly how to carry on the farm operations and soon become hardened to regular farm work." "They are getting a new viewpoint of farming as a vocation and even though they may not follow it, their experience here is going a long way in giving them a liberal education."

The first work assigned to these young city farmers was the mapping of the 900-acre farm, showing the location of the fields and buildings and the crop rotation plan. It was a good lesson in farm management, the basis of all the farm operations. Gardening, harvesting and threshing followed in rotation. A new job and a new lesson every day—always something new—nothing monotonous. The mechanism of every farm implement and its use is known. When your observer landed at Edellyn farms on August 2 the "lusties" who might otherwise have been riding a "bike" on the boulevard or playing ball in an alley, were helping to bale rye straw, just threshed, so that it might be stored in small space under cover. Then, too, all the weed pests, from Canadian thistle to ragweed, were classified, the life history written up and the means of control decided upon.

It is fortunate for this camp that Mr. Wilson maintains such large herds of pure-bred stock. He is a firm believer in a farm well balanced with live stock in order to maintain soil fertility. His 90 head of Shorthorn cattle is one of the best herds in the district, to say nothing of the Clydesdales, Ayrshires, White Orpington poultry, ducks, turkeys, saddle horses and swine. Live stock judging, therefore, has been no small part in their practical education. The boy who asked to see the "Bull Durham" breed of cattle when he first arrived at Edellyn farms now knows "there is no such animal" except on the advertising posters. For their six weeks of work the boys will receive regular credit from the board of education of the Chicago city schools.

The camp is self-sustaining. Each boy is given a regular wage according to his ability as a workman and his board and other incidentals are charged against his earnings. Although strict camp regulations, army style, from the morning bugle until the blowing of taps, is enforced by their own elected "mayor," the boys have their quota of fun and play as well. Horseshoes are popular every evening and some have become expert enough to "almost" make a ringer every time. Besides that there is soccer ball, duck-on-the-rock, indoor baseball, or if the muscles are a wee bit sore, the radio outfit furnishes recreation and entertainment. On the Fourth there were fireworks and real "T" bone steaks, a whole one for each, brought direct from the Union stockyards by Mr. Wilson himself as a surprise for his newly adopted farm hands. Then there is the swimming hole, down in an old stone quarry. The work of the K. P.'s (kitchen police) and the washing of clothes, a job to which every camper falls heir, is a new experience to many city boys, and a thing or two is learned about the things that "mother used to do." All in all, the camp school gives the boys a better understanding of farm life and a feeling of independence and self-reliance, which is a new experience in their young lives.

The whole plan may develop to be a valuable addition to the educational system of our larger cities. A first-hand knowledge of the basic science and industry of the nation (agriculture) is of considerable importance in the education of the young people of our metropolitan centers. If adopted generally it would help to create a more sympathetic appreciation among its people of the farmer's difficulties. Because of the fact that under such a plan the work can be carried on a self-sustaining basis it would seem feasible that it could and should be adopted generally by our larger cities. At any rate it is a satisfaction to farm folk to know that the city is turning the minds of its youth countryward to learn many of the things about our basic industry, agriculture, without which their education would be incomplete.

When answering ads, please don't fail to mention this paper.

New Tariff Bill

Is Almost Ready to Become a Law

The administration's tariff bill was passed by the lower house of congress several months ago and transmitted to the senate. The senate has considered it for several months, making many amendments to it, and passing it in the amended form. It then went to a joint committee of house and senate for agreement on the changes between the senate and the house provisions. This joint committee reported last week, and with few exceptions, if any, the bill will undoubtedly be adopted soon in the amended form by both houses and sent to the president for his signature.

So far as agriculture is concerned, the principal point yet undetermined is whether or not potash for fertilizing purposes shall be admitted entirely free of duty or whether a special provision shall be made that for the first three years from the passage of the act imported potash shall pay a tariff of 1 1-2 cents per pound. The bill as recommended by the conference committee includes the 1 1-2 cent provision, but it has been referred back to the committee for reconsideration.

As the measure was reported from the conference committee last week it provided for tariffs as follows on articles of especial interest to farmers:

Live Stock.

Cattle, from 1 1-2 to 2 cents a pound; Payne-Aldrich, from $2 a head to 27 1-2 per cent ad valorem; Underwood, free.

Sheep and goats, $2 a head; fresh lamb, 4 cenes a pound.

Hogs, 1-2 cent a pound; fresh pork, 3-4 cent a pound; bacon, ham and shoulder, 2 cents a pound; lard, 1 cent a pound; lard compounds and substitutes, 4 cents a pound.

Horses and mules, valued up to $150 each, $30 each; valued over $150 each, 20 per cent. Raw wool, 31 cents a pound scoured.

Farm Produce.

Milk, fresh 2 1-2 cents a gallon; buttermilk, 1 cent a gallon; cream, 20 cents a gallon; milk, condensed or evaporated, sweetened, 1 1-2 cents a pound; butter and oleomargarine and other butter substitutes, 20 per cent.

Cheese and substitutes, 5 cents a pound; Payne-Aldrich, 6 cents; Underwood, 20 per cent.

Poultry, live, 3 cents a pound; poultry, dead, 6 cents a pound; eggs of poultry in the shell, 8 cents a dozen.

Honey, 3 cents a pound.

Fresh or frozen salmon, mackerel and halibut, 2 cents a pound. Herring and mackerel, pickeled or salted, 1 cent a pound.

Barley, 20 cents a bushel; corn, 15 cents a bushel; oats, 15 cents a bushel; milled rice, 2 cents a pound; rye, 15 cents a bushel; wheat, 30 cents a bushel; wheat flour, 78 cents per 100 pounds.

Fruit.

Apples, 25 cents a bushel; apricots, green, ripe, dried or in brine, 1-2 cent a pound; cider, 5 cents a gallon; figs, fresh, dried or in brine, 2 cents a pound; raisins, 2 cents a pound; lemons, 2 cents a pound; limes, oranges and grapefruit, 1 cent a pound; olives, in brine, green or ripe, 20 cents a gallon.

Peaches and pears, 1-2 cent a pound; pineapples, in bulk, 3-4 to 1 cent each; marmalade, jellies and fruit butters, 35 per cent; almonds, unshelled, 4 3-4 cents a pound; shelled, 14 cents a pound; Brazil nuts, 1 cent a pound; coconut meal, shredded, 3 1-2 cents a pound; peanuts, unshelled, 3 cents a pound; shelled, 4 cents a pound; walnuts, unshelled, 4 cents a pound; shelled, 12 cents a pound.

Peas, green or dried, 1 cent a pound; onions, 1 cent a pound; Irish potatoes, 50 cents per 100 pounds; tomatoes, 1-2 cent a pound; turnips, 12 cents per 100 pounds; chocolate and cocoa, 2 cents a pound; hay, $4 a ton; hops, 24 cents a pound.

Cream separators valued above $50, 25 per cent; sugar, 2.20 cents a pound (1.76 a pound Cuban raw).

Foreign Oils.

Castor oil, 3 cents a pound; linseed oil, 3 3-10 cents a pound; olive oil in containers, 7 1-2 cents a pound; in bulk, 6 1-2 cents a pound; cotton seed oil, 3 cents a pound; coconut oil, 2 cents a pound; peanut oil, 4 cents a pound; soya bean o 2 1-2 cents a pound.

On the Free List.

The principal items on the free list ar Agricultural implements, includi plows, tooth or disk harrows, harveste reapers, agricultural drills and plante mowers (except lawn mowers), hor rakes, cultivators, threshing machines, co ton gins, wagons and carts.

Animals imported for breeding purpos Binding twine made from New Zeala hemp, Manila. Tampico fiber, sisal gra or sunn.

Sulphur in any form and sulphur or sodium nitrate, sulphate, crude, or sa cante and nitre cake; fish for fertilize potassium nitrate or salt petre.

SELLS PRODUCTS AT HOME.

The Grays Harbor Egg association h been selling its products entirely with the county and has averaged about 10 cases a month during the last year. Th plan has been carried out with the c operation of the dealers in the differe towns who realize the value of using pro ucts from their own district. The pric received were better than if the eggs ha been shipped to outside points, since th greater cost of hauling was eliminate All of the members are required to stam the date on each egg as well as the pr ducers' number. There are about 65 mem bers in the association.

TREES ON WASTE LAND.

Many a non-producing spot on the far could be made to produce shade, woo posts and so on. Plant a tree.

AT YOUR SERVICE.
DEMPSEY
Hotel and Restaurant
(C. C. DEMPSEY & SONS)
UP TO DATE.
Opposite Union Station. Spokane.

Do You Want Duty-Free POTASH?

If so, write at once to the Representative from your Congressional District, and also to both of the United States Senators from your State, and urge them to ask the members of the Conference Committee, which is now considering the Tariff Bill, to agree to the Senate amendment which leaves Potash on the Free List, where it always has been.

Briefly, what has happened is this:—

The Tariff Bill passed by the House imposed a duty of $50 per ton on fertilizer Potash. The Senate restored fertilizer Potash to the Free List, and voted down a proposal to pay a bounty of $50 per ton on Potash produced in the United States.

The question now before the Conference Committee is simply whether fertilizer Potash shall remain on the Free List or shall pay a duty of $50 per ton. This duty would double the price of Potash to the farmer.

The House of Representatives did not vote on fertilizer Potash as a separate item, although many members wished to do so. There will now be a chance for such a vote, when the Conference Committee makes its report.

The proposed duty would make farmers pay over sixty million dollars ($60,000,000.00) more for the same amount of Potash that they have been using in the past.

The promoters of the speculative Potash enterprises in this country maintain a very active organization in Washington, and will spare no effort to induce Congress to impose this enormous burden on the farmers of the country.

The Washington representatives of the Farm Organizations oppose this duty and will welcome your help.

Write to your Congressman and Senators today, and let them know how *you* feel about it.

SOIL & CROP SERVICE, POTASH SYNDICATE
H. A. HUSTON, Manager
42 Broadway New York

Holstein Case Still Unsettled

Readers of THE FARMER will remember the publication in this paper three years ago of the report of an alleged confession by one Charles Cole who, while acting as milker in the Holstein barns of Oliver Cabana Jr. of New York state had, according to his statement, "helped" the Cabana cows make high butterfat records by injecting butterfat into the milk unknown to the testers. It will be remembered that Mr. Cole later repudiated the alleged confession, declaring that it was untrue.

From that day to this the Holstein-Friesian Association of America has been endeavoring to clean house with reference to the alleged fraudulent records, but has been halted in its move by one court action after another forbidding it to take the necessary action to adjust the records.

What appeared to be the final decision in the matter was rendered recently by the supreme court of New York, untying the hands of the association and permitting it to investigate the records and act upon them. The result was that a painstaking investigation was made and, on the basis of the evidence found, 33 of the 34 records made during the period of the alleged fraudulent practices in the Cabana herd were cancelled by the board of directors of the association.

A report of this action was ready for publication in THE FARMER when the following telegram was received from the Holstein association:

"Cancel Cabana story sent you. Let no story on case appear over our name until further notice. Association enjoined from publishing. Letter follows."

As stated in the telegram, the association had been again enjoined by the supreme court of the United States, this time from another angle, from giving out any publicity on its action as to the cancellation of the Cabana-Cole records. In the words of the supreme court's injunction, the association was enjoined against "all further proceedings on the part of the Holstein-Friesian Association of American concerning such reports of cattle now or formerly owned by Cabana, and with respect to any determination that may have been heretofore made cancelling the same and the promulgation of any such determination through any publication of said association or otherwise."

Thus it appears that at the end of over three years' effort to wipe out the stain of this unfortunate incident in Holstein record making, the association is again halted by a court action started by a party who would consider himself injured were the records of the Cabana herd cancelled. How much longer the association will be prevented from carrying out its laudable purpose of cleaning up this scandal is problematic.

From the history of the case it appears that Mr. Cabana started in the Holstein business about 10 years ago; that during the first two years he made no records of note, but that, beginning with 1915, a considerable number of high records were broken at his Pine Grove farm, near Buffalo, N. Y., culminating in a sale of a considerable number of his cattle at world record prices for a large sale, reported to be an average of over $3000 per animal. This sale occurred in May, 1919, and the alleged confession of Cole took place in August of that year. Mr. Cabana denied any knowledge of fraudulent methods having been practiced in obtaining high records in his herd.

Hog Production

Rise and fall in hog production in the Pacific northwest is indicated by the receipts of live hogs at the Portland Union stockyards. G. A. Pierson, president of the stockyards company, gives figures showing the number of head received at the North Portland market by years as follows:

	Oregon	Idaho	Middle West
1916	207,320	75,318	.....
1917	154,828	26,238	.....
1918	166,551	22,545	582
1919	143,007	29,469	385
1020	113,986	18,725	21,943
1921	70,215	13,777	49,493

For the first eight months of 1922 and 1921 the receipts at North Portland were:

	1922.	1921.
Oregon	39,828	50,241
Idaho	33,471	8,930
Middle west	62,920	30,805

President Pierson said in a statement issued recently.

"The yearly figures indicate the serious decline in hog production in Oregon, and to some extent in Idaho, and also indicate the increased number of hogs that have been brought in from the farms outside our natural tributary territory. Where the receipts from Oregon for the year 1916 showed 207,000 head, 1921 was only able to show 70,000 head, a drop of approximately 66 per cent.

"Reference to the comparative receipts by months, 1922 and 1921, shows that Oregon is falling still farther behind, the receipts for each of the eight months this year being less than corresponding months in 1921, except the month of July, and the total receipts for eight months from Oregon this year are 40,000 against 50,000 last year.

"Reference to the table also shows that Idaho is recovering ground rapidly. The receipts from Idaho for eight months last year show approximately 9000 head, and for the same period this year this has jumped up to better than 33,000 head.

"That there is increased demand for pork products in the Pacific northwest is shown by the fact that greatly increased receipts are coming from the middle west. Note that where approximately 31,000 hogs came in the first eight months of 1921, double that number, or approximately 63,000 hogs, have been brought to this market in the same period this year.

"Perhaps the serious difficulty in Oregon at this time is to secure breeding stock. The supply of hogs appears to be so depleted that those who want breeding stock and feeder pigs are having difficulty in finding what they want. We received a request yesterday for two carloads of feeder pigs to be used in cleaning up off-grade fruit and shattered grain in the southern part of the state. Immediate shipment was asked, and with the further request to advise how many more feeder pigs we could secure for that section. As a matter of fact we are having difficulty in assembling even two carloads.

"I received a letter in the mail yesterday that surprised me. It was written by a man in one of the Willamette valley counties, who is in position to know what he is talking about, and I quote from his letter as follows: 'Our county assessor's records show that the value of dogs in this county equals two-thirds the value of hogs,' and so far as I know the county is not particularly noted for the quality of its dogs."

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41 E. 42d St., New York City.

The Rabbit Game

(Continued from page twelve.)

want good health to just keep out of it. Now, Mr. Beginner, leave these buy-back firms alone. Not all of them are crooked, but the crooked are mixed up with the straight and there is a possible thing that you will not be able to tell the difference and patronize the "crookedest of all the crooks." Leave them alone, I say, for there are too many honest breeders the country over who will never give up interest for your success after they have sold you their stock.

Do not buy several different breeds at first. Buy first one breed and stick with that breed until you are sure that you are competent to handle some other breed or breeds of rabbits.

Common sense is the most important quality for the beginner in the rabbit business. Read all available literature on rabbits and give heed to what the veterans in the business have to say. The most popular breeds of today are the Belgian hare, Flemish Giant, New Zealand Red and American Blue. Learn something of each of these individual breeds, so you can tell which is the better for you to purchase.

Do not breed too young. Do not breed your does in the hot summer time or in the winter time, when you haven't the facilities handy to save the little ones from freezing to death. Breed only three and four times a year, three times is better. Give your rabbits a good variety of feed and keep your hutches clean. These rules are a variety of important rules and are often slighted by the beginner.

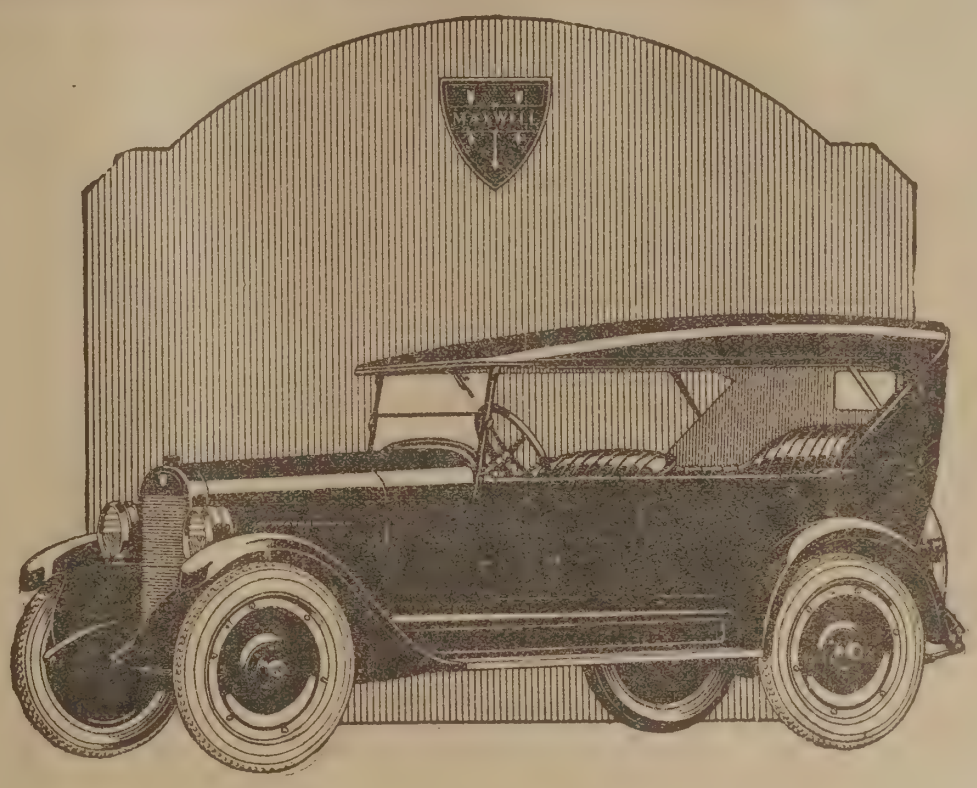
When you have stock for sale, advertise. Advertising is a good medium by which we can sell our surplus stock and is usually resultful. Let the buying public know who you have to sell.

Do not misrepresent your stock. Sell your stock on the "Golden Rule" plan.

When you get far enough along, join several good associations.

Keep wide awake. Run your business on a strictly business basis and don't get so far along that you are sure there is nothing more for you to learn. Remember, the best of us never pass the stage of learning.

In conclusion I want to say to the beginner, to investigate the rabbit game, and in order to attain success, use one-half part common sense and one-half part energy.



A kind of value not to be duplicated, in the kind of a car the farm needs. Long mileage on gas and oil and tires. Genuine comfort on the road. Ease of handling, even in rough going. Beauty that makes people turn to watch it go by.

Cord tires, non-skid front and rear; disc steel wheels, demountable at rim and at hub; drum type lamps; Alemite lubrication; motor-driven electric horn; unusually long springs; deep, wide, roomy seats; real leather upholstery in open cars, broadcloth in closed cars; open car side-curtains open with doors; clutch and brake action, steering and gear shifting, remarkably easy; new type water-tight windshield. Touring Car, $885; Roadster, $885; Sedan, $1335; Coupe, $1235. Prices F. O. B. Detroit, revenue tax to be added

MAXWELL MOTOR CORPORATION, DETROIT, MICHIGAN

MAXWELL MOTOR CO., OF CANADA, LTD., WINDSOR, ONT.

The Good

MAXWELL



SYNOPSIS.

Esau Haggerty, a strong man of mature years, and Orlando Medford, a young, slightly built and frail companion, have started from their Illinois home town for the great gold diggings of the west. Esau is pushing a provisions-laden wheelbarrow. Orlando is leading a cow. They struggle slowly westward, meeting up with others also headed for the gold diggings. With a party of men traveling by handcart they all but starve for water on a desert, but dig a well and escape. They meet with a family by the name of Cooper, one member of which is a girl of years and manner that at once captivate young Orlando, who delights in keeping near her prairie schooner as they journey on. Once the entire party gives up the westward trip when they meet discouraged gold seekers returning, but Orlando and Hazel Cooper induce them to turn to the west again. They have many interesting experiences on the way, finally coming upon a great Indian camp. Not many days later they sighted Pike's peak, and a little later plodded into a little frontier town that has since grown to be the great city of Denver, Colorado. Here they learned that a rich gold strike had been made not far away. While standing in the street, they saw two four-mule stages drive up, loaded with passengers from Leavenworth.

CHAPTER TWELVE.

A Delay at the River.

The company that had started the stage line, only a few days before, had an office here. It was in front of this office that the two stages now came to a standstill. They traveled in pairs, so as to render each other assistance in case of trouble or of an attack by Indians. They had followed the northern route, up the Republican river.

No postoffice had been established in Denver as yet. But the company running the stage line was bringing letters from Leavenworth at a charge of 25 cents a letter. So a crowd had quickly assembled around the office door, all to gaze at the stagecoaches and the passengers, and many to learn if there was any mail for them. Not only had a large number of letters arrived from the states, but a good supply of newspapers as well.

None of the foot travelers had known of this opportunity to receive mail when they left home. Indeed, the stage line had been established since they had started from Kansas City. So they were not expecting anything. But they waited with the crowd while a man in the office door called out the names of those for whom he had letters. Night was now coming on, and he had to read the last names by lantern light.

When his task was completed he shouted an announcement: "Tomorrow morning at 10 o'clock two stagecoaches will roll out from this office for Leavenworth! Those desiring to engage passage can do so here, and those having letters to forward may hand them in here!"

"That's our chance, Esau!" exclaimed Orlando at once. "We must get some letters ready in time to start 'em off."

"Mighty big price to pay for a letter, two bits is. One's about all I can afford to write."

"Same here. But I can tell a lot in one letter."

The two now left their party and made their way back to camp. A little later Sanders came. But the other three men remained to see what was to be seen. Not till a late hour did they return.

Next morning most of the party were up by the time they could see, and they went to writing as fast as they could write. Orlando had much so set down—much to tell of their long journey across the plains and up along the foot of the mountains. And he did not stop, either to milk Brindle or to eat his breakfast, until his letter was finished and ready for mailing.

After breakfast all took their letters over to the stage office, handed them in and paid the carrying charges on them. That done, they waited, along with many others, to watch the two stagecoaches roll away.

When the excitement was over there the sightseers wandered about the town, chatting with various persons and learning all the latest news from the gold diggings. Most of what they heard was favorable. Indeed, they were told that in Gregory's gulch certain miners were washing out as much as $100 a day for each man.

The party had intended to spend at least the rest of this day here. But those reports so excited them that they returned at once to camp. There, after eating their dinner, they packed up their things, loaded them upon the cart, the wheelbarrow and the cow, and marched off toward the mountains.

But not far did they travel before finding their way blocked. The South Platte, which ran by the north edge of the town, could now be crossed only by ferrying. And but one ferryboat was running—a flatboat.

A big rope had been stretched high across the river, and to this each end of the boat was fastened by means of a short rope and a siding pulley. By lengthening these two ropes, so that the forward end of the boat pointed somewhat upstream, the ferryman made the current move them back and forth across.

So far was the ferryboat behind with its work that white-topped wagons were strung for more than a quarter of a mile along the river bank. Every one of them was waiting its turn to be ferried over.

As there was nothing better to do, the foot travelers took their place at the tail end of this string, to wait till their turn came.

As soon as the party had stopped, Sanders, disengaging himself from the cart, went to the boat landing to find out how soon they could expect to be set across; also how much they would have to pay.

After a good while he came back to report that their turn to cross would not come before noon of the following day. The boat would hold but one wagon and team at a time, and the work could not well be hastened. As for the charge, he had been told that each wagon was paying $2.50. The foot party could all cross at once, they and their belongings, and that was the sum they would have to pay. This was a relief, for not one of the seven had more than a few dollars.

After getting themselves in position to wait, the party sat down on the river bank to rest. Orlando relieved the cow of her pack and permitted her to graze. One or two of the men got out hooks and lines and went fishing, using grasshoppers for bait. Others wandered along that string of wagons, chatting with everybody they saw and learning all they could of the country they were headed for.

From time to time other travelers arrived and took their places at the end of the waiting string. When the shutting down of darkness had stopped the ferryboat the foot travelers found themselves about the middle of the line.

Now they kindled a little fire, using driftwood gathered along the river bank. Numerous similar fires were blazing near the waiting wagons. The handcart's crew slept by their fire, but Orlando and his partner, leaving the wheelbarrow where it was, took the cow and their bedclothes and went farther upstream. There, where the grass was better, they tied Brindle to a stake and slept near her. It was very important that Brindle should have good grazing if she was to travel and give milk at the same time. And it was not considered safe to leave her alone. Too many thieves and other lawless characters had come here with the crowd.

When morning broke the two men returned to their camp, carrying their bedding and their guns and leading the cow. After milking her and cooking and eating their breakfast they sat down to wait again. The ferryboat had started with daylight, and the rattling of the sliding pulleys could be plainly heard as wagon after wagon was carried across to the north bank.

Wearying of the delay, the handcart party finally strolled back to see what was going on in town. Esau remained to guard their things and to move them closer to the boat landing as the string of wagons between him and that point grew shorter. But Orlando, leading his cow, wandered away in quest of good grazing again.

As is usual in such cases, the ferryboat did its work more slowly than had been expected. So the foot travelers cooked and ate their dinner while waiting. And it was more than an hour later when, their turn having come at last, they went aboard the little ferryboat, paying the fare. Now the boat ran swiftly across the stream, the current rippling noisily against it, and the sliding pulleys trundling merrily along the high-stretched cable.

When the flatboat had run her forward end against the north bank all her passengers went ashore with their belongings. At once the boat started back for another load, and the travelers pulled their cart and pushed their wheelbarrow up the river bank.

On top of the bank they paused for a minute or two, for a brief look at the straggling little town of cabins and wigwams they were leaving behind. Then, turning, they took a new but much-traveled road and tramped away toward the mountains.

"Looks like the distance is only a mile or two," remarked Orlando.

"But they say it's every step of 15 miles,' Esau answered.

And Sanders said: "We're well rested, the whole caboodle of us, and Brindle's well rested. Let's try to cover that 15 miles by night."

"So say I!" cried Orlando, eagerly. "Hooray We're close to the gold diggings at last!"

Though recently made—it was scarcely a month old—the trail from Denver to Gregory's Diggings was broad and so well trampled that it lay shoe-mouth deep in dust. And it seemed alive with travelers. As fast as the little flatboat could float them across the Platte, the white-topped wagons, in long strings, rolled toward the mountains. Other wagons were returning to Denver, but those were comparatively few.

After their rest, the seven men on foot tramped faster than usual. While Esau was passing a string of wagons he heard a man's voice saying: "Well, if here ain't a dadblamed grump, pushin' a wheelbarr' all the way to the moon!"

Esau had been tramping along doggedly, with his eyes on the road ahead. But now he looked around in haste, to meet a cheerful, grinning face. The man who had spoken was on foot behind one of the wagons, driving three cows. The cows all had calves, and the calves were tied to the wagon's rear axle. A girl of 9 or 10 years was helping the man with the cows.

"That's right," answered Esau, cheerfully. And he grinned in return. "And what's more, I've purty nigh pushed her there, too."

"Well, you've got a bushel of sand in your craw! That's certain and shore! How many miles have you come with that contraption?"

"About 1400, all counted, I reckon."

"Yes, you shorely have got grit. I've tramped about a thousand and druv these cows behind the wagon. But that's an easy job alongside of yo'r'n. And I've had some help, too." He glanced toward the little girl. "Becky helps me a right smart, when she wouldn't ruther ride in the wagon."

"But who drives your—?" Esau had begun to inquire, when a glance ahead showed him the answer to his question.

A woman, with a long-handled whip in her hands and a man's broad-rimmed hat on her head, was striding along in boots by that two-yoke team of work cattle.

"The old woman has done most of the ox drivin'," the man explained. "She's as good a teamster as I am, and maybe better. She wanted to fetch our milch cows with us, and offered to manage the wagon if I'd drive the cows. I've stuck to my job, and she's stuck tight to her'n. We'll soon be at—Becky, fetch old Sukey back here!"

The little girl ran out of the road after the cow, and the man went on relating his experiences. He soon mentioned his name, which was Hinkson.

When Esau started to pass on the other man said: "Well we'll soon see you ag'in, I'm 'lowin'. We've both had a mighty long, hard tramp, and reckon maybe we're both close to the end of our road at last. I'm shorely glad uv it. I want a little diggin' before I do any more hoofin'. I'd like to give my arms some work and my feet a rest, at least for a spell."

"Don't know but what that would be a welcome change," admitted the man behind the wheelbarrow, with a grin. "Well, see you ag'in at the diggin's!"

Esau passed on after his party, who were already a mile or so ahead. He overtook them a good while later. And the whole seven traveled so well that as night was coming on they went into camp on the bank of Clear creek, at the foot of the mountains.

The last mountain snows were now melting, and the creek, which here emerged from a gorge, was very much swollen. Many wagons were camped along its near bank and several on the far bank.

Finally the weather turned cooler, and perhaps most of the snow had melted. At any rate, the stream began to run down.

As soon as the creek was shallow enough the waiting wagons proceeded to cross, even while the swift water would run into their wagon beds.

Not a great distance beyond the creek the road entered the mountains. And the way it entered was by climbing over them. Hundreds of covered wagons were strung along the foot of the range. Many of the gold seekers, seeing the hard way ahead, had preferred to leave their wagons and teams here, in charge of people who were making money by caring for such things. Knowing that the distance to the diggings was not far, they had chosen to take what they could carry on their backs and travel the remainder of the way on foot.

But others—numerous others—preferred to take their wagons, though the road up the mountainside was frightfully steep; so steep that it seemed incredible that any team could do more than climb it, much less climb it and pull a wagon up after them. Yet the well-beaten trail was good evidence that many wagons had gone up and down there. Indeed, they were going up and down even now.

But they were not moving in their usual manner. For going up, two or three men, or four men, would combine their teams till they had perhaps 10 yoke—20 oxen—to one wagon. And that wagon would have no very heavy load; commonly less than 1000 pounds. Such a wagon was preparing to start up when the foot travelers arrived at the foot of the mountain.

With the cracking of whips and the clanking of many big chains, the team started. Three drivers tramped beside them, each driver managing his own oxen. While the wagon was crawling up the steep mountainside the spectators noticed that the oxen seemed to be trying to stick the points of their hoofs into the roadway. And from time to time the wheels had to be locekd and scotched till the team could rest.

But the wagon kept creeping upward, till it disappeared over the mountain top. And

(Continued on page eighteen.)

Bits of Fun FOR Everyone

Had Been in Worse Places.

Woman—I should think you would be ashamed to beg in this neighborhood.

Tramp—Don't apologize for it, mum I've seen worse.—Williams Purple Cow.

Was Not Hasty.

"Reggie isn't going to marry Dolly after all."

"But I thought he fell in love at first sight."

"Yes but he took a second look."—New York Sun.

Perfect Equality.

Father—Why is it that you are always at the bottom of the class?

Johnny—It doesn't make any difference, daddy; they teach the same things at both ends.—Western Christian Advocate (Cincinnati).

Gets Down to Facts.

A Russian Jew wanted to become an American citizen and this is how he filled out three of the questions on his naturalization blank:

Name—Joseph Levinski.
Born—Yes.
Business—Rotten.—Hospitality.

Amateur Detective Work.

Two sailors, at a dog show, were gazing at a valuable Ikye terrier which had so much hair that it looked more like a woolen mat than a dog.

"Which end is 'is 'ead, Tom?" asked one.

"Blowed if I know," was the reply. "But 'ere, I'll stick a pin in him, and you look which end barks."—Successful Farming.

A Matter of Courtesy.

Bill Jones marched his wife and 12 children into a shoe store and told the clerk to fit them up.

The clerk worked hard for almost two hours and at last had each of the 13 whims satisfied as to foot comfort, so started to make out a sales slip.

"Oh, I don't want to buy the shoes," said Bill, "just mark down the sizes of each one, I am going to order the shoes from that new mail order house at Kalamazoo.

Sounds Phoney!

"Is there anything you would like to do before I press the button?" said the warden of Sing Sing to the murderer in the electric chair.

"Yes, your honor," said the latter, "I would like to get up and give a lady my seat."

A Speech, Anyway.

The individual entered the crowded room while the meeting was in progress, took out a bundle of notes and began to address the meeting.

The chairman made repeated efforts to interrupt the speaker, but he refused to be called to order. The oration lasted close upon half an hour.

"Have you entirely finished, sir?" the chairman asked.

"Yes—quite; but I defy you to deny the truth of my statements," he retorted.

"I have no wish to, sir," said the chairman. "The gas company, of the management of which you complain, is holding its meeting in the next room. This is the vegetarian society."—Kansas City Star.

Prepared for the Worst.

There was turmoil on deck, feet clattered to and fro, there came a grinding sound, and the engines seemed to stop.

The timid passenger rushed from his cabin and almost collided with the captain.

"What has happened?" he panted.

"Be prepared for the worst!" said the captain sternly.

"Wh-where are the lifebelts?"

"It's too late to use those," said the captain. "We've done everything we can. Now it's every man for himself!"

He led the timid one to the side of the deck.

"I can't! I daren't look!" he cried. "Tell me what has happened!"

"We're in harbor," said the captain gently.—Answers, London.

FARMERS' WANT ADS

This is the farmers' "want," "sale" and "exchange" department for small advertisements of farmers, including live stock and poultry.

Advertising rates for ads running 1 to 3 times, 10c per word per insertion, with a special rate to Farmer subscribers, as follows: Ads running 4 to 12 times, 9c per word per insertion; ads running 13 times or more, 8c per word per insertion.

All commercial and land advertising 10 cents per word each insertion. Open also to nonsubscribers.

In using these columns advertisers must observe: (1) No advertisements will be inserted for less than $1.00. (2) Every word, number and initial, including name and address, must be paid for. (3) New advertisements, changes of copy or cancellations must reach general office, Spokane, Wash., 10 days in advance of publication date. (4) Cash must accompany order.

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HELP WANTED—MALE 3

MEN WANTED AT ONCE TO FILL GOOD POsitions. You can qualify in few weeks. Experience unnecessary. Free employment department. Write for free catalogue 100-B, and rates. Modern Automobile and Tractor Schools, W1803 Third ave., Spokane, Wash., or 700 Mercer st., Seattle.

WANTED — SALESMAN WHO CAN SELL high-grade, dependable nursery stock; several counties in Oregon, Wash., Idaho and Montana now open for assignment. Our selling contract will interest you. Address Albany Nurseries, Inc., Albany, Ore.

WANTED — MEN WITH HORTICULTURAL experience to sell our dependable nursery stock; have select territory for immediate acceptance. Write for particulars. Capital City Nursery Company, 426 Oregon bldg., Salem, Ore.

WANTED—EXPERIENCED RANCH HAND, one year or longer; prefer married man. Box 297, Chester, Mont.

SITUATIONS WANTED—Male 21

HONEST, RELIABLE SINGLE MAN, 45, wishes steady position on farm. H 15, Washington Farmer, Spokane.

FRESH FOOD PRODUCTS 51-1

"HONEY BRAND" HONEY — ALFALFA, sweet clover product; pure, light, thick, good flavored; gives satisfaction wherever used; I 60-lb. can, $6.50, two for $12.75. Write for circular and prices in palls. Oliver Sires, Wapato, Wash.

HONEY—400 TEN-LB. PAILS CHOICE ALfalfa, sweet clover honey; also 60-lb. cans and 5-lb. palls; discount on five-case orders or more. Write for prices and sample. Wm. R. Sires, Wapato, Wash.

WHITE ALFALFA, SWEET CLOVER HONEY; 1 60-lb. can, $7.50; 2 60-lb. cans, $14.50; six 10-lb. cans, $8.50; three No. 10 pails, prepaid, third zone, $5.50. Wells D. Rose, Sunnyside, Wash.

NEW HONEY, FINE QUALITY ALFALFA, sweet clover; 60-lb. can prepaid, second zone, $7.29; two, $12.75; not prepaid; 3 10-lb. palls, prepaid, second zone, $4.25. Harry Fisher, Prosser, Wash.

POPULAR BRAND HAPPY HOME HONEY—One 60-lb. can, $6.50; two cans, $12.75; six 10-lb. palls, $7.50; comb honey prices on request. H. N. Paul, Mabton, Wash.

FINEST NEW HONEY, 60 POUNDS, $7.60; 2 cans, $14.40; add postage; 10 pounds, $1.90; 5 pounds, $1 prepaid; satisfaction guaranteed. Geo. Bancroft, Hermiston, Ore.

NEW CROP ALFALFA-SWEET CLOVER honey; 60-lb. can, $4.75; two cans, $9 f. o. b. Rigby. Heckman & Larsen Honey Co., Rigby, Idaho. Quality guaranteed.

DELICIOUS NEW CLOVER HONEY. 60 pounds, $5.50; two 60s, $9.75; six 10s, $6.75; 12 5s, $7. Agents wanted. Browne, Box 499, Twin Falls, Idaho.

NEW HONEY—ALFALFA AND SWEET CLOver; 1 60-lb. can, $6.50; two, $12.75; discount on large quantities. Ernest Sires, Yakima, Wn.

3-POUND BOX ABSOLUTELY BONELESS codfish; fine white, new catch fish, delivered by mail, $1. Coffin Fish Co., Seattle, Wash.

APPLES—COMBINATION FANCY AND "C" Jonathans, dollar per box; packed, dollar fifteen. Stanley Arnold, Pateros, Wash.

HONEY — FRESH ALFALFA-SWEET CLOver honey; one 60-lb. can, $6.50; two cans, $12.75. A. L. Traner, Touchet, Wash.

COMB HONEY AT $4.40 PER 24-LB. CASE, express not prepaid. G. I. Folsom, Route 1, Prosser, Wash.

MISCELLANEOUS—FOR SALE 50

SASH AND DOORS—O. B. WILLIAMS CO., 1943 First ave. So., Seattle. Chicken house sash, 20" wide by 25" high, 80c; a dozen different sizes in stock for immediate shipment. Skylights for chicken houses, 36"x40"; price, glazed, $2. This is the size recommended by the Western Washington experiment station. We carry them in stock for immediate shipment. Sash and doors for all purposes at lowest prices. All orders receive prompt attention. Our large illustrated catalog No. 35, showing full line of building material and built-in fixtures for the home, free on request. O. B. Williams Co. Established 1899.

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WALL BOARD—WRITE FOR SAMPLE OF Washington plaster wall board; won't warp, won't burn. Manufactured by Washington Building Products company, 6851 E. Marginal Way, Seattle, Wash.

NATURAL LEAF TOBACCO, CHEWING, 5 pounds, $1.75; 15 pounds, $4; smoking, 5 pounds, $1.25; 15 pounds, $3. Send no money, pay when received. Farmers' Tobacco Association, Paducah, Ky.

ALL WOOL KNITTING YARN FOR SALE, direct from manufacturer at 95c, $1.35 and $1.60 a pound. Postage paid on $5 order. Write for samples. H. A. Bartlett, Harmony, Maine.

NATURAL LEAF TOBACCO, CHEWING, 5 lbs., $1.75; 10 lbs., $3; smoking, 5 pounds, $1.25; 10 pounds, $2. Send no money, pay when received. Tobacco Growers' Union, Paducah, Kentucky.

TOBACCO — KENTUCKY'S PRIDE: EXTRA fine chewing, 10 lbs., $3; smoking, ten lbs., $2; twenty, $3.50. Farmers' Club, Mayfield, Ky.

NATURAL LEAF SMOKING TOBACCO—5 lbs., 75c; 10 lbs., $1.25; 20 lbs., $1.75. Cash with order. United Farmers, Mayfield, Ky.

BEES FOR SALE—GUARANTEED ITALIANS. H. A. Scullen, Corvallis, Ore.

AUCTIONEERS 75

LIVE STOCK AUCTIONEER—SALES CONducted anywhere. Write for dates and terms. U. S. McFaddin, 1307 Maxwell, Spokane.

MACHINERY—For Sale. 93

BUFFALO PITTS 30-50 SEPARATOR; CASE 12-60 engine, good shape; cheap or trade for dairy cows. S. T. Allgood, Route 2, Sandy City, Utah.

WILL TRADE 16 H. P. MOGUL INTERNAtional tractor for 25 h. p. stationary gas engine. Talcott Sawmill, Wahkiacus, Wash.

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It will pay you to write for free booklets and information offered in the advertising columns; and when you DO write, please mention THE WASHINGTON FARMER.

STOVE REPAIRING 128

WRITE MYER RUBENS, SPOKANE, ABOUT stove repairs, welding broken parts, nickel plating.

FUR-BEARING ANIMALS 170

SILVER AND CROSS FOXES FOR SALE. William Rambo, 407 Sprague, Spokane.

PETS—Dogs, Birds, Etc. 171

BEAUTIFUL WHITE COLLIE PUPPIES; reasonable prices. Urbandale Farm, Oakley, Idaho.

FINE FOX HOUNDS, PUPPIES; GUARANteed strain. Hugh Morrison, Route 8, Spokane, Wash.

POULTRY 174

PULLETS—1500 APRIL AND MAY HATCHED White Leghorn pullets for sale at attractive prices; hatched from thoroughbred Hollywood and Tancred strains; sired by cockerels 250 to 290 egg strains. We ship at three months of age and guarantee satisfaction or you may return the birds in 3 days. We can give you quality and service. Queen Hatchery, Seattle, Wash.

WILLAMETTE VALLEY BARRED PLYmouth Rocks. Over fifteen hundred young birds in 1922; heavy laying strain, dark and beautifully barred; cock birds and cockerels for sale; only the very best allowed on the Dimick stock farm; bank references. F. C. Waldron, R. F. D. 2, Hubbard, Ore.

CERTIFIED WHITE LEGHORN BABY chicks, hatched in the world's largest electric hatchery; choice free range, high egg producing breeding flocks, inspected by the Sonoma county farm bureau. Safe arrival guaranteed. Must Hatch Incubator Co., 445 Seventh st., Petaluma, Cal.

POULTRYMEN — SEND EIGHT TWO-CENT stamps for special three months' trial for the best and oldest exclusive poultry journal in the west. The articles and advertisements are of special interest to poultry breeders. Northwest Poultry Journal, Salem, Ore.

WHITE LEGHORN BABY CHICKS, FROM free range Hoganized stock; breeding flocks inspected by Sonoma county farm bureau; accredited hatchery inspector. Full count and safe arrival guaranteed. For price write to Lafranchi Hatchery, Petaluma, Cal.

WHITE LEGHORN BABY CHIX FOR SUMmer and fall months from stock accredited by Sonoma county farm bureau. We guarantee safe arrival. Write for prices and literature. The Pioneer Hatchery, 422 Sixth street, Petaluma, Cal.

FOR SALE—WHITE LEGHORN COCKERELS, top notchers. It's money saved to drop us a card stating what you wish. No money till you are satisfied. River View Yards. Box 108, The Dalles, Ore.

JERSEY BLACK GIANTS, AMERICA'S PREmier heavyweight fowl; Aug. 10th, 1922, admitted to standard; eggs and stock. C. M. Page & Sons, Box 877, Belmar, N. J.

PUREBRED BABY CHICKS FOR 1923. LEGhorns, Reds, Barred Rocks, White Rocks, Minorcas, Anconas. Free catalog. Booking orders now. C. N. Needham, Salem, Ore.

BABY CHICKS — WE GUARANTEE OUR chicks to be from the highest producing hens in Petaluma. Write for further information. The White Hatchery, Petaluma, Cal.

PULLETS, VIGOROUS RANGE RAISED S. C. White Leghorns of excellent laying strain, at reasonable price. F. M. Shank, Route 2, Box 111, Hubbard, Ore.

DOLLARS FOR YOUR EGGS—WE PAY THE top market prices for your eggs and poultry. Daily cash remittances. Western Produce Co., Spokane.

ALLEN'S ROCKS AND LEGHORNS WIN, LAY and pay. Write your wants. D. W. Allen, La Conner, Wash.

LIVE STOCK 177

WE GUARANTEE TO PAY THE HIGHEST market prices for your poultry and live stock. Owing to the constant changes in the market we are unable to quote prices in this paper from week to week. We will furnish tags and prices when you are ready to ship. Write us what you have to sell. Prompt returns. John Lewis & Co., Spokane, Wash.

LARGE, HEAVY PRODUCING HOLSTEINS for sale at all times in car lots; tuberculin tested; 150 to 200 head always on hand; well marked heifer calves from registered sires and heavy producing dams; crated for shipment anywhere, $25 f. o. b. Levinson & Balmelli, Yakima, Wash.

WE PAY TOP PRICES FOR YOUR LIVE OR dressed veal, hogs and poultry. Your check by return mail. Shipping tags on request. M. & J. Packing Co., Spokane.

GUERNSEY BULL, 2 YEARS OLD; SIRE, Mixture Doctor; dam, Satin Lady; reasonably priced. Jos. Martin, Richland, Wash.

FOR SALE—AT SNOHOMISH COUNTY FAIR, 8 Ayrshire cows; 3 sires of Willowmoor stock; tuberculin tested. William Milne.

TOP FANCY LIGHT VEAL, 12½C. JONES AND Williams, S101 Division st., Spokane, Wash. Prices subject to fluctuations.

FOR SALE—60 SHROPSHIRE AND 10 DElany yearling bucks, $12 per head. Ambrose Kippes, Richland, Ore.

FOR SALE—50 HEAD BLACK FACED BUCKS, purebred, not registered. Y. C. Mansfield, Sunnyside, Wash.

FOR SALE—8 HIGH GRADE HIGH PRODUCing Guernsey cows, freshen soon. Box 461, Eugene, Ore.

RAMS, REGISTERED SHROPSHIRES, ONE and two years old. G. H. Thompson, Macleay, Ore.

FOR SALE CHEAP—REGISTERED HOLstein bull calf. Eugene Finley, Jefferson, Ore.

REGISTERED YOUNG O. I. C. PIGS FOR sale. Dr. Will, Puyallup, Wash.

LIVE STOCK (Continued) 177

SAVE THE CALVES—"SAVACALF," A POWerful germicide, is used for treating contagious abortion in cows. It drives the disease from those that have it, and prevents the clean herds from getting it. Simply mix it with the salt and treat the whole herd at once. Costs 25 cents per head per year. Every breeder should use it. $5 package postpaid. Absolutely guaranteed. Write for information. H. C. Babbitt, Boise, Idaho.

40 ANGORA GOATS, MOSTLY NANNIES, good condition; $2.50 each. Thos. Carmichael, Gaston, Ore.

WILL SELL 30 HEAD OF REGISTERED Shropshire rams. Write McK. Edwards, Valley, Wash.

200 YOUNG REG. HAMPSHIRE EWES; BARgain. C. E. Cleveland, Stanfield, Ore.

FOR SALE — 150 YOUNG COARSE WOOL ewes. Young Bros., Auburn, Wash.

HARNESS and SADDLERY 189

SEND FOR FREE HARNESS AND SADDLE catalog today; cut out the middleman, buy direct from the manufacturer. Lowest prices in the west; satisfaction guaranteed. Established 1881. Write Pierce Harness Co., Dept. T, Spokane, Wash.

HAY FOR SALE 200

ALFALFA HAY, GUARANTEED QUALITY; prompt shipment; buy direct and save money. Prices upon application. Ernest T. Freepons, Walla Walla, Wash.

CHOICE ALFALFA HAY, GREEN AND leafy; the kind that dairymen like to feed. Write for delivered prices. J. F. Jacobson, Kennewick, Wash.

FAIRS 370

PACIFIC INTERNATIONAL LIVE STOCK EXposition, Nov. 4 to 11, 1922. Entries close noon, October 10. Send for premium list. O. M. Plummer, general manager, 211 Northwestern Bank bldg., Portland, Ore.

SHERMAN COUNTY FAIR, MORO, ORE., OCT. 11-14, 1922. Write for premium lists. W. S. Carpenter, Secretary, Moro, Ore.

JOB PRINTING 372

GUARANTEED BETTER BUTTER WRAPpers. 100, 60c; 250, $1.25; 500, $2.25; 1000, $4; printed to order. Home Specialty Co., Middleton, Idaho.

TANNING 425

ANY KIND OF HIDE TANNED WITH HAIR on, or for leather. Mohr, 321 Sprague, Spokane.

TAXIDERMISTS 426

WE MOUNT ANYTHING FROM A FLEA to elephant. Mohr, 321 Sprague, Spokane.

FURRIERS 429

FURS TO ORDER, REPAIRED, REMODeled and for sale. Mohr, 321 Sprague, Spokane.

HIDES, PELTS AND WOOL 430

HIDES—WE BUY HIDES OF ALL KINDS. Write for prices and tags. Hibbard-Stewart Co., Hibbard bldg., Seattle.

WOOL—WE BUY WOOL AND PELTS. WRITE for prices and tags. Hibbard-Stewart Co., Hibbard bldg., Seattle.

MATERNITY HOMES 497

MATERNITY HOSPITAL; STRICTLY PRIvate; doctor in attendance; prices reasonable. Mrs. Elizabeth Peel, matron, W1324 Broadway, Spokane.

BUILDING MATERIAL 588

FIX BROKEN PLASTER WALLS WITH PERfection plaster wallboard; nailed on like lumber; takes calcimine or paint; sample and booklet from Western Wallboard Co., Seattle, Wash.

BUILDERS, CONTRACTORS, HOME OWNERS, write for free 1922 catalog. Tacoma Sash & Door Co., Tacoma, Wash.

NURSERY STOCK 621

NURSERY STOCK, ITALIAN PRUNE TREES and trees of all kinds. Berries and small fruits of all varieties. Buy direct and save 50 per cent. Brooks Nursery, Lafayette, Ore.

PANSY PLANTS FOR SALE—GET READY for summer flowers. For information write Nan Blair, R. 6, Box 428, Portland, Ore.

BULBS—NARCISSUS, DAFFODILS, CROCUS, iris, tulips, jonquils, 35c per dozen, mixed. Mrs. Mary Insel, Shelton, Wash.

FARM LANDS FOR SALE 651

70 ACRES TIMBER AND CUTOVER LAND; fronts county road; fine springs, soft water; half mile to store, postoffice, railway station; Pacific highway, paved; part easily cleared; great prospective poultry farm; fenced; no buildings; closely settled community. $25 acre; $250 cash, twenty years balance; no trades. Owner, Bartlett Johnston, Saginaw, Ore.

ALFALFA, STOCK RANCH—125 ACRES ALfalfa and stock ranch fully equipped; in eastern Washington, on banks of Columbia river; beautiful place to live; nearby grade and high schools, churches, etc.; splendid soil; specially priced for quick sale. H. W. Frieling, Box 62, Seattle, Wash.

EIGHTY-ACRE RANCH, WELL FENCED; IN best condition for big crops; good house, bearing orchard, berries; 2½ miles to cream station; possession this fall. M. A. Tryon, owner, Hazelton, Idaho.

CHEAP—4800 ACRES, 1700 UNDER KENNEwick project; fine sheep range, including 10,000 acres leased land. Also lots and acreage in Yakima. D. G. Goodman, Yakima, Wash.

STOCK RANCH, 275 ACRES; 50 CULTIVATED; buildings, orchard, creek; on plank road; near school; price right. Ira Boyer, Molalla, Ore.

WANT TO HEAR FROM SOME ONE WHO wants to buy farm land. H. J. Foster, Ola, Idaho.

648-ACRE STOCK RANCH; SOUTHEAST IDAho; owner. Box 125, Freewater, Ore.

FARM LANDS FOR SALE (Continued) 651

IRRIGATED FARMS FOR SALE—160-ACRE farms, improved or unimproved; 30 to 160 acres irrigable land on each parcel; near Lethbridge, in sunny southern Alberta, can be bought for $15 to $40 an acre. No need for pioneering. Well settled country, good roads, railways, schools, telephones; agreeable social conditions; fertile land; success of irrigation farming here already demonstrated; irrigation system being constructed under government supervision. Water available in 1923. Write for information concerning crops grown and description and location of farms to the province of Alberta, Irrigation Council, 12 Provincial building, Lethbridge.

CUTOVER LANDS, EASY TO CLEAR; $8 TO $20 per acre; 25 miles north of Spokane; on hard-surfaced highway; Great Northern and Milwaukee railways; excellent opportunity for dairying and stock raising, with Spokane markets and creamery near at hand. Will help the man who will live upon this land and agree to clear a part each year by giving lumber to help start his buildings, and a purebred Jersey bull to groups of farmers. Interest and payments low. Write Milan Farms Development company, Dept. T, Old National Bank bldg., Spokane, Wash.

BIG OPENING SALE OF YAKIMA VALLEY farm land, under an assessed state and government approved irrigation project; good, deep soil; close to town, railroads and state highway. We sell in tracts to suit purchaser at $25 per acre and up, on easy terms. Our many sales to farmers show that this land is a good investment. Western Lands, Inc., owners, 913 Green bldg., Seattle.

LOGGED-OFF LANDS IN STEVENS COUNTY, Washington, at greatly reduced prices. Most of land sells at $5 to $20 per acre; thickly settled community, good schools, hard surfaced and paved roads to Spokane; best county in state for dairy and stock raising; most places water can be found at shallow depths. Write for folder. Phoenix Lumber company, Dept. T, Spokane, Wash.

VALLEY FARM LANDS AT ONALASKA, Wash.; productive silty clay loam, not gravelly, level, well watered; convenient markets, roads, etc.; 20 acres up, $15 to $50; small payments and $10 to $15 monthly; steady nearby employment assured purchasers. Salesman, Onalaska, or write Graham Land Co., 1008 American Bank bldg., Seattle.

CALIFORNIA STOCK RANCHES, IN MENDOcino county; 4 kinds of acorns for hogs; plenty of grass and water; 50-in. rainfall; mild climate; 160 acres up. Prices $6 per acre up, as per improvements. No trades; easy payments; liberal terms. E. D. Baker, Nashmead, Cal.

450 ACRES DAIRY AND STOCK FARM; 150 cleared, balance seeded; all fenced; 100 bottom land; running water; good buildings; near paved road. $5000 down, balance easy terms; will lease to responsible party. J. M. Dempsey, owner, Auburn, Wash.

BIG LUMBER CO. LAND SALE IN SKAGIT county; 40 acres, $1400; 20 acres, with new house, $1500. Lumber furnished for building. Lots of work for the settler; splendid district, roads, schools and towns. H. C. Peters, 726 3d ave., Seattle.

35 ACRES, 32 PLOWED; WILL RAISE 100 bushels wheat acre; 8-room house, electric plant, plenty fruit, buildings; main road, phone, mail, school bus; fine view; 3 miles to town. Price $6800; $1500 down. Chris De Vries, Oak Harbor, Wash.

7000 ACRES SEQUIM LAND SETTLEMENT project, containing the finest berry and dairy land in the state, now offered for settlement at attractive prices and terms. Free booklet. Thos. G. Mortland, Sequim, Wash.

440 ACRES HAY AND DAIRY; 1 MILE FROM high school; 8 from Cheney normal; will consider 5-acre improved for equipment and hay and feed. Hentges, Valley, Wash.

SELL YOUR PROPERTY QUICKLY FOR cash; no matter where located. Particulars free. Real Estate Salesman company, 501 Brownell, Lincoln, Neb.

FOR SALE OR RENT—400-A. IRRIGATED stock and dairy ranch; with or without equipment, stock and hay. Box 192, Plains, Mont.

FOR SALE CHEAP—HEIR'S PROPERTY. BOX 15, Algona, Wash.

FARM LANDS—Wanted 654

WANT TO HEAR FROM OWNER HAVING farm for sale. Give particulars and lowest price. John J. Black, 80th st., Chippewa Falls, Wis.

FARMS WANTED—SELL YOURS QUICKLY for cash, no matter where. Particulars free. R. A. McNown, 310 Wilkinson bldg., Omaha, Neb.

WANTED—COUNTRY AND CITY PROPERTY. Write Box 582, Prosser, Wash.

FARM LANDS FOR RENT 657

FOR RENT—SUBIRRIGATED DAIRY AND hay ranch; 320 a. pasture; also 80 a. wheat land; plenty water. Write Mrs. Henry Landreth, R. 1, Reardan, Wash.

IRRIGATED LANDS—For Sale 663

500 CATTLE, 1346-ACRE IRRIGATED RANCH; wish to sell half interest; purchaser must have not less than $20,000 cash; purchaser can have management if desired. J. L. Milner, Idaho Falls, Idaho.

160 ACRES IRRIGATED LAND; NEAR TOWN; in beautiful Yakima valley; splendid dairy farm; fine fruit land; 100 acres in alfalfa. $200 per acre; easy terms. W. C. Wright, Outlook, Wash.

40 ACRES IRRIGATED LAND; HIGHLY IMproved. Owner, James Gordon, Mabton, Wash.

20 OR 40 ACRES KENNEWICK ALFALFA. Write J. Jacot, Finley, Wash.

FOR SALE OR EXCHANGE 702

TAKEN UNDER FORECLOSURE—NINE HUNdred acres very productive grain and hay land; level, partly irrigated; running water; some buildings; close to range; perfect title; easy terms. Thirty-five dollars per acre. Might consider some clear property in exchange. R. P. Hunter, Ogden, Utah.

760-A. STOCK RANCH, DOUGLAS COUNTY.; good bldgs.; plenty water; good range; trade for farm, city or business. Price $20,000; mtg. $5380. 415 Jamieson bldg., Spokane.

480-A. WHEAT RANCH; NEAR ALMIRA; 300 cultivated; bldgs., water. Price $30 per acre; trade for smaller place or city property. 415 Jamieson bldg., Spokane.

FINE UNIMPROVED IRRIGATED LAND; near Idaho Falls, to exchange for isolated mountain ranch, preferably in Idaho. Ben H. Matkins, Hamer, Idaho.

TO EXCHANGE—Real Estate 705

$35,000 WORTH CLEAR INCOME PROPERTY in Tacoma for good ranch, clear. Write owner, 3206 North 27th st., Tacoma, Wash.

Pike's Peak or Bust

(Continued from page sixteen.)

scarceiy was that wagon out of sight when another was seen coming down.

To this there were only three yoke of oxen, and two men were in charge of it. One was managing the team, while the other was watching the wagon itself to see that nothing gave way. For not only were both hind wheels locked fast, so that they had to slide over the rocky grouid, but a good-sized pine tree had been felled and chained to the hind axle. The tree was dragging trunk first, but it had a bushy top, which was sweeping the roadway behind the wagon, and thus helping to hold it back.

Standing at one side of the road, the foot travelers watched the coming down with much interest. When the wagon had reached the bottom of the steep slope, it was stopped till the man walking by it could jerk the lock chains loose and release those sliding wheels. Now he shouted to the driver to turn out of the road. As soon as the pine tree had been dragged to one side it was unchained and left lying there. Many similar trees were scattered around, showing that other teamsters had resorted to the same expedient.

"Pretty steep traveling, don't you find it?" called out Sanders.

"You bet it's steep—everlastin'ly steep! Next door to straight up and down!" answered the man behind.

And the man with the oxen added: "If I'm ever ravin'-distracted enough to try to take a wagon and team into sech a ding-blasted country as that'n' ag'in I hope the Lord'll break my fool neck and put me out of my misery!"

"Reckon I'm horse enough to push this wheelbarr' up there?" inquired Esau.

The teamster glanced at the one-wheeled vehicle, and then at its owner.

"No, you ain't—not unless you're a steam engyne in breeches! My guess is you'd tarr out before you clumb 20 steps up the steepest part."

"Maybe so, maybe so not," answered the wheelbarrow's owner. "I've pushed this clumsy old contraption all the way from southern Illinois to the Rocky mounds, with a little side trip of about 300 miles. Of course, my pardner here has lent me a hand now and then. But between us we've wheelbarrered every step of 1400 miles, I reckon."

"And ain't tarred out yit?" demanded the teamster incredulously.

"Not by a long shot!"

"Then all I can say is: You've got lots more grit in your gizzard than I've got in mine! But you'd better hustle up a dozen men or so before you start up this big slant. You've clumb some devilish high hills, I'm guessin', in all that 1400 mile. But all of 'em stacked one on top of t'other wouldn't be as high or as steep as this golly-buster of a hill right here."

"But we're bound to get up somehow," Orlando told him. "We've started to the Gregory Diggings, and this is the only road."

Here the men who had just taken a wagon up were seen coming down, with their long team, for another wagon. Another string of wagons had also just arrived, stopping not far back. The drivers now came forward to examine the trail, and the foot party were soon in conversation with them.

Ere long a man who had been camped not far away was seen coming. Having despaired of getting his whole wagon up, he had taken out the tongue and fore wheels, and roped such supplies as he would need most to the fore axle and hounds. With three yoke of cattle to pull that improvised cart, he was going to try the mountain.

He went up. But even with such a light load the six work cattle seemed to have every pound they could pull.

When that outfit had disappeared, somewhere up among the clouds, apparently, Sanders addressed his partners: "Well, boys, what do you think by this time? Reckon we're wheelhorses enough to drag this cart and this wheelbarrow up that tilted road?"

"I'm doubtin' mightily if it lays in our breeches to do that," answered a handcarter.

And Esau said: "My notion is we'll have to splice teams to git up, and maybe load light besides."

"Guess you're right about that," Sanders agreed. "Still, just to see how the thing will work, we might try to go up as we are. Buckle your bellybands, boys!"

Two carters were quickly harnessed in front of the cart, another was in the shafts and the other two were pushing behind. All went well enough at first. But by the time they had climbed a hundred yards or so and reached the steepest part of the road they were seen to move more and more slowly. Finally they stopped altogether. After standing for a minute or two they turned round, those in harness seizing their straps with their hands and permitted the cart to run backwards.

"Too tough a job—too tough a job for little shavers like us!" declared Sanders, when they were at the foot of the slope.

He began to unfasten his harness. The others were wiping their sweaty faces with their sleeves, or fanning themselves with their hats.

"No wonder the pore oxens have to stick their toenails in!" exclaimed one of the party.

After a little while Sanders remarked: "Only way I can see is for us to unload all but about 150 pounds. Then, if Esau and Orlando will double teams with us, we may be able to snake her up."

"Yes, we'll give you a boost. To be sure we will," answered Orlando. "We're going to need one ourselves. Won't be room for both of us to get behind and push. Hadn't we better put a rope to the fore end of your cart?"

"A rope will be all right," Sanders told him. "Have it long enough for two men to lay hold of it."

So the cart was moved back from the road and the greater part of its load taken off. A man camped near by promised to keep an eye an what was left as well as on the wheelbarrow and on the pack which Orlando had removed from Brindle. The cow herself, with her packsaddle still on, had been turned loose to graze.

Now the handcart's crew fell into their accustomed places. Nobody was riding, of course, and two were behind to push. After tying a rope to the crosspiece at the end of the cart's shafts, and letting it extend forward, Esau and Orlaido had something to pull by.

When everything was ready, Esau threw the rope over his shoulder, Orlando seized hold of it, their leader shouted "Go!" and away they went.

"Now stick your toenails in, boys! Stick 'em in deep!" bawled Sanders, when they came to the steepest part of the road.

The cart went on this time, though not without much tugging and straining and sweating on the part of the seven men pulling it. When a few hundred feet up they had to stop and rest. And so they did again and again. But at last they found themselves on the mountain top, 10,000 feet above where they had started. Or at least that was what a weary handcarter declared the distance to be, after they had reached the summit. And nobody disputed his guess.

As soon as they had rested enough and felt strong enough to return they unloaded the flour and other things from the cart. Those they left in the care of a man who had stopped his wagon there. He was chopping a pine tree to drag down.

"Now who's yearning for a ride?" called out Sanders.

"Not this boy!" answered Esau. "If the cart broke loose a feller might ride whizzin' to kingdom come!"

So they started back down the mountain with the cart. And when they had reached the bottom all agreed that the coming down was well nigh as hard as the going up. And if the cart had been loaded, the coming down would have been fully as hard.

At the foot of the mountain they seated themselves to rest for a few minutes, while they watched 22 oxen drag a big but nearly empty wagon up the mountainside. One of the drivers was a woman—a woman wearing boots and a man's hat. It was Mrs. Hinkson, the wife of the traveler Esau had talked with soon after crossing the South Platte. Hinkson himself was not far back, looking after the wagon and the children and the loose stock.

When the way was clear the foot travelers put another load on their cart and started up again. But before reaching the steepest part of the road they heard somebody calling to them. Looking behind, they saw three people they knew: Cooper and Holloway and Givens, Holloway's present partner. Those men had just arrived; their wagons could be seen standing a few hundred yards in the rear. The cart had come to a standstill.

"You fellows seem to be having no end of fun getting your plunder up into the clouds!" Cooper called after them.

"Yes, we're having a man-killing job of it!" Sanders admitted. "But we're dragging it up, a jag at a jump. "You'll have a thundering time getting that big, loaded wagon of yours up here!"

"Wouldn't I, though—if I was gump enough to try! But I'm not gump enough to try!"

"What! You're not going any further, Mr. Cooper?" demanded Orlando.

"Oh, yes, I'm expecting to go further myself. But I'll leave my wagon and stock down here and my family to look after 'em."

"How are you goin' in, then?" Esau inquired.

"With a pack on my back, I'd guess; or

(Continued on page twenty-four.)

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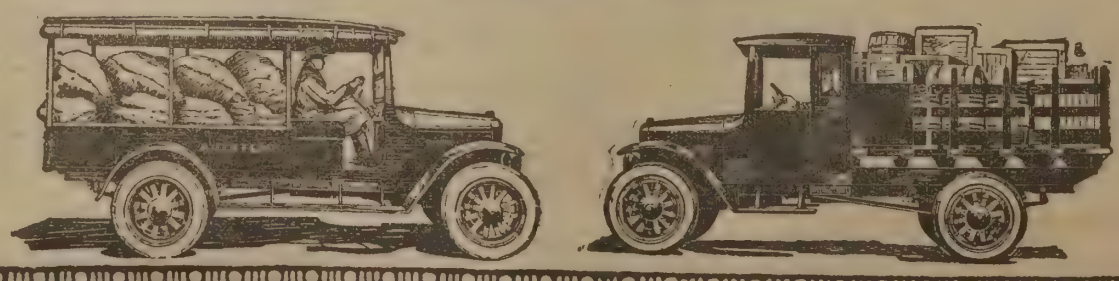
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FAMILY CIRCLE

ALICE BARLAND
EDITORIAL CONTRIBUTOR

Establishing Habits

The eating, breathing, sleeping and postural habits established by children are about the most valuable asset or the most serious menace that can affect their lives. They are also one of the most controllable influences that will enter into personal success or failure, if controlled early.

Speaking before a body of women, a nationally recognized Chicago authority on child health, Dr. Carolyn Hedger, recently declared that the persistent aversion to milk sometimes encountered in children is purely a problem for psychological control or is a matter of the method of imbibing milk. "Only in one case in 10,000, perhaps," she said, "do we encounter a human organism sensitized to the milk proteins, or incapable of taking milk. In 25 years of practice I have never had one case. With many children indisposed to take it I have overcome the prejudice by beginning with milk given by the teaspoonful, then the tablespoonful, as a medicine. Taken slowly, thus, it is soon relished."

In other cases the adult's prejudice against milk as a beverage was the difficulty that stood in the way, or some other psychological influence. A pretty glass, a dainty paper napkin, a festive, social aspect lent to the milk drinking by sharing with mother or father the delicious beverage, has often overcome the obstacle. Dr. Hedger alluded to one instance in her knowledge of a small and wilful miss able to induce vomiting at will, so purely was the physical revulsion really a psychological one. "What was done in her case might not be safely recommendable for general application," she said. The child's father, after all persuasive methods had failed to cause her to eat the prescribed oatmeal, repeatedly and forcibly fed her, one morning, between intervals of protest and intervasl of eruption, the required amount. When it became clearly evident to the child that the stipulated amount of oatmeal would keep on going down her gullet, would she, wouldn't she, the oatmeal stuck to her ribs, and thereafter she ate it in peace and enjoyment. Some degree of psychological control over the stomach's reaction is more common in children than is generally supposed, in Dr. Hedger's conviction.

Hence the importance of good psychological methods, not only to induce consumption of the proper food, but good assimilation of it. Another entire family of children averse to milk had been speedily converted to its habitual use when they learned that "children too sick to drink milk must stay in bed."

Just Folks

Rules of life are easily made.

It is better not to see all things as they are.

A big piece of education is to name trifles rightly.

It is even better to be one-sided than to be no-sided.

Men and women will always be waiting for the last word.

There is nothing necessary that is carried over from the evening to the morning. This thought of itself gives poise.

The day is done. The books are balanced.

The morning is a new resurrection of life and should come with the joy of springtime, and the evening should follow with the joy of the harvest. There is no magic about the miracle of work in the morning and rest in the evening. It is simply the beginning and the ending of the chapter with the blessed uncertainty of when the final chapter shall close.

Plan for the new chapter always but let it always be a new chapter. Let the freshness and vigor of youth enter into every morning's duty. Let the ruggedness of action characterize the midday and let the graciousness of age close the chapter at night. So shall growing content come with the years. So shall misfortune be interpreted. So shall there be light at eventide. E A S

Home Recipes

Brown Sugar Frosting—One and one-half cups brown sugar, one-half cup sweet cream, two tablespoons butter, cook till it bubbles, then flavor with vanilla and beat till thick.—Mrs. L. Balser, Idaho.

Fruit Cake—Two cups brown sugar, two cups boiling water, one pound of seeded raisins, two tablespoons of lard, one teaspoon each of cloves and cinnamon; stir together and boil five minutes; let cool and add one rounding teaspoon soda and three cups flour. Bake in a slow oven 45 minutes. It improves with age if not kept more than a month.—Mrs. F. M. S., Idaho.

Cold Relish: One peck of ripe tomatoes, chopped fine and drained, six large onions (chopped), two cups chopped celery, one large pepper, two pounds brown sugar, one-half cup salt, two ounces white mustard seed, two tablespoons of cinnamon, one quart vinegar; mix thoroughly and put away unsealed.

MRS. JENNIE HAIN.

Easily Made Boudoir Cap

By JEANETTE BELL.

This charming cap is of the most simple work. The foundation of the cap is a band of sash ribbon. This may be of any kind or color desired. The model was made of flowered ribbon on a white background. This sash ribbon was five inches wide, of which 42 inches were used. The daisies were made of the widest size of white rick rack braid, with centers of yellow crochet. Cut 20 points of rick rack braid, sew the ends together, then fold each point and sew together, forming the petals, as shown in the illustration. Seven of these flowers are used, six daisies for the band and one for the center of the crown. One ball of mercerized crochet cotton of any shade desired is used. With a sharp-pointed crochet hook make :

First row: * 1 s c into point of braid, 5 ch sts, repeat *, for this row, 5 ch sts.

Second row: * 1 s c into center st of loop of previous row, 5 ch sts, repeat *, for this row, 3 sl sts, to center of loop.

Third row: 3 ch sts, 1 d c, 2 ch sts, 2 d c, all into center st of loop, * 1 ch st, 2 d c, 2 ch sts, 2 d c, all into center st of next loop, repeat *, for each loop of previous row, break thread.

Repeat for the next daisy. Join the first and second medallions as follows: Join to ch in center of group, make 1 s c, 3 ch sts, 1 s c between groups of next medallion, 3 ch sts, 1 s c into next group, 3 ch sts, 1 s c over opposite ch, continue back and forth until you have joined 3 groups on each medallion, break thread.

The six medallions joined, form the band.

For the crown, make a medallion, same as before.

Fourth row: * 5 ch sts, skip 2 d c, 1 s c, repeat *, for this row.

Fifth row: * 5 ch sts, 1 s c into center st of loop of previous row, repeat *, for the next 3 rows.

Ninth row: 2 sl sts, to center of loop, 3 ch sts, 1 d c, 2 ch sts, 2 d c, all into center st of loop, * 2 d c, 2 ch sts, 2 d c, all into center st of loop, repeat *, for each loop, 3 ch sts.

Tenth row: * 2 d c, 2 ch sts, 2 d c, all between groups of previous row, 1 ch st, repeat *, between each group, break thread.

For the daisy center, make of deep yellow, 5 ch sts, join, forming a circle.

First row: 5 s c into circle.

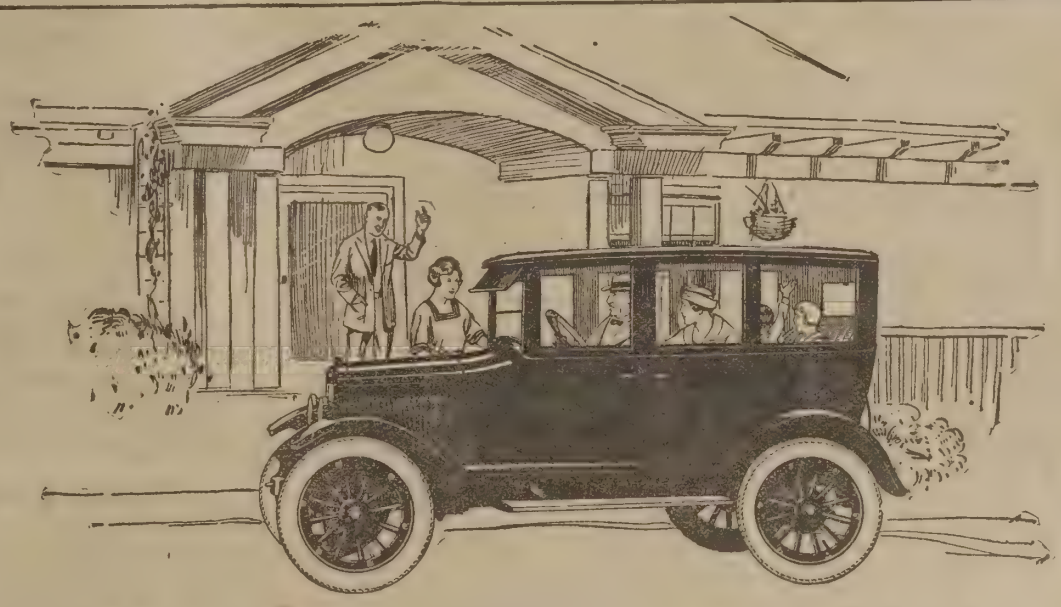
Second row: 2 s c into each st.

Third row: 1 s c into each st.

Fourth row: * 1 s c into first st, 2 s c into next st, repeat *.

Fifth row: 1 s c into each st, repeat for the next 2 rows, fill with cotton and decrease rapidly to close, sew to the center of daisy. Sew the ribbon ends together, and shir at top and bottom. Sew the crown to one edge and the band of medallions to the other. As the latter is in scallops, the ribbon will follow the scallops.





The Overland Sedan—the Ideal Family Car

For the farmer who must get about quickly and without delay—for the housewife whose visits to town must be made in all kinds of weather—for the entire family who want a smart, light, economical and comfortable car, there is nothing that fits their needs quite as well as the Overland Sedan, now priced at $895.

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High Points in News of the Week

As important as were the developments in the railroad strike situation last week, the European and Near East situation took precedence in news interest. The general public is wondering if another great war is about to begin. The Turks are on a rampage; they have completely demolished the Greek army in Asia Minor; they have renewed their atrocities against Christians and are now believed to have plans under way to re-enter Europe and take possession again of the Dardanelles and the Bosphorus, from which they were driven during the recent war.

England, Italy, France and dependencies of these allied countries are rallying in warlike fashion to prevent any such aggression on the part of the Turkish army. The allied watchword of the great war is again to be heard: "They shall not pass." Except in so far as the welfare of American citizens in the territory affected is involved, the United States is not directly concerned in the situation, though there is no way to predict dependably what the ultimate outcome may be. All Europe is seething in controversy and discontent. Not a nation of that continent is beyond the possibility of being drawn into another conflagration, though the present situation may be cleared up with comparatively little conflict.

Reappearance of the victorious Turks on the European shore would, it is held by the British government, provoke a situation of the gravest character throughout the Balkans, and very likely lead to bloodshed on a large scale in regions already cruelly devastated.

The British government maintains that it is the duty of the allies of the late war to prevent this great danger and secure order and peaceful conditions in and around the straits.

Great Britain is prepared to bear her part in this matter, it is stated. It is pointed out as clear that the other allied powers of the Balkan peninsula are also vitally affected. Rumania, it is noted, was brought to her ruin in the great war by the strangulation of the straits. The union of Turkey and Bulgaria would be productive of deadly consequences to Serbia in particular, and Jugo-Slovakia as a whole, it is argued, while the whole trade of the Danube flowing into the Black sea is likewise subject to strangulation if the straits are closed.

It is further maintained that an adequate force must be available to guard the freedom of the straits and to defend the deep water line between Europe and Asia against violent and hostile Turkish aggression.

It is announced that Great Britain intends to reenforce immediately and, if necessary, to considerable extent, troops at the disposal of General Harrington, the British commander at Constantinople. Orders have been given to the British fleet in the Mediterranean to oppose by every means any infraction of the neutral zones by the Turks or any attempt by them to cross to the European shores.

The British government holds that if the allies were driven from Constantinople by the forces of Musta pha Kemal Pasha it would be an event of the most disastrous character, producing far-reaching reactions not only throughout all the Moslem countries, but throughout all the states defeated in the late war, who would be profoundly encouraged by the spectacle of the undreamed of success which have attended the efforts of the comparatively weak Turkish forces.

The cabinet has been sitting informally over the week-end at Chequers Court, the country residence of the prime minister. Austen Chamberlain, Lord Birkenhead, Sir Robert Stevenson Horne and Winston Spencer Churchill have been Mr. Lloyd George's guests there, and all through Sunday the telephones between Chequers Court and the foreign office in London have been humming with consultations with the various government departments.

* * *

All 47 of the miners entombed in the Argonaut mine August 27 are dead, it was announced officially shortly before 9 o'clock Monday night.

A note found on one of the bodies indicated that all the men had died within five hours of the beginning of the fire, August 27, officials said.

Mine officials declared that the condition of the crosscut behind the bulkhead was such that life could not have been sustained there by the entombed men for more than a few hours. They said that death had come to the entombed men painlessly. The gases, they said, would produce first a lethargy, then a coma and finally death.

Jackson, Amador county, the scene of the greatest mining disaster in California's history, lies about 40 miles southeast of Sacramento, the state's capital. It has a population of 2500, which includes a considerable number of foreign-born. These are the workers in the Argonaut and Kennedy mines which are among the deepest in the world, each possessing shafts nearly a mile deep. Of the foreign-born miners, the Italian element predominates.

* * *

The destruction of the Greek port of Smyrna by fire, accompanied by reports of horrible massacres perpetrated by the Turkish nationalist forces, the victims, numbering between 1000 and 2000 persons, has still further complicated the already grave situation in Asia Minor.

Death and indescribable misery rule among 200,000 of the crazed population. Six lone American relief workers are attempting the superhuman task of ministering to the dead and dying.

The catastrophe is so vast that only the collective efforts of the allied nations can cope with it. When the fire was at its worst, the American destroyers Lawrence and Litchfield were almost swamped by thousands of maddened survivors who plunged into the water in the darkness of night and swam out to the ships, imploring piteously to be saved. The American bluejackets rescued hundreds of drowning.

* * *

The chief development in the railroad strike situation last week was the decision by the leaders of the shopmen's organization that strikers were at liberty to make settlement with individual railroad companies. This decision was followed by the beginning of negotiations that brought a virtual end of the strike on about 50 roads, with mileage, totaling about one-third of the entire mileage of the country. Many believe that this marks the beginning of the end of the strike. The Chicago, Milwaukee & St. Paul is the only transcontinental road serving the north west that has made settlement, though many of the smaller companies in this territory have done so. The Great Northern and Northern Pacific have announced that they will not settle on any other basis than the wages and conditions laid down in the ruling of the railway labor board, against which the strike was called. Both these roads declare that they are operating successfully with men employed since the strike began, and that they can reemploy only such of their former employees as are actually needed to fill positions that are now vacant.

A significant event occurred last week in connection with railroad operation when the New York Central entered into agreement with two of the operating railroad brotherhoods. The agreement provides that the present wages and working rules shall hold one year and the company will withdraw its application already made to the labor board for reduction in wages. Other lines, including the Pennsylvania system, are reported to be making similar negotiations.

* * *

The American Federation of Labor, under the leadership of Samuel Gompers, is preparing a constitutional amendment for submission to congress, intended to limit the power of the United States supreme court. Under the proposed amendment, if an act of congress is declared by the courts unconstitutional, but later is repassed by congress it can not again be declared unconstitutional.

* * *

Both houses of congress have now completed their action on the soldier's bonus bill and have passed it on to President Harding for his signature or veto. Probably before this reaches the reader the president will have signed it or returned it to congress without his approval. There is wide speculation as to whether he will sign or veto it.

* * *

The United States department of labor reports that a nation-wide labor shortage is at hand. With a view to improving conditions the department is organizing the entire United States, with a sort of clearing house through which a state that needs additional help may be assisted in securing it from other territory where a greater supply exists.

* * *

Mrs. Harding, wife of President Harding, is reported to be recovering from

(Continued on page twenty-two.)

Farm Business and Markets Outlook

(Continued from page five.)

Prices for No. 1 American cheese on September 13 were:

Chicago — Twins, 20 1-4@21 1-2c; S. Daisies, 20 1-4@20 3-4c; D. Daisies, 20@20 1-2c; Y. Americas, 20@20 1-2c; Longhorns, 20 1-2@21c; Square Prints, 21@21 1-2c.

Apple Crop Generous.

The September forecast of the commercial apple crop was 32,583,000 barrels, compared with 21,200,000 barrels last year and an average of 26,800,000 barrels in the five years, 1916 to 1920. Washington has 7,846,000 barrels, Oregon 1,549,000 barrels, Idaho 1,072,000 barrels and Colorado 974,000 barrels. Receipts continued to reflect the big crop the carlot movement in the week ending September 9 being 1768 cars compared with 1215 cars last year, 1068 cars two years ago and 913 cars three years ago. Prices remain low with barreled Jonathans quoted at $3 to $3.25 at Chicago.

Potato Crop a Record.

The white potato crop was estimated at 438,398,000 bushels on September 1, or slightly less than a month ago compared with 347,000,000 bushels last year and an average of 373,000,000 bushels in the five preceding years. Combined with the sweet potato crop of 108,000,000 bushels, the total is the largest on record.

Prices remain weak, although carlot shipments have declined until they were only up to normal for the season last week. Early Ohios are quoted at $1 to $1.25 per 100 pounds sacked, with rurals at $1.25 on the Chicago carlot market.

LATEST QUOTATIONS.

The Livestock Market.

PORTLAND, Ore., Sept. 16.—Cattle—Choice steers, $7.50@8.25; medium to good steers, $6.75@7.50; fair to medium steers, $5.75@6.75; common to fair steers, $4@5.75; choice cows and heifers, $5@5.50; medium to good cows, heifers, $3.50@4.50; fair, medium cows, heifers, $3@3.50; common cows, $2@3; canners, $1.50@2; bulls, $3@4; choice feeders, $5@5.50; fair to good feeders, $4@5; choice dairy calves, $8.50@9; prime light calves, $8@8.50; medium to light calves, $7@8; heavy calves, $6@7; common heavy calves, $4@6.

Hogs—Prime light, $10@10.50; smooth, heavy, 200 to 300 lbs., $9@9.50; smooth heavy, 300 lbs. up, $8@9; rough heavy, $6@8; fat pigs, $9.75@10; feeder pigs, $9.75@10; stags, subject to dockage, $5@7.

Sheep—East-of-mountain lambs, $10@11; choice valley lambs, $9.50@10; medium valley lambs, $8@9; common valley lambs, $6@8; cull lambs, $5@6; light yearlings, $8@8.50; heavy yearlings, $7@8; light wethers, $6@7; heavy wethers, $5@6; ewes, $2@5.

SPOKANE, Sept. 16.—Cattle—Prime steers, $6@7.50; good to choice steers, $5@6; medium to good steers, $4.50@5; fair to medium steers, $4@4.50; common to fair steers, $3@4; choice cows and heifers, $5@5.50; good to choice cows and heifers, $4@5; medium to good cows and heifers, $3.50@4; fair to medium cows and heifers, $2.50@3.50; canners, $1.50@2.50; bulls, $2.75@4.50; light veal calves, $7@8.50; heavy veal calves, $5@7; stockers and feeders, $3.50@5.

Hogs—Prime mixed, $9@10.50; medium, $8.50@9.50; heavies, $6.50@8.50; fat pigs, $8.50@10; stockers and feeders, $8.50@10.

Sheep—Prime lambs, $8@10; fair to medium, $7@8; yearlings, $7@8; wethers, $6.50@7.50; mutton ewes, $3@6.50; feeder lambs, $6@7.

The Grain Market.

PORTLAND, Ore., Sept. 16.—Cash wheat—Hard white, Bluestem, Bart, $1.18; soft white, $1.08; western white, $1.10; hard winter, northern spring, $1.05; western red, $1.01.

Futures: Wheat—Bluestem and Bart, September, $1.18; October, $1.17; November, $1.15; soft white, September, $1.08; October, $1.06; November, $1.05; western white, September, $1.10; October, $1.07; November, $1.04; hard winter, northern spring, September, $1.05; October, $1.04; November, $1.03; western red, September, $1.01; October, $1; November, 98c.

Oats—No. 3, 36-pound naturals, September, October, November, $30.50; 36-pound slips, September, October, November, $29.50; 38-pound naturals, September, October, November, $31.

Corn—No. 2 eastern yellow, shipment September, October, $29; November, $28.25.

SEATTLE, Sept. 16.—Cash wheat—Hard white, $1.08; soft white, western white, hard red winter, soft red winter, northern spring, $1.07; western red, $1.04; Big Bend Bluestem, $1.18.

Hay and Feed Grain.

PORTLAND, Ore., Sept. 16.—Millfeed—Prices f. o. b. mill: Mill run, ton lots, $27; middlings, $39; rolled barley, $36@38; rolled oats, $42; scratch feed, $48 per ton.

Corn—White, $35; cracked, $37 per ton.

Hay—Buying price, f. o. b. Portland: Alfalfa, $18@18.50 per ton; cheat, $15; oats and vetch, $20; clover, $18; valley timothy, $20; eastern Oregon timothy, $20@21.

SPOKANE, Sept. 16.—Wheat—Feed wheat, $40 per ton.

Oats—$40 per ton; steam rolled, $42.

Corn—$36 per ton; cracked corn, $38 ton.

Barley—$42; steam rolled, $44.

Bran and shorts—$32 per ton.

Alfalfa, $22 ton; timothy, $24 ton; mixed hay, $22 ton.

General Produce.

PORTLAND, Ore., Sept. 16.—Butter—Cubes, extras, 40@41c lb.; prints, parchment wrapped, box lots, 46c; cartons, 47c. Butterfat, 46c delivered station; buying price, A grade, 43c.

Eggs—Buying price: Current receipts, 30@32c per dozen; henneries, 34@35c per dozen. Jobbing prices: Front street, candled ranch, 35@36c; selects, 38c. Association, selects, 39c; firsts, 37c; pullets, 33c.

Cheese—Tillamook, triplets, price to jobbers, f. o. b. Tillamook, 26c; Young Americas, 27c; longhorns, 27c pound.

Poultry—Hens, 12@22c lb.; springs, 18@22c; ducks, 15@22c; geese, nominal; turkeys, nominal.

Veal—Fancy, 15½@16c per pound.

Pork—Fancy, 14½c per pound.

SPOKANE, Sept. 16.—Poultry—Fat hens, 17c lb.; light hens, 24c lb.; roosters, 8c lb.; spring chickens, 13c lb.

Fresh ranch eggs—$9@10.50 case; no storage.

Butterfat—43c a pound.

SEATTLE, Sept. 16.—Eggs—Select local ranch, white shells, cases included, 30c per dozen; mixed colors, 29c per dozen; pullets, 18@20c per dozen. Cases returned to shipper, 1c less.

Butterfat—F. o. b. Seattle: A grade, 45c per lb.; raw milk, $2 per cwt.

Poultry—Hens, 4½ lbs. and up, 22c per lb.; over 3½ lbs. and under 4½ lbs., 15c per lb.; 3 to 3½ lbs., 10c per lb.; 1922 broilers, 1 lb. and heavier, 20c per lb.; old roosters, 10c per lb.; geese, fat, live, 16c per lb.; do fancy dressed, 24c per lb.; ducks, 3 lbs. and heavier, live, 15c per lb.; turkeys, fat, dry picked, 12 to 15 lbs., 30c per lb.; do live, fat, 7 to 10 lbs., 25c per lb.; squabs, large, $3 per dozen; pigeons, $2; guineas, $9 per dozen.

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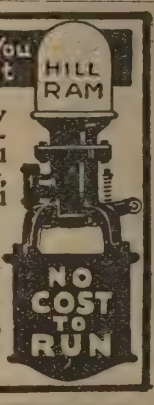
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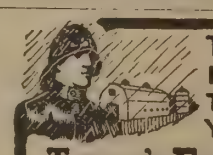


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Glance over the bargains on the "Want Ad" page.

Your Health

By Royal S. Copeland, M. D., F. A. C. S.

HOW TO RELIEVE "IRITIS."

There are all kinds of suffering—earache, brainache, heart pain—but there is no more agonizing than that caused by iritis.



Dr. Copeland.

The colored part of the eye is the iris. It is brown, or blue, or black, or variegated in color. This iris is really a muscle or several delicate layers of muscles. The black patch in the middle of the iris is a hole in the iris. This is the pupil, which varies in size as the muscles of the iris dilate and contract it.

As I have said, the main substance of the iris is muscle, and it is subject to all the diseases muscles have. Rheumatism is one of these, of couse. So we have "rheumatic iritis."

Normally, the iris has lustre and brilliancy. In iritis it becomes muddy and dull.

The pupil, which reacts to light and shade, changing its size almost constantly, becomes fixed in iritis.

There is a peculiar zone of redness in the white of the eye. This zone surrounds the iris and gradually widens and deepens in color. If the case grows worse the entire white becomes red and inflamed.

There is pain in the eye as if some foreign substance had entered it. The pain grows worse and shoots up into the forehead and even to the top of the head.

Sometimes operative measures are necessary.

Hot water compresses and all forms of heat are helpful. Capsicum-vaseline applied to the temple, and a hot towel applied over it may help to control the pain.

The eye should be protected from the light, but fresh air and sunlight are essential to improve the general condition of the patient.

In some cases the pain is terrific and it is worse at night and in wet weather. There are cases of so-called "quiet iritis," where there is little pain, but thery are not common.

Bad teeth, rheumatism, tonsillitis, exposure and blood-disease are factors in producing the disease. Of course, there are many other causes.

In the treatment, the pupil must be kept dilated with atropine. Soothing drops should be used, and the primary cause treated.

It is common to have relapses, and the the disease lasts a long time in spite of good treatment.

Take Time to Learn

That housewife who "has not time to" put up fruit and vegetables and to cure meats faces the alternatives of taking time to become well acquainted with standards of commercial brands or frequently accepting an imposture. She will learn, in the course of time, to look for the resoldering mark beneath the can which tells her that the product has been punctured once to allow the escape of gases that had formed; to ask herself if the canned goods have the right color or that of aged goods; if the catsups and jams betray the color of partially disintegrated components; if the dried prunes have been rebrightened with molasses and are sticky, instead of being fresh or sugar-whited with age; if the pickling fluid used on the "store" meats is efficient even unto pickling the internal human membranes, or is a mere deodorizer concealing the condition of and the nature of the minced meats. She will need to know why some brands are cheap and some expensive, when it pays to take a cheaper brand and when it is unwise. She will need to know that certain varieties of fish, such as grayfish and codfish, can not be tinned without risk of ammonia's formation within the tin. On these, and many other points, she will need to take time to become informed.

Boys and Girls Have Trip

Two auto loads of club boys and girls from Kitsap county enjoyed a trip to Tacoma and through the Puyallup valley with G. N. Worden, their county agent and club leader, on August 23 and 24. The party took in all of the points of interest and camped over night of the first day out. All had the time of their lives and learned much to be remembered in their club work.

SAVE BY REMODELING.

Old garments were remodeled by farm women last year, as a result of demonstrations by county extension agents, into 55,600 up-to-date articles of apparel, according to reports to the United States department of agriculture. Under similar instruction 105,000 new garments were made.

GRINDING BREAKS TISSUE.

Ground meats, such as hamburger, do not keep quite so well as whole meat, the grinding tending to break down and expose tissue surface.

GENUINE CONSERVATION.

It is as important to protect and conserve what you have as to produce something new.

KEEP THE INFORMATION.

Keep a well-indexed scrapbook.

Latest High Class Patterns for the Home

Please order the patterns you desire at least two or three weeks before you wish to use them. Desiring to obtain the latest high-class patterns for its readers, THE FARMER has made arrangements to have them sent direct from the east, and under present mailing conditions it takes about that time for them to reach you.



4086. Girl's Dress. Cut in 4 sizes: 4, 6, 8 and 10 years. A 6-year size requires 2 7-8 yards of 32-inch material. To make vest and cuffs of contrasting material will require 5-8 yard of 32-inch material. Price 10c.

3266. Child's Play Dress. Cut in 4 sizes: 2, 4, 6 and 8 years. A 4-year size will require 3 3-8 yards of 27-inch material. Price 10c.

3812. Misses' Dress. Cut in 3 sizes: 16, 18 and 20 years. An 18-year size requires 4 3-4 yards of 27-inch material. Price 10c.

4096. Lady's Dress. Cut in 7 sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. A 38-inch size requires 7 5-8 yards of 32-inch material. The width of the skirt at the foot, without overlapping portion, is 2 3-8 yards. Price 10c.

3719. Lady's House or Day Dress. Cut in 7 sizes: 36, 38, 40, 42, 44, 46 and 48 inches bust measure. A 38-inch size requires 6 yards of 36-inch material. If made as illustrated it will require 4 3-8 yards of plaid and 1 5-8 yards of plain material 36 inches wide. The width of the skirt at the foot is about 2 1-4 yards. Price 10c.

4098. Lady's Apron. Cut in 3 sizes: Small, medium and large. A medium size requires 2 1-2 yards of 36-inch material. Price 10c.

4072-4078. Lady's Costume. Waist 4072 cut in 7 sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. Skirt 4078 cut in 7 sizes: 25, 27, 29, 31, 33, 35 and 37 inches waist measure. To make this design for a medium size will require 7 1-2 yards of 40-inch material. Revers, collar and vest require 1 5-8 yards of contrasting material 32 inches wide. The width of the skirt at the foot is 2 1-4 yards.

TWO separate patterns, 10c FOR EACH pattern.

3794. Girl's Dress. Cut in 4 sizes: 8, 10, 12 and 14 years. A 12-year size will require 1 3-4 yards of 27-inch material for the guimpe and 3 3-8 yards for the dress. Price 10c.

4083. Junior Dress. Cut in 3 sizes: 12, 14 and 16 years. A 14-year size requires 5 yards of 32-inch material. Price 10c.

4095. Lady's Corst Cover. Cut in 4 sizes: Small, 34-36; medium, 38-40; large, 42-44; extra large, 46-48 inches bust measure. A medium size requires 1 1-2 yards of 36-inch material. Price 10c.

3893. Lady's Chemise and "Step In" Drawers. Cut in 4 sizes: Small, 34-36; medium, 38-40; large, 42-44; extra large, 46-48 inches bust measure. A medium size requires 1 1-4 yards of 36-inch material for the vest and 1 3-8 yards for the drawers. Price 10c.

3875. Child's Set of Short Clothes. Cut in 5 sizes: 1, 2, 3, 4 and 5 years. Size 4 requires for the dress, 2 3-8 yards; for the petticoat, 1 5-8 yards; for the combination, 1 1-2 yards of 36-inch material. Price 10c.

Fashion Book Notice.

Send 12c in silver or stamps for our up-to-date fall and winter 1922-1923 book of fashions, showing color plates, and containing 500 designs of ladies,' misses' and children's patterns, a concise and comprehensive article on dressmaking, also some points for the needle (illustrating 30 of the various, simple stitches), all valuable hints to the home dressmaker.

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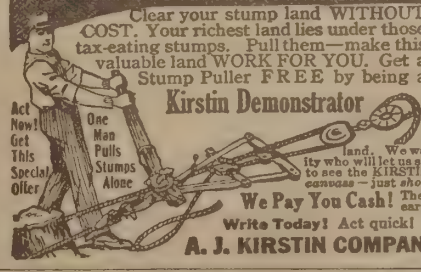
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HUGHES & COMPANY, Spokane Distributors.



Ora Schafer, Adams county, Wash., will be 12 years old January 28, 1923. When school commenced early in September she went in the sixth grade. She says she still likes to read The Junior Farmer.

Aunt Nellie has the following nice letter from Millie Le Bret: "This is the first time I ever wrote a letter on a typewriter. I like The Junior Farmer and I read it to my little sister every time I get it. I have little twin brothers who are now 4 years old. Their names are Jimmie and Johnny." Millie lives in southern Stevens county, Wash., north of the Spokane river.

"I should like to join the Children's Corner," writes Phyllis March, Skagit county, Wash. "I am 11 years old. My birthday is October 4, I live on an island called Sinclair island in Puget sound. My pets are a big sheep, two cats, a dog, three cows and a calf."

A new cousin in Snohomish county, Washington, writes that she should like to join the Corner. She is Nina Toivonen. Nina is in the sixth grade and the name of her school is the Swans Trail. She has a sister and three brothers. Two calves, three cats and some chickens are family pets at the Toivonen home. January 15, 1923, Nina will be 12 years old.

Laura Thomas writes to us about her little black and white puppy and her 10 little chickens. Laura was 11 September 20, 1922. She says she is getting along nicely in the sixth grade at school. Her home is near Coal creek, Lincoln county, Washington.

"Yesterday, Monday, August 28, I came home from Bellingham, after a week's vacation," writes our little friend Velzia Stevens of Whatcom county, Wash. "Every one is fine there and the baby is cutting teeth at the age of six and a half months. When I was in town I got lost, but I found my way home after I wandered around about an hours. My teacher's name is Miss Elsie Hughdahl. We shall only go to school about a month because we are going to move to town for the winter. Love to you and the cousins."

"How are all the cousins?" asks Anna Mae Tarter. Anna Mae writes that she spent three days out in the country. Her school started the day she wrote to Aunt Nellie, which was September 6. Anna Mae lives in Grant county, Washington. She is always glad when The Junior Farmer comes. Her pets are three little calves.

We have a nice letter from a cousin in Franklin county, Washington, who signs her name "Frances." Frances enjoys the stories in The Junior Farmer very much. She writes: "Our school will start a week from tomorrow (September 11). I like to go to school. My sister, Helen, is playing on the piano. We have one hired man. His name is Pete." (What is your last name, Frances?)

"I would like to join The Corner," writes Arthur Toivonen, a western Washington cousin. "I will be 9 years old October 1. I am in the third grade at school. I go to the Swans Trail school and my teacher's name is Miss Murphy. I live on a 10-acre farm about five miles from town in Snohomish county. We have two cows, two calves and a lot of chickens. I have two brothers, William and Neil. My sisters are Nina and Laila."

"I get The Junior Farmer from one of my school chums and enjoy reading it. Will you please send me the little paper?" The above letter comes to us from Violet Lutz of eastern Washington. (We are glad to have you with us, Violet.)

Matilda French writes a little note to tell Aunt Nellie that Monday morning, September 11, she started to school. She is a central Washington cousin. We are glad to hear from Matilda.

Birthday Greetings

THURSDAY, September 21—Frank Pietila, 6 years old; Esther Wahl, 11.

SATURDAY, September 23—Alice Hill, 11 years old; Danny Roe, 10; Carl Schmick, 11.

SUNDAY, September 24—Paul Anderson, 11 years old; Lemerl Bridsell, 11; Elizabeth Felchlin, 10; Margaret Fender, 11; Alice Paulson, 10; Nadine L. Hutchens, 10.

MONDAY, September 25—Evelyn Arneson, 11 years old; Louise Vorla, 11.

TUESDAY, September 26—Louis Chabre, 10 years old; Florence Frye, 10; Shirley Brooks, 11.

WEDNESDAY, September 27—MaCament Dickenson, 10 years old; Martha H. Haskins, 10; Paul Keller, 10.

LETTERS WELCOMED BY AUNT NELLIE.

Among recent letters received by Aunt Nellie are those from cousins whose names follow. A few of these will be published each week in the regular edition of THE FARMER and others will appear from time to time in The Junior Farmer:

Jay Atkinson, Laura Thomas, Gertrude Pinister, Violet Lutz, Anna Kuzminich, Phyllis Van Dyke, Mabel Hanson, Martha May Jenkins, Edna Amend, Marion Lewis, Ellen Nelson, Verna Stevens, Hazel Schafer, Ora Schafer, Elizabeth Millim, Alice Goodfellow, Nina Toivonen, Anna Mae Taeter, Arthur Toivonen, Dorothy Loch, Marie Trupp, Elizabeth May Thomas, Mathilda French.

BEDTIME STORIES

By THORNTON W. BURGESS.

REDDY THINKS HE SEES GHOSTS.

Reddy Fox came down the lone path through the Green Forest on his way to the Green Meadows. He had brushed his red coat until it shone. His white waistcoat was spotless and he carried his big tail high in the air that it might not become soiled. Reddy was feeling as fine as he looked. He would have liked to sing, but every time he tried his voice cracked and he was afraid that some one would hear him and laugh at him. If there is one thing that Reddy Fox dislikes more than another it is being laughed at.

Reddy chuckled at his thoughts, and what do you think he was thinking about?



"It must be his ghost," muttered Reddy.

Why about how he had seen Farmer Brown's boy carrying off Unc' Billy Possum by the tail the afternoon before. He knew how Farmer Brown's boy had caught Unc' Billy in the henhouse, and with his own eyes he had seen Unc' Billy was dead! There could be no doubt about it. And Reddy was glad of it. Unc' Billy Possum had made altogether too many friends in the Green Forest and on the Green Meadows, and he had made Reddy the laughing stock of them all by the way he had dared Reddy to meet Bowser the hound and actually had waited for Bowser while Reddy ran away.

Reddy remembered that Unc' Billy's hollow tree was not far away. He would go over that way just to have another look at it. So over he went. There stood the old hollow tree and half way up was the door out of which Unc' Billy used to look down on him and grin. It was Reddy's turn to grin now. Presently he sat down with his back against the foot of the tree, crossed his legs, looked this way and that way to make sure that no one was about, and then in a dreadfully cracked voice he began to sing:

Ol' Bill Possum, he's gone before!
Ol' Bill Possum, he is no more!
Bill was a scamp, sir,
Bill was a thief!
Bill stole an egg, sir;
Bill came to grief.
Ol' Bill Possum, it served him right;
And he is no more for he died last night.

"Very good, sah, very good. Ah sutt'nly am obliged to yo' all for yo' serenade," said a voice that seemed to come right out of the tree at Reddy's back.

Reddy Fox sprang up as if some one had stuck a pin into him. Every hair stood on end as he looked up at Unc' Billy's doorway. Then his teeth began to chatter with fright. Looking out of Unc' Billy's doorway and grinning down at him was something that looked for all the world like Unc' Billy himself.

"It must be his ghost!" muttered Reddy, and tucking his tail between his legs he started up the lone little path as fast as his legs could take him.

Reddy never once looked back. If he had he might have seen Unc' Billy Possum climb down from the hollow tree and shake hands with Jimmy Skunk, who had just come along.

"How did Ah do it? Why Ah Just pretended Ah was daid when Farmer Brown's boy caught me," explained Unc' Billy. "Of course he wouldn't kill a daid possum. So when he tossed me down on the chopping block and turned his back Ah just naturally came to life again, and here Ah am."

Unc' Billy Possum grinned broader than ever, and Jimmy Skunk grinned too.

News of the Week

(Continued from page twenty.)

the serious illness that has threatened her life during the last two weeks.

* * *

Another critical situation has arisen between the allies and Germany over the payment of reparations by Germany. The latter has flatly refused to deposit 100,000,000 gold marks, as demanded by Belgium, to guarantee payment of a reparations installment now overdue. Again France and Belgium are standing firmly for compelling Germany to make good, while Great Britain is apparently more sympathetic toward Germany. A meeting of the allied premiers probably will be held at once to take up the question.

* * *

A report from Chicago says that the five great packing concerns, including Armour, Wilson, Morris and Cudahy, are contemplating a merger into one corporation with capitalization at over $500,000,000.

* * *

Attorney General Daugherty finished last week his arguments before the United States district court at Chicago in favor of a continuation of the temporary injunction secured against the striking railroad workers. Attorneys for the strikers will present their case to the court beginning early this week.

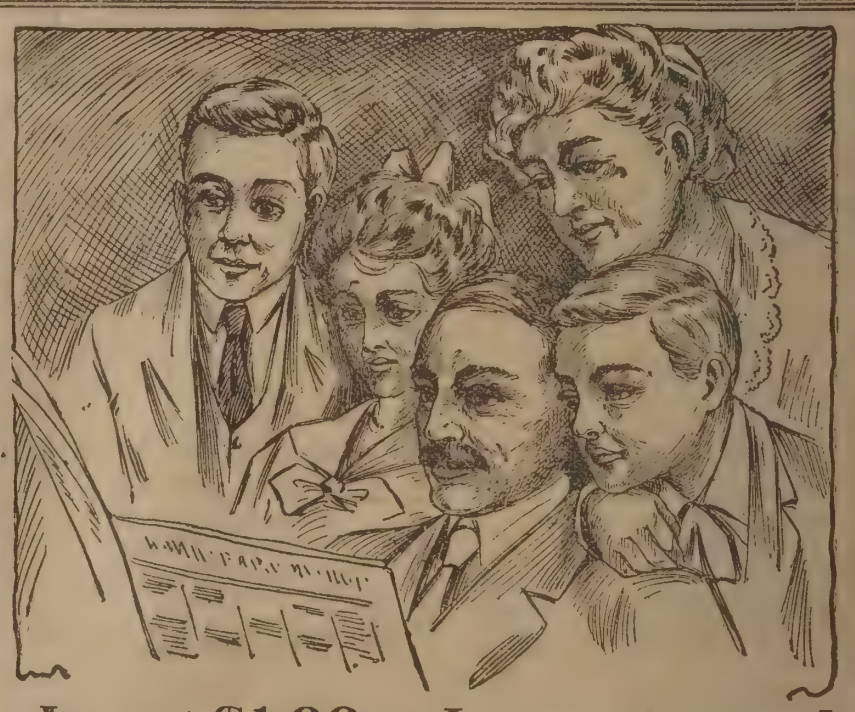
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Impeachment proceedings were started last week in congress against United States Attorney General Daugherty on grounds that he exceeded his constitutional rights in obtaining the injunction against the striking railroad workers in Chicago two weeks ago. The case is being heard by the judiciary committee of the house of representatives.

What the War Did for the Palouse

(Continued from page three.)

experiment station was ready to help him and had a system of cropping worked out so that these wheat farmers are now growing legumes such as clover, alfalfa, sweet clover and peas in a rotation, are cropping their soil every year and are returning the straw and manure to the land. They are growing just as much wheat as they ever did and produce all these other crops besides. The live stock necessary to consume on the farm those crops that are not readily marketable is being gradually introduced and in the course of a few years the farmer will wonder how he ever got along without the cow and the pig and the hen. Here is one case at least where the after effects of the war were not demoralizing. They have made the population, as well as the agriculture of the Palouse region, more permanent, and the dream of the visionaries has been realized. The future Palouse farm will be smaller and more intensively managed because of the war.



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If your subscription is already paid in advance it will be extended from the date to which it is paid. Sept. 21, 1922.

News for Breeders

HAS 18 HEAD REGISTERED.

There are 18 head of registered Jerseys on the William Cooke farm in the Shelton valley, in Mason county. The farm is more commonly known as the Shelton dairy and is being operated by William Cooke and his son, W. Cooke, each of whom have a dwelling house on the farm.

A 2-year-old bull, Utellum, that comes from a Puyallup valley herd, is being used on the herd with good results. He has some strong St Mawes breeding behind him and is a typy individual. A Shorthorn bull is also kept for use on some of the grade cows in the herd with the intention of breeding some good veal calves.

In addition to the Jerseys there are 37 head of Lincoln sheep kept on the farm, which are allowed to feed on the native and meadow pastures. Although there has been no trouble with coyotes in this neighborhood, a few sheep have been killed by dogs and it is thought best to keep all of the flock in the barn at night. Sheep are found to be a paying undertaking for local conditions and it takes but little time to care for them.

For feed, both clover and vetch crops have been found to yield best and the vetch is usually planted with winter wheat. Native grass is used for hay from some of the bottom land and it makes a fair grade of hay if properly matured.

Mr. Cooke had one of the heaviest crops of oats in a 12-acre field, which was mostly clay loam soil. The field had been in sod for 10 years and received no manure. The oats will be cut for grain and it is expected to produce an exceptional yield. Some of the tallest patches measure five feet from the ground. The crop was seeded the middle of June.

EFFECT OF PUREBRED SIRE.

There are 11 daughters of two foundation cows on the Tualco Valley farm near Monroe, Snohomish county, that are doing much better than their dams in milk production, according to Dr. Stockwell, the owner.

The instance was given to show the value of a purebred sire and his effect on a good herd. The bull, Prince Aralia Burke 4th, is now a 5-year-old and is a half brother to Cascade Blossom and his dam was a world-record cow when the record was made.

Dr. Stockwell is breeding for type and believes that if this is once attained, the production will take care of itself. There are many of the cows in the herd that are making good showings in their milk production and as the heifers freshen they are making better showings.

BUYS AYRSHIRE SIRE.

Harry D. Mytinger of Pendleton, Ore., recently purchased from E. W. Van Tassell of Wenatchee, Wash., the young Ayrshire bull, Wenatchee Prince. This youngster is by Willowmoor Peter Pan 25th and out of Queeche's Robinhood of Wenatchee. The dam has a record of 11,649 pounds of milk and 498.26 of fat, made as a junior 2-year-old. She is now on test as a junior 3-year-old and is milking 65 pounds a day, with a test of 4.96. She will have over 90 pounds of fat to her credit for August, when the official report is made. Mr. Mytinger recently bought a foundation herd of 13 Ayrshires from J. U. Smith of Newburg, Ore.

WINS STATE RECORD.

Star of Yewloa, a junior 2-year-old Jersey owned by N. C. Sears of Winlock, Wash., now holds the Washington state record for Jerseys on official test at that age. Star in her year, which ended in February, produced 456.23 pounds of fat. This record is 56 per cent above the requirement for the register of merit at that age. The heifer was second in class at the recent Southwest Washington fair. Mr. Sears has been successful with his herd in the show ring and is now making a number of good records.

BUYS UNBORN BOAR PIG.

During the Southwest Washington fair, the last week in August, J. H. West, O. I. C. breeder, of Centralia, Wash., purchased an unborn pig from Ed Schoel of Albany, Ore. The pig is to be out of Mr. Schoel's grand champion sow and by Chief Justice Jr., a noted big type boar of Nebraska. Mr. West bought a boar pig from Mr. Schoel six years ago and he gives that pig much of the credit for making his herd the good one it is.

MAKING GOOD RECORD.

Lily L. 3d, a milking Shorthorn cow, owned by Northwood farms of Redmond, Wash., started on official test in February and was shown at the fairs at Burlington, Wash.; Vancouver, B. C., and Chehalis, Wash. In 167 days after her start she had averaged 50.8 pounds of milk per day. She was grand champion at the first two shows.

INFORMATION AT HAND.

File this paper away every week.



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A few cows, also young bulls by the great sire, Peerless Knight by Beau of Glenside, carrying 93¾ per cent blood of the champion milch cow, Rose of Glenside.
J. E. DANILLS, Murphy, Ore.

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About 20 registered ewes and ten lambs of excellent Hampshire blood lines, for sale at bargain prices, together or singly.
B. C. Altman, Gresham, Ore.

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Please mention THE WASHINGTON FARMER when writing

Pike's Peak or Bust

(Continued from page eighteen.)

maybe on a pony. You don't catch me trying to drag my wagon up into that mountainous country. Men I've talked with say this is about the worst place, right here at the start. But there's more—plenty more a good deal like it."

"Not much doubt of that, I reckon," Sanders answered. "Boys, I rather wish we could cache some of our stuff here."

"So do I," spoke out Esau. "At least till we can make a spyin' trip in there to see what's comin' to pass, and what the prospects air."

Now Cooper said: "If any of you men want to leave anything down here, my folks will look after it for you. Guess there'll be room in my wagon or in our tent for whatever you don't care to take."

"Lando, I'm thinkin' me and you'd better lighten our loads by about half. More on my wheelbarr' than I can push around up there. And you've got more than old Brindle can pack after she leaves the level country," said Esau.

"You're right, Esau. Not far in to the diggings from here. One or both of us can easily come back for supplies any time we run short."

"Guess there'll be some storage room in our wagon, won't there, Jeff?" remarked Holloway to his partner.

"Why, yes. Room and to spare. We've got only a small load, the two of us together. And ours is a bully good wagon cover, too. Your stuff will keep dry, no matter how hard the rain pours down."

"And you're goin' to leave your wagon and team out here?" asked Esau.

"That's what. Jess and I have arranged with Mr. Cooper's folks to look after everything for us while we're away. We're all going in with what we can pack on our backs, till we look things over, and maybe get us some claims. We expect to leave our wagon right by Mr. Cooper's. And Mrs. Cooper says her and the children will see after it. And the boys say they'll take care of our team—our work cattle."

Now the men holding the cart, after a few words together, let it run back down to level ground. There the situation was talked over, with the result that a new working agreement had soon been entered into. They would all go in together to the mines, starting the following morning.

As they were not to set out at once, the foot travelers toiled up to the mountain top with the empty cart and brought down what they had carted up there. From the wheelbarrow and Brindle's pack Esau and his partner selected such things as they expected to carry with them. The cow, with a much-lighted pack, would be taken in to the gold diggings, but the wheelbarrow would be left here. A good part of the cart's load would also find storage in Given's wagon.

Before making camp, Cooper's wagon, and also Given's, were driven back more than a mile from the road, to where were water and good grass for the stock. It was there, at the foot of the mountain, that the Cooper family would remain in camp. Other similar camps, with women and children in them, could be found not far away. Mrs. Cooper and Hazel would manage things, and Hazel's not very large brothers would keep all the oxen and Cooper's cows under herd.

The foot travelers followed the wagons and camped with them. Taking advantage of the brief stay here, Orlando missed no opportunity to talk to Hazel. And he made such good use of the few hours that the two quickly became better friends than ever. Even before the time drew near to set out, he had some visible evidence of their friendship.

Early the following morning the party of gold seekers, 10 in number, were ready to start. Now there was a moderate-sized pack on Bindle's back. All the party's others things were on the cart. Cooper had a pony he had intended to use as a pack animal, but the boys would need a horse while herding the cattle, and the pony would be left behind.

Away they all went, back to the trail first, and then up the mountainside. Three of the handcarters were working in harness, as usual, and one was pushing behind. In addition to leading Brindle, Orlando was helping push. The other five men were in front, all tugging manfully at a long rope.

The cart was rather heavily loaded and, even with 10 to push and pull, getting it up the steep mountain was no easy task. At last, however, it was on level ground. After that the party moved on easily enough for a time. Then came more tugging and straining and sweating.

It was a much-traveled but rough, wild road which the foot farers followed that day. Up and down mountainsides it led, across clear and cold but shallow streams and through narrow, gloomy canyons, with upright rock walls which seemed almost to overhang. Though they had not had covered many miles, every man of them was weary when the time came to camp for the night.

(To be continued.)

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SEPTEMBER 28, 1922. Washington's Great Farm Magazine EVERY THURSDAY

THE WASHINGTON FARMER

ESTABLISHED 1894 SPOKANE. SEATTLE.



What Are the Best Winter Wheat Varieties for Washington?--Page 15

Club Contests Keen

Nearly 40 eager youngsters from Lewis, Thurston, Pacific, Cowlitz, Clarke and Grays Harbor counties, usually accompanied by a county agricultural or club agent as well as by the regulation chaperons, marched upon the Southwest Washington fairgrounds at stated intervals throughout the week of the recent fair, fired their respective broadsides in cooking, sewing, gardening or pig raising, and retired, leaving the genial state club leader and charge d'affaires, F. L. Audrain, to figure up the casualties. Usually retirement was in good order, but one or two club groups which have not had the advantage of leader guidance encountered problems which they had never met before and opponents who were highly skilled. The engagements resulted in a distinct triumph for the Grays Harbor club members, for, while Cowlitz county won three district championships to Grays Harbor's four, two of these were won without opposition, and Cowlitz county has a club leader, while Grays Harbor has not. Lewis county, which has heretofore been a heavy winner, won only one contest this year, as did Thurston and Pacific.

The best contests were in canning, where there were five entries, and in sewing, gardening, pig raising and dairying, in each of which four teams were entered; but it was in the beekeeping contest that George Robinson of Grays Harbor made the high score, a perfect one, and consequently will represent the district at the state fair. The next highest score was 96, also made by a Grays Harbor representative, Elvira Lightner, in sewing. She defeated Lydia Guild of Cowlitz by one point. Luella Ellingsen of Lewis scored 91, and the Thurston representative, Edna Yearout, was fourth.

The Cowlitz county canning team, Irvina Guild and Ida Martin, defeated the one from Lewis, Mabel Carlson and Ruth Smith, 93 to 92. The Thurston team, Glenna Watters and Valeta Keating, scored 90, but the Clarke and Pacific county teams were distanced. In gardening Frank Knizek, a Dryad boy, won Lewis county's only triumph, scoring 92 to 90 by his nearest competitor, George Carroll of Kalama. Here, too, a Grays Harbor entrant, Floyd Gouchner, ranked high (87), and Clarke county was fourth. It was quite fitting that Robert Polsen of Grays Harbor, president of the state club association, should win his contest in pig raising, else how would he get to the state fair? He did so handily, defeating Cowlitz, Lewis and Thurston county boys. Grays Harbor in the person of Crosby Valentine won again in dairying, scoring 91 to Francis O'Connor's 87. The latter came all the way from the Naselle valley, in Pacific county, to attend the fair. He lives on a farm where it's so wet in the winter that they have to walk on sidewalks set up on stilts, and he walked and rowed a boat several miles in order to catch the stage which brought him to South Bend.

The poultry contest proved a triumph for Edwin Halverson of Pacific county, who has 300 Rhode Island Reds of his own and who almost wept for joy when he was allowed to judge birds of that breed instead of White Leghorns. He had only one opponent. Valiant with the hoe where his namesake was valiant with the bow, Robert Adair of Thurston county scored 93 in the potato club contest, nosing out Ralph Lindley of Grays Harbor by one point. Louis Christen, Pacific county entrant, made 89. The home management and "own-your-own-room" contests were won, respectively, without opposition by Anna Waggonhoffer and Mildred Bailey, Cowlitz county girls, who are members of the first clubs of this kind to be formed in the state.

Other contestants than those mentioned include Anna Pebl and Mildred Chester (canning), Pacific county; James Hamilton (dairy), Vera Sweeney (cooking) and Ralph Detering (pig), Lewis; Roy Taylor (pig) and May Richards (beef), Thurston; Harlan Shepherdson (pig) and Wayne Bozarth (dairy), Cowlitz; Mary Kilpinski (garden), Cecil Roberts and Katherine James (canning), Clarke; Edna Johnson (beef) and Clarence Glenn (poultry), Grays Harbor.

Uses Disk to Kill Out Grass

There need be no fear of grasses choking out an alfalfa crop in western Washington if the disk is used at the proper time, according to Frank Binns, who has a grain and hay farm near Shelton in Mason county.

"I had some alfalfa in rows to try it out last year," said Mr. Binns, "and when it seemed to be getting crowded out with grass this spring I went after it with a cultivator, intending to kill it all and plant some more in another field. The result was that I got the grass out in fine shape and the alfalfa came up with the best stand I have ever seen.

"I am positive that if the disk is used in the early spring or after the first cutting it will kill out all of the undesirable grasses that come up during the winter and the cultivation will do the alfalfa good. The results of this crop are very encouraging, since I find it is not difficult to get it started in new land if the seed has been properly inoculated.

JERSEYS AT SKAGIT FAIR.

Through an unavoidable error, the Jersey awards were omitted from the story of the Skagit County fair at Burlington last month. The grand champion cow was Juda Regina, a 7-year-old animal with much capacity, excellent type and an exceptionally well developed udder. She was from the H. S. Ruley herd at Mt. Vernon. This is the second time this cow has been placed at the head of the Jerseys.

The junior champion, a senior yearling, was in the same herd, Lad's Rinda Pansy of Valley View, a granddaughter to Rinda Lad. She showed excellent quality and was a good example of the type of animals in this herd. Peter Meenderink of Lynden had the grand champion bull, Sunlight Chief, a 5-year-old animal that has been used as the herd sire by Mr. Meenderink. He is a well built animal and made a fine appearance in the show ring. The other herds shown were those of N. Jordal of Ferndale; H. Tarry, Avon; C. Callahan, Fredonia, and the Teabrink herd of Burlington. There were more individual exhibitors in the Jersey show this year than there have been in past years, although the number of animals was less.

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THE WASHINGTON FARMER

SUCCESSOR TO

Vol. 47. No. 13 THE RANCH PACIFIC DAIRYMAN HORN AND HOOF September 28, 1922

For Good Farming, Attractive Country Homes and Happy Country People

Twenty-Sixth Chapter Added to Fair Book

Live Stock, Including Alligator and Coyote, Feature Annual Exposition at Yakima September 18-23

In at least one respect the 26th annual Washington state fair was one of extremes—the extreme southeastern corner and the extreme northwestern corner of the United States being represented. To be more specific, the tropical swamps of Florida sent a baby alligator to compete with the good things Washington producers had to show, and the sawdust was well trampled about his little natatorium in the state game department's building. Had there been prizes offered for this class of live stock he would have been declared first in class, junior champion and grand champion alligator of the show, for he alone represented his amphibious race.

To be sure, this southern animal was but a side show of Washington's great 26th annual state fair—a side show of a side show, to be exact, for, interesting and instructive as were the displays of live fish, beaver, wild geese and ducks, pheasants, deer, elk, bear and so on in and around the state game building, they were but a grain of sand on the shore of an ocean billowing with the products Washington.

Billowing? Yes, but at that the agricultural and horticultural resources of Washington were inadequately represented in the building devoted to their displays. They were of excellent quality; some of the county and community displays were of highest class, but for a state the annual farm crops of which have a value that may appropriately be quoted as a sizable fraction of a billion dollars, the display was regretably small. There are 39 productive counties in Washington; only five county exhibits were made at the state fair. There are rich communities too numerous to be named; eight (and all in the Yakima valley) had booths at the state fair showing their productiveness. Unquestionably the opportunity for the counties and communities of the state to advertise themselves and the state of which they are parts is being undervalued. Next year's fair should see four times as many county displays, several times as many community booths and a much more representative showing of individual exhibits of fruits, cereals, vegetables and other products—for the tray, sheaf, peck and half dozen classes of apples, wheat, corn and so on was also light, though of quality of which to be proud.

West Side Is Winner.

Two West Side counties led in the county exhibits, Benton, the only East Side county to compete, taking third place. Pierce county, with a display built up around the idea of "the valley of the mountain" and showing a wide variety of products neatly displayed, won first prize, while Skagit county, with her oats, seed crops, dairying industry, fruits, vegetables and many other products, was awarded second. One feature of the Skagit county booth was the presence of condensed milk and Darigold cheese and Darigold butter, produced and manufactured by the organized dairymen of the county under affiliation with the United Dairy Associations of Washington. While the crops were varied as represented in the Benton county display, grapes were outstanding. The other two counties showing were Jefferson and Kitsap, placing in the order named.

In the district contest the eight booths were placed by the judges in the following order of winnings: Tieton View, Naches Heights, Wapato, Toppenish, Terrace Heights, Pomona, Grandview and Zillah.

Other displays in the building included an individual showing of vegetables by Louis Deccio of Yakima and a booth prepared by the Western Washington State hospital at Steilacoom.

Practical Education.

Of notable educational significance were exhibits by the state department of agriculture, the state college extension service and the government. In the horticultural building the state had an exhibit showing diseases and pests of Washington crops, with information as to means of combating them. The extension service had liberal space devoted to horticulture, live stock feeding, labor-saving equipment, grain treatment, farmstead planning, farm housing and the like. Incidentally, farmstead plans and farm buildings appealed to many exhibitors as something that should be advertised at a fair. Lumber vied with concrete. From baby chicks and their housing to a huge barn and hay to put into it, the Tum-a-lum Lumber company's miniature farmyard extolled the virtures of wooden construction, while just across the "street" of the Mechanics building was a model farmstead exhibited by the cement association, with everything from posts to silo made of concrete.

Predaceous animals, from rats to timber wolves, would have received a hair-raising scare had they been able to see themselves as others saw them in the government bioligical survey's department. "Just a common, chicken-stealing coyote caught by a federal hunter" kept vigil at the door. Uneaten dog biscuit in his cage was mute testimony to his dislike for modern food products as compared to the kind caught behind the chicken house early in the morning.

Numerous exhibits of modern devices for making the farm and home better places in which to live drew their share of attention from the crowds. Household equipment and furnishings of all kinds were shown and demonstrated, from furnaces to candleshades. Automobiles and up-to-the-minute accessories and attachments occupied a large section. Outside, tractors cavorted around as though they were made for wild west performance rather than plowing and seeding. Huge irrigation pumps, operated by gasoline engines, wore out large quantities of water pumping it back and forth from the tank that was both source and receiver, and home lighting plants competed with the sun to prove their ability. Both won.



Milking time in the Guernsey show ring. Judge Grout required cows in milk to appear in the ring with udders full, after which they were milked out before final decision as to awards. A cow without a good udder is like gold with nothing to spend it for. Mr. Grout is shown coatless as he worked.

Club Work Is Strong.

The boys and girls' club work was divided into two sections: The district and state contests. Both divisions were carried on in true club routine and the winners chosen by the persons having the best record for the year and his ability to judge and demonstrate his own particular kind of work.

The district contest winners were as follows:

Cooking—Preston Anglin of Hanford, who scored 87 points. He prepared a meal for a 2-year-old child and told how it was done. There were no other contestants in this class.

Sewing—Ardice Sheppard of Kennewick, first, 91 points, and Mary Rupert, second, with 82 points.

Breadmaking—Flora Brooks, 87 points, with no competition.

Canning—Benton City, 93 points. Team members, Elizabeth Drenkhahn and Ethel Kelso. Tieton, second, 87 points. Team members, Hazel Mingus and Gladys Gilbert.

Garden—Edward Lum of Kennewick, first, with 90.5, and Irvin Rozencranz of Yakima, second, with 90 points.

Dairy—Chris Verstate of Yakima, first, with 94, and Chester Cox of Kennewick, second, with 88 points.

The state contests were as follows:

Beef—Nora Waite of Ellensburg, first, with 93.6 points; Chester Schelin of Mabton, 87.3 points, and May Richards of Tenino, third, with 86.6 points.

Garden—Edward Lum of Kennewick, 86; Frank Knizek of Dryad, 83, and Albert Pease of Usk, 81 points.

Dairy—Chris Verstate, 94; Crissie Keuster of Spokane, 89, and Chester Cox of Kennewick, 88 points.

Bees—George Robinson of Elma, first, 97, and Lorane Engals, second, with 92 points.

Canning—Southwest Washington team from Kelso, first, with 93 points; members, Irvin Giles and Ada Martin. Yakima district was second, with the Benton City team winning 92 points. The team was composed of Elizabeth Drenkhahn and Ethel Kelso as team members. The Spokane district team was third, with 90 points. Members were Goldie Hammond and Florence Hogan of Rockford. Adriana Vander Griend and her sister, Maurie, of Puyallup were placed fourth.

Rabbits—Caroll Birdwell of Puyallup, first, with 95, and George Sheppard of Kennewick, with 90 points.

Sewing—Selena Deno of Spokane, first, with 94 points; Alice Sheppard of Kennewick, second, 92, and Elvira Lehtinen of Montesano, with 82 points.

Sheep—Kenneth Hinshaw, Goldendale, first, with 89 1-4; Gordon Brown, Spokane, second, 77, and Rowland Newman of Ellensburg, third, with 65.6 points.

Poultry—Alma Ockfer of McKenna, 97.5 points; Harvey Norris of Goldendale, 95, and Paul Cordel of Cheney, third, with 90 points.

Potato—Mark Wells, 94, and Robert Adair, 93.5 points.

Swine—Lester Hartley, Cheney, first; Harold Bagley of Sunnyside, second; Henry Kane of Pierce county, third, and Robert Paulson of Montesano, fourth.

Win Washington Farmer Cups.

The special trophy cups given by The Washington Farmer to the highest scoring club boy in pig, sheep, dairy, beef, poultry, garden, corn or potato contests, and to the highest scoring girl in the canning, cooking, breadmaking or sewing contests were won by Harvey Norris of Goldendale and Selena Deno of Spokane. Harvey scored 95 points in poultry and Selena scored 94 in sewing.

The special dairy contest, which was open to all counties and awarding the win-

(Continued on page six.)

McAdoo Sees the Light

Land Reclamation Important to Entire Nation

While THE FARMER is not a partisan journal, it does reserve the right to commend sound and constructive utterances when they come from prominent public men, republican or democrat. We were especially impressed with the wisdom of a recent public statement by William G. McAdoo, former secretary of the treasury and railway director in President Wilson's administration.

Mr. McAdoo, who is ardently in love with the wild, free life of the west, recently enjoyed a week's rafting trip down the south fork of the Snake river. When he arrived at Rigby, Idaho, he gave out a statement in which he said, in part:

I noted the lack of storage of the waters of the Snake, not saved by the construction of a dam at a suitable point. Water is allowed to go to waste, which could be used for hydro-electric power and irrigation. It is not possible for the human eye to say by casual observation definitely the cost or feasibility of such a reclamation project; except after a proper survey.

It seems to me that all conditions are favorable to the proper conservation of Snake river at a very reasonable cost.

It is a pity that the federal government does not take hold of these feasible projects. They would cut off many wasteful expenditures now being made at Washington and secure for them reclamation and power development properly, which would increase the national wealth and contribute to national prosperity—to the farmers, miners and business men of the state where such projects were, a real service would then be rendered.

It is an extremely short-sighted view to say that the projects are local. They are important to the entire nation in contribution of wealth and to the upbuilding of the country as a whole.

Mr. McAdoo truly added that "the west needs an intelligent policy of land reclamation, hydro-electric power development, cheaper railroad transportation and plenty of it, and reduced taxation." But these are more than western needs; they are national advantages and requirements.

For 100 years and more the west has been the expansion chamber of the nation, and it is to the national interest to continue that relation between the east and the west. For more than half a century the homestead law contributed incalculably to the development of the nation. But good homesteads are gone, and the nation now must look more and more to irrigation of arid lands, to the clearing of logged-off lands and to drainage. As it would have been short-sighted and costly if opposition to the homestead law had been successful, so now it would be short-sighted and ruinous to stop the progress of western reclamation.

As Mr. McAdoo says, "These are problems of statesmanship; mere partisan politicians are unequal to them." It took statesmanship for President Jefferson to make the Louisiana purchase and send Lewis and Clark across the continent to the Pacific; it took statesmanship to pass the Oregon donation land claim act; it took statesmanship for Secretary Seward to buy Alaska; it took statesmanship for President Roosevelt to establish a national reclamation policy, and there is need now, and will always be need, for continuing statesmanship.

It is reassuring to find that there are republicans like President Harding and Secretary of the Interior Fall, and democrats like former Secretary McAdoo, who are alert to the continuing need of western development.

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President Harding's Veto of the Bonus Bill

When President Harding vetoed the bonus bill he prevented an increase of the national indebtedness variously estimated at from $4,000,000,000 to $7,000,000,000. It is hard for the mind to take hold of the magnitude of sums expressed in billions. It is easier to grasp the meaning of the savings effected by the president's veto by calculating, for example, the sums that will be saved to the various counties of the state of Washington.

If the cost of the bonus bill had been $6,000,000,000, as many authorities said it would be, Washington's share of the taxes to meet that obligation would have been nearly $60,000,000. That calculation is based on the quotas of the fourth Liberty bond campaign. In that campaign the government asked the nation for $6,000,000,000 and the people of Washington state were asked to subscribe $58,218,000. Going to the records, we find that the following quotas were assessed against the counties of Washington in that Liberty bond campaign. So it is easy for our subscribers in each county to get a pretty close line on what the veto meant in the way of savings to them in taxes.

Adams	$ 237,600	Klickitat	$ 224,900
Asotin	116,500	Lewis	771,000
Benton	235,300	Lincoln	818,400
Chelan	529,800	Mason	88,000
Clallam	260,200	Okanogan	290,600
Clarke	662,000	Pacific	428,000
Columbia	304,300	Pend Oreille	75,200
Cowlitz	239,000	Pierce	6,047,000
Douglas	336,000	San Juan	70,500
Ferry	35,800	Skagit	838,000
Franklin	155,100	Skamamia	49,000
Garfield	339,100	Snohomish	1,716,200
Grant	135,600	Spokane	5,988,500
Grays Harbor	1,800,000	Stevens	322,100
Island	41,600	Thurston	725,000
Jefferson	204,200	Wahkiakum	49,000
King	26,872,400	Walla Walla	1,616,600
Kitsap	361,800	Whatcom	1,652,200
Kittitas	561,600	Whitman	1,435,800
		Yakima	1,691,200

If the bonus bill had meant a cost of only $4,000,000,000, the lowest estimate, the share of the state and the various counties in the state would be two-thirds of the foregoing figures.

It would be a mistake for the people of any county to imagine that by some process they could have escaped their share of the taxes to meet the bonus. The burden of taxes that would have been necessary to make the bonus payments would have to be distributed over all the states and all the counties substantially on the basis of the quotas of the Liberty bond campaign.

Much as the people of Washington would like to have more improvements, such as paved highways, better schools, needed bridges, hospitals, etc., it is safe to say that if a bond issue of $60,000,000 were proposed to acquire these benefits it would be overwhelmingly voted down at the election. Yet the burden of taxation would have been none the less if $60,000,000 had gone into bonus payments than if it had been borrowed and expended in local improvements in the state. The government itself had not a dollar to make bonus payments; it would have had to take the entire $4,000,000,000, $5,000,000,000 or $7,000,000,000—whatever the cost might have been—out of the pockets of the people.

These facts are fairly to be weighed when we consider the effect, and, to some extent, the unpopularity, of the president's veto. It was not a pleasant duty for him to veto the bonus bill. The easier procedure would have been to drift along and allow the bill to become a law. But the duty of the president under the Constitution is to exercise the veto power in just such cases, and we believe that most of our readers will agree that he has acted courageously and patriotically, and that in the long run the ex-service boys themselves will see the wisdom and courage of his action. In the long run the boys themselves would have been injured more than they would have been benefited by the bonus, because the imposition of another $5,000,000,000 or $6,000,000,000 upon the national debt at this time would be depressing to industry and business and would put off just that much longer the return of prosperity.

In saying these things we are not unmindful of the splendid and patriotic service rendered their country by the ex-service men. It is not a question of flinching from our duty in recognizing their service, but it is a matter of weighing well the national welfare and the ultimate benefits to the ex-service men themselves. Not only that, but the laying now of an additional burden of $4,000,000,000 or $6,000,000,000 upon the nation would have meant that the country could not take as good care of the disabled men as it is now taking. In that work it is giving, with a lavish hand, $500,000,000 a year for the rehabilitation of the disabled men, and that service of gratitude and sympathy must be carried on regardless of the cost to the nation.

We believe that when the able-bodied ex-service men think it over they will approve the action of the president and will agree that nothing should be done that could possibly diminish the ability of the nation to take proper care of their disabled and deserving comrades.

Foolish to Take This Chance

When a charge of dynamite fails to explode, it is dangerous to return to a stump to relight a fuse.

A Whatcom county farmer tried it, and was soon taken to a hospital with the fingers of both his hands blown off, the bones in the hands shattered, the collar bone broken, and his eyes peppered with powder and blinded.

LOOKING INTO OTHER FARM FIELDS

Texas reports that a watermelon weighing 102 pounds was grown by J. P. Carter near Garza.

* * *

The potato crop in western Nebraska has been seriously affected by the continued hot and dry weather and the final yield will be considerably under earlier estimates.

* * *

Twenty-six reclamation projects have been built under federal government supervision since the establishment of the United States reclamation service 20 years ago. The total area of these 26 projects is not equal to the proposed area of the Columbia basin project.

* * *

Distributors of lettuce in California are making an attempt to secure a reduction in estimated weights on head lettuce and have asked the railroads for an estimated weight of 60 pounds per crate instead of the 70-pound minimum which was in effect during the last season.

* * *

South African fruits maturing at the time when American and Mediterranean fruits are not available, are now being shipped around the world—over 800,000 boxes having been exported in 1921, Consul Charles J. Pisar states. The fertile fields used by the Boers as grazing lands are now sustaining hundreds of thousands of fruit trees. South Africa's orchards contain 116,320 lemon trees, 1,382,410 orange trees, 323,300 tangerine trees, 1,211,550 apple trees, 907,800 apricot, 105,300 mango, 57,560 nectarine, 2,411,270 peach, 542,420 pear, and 995,570 plum trees, according to the government census.

State Farm News

Messrs. Burns and Fowler of Shaw island, in San Juan county, have succeeded in acclimating and producing in commercial qualities the Chinese medicinal plant called ginseng. Starting with $5 worth of seed and $30 worth of roots the experiment has developed into several plantations, and beginning last year commercial quantities were placed on the market. From a single bed some 40 feet long by 5 wide, $298.50 worth of the roots were sold by one party. The dried roots seldom sell below $6 per pound. The roots are not sold until 5 or more years of age and a single root often weighs a pound or more.

* * *

The Yakima Valley Dairymen's association, one of several activities of the farm bureau, with 125 members present in a recent all-day meeting, pledged $20,000 to carry on for the coming six months. This action was almost unanimous.

* * *

A campaign against the orchard mouse is to be waged this fall by the federal bureau of biological survey, according to Leo K. Couch, inspector in charge of rodent control at Olympia. The pest has done serious damage in five counties and the first results of a questionnaire to determine the damage done last winter has been announced. Of 273 orchards in the Yakima valley, having a total of 7032 acres, there was a loss of 4664 trees by mouse girdling. Signs of an invasion again this year are reported. Questionnaires have been sent to fruit growers of Chelan, Okanogan, Kittitas and Benton counties.

* * *

W. M. Clark, C. C. Goodrich, Matt Harkema and Fred Shadbolt, representing Zillah apple growers, met with Yakima county farm bureau officials a few days ago with a view to forming a pool for apples, tending to stabilize the market.

* * *

The Frank Waterhouse ranch of 160 acres, near Yakima, has been bought by Henry Kleinberg, Ellensburg pioneer, for $50,000. The property is considered the show place of the Yakima reservation and Kleinberg estimates that at least $150,000 was spent for the place and improvements. There are 80 acres in orchard, 80 in hay, a modern packing house, a Northern Pacific station and two ranch houses on the place.

* * *

Fruit shipments from the Wenatchee district up to September 14 were 136 cars of cherries, 95 cars of apricots, 513 cars of mixed fruits, 159 cars of apples, 351 cars of pears, 9 cars of plums, 125 cars of peaches—making a total of 1188 cars this season.

* * *

R. S. Fowler, county agriculturist of Lewis county, Washington, who judged Guernsey cattle at the Tillamook, Ore., fair, was superintendent of live stock for the Southwest Washington fair at his home town of Chehalis. Much of the success of the live stock show is due to his untiring and efficient efforts. Fair management and exhibitors were well pleased with his work. Whether judging or "managing" Mr. Fowler is right at home with the live stock.

* * *

The resignation of F. L. Audrain, state leaders of boys' and girls' club work in Washington for two years past, has been accepted effective December 1.

* * *

The beekeepers of Mason county have carried on a thorough campaign to weed out the foul brood that was found in a few places. Owing to the fact that the services of the state bee inspector were cut off last spring the beemen in the county went together and paid the expenses and salary of an expert and had every hive in the district examined. They are now ready to start the next year's work on a stronger footing.

* * *

About $30,000 was spent fighting the fires threatening Pend Oreille county forests this year, according to the report of A. L. Baker, secretary of the Eastern Washington Timber Protective association. Of this, $12,000 was spent in fighting fires across the line in Stevens county.

* * *

The potato crop in Grays Harbor county will be little over half normal, A. B. Holloway, prominent grower of the Brady district, estimates. Mr. Holloway blames the drought of last summer, but says that the quality this year will be good. The growers are hoping for a dry fall, which will increase the crop materially.

* * *

A storage in transit rate of 6 cents a pound on prunes, which will permit storage at Missouri river points on the Union Pacific to avoid glutting of any one market, is announced at Yakima by the Union Pacific. The rate and privilege went into effect September 1.

* * *

Fire on the Yakima reservation recently destroyed the hop house of P. N. Campbell, half a mile west of Wapato, causing a loss of $10,000. The fire started in a dryer and the blaze could not be gotten under control. Some hops were destroyed. Those being picked are being dried in the kilns of Dan McDonald and F. A. Shadbolt, near by.

* * *

Fred L. Wolf of Newport, a newspaper man and former state legislator, was elected president of the Washington State Good Roads association at its recent convention. Vice presidents elected for the coming year include E. L. French, Vancouver; F. J. Wilmer, Rosalia; C. F. Stinson, Pasco; M. J. Carrigan, Seattle, and Leon Titus, Olympia. Percy L. Sinclair of Pacific county was elected treasurer. Douglas A. Shelor, Seattle, secretary of the Automobile Club of Western Washington, was appointed historian to record the accomplishments of the association.

Members of the executive committee include the following: Al Rogers, Waterville, chairman; C. C. Van Arsdol, Clarkston; Alex. McNeil, Kennewick, E. M. Gillette, Wenatchee; C. E. Fulmer, Clallam; E. L. French, Vancouver; E. W. Truett, Columbia county; R. B. McFarland, Pasco; Bert Thomas, Grant; Alex. Polson, Aberdeen; A. S. Eldridge, Seattle; J. C. Hubbell, Ellensburg; G. F. Rust, Kitsap; R. H. Sommerville, Centralia; Charles Meyers, Lincoln; Mark Reed, Shelton; N. E. Whitworth, Okanogan; P. C. St. Clair, Pacific; Fred Turnbell, Pend Oreille; W. C. Baldwin, Tacoma; J. C. Wilson, Big Lake; W. G. Hufford, Skamania; Frank Weber, Snohomish; Arthur D. Jones, Spokane; J. G. Kulzer, Stevens; Thad C. Pierce, Thurston; W. N. Meserve, Wahkiakum; E. C. Burlingame, Walla Walla; J. J. Donovan, Whatcom; J. T. Tifft, Colfax, and W. L. Dimmick, Yakima.

FARM BUSINESS AND MARKETS OUTLOOK

Aside from an overabundance of common cattle which invariably occurs at this season of the year, the cattle market is a healthy affair.

Cooler weather and the recent settlement of the coal and rail strikes have brought an expansion of the dressed beef trade and the largest run of the season at the leading markets last week was absorbed at higher prices for practically all kinds.

Prime steers reached a new top of $11.75 and scarcity of such steers is expected to continue until December. Intermediate grades of steers failed to advance as much as the best kinds as the western range delegation increased materially. Cows and heifers also made moderate gains for the week. Bulls recovered smartly from the recent depression and calf prices were the highest of the season.

A further increase in market supply can be expected before the high point of the autumn beef harvest is reached, but no pronounced decline in the price level is likely unless brought about through the abundance of pork and poultry during the fall months. The broad movement of feeders to the country in the last few weeks forecasts a generous supply of shortfeds within the next three months so that a pronounced advance upon the rank and file likewise appears improbable.

Cattle Feeders Continue Active.

Combined shipments of stockers and feeders from the leading markets continue to run far above the corresponding period in either of the two preceding years and are increasing rather consistently each week. Widespread rains and revival of fall pastures was an additional stimulus recently. Prices show but little change, since the supply from the western range, the southwestern pastoral area and from Canada is adequate for the demand. Light weights at prevailing prices seem to offer the safest opportunity for the feeder.

Increase in Pork Production.

The department of agriculture estimates the number of stock hogs on farms on September 1 to be fattened this winter at 60,500,000 head compared with 55,917,000 head last year and 56,584,000 head two years ago. The increase of slightly over 8 per cent is not great enough to indicate extremely low prices for hogs compared with feed costs although the handsome profits of the last year can not be expected to continue.

Receipts of hogs at the leading markets again set a new record for the corresponding week, but prices advanced to the highest point in a month, the $10 quotation being restored at Chicago. Packing sows are becoming less numerous right along while new crop hogs are showing up, this change in the character of the supply being a factor in the higher average price level. Lower prices for pork appear to have stimulated demand and the settlement of labor troubles together with cooler weather were additional aids so that trade, both in fresh pork and cured hams, was unusually brisk. Export trade also has improved. Stocks of lard in storage are decreasing steadily and hog meats are disappearing more rapidly than during August.

From this time on receipts can be expected to increase rather steadily from week to week so that the recent advance may not be maintained.

Lamb Receipts Light.

Receipts of lambs and sheep at the seven leading markets in the last few weeks have been the lightest on record for the corresponding season. The total last week ran more than 40 per cent below the average. Consumptive demand is fairly broad and in addition lamb feeders are competing with packers in order to obtain even a small supply for feed lots. As a result of these influences prices advanced sharply last week to a top of $14 at Chicago, the highest since May.

Feeder demand is keen, but is limited by the small available supply. Prices are extraordinarily high, but unless the western range supply expands the number put into feed lots will be small enough to make the feeding operation fairly safe.

Improvement in Horse Trade.

Demand for horses has broadened materially in the last few weeks and prices upon the better grades are higher. City buyers are after drafters weighing 1700 pounds and up at prices ranging from $200 to $300 at Chicago, an advance of about $10 over recent levels. Most of the arrivals consist of 1400 to 1600 pound chunks which bring $130 to $175. Southern trade has improved in both horses and mules. Coal dealers are in the market in a limited way and logging outfits are showing interest.

Wool Market Displays Strength.

The wool market is showing a healthy tone and activity is more marked than a few weeks ago as manufacturers have resumed buying on a broader scale. Higher prices on woolen goods are rather freely predicted. The London auction reports prices steady to 10 per cent higher than the preceding series. The duty recommended in a conference report on the wool tariff is 31 cents per pound and makes but little change in the situation, although it may effect sales upon some of the wool held in bond of which there were 108,549,776 pounds on July 31. Part of these wools have been on hand for a long time and a few forced sales have been made recently. Some buyers are holding back until more of these wools are put on the market in the hope of picking up bargains.

War Scare Lifts Wheat Market.

War in the Near East finally caused wheat buyers to take alarm last week and lifted prices about 8 cents a bushel. Export sales have increased slightly and a shortage of nearby wheat has developed abroad as a result of small world shipments in the last week or two. Flour trade also is more active with some disposition on the part of bakers and others to buy ahead at the prevailing price level.

The improvement in the demand has hardly been sufficient to explain the full advance as the latter was partly due to a change in speculative activities and its maintenance will depend upon continuance of the war scare.

Receipts of wheat have increased, but there has been a tendency in the spring wheat districts to hold back and the movement is not extremely heavy, although above the average for the corresponding period in past years. In Canada farmers are selling freely with daily receipts at country elevators estimated at 3,500,000 bushels. Manitoba wheat is 6 to 8 cents cheaper than United States wheat so that most of the export business is going in that direction.

Wheat Surpluses Look Ample.

Besides the exportable surplus of over 500,000,000 bushels in North America the new crop in Argentina promises to furnish about 150,000,000 bushels and Australia about 100,000,000 bushels, according to private estimates, with approximately 40,000,000 bushels from other countries. The surplus of old wheat in Argentina is estimated officially at 23,000,000 bushels. Based on these figures there is an ample supply of wheat in sight to meet the needs of importing countries whose total takings last year were approximately 680,000,000 bushels. The southern hemisphere crops may yet be injured, of course, as they are approaching the critical period of growth, but thus far reports have been rather favorable.

Wheat statistics are less bullish than they have been for three years as there is now a prospect that the world will wind up the present crop year with more wheat than at the end of the preceding year.

Coarse grain markets have advanced recently, because of the strength in wheat. It is generally believed that the corn crop will fall below the government's estimate and demand remains broad. Producers are selling freely and primary receipts have increased again. Corn prices are now the highest in seven weeks.

Receipts of oats increased last week, but there is as yet nothing like the usual post-harvest movement. Demand from the east has improved materially and prices up about as much as corn from the low point of the season.

Cash Grain Markets.

The range of cash grain prices for the week ending September 20 is as follows:

Chicago—Wheat—No. 3 red, $1.05@1.11; No. 4, $1.02@1.10; No. 2 hard, $1.02@1.09 1-4; No. 3, $1.01 1-4@1.08 1-4; No. 1 northern, $1.16 1-4@1.29. Corn—No. 2 mixed, 62 3-4@66 1-4c; No. 3, 61 1-2@64 1-2c; No. 2 yellow, 63@66 1-2c; No. 2 white, 63@66c; No. 3, 61 1-4@65 1-2c. Oats—No. 2 white, 36 1-2@41 1-2c; No. 3, 35 1-2@39 1-2c. Rye—71 1-2@76 1-2c. Barley—55@63c.

Feed markets have advanced sharply in the last few days, due primarily to light offerings. Bran has advanced nearly $3 and cottonseed meal about $2. Drouth in the southwest has brought a brisk demand from that section, but sales elsewhere generally are small and the market is not expected to retain the advance.

Prices per ton (100-pound bags) in carlots—Chicago—Bran, $19.50@20; standard middlings, $20.50@21; flour middlings, $23@24; cottonseed meal, 36 per cent, $36.50; 43 per cent, $40.50; hominy feed, $25; gluten feed, $30.35; old process oil meal, $41.50; tankage, $60.

Arrivals of hay at distributing markets and country loadings in the surplus sections both are comparatively light. Prices are firm in a few cities, but most points report weakness.

Prices per ton in carlots—Chicago—No. 1 timothy, $20@22; No. 2, $17@20; No. 3, $12@13; No. 1 light clover, $17@20; No. 1 clover, $14@17; No. 1 clover mixed, $14@17; upland prairie, $15@18; midland prairie, $12@14; rye straw, $10@11; oats and wheat straw, $8@9.

Clover Seed Crop Above Average.

The yield of red clover seed is approximately 1,880,000 bushels compared with an average of 1,538,000 bushels during the six preceding years. The crops of alsike and white clover also are larger than in 1921. Prices have been firm during the last 10 days.

Toledo—Per bushel: Prime red clover, $13@17; prime timothy, $4.25@5.25.

Chicago—Per 100 pounds: Clover, $13@17; timothy, $4.25@5.25.

Egg Market Retains Advance.

Egg prices have retained nearly all the recent advance. Receipts of fresh eggs at the leading cities are running lighter than last year and slightly below the average for the corresponding season in the three preceding years. Demand is brisk and in addition to current receipts, rather heavy withdrawals from cold storage are necessary.

Poultry prices are holding up as receipts are not running as much above the average for the corresponding season as they were two months ago. Indications are, however, that the crop to be marketed this fall and winter will be larger than during any recent years.

Although a weaker tone was noticeable in the butter market last week prices at eastern points advanced slightly and the decline at Chicago was negligible. Rains and cooler weather have improved the prospects for autumn production, but it is improbable that the make will be sufficient to supply the consumptive demand so that steady inroads must be made into cold storage holdings from this time on. Fancy butter has been scarce as most of the recent receipts were made during the hot weather period. The butter situation is comparatively strong, although advances from this level may be rather slow.

Prices for fresh 92-score creamery butter on September 20 were:

Chicago, 39 1-2c; New York, 42c; Boston, 41 1-2c; Philadelphia, 42c.

Cheese markets were dull early last week with but little buying on a broad scale at distributing points, but toward the close demand from the south and east expanded materially and values were well sustained. Country markets have been clearing up satisfactorily and in the east the supply of New York state cheese has been inadequate, turning part of the demand toward Wisconsin product. Reopening of coal mines is believed to be one important factor in the improved trade. Based on storage stocks and the rate of production, the cheese market is in a fairly strong position.

Prices for No. 1 American cheese on September 20 were:

Chicago—Flats, 21 1-2@22c; Twins, 21@21 1-2c; S. Daisies, 21@21 1-2c; D. Daisies, 21@21 1-4c; Y. Americas, 21@21 1-2c; Longhorns, 21 1-2@22c.

Fruits and Vegetables.

Potato shipments have increased again and are above normal for this season of the year. The carlot movement for the season to September 18 totaled 74,551 cars compared with 66,511 cars last year. Northern round whites are quoted at $1.20 to $1.45 per 100 pounds in midwestern cities.

The apple market is holding at about the same level as in the two preceding weeks with summer apples quoted at a range of $1 to $1.25 a bushel on midwestern markets and Grimes Golden and Jonathans bringing $3.75 to $5.50 a barrel. Receipts continue to reflect the big crop, the carlot movement for the season to September 18 being 12,356 cars compared with 8866 cars last year.

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LATEST QUOTATIONS.

The Live Stock Market.

PORTLAND, Sept. 23.—Cattle—Choice steers, $7.50@8; medium to good steers, $6.75@7.50; fair to medium steers, $5.75@6.75; common to fair steers, $4@5.75; choice cows and heifers, $5@6; medium to good cows and heifers, $3.50@4.50; fair to medium cows and heifers, $3@3.50; common cows, $2@3; canners, $1.50@2; bulls, $3@4; choice feeders, $5@5.50; fair to good feeders, $4@5; choice dairy calves, $8.50@9.50; prime light calves, $7@8; medium to light calves, $7@8; heavy calves, $5@7; common heavy calves, $4@5.

Hogs—Prime lights, $11@11.50; smooth heavy, 200@300 lbs., $10@10.50; smooth heavy, 300 lbs. up, $9@10; rough heavy, $7@9.50; fat pigs, $10.50@11; feeder pigs, $10.50@11; stags, subject to change, $5@7.50.

Sheep—East-of-mountain lambs, $10@11; choice of valley lambs, $10@11; medum valley lambs, $9@10; common valley lambs, $8@9; cull lambs, $7@8; light yearlings, $8@8.50; heavy yearlings, $7.50@8; light wethers, $6.50@7.50; heavy wethers, $5.50@6.50; ewes, $2@6.

SPOKANE, Sept. 23.—Cattle—Prime steers, $6@7.50; good to choice steers, $5@6; medium to good steers, $4.50@5; fair to medium steers, $4@4.50; common to fair steers, $3@4; choice cows and heifers, $5@5.50; good to choice cows and heifers, $4@5; medium to good cows and heifers, $3.50@4; fair to medium cows and heifers, $2.50@3.50; canners, $1.50@2.50; bulls, $2.75@4.50; light veal calves, $7@8.50; heavy veal calves, $5@7.50; stockers and feeders, $3.50@5.

Hogs—Prime mixed, $9.50@10.75; medium, $8.50@9.50; heavies, $6.50@8.50; fat pigs, $8.50@10; stockers and feeders, $8.50@10.

Sheep—Prime lambs, $8@10.50; fair to medium, $7@8; yearlings, $7@8; wethers, $6.50@7.50; mutton ewes, $3@6.50; feeder lambs, $6@7.

The Grain Market.

SEATTLE, Sept. 23.—Wheat—Hard white, $1.10; soft white, western white, hard red winter, northern spring, $1.09; soft red winter, $1.08; western red, $1.06; Big Bend Bluestem,

(Continued on page twenty.)

Range of Live Stock Prices, Week Ending Sept. 20

CATTLE.	Chicago.	Spokane.	Portland.	N. S. Lake.
Choice, prime heavy steers (1100 lb. up)	10.50@11.75			
Good heavy steers	9.35@10.75			
Medium heavy steers	7.90@ 9.50			
Common heavy steers	6.15@ 7.90			
Choice, prime light steers (1100 lb. d'n)	10.25@11.60			
Good light steers	9.15@10.65			
Medium light steers	7.75@ 9.40	6.00@ 7.50	6.50@ 8.25	6.25@ 7.00
Common light steers	6.00@ 7.75	3.75@ 6.00	4.25@ 6.50	4.00@ 6.50
Common to choice butcher heifers	4.75@ 9.50	3.50@ 6.50	3.50@ 6.00	3.25@ 5.50
Common to choice butcher cows	3.75@ 8.50	2.75@ 5.25	2.75@ 5.00	3.00@ 5.00
Bologna and beef bulls	3.90@ 6.85	2.75@ 4.50	3.00@ 4.00	2.00@ 3.00
Canners and cutters, cows and heifers	2.75@ 4.10	1.50@ 2.50	1.50@ 2.00	1.50@ 2.75
Canner steers	3.75@ 4.50	2.50@ 3.50	2.75@ 3.50	2.50@ 3.50
Medium to choice light veals	11.50@13.50	7.00@ 8.50	7.00@ 9.00	7.50@ 8.50
Common to choice heavy veals	4.25@ 7.50	5.00@ 7.00	4.00@ 7.00	
Common to choice feeders (1000 lb. up)	5.65@ 8.25			
Com. to choice feeders (750-1000 lb.)	5.50@ 7.75	3.50@ 5.00		4.00@ 5.50
Common to choice stocker steers	4.00@ 7.40			
Com. to choice stocker cows, heifers	3.25@ 5.50			
HOGS.				
Top of market	10.10	10.50	10.50	9.15
Bulk of sales	7.25@10.05	9.75@10.50	9.50@10.40	8.00@ 8.75
Heavy (250 lb. up)	8.10@ 9.75	9.00@10.25	8.75@10.25	8.00@ 8.75
Medium (200-250 lb.)	9.00@10.00	10.00@10.50	9.75@10.40	8.75@ 9.00
Light (150-200 lb.)	9.55@10.00	10.00@10.50	10.00@10.50	8.50@ 9.15
Light lights (130-150 lb.	8.90@ 9.80	9.75@10.25	10.00@10.50	8.50@ 9.00
Smooth packing sows (250 lb. up)	7.00@ 8.40	7.50@ 8.50	7.00@ 8.25	7.00@ 7.50
Rough packing sows (200 lb. up)	6.60@ 7.75	6.50@ 7.50	6.00@ 7.25	6.50@ 7.00
Medium to choice pigs (130 lb. down)	8.00@ 9.40	8.50@10.00	9.75@10.00	
Stock pigs		8.50@10.00	9.75@10.00	8.50@ 9.25
SHEEP AND LAMBS.				
Medium to prime lambs (84 lb. down)	12.50@14.50	8.75@10.00	9.50@11.00	10.50@11.50
Culls and common lambs	8.50@13.00	7.00@ 9.00	6.00@ 9.50	7.00@10.50
Medium to prime yearling ....wethers	8.75@12.00	7.00@ 8.00	7.50@ 8.50	5.00@ 7.00
Medium to prime wethers	6.75@ 9.25	6.50@ 7.00	5.00@ 7.00	4.00@ 5.50
Medium to choice ewes	3.75@ 7.00	3.75@ 6.00	4.00@ 5.00	3.00@ 4.00
Culls and common ewes	1.50@ 3.75	2.00@ 3.75	2.00@ 4.00	2.00@ 3.00
Full-mouth to yearling breeding ewes	4.50@11.50			
Feeder lambs	11.75@13.85	6.00@ 7.00		

Twenty-Sixth Chapter Added to Fair Book

(Continued from page three.)

ning team a trip to the National Dairy show, was won by the Spokane team, on which were Cecil Resor, Bernice Spear and Aubrey Schenefelt. Their score was 783 points, while the Yakima team, composed of Chris Verstate, John Lunders and Leland Duffield, scored 774.

The woman's department was housed in two buildings this year and had exhibits from all parts of the state. Most of the exhibits were needle and fancy work and there were some high-class articles shown. The demonstration building included a day nursery and departments to show the construction of dress forms, hats, labor-saving devices and many other articles dear to the heart of the modern housewife. Miss Mary Remy of Yakima was in charge of the department.

The Poultry Department.

The exhibit of poultry was very good. The Rhode Island Reds had the largest entry list, which represented some of the best quality ever shown at Yakima. There was also a good quality of White Leghorns and the White Wyandottes were better than usual. The entire turnout totaled over 800 birds and included seasonably good showings of practically all of the main breeds. At least half of the entries were from breeders in the Yakima valley. C. H. Barnett of Seattle judged.

OUT WITH THE HERDSMEN.

It is impossible to compare this year's live stock show with those of former years, either as to exact number of animals or as to the fine points of quality. But if there has ever been a better show at Yakima it was a good one. Every department was strong. No class can be called weak, though some were stronger than others. Dr. Robert Prior took justifiable pride in the department of which he was superintendent.

Guernseys were generally admitted to be the feature of the show, with outstanding herds and a few individual entries competing. Guernsey enthusiasm was somewhat dampened by the report that reached the barns Tuesday that Sammamish Topsy, Dr. Park Weed Willis' high-record cow, one of the noted animals of the breed in the west, had died at Spokane following an illness contracted during the earlier part of the fair circuit. A hard competitor of the fawn-and-whites for feature honors was the Shorthorn show, in which five large herds and representatives of several others took part.

All beef breeds were judged by John L. Smith of Spokane.

The Shorthorns.

The Shorthorns came from outside of the Yakima valley with the exception of 10 club steers of the Hercules steer clubs, which came from the Mabton district, the other 10 coming from Kittitas county. Two of the breeding herds came from Oregon, those of G. W. Delay of Hot Lake and W. A. Heater of Sublimity. The others were from Washington farms, but there was not the turnout from the smaller breeders that is always desirable. The grand champion bull was Hercules Conqueror of the Day & Rothrock herd at Sprague, a junior yearling, a grandson of both Gainford Perfection and Doune Radiance, the two aged herd sires on the Hercules farm. The grand champion female was Perfection Lady of the same herd, a senior yearling. Both senior championships went to DeLay.

Exhibitors—W. G. Cordiner, Walla Walla, Wash.; Day & Rothrock, Spokane, Wash.; G. W. DeLay, Hot Lake, Ore.; W. A. Heater, Sublimity, Ore.; J. D. McGuire, Tenino, Wash.; William Mulhall, Buena, Wash.; State College of Washington.

Bulls: Group of three—1, Day & Rothrock, Spokane, Wash.; 2, J. D. McGuire, Tenino, Wash.; 3, State College of Washington; 4, W. A. Heater, Sublimity, Ore.; 5, W. G. Cordiner, Walla Walla, Wash.. Group of two bred by exhibitor—1, Day & Rothrock; 2, Cordiner; 3, McGuire; 4, Heater; 5, G. N. DeLay, Hot Lake, Ore.

Aged bull—1, Heater, on Gainford Modus; 2, DeLay, on Village Reserve; 3, McGuire, on Mayflower King. Two-year-olds—1, DeLay, on Hercules Cornerstone (senior champion); 2, Cordiner, on Hedgewood Hopeful. Senior yearling—1, State College of Washington, on Hercules Rex. Junior yearling—1, Day & Rothrock, on Hercules Conqueror (junior and grand champion); 2, McGuire, on Hercules Model; 3, Cordiner, on Cumberland Again; 4, DeLay, on Linden Laddie. Senior calves—1 and 2, Day & Rothrock, on Hercules Marshall and Hercules Radiance; 3, State College of Washington, on Village Top; 4, Heater, on Gainford Silvertip; 5, Cordiner, on Hawthorne Prince; 6, Delay, on Missie's Villager. Junior calves—1, State College of Washington, on Doune Sultan; 2 and 4, Cordiner, on Captain Radium and Prince Cumberland; 3 and 6, McGuire, on King's Perfection and Oakgrove King; 5, Heater, on Little Gainford.

Females: Aged cow—1, State College of Washington, on Orange Blossom Lady; 2, and 5, Cordiner, on Dorothy Hedgewood and Cumberland Lass 3d; 3, DeLay, on Dunbro Maid; 4, McGuire, on Roan Lady. Three-year-olds—1 and 2, DeLay, on Scottish June 4th (junior champion), and Ruberta's Missie; 3, Cordiner, on Olantha Commodore; 4, McGuire, on Hercules Missie 3d; 5, Heater, on Signet's Memory 7th. Two-year-olds—1, Cordiner, on Priscilla B 2d; 2, Heater, on Memory's Roan Lady; 3, McGuire, on Chief's Hope; 4, DeLay, on Englisk Lady 21st. Senior yearlings—1 and 2, Day & Rothrock, on Perfection Lady (junior and grand champion), and Hercules Matchless 3d; 3, Heater, on Memory's Snowdrift; 4, DeLay, on Village Missie; 5, McGuire, on Hercules Missie 3d. Junior yearlings—1 and 2, Day & Rothrock, on Hercules Topsy 5th, and Hercules Jasmine 2d; 3, Cordiner, on Lavender Sue; 4, Heater, on Thistlebloom 2d; 5 and 6, McGuire, on Mayflower Rose and Mayflower Hope. Senior calf—1 and 3, Day & Rothrock, on Hercules Sylvia 3d and Hercules Violet 6th; 2, McGuire, on King's Hope; 4, Cordiner, on Bessie Hedgewood; 5, DeLay, on Village Duchess D 2d; 6, Cordiner, on Acanthus 2d.

Groups: Graded herd—1, DeLay; 2, Cordiner; 3, Heater; 4, McGuire. Yearling herd—1, Day & Rothrock; 2, McGuire; 3, DeLay. Calf herd—1 and 2, Day & Rothrock; 3, DeLay. Get of sire—1 and 2, Day & Rothrock; 3, McGuire; 4, Cordiner.

The Herefords.

There were two large herds of Herefords out, while Charles Bull of Mabton and the state college added to the classes with three head. The numbers were not as large as has been in the past, but the quality was very good. The senior and grand champion bull was from the O. A. Boggs herd at Daysland, Alberta. This animal, Alberta Panama, a 3-year-old, was well covered and had an abundance of quality. The senior and grand champion female, Miss Panama, a 4-year-old, is a cow of good size and real Hereford type.

Exhibitors—O. A. Boggs & Sons, Daysland, Alta.; Charles Bull, Mabton, Wash.; Methow Valley Live Stock Co., Winthrop, Wash.; State College of Washington.

Bulls: Group of three, any age—1, Boggs & Son; 2 and 3, Methow Valley Live Stock Co.; 4, George Bull. Group of two, any age—1, Boggs & Son; 2 and 3, Methow Valley Live Stock Co.; 4, Bull.

Aged bull—1, Boggs, on Alberta Panama (senior and grand champion). Two-year-olds—1 and 2, Boggs, on Alberta Panama 2d and Melrose Perfection; 3, Methow Valley Live Stock Co., on Chewuch Panama 14th. Senior yearling—1, Methow Valley Live Stock Co., on Beau Stewart. Junior yearling—1 and 2, Boggs, on Alberta Panama 3d (junior champion) and Dudley's Panama; 3, Methow Valley Live Stock Co., on Commander Jr.; 4, State College of Washington, on Bonnie Rex. Senior calf—1 and 2, Methow Valley Live Stock Co., on Prince Perfect and Pince Chewuch 2d; 3 and 4, Bull, on Beau Carlos 1st and Donald Carlos. Junior calf—1 and 2, Methow Valley Live Stock Co., on Beau Sunshine and Sir Radio; 3, Bull, on Donald Carlos.

Females: Aged cow—1, 2 and 3, Boggs, on Miss Panama (senior champion), Bonny Lady Panama and Panama Lady 3d. Two-year-olds—1, Methow Valley Live Stock Co., on Florence Debonair; 2, Boggs, on Miss Fairfax Panama. Junior yearling—1 and 2, Boggs, on Panama Lady 3d (junior and grand champion(and Miss Columbus Panama 2d; 3 and 4, Methow Valley Live Stock Co., on Blossom's Joy and Princess Lilly. Senior calf—1, 3 and 4, Methow Valley Live Stock Co., on Lady Annabell, Miss Frances and Wild Rose; 2, Boggs, on Miss Panama Perfection.

Groups: Aged herd—1, Boggs; 2, Methow Valley Live Stock Co. Young herd—1, Boggs; 2, Methow Valley Live Stock Co. Calf herd—1 and 2, Methow Valley Live Stock Co. Get of sire—1 and 2, Boggs; 3 and 4, Methow Valley Live Stock Co.; 5, Bull.

The Aberdeen Angus.

The Aberdeen Angus competition was between the Condon & Battles herd of Yakima and that from Chehalis owned by J. A. Scollard. The two herds filled a majority of the classes, totaling 33 animals. The grand champion bull was Erickman C. B. 5th of the Scollard herd, which won on his extreme smoothness and general Angus quality. The Yakima herd had the senior and grand champion female in Ridgelawn Barbara 2d, an 8-year-old cow, smooth, low-set and well fleshed.

Exhibitors—Congdon & Battles, Yakima, Wash.; J. A. Scollard, Chehalis, Wash.

Bulls: Groups of three—1 and 3, Congdon & Battles; 2, Scollard. Group of two bred by exhibitor—1 and 2, Congdon & Battles; 3, Scollard.

Aged bull—1 and 2, Congdon & Battles, on Blackbirdman CB 5th, and Prizemere 10th. Two-year-olds—1, Scollard, on Erisman CB 5th (senior and grand champion). Senior yearlings—1, Congdon & Battles, on Prideman CB 14th. Junior yearlings—1, Scollard, on Blackmead 2d; 2 and 3, Congdon & Battles, on Prideman CB 18th and Queenmere 15th. Senior calf—1 and 2, Congdon & Battles, on Blackmere 16th (junior champion), and Ericman CB 8; 3, Scollard, on Heathermead 4th. Junior calf—1 and 2, Congdon & Battles, on Eillermere 7th and Queenmere 18; 3, Scollard on Gloriamead.

Females: Aged cow—1, Congdon & Battles, on Ridgelawn Barbara 2d (senior and grand champion); 2, Scollard, on Kannia K 4th. Two-year-olds—1 and 3, Congdon & Battles, on Pride of Rosemere 37th and Queen of Rosemere 13th; 2, Scollard, on Rose of Rosemere 8th. Senior yearling—1, Congdon & Battles, on Erica CB 4th (junior champion); 2, Scollard, on Blackcap of Broadmead. Junior yearlings—1 and 2, Congdon & Battles, on Barbara of Rosemere 33d and Queen of Rosemere 15th; 3, Scollard, on Erica of Broadmead. Senior calf—1 and 2, Congdon & Battles, on Barbara CB 2d and Erica CB 6th; 3, 4 and 5, Scollard, on Erica 4th of Broadmead, Blackcap of Broadmead 2d and Bonnie Rose of Broadmead.

Groups: Aged herd—1, Congdon & Battles; 2, Scollard. Yearling herd—1, Congdon & Battles; 2, Scollard. Calf herd—1, Congdon & Battles; 2, Scollard. Get of sire—1 and 2, Congdon & Battles; 2, Scollard.

The Guernseys.

There was a marked increase in the number of Guernseys shown this year and there were some of the finest individual herd showings that have ever been seen at the state fair. The grand champion bull was Chicona Lover Bold of the Wallace & Fordyce herd. He was a smooth, typy animal of excellent quality. A. L. Gile of Chinook, Wash., had the senior and grand champion female, Jewel of Rose City, that showed an excellent udder development in addition to her general conformity to Guernsey standards. George P. Grout of Duluth, Minn., judged.

Exhibitors—H. E. Angel & Son, Mabton, Wash.; Roy R. Bush, Outlook, Wash.; William S. Cross, Wapato, Wash.; A. L. Gile, Chinook, Wash.; E. W. Pazel, Yakima, Wash.; Orchard Hill Farm, Redmond, Wash.; R. T. Peterson, Yakima, Wash.; W. O. Reith, Astoria, Ore.; Ben H. Ridgeway, Sequim, Wash.; A. Macrae Smith, Bellingham, Wash.; Wallace & Fordyce, Sunnyside, Wash; Jesse Beasley, Sunnyside, Wash.; T. O. Burlingame, Sunnyside, Wash.; Ray N. West, Yakima, Wash.; C. J. Thursh, Granger, Wash.; F. L. Shannon, Walla Walla, Wash.

Bulls: Three years or over—1, Wallace & Fordyce, on Chicona Lover Bold (senior and grand champion); 2, A. L. Gile, on Chicona Buster; 2, H. E. Angell & Son, on France's May King; 4, Orchard Hill Farm on Chicona Hero. Two-year-olds—1, Reith, on Glenwood Sequel Lad of Willow-wood. Yearling—1, Wallace & Fordyce, on Fawndale Marose; 2, Ridgeway, on Khedin Kitchener of Sequim Prairie; 3, Gile, on Chicona Peter; 4, Angel & Son, on Bobbie Boy of Pleasant Acres. Senior calf—1, Smith, on Fircrest LaFrance Rival; 2, Reith, on Willow-wood Buttermaker; 3, Gile, on Chicona Luke; 4, Angel & Son on Ruby Dell Frenchman. Junior calf—1 and 4, Wallace & Fordyce, on Fawndale Bold Laddie (junior champion) and Fawndale Boulder; 2, Jesse Beasley, on Alga's Bold Lad; 3, Angel & Son, on Dame's Lad of Ruby Dell.

Females: Cows, four years or over—1, Gile, on Jewel of Rose City (senior and grand champion); 2, Smith, on La France of Bralee; 3 and 4, Angel & Son on Angel's Lila May and Georgia Dunn. Three-year-olds—1, Angel, on Sweet Dame of Muskeego; 2, Orchard Hill Farm, on Katie Did of Orchard Hill; 3, Wallace & Fordyce, on Filipina of Groton Farms; 4, Reith, on Lilly's Blossom of Willow-wood. Two-year-olds—1, Smith, on Fircrest Pretty Maid; 2, Reith on Rose Girl of Oregon; 3, Angel & Son, on Lila May's Daisy; 4, Bush, on Old Homestead Lilly Belle. Senior yearling—1 and 4, Smith, on Fircrest LaFrance Pride (junior champion) and Fircrest May Blossom; 2, Angel & Son on Old Homestead Belle's Queen; 3, Gile, on Doris of Chicona. Junior yearling—1, Orchard Hill Farm, on Wanda Topsy of Orchard Hill; 2 and 4, Wallace & Fordyce, on Anchor Rose of Fawndale and Twinkle's Daughter; 3, Gile, on Sunlight of Chicona. Senior calf—1, Angel & Son, on Ruby Dell Butter Queen; 2 and 3, Bush, on Old Homestead Sunshine and Old Homestead Katharine; 4, Reith, on Jewel Chene of Willow-wood. Junior Calf—1 and 4, Reith, on Ada May Chene of Willow-wood and Ruby Girl; 2, Ridgeway, on Ben's Sequim Daisy; 3 and 5, Gile, on unnamed.

Groups: Graded herd—1, Gile; 2, Wallace & Fordyce; 3, Smith; 4, Reith. Young herd—1, Smith; 2, Gile; 3, Angel & Son; 4, Orchard Hill Farm. Calf herd—1, Gile; 2, Smith; 3, Reith; 4, Angel & Son. Get of sire—1, Wallace & Fordyce; 2, Gile; 3, Smith; 4, Reith. Produce of cow—1 and 2, Smith; 3, Ridgeway; 4, Reith.

The Holsteins.

The Holstein barn was full to overflowing, but there were 70 of the animals that were in the breeders' consignment sale, which was held on Wednesday, few of which were entered in the show. Some of the state's most prominent herds were represented and they filled some strong classes. One herd was at the state fair for the first time. This was the new Holstein herd from the Western State hospital at Fort Steilacoom. The grand champion bull was the Carnation bull, Matador Segis Walker 6th of Carnation farm, that has won at the Pacific Int...

(Continued on page eleven.)

Do You Know How to Cut a Rafter?

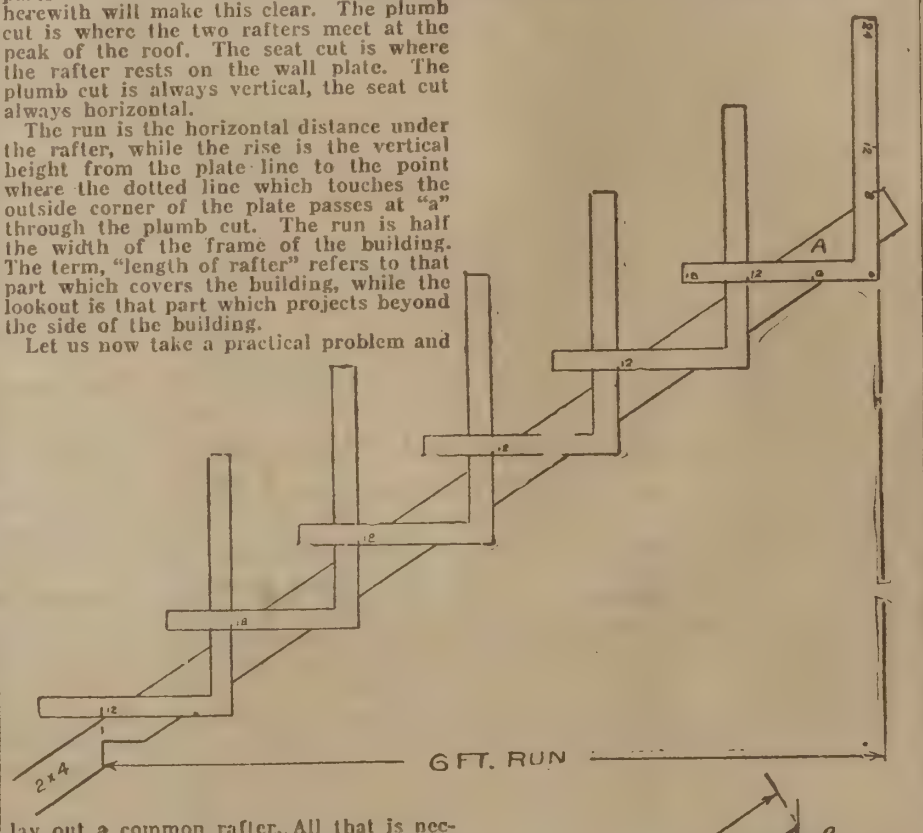
By PROFESSOR L. J. SMITH.

Many a farmer, in building any of the various small farm buildings, has no difficulty until he comes to laying out the rafters. Yet this is not a very hard matter, once one takes a little time to think the problem through.

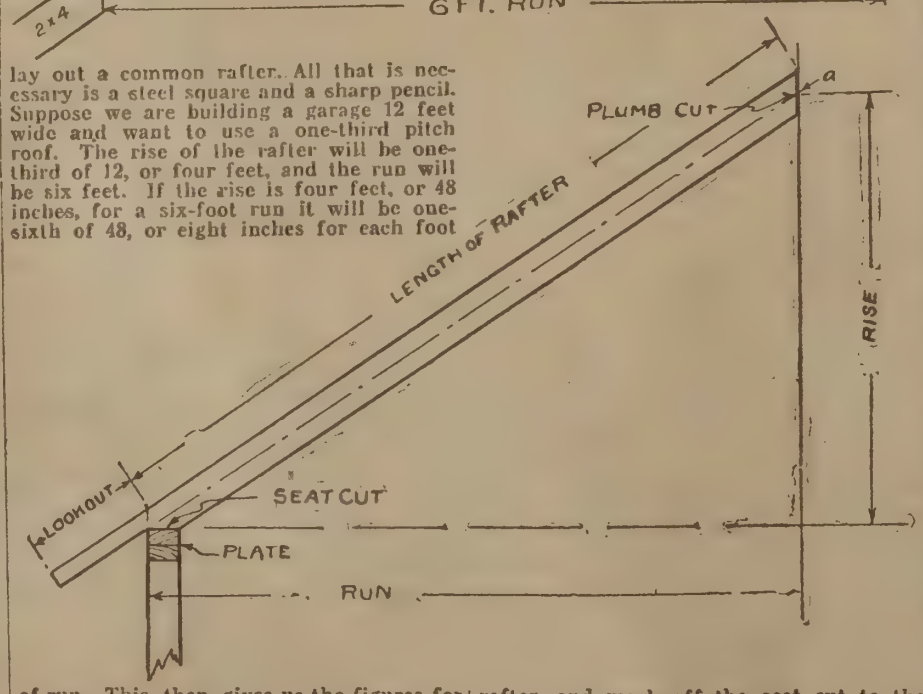
First, we should get clearly in mind the parts of a rafter. The first illustration herewith will make this clear. The plumb cut is where the two rafters meet at the peak of the roof. The seat cut is where the rafter rests on the wall plate. The plumb cut is always vertical, the seat cut always horizontal.

The run is the horizontal distance under the rafter, while the rise is the vertical height from the plate line to the point where the dotted line which touches the outside corner of the plate passes at "a" through the plumb cut. The run is half the width of the frame of the building. The term, "length of rafter" refers to that part which covers the building, while the lookout is that part which projects beyond the side of the building.

Let us now take a practical problem and



lay out a common rafter. All that is necessary is a steel square and a sharp pencil. Suppose we are building a garage 12 feet wide and want to use a one-third pitch roof. The rise of the rafter will be one-third of 12, or four feet, and the run will be six feet. If the rise is four feet, or 48 inches, for a six-foot run it will be one-sixth of 48, or eight inches for each foot



of run. This, then, gives us the figures for applying our steel square to the 2x4 rafter. First lay off the plumb cut by placing the square on the 2x4 so the eight-inch and 12-inch division are in line with the upper edge of the rafter, as shown in "A" in the second sketch. Then make a fine mark at the 12-inch division and transfer the square so the eight-inch division coincides with the first 12-inch mark made on the rafter. Make as many transfers as there are feet in the run, and the last 12-inch pencil mark will be directly above the outer edge of the studding. Now slide the square farther down, keeping the eight and 12-inch divisions on the upper edge of the rafter, and mark off the seat cut to the desired depth.

The transfers and marks must be very carefully made to get accurate results. Also choose 2x4 that is absolutely straight. After carefully sawing out one rafter, it can be used as a pattern for the rest.

Walla Walla Fair Best Ever

By W. C. FLETCHER.

The Walla Walla county fair was voted by old-time fair men the best ever held here in 37 years. Breeders from all over the northwest, as well as some from Canada, pronounced their treatment all that could be desired. The exhibits, purely agricultural, represented the wonderful variety and scope of the farming interests of Washington's oldest community. The success of her own live stock, especially, was gratifying to her red-blooded farming enthusiasts.

Sheep, hogs, dairy and beef cattle were caught up out of pastures, in many cases but a day or two before being exhibited, and won many places in this $500,000 exhibit, including not a few grand championships, from the Spokane Interstate fair winners, who had come here for pickings. Much of this stuff was bred in this wonderland of mountain, valley and dry farms, showing that the contention that diversified farming, including live stock, is entirely feasible.

Furthermore, there was no busting or bucking or bull-dogging to mar and torture the dumb friends of humanity. C. M. Rader, a prominent Shorthorn breeder, summarizes this tersely:

"Our community has progressed beyond bucking. We haven't any bucking, and, what is more, we never shall have any more bucking. We don't care to cater to the type of young man whose title to manhood depends on his ability to smoke a cigarette and an ability to hunt up moonshine. We propose to change the type of our young manhood by having a different type of fair—the kind we have this year, with its live stock value at more than $500,000."

"That kind" had a wide variety appeal including woman's work, better babies' clinic, food demonstrations and exhibits from the extension service of the Washington State college that alone would have filled a pavilion had it been assembled all in one place;

An exhibit of four generations of improvement through the use of purebred sires on the dairy herd of the state penitentiary;

A contrast showing that one dairy sire was worth $1000 more than another through the improvement of daughters over dames;

A contrast of two pens of trapnest pullets, one laying almost exactly twice as many eggs per year as its rival under exactly the same conditions but sired by an inferior sire from an inferior mother;

A special hog barn filled with the porcine pets of boys' and girls' industrial clubs, and another filled by the kiddies' 120 pens of poultry;

A special department of the women's farm bureau showing labor-saving devices for the farm home, including an iceless refrigerator, similar to many made by the farm women themselves;

A kitchen jitney and a woodbox on wheels;

A children's nutrition clinic;

A radio concert;

Speed races galore, and the same big carnival company that supplied fun at the Spokane Interstate fair the preceding week.

All these and many more features of the modern fair.

But there was a fly in the ointment. The crowd wasn't there. The last day, the best, had but few more than 3000 paid admissions. A number of reasons were ascribed: The day charge of $1 and the free admission nights was one considered; the fact that the business men did not cooperate by closing their stores; that the times are hard; that people were ignorant of the value of the fair, and the beautiful autumn weather required a rush of fall work—all these reasons and many more.

But Walla Walla had a real fair, thanks to the splendid cooperation of the county farm bureau, the fair association, the Walla Walla Purebred Breeders' association, its county bee association, whose excellent exhibit was pronounced by George York, superintendent of the Interstate fair bee division, as one of the best that he has ever seen in the United States, and all of her forward-looking citizens.

As an evidence of its spirit, consider the 11th hour rush that resulted in the building of two pig sheds, each housing four rows of live stock, the erection of many pens, the adaptation of the recently partially burned sheds, and the big, fat premiums and all of this was done without a professional secretary or a county subsidy. May Walla Walla's progressives have the spirit to perpetuate it.

The live stock exhibits were from all parts of the northwest. In the sheep and goat classes William Riddel & Sons of Monmouth have had a fine showing of Angora goats as well as Lincoln sheep with curly wool. C. H. Craig of Lowden showed Cotswold and Rambouillets. Shropshires were shown by Feltzer Brothers of Tangent, Ore., and A. T. Fox of Oregon showed Oxford Down. Archie Stewart showed 15 pens of various classes of sheep. Harold W. Hastings of Thornton, Wash., had French Merinos on exhibit.

In beef cattle W. W. Cordiner, Walla Walla; Ralph Rader, Walla Walla; W. A. Heater of Sublimity, Ore.; W. W. Craig, Walla Walla, had Shorthorns; Methow Valley Live Stock company, Reginald H. Parsons, Winthrop, Wash.; Shadeland Stock farm, O. A. Boggs & Sons, Daysland, Alberta, Canada; Weatherford Stock ranch, Dayton, Wash., exhibiting Herefords; Broadmead farm of Chehalis had Aberdeen Angus exhibits.

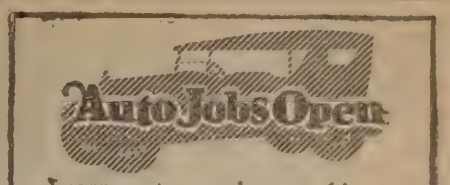
In the swine exhibits Berkshires were shown by Stubblefield Home, Walla Walla, and James C. Bonner. Poland Chinas by E. O. Lee of Silverton, Ore.; B. F. Kammerzell, Colfax; Duroc Jerseys by S. D. Cornell, Grandview; Frank Busch, Johnson, E. K. Huber, Touchet, J. W. Yenney, Walla Walla; Chester Whites by Ed. School, Albany, Ore.; Hampshires by J. M. Fruits, Cambridge, Idaho; Washington state penitentiary.

W. O. Reith, Astoria, Ore.; Chicona farms; A. L. Gile, Chinook; Orchard Hill farm, Fircrest farm, Lynden; Shannondale farm, and F. L. Shannon, Walla Walla, had exhibits of Guernsey cattle; Shannondale farm of Walla Walla; Walla Walla college, College Place; Vernon Baker of Walla Walla, Washington state penitentiary, Walla Walla; state college, Pullman, had exhibits of Holsteins; the Jersey exhibits, including Allendale Jersey farm, Yakima; N. C. Nelson, Walla Walla; Mrs. F. Levy, College Place; Bixby farms, Freewater, and Sears & Litte of Chehalis, Washington; Wenatchee Ayrshire farm also had an exhibit of Ayrshires.

Shire horses were exhibited by W. A Clark, Latah, Wash.; H. W. Merritt, Rosalia; Clydesdale by R. C. McCroskey, Garfield, and Percherons by W. A. Clark, Latah; J. A. Martin, Touchet; W. R. White, Dry Creek; J. M. Reavis, Walla Walla; an unusual record for his first two shows was made by a 2-year-old Shire stallion owned by H. W. Merritt of Rosalia and exhibited at the fair, being named grand champion at the Spokane Interstate fair, and being placed in the same position in the Walla Walla fair.

W. A. Clark of Latah took five firsts, and grand champion. R. C. McCroskey of Garfield had everything his own way with his Clydesdales, as there were no other entries. L. A. Martin secured the grand champion of the Percherons. J. A. Scollard of Chehalis had no competition for

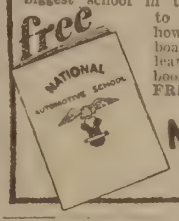
(Continued on page ten.)



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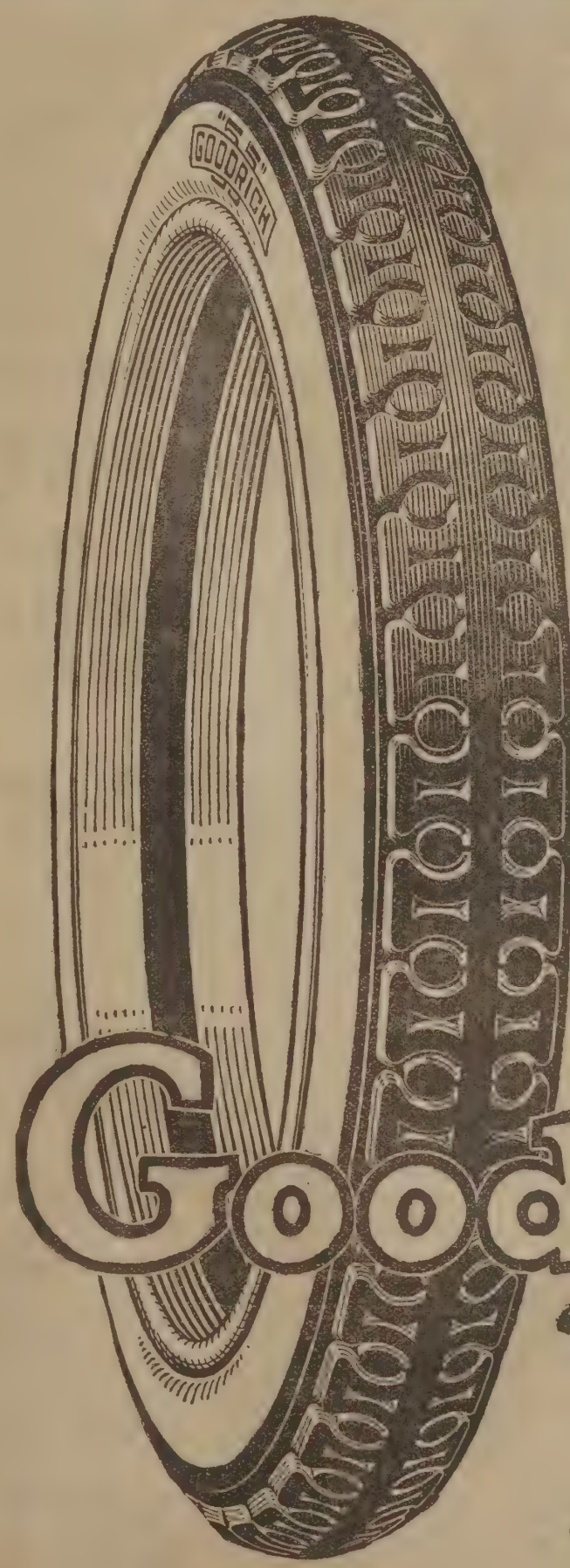
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And its price is down—the lowest of low-tide prices.

Look this tire over at your nearest Goodrich Dealer, and you'll see sure return of service for every cent in its price.

THE B. F. GOODRICH RUBBER CO.
Akron, Ohio

Goodrich "55"

THE TIRE FOR SMALL CARS

LIVESTOCK AND DAIRY

Butter

New York Consumes 230 Tons Every Day

By W. B. LIVERANCE.

It would take 305 trains of 30 refrigerator cars each to transport the butter that is required each year by the city of New York, as the average annual receipts of butter in that city alone are fully 2,750,000 60-pound parkages, or about one-sixth of the total production in the country.

In other words, the consumption of butter in Greater New York, which consists of the boroughs of Manhattan, Brooklyn, the Bronx, Queens and Richmond, is nearly 1600 tons each week or 230 tons every day of the year.

On the basis of a population of 6,000,000 inhabitants, many of whom use but little, if any, the weekly per capita consumption of butter in the greater city is one-half pound. The butter business of New York city, from the standpoint of the wholesaler, basing computations on the average price for the last year, amounts to approximately $75,000,000 annually, or $250,000 each business dav of the year.

It can be seen very readily that the tiny pat of butter used by the individual at mealtime when multiplied many times aggregates a value of considerable magnitude.

It is quite apparent that the consumer is compelled to pay several handling charges when he purchases butter. The wholesaler must be paid, the jobber can not work for nothing and the retailer is not in business for pleasure alone. In addition, in case the speculator has had "his finger in the pie" he expects some return for the risks he has run in storing his butter.

The question is, and one which is discussed freely these days, whether or not one or more of the classes of operators in the market can be eliminated without injuring the efficiency of distribution. Under conditions that have obtained in the past it is quite probable that none could have been eliminated to advantage.

At present, however, as previously mentioned, the chain store organization is making inroads into the fields of both the wholesaler and the jobber. In addition, in some states where the creamery industry is well developed state-wide organizations of creameries have been perfected with an ultimate aim of marketing their own butter.

It is quite possible that we shall witness striking changes in the distribution of butter and that many of the agencies that now exist will be frozen out in the not distant future.

LIFE PRESERVERS FOR LIVE STOCK

By DR. E. E. WEGNER, W. S. C.

DIGESTIVE TROUBLES, ARTICLE VIII.

Great Colon.



The troubles of this portion of the digestive tube are not rare and in many respects are similar to those of the cecum; this portion of the tube, however, is so arranged that all the food materials must pass directly through it in order to traverse the digestive tube, precluding any possibility of a drug going around an obstructing mass.

The large colon receives food materials directly from the base of the cecum and as this portion of the digestive tract is very large it has to be arranged in a regular manner in order to be contained within the abdominal cavity. The large bowel is about 15 feet long and varies in diameter from three inches to 12 inches; this enormous organ then is folded twice, so that it may be contained within the abdominal cavity; that is, it starts in the region of the right flank and extends forward to about the diaphragm where it turns to the right and backward along the first portion to near the entrance to the pelvis, where it turns somewhat downward and forward, extending to a point near the stomach, this third portion closely following the second one. At the stomach the tube turns again backward toward the right flank, the fourth portion following the first one, so in reality this portion is doubled upon itself twice, so that it may be shortened enough to enter the abdominal cavity.

Food materials remain here for a considerable time and since there isn't a great deal of fluid present here, it is a very favorable place for the development of impactions; it also is a favorable place for fermentive changes and the development of gases that many times prove so troublesome. The impactions that develop here are not confined to any one class of foods, but a great variety are responsible; in fact, these many times seem to be independent of the kind of foods and more certainly follow certain devitalizing processes, though, of course, certain dry and bulky foods are more often responsible than softer, more succulent ones. Straw in the winter is commonly a causative agent, but the same may result when the animal is regularly fed on stall rations of a substantial character.

The symptoms that characterize this condition are similar to those of impaction of the cecum and the difference must be determined by exploration through the rectum in most instances. There is casual pain at first, evidenced by pawing slightly and lying down a great part of the time, followed by increased discomfort. Refusal of the foods is more evidence of distress. It is fortunate indeed if the gas formation does not complicate the condition as frequently happens. Where the case is uncomplicated purgatives are in order, such as raw linseed oil or mineral oil, time being given for them to soften the mass; this requires a number of hours, depending upon the intensity of the individual case. Drastic acting drugs should not be given, as they usually aggravate these cases without doing material good.

Feeds of all kinds should be withheld during attacks of impaction, as they aggravate all cases and the animals should not be coaxed to eat, but rather should be kept without foods until the appetite returns; they may then be given small quantities of food several times a day, but overloading should be carefully avoided.

VETERINARY

By DR. S. B. NELSON.

Lumpy Jaw.—I have a cow that has been in poor flesh all summer. The other day I noticed a lump just at the back of the left lower jaw about eight inches long and possibly four thick. It is hard, but is not fast to the jaw bone. Would her calf be fit for veal? If I call the state veterinarian and he says the cow has lumpy jaw, would I get any pay for the cow if I had to kill her? W. H. D.

If the cow is affected with lumpy jaw the veal would be fit for meat provided the veal was not at all affected, which is not likely. I am not informed as to whether or not you can receive indemnity from the state if the state veterinarian condemned the cow. Write to Dr. Pelton, department of agriculture, Olympia, and he can give you advice regarding the indemnity.

Fly Repellent.—My cow is tormented with dozens of small flies resembling house flies. What could I do to keep them off? She is in the brush a great deal, so it would be hard to keep a blanket on her. Would it be better to feed her bran or corn to keep up the milk flow and flesh this winter? E. N. J.

Orovada, Nev.

You will have a pretty fair fly repellent by the use of fish oil to which a little tar has been added; enough to give it a good strong odor of tar. If the mixture is too thick to work through the spray pump, dilute it with a little soap and water solution made fairly strong. Whether you feed your cow corn or bran will depend on what other feeds you are using. In a general way I would say that corn would be better.

Heaves.—Will you kindly give me a treatment for heaves in horses? H. E. C.

Decrease the amount of roughage one-half at least. You may increase the grain slightly if necessary. Give the animal one

(Continued on page seventeen.)



Blackleg Aggressin

NATURAL GERM-FREE VACCINE

OR

Blackleg Filtrate

CULTURAL GERM-FREE VACCINE

Scientifically Prepared and Tested

Consult your veterinarian or druggist.
Write for booklet on blackleg prevention.

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TOWER'S FISH BRAND
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$4.50 Get yours at your nearest dealer

A.J. TOWER CO. BOSTON

TOWER'S FISH BRAND

McQUAY-NORRIS

PISTON RINGS
PISTONS
PINS





They will cut down your Gas, Power and Transportation expense

Your tractor, truck, engine or pump, and your automobile all depend upon the motor's piston rings, pistons and pins for economy and the machine's length of life. There is great waste in all of them when wear has taken place in these three vital units. And these parts wear faster in farm motors than they do in city-used motors, because of dusty roads and fields.

Dust works into the cylinders through the carburetor and mixes with the lubricating oil where it acts as an abrasive and produces more wear than happens in city automobiles that operate on paved streets. There is special need for farmers to overhaul their gasoline motors.

Thousands of added miles of car life and many added hours of power usefulness can be given most motors by renewing their piston rings, pistons and pins. The gas and oil saving will generally pay the expense of renewing them. They really need renewing just as much as tires do. There is this difference: you can see tire wear easily, but you cannot see piston ring, piston and pin wear. Power loss in the motor and an increase in gas and oil consumption tells you of it, however.

Sometimes only piston rings are required to restore these losses due to wear. There is a McQuay-Norris ring for every purpose and price—all made of Electric Iron.

If, however, the cylinders are worn enough to necessitate regrinding or reboring, then McQuay-Norris *Wainwright* Pistons and Pins are needed as well as McQuay-Norris Piston Rings. The McQuay-Norris line offers a complete renewal service for motor wear. Send for our Free Booklet, "To Have and to Hold Power," which explains the whole subject of motor wear and its correction. Address Dept. BD.

McQUAY-NORRIS MANUFACTURING COMPANY, ST. LOUIS, U. S. A.

Pistons and Pins
McQuay-Norris *Wainwright* Pistons and Pins—gray iron pistons as light in weight as safety permits—specially designed for replacements—available in standard sizes and over-sizes—also in semi-finished form 75-thousandths over-size—pins of special hardened steel, ground to exceptional accuracy.

$1.25 Per ring — LEAK-PROOF — an exclusive two-piece design preventing loss of gas and compression. Gives equal pressure at all points on cylinder walls. For all piston grooves except top, which should have Supercyl. Each ring packed in a parchment container.

$1.00 Per ring — Supercyl—Keeps lubricating oil out of combustion chamber. Collects excess oil on each down stroke of piston and empties on each up stroke, which ordinary grooved rings cannot do. Each ring packed in a parchment container.

50c Per ring — *JIFFY-GRIP*—a one-piece ring. Non-butting joint, which can be fitted closer than ordinary step cut—velvet finish—quick seating. "Seats in a jiffy." To keep them clean and free from rust, each ring is packed in an individual glassine envelope.

Snap Rings—of the highest grade. Raised above the average by McQuay-Norris manufacturing methods. Their use insures all the satisfaction possible for you to get from a plain snap ring. They are packed twelve rings to the carton and rolled in waxed paper.



2307-F

Live Stock Men Meet

Live stock breeders took occasion to get together in a number of breed meetings during the state fair at Yakima September 18-23. Members of the Washington Guernsey Cattle club and their friends met at the Commercial hotel at Yakima for a banquet and business meeting on Wednesday evening. A number of interesting talks were given by Dr. S. B. Nelson of the state college. Dr. L. C. Pelton of the state department of agriculture and others. Dr. Park Weed Willis of Seattle told of the life and death of his record cow, Sammamish Topsy, and of the good fortune he felt in having in his herd some 20 of her offspring. A. L. Gile of Chinook, Wash., gave a short outline of the benefits of purebred cattle. George P. Grout of Duluth, Minn., gave an interesting history of the Guernsey herd at Jean Duluth farms, of which he is part owner.

The business meeting which followed resulted in the election of officers for the coming year. A. L. Gile of Chinook is the new president; J. V. Vance, Yakima, vice president; L. J. Clark of Bellevue, secretary-treasurer; H. E. Angel of Mabton and R. N. West of Yakima, members of the executive committee.

E. L. Westover, western representative of the American Guernsey Cattle club, was appointed to confer with the dairy department of the state college once a year in order that better cooperation may be maintained between the college and the association. A motion was passed to have all Guernsey sales sanctioned by the state association in order that the buyers may know that the animals consigned are up to standard.

The Jersey Breeders.

There were 25 at the Jersey banquet held at Yakima on Wednesday. A number of the out-of-town dairymen attended the affair and stayed for the business meeting which followed. Short talks were made by such men as Dr. S. B. Nelson and Don G. Magruder of the state college, Dr. L. C. Pelton of the state department of agriculture and Frank P. Astroth, representative of the American Jersey Cattle club. The election of officers which followed resulted in the election of E. W. Trezise to succeed himself; N. C. Sears of Chehalis, vice president; R. I. Tanner of Sumas, secretary-treasurer; S. O. Pool of Wenatchee and J. W. Taylor of Montesano on the board of directors.

The Black-and-Whites.

Members of the state Holstein-Friesian association and their friends held a banquet at the Commercial hotel on Tuesday night prior to their sale of cattle at the fairgrounds on September 20. George A. Gue acted as toastmaster and called on a number of prominent men for short talks, among which were Frank Rothrock, Dr. L. C. Pelton, Charles Sprong of Grandview, Calvin Phillips of Seattle and William Bishop of Chimacum.

The Swine Breeders.

The hogmen who attended the state fair at Yakima held an interesting get-together meeting on Friday night of fair week. All "breeds" were invited and a number of talks were given by those who attended.

Charles M. Talmadge of Salem explained his idea of type for all breeds. "The right type is what the people want," he said. "It is not only what the butcher wants, but it is also something that is demanded by the housewife. It is something we must all keep in mind if we are going to breed a hog that will sell on any market."

NATIONAL DAIRY EXPOSITION.

With 32 tons of special properties being arranged for the $32,000 "Healthland" exhibit, the installation of stanchions in the $600,000 cattle barn for 1000 purebred and from 350 to 500 grade cattle, many of which will be sold at auction, advance installments of the $1,000,000 machinery exhibit and changes being made in the agricultural building for the poultry exposition, final preparations are being made for the National Dairy exposition, Minnesota state fairgrounds, October 7 to 14.

"Majesty's Best"

"Majesty's Best" took first prize, senior champion and grand champion in Clydesdales at the Spokane Interstate fair. The horse is owned by H. T. Whitman of Rosalia, Wash., and was in charge of James Norton at the fair grounds. Mr. Norton has been at every Interstate fair for 18 years. He came from Scotland after the Boer war, in which he served for three and a half years.

By an unfortunate oversight, the report in The Washington Farmer stated that Robert C. McCroskey of Garfield, Wash., was the only exhibitor of Clydesdales and won all awards in this class.

FIRST APPLE CARGO.

The first refrigerated ship to carry Wenatchee apples to Europe this season is the "Gothic Star" of the Admiral line that will sail from Seattle October 2. Several thousand boxes will go across on this vessel and will probably go into cold storage on the other side.

—WE GUARANTEE
EVERY GRADUATE A PAYING POSITION.

ENROLL ANY MONDAY
Day or Night School

New classes form each week. Start immediately and begin earning money quickly. Write for
Success Catalogue Free

Behnke-Walker
BUSINESS COLLEGE
Fourth, Near Morrison, Portland, Ore.

In writing advertisers, be sure to say you saw their advertisement in The Washington Farmer.

GENERAL ADVERTISING.

New Lamp Burns 94% Air

Beats Electric or Gas

A new oil lamp that gives an amazingly brilliant, soft, white light, even better than gas or electricity, has been tested by the U. S. Government and 35 leading universities and found to be superior to 10 ordinary oil lamps. It burns without odor, smoke or noise—no pumping up, is simple, clean, safe. Burns 94% air and 6% common kerosene (coal-oil).

The inventor, W. W. Johnson, 31 N. Fifth St., Portland, Ore., is offering to send a lamp on 10 days' FREE trial, or even to give one FREE to the first user in each locality who will help him introduce it. Write him today for full particulars. Also ask him to explain how you can get the agency, and without experience or money make $250 to $500 per month.—Adv.



Pull 'Em Quick at Low Cost

Then Make Big Money Pulling Stumps for Others

Pull out your old stumps and hedges. Make every foot of your richest soil grow money-making crops. Then make big money pulling stumps and hedges for others. Write and get my price on our new improved Hercules Stump Puller—the fastest, easiest, cheapest land clearing machine ever made. Yanks 'em out, big or little, quick and clean. Easy to operate and move. Both horse and hand power machines. $10.00 down—easy payments.

"Made $62.50 in 3 days," writes one owner. Send today for Hercules catalog and Special Folder. Ask for Catalog No. 414

$10.00 Down
Easy Payments



Ready to Hitch to

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HERCULES MFG. CO.
Centerville, Iowa

Note these New Prices on U.S. Tires

ON July 29, 1922, the lowest prices ever quoted on U. S. Passenger Car Tires went into effect—Royal Cords included.

These new prices should give confidence to dealers and car-owners that no lower basis of quality tire prices will prevail.

Bear in mind that these prices apply to the most complete line of quality tires in the world. Remember, too—as you read the following table—that U. S. Quality has been positively maintained.

SIZES	Royal Cord	FABRIC Nobby	Chain	Usco	Plain
30 x 3 Cl.	——	$12.55	$11.40	$9.75	$9.25
30 x 3½ "	$14.65	15.60	13.00	10.65	—
31 x 4 "	——	23.00	21.35	18.65	—
30 x 3½ SS.	14.65	——	——	——	—
32 x 3½ "	22.95	20.45	16.90	15.70	—
31 x 4 "	26.45	——	——	——	—
32 x 4 "	29.15	24.35	22.45	20.85	
33 x 4 "	30.05	25.55	23.65	21.95	
34 x 4 "	30.85	26.05	24.15	22.40	
32 x 4½ "	37.70	31.95	30.05	——	
33 x 4½ "	38.55	33.00	31.05	——	
34 x 4½ "	39.50	34.00	32.05	——	
35 x 4½ "	40.70	35.65	33.55	——	
36 x 4½ "	41.55	36.15	34.00	——	
33 x 5 "	46.95	——	——		
35 x 5 "	49.30	43.20	39.30		
37 x 5 "	51.85	45.75	41.70		

Federal Excise Tax on the above has been absorbed by the manufacturer

The dealer with a full line of U. S. Tires at these new prices can serve you better than you have ever been served before in the history of the automobile.

If there ever was any fancied advantage in shopping around for tires it disappeared on July 29, 1922.

United States Tires are Good Tires

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30 x 3½ USCO FABRIC $10.65

30 x 3½ Clincher and Straight Side Royal Cord $14.65

United States Tires
United States Rubber Company
Fifty-three Factories — The Oldest and Largest Rubber Organization in the World — Two-hundred and thirty-five branches

Extension Work and Cooperation

Secretary Wallace Defines Duties of the County Agents

The relationship between the county agent and other extension workers and farmers' organizations, especially the cooperative marketing associations, has been a widely discussed subject. THE FARMER is glad to publish the following official statement on the matter by Secretary Henry C. Wallace of the department of agriculture:

The act of congress approved May 8, 1914, and supplemental acts thereto, established cooperative agricultural extension work between the federal department of agriculture and state agricultural colleges. Section 2 of that act defines the work as follows:

Sec. 2. That cooperative agricultural extension work shall consist of the giving of instruction and practical demonstrations in agriculture and home economics to persons not attending or resident in said colleges in the several communities, and imparting to such persons information on said subjects through field demonstrations, publications, and otherwise; and this work shall be carried on in such manner as may be mutually agreed upon by the secretary of agriculture and the state agricultural college or colleges receiving the benefits of this act.

It is thus made clear that the work of the cooperative extension employees, whether county agents, home demonstration agents, boys' and girls' club agents, or other cooperative extension workers, is educational. These extension workers are public teachers paid with money largely raised from all of the people by taxation and are charged with giving instruction and practical demonstrations in agriculture and home economics. Their work covers the entire rural field, which includes economic production, economic marketing, and the development of better home, community and social conditions.

What They May and May Not Do.

As they are public teachers it is not a part of the official duties of extension agents to perform for individual farmers or for organizations the actual operations of production, marketing, or the various activities necessary to the proper conduct of business or social organizations. They may not properly act as organizers for farmers' associations; conduct membership campaigns; solicit membership; edit organization publication; manage cooperative business enterprises; engage in commercial activities; act as financial or or business agents, nor take part in any of the work of farmers' organizations, or of an individual farmer, which is outside of their duties as defined by the law and by the approved projects governing their work. They are expected, however, to make available to organizations such information as will be helpful to them and contribute to the success of their work.

The various federal laws provide that cooperative extension work shall be conducted in such manner as shall be mutually agreed upon by the secretary of agriculture and the state agricultural colleges. By an agreement between these agencies an extension director located in each state is the representative of both the college and the department. He submits projects for extension work to the secretary for approval.

Where Cooperation Comes In.

In carrying out these projects the law provides that no federal Smith-Lever money, except $10,000 per state, shall be paid to the states for cooperative extension work until

* * *an equal sum has been appropriated for that year by the legislature of such state, or provided by state, county, college, local authority, or individual contributions from within the state, for the maintenance of the cooperative agricultural extension work provided for in this act.

* * *moneys contributed from such outside sources * * * shall be paid only through the secretary of agriculture or through state, county or municipal agencies, or local farm bureaus or like organizations, cooperating for the purpose with the secretary of agriculture.

This makes it very clear that the law contemplates cooperation with farmers' organizations willing to cooperate in the work with which the cooperative extension agent is charged. It is the duty of the extension agents to render such assistance whenever possible in his teaching capacity to any agricultural organizations desiring it. Furthermore, the work of these extension agents can be the most effective where it is carried on with organized groups of rural people. It is entirely proper for any agricultural organization desiring to cooperate financially in the work of the extension agents to contribute funds for the support of such work, and these funds may be accepted legally by the extension service of the agricultural colleges and by the federal government for work on approved projects.

Cooperate With Everybody.

In short, it is the business of the extension agent to cooperate with all agricultural organizations which desire to cooperate on approved projects. If more than one organization exists in a county he must cooperate with all fairly and impartially in the educational work in which they are mutually interested.

The department of agriculture must necessarily consider in its administration of federal cooperative extension funds the laws which have been passed by the various state legislatures in accepting these funds and under which agreements have been made with those states for conducting this work. If special provisions relating to the methods of cooperation with agricultural organizations or other agencies are contained in the state laws, which do not conflict with the federal laws, it is clearly the duty of the secretary of agriculture to accept such provisions in a cooperative project.

APPLE CROP OF CANADA.

According to the August report of the department of agriculture for Canada the present prospects are for a crop of summer and fall apples about 70 per cent of that of 1921, while winter varieties will yield probably 80 per cent of the 1921 crop. The total crop to be shipped from Ontario is estimated at 3446 cars.

Walla Walla Fair

(Continued from page seven.)

his Aberdeen Angus, taking everything.

The special prize for the four best beef animals under 1 year of any breed was won by the Methow Valley Live Stock company. W. G. Cordiner took eight firsts and six seconds on Shorthorns.

In Hampshire hogs, J. M. Fruits lost but one prize, the grand champion sow, which went to the state penitentiary.

The 14 community exhibits, the booths of which filled nearly half of the first floor, were especially complete and attracted a great deal of attention. They were so complete and presented such an artistic combination of varieties as to be the equal of many county exhibits in large fairs scored on a basis of 10,000 points. 6000 being allowed for the booths and 800 for each animal class of hogs, horses, beef, dairy and sheep. They rated Lowden, 1; Prospect Point, 2; College Place, 3; Burbank, 4. The booth of the latter scored all of her 5700 points, no live stock being shown. Lowden won first on all-around performance, getting first on horses, sheep, beef and second on booth and third on dairy.

In commenting on the community spirit that made the fine exhibits possible, W. H. Talley, county agriculturist, stated:

"I am especially fortunate in having such fine people to work with. When you consider that this is the first year that anything of the sort has been attempted and that 400 people participated, many of them for four days in arranging alone these exhibits, perhaps you can realize what this has meant in cementing not only the friendship in the local communities, but in fusing them into the strong county farm bureau organizations of more than 1100 members."

Expressions of assurance of finer exhibits for another year and praise of each other's exhibits could be heard from all sides.

Another expression of this same fine spirit was evidenced in the fine boys and girls' club poultry show of 120 pens. The kiddies from the pepful youngster of 10 up to the mature young men and women of 18 and 19 were there with the choicest poultry show that the writer has seen this year. Competition was keen and laurels hard won.

The special club swine exhibit was another evidence of this day-after-tomorrow-mindedness of the Walla Walla junior farm bureau.

WISCONSIN ONION CROP.

A thousand acres of commercial onions are being grown in Wisconsin this year.

SCIENCE PERFECTS *a new economy oil for Fords*

Four years ago Tide Water engineers began exhaustive experiments to produce a lubricating oil exclusively for Ford automobiles. This undertaking was based on a single fact definitely established by them through long practical experience.

The fact—the Ford motor presented unique and complex problems of lubrication, never fully mastered by any oil.

In November 1921, Tide Water engineers announced that laboratory and refinery experiments were over. Veedol Fordol was ready for the test of the road.

Thousands of miles were covered in tests carefully checked by Tide Water engineers in country lanes and city streets. One large company put Fordol to test in its fleet of 750 Ford cars of all types. A nationally known taxi company gave Fordol gruelling traffic tests.

The combined results confirmed to the last detail the 8 economies in Ford operation established by Tide Water engineers. Fordol was ready for the public! At last a Ford lubricant that actually mastered *all* of the lubricating problems of the Ford power plant!

You are not asked to buy Veedol Fordol on faith. Do as the owners of the fleet of 750 Fords did. Do as the taxi company did. Test it! Watch the results. Note the new economies you experience. You will realize quickly what a factor Fordol is in your motoring satisfaction.

Veedol Fordol is on sale at all dealers who display the orange and black Veedol sign

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2—Eliminates costly "chatter"—Fordol lengthens the life of Ford brake and transmission bands by properly lubricating them. "Chatter," a result of faulty lubricants, is *entirely eliminated.*

3—10 to 25% saving in oil—The savings in oil consumption run from 10% to 25%. The exact savings depend upon the mechanical condition of the engine and the lubricant formerly used.

4—10 to 25% less carbon—Fordol forms on an average from 10% to 25% less carbon in the Ford engine cylinders. The exact savings depend on the mechanical condition of the engine and the lubricant formerly used. Less carbon means more power with fewer repairs.

5—Resists heat and friction—Fordol possesses to a super-degree the famous characteristic of all Veedol oils to resist heat and friction.

6—Increased ability to coast—With average lubrication a Ford will only coast down steep hills. With Fordol, coasting is possible down the slightest grades.

7—Resists fuel dilution—Even with poor fuel, Fordol maintains its power-seal and lubricating value longer than other oils. Result—more miles per gallon of gas and per quart of Fordol.

8—Fewer repairs—Because Fordol masters the lubricating problems of the Ford power plant the result is a hitherto unknown freedom from engine vibration and repair bills.

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Twenty-Sixth Chapter of Fair Book

(Continued from page six.)

national two years in succession. May Walker Skylark of the same herd won grand champion female. She is a daughter of the original Matador Segis Walker and was showing dry. George E. Morton, head of the animal husbandry department of Colorado State college, judged the Holsteins.

Exhibitors—William Bishop, Chimacum, Wash.; Stephen E. Chaffee, Sunnyside, Wash.; Carnation Stock Farms, Seattle, Wash.; Charles Eldridge, Chimacum, Wash.; F. E. Fairbanks, Selah, Wash.; Francis Hansen, Yakima, Wash.; Lauraris Hansen, Yakima, Wash.; R. Hoffman and O. Skagan, Kent, Wash.; State College of Washington; L. G. Stickney, Toppenish, Wash.; E. V. Taylor, Selah, Wash.; Arthur Wiley, Wiley City, Wash.; Yarr Bros., Chimacum, Wash.; Ralph Tuttle, Walla Walla, Wash.; Western State Hospital, Stellacoom, Wash.

Bulls: Aged bull—1, Carnation, on Matador Segis Walker 6th (senior and grand champion); 2, Bishop, on Skagit Korndyke Vale Pietertje. Two-year-olds—1, State Hospital, on Sir Pietertje Ormsby Blossom; 2, Chaffee, on Chief of the Ormsbys. Yearlings—1, State hospital, on Carnation King Matador Mutual; 2, Bishop, on Sir Chimacum Perfection; 3, Hoffman & Skagan, on Riveland Prince. Senior calf—1, Carnation, on Ensign Model Matador Abbekirk (junior champion); 2, state hospital, on Stellacoom Sir Ormsby Veeman; 3 and 4, State college, on Chinook Piebe Adam and Chinook Piebe Count. Junior calf—1 and 3, Bishop, on Sir Chimacum Ormsby Gettie and Sir Chimacum Molly's Korndyke; 2 and 5, Carnation, on unnamed calves; 4, State college, on Chinook Piebe Excellent.

Females: Aged cow—1, Carnation, on May Walker Skylark (senior and grand champion); 2, Yarr Bros., on Bos Johnson; 3 and 4, Bishop, on Hazelwood Pietertje Jewel and Chimacum Lutske Avacanora. Three-year-old—1, 2 and 3, Carnation, on Carnation Matador Queenie, Tillamook Princess Wayne and Queen Bonheur Pontiac DeKol; 4, Bishop, on Chimacum Wayne Molly. Two-year-old—1, Carnation, on Carnation Matador Aaggie Segis; 2, Bishop, on Jewel Hazelwood DeKol; 3, Stickney, on Edna Hartog Aaggie; 4, State college, on Josephine Ormsby Hazelwood Heilo. Senior yearling—1 and 3, Carnation, on Carnation Matador Nena Kaan and Carnation Matador Coquette; 2, State college, on Hazelwood Heilo Aaggie DeKol; 4, Chaffee, on Otsego Butterfly. Junior yearlings—1 and 3, Carnation, on Carnation Matador Christmas (junior champion) and Carnation Sylvia Segis; 2, State hospital, on Steilacoom Bonnie Ormsby Lass; 4, Chaffee, on Aaggie Midnight Vale. Senior calf—1 and 2, State hospital, on Steilacoom Molly Ormsby Hengerveld and Steilacoom Blossom Zanke Mercerdes; 3, Chaffee, on Glencliff Segis Walker Posch; 4, Bishop, on Chimacum Wayne Segis. Junior calf—1, State hospital, on Steilacoom Jewel Pontiac Korndyke; 2, Bishop, on Chimacum Selah Fayne Ormsby; 3, Carnation, on unnamed; 4, State college, on Chinook Piebe Dora.

Groups: Graded herd—1, Carnation; 2, Bishop; 3, State hospital. Young herd—1, Carnation; 2, State hospital; 3, Chaffee; 4, Bishop. Calf herd—1, State hospital; 2, Chaffee; 3, Carnation; 4, Bishop. Get of sire—1 and 2, Carnation; 3, Bishop; 4, State college. Produce of cow—1, Carnation; 2, Rishop; 3, State hospital.

The Jerseys.

The Jersey classes brought out some excellent type and quality, but the turnout was not adequately representative of the breed in the state. Sultan's Olga Lad of the Erickson herd of Yakima was senior and grand champion bull. He beat Glen Tana's younger animal by a close margin. The state college took the grand champion female award on Waikiki's Pilot Mary, a junior yearling, with an exceptionally well developed barrel and a good makeup all around, though showing a little beefy.

Exhibitors—Erickson Bros., Yakima, Wash.; Glen Tana Farms, Spokane, Wash.; Midfields Farm, Winlock, Wash.; State College of Washington; Clarence Worrell, Yakima, Wash.; Marie Tornay, Ellensburg, Wash.; T. S. Lester, Sunnyside, Wash.

Bulls: Aged bulls—1, Erickson Bros., on Sultan's Olga's Boy (senior and grand champion); 2, Glen Tana Farm, on Glen Tana Perfection. Two-year-olds—1, Midfields, on Champion of Midfields; 2, Erickson, on Raleigh's Fancy Lad. Yearlings—1, Glen Tana, on Glen Tana Morocco Wonder; 2, Erickson, on Sultan's Bonnie Lad; 3, Midfields, on Fussy's Fern Nobel 35th; 4, Erickson, on Fern's Golden Duke. Senior calf—1, Midfields, on Midfields Manila; 2, Glen Tana, on Glen Tana Guenon; 3, Erickson, on Sultan's Marigold of J. H.; 4, Midfields, on Midfields Combination. Junior calf—1, Glen Tana, on Glen Tana Morocco Majesty (junior champion); 2, Midfields, on unnamed; 3, Erickson, on Sultan's Lad of J. H.; 4, Glen Tana, on Glen Tana Morocco Sultan.

Females: Aged cows—1 and 2, Erickson, on Sultan's Figgis of J. N. (senior champion) and Sultan's Violet Rose; 3, Glen Tana, on Glen Tana Sibyl 2d. Three-year-olds—1, Midfields, on Star of Yewlea. Two-year-olds—1 and 4, Midfields, on Cicely's Golden Dawn and Panacea of Midfields; 2, Erickson, on Olga's Pet; 3, Glen Tana, on Glen Tana Dorothy. Senior yearlings—1, Erickson, on Sultan's Vesta Lass; 2, Worrell, on Olga's Goldie Pet; 3, State College of Washington, on Chinook Landseer Faith; 4, Midfields, on St. Mawes Merry Olga. Junior yearlings—1, State College of Washington, on Waikiki's Pilot Mary (junior and grand champion); 2, Glen Tana, on Glen Tana Morocco Inez; 3, Erickson, on Flower Lassie; 4, Midfields, on Sweetheart's Image. Senior calf—1, Glen Tana, on Glen Tana Morocco Lady; 2, Erickson, on Zellah's Fancy Queen; 3, Marie Tornay, on Precious Little Pearl; 4, Midfields, on unnamed. Junior calf—1 and 4, Midfields, on unnamed and St. Mawes Golden Clythia; 2 and 3, Erickson, on Raleigh's Maid of J. N. and Olga's Bonnie Babe of J. H.

Groups: Graded herd—1, Erickson; 2, Glen Tana; 3, Midfields. Young herd—1, Glen Tana 2, Erickson; 3, Midfields. Calf herd—1, Glen Tana; 2, Midfields; 3, Erickson. Get of sire—1, Erickson; 2 and 4, Glen Tana; 3, Midfields. Produce of cow—1, Glen Tana; 2 and 4, Erickson; 3, Midfields.

The Milking Shorthorns.

The milking Shorthorns were from two Washington herds and the Dwight A. Smith herd from Salmon, Idaho, in which herd was the junior champion bull, a senior calf of good quality. The animals from the E. C. Truesdale farm at Centralia made a creditable showing, but both of the grand champions were in the herd from the Northwood farms at Redmond, Wash., near Seattle. Gretna Challenger, the grand champion bull, was a 4-year-old with a well-developed barrel and good loin and splendid covering. The senior and grand champion female was a white animal of quality, Billing White Ruth. She was well balanced between the beef and dairy qualities, a genuine "double-decker."



Twenty boys and girls and 20 Shorthorn steers, a distinct feature at the state fair. They are all the boys and girls and half the steers of the Hercules Shorthorn steer clubs. Their story will be told in a later issue of THE FARMER.

Exhibitors—Dwight A. Smith, Salmon, Idaho; Northwood Farms, Redmond, Wash.; E. C. Truesdale, Centralia, Wash.

Bull: Two years or over—1 and 2, Northwood Farm, on Gretna Challenger (senior and grand champion) and Northwood Defender; 3, Smith, on Roan Fairhelm. Yearling—1, Northwood Farm, on Northwood Pride; 2, Truesdale, on Walgrove Perfector; 3, Smith, on Rockrose Commander. Senior calf—1, Smith, on Rockrose Lake (junior champion); 2, Northwood Farm, on Northwood Surprise; 3, Truesdale, on Wynooche Jeweler. Junior calf—1, Northwood Farm, on Northwood Cyrus; 2, Truesdale, on Roan Jeweler 2d.

Females: Aged cow—1 and 3, Northwood Farm, on Billing White Ruth (senior and grand champion) and Lilly L 3d; 2, Smith on Buttercup's Belle 3d. Two-year-old—1, Smith, on Beth Rockrose; 2 and 3, Northwood Farm, on White Princess and Roan Jewel. Senior yearling—1, Smith, on Rockrose Clarisse; 2, Northwood Farm, on Miss Rose of Oaklawn; 3, Darces, on Maud Jewel. Junior yearling—1, Northwood Farm, on Northwood Winnie 2d (junior champion); 2, Smith, on Rockrose Lulu; 3, Truesdale, on Ora Jewel. Senior calf—1, Truesdale, on Anna Jewel; 2, Northwood, on White Princess; 3, Smith, on Rockrose Snowdrop.

Groups: Aged herd—1, Northwood; 2, Smith; 3, Truesdale. Young herd—1, Smith; 2, Truesdale. Calf herd—1, Smith; 2, Truesdale. Get of sire—1, Smith; 2, Truesdale. Produce of cow—1, Smith; 2 and 3, Northwood.

Ayrshires.

Exhibitors—E. W. Van Tassell, Wenatchee, Wash.; State College of Washington.

The State College of Washington showed two head in competition with the full herd of E. W. Van Tassell of Wenatchee, Wash., the latter winning all awards except first in senior bull calf (junior champion) on Chinook Cavalier Karton and second in senior heifer calf on Chinook Cavalier Elsie.

THE HORSE SHOW.

The horse show this year was considered

(Continued on page fourteen.)

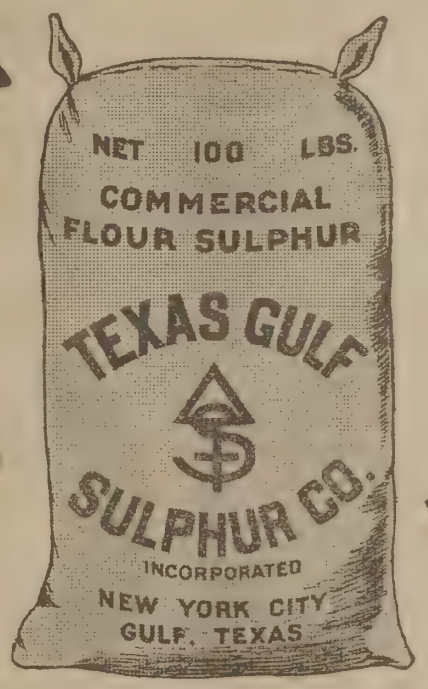
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POULTRY AND RABBITS

It Means Culling

Low Prices Make Po r Hens Poorer

"There is no use to disguise the fact that there are no fortunes in sight for northwest poultrymen," said Auditor D. S. McDole of the Washington Cooperative Egg and Poultry association when asked recently at Yakima about the prospects for the future. "There are in storage right now 2,278,000 more cases than were in storage August 1, 1921, and the stored total is 10,000,000 cases, or 25,000 carloads. That's more carloads of eggs than Yakima will ship carloads of apples this whole season.

"There has been an enormous increase in the number of poultry kept in the middle and southern states—particularly the latter, where conditions approximate those in the northwest except that the summer is long and extremely hot. Texas, Louisiana and even Oklahoma, for example, have the same open winters. In New Jersey they are specializing on a "48-hour egg" with which, of course, we can not possibly compete, and for which they are getting 46 cents at present—6 or 7 cents per dozen more than Pacific coast whites. There promises to be no money at all in storage operations this year; in fact, Chicago warehousemen have announced that they are ready to let go their stored eggs for 75 cents less than they put them in for. New York banks have reduced their advances to $5 per case, and Los Angeles banks have ceased making them entirely.

"The answer to all this which we have been making our members is that they must cull their flocks to the very marrow of producing usefulness. There is little enough excuse at any time for keeping unprofitable birds in the flock, but there will be less excuse than ever this fall. Cull and cull again; make certain that there are no idle birds, is the best advice that we can offer. What winter market conditions will develop we do not know."

Trying Out Early Chicks

"We are trying an experiment with early hatched chicks to find how they would produce during the winter and early months," said John Annonem of Winlock, Wash. "We have 250 White Leghorn pullets that were hatched the 5th of January. They started laying at the age of 4 months and 10 days and they are now producing a 60 per cent lay. The experiment looks all right so far. The flock was thoroughly culled at the age of 4 months and all birds weighing over three pounds were taken out. All of these chicks were hatched from pullet eggs."

There are 1000 breeders in an adjoining pen, all of which are required to trapnest 180 eggs a year. Any hens laying above 168, however, are taken to the commercial laying houses. Anything under this number is disposed of. The commercial flock is not trapnested. There are 2800 birds in all on the Annonem farm.

Feeds Mustard to Chickens

R. V. Totten of Falls City, King county, tells of an interesting way to eradicate mustard from growing crops. Early this summer he had a crop of corn in which some mustard was growing, and he pulled a small armload of the weeds for the chickens. He found that they ate it very readily, so he made a practice of pulling a small amount each day and feeding it to the chickens in the place of other green feeds.

"I kept up the plan until I had cleaned out the entire patch," said Mr. Totten, "and you can not find a bit of mustard in the whole field. The birds seem to thrive on the weed, and ate it even when it had begun to bloom. I not only avoided feeding my young kale plants, but weeded out the entire patch of corn as well."

New Standard for Judging

A new standard for the judging of poultry was recently established at the American poultry convention held at Knoxville, Tenn. H. H. Collier of South Tacoma attended the convention, representing the northern states.

The plan agreed upon will allow more recognition for the utility qualifications of the fancy and show stock. Judges will be asked to ascertain something of a hen's egg production qualities as well as her general appearance. Mr. Collier is enthusiastic over the new standard, saying that it should mean much to the poultrymen of western Washington, who have heretofore emphasized egg production and not paid enough attention to show stock. Details of the new plan can soon be had in pamphlet form, and will also include the judging for eggs.

"It will mean a new step in the poultry game," said Mr. Collier. "The man who raises commercial poultry will be able to show these birds in competition with other birds at the poultry show. It is a point we have been after for many years, that the best producers are the best showbirds. Every egg record we have had has been made by fine bred birds, which indicates that high production goes hand in hand with the type of the bird itself."

Turkeys Have Roup

By RALPH E. WALDO,

I have some turkeys and their heads swell up, eyes water and nostrils seem to get clogged and it is difficult for them to breathe. Can you tell me what it is they have and what I can do for them? Will the chickens catch it from them?

A. L. C.

The turkeys in question have roup. This disease is the result of a cold, which is caused by damp, poorly ventilated or drafty quarters. The first step to take in curing the disease is to remove the cause.

Remodel the roosting quarters so that it is dry and well ventilated, with no drafts striking the roosting birds. The pus formation in and around the eye and nostril may be partially removed by gently massaging the affected parts with the thumb. Then paint the affected area with tincture of iodine. If you take a small syringe and force kerosene into each nostril it will help to clean out the head passages.

It would be well to give the entire flock a dose of epsom salts at the rate of one-fourth pound of salts dissolved in one gallon of water. Roup is contagious, but is not hard to control, providing the proper housing conditions are present.

Profit of $1.50 Per Hen

"I find that I can do the heavy work about the poultry plant and get it out of the way by 8 a. m., so that I can get at the work about the farm," explained L. H. Jacobs of Shelton, who keeps about 1000 White Leghorn hens. "Mrs. Jacobs looks after such details as feeding the mash, watering and gathering the eggs. She takes an interest in the work and it gives me a chance to spend a full day on the farm."

Mr. Jacobs finds that he can average about $1.50 per hen, which is above cost of feed and other expenses. A registered Shorthorn bull is kept on the farm and there also is one purebred heifer, from which he expects to build up a herd of milking Shorthorns for general farm use.

COLOR IN THE BEAK.

About five weeks are required for the yellow color to fade entirely from a Leghorn's beak, and it returns first to the base, giving the poultryman a sure index of what the bird is doing. Yollow there indicates that either she has rested or is resting now.

Big Fruit Storage Plant

The biggest social event of the season at Kennewick occurred when more than 1500 citizens of Kennewick, Richland and Benton City were guests of the Yakima Fruit Growers' association at the grand opening of the big "Y" cold storage plant just completed here.

Manager C. H. Swigart of Yakima briefly reviewed the origin and progress of Yakima's foremost pioneer cooperative marketing organization through which the construction of the plant was possible at a cost of more than $75,000, and with a storage capacity of 100 carloads (75,000 bores) of apples in this first unit, which, he said, was only one-half the size of the plant ultimately contemplated.

West Side Irrigation

Further evidence of the beneficent effect of irrigation in western Washington in territory with normal precipitation is cited by Dan A. Scott, director of the state department of conservation and development, and Marvin Chase, state hydraulic engineer, following an inspection of the Yelm irrigation district.

With 3000 acres under cultivation, 350 of which were brought under this year, the Yelm district shipped 200 tons of fruit this season, the strawberries averaging 275 quarts an acre and red raspberries 300 quarts.

PUT IMPLEMENTS UNDER COVER.

Last winter some of your implements weathered the storms out in the open. Shed them this fall.

Endurance

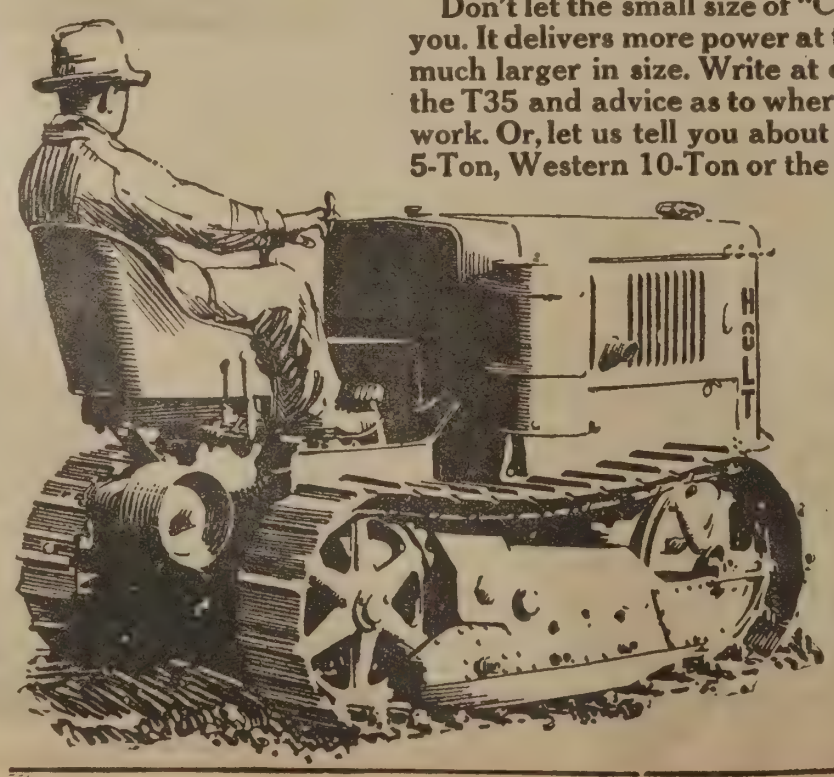
"Caterpillar" T35 Tractor conclusively proves that neither power nor endurance need be sacrificed to produce a tractor of small size and light weight. The T35 weighs but 4000 pounds and measures only 48 inches wide, yet it has 15 drawbar horsepower and maintains the same high standard of economy, dependability and endurance that have always marked Holt products. Better qualities of steel, improved methods of heat-treatment, advanced design, enabled Holt to make this achievement—the supreme small tractor.

Other factors contributing to T35 endurance are the exacting standards of accuracy in workmanship; the perfect system of lubrication—full force-feed for the motor, oil baths for gears, Alemite fittings in place of grease cups; complete enclosure of all working parts from dust and dirt; simplicity; easy accessibility; numerous other features.

Don't let the small size of "Caterpillar" T35 Tractor mislead you. It delivers more power at the drawbar than many tractors much larger in size. Write at once for full information about the T35 and advice as to where you can see it on display or at work. Or, let us tell you about larger "Caterpillar" Tractors—5-Ton, Western 10-Ton or the big-power 75.

$375 SAVING.

Manufacturing economies resulting from increased production which was necessary to meet the great and growing demand for "Caterpillar" T-35 tractors have made possible a recent reduction of $375 in the price of this "supreme" small tractor.



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ORCHARD AND GARDEN

Good Points in Apple Thinning

By PROF. O. M. MORRIS,

Head of Department of Horticulture, W. S. C.

Orchardists are just now experiencing the results of proper or improper thinning during the 1922 season. In some orchards good fruit is being harvested because of proper practices, including proper thinning. In others inferior fruit is the result of inferior methods. Therefore it seems appropriate to discuss thinning at this time, though it is several months before actual thinning will be again in order. We recommend that the reader study carefully this article and two others that will follow it, then clip them out and put them away for study again from time to time throughout the season as various of the problems affecting thinning arise. As Professor Morris shows, thinning involves much more than the mere removal of some of the apples. It even involves soil tillage this fall.—Editor.

ARTICLE ONE.

The primary object of thinning apples in the orchards of Washington is to increase the net profits from the crop.

This is accomplished in four different lines of results: First, by increasing the size of the fruits permitted to mature; second, by increasing the per cent of the best grades, as extra fancy and fancy; third, by reducing the harvest cost of the crop; and fourth, by reducing the effects of an overload of fruit on the trees. The first three lines have been discussed fully from time to time.

A tree carrying an overload of fruit will produce its maximum tonnage, but this is almost sure to reduce the possibility of a crop the following year. Trees may bear a good crop year after year. This activity varies with the variety, but the load must be reduced to much less than a normally full crop, or in most cases even a fair crop, before the fruits will grow to extra large size. A Jonathan tree capable of producing 10 boxes of fruit when loaded so that the size of the fruit will be 188 to the box, will not produce 10 boxes of fruit if thinned down so that there are 960 apples instead of 1880. This thinning would require that the apples would double in size or jump from 188s to 96s. The larger sizes are produced by the tree only under conditions where the trees have a surplus of leaf and growth power above that of the actual requirements for the carrying of the crop of fruit.

Varieties Respond Differently.

The response of the different varieties to the thinning is a factor that requires careful attention. The habit of growth and the distribution of fruiting wood makes the very mechanics of the tree capable of responding in different degrees to the different types of thinning practiced. I want to mention only a few of the varieties in order to give the idea that I have in mind.

The Winesap tends to produce heavy crops regularly and is one of the best annual bearers in our northwest fruit list. The variety has a strong tendency to produce a few main branches in the trees and have each of these to continue the development of the one terminal bud or branch and of others to be distinctly lateral in development. Most of the fruiting wood is started as spurs on the lateral branches and there are relatively few fruits produced on spurs attached directly to the main branches. The fruit spurs have a good capacity for branching and producing fruiting spurs of short to medium length and only under a distinctly disturbed condition will the fruiting spurs revert to twig growth. We see this manifest very often in certain parts of the tree top where all of the spurs are small, short, semi-drooping and producing smaller fruits each succeeding year.

When some changed condition causes the fruiting spurs to turn from annual blossom production to twig growth they quickly reach their wood production limit and turn again to blossom production. The branching spurs do not have the desirable characteristic of maintaining one as a leading branch and keeping the others secondary. This develops a large amount of slender spurs of short or intermediate length and a large number of these accumulating in one area of the tree causes the noticeably strong tendency of this variety to produce small fruit as the tree attains age.

Remove the Terminal Fruits.

The twigs and terminal buds are small and wirelike in character, and carry all of the fruit to maturity. The leaves are small and not overabundant. In thinning it is advisable to remove the terminal fruits in weak branches and reduce the cluster to a single fruit. Thin them to seven or eight inches apart.

This variety carries a relatively high market value for small sized fruit, but of course there is a good difference in price of fruits of 163 and larger and those of smaller size. Color requirements in this variety are much easier attained than with the Jonathan and Stayman, hence the distribution of fruit is relatively more important and the exposure to direct sunlight is relatively less important. This variety should be thinned early and the thinning can be done very early as few fruits fall after the crop is said to have set.

What has been said of the Winesap can with slight modification be said of the Jonathan. Both varieties have an admirable capacity to produce a blossom bud one year and continue twig growth the next year and in this way alternate between fruit and wood production. Both varieties have a weakness in their tendency to overload with fruit and reduce the vigor of the tree.

Rome Beauty Clusters.

The Rome Beauty has an unusual capacity to alternate between blossom production and twig growth in the same spur or twig. The short twig growth is the normal tendency of the variety. It is an annual producer and usually at maturity is persistent in its fruiting habit. It has a strong tendency to produce fruits in clusters on the end of the branches, which, with a load of maturing fruit, becomes pendulous. The extremely large size of this variety do not require high color attainment, and if well supported on strong wood do not require thinning for the best distribution of sunlight. Small Rome Beauty apples are not desirable. It is advisable ordinarily to thin to one fruit per cluster. In heavy crops thin to one fruit per cluster and do not permit the fruit to be closer than eight inches of each other.

The constant interchange of action between fruit producing and twig growth of all the branches on the tree is an extremely marked characteristic of this variety. A careful system of heading back the side wood in smaller branches is necessary to keep the tree producing its load where it can be well supported. The leaves are large, vigorous and apparently very effective as digestive organs so that the spurs often produce a fruit and twig four to six inches long the same year and if the soil is fertile and the trees have received moderate pruning, the same spur that is this year producing a fruit may produce a twig of four to six inches and terminate it with a fruit bud for next year's growth.

Every Other Year Habit.

In the Wagener, Spitzenberg and Fameuse, we have another peculiar type of plant. These varieties produce their fruit on very short spurs on the side of long polelike branches. They ordinarily produce one fruit on a spur and the fruits have a strong tendency to be quite uniform in size unless the tree is extremely overloaded. These varieties are extreme in their development or biennial producing habit and will often go to the extent of one large branch producing a heavy crop this year while the remaining part of the tree is barren and the following year reverse the condition. In these varieties the fruit spurs have almost lost their individuality and act in mass. The foliage may be removed from the individual spurs, but the fruit produced by those spurs will be quite normal in size. It is ordinarily not possible to have even annual production unless it is done by alternating large branches in the tree or holding the production far below the maximum crop that the tree is able to produce in good form. The thinning of fruits on these varieties should be gaged on the full capacity of the tree to make good-sized apples. The growers usually permit them to bear a full load when they fruit, knowing that it will be necessary to thin them far below a reasonable crop before it will have much influence in encouraging the development of a crop the following year.

Heavy foliage—heavy crop, lighter thinning.

Light foliage—light crop, heavy thinning.

In the next article Professor Morris will discuss the influence of certain cultural practices on thinning. The amount of plant food available is one factor in determining what thinning to do and the manner in which to do it.

BLACKBERRIES BRING GOOD RETURNS.

Mrs. E. F. Benson of Gig Harbor reports good returns from a few Himilaya blackberry vines, and is putting out more sets. Last spring they put out 44 tips and by September 1 they had grown to a length of 14 feet.

"We like them better than the Everbearing blackberry," said Mrs. Benson, "since they sell equally as well and they are not so hard to pick. There is some difference of opinion in this regard, but there is not much preference for either kind of fruit on the local market."

Destroying Cabbage Pests

To the Editor: I wish to tell my friends how I beat the cutworms on my cabbage plants. After I set out the plants I sprinkled a good, liberal supply of pulverized sulphur on and around each plant. Then I kept watch, and as soon as the cabbage louse began to show I sprinkled again with fine sulphur dust. Up to date I have the louse whipped and all cabbages are looking fine. Also there are no cabbage worms, either. Sprinkling the fine sulphur dust on and around the plants after setting out, and then about twice during the summer is enough to keep the plants clear of the pests. This also works on tomato plants or any other kind of garden truck. CHARLES H. DAVIDSON.

Thorp, Wash.

Millionaire Pears

Anjou pears, which are the choicest fruit grown in the Yakima (Wash.) valley and which brings the highest price a box of any pears or apples, have mostly gone into local storage to await the time when the market is right, says the Yakima Herald. Anjous are the pear which the wealthy New Yorkers fancy and the millionaires of that great metropolis at Christmas time pay a good price for this luscious fruit. It has been termed "the millionaire's pear" and Yakima valley Anjous have brought as high as $6 a box.

Very few cars of Anjous have been forwarded, but are being held in storage until the proper time for shipment. They are usually handled so as to be ripe by Christmas. Unusual pains are taken in handling this fruit.

Sorters use canvas gloves and especial care is exercised in the handling. The packers also wear gloves and they are paid by the day instead of by the box to insure very careful handling, as the pears must be as near perfect as possible to qualify for the highest class trade in New York. The packers are paid $5 a day.



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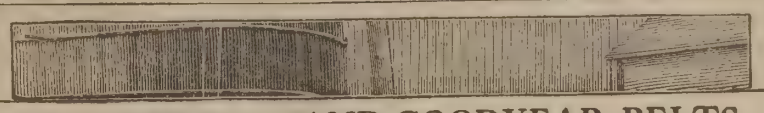
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GOODYEAR

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Twenty-Sixth Chapter of Fair Book

(Continued from page eleven.)

one of the best ever seen on the grounds and George M. Wilson, who judged all breeds, was well pleased with the turnout. The Shires had the largest number and some of the best quality, especially in the female classes. The Clydesdales were not far outclassed. In fact, the quality and type was far above the average. The Percherons also had a creditable showing. No Belgians were shown. The majority of all breeds came from the Inland Empire.

The Shires were exhibited by H. W. Merritt and Mr. and Mrs. W. A. Clark, the former breeder, taking the junior and grand champion honor with Forrester Prince, a 2-year-old stallion, with splendid quality and substance. The senior and grand champion mare, Martha Washington, was owned by the same breeder. She is an aged mare of great draft quality, with much bone, well muscled and spirited.

The Clydesdales of the R. C. McCroskey farm were outstanding. His champions were Lady Ramsey, a 7-year-old, and Prince, an outstanding colt.

E. L. Mulhall of Buena showed the senior and grand champion Percheron mare in Lenore. The grand champion stallion, Mignon, a horse 19 years old, but sound and clean, was a wonderful animal for his age. He is owned by J. A. Adams & Sons of Yakima.

Exhibitors—J. A. Adams & Son, Yakima, Wash.; Emmett Mulhall, Buena, Wash.; H. C. Doepke, Fairfield, Wash.; Earl Mulhall, Grangeville, Idaho; W. A. Clark, Latah, Wash.; Mrs. W. A. Clark, Latah, Wash.; H. W. Merritt, Rosalia, Wash.; O. B. Skidmore, Plummer, Idaho; Robert C. McCroskey, Garfield, Wash.; Will Hill, Buckley, Wash.; Robert McKendricks, Yakima, Wash.; Howard Fisher, Mabton, Wash.; E. N. Eagle, Toppenish, Wash.

Shires.

Stallions: Four years or over—1, Clark, on Eureka Nig 2d (senior champion); 2, Skidmore, on General Leonard Wood. Three-year-olds—1, Skidmore, on Teddy R.; 2, H. W. Merritt, on Blue Ribbon Winner 2d. Two-year-olds—1 and 3, Merritt, on Forest Prince (junior and grand champion) and Billo Billie; 2, Clark, on Mack. Yearlings—1, Mrs. W. A. Clark, on Bardon Menestrel 2d; 2, Merritt, on Sir Gould. Colt—1, Clark, on Rothwell Forester 2d; 2, Merritt, on Irvin Washington.

Mares: Four years or over—1 and 2, Merritt, on Martha Washington (senior and grand champion) and Lady Victoria Rose; 3, Clark, on Colony Heroine. Three-year-olds—1, Merritt, on Kcota Molly. Two-year-olds—1, Clark, on Mary Pickford. Yearlings—1, Mrs. Clark, on Colony Missie (junior champion); 2, Merritt, on Nancy Lee; 3, Skidmore, on Maud Shotkin. Filly—1, Merritt; 2, Clark.

Mare and foal—1 and 3, Clark; 2, Merritt. Produce of mare—1, Skidmore; 2 and 3, Clark. Stallion and three mares—1, Merritt; 2, Clark.

Percherons.

Stallions: Four years or over—1 and 2, Adams, on Mignon (senior and grand champion) and Carmont. Yearlings—1, Adams, on Kasba (junior champion). Colt—Adams, on unnamed.

Mares: Four years or over—1 and 2, Emmett Mulhall, on Lenore (senior and grand champion) and Mabel; 3, Adams, on Iona. Three-year-olds—1, Adams, on Nona. Two-year-olds—1, Emmett Mulhall, on Marise (junior champion); 2, Doepke, on June Waltz. Filly—1, Mulhall; 2, Adams.

Mare and foal—1 and 3, Mulhall; 2, Adams. Produce of mare—1 and 2, Adams; 3, Mulhall. Stallion and three mares—1, Adams.

Percheron Society Specials.

Colt—1 and 2, Adams, on Buster (champion) and Kasba.

Mares: Four years or over—1 (champion) and 2, Mulhall; 3, Adams. Two-year-olds—1, Mulhall; 2, Doepke. Fillies—1, Mulhall; 2, Adams.

Clydesdales.

All awards in the Clydesdales went to Robert C. McCroskey of Garfield, Wash., the only exhibitor.

THE HOG SHOW.

The swine division was larger this year than last and it was necessary to build two more rows of pens to accommodate all comers. The Poland Chinas had the largest number, some of which were from new herds. There were many local breeders and several club members who showed. The Duroc Jerseys were exceptionally high



Busch's Royal Pathfinder, grand champion Duroc Jersey boar at the state fair, owned by Frank P. Busch, Johnson, Wash.

in quality and type. The Berkshires made a strong show, as did also the Chester Whites. Both the Hampshire and the Tamworth breeds had less competition than the other breeds, but each made a creditable showing. Three futurities drew out much quality young stuff. A. J. Firkin of Nampa, Idaho, judged the Polands, while Charles M. Talmadge of Salem judged all other breeds.

Poland Chinas.

Exhibitors—Baker & Paddison, Yakima, Wash.; E. M. Dorsey, Pasco, Wash.; B. B. & Ivan B. Fenton, Sunnyside, Wash.; J. F. Torgazon, Silverton, Ore.; John Funke, Cottonwood, Idaho; H. W. Hastings, Thornton, Wash.; B. F. Kammerzell, Colfax, Wash.; Arthur King & Sons, Yakima, Wash.; T. S. Lester, Sunnyside, Wash.; John F. Lynn & Son, Peach, Wash.; E. O. Loe, Silverton, Ore.; George M. Longknecht, Yakima, Wash.; Howard McKinley, Cottonwood, Idaho; E. S. McCulloch, Sunnyside, Wash.; James Mulkey, Silverton, Ore.; W. A. May, Toppenish, Wash.; Harvey Norris, Goldendale, Wash.; L. J. Oder, Yakima, Wash.; A. Prior, Yakima, Wash.; Washington State College; E. V. Taylor, Selah, Wash.; J. P. Thurston, Yakima, Wash.; Harold Van Wechel, Yakima, Wash.; H. Wyckoff, Toppenish, Wash.; Elmer A. Smith, Thorp, Wash.



Eureka Nig 2d, senior champion Shire stallion at the state fair, owned by W. A. Clark, Latah, Wash.

Boars: Aged boar—1, Wyckoff, on Iowa (senior and grand champion); 2, Lester, on Cedar Giant; 3, McCulloh, on Brunk's Great Timm. Senior yearling—1, Loe, on Wonder Jones; 2, Fentons, on Hillcrest Lad. Junior yearling—1, Kammerzell, on Designer's Model; 2, Baker & Paddison, on Big Giant; 3, Torgazon, on Maplehill Master. Senior pig—1 and 3, Oder, on Naches Big Bone and Naches Ranger; 2, Thurston, on unnamed. Junior pig—1, Baker & Paddison, on Columbia Chief 2d (junior champion); 2, Kammerzell, on Fashion Archdale; 3, May, on Black Orphan.

Sows: Aged sow—1, Lengknecht, on Diamond (senior champion); 2, Loe, on Wonderful; 3, Oder, on Lady Master. Senior yearling—1, Loe, on Lady Jones; 2, Kammerzell on Fashion's Pet 2d. Junior yearling—1, Longknecht, on Bessie; 2 and 3, Loe, on Miss Liberator and Wonderful Giant. Senior pig—1, Longknecht, on Maxine (junior and grand champion); 2, Washington State college, on Giant Lady 2d; 3, Loe, on Miss Buster. Junior pig—1, Longknecht, on Helen A. Wonder; 2, Kammerzell, on Archdale's Best; 3, Loe, on Miss Sally Peter.

Groups: Aged herd—1, Loe; 2, Kammerzell; 3, Baker & Paddison. Young herd—1, Kammerzell; 2, Loe; 3, Oder. Young herd bred by exhibitor—1, Kammerzell; 2, Loe; 3, Oder. Get of sire—1, Kammerzell; 2, Loe; 3, Oder. Produce of sow—1, Kammerzell; 2, Loe; 3, Oder.

Poland China Futurity.

Boars: Junior yearling—1, Baker & Paddison, on Big Giant. Senior pig—1 and 2, Oder, on Naches Big Bone and Naches Ranger; 3 and 4, Lester, on Superba Model and Superba Model 2d. Junior pig—1 and 4, Baker & Paddison, on Columbia Chief 2d and Montana Chief; 2 and 6, Kammerzell, on Fashion Archdale and Royal Checkers; 3, 5 and 7, May, on Black Orphan, May's Orphan and Smooth Orphan; 8, Taylor, on Buster Mastadon.

Sows: Junior yearling—1, Longknecht, on Bessie; 2 and 3, Prior, on My Pet and Big Queen 2d. Senior pig—1, Longknecht, on Maxine; 2 and 3, Prior, on A. Prior's 11th and A. Prior's 12th; 4 and 7, Oder, on Naches Queen and Naches Lass; 5 and 6, Lester, on Fancy Clarinda 2d and Fancy Clarinda. Junior pig—1, Longknecht, on Helen A. Wonder; 2, 3 and 7, Kammerzell, on Archdale's Best. Archdale's Queen and Archdale's Pet; 4, Longknecht, on Ella J.; 5, Fentons, on Hillcrest Lil; 6, Oder, on Queen of Mastadons; 8, Van Wechel, on Sis Clansman 1st.

Senior litters—1, Oder, on litter out of Miss Price; 2, Lester, on litter out of Fancy Maid. Junior litters—1 and 4, Kammerzell, on litters out of Fashion Pet 2d and Clansman Kind; 2, Baker & Paddison, on litter out of Daisy May 2d; 3, Longknecht, on litter out of Bessie; 5, Fentons, on litter out of Hillcrest Fancy A; 6, Oder, on litter out of Miss Price; 7, King & Son, on litter out of Lady Mastadon A; 8, May, on litter out of Smooth Big Lady.

Duroc Jerseys.

Exhibitors—Frank P. Bush, Johnson, Wash.; S. E. Chaffee, Sunnyside, Wash.; S. D. Cornell, Grandview, Wash.; J. K. Conzigns, Yakima, Wash.; F. D. Gano, Sunnyside, Wash.; Phillips Hitchcock, Sunnyside, Wash.; Chester Murphy, Sunnyside; H. W. Turner, Sunnyside; F. M. Yockey, Outlook, Wash.; State College of Washington; Wallace & Fordyce, Sunnyside, Wash.

Boars: Aged boar—1, Busch, on Busch's Royal Pathfinder (senior and grand champion); 2, Cornell, on Great Wonder Chief; 3, Turner, on Colonel Pathfinder. Senior yearling—1, Cornell, on Grandridge Wonder Pride. Junior yearling—1, Murphy, on Pathfinder 1st; 2, Cornell, on Grandview Wonder Chief 7th; 3, Conzins, on Orion Joe Jr.; 4, Busch, on Woodland Golden Model. Senior pig—1 and 2, Turner, on Royal Pathfinder Jr. 1st (junior champion) and Lady Orion's Pathfinder; 3, Murphy, on Crimson Chief. Junior pig—1 and 2, Busch, on Skookum Pathfinder and Imikash Pathfinder; 3, Chaffee, on Glencliff Chief.

Sows: Aged sow—1 and 3, Cornell, on Belltrama Defender Maid and Sensation Lady 1st. Senior yearling—1, Cornell, on Miss Hazel 2d (senior and grand champion). Junior yearling—1 and 2, Busch, on Woodland Model 1st and Woodland Model 2d; 3, Turner, on I Am Lady Orion. Senior pig—1, Cornell, on Grandridge Wonder Girl 4th (junior champion); 2, Turner, on Lady Orion 3d; 3, State College of Washington, on Illustrator I Am 2d. Junior pig—1 and 2, Cornell, on Grandview Wonder Chief Girl 7th and Grandview Wonder Chief Girl 18th; 3, Turner, on Yakima Charlotte.

Groups: Aged herd—1, Busch; 2, Cornell; 3, Turner. Young herd—1, Turner; 2, Murphy; 3, Cornell. Herd bred by exhibitor—1, Turner; 2, Cornell; 3, Murphy. Produce of sow—1, Turner; 2, Busch; 3, Murphy. Get of sire—1, Turner; 2, Busch; 3, Cornell.

Duroc Jersey Futurity.

Fall pigs: Boars—1 and 2, Turner, on Royal Pathfinder Jr. 1st and Lady Orion's Pathfinder; 3, Murphy, on Crimson Chief; 4 and 7, Busch, on Golden Western and Golden Model; 5 and 6, Cornell, on Grandview Wonder Chief 2d and Grandview Wonder Chief 1st. Sows—1, 3 and 4, Cornell, on Grandridge Wonder Girl 4th, Grandview Wonder Girl 1st and Grandview Wonder Girl 14th; 2, 6 and 7, Turner, on Lady Orion 3d, Lady Orion 4th and Lady Orion Mary; 5, Murphy, on Murphy's Pathfinder Queen; 8, Busch, on Sunset 1st. Litter—1, Turner; 2, Murphy; 3 and 4, Cornell; 5, Busch.

Spring pigs: Boars—1, 2 and 4, Busch, on Skookum Pathfinder, Imikash Pathfinder and KupKup Pathfinder; 3, Chaffee, on Glencliff Chief; 5 and 6, Hitchcock, on unnamed; 7, Cornell, on unnamed. Sows—1, 2, 3 and 4, Cornell, on Grandview Wonder Chief Girl, Grandview Wonder Chief Girl 18th, Grandview Wonder Chief Girl 8th and Grandview Wonder Chief Girl 19th; 5, Turner, on unnamed; 6 and 7, Busch, on unnamed; 8, Hitchcock, on unnamed. Litter—1 and 4, Busch; 2, 7 and 8, Cornell; 3, Turner; 5, Hitchcock; 6, Wallace & Fordyce.

Berkshires.

Exhibitors—Ray Banks, Moxee City, Wash.; Albert Booker, Donald, Wash.; J. A. Bull, Ellensburg, Wash.; James Bonner, Silverton, Ore.; Kenneth E. Cain, Yakima, Wash.; C. O. Goodwin, Donald, Wash.; Stubblefield Home, Walla Walla, Wash.; Orval R. Loe, Silverton, Ore.; Edwin Mills, Ellensburg, Wash.; Fred H. Sinnes, Prosser, Wash.; Pearl Wood, Silverton, Ore.; Kenneth B. Wilcox, Wapato, Wash.; Helen Wilson, Ellensburg, Wash.; Simonson Hog company, Buena, Wash.

Boars: Aged boar—1 and 2, Simonson, on Crestland Bob (senior and grand champion) and Crestland King; 3, Banks, on Fruitland's Rival 4th. Senior yearling—1, Cain, on Crestland Cain. Junior yearling—1, Sinnes, on Rival's Monarch 4th; 2, Banks, on Rival's Rivalry; 3, Simonson, on Buena Prince. Senior pig—1 and 2, Sinnes on Dominator's Royal Superb and Dominator's Royal Superb 2d; 3, Wood, on Producer. Junior pig—1 and 2, Sinnes, on Monarch's Royal Superb (junior champion) and Monarch's Royal Superb 2d; 3, Stubblefield, on Monarch Sentinel.

Females: Aged sow—1, Banks, on Silverbrook Violet 3d. Senior yearling—1, Goodwin, on Laurel Ione 2d; 2, Simonson, on Riverby Rose. Junior yearling—1 and 2, Wilcox, on Ames Typess 3d (senior champion) and Riverby Robin 15th; 3, Banks, on Silver Brook

(Continued on page sixteen.)

The Washington state fair is a child of the state department of agriculture, and as such was carefully watched over by department officials. Director E. L. French of the department was present throughout the entire week, as were also F. H. Gloyd, his assistant; Dr. Pelton of the live stock department, Dr. Donohue of the dairy branch and others participating in the common effort to make the fair a worthy offspring, which it proved to be. Governor Hart, a silent partner in all state departments, was present two days of the fair. General satisfaction was expressed upon announcenfent by Director French early in the week that H. P. Vermilye, now closing his second season as secretary of the fair, would be at the helm again for the 1923 exposition.

The weather man was kind ;the fair in general was of high merit; the entertainment programs were worthy, and the crowds goodly in numbers and appreciative. Wednesday was Yakima day and if one wanted to buy anything he had to go to the fair to do it, for the town was closed all afternoon while everybody went to the fair. Attendance for that day approximated 20,000, bringing the week's total well toward the 75,000 mark.

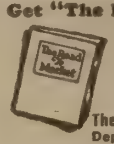
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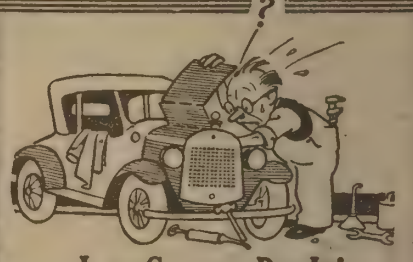
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Four Best Winter Wheats

By E. F. GAINES Cerealist, Division of Farm Crops
Agricultural Experiment Station, Pullman, Wash.

There are certain varieties of fall wheat that have a right to a larger share of the wheat land of Washington. Each of the four varieties, Hybrid 128, Triplet, Turkey and Red Russian, is best in the particular section to which it is adapted. There are other varieties, such as Fortyfold, Jones Fife and Jenkins Club, that are being grown almost exclusively in certain sections, but careful comparative tests over long periods of time show them to be inferior to the four named above.

The tests at Pullman in field plots side by side for the last nine years show the following average yields per acre:

Triplet	45.9 bushels
Hybrid 128	45.5 bushels
Turkey Red	39.7 bushels
Red Russian	39.0 bushels
Jones Fife	37.9 bushels
Fortyfold	31.5 bushels

Jenkins Club has been tested for the last four years only, during which time the average yield has been 5.6 bushels below Hybrid 128.

Pullman is located in the heart of the Palouse country and is representative of the principal wheat belt of the state. The tests shown above indicate that Triplet and Hybrid 128 are distinctly superior to the other varieties mentioned for the Palouse country.

Turkey is the best variety for the drier areas of the Big Bend. The records from the Dry Land branch experiment station at Lind show that it is the safest wheat on the average when the season is favorable for fall seeding. It stands drought well, yields well, is heavy, and resists smut. The four-year average yield of the principal varieties at Lind in bushels per acre is shown below:

Turkey Red	10.3 bushels
Hybrid 128	8.9 bushels
Jones Fife	8.8 bushels
Triplet	8.1 bushels
Fortyfold	6.8 bushels

In addition to the larger yield of Turkey, it brings the highest price on the market, due to its superior quality.

Red Russian has a place in Washington, west of the Cascade mountains. It matures late and its broad leaves shade the ground well, thus smothering weeds somewhat better than other varieties, it is claimed. The yield, however, is not superior to Hybrid 128 and Triplet, as the following five-year average in bushels per acre from the experiment station at Puyallup shows:

Hybrid 128	36.5 bushels
Triplet	36.4 bushels
Red Russian	36.4 bushels

Fortyfold and Jones Fife are evidently inferior, for they are no longer listed in the variety test publications from the Puyallup experiment station.

The main advantage Red Russian has over Hybrid 128 and Triplet is that it is universally grown west of the Cascades and seed is readily available. The fact that it matures later and has grain of poorer quality are factors that may not affect its value, depending upon local uses for the crop. Red Russian was once the dominant winter wheat in Whitman and Spokane counties, but it is now being replaced by Triplet, Hybrid 128 and Turkey.

Seed of the four varieties may be obtained in quantity in sections of the state where they are produced.

Red Russian may be obtained almost anywhere west of the Cascades or from the warehouses in western Whitman and Spokane counties. In 1922 Hybrid 128 comprised between 35 and 40 per cent of all winter wheat grown in Washington, and seed may be obtained near at hand in most sections.

Turkey is the prevailing winter wheat in the warehouses of the drier areas of the state. The counties of greatest Turkey production are Adams, Asotin, Benton, Douglas, Franklin, Grant, Lincoln, Klickitat, Walla Walla and Whitman.

Triplet has been introduced recently, but its distribution is widely scattered from Pendleton, Ore., to Spokane, Wash.. Approximately 1,000,000 bushels were produced in 1922 in Washington. The counties listing greatest production are Columbia, Whitman and Walla Walla.

For those wishing to enter the pure seed business the agricultural experiment station at Pullman has a small quantity of Triplet and Hybrid 128 for sale at $1.50 per bushel.

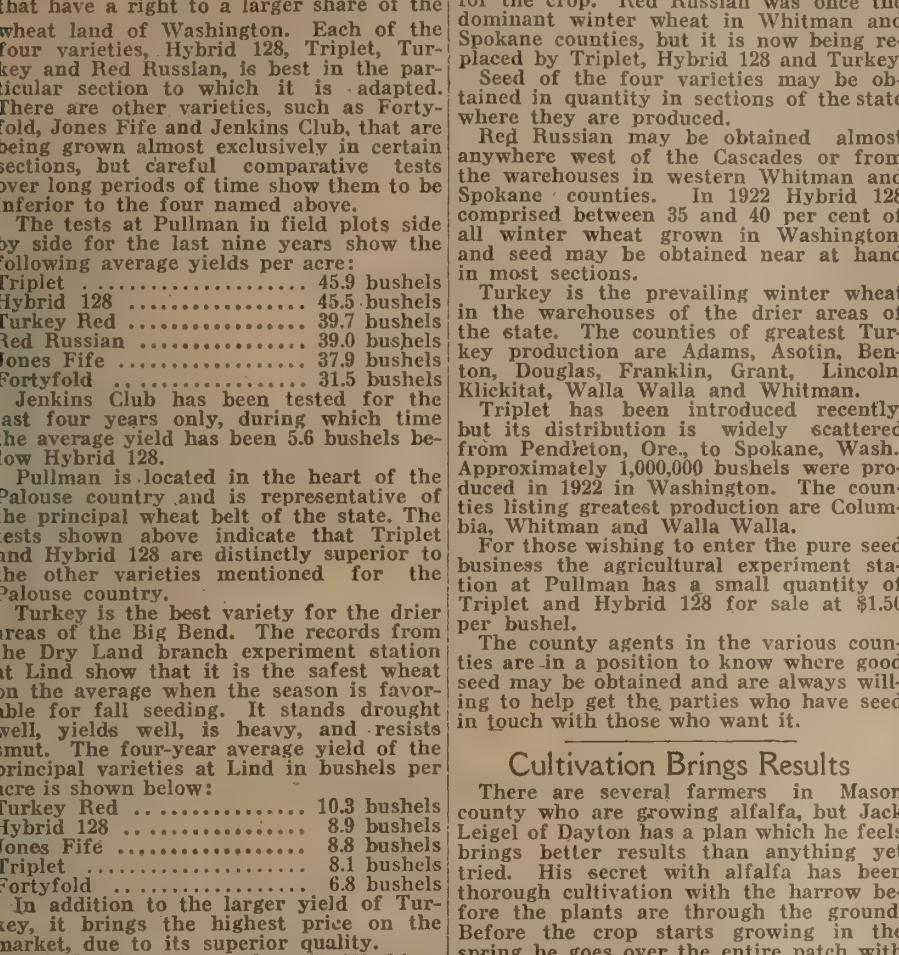
The county agents in the various counties are in a position to know where good seed may be obtained and are always willing to help get the parties who have seed in touch with those who want it.

Cultivation Brings Results

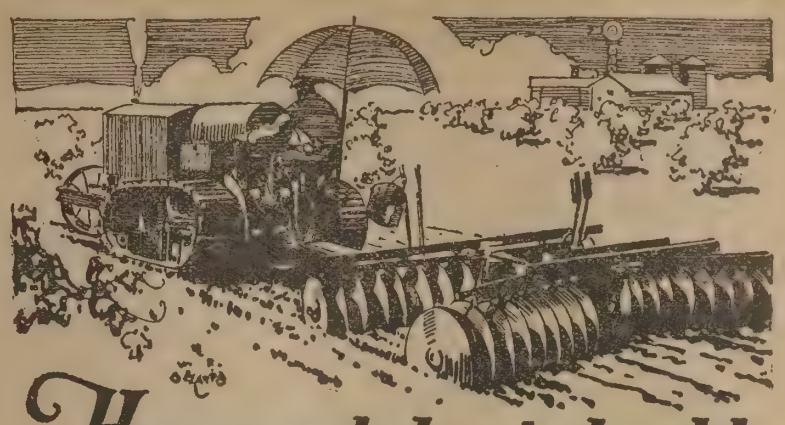
There are several farmers in Mason county who are growing alfalfa, but Jack Leigel of Dayton has a plan which he feels brings better results than anything yet tried. His secret with alfalfa has been thorough cultivation with the harrow before the plants are through the ground. Before the crop starts growing in the spring he goes over the entire patch with a spike-tooth harrow, which takes out all weeds and blue grass which has started growing during the winter months. The harrow is again used immediately after the removal of the first crop, which takes out all weeds and puts the soil in excellent condition for growing a second crop.

STAHL GOES TO CALIFORNIA.

J. L. Stahl has tendered his resignation as horticulturist and assistant superintendent of the western Washington experiment station at Puyallup and left for Davis, Cal., where he will become a member of the experiment station staff at University of California. Mr. Stahl has been with the experiment station for the last 11 years and his place will be filled temporarily by C. L. Vincent from the state college pending the appointment of Mr. Stahl's successor by the board of regents.



The four best winter wheats—from left to right they are: Red Russian, Turkey, Triplet, Hybrid 128.



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—*Board of Lubrication Engineers.*

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Mention THE WASHINGTON FARMER when writing advertisers.

Twenty-Sixth Chapter of Fair Book

(Continued from page fourteen.)

Beauty. Senior pig—1 and 2, Sinnes, on Dominator's Royal Fashion (junior and grand champion) and Dominator's Royal Fashion 2d; 3, Wilcox, on Bunty's Typess. Junior pig—1 and 2, Sinnes, on Monarch's Royal Fashion and Monarch's Royal Fashion 2d; 3, Bonner, on Hillbrook Julia.

Groups: Aged herd—1, Banks. Young herd—1 and 2, Sinnes; 3, Wood. Herd bred by exhibitor—1 and 2, Sinnes; 3, Wood. Get of sire—1 and 3, Sinnes; 2, Wood. Produce of sow—1 and 3, Sinnes; 2, Wood.

Berkshire Futurity.

Spring boars—1 and 2, Sinnes, on Monarch Royal Superb and Monarch Royal Superb 2d; 3, Stubblefield, on Monarch's Sentinel; 4, Banks, on Rival B; 5, Bull, on Sunset Duke 13th; 6, Stubblefield, on Monarch's Sentinel 2d; 7, Simonson, on Buena; 8, Wilcox, on Bunty's Best.

Spring sows—1 and 2, Sinnes, on Monarch Royal Fashion and Monarch Royal Fashion 2d; 3, Simonson, on Silver Buena Beauty; 4, Banks, on Silver Brook Beauty 8th; 5, Stubblefield, on Monarch's Mayflower; 6, Bull, on Sunset Duchess 7th; 7, Bull, on Sunset Duchess 8th; 8, Wilcox, on Bunty's Typess 4th.

Litters of four—1 and 3, Sinnes; 2, Simonson; 4, Wilcox; 5, Stubblefield; 6, Bull; 7, Banks.

Chester Whites.

Exhibitors—Fred Niesz, Wapato, Wash.; Leonard Newman, Thorp, Wash.; Purdin & Parker, Wapato, Wash.; Ed Schoel, Albany, Ore.; Frank Von der Heyden, Wapato, Wash.

Boars: Aged boars—1, Ed. Schoel, Albany, Ore., on Iowa Lad (senior and grand champion). Senior yearling—1, Frank Von der Heyden, Wapato, Wash., on Oak Prince; 2, Schoel, on Benton Chief. Junior yearling—1, Schoel, on Young Prince. Senior pig—1 and 3, Schoel, on Chief Justice Jr. (junior champion) and Buster; 2, Von der Heyden, on Oak Prince 2d. Junior pig—1, Leonard Newman, Thorp, Wash., on Kittitas King; 2, Schoel, on Prince; 3, Von der Heyden, on Western Fir.

Sows: Aged sow—1, Schoel, on Oregon Queen (senior and grand champion); 2, Von der Heyden, on Rollo's Choice; 3, Purdin & Parker, Wapato, Wash., on Perfection. Senior yearling—1 and 2, Purdin & Parker, on Perfection 4th and Perfection 5th. Junior yearling—1 and 2, Schoel, on Benton Pride and Benton Queen. Senior pig—1, Schoel, on Queen's Vesta (junior champion); 2 and 3, Von der Heyden, on Fir 2d and Fir 3d. Junior pig—1 and 2, Newman, on Kittitas Queen and Kittitas Queen 2d; 3, Schoel, on Bonnie.

Groups: Aged herd—1, Schoel; 2, Von der Heyden. Young herd—1, Newman; 2, Schoel; 3, Von der Heyden. Breeder's herd—1 and 3, Schoel; 2, Von der Heyden. Get of sire—1, Newman; 2, Schoel; 3, Von der Heyden. Produce of sow—1, Newman; 2, Schoel; 3, Von der Heyden.

Hampshires.

Exhibitors—S. E. Chaffee, Yakima, Wash.; J. M. Fruitts, Cambridge, Idaho; H. W. Hastings, Thornton, Wash.

All awards went to J. M. Fruitts, Cambridge, Idaho, except 1st in junior pig and junior champion, which went to S. E. Chaffee, Sunnyside, Wash., on Cherokee Monarch.

Tamworths.

Exhibitors—Allen Brown, Yakima, Wash.; G. E. McDaniel, Yakima, Wash.; I. J. Oder, Yakima, Wash.

I. J. Oder won all awards except the following: First on junior boar pig, third on aged sow and second in all group classes, which went to G. E. McDaniel, Yakima, and third in senior sow pig, which went to Allen Brown, Yakima, on Brown's only entry, Lookout Queen. Oder won all championships as follows: Senior champion boar, Colonel X; junior and grand champion boar, Bell Boy; senior and grand champion sow, Columbus Pet 1st; junior champion sow, Riverside Queen.

Sow and Litter, Any Breed.

First, T. S. Lester, Sunnyside, Wash., on Poland China; 2, Frank Von der Heyde, Wapato, Wash., on Chester White; 3, I. J. Oder, Yakima, on Poland China.

Fat Barrows.

Under six months—1, Orval R. Loe, on Berkshire; 2 and 3, Ward Rugh, Ellensburg, Wash., on Chester Whites.

Over six months—1, S. L. Woodhouse, Ellensburg, Wash., on Chester Whites; 2 and 3, Fruitts, on Hampshires.

Pens of three under six months—1, Rugh, on Chester Whites; 2, Loe, on Berkshires.

Pens of three, over six months—1, Fruitts, on Hampshires.

Champion barrow—Woodhouse, on Chester White.

Champion pen—Rugh, on Chester Whites.

THE SHEEP SHOW.

The sheep display brought out some strong classes, especially in the Hampshires show, in which the club boys from Kittitas county played a prominent part. There were also some fine Rambouillets and Shropshires, while the Lincolns from Oregon and Yakima herds made strong competition. Other breeds were satisfactorily represented. There was a good milch goat show, which was made up of three of the main breeds. A few Angoras were shown.

O. V. McWhorter of DuBois, Idaho, judged the sheep in all classes.

Exhibitors—E. W. Bailey, Naches, Wash.; Carol Robinson, Ellensburg, Wash.; C. H. Craig, Lowden, Wash.; H. S. Curris, Steveston, B. C.; E. N. Eagle, Toppenish, Wash.; Felzer Bros., Tangent, Ore.; Floyd T. Fox, Silverton, Ore.; Ed Farquer, Granger, Wash.; J. G. S. Hubbard & Sons, Monroe, Ore.; H. W. Hastings, Thornton, Wash.; Hastings & Comegys, Thornton, Wash.; E. F. Hubbard, Corvallis, Ore.; C. M. Hubbard, Pullman, Wash.; Alex. E. McCredy, Wapato, Wash.; Rowland Newman, Thorp, Wash.; Archie Prior, Yakima, Wash.; William Riddle & Sons, Monmouth, Ore.; William Riddle Jr., Monmouth, Ore.; State College of Washington; Ed. Schoel, Albany, Ore.; Archie C. Stewart, Aldergrove, B. C.; Ernest Wilson, Ellensburg, Wash.; Peter Wippel & Sons, Ellensburg, Wash.; S. P. Wippel & Sons, Ellensburg, Wash.; Harold Wippel, Ellensburg, Wash.

Rambouillets.

Rams: Aged ram—1 and 2, Craig. Yearling—1 and 2, Craig; 3, Schoel. Lamb—1, McCurdy; 2, Craig; 3, Schoel.

Ewes: Aged ewe—1 and 2, Craig; 3, Schoel. Yearling—1 and 2, Craig; 3, Schoel. Lamb—1 and 2, Craig; 3, Schoel.

Get of sire—1 and 3, Craig; 2, Schoel. Produce of ewe—1, Craig; 2, Schoel; 3, Stewart. Pen—1 and 3, Craig; 2, Schoel. Flock—1 and 2, Craig; 3, Schoel.

Champion ram and champion ewe—Craig.

Shropshires.

Rams: Aged ram—1, Felzer Bros.; 2, Stewart; 3, Fox. Yearling—1, Stewart; 2, Fox; 3, Felzer. Lamb—1, Felzer; 2, Stewart; 3, Fox.

Ewes: Aged ewe—1, Stewart; 2, Fox; 3, Felzer. Yearling—1 and 3, Stewart; 2, Fox. Lamb—1, Stewart; 2, Fox; 3, Felzer.

Get of sire—1, Felzer; 2 and 3, Fox. Produce of ewe—1, Fox. Pen—1, Fox; 2, Felzer. Flock—1, Stewart; 2, Felzer; 3, Fox.

Champion ram—Felzer. Champion ewe—Stewart.

Hampshires.

Rams: Aged ram—1, Hubbard & Sons; 2, Prior. Yearling—1, C. M. Hubbard; 2, Hubbard & Sons; 3, Prior. Lamb—1, Harold Wippel; 2, Wilson; 3, Newman.

Ewes: Aged ewe—1, Hubbard & Sons; 2, Hastings; 3, S. P. Wippel & Sons. Yearlings—1, S. P. Wippel & Sons; 2, Hubbard & Sons; 3, Wilson. Lamb—1, Harold Wippel; 2, Wilson; 3, S. P. Wippel & Sons.

Get of sire—1, Wilson; 2, S. P. Wippel & Sons; 3, Prior. Produce of ewe—1, Newman; 2, Wilson; 3, Prior. Pen—1, Wilson; 2, S. P. Wippel & Sons; Prior.

Champion ram and champion ewe—Hubbard & Sons.

Southdowns.

All awards in Southdowns went to Archie C. Stewart, Aldergrove, Alta.

Oxfords.

Rams: Aged ram—1 and 2, Fox. Yearling—1 and 2, Hastings; 3, Fox. Lamb—1 and 2, Hastings; 3, Fox.

Ewes: Aged ewe—1, Hastings; 2 and 3, Fox. Yearling—1, Fox; 2 and 3, Hastings. Lamb—1, 2 and 3, Hastings.

Get of sire—1 and 2, Hastings; 3, Fox. Produce of ewe—1 and 2, Hastings; 3, Fox. Pen—1 and 2, Hastings; 3, Fox. Flock—1 and 3, Hastings; 2, Fox.

Champion ram and champion ewe—Hastings.

Romneys.

Rams: Aged ram—1, Currie; 2 and 3, Riddle Jr. Yearling—1 and 3, Riddle Jr.; 2, Currie. Lamb—1, Currie; 2 and 3, Riddle Jr.

Ewes: Aged ewe—1, Currie; 2 and 3, Riddle Jr. Yearling—1 and 2, Currie. Lamb—1 and 2, Riddle Jr.; 3, Currie.

Get of sire—1 and 3, Riddle Jr.; 2, Currie. Produce of ewe—1, Riddle Jr.; 2, Currie. Pen—1, Riddle Jr.; 2, Currie. Flock—1 and 2, Riddle Jr.

Champion ram—1, Currie. Champion ewe—Riddle Jr.

Cotswolds.

All awards in Cotswolds went to William Riddle & Sons, Monmouth, Ore.

Lincolns.

Rams: Aged ram—1 and 2, Riddle & Sons; 3, Prior. Yearling—1 and 3, Riddle & Sons; 2, Stewart. Lamb—1, Riddle & Sons; 2, Stewart; 3, Prior.

Ewes: Ewe—1 and 3, Riddle & Sons; 2, Stewart. Yearlings—1 and 2, Riddle & Sons; 3, Prior. Lamb—1 and 2, Riddle & Sons; 3, Prior.

Get of sire—1 and 3, Riddle & Sons; 2, Stewart. Produce of ewe—1, Riddle & Sons; 2 and 3, Stewart. Pen—1, Riddle & Sons. Flock—1 and 2, Riddle & Sons; 3, Stewart.

Champion ram and champion ewe—Riddle & Sons.

Leicesters.

All awards in Leicesters went to E. F. Hubbard, Corvallis, Ore.

Dorset Horns.

All awards in the Dorsets went to Floyd T. Fox, Silverton, Ore.

Fat Sheep.

Middle wool (purebred, grade or crossbred): Yearling wether—1, Stewart; 2, Washington State college. Wether lamb—1 and 2, Washington State college. Pen of 3 wether lambs—1, Washington State college; 2, Stewart. Champion wether—Stewart. Champion pen—Washington State college.

Milk Goats.

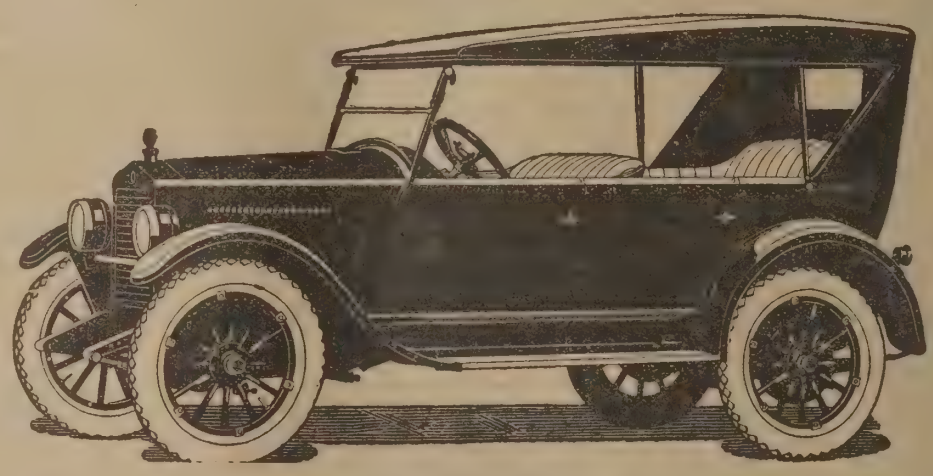
Purebreds, grades or crossbreds: Aged buck—J. M. P. Reed, Ellensburg, Wash.; 2, E. W. Bailey, Naches, Wash. Yearling buck—1, W. H. Higday, Donald, Wash. Buck kid—1, H. H. Abrams, Growmore, Wash. Aged doe—1, Abrams; 2, Higday; 3, Reed. Yearling doe—1, Bailey; 2, Abrams; 3, Higday. Doe kid—1, Bailey; 2, Higday; 3, Abrams. Champion buck, Reed; champion doe, Abrams.

WHEAT AT VANCOUVER, B. C.

Over 1,000,000 bushels of wheat has thus early been contracted for delivery at the port of Vancouver.



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You can have no appreciation of what this price buys until you examine and drive it.

To all that made Essex such a wonderful value in the past are added refinements and comforts never before offered in a car of its price class. Roomier seating, wider doors and greater riding ease, contribute something new in personal comfort.

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VETERINARY

(Continued from page eight.)

ounce of Fowlers' solution of arsenic on the feed once daily for two or three weeks; then give him a rest and repeat the treatment.

Tender Shoulders.—Is there any way of treating tender shoulders of horses to prevent gallings? E. M. K.

Apply glycerite of tannin to the shoulders once daily for a few days before the horse is placed on heavy work. If this can not be done, then apply the medicine to the shoulders with a little friction at night and let it toughen the shoulders by morning.

HELP WANTED—MALE 3

MEN WANTED AT ONCE TO FILL GOOD POsitions. You can qualify in few weeks. Experience unnecessary. Free employment department. Write for free catalogue 100-B, and rates. Modern Automobile and Tractor Schools, W1803 Third ave., Spokane, Wash., or 700 Mercer st., Seattle.

WANTED — SALESMAN WHO CAN SELL high-grade, dependable nursery stock; several counties in Oregon, Wash., Idaho and Montana now open for assignment. Our selling contract will interest you. Address Albany Nurseries, Inc., Albany, Ore.

SITUATIONS WANTED—Male 21

HONEST, RELIABLE SINGLE MAN, 45, wishes steady position on farm. H 15, Washington Farmer, Spokane.

FRESH FOOD PRODUCTS 51-1

"HONEY BRAND" HONEY — ALFALFA, sweet clover product; pure, light, thick, good flavored; gives satisfaction wherever used; I 60-lb. can, $6.50, two for $12.75. Write for circular and prices in pails. Oliver Sires, Wapato, Wash.

HONEY—400 TEN-LB. PAILS CHOICE ALfalfa, sweet clover honey; also 60-lb. cans and 5-lb. pails; discount on five-case orders or more. Write for prices and sample. Wm. R. Sires, Wapato, Wash.

WHITE ALFALFA, SWEET CLOVER HONEY; 1 60-lb. can, $7.50; 2 60-lb. cans, $14.50; six 10-lb. cans, $8.50; three No. 10 pails, prepaid, third zone, $5.50. Wells D. Rose, Sunnyside, Wash.

NEW HONEY, FINE QUALITY ALFALFA, sweet clover; 60-lb. can prepaid, second zone, $7.29; two, $12.75; not prepaid; 3 10-lb. pails, prepaid, second zone, $4.25. Harry Fisher, Prosser, Wash.

POPULAR BRAND HAPPY HOME HONEY— One 60-lb. can, $6.50; two cans, $12.75; six 10-lb. pails, $7.50; comb honey prices on request. H. N. Paul, Mabton, Wash.

FINEST NEW HONEY, 60 POUNDS, $7.60; 2 cans, $14.40; add postage; 10 pounds, $1.90; 5 pounds, $1 prepaid; satisfaction guaranteed. Geo. Bancroft, Hermiston, Ore.

NEW CROP ALFALFA-SWEET CLOVER honey; 60-lb. can, $4.75; two cans, $9 f. o. b. Rigby. Heckman & Larsen Honey Co., Rigby, Idaho. Quality guaranteed.

NEW HONEY—ALFALFA AND SWEET CLOver; 1 60-lb. can, $6.50; two, $12.75; discount on large quantities. Ernest Sires, Yakima, Wn.

DELICIOUS NEW CLOVER HONEY, 120 pounds, $9.75; 30 pounds, $3.25; won't crystallize. Browne, Box 499, Twin Falls, Idaho.

SMOKED SALMON, 5-POUND BOX, $1.25; salt salmon bellies, 5 pounds, $1.25, delivered by mail. Coffin Fish Co., Seattle, Wash.

APPLES—COMBINATION FANCY AND "C" Jonathans, dollar per box; packed, dollar fifteen. Stanley Arnold, Pateros, Wash.

HONEY — FRESH ALFALFA-SWEET CLOver honey; one 60-lb. can, $6.50; two cans, $12.75. A. L. Traner, Touchet, Wash.

COMB HONEY AT $4.40 PER 24-LB. CASE, express not prepaid. G. I. Folsom, Route 1, Prosser, Wash.

MISCELLANEOUS—FOR SALE 60

SASH AND DOORS—O. B. WILLIAMS CO., 1943 First ave. So., Seattle. Chicken house sash, 20" wide by 25" high, 80c; a dozen different sizes in stock for immediate shipment. Skylights for chicken houses, 36"x40"; price, glazed, $2. This is the size recommended by the Western Washington experiment station. We carry them in stock for immediate shipment. Sash and doors for all purposes at lowest prices. All orders receive prompt attention. Our large illustrated catalog No. 35, showing full line of building material and built-in fixtures for the home, free on request. O. B. Williams Co. Established 1899.

SACKS—SECOND-HAND GRAIN AND SPUD correctly sorted and graded; also pipe, new and second-hand, any size; standard roofing paper at a big saving; pumps, engines, belting, cables, etc. Alaska Junk Co., Inc., S120 Adams st., Spokane, Wash.

HOMESPUN TOBACCO SHIPPED COLLECT on delivery. Chewing, 5 pounds, $1.75; 10 pounds, $2.50; 20 pounds, $4.50; smoking, 5 pounds, $1.25; 10 pounds, $2; 20 pounds, $3.50. Farmers' Association, Paducah, Ky.

WALL BOARD—WRITE FOR SAMPLE OF Washington plaster wall board; won't warp, won't burn. Manufactured by Washington Building Products company, 6851 E. Marginal Way, Seattle, Wash.

NATURAL LEAF TOBACCO, CHEWING, 5 lbs., $1.75; 10 lbs., $3; smoking, 5 pounds, $1.25; 10 pounds, $2. Send no money, pay when received. Tobacco Growers' Union, Paducah, Kentucky.

ALL WOOL KNITTING YARN FOR SALE, direct from manufacturer at 95c, $1.35 and $1.60 a pound. Postage paid on $5 order. Write for samples. H. A. Bartlett, Harmony, Maine.

TOBACCO — KENTUCKY'S PRIDE; EXTRA fine chewing, 10 lbs., $3; smoking, ten lbs., $2; twenty, $3.50. Farmers' Club, Mayfield, Ky.

BUY YOUR ALFALFA HAY AND NETTED Gem potatoes direct from grower. Samuel Shockley, Box 185, Outlook, Wash.

MISCELLANEOUS—Wanted. 63

EGGS, APPLES, HUCKLEBERRIES—WRITE us. Uncle's Delicious Pies, Inc.; capital stock $50,000. 554 Mississippi avenue, Portland.

When answering ads, please don't fail to mention this paper.

FARMERS' WANT ADS

This is the farmers' "want," "sale" and "exchange" department for small advertisements of farmers, including live stock and poultry.

Advertising rates for ads running 1 to 3 times, 10c per word per insertion, with a special rate to Farmer subscribers, as follows: Ads running 4 to 12 times, 9c per word per insertion; ads running 13 times or more, 8c per word per insertion.

All commercial and land advertising 10 cents per word each insertion. Open also to nonsubscribers.

In using these columns advertisers must observe: (1) No advertisements will be inserted for less than $1.00. (2) Every word, number and initial, including name and address, must be paid for. (3) New advertisements, changes of copy or cancellations must reach general office, Spokane, Wash., 10 days in advance of publication date. (4) Cash must accompany order.

Above rates include insertion in The Washington Farmer, The Idaho Farmer and The Oregon Farmer, which constitute the Pacific Northwest Farm Trio, 46 Review Building, Spokane, Wash.

RADIO EQUIPMENT 89

RADIO SET, WESTINGHOUSE RC-2; TWO stages amplification, complete with "A" and "B" batteries, 3000 ohm Manhattan phones, aerial and ground. Receives broadcasted farm reports, news and music several hundred miles. Full directions for installation and operation. Special low price if taken at once, $146. Tubes for above set $16 extra. Address Sound Radio Sales, 600 Tacoma bldg., Tacoma, Wash.

RADIO—SPECIAL PRICE ON DETECTOR tubes, $4.50; amplifying, $5.75; postage prepaid. Send money order today. Sound Radio Sales, 600 Tacoma bldg., Tacoma, Wash.

RADIO—SPECIAL PRICE ON AERIAL WIRE. Number 14 bare, hard drawn copper, 55c per 100 feet. Address Sound Radio Sales, 600 Tacoma bldg., Tacoma, Wash.

MACHINERY—For Sale. 93

WILL TRADE 16 H. P. MOGUL INTERNAtional tractor for 25 h. p. stationary gas engine. Talcott Sawmill, Wahkiacus, Wash.

STOVE REPAIRING 128

WRITE MYER RUBENS, SPOKANE, ABOUT stove repairs, welding broken parts, nickel plating.

FUR-BEARING ANIMALS 170

SILVER AND CROSS FOXES FOR SALE. William Rambo, 407 Sprague, Spokane.

PETS—Dogs, Birds, Etc. 171

WHEN YOU WANT A DOG, CANARY, PARrot, rabbits or a pet or pet stock supplies, cages, feeds or remedies, write. We are headquarters in the northwest. Routledge Bird, Pet & Animal Co., 174 Union avenue, North, Portland, Ore.

FOR SALE—GOLDEN FOX TERRIERS, TWO months old, females, $10. M. Dilley, Scappoose, Ore.

BEAUTIFUL WHITE COLLIE PUPPIES; reasonable prices. Urbandale Farm, Oakley, Idaho.

FINE FOX HOUNDS, PUPPIES; GUARANteed strain. Hugh Morrison, Route 8, Spokane, Wash.

RABBITS and HARES 173

WRITE FOR PRICES ON NEW ZEALAND Red rabbits. East Larchmont Pet Stock Farm, R. 4, Box 49, Tacoma, Wash.

POULTRY 174

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POULTRY (Continued) 174

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FAIRS 370

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SHERMAN COUNTY FAIR, MORO, ORE., OCT. 11-14, 1922. Write for premium lists. W. S. Carpenter, Secretary, Moro, Ore.

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PIKE'S PEAK OR BUST

By LEWIS B. MILLER

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SYNOPSIS.

Esau Haggerty, a strong man of mature years, and Orlando Medford, a young, slightly built and frail companion, have started from their Illinois home town for the great gold diggings of the west. Esau is pushing a provisions-laden wheelbarrow. Orlando is leading a cow. They struggle slowly westward, meeting up with others also headed for the gold diggings. With a party of men traveling by handcart they all but starve for water on a desert, but dig a well and escape. They meet with a family by the name of Cooper, one member of which is a girl of years and manner that at once captivate young Orlando, who delights in keeping near her prairie schooner as they journey on. Once the entire party gives up the westward trip when they meet discouraged gold seekers returning, but Orlando and Hazel Cooper induce them to turn to the west again. They have many interesting experiences on the way, finally coming upon a great Indian camp. Not many days later they sighted Pike's peak, and a little later plodded into a little frontier town that has since grown to be the great city of Denver, Colorado. Here they learned that a rich gold strike had been made not far away at what was called Gregory's diggings. They mail letters to the folks back home and hurry on toward the place of the strike. At the foot of the mountains the women and children are left in camp to care for most of the supplies, while the men travel on foot into the steep interior. They pitch their first camp well up among the rugged Rockies.

CHAPTER THIRTEEN.

At the Gregory's Gulch Diggings.

The foot travelers' camp was not far from the bank of a small but noisy mountain stream. Pine trees grew all around, and they had to rake back the pine needles before kindling their fire. Not far away, luckily, was a little patch of grassland, where Brindle could find her supper. Other travelers were camped scarcely a stone's throw off, some on their way to the gold diggings, other returning to Denver.

Being weary after their unaccustomed exertion of mountain climbing, the company of 10 had camped early. And they ate their supper before dark. After supper Orlando took his gun and, followed by Frisk, strolled away down the branch. In spite of his weariness, he was feeling unusually cheerful.

He was supposed to be hunting for game. But, when well out of sight of the camp he stopped, set his gunstock on the ground and took a little black case out of his pocket. Opening the case, he stood gazing at a daguerreotype of Hazel Cooper. She had given it to him only the day before. Not caring to open the picture where all that crowd of men could see, he had come away on purpose to be alone.

He had also intended to do some hunting, but so much time did he spend gazing at the picture that he returned to camp, at dusk, without any game. But it seemed to him that he had made some progress in his courtship. Besides having the daguerreotype, he was now traveling in a mining party with the girl's father. Orlando was usually careful of his words and conduct, but he resolved to be more careful than ever before. Whether Cooper himself had any thought of such a thing or not, the young traveler could not help feeling that he was on trial as a son-in-law.

Next morning the party ate their breakfast in the dim, chilly dawn, then packed up and marched on toward the gold diggings.

It was about the middle of the forenoon when, going down a steep mountainside, they found themselves in Gregory's Gulch. This was the scene of the greatest gold excitement in all the Rocky mountain region. Here had already been discovered mines which, in the years to come, would prove the richest in the as yet unheard-of state of Colorado.

At this time there were 5000 or 6000 people in Gregory's Gulch. They were strung up and down the gulch for miles and were living in tents, or under brush sheds, or in the rudest of pine log cabins. Some of the cabins were covered with tents, and a few with hand-sawn planks, or with the usual layer of dried mud on logs and grass. But most of them could boast only a roof of brush.

Besides the thousands of men who swarmed everywhere, there were women, a good number of them, in camp. Most of the women were busy along the stream, washing clothes. At the prices they were reported to receive, they doubtless washed out more gold than most of their miner husbands were washing out.

After passing through the busiest part of the gulch, till they came to the far side of it, the newcomers established their camp. Leaving the cart and Brindle there, all the men but one started out to learn what they could of gold mining. Nof a man of them had had any mining experience, and it was important that they gather up all the information possible.

The first and most discouraging fact they learned was that every desirable claim in Gregory's Gulch was already taken. Claims were changing hands constantly, some being sold for several thousand dollars apiece. The miners found no gold in the creek bed, they reported. The gold they obtained came from washing out "rotten quartz," as they called it, which they dug up on the mountainside or at the foot of the mountain.

Here, for the first time, these people fresh from the states saw what was termed sluice mining. When a miner had dug up some earth he carried it to the creek and emptied it into a long wooden trough, through which a stream of water was flowing. The swift current would carry on the dissolved earth, but the heavy particles of gold would drop to the bottom and lodge against cleats.

Most of the miners, however, were merely using pans. Filling their mining pans with earth, they would go to the stream's edge and keep washing, carefully, till the earth and sand were washed away and only the gold remained. The pans were made of black iron, so that the yellow particles of gold would be easily visible against it.

One miner, whom the newcomers watched at his work, washed out, while they were watching him, a panful of dirt that left him more than $5 worth of gold.

"Can you do that well every time?" questioned Orlando, eagerly.

"No, I cain't—you bet your bottom dollar I cain't! If I could—if I only could, I'd mighty soon be well enough fixed to strike back for the states. Done better'n this, though, I have. Lot's better. One pan I washed out a few days ago paid me jest a lettle up'ards of $17. Big trouble is, pans that pays well is few and fur part. Most of 'em pays little or nothin'."

As the sightseers strolled on from claim to claim, they learned that some of the miners—those who had the best claims—were washing out good pay for their work. But many of them were not earning as much as what they were eating cost.

Besides the miners, there were many people here who made their living in various ways. Some men had brought cows to the gulch and were selling milk to the miners. The animals found good grazing on the mountainsides, and the milk brought high prices. One of these milk peddlers, with whom Orlando talked, complained that, unless he watched his cows all the time, he had much trouble to keep other men from milking them on the sly.

After remaining together for a little while, the party of nine had scattered, each wandering wherever inclination led him. Not till their noontime appetites drove them back to their own camp did they all come together again. Now they compared experiences, each exchanging what he had learned for what all the others had learned.

When they had discussed the situation in all its details, Cooper announced his conclusion: "From everything I can pick up, all the pay claims here have some fellow roosting on 'em. We're every one as green as grass about this gold-mining business. About all we can do here is to learn the best methods. Then when we find some good place to take up claims we'll know how the thing's done."

"But if we don't dig here, where can we go to do better?" demanded Orlando.

"Oh, we've got the whole Rocky mountain range to prospect over," Sanders reminded him. "Just about as apt to be gold in one place as another, as far as I can make out. Worlds of room here for everybody that comes."

"Even here most of the miners are not washing out dust enough to pay their board," Givens remarked. "It's a sort of lottery, this whole mining business."

"Of course, Jeff. I knew that before I started from home," spoke Holloway. "I'd had a good chance to learn. You've heard me tell about it already, but the others haven't. Five years ago this spring I started with a big drove of beef steers from Texas to California. We couldn't get through to California, as it happened, so we turned east and drove to Missouri instead. I stopped there and got married, and I've been living in Missouri and Kansas territory ever since.

"But what I began to say was that the three owners of the cattle, Joe Burgess, Jeddy Johnson and Phil Gregory, were all from California. That is, they'd gone out there in '49 and spent years in mining. Most of the time they made barely enough to exist on. But at last they struck it rich—dug up $30,000 or $40,000 in gold. In spite of that, though, Burgess always declared that gold mining is the veriest gamble. He insisted that it cost somebody $2 for every dollar dug out of the mines. A few people strike it rich, he said, like he and his partners had done. The others don't get back the money they spend, much less pay for their back-breaking labor."

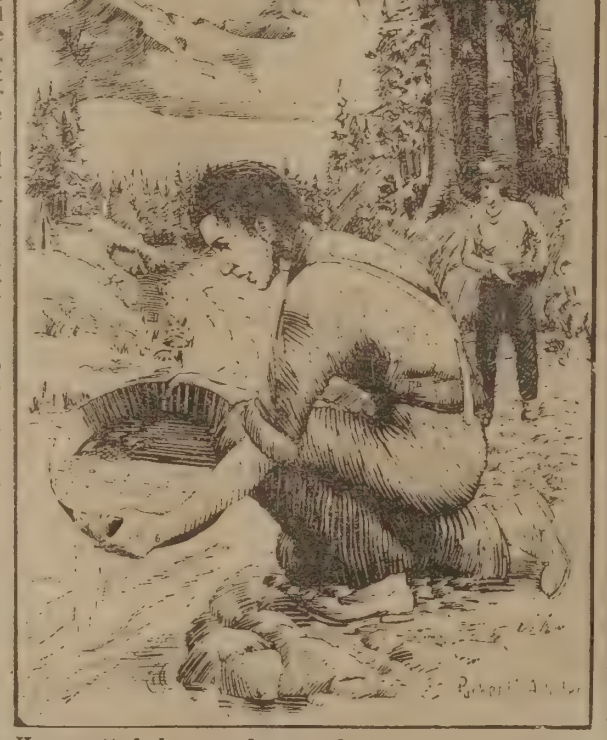
"That was a mighty discouraging way of looking at mining, Holloway," Cooper commented. "After hearing that from a man who knew, I marvel that you got up spunk to start out and try mining on your own hook."

Holloway laughed. "Well, there's always a chance, you know, that you'll be the lucky fellow—the fellow to strike it rich."

"Yes, we're all hoping to draw a big prize in this gold-mining lottery. That's what drove us out to this wild region," Sanders put in.

"And then there's the experience, boys," suggested Cooper. "As I've already said to some of you, I think it's worth a whole lot to have interesting things to think about and talk about. Our journey across the plains, though not very exciting, was full of interesting happenings. And then look at what we see here. We'll never live long enough to forget this, or to quit talking about it. I'd crossed the plains before, but this is my first experience in a gold miners' camp. I wouldn't have missed this busy, buzzing beehive for anything."

After eating and resting, most of the party wandered away through the mining camps again. And the first thing of interest they noticed was a Mexican pack train. Several Mexicans had come from New Mexico, driving a number of burros loaded with flour and meal. They had halted near a stream and were selling their stuff about as fast as they could measure it out.



He squatted down and proceeded with the washing.

Leaving the rest of their party talking to a miner, Orlando and Esau strolled on. At length they came to a covered wagon, which was standing not more than 50 yards from the creek. There they found Esau's acquaintances, the Hinksons. The woman, with a tub, a big pot and a fire by the stream's edge, was washing clothes. Her husband was working with a miner, and the youngest children were playing about.

"Well, got you a claim a'ready, I see," Esau remarked to Hinkson.

"Nope. We jest stopped here for a little while, and I've hired to this man to help him till I make up my mind what to do. Ain't no very good chance here to try any minin' on my own hook, as fur as I can see. We're all busy enough, though. I'm swingin' a pick and mammy's got some washin' to do. Becky, she's away up yander on the mountainside, whar you hear them two bells, a-mindin' the steers and the cows. Reckon maybe we'll have some milk to sell after our cows picks up a bit."

Esau and Orlando now moved on. After a little while they separated, each wandering away in search of the things that interested him most. During the afternoon Orlando chatted with no telling how many miners and saw many new things. Here and there he passed a tent where groceries were sold, all at amazingly high prices. A number of men he saw who were dressed differently from the miners. One of those, whom he stopped to interview, explained with evident pride that he was a gambler. Other tents the young sightseer passed where, as a bold but crudely-lettered sign never failed to make known, strong liquors were sold. Night was coming on when the young man returned to his own camp.

There he found most of his party, and the others arrived a little later. Each of them had many things to tell, and was eager to tell them.

Holloway had happened upon some former acquaintances—the men he had started with on the Smoky Hill route. They had kept on, and had succeeded in getting through to water, though not till they had driven 80 or 90 miles without it. But they had experienced even worse times afterward. Having come to where there was no grass, they had been under the necessity of feeding all their meal, flour and beans to their oxen, to keep them able to travel. Still later, there being little game the men themselves had been forced to eat such things as they could find. Two or three times they had feasted on owls, and once, so extreme was their hunger, they had been driven to kill a rattlesnake, cook it and eat it.

"My! But ain't I glad we three had the gumption to turn back when we did?" Holloway exclaimed, after relating what he had been told.

Two of the handcart's crew had come upon a relative of theirs, from Indiana. The man had a claim near the upper end of Gregory's Gulch. And two other men, partners of his, had claims by him.

Early next morning Orlando and Esau walked over to the creek to wash some of their clothes. While they were thus employed, and chatting with the miner whose claim they were on, they saw a rather numerous company advancing down the road into the gulch. One of these proved, on coming nearer, to be a striking-looking figure. He was mounted on a mule. After the party had passed on up the gulch it was learned that several of them were newspaper correspondents. And the mule rider was no other than Horace Greeley, already famous as the editor of the New York Tribune. Several years later he would be a candidate for the presidency.

Orlando had heard and read much of this man, and he had also read the weekly edition of his paper more or less. He saw him several times during the day, and when word passed through the camp that Greeley would make a speech, both he and Esau were among those who assembled to hear him.

The meeting was held just before sunset, after the miners had ended their day's work. Perhaps 2000 men came together in a grove of pine trees to listen to what the famous editor had to say. Having been among the first to arrive at the appointed place, Orlando stationed himself close enough to where the speakers stood to hear every word. Others of the newspaper party spoke, but Orlando was interested mostly in the editor of the Tribune.

Greeley was a benevolent-looking man, with a very bald head and a face smoothly shaven, except for a fringe of billy-goat whiskers under his chin. He was not a particularly pleasing speaker. In fact, the young man was somewhat disappointed in the speech as a whole. But the sentiments were excellent. The speaker urged his hearers to live as if they were among their families at home, instead of being out here in a wild mountain gorge, hundreds of miles from civilization.

The speaking over, the miners scattered to their claims, and Orlando and Esau went back to their own camp. They saw the editor again next morning when he was returning to Denver on muleback, as he had come.

Not very long after the newspaper men had disappeared up the mountainside the 10 gold seekers who had come in together assembled around their campfire to decide what to do. They had been here long enough to undertsand the situation as well as they were likely to understand it.

Sanders was the first to utter his sentiments: "For my part, I wouldn't give a bawbee for our chances here. We're too late to grab any claims worth working."

"Exactly my opinion, that is," agreed Cooper. "But then another question bobs up: Where can we go to better ourselves?"

"I've been told there's a chance to get good claims over to the west of here, on Clear creek." Jess Holloway was speaking. "There's a new mining camp just starting up over there, and it may turn out as rich as these Gregory diggings. From all I can learn, that seems as good a place to try our luck as any."

"Yes, I've listened to ever so much talk about that Clear creek camp," Sanders said. "In fact, I've tried to rake up all the information I could from miners who've been there. Must [illegible] rather favorably of the pl[illegible] I'd be perfectly willing to t[illegible] way and see how the outloo[illegible]

Several of the others ex[illegible] selves as being willing to m[illegible]

(Continued from page twenty-two)

FAMILY CIRCLE

ALICE BARLAND
EDITORIAL CONTRIBUTOR

Experience Letters

From Our Family Circle Women

Dear Mrs. Barland: Will you allow a grandmother to send in a line on child training, that others may profit by some of her sad mistakes?

One of my worst mistakes was slapping children in the mouth for "sauciness" or talking back. I did not think I was slapping hard at the time, but one of my daughters would be a very handsome woman except for her crooked teeth, which have spoiled the shape of her mouth in such a way that dentists say artificial teeth will not remedy it.

I am sure my slapping her did the damage, as the other children, who were never given to talking back, all have lovely teeth. They escaped that punishment. I have thought since how much better it would have been to have made her sit in a corner for a while, increasing the time on a second or third offense.

See if you can not start a sunshine club in your family. Prepare a card with two lines against the names of each member of the club, one on the first line marked sunshine, the second marked clouds. Put a cross for good behavior and a black ball for disobedience and bad temper, etc. It might add to the interest of the club if father's and mother's name headed the list. (It would be a good idea if a system of canceling the black balls was followed, say, after two days of very good behavior to cancel the black balls and start again.—A. W. B.)

Mothers, teach the little ones to help you, even while they are only 3 or 4 years old. They can dust and pick up their toys and if you provide a little box cupboard to hold them the children can be taught to be orderly. One can be made out of a small box with a pretty little curtain in front.

Always answer your children truthfully. You can not expect them to tell the truth if you do not do so.

It is a great privilege to be a parent, but too few are worthy to be guides to the dear children. Few children are bad at heart, but get led into badness. One should never speak of a child's faults to others or before the child. It is humiliating and makes the child feel rebellious and inclined to live up to the name he has been given for badness. There is good in every one if we will but look for it, but we are too prone to see the bad, and, worse yet, to call the attention of others to it instead of directing our thoughts toward the good traits. A GRANDMOTHER.

Oregon.

Dear Mrs. Barland: In an effort to do my bit for the Circle page I am going to give my experience in making pin money on the farm. I shall be very glad to hear from others along the line of pin money.

Two years ago this spring I asked my husband to get a few new-born lambs from a flock a few miles from us. The sheep were to follow the range and we were given five lambs which were twins and would be too much for the mothers.

We purchased lamb nipples from the drug store and fed them from bottles on whole milk for about two weeks and then on skim milk until they were eating grass well. From time to time we added a tablespoon of salad oil to the milk to guard against constipation. They grew wonderfully well and in September brought $32.50 on the market at 9 cents a pound. I felt well repaid for the interesting experiment.

I also invested in a few sittings of pure strain Rhode Island Red eggs. The next spring I was selling hatching eggs at 75 cents a sitting or $4 per hundred. I have 40 hens culled for color and laying qualities and they are bringing into the family treasury about $10 a week during the hatching season. One must have the blood lines back of the stock and then advertise. This fall my fries and culls will net me a nice little bank account.

I hope to have at least 100 laying hens this winter. No other line on the farm has paid such large returns for the small investment. MRS. H. R. V.

Idaho.

Dear Mrs. Barland: Could another busy mother enter the Circle?

I will give a few things I have learned that I hope will help some one. Iodine can be removed by kerosene; also kerosene will remove grease spots old or new from a floor; pour it on the spot and [illegible] to evaporate.

[illegible] us. Uncle [illegible] remove black hat dye.

$50,000. 554 [illegible] MRS. H. C.

When [illegible] Barland: For years back I don't fail [illegible] subscriber of this paper and [illegible] very many things that have [illegible] helpful, and I enjoy it week by week as it comes. The Family Circle is my favorite and I find comfort and cheer on that page many times.

The life of a farm wife is not all cloudless, especially one with small means. But no matter how limited is one's income there can be happiness in the home, for that is something money can not buy.

I have always worked hard, saving in all ways, but still the time is not yet in sight when I can realize my ambition nor even provide myself with the modern conveniences with which to lighten the work of the house. But I am hoping the time will come when I can have these things. I am thankful for what I have. The children are growing up fast and will soon be gone. For them I have sacrificed everything, have given my all and they are my fortune and my joy. I wish we could keep them always with us.

Only three times have I met with any one who could speak the tongue of my native land, the most beautiful part of the world, French Switzerland.

MARIETTA.

Dear Mrs. Barland: I enjoy the Circle letters and I wonder why so many withhold their names. I read the letters and am anxious to know the names to see if I know any of the writers.

I wonder how many of the sisters caponize their roosters? I have done so for two years and when you have eaten a capon once you will want them ever after. My capons mother my little chicks and make the best of mothers.

MRS. H. B. KINNEY.

Prosser, Wash., Route 2.

In a recent issue of THE FARMER the printer made me say "the Majestic carries 41,000 passengers"; it should have said 4100. A. W. B.

Your Health

By Royal S. Copeland, M. D., F. A. C. S.

A few weeks ago I went to Chicago to accept honorary membership in the "One Hundred Year club." The president is Dr. Josephine Paine, an enthusiastic advocate of the doctrine that nature constructed the human machine in so painstaking a manner as to make it capable of successful operation through a full century.



Dr. Copeland.

In inviting me to the meeting, she wrote that the object of the club is to defeat Father Time by conserving youth and spreading health propaganda.

This organization believes that the knowledge and practice of the fundamentals of hygiene and correct living inculcate the spirit of youth and efficiency. It believes this sort of living increases the useful years and makes glorious, rich and beautiful the sunset of life.

Here is the inspiring motto of the club: "Young at 50, efficient at 80, remain happy at 100."

By right living and right thinking the average person should live to be 100. Not only should he live to be 100, but, like Moses, his eye should be undimmed and his natural force unabated.

The most fallacious thought in the world is the accepted belief that threescore years and ten mark the limits of human life.

Old age is a matter of physical neglect, almost invariably founded on ignorance or bad advice.

The human family is progressing in length of life. Fifty years ago in my city the expectation of life was 42 years. Now it is 53 years. There is no reason why it should not grow better with each new decade.

These figures refer to the public health, to the mass. So far as the individual is concerned he can do as he likes with his own life. If he has the character, the willpower, the perseverance, and adds to them the knowledge of how to live, he should look forward to 100 years of efficient life.

You can not indulge your appetite, stay up nights, expose yourself to all the extremes and live to the century mark. But if you can get set to a sensible and simple way of living and will heed the early complaints of your body, you may be a worthy candidate for 100 years of useful life.

There are 3500 men and women in the United States past 100 years of age.

I am proud to be a member of the One Hundred Year club. I like the spirit of my co-members. Won't you join us in the determination to live to be 100?

Just Folks

Hunger is king.

To look up is to go up.

Literature includes a lot of unnecessary things.

Half thoughts are better than no thoughts.

The extraordinary does not count in the grand total.

It has long been my opinion that our common schools should be of continual service to the public and not be merely a charge on the public. We are overlooking the tremendous aggregate of boy and girl power in our schools. These services of a public nature, which can be rendered by the school children, will as well add much to the value of their education which they are now receiving in the schools.

I am reminded of this by the news item that J. A. Churchill, state superintendent of schools of Oregon is sending out literature to 7000 teachers in Oregon dealing with the white pine blister rust, which, reports indicate, is destroying many thousands of dollars' worth of valuable timber in different parts of the state.

It is the purpose of the state superintendent that the teachers shall instruct their pupils how to detect the disease, which usually is found on white pine trees, currants and gooseberries. Presence of the disease, according to the literature, should be reported to the state superintendent of schools, who later will transmit the reports to the government officials at Washington.

Some years ago at a dry farming congress in Lethbridge, Alberta, I was talking with government weather experts, and they were emphasizing the importance of a larger number of volunteer weather observers, the need of a larger amount of data on the rainfall. I inquired if there was any good reason why every rural school should not be a weather station to gather this data, and if the teacher and pupils could not observe and record the needed information. They agreed that it was entirely practicable; that the instruments would cost only a few dollars and there was nothing intricate about the work. This little addition to the school duties would be eminently educational as well.

There are a lot of other ways by which the schools could help out in public ways, and help themselves in the ways of knowledge as well. E.A.S.

Home Recipes

Grape Juice: First heat the jars, then to each jar put in one cup of grapes and one-half cup sugar, fill the jar with boiling water and seal air tight. Be sure to have your jars in hot water, then add the boiling water slowly. The juice will not have much color at first, but in a few weeks it will be ready to use. Shake the jars gently while still hot to stir the sugar.

RUBY A.

Dear Mrs. Barland: I think it well to give quite a little attention to the floors in a house and find that a well-kept floor is easy to clean and always looks nice.

I make my floor wax at home and it is very inexpensive and just as effective as what you buy. It is suitable for any varnished floor and as good for furniture. Here it is:

Floor wax: One pint turpentine, four ounces beeswax; ammonia water, three ounces; water, one pint. Mix the beeswax and turpentine and heat by placing the vessel containing them in hot water until the beeswax dissolves, then remove and add the ammonia and water and stir vigorously until the mass becomes creamy. Never heat the mixture over a direct flame, as the turpentine is explosive. This floor wax should be applied in very thin coats and thoroughly rubbed in with a heavy wax brush wrapped in burlap or coarse carpet.

MRS. EMMA M. MURPHY.

Washington.

Dear Mrs. Barland: Will some one who has a specially good way to prepare a roast of beef write and tell all about it? What spices or savors should be used and how much salt?

I will give my recipe for sour dough hot cakes: On quart of flour, two teaspoons of baking powder, one teaspoon soda, two eggs beaten separately, two cups sour milk enough sweet milk to thin the batter. Save out almost a pint and the next morning use this instead of sour milk for hotcakes. The sour dough will grow better after four or five days.

MRS. GUY ALLGIN.

Ellensburg, Wash.

DOUGLAS COUNTY PRUNES.

Douglas county estimates a prune crop this year of about 15,000,000 pounds, bringing about $1,250,000 into the county. Many of the producers have sold their prunes at 10 cents a pound. Others are holding for more.

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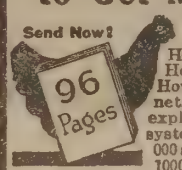
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High Points in News of the Week

The war between Turkey and England, and possibly involving several European nations, apparently has been temporarily if not permanently averted. England, France and Italy have agreed upon terms of settlement in the controversy that are believed to be agreeable to the Turkish leaders. A conference with the Turks has been called and steps are now being made for an armistice pending the actions of the conference. The terms agreed upon by the allies will permit Turkey to take possession again of eastern Thrace, on the European side of the Dardanelles, the sea of Marmora and the Bosphorus, from which the Turks were expelled during the recent World war. The Dardanelles is a narrow neck of water connecting the southern tip of the sea of Marmora with the Aegean sea, which in turn opens into the Mediterranean. The Bosphorus is a similar neck of water connecting the northern tip of the sea of Marmora with the Black sea. The three combined form a division between southern Europe and south Asia, or Asia Minor, and are a natural channel of commerce between the interior of Asia, primarily Russia, and the civilized world. At the present there is a neutral strip of land the entire length of this outlet and the terms agreed upon by the allies provides that it shall remain neutral and that the outlet shall remain open for free world commerce.

* * *

The 67th congress adjourned last week, not to meet again until the opening of the next regular session in December, unless President Harding calls for a special session, which is understood to be probable. A summary of the important measures enacted by the session now ended includes the following:

The tariff bill as completed last week; creation of the allied debt funding commission; appropriation of $20,000,000 for Russian relief; appointment of a "dirt farmer" on the federal reserve board; cooperative marketing by farmers; regulation of grain futures so as to meet the supreme court decision, making the original Capper-Tincher law inoperative; creation of 25 more federal judges; extension of 3 per cent immigration quota law for two years; scrapping of naval vessels in accord with the arms conference treaties; reorganization of the patent office with an increase in its force; reorganization of the basis of pay of army, navy and marine officers; decrease in personnel and expense of army and navy; monthly payment of pensions; development of rivers and harbors; appropriation of $7,500,000 to continue work on the Muscle Shoals, Ala., power project; appropriation of $1,500,000 to loan farmers for seed grain; appropriation of $500,000 for prosecution of war frauds; continuation of wartime bonus pay of federal employees.

* * *

In the senate last week Senator Borah of Idaho made public a letter from Bernard M. Baruch, former head of the war industries board, declaring that there could be no justification for the cancellation of the American loan to Great Britain, because the British government had used a substantial part of the proceeds to build ships for her mercantile fleet, purchase food for her civilian population and engage in other commercial enterprises.

At no time has THE FARMER been in sympathy with this hysterical, sentimental crusade for the cancellation of the $11,000,000,000 owed to us by European allies. It is especially ridiculous to argue that we should cancel the more than $4,000,000,000 that Great Britain borrowed from us during the war.

In the first place, Great Britian's territory was not devastated by the war.

In the second place, she is demanding indemnity from Germany, while the United States is not claiming a dollar of reparations.

In the third place, as a result of the war, Great Britain vastly increased her possessions, while the United States did not take another acre of territory. We had hoped that the agitation would die out in Great Britain and that the British people would have too much pride to keep resurrecting this question after the facts were weighed.

Any administration or any congress that might dare to make a gift of that $11,000,000,000 owed to us by the allies would quickly feel the just indignation of the American people.

* * *

The federal court of Chicago last week sustained the government's plea for a country-wide temporary injunction against striking railroad shopmen. The injunction is a continuation of that issued three weeks ago and is designed to prevent interference in any way by the strikers with the operation of the railroads.

* * *

President Harding signed the tariff bill of 1922 September 21 in the presence of Chairman McCumber of the senate finance committee, Chairman Fordney of the house ways and means committee, a number of house members and others.

Remarking that the measure had been "long in the making," President Harding, after he had affixed his signature with a pen presented to him by Mr. Fordney, who said he intended to keep it as a souvenir, said that "if we succeed as I hope we will succeed in making effective the elastic provisions of the bill, this will prove the greatest contribution toward progress in tariff making in a century."

* * *

President Harding has issued a proclamation designating Monday, October 9, as National Fire Prevention day. The fire waste in the United States year after year, the president declares, reaches appalling figures, which are not approached in any other country. He adds, there ought to be ways to minimize such losses. The Chamber of Commerce of the United States announces that local commercial bodies throughout the United States "will take the lead" in observing the fire prevention week from October 2 to 9. In placing before business associations a suggestive program for the week, the United States Chamber of Commerce says:

"Property valued at about $7,869,000,000 was destroyed by fire in the United States in the 40 years ending with 1921. The loss during the last year of this period was approximately six times as great as that of the first year. In 1921 more than 15,000 lives were lost and property valued at $500,000,000 was destroyed by fire. This was simply the total of many separate fire losses and was not the result of any great conflagration.

"During the first seven months of the current year, property valued at $230,000,000 was added to the nation's ash heap."

* * *

The Capper-Tincher bill providing for regulation of trading in future on grain markets has been signed by President Harding.

Under the provisions of the bill, Secretary Wallace said, exchanges are prohibited from discriminating against cooperative associations of grain producers who may desire membership in order to obtain use of the facilities of the exchanges.

Undue manipulation, attempts to corner the market and the dissemination of false or misleading information about crops or markets can be prevented under the law.

The secretary of agriculture also has power to examine the books and records of the members of the exchanges and to require such reports as may be necessary to carry out its provisions.

The reports that this law will put the exchanges out of business or interfere with their legitimate functions are without foundation, the secretary said.

* * *

Governor Kendall of Iowa in a statement last week, said he believed it would be wise for the government to transfer to cereals for two weeks the priority now enjoyed by coal so that the farmers of the Mississippi valley might dispose of their surplus before a further break occurs in prices.

"The car shortage in Iowa," Governor Kendall said, "is a serious embarrassment to all industry and enterprise, and it is one of the most difficult to remedy."

* * *

Investigation preceding the veto of the bonus bill by President Harding brought out the statement that a deficit of $650,000,000 faces the country for the fiscal year which began last July and ends June 30 next.

FOR BOYS' AND GIRLS' CLUB PRIZES.

Approximately $450,000 is being provided by the various counties in the United States this year in prizes for the boys and girls in club work. Many county farm bureaus are contributing liberally. The total amount being offered in prize money to boys and girls this year to encourage the work is $734.000.

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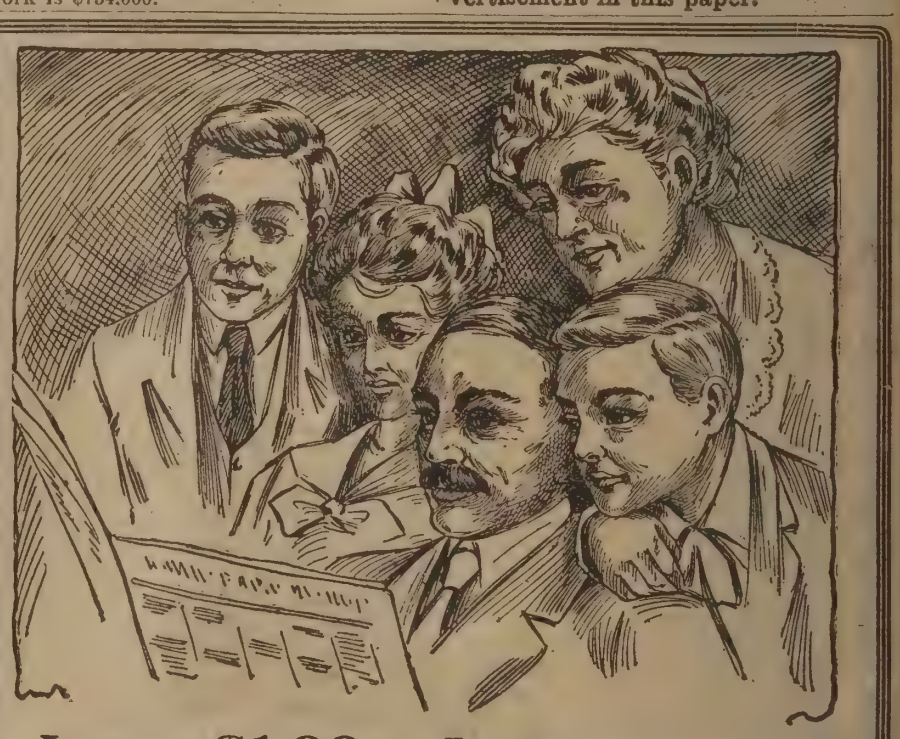
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Farm Business and Markets Outlook

(Continued from page five.)

$1.20. Yesterday's car receipts: Wheat, 70; corn, 3; hay, 1; flour, 15; oats, 3.

PORTLAND, Ore., Sept. 23.—Wheat, hard white, Bluestem, Bart, $1.18; soft white, western white, $1.09; hard winter, $1.06; northern spring, $1.07; western red, $1.02.

DAVENPORT, Wash., Sept. 23.—Bluestem, $1.05; Marquis, 98c; Gold Coin, 92c.

PULLMAN, Wash., Sept. 23.—Red wheat, 87c; white wheat, 90c.

WALLA WALLA, Sept. 23.—Bluestem and Bart, $1.02; club, 93c; Turkey red, 90c.

RITZVILLE, Wash., Sept. 23.—Bart, $1.11; Red, 94c; Fife, 88c.

ODESSA, Wash., Sept. 23.—Marquis, Bluestem and Bart, $1.11; Turkey red, 95c; Jones' Fife, 91c.

DAYTON, Wash., Sept. 23.—Club wheat, 94c; red, 90c.

Hay and Grain Feed.

PORTLAND, Ore., Sept. 23.—Millfeed—Price f. o. b. mill: Mill run, ton lots, $27; middlings, $39; rolled barley, $36@38; rolled oats, $42; scratch feed, $44 per ton.

Corn—White, $35; cracked, $37 per ton.

Hay—Buying prices, f. o. b. Portland: Alfalfa, $18@18.50 per ton; cheat, $15; oats and vetch, $20; clover, $18; valley timothy, $20; eastern Oregon timothy, $20@21.

SPOKANE, Sept. 23.—Wheat—Feed wheat, $40 per ton.

Oats—$40 per ton; steam rolled, $42.

Corn—$36 per ton; cracked corn, $38 ton.

Barley—$42; steam rolled, $44.

Bran and Shorts—$32 per ton.

Alfalfa, $22 ton; timothy, $24 ton; mixed hay, $22 ton.

General Produce.

PORTLAND, Ore., Sept. 23.—Butter—Cubes, extras, 41c lb.; prints, parchment wrapped, box lots, 46c; cartons, 47c. Butterfat, 46c delivered station; buying price, A grade, 43c.

Eggs—Buying price: Current receipts, 34@36c per dozen; henneries, 38@39c per dozen. Jobbing prices: Front street, candled ranch, 39c; selects, 42c. Association, selects, 42c; firsts, 40c; pullets, 36c.

Cheese—Tillamook triplets, price to jobbers, f. o. b. Tillamook, 26c; Young Americas, 27c; longhorns, 27c pound.

Poultry—Hens, 12@22c lb.; springs, 18@22c; ducks, 15@22c; geese, nominal; turkeys, nominal.

Veal—Fancy, 15½@16c per pound.

Pork—Fancy, 15c per pound.

SPOKANE, Sept. 23.—Poultry—Fat hens, 17c lb.; light hens, 10c lb.; roosters, 8c lb.; spring chickens, over 2½ lbs., 14c; broilers, 1½@2½ lbs., 16c lb.

Fresh ranch eggs—$9@10.50 case; no storage.

Butterfat—43c a pound.

SEATTLE, Sept. 23.—Eggs—Select local ranch, white shells, cases included, 37c per dozen; mixed colors, 36c per dozen; pullets, 26c per dozen. Cases returned to shipper, 1c less.

Butterfat—F. o. b. Seattle: A grade, 48c per lb.; raw milk, $2 per cwt.

Poultry—Hens, 4½ lbs. and up, 24c per lb.; over 3½ lbs. and under 4½ lbs., 16c per lb.; 3 to 3½ lbs., 10c per lb.; 1922 broilers, 1 lb. and heavier, 22c per lb.; old roosters, 10c per lb.; green, fat, live, 16c per lb.; do fancy dressed, 24c per lb.; ducks, 3 lbs. and heavier, live, 15c per lb.; turkeys, fat, dry picked, 12 to 15 lbs., 30c per lb.; do live, fat, 7 to 10 lbs., 25c per lb.; squabs, large, $3 per dozen; pigeons, $2.

Bits of Fun for Everyone

Yes, Indeed!

"Do you believe in long engagements?" she asked.

"Indeed, I do," he returned. "A couple should be happy just as long as they can."—Country Gentleman.

Qualified.

Negro rookie—I'd lahk ta have a new pair o' shoes, suh.

Sergeant—Are your shoes worn out?

Rookie—Worn out! Man, the bottoms of mah shoes are so thin Ah can step on a dime and tell whether it's heads or tails.

He Made an Impression.

Kitty, age 4, had been naughty and her father had had to administer vigorous correction before going to business.

That an impression had been made was apparent in the evening. Kitty called upstairs with frigid politness: "Mother, your husband's home."—Successful Farming.

Their Future Assured.

Graduate: "Darling, we can be married at last. I have obtained a position in the university."

Prof.'s daughter: "But we can never live on an instructor's salary."

Graduate: "Ah, but the job I've got is that of a janitor."—Columbia State.

Matching Wits.

"I want a mattress that is cool to sleep on in hot weather."

"One of these air mattresses, madam, you will find just the thing; they were filled during the cool weather."

"How clever! And I suppose their resilient qualities are due to their being filled with spring air."—Boston Transcript.

Laying the Blame.

"Yes, sir; an' the last time I was wounded they was in such a 'urry ter dew me up they went and left a sponge inside me—and it's there now."

"Good gracious! Doesn't it hurt you?"

"No, sir, thank you. But it do make me most uncommon thirsty!"—The Doctor.

A Valuable Animal.

Do you mean to tell me that you ask $100 for that horse?" inquired the deacon. "Why, look at her—she's got the blind staggers."

"Blind staggers nuthin," replied Elias Hoot. "That horse is trained and he's up-to-date. He's shimmyin'!"—Capper's Farmer.

Not Experienced.

Down in Texas the short cotton crop forced a large number of country negroes to the cities. One of these applied for a job at one of the large employment agencies.

"There's a job open at the Eagle laundry," said the man behind the desk. "Want it?"

The applicant shifted uneasily from one foot to the other.

"Tell you how it is, boss," he said finally. "I sure does want a job mighty bad, but de fack is, I ain't never washed an eagle."—Argonaut.

Latest High Class Patterns for the Home

Please order the patterns you desire at least two or three weeks before you wish to use them. Desiring to obtain the latest high-class patterns for its readers, THE FARMER has made arrangements to have them sent direct from the east, and under present mailing conditions it takes about that time for them to reach you.



4109-4014. Lady's Costume. Waist 4109 cut in seven sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. It requires 3 yards of 32-inch material for a medium size. Skirt 4014 cut in seven sizes: 25, 27, 29, 31, 33, 35 and 37 inches waist measure, and requires 2 5-8 yards of 40-inch material for a 29-inch size. The width at the foot is about 2 1-4 yards with plaits extended. Two separate patterns, 10 cents for each pattern.

3851. Lady's Dress. Cut in seven sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. A 38-inch size requires 4 3-4 yards of 40-inch material. The width at the foot is 2 1-8 yards. Price 10 cents.

4133. Child's "Play Dress." Cut in four sizes: 2, 4, 6 and 8 years. A 6-year size requires 3 1-4 yards of 36-inch material. Price 10 cents.

4103. Girl's Cape. Cut in six sizes: 6, 8, 10, 12, 14 and 16 years. A 12-year size requires 4 yards of 44-inch material. Price 10 cents.

3781. Girl's Jumper Dress. Cut in four sizes: 8, 10, 12 and 14 years. A 12-year size will require 4 1-2 yards of 40-inch material. Price 10 cents.

3736. Lady's House Dress. Cut in six sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. A 38-inch size will require 5 1-4 yards of 38-inch material. Price 10 cents.

3895. Misses' One-Piece Dress. Cut in three sizes: 16, 18 and 20 years. A 16-year size requires 4 1-2 yards of 36-inch material. The width of the skirt at the foot is about 2 yards. Price 10 cents.

4121. Lady's Dress. Cut in seven sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. The guimpe will require 2 3-8 yards of 36-inch material and the dress 3 3-4 yards for a 38-inch size. If the guimpe is made with short sleeves it will require 1 7-8 yards of material. To make the guimpe and dress of one material requires 6 1-8 yards 36 inches wide. The width of the skirt at the foot is 2 5-8 yards. Price 10 cents.

3889. Girl's Dress. Cut in four sizes: 4, 6, 8 and 10 years. The guimpe will require 1 1-2 yards of 27-inch material, and the dress 2 3-8 yards for a 6-year size. Price 10 cents.

4129. Lady's Negligee. Cut in four sizes: Small, 34-36; medium, 38-40; large, 42-44; extra large, 46-48 inches bust measure. A medium size requires 6 1-4 yards of 27-inch material. Price 10 cents.

4131. Lady's Two-Piece Undergarment. Cut in four sizes: Small, 34-36; medium, 38-40; large, 42-44; extra large, 46-48 inches bust measure. A 38-inch size requires 1 5-8 yards of 36-inch material for the drawers and 1 5-8 yards for the chemise. Price 10 cents.

4118. Girl's Dress. Cut in four sizes: 6, 8, 10 and 12 years. A 10-year size requires 3 1-2 yards of 32-inch material. Price 10 cents.

Fashion Book Notice.

Send 12 cents in silver or stamps for our up-to-date fall and winter 1922-1923 book of fashions, showing color plates, and containing 500 designs of ladies', misses' and children's patterns, a concise and comprehensive article on dressmaking, also some points for the needle (illustrating 30 of the various, simple stitches), all valuable hints to the home dressmaker.

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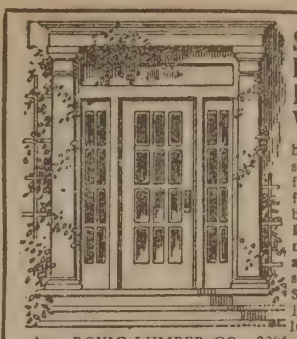
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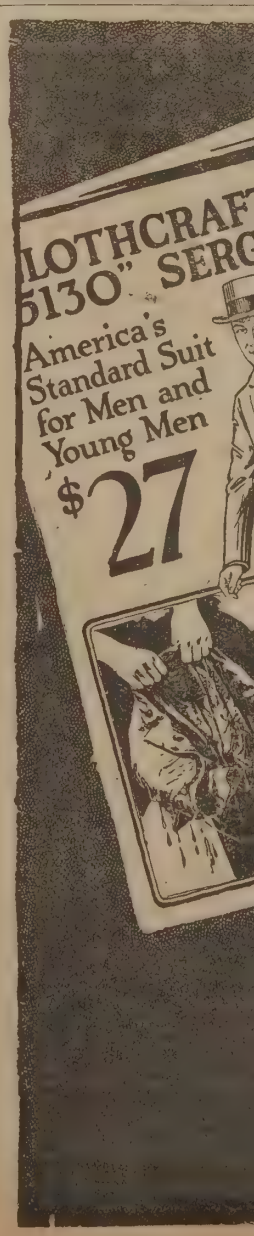
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A new cousin in Stevens county, Washington, joins the Corner. He is Jay Atkinson, who will be 11 on his next birthday, October 29, 1922. Jay writes that he has a nice teacher, Miss Athow. His school commenced September 5. He is in the fourth grade.

Birthday Greetings

THURSDAY, September 28—Frances Schnuriger, 11 years old; Mary Wuotila, 11.

FRIDAY, September 29—Joyce McDonald, 8 years old; Fern Parnell, 10; Roger Stone, 11.

SUNDAY, October 1—Lola Benner, 11 years old; Emrose Corbin, 9; Evelyn Darrah, 11; Sarah Moses, 10; Annie Thomson, 11; Arthur Toivonen, 9.

MONDAY, October 2—Marjorie Dean, 8 years old; Nina Kirkpatrick, 11; Margaret Layne, 11.

TUESDAY, October 3—Donald Leed, 11 years old; Inez Osterberg, 8; Alice Perkins, 11; Irene Torppa, 10.

WEDNESDAY, October 4—Loretta LaFollette, 10 years old; Loren Penney, 11; Gwendolyn Schuyleman, 8; Mildred Watson, 7.

LETTERS WELCOMED BY AUNT NELLIE.

Among recent letters received by Aunt Nellie are those from cousins whose names follow. A few of these will be published each week in the regular edition of THE FARMER and others will appear from time to time in The Junior Farmer:

Daurice Mae Davis, May Sanders, Helen Sanders, Carl Crosby, T. Edward Crosby, Vera Bice, Inez Tillotson, Evelyn Ellis, Margrit Norberg, Eda Gross, Martha Keehner, Alice Sanborn, Joe Flork, Bill Engstrom, Anna Turner, Virgil Sills, Ella Duim.

BEDTIME STORIES

By THORNTON W. BURGESS.

UNC' BILLY IS LONESOME.

The news that Unc' Billy Possum wasn't dead at all, but that he was back in his hollow tree soon spread through all the Green Forest and over the Green Meadows. Everybody hastened to pay their respects—that is, everybody but Reddy Fox. Unc' Billy and his partner, Jimmy Skunk, told every one who called how Reddy Fox had thought that Unc' Billy was a ghost and had been frightened almost to death, so that he ran away as fast as his legs could take him. Unc' Billy grinned as he told how Reddy had sat under the hollow tree and sung because he was so glad that Unc' Billy was dead and all the little people of the Green Forest laughed until their sides ached when in a funny cracked voice Unc' Billy sang the song for them.

Thereafter, whenever one of them caught sight of Reddy Fox at a safe distance, he would shout:

Ol' Bill Possum, he's gone before!
Ol' Bill Possum, he is no more!

It got so that Reddy never came down on the Green Meadows in the daytime and



"Ah reckon Ah'll have to go back to Ol' Virginny, Ah sutt'nly do," said Unc' Billy Possum.

at night he avoided meeting any one, if possible, even his old friend, Bobby Coon. And, of course, Reddy hated Unc' Billy Possum more than ever.

But Unc' Billy didn't care, not he! He knew that all the rest of the little people of the Green Forest and the Green Meadows thought him the smartest of them all because of the way in which he had fooled Bowser the Hound and Farmer Brown's boy. He liked his neighbors, he liked the Green Forest, and so he made up his mind that this was the place for him to stay.

But in spite of all his friends, Unc' Billy was lonesome. The longer he stayed, the more lonesome he grew. Unc' Billy wanted his family whom he had left way down in Ol' Virginny. Finally he told Jimmy Skunk all about it and for once Unc' Billy had forgotten how to grin. Yes, sir, Unc' Billy had forgotten how to grin. Instead, he just wept, wept great big tears of lonesomeness into his red bandanna handkerchief.

"Ah reckon Ah'll have to go back to Ol' Virginny, Ah sutt'nly do," said Unc' Billy Possum from the depths of his red bandanna handkerchief.

Jimmy Skunk grew very thoughtful. Since he and Unc' Billy Possum had been in partnership Jimmy had had more eggs to eat than ever before in his whole life. Now Unc' Billy was talking about going away. Jimmy thought very hard. Then he had a bright idea.

"Why not send for your family to come here and live in the Green Forest, Uncle Billy?" he asked.

Unc' Billy stopped crying. His two little eyes looked out sharply from the midst of the red bandanna handkerchief. "How do yo' alls reckon Ah can send word?" he asked.

Jimmy scratched his head. "There's Mr. Skimmer, the Swallow; he's fixing to go south; perhap's he'll take the message to your family," said he.

"The very thing!" cried Unc' Billy Possum, wiping his eyes and stuffing the red bandanna into his coattail. "Ah thanks yo', sah. Ah does indeed. Ah'll see Mr. Skimmer at once."

And without another word Unc' Billy Possum started down the Crooked Little Path for the Green Meadows to look for Mr. Skimmer Swallow.

Pike's Peak or Bust

(Continued from page eighteen.)

creek. But it soon came out that four of the handcarters preferred to remain in Gregory's Gulch, at least for a while. The two who had found a relative had been offered a share in the relative's claim if they would help to work it. And the other two handcarters had been offered shares in the relative's partners' claims on the same conditions.

All the four urged Sanders to go with them up there. But he had no faith in the claims they were going to. Also, there would already be seven in the new party, and that number, they had learned, was fully as many as could work together advantageously.

"You boys go right ahead if you believe that's the wisest thing to do," he told his partners. "As for myself, I prefer to try Clear creek diggings. That will leave six of us here, anyway, and all of the same mind. The seven of you will make another party, and that will be numerous enough."

And thus the matter was arranged. Sanders owned the cart, but he permitted his former partners to use it to wheel their tools and supplies up the gulch to where they were planning to mine. He and Orlando went with them to bring back the empty cart.

It was late in the day when the two returned, and the start to Clear creek was postponed till the following morning. Then, with most of their things on the cart and the rest on Brindle, they set off westward.

The distance, on an air line, was only a few miles. But the party of six took a roundabout course to avoid the mountains. They themselves did not know the way, but there were others with them, some of whom had been to the new camp before. Those would serve as guides for the whole party.

Not till late in the day did the six gold seekers, with their dog, their cow and their cart, arrive at the diggings they had started for. There they found more than a hundred miners at work along a creek between two mountains. Every man had a claim, and nearly every man was trying to wash gold out of his claim. No very rich discoveries had been made as yet. So there had been no great rush to this particular place.

However, the newcomers quickly learned that, while none of the miners was washing out much gold, all who worked steadily were making wages; usually from $1 to $2.50 a day.

So the party of six promptly decided to take up claims. Going to the upper end of the camp, they measured them off and staked them out. Each man's claim was 50x150 feet. One end of every claim was against Clear creek. The six men would thus have 300 feet of running water for washing out their gold—if they found any gold to wash out.

As soon as the last of their claims had been staked off the party proceeded to establish their camp on one of them.

All the six claims stretched across a narrow little valley, which was rather higher near the creek than farther back. On this high place it was that the newcomers had established their camp.

"Most of the miners here have struck pay dirt, they tell me," Cooper remarked. "I'm guessing our claims are as rich as theirs, and we ought to do at least as well."

"For me, I don't see why the' shouldn't be as much gold here as in Gregory's Gulch," commented Esau.

"May be more. We can't know till we dig," Holloway observed.

"Our chances are as favorable here as they would be any other place I know of," was Sanders' opinion.

When bedtime came the party found the ground pretty hard where they expected to sleep. So they took some bags they had, went back to the mountainside and filled them with pine needles. On this rosiny, odorous foundation the men made their pallets of quilts and blankets.

While the others were lying down, Orlando walked back toward the mountain to see about Brindle. After milking her he had tethered her there, on a patch of grass. Looking after the cow was usually the last thing he did before going to sleep. Returning to camp, he lay down in the bed which he and Esau had prepared.

But the strange, wild surroundings seemed to drive sleep from his eyes, and he remained awake for a good while. Others also had trouble in sleeping at first. In their ears was the constant and rather loud but not harsh roar of the creek near by. And in and beneath that roar were other noises, very different. Those were made by the stones, some an inch in diameter, other weighing hundreds of pounds, which the swift, bold creek was rolling down its rocky channel. Sixty years later, the thing of this night that one member of the party would recall most distinctly would be the grinding of those boulders under the force of the current, the noise having seemed to reach his ears through the ground on which he lay.

However, the party were all weary from their day's travel, and when they did once fall asleep they slept soundly, in spite of the water noises and other noises around them. Long they had been looking forward to this. But now, for the first time in any of their lives, they were about to try their luck at actual gold mining.

Hence they were up and cooking breakfast before daylight. And by the time the morning sun was gliding the mountain tops every man was ready to do his first digging.

Before actually beginning work, however, they discussed their plans in detail. It had already been agreed that they would share equally, all the gold they washed out being put together till they were ready to divide it. Six men were rather more than could work at the same time. They had not much meat, any of them, and as it was important that they should be as saving as possible of their small supply, they agreed that two of their number should go hunting every day and try to bring back some game. The hunters could also do more or less prospecting for minerals while they were out. Of the others, any one not actually working could be preparing dinner or supper, so as to have it ready when the gold diggers were ready to eat.

Everything agreed upon, the whole party moved about over their big claim, looking for the best place to dig. They knew little of such matters. But a man on a claim below theirs, who told them that he had mined in California, suggested that the low land back near the foot of the mountain would be the most likely spot. Gold, being a very heavy metal, would naturally gravitate to the lowest point it could reach. So it was there that the party of six began their digging.

The shaft they started was much like a well; only it was larger than most wells. While some with picks dug up the earth, others with shovels stood near to shovel it out, and still others waited with their pans, ready to receive the dirt and carry it to the creek.

Orlando Medford, full of eagerness and suppressed excitement as he was, was the first to receive a shovelful of dirt into his pan. Hurrying, almost running, to the creek with it, he squatted down at the water's edge and proceeded with the washing. Having watched numerous experienced miners at such work during the last few days, he knew pretty well how it should be done.

First he put his pan almost under the water. Then he began to move it, so as to make the water carry off the loose dirt as the movements of the pan stirred it up. Having continued that till all the dirt had been washed out, there remained some gravel. That he threw out with his fingers. Now he found sand in the bottom of his pan—black sand. When the sand had been cautiously washed out he was delighted to see numerous small particles of gold against the black iron.

Others were now washing out dirt—all the others, in fact. And they, too, soon found the color of gold in their pans. While the amount obtained was very small, the new miners were greatly encouraged by it.

Steadily, eagerly they toiled. When night came, and they had weighed their accumulated dust on Cooper's small scales, they found that they had about $7 worth. That was a little more than $1 apiece for their day's work.

(To Be Continued.)

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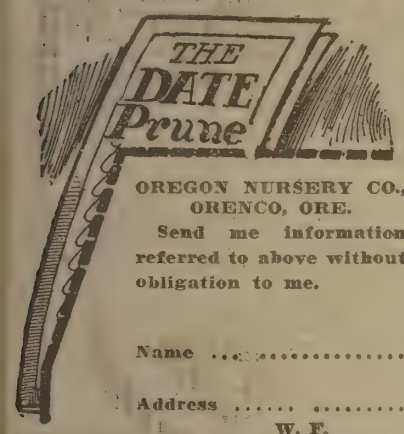
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News for Breeders

Northwest's List Grows

Two Washington bulls have entered the list of sires with 50 or more A. R. O. daughters since January 1, and many other indications of progress by the Holstein-Friesian breed in the northwest are shown in a recent summary corrected to July 17.

The two bulls referred to are Judge Segis, owned by Hollywood farm, now credited with 62 A. R. O. daughters, and Matador Segis Walker, owned by Carnation stock farm, now credited with 64. Johanna McKinley Segis, formerly owned by Carnation, has increased his total from 89 to 94 and is now nearing the "century" mark. It is interesting to note that two of these bulls were sired by King Segis and the third by one of his sons.

One 30,000-pound cow, Stanhope Belle Johanna, has been credited to Oregon since January, giving Washington and Oregon five out of a total of 25 for the breed. Idaho has added one 30-pound (butter) cow, Florence of Rigby, owned by C. E. Johnson of Idaho Falls, to her previous total of five; Oregon has added one, Lady Milly Colantha, owned by Dr. W. T. Phy of Hot Lake, to her previous total of two, and Washington has added six to her previous total of 76, as follows: Princess Pietertje Artis, formerly owned by S. V. Butchart of Sunnyside; Highland Sylvia Segis Lady, Carnation Setske Segis and Carnation Princess Segis, owned by Carnation stock farm, and S. V. H. Molly and Illustrites Pontiac of Greenbank, owned by Western State hospital of Steilacoom.

Oregon has made the largest proportionate gain in number of 1000-pound butter producers, having added four to her previous total of three. In order of standing they are: Stanhope Bellen Johanna; Model Segis Prilly Gelsche, owned by C. J. Berning of Mount Angel; Lucy Freela Pontiac, owned by Mas Arp of Eugene, and Gertie De Kol, owned by J. F. Peerenboom of Roy. Idaho's one 1000-pounder, Idaho Violet Posch Ormsby, owned by the University of Idaho, made another 1000-pound record during the period, and to Washing's previous total of 33 in this class seven were added, as follows: Segis Clothilde Emma, owned by Carnation stock farm; Chimacum Wayne Bess and Glassa Lelah 2d, Lee Brothers, Mount Vernon; Cascade Maggie, R. L. Rutter Jr., Ellensburg; North Star Daisy Johanna, F. S. Stimson company, Hollywood; Cascade Blossom, Cascade Piebe and Cascade Pietertje, William Todd & Sons, Yakima, and Von Heim Winifred Colantha, R. H. Tuttle, Walla Walla.

HERD SHOWS IMPROVEMENT.

There are 70 head of milch cows on the Pete Omdahl farm, near Sedro-Woolley, Skagit county. Twenty-five of these animals are purebred Holsteins. This herd was started several years ago with a bunch of grade animals with the intention of building up a commercial dairy herd. Mr. Omdahl soon found that many cows were not paying for their feed, and, according to his own statement, determined to dispose of some of the poorer ones and buy a few registered cows. With these he has built up the present herd of 25 animals, and has also produced a number of promising females from his grade cows by the use of a good bull. A 6-year-old cow in the herd is milking between 30 and 40 pounds daily, and was only dry six days before she freshened with a heifer calf. She will be put on official test this fall. Mr. Omdahl has a new bull calf by Chimacum King Korndike Sadie Vale. There are seven Hartog heifers from the Smith bull at Sumas. Practically all of the daughters in this herd show a better production than their dams.

A BIG HOG RANCH.

There are approximately 6000 hogs at the Pacific hog ranch, near Kirkland, in King county, Washington. I. W. Ringer, manager, is planning on having 525 sows farrow this fall. All animals are immunized from diseases at an early age. There have been as high as 11,000 hogs on this ranch at one time.

INTEREST IN GARDENING.

Two hundred and sixty thousand farm families either made their first home garden or changed their previous ways of gardening in 1921, as a result of demonstrations of improved methods by agricultural extension agents, according to reports received by the United States department of agriculture.

HOLD CONSIGNMENT SALE.

The Shorthorn and Hereford sale made up of animals consigned by five members of the Okanogan County Purebred Breeders' association recently offered evidence of the desirability of fitting animals well for public sale. Feed shortage last year considerable proportion of those sold, this considerable proportion of those sld, this condition resulting in low prices. Well-fitted animals sold at an average of from $115 to $150 each. Nearly all those sold remained in the general locality of Tonasket, where the sale was conducted. Five head of Jerseys were also sold, bringing up to $175 each, or somewhat higher than the beef cattle. The sale was cried by Colonel Harry C. Cranke of Moscow, Idaho.

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E. A. RHOTEN, Sale Manager, Salem, Ore.

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AT AUCTION.
ALBANY, Ore. October 11, 1922.

Complete dispersal of herd of Jerseys owned by Ed Falk, Albany, Ore.

This is on the Hulbert farm and is the herd formerly owned by Mark Hulbert. This is the original home of Golden Glow's Chief, Pride Olga's Third King, and other noted sires and the foundation from whence came such cows as Vive La France, Lady Silken Glow, Frosty's Valinda, etc.

Many of the offerings are closely related to these great cows. Catalog gives details. Send name to sale manager for one.

E. A. RHOTEN, Sale Manager, Salem, Ore.
ED FALK, Owner, Albany, Ore.

LAST CALL
Registered Jerseys at Auction
DAYTON, ORE. Thursday, Oct. 5, 1922

Twenty-five head heavy producing cows, bred heifers, heifer calves and one selected young bull of St. Mawes and Golden Glow's Chief breeding.

The blood of our greatest foundation Jerseys are to be found in the pedigrees of this offering. Part of the cows are fresh, others in various stages of lactation.

They are from the herds of Austin Stevens, Elmer Baxter, A. T. Nairn and Guy Sully.

Sale to be held on the Nairn farm, 2½ miles southwest from Dayton, one-half mile south of the paved highway.

Catalog gives details. Send for one.

E. A. RHOTEN, Sale Manager. Salem, Oregon.
COL. J. W. HUGHES, Forest Grove, Ore. Auctioneer.

Oreglow Jerseys

Have moved from Iron Mine Farm to our new home. Few females and bull calves under 6 months for sale.

D. BROOKS HOGAN.

OREGLOW FARM, Boring, Ore.

MAPLE RIDGE JERSEY FARM
offers strongly bred St. Mawes bull from R. of M. cow, sired by St. Mawes Susy Olga's Lad, whose three nearest dams average 841 lbs. fat. Priced right.
J. C. BROWN & SONS, Shedd, Ore.

Fourth Gold Medal Jersey Bull
now in use in my herd. No other herd ever had so many. Young stock for sale.
ED CARY, Carlton, Ore.

Jerseys 797 lbs. of fat, the highest record 3-year-old tested in 1920 is dam of a high class young bull we have to offer.
J. J. VAN KLEEK & SONS, Box T.
BEAVERTON, ORE.

Quality Ridge Angus

Well bred cattle for sale at all times at farmers' prices. A number of good bulls and heifers at present.

Satisfaction guaranteed.

J. A. HARRIS & SONS, Eden, Idaho.

Registered Guernsey Bull Calves
from imported and American dams. Bred for quality and production. Write for description, breeding and prices.
J. T. HARSHBERGER & SONS. Filer, Idaho.

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By the champion sire of the northwest circuit, closely related to the world champion Red Polled cow.
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H. M. HALL, Tonasket, Wash.

Bred Duroc Gilts and weaning pigs, Great Wonder and Sensation breeding. All eastern bred stock. Satisfaction guaranteed.
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$4.98



Sharood proves again his claim to the "lowest prices in America" in presenting this Pressed Velour coat. Where else could you find such a coat at this price? A practical and good-looking model of pressed velour with generous collar of real brown coney fur. All-around belt and button trimming. Sizes 16 to 20; women's, 34 to 46. **Order No. 51E5703. Send no money. Pay $4.98 and postage on arrival.**

Order similar style with collar of soft, deep-piled plush by No. 51E706. Send no money. Pay $4.69 and postage on arrival.

Fine Fur-Trimmed Coat *for* Girls Only

$3.98



A sensational bargain—a handsome coat of Pressed Velour in navy blue or brown, regular $7 value. Has collar of genuine Kit Coney, which buttons snugly around throat. Belt all around, two novelty pockets and two buttons at back. Sizes 7 to 14 years. **Order Brown by No. 51E5595. Navy by No. 51E5596. Send no money. Pay $3.98 and postage on arrival.**

Order similar style with handsome plush collar, sizes 2 to 6. Order black by No. 51E-5581. Order brown by No. 51E5582. Price either color, $2.98. Send bargain price and postage.

Very Richly Embroidered Gabardine DRESS

$2.98



Mention Size and Color Wanted

Sharood especially recommends this pretty model. A becoming style that is going to be very popular this fall. Has wide, flowing sleeves, two new fashion panels. Handsomely embroidered at top and waist. Women's and misses' sizes 16 to 44.

Order brown by No. 51E5521. Navy by No. 51E-5520. Send no money. Pay $2.98 and postage. Money back if you're not satisfied. State size wanted.

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Men's Winter Underwear

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Heavy weight flat knit union suits of select long fiber cotton, in popular Jaeger or gray Random color. Heavily brushed fleece lining. Wrists and ankles are elastic knit. Sizes 34 to 46 chest. Buy a year's supply today. **Order Jaeger color by No. 51C1279. Random color by No. 51C1280. Send no money. Pay 89c and postage on arrival.**

Boys' flat knit union suits of fine quality cotton. Sizes 3 to 16. Order by No. 51C1358. Send no money. Pay 79c and postage on arrival.

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Give Size



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Women's Calf-Finish Leather Oxfords

$1.98



Give Size.

Made with imitation shield and medallion-perforated vamp, perforated lace stay and circular foxing. Has medium rubber heel and medium pointed toe. Sizes, 2½ to 8, wide widths. **Order gunmetal by No. 51A69. Order brown by No. 51A70. Send no money. Pay $1.98 and postage on arrival.**

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Fine scout shoe of soft, pliable brown leather. Absolutely guaranteed barnyard proof; reliable, sturdy soles; low, broad leather heels; leather insoles; reinforced leather back stay. Guaranteed to stand hardest wear. Wide widths. Sizes 6 to 12.

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Order by No. 51A733. Send no money Pay $1.99 and postage on arrival. Order little boys' sizes, 9 to 13½, by No. 51A565. Price $1.79. Order big boys' sizes, 1 to 6, by No. 51A564. Price $1.89. Pay bargain price and postage on arrival.

Women's Patent Leather or Brown Calf-Finished Flappers.

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Give Size.

This smart pump in sizes 2½ to 8. In black patent leather or brown calf-finish—a stunning one-strap model with imitation shield tip and medallion, effectively perforated. Has medium rubber heel. **Order patent leather by No. 51A72. Order brown calf by No. 51A73. Send no money. Pay $1.98 and postage on arrival.**

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Mothers—Don't fail to take advantage of this splendid offer in a practical blucher dress shoe for men, boys and little fellows. **Order men's sizes 6 to 11 by No. 51A674. Pay $1.98 and postage on arrival. Order little boys' gun metal blucher, sizes 9 to 13½, by No. 51A590. Pay $1.79 and postage on arrival. Order same style for big boys, sizes 1 to 5½, by No. 51A589. Pay $1.89 and postage on arrival. Always mention size.**

Women's Soft Kid-Finished Shoes



Ideal winter shoes in black only. Good quality oak outer soles and low rubber heels. Warmly fleece lined. Sizes 3 to 9. Wide widths.

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$1.98

State size

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10 Yards Fancy Outing Flannel $1.49

Ideal weight for undergarments. In fancy stripes, checks and plaids, white grounds with pink, blue or tan designs. 27-in. width. State pattern and color. **Order by No. 51F-3425. Send no money. Pay $1.49 for 10 yards and postage on arrival.**

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Very choice patterns in fast colors. In white, gray, Calcutta and Indigo blue with neat stripes or dots. State color and pattern. **Order by No. 51E3406. Send no money. Pay $1.49 and postage.**

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Persian and floral patterns. Predominating colors; navy, pink, red, tan, green and blue grounds. **Order by No. 51F3404. Send no money. Pay $1.59 and postage for 10 yards on arrival. State color.**

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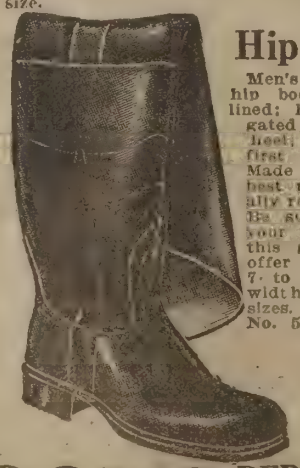


Storm boots of soft brown cowhide, absolutely barnyard proof, solid leather double chrome outsoles, sewed and nailed; solid leather insoles; durable counters; dirt-excluding bellows tongue.

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Sewed throughout with heavy waxed linen thread. Sizes 6 to 12. Wide widths. **Order by No. 51A769. Send no money. Pay $2.98 and postage on arrival. State size.**

Hip Boots



Men's pure gum hip boots; friction lined; heavy corrugated sole and heel; guaranteed first quality. Made of the very best rubber. Usually retailed at $5. Be sure to order your pair while this great saving offer lasts. Sizes 7 to 12. Wide widths. No half sizes. **Order by No. 51A949.**

$2.79

Give Size

Men's and Boys' Brown Leather Heavy Work Shoe

$1.98

State Size

Splendid brown leather work shoes. Heavy, durable uppers; extra strong solid oak leather soles; leather insoles; low broad leather heels and reinforced leather back stay. Roomy last. **Order men's sizes 6 to 12 by No. 51A758. Send no money. Pay $1.98 and postage on arrival. Order boys' sizes, 1 to 5½, by No. 51A554. Price $1.89. Order little boys' sizes, 9 to 13½, by No. 51A555. Price $1.79 and postage on arrival.**

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Our Market Service Gives You a National and World-Wide Viewpoint--Page 5

One Big Apple

Worth More Than Two Little Ones

"One big apple is worth more than two little ones," according to information which was given at the horticultural booth arranged by the extension service of the state college for a number of the fall fairs. "An apple 2 9-16 of an inch in diameter will pack 188 to the box. Apples 3 3-16 of an inch in diameter will pack 96 apples to the box, one of which will nearly equal two of the small sized apples.

"By increasing the diameter of a 188-sized apple five-eights of an inch the volume is double. By growing one 96, instead of two 188 apples the value is increased approximately 60 cents per box." This can be accomplished by thinning the crop during the late spring months, and is explained by E. G. Wood, horticultural specialist of the extension service.

As a graphic illustration of the above statements, a few figures for the prices of apples have been arranged. Following are prices made to the grower of 1921 crops of Janathans:

Extra fancy, from 96 to 125 in box, $1.90; 138 to 163 in box, $1.65; 175 to 225 in box, $1.15.

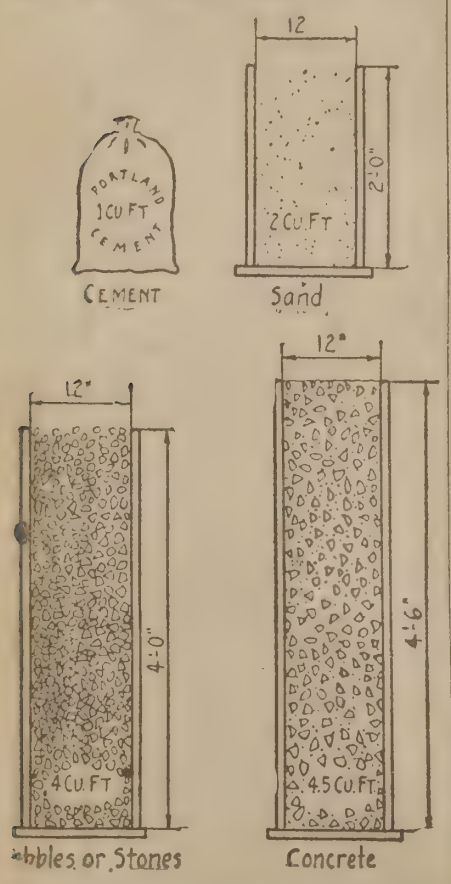
Fancy, from 96 to 225 in box, $1.65; 138 to 163 in box, $1.40; 175 to 225 in box, 98 cents.

C grade, from 96 to 163 in box, $1.30; 175 to 225 in box, 90 cents.

Thinning has become one of the most necessary tasks in an orchard, because it has been found to pay big returns. It not only saves picking a larger number of apples, but it brings in a larger return for the larger sized fruit. There are also less packing and transportation expenses to be paid.

What Concrete Is

Concrete is made by mixing Portland cement, sand, pebbles or broken stone and water in certain definite proportions, according to the kind of work for which the concrete is to be used, and then permitting the mixture to harden under proper conditions in forms or molds. As soon as concrete has been mixed, if left undisturbed, it begins to harden and soon becomes like stone. The hardening process, which is a chemical change that takes place in the cement when mixed with water, continues for a long time after the concrete has acquired sufficient strength for the purpose intended. This continual increase of strength is the quality by which concrete differs from all other materials. Concrete grows ever stronger, never weaker, by age.



Cement, sand and pebbles in the proper proportions when mixed with water harden into the solid mass that is concrete. Note that one cubic foot of cement, two cubic feet of sand and four cubic feet of pebbles do not make seven cubic feet of concrete, but 4.5 cubic feet.

Theory of Mixing Concrete.

Pebbles, sand and cement must be mixed in correct proportions in order to make a dense, strong concrete.

For this reason, in mixing concrete, stone and sand are used in such proportions that the amount of spaces or voids between them is as small as possible, and all the surfaces of the sand and pebbles are coated with a film of cement. The smaller the voids are, the stronger and more dense will be the concrete. A dense concrete is also watertight; if the voids are not all completely filled, the concrete will be porous and will not be impervious to water.

It is very important that no dirt or finely powdered sand be used, as the use of such material interferes with the action of the cement in hardening. The strength of the concrete depends upon the adhesion of the cement mixture to the clean surfaces of sound, hard particles of sand or stone.

New Live Stock Class

At the Snoqualmie Valley fair held at Tolt, King county, Wash., September 14-16, a new live stock class was tried out for the first time. This class was open only to members of the local cow testing association who had finished a year's record. Two cows were exhibited from each of four herds.

The judging took into consideration three distinct points as follows: (1) Conformation of the individual cows exhibited; (2) individual butterfat record, and (3) average profit over feed per cow for the herd from which the cows came.

For a perfect dairy conformation, a total of 25 points was allowed for each cow. Deductions were made according to defects found. On an individual record of 300 pounds of fat, 25 points were allowed and in addition there was a credit of one point for each five pounds of fat above the 300 pounds. For the average profit per cow over feed cost 100 points was allowed if the profit was $60 per cow, and one point was added for each $5 profit per cow above $60, returns being figured uniformly on the basis of 50 cents per pound butterfat.

This new class created a great deal of interest and comment, especially at the time of the judging. H. E. McNatt of the western Washington experiment station did the placing and scoring for conformation. When he had placed the whole group of eight cows it was interesting to note that the grade cow which stood first in the association in fat production also stood first in this class for conformation. She was given a score of 22 1-2 points out of a possible 25 on conformation.

With the exception of this first place, it was clearly shown that good conformation was sixth in production.

Fifty dollars prize money was donated for this class—$25 by the Carnation stock farm and $25 by the fair association. This money was divided pro rata to all exhibitors scoring 200 points or more.

The following is a list of the exhibitors with their scores: A. E. Moore, Tolt, 318.7, $15.10; L. J. Clark, Bellevue, 263.3, $12.50; Methow Valley Live Stock company, Tolt, 249.0, $11.80; H. L. Allen & Co., 223.4, $10.60.

ASOTIN COMMUNITY CLUB.

The Asotin Community club, during the coming winter, proposes to concern itself with the erection of a community house, which will contain a public meeting room, accommodations for the library, and office space for civic organizations. Last year the club turned its attention to the improvement of the park on Asotin creek water was piped, the band stand repaired and the lawn improved.

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The inventor, W. W. Johnson, 31 N. Fifth St., Portland, Ore., is offering to send a lamp on 10 days' FREE trial, or even to give one FREE to the first user in each locality who will help him introduce it. Write him today for full particulars. Also ask him to explain how you can get the agency, and without experience or money make $250 to $500 per month.—Adv.

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THE WASHINGTON FARMER

Vol. 47. No. 14 — SUCCESSOR TO THE RANCH PACIFIC DAIRYMAN HORN AND HOOF — October 5, 1922

For Good Farming, Attractive Country Homes and Happy Country People

Large Crowd at Whatcom County Fair

By RALPH ERSKINE.

It takes more than bad weather to keep people of western Washington from attending their county fair, as was shown by the large turnout for the Whatcom county fair which was held at Lynden, September 26 to 30. Although the weather was by no means ideal and there was one day of drizzling rain, the people turned out in large numbers. Friday, the fourth day of the fair, was a half holiday for Bellingham and other towns in the county and even the school children helped by coming out in a body and filled the ground to overflowing.

Two of the biggest divisions of the fair this year were the live stock show and the poultry department while the vegetables, fruits, sewing and canned goods in the agricultural building should not be overlooked. The live stock section was made up largely of Jerseys and Guernseys, the former breed having one of the best turnouts that was ever known in the history of the fair.

The entertainment part of the day's program was complete and aside from the races there were ball games to keep something going on in front of the grandstand constantly. The concessions were of the cleaner type and many of the "hot-dog" stands were arranged by local people.

In the agricultural building one could find almost any kind of farm products except live stock. The grange and community booths were very attractive and the large variety of vegetables, fruits and canned goods indicated that Whatcom county was truly a land of plenty. The Ten Mile grange took first award while Councilman grange was second and the grange from Ferndale third.

The general farm products section took up one entire corner of the building and contained a large number of individual entries. The horticultural section brought out a large number of apple varieties as well as many kinds of pears. There was also a good collection of soft fruits which had been collected from home gardens.

There were 21 potato entries, all of which were arranged on a long table running almost the entire length of the building. They were entered as 100-pound displays and represented the commercial varieties that bring the best returns in this district.

In the long white potato class, W. Baer of Ferndale won first on Netted Gems, and L. H. Silver won second. O. A. Runolfson of Blaine took first in the Burbank seed and Early Rose.

The flower display in the horticultural building was much larger and better in many respects than it was last year. The display was largely cut flowers from home gardens and there was a large number of dahlies. Other seasonal flowers were shown which added to the variety and quality of the display.

The extension service of the state college had two booths in the building, one a poultry booth showing the value of high producing hens for money makers and the other a home economics booth which demonstrated many labor savers about the kitchen as well as a variety of decorative stitches. A third booth was put on in the dairy barn which gave a few details of silo construction as well as other dairy farm subjects and pointed out the value of high production for economic returns.

The women's department was in the balcony of the agricultural building and included fancy work, art, canned goods and cooking.

Women's Department Attracts.

The Whatcom county home economics clubs fitted a booth in this building in which they showed all branches of work which they have been doing throughout the year. Their home-made fiber furniture, rugs, garments and fancy work showed that the clubs were active in their endeavor to create new articles for the homes and to make over old clothing as well. Their home-made hats were as attractive as could be expected from an experienced milliner and a display of hat trimmings made from odd pieces was unusual.

The women from these 17 different clubs meet once each month at the home of some member and do sewing or other work with the help of the leader or by an occasional visit of a specialist from the state college. Last year some of these women took up the making of woolen comforts. This year a new work has been accomplished, the making of corsets. By the use of the dress form a corset can be made with very little expense that will fit the owner perfectly.

The child welfare department had a number of sample meals which were recommended for children. A scale was set up and the children encouraged to weigh and measure themselves to see if they were of normal weight for their age.

Largest Show of Jerseys.

The Jerseys had one of the largest shows that has ever been seen on the grounds. There were seven exhibitors out and some 70 animals. The local herds had the majority of entries, although one herd, owned by A. M. Starr, came from Coaldale, Alberta. The senior and grand champion bull was Mr. Hormblow of the Starr herd. He was a 9-year-old animal with a deep chest, good barrel and decided masculine front. Double St. Mawes of the David McLeod herd at Bellingham was senior and grand champion female. G. S. Bulkley, who judged the classes, said that she had one of the best coupled udders he had ever seen.

Peter Meenderink of Lynden had the junior champion female, a neat little junior calf with a typy head and an abundance of quality. The junior champion bull was Primrose's Washington St. Mawes, a senior calf of the R. I. Turner herd, a typical St. Mawes calf with a strong hind quarter and good shoulders.

Poppy's Koffee Roaiare, an aged gold medal cow of the Tanner herd, was placed second to the grand champion female by a very close margin. She is the winner of two gold and two silver medals with a 764-pound record as a 7-year-old.

Other Jersey exhibitors that deserve mention here are Nels Jordal of Ferndale who had nine head in all, including a junior bull calf that made a close run for junior champion, and B. C. Crabtree of Lynden who had 10 head of very typy animals and Peter Meenderink of Lynden who showed 13 head.

The milking Shorthorns were represented by the seven head from the De Graff Brothers herd of Lynden. Although this was the only herd of the breed there was one heifer that was particularly outstanding, Glenside Emma Clay. She is a 2-year-old out of Leta Clay, one of the De Graff cows and sired by Glenside's Roan Prince.

Guernseys Make Good Showing.

It was to be expected that the Guernsey would make a good showing since there are a number of herds in the county and adjoining territory. There were three of the better known breeders from the county that entered and S. P. Davis of Olga, San Juan county, brought three head. La France of Bralee, the 5-year-old cow of the Dr. A. McRae Smith herd of Lynden, was placed senior and grand champion above all the other class winners, although there were some excellent individuals competing. Fircrest's La France's Pride, an outstanding heifer of the same herd, was made junior champion female.

Another one of the Smith animals, Fircrest La France's Rival, a junior yearling, was unquestionably the junior and grand champion bull, and Butternut Boy, the 4-year-old herd sire of the J. O. Anderson herd, was senior champion. The latter animal had some excellent type and his pedigree traced back to Governor of the Chene on the sire's side. He has been in the Anderson herd since a calf.

The 11 head shown by Vander Griend Brothers of Lynden were a credit to the breed and they gave their competitors a close run for the placings made.

Ayrshires From Whatcom.

The Ayrshire exhibitors numbered five in all and came from Whatcom county only. Both of the grand champions were in the herd of C. Vos Camp of Lynden. Glenwood's Sentinel II., the well built yearling with a perfect topline, was the junior and grand champion bull, while Idiline of Laurel, a 6-year-old female, was made senior and grand champion cow. She had a true dairy type and an udder that was well placed. The junior champion female was Nooksack Lady King, a senior yearling of the Arnold Kaas herd of Ferndale. Other exhibitors were G. A. Palmer of Lynden and George Brown of Ferndale.

The grand champion Holstein female was an 8-year-old cow, Nettie Wayne De Kol, an unfaulted animal with a wonderful udder. She was shown by J. I. Hutchen of Lynden. H. J. Evans of Ferndale, another exhibitor of the breed, brought out five of his best individuals and had the junior champion bull, while J. Barteld of Lynden had the junior champion female, Lady Whatcom Delight Piebe, a senior calf.

Swine Entries.

There were four breeds of swine represented at the hog barn, which was under the supervision of M. J. Morris of Lynden. There were 38 head in the whole show, the greater part of which were black hogs. The Berkshires were shown by Mr. Morris who had the champion boar, Bonnie's Baron IV., and Wynona's Dutchess, a 7-year-old sow. Connie Verduin of Lynden and E. Glassburn of Ferndale, each had one entry.

The Poland Chinas brought out 11 entries from John Bulkley of Ferndale, who had the champion boar and sow, while O. Vos Camp of Custer and Peter Jensen of Ferndale each had one entry.

The Duroc-Jerseys had the largest number in the show, 14 head, all of which were shown by one exhibitor, N. Bellinger of Lynden.

Connie Verduin had the only Chester White, a young gilt. There were eight head of Hampshire sheep shown by D. A. Dow of South Bellingham, who took all the awards.

Birds From Canada.

The poultry show brought in a large number of birds from Canada as well as from some of the local breeders. There were two carloads of birds from across the line, one from Coaldale, Alberta, and the other from Cornwall, Ontario. There were also a few entries from New Westminster, B. C. All of these entries made up a large assortment of some of the less common breeds. Two White Wyandottes came direct from London, England.

The show had some of the best individual exhibits that have ever been shown on the American continent, according to Harry J. Beernick of Lynden, superintendent of the poultry department. The Leghorns came out the strongest of any breed while the Barred Plymouth Rocks were of a very good quality. There was also a good display of water fowl, which included one large local exhibitor, Cowherd's Duckery of Ferndale. The classes were judged by Harry Collier of Tacoma.

Prize Herds Headed This Way

All roads lead to the Pacific northwest about this time of the year and prize live stock will soon be found traveling most of them bound for the Western Royal and the Pacific International live stock shows. The latter show has become well recognized as the climax of the show season of the west, and even rivals the great Chicago International for national place.

This year an especially fortunate relationship as to dates of other shows exists, making the San Francisco show and the National Dairy show at Minneapolis natural feeders for the two big northwestern expositions.

The Western Royal at Spokane will this year be held October 28 to November 2, opening two weeks after the close of the Minneapolis and five days after the close of the San Francisco show. Immediately following the Royal will be the Pacific International at Portland. The result is that several of the big herds, especially of dairy cattle, showing at Minneapolis, will come west and participate in the shows out here, and that several herds of various classes of stock will come north from San Francisco. With several Canadian herds and flocks already entered, both of these shows promise to be not national, but international events.

While some doubt had been expressed as to the holding of the Western Royal this year, its certainty has been announced by President Huston McCroskey of Garfield and Manager J. T. O'Brien of Spokane. Prize money totaling $17,000 has been assured. President McCroskey is now in the east working in the interest of the show.

The Royal will be held this year under the elevated tracks of the Union Pacific and Milwaukee railroads in the heart of the business district of Spokane, where it was located last year. There was a little room to spare last year, but preliminary entries indicate that every available stall will be occupied this year.

Superintendents for the show have been announced as follows: General superintendent, Ralph Close, Spokane; beef department, C. W. Hickman, Moscow, Idaho; dairy cattle, John L. Smith, Spokane; horses, H. E. Goldsworthy, Rosalia, Wash.; hogs, D. M. Adams, Spokane; sheep, Howard Hackedorn, Pullman, Wash. All these men have volunteered their services, not only guaranteering excellent supervision throughout the show, but saving the association much expense.

The list of judges has not yet been completed. It is expected that Duncan Marshal of Canada will judge the beef cattle, John B. Irwin of Minneapolis the dairy cattle and W. L. Carlyle of Alberta the horses.

Grain Futures Act

Statement by Secretary Wallace

Concerning the grain futures act, which was signed by President Harding September 21, Secretary of Agriculture Wallace says in a statement sent out by the United States department of agriculture that "the reports that this law will put the grain exchanges out of business or interfere with their legitimate function are without foundation." Secretary Wallace's statement follows:

"The new law takes the place of the regulatory provisions of the future trading act August 24, 1921, which were declared unconstitutional by the supreme court of the United States last May. In substance the new law is the same as the old, but the new law is based on the power of congress to regulate interstate commerce, while the former statute was based on the taxing power of congress. The new law does not become operative until November 1. As all of the exchanges were fully acquainted with the requirements of the former law, there should be no difficulty or delay in complying with the new law. The exchanges affected are those at Chicago, Minneapolis, Duluth, Kansas City, St. Louis, Toledo, Milwaukee, San Francisco, Los Angeles and Baltimore.

"This law does not interfere with hedging transactions on the boards of trade. Neither does it interfere with ordinary speculation in the buying or selling of contracts for future delivery. If, however, there should be evidence of undue manipulation, or attempts to corner the market, or of the dissemination of false or misleading information about crop or market conditions by members of the exchanges, such conduct would be inquired into and promptly dealt with as required by the law. In addition, it prohibits the exchanges from discriminating against cooperative associations of grain producers who may desire membership in order to obtain the use of the facilities of the grain exchanges. The secretary of agriculture also is given the requisite authority to examine the books and records of the members of the exchanges and to require such reports as may be necessary to carry out its provisions.

"The reports that this law will put the grain exchanges out of business or interfere with their legitimate functions are without foundation. It will not interfere with the proper operation of such exchanges. No one will be persecuted. No proper business will be harassed. The law gives us an opportunity to observe and inquire into the operations on grain exchanges and to put a stop to improper practices, if such exist. It gives opportunity to study this whole system of registering prices of grains. In a year or so we should be able to speak with authority concerning grain exchange dealings. Nobody can do that now.

"In the administration of this law I am confidently expecting hearty cooperation from legitimate dealers in grain and from all others who favor free, open and competitive markets."

To Feature Domestic Science

The domestic science department of the Pacific Northwest Fruit exposition at Seattle will be an important part of the exhibits this year. Miss Maud Wilson, state home demonstration leader, will have charge of the work. The premium list includes nearly all known fruit products that have a practical value in the kitchen. There are over 200 lots listed. Club displays are to be emphasized and a $50 prize is offered for first place and $25 for second. All articles sent to the exposition will be returned to the owner after the show is over. The committee plans on making this division one of the most educational features of the exposition.

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Unionizing Public School Teachers

In a recent address in New York, United States Senator Stanley of Kentucky declared that "national ownership of industry would transform industrial conflicts into political struggles. It changes a strike against employers into an insurrection against the state."

Undoubtedly the Kentucky senator has put his finger on the danger spot of government ownership of such industries as the railroads and coal mining. As these industries are labor-unionized, it would be difficult, if not impossible, for the government to de-unionize them after it had taken them over under government ownership.

As matter of fact, the executive council of the American Federation of Labor, in conference at Atlantic City recently, declared for a more aggressive policy of unionizing the teachers of the public schools of the United States. It announced a nationwide effort to organize the teachers into labor unions. If that were done, as Senator Stanley says, a strike by the teachers would be an insurrection against the state.

THE FARMER is not antagonistic to organized labor. It clearly sees that labor must have the right to organize, within reasonable bounds, for its own protection. Without such organization it would be at the mercy of combinations of capital. But organized labor must understand that the great body of the American people, who are friendly to it up to this point, will not stand for the unionizing of the public school system, the police and fire departments in towns and cities, and the railroads and coal mines, if those industries were taken over for public ownership.

Culling Increases Profit

During July of this year the extension service of the State College of Washington sent out L. W. Cassell of the poultry department to give a series of 12 culling demonstrations in King county. Instructions on the latest methods of culling were given to 490 poultrymen owning 49,779 birds.

At these demonstrations, record cards were handed out, on which the poultrymen reported—number of birds in the flock, number of culls taken out, number of eggs laid by the culls in one week and the number of eggs laid by the remaining flock the same week. Reports have now been received from 33 poultrymen who own 7605 birds. They culled out 992 birds, or 13%.

During one week the culls laid 771 eggs, which is equivalent to a 11.1% lay. The good hens remaining in the flocks laid 24,023 eggs, which is equivalent to a 52% lay. If the culls had been left in the flocks the per cent of lay would have been 46.5%.

If 33 poultrymen can raise the average lay of their flocks from 46.5% to 52% by culling it can be done by every poultryman in the county. It is a little late now to get the best results from culling. Still it is not too late and it will be found that even as late as this it will pay to look over your flocks and if you see any yellow shanks, yellow beaks, shriveled up combs, and bright, clean plumage, it would be well to examine more carefully and see if they are not culls.

The saving in culling is not only in the fact that you save in the feed bill, but there is more room for the workers, and you are less likely to have disease in your flock if you sell off the culls as fast as you find them. In addition there is a small income from the sale of the culls on the market.

The 30-10 School Tax Plan

In 1921, 295,113 children attended public schools in the 2595 school districts of the state. Of these children, 287,345 attended school for 161 days (eight months) or over, and 147,652 of these attended for 181 days (nine months) or over. Only 7768 children (2.6 per cent) had less than eight months' schooling. It is because of these 7768 children in scattered, remote and sparsely settled districts with small taxable property that the 30-10 bill proposes to increase taxation all over the state $10 for every school child, from the present levy of $20 per school child to $30 per school child.

Is it necessary or advisable?

In 1910 Washington actually ranked at the head of all the states in expenditure of money per school child, and in efficiency as measured by school attendance. In 1921 California and Nevada slightly surpassed her in expenditure per school child, owing to peculiar conditions in those two states, but Washington was ahead of all the other states, and far ahead of most of them. We spent $97.85 last year per school child, twice what we spent in 1912, while Massachusetts spent $82.54, Minnesota $88, Virginia $33.83. The average for the United States in 1918 was $49.12 per child.

Moreover, while Washington by direct taxation has been generously increasing its contribution for education 270 per cent or more in the last 10 years, its taxable property has only increased 17 per cent and its school attendance 35 per cent. Surely no sane person can call the state niggardly. The total cost of public school education in Washington last year was $28,553,333.

Since it appears that 97.4 per cent of our children have eight months of schooling, or more, and since the experts praise highly the general efficiency of our school system, it follows that no educational emergency exists, especially as the 30-10 bill puts up to the people this November a plan of educational reorganization which would normally come before the legislature two months later, in January.

Other points involved in this school problem will be taken up in later issues of The Washington Farmer. In this week's issue, in other columns, will be found an argument for and one against the 30-10 plan.

LOOKING INTO OTHER FARM FIELDS

Agricultural market information is now distributed by wireless from the Eiffel tower.

* * *

Delaware, with over 1150 carloads, has shipped nearly one-fifth of this season's car lot supply of early apples.

* * *

Meadow fescue, or English blue grass seed, is produced in eastern Kansas and western Missouri. Most of it is exported to European counties, chiefly Germany.

* * *

The Australian Producers' Cooperative Federation has just established a selling agency in France, the demand for Australian unsalted butter in that country having increased tremendously, according to R. H. Fisher of the American consulate at Sydney in a report to the department of commerce. Australian butter in France is reported to be realizing on the average if 15 shillings per hundredweight above rates ruling in the United kingdom, and while it is impossible to estimate the exact demand in France for Australian butter, it is put down roughly at 10,000 to 15,000 boxes weekly from December to April.

State Farm News

Governor Hart has received from the federal government a check for $69,303.64 as this state's share of receipts from the sale of timber in national forests in Washington during 1922. The money will be distributed by State Treasurer Babcock to the counties in which the forests are located, to be used proportionately for schools and roads. The receipts from the different forests follow: Chelan, $5381.45; Columbia, $6966.18; Colville, $3556.16; Kaniksu, $13,645.70; Olympic, $11,445.46; Rainier, $2960.37; Snoqualmie, $11,293.98; Umatilla, $1263.51; Washington, $9018.76; Wenatchee, $3742.07.

* * *

The Five Mile school held a fair September 22, attended by about 150 persons. The proceeds were $21, which will be devoted to school purposes. The displays were of fruits, vegetables and flowers. A program, consisting of music, readings and a playlet, was given.

* * *

Regular daily apple trains are now the rule out of the Wenatchee terminals and these will soon be increased to from two to three solid trainloads every 24 hours. The new terminals and shops of the Great Northern railway costing $1,500,000 will be completed and occupied within the next 15 days, it is announced, when the storage and handling of fruit trains will be greatly facilitated. Total apple shipments to date are more than 600 cars, and these are being added to at the rate of over 50 per day.

* * *

About 250 apple growers of Yakima county have approved a contract for pooling the entire crop, prepared by Clyde Shelton, C. P. Wickersham, O. V. Armstrong, W. H. Burrill and S. M. McKee. It provides for the crop to be assigned to a pool, with forfeiture clauses for withdrawal.

* * *

Grain warehouse men all over the state have been notified by the department of public works in Olympia that the practice of deducting a full pound from the weight of the sack when weighing grain must be stopped at once or immediate prosecution will result. The department's weighing rule provides for the deduction of three-quarters of a pound for the weight of the sack. The law provides a penalty of $1000 for each violation of the rule.

* * *

A. E. Lundeen of Rochester is building a wooden hoop stave silo under the direction of E. B. Stookey, Thurston county agricultural agent. This silo will measure eight feet in diameter and will be ready in time for the harvesting of a crop of corn. Mr. Lundeen has one of the best herds of Jersey cattle in the county.

* * *

Yellow Bantam corn ears measuring 14 inches and Evergreen sweet corn 10 inches long were raised this season by Martin Secondo, rancher of the Cowiche. Young trees planted last spring show in some cases new growth of five and a half feet. Mr. Secondo's corn patch comprises three acres and his orchard is 20 acres in extent. He bought the place of 40 acres last spring from O. A. Fechter and has been doing intensive work on it since.

Potatoes planted May 18, although not ready to be dug yet, are running from four to nine inches, he said. The place had been in alfalfa before he took it over.

* * *

P. S. Darlington, who has been for some time the deputy horticultural inspector in the Wenatchee district, has been transferred to district No. 9, with headquarters in King county. F. S. Neilson has been appointed to fill the vacancy in Wenatchee.

* * *

The Walla Walla seed potato association at a recent meeting decided to market its potatoes in the county this fall as much as possible, instead of shipping out.

The reason given is that many potatoes coming in are diseased and it is feared the disease will spread. Locally grown potatoes were found to be comparatively free from disease. Some potatoes will be handled through produce houses and others will be stored in pits until they are in demand.

* * *

A. A. Prince, sales manager of the Walla Walla branch of the North American Fruit exchange, says that Jonathan apples are bringing 50 to 75 cents less this year than last and Delicious apples from $1 to $1.50 less than in 1921. The market for late-keeping varieties is better.

* * *

D. A. Scott, head of state conservation and development; Ivan Goodner, state conservation engineer, and Marvin Chase, state hydraulic engineer, have been on a tour of inspection of irrigation projects in the Methow valley. It is expected that in a short time crews will be set at work checking up on the old Chandler survey of the proposed Pateros-Brewster project, with a view to putting that in shape for financing.

* * *

According to a statement by W. H. Paulhamus of Puyallup, the 1922 raspberry deal has given the growers an average of more than $2 per crate on all stock they shipped out as fresh. This will constitute at least one-third of the whole yield, it is stated.

* * *

Plans to raise $100,000 from citizens of the state to be loaned to farmers in the crop failure districts in the Big Bend country for winter seed and feed seed have been begun by the directors of the Spokane Chamber of Commerce. State Senator H. D. McMillan of Ephrata emphasized the serious conditions in some parts of Lincoln, Grant, Adams and Douglas counties. Some of the farmers, he said, would require feed as well as seed. Senator McMillan estimated the need of $100,000 in loans.

* * *

Improvements, to cost about $85,000, will be done on the canals and flumes of the Wenatchee reclamation district this winter. Work will be begun as soon as the water is turned off between October 10 and 15.

The improvements planned will fit in with any program to increase the capacity of the system which may be adopted by the reclamation district engineers as a result of complaints by water users this summer that they were not getting enough water, although receiving their full quota.

The winter work is for safety, and to insure delivery and conservation of water. Replacement of flumes by ditches, installation of steel and wood pipe, concreting of ditches at places and preparing the newly completed 3300-foot tunnel, opposite Cashmere, for diverting the water through it next spring, are among the improvements to be done.

FARM BUSINESS AND MARKETS OUTLOOK

Demand for beef steers maintains its recent breadth and receipts at the leading markets last week, 50 per cent larger than 60 days ago and above normal for the season, were absorbed without material loss in values. At the same time, beef prices in eastern cities advanced sharply. The upward trend in wage scales and almost universal employment are partly responsible. Feeders also are taking their full share of the crop, including fleshy steers suitable for killers.

Prime steers at Chicago reached a new high of $12. Lower grades declined slightly at that point due to an influx of westerns, but at Kansas City values on grassers advanced. Butcher cows and heifers are feeling western competition more keenly and were variously quoted at steady to lower and the same description applies to bulls. Choice veal calves are scarce with prices on a high level, but the trend is downward. The movement of heavy calves from the southwest is at high tide with Kansas City receipts setting a new record.

Receipts of cattle generally reached the crest of the autumn run around the middle of October, so that after another 60 days the lower grades will be on a more secure footing. Warmed up steers will increase in number, however, as grassers decreased, so that no beef shortage is in prospect. Feeder shipments from all stock yards during August were the largest for that month in six years at least. Many of these cattle will be returning to market during the late fall and will keep the market platter reasonably well covered.

Cattle feeders are still buying at above the normal rate, so that the countryward movement may not yet become heavy enough to create an unhealthy situation for the winter and spring market. September shipments, like those of August, promise to set a new record for the month and car shortage is preventing as heavy purchases as would be made otherwise. The new tariff is expected to curtail the movement of cattle from Canada, many of which were in feeder condition.

Pork Consumption Satisfactory.

Storage stocks of lard in the United States declined nearly 25,000,000 pounds during August compared with an average decrease in that month of 17,000,000 pounds. Stocks of hog meats in storage decreased 63,500,000 pounds compared with an average decrease of 120,000,000 pounds. Evidently the lard market is proportionately better than the market for hog products, but in view of the fact that hog slaughter in August was the largest on record and average weights were high, the showing is not altogether unfavorable. Furthermore, stocks of both lard and meats on September 1 were below the five-year average on that date. Packers report marked broadening in the foreign demand for hog products, especially lard, in the last 10 days, the Near East situation probably being a factor.

Receipts of hogs are increasing and the market is developing an easier tone. A heavy autumn run is on the horizon and a downward trend in values is probable.

Lamb Receipts Below Normal.

Arrivals of lambs and sheep have increased slightly in the last two weeks, but are still running 40 per cent or more below normal for this season of the year. Since the season at which the supply usually declines will soon be at hand, the market appears to be in an exceptionally strong position. Besides the limited supply, the eager demand for feeders, the strong market for dressed lamb and buoyant tone in wool all are contributing factors. Prices have advanced to the highest point of the season, feeders ascending fully as rapidly as fat classes. The number being placed in feedlots is small in spite of high prices which feeders are paying, so that operations show more evidence of safety. Early in the season the movement from the 12 leading markets was comparatively heavy, but it has not increased at a normal rate since that time because the lambs were not to be had. The total from July 1 to September 16 is only 596,960 head compared with 621,243 head last year.

Wool Market Firm and Active.

The wool market has been active recently with prices firm. Passage of the 31-cent tariff, scoured basis, has given the trade a more settled outlook. Over 100,000,000 pounds of wool which have been held in bond will now be released, but manufacturers are steadily absorbing all offerings. Foreign markets are firm, including Australian, where the new clip is on sale. The South African clip is said to be 60 per cent larger than those of recent years, but the South American clip is the smallest for a long while. The outlook for the next clip in the United States is bright with a reasonably high tariff, a marked shortage in the sheep population and apparently a secondary period of inflation as the controlling influences.

War News Sustains Wheat.

The war scare in Europe furnished the motive power back of advances in the wheat market last week. The upturn has been partly lost, but there has been a notable turn in trade sentiment which is always an important factor in shaping the course of the market over short periods at least.

Buying of cash wheat by exporters has not expanded much as yet, but the amounts being sold are as large as when wheat was around $1 per bushel. In addition, it is believed that exporting concerns have themselves purchased millions of bushels of wheat in the futures market, mostly at Winnipeg, during the past 10 days. Whether these purchases are purely speculative or based on consummation of export contracts under cover is unknown.

Foreigners have not bought ahead as much as usual in the last two months. Shipments from exporting countries have fallen off recently and the amount on ocean passage has declined, so that a shortage of near-by wheat available to European interests has added to the uneasiness created by the political situation. It is believed that Europeans need approximately 2,000,000 bushels of wheat per day from North America from the present time until the end of January or a total of around 200,000,000 bushels altogether. Even if the war scare vanishes, purchases for export are likely to give the market support, at least around the dollar level at Chicago.

Domestic flour trade is fairly active with buyers showing fear of a further advance in wheat. Millers are grinding about 12,000,000 bushels of wheat per week, which is not far from the full amount reported as arriving at primary markets.

Spring wheat is being held back more or less, due to car shortage and low prices, so that the movement to northwestern markets is not as heavy as expected and total primary receipts now are only equal to the average for the corresponding period in the preceding 10 years, while in July and August they were considerably above the average.

With the war scare on, the weight of Canadian wheat has not been so prominent, although the advance in prices recently has resulted in a marked increase in offerings. Congestion of transportation facilities in Canada as well as in the United States is retarding the movement in both countries to some extent. Canadian wheat remains 6 to 10 cents cheaper than United States wheat besides being of higher milling quality, so that exporters are partial to the former.

All statistical compilations show a reasonable margin in the exportable surpluses over the needs of importing countries, but the surplus is not burdensome and with wheat disappearing rapidly in the United States it is becoming more clear that the price is low enough to stimulate absorption of the surplus. If industrial conditions improve or a war is started a higher level is probable.

Corn in Strong Position.

Coarse grain prices are showing much strength influenced to some extent by the action of wheat, although there has been no marked change in the volume of export business. The car shortage is restricting country offerings of corn to some extent and they are now smaller than a week ago when the price was lower. The increase in live stock production and the smaller crop and reduced carryover of old corn are making for a strong situation in corn.

Big Advance in Oats.

The season is past in which the usual after-harvest run of oats takes place and receipts at primary markets are declining slowly. The eastern and New England demand for oats is the broadest in a long while. Prices are up about 30 per cent or more from the low point of the season. The visible supply is only about half as large as last year, when it was extraordinarily large.

Cash Grain Markets.

The range of cash grain prices for the week ending September 27 was as follows:

Chicago—Wheat—No. 2 red, $1.10 1-2; No. 3, $1.07 1-2@1.12; No. 2 hard, $1.06@1.09; No. 3, $1.07 1-2@1.07 3-4. Corn—No. 2 mixed, 62 3-4@65 3-4c; No. 3, 62 1-4@65 1-4c; No. 4, 62@65c; No. 2 yellow, 63 1-4@66 1-2c; No. 3, 62 1-4@65 1-2c; No. 4, 61 3-4@65 1-4c; No. 2 white, 62 3-4@66 1-4c; No. 3, 62 1-2@65 1-2c; No. 4, 61 3-4@65c. Oats—No. 2 white, 40 1-4@42c; No. 3, 39@41 1-4c; No. 4, 38 3-4@40c. Rye—No. 3, 68@68 3-4c. Barley—57@62c.

Seed Movement Above Average.

Receipts of clover seed at Chicago from July 1 to September 16 totaled 1,415,000 pounds compared with 932,000 pounds last year and 890,000 pounds two years ago. Receipts of timothy totaled 15,236,000 pounds compared with 16,293,000 pounds last year and 6,845,000 pounds two years ago. At Toledo for the season to September 16 receipts of red clover seed totaled 2243 bags compared with a four-year average of 1481 bags; while alsike totaled 3060 bags compared with 2266 bags, and timothy 1502 bags compared with 1605 bags.

Prices on September 27 were:

Chicago—Per 100 pounds: Clover, $15@18; timothy, $4.50@5.50.

Toledo—Per bushel: Prime red clover, $10.50; prime timothy, $2.95@3.20.

Feed Market Sharply Higher.

A sharp advance has occurred in feed prices in the last two weeks. Buying is limited to prompt shipments, however, and is scattered, while production is up to normal, so that justification for the advance is not clear and it is not likely to be sustained. Car shortage is a factor.

Prices per ton (100-pound bags) in carlots—Chicago—Bran, $21.50; standard middlings, $22.50; flour middlings, $25@26; cottonseed meal, 36 per cent, $40; 43 per cent, $44; hominy feed, $27; gluten feed, $31.35; old process oil meal, $44; tankage, $60.

Hay Prices Firm.

Hay prices are firm on midwestern markets although eastern markets are easy. Demand is limited, but receipts and country loadings are light in spite of the large crop. Arrivals at Kansas City, the chief distributing market, for the entire year to September 20 totaled 15,046 cars compared with 14,820 cars to the same date last year.

Prices per ton in carlots—Chicago—No. 1 timothy, $21@23; No. 2, $20@21; No. 3, $12@15; No. 1 clover mixed, $20@21; No. 1 closer, $14@16; No. 1 clover mixed, $16@17; No. 1 alfalfa, $20@23; upland prairie, $16@18; midland prairie, $12@14; rye straw, $10@11; oat and wheat straw, $8@10.

Egg Prices Still Gaining.

Egg prices have continued to advance. In spite of an increase in poultry production, receipts of eggs at the leading markets in the last 30 days have been running below the average for the corresponding period in the three preceding years. As a rule the supply of fresh eggs declined approximately 50 per cent from the middle of September to the middle of November. A similar decrease this year may mean a still higher price level, although the huge storage stocks will be drawn upon extensively to make up the shortage in fresh arrivals.

Poultry prices are showing resistance although the trend is most likely to be lower in the next two months. The advance in butter, eggs and cheese recently which is giving cold storage operators a chance to get out whole will put these operators in better humor to store poultry.

Butter Prices Highest of Year.

Butter prices advanced last week to the highest point in the calendar year. The seasonal decline in production has gone far enough to create marked scarcity of fancy fresh butter, while the demand shows no abatement as a result of the advance of nearly 30 per cent in values from the low point of the season. Recent rains apparently have done little to increase production, although they may help to maintain it during the fall. Large quantities of "short-held" and storage butter are already being used to make good the shortage in current receipts. Reductions in storage stocks in the first 20 days of September at the four leading markets averaged 250,000 pounds daily while the total September reduction last year was only 150,000 pounds.

Prices for 92 score fresh butter on September 27 were: Chicago, 41c; New York, 43 1-2c; Boston, 43c; Philadelphia, 44 1-2c; San Francisco exchange quotation, 33c.

Cheese Markets Firm.

Cheese markets were firm last week with an active demand, especially for shipments from country points to the south and east. Receipts at distributing markets have increased during the last two weeks, but dealers in closest touch with the trade are disposed to view the situation with confidence as no cheese is being pressed for sale. Some storage cheese is being moved, but there is no anxiety on the part of holders so that they are not offering their stocks at concessions. Some one and two year old twins and cheddars have been sold at 29 cents. Brick cheese has advanced more than any other style with the supply quite limited. Foreign styles have shared in the general brisk demand.

Prices for No. 1 American cheese on September 27 were:

Chicago—Twins, 22@23c; S. Daisies, 22@23 1-2c; D. Daisies, 22@22 1-2c; Young Americas, 22@23c; Longhorns, 22 1-2@23 1-2c.

Fruits and Vegetables.

Receipts of potatoes are increasing as the late crop states are shipping freely, the movement in the week ending September 23 being 6527 cars, the largest yet this year. In the last three years the high point of the season's movement has been reached around the middle of October so that in a few more weeks the pressure should reduce. Prices are uneven, but show little change. Northern round whites are quoted at a range of $1 to $1.15 per 100 pounds sacked in midwestern markets. Prices for rurals in wagonloads at Idaho shipping points range around 50 cents to growers while Early Ohios in Nebraska are bringing 50 to 60 cents.

Carlot shipments of apples are increasing steadily, but are now only about equal to the average for the corresponding period in the three preceding years. Shipments from the box apple states are running less than half as large as last year. Barrel apple prices have strengthened materially in the last few weeks, but are weakening again with Jonathans quoted at $3 to $5 wholesale in midwestern markets while Grimes Golden are bringing $1.75 to $2 a box.

LATEST QUOTATIONS.

The Live Stock Market.

PORTLAND, Ore., Sept. 30.—Cattle—Choice steers, $7.50@8; medium to good steers, $6.75@7.50; fair to medium steers, $5.75@6.75; common to fair steers, $4@5.75; choice cows and

(Continued on page twenty.)

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Range of Live Stock Prices, Week Ending Sept. 27

CATTLE.	Chicago.	Spokane.	Portland.	N. S. Lake.
Choice, prime heavy steers (1100 lb. up)	10.85@12.10			
Good heavy steers	9.20@10.90			
Medium heavy steers	7.60@ 9.40			
Common heavy steers	6.00@ 7.80			
Choice, prime light steers (1100 lb. d'n)	10.75@11.90			
Good light steers	9.10@10.75			
Medium light steers	7.50@ 9.30	6.25@ 7.50	6.50@ 8.00	6.25@ 7.00
Common light steers	5.85@ 7.65	3.75@ 6.50	4.25@ 6.75	4.25@ 6.25
Common to choice butcher heifers	4.85@ 9.50	3.25@ 6.25	3.50@ 6.50	3.50@ 5.50
Common to choice butcher cows	3.75@ 8.50	2.50@ 5.00	3.00@ 5.25	2.50@ 4.75
Bologna and beef bulls	3.60@ 6.40	2.75@ 4.50	3.00@ 4.00	2.00@ 3.50
Canners and cutters, cows and heifers	2.75@ 4.00	1.50@ 2.50	1.50@ 3.00	1.50@ 3.00
Canner steers	3.60@ 4.50	2.00@ 3.50	2.00@ 3.25	2.00@ 3.25
Medium to choice light veals	10.00@13.25	7.00@ 8.50	7.00@ 9.50	7.50@ 8.25
Common to choice heavy veals	3.50@ 7.25	5.00@ 7.50	4.00@ 7.00	
Com. to choice feeders (1000 lb. up)	5.75@ 8.25			
Com. to choice feeders (750-1000 lb.)	5.65@ 7.75	3.50@ 5.00	4.00@ 5.50	4.00@ 5.50
Common to choice stocker steers	4.00@ 7.40			
Com. to choice stocker cows, heifers	3.50@ 5.50			
HOGS.				
Top of market	10.75	10.75	11.50	9.50
Bulk of sales	7.60@10.60	9.50@10.75	10.00@11.25	8.50@ 9.25
Heavy (250 lb. up)	8.70@10.40	9.25@10.50	9.00@11.00	8.25@ 9.00
Medium (200-250 lb.)	9.50@10.65	9.50@10.75	10.50@11.25	8.50@ 9.25
Light (150-200 lb.)	9.80@10.65	9.50@10.75	11.00@11.50	9.00@ 9.50
Light lights (130-150 lb.)	9.50@10.30	9.00@10.75	10.75@11.25	8.75@ 9.25
Smooth packing sows (250 lb. up)	7.75@ 8.80	7.50@ 8.50	8.50@ 9.50	
Rough packing sows (200 lb. up)	7.15@ 8.15	6.50@ 7.50	7.50@ 8.50	
Medium to choice pigs (130 lb. d'n)	8.75@ 9.75	8.50@10.00	10.50@11.00	
Stock pigs		8.50@10.00	10.50@11.00	8.50@ 9.00
SHEEP AND LAMBS.				
Medium to prime lambs (84 lb. down)	13.25@14.75	9.00@10.00	9.00@11.00	10.50@11.50
Culls and common lambs	9.00@13.25	7.00@ 9.00	7.00@ 9.00	7.50@10.50
Medium to prime yearling wethers	9.00@12.25	7.00@ 8.00	7.50@ 8.50	6.00@ 7.50
Medium to prime wethers	6.25@ 9.25	5.00@ 7.50	5.50@ 7.50	4.00@ 5.50
Medium to choice ewes	3.50@ 7.10	3.50@ 6.50	3.50@ 6.00	3.00@ 4.50
Culls and common ewes	2.00@ 3.75	2.00@ 3.50	2.00@ 3.50	
Full-mouth to yearling breeding ewes	4.50@11.50			
Feeder lambs	12.50@14.40	6.00@ 7.00		10.00@10.50

Snohomish Fair

Brings Out Best of Farm Produce

By RALPH ESKINE.

The Snohomish county fair this year brought out the fact that the people in that county believe in a yearly exhibition of their best produce and in practical demonstrations for the benefit of their community rather than a number of concessions and horse races.

This county has for many years had its county fair at Granite Falls, a community in the eastern part of the county. The fair association owns its own buildings and grounds, and each year holds a very attractive little fair. The location of the grounds gives the fair a kind of a community aspect, but when one examines the exhibits he finds that they have been brought in from all parts of the county, thus making it truly a county institution.

For the amusement features the association has found it best to resort to such athletic games as can be arranged, since the grounds as yet are not sufficiently large to allow for a race track. This year the weather man did not favor them, as he has done in the past, but there was a good turnout all three days and the football game on September 30, the last day, drew a crowd from many parts of the county.

In the agricultural building the vegetables took up a large part of the space, while flowers from home gardens made a very creditable showing. The state college extension service had arranged three of their booths: horticulture, the booth showing a model farm with the proper rotation of crops, and the bee and honey display. Each of these exhibits was demonstrated by cards which explained each detail that was not self-evident. There were two of the extension specialists with the exhibits, R. N. Miller, the farm management specialist, and A. B. Slocum, bee specialist.

Another interesting booth in this building was arranged to show the girls' home work, which included such articles as fancy work, cooking and sewing. The display was very well arranged and displayed some neat handiwork.

Another building was reserved for the commercial booths, but also housed other departments, such as the home demonstration and county agent's department. The latter consisted of a comparison of two pens of White Leghorn hens, one with birds that averaged 128 eggs per hen and the other a 241-egg average. The difference in profit was given as over $2000 for the year.

Another comparison was made to show the value of selecting and treating seed potatoes. The seed that was taken from the bin and planted without treatment returned a crop of only 6.4 tons to the acre, while the seed that had been selected from the field and treated with corrosive sublimate produced 14.4 tons to the acre. Mr. Love, the county agent, also had a potato grader set up to show how time could be saved in sorting tubers for market.

Mrs. Harriet Stow, county home demonstration agent, had arranged a very complete display of articles which had been made from flour and sugar sacks. In most cases the garments had been dyed and decorated to make them look more attractive. It was surprising what a large number of useful and attractive garments could be made of this material.

A lesson in nutrition was another feature of this department which brought out the point that it was not necessary to buy expensive articles in order to obtain vitamines, as is sometimes thought, but by supplying a good variety of vegetables, fruits, milk and its products the necessary vitamines may be had. The woman's department proper was in this building and had the usual variety of fancy work, sewing and canned goods that go to make up the list of articles made at home.

There were three breeds of dairy cattle in the barns, but the 20 head entered did not do justice to the numerous dairy herds that are to be found about the county. The animals that were shown were representative of the different breeds and demonstrated some excellent type and quality.

The Guernseys were shown by three breeders. J. E. Wrage of Arlington had the grand champion bull, Lishman's Son, the 5-year-old herd sire of the Valley Gem farm. Traveler's Starlight, a junior calf, was the junior and grand champion female and was from the C. E. Entsminger herd of Arlington. The other exhibitors of Guernseys were Mr. Englebretzen of Granite Falls and H. P. Lewis of Arlington.

The Jerseys were shown by Floyd Heavens of Granite Falls, who won all awards in the classes filled. He had a good herd of Island type Jerseys, with Bess' Oxford Fern's Lad, a 7-year-old bull, as the herd sire.

William Milne of Granite Falls had 11 head of Ayrshires on exhibit. The herd bull, Ben Hur, of the Willowmoor strain, is now 4 years old and has a straight top line with a good barrel. The females of the herd were put up for sale the last day of the fair. Mr. Milne resorted to this means in order to reduce the number of animals in his herd.

The swine show was made up of three breeds, Hampshires, Duroc Jerseys and Chester Whites. Dr. H. K. Stockwell of Monroe had the black and white belted hogs, including some young classes, as well as one entry in the sow and litter class. A. Turley of Monroe had the Duroc Jersey boar, an 18-month-old animal, with plenty of size. Two Chester Whites were shown which had just been purchased by Ed Hoem of Snohomish, from Leonard Newman of Thorp, Kittitas county.

All of the classes of live stock were judged by C. W. Krassin of Snohomish, a graduate of the state college and a breeder of Holstein cattle.

The poultry show was made up largely of Barred Plymouth Rocks, which brought out some excellent birds. The Rhode Island Red classes were also well filled, but the lighter breeds did not turn out as might be expected from a county where there are as many commercial flocks as are found in Snohomish county. There were, however, some Brown Leghorns and some of the less common breeds. The waterfowl and turkey display was good and was made up of birds from near-by farms.

Wenatchee Apples Stronger

The Wenatchee apple market is showing greater strength than at any time previously during the present season. While no advance in prices is noted, buyers from outside are coming into the market more generally than ever before. A premium is being offered for extra fancy grades of both Jonathans and Delicious, as neither of these varieties is very well colored. All other varieties are coloring up since frosty nights came.

The building of a $450,000 cold storage and icing plant at Chelan station by the Great Northern railway is regarded as one of the most important developments of the season in that district. The work will commence at once and the new plant will be completed in time for the next fruit shipping season. In addition to furnishing ice for the refrigerator cars of the road, several hundred cars' capacity of cold storage may be provided in the new plant.

A Granddaughter of a Grand Old Guernsey

Unaware of the fact that her illustrious granddam was no longer with the herd, the beautiful Guernsey heifer pictured here left the Spokane Interstate fair, where she had won first place in the junior yearling class, competed in an even stronger class at the state fair at Yakima and again went back to her stalls wearing the blue ribbon. The heifer is Wanda Topsy of Orchard Hill farm, a granddaughter of Sammamish Topsy, the cow of the Dr. Park Weed Willis herd that, as the record Guernsey west of the Mississippi river, made the Guernsey excursion by boat about the islands of Puget sound late in July this year. It is not a far stretch of the imagination to see in this trip possibly the beginning of the exposure that resulted in Sammamish Topsy becoming ill at the Interstate fair and dying at Spokane shortly after its close, the second week in September. She had also been shown with the Orchard Hill herd at the Southwest Washington fair late in August.



A feature of the fair circuit this season has been the strength of the Guernsey competition. Similar shows have never before been seen at Chehalis, Spokane or Yakima. Neither has there been on any show grounds a more enthusiastic aggregation of breeders than the breeders of the fawn-and-whites as they watched the judging at the state fair. Dr. Willis, owner of Wanda Topsy and 19 other offspring of Sammamish Topsy, who is shown standing behind the heifer in the picture, was as enthusiastic as any of them, notwithstanding the fact that he is selling out his entire herd at the farm near Redmond, King county, November 22. Inability to take time from his practice as a physician in Seattle for the proper development of his live stock interests is given as his reason for closing out his herd. Other Washington Guernsey men showing at Yakima included Dr. A. Macrae Smith of Bellingham, Wallace & Fordyce of Sunnyside, Albion L. Gile of Chinook, H. E. Angel & Son of Mabton, Mr. and Mrs. Roy R. Bush of Outlook and several other breeders who showed a few head each.

SET ORCHARD WAGE SCALE.

Representative Wenatchee growers have set the following wage scale for orchard help:

Picking, 40 cents an hour or 5 cents a box; sorting, 35 cents an hour; packing, 5 cents a box off the grader and 7 cents a box off the bench; all other orchard and warehouse labor, 40 cents an hour. These wages are about the same as last year.



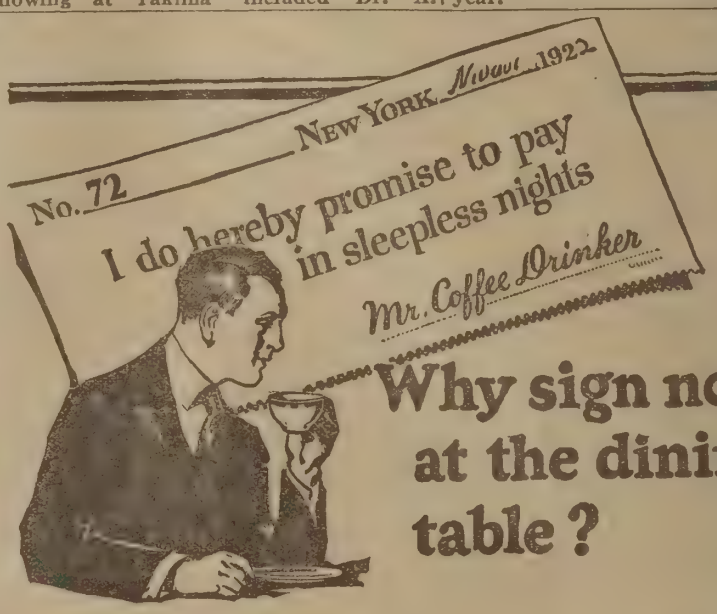
WHEREVER window shades are operating silently and unnoticed, you will usually find that they are mounted on Hartshorn Rollers. For *Hartshorn* is the guarantee of unvarying perfection in window shade service.

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SHADE ROLLERS AND WINDOW SHADE FABRICS

Established 1860

For further interesting and valuable information on how to solve your window shade problems, write STEWART HARTSHORN CO., 250 Fifth Ave., New York.



Why sign notes at the dining table?

IF your mealtime cup of coffee leads you into midnight wakefulness and mid-afternoon drowsiness (as so often happens) why not stop giving the promise to pay?

It is so easy to keep out of debt by turning to Postum.

Postum is a satisfying, mealtime drink, rich in flavor and aroma—and with no regretful settlements, afterward.

Why not try Postum instead of coffee today, and pave the way to better health and happiness?

Postum comes in two forms: Instant Postum (in tins) prepared instantly in the cup by the addition of boiling water. Postum Cereal (in packages, for those who prefer to make the drink while the meal is being prepared) made by boiling fully 20 minutes.

Sold by All Grocers



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—FOR HEALTH
"There's a Reason"

Made by Postum Cereal Co., Inc., Battle Creek, Mich.

Wenatchee Apples

Crop Smaller Than Anticipated

By E. H. M'PHERSON.

As the apple harvest progresses it is evident that the total crop of the Wenatchee district will not be nearly so large as had been anticipated. The first estimate was for 15,000 carloads. On September 1 Inspector Neilson reduced this to practically 14,000 cars and many shippers who are in close touch with the situation now predict that not more than 12,500 or 13,000 cars will be actually shipped.

Worm and hail loss are largely responsible for this decrease in the commercial crop. Worms wrought havoc around Wenatchee and hail was almost equally destructive in the Lake Chelan and Okanogan sections. Inspection is much more rigid this year than last, as there is a double check on all apples on the part of both the state and federal authorities besides the inspection of shippers and selling organizations. Every defect, no matter how minute, is seized upon as a cause of rejection or regrading. As a result the quality of the fruit sent out from the Wenatchee district will be higher than ever before.

According to a report issued by the United States bureau of agricultural economics, actual apple sales from the Wenatchee district to September 16 amounted to 1000 cars, which is only one-third as many as had been sold up to the same date last year. But it is more than the actual sales of the Yakima, Hood River, Walla Walla, Spokane and all the Idaho apple districts combined, according to the same authority. Superior sales organization and the district advertising campaign is credited with this showing.

An aggressive campaign for a temporary reduction of freight rates on apples will be conducted by the growers and shippers of the Wenatchee district. While a rereduction was figured was never actually time ago in all freight rates, this did not benefit the fruit districts of the northwest, as the advanced rate from which the reduction was figured, was never actually in effect. Present market conditions and the exceptionally heavy apple crop of the country are two of the principal arguments being advanced by the Wenatchee Valley Traffic association.

Short Courses

Practical Instruction at W. S. C.

In the short courses in agriculture at the Washington State college practical instruction is offered over a period of eight weeks, from January 8 to March 3, inclusive. This is divided into two terms of four weeks each. The work in either may be taken by the student, but it is so planned that the second term's work is of the greatest value of those who have taken the first. Certain subjects of general interest are required. In addition, classes are provided which offer special work in the particular subdivision of farming which may be of most interest to the individual student.

Special four weeks' courses in horticulture and in dairying are offered during the first four weeks for those engaged in practical orchard work or in dairy farming. Two weeks' courses in gas engines, gas tractors, creamery operation and milk testing also are offered.

Any person who can read and write and who is above the age of 16 years may enroll in any of the short courses.

Tuition is free to the winter short course students except for the gas engine and tractor courses, for which a fee of $5 for each two weeks is charged and the creamerymen's course, for which the fee also is $5.

All students contemplating taking short course work should be on hand for registration in James Wilson hall on the day the course begins. For further information write to the dean, college of agriculture, Pullman, Wash.

Wait Till the Fur Is Prime

Trappers often get anxious just as the season is about to open and start trapping before the pelts of the animals are fully prime. They lose money through trapping too early as well as by making preparations too late.

It is difficult to lay down a general rule as to when the pelts of the several animals are first in good condition for trapping. Everything will depend on the locality and the animal. But here are a few general instructions which serve the trapper as a very fair guide:

Don't trap skunk till the last part of October.

Don't trap muskrat till late fall. Muskrat skins are in best condition in midwinter and early spring.

Don't start trapping mink till the middle of November.

Coon can be taken the first of November.

Foxes are in good condition about the middle of November.

Learn the game laws covering your section. Write to your local game warden for them. The large fur houses will send you game laws for every state in the Union. Never violate either the spirit or the letter of the law. Your game laws will tell you the earliest possible date when you can start trapping.

But though you can easily trap too early, it is safe to say that you can not start too soon on the work of preparation. Give yourself plenty of leeway in which you can bring your outfit up to date, order new supplies, decide where you are going to run your trap line and all the other operations which are important and require time. Start early to prepare for trapping, but don't trap too early.

Work With Farm Bureau

To the outsider one of the most interesting phases of farm bureau work in Walla Walla county is the friendly spirit of cooperation that exists among the various special organizations. All of their members join the county farm bureau membership, which costs $10 per year, in addition to the special organization dues, which is usually $1 per annum. The farm bureau helps in the general excursions by encouraging members not especially interested in swine, for instance, to join in them. Subsidies are also given sometimes to these special organizations.

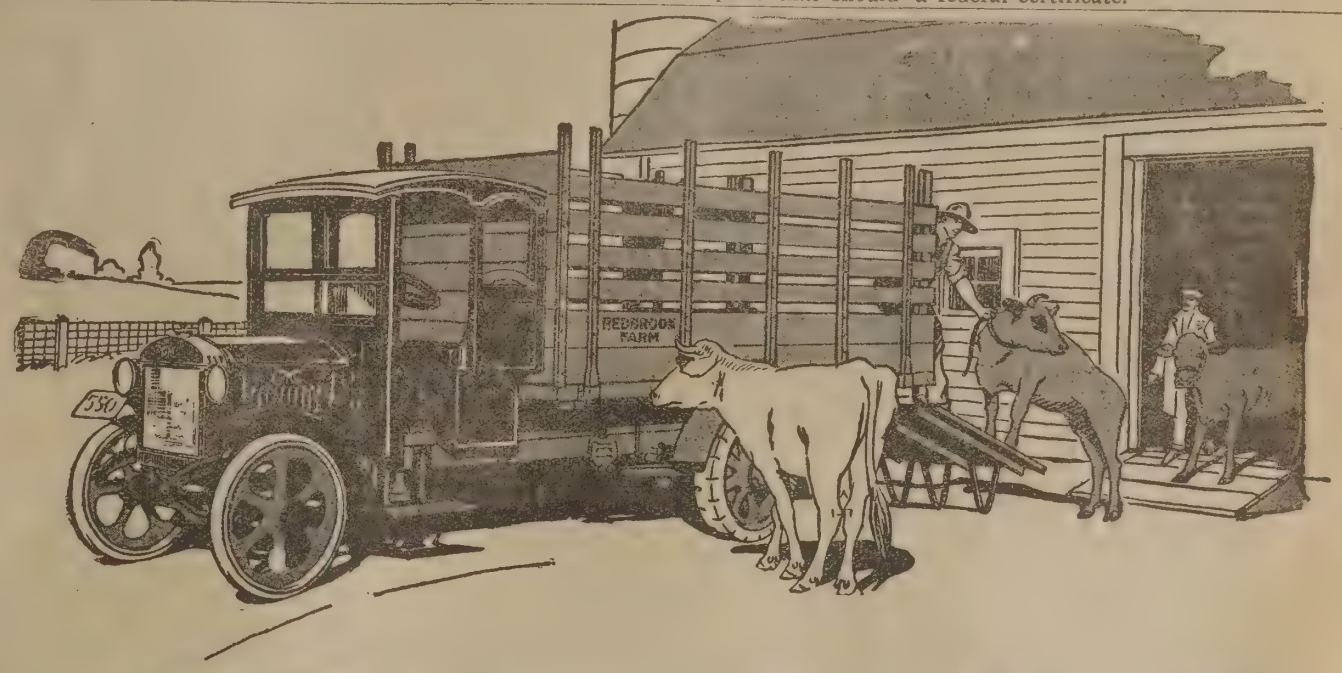
Among the associations thus organized are:

The Walla Walla Purebred Breeders' association, whose unstinted efforts helped largely in the extraordinary county fair held recently, and which conducts an annual consignment sale. The Walla Walla County Poultry association, whose winter show is one of the best in the northwest.

The Certified Seed Potato association, just recently organized to encourage and supervise this new enterprise that should be so profitable, especially in the foothill country, and the cow testing association, whose members conduct regular monthly tests on 350 cows. This latter organization is unique in that a Walla Walla high school student in vocational agriculture has this for his project. The members pay $2 a cow per annum; the boy owns his own auto and gets pay for the work. Besides this he has an excellent opportunity for studying various methods of management of his herds.

FEDERAL APPLE INSPECTION.

About 4000 acres of fruit have been signed by growers of Wenatchee district for the new federal inspection. Eastern prices are reported to be giving preference to apples shipped under the federal requirements. It is, however, optional with the grower to have his fruit inspected for a federal certificate.



GMC

Model K41—Two Ton

$2375

Chassis Only—At the Factory

GMC Chassis list at factory as follows: One Ton, $1295; Two Ton, $2375; Three and One-half Ton, $3600; Five Ton, $3950; tax to be added

Haul Stock This Fall With a GMC

Flashing along the good highways at a fast speed and also developing more pulling power in bad going than is averaged by trucks of like capacity, the Model K-41, Two Ton GMC truck, is the finest equipment yet produced for hauling stock and for other heavy work on the farm.

Like the "Jim-Dandy" one ton GMC, this truck has exclusive improvements that increase operating economy and reduce the time and expense of maintenance. Model K-41 is equipped with the GMC Two-Range Transmission, providing greater pulling power in combination with more road speed—a combination never before accomplished until the development of this distinctive feature by GMC engineers.

The Two-Range transmission has successfully multiplied economical engine power into greater power at the wheels and has opened up new fields for motor truck use, both in the city and on the farm. With this transmission a GMC truck will go anywhere that wheels can get traction and on good roads will speed 18 miles an hour with solid tires.

It has such other advantages as GMC Removable Cylinder Walls, Pressure Lubrication, Removable Valve Lifter Assemblies, Instantaneous Governor Action, Magneto Ignition, Conduit Wiring, Thermo-Syphon Cooling, Electric Lights and Generator, Provision for Starting Motor and many other refinements not usually found on motor trucks.

Write for an illustrated booklet "GMC Trucks on the Farm."

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LIVESTOCK AND DAIRY

Filling the Silo

By F. L. BALLARD.

Silo filling time is at hand. Preliminary arrangements include getting the silo and silage cutter in proper condition. All bolts in silage cutters should be tightened and the knives sharpened. In the case of a stave silo the hoops should be adjusted, as doubtless they have become loosened during the summer season. If the silo is of concrete and the inside is rough it may be well to paint or paraffin.

One of the most important factors in silage production lies in the proper stage of cutting the crop. Immature crops contain a high percentage of sugar and make silage of poor quality. Crops standing in the field until they are brown and dry require the addition of much water to replace the natural plant juices. Silage from such crops does not pack well. The best time for cutting corn is when the ears are well dented and are beginning to glaze. Sunflowers should be at least 60 to 70 per cent in blossom. Oats and peas should be cut when the oats are in stiff dough stage and when the peapods first begin to turn yellow. It is important that the silage cutter cut in uniform lengths, or poor silage will result. Farmers purchasing a silage cutter should consider the possibility of using it for chopping hay also, as this practice is found profitable when hay is high in price. The crop should be cut into pieces of uniform lengths, three-fourths of an inch or less. It is much better to cut silage too fine than to have it too coarse. On the average one-half inch is a most satisfactory cut. If the silage will exude moisture freely when a double handful is squeezed tightly it is sufficiently moist. If the water runs out in a stream there is too much moisture and a few loads of oat or wheat hay should be run in. In case more moisture is needed, water should be added. If a hose is not available it is best to set a barrel high enough so that water may run from it to the blower.

One of the most important points in silage making is proper packing. Continual tramping must be given the silage as it comes from the blower. Otherwise air centers the food mass and spoilage results. With large cutters it is often necessary for three to six men to be actively tramping in the silo. The middle of the silage mass should be kept lower than the edges and most of the tramping done on the edges.

It is best not to feed silage for two or three weeks after filling, as it requires about this time for proper fermentation.

ELECTRIC PLANT FOR SALE.

Perfect condition; 32-volt capacity; 50 lights, also pump and motor complete for pumping water; will install if required. Bargain for quick sale. Specially suited for farm or country place.

Box 893, Seattle. Phone Kenwood 1192.



The Tester Knows

The only sure and accurate way to determine just how close your separator is skimming is by means of the Babcock Test, and the most accurate operators of the Babcock Test are the cow testers employed by the various cow testing associations. The following statements from cow testers are interesting:

—"The closest skimming of milk I have in this association is done with a De Laval. Of the 29 separators in this association 16 are De Lavals."—Tester for the second largest association in Minnesota.

—"De Laval Separators and Milkers are to my mind superior to any other makes. The separator is the most efficient skimmer of milk and its durability is lasting. In this community we have practically all De Laval Separators."—Tester for a Pennsylvania association.

A De Laval soon pays for itself and is sold on such easy terms that you can use it while it is doing so.

De Laval Pacific Company
61 Beale Street San Francisco

Sooner or later you will use a
De Laval
Cream Separator and Milker

When answering ads, please don't fail to mention this paper.

VETERINARY

By DR. S. B. NELSON.

Throat Worms.—What can one give to a 6-month-old calf to cure it of throat worms? What is the method of dehorning young calves with caustic?

A. L. S.

There is only one way that I know of that you may get fairly good results from treating young calves for throat worms, and that is to put them into a practically air-tight building, in the center of which is put a couple of bricks and place a tin pan full of sulphur. Set this afire and allow the calves to breathe the fumes for several minutes, then turn them out to the fresh air. This should be repeated after four or five days, possibly two or three times.

To dehorn young calves with caustic the caustic should be used when the calf is from 3 to 5 days old, just when you can feel the button. Wet the caustic slightly and press firmly with the caustic on the top of the button, working it around so as to cover the base of the button. Be sure to cover all of it, otherwise you would have a slight stub of a horn come out where the horn root was not killed.

Gilt Is Lame.—I have a 6-month-old gilt that has been lame for a month. There is a swelling on her knee and down in her leg. C. B. S.

I would suggest that you give your gilt 10 grains of potassium iodid once daily for a week or 10 days. It is also suggested that you paint the swelling on the leg with tincture of iodine once daily four or five time.

Indigestion.—I have a young cow that had pigs August 7. The pigs seemed to do all right for about 10 days and then they couldn't eat very good and they ran backwards and got stiff in the front legs. Two died and the rest seem sick, so we took them away from the sow. The sow seems healthy and eats good. G. D.

The sow was too good a feeder for the pigs; too much milk for them and consequently caused a slight indigestion, which is manifested in pigs by the symptoms which you give. This can generally be overcome by giving the pigs more exercise, because it is difficult to keep them from getting all the milk that the sow gives. One very important stockman is in the habit of throwing tightly wadded newspapers into the pen where the little pigs are. The pigs will nose around and begin to play with the ball and thus give themselves exercise. He does this sometimes four or five times a day.

Stringy Milk

By A. B. NYSTROM.

I would like some information concerning a cow. The milk seems fine, but on washing the pans, as soon as what little milk and cream left in the pans mixes with the washing water, the water thickens and gets stringy, which is disagreeable. The cow seems in good health. I am using the milk for a year-old baby.

Bickleton, Wash. N. B. M.

It is not probable that the milk is dangerous to feed your baby. However, since it is possible that the bacteria which causes stringy milk are present I would advise you to sterilize by boiling for 20 minutes all pans, milk utensils and strainers. Also have the cow tested for tuberculosis. Cows recently fresh often give milk containing a large amount of dead tissue or broken-down cells. When this tissue comes in contact with water that has any soap or alkili in it, a slimy substance is formed. It is not necessarily a diseased condition that makes this, although it is more prevalent when the cow is not in the best of health.

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Complete the job before you quit.

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WOLVERINE!

The 1000 Mile Shoe



September 8, 1921.

The first pair of Wolverine Shoes we sold was on August 21st, 1920. Customer has worn this pair every day since and wishes another pair.

This customer is a farmer and has sweaty feet, and has worn shoes in barnyard manures. Shoes have not been soled or repaired in any manner except renailing.

Stoffel & Earl,
Casey, Iowa.

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Hi-Cut Wolverine
King of Storms.

Horsehide
Through and Through

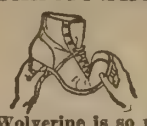
Secret Tanning Process
Makes This Leather *Stay* Soft

Every man knows what it is to dry out wet shoes. The leather dries out stiff as a board, hard and uncomfortable.

Now this discomfort is ended. For, thanks to our exclusive, secret, double-tanning process the Wolverine shoe dries out after every soaking as soft as new buckskin. *This amazing shoe stays soft.* No other shoe made is like it!

We tan the leather in our own tannery. We take selected horse hide of the superfine quality formerly used for expensive Cordovan shoes and Cossack saddles—the toughest, longest-wearing leather known. Yet by our secret tanning process we give this wear-resisting leather the softness and pliability of buckskin. It never loses its softness—and it wears and wears and wears. For we even increase its natural durability.

WOLVERINE
Comfort Shoe



This Wolverine is so pliable and soft you can double it up like a moccasin. It wears like iron but you'll hardly know you have a shoe on, it is so soft and easy.

For tender feet, or where you do not encounter wet weather, wear this Comfort Shoe. A blessing to the feet.

Unusual Economy
Work Shoes for All Purposes

We operate our own tannery and our shoe factory as one organization. This effects very large economies. So every Wolverine shoe is very low priced when you consider the quality.

There is a Wolverine for every use. For field and shop, for lumbering and hunting, for the mines and the oil fields. The hi-cut model shown assures dry, warm feet in blizzard weather. The ever-soft leather in every model assures perfect comfort always. This new-day shoe is the one all men want.

If your dealer cannot supply you we will see that you are supplied. *Send the coupon for catalog.*

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The Thirty-Ten Plan--Yes or No?

Readers of The Washington Farmer who have followed the discussion of the 30-10 plan as it has appeared in previous issues of THE FARMER will be interested in the pros and cons of this important subject as presented in the two statements herewith. The 30-10 plan will be on the ballot in November and all good citizens will vote yes or no on it. It provides that there shall be raised by a state-wide tax $30 for every school child in the state ($20 is now raised by state-wide tax) and by county tax $10 per school child in the county. It provides also that no school district may levy more than 17 mills local tax (the legal limit now is 20 mills).

YES By J. MALTBY, Spokane Chairman Publicity Committee, 30-10 Plan.

My conversion to the proposed educational measure, 30-10, was slow. The arguments of the opposition were freely voiced by me until I fully understood the measure, its origin, its purpose, and the conditions that are crying for correction. I, therefore, submit three points which are underlying principles of 30-10, with the hope that, as they have grounded me firmly on the rock of assurance, against which opposition beats in vain, they may do the same for others

Is 30-10 a radical, untimely proposition? The first step in my conversion came when it became clear that 30-10 is just the next step in educational finance, just the next logical step in the historical march of a century. At the National Educational association at Boston in July one-third of the program was given to the problem of school finances. The issues covered in 30-10 were discussed and the search light of the National Educational association turned on federal aid as a remedy. We are not even leaders in the relief measure. California and Utah, I understand, are operating under measures similar to 30-10.

Will 30-10 increase the taxes of the state about $4,000,000? At first I thought it was an attempt to raise more money for education. When I learned clearly and definitely that 30-10 planned to operate with the same budget, the same amount of money as education receives under the present plan, another objection was removed. I knew we were most of us still paying for the war and our burdens were not easy. This is not a time to ask for increases. Thirty-ten simply means collecting the same amount of money on a different basis and distributing in a better way.

Are there many poor districts in the state which would really be helped by 30-10? At first I was quite firm in my convictions that there were only a few districts that would be helped by 30-10. I had yet to learn the extent of the gross inequality of opportunity that exists for the children of the state, because of the variations of wealth in the districts. The following table will answer this question.

116 districts raise only 1 mill for schools
279 districts raise the limit of 20 mills
667 districts raise 5 mills or less
1226 districts raise 5 mills to 10 mills
644 districts raise 10 mills to 20 mills

One district in Washington raises 1-2 mill, while 279 raise 40 times as much. Many districts taxing themselves the limit, 20 mills, have been able to maintain only a short term at a low salary.

In addition to these points it may be of interest to the rural schools to learn that under the present plan of distribution the average district school sends but $200 more to the state in taxes than it receives back into its local school fund from the state. This $200 goes to the centers of population. It is a safe estimate that 75 per cent of the districts in Spokane county, formerly, under 30-10 will receive back from the state all the money they put in and then some. This will give all rural schools an opportunity to hold a full term of school and pay an adequate salary.

What do you pay? How long is your term? are questions whose answers have settled the fate of many schools for decades.

Although 30-10 does not ask for an increase, it is not asking for a decrease, in expenditures for education. In this respect it is in accord with decided sentiment all over the country not to cut expenditures for education. This attitude is manifested everywhere from Portland to Wisconsin, from Spokane and Los Angeles to Canada and Great Britain.

Under 30-10 the districts rich in children but poor in wealth will have an opportunity to lower their local taxation. If this is their greatest need and desire they will do it. Under 30-10 they have a choice. That choice, which expresses the will of a democratic community, once made is surely their concern.

The voters of Washington are to be congratulated on having the opportunity of voting on a measure of wisdom and vision somewhat in advance of most of the states of this nation.

NO By JOSEPHINE CORLISS PRESTON, State School Superintendent.

An impression exists in some parts of the state that I am supporting initiative measure No. 46, known as the 30-10 measure. To correct that impression I wish to make my position clear.

I am not in favor of the plan in the form in which it is now before the people. It would increase the state school tax nearly $4,000,000 and add a levy of over 3 mills on all taxable property in the state for that purpose. I do not believe that there is an emergency in education that demands such a change.

The measure would tend to increase the total amount of taxation for school purposes. While automatically increasing the state tax it does not guarantee lower local taxes. I am opposed to any considerable increase in school expenses during the present business depression.

The bill makes an objectionable change in the distribution of school funds.

State money is now distributed in proportion to the attendance of children.

This measure would distribute one-half on the basis of attendance and the other half in proportion to the number of teachers.

The distribution of county funds would be on the same basis, instead of the present basis of one-third in proportion to the number of teachers.

The consolidation bonus is also eliminated.

These changes would encourage needless duplication in the number of teachers and schools and discourage the present movement toward centralization in natural community centers which is the greatest factor in the improvement of rural schools.

We are trying to give the country people strong school centers that can maintain rural high schools and keep the boys and girls at home during the high school age.

This measure would place great obstacles in our way.

I regret to find myself differing from many people who are sincerely interested in education, but I feel that much of sentiment in favor of the bill is based on a misunderstanding of its real effect.

Any thoughtful person will know that as superintendent of public instruction I am deeply and unselfishly interested in the civic and school welfare of the children of this state. It is my business to be interested if I had no other urge or impulse.

My experience and contact with our schools have convinced me that the 30-10 measure will not be for the best interests of education.

ED CAREY BUYS ORCHARD.

Ed Carey has purchased from Joe Conn 20 acres of bearing orchard, located near Peshastin, Chelan county, for $34,000. The orchard consists of the very best commercial varieties, half Delicious and the balance Winesaps and Rome Beauties. Mr. and Mrs. Carey have moved to the ranch and will take care of the crop this year.

IT NEVER DECAYS.

One virtue of concrete construction is that it is permanent.

TO BOOST CANADIAN APPLES.

William Noxon, agent general for Ontario in London, states that the British government is willing to give to Canadian fruit growers certain concessions to advance the fruit interests of the country.

A Special Sort of Specialist

A special sort of swine specialist is J. W. Yenne of Milton, Ore. His specialty is selling purebred Duroc Jerseys at weaning time to Walla Walla valley farmers and makes more money from this than from any other phase of his diversified farm of 93 acres, located half way from Walla Walla to Milton.

"Convinced that I had the goods," Mr. Yenne stated recently, "I took my herd boar and several sows to the Walla Walla county fair and was more than pleased with my success, especially that I had not fitted much. Getting first with my Orion boar over the strong Cornell boar of Grandview, Wash., the grand champion at Spokane made be me feel pretty good.

While I have been raising hogs for 15 years, I have been in the purebred Duroc Jerseys only two years, but I am so well satisfied with them that I shall continue breeding them.

Mr. Yenne has 93 acres, 35 of which, being under the ditch, is planted to a young orchard, garden stuff and alfalfa being grown between the rows of trees. The rest of the land extending back up on the hill is wheat land.

THE AUTO-OILED AERMOTOR

A Real Self-Oiling Windmill

A year's supply of oil is sent with every Aermotor



Oil an Aermotor once a year and it is always oiled. Every moving part is completely and fully oiled. A constant stream of oil flows on every bearing. The shafts run in oil. The double gears run in oil in a tightly enclosed gear case. Friction and wear are practically eliminated.

Any windmill which does not have the gears running in oil is only half oiled. A modern windmill, like a modern automobile, must have its gears enclosed and run in oil. Dry gears, exposed to dust, wear rapidly. Dry bearings and dry gears cause friction and loss of power. The Aermotor pumps in the lightest breeze because it is correctly designed and well oiled. To get everlasting windmill satisfaction, buy the Aermotor.

Aermotor Towers are Towers of Strength

Write today for Circular. AERMOTOR CO. Chicago Kansas City Des Moines Minneapolis Oakland

HUGHES & COMPANY, Spokane Distributors.

LEARN - AUTOS - TRACTORS AND AUTO ELECTRICITY

AT ADCOX SCHOOL



LARGEST IN THE WEST

100,000 auto mechanics needed

From the Pacific Northwest—from California—from the Mountain States—from the East! By letter and telegram, calls are pouring in for Adcox men. I foresaw this condition several months ago. I then strongly urged more men and young men to become "Gas Engineers"—start their training at once. Some responded—but others, because things were in a slump, put the matter off. Now the "big rush" is on—we've had more "hurry-up calls" for Adcox men during the last sixty days than during any previous six months. And the demand for men is going to increase. Just think! More new cars have been sold during the last three months than in any previous six months of automobile history. Nearly 11,000,000 automobiles—and only 40,000 garages. 275 cars for every garage! 50 cars will support a garage and two mechanics. Ever see such an opportunity? More than 100,000 auto mechanics needed! I can't tell you the whole story in this limited space—but it's all in my "Big Red Book"—which costs $1.50 a copy to print, but which I will send FREE to any man or young man who is sufficiently interested to mail the coupon below. Mail it right now, please—NOW, before you forget.

L. L. ADCOX, President,
Adcox Auto & Aviation School,
Portland, Oregon.

Send me FREE copy of your Big Red Book No. 1 on the auto business, and I'll read it.

Name .....

R. F. D. or Street Number.....

Town .....

State .....

Too Wet or Too Dry

Narrow Zone Between the Limits of Which Plant Life Can Develop

The fine optimism which comes through the heading of our two great irrigation communities, that of the senate and that of the house, with two splendid leaders from the Pacific northwest, McNary of Oregon and Smith of Idaho, calls to mind the fact that the two problems of irrigation and drainage are not so far apart, after all.



E. A. Bryan.

Scientific agriculture has called attention to many things. For example, that there is in temperatures a narrow zone between the limits of which plant life can develop.

Too cold, and the life processes are checked and soon stop. Too hot, the same thing occurs.

It is like the temperatures of our bodies. A while ago that pest, the "flu," put my temperature at subnormal—96 or 97 degrees—for a week or so. The doctor said, "Lie by. Don't work till your temperature is normal." A few years ago, with typhoid fever, my temperature was running 104 to 105, and my family and friends were fearing that they might soon attend my funeral. A narrow zone of 10 degrees, out of the thousands of possible degrees, marking the possibility of human life.

The agricultural scientists have pointed out that a similar narrow zone of soil moisture marks the upper and lower limits of crop production. The swamp and the desert are akin. In the swamp, too much; in the desert, too little water.

Plant life takes its mineral food in liquid form. It can take no pills, even for its health. The plant can eat no solid food. Some folks think that in some magical way earth is converted into cornstalk or squash or apple. Yes, it is by a magic process, but that is by the solid matter going into solution and the plant food being taken up in liquid form. So water, the "universal solvent," must dissolve the elements of plant food and thus prepare it for use. But there must not be too much water. It is but a narrow zone of moisture that is possible in the case of ordinary crops.n There must neither be too much or too little.

Even when we provide for irrigation we are wise if we look to it that drainage, artificial or natural, is at hand. And, of course, we must not use too much water, which some men do to save work.

Over at Sunnyside years ago some men were pouring on 10 feet annually, breaking out the plant food and drowning the crops, and, of course, ruining the land. But the swamp lands, with a great excess of water, are even surer than arid lands to be more fertile and they are less liable to be impregnated with alkali. Besides this, when drained on a proper scale, the cost per acre is usually much less and the upkeep is often negligible.

The lower Mississippi valley in particular has large areas of very level, very rich lands, which, when properly drained and diked, become almost inexhaustible farm lands. Climate likewise favors a maximum production of farm staples. The unfortunate fact that much of these lands is in private ownership or may easily pass into that state is a drawback to easy governmental reclamation projects. One must drain intervening areas in any event and so the difficulty of making the owner bear his fair share of the cost is all the more difficult.

The combination, however, of the reclamation of arid lands and swamp lands is important from many points of view, not the least significant of which is the political.

To what extent and how cutover lands should be included is more questionable, but into that question I can not now go.

Control of the water supply so as to give the land enough, but not too much, and to withdraw the surplus water, but not to too great an extent, puts the soil in condition where it may produce its maximum and in any case a profitable crop. Peaty lands often are drained to such an extent, without provision to flood, that fires destroy the surface deposits. Northern Idaho and both eastern and western Washington, with certain parts of Idaho, have some lands of this description.

Our congressional leaders in this reclamation matter, who fortunately are from the northwest, should be backed up to the limit by every citizen.

September 4, 1922.

E. A. Bryan

Wire Worm

Menace to the Potato Industry

The greatest single factor menacing the potato industry in the Yakima valley is the wire worm, according to W. L. Close, district horticultural inspector, who has been keeping an eye on the situation for some time past.

"In saying that the wire worm is the greatest pest which the potato industry has to contend with, I am not telling the growers anything new," said Mr. Close, "but what I do wish to bring out is the fact that mighty little is known about the pest. With the idea in mind of solving this important problem, I suggest that the farm bureau, the extension service of the Washington State college and the state department of agriculture get together and secure a good federal man to devote his entire time to the wire worm situation. Until we get some one on the job the wire worm will continue to make culls of No. 1s and to decrease our profits accordingly."

PREVENTS MUCH TROUBLE.

Punctuality gives one the right start.

Texas Gulf Sulphur

Best for Agricultural Use

Crude Sulphur---Flour Sulphur---Inoculated Sulphur

Direct Shipments From Portland, Oregon

As the world's largest producers of sulphur we can serve you best. Texas Gulf Brand contains 99 1-2 per cent pure sulphur and is supplied in three different forms, as above.

We will give your dealer or county agent full cooperation.

Write us in detail regarding your sulphur requirements or wire us a night letter, charges collect, stating alfalfa acreage, kind and amount of sulphur you will use, name and address of dealer or county agent. We will promptly supply information and quotations.

Sulphur Book and Other Helpful Literature—FREE

TEXAS GULF SULPHUR CO.

41 E. 42d St., New York City.

Dr. E. E. Heg Dies

The death of Dr. Elmer E. Heg of East Stanwood, Snohomish county, which occurred early on Tuesday morning, September 26, marks the loss of one of the state's well-known dairymen. For many years past. Dr. Heg had been engaged in the breeding of Holstein cattle, having lived in the vicinity of Chimacum for a number of years before moving to O'Brien, in King county, just before he and his two sons, Henry and Hans, entered the World war. Again, in 1919, Dr. Heg began the operation of a dairy farm in the Florence district, near East Stanwood, having rented out some of the best cows for the period of the war. Both of his sons helped in the operation of this farm, Henry being with him at the time of his death, which was due to heart failure.

Vote New Irrigation District

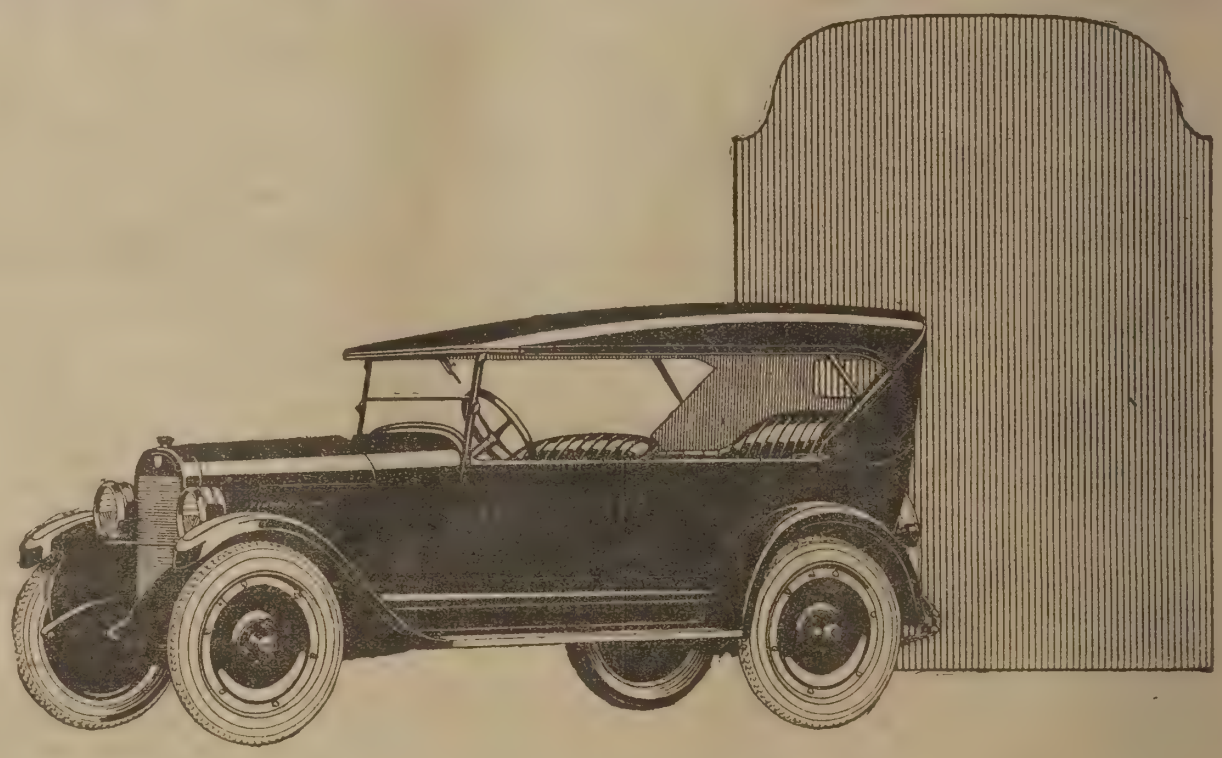
By a vote of 133 to 3 owners of 5000 acres of land in the Spokane valley brought into existence a new irrigation district September 26. The district lies in part on the south side of the Spokane river, but includes lands on the north side at East farms, Greenacres, Millwood, Orchard avenue and other points. Seventeen hundred acres of the included area are the property of the Spokane Valley Land and Water company, from whom it is purposed to purchase the water, under a gravity system. The estimated cost per acre of placing these 5000 acres under water is given as not to exceed $15.

The original petition for this district included lands in the already existing water district at Greenacres, upon which it was proposed to replace pumped water with the new supply by gravity. A new procedure was necessary under the ruling of the state attorney general, who held that lands within the already existing district were barred from inclusion in the new.

Under the second and successful petition are included 800 acres of dry land not embraced in the previously defined project, and lying chiefly at the west end and in the region of West farms. The holdings of Arthur D. Jones, Peter Morrison, the Liberty Valley Land company and others who had opposed the original project have been excluded from the district, as finally created. The canvassing of the vote and other steps have not as yet been taken by the county commissioners, but in view of the decisive returns of the election they are regarded as purely formal. It is thought that consolidation of the new district with that at Greenacres is now probable, making regular the process by which the older district may receive the proposed benefits of a change from a pumping system to a gravity flow.

SALE OF LOGGED LANDS.

Fifteen thousand acres of logged lands in the western part of Grays Harbor county have been sold in the last year by one Aberdeen realty firm. The sales have been at from $3 to $5 an acre and some of the tracts have run into thousands of acres.



Such value as you will not find elsewhere—value that expresses itself in a new kind of beauty, in all-satisfying performance, in savings that make a motor car worth while on the farm.

Cord tires, non-skid front and rear; disc steel wheels, demountable at rim and at hub; drum type lamps; Alemite lubrication; motor-driven electric horn; unusually long springs; deep, wide, roomy seats; real leather upholstery in open cars, broadcloth in closed cars; open car side-curtains open with doors; clutch and brake action, steering and gear shifting, remarkably easy; new type water-tight windshield. Touring Car, $885; Roadster, $885; Sedan, $1335; Coupe, $1235. Prices F. O. B. Detroit, revenue tax to be added.

MAXWELL MOTOR CORPORATION, DETROIT, MICH.

MAXWELL MOTOR CO. OF CANADA, LTD. WINDSOR, ONT.

MAXWELL

The Good

MAXWELL

Old Timer

Converted to Pure Bred Game

Walter Barnett of Walla Walla is another old-timer recently converted to the purebred stock game. While he has been raising stock, especially sheep, for a number of years, and has frequently topped the Portland market with his fine Hampshire lambs, born in January, he only last year decided on the purebreds. He now has 40 purebred Hampshire ewes, but plans to have 200. These replace the 1000 grades that he sold last spring. He also has 10 purebred Poland China sows, and is making a start in Shorthorns.

While he has a large mountain summer pasture, part of which he leases, he carries the purebreds on his 1400-acre ranch near Touchet. Of this 1200 acres is still native bunch grass, the rest being pasture and alfalfa land under the ditch. Due to the long growing season, the third alfalfa crop is taken off about the middle of September, thus leaving nearly a month of fine pasture.

Mr. Barnett's success in January lambing, making the big growth necessary for top May and June prices, is one of the most interesting of his many activities. Despite old sheepmen's telling him the risk of freezing is too great he has constructed a battened shed in the shape of a big square, but open on one side. A big stove is placed in there for emergency, and two men take turns watching the 1000 ewes night and day. As soon as one shows signs of lambing she and her lamb are put in one of the little square "jails." Mr Barnett finds that this not only saves a great deal of labor, but reduces the loss of lambs to practically nothing despite the coldest of weather.

Another big advantage of this early lambing is the superior condition of the ewe over what it would be later in the spring. A fine flow of milk is assured by feeding cut alfalfa, over which is sprinkled a little corn chop.

Not a little of Mr. Barnett's success is due to the zealous loyalty of his herdsman, W. G. McDonald. "Mac" has been with him for many years and, as all the commission men from Portland to Chicago will swear, is always on the lookout for the boss' interests.

Apple Yard Opened

The opening of the new $1,500,000 Great Northern terminal at Wenatchee, known as Apple Yard, is the most important recent event to the fruit growers and shippers of the Wenatchee district. With over five miles of switching track, a 24-stall roundhouse and modern repair shops, this plant is said to be the finest on the Great Northern system west of St. Cloud, Minn. All fruit trains will be made up in these yards, which are located about two miles south of Wenatchee, and a saving of from 12 to 24 hours in handling time will be effected on every train load of apples shipped east, according to the belief of local officials.

More freight is handled out of Wenatchee than any other station on the Great Northern between Seattle and Minneapolis, according to a statement in the Wall Street Journal recently.

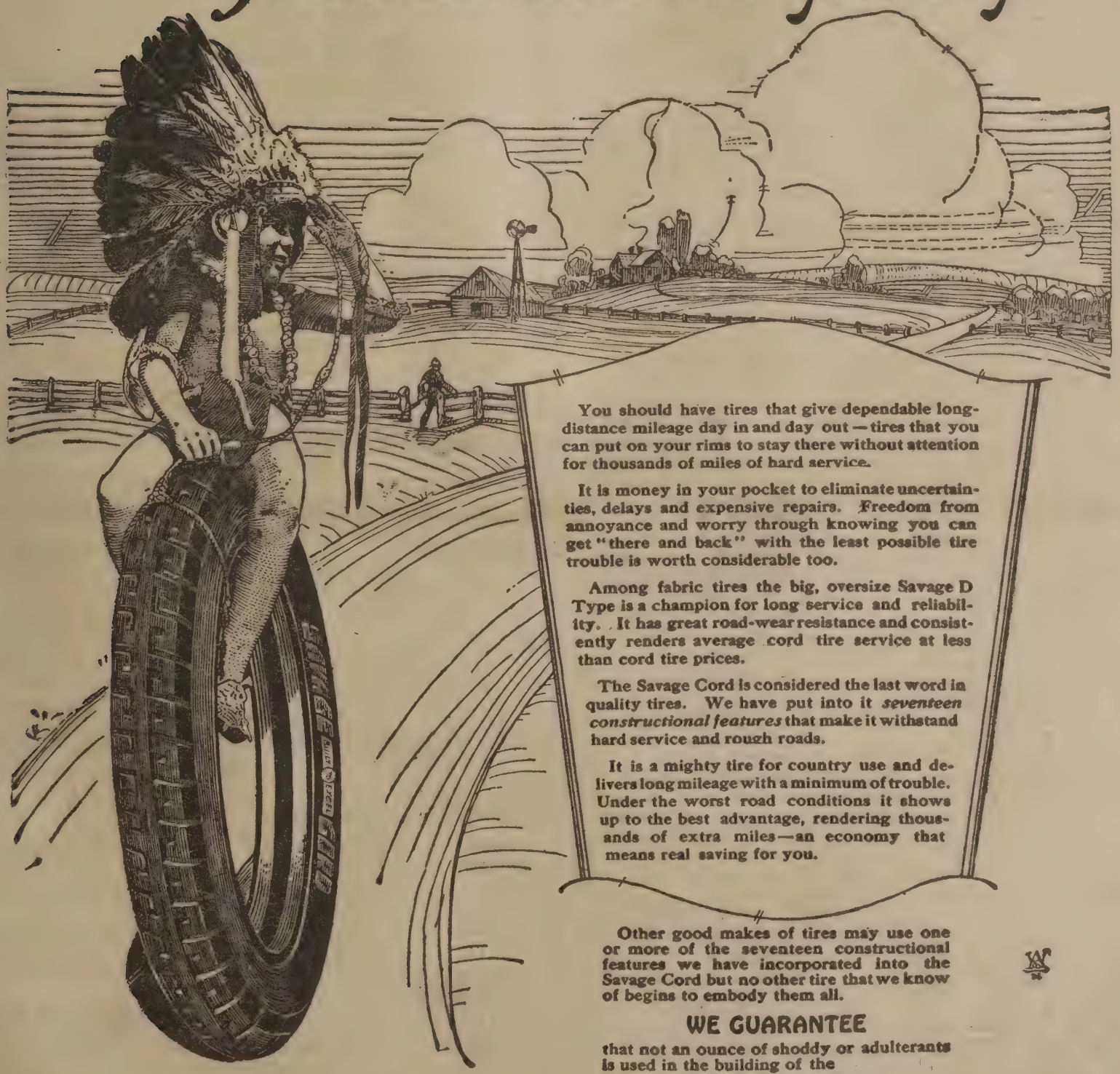
An average of 200 carloads of apples daily averaging four trains every 24 hours, has been forwarded from Wenatchee recently until a car shortage suddenly developed. But General Superintendent W. R. Smith states that 1500 refrigerators are immediately available for apple loading.

AT YOUR SERVICE.
DEMPSEY
Hotel and Restaurant
(C. C. DEMPSEY & SONS)
UP TO DATE.
Opposite Union Station, Spokane.

Stump Pullers
single and double drum hoists, hay hoists, hand hoists, Witte gas engines, and portable sawmills.
J. J. PETER, 309 1st Ave. South, Seattle, Washington.

Just What You Want
may be offered in this week's want ads at a bargain. It's a good idea to look them over every week

Look for
GREATER MILEAGE
from the next tire you buy



You should have tires that give dependable long-distance mileage day in and day out—tires that you can put on your rims to stay there without attention for thousands of miles of hard service.

It is money in your pocket to eliminate uncertainties, delays and expensive repairs. Freedom from annoyance and worry through knowing you can get "there and back" with the least possible tire trouble is worth considerable too.

Among fabric tires the big, oversize Savage D Type is a champion for long service and reliability. It has great road-wear resistance and consistently renders average cord tire service at less than cord tire prices.

The Savage Cord is considered the last word in quality tires. We have put into it *seventeen constructional features* that make it withstand hard service and rough roads.

It is a mighty tire for country use and delivers long mileage with a minimum of trouble. Under the worst road conditions it shows up to the best advantage, rendering thousands of extra miles—an economy that means real saving for you.

Other good makes of tires may use one or more of the seventeen constructional features we have incorporated into the Savage Cord but no other tire that we know of begins to embody them all.

WE GUARANTEE
that not an ounce of shoddy or adulterants is used in the building of the
SAVAGE CORD

THE SPRECKELS "SAVAGE" TIRE CO. SAN DIEGO, CALIFORNIA
OUR BEST ASSET IS THE SATISFIED CUSTOMER

POULTRY AND RABBITS

Tuberculosis

In Many Species of Birds

Tuberculosis has been observed in many species of birds, among them the hen, turkey, pigeon, duck, goose, guinea fowl, peafowl, ostrich, parrot, canary, pheasant, sparrow and swan. Government experts have found that among wild birds the disease is most destructive to those confined in zoological gardens.

The highest mortality among domesticated birds from tuberculosis is shown in the hen. The disease is known to prevail in many countries and is widely distributed in the United States. It has spread so extensively in some states as to cause very serious losses to the poultry industry, according to the government specialists. Tuberculosis of hens is a chronic, infectious disease, characterized by the formation of tubercles or nodules and resembling tuberculosis of other animals and man. It is commonly called spotted liver, liver complaint or rheumatism. Affected birds are also described as "going light."

The insidious manner of attack, the specialists say, makes tuberculosis most difficult to combat, because in affected birds there are no visible symptoms until the disease processes are far advanced, and in the meantime the bird may be spreading the disease among others of the flock.

One of the first symptoms exhibited is gradual emaciation, which becomes especially noticeable in the breast muscles. These diminish in size until in advanced cases there is scarcely any flesh left on the breast bone. Feeling the breast region with the fingers will readily detect this wasting of the muscles. Loss of weight proceeds with emaciation and is very marked in the late stages of the disease. The appetite continues good. There is no rise in temperature, a normal range of from 106 to 108 degrees Fahrenheit being maintained until shortly before death, when the temperature drops several degrees.

Lameness in one or both legs, or drooping of one or both wings, is often observed, and may be the first symptom seen. These result from the development in the joints of the legs or wings of tubercle bacilli, which cause painful swellings.

As the disease advances, the comb, wattles, skin of the head and membranes in the mouth and about the eyes become pale. The eye itself remains bright. The feathers are ruffled. The bird grows listless, weak, moves about little and is easily caught.

Deaths in the flock occur at intervals. Affected birds may live only a short time after symptoms are noticed, or they may live for weeks. This depends to a large extent on the stage reached by the disease before the attention of the owner is attracted to the condition of the fowl. The course of tuberculosis is indefinite, however, and may be shorter in flocks where infection is widespread and consequently heavier than in mildly or newly infected flocks. Its course may run well over a year from the time the individual is infected.

Feeding Mash to Poultry

A mash composed of ground grains or their byproducts and some form of animal protein is an essential part of a ration for both growing chickens and laying hens. The reason is that birds putting on growth or producing eggs can not assimilate enough nutriment from whole or cracked grains to supply the maximum need. When the grain is ground, say specialists of the United States department of agriculture, little work is required of the gizzard, and much more of the feed can be used in making flesh or eggs.

The scratch grain part of the ration, however, is needed to give the gizzard something to do in order to keep the birds in health. For laying hens the scratch grain thrown in the litter provides an incentive to needed exercise.

It was once thought that the mash should be fed wet to produce the best results, but experiments have proved that in spite of the slightly better palatability of the wet feed, the convenience of feeding it dry overbalances any slight gain in production. Feeding it dry is now the usual method. Digestibility is not increased by wetting.

The principal objection to the wet mash is that it requires too much labor. It must be moistened, then carried to the hens once a day, and the troughs must be cleaned after each feeding. Cleanliness is absolutely essential, because indigestion and diarrhea will result from feeding in dirty troughs. On the other hand, the dry mash hopper may be filled once a week or even less frequently, and needs no further attention. Hens do not overeat of dry mash, as they sometimes do of wet feed.

Ventilation Is Vital

Just because the nights are becoming a little cooler—cold, in some localities—one should not close all the windows and shut the door of the chicken house. Hens do not object to a little cold if they are not in a draft, but they do object to stuffy quarters.

The hen uses more oxygen per pound of body weight than almost any other animal. She gets it from fresh air, and if the air is not available she simply does without this vital element in the quantities in which she needs it. She can get along on half ration of grain much better than she can on half ration of oxygen.

Likewise, the hen breathes out a large amount of moisture. If her house is shut up tightly or the ventilation poorly planned, there is sure to be an accumulation of moisture in the house in cool or cold weather. This means damp litter, damp nests and general insanitary conditions.

Most cases of roup are traceable to poor housing conditions. Roup is the direct outgrowth of colds, and colds are more often the result of too little fresh air than too much. Ever see a hen seek a high limb on a tree as a roost? She can endure much cold weather without taking cold, and roup is unknown to her. But look carefully over the flock that is "well housed" with warm quarters and these ailments are likely to be found. Well housed doesn't mean tightly housed. It means sheltered from wind and storm, but with an abundance of good, wholesome air, reasonable warmth and dry litter and ceilings.

A GOOD GREENS FOR CHICKENS.

Swiss chard has been found an excellent green feed for hens. Chard is a member of the beet family, producing tops without the enlarged root below the ground. It will grow rank on fertile, well-watered soil. The way to use it is to cut it just above the ground and throw to the hens what they need at each feeding time. Within a couple of weeks the roots have sent up a new growth of leaves equal to the original one. Thus one may begin at one end of a row, cutting a few feet each day, and coming back at the proper time for the second cutting. This system has the advantage of providing fresh, young greens for the fowls throughout the growing season.

WHEN POULTRY PAYS BEST.

In spring and summer actual cash returns are very small, and the poultryman must remember that the real profit for five months lies in what will later be produced by the growing stock. From this time on, however, both pullets and old hens should be giving good accounts of themselves.

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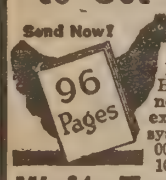
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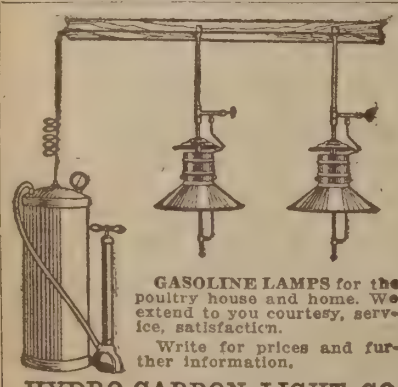
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ORCHARD AND GARDEN

Apple Thinning

Fertility One Determining Factor

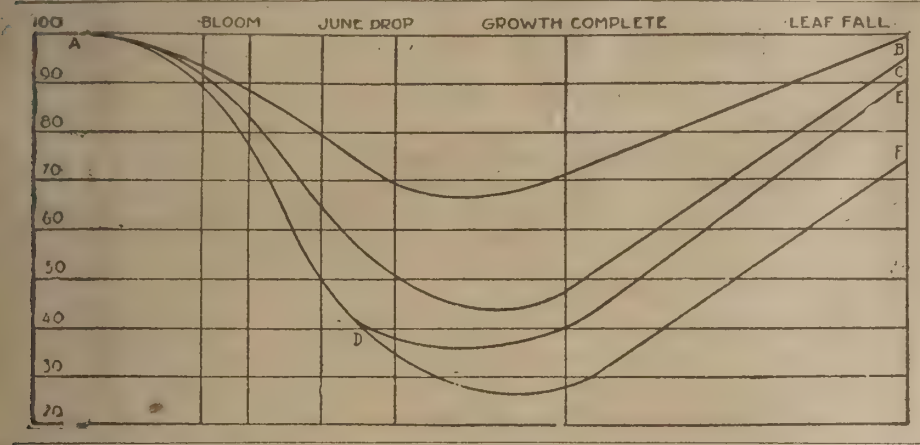
By PROF. O. M. MORRIS

In the first article of this series Prof. Morris discussed thinning principles as applied to different varieties of apples. In this, the second, he discusses thinning as affected by available and stored plant food for the tree. We again recommend that our readers study these articles carefully, then clip them out or file away the papers for future study and application as various of the problems influencing thinning arise throughout the ensuing season.

ARTICLE TWO.

Thinning is only one of several cultural operations that must be performed in order to have the orchard produce its maximum profit and, in order that the work be done with the best results, it is necessary to know something of the soil fertility and capacity of the trees for growth. The fruits and new growth use very rapidly the stored food material in the tree body and branches. The fertility of the soil is a very potent factor in enabling the trees to replenish this stored food supply and to gain the equilibrium necessary to be attained before wood growth can be properly developed. We see the maximum result of thinning in old trees because in their crowded condition and partially exhausted soil fertility, which commonly exists, these trees show a response to the release from an overload when thinning is done. On the young trees, which have not yet fully occupied their ground, small branches may develop clusters of fruit to a very large size. In such cases the fertility of the soil supplies more plant food material than the trees need for maintenance of a moderate rate of growth. So long as the soil fertility keeps the tree in that stage of development where the wood growth has the ascendency the necessity for thinning is reduced to the minimum and as the fertility decreases the necessity for thinning increases.

The accompanying chart on stored food shows the relative per cent of stored food in an apple tree during the growing season. The line AB shows the stored food content of a tree of bearing age that is not carrying a load of fruit. Line AC shows the stored food content of a tree carrying a medium load of fruit. Line ADE shows the stored food content of a tree carrying a full load of fruit which was thinned well at D. This would be ordinarily in the late spring. The line ADF shows the stored food content of a tree carrying an overload of fruit. No thinning was done on this tree.



The tree represented by the line AB has at the close of the growing season a good supply of stored food and is well prepared for a good start in growth next spring. The lower the stored food content of a tree the leaves show, the poorer the growth possible for it to make in the early spring. If the stored food content runs extremely low during midsummer, later fruit buds are seldom produced.

The next article in this series will discuss pruning as it influences the thinning of next year's apple crop.

Makes Success With Raspberries

BY HELEN STURGIS.
R. F. D. No. 3, Yakima.

Raspberries can be successfully grown in a hot, dry climate. It has been proved that they are not partial to damp atmosphere, which had formerly been supposed.

Mr. and Mrs. S. M. Bayes of Yakima harvested an excellent crop of raspberries this spring. A first year crop from three acres netted them $2500 despite the fact that neighbors tried to dissuade them from planting berries as a money making venture.

Most of the raspberries grown in Yakima have consisted of a few rows in each garden that were often neglected for more important work. It has been believed that these berries could not be made to bear sufficiently well to grow them on a large scale.

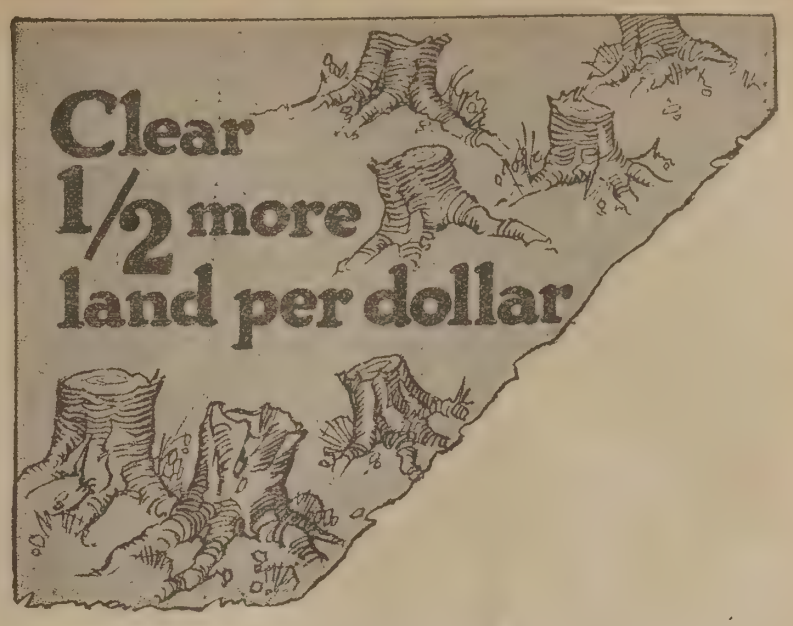
Mr. and Mrs. Bayes formerly lived on the Sound and had had experience in berry culture there. They moved to Yakima and bought a tract of new land under the Tieton canal. Young trees were set out and the tedious task of waiting for them to bear was begun. They decided to crop the land and were convinced that raspberries would do well on this side of the mountains if they were properly cared for.

In the spring of 1921 the land between the trees was planted to red and black raspberries and strawberries. The plants were bought at Everson, Wash. For the red raspberries the Cuthbert variety was chosen and the 10,000 plants were set on three acres. The young apple trees were 30 feet apart, which allowed four rows of berries six feet apart to be between the rows of trees. In the rows the plants were put two feet apart.

Planting was done in the spring, and the bushes were cut back to about one and one-half feet in height. They were allowed to run during the first season and in the spring of 1922 they were trimmed to four feet, with five or six stalks left to fruit.

The black raspberries were set on three-quarters of an acre and were about a foot

(Continued on page fifteen.)



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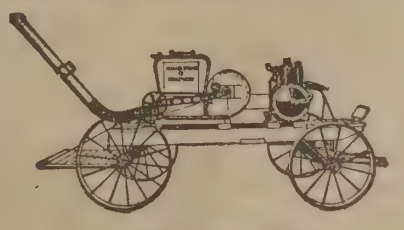
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Romance of the Apple

Through All Ages Man Has Carried Fruit With Him to Ends of the Earth

By C. I. LEWIS

Through all the ages, man has gone through all sorts of hardship and privation to carry fruit with him to the ends of the earth. As a result, some races, especially in the tropics, subsist on fruit alone.

Southwest Asia and Asia Minor have been the home of most of our fruits. From that point the traders passing through Greece, Italy, through Spain, France and England, gradually introduced these fruits. With the discovery of the new world, the voyagers almost invariably carried with them plants and seed to the new land. The hardy Spanish buccaneers introduced into Florida the seed of the citrus and have made that land one of the greatest producers of high quality citrus fruits in the world. These same buccaneers, sailing down around South America, introduced into Chile the olive, walnut and other fruits which later the Spanish fathers carried from that country to southern California and laid the foundation for marvelous horticulture. In all probability, the French traders introduced apples into Canada and possibly the Snow apple formerly may have originated from that source.

Our pilgrim fathers and Virginia cavaliers brought with them trees and seed. Too often, however, the trees died and the colonies had to resort to the planting of seed. These early orchards produced fruit largely of inferior quality and the fruit was largely manufactured into cider, but from this seedling epoch came our well-known varieties of today.

The Baldwin seemed to have originated as a chance seedling in 1740 at Wilmington Mass., and was named by Colonel Baldwin in 1784. No one knows where the Spitzenburg came from except that it originated in Ulster county, New York, more than a century ago and it is undoubtedly the result of seed which was probably brought from New England and planted in that section. Our famous Yellow Newtown, sometimes known as the Albermarle Pippin, originated near a swamp on the estate of Mr. Moore in Newtown, Long island.

Benjamin Franklin received specimens of this fruit in England as early as 1759 and it was exported in fairly large quantities by 1773 to both the West Indies and to England. We know that the Grimes probably originated in West Virginia, from seed which was planted at that point and that this variety is very old is evidenced by the fact that it was offered to the trade in New Orleans as early as 1804. The Jonathan was described in Judge Buell's catalog of 1825 as originating on the farm of Philip Rick, Woodstock, Ulster county, New York. The famous Northern Spy was found in a seedling orchard at East Bloomfield, New York. It had been planted by Herman Chapin, the seed coming from Salisbury, Conn., the original trees having died before bearing but the sprouts lived and thus the wonderful variety was propagated. It was well distributed by 1847. The Rome originated on the farm of H. N. Gillett of Ohio and was shown at a convention of fruit growers as early as 1848. Without doubt the Rhode Island Greening probably originated as a seedling near Newport, R. I., at Green's End.

Some varieties like the Winesap we know little about, as regards their origin ,although the Staymen originated in 1866 at Leavenworth, Kan. The McIntosh originated in Dundas county, Ontario, and was freely propagated as early as 1870. The Wealthy, to which we owe so much to Peter Gideon, originated at Excelsior, Minn., from the seed of a cherry crab obtained in 1860 from Bangor, Maine. Had it not been for the seedling epoch in our horticultural history these varieties would never have been produced and America would have lost many valuable commercial varieties.

Probably many varieties were lost—for example, we know that the Indians took seed from the colonists in New England and planted orchards in New York and Pennsylvania. Sad it is that General Sullivan in his raids destroyed the Indian orchards he came in contact with and thereby perhaps deprived us of many valuable varieties. Mr. Chapman, known as the eccentric Johnny Apple Seed, in his wanderings down in the Ohio valley, clothed in burlap, carrying a sack of seed in one hand and a Bible in the other, blazed the trail for varieties of apples through that district. Possibly the Ben Davis group may have originated from Johnny Apple Seed distributed in the Ohio valley.

Quite a new epoch in our American pomology was the introduction of the Russian varieties. As early as 1838 we find that four Russian varieties were grown in the trial gardens at Salem, Mass., and described in the catalogs and in the "Book of Fruits," these varieties being the Red Astrakham, the Tetofsky and the Duchess and the Alexander. We know that a controversy arose later on; how Professor Buff of this state lead the fight in favor of the Russian apples, recognizing much merit in them, and they have contributed much to our American horticulture.

As the pioneers swept westward over the Rockies to the Pacific coast, we find they always carried fruit with them. Lewellyn brothers and Meek, after several trials and much privation, brought fruit to Oregon and planted some of the seed which originated the famous Black Republican and Lambert Cherry.

At a banquet in England in the early part of the last century, the ladies of the table laughingly gave the seeds of fruits to the Hudson Bay travelers who were to go to Vancouver, Wash. Some of these seeds were planted and thrived in orchards in the Vancouver district. The Mormons, as they wandered westward to Utah, always instructed their followers to bring seeds of all kinds and early established in Utah the foundation for a permanent horticulture.

Some of the work in originating the varieties I have described was probably intentional, an effort being made on the part of some to originate new varieties. The greater part of it, however, was accidental and some of our finest varieties came very nearly being destroyed. The Northern Spy had a very narrow escape. The Delicious apple perhaps narrowly escaped destruction. This variety occurred as a sprout on a Yellow Bellflower which was grated on Vermont seedlings. Suppose some stray steer had eaten and destroyed the shoot, we would not today have the wonderful Delicious apple.

Down in Florida they have a new variety of orange known as the Temple orange, which is said to have originated from the sprout of a seedling root, following a disastrous freeze at the top of the tree.

The Delicious apple represents the crowning point of achievement in the origination of American varieties. On the Pacific coast where I am very familiar with orcharding, it is not uncommon to find this variety yielding as high as 750 packed boxes per acre, whereas some of the older varieties often do not yield more than 200 boxes per acre. The high yielding varieties like Delicious, Jonathan, Winesap, Staymen and the Winter Pearmain which tend to produce annually big crops, are the varieties which are making fruit growing profitable in the west. No variety of apple of American origin ever had quicker distribution than the Delicious

Gradually, some of the older varieties are slipping by the wayside; the Baldwin has probably passed its zenith, being an irregular bearer, winter-killing frequently, and being subject to Baldwin Spot which have contributed to restrict its planting.

The future is going to see the demand for quality fruits, coupled with productiveness, vigor and good appearance. Can we now, with the later generations, show that same zeal in the improvement of our varieties and the origination of new ones? What more can we do for posterity than to bring forth beautiful, superior fruits, nuts, flowers and vegetables?

A Honey State

By GEORGE W. YORK.

Washington is a million-dollar bee and honey state. That sounds rather fishy, doesn't it? But it is true, and only a very few people even in Washington know what a "sweet state" this is.

But if the industry of beekeeping was protected the value of bees and honey in Washington could be doubled or trebled.

Scarcely any one knows that approximately $500,000 was lost in this state in the last three years, through bee diseases and spray poisoning of bees.

Not many folk know that the crop of honey is gathered by the bees at no loss of any other crop, but to the betterment of many crops, and that one of the finest food products of this state would go to waste if it was not gathered or conserved by the little busy bee.

While the value of the honey product of the bees is very great, it is not generally known that the value of bees as pollinators of fruit and other blossoms is greater than their value as honey-gatherers.

And yet, Washington spends only $2000 a year for the encouragement and protection of the bee industry.

Hundreds of tons of honey are shipped into Washington every year, but a better product could be produced within this state if the industry had the proper encouragement.

But when the value of bees to the state is considered, there is no good reason why everything within reason should not be done for the beekeeping industry.



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For years it has been known as a thoroughly trustworthy car—ready for work from sun-up to sun-down, and even long after, without babying and petting.

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They have experimented with cars which were lower in first cost; and they find the Hupmobile to be lower in last cost.

The Hupmobile, in short, gives better service at lower cost—and its records back us up when we say that the farmer who buys it with that expectation is going to find his expectation realized.

The Hupmobile is built by an old and well-established company, and is favorably known all over the world

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New Method of Smut Control

Many scientific investigators, as well as farmers, believe that a much better method of controlling smut in wheat than those heretofore used has been discovered. It is the copper carbonate method of dry-treating seed. Although both bluestone and formaldehyde treatments have proved effective in preventing bunt of wheat due to seed-borne spores, both have certain disadvantages and their employment is frequently followed by injurious effects upon the crops, says State College of Washington investigators, who are convinced that the new method is better.

It has long been recognized that the use of the various bluestone formulae causes much reduction in the per cent of germination of treated wheat. Also that an after bath of bluestone-treated wheat with milk of lime greatly lessens the amount of seed injury, and the same method is effective in lessening the injury from formaldehyde.

The methods of treating grain in bluestone or formaldehyde are inconvenient. The handling of the wet sacks of grain is a disagreeable operation, while the necessity for immersing in two successive baths is an added burden. Grain treated by a wet method must also be protected from freezing.

Tried First in Australia.

In the form of a finely powdered dust copper carbonate was first tested by Darnell-Smith in New South Wales as a fungicide in the control of wheat smut. On the basis of tests conducted in 1915 and 1916 he reported in 1917 that copper carbonate dust gave better results than either formaldehyde or bluestone. The copper carbonate dust treatment caused no injury to seed or to young plants and also resulted in very substantial increases in yield. The excellent results obtained in Australia soon attracted the attention of American investigators, who reported excellent control of both bunt of wheat and smut of oats by using two ounces of copper carbonate dust per bushel, with no appreciable injury to wheat. The favorable results reported by these workers have been substantiated by the experiments at the agricultural experiment station of the State College of Washington.

Two Ounces Per Bushel.

On the basis of completed trials their present recommendation is the use of two ounces of finely powdered copper carbonate testing 50 per cent or more of metallic copper per bushel of wheat. The powder should be fine enough to pass through at least a 100-mesh sieve. The effectiveness of the treatment depends on the uniform distribution of the fine particles over the surface of the grain. Two ounces per bushel gives a complete coating, and no added protection has been afforded by using more. Work now in progress will tell whether it will be possible to use less dust per bushel and still obtain effective protection. Specific data concerning the comparative value of copper carbonate dust and the standard bluestone treatment in preventing smut from soil contamination will not be available until the end of the 1922 harvest.

The application of the copper carbonate dust may be made in a number of different ways. In the earlier experimental work the treatment was carried out by shaking the seed and the requisite amount of copper carbonate in a closed container. A barrel churn has been used with good results, while in some larger operations a small concrete mixer has been tried. A special dusting machine has been designed which is effective and also convenient, and it is expected that this or a smilar machine will come into general use.

Advantages of New Method.

The advantages of the dust treatment are so pronounced that this method of control may be expected to replace the older wet treatments with bluestone or formaldehyde, in the opinion of the experts. The important advantages of this copper carbonate dust are briefly enumerated as follows:

1. The elimination of the inconvenient and disagreeable soaking methods.
2. The convenience of being able to treat seed days, or even months, before it is needed for use, thus making possible the utilization of spare time.
3. The elimination of seed injury and retarded growth, with even an improvement in germination over that of untreated seed. This will make possible a reduction in the amount of sed used per acre and should result in a considerable annual saving as soon as the method comes to be generally practiced.
4. The elimination of danger from seeding in the dry, making it possible to seed in the "dust," rather than being obliged to wait for rain.
5. Probable increased yields due to better stands, no retarding influence of the fungicide, and better control of smut.
6. A probable increased protection from reinfection of treated seed by smutty sacks, broken smut balls or from the wind-borne spores that are generally present in our summer fallow fields.

McWhorter to Prosser

Virgil McWhorter, superintendent of the United States sheep experiment station at Dubois, Idaho, has resigned and will go into the sheep business at Prosser, Benton county, Wash., where he will be one of the members of the Triangle Sheep company.

Other member of the company are F. R. Marshall of Salt Lake City, secretary of the National Wool Growers' association, and Howard Hackedorn, head of the live stock department at the state college. They have purchased about 2400 head of sheep, part of which are from the Archie Prior herd. Plans are being laid to operate two bands during the summer and one in winter.

Mr. McWhorter's position at Dubois will be filled by W. A. Deueche of Boise.

Makes Success With Raspberries

(Continued from page thirteen.)

high when planted. They were put three feet apart in the rows. Otherwise they were the same as the reds.

Tieton water-users are allowed to irrigate only at specified times. On the Bayes ranch water could be had every two weeks. The soil is light volcanic ash and the land a south slope, so it can easily be understood that the cultivation to retain the moisture in the ground, could not be neglected. Mrs. Bayes and her small son with their trusty hoes are given no little credit for the success of the venture.

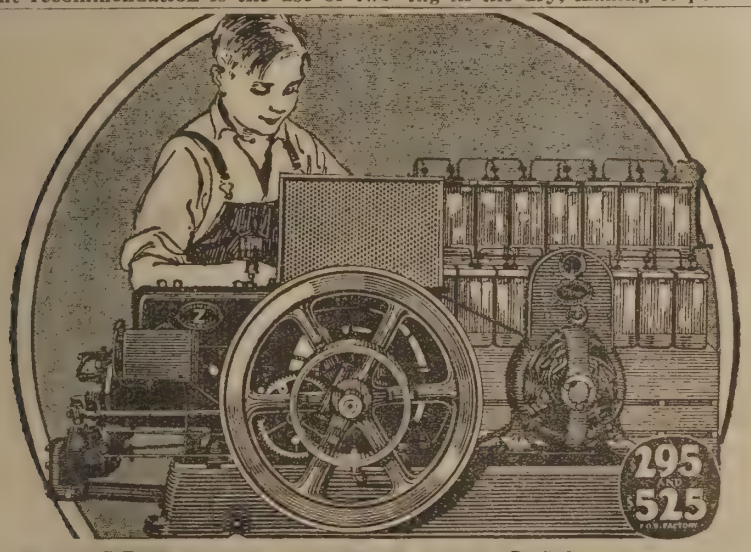
Red spiders which have been troubling some growers have not appeared at the Bayes place. In 1921 they sprayed the bushes with a strong tobacco solution but they have used no spray this year. It is their intention to spray with sulphur early next spring before the leaves are out.

The entire raspberry crop, with the exception of 60 crates, was sold to retail merchants in Yakima. Pickers were paid 60 and 75 cents a crate for picking the reds and 40 and 50 cents for the blacks. The higher prices were paid toward the close of the season as berries were not as plentiful. At the very last of the picking season the workers picked on shares.

Mr. and Mrs. Bayes believe they can make their berries yield splendidly for at least five years if the ground is properly fertilized. The land is new and no fertilizer has yet been used.

RAISE OWN FEEDS.

"One of the best solutions to our dairy problems is the raising of our own feeds," says A. E. Johnston of Gig Harbor, Pierce county, Washington. "There are many crops that can be planted in the fall and will grow well during the winter. We can just as well have such crops as these growing, and feed a small amount of green feed during the winter, especially when there is no silo on the place."



DOUBLE SERVICE from this SIMPLER PLANT

Here, at last, is a Home Light Plant that gives *double* the usual service, yet is entirely free from intricate concealed mechanisms. It is not only *more useful*, but also *more simple*.

The Fairbanks-Morse Plant supplies electricity for lights and electrical conveniences and engine power for a line shaft or individual machines *at the same time*. Or you can use the plant for electricity alone or for engine power alone.

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UNIFORMITY

Every gallon like every other gallon. Every drop capable of vaporizing rapidly and uniformly in the carburetor, and being consumed completely in the cylinder at the jump of the spark.

That's "Red Crown."

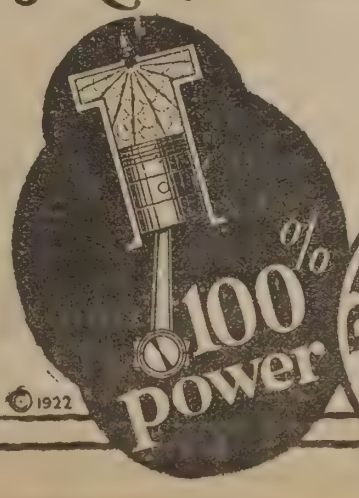
That's quality in gasoline.

Use "Red Crown" and *nothing else*, and your car will develop the maximum power that its makers designed it to give.

Fill at the Red Crown sign—at Service Stations, garages, or other dealers.

The Gasoline of Quality

STANDARD OIL COMPANY
(California)



RED CROWN GASOLINE

PIKE'S PEAK OR BUST

By LEWIS B MILLER

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PM

SYNOPSIS.

Esau Haggerty, a strong man of mature years, and Orlando Medford, a young, slightly built and frail companion, have started from their Illinois home town for the great gold diggings of the west. Esau is pushing a provisions-laden wheelbarrow. Orlando is leading a cow. They struggle slowly westward, meeting up with others also headed for the gold diggings. With a party of men traveling by handcart they all but starve for water on a desert, but dig a well and escape. They meet with a family by the name of Cooper, one member of which is a girl of years and manner that at once captivate young Orlando, who delights in keeping near her prairie schooner as they journey on. Once the entire party gives up the westward trip when they meet discouraged gold seekers returning, but Orlando and Hazel Cooper induce them to turn to the west again. They have many interesting experiences on the way, finally coming upon a great Indian camp. Not many days later they sighted Pike's peak, and a little later plodded into a little frontier town that has since grown to be the great city of Denver, Colorado. Here they learned that a rich gold strike had been made not far away at what was called Gregory's diggings. They mail letters to the folks back home and hurry on toward the place of the strike. At the foot of the mountains the women and children are left in camp to care for most of the supplies, while the men travel on foot into the mountains toward the diggings, which they reach the second day. Every claim is taken, so most of them proceed further and locate claims on Clear creek where they begin actual mining. The first day six of them wash out gold worth seven dollars.

CHAPTER FOURTEEN.

At Work on Clear Creek.

For several days they kept on working in the same manner. After digging up the dirt they carried it to the stream in their pans, and there separated the much dirt, gravel and sand from the little gold by washing. When first located, their claims had been the farthest up the creek. But many other miners had come in, often 30 or 40 a day, and staked out claims higher up. Now brush sheds and campfire smoke were as numerous upstream as downstream.

After several days some of the six began to complain of the slow way they had to work. Washing out a panful of dirt was a rather long, tedious process. Other miners, both above and below, were putting in sluice boxes. And Cooper's party were soon planning to do the same thing.

From time to time men came through the camp, offering to sell lumber. As yet not a sawmill could be found in these mountains. But in various places two men, using a whipsaw, were cutting lumber by hand. The log was placed on a platform, so that one man could stand below the log to saw and the other on top of it. Of course that was a slow, tiresome way of making lumber. But the sawyers received $30 a hundred feet for the planks they cut, and they could saw out more gold in that way than most of the miners were washing out.

When the lumber sellers first visited this camp the party of six had not money enough, all together, to buy more than a plank or two. But, after digging several days and washing out gold by hand, they had accumulated sufficient dust to pay for a sluice box. So, the next time the sawyer came through the camp they told him to bring them 12 planks 16 feet long. Two-thirds of them were to be 10 inches wide, the others a foot wide. They also ordered two or three additional planks, making a total bill of about $75.

It was perhaps 10 o'clock when the lumber was ordered. And late in the afternoon the sawyer arrived with it. He had their planks, as well as other planks for other miners, on the fore wheels of a wagon, with a single yoke of oxen pulling it. The rear ends of planks were dragging on the ground. That was the only practicable way of bringing the lumber down from the bench on the mountain where it had been sawed.

With these planks, and with some nails bought from a trading tent, Cooper's party, all working together, had soon constructed their sluice box. When completed it was about 60 feet long, but it had been made in sections, each 16 feet in length. Each section consisted of three planks, a foot-wide plank for the bottom and two 10-inch planks for the sides. Also the sections had been so shaped that the small end was narrow enough to fit into the wide end of another section.

Now came the putting of the sections in position and joining them together. That was not very difficult.

Though noticeably swift, from its rapid descent, the stream running down Clear creek was here scarcely a foot deep. While swifter in some places than in others, it had no pools—no deep places. And it flowed over a rock bottom. Also, the stream at its present stage did not cover all of its bed, there being some dry bottom at the edge of the water, and only a few inches higher. It was on this dry bottom that the miners prepared a place to clean up.

Beginning a sufficient distance upstream, they placed heavy stones in the edge of the water and rested the first section of their sluice box on those. The upper end of the section was a few inches under water, and the lower end, though higher from the creek bed, was still low enough for the water to run through the box and drop down. But, instead of letting it drop down, the miners fitted another section over the first section, and thus conducted the water on. In this way they led a small but swift stream out over dry bottom.

And so they kept on, adding section to section, all but the first section being supported by short benches instead of by stones. When the sluice box was finished



Sawed out more gold than most of the miners were finding.

the lower end was more than a yard above the dry part of the creek bed, yet the water was flowing through the whole box swiftly.

In addition to the sluice box, there were the long tom and the riffle box, so called. The first was about a yard long and had holes in the bottom, at one end. Through those the water, sand and smaller gravel would fall, leaving the stones and larger gravel in the long tom, from which they could be thrown out by hand.

From the sluice box the water fell into the long tom, and it strained through the bottom of the long tom into the riffle box. This last was a yard long and not so wide and was made of sheet iron. The sand and fine gravel, with the gold in it, dropped to the bottom of this box and remained there. But the water flowed out over the top. This iron box they had bought from a discouraged miner, who wanted to go away.

Across the bottom of their sluice box the miners had nailed cleats—narrow strips of wood. Those would allow the dirt and most of the gravel to be swept on by the water, but at least part of the gold would lodge against the cleats.

Carrying the dirt to the sluice box in their mining pans was too slow. So they made use of some coarse coffee sacks, which had been bought for the purpose from a grocery tent. Filling the sacks with dirt as they dug it up, they would carry them on their shoulders and empty them into the sluice box. The swift water flowing through swept the dirt away, and the stone and gravel with it. Part of the stones and gravel were strained out by the long tom, from which they could be shoveled out. What remained, mostly black sand, dropped into the riffle box.

After digging up dirt and carrying it to the sluice box all day, the miners shut off the water and cleaned up as night was coming on. This they did by scraping up, with a little iron paddle, the gold lodged against the cleats, and by washing out the sand and gravel in the riffle box. They had quicksilver with them, for use in gathering up very fine gold. But there was only coarse gold here, and they had no occasion to use their quicksilver.

After cleaning up at the end of their first day with the sluice box they found that they had only a little more than $10 worth of gold. That was rather disappointing, after all their work. But they promised themselves to do better as they dug deeper.

And they did do better. So much better that they could clean up about $15 a day, or $2.50 apiece. That was far less than they had hoped to make, though it was about as much as anybody else was cleaning up. But, expecting to do still better soon, and being hopeful of "striking it rich" at almost any minute, they toiled on.

As had been agreed at the outset, the party kept two of their number out hunting most of the time. At that they took turns, two men going out one day and two other the next. And the hunters did more than hunt. Besides their guns they carried a pick, a shovel and a pan, so that they could prospect wherever they went. Even if the six men did not do better where they were now working, there was a possibility that their prospectors would sooner or later discover better-paying dirt somewhere.

All the while a very interesting kind of life was going on here between two mountains. Men with various things to sell came from time to time, also bringing news from other camps. And often miners from these diggings, who had gone to Denver, returned with letters and papers. In such ways the men in this isolated mining camp kept in touch with the civilization they had left behind. At night, while gathered around one another's campfires, they exchanged such news as had come to them during the day.

Naturally, however, most of the miners' talk was of mining. While everybody at work here was making something, nobody was making much. On this account many were discouraged, having expected rich returns. Others, on the contrary, were cheerful and very hopeful of doing better soon. Nearly every party of miners had one or more members out prospecting every day, and they were hoping for valuable discoveries from that source.

Out in the surrounding mountains could occasionally be found a rude cabin, occupied by some men who lived by hunting and trapping. Now and then one of these trappers would visit the Clear Creek mining camp. Some came out of curiosity, perhaps, and to hear the latest news from the world they had long since forsaken. Others, having killed an elk or a bear, brought in the meat on a pack pony to sell it to the miners. Sometimes, by invitation, one of these trappers would spend a night in the camp, sleeping in a blanket or buffalo robe by somebody's campfire. Shaggy-looking fellows were they all, their hair long and their beards bushy. Even their ill-fitting clothes were often made of skins with the hair left on.

Most of these trappers were men of little or no education. But one who was different spent a night with Cooper's party. In appearance he was much like the rest of his tribe. But, except that he was ignorant of recent happenings in the world, he proved unusually intelligent. Orlando noticed that he used far better language than did most of the miners.

While sitting by their campfire he mentioned to the party of six that he had been born in St. Louis and had spent most of his life there. He seemed much interested in the place, and in what Orlando, Esau and others of the party could tell him concerning it. He spoke of men prominent in business there, and he told things about them which meant that he must have known them intimately. But he did not mention his own name; nor did he explain why he had left the city, 10 years before, and buried himself in this wilderness.

Perhaps he naturally loved a wild life and preferred, after having tried it, to live here rather than in any center of civilization. More probably he had failed in business and, being greatly discouraged, had never had the heart to try again. Also he might have been disappointed in love, or might have had family troubles, which so embittered his life that he fled to the wilderness to forget. At the same time there was a possibility that he had been guilty of some crime in the city, had deserted a wife and children, or defrauded somebody out of money, or even committed murder.

Next morning he went away, soon after breakfast, without enlightening anybody

(Continued on page eighteen.)

Bits of Fun FOR Everyone

Meeting Expenses.

"Do you have any trouble meeting expenses now?"

"Lord, no! I meet 'em everywhere I turn."

Faith.

Little Helen asked with much earnestness in her evening devotions that Boston be made the capital of Maine.

"My dearie," expostulated the shocked mother, "why did you ask that?"

"That's what I said today in examination, and I want it to be made right."

Really Much Better.

An old gentleman entered a country newspaper office and, approaching the editor, said: "I want to get copies of your paper for a week back."

The editor replied: "Hadn't you better try porous plaster?"—Ladies' Home Journal.

Discouraging Willie.

"Reggie," said her husband's wife, "I don't believe you have smoked one of those lovely cigars I gave you last Christmas."

"No, my dear, I haven't," replied the wife's husband. "As a matter of fact, I intend to keep them until our little Willie grow up and wants to learn to smoke."

Not Unlike Others.

Tommy had been playing truant from school, and had spent a long, beautiful day fishing. On his way back he met one of his young cronies, who accosted him with the usual question, "Catch anything?"

At this, Tommy, in all the consciousness of guilt, quickly responded: "Ain't been home yet."—Tit-Bits.

Opposite.

Teacher—If heat causes things to expand, what does cold do?

Willie—Makes the days shorter in the winter time."

A Tragedy of Color.

"Horrors! While mother was sleeping the baby licked all the paint——"

"Off a toy?" gasped the excited neighbor.

"No; off mother."—Country Gentleman.

What Was It?

Pat—I woke up in th' noight last noight, an' Oi cudn't go t' shlape no more at all for worryin'.

Mike—Phwat was ut worryin' ye?

Pat—Oi dunno phwat ut was. Ut was somethin' that Oi was worryin' about yistuddy, but Oi cudn't fer th' loife av me ric'lict phwat ut was!—Life.

Which Would Be Funnier?

"Don't you want to buy a bicycle to ride around your farm on?" asked the hardware clerk, as he wrapped up the nails. "They're cheap now. I can let you have a first-class one for $35."

"I'd rather put $35 in a cow," replied the farmer.

"But, think," persisted the clerk, "how foolish you'd look riding around on a cow."

"Oh, I don't know," said the farmer, stroking his chin; "no more foolish, I guess, than I would milkin' a bicycle."—Fruit Dispatch.

Farmers' Want Ads

HELP WANTED—MALE 3

MEN WANTED AT ONCE TO FILL GOOD POsitions. You can qualify in few weeks. Experience unnecessary. Free employment department. Write for free catalogue 100-B, and rates. Modern Automobile and Tractor Schools, W1803 Third ave., Spokane, Wash., or 700 Mercer st., Seattle.

WANTED — SALESMAN WHO CAN SELL high-grade, dependable nursery stock; several counties in Oregon, Wash., Idaho and Montana now open for assignment. Our selling contract will interest you. Address Albany Nurseries, Inc., Albany, Ore.

AGENTS WANTED 9

MEN WITH HORTICULTURAL EXPERIence can make good money selling our splendid line of well grown trees and plants. Write for contract. An early start will give you the advantage. Salem Nursery company, 428 Oregon bldg., Salem, Ore.

SELL TREES AND PLANTS FOR US. STOCK reliable and in good assortment. Contract upon request. Write today. Capital City Nursery company, 426 Oregon bldg., Salem, Ore.

SCHOOLS AND COLLEGES 26

EARN $110 TO $250 MONTHLY, EXPENSES paid, as railway traffic inspector; position guaranteed after 3 months' spare time study or money refunded; excellent opportunities. Write for free booklet G-157, Stand. Business Training Inst., Buffalo, N. Y.

EDUCATIONAL 48

BEHNKE-WALKER BUSINESS COLLEGE of Portland; one of the largest institutions of its kind in America; guarantees a position to every graduate. Enroll now for fall term. A few months training under expert instructors and you are ready to enter business and win. Behnke-Walker graduates are always in demand. Write today for our free success catalogue. Address Behnke-Walker Business College, Fourth, near Morrison, Portland, Ore.

FRESH FOOD PRODUCTS 51-1

WHITE ALFALFA, SWEET CLOVER HONEY; 1 60-lb. can, $7.50; 2 60-lb. cans, $14.50; six 10-lb. cans, $8.50; three No. 10 pails, prepaid, third zone, $5.50. Wells D. Rose, Sunnyside, Wash.

NEW HONEY, FINE QUALITY ALFALFA, sweet clover; 60-lb. can prepaid, second zone, $7.29; two, $12.75; not prepaid; 3 10-lb. pails, prepaid, second zone, $4.25. Harry Fisher, Prosser, Wash.

POPULAR BRAND HAPPY HOME HONEY—One 60-lb. can, $6.50; two cans, $12.75; six 10-lb. pails, $7.50; comb honey prices on request. H. N. Paul, Mabton, Wash.

(Continued on the following page.)

FRESH FOOD PRODUCTS (Continued) 51-1

"HONEY BRAND" HONEY — ALFALFA, sweet clover product; pure, light, thick, good flavored; gives satisfaction wherever used; 1 60-lb. can, $6.50, two for $12.75. Write for circular and prices in pails. Oliver Sires, Wapato, Wash.

HONEY—400 TEN-LB. PAILS CHOICE Alfalfa, sweet clover honey; also 60-lb. cans and 5-lb. pails; discount on five-case orders or more. Write for prices and sample. Wm. R. Sires, Wapato, Wash.

FINEST NEW HONEY, 60 POUNDS, $7.60; 2 cans, $14.40; add postage; 10 pounds, $1.90; 5 pounds, $1 prepaid; satisfaction guaranteed. Geo. Bancroft, Hermiston, Ore.

NEW CROP ALFALFA-SWEET CLOVER honey; 60-lb. can, $4.75; two cans, $9 f. o. b. Rigby. Heckman & Larsen Honey Co., Rigby, Idaho. Quality guaranteed.

NEW HONEY—ALFALFA AND SWEET CLOver; 1 60-lb. can, $6.50; two, $12.75; discount on large quantities. Ernest Sires, Yakima, Wn.

DELICIOUS NEW CLOVER HONEY, 120 pounds, $9.75; 30 pounds, $3.25; won't crystallize. Browne, Box 499, Twin Falls, Idaho.

3-POUND BOX ABSOLUTELY BONELESS codfish; fine white, new catch fish, delivered by mail, $1. Coffin Fish Co., Seattle, Wash.

NICE OREGON PRUNES DIRECT, $7.75 PER hundred. Special 12½-lb. sample bag prepaid $1.80. Kingwood Orchards, Salem, Ore.

HONEY — FRESH ALFALFA-SWEET CLOver honey; one 60-lb. can, $6.50; two cans, $12.75. A. L. Traner, Touchet, Wash.

COMB HONEY AT $4.40 PER 24-LB. CASE, express not prepaid. G. I. Folsom, Route 1, Prosser, Wash.

MERCHANDISE 59

ARMY GOODS—STAG SHIRTS, $3.45; ARMY wool shirts, $3.25; work shoes, $2.95; officers' dress, $3.95; russets, $4.25; wool breeches, $1.95. Price list furnished. Walker's Army store, 501 Trent, Spokane.

MISCELLANEOUS—FOR SALE 60

SASH AND DOORS—O. B. WILLIAMS CO., 1943 First ave. So., Seattle. Chicken house sash, 20" wide by 25" high, 80c; a dozen different sizes in stock for immediate shipment. Skylights for chicken houses, 36"x40"; price, glazed, $2. This is the size recommended by the Western Washington experiment station. We carry them in stock for immediate shipment. Sash and doors for all purposes at lowest prices. All orders receive prompt attention. Our large illustrated catalog No. 35, showing full line of building material and built-in fixtures for the home, free on request. O. B. Williams Co. Established 1899.

SACKS—SECOND-HAND GRAIN AND SPUD correctly sorted and graded; also pipe, new and second-hand, any size; standard roofing paper at a big saving; pumps, engines, belting, cables, etc. Alaska Junk Co., Inc., S120 Adams st., Spokane, Wash.

HOMESPUN TOBACCO SHIPPED COLLECT on delivery. Chewing, 5 pounds, $1.75; 10 pounds, $2.50; 20 pounds, $4.50; smoking, 5 pounds, $1.25; 10 pounds, $2; 20 pounds, $3.50. Farmers' Association, Paducah, Ky.

WALL BOARD—WRITE FOR SAMPLE OF Washington plaster wall board; won't warp, won't burn. Manufactured by Washington Building Products company, 6851 E. Marginal Way, Seattle, Wash.

NATURAL LEAF TOBACCO, CHEWING, 5 lbs., $1.75; 10 lbs., $3; smoking, 5 pounds, $1.25; 10 pounds, $2. Send no money, pay when received. Tobacco Growers' Union, Paducah, Kentucky.

ALL WOOL KNITTING YARN FOR SALE, direct from manufacturer at 95c, $1.35 and $1.60 a pound. Postage paid on $5 order. Write for samples. H. A. Bartlett, Harmony, Maine.

FOR SALE — FAIRBANKS-MORSE HOME light plant; 32 volt, 40-light; first-class condition; replaced by power line; cheap. W. S. Dowd, Parkdale, Ore.

TOBACCO — KENTUCKY'S PRIDE; EXTRA fine chewing, 10 lbs., $3; smoking, ten lbs., $2; twenty, $3.50. Farmers' Club, Mayfield, Ky.

NATURAL LEAF SMOKING TOBACCO—5 lbs., 75c; 10 lbs., $1.25; 20 lbs., $1.75. Cash with order. United Farmers, Mayfield, Ky.

BUY YOUR ALFALFA HAY AND NETTED Gem potatoes direct from grower. Samuel Shockley, Box 185, Outlook, Wash.

FREE TOBACCO—WRITE FOR SAMPLE OF Kentucky's best smoking tobacco. Hawesville Tobacco Co., Hawesville, Ky.

MISCELLANEOUS. 61

EXCHANGE CANNED SALMON FOR FRUIT, jar for jar. Ray Prickett, Siletz, Ore.

MISCELLANEOUS—Wanted. 63

EGGS, APPLES, HUCKLEBERRIES—WRITE us. Uncle's Delicious Pies, Inc.; capital stock $50,000. 554 Mississippi avenue, Portland.

STOVE REPAIRING 128

WRITE MYER RUBENS, SPOKANE, ABOUT stove repairs, welding broken parts, nickel plating.

FUR-BEARING ANIMALS 170

SILVER AND CROSS FOXES FOR SALE. William Rambo, 407 Sprague, Spokane.

PETS—Dogs, Birds, Etc. 171

WHEN YOU WANT A DOG, CANARY, PARrot, rabbits or a pet or pet stock supplies, cages, feeds or remedies, write. We are headquarters in the northwest. Routledge Bird, Pet & Animal Co., 174 Union avenue, North, Portland, Ore.

BEAUTIFUL WHITE COLLIE PUPPIES; reasonable prices. Urbandale Farm, Oakley, Idaho.

FINE FOX HOUNDS, PUPPIES; GUARANteed strain. Hugh Morrison, Route 8, Spokane, Wash.

POULTRY 174

PETALUMA ELECTRIC BROODERS ARE world beaters for raising chicks. No danger of fire, less care, better chicks. They grow faster, and are stronger and more vigorous than by any other plan. Our brooders give them "pep." Send for free literature. Petaluma Electric Incubator Co., Petaluma, Cal.

1923 WHITE LEGHORN CHICKS FROM FAmous egg strains; Corvallis bred; low price, high quality; enlarged capacity to care for large orders as well as small. Oregon-Corvallis Hatchery, Corvallis, Ore.

BRONZE TURKEYS — LARGE, RANGE raised toms from good laying strain; for November delivery, $8 each; also a few pullets at $5 each. Mrs. Ray Kelly, Touchet, Wash.

SICILIAN BUTTERCUP COCKERELS, $2.50. Also cocks, hens, pullets. Charles Carland, Route 2, Saint Maries, Idaho.

FARMERS' WANT ADS

This is the farmers' "want," "sale" and "exchange" department for small advertisements of farmers, including live stock and poultry.

Advertising rates for ads running 1 to 3 times, 10c per word per insertion, with a special rate to Farmer subscribers, as follows: Ads running 4 to 12 times, 9c per word per insertion; ads running 13 times or more, 8c per word per insertion.

All commercial and land advertising 10 cents per word each insertion. Open also to nonsubscribers.

In using these columns advertisers must observe: (1) No advertisements will be inserted for less than $1.00. (2) Every word, number and initial, including name and address, must be paid for. (3) New advertisements, changes of copy or cancellations must reach general office, Spokane, Wash., 10 days in advance of publication date. (4) Cash must accompany order.

Above rates include insertion in The Washington Farmer, The Idaho Farmer and The Oregon Farmer, which constitute the Pacific Northwest Farm Trio, 46 Review Building, Spokane, Wash.

POULTRY (Continued) 174

PULLETS—1500 APRIL AND MAY HATCHED White Leghorn pullets for sale at attractive prices; hatched from thoroughbred Hollywood and Tancred strains; sired by cockerels 250 to 290 egg strains. We ship at three months of age and guarantee satisfaction or you may return the birds in 3 days. We can give you quality and service. Queen Hatchery, Seattle, Wash.

WILLAMETTE VALLEY BARRED PLYmouth Rocks. Over fifteen hundred young birds in 1922; heavy laying strain, dark and beautifully barred; cock birds and cockerels for sale; only the very best allowed on the Dimick stock farm; bank references. F. C. Waldron, R. F. D. 2, Hubbard, Ore.

CERTIFIED WHITE LEGHORN BABY chicks, hatched in the world's largest electric hatchery; choice free range, high egg producing breeding flocks, inspected by the Sonoma county farm bureau. Safe arrival guaranteed. Must Hatch Incubator Co., 445 Seventh st., Petaluma, Cal.

POULTRYMEN — SEND EIGHT TWO-CENT stamps for special three months' trial for the best and oldest exclusive poultry journal in the west. The articles and advertisements are of special interest to poultry breeders. Northwest Poultry Journal, Salem, Ore.

WHITE LEGHORN BABY CHICKS, FROM free range Hoganized stock; breeding flocks inspected by Sonoma county farm bureau; accredited hatchery inspector. Full count and safe arrival guaranteed. For price write to Lafranchi Hatchery, Petaluma, Cal.

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JERSEY BLACK GIANTS, AMERICA'S PREmier heavyweight fowl; Aug. 10th, 1922, admitted to standard; eggs and stock. C. M. Page & Sons, Box 877, Belmar, N. J.

PUREBRED BABY CHICKS FOR 1923. LEGhorns, Reds, Barred Rocks, White Rocks, Minorcas, Anconas. Free catalog. Booking orders now. C. N. Needham, Salem, Ore.

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BARRED ROCK COCKERELS OR EXCHANGE for yearling hens, same breed; also Bronze turkey toms and weaned Duroc boar pigs, $10 each. A. Wilson, Whitcomb, Wash.

PULLETS, VIGOROUS RANGE RAISED S. C. White Leghorns of excellent laying strain, at reasonable price. F. M. Shank, Route 2, Box 111, Hubbard, Ore.

DOLLARS FOR YOUR EGGS—WE PAY THE top market prices for your eggs and poultry. Daily cash remittances. Western Produce Co., Spokane.

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GIANT BRONZE TOMS, $10, AND ARISTOcrat Barred Rock cockerels, $3.50. Dec. delivery. Mrs. Roy Watkins, Olex, Ore.

ALLEN'S ROCKS AND LEGHORNS WIN, LAY and pay. Write your wants. D. W. Allen, La Conner, Wash.

400 WHITE LEGHORN PULLETS, $1 EACH. E. Parfitt, Sunnyside, Wash.

LIVE STOCK 177

SAVE THE CALVES—"SAVACALF," A POWerful germicide, is used for treating contagious abortion in cows. It drives the disease from those that have it, and prevents the clean herds from getting it. Simply mix it with the salt and treat the whole herd at once. Costs 25 cents per head per year. Every breeder should use it. $5 package postpaid. Absolutely guaranteed. Write for information. H. C. Babbitt, Boise, Idaho.

WE GUARANTEE TO PAY THE HIGHEST market prices for your poultry and live stock. Owing to the constant changes in the market we are unable to quote prices in this paper from week to week. We will furnish tags and prices when you are ready to ship. Write us what you have to sell. Prompt returns. John Lewis & Co., Spokane, Wash.

LARGE, HEAVY PRODUCING HOLSTEINS for sale at all times in car lots; tuberculin tested; 150 to 200 head always on hand; well marked heifer calves from registered sires and heavy producing dams; crated for shipment anywhere, $25 f. o. b. Levinson & Balmelli, Yakima, Wash.

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FOR SALE—50 HEAD BLACK FACED BUCKS, purebred, not registered. Y. C. Mansfield, Sunnyside, Wash.

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LIVE STOCK (Continued) 177

WE PAY TOP PRICES FOR YOUR LIVE OR dressed veal, hogs and poultry. Your check by return mail. Shipping tags on request. M. & J. Packing Co., Spokane.

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FOR SALE — 150 YOUNG COARSE WOOL ewes. Young Bros., Auburn, Wash.

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HARNESS and SADDLERY 189

SEND FOR FREE HARNESS AND SADDLE catalog today; cut out the middleman, buy direct from the manufacturer. Lowest prices in the west; satisfaction guaranteed. Established 1881. Write Pierce Harness Co., Dept. T, Spokane, Wash.

HAY FOR SALE 200

CHOICE ALFALFA HAY, GREEN AND leafy; the kind that dairymen like to feed. Timothy and wheat hay for horses. Write for delivered prices. J. F. Jacobson, Kennewick, Wash.

ALFALFA HAY, GUARANTEED QUALITY; prompt shipment; buy direct and save money. Prices upon application. Ernest T. Freepons, Walla Walla, Wash.

300 TONS ALFALFA HAY. METHOW VALley. P. Hudson, Twisp, Wash.

FAIRS 370

PACIFIC INTERNATIONAL LIVE STOCK EXposition, Nov. 4 to 11, 1922. Entries close noon, October 10. Send for premium list. O. M. Plummer, general manager, 211 Northwestern Bank bldg., Portland, Ore.

JOB PRINTING 372

BEST PARCHMENT BUTTER WRAPPERS, 8x11, neatly printed, 100, 60c; additional hundred, 40c. Home Specialty Co., Middleton, Idaho.

TANNING 425

ANY KIND OF HIDE TANNED WITH HAIR on, or for leather. Mohr, 321 Sprague, Spokane.

TAXIDERMISTS 426

WE MOUNT ANYTHING FROM A FLEA to elephant. Mohr, 321 Sprague, Spokane.

FURRIERS 429

FURS TO ORDER, REPAIRED, REMODeled and for sale. Mohr, 321 Sprague, Spokane.

HIDES, PELTS AND WOOL 430

HIDES—WE BUY HIDES OF ALL KINDS. Write for prices and tags. Hibbard-Stewart Co., Hibbard bldg., Seattle.

FURS—WE BUY FURS AND PELTS. WRITE for prices and tags. Hibbard-Stewart Co., Hibbard bldg., Seattle.

MATERNITY HOMES 497

MATERNITY HOSPITAL; STRICTLY PRIvate; doctor in attendance; prices reasonable. Mrs. Elizabeth Peel, matron, W1324 Broadway, Spokane.

PERSONAL 537

WIDOWER, 39, WITH CHILDREN; GOOD ranch, western Oregon, wishes to correspond with lady with some means; references given and asked; object, matrimony. Address H 6, care Oregon Farmer, Spokane, Wash.

BUILDING MATERIAL 588

TURNS PLASTERING INTO PLAY—PERFECtion plaster wall board can be nailed on just like lumber, and makes a perfect plaster job. Western Wallboard Co., Seattle, Wash.

BUILDERS, CONTRACTORS, HOME OWNERS, write for free 1922 catalog. Tacoma Sash & Door Co., Tacoma, Wash.

SEEDS 620

VALLEY COUNTY WINS FIRST SEVEN world prizes. Timothy, 7c; timothy-alsike mixed, 10c. M. Meador, Norwood, Idaho.

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NURSERY STOCK, ITALIAN PRUNE TREES and trees of all kinds. Berries and small fruits of all varieties. Buy direct and save 50 per cent. Brooks Nursery, Lafayette, Ore.

BEST VARIETIES FOR THE WEST; HANDsome 48-page descriptive catalogue free. Routledge Seed & Floral Co., 145 Second st., Portland, Ore.

FARM LANDS FOR SALE 651

FOR SALE—FORTY ACRES, WELL IMproved; on good graveled road; half mile to school; 2 miles to town; good house and barn full of hay; 2 work horses, 2 colts, 5 cows and 12 head of young cattle; farming tools and furniture if wanted. This is a bargain if taken at once. Apply to owner, C. E. Kimble, R. F. D. 1, Guemes Island, Anacortes, Wash.

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80 ACRES, 12 PLOWED, FENCED, GOOD house and outbuildings, small orchard; well at door, also spring creek. $2000. M. T. Hemenway, Winlock, Wash.

80 ACRES, 40 CLEARED; GOOD BUILDINGS; near Chehalis; stock and crop cheap; some terms. Write owner, M. J. Lovelace, Box 18, Chehalis, Wash.

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FARM LANDS FOR SALE (Continued) 651

HIGHEST TYPE PRODUCTIVE SOIL FOR general farming; ideal berry and poultry district; abundant moisture, many springs; easy clearing; near town, good schools, markets and transportation; center of large agricultural district, with improved ranches in every direction. Immediate and steady employment for land buyers within walking distance; several thousand acres to select from; all good land; $15 to $45 per acre; unusually easy terms. At Onalaska, Wash., in Newaukum river valley (15 miles southeast Chehalis.) See salesman Onalaska, until Nov. 1st, thereafter, shown by appointment through Seattle office. New addition just opened. Graham Land company, 1008 American Bank bldg., Seattle.

PAYING FARMS AT LOW COST—160-ACRE farms, improved or unimproved; 30 to 160 acres irrigable land on each parcel; near Lethbridge, in sunny southern Alberta; can be bought for $15 to $40 an acre. No need for pioneering. Well settled country, good roads, railways, schools, telephones; agreeable social conditions; fertile land; success of irrigation farming here already demonstrated; irrigation system being constructed under government supervision; water available in 1923. Write for information concerning crops grown and description and location of farms to the province of Alberta, Irrigation Council, 12 Provincial building, Lethbridge.

DO YOU WANT A GOOD HOME FARM?—160 acres, in the heart of Walla Walla country, five miles S. E. from Walla Walla: 60 acres bottom land, balance 60-bushel wheat land; nine-room house, full cement basement, hot and cold water, bath, etc.; large barn, bunk house, chicken house, machine shed, hay shed, pump house, spring water; electric lights in all buildings; telephone; on country road and R. F. D. route. Price $200 per acre. $12,000 will be recognized, balance can be arranged. No trade of any kind. Write, phone, or see C. A. Beck, 10 West Alder st., Walla Walla, Wash.

CUTOVER LANDS, EASY TO CLEAR; $8 TO $20 per acre; 25 miles north of Spokane; on hard-surfaced highway; Great Northern and Milwaukee railways; excellent opportunity for dairying and stock raising, with Spokane markets and creamery near at hand. Will help the man who will live upon this land and agree to clear a part each year by giving lumber to help start his buildings, and a purebred Jersey bull to groups of farmers. Interest and payments low. Write Milan Farms Development company, Dept. T, Old National Bank bldg., Spokane, Wash.

BIG OPENING SALE OF YAKIMA VALLEY farm land, under an assessed state and government approved irrigation project; good, deep soil; close to town, railroads and state highway. We sell in tracts to suit purchaser at $25 per acre and up, on easy terms. Our many sales to farmers show that this land is a good investment. Western Lands, Inc., owners, 918 Green bldg., Seattle.

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MUNICIPAL LANDS FOR SALE BY THE DIStrict; no agents, no commission; interested only in getting home-builders on the project. Longest growing season in the northwest. Gardens and fruits thrive; schools, highways and railroads the best. Junction Snake and Columbia rivers. Write for terms and folder. Address Burbank Irrigation district No. 4, Burbank, Wash.

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7000 ACRES SEQUIM LAND SETTLEMENT project, containing the finest berry and dairy land in the state, now offered for settlement at attractive prices and terms. Free booklet. Thos. G. Mortland, Sequim, Wash.

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CHEAP—4800 ACRES, 1700 UNDER KENNEwick project; fine sheep range, including 10,000 acres leased land. Also lots and acreage in Yakima. D. G. Goodman, Yakima, Wash.

440 ACRES HAY AND DAIRY; 1 MILE FROM high school; 8 from Cheney normal; will consider 5-acre improved for equipment and hay and feed. Hentges, Valley, Wash.

SELL YOUR PROPERTY QUICKLY FOR cash; no matter where located. Particulars free. Real Estate Salesman company, 501 Brownell, Lincoln, Neb.

PUGET SOUND COUNTRY; WATER FRONTage farm lands; free map to landseekers. Charles Somers Co., Alaska bldg., Seattle.

FARM LANDS—Wanted 654

FARMS WANTED—SELL YOURS QUICKLY for cash, no matter where. Particulars free. R. A. McNown, 310 Wilkinson bldg., Omaha, Neb.

FARM LANDS—Wanted to Rent 660

WANTED—TO RENT OR TAKE CHARGE OF equipped farm; young married, competent farmer. Address H 7, Idaho Farmer, Spokane.

IRRIGATED LANDS—For Sale 663

500 CATTLE, 1346-ACRE IRRIGATED RANCH; wish to sell half interest; purchaser must have not less than $20,000 cash; purchaser can have management if desired. J. L. Milner, Idaho Falls, Idaho.

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COUNTRY HOME, WITH CITY ADVANTAGES, just outside city limits; 3 acres; 2 subirrigated black soil; strictly modern 8-room house; hot water heat, fireplaces, built-ins; separate servant's quarters; garage and chicken houses. Value $9000, reduced to $5500 cash, $6000 terms. Mrs. C. H. James, Route 1, Spokane.

FOR SALE OR EXCHANGE 702

80 ACRES; 30 CLEARED; 2 MILES FROM town; good soil and running water. For particulars, Joe Johnston, Springdale, Wash.

180-ACRE STOCK OR DAIRY FARM; 120 acres level meadow; running water; plenty of free range. Box 131, Springdale, Wash.

TO EXCHANGE—Real Estate 705

GOING TO CALIFORNIA, FOR SALE OR EXchange—All or part of 320 acres level land; suburban to Vancouver; city water; near electric car lines; can clear loan and assume mortgage on coast states improved country or city property. Owner, J. D. Westenhaver, 2048 Stevens st., Vancouver, B. C.

$35,000 WORTH CLEAR INCOME PROPERTY in Tacoma for good ranch, clear. Write owner, 3206 North 27th st., Tacoma, Wash.

Pike's Peak or Bust

(Continued from page sixteen.)

on any of these points. About the only thing he did tell was that the cabin he called home at present was three days' travel to the northwest.

But the six men he had spent a night with talked much of him afterward and speculated not a little on what they might have learned had they been permitted to read those unopened pages of his history.

When their shaft had gone down so far that the dirt and stones dug up could not be thrown out with a shovel, the six partners constructed a windlass. With this and a rope, and a box to hold the dirt, they went on with their work.

When the box had as much dirt in it as a man could conveniently carry it was wound up on the windlass and emptied into one of their sacks. And the sack a miner caught up, threw over his shoulder and bore away to the sluice box.

But not everything dug up by the miners in their shaft went to the sluice box. Much of this little, cramped valley—all of it, probably—had been made by Clear creek, and was largely composed of boulders. When dug out of the soil that embedded them those boulders and smaller stones were found to be worn very smooth. Much washing they must have undergone to round them in that way.

Those of the stones that were small enough were put into the dirt box and so drawn up. But some were too large for the dirt box, and some were too heavy to be drawn up without a stronger rope and a stronger windlass. Those it was necessary to break before they could be taken out, especially as they were too round and smooth for a rope to stay on them. From more experienced miners the party had learned how to crack the boulders.

One day, when the first of those too-large-to-handle boulders had been dug and pried out of its bed in the bottom of the shaft, Cooper, who was now digging, called up: "Boys, guess some of you had better go for a lot of pine knots!"

The men at the mouth of the shaft agreed, and two of them, both carrying dirt sacks, were soon moving away toward the mountainside, where pine trees grew. Wherever could be found a rotting pine log were pine knots. Being rich in rosin, the knots were still hard and sound after the rest of the log had decayed.

With their sacks well filled, the two men returned to the shaft. There both the knots and other kindling were let down in the dirt box to Cooper. While Copoer was piling the knots and kindling on the boulder, Orlando hurried to camp and returned with a chunk of fire. With that, when it had been lowered, the man in the shaft fired the fuel on the boulder. As soon as smoke began to rise he stepped into the box, grasped the rope and allowed Esau and Orlando to draw him up.

By this time much smoke was rising from the shaft. After watching the fire till it began to burn well, the three miners returned to camp. Givens had gone earlier, to prepare dinner. Abe Sanders and Jess Holloway were out prospecting and hunting and had carried their dinner with them.

CHAPTER FIFTEEN.

A Little Maid With Her Bottle of Gold.

After eating, the miners returned to their shaft, to find smoke and heat fogging up from its mouth, and the pine knots still burning fiercely.

Again they returned to camp, where they rested a while under their brush shed. When they came back, carrying buckets of water, a look into the shaft showed them that the fire had pretty well burnt out. Now each of the two carrying water poised their buckets carefully, then poured the water onto the hot boulder.

At once, amid the smoke and steam and hissing, could be heard a sharp cracking in the shaft. Several minutes later, when the smoke and steam had cleared, the men looked down, to see that the boulder had burst into several pieces. Givens was now lowered, and the fragments of the rock were piled into the dirt box and drawn out.

That was their first experience of the kind, but by no means the last. Again and again these miners, as well as all the others here, had to make use of fire and water to break up boulders too heavy to handle whole.

Four of the miners commonly worked at one time. One man was lowered into the shaft, where he dug up the earth and sent it out in the dirt box. Another man turned the windlass, and the other two received the dirt into their sacks and shouldered it away to the sluce box. The remaining two of the six were off, as usual, wandering over the mountains as they hunted and prospected. When the sun was low all the men at camp helped to clean up the sluice box.

Among the newcomers in the Clear Creek camp was a family that Cooper's party had some acquaintance with—the Hinksons. Rough as the road was, Mrs. Hinkson, still wearing a man's boots and a man's hat, had succeeded in driving her wagon in; and her husband and Becky had driven the milk cows and their calves. The family had established a camp, and Hinkson had staked out a claim. He and his wife were working it together, digging up dirt, carrying it to the creek in their pans and there washing it out.

Probably they did not clean up much, for they gave part of their time to other things. The woman washed clothes when she could find them to wash. Most of the miners here were not making enough to hire their washing done. They did it themselves, often by moonlight or by firelight. Also the man, who seemed to be not very strong, milked his cows and sold the milk. Every night and every morning he went up and down the strung-out camp with his tin bucket, peddling its contents to whoever cared to pay the price. Brindle was still giving milk and the party her owner was with did not have to buy. However, none of the other miners owned a milk cow; and most of them liked a little milk now and then, when they could afford it.

"I could sell a dozen times as much as I do if I had it to sell," Hinkson told the party of six late one day. He was returning with an empty bucket to his own camp, and had stopped for a few minutes to chat and swap news with the resting miners.

After Hinkson's cows were milked in the morning, they and the four oxen were placed in charge of Hinkson's 10-year-old daughter, Becky, who drove them away to wherever she could find pasture, and herded them during the day. One of the oxen had a bell on, and so had one of the cows. When milking time drew near, the child, armed with a switch, marched her little drove back to her own camp. A rude pen had been built, in which the cows and steers were kept at night and the calves during the day. The calves were turned out at night, one with a bell on; but they did not have to be herded.

A faithful, patient little herder was Becky; and as she often passed between their camp and their shaft with her charges, the six men soon became well acquainted with her.

"Won't you have some dinner with us, Becky?" Orlando said to her one day.

Her cattle were on the mountain side, beyond the creek, and the bare-footed little maid had waded the creek for a chat with the miners while they were resting. From their camp she could keep an eye on her charges, grazing a hundred feet or so higher.

"No, sir. I've done et," she answered, in her serious, matter-of-fact way. "I take my dinner in a little tin bucket that I used to tote to school, back whar we come frum—back in the states. I et up thar and left my bucket up thar." She glanced toward the mountain side. "But I had to come down to the creek to git me a drink. So I thought I'd wade across and see if you'd struck it rich yit."

"No, we hasn't struck it rich yet, Becky," Jess Holloway answered her.

"Reckon you uns is like us uns," the child remarked. "Pap says we've struck it pore. And he don't 'low we're goin' to do much better. He says milkin' pays better'n minin'. If it didn't, he 'lows the jig would be up with us."

"Do you do any milkin' yourself, Becky?" questioned Esau, after the little girl, at their invitation, had seated herself on a log in the shade.

"No, sir. That is, not much. 'Bout all I do is to hold tails for pap."

"Hold tails? How's that?" asked Orlando.

"Why, when the flies bites the cows, if I didn't hold their tails, they'd switch 'em right in pap's face, and maybe in his eyes. But I hold hard and don't let 'em."

"A tail-holder is a very useful person. Only wish I had one when I got to milk Brindle," Orlando commented with a smile.

"If your claim was close to ourn'n, I'd come down and hold her tail for you. Maybe I will anyhow, if mammy will let me."

"No, don't trouble to do that," Orlando hastened to say. "I can get through it all right without any help."

Now the child thrust her hand into what was evidently a pocket in her little homespun dress, and took out something, which she held aloft. It was a vial, yellow for nearly an inch of its length.

"Jist looky what I've got!" she cried.

"Why, you little rich girl! Where did you get all that gold?" demanded Sanders.

"Over in Gregory's gulch, while we's camped there."

"Did you wash it out?" asked Holloway.

She shook her head. "Not me. Mammy baked some bread for one of the miners. When I took it to 'im, he was washin' out a panful of dirt. And he up and says: 'Sissy, that bread smells awful good after flapjacks. You set right down thar and wait a minute. When I git through with this here pan, I'm goin' to give you the biggest piece of gold in it.' So I waited. And it was might' nigh as big as a—as a pea. And I squeezed it tight all the way back to camp. There mammy give me this little bottle to put it in. And nearly every miner that seen the bottle drapped another little piece in, till pap 'lows I've got 'most twenty dollars. Mammy don't like for me to tote it; but I love to have it to play with when I'm by myself."

"Let me see that bottle, won't you, Becky?" said Orlando.

She handed him the vial. After examining it, the young man took out a buckskin bag, untied its string, select a piece of gold from it and dropped it into the vial. Then he passed the vial on to the other miners, each of whom did the same thing.

"I ain't axin' nobody for nothin'," the little maid commented, in her quaint way, while her bottle was passing from hand to hand. "No, I ain't no beggar. But if anybody wants to drap a leetle, teeny, bitsy piece of gold into my bottle, you don't ketch me actin' up about it. I ain't a-goin' to squall like a baby gittin' its face washed."

The men laughed. "No, no need of that," Cooper assured her, after dropping in his bit of gold and corking the vial.

"Well, I've got to go. My cows and steers is strayin' away up yander. They may climb up among the clouds, whar I cain't see 'em; or up whar the bars'll kill 'em and eat 'em," she said, a few minutes later, as she sprang from her seat on the log.

"Come back and see us," Orlando called after her.

"Yes, be sure to come, Becky!" added Holloway. "Drop in on us every day if you can."

"Maybe so," she called back. She was already down the bank and wading the creek. "I'll come whenever I can. I've got lots to do."

She did return every day or two. And nobody visited the camp of the six miners who was more welcome.

For the party's hunting, Cooper and Sanders commonly went out one day, Esau and Orlando the next, and Holloway and Givens the day after.

One afternoon, their turn having come, Jess Holloway and Jeff Givens set off together. There being a shortage of meat in the camp, the pair were out for game only, their pick and pan having been left behind.

(Continued on page twenty-two.)



FAMILY CIRCLE

ALICE BARLAND
EDITORIAL CONTRIBUTOR

Experience Letters

From Our Family Circle Women

Dear Mrs. Barland: I thought I would write and tell the Circle some of my ways to make ends meet. I am 40 years old and my sister is 42 and we each have 10 healthy and hearty children. My twins are 2 years old and this is the way I make drawers for them: I take heavy stocking legs, cut off the bottom the right length, split down one side of each leg about 10 inches, and sew the top part together about four inches; then I set in a square piece for the seat, letting one point of the square run up the back seam and one point run up the front seam and one come down each leg. Then take elastic and sew to the tops stretching both the stocking and the elastic. These little drawers can be easily removed and are a great help when breaking in children to tidy habits.

For the little girls we use the little 10-pound cereal sacks the same way, only putting elastic in the bottom of the legs and turning a hem at the top into which to run the elastic.

To lengthen dresses we sometimes cut off the hem at the bottom half an inch above the hem and sew in some other cloth, selecting something that will harmonize and the effect isn't bad. On wool dresses I often sew on a strip of bright braid to cover the seam when I have had material of the same kind to lengthen with. A tuck will also hide a seam.

I, like many others, use sugar sacks, after washing and bleaching, for little girls' dresses. I dye them different colors, pink, blue and lavendar. They make up very pretty.

To keep the heels of shoes from running over or scuffing off I get a box of bob nails and drive in the side or all over the heel wherever needed and grease the shoes once in two weeks with warm tallow. MRS. R. B.

Washington.

Dear Mrs. Barland: I have often thought it would be helpful if we would have more helps in the Family Circle about dressmaking. That is, have experiences written up as to how dresses have been made of material at hand, such as combining different material into a dress. I know many of the women do these things and it would be helpful if they will tell how they did it. I am sure there is many a dress just around the corner if only the idea is received by the readers.

MRS. H. E. S.

Washington.

Dear Mrs. Barland: Since I wrote you last we have had a light hailstorm, but no damage was done. Twenty-five miles from us the hail "cleaned them out."

The grasshoppers are dying by the million; a sort of fly is stinging them. Even if God sends calamity he also sends blessings. Sometimes when things get dark and trials are thick I look away to the beautiful majestic mountains and am convinced there is a God who rules over all. MRS. K. S.

Bole, Mont.

Home Recipes

Carrot pudding: One cup grated carrots, one cup grated potatoes, one cup flour, one cup sugar, one cup raisins, one-half cup butter, one level teaspoon each of allspice, cloves, nutmeg, cinnamon and salt. Mix all together well, except the flour; put one teaspoon of soda into the flour and sift it into the other ingredients, boil in a double boiler for three hours. MRS. N. M.

Idaho.

Preserved pumpkin: Stew the pumpkin dry, that is boil it down until the bulk is greatly reduced, stirring frequently to avoid burning.

When well boiled down remove from the fire and to every three-fourths cup of pumpkin add three-fourths cup granulated sugar, one-half teaspoon of ginger, a pinch of salt and one-eighth teaspoon each of cinnamon, cloves and nutmeg. Blend thoroughly, heat to the boiling point, being careful not to burn. Seal in air-tight jars, either pints or quarts, and this will keep indefinitely.

For pie dissolve one cup of the pumpkin in one and one-half cups of scalded milk, add two well-beaten eggs, bake in a good rich crust and you have the famous New England pumpkin pie. I never peal the pumpkin, as that takes away much of the richness. MRS. ARTHUR KELLY.

Chehalis, Idaho.

Rose Powder: Gather leaves from strong smelling roses soon after the sun rises, spread them on a sieve and sprinkle with fresh water; after the water has dripped off rub the leaves fine, sift flour over them and work as you do noodles. Roll thin and dry quickly in a warm oven and while it is still warm pulversize it and sift it. Keep in closed glass jar. This is sometimes used for flavor in baking. MRS. R. Y.

Just Folks

Looking through an encyclopedia, my eye fell on the word "meeting." It quite naturally is defined as "an assemblage of people called with a view to deliberate on some specific subject or to accomplish some specific purpose."

Just following this was the word "meeting" with a more specific meaning of "the name applied by the society of 'Friends' to their various assemblages for worship or for the management of official business." The word "meeting" is applied to the usual gatherings of this religious society on several days of the week for worship, meditation and instruction. The same word is also applied to the monthly meeting which is an assembly of members from several contiguous congregations charged with making provisions for the education of children, for the admission of new members and for needed discipline.

In this last duty is included the appointment of committees to see that the rules are observed and "to settle difficulties among members by private admonition and council so as, if possible, to prevent their being brought before the meeting." Even when cases of trouble are introduced at the meeting, similar committees are appointed to settle them "informally," if possible, outside of the meeting.

In my boyhood days I remember riding with my parents along a highway in New England which was bordered by unusually prosperous farm homes. It was a delight to see the well-kept farms and farmsteads. Stopping to talk with the farmers themselves one noticed the poise the farm folks had, given to smiles and generally a happy looking people.

I am now wondering how much of this thrift and poise and happiness was due to the settlement of the troubles between neighbors when possible out of the "meetings." It appears from the above that the committees were busy settling these neighborly troubles so that they should never be brought to public attention, and even when they were brought to the attention of the meeting, committees were appointed to see if they could not be settled "informally."

"Informal" settlements, after all, are the most valuable. As soon as a troublesome matter is put on record it makes it harder to settle in a friendly way.

Probably the Friends, or Quakers, as they are sometimes called, also may have cultivated a habit of overlooking and forgetting those untoward words and actions which breed trouble when nursed. In fact, the habit of men folks and women folks among the Friends of dressing in a uniform and quaint manner probably had not a little to do with the allaying of jealousies and envyings, which play so prominent a part in heart disturbances.

The Friends always have been a small sect as regards numbers, but they have played a large part in making the world a better place for having lived in it.

What Others Say

Farm and Ranch: The rest cottage or rest room is becoming an institution in progressive towns and cities catering to the farm trade.

Ohio Farmer: We hope every one who attends any fair, county or state, at which boy and girl club members display their handiwork will take time to inquire into the feeding of the calves or pigs or chickens, or into the work required to complete the clothing or food or other clubs.

Farmers' Guide: One of the common mistakes made by those who are responsible for the program of farmers' meetings is crowding them too full.

National Stockman and Farmer: All staple foods are valuable in their place and meat is no exception even if some folks do theorize to the contrary.

Field Illustrated: People will and should, follow personal likes and dislikes in poultry keeping.

Utah Farmer: The most important unit in rural life is the family.

Successful Farming: Nothing is ever gained by shipping culls with good stuff. It lowers the price on the good stuff.

Rural New Yorker: Any apparent misfortune that will make a man stand still in the face of his troubles and think them out may be a blessing in disguise.

California Cultivator: California is not alone in having its roads pounded to pieces by overloads.

Breeders' Gazette: Not until live stock production is put on a quality basis can much progress be made in price stabilization.

Kansas City Star: The idea of concentrated selling as direct to the consumer as possible is going to live and be worked out in some practical form.

Hoard's Dairyman: If we as dairy farmers could get our products on to the market and into the consumer's mouth when its quality was at its best we could not begin to supply the demand.

Home Helps

By MRS. C. B. SMITH.

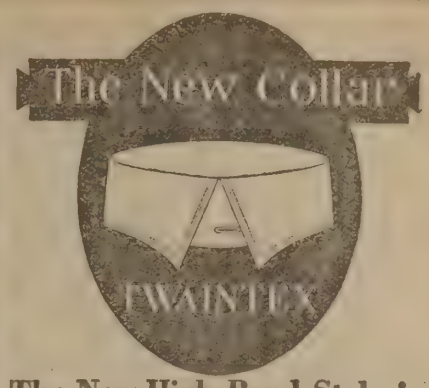
Nothing so deadens the gloss of glazed tile papers as to leave drops of moisture on them after washing. Rubbing each time with a soft, dry cloth will keep them shining for years.

Every one who uses a typewriter knows how hard it is to keep track of the eraser, which even the best operator finds occasional use for. My little son, becoming tired of hunting for mine, tied one end of a string about 15 inches long through the hole in the eraser, which is of the circular kind, and attached the other end to the pencil holder on top of the machine. It can not get lost and is easier to pick up.

If you do not own a polishing mitten for stoves, one may be made by using the sheep lining from a discarded work coat. Cut a mitten from any desired material and after sewing it up fit a palm cut from the sheep skin and sew it on, fleece side out. The side of a sheep moccasin will answer instead of a piece of the coat lining if the latter is not available.

Never place hot fruit jars on cool metal. They are less likely to break if put on a board or table. Breakage is prevented also by tipping the jar slightly and inserting a small object under one side to allow the air to pass under it. Cool air out of drafts rarely causes breakage.

Skin Tortured Babies Sleep
Mothers Rest
After Cuticura
Soap, Ointment, Talcum, 25c. everywhere. For samples address: Cuticura Laboratories, Dept. J, Malden, Mass.

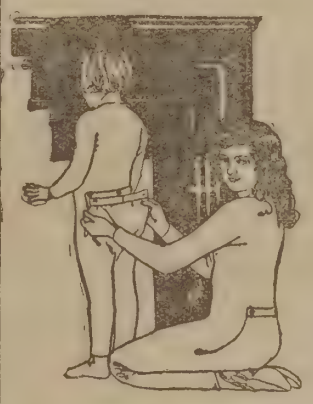


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High Points in News of the Week

The eyes of the world have been fixed on the Near Eastern situation during the last week, as for several weeks, where the British and other allied governments have been trying to avoid an actual opening of battle with the Turkish forces, which have been operating madly in Asia Minor and on the western side of the Dardanelles, the sea of Marmora and the Bosporus. The situation is acute at this writing, and, while there is just now an indication that war may be avoided, it is not impossible that hostilities between the British forces and those of the Turk nationalists will have opened before this reaches the reader.

At the close of the war the Turks found themselves driven out of southeastern Europe, being compelled to vacate Thrace, which lies on the European side of the Dardanelles, Marmora and the Bosporus, which, as shown last, constitute a narrow water passage connecting the Black sea and the Aegean sea, forming an international dividing line between Europe and Asia. Constantinople, the great Turkish capital, lying on the European side of the Bosporus, was internationalized, though still remaining distinctively a Turkish city. A narrow strip of land on each side of the Dardanelles, Marmora and the Bosporus was declared to be neutral land, like the neutral zone between France and Germany, with military activities within it denied to all nations. Also as an outgrowth of the war, the Greeks secured certain concessions in Asia Minor.

The present unpleasantness is the direct result of an uprising of Turks to drive the Greeks out of Asia Minor, which they have done successfully. The sweeping success of the Turks against the Greeks apparently has filled them with daring and renewed their ambition to regain their former power in Thrace, on the European side.

The allies have agreed that the Turks shall again possess Thrace, but have declared that the waterway between the Black sea and the Aegean (which is a tributary of the Mediterrancan) must remain freely open to all nations, never again being under Turkish control or that of any other single nation. The allies have been attempting to secure a peace conference with the Turkish leaders, but so far have failed, though it is indicated now that such conference will be held.

In the meantime, the Turks have occupied nearly all of the neutral zone on the Asiatic side of the Dardanelles, notwithstanding several "ultimatums" from the allies that they must not do so. The British troops and naval forces have been congregating in the vicinity in warlike manner, and failure of the Turks to respect the demands of the allies is practically sure to throw at least these two nations into actual war. Others are as equally sure to be drawn in, as nearly all nations are directly or indirectly interested in the situation. Some fear has been expressed that should England and Turkey declare a state of war to exist it would be the opening of a second world war.

At this writing the prospects for peaceable settlement appear brighter than at any time since the Turks ran amuck.

* * *

It is estimated that nearly 400,000 persons are in dire straights in the territory surrounding Smyrna, including neighboring islands in the Mediterranean sea, as a result of the recent destruction of that city by fire, followed by ransacking and massacring by the victorious Turks. Smyrna was a port at the east end of the Mediterranean in the hands of the Greeks, which have been driven wholesale from Asia Minor. Reports indicate that relief available is up to this time woefully inadequate to prevent the death from exposure and starvation of thousands of victims.

* * *

As a result of the Near Eastern situation King Constantine of Greece has abdicated and Prince George has assumed the throne. A revolution, involving mutiny of a large part of the Greek army that was opposed to Constantine, was about to take place in Greece.

Announcement is also made of the abdication of the sultan of Turkey in favor of the heir apparent.

* * *

Production of all coal, bituminous and anthracite, for the week ended September 30, is estimated at about 11,600,000 net tons by the geological survey in its weekly report. This was calculated to be sufficient to meet the current consumption, though probably not quite enough to allow storage for the future.

* * *

The average farm of Iowa, including buildings, live stock, machinery and the land, is worth $38,941, according to the last federal census. This is the highest average value of any state in the Union, and is more than three times the average for the country as a whole, which is $12,084. South Dakota comes second with an average of $37,837.

* * *

The New York democratic convention last week nominated former Governor A. E. Smith for governor and Dr. Royal S. Copeland for United States senator. Smith was nominated after William R. Hearst, newspaper publisher, had withdrawn from the race when it became apparent that he could not be nominated. The republican convention renominated Governor N. L. Miller and Senator W. M. Calder.

* * *

The Chicago, Milwaukee & St. Paul Railroad company has announced a cut of 7 cents per 100 pounds in the freight rate on wheat shipped from points west of Lavina, Mont., to Seattle and Tacoma for exportation. The cut is said to be the result of a desire to stimulate loading of cars for the Puget sound district so that empties will not have to be hauled west to receive lumber for eastern shipment.

* * *

It is understood that the officials of the striking railroad shopmen will appeal to the United States supreme court from the decision of the Chicago federal court in granting an injunction against the strikers prohibiting interference with the operation of trains.

Reports from a number of points tell of the formation of organizations among the new employees in the shops affected by the strike. In some instances it is reported that these workers are receiving higher wages than those fixed for the former shopmen by the United States railway labor board.

Railroad companies report success in filling positions. There have been few developments in the situation during the last week. Separate settlements have been made by several of the roads. Others, including the Great Northern and Northern Pacific, declare they are operating successfully in spite of the strike and that they will make no settlement with the strikers.

* * *

The Columbia irrigation project was indorsed by the rivers and harbors congress, in session at Everett last week. A resolution adopted set forth that the irrigation project would add several hundreds of thousands of tons of freight to the annual volume of Pacific coast harbors.

* * *

Improvement in the labor situation throughout the country, both through a reduction of unemployment and a distinct upward tendency shown by wages, was the chief economic development during September, according to the monthly survey of business conditions issued by the federal reserve board.

The volume of employment was increased during September, the board said, in consequence of the return to work of several hundred thousand coal miners, railroad shopmen and textile workers.

The period from August 15 to September 15, moreover, contained by far the largest number of wage increases reported in any month since the decline of business activity in 1920.

The most important increases occurred at copper mines, steel mills, cotton mills and in the building industry. Unskilled or semi-skilled workers received most of these advances.

* * *

Advisability of calling an international conference to consider further means of curtailing production of opium and illicit traffic in habit-forming drugs has been discussed with President Harding by Chairman Porter of the house foreign affairs committee, who said later that the president was inclined to favor the suggestion.

Illegal traffic in drugs has reached alarming proportions in the United States, Mr. Porter said. He expects to introduce after congress reconvenes a resolution requesting the state department to make representations to opium-producing countries that an agreement be reached for curtailing production and vigorously restricting sale of the product.

To Judge at Big Stock Show

Men of national reputations have been secured to do the judging at the Pacific International Live Stock show, November 4-11. In every class the man who ties the ribbons is widely known for his ability as a judge and in many cases he is noted as a breeder also. The following is the list:

Jerseys—C. S. Graves, Liberty, Mo.

Holsteins—W. S. Moscrip, Lake Elmo, Minn.

Guernseys—John E. Clark, Hardwick, Wis.

Ayrshires — (Announcement not yet made.)

Red Polled—Professor John Fitch, Kansas Agricultural college.

Shorthorns, both beef and milking—William A. Dryden, Brooklyn, Ont.

Herefords—James L. C. Painter, Roggin, Col.

Aberdeen Angus—C. W. Eckardt, Armonk, N. Y.

Fine and middle wool sheep—Professor W. C. Coffey, dean and director Minnesota Agricultural college.

Coarse wool—C. L. Hawley, Portland, Ore.

Angora goats—Not yet announced.

YAKIMA POTATO SHOW.

Plans for a big potato and corn show at Yakima in December are under way, according to County Agent A. E. Lovett.

Farm Business and Markets Outlook

(Continued from page five.)

heifers, $5@6; medium to good cows, heifers, $3.50@4.50; common cows, $1.50@2; canners, $1.50@2; bulls, $3@4; choice feeders, $5@5.50; fair to good feeders, $4@5; choice dairy calves, $3.50@9.50; prime light calves, $7@8; medium to light calves, $7@8; medium to light calves, $7@8; heavy calves, $5@7; common heavy calves, $4@5.

Hogs—Prime light, $11@11.50; smooth heavy, 200 to 300 lbs., $10@10.50; smooth heavy, 300 lbs., $9@10; rough heavy, $7@9.50; fat pigs, $11@11.25; feeder pigs, $11@11.50; stags, subject to dockage, $5@7.50.

Sheep—East-of-mountain lambs, $10@11; choice valley lambs, $10@11; medium valley lambs, $9@10; common valley lambs, $8@9; cull lambs, $7@8; light yearlings, $8@8.50; heavy yearlings, $7.50@8; light wethers, $6.50@7.50; heavy wethers, $5.50@6.50; ewes, $2@6.

SPOKANE, Sept. 30.—Cattle—Prime steers, $5@7; good to choice steers, $5@6; medium to good steers, $4.50@5; fair to medium steers, $4@4.50; common to fair steers, $3@4; choice cows and heifers, $5@5.50; good to choice cows, heifers, $4@5; medium to good cows, heifers, $3.50@4; fair to medium cows, heifers, $2.50@3.50; canners, $1.50@2.50; bulls, $2.75@4.50; light veal calves, $7@8; heavy veal calves, $5@7.50; stockers and feeders, $3.50@5.

Hogs—Prime mixed, $10.50@11.25; medium, $9.50@10.25; heavies, $7.50@9.25; fat pigs, $8.50@10.50; stockers and feeders, $8.50@10.

Sheep—Prime lambs, $10@10.50; fair to medium, $7@8; yearlings, $7@8; wethers, $6.50@7.50; mutton ewes, $3@6.50; feeder lambs, $5@7.

The Grain Market.

PORTLAND, Ore., Sept. 30.—Wheat—Hard white, Bluestem, Bart, $1.19; soft white, $1.10; western white, $1.09; northern spring, $1.08; hard winter, $1.07; western red, $1.04.

Grain futures: Wheat—Bluestem and Bart, October, $1.19; November, $1.18; soft, white, October, $1.10; November, $1.08; western white, October, $1.09; November, $1.08; hard winter, October, $1.07; November, $1.06; northern spring, October, $1.08; November, $1.07; western red, October, $1.04; November, $1.

Oats—No. 2, 36-pound naturals, October, November, $31.50; 36-pound clips, October, November, $31; 38-pound naturals, October, November, $32.50.

Barley—44-pound minimum, October, November, $28.50; 40-pound minimum, October, November, $28.

Corn—No. 2 eastern yellow, shipment October, November, $29; mill run, October, November, $28.50.

WALLA WALLA, Sept. 30.—Bart and Bluestem, $1.03; Club, 94c; Turkey Red, 89c.

RITZVILLE, Wash., Sept. 30.—Bart, $1.11; red, 95c; Fife, 90c.

DAVENPORT, Wash., Sept. 30.—Bluestem, $1.08; Marquis, 95c; Gold Coin, 91c.

ODESSA, Wash., Sept. 30.—Marquis, Bluestem and Bart, $1.11; Turkey Red, 94c; Jones Fife, 90c.

DAYTON, Wash., Sept. 30.—Club wheat, 92c; red, 91c.

SEATTLE, Sept. 30.—Wheat—Hard white, $1.11; soft white, western white, northern spring, $1.10; hard red winter, soft red winter, $1.09; western red, $1.07; Big Bend Bluestem, $1.25.

Hay and Feed Grain.

PORTLAND, Ore., Sept. 30.—Millfeed—Price f. o. b. mill: Mill run, ton lots, $27; middlings, $39; rolled barley, $36@38; rolled oats, $42; scratch feed, $44 per ton.

Corn—White, $36; cracked, $38 per ton.

Hay—Buying prices, f. o. b. Portland: Alfalfa, $18@18.50 per ton; cheat, $15; oats and vetch, $20; clover, $18; valley timothy, $20; eastern Oregon timothy, $20@21.

SPOKANE, Sept. 30.—Wheat—Feed wheat, $40 per ton.

Oats—$40 per ton; steam rolled, $42.

Corn—$36 per ton; cracked corn, $38 ton.

Barley—$42; steam rolled, $44.

Bran and shorts—$32 per ton.

Alfalfa, $22 ton; timothy, $24 ton; mixed hay, $22 ton.

General Produce.

PORTLAND, Ore., Sept. 30.—Butter—Cubes, extras, 41@42c lb.; prints, parchment wrapped, box lots, 48c; cartons, 49c. Butterfat, 48c, delivered station; buying price, A grade, 43c.

Eggs—Buying price: Current receipts, 37c per dozen; henneries, 43c per dozen. Jobbing prices: Front street, candled ranch, 45c; selects, 48c. Association, selects, 48c; firsts, 46c; pullets, 40c.

Cheese—Tillamook triplets, price to jobbers, f. o. b. Tillamook, 28c; Young Americas, 29c; longhorns, 29c pound.

Poultry—Hens, 12@22c lb.; springs, 18@22c; ducks, 20c; geese, 20c; turkeys, nominal.

Veal—Fancy, 15½@16c per pound.

Pork—Fancy, 15½c per pound.

SEATTLE, Sept. 30.—Eggs—Select local ranch, white shells, cases included, 45c per dozen; mixed color, 43c per dozen; pullets, 33c per dozen. Cases returned to shipper 1c less.

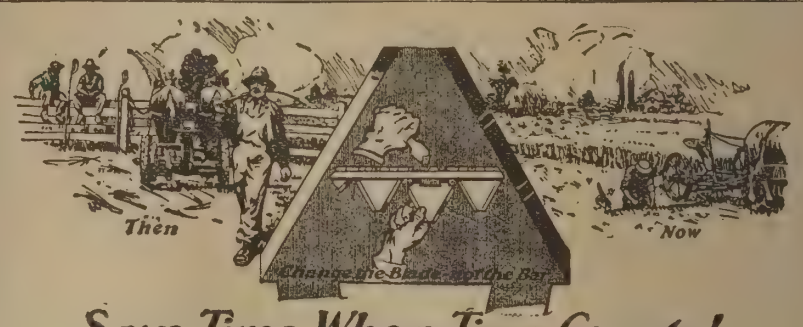
Butterfat—F. o. b. Seattle: A grade, 50c per lb.; raw milk, $2 per cwt.

Poultry—Hens, 4½ lbs. and up, 24c per lb.; over 3½ lbs. and under 4½ lbs., 16c per lb.; 3 to 3½ lbs., 12c lb.; 1922 broilers, 1 lb. and heavier, 22c per lb.; old roosters, 10@11c lb.; geese, fat, live, 16c per lb.; do fancy dressed, 24c per lb.; ducks, 3 lbs. and heavier, live, 15c per lb.; turkeys, fat, dry picked, 8 to 15 lbs., 30@33c per lb.; do live, fat, 10 to 15 lbs., 25c per lb.; squabs, large, $4.50 per dozen; pigeons, $2; guineas, $8 per dozen.

SPOKANE, Sept. 30.—Poultry—Fat hens, 17c lb.; light hens, 15c lb.; roosters, 8c lb.; spring chickens, over 2½ lbs., 14c; broilers, 1½ to 2½ lb., 16c lb.

Fresh ranch eggs—$9@10.50 case; no storage.

Butterfat—45c a pound.



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It has instantly removable blades. You can slip each one out in a jiffy after you've unlocked it. But nothing can shake it loose after you've locked it in with the keystone wedge — itself locked in place. Tests have proven it.

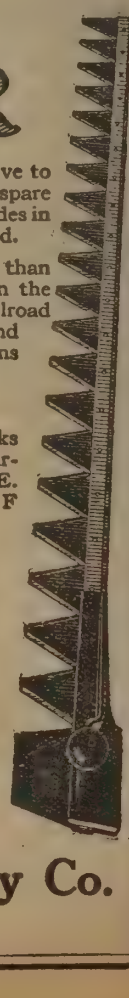
You don't lose a moment in the field. If you break or dull a blade you can replace it with a sharp blade in less than no time. You don't even have to take the knife out of the machine. It's as easy as slipping a new blade in a safety razor.

All the spares you need are a dozen blades. You don't have to tie your money in complete spare bars. And you carry the blades in your toolbox—always at hand.

The A-M-F Bar is stronger than old type bars. It is built on the truss principle—like a railroad bridge. It won't break and won't bend, but always runs free and true.

We guarantee it.

Any bar or head which breaks within a year from date of purchase will be replaced FREE. Rust-proofed by the A-M-F Intraloy Process.



Think of this! A-M-F Blades are high carbon steel—hard to damage. They hold their edge better; and you can take them out of the bar and grind them singly—clear down to the heel. It's the only way to keep mower knife cutting clean.

A-M-F Sickle Bars are made for all the modern standard mowing machines. It takes only a moment to fit one to your machine.

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Your Health

By Royal S. Copeland, M. D., F. A. C. S.

Operations are always dreaded. Why? The natural answer is the fear of pain. I do not believe this is the real objection. My mail is filled with letters from persons who wish to know if this or that condition can not be cured without an operation, "because I am afraid to take an anaesthetic."



Dr. Copeland.

This is the reason many operations are dreaded—the fear of the anaesthetic.

I had been doing operative work for more than 20 years before I had occasion to take an anaesthetic myself. During these years, for my own patients and those of other operators, I witnessed the giving of the anaesthetic to many hundreds of persons. In spite of this experience I confess I dreadfully hated to be anaesthetized. I was as timid about it as were the many laymen I had seen submit to the ordeal for the first time.

My purpose in giving my own experience is to comfort any one who may have to take an anaesthetic. Let me assure you there is nothing painful or uncomfortable about it, except the mental disturbance. Really, you will be a little ashamed, as I was, to think you permitted yourself to be so worried about taking an anaesthetic.

There is no doubt that a generation ago methods of administering anaesthetics were very crude, and, in many instances, cruel. They used to hold the patient and force him to breathe in choking and nauseating vapor. The struggles of the patient were not pleasant to witness, and they certainly must have been accompanied by torture of mind.

Nothing like this can occur today if you have a skilled anaesthetist. He will start you off with nitrous oxide gas and switch to the chloroform or ether after you have gone to sleep. He watches you closely, limiting the quantity of anaesthetic to your absolute need.

You awaken quickly, free from nausea, except in occasional cases, and none the worse for your experience.

Don't worry any more about taking an anaesthetic.

IN A GARDEN.

Any garden blooming sweetly,
In the sunshine of God's grace,
Holds a little of his presence—
Every blossom's smiling face
Is an echo of his gladness;
Every cloud that drifts above,
Looks upon the garden kindly,
With his dear, reflected love.

Oh, a garden gives a promise
Of God's graciousness and power!
He it is who makes it flourish,
He it is who tends each flower.
God is nearer, in a garden,
Than in almost any place—
One can almost feel him, passing,
With a smile upon his face!

—Margaret E. Sangster, in the Christian Herald.

CHURCH GETS $1000 A WEEK.

Dr. George Craig Stewart of Evanston, Ill., was one of the most envied men at the recent Episcopal general convention in Portland.

Dr. Stewart is the rector of one of the finest parishes in the church. He has two clergymen as assistants. His church is in Chicago. His congregation is wealthy. More than $1000 a week is contributed for the upkeep of the church and its various activities.

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Please order the patterns you desire at least two or three weeks before you wish to use them. Desiring to obtain the latest high-class patterns for its readers, THE FARMER has made arrangements to have them sent direct from the east, and under present mailing conditions it takes about that time for them to reach you.



4130. Lady's Apron. Cut in four sizes: Small, medium, large and extra large. A medium size requires 3 1-8 yards of 36-inch material. Price 10 cents.

4132. Boy's Suit. Cut in four sizes: 3, 4, 5 and 6 years. A 4-year size requires 1 3-4 yards of 27-inch material for the blouse, and 1 5-8 yards for the trousers. To make collar and cuffs of contrasting material will require ½ yard. Price 10 cents.

4128. Lady's Work or Porch Dress. Cut in seven sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. A 38-inch size requires 5 7-8 yards of 32-inch material. To trim as illustrated requires 1 yard. The width of the skirt at the foot is 2 3-8 yards. Price 10 cents.

3854. Girl's Dress. Cut in five sizes: 6, 8, 10, 12 and 14 years. A 10-year size requires 2 1-2 yards of 44-inch material. Price 10 cents.

4108-4049. Lady's Costume. Blouse 4108 cut in six sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. Skirt 4049 cut in seven sizes: 25, 27, 29, 31, 33, 35 and 37 inches waist measure. To make this model for a medium size requires 6 yards of 40-inch material, with 1 1-8 yards of 18-inch material to face the cascades. The width of the skirt at the foot without overlapping portion is 2 1-8 yards. Two separate patterns, 10 cents for each.

4124. Misses' Dress. Cut in three sizes: 16, 18 and 20 years. An 18-year size requires 5 1-4 yards of 36-inch material. The width of the skirt at the foot is 2 1-4 yards. Price 10 cents.

3897. Lady's House Gown. Cut in four sizes: Small, 34-36; medium, 38-40; large, 42-44; extra large, 46-48 inches bust measure. A medium size requires 5 5-8 yards of 36-inch material. Price 10 cents.

4104-3203. Girls' Dress and Cape. Cape 4104 cut in five sizes: 6, 8, 10, 12 and 14 years. It requires 4 1-4 yards of 36-inch material for a 10-year size. Dress 3203 cut in four sizes: 6, 8, 10 and 12 years. A 10-year size requires 5 3-8 yards of one material 27 inches wide. Two separate patterns, 10 cents for each.

4122. Lady's Dress. Cut in six sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. A 38-inch size requires 4 5-8 yards of 44-inch material. To trim as illustrated requires 5-8 yard of 44-inch material. The width at the foot is 2 1-4 yards. Price 10 cents.

3576. A Practical Set of Mittens. Cut in four sizes: Small, medium, large and extra large. It will require 1-2 yard for one pair made like No. 1, 3-8 yard for No. 2, and 3-8 yard for No. 3. Price 10 cents.

3590. Set of Pretty Caps. Cut in three sizes: 18, 20 and 22 inches. To make the caps for either head size indicated, will require 1-2 yard for No. 1, and No. 2, 3-8 yard for linjng and 1-2 yard for the outer portions. Price 10 cents.

4115. Girl's Dress. Cut in rfou sizes: 8, 10, 12 and 14 years. A 10-year size requires 2 3-4 yards of 32-inch material. Price 10 cents.

3753. Junior's Dress. Cut in three sizes: 12, 14 and 16 years. A 14-year size requires 2 3-4 yards of 36-inch material for the dress, and 2 1-4 yards of 32-inch material for the guimpe. Price 10 cents.

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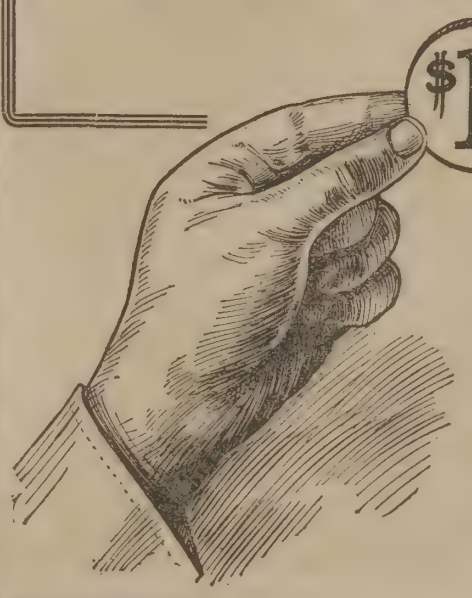
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If your subscription is already paid in advance it will be extended from the date to which it is paid. Oct. 5, 1922.



Dorothy Loch, in Yakima county, Washington, sends in the following jokes:

Mother—Tommy, what is your little brother crying that way for? Tommy (who had taken the little fellow's cake)—I guess that's the only way he knows how to cry, ma.

A young man who lived in the country took his sweetheart some flowers. "How kind of you," said the girl, "to bring me these lovely flowers. They are so beautiful and fresh; I think there is some dew on them yet." "Yes," said the young man in great embarrassment, "there is, but I'm going to pay it off tomorrow."

Mother—Always think twice before you speak. Tommy—Gee, ma, if you always think twice before you speak you must do some swift thinking when you get goin' for pa!

Mike—I lost my dog. What am I going to do? Pat—Why don't you advertise for him? Mike—Sure, but my dog can't read advertisements.

She—Did you tell anybody about my pies? He—Oh, yes! I had to tell my physician what ailed me.

Inez Tillotson goes to the Liberty school, in Whatcom county, Washington. She says she is in the sixth grade and has good times playing. Her teacher is Mr. Stuart.

We are glad to receive a letter from Evelyn Ellis, who has never written to us before. She likes to go to school and is in the second grade this term. Evelyn is 8 years old. She lives in west Washington, near Skagit bay.

Alice Coons of Clarke county, Washington, has the same teacher this year that she had last and Alice is glad, because Miss Fitsimons is a good teacher and Alice likes her. Alice was sick for a little while, but she is better now. She has had a nice visit with her sister, who came home for a month's vacation. Alice was glad to see her.

Here is a letter from Alma Stensaa, a cousin in Snohomish county, Washington: "I am 9 years old. We have 38 children in our school. I have a pet cat. We have 70 chickens. I play with my girl friends. I am in the third grade at school. My best friends are Agnes Hasby and Leona Robb."

Edna Barrie had a nice vacation at her cousin's home in Grays Harbor this summer and is now back at school taking fifth grade work. Her teacher lives only a block from her home. Edna's friend, Florence Dobbs, was at her house when she wrote to us. Why is a woman driving a nail like lightning? Because she never strikes twice in the same place. Edna's home is near the Strait of Juan de Fuca, in northwest Washington.

BEDTIME STORIES

By THORNTON W. BURGESS.

BOBBY COON ENTERS WRONG HOUSE.

After Unc' Billy Possum had arranged with Mr. Skimmer the Swallow, who was going south, to take a message to his family in Ol' Virginny, telling them to come join him in the Green Forest, he at once began to make preparations to receive



First of all he had to clean house.

them. Unc' Billy isn't any too fond of work. He had a lot rather that some one else should do the work for him and he is smart enough to fix it so that usually some one else does.

But getting ready to receive his family was different. No one else could arrange things to suit him. This was Unc' Billy's own job, and he was right on it every minute of the day. First of all, he had to clean house. He had been keeping bachelor's hall so long in that big hollow tree that things were not very tidy. So Unc' Billy cleaned house and while he worked he whistled and sang. Peter Rabbit, passing that way, overheard Unc' Billy singing and this was his song:

Mah o' woman is away down souf—
Come along! Come along!
Ain't nothin' sharper than the tongue in her mouf—
Come along! Come along!
She once was pretty but she ain't no mo',
But she cooks mah meals an' she sweeps mah flo',
She darns mah stockings an' she mends mah coat,
An' she knows jes' how mah chillun fer to tote,
Come along! Come along!

Mah pickaninnies am a headin' dis way—
Come along! Come along!
Daddy am a watchin' fo' 'em day by day—
Come along! Come along!
Mah ol' haid aches when Ah think ob de noise
De's boun' to be wid dem gals an' boys,
But Ah doan care if it busts in two
If de good Lord brings dem chillun troo!
Come along! Come along!

Every little while Unc' Billy Possum would sit down to rest, for he wasn't used to so much real work. But finally he got his house clean and made as comfortable as possible, and about that time he began to think how good an egg would taste. The more he thought about it the more he wanted that egg.

"It's no use talking, Ah just naturally have to have that egg," said Unc' Billy to himself, and off he started for Farmer Brown's.

Unc' Billy Possum was hardly out of sight when along came Bobby Coon. Now, Bobby Coon was absent-minded or else he was so sleepy that he didn't know what he was doing, for Bobby Coon had been out all night. Anyway, when he reached Unc' Billy Possum's hollow tree he began to climb up it just as if it were his own. He looked in at Unc' Billy's door. There was the nicest bed he had seen for a long time. He looked this way and he looked that way. Nobody was in sight. Then he looked in at Unc' Billy's door once more. That bed certainly did look soft and comfortable. Bobby Coon chuckled to himself.

"I believe I'll just see if that bed is as comfortable as it looks," said he.

And two minutes later Bobby Coon was curled up fast asleep in Unc' Billy Possum's bed.

Birthday Greetings

THURSDAY, October 5—Inez Bennett, 11 years old; Grace Ione Mains, 11; Geneva Straham, 8.

FRIDAY, October 6—Stella Cade, 9 years old; Artie James, 9; Ruth Power.

SATURDAY, October 7—Donald Cunningham, 10 years old; Thordis Fjerlie, 9; Blanche L. Gourlay, 8; Dorothy Palmer, 11.

SUNDAY, October 8—Esther Ahlf, 9 years old; Margaret Jones, 11; Ruth Stuhr, 9.

MONDAY, October 9—Frances Lobaugh, 11 years old; Isabelle Redding, 11.

TUESDAY, October 10—Marvin DeGooyer, 8 years old; Thelma Reynolds; Annie Mae Wyatt, 10.

WEDNESDAY, October 11—Sarah Houghton; Melva Hume, 9 years old; Annie Thompson, 11.

LETTERS WELCOMED BY AUNT NELLIE.

Among recent letters received by Aunt Nellie are those from cousins whose names follow. A few of these will be published each week in the regular edition of THE FARMER and others will appear from time to time in The Junior Farmer:

Esther Strunk, Edrie Bradbury, Bernice Moys, Harold Thaden, Cecilia Roy, Ida May McAuley, Evelyn Wilson, Lois Engle, Gladys Cook, Mary Buntain, Helen Hoard, Mabel Baer, Willie Jones, Marie Wichert, Irma Graebener, Mary Chard, Pearl Fletcher, Merle Dennis, Elva Blankenship, Martha Floch, Hazel Digerness, Matilda French, George White, Leda Ruby Harrel, Maude Warfield, Luella Jones, Vivian Minden, Archie Hansen, Martha Caviezel, Jackson Winterstein, Fred Kissler, Martha Kissler, Anna Pflugrath, Laura Esko, Mary Louella Jenkins.

Pike's Peak or Bust

(Continued from page eighteen.)

For a good while the two hunters clambered about over the mountains. They were looking for game; and at the same time they were keeping a careful watch lest they should come upon game they were not looking for. The game they were anxious not to find was a grizzly bear.

Not many such bears were here. But some there undoubtedly were, and all the miners were much afraid of them. It was known that they were huge, fierce fellows, and that an ordinary rifle bullet would not stop one. Indeed, it was a well-attested, undoubted fact, told again and again by every camp fire, that a single grizzly had once killed five hunters of the same party, as fast as he could get to them.

"Well, Jess, s'pose we jump a bear this morning. What're we going to do?"

"That depends, Jeff. All depends on the kind of bear. If he turns out to be a black or a cinnamon, we'll try hard to pack 'im home with us; or at least the best parts of 'im. But if he proves to be a grizzly—get away, boys! No grizzlies in mine, thank you! They're too big, altogether too big, and too hard to head off. I'll let a grizly bear alone any day if he'll let me alone."

"But the ugly thing about a grizzly is that he won't let you alone, Jess. That is, if you're close to 'im. First glimpse you catch of 'im, he's charging straight at you, with his big mouth open and his little eyes full of fury. You recollect what that trapper told us—that man from St. Louis?"

"That I do—well enough. They hide in such places that they can see you before you discover them. Or maybe they scent you."

"One lovely thing about a grizzly."

"There is, eh? I'd never heard of that, Jeff. Mention it."

"Why, that big varmint cain't climb a tree. And you and I are bully-good climbers, I'm guessing. Or at least I am."

"Well, I'm a fair climber, I suppose; though I haven't had much practice at it since I was a boy, back in old Tennessee. But if a grizzly bear was charging straight at me, I have a strong conviction that I could shin up a tree trunk as fast as you or any other longlegs."

Givens laughed. "Guess a grizzly would make the slowest, laziest poke-easy hump himself like a good fellow. That's safe to gamble on. But let's hope we'll be lucky and not run afoul of a grizzly today."

"Amen to that! Only safe way to hunt a grizzly is to go out with a party, ten or fifteen or twenty strong. Then some of their bullets are well-nigh sure to reach a mortal spot. If not, all the bullets together will mighty soon lay 'im low."

At length the two hunters found themselves on a bench of the mountain. Here, in a low place, they came upon a thicket of aspens. Close around this thicket the soil was loose; and in the soil the hunters discovered tracks of numerous game animals. Among those were some bear tracks. Now both men stood with a hand on a knee, inspecting the game signs critically.

"To me this looks every bit and grain big enough for a grizzly's track," Givens said, with an uneasy glance around.

Jess turned his eyes toward what the other hunter was staring at. "Hard telling, Jeff. It's a bear track—not a doubt of that. It may have been a grizzly; or it might have been only a cinnamon. We ought to kill something here, with all these game signs. I'll tell you, Jeff. This is a good-sized thicket. Suppose you go to the right while I go to the left, and we'll meet on the far side. By being very cautious, at least one of us ought to get a shot."

(To Be Continued.)

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Read the "Want Ad" page this week for good offers of all kinds.

News for Breeders

WINS GOLD MEDAL.

Alpha's Lady May, a Jersey in the Parker Askew herd at Montesano, recently won a gold medal from the American Jersey Cattle club for a production of 12,751 pounds of milk and 713 pounds of butterfat. She carried a calf 225 days during the test and stood in the 50-pound class for eight consecutive months. She was sired by Fernside's Stoke Pogis 3d.

Pogis Lady Alpha, the dam of Lady May, is nearly 13 years old and has a record of 640 pounds of fat. Three of her daughters have averaged over 600 pounds, which includes the gold medal cow. Lady Alpha is a strong Stoke Pogis bred animal and has produced 11 calves.

There are 14 head of cows on the Askew farm, in the upper Wynoochee valley. Practically all feeds are raised on the farm with the exception of a few concentrates. Winter wheat and vetch are grown for silage crops and red clover constitutes the hay crops.

RAISES TWO LITTERS A YEAR.

"I have had no bad results from raising two litters a year from my brood sows," remarked William Joyce of Burlington, who has a herd of 60 head of Hampshire hogs. "They are an attractive breed and are taking well among the farmers of this section. The foundation stock comes from the Cherrick farm in Oregon."

Mr. Joyce lets the brood sows run out all winter except for a few weeks during farrowing time when they are kept in small individual houses which can be moved from one pen to another. Peas and barley are the main feeds used, since they can both be raised on the farm. It is necessary, however, to buy such feeds as mill run or middlings to make the proper mixture.

Although Mr. Joyce keeps 10 head of dairy cows, he finds that it is more profitable to sell the milk and buy buttermilk.

SIRE HAS GOOD DAUGHTERS.

Sir Mercedes Sadie Vale, the 5-year-old herd bull on the Martin Treosti farm, near Snohomish, is sired by Chimacum King Korndyke Sadie Vale, and is out of Lady Cornucopia Mercedes 2d. This bull was on the show circuit for the first time last fall, winning second place at Yakima and third at the Pacific International. He has 15 daughters in the herd, some of them milking. One daughter has a testing association record of 350 pounds of butterfat as a senior yearling. Other daughters are averaging 50 pounds per day, and one over 60 pounds, on two milkings with ordinary herd care. Some of these daughters will be put on official test this fall.

HOLSTEIN SALE AT EVERETT SHOW.

The Washington State Holstein-Friesian association will hold a consignment sale of 65 registered Holsteins at the Everett Dairy and Live Stock show. The sale will take place the second day of the show, Friday, October 13, and will include many animals of the Dr. E. E. Heg herd at East Stanwood. There will also be three heifers from the Lee Brothers herd at Mount Vernon and five from Ed Hoem and A. H. Buck of Monroe. George Gue will cry the sale and George S. Bulkley of Carnation Stock farms will clerk.

ELLENSBURG COW HAS RECORD.

Another record has been made by a member of the fancy Jersey herd of Nichols & Plunkett, farmers, near Ellensburg. Manda's Empress, a 2-year-old, for May finished fourth in her class for the entire United States and was highest west of the Rocky mountains, producing 55.89 pounds of butterfat and 1109 pounds of milk. The leading cow, a Virginia animal, produced 61.53 pounds of fat, but had been milked only 30 days, compared with 186 days for Manda's Empress.

During April Manda's Empress was second in the United States in her class.

IS USING THE BROWN SWISS.

Brown Swiss cattle have not been heard of as much as some of the other breeds in Washington, but Zeo Priszner, a farmer in the Matlock district, has purchased a registered bull and is planning on breeding up his herd of grade heifers. Since much of his land is in stump pasture, he feels that it will pay to have a breed that will rustle its own feed from the native grasses with such additional pasture crops as can be furnished on the farm. He is selling cream and will feed skimmed milk to the calves and fatten them for veal.

A HERD OF DOUBLE-DECKERS.

There are 25 milking Shorthorns in the herd of 80 animals owned by N. C. Hall of Ridgefield, Clarke county. Some of these animals will milk as high as four gallons daily. The females are of the Clay family, while the herd bull, Villager Sam, is a grandson of the Imported Villager. He is a 4-year-old and shows wonderful prepotency in his offspring. Mr. Hall sells from 10 to 15 head of animals each year.



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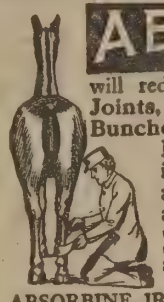
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WM. MACBRIDE'S SALE.
Tuesday, Oct. 10, 1922.
Sale to be held on the MacBride farm about six miles northwest from Shedd, and about 12 miles southwest from Albany.
Twenty Head Jerseys.
various ages, both sexes, including the great bull Holger and many of his daughters, a dispersal of the MacBride herd, also implements, horses, tools and a complete threshing outfit.

ED FALK'S SALE.
Wednesday, Oct. 11, 1922.
Sale to be held on the Oak Ridge Jersey farm, about 7 miles south and west from Albany.
Forty-Five Head Jerseys.
including R. of M. daughters of Pride's Olga 3d King, Golden Glow's Chief and other young stock. A dispersal of the Falk herd. Also implements, tools, horses, etc.

Catalog giving details can be had on request to sale manager. Both sales start at 10 o'clock.
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SALE MANAGER:
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The following cattle are included: 50 head cattle consisting of 25 head of registered Shorthorns, 25 head of high grade Shorthorn cows, all bred to my herd bull, a bull bred by the U. of Idaho, and 4 of his sons. These cattle have made money for me and will for you; 6 months' time given. Send for catalog and mail your bids to the auctioneer and sales manager at Moscow.
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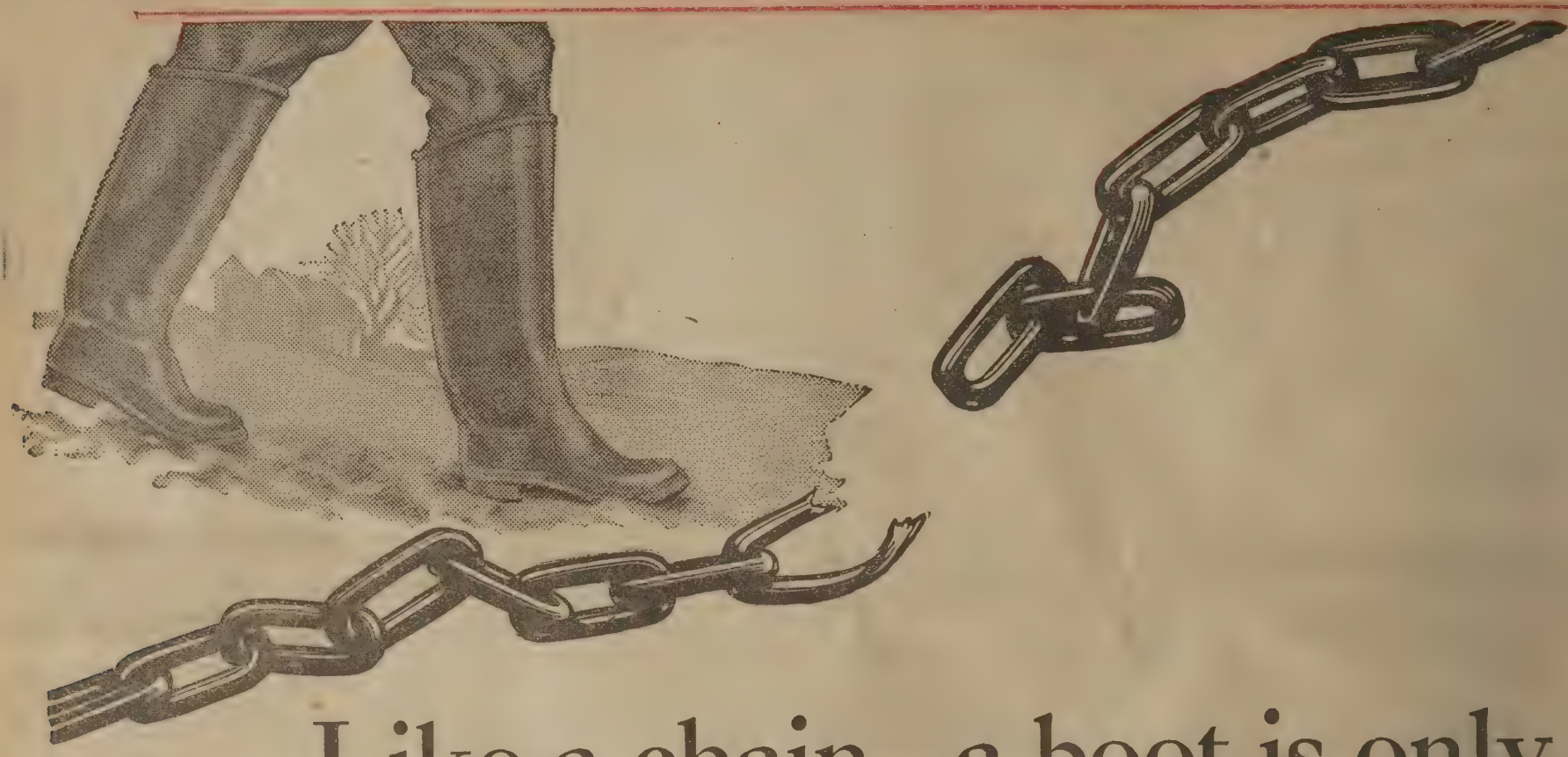
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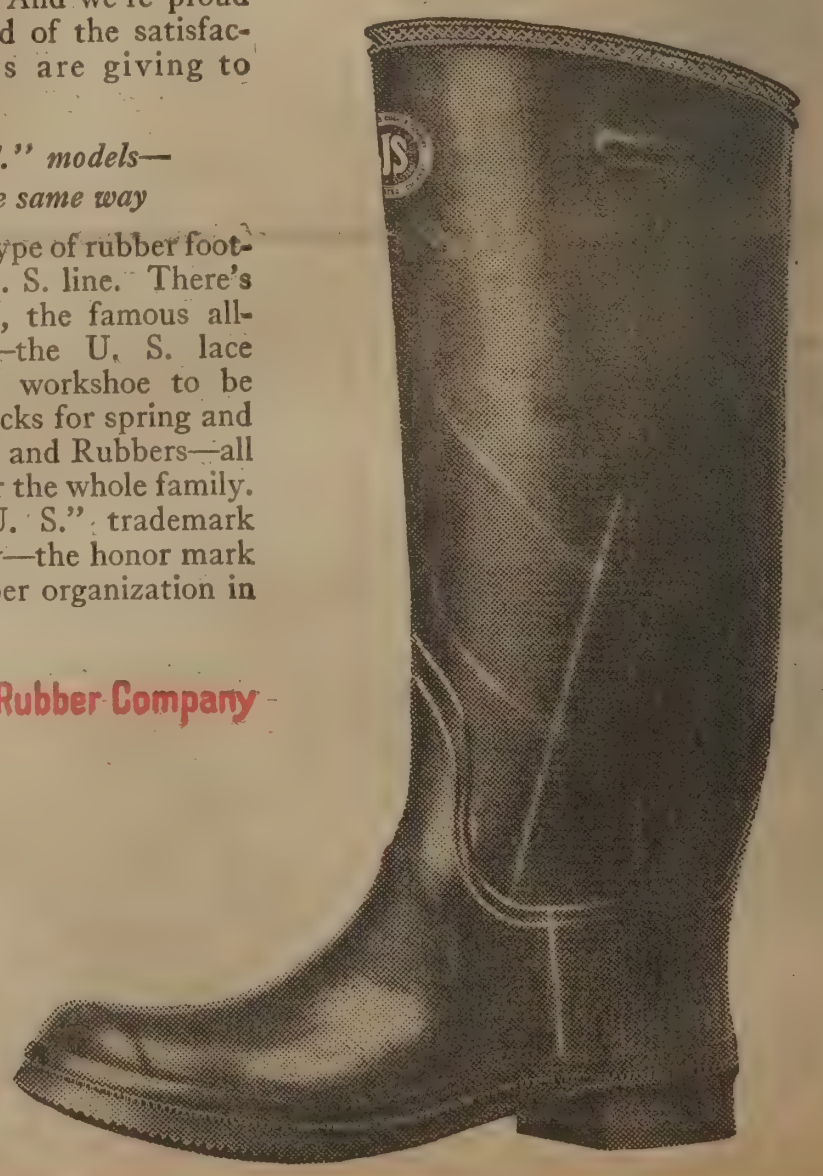
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THE WASHINGTON FARMER
ESTABLISHED 1894
SPOKANE. SEATTLE.



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Thurston County

More Dependence Should Be Placed in the Home Market—Page 6

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Multiply Tractor Jobs

Says the tractor enthusiast: "A tractor doesn't get the colic, spavin or wind gall; it doesn't switch its tail in your face or make you holler your head off when you want it to stop!"

"Quite so," says the horse's advocate. "And a tractor doesn't know enough to stop sometimes when it ought to!"

The fact is, too many arguments have been brought forward for the exclusive use of one or the other form of power, when each has its place.

The United States department of agriculture sometime ago published the results of a study of the "Influence of the Tractor on the Use of Horses." This bulletin, No. 1093, clearly indicates that the horse and the tractor must both be used to gain the greater efficiency.

"Too many are misled by the broad statements that are circulated regarding the importance of the tractor in the matter of horse displacement and lose sight of the major advantage of the tractor, namely, its ability to do heavy work and cover the desired acreage in a shorter time than the same can be done by horses," says the bulletin.

"All reports emphasize the fact that the great advantage of the tractor lies in its ability to save time at critical seasons when time is precious and the success or failure of an entire crop hangs on the speed with which it is handled."

Facts Brought Out.

Here are a few of the principal facts brought out by the government's investigation:

1. The number of horses disposed of on 141 farms averaging 346 1-2 acres, on which tractors had been used for a year or over, was 2 1-2 per farm.

2. The average number of tillable acres per horse increased from 26 1-2 to 28 1-2 after the purchase of the tractor.

3. Nine operators out of 191 displaced horses entirely on plowing, disking and harrowing.

4. Only 16 operators allowed their horses to stand idle while the tractor was in use.

5. The principal advantage of a tractor is its ability to do heavy work in a shorter time than it can be done with horses.

This report also states: "It is noticeable that the men who have owned a machine for one year or less use it, as a rule, only for plowing and a little belt work. As a rule, the longer a machine is owned and the more experienced the operator becomes, the more operations he finds the tractor can be used for."

This is one of the most important matters in relation to the successful use of the tractor. There is considerable money tied up in a tractor, and this money should be earning all the time. We do not like to put our money in a bank and get no interest on it, but that is what we are doing with our tractor money if we let the machine lie idle several months of the year. Unquestionably the successful user of the tractor is the man who finds all manner of jobs that it can perform, thereby getting out of it the highest degree of labor efficiency possible.

Not so long ago the writer was in the machine shed of a successful farmer of the Palouse country. The tractor and the combined harvester were housed side by side. The tractor, to be sure, was unemployed, but the principle was illustrated in this: The gas engine on the combine (for operating the machinery) was lined up with the feed mill for rolling the season's supply of grain. The work could be done at odd times during the bad weather, thus making for labor efficiency of both men and engine. Had the combine not been equipped with the engine, the tractor no doubt would have been, as it should have, lined up with the feed mill for belt work.

The tractor is not merely a power machine for plowing. Where it succeeds as it should, it is used for cultivating, hauling, grinding grain, cutting hay or silage, seeding and as many other tasks as it can effectively be made to perform.

Are After Production

The Van Hoose Brothers of Wenatchee have taken Dr. J. F. Lester into partnership in caring for their herd of 20 grade Holstein and grade Jersey cows. There are two of the Jerseys that are registered and a purebred Holstein bull is used on all cows that show a predominance of that breed. The services of a purebred Jersey bull is secured in the neighborhood for the other animals.

"We are not planning on going into either breed of cattle," said Dr. Lester, "but we are breeding for milk production. We are raising all of the best heifer calves and will thus increase the size of the herd slightly."

The milk from the Van Hoose herd is cooled immediately after being milked with a stream of spring water and held at a low temperature until delivered in bottles to the city retail trade. Later on a special brand of certified milk may be put up and sold to fill a special demand.



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If you are at all interested in the Raw Fur Industry, whether trapper or shipper, you will surely want to know what we have in store for you.

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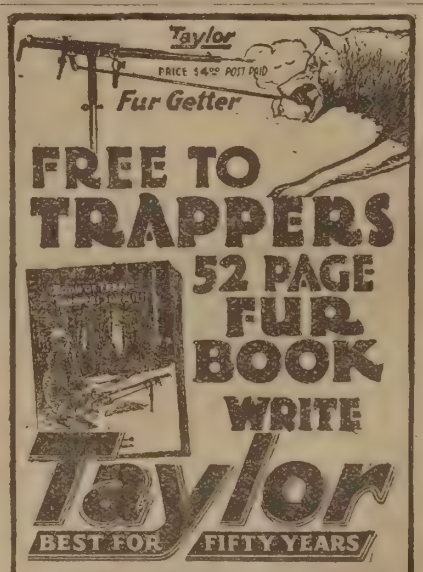
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THE WASHINGTON FARMER

SUCCESSOR TO

Vol. 47. No. 15 THE RANCH PACIFIC DAIRYMAN HORN AND HOOF October 12, 1922

For Good Farming, Attractive Country Homes and Happy Country People

There Was Something Doing Every Minute

By RALPH ERSKINE

The 23d annual Western Washington fair has passed into history and the 100,000 or more people who attended will recall the event as the best ever held at Puyallup. Some of the visitors were interested in the better babies contest, in which there were 600 of "the best babies in the world!" Others spent their time wandering about the live stock barns where some of the champions of the northwest were entered. The poultry and rabbit fanciers found plenty to interest them in the large poultry building and there was always a crowd in front of the fruit and vegetable exhibits. When the guests had tired of looking at the exhibits there were plenty of entertainment features awaiting them, either in front of the grandstand or among the concessions at one corner of the fairgrounds.

Every foot of space in both the industrial and automobile sections was filled with interesting and instructive displays and the woman's building was filled to capacity with housewives' handwork, which was enough to fill even mere man with admiration.

It was a real fair. A fair for all the family, a fair in which there was no lagging. There was something going on every minute.

Rain Fails to Wet.

There were occasional showers during the week, but the fair management was prepared for bad weather with covered passageways, so that the rain did not interfere with the day's program except to slightly curtail the attendance. The grounds are compact and every foot is utilized to the best advantage.

The live stock department brought out herds from many parts of the state and some entries came from Oregon. While this department is not as large in proportion as the other departments, W. H. Paulhamus, president and manager of the fair, made a special attempt to have as many representative herds from each breed as could be accommodated.

There were two herds of Holsteins entered, the 17 head from the Carnation stock farms and the herd from the Western State hospital at Fort Steilacoom. All of the young animals in the Carnation herd were sired by Matador Segis Walker, the herd sire. The grand champion bull was a full brother, Segis Walker Matador. The state herd made a strong fight for the grand champion female, but Hazelwood Aaggie Hartog, an aged cow in the Carnation herd, was placed at the head of the females.

Robert Tresch, a Holstein breeder of Puyallup, was the third exhibitor of the breed, but he showed only one animal.

Two Guernsey Herds.

The fawn and whites came from two of the state's better known breeders, the herd from Orchard Hill farm, owned by Dr. Park Weed Willis of Seattle and the Dr. A. McRae Smith herd of Bellingham. The latter had both grand champions. The surprise of the day came when John L. Smith, who judged the dairy classes, placed Fircrest LaFrance's Pride, a senior yearling heifer, over LaFrance of Bralee, both of the Smith herd, for the female grand champion. The older animal, although showing dry, had been placed above any of the other females in the herd and was grand champion at some of the fairs. Both champions were the produce of LaFrance of Bralee.

The animals in the Dr. Willis herd made a much better showing than a list of the champions would indicate. Chicona Hero, the 5-year-old herd bull, was a strong individual and the two yearling bulls, Glenwoods Jolly Tar and Chicona Victory, were placed first and second. These animals have been running a close race for first at all fairs where they have shown. The females shown in this herd are well bred animals and were a credit to their owner.

The herd of Sears & Little of Winlock comprised all the Jerseys except a senior yearling bull. The turnout consisted of 16 high-class animals of the St. Mawes strain. Most of the animals were young individuals which were sired by St. Mawes of Grassmere, the herd bull at the Sears farm. Diploma's Royal Boy, a junior calf, was made grand champion above some of the other bulls that had been placed champion at other fairs.

Cicely's Golden Dawn, a 2-year-old with a splendid frame and well placed udder, was made grand champion. The herd had the misfortune to lose the senior heifer calf that stood a chance for a high placing in the female classes. She contracted pneumonia and pleurisy at Yakima and died at the Puyallup fair.

The Ayrshires came from the VanTasset herd of Wenatchee and filled all classes listed. Queen Scottish Cavileer, the bull that headed the herd at the state college last year, was grand champion bull. The entire herd made a splendid addition to the show.

Good Beef Cattle.

The Herefords were represented by the show herd from the Methow Valley Live Stock company at Winthrop, Wash. There were 16 head in this herd that had just finished the circuit in Washington and attended the Oregon state fair. Their outstanding male was the herd sire, Commander Jr., that was first prize junior calf at the International in 1920. He was made grand champion at Puyallup. Lady Anabel, a senior calf, was placed at the head of the female classes.

J. D. McGuire of Tenino entered the only Shorthorns that were shown and took all prizes in the classes that were filled. Most of the young stuff in the herd is sired by the 3-year-old herd sire, Mayflower King.

The horses made a much better showing than last year. R. C. McCroskey of Garfield had the only exhibit of Clydesdales, but had the classes well filled with 14 head. His yearling stallion, Prince, an outstanding animal that has been winning heavily everywhere shown, was grand champion.

H. W. Merrit of Rosalia exhibited Shires. Martha Washington was the grand champion mare and Forester Prince, an exceptional 2-year-old, was placed at the head of the male classes.

For the Percheron there were three exhibitors: S. Mulhall of Buena, Yakima county; the Ruby Stock farms of Portland and H. W. Merrit of Rosalia, who had two head. The herd from the Ruby Stock farm included also four Belgians and two Shires, as well as the two head of Percherons. Ruby had the champion Percheron stallion and champion Belgian stallion, while Mulhall had the champion Percheron mare, Lenore. The classes were judged by George M. Wilson of Wilbur.

Good Hog Show.

There was a creditable, though comparatively small, swine show. The bacon type was well represented by the Tamworths, although it was a one-herd showing. I. J. Oder of Yakima entered his 17 head that he had shown at Yakima. One Duroc Jersey was entered with this herd which competed with the aged sow in the W. H. Turner herd, also from the Yakima valley. The sweepstakes sow of the show was one of Oder's Tamworth, while Turner showed the sweepstakes boar, a Duroc Jersey.

Poland Chinas came from the George Longknecht herd at Yakima and from J. J. Oder's farm, nine head in all. Maxein, a sow pig owned by Longknecht, was placed at the head of the female classes of Polands.

Morrill Delano, Puyallup, and L. C. Hansbury, Orting, were the exhibitors of Berkshires, each showing a few head of good animals.

R. W. Fowler of Chehalis judged the swine classes.

There was the largest exhibit of Chester Whites that has been shown at Puyallup in many years. J. A. Irwin of Tacoma exhibited 29 head, most of which were of his own breeding and traced back to the Rassmussen herd in Minnesota. W. H. Noris, the only other exhibitor of Chester Whites, had one boar in the 1 year and under 2 class.

Fruits and Vegetables.

There was no department that has made more rapid strides toward perfection than the horticultural an dvegetable division. The booths this year were made up by counties, communities and individuals. Some clever arrangements were shown and there were many of the newer varieties of fruits exhibited. One of the most attractive showings was the potato display, which was put up by a number of the Pierce county farmers with the help of L. T. Oldroyd, county agent. The trays of potatoes were labeled to indicate the varieties and a large sign emphasized the fact that good market tubers could be grown in the Puget Sound district as well as in the irrigated sections if the proper varieties are selected.

In the county booths, Skagit county took first prize, while Grays Harbor was second and Mason third. The general community exhibits were placed as follows: Puyallup Heights first, Sumner second, Alderwood Manor third and Yelm fourth.

In addition there were some commercial fruit displays, for which Puyallup Heights took first award and the Sumner district second. There were a few individual market garden displays, in which Jacob Stilling was first and the Helmond Brothers of Sumner second.

The Experiment Station Exhibit.

The western Washington experiment station had a complete exhibit showing some of the main lines being carried on at the station at Puyallup. A large variety of grains and grasses was shown and recommended for western Washington. The 24 kinds of dangerous weeds that are found in this section were shown in pots.

The necessity of spraying fruit trees and treating potatoes for diseases was demonstrated by the actual result of both practices. The fertilizer boxes gave the visitor an apportunity to examine each kind and the card on the wall told what each should be used for.

A model barrier for checking the strawberry root weevil was set up with a miniature berry patch. This is an entirely new method in Washington and will be tried by the experiment station next year.

The extension service of the state college demonstrated 11 different phases of farm and home work in booths, all of which clearly explained the objects by show cards. The departments covered were: Berry growing, potato diseases, bees, rotation of crops, dairying, poultry and home economics.

A better sires demonstration was arranged in the cattle barn, where four cows were shown that had better records than their dams as a result of using purebred sires.

The School Exhibits.

The educational building had a complete display of exhibits from all the county and city schools. The space was divided according to the size of each exhibit, the Tacoma city schools taking a large space at one side. The county schools had smaller booths on the opposite side of the building and contained practically all branches of school work. There were some very fine pieces of furniture made in the manual training classes in the larger schools and the quality of all work was more than could be asked of the students.

The commercial exhibits in the next building were many and of a varied nature. The United States bureau of public roads had set up a display which illustrated different types of roads. The forest service of the United States department of agriculture told what the service is doing and the United States biological survey had a display telling of rodent control which is being carried on in different parts of the state.

The western state hospital at Fort Steilacoom, had a large display of fancy work and other pieces which had been done by the patients. Some of this work, however, was put up for sale.

The Sweetest Department.

The bee and honey department was one of the most attractive displays. Entries came from Yakima and Oregon as well as from many of the beekeepers of the Puyallup valley. Wilfred Orley, a club member from Edgewood, gave a bee demonstration in a screened cage, to show the different steps of handling the bees. Wilfred has been working with bees for only one year.

The Edgewood Bee club put on a complete display of honey, both comb and extracted. Colonies were housed in glass frames and there were other educational features that added to the exhibit.

The Club Department.

The boys and girls' club exhibit was one of the most interesting divisions of the agricultural department. It was mainly of the two kinds of work, gardening and sewing and came from all parts of the county.

The display from Connell's Prairie Garden club won first place and the Loveland exhibit was second. Other clubs that competed for the honors were: Alderton, McMillen, Fife, Sumner, Parkland, Woodland, Marion, Crescent Valley, Puyallup and Jovita. The Thrift berry club won first prize with its display of berry bushes. The booth was one of the most attractive ones in the building.

In the sewing clubs the prizes were awarded on the individual workmanship of the different garments shown. The clubs that exhibited were: Benston, Puyallup, Marion, Woodland, Parkland,

(Continued on page fifteen.)

SOMETHING of the pleasure of entering a clean, well-kept and hospitable home greets one as he enters the gates of the Western Washington fair at Puyallup, and, despite a stress of business, no host can be more hospitable than W. H. Paulhamus, whose attractive personality pervades the whole institution.

Nowhere have I seen fair buildings more lavish with light, ventilation and walks between the lines of exhibits. Nowhere have I seen a more magnificent display of flowers that could be taken in by one sweep of the eyes than were most tastefully exhibited in a big tent. "We want a permanent building to take care of these flower exhibits," said Mr. Paulhamus.

At an expense of $400 and express charges from New York, Mr. Paulhamus provided a roomful of paintings by American masters, brought across the continent from the Metropolitan art museum.

Mr. Paulhamus is master of ceremonies at the afternoon programs and his "talks" before the grandstand lend a charm to the program that is heartily appreciated by the crowds.

These are only two or three incidents of the fair, a full report being given in this issue of The Washington Farmer by a staff representative.

The Western Washington fair is an institution that not only deserves the large patronage which it is receiving from the West Side people, but is one which East Side people will be well repaid for visiting.

E.A.S.

Won Trophy Cups



In the accompanying picture are shown Miss Selena Deno of Spokane and Harvey Norris of Goldendale, club girl and boy, who won The Washington Farmer trophy cups at the Washington state fair this year. One cup was awarded to the highest scoring girl in the canning, cooking, breadmaking or sewing contests, and another similar cup to the boy scoring highest in pigs, sheep, dairy, beef, poultry, garden, corn or potato contests. Miss Deno scored 94 points in sewing and Harvey scored 95 points in poultry.

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Dollar Farming and Life Farming

Can grain farming, live stock farming, fruit farming and truck farming be made so attractive in the the state of Washington that more and more people will desire to get into the game and stay in the game?

Dollar work alone will never do this, nor will non-dollar work alone ever do it, for farming is both a business and a life. There are business attractions and there are life attractions in farming.

Almost any one can point out dollar attractions, even if they are not there. Only here and there is there one who can point out the life attractions, the life satisfaction in farming.

Farming has to do with life's operations—plant and animal life. You may fill a warehouse with chairs that you have made or you may fill a warehouse with grain that you have grown. The one is different from the other.

You have not been initiated into grain growing unless the growing field of grain talks to you; you have not entered into the secrets of fruit growing unless the apples on the trees are confidential with you. After you have done all else you must pet the cow to get the most milk. Something besides feed puts the most flesh on the steer.

Many years ago I was on a wheat farm in the Palouse country. The owner was a comparatively recent comer in the neighborhood. I was out in the wheat field with him. During the conversation he picked up a clod of the soil; he broke it apart and fondled it in the palm of his hand. He was talking to that soil in a language all his own. It was to him a living thing. We are finding out more and more that the productive soil is a living thing. Such intimacy with the soil has not destroyed the productiveness of that man's farm. I've noticed that he has prospered and bought other lands.

The life in farming does not necessarily destroy the dollar in farming. The two together make the farmer satisfied.

A World Yet Undeveloped

There may open up, some day, a great new field of reclamation—reclamation of a basically different type—that will make highly valuable the bogs, pine barrens and soils of other types now neglected, declares a writer in the National Geographic Magazine. There may, in his opinion, come into propagation in America's temperate latitudes new forms of field and orchard plant that will utilize the "acid" soil.

The reason that wheat and its familiar relatives, are the staple grains, that apples and our other common fruits of the temperate zone occupy our orchards, is merely that civilization began on an alkaline soil. Asia Minor, which was the birthplace of agricultural and horticultural progress, did not prove a happy home for the acid-loving species of plant life. Those grains, vegetables and fruits that flourished in its alkaline earth were, therefore, the group destined for fostering care and passed on to Europe and America. We know them today, at an advanced stage of their improvement, as forms far removed from the unprofitable weeds in which they had their beginnings.

The group of acid-loving plants is large, possibly as potentially productive, nutritious and palatable, as the alkali-lovers, though yet undeveloped. Who can say what other plant forms, of strangely alien character, our temperate zones would now be yielding if the acid soil, instead of the alkaline, had been the basis of husbandry from the beginning? Who can say what strange, what vitally novel plant life may yet occupy our waste soils if, from forms yet almost untouched by selection, we develop useful acid-preferring vegetables, fruits and grains? From acid soil, we have one staple product—the potato, native to South America, but already highly improved. Possibly other species, now neglected, have a future as potential.

Disappointed But Not Discouraged

THE FARMER shares in the disappointment of the apple growers and other farm producers and business interests of the Wenatchee district over the adverse report of the examiner for the interstate commerce commission on the construction of the Wenatchee-Southern railroad in Chelan, Kittitas and Benton counties.

Under United States law, permission to build another railroad can not be had until a certificate of public convenience and necessity has been obtained from the interstate commerce commission. It is proposed to construct a railroad from Wenatchee in a southerly direction along the west bank of the Columbia river 53 miles to Beverly Junction, on the Chicago, Milwaukee & St. Paul, and from Hanford, Benton county, in a southerly direction along the west bank of the river to a connection with the O.-W. R. & N. at a point five miles from Kennewick, a distance of 29 miles. At present Wenatchee has only one railroad outlet, the Great Northern, and the petitioners for the proposed new road represented that the Great Northern was unable to move the apple crop promptly. Therefore the need of a connection with other transcontinental lines.

But while there is disappointment over the unfavorable report of the examiner, final decision rests, after all, with the interstate commerce commission, and the fact that the examiner has rendered an adverse report is not conclusive that the commission will agree with his findings. We are glad that the promoters of the Wenatchee-Southern have not given up the fight, but declare their purpose to "leave no stone unturned to obtain a favorable decision from the commission." President Edward S. Russell is quoted as saying: "The unfavorable recommendation will make the fight harder and will cause us additional expense, as we shall have to send out attorneys to Washington, but we believe the entire community is with us in our effort to obtain greater and better transportation facilities for the district."

There are five transcontinental systems in the state of Washington—the Northern Pacific, the Great Northern, the Chicago, Milwaukee & St. Paul, the Union Pacific system and the Canadian Pacific. With the state thus gridironed with railroads, the Wenatchee district is too rich and important to be restricted to the service of a single railroad, when the building of two short links would connect it with other systems in a way that would be beneficial both to the producers and the consumers of the country.

There are now nearly 3000 cooperative buying and selling organizations in Germany.

* * *

Owing to internal troubles in Ireland the London market is reported as sustaining a serious curtailment of its supplies of bacon. One large firm, which normally supplies 6000 sides of bacon per week to London, has lost its factories in Waterford, Limerick and Cork through incendiarism, says Commercial Attache Tower, London, reporting to the department of commerce.

State Farm News

An intercounty community federation was organized at Walla Walla recently at a meeting attended by 38 representatives of 10 towns and communities of southeastern Washington and northeastern Oregon.

A. R. Gardner, Kennewick, was elected president; J. L. Wallace, Dayton, first vice president; E. L. Wheeler, Waitsburg, second vice president; A. F. Wehe, Pasco, secretary, and M. C. Zinthoe, Starbuck, treasurer.

The purpose of the organization is to bring into closer relationship, coordinate efforts and promote commercial, industrial and social welfare of its member communities and to work in harmony with all agencies for the general upbuilding and development of the Pacific northwest.

* * *

White Bluffs' first annual community stock and fruit fair was held September 29 and 30. The premium list included first and second ribbons for all kinds of stock, poultry, grain, vegetables, fruit, flowers, cookery, needlework and antiques.

* * *

Gardeners of the Walla Walla valley will experiment this year with raising of broccoli. it was stated by C. B. Auker, head of gardener's association. At Roseburg, Ore., it is being raised successfully, between 400 and 500 cars being shipped annually.

The question to be decided here is whether it can survive the winters, as it is planted in the fall. Gardeners, since the recent rains, have been planting onions and spinach, the rain having been sufficient to put the ground in condition.

* * *

Following the meeting of fruit growers in the Zillah district when 60,000 boxes of apples were signed up with the apple pool committee, the growers again met a few days later and signed 95,000 boxes more, according to word received at the farm bureau office at Yakima.

* * *

The commissioners of dike district No. 3 at Locke, in Pend Oreille county, signed a contract with the Standard Asphalt Paving company of Spokane to restore the dike at Locke, which was washed out by high water in the Pend Oreille river in the spring of 1921.

The dike will be raised to an elevation of 2050 feet above sea level, two feet higher than the crest of the 1913 flood, the highest since 1894. The break will be filled and the dike strengthened at all points. Work will be started at once.

Commissioners of the district are W. C. Cusick, Fred Metcalfe and P. H. Sullivan.

* * *

U. F. Diteman of Yakima reports that he has sold 12 carloads of feeder lambs to farmers in the lower valley who will fatten them for the Coast market.

* * *

The Northern Pacific railway has purchased three half blocks on the south edge of Yakima adjoining its tracks. The reported price is $50,000. The company plans to lay trackage, build warehouses and lease the property for industrial purposes. George T. Reid, vice president, says building may not be done until next year.

* * *

D. H. Ulrich has been appointed manager of the Stevens county farm bureau to succeed C. H. Gerkin, who resigned recently to represent a fruit marketing concern at Meyers Falls and take charge of the warehouse at that place.

* * *

John H. Hall of Portland, Ore., has filed articles of incorporation for the Yakima Southern railway, with Secretary of State J. Grant Hinkle. Other incorporators named are E. E. Lytel, Henry E. Reed and J. B. Atkinson. The corporation is capitalized at $1,000,000 and its purpose is to build a railway between Yakima and Underwood. Underwood is about 75 miles southwest of Yakima and about two miles west of White Salmon, across the Columbia river from Hood River. The proposed road will connect with the S., P. & S. at Underwood. Headquarters of the new corporation will be at Vancouver, Wash.

* * *

Thirty-eight cars of sheep were sent to market from Yakima on September 29. Shippers and number of cars were: Ballard Sheep company, 12; Yakima Sheep company, 10; Ernest Berg and George Prior, 5 each; Rowe & McGuffie, 4; H. E. Fleming, 2.

The lambs of this shipment will average 75 to 80 pounds.

* * *

About 4000 acres of fruit have been signed by growers for the new federal inspection and to cope with the additional work, says a Wenatchee report. District Inspector Nielson is putting on additional inspectors in Grant, Chelan, Douglas and Okanogan counties. Eastern buyers are reported to be giving preference to apples shipped under the federal requirements, but it is optional with the grower whether his fruit is inspected for a federal certificate.

* * *

Don M. Carr, superintendent of the Indian agency at Fort Simcoe, has received a wire from the interior department at Washington, D. C., that the department had decided on the removal of the agency to Toppenish.

* * *

The amount asked by the Lincoln county commissioners for the three road districts in that county and for the county road and bridge funds for next year is $4846 less than the amount asked in 1914 and $28,200 less than was asked for in 1920, when prices were at their highest. The amount asked for the three road districts and road and bridge fund for next year is $112,800.

* * *

Washington is to be the first state in the Union to receive the cooperation of the federal government in the eradication of tuberculosis in cattle in the state-wide area plan, it is announced by E. L. French, department of agriculture.

At a conference between officials of the state department and the federal bureau of animal industry it was found that Washington had advanced the fight against tuberculosis in animals farther than other states. Operations have been extended to every county and in each county from 50 to 90 per cent of the cattle have been tested for tuberculosis.

The state-wide area designation means that the federal government will participate on an equal basis with the state in furnishing inspectors and in payment of indemnities for cattle condemned after the tests. The new plan will result in an immediate cleanup of the state, completion of unfinished tests and obtaining and enforcing quarantine laws to bar the entry of cattle until they have been tested, said Director French.

FARM BUSINESS AND MARKETS OUTLOOK

Business activity resumed its upward trend with a rush following the settlement of the coal strike and the partial settlement of the railroad strike. The same rate of acceleration is not likely to be maintained over a long period, but moderate improvement promises to continue during the fall.

Car loadings for the week ended September 16 were the largest in nearly a year. A slight advance in money rates and a decline in the bond market indicate that more funds are being used in business development. Prices for new material, such as iron, steel, copper, lead, wool and hides have advanced.

The tide has turned in wages as shown by the outcome of the coal strike and the fact that wage increases in the last three months in all branches of employment combined have been much more numerous than wage reductions.

With wages stabilized on a level only slightly below the peak of the war period, costs of manufactured articles and services which the farmer must buy, including transportation, remain out of line with the price of farm products. On the other hand, high wages put the laboring classes in position to buy farm produce.

Prospects for the future are not universally favorable by any means. The car shortage becomes more serious each week. Where perishable goods are involved, it inevitably means hardships.

That industrial and trade activity can continue long with the farmer's income so much out of line with the income of other branches of society as at present is quite doubtful. Either prices for farm products must advance to a higher level or industrial activity will collapse within the next 12 months.

Broad Demand for Good Beef.

Prime steers reached a new top of $12.85 at Chicago last week which is the highest point since the fall of 1920.

With so many grass steers and plain shortfeds on the market, butcher cows and heifers have had insecure footing and declined 25 cents last week. Veal calves dropped 50 to 75 cents at Chicago with heavy killing classes down even more, which is the normal trend for them at this season.

Instead of 1000 to 1100 pound steers most buyers are after 750 to 900 pound weight or even lighter. Experience in recent winter feeding operations justifies the change.

New Crop Hogs Break Market.

Shoats from the spring pig crop are becoming numerous on all the leading markets and weekly receipts are certain to expand from 25 to 50 per cent in the next three months.

Demand for fresh pork is keen and both foreign and domestic buying of cured hog meats and lard maintain satisfactory breadth.

Reductions in storage holdings of both hog meats and lard during September reveal an exceptionally healthy situation.

Lamb Run Expanding.

Receipts of sheep and lambs at the seven leading markets have expanded over 50 per cent in the last six weeks, but the total last week was only about 276,000 head compared with an eight-year average for that week of 442,000 head. Prices have receded slightly, but no drastic decline is in prospect. Dressed lamb prices were affected by larger offerings, including some fresh Canadian and frozen Argentine and New Zealand lamb and by the fact that they were out of line with other meats.

Feeders are taking all the thin lambs they can find at prices above the fat lamb market.

Wool Trade Broadens.

Wool trade has broadened since the new tariff went into effect as manufacturers feel more certain over the outlook. Practically all grades of wool have changed hands at firm prices with evidence of an advancing tendency.

Withdrawals of bonded wools have not been exceptionally heavy since the new tariff went into effect. Most of these wools have already been purchased by manufacturers who will take them out as needed.

The Boston market is quoted as follows:

Wisconsin, Missouri and average New England—One-half blood, 46@47c; three-eighths blood, 43@44c; one-fourth blood, 42@43c.

Scoured basis:

Oregon—Eastern No. 1 staple, $1.25@1.28; fine and fine medium combing, $1.15@1.20; eastern clothing, $1.05@1.12; valley No. 1, $1.07 @1.10.

Territory—Fine staple choice, $1.27@1.32; one-half blood combing, $1.10@1.15; three-eighths blood combing, 88@95c; one-fourth blood combing, 77@80c.

Wheat Disappearing Fast.

Demand for wheat in the last three months failed to support prices at the early season level, but a survey of the situation shows that United States wheat has been absorbed into consumptive and export channels at a gratifying rate.

A summary of the situation for the first three months of the current wheat year and comparative figures for the corresponding period in 1921 and the 10 years, 1911 to 1920, appear in the following table:

	1922. Bushels.	1921. Bushels.	Average 1911-1920. Bushels.
Primary receipts	157,201,000	193,687,000	128,363,000
Total disappearance	142,620,000	148,958,000	100,053,000
Exports, September, 1922, est..	85,000,000	135,327,000	55,199,000

The flour production for July 1 to September 16, 1922, was 28,978,000 barrels; 1921, 31,800,000 barrels; average 1918-1920, 24,604,000 barrels.

The department of commerce estimates the crops of importing nations at 160,000,000 bushels less than last year, but this is partly offset by an increase in the rye and potato crops, and the poverty of European countries may limit their purchases. Both France and Germany are putting food regulations into effect.

The North American crop is 112,000,000 bushels more than last year, the Argentine crop is estimated unofficially at 30 per cent more than last year, and India is said to have removed the ban on exports. Australia reports some damage from dry weather, but Broomhall estimates the surplus from the new crop at 70,000,000 bushels.

Coarse Grains Firm.

Corn and oats prices have advanced about 10 cents a bushel in the last month.

Primary receipts of oats from August 1, the beginning of the oats year, to September 30, total 48,532,000 bushels compared with 61,824,000 bushels last year and an average of 65,691,000 bushels in the 10 preceding years. Demand has been practically up to normal as shown by a disappearance of 49,231,000 bushels from commercial channels compared with 33,543,000 bushels last year and a 10-year average of 51,424,000 bushels.

Cash Grain Markets.

The range of cash grain prices for the week ending October 4 was as follows:

Chicago—Wheat—No. 2 red, $1.09 1-2@1.15 3-4; No. 2 hard, $1.06 3-4@1.09; No. 3, $1.06. Corn—No. 2 mixed, 63 3-4@67 1-2c; No. 3, 63 3-4@67c; No. 2 yellow, 64@68c; No. 3, 64@67 1-4c; No. 3, 63 1-4@66 3-4c; No. 2 white, 64 @67 3-4c; No. 3, 64 1-2@67 1-4c; No. 4, 63 1-4@66 3-4c. Oats —No. 2 white, 40 1-2@43c; No. 3, 38 3-4@42 1-4c; No. 4, 36 1-2@38 1-4c. Rye—70 1-2@71 3-4c. Barley—58@66c.

Most Timothy Seed Sold.

The department of agriculture reports that fully two-thirds of the timothy seed crop had already left the hands of growers by September 12. The market is firm at present. Alfalfa seed production is about the same as last year. Clover seed prices lost part of the smart advance of last week. Reports of yields are below the expectancy of a month ago and farmers are selling less freely than when prices were $2 lower.

Chicago, per 100 pounds—Clover, $13@17; timothy, $5 @6.25.

Toledo, per bushel—Clover, $11.40; timothy, $3.15.

Sharply higher prices for feeds resulting from the war scare and car shortage have restricted the demand. Eastern buyers are indifferent and the southwest which has been the most active buyer has slowed down perceptibly. Some Canadian millfeeds are coming into the east.

Prices per ton (100-pound bags) in carlots—Chicago—Bran, $22; standard middlings, $22.50; flour middlings, $26; cottonseed meal, 36 per cent, $38.50; 43 per cent, $42.50; hominy feed, $27; gluten feed, $31.05; old process oil meal, $45; tankage, $60.

Hay Markets Firm.

Hay markets are generally reported as firm with receipts light. Demand is limited also, but may improve with colder weather. Drought in the southwest has broadened the demand from that section while the size of the alfalfa surplus in Oklahoma and Kansas was cut down by the same cause. Pastures in most sections are in good condition. Prices seem more likely to go higher than lower.

Price per ton in carlots—Chicago—No. 1 timothy, $21 @23; No. 2, $20@21; No. 3, $12@15; No. 1 light clover mixed, $20@21; No. 1 clover, $14@16; No. 1 clover mixed, 16@17; No. 1 alfalfa, $20@23; upland prairie, $17@19; midland prairie, $14@17; rye straw, $12@13; oat and wheat straw, $9@11.

Fresh Eggs Scarce.

Strictly fresh eggs are extremely scarce and are selling at a big margin over the doubtful kinds. They are almost sure to become more scarce in the next 60 days so that there is no reason to look for a lower price range. Storage eggs are being moved out rapidly, but such a movement must continue right along to dispose of the enormous stocks.

Receipts of eggs at the four leading markets during September totaled 765,753 cases compared with 852,763 cases last year. Total holdings in the United States on October 1 promise to be about 8,000,000 cases, the largest on record for the corresponding date, but a decrease of over 20 per cent from the high point two months ago.

Poultry prices are weakening, but are still comparatively high. Receipts are expanding gradually, but the September total on the four leading markets was smaller than in September last year. Demand is exceptionally broad and storage stocks did not start to increase until around October 1.

Butter Supply Is Light.

Receipts of butter at the four leading markets have been running slightly below normal for this season of the year. Demand remains keen, especially for the higher scores. The supply in the fresh arrivals has been insufficient and storage butter has been drawn upon freely so that storage stocks at the four leading cities are now smaller than they were last year. Based on this evidence storage stocks in the entire United States on October 1 are believed to be the smallest for that date in a number of years. Lower grades are easier to obtain and prices thereon have not been maintained in all cases while higher scores advanced during the past week. With withdrawals from cold storage in large volume, the price at which storage operators are willing to sell is an important factor.

Prices for 92-score fresh butter on October 4 were:

Chicago, 42 1-2c; New York, 44c; Boston, 44c; Philadelphia, 45c.

Advance in Cheese Prices.

Cheese prices advanced again last week, influenced by the strength shown at country points, the trade in some respects assuming the proportions of a boom. Sales in large blocks were not numerous, but local trade and small shipping orders were on a highly satisfactory scale on distributing markets. The amount of cheese disappearing into consumptive channels at the four leading markets during September was about 38 per cent more than in that month last year. Receipts declined last week so that it is evident that higher prices have not yet increased the pressure upon the market from the producing sections. All of the recent advance may not be maintained, but on the other hand no pronounced decline is probable. Storage stocks are being drawn upon at a moderate rate.

Prices for No. 1 American cheese on October 4 were:

Chicago—Flats, 23@24 1-2c; Twins, 22@23c; S. Daisies, 23@24c; D. Daisies, 22@23 1-4c; Young Americas, 22@23c; Longhorns, 24@25c.

Fruits and Vegetables.

Carlot shipments of potatoes are the heaviest of the year and are still increasing. The total last week appeared to be about 7900 cars compared with an average of 6467 cars in the corresponding week during the three preceding years. The crop is approximately four bushels per capita while the average crop in the preceding 20 years has been at the rate of 3.6 bushels per capita. Prices were weak at most points, but Colorado f. o. b. prices advanced to 75 to 85 cents per 100 pounds for Brown Beauties. Northern round whites are quoted at $1 to $1.10 per 100 pounds in carlots at Chicago and $1.25 to $1.55 at other midwestern markets.

The carlot apple movement is expanding steadily each week with about 5000 cars shipped in the last week in September, which is below the corresponding week last year, although larger than in 1920 and 1919. Prices upon midwestern A 2½ Jonathans are $3.50 to $5.50 per barrel in the central west with Northwestern Jonathans at $2.25 to $2.75 per box.

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Range of Live Stock Prices, Week Ending Oct. 4

CATTLE.	Chicago.	Spokane.	Portland.	N. S. Lake.
Choice, prime heavy steers (1100 lb. up)	11.00@12.85			
Good heavy steers	9.10@11.25			
Medium heavy steers	7.50@ 9.20			
Common heavy steers	6.00@ 7.60			
Choice, prime light steers (1100 lb. d'n)	10.90@12.50			
Good light steers	9.10@11.10			
Medium light steers	7.50@ 9.10	6.50@ 7.50	6.75@ 8.00	6.50@ 7.00
Common light steers	5.85@ 7.50	4.00@ 6.50	4.50@ 6.75	4.50@ 6.50
Common to choice butcher heifers	4.75@ 9.25	3.50@ 6.00	3.50@ 6.25	3.50@ 5.75
Common to choice butcher cows	3.75@ 8.25	2.50@ 5.00	2.75@ 5.50	2.50@ 4.75
Bologna and beef bulls	3.50@ 6.40	2.75@ 4.50	3.00@ 4.00	2.00@ 3.50
Canners, cutters, cows and heifers	2.75@ 3.75	1.50@ 2.50	1.50@ 2.25	1.50@ 3.00
Canner steers	3.50@ 4.50	2.75@ 3.50	2.75@ 3.75	2.75@ 3.50
Medium to choice light veals	9.00@12.75	7.00@ 8.50	7.00@ 9.50	7.50@ 8.25
Common to choice heavy veals	3.50@ 7.00	5.00@ 7.50	4.00@ 7.00	
Com. to choice feeders (1000 lb. up)	5.75@ 8.25			
Com. to choice feeders (750-1000 lb.)	5.75@ 7.75	3.50@ 5.00	4.00@ 5.50	4.50@ 5.50
Common to choice stocker steers	4.25@ 7.50			
Com. to choice stocker cows, heifers	3.50@ 5.50			
HOGS.				
Top of market	10.75	11.25	11.50	10.15
Bulk of sales	7.70@10.60	10.25@11.00	10.50@11.25	9.00@ 9.70
Heavy (250 lb. up)	6.85@10.40	10.00@10.75	9.50@10.75	
Medium (200-250 lb.)	9.65@10.65	10.25@11.10	10.50@11.25	9.00@10.00
Light (150-200 lb.)	9.50@10.65	10.50@11.25	10.75@11.50	9.50@10.15
Light lights (130-150 lb.)	9.30@10.20	10.25@11.10	10.50@11.25	9.00@ 9.75
Smooth packing sows (250 lb. up)	7.50@ 8.60	8.00@ 9.00	8.00@ 9.00	6.75@ 7.50
Rough packing sows (200 lb. up)	7.00@ 7.90	7.50@ 8.00	7.00@ 8.00	6.00@ 6.75
Medium to choice pigs (130 lb. down)	8.50@ 9.90	9.50@10.50	11.00@11.25	
Stock pigs		8.50@10.00	11.00@11.50	8.50@ 9.00
SHEEP AND LAMBS.				
Medium to prime lambs (84 lb. d'n)	12.50@14.75	9.00@10.50	9.50@11.00	10.00@11.50
Culls and common lambs	8.50@13.25	6.00@ 9.00	7.00@ 9.50	7.00@10.00
Medium to prime yearling wethers	8.75@12.50	7.00@ 8.00	7.00@ 8.50	6.50@ 7.50
Medium to prime wethers	6.25@ 9.25	6.00@ 7.50	5.50@ 7.50	4.00@ 5.50
Medium to choice ewes	3.50@ 7.00	4.00@ 6.50	3.50@ 6.00	3.25@ 4.50
Culls and common ewes	2.00@ 3.75	2.00@ 4.00	2.00@ 3.50	2.00@ 3.25
Full-mouth to yearl. breeding ewes	4.50@11.50			
Feeder lambs	13.00@14.75	6.00@ 7.00		10.00@10.50

Hay—Timothy, $21@23; No. 2, $20@21; No. 3, $12@15; No. 1 light clover mixed, $20@21; No. 1 clover, $14@16; No. 1 clover mixed, 16@17; No. 1 alfalfa, $20@23; upland prairie, $17@19; midland prairie, $14@17; rye straw, $12@13; oat and wheat straw, $9@11.

LATEST QUOTATIONS.

The Live Stock Market.

PORTLAND, Ore., Oct. 7.—Choice steers, $7.50@7.75; medium to good steers, $6.50@7.25; fair to medium steers, $5.50@6.50; common to fair steers, $3.75@5.50; choice heifers, $5.25@5.75; choice cows and heifers, $5@5.50; medium to good cows and heifers, $3.50@4.50; common cows, $1.50@2; canners, $1.50@2; bulls, $4@4.50; choice feeders, $5@5.50; fair to good feeders, $4@5; choice dairy calves, $9@10; prime light calves, $9@10; medium to light calves, $8@9; heavy calves, $5@7.

Hogs—Prime light, $10.25@10.60; smooth heavy, 250@300 pounds, $9.50@10; smooth heavy, 300 pounds, $9@9.50; rough heavy, $7@8.50; fat pigs, $10@10.25; feeder pigs, $10.

Sheep—East-of-mountain lambs, $10@11; choice valley lambs, $9.50@10.50; medium valley lambs, $8.50@9.50; common valley lambs, $7.50@8.50; cull lambs, $6.50@7.50; heavy yearlings, $7.50@8; light wethers, $6.50@7.50; heavy wethers, $5.50@6; ewes, $2@6.

SPOKANE, Oct. 7.—Cattle—Prime steers, $6@7.50; good to choice steers, $5@6; medium to good steers, $4.50@5; fair to medium steers, $4@4.50; common to fair steers, $3@4; choice cows and heifers, $5@5.50; good to choice cows and heifers, $4@5; medium to good cows and heifers, $3.50@4; fair to medium cows and heifers, $2.50@3.50; canners, $1.50@2.50; bulls, $2.75@4.50; light veal calves, $7@8.50; heavy veal calves, $5@7.50; stockers and feeders, $3.50@5.

Hogs—Prime mixed, $10.25@11; medium, $9.25@10; heavies, $7.25@9; fat pigs, $8.25@10.25; stockers and feeders, $8.50@10.

Sheep—Prime lambs, $8@10; fair to medium, $7@8; yearlings, $7@8; wethers, $6.50@7.50; mutton ewes, $3@7; feeder lambs, $5@7.

The Grain Market.

PORTLAND, Ore., Oct. 7.—Cash wheat Hard

(Continued on page twenty.)

Increasing Home Demand for American Farm Products

Wheat prices at Chicago and other grain market centers have been bobbing up and down, according to the war news from Constantinople. When the outlook for a peace settlement seemed gloomy the price of wheat would shoot upward, only to react with a downward movement when more pacific news came from Paris, London and Constantinople.

But, aside from the Turkish developments, the foodstuffs division of the United States department of commerce has reports which seem to justify a hope for continuing higher wheat prices. Much depends upon the total takings of wheat by importing countries for the coming year. The best data available at present indicate that these countries produced this year about 160,000,000 bushels of wheat less than last year. As they took 640,000,000 bushels of wheat last year, if we added this to the present deficiency there would be indicated a probable need of about 800,000,000 bushels, provided they consumed as much as last year. Increased rye and potato crops in a number of European countries will offset some of the demand for wheat. But, allowing for this, the importing countries should take better than 700,000,000 bushels if they can find the means to do so. But that if is a big "if." Undoubtedly the importing countries would like to buy more wheat and flour from America if they had the financial resources to do the buying.

That they will buy more is the opinion of Secretary of Commerce Hoover. According to the secretary, delayed purchases by European wheat buying countries, which will take approximately 160,000,000 bushels of wheat more this year than last, will stabilize the price of the grain in the United States.

Mr. Hoover believes that the recent transportation difficulties will probably prove to be a blessing in disguise to the wheat growers who have been unable to market their products. Farmers, he said, are prone to sell their products after threshing. Because of the low price at which the wheat has been selling, and the larger demand which is bound to come, the farmers who have held their grain will be in a much more favorable position than those who were unlucky enough to obtain transportation facilities.

The European wheat crop will be about 800,000,000 bushels, or about 160,000,000 less than last year, Mr. Hoover said. Buying has been very slow from overseas, as is usually the case, and the demand will probably come all at once, he declared.

Another controlling factor will be the supply of wheat in the exporting countries. The final estimate of the Argentine government for the 1921-22 wheat harvest is 180,640,700 bushels, according to a cable just received by the department of agriculture from its agricultural commissioner at Buenos Aires. If this estimate should be borne out, the Argentine crop this year will be about 10,000,000 bushels more than that of last year.

Turning to our own food exports, it is found that the most notable increase in August was in wheat shipments—33,703,000 bushels, valued at $42,404,000, as compared with shipments of 14,952,000 bushels in July. But, notwithstanding this increase in August over July exports, August exports this year are much less than August exports in 1921, when we sent abroad 58,536,000 bushels of wheat, or nearly 25,000,000 bushels more than were exported in this August.

However, the general trend of our exports of food products indicates that the war-ridden European countries are getting back more and more on a production basis. Exports of dairy products, for instance, were only $1,641,000 in August this year, as compared with $4,082,000 worth in August of last year. There was a falling off also in exports of bacon, hams and shoulders, lard and other meat products.

Comparing the eight months ended August, 1922, with the corresponding eight months of 1921, we find a heavy slump in the value of our exports of breadstuffs were worth only $341,340,000, as compared with $575,052,000 in the same period of last year.

On the same basis of comparison, our total exports of meat products fell from $117,650,000 the first eight months in 1921 to $88,782,000 in the first eight months of this year, while our exports of dairy products fell from $29,549,000 to $18,317,000.

It is apparent that the American farm producers must now put greater dependence on the home markets and less on foreign demand. When conditions are prosperous and labor is fully employed in all industries, the consumptive demand of the American population increases enormously. There are cheerful signs that we are coming into a fairly long period of prosperity and increased purchasing power among the consuming masses. If that expectation is realized it will offset the diminishing purchasing power of foreign countries. Our own people will consume more of our products, and we shall have a smaller surplus to sell abroad.

Upon this comprehensive survey of world market conditions there is no reason to expect a return, or an approximate return, of war-time prices for agricultural products. There is reason, though, to expect that a marked improvement in the home demand will bring prices which, on the whole, will be fairly remunerative for our various agricultural products.

Farm Contribution to Industry

By GILBERT GUSLER

Out of the 15 leading manufacturing industries in the United States at the time of the last census 10 are directly or indirectly dependent upon agriculture for the raw material they use. Likewise, the farmer is dependent upon them for a market for part of his product.

The list, together with the total value of the product of each industry for 1919, is as follows:

Slaughtering and meat packing, wholesale	$3,714,340,000
Iron and steel, steel works and rolling mills	2,812,775,000
Automobiles	2,387,833,000
Foundry and machine shop products	2,321,129,000
Flour mill and grist mill products	2,193,129,000
Cotton goods	1,877,919,000
Shipbuilding, steel	1,454,116,000
Bread and other bakery products	1,406,145,000
Lumber and timber products	1,400,000,000
Cars and general shop construction and repairs by steam railroad companies	1,277,584,000
Clothing, women's	1,184,099,000
Clothing, men's	1,158,007,000
Boots and shoes	1,149,560,000
Rubber goods, not elsewhere specified	980,070,000
Leather, tanned, curried and finished	928,584,000

BUILDING UP JERSEY HERD.

There are 16 grade Jerseys at the B. Hanson farm at Falls City, King county, and a registered bull is being used to increase the production of the offspring. The milk from the cows is separated and the cream sold, while the milk is kept on the farm and fed to the pigs. Fifty Chester Whites are kept during the summer and fattened for the fall market. Practically all of the pigs are raised on the farm and grains are grown for feeding. Mr. Hanson has developed a retail trade that takes practically all of the products from his farm as they are produced.

HARROWS HIS WINTER WHEAT.

J. L. Handcock of Coupeville, Island county, Wash., is working half of the 210 acres which he and Carl Dean operate on a partnership plan. Mr. Handcock usually grows a crop of wheat and one year received a medal with a production of 81.21 bushels to the acre. Second award, however, was only a part of a bushel below his figure. Mr. Handcock is certain that he can beat this record with a properly seeded wheat crop and a good season. Mr. Handcock believes in harrowing his winter wheat in the spring to break up the soil and kill weeds.

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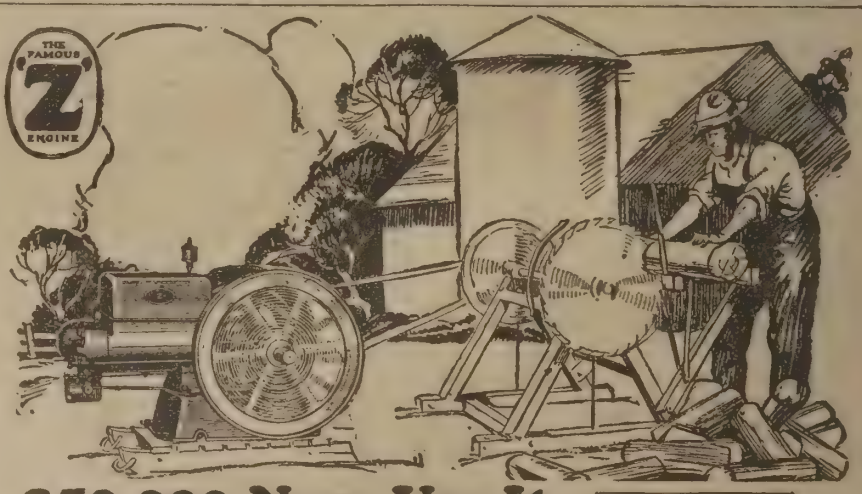
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The smaller sizes, the powerful 1½ and 3-horse power engines, are the most popular for many of these jobs. If you need more power, the International 6 or 10 horse power sizes will supply plenty of it.



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LIVESTOCK AND DAIRY

Fall Freshening

When the Cow Needs Proper Care

By A. B. NYSTROM.

Fall cows as a general rule produce more milk and are more profitable than those that freshen in the spring. The reason for this is that the stimulation to produce milk immediately following calving keeps the cow at high production during the winter months or while on barn feeding and later in the lactation period, when a drop in flow is expected, there is an added stimulation caused by green grass, so that actually a high production in the milk flow is maintained for several months more.

The secret of high yearly production lies in giving the cow a good start. If the dairyman uses his powers of observation he will see that those cows that start the year in poor flesh, or that are out of condition for a while just following freshening, never make as good a record as those that are well conditioned.

It is natural for a cow to lay on extra fat while dry. Indeed that is one reason for having her dry. Such cows are sure to make a good account of themselves, provided they are properly fed after calving. Feeding heavily just previous to and just following the time of parturition is sure to spell failure. The safest way is to cut down in the feed about two weeks before the due date and feed lightly of laxative feeds, such as a few roots, bran, ground oats and a little oil meal. Clover or alfalfa hay should be the main part of the roughage ration.

Just about two days before calving feed no oats and only a small amount of bran. Give plenty of water and if the weather is cold take the chill off the water before offering it to the cow. This practice might well be continued for four days after calving.

If delivery of the calf has been normal it will be safe to begin increasing the ration a week after freshening. Care should be taken to make the increase gradual, never feeding more than the cow will clean up. It is better for the first month, and in the case of extra heavy producers, for several months, to have the cow looking for more feed after she has consumed all she is going to get. Overfeeding in the early stages is often what causes the cows to drop in milk production, and once they drop, they will never get back to where they were.

Another way to keep up the flow is to provide clean stalls. These should be heavily bedded if the cows are kept in at night. Cows that are left in the barnyard at night should be provided with a shelter from rain and a clean place to lie down. It is unreasonable to expect a cow to produce their best if they must wade in mud and mire night after night and only have an opportunity to lie down while in the barn at milking time.

LIFE PRESERVERS FOR LIVE STOCK

By DR. E. E. WEGNER, W. S. C.

DIGESTIVE TROUBLES—ARTICLE IX.

Floating Colon.

This portion of the digestive tube extends from the great colon to the anus and all of the material extruded from the body must pass this portion. One must keep in mind also that the great colon, which has a diameter of from four to 10 inches, is followed by this portion which has a diameter of but three inches and that the material in the great colon must therefore be separated into quantities small enough to pass through this smaller tube, and that if this does not occur and great masses attempt to pass out through the floating colon there is danger that they may become lodged here and unable to make the passage. In fact this very frequently happens, especially when the food materials in the great colon are of the tough or sticky nature.



The above, which constitutes an impaction of the floating colon, is quite common in horses and especially at certain times of the year when the food is of the right kind to produce it. The most common offending food is not the manger-fed hay, but rather the pasture weeds that animals eat from choice or necessity. There are several kinds that are especially offensive. The so-called pepper-grass is one of the worst. Horses like this weed and will eat large quantities when it can be found in their pasture, especially when the pasture is short. It commonly grows abundantly in the lower ground and may be found green after most other grasses have dried up, and for this reason it is popular with them. The commonly known china-lettuce is another very dangerous weed upon which horses so commonly feed in the summer fallow. This weed, in addition to being woody and tough, contains a gluey, sticky substance that has a decided tendency to seal the tangled masses together and this makes it almost impossible to soak it up with water and get it out in this way. Green alfalfa pasture is dangerous for the same reason and green wheat has also caused the same condition. Of the dry feeds, pea-straw is probably the worst offender and I have seen a great number of horses killed as a result of impaction of the floating colon from this feed alone. When it is mixed with other kinds of hay the danger is reduced, but I would not recommend it alone for a horse feed under any circumstances. It may be fed to the cattle with much less danger.

Your veterinarian will likely surmise the cause of the trouble when he is told the history of the illness and the fact that the horses have been feeding upon weeds of various kinds, and if this is not sufficient evidence he will make the diagnosis certain by a rectal examination, as it is almost always possible to feel the mass through the wall of the bowel. Sometimes it is close enough to the anus that it may be touched with the hand and removed by breaking it up with the fingers. These cases are rare, however, and are usually not so easily handled.

One must keep in mind that when this condition exists there is no movement of the bowel at all as nothing can pass this mass, and for this reason it is not to be wondered at that the animal bloats, as the gas that naturally forms within the bowel can not escape and must collect and distend the bowel and the abdomen. This is one of the most serious consequences and results in death very soon in some cases. When this condition is found and bloating has occurred it is necessary for the veterinarian to remove the gas by tapping the bowel and removing the gas artificially, as he can not open the natural tube in time to save the animal's life, and all this time the animal is in great pain.

(Continued in the next issue.)

Wool Stocks in U. S.

Stocks of wool in and afloat to the United States on June 30, 1922, totaled 479,151,184 pounds, grease equivalent, according to the quarterly joint wool stock report just released by the bureau of the census, United States department of commerce, and the bureau of agricultural economics, United States department of agriculture. This is the first report issued under a joint arrangement between the two government departments.

Stocks by condition consisted of 322,-

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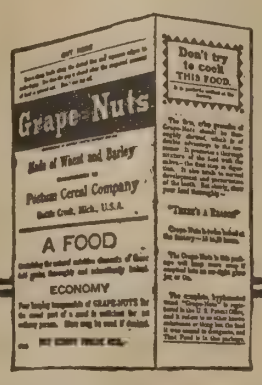
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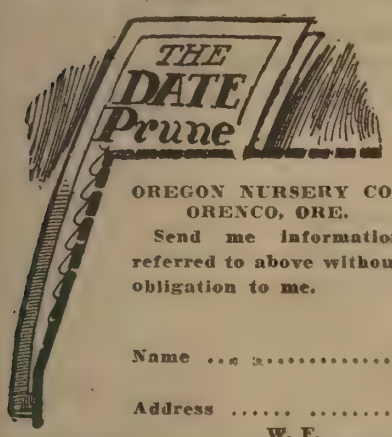
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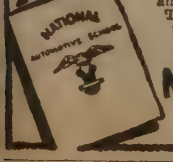
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332,921 pounds of grease wool, 35,648,032 pounds of scoured wool, 16,629,680 pounds of pulled wool, 23,346,363 pounds of tops, and 8,328,283 pounds of noils. Dealers held 176,857,999 pounds and manufacturers 197,652,634 pounds. Of the total quantity reported, 54.8 per cent was foreign wool, and 45.2 per cent was of domestic production. The supply of half-blood and fine wool is said to compare favorably with that of quarter and three-eighths blood.

The distribution by selections of stocks held by manufacturers was: New England 116,664,493 pounds, middle Atlantic 87,009,512 pounds, Pacific coast 2,773,443 pounds, all other sections 18,544,333 pounds. Holdings of dealers, according to markets were: Boston 108,167,907 pounds, Chicago 10,833,492 pounds, New York 6,854,977 pounds, Philadelphia 24,039,626 pounds, Portland 2,849,854 pounds, St. Louis 12,416,061 pounds San Francisco 1,849,948 pounds, other cities 14,091,633 pounds.

How to Tan Hides

Will you kindly tell me how to tan hides, such as calf and goat hides, with the hair on? SUBSCRIBER.

Auburn, Wash.

The care of hides includes skinning, curing and tanning. As a rule, the first step in skinning an animal is to make a cut along the under side from chin to tip of tail, and from each foot along the inner side of the leg excepting beavers, the pelts of which are sent to market flat, are slit across beneath the tail from heel to heel, the skin being reversed as the body is withdrawn, says a circular issued by the bureau of biological survey of the U. S. department of agriculture. The tail and base of the ears should be skinned out.

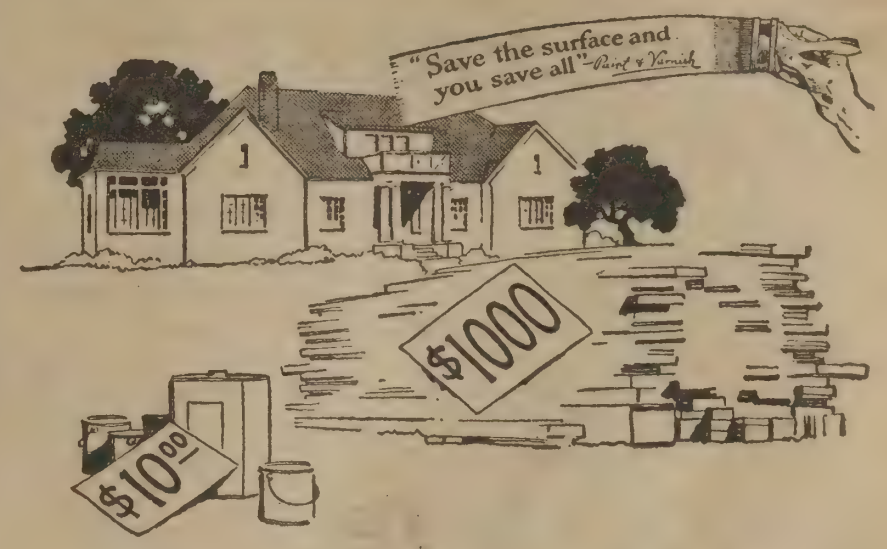
Fresh skins should be divested of loose fat and muscle and then either tanned at once or cured so as to be kept without deterioration until a convenient time for tanning arrives. They are cured by being stretched free of wrinkles, flesh side exposed, and left in a cool, shady, airy place. In moist atmospheres, or where haste is imperative, the flesh side may be covered with a layer of salt and the skin be folded, hair side out, into a compact bundle, which should be opened and refolded two or three times during the first two days to insure salt action in every part. Flat skins may be stretche by pinning them out on floor or frame, but in any case there should always be a circulation of air on both sides. Pelts of fur animals are dried, flesh side out, after being drawn over pieces of board shaped so as to stretch them uniformly. Mole skins, as an exception, are pinned out flat to dry, like beaver hides. Wolf, fox, lynx, and widl cat pelts are taken from the boards and turned fur side out before they are fully dried. Other kinds of pelts go to market flesh side out.

Skins may be tanned either with the hair on or off, as desired. Hair can be removed from hides by soaking them in tepid water made alkaline by lye or lime, until the hair comes out readily. Before they are put through the tanning process they should be washed to free them from the alkaline solution.

The following recipe for a tanning liquor is in common use: To each gallon of water add one quart of salt and one-half ounce of sulphuric acid. This mixture should not be kept in a metal container. Thin skins are tanned by this liquor in one day; heavy skins must remain in it longer. They may remain in it indefinitely without harm. When removed from this liquor, they are washed several times in soapy water, wrung as dry as possible, and rubbed on the flesh side with a cake of hard soap. They are then folded in the middle, lengthwise over a line, hair side out, and left to dry. When both surfaces are barely dry, and the interior is still moist, they are laid over a smooth rounded board and scraped on the flesh side with the edge of a worn flat file, or a similar blunt-edged tool. In this way an inner layer of fat is removed and the skins become nearly white in color. They are then stretched, rubbed, and twisted until quite dry. If parts of the skin are still hard and stiff, the soaping, drying and stretching process is repeated until the entire skin is soft. Fresh butter, or other animal fat, worked into skins while warm, and then worked out again in dry hardwood sawdust, or extracted by a hasty bath in gasoline increases their softness.

A BULLY BULL CLUB.

The Winlock Bully Calf club was unique in that it is the only calf club in the United States composed entirely of bull owners. Five boys make up the club and three of them were in the money in the open senior calf class, standing second, third and fourth. In the club class the boys were judged on the improvement made since May, when the club was formed. Floyd Morton's calf, that stood at the top, is not only a smooth, typy calf, but its improvement since starting has been remarkable. The members of the club, Floyd Morton, William Rinta, Eino Laakso, Charles Rinka and Archie Laakso, each made good scores in Jersey cow judging.



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Just Freight Rates

Are Vital to Farming Industry of the Country

In a recent address before a massmeeting of farmers and business men at the fair grounds, Davenport, Iowa, Secretary of Agriculture Wallace discussed the agricultural situation and the agricultural legislation enacted by congress. He referred particularly to freight rates on agricultural products, and said in part:

One of the heavy burdens which the farmer has been forced to carry at a time when he was least able to carry it has been the large increase in freight rates.



H. C. Wallace.

In 1920 freight rates on many of the more important farm crops were almost double what they were before the war. These increased rates not only imposed a grievous financial burden, but in many cases narrowed the market for crops which were not worth enough to carry the freight rate to distant markets.

At the same time the increased rates on the things the farmer had to buy added to his cost of living and the cost of production by just that much. Had prices of farm crops remained at the 1919 and early 1920 levels the higher freight rates could have been paid without inconvenience.

A freight rate of 25 cents a bushel when corn is selling for $1.75 a bushel is not a serious matter, but a 25-cent rate on 50-cent corn is ruination.

During 1921 the influence of the administration was exerted in every proper way to bring about a reduction in freight rates on farm crops, and a number of important reductions were secured. Rates are still altogether too high, however, with relation to the selling value of crops, and further substantial reductions must come in the near future.

This railroad question is exceedingly complex and difficult. When the federal government took over the roads it was on the agreement that in addition to proper maintenance they should be assured of earnings equal to the average of the three years, June 30, 1914, to June 30, 1917. Costs of operation were increasing steadily and the government advanced both passenger and freight rates. But materials, and especially wages, continued to advance, the latter with government assent and even encouragement. Iniquitous working agreements and shop rules which greatly reduced labor output were accepted. The result was that railroad costs of operation increased far more than railroad receipts.

During this period practically everything shipped was selling at a price high enough to have carried a correspondingly high freight rate.

Good business administration would have provided for railroad income during those prosperous times large enough to meet the government contract and would thus have saved the hundreds of millions which the government afterward had to pay. Also it should have made it possible for a prompt reduction in rates when the prices of farm crops made it necessary.

The urgent demand by farmers for large reductions in freight rates have led some people to think that if the farmers could have their way they would put rates so low that the roads could not possibly operate. Nothing could be further from the truth. The farmer is almost wholly dependent on the railroad for the movement of his surplus crops and live stock. Much agricultural freight is perishable and must have expedited movement. The farmer, therefore, has a direct interest in efficient railroad operation and knows that the roads must be permitted to charge enough to cover all proper costs of operation and enough in addition to give a fair return upon the money invested and thus keep capital in the business. Neither does the farmer want government operation of the railroads. He had enough of that in his three years' experience to satisfy him for all time. He will never forget the losses, both direct and indirect, which he suffered because he could not ship when his stuff was ready for market, and because of bad service.

Nevertheless, freight rates on farm crops and live stock must come down. With present prices for his crops and with probable prices for the next year or so the farmer simply can not afford to pay the present rates. They are out of all proportion to the pay he gets for what he grows.

The distortion between the freight revenue received by the railroads and the prices for the principal farm crops in the year 1921 can be illustrated in this way:

In 1913 the average amount the railroads received for hauling a ton of freight one mile would buy 1.4 bushels of corn in Iowa; in 1921 the revenue received by the railroads for hauling a ton of freight one mile would buy 3.1 bushels of corn in Iowa.

In 1913 this revenue per ton mile would buy one bushel of wheat in North Dakota; in 1921 1.1 bushel.

In 1913 6.1 pounds of cotton in Texas; in 1921 10.5 pounds.

In 1913 10 pounds of hogs in Nebraska; in 1921 18 pounds.

In 1913 1 bushel of potatoes in New York; in 1921 1.5 bushel.

In 1913 14 pounds of sheep in Wyoming; in 1921 22 pounds.

In 1913 2.1 bushels of oats in Illinois; in 1921 3.9 bushels.

In 1913 3.1 pounds of butter in Missouri; in 1921 4 pounds.

It would not be fair to assume from what I have just said that the increased purchasing power of the freight revenue represented profit to the railroad. On the contrary, railroad cost of operation increased even more rapidly than railroad receipts. Apparently the largest item in the increased cost of railroad operation was composed of the advanced wages given railroad employees. It is interesting to compare the purchasing power of the average yearly earnings of railroad employees in the year 1921, expressed in terms of farm products. Taking the average yearly earnings of railroad employees, we find that in 1913 the yearly wage would buy 1492 bushels of corn in Iowa and in 1921 4112 bushels.

It would buy 1028 bushels of wheat in North Dakota in 1913; in 1921 1466 bushels.

In 1913 it would buy 6449 pounds of cotton in Texas, and in 1921 13,934 pounds.

It would buy in 1913 102 hundredweight of hogs in Nebraska, and in 1921 237 hundredweight.

It would buy 148 hundredweight of sheep in Wyoming in 1913, and in 1921 296 hundredweight.

In 1913 it would buy 1087 bushels of potatoes in New York; in 1921 1916 bushels.

In 1913 2174 bushels of oats in Illinois; in 1921 5109 bushels.

In 1913 3309 pounds of butter in Missouri; in 1921 5285 pounds.

A hopeful sign which points toward the possibility of reductions in railroad rates is the gradual reduction in the part wages contribute to the total operating cost. Apparently the railroads are making steady progress in the reduction of these costs, and should, therefore, be able soon to make substantial reductions in freight rates on farm products.

In considering the matter of freight rates of agricultural products there are two things which should always be kept in mind.

First, that the cost of transportation is essentially a part of the cost of production, so far as agriculture is concerned, and any increase in transportation costs must come out of the price the farmer receives. In this the farmer is at a disadvantage with the manufacturer, the jobber or the retailer, al lof whom as a rule are able to add increased transportation costs to the price they get from the buyer and who are, therefore, interested not so much in the freight charge proper, but in being assured that the freight charge, whatever it may be, places them at no disadvantage in meeting competitors.

Second, our business and industrial life has been built up on a system of relatively low railroad rates for agricultural crops, designed to encourage their movement over long distances to industrial and business centers. A sudden reversal of this theory of rate making results in great economic injustice, from which the farmers are suffering now, and if persisted in will keep us in a state of confusion and agricultural and business uncertainty for a prolonged period.

The increase in freight rates by the horizontal method, having little regard to the character of the product and to the economic effect upon the business of the nation, is wrong in principle and can not be continued without baneful results to agriculture.

Freight rates on farm products must be brought down without impairing in any way the efficiency of the transportation service.

The Cover Page

On the cover page of this week's issue of The Washington Farmer is a picture of Dorothy McKenzie, daughter of Mr. and Mrs. Roy McKenzie of Yelm, Thurston county. Dorothy is posed with a purebred Buff Orpington rooster, one of the many purebred of various kinds on the McKenzie place. At the present time the McKenzies are raising Indian Runner ducks, Toulouse geese and purebred Rhode Island Red chickens. The farm on which they are living was purchased a year ago, since which time they have been busily engaged in converting it into a comfortable home. Roy McKenzie and his brother George are farming also the farm of their father, J. A. McKenzie, who recently purchased a small tractor to enable them to get the crops in more quickly.

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Farms Need Factories

Agriculture and Manufacturing Must Go Hand in Hand

By E. C. JOHNSON,
Dean College of Agriculture and Director of Experiment Station, W. S. C.

Encouragement of manufacturing by means of water power and the use of products from our farms and forests, and the employment of every possible means to lower freight rates and encourage transportation by shipping in order that there might be better markets for farm products and manufactured goods, is urged. The farmers of the northwest need markets beyond anything else. They are wonderful producers, but markets are often lacking. Markets mean people who can buy; people within striking distance; people so near or rates so low that freights will not prohibit consumption or demand. They mean short hauls or low freight for long hauls. They mean a large population or cheap transportation by sea and land. If we can improve and increase our markets by building a large population in the west, which ultimately will be done, and if we can improve them by lowering the costs of transportation, we will enlarge the opportunity for the development of our agricultural and other natural resources more than by any other means.

In working for an increase in population we must remember that agriculture and other productive industries must go hand in hand. When we promote reclamation by irrigation or by the clearing of logged-off lands and when we promote a better agriculture, as we should do, we should at the same time promote the manufacturing industry by the use of water power for the utilization of products of farm, forest and mine. We should manufacture cloth from our own wool, dress our own beef and mutton, make furniture and build machinery from our own lumber, make harness and leather goods from the hides of our stock and manufacture a multitude of other articles from the raw products of our state and with the use of water power now wasted.

Coincident with the work for a larger population and the development of agriculture and manufacturing we should guard the natural resources which are ours. The attention of the entire state should be directed to the conservation of forests and of natural reforestation by fire control systems and fire control regulations, to the development of our agricultural possibilities, to the utilization of water power for manufacturing purposes and the lowering of the costs of transportation.

To accomplish these purposes the greatest team work is necessary, team work on the part of our state government, our state institutions and our citizens' organizations of every kind. In this program the chambers of commerce found in almost every town of any size can have a very large part.

By Helping Build Up the Home Town You Benefit Yourself

Cases are on record where thriving towns have been literally wiped off the map by the destructive forces of nature—floods, fires, earthquakes, cyclones and volcanic eruptions—while in other cases the change in economic conditions such as the abandonment of railways, mills and mines has made once prosperous villages voiceless and deserted.

Few there are who will deny that blotting out the community near which they live would be a calamity in every sense of the word. Being "near town" means strong church advantages, good schools, good roads, easy communication with the outside world, and adequate shopping and marketing facilities.

Yet it should be considered that these advantages and, indeed the very existence of the town itself, are made possible and maintained by the business interests of the community of which the retail store is the outstanding factor.

When doing your buying you will, of course, give careful consideration to quality, service and price. Once you have done so and find that the local dealer gives you as good a proposition as the outsider, it stands to reason that the above facts should tip the scales in favor of the home store.

Offer $80,000 in Premiums

More than $80,000 in cash premiums will be awarded at the Pacific International Live Stock exposition next month, and many trophies, cups and medals have been offered. Seven stakes of $1000 each will be awarded in the horse show events.

An international dairymaid's contest in which the blue ribbon experts of many states and from Canadian points will compete in a three-day relay tournament, is a novel feature. The expert dairymaids are being assembled through the granges of the country to compete for honors and cash pries of $50, $40, $30, $20 and $10. The milking contest will be a special feature.

The milkmaid's contest will be open to all and entries will be welcomed at Pacific International headquarters, 211 Northwestern Bank building.

WILL SELL HIGH-CLASS JERSEYS.

Gwendola Rosaire, with an official record of 919 pounds of fat, is one of the cows that will be sold in the Pacific International Jersey sale at Portland next month. She is one of 10 that will be consigned by N. C. Sorensen of Chehalis, Wash. His offering will include a son of Mr. Sorensen's other gold medal cow. Harry West, breeder and importer, of Scappoose, Ore., will consign about 10 head, part of them register of merit cows, part young stuff and all close up Island breeding. C. F. Bates of Salem, Ore., will consign the first prize 2-year-old of the Oregon state fair. This heifer is on test and is reported to be producing over 50 pounds of fat per month. Others will be daughters of Gamboge April King, the only direct son of Gamboge Knight in the northwest. E. A. Rhoten of Salem and C. D. Minton of Portland are in charge of the sale.

Northwest Market Service

Senator McNary, chairman of the senate joint committee of agriculture and appropriations, conferred recently with Secretary of Agriculture Wallace and promised that he would exert every effort to secure the enactment of legislation for the extension of the market news service to the Pacific northwest. This will be done within the next few months, if congress will approve an appropriation of $500,000 to be carried in the next agricultural appropriation bill.

Spokane, it is said, would be considered for the location of an office in Washington, because of the fact that that is the center for both a large fruit and vegetable growing region as well as the shipping point for much live stock.

It was also learned from the department of agriculture that plans call for the opening of a branch of the bureau of crop estimates in Portland, to be devoted especially to a market news service on the live stock industry.

WENATCHEE APPLE SHIPMENTS.

Wenatchee apple shipments to date are sligtly in excess of 2000 cars. Only about 500 empty cars are available for apple shipments in this territory and very few are being received. District Inspector Neilson estimates that total crop of the district at 13,400 cars, but other authorities believe he is about 1500 cars too high. Many of the lower grade apples will not be shipped and others will be lost through lack of cars. Already shippers are making formal written requests for cars as a basis for damage suits in case no cars are furnished. Fewer outside laborers are being employed in the orchards this year than usual. On account of the low prices prevailing and the large loss from worms and hail, orchardists can not afford to hire their work done, so they are doing it themselves, getting better results and saving money.



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POULTRY AND RABBITS

Poultry Problems

By W. D. BUCHANAN,
Poultry Specialist, State College of Washington.

SOFT-SHELLED EGGS.

What is short in the ration when soft shells appear on the dropping board each morning and all the eggs have well-formed and hard shells? Why so many double-yolk eggs (three to five) each day from 100 pullets? Why the occasional brown shell from the O. A. C. S. C. W. L.? What is short in the ration when they pick each other's combs? H. H. S.
Elma, Wash.

Soft-shelled eggs on the dropping boards and so many double-yolked eggs would indicate that the pullets are slightly out of condition. I would advise giving them a little sour milk to drink, plenty of exercise and plenty of green feed. A little bone meal in the mash might help.

The O. A. C. Leghorns sometimes produce brown or tinted eggs because the strain was originally produced from Leghorns and Barred Rocks. Picking combs probably indicates crowding, lack of fresh air or lack of something to do.

GETTING RID OF LICE.

What is the most practical way to get rid of and prevent chicken lice in a large flock of 2000 hens? Also what is considered a fair average number of eggs a year per hen in a flock of this size of White Leghorns or Plymouth Rocks?
Clarkston, Wash. R. D. W.

The most practical way in hot weather is to dip the hens in a solution made by dissolving one ounce of sodium fluoride in one gallon of water. It would require about 30 gallons of the solution to dip the 2000 hens. In cool weather it is best to powder the hens, using about nine very small pinches of the sodium fluoride to each bird. This will take about four pounds for the 2000 hens. Leghorns are not likely to be very lousy if a good dust bath is provided. Under present conditions an average of 175 eggs for the Leghorns and 160 for the Rocks would be considered good in a flock of that size.

CAUSE OF EGG EATING.

Our last year's pullets have commenced to eat eggs. Please tell us the cause or the lack of food that causes this.
College Place, Wash. MRS. G. S.

Chickens are fond of eggs and will always eat them if they are broken. The trouble sometimes starts from limited nest room or from using nests without sufficient bedding. Anything that causes an egg to break may start the habit. A lack of ash in the form of shell or granulated bone or a lack of protein in the form of milk, meat scrap or fish meal, might cause them to crave eggs.

HATCHING TURKEY EGGS.

Can turkey eggs be hatched in an incubator, and how warm should it be kept?
Yakima, Wash. AN OLD READER.

Turkey eggs can be hatched in an incubator, although most growers prefer a chicken or turkey hen. The temperature should be 102 degrees with bulb of thermometer on level with top of egg. Some breeders raise temperature to 103 degrees on third and fourth weeks.

CHICKS DIE IN SHELL.

What caused so many of my chickens to be dead in the eggs? They seemed to be nearly matured, but unable to get out of the shells. Some had parts of the shells stuck to them after they got out and if the shell was removed it caused a rupture. What causes the scale on chicken's legs and can it be removed?
Colton, Wash. A. J. R.

The chief cause for chickens dying in the shell is a lack of vigor in the parent stock. This lack of vigor may be traced to inbreeding, lack of exercise, lack of fresh air, etc. The cause is sometimes due to a lack of moisture, if the chicks are hatched in a machine or under a hen in midsummer. The scale on chickens' legs is caused by a little mite that breeds in filth, and is then transmitted from bird to bird. It can be removed by washing two or three times a week with a solution of coal oil and lard, three parts oil to one of lard.

FEEDING SUNFLOWER SEED.

I note a discussion in The Washington Farmer on protein feeds. It says that a straight sunflower seed is too rich in protein. That sounds reasonable on paper, but in practice sunflower seed does produce an abundance of eggs. I have not been able to get scratch feed or wheat for some time on account of shipping conditions. I had about 1000 sunflower heads, and gathered them and scattered them in the scratch pen. The chickens eat all they want. I keep plenty of burnt bone and shell and turn them out about two hours in the evening to graze on the lawn and garden. I have 12 hens and get seven and eight eggs a day at present. How about the protein theory?
Oroville, Wash. C. F. K.

I have had no part in the discussion to which you refer. Sunflower seed carries 16.3 per cent crude protein, 29.9 per cent nitrogen-free extract, 21.4 per cent crude fiber and 21.2 fat. It has a nutritive ratio of 1:44, which would be ideal for egg production if it were not for the excessively high fiber content. The ideal fiber content for chickens is 3.5 per cent.

Concrete Poultry House

By W. D. BUCHANAN

I wish to know if poultry houses built of concrete in a dry climate will be too cold or damp in winter. Will paint or tar on surface of walls prevent dampness or mites and lice from staying in the walls and on roosts? G. A. B.
Lantz, Wash.

A concrete poultry house will be neither cold nor damp if it is well ventilated, and well cured before chickens are put in. Tar will tend to prevent dampness, but it is not equal to fresh air. Lice stay on the chickens, not on the roost or walls. Mites are likely to stay on the roosts or roost supports in any building, but may be exterminated with a good oil spray. The chief objection to a concrete house is the cost.

Plan Accredited Hatchery

There are 14 poultry breeders in the vicinity of Shelton, Mason county, who anticipate the establishment of the first accredited hatchery in the state. The hatchery will be located at Shelton, and will be operated by some one who understands the hatching of chicks, and who will buy the eggs from the different breeders, all of whom will have their flock inspected and passed on by some poultry expert appointed for this work by the state college.

Plans are being perfected to allow for the establishment of accredited hatcheries wherever desired throughout the state, but as yet this is the first one to announce its intention of operating for the coming spring.

A GOOD SIGN.

Per capita consumption of eggs in the United States is increasing somewhat faster than the population, and this is well from the standpoint both of the produce and of the consumer. Eggs are even more valuable than milk, when it comes to tissue building.

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The tooth attacks

Film also holds food substance which ferments and form acids. It holds the acids in contact with the teeth to cause decay.

Germs constantly breed in it. They, with tartar, are the chief cause of pyorrhea. Thus most tooth troubles are now traced to film, and very few people escape them.

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Dental science has long been seeking a daily film combatant. In late years two effective methods have been found. Authorities have proved them by many careful tests. Now leading dentists nearly all the world over are urging their daily use.

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Other effects are now considered essential. Pepsodent is made to bring them all.

It multiplies the salivary flow. It multiplies the starch digestant in the saliva. That is there to digest starch deposits on teeth, so they will not remain and form acids.

It multiplies the alkalinity of the saliva. That is Nature's neutralizer for acids which cause decay.

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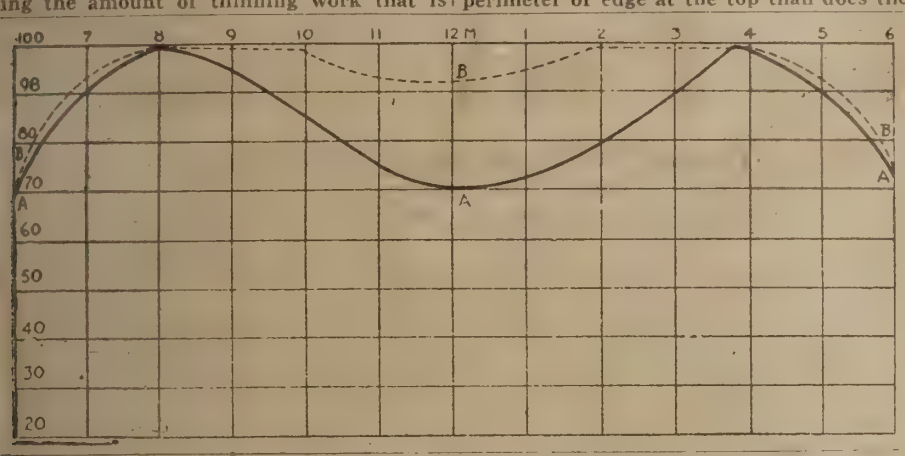
By PROF. O. M. MORRIS

This is the last of this series of articles by Prof. Morris on thinning. It discusses the importance of pruning as it affects thinning. Again we recommend that our readers study these articles carefully and keep them for reference from time to time throughout the year. The orchard is right now beginning the production of the 1923 apple crop. What you do now, this winter, and early next spring determines to a large degree the crop you will have.—Editor.

ARTICLE THREE.

Pruning is an orchard practice that is often of very great importance in modifying the amount of thinning work that is necessary to be done. When neglect of pruning permits the tree top to become thick increased thinning is a necessity, but by constant cutting out and removal of over-dense growth the maximum opportunity for all of the top to make its maximum growth will be maintained and the minimum necessity for thinning exist. This thought can be carried farther than in actual pruning of the individual trees. In the thinning of close-planted orchards it will be found to be equally true. Too thick tree planting is necessitating heavy thinning and also preventing the trees from developing the maximum size of fruit desired.

The inner part of the tree top may grow and produce valuable fruit if exposed to partial sunlight or to the direct rays of the sun for a part of the day. The activity of foliage in food digestion does not increase in direct proportion to the intensity of direct sunlight it receives. During the middle part of the day in our bright sunshine districts the light after about 9 o'clock becomes so bright that growth and digestice activity is actually inhibited or hindered. Trees so pruned that during the middle of the day part of the direct rays would shine through make the maximum amount of stored food. This explains why the pruning to a medium open top permits the production of satisfactory fruit from center to circumference. The tree that is pruned to form a very dense outer perimeter does not produce markedly better fruit at its outer perimeter or edge at the top than does the tree pruned in the more open style.



In the accompanying chart on food manufactured by apple leaves in sunlight, the solid line A represents the rate or the per cent of efficiency in food digestion of the apple leaves fully exposed to the direct rays of the sun for a day in midsummer. The broken line B represents the same by the foliage of apple trees, the top of which is open so that about 10 per cent of the direct rays of the sun pass through the top and reach the growth beneath.

Trees set far enough apart for the sunshine to reach the growth on all sides and open enough in the top to admit of plenty of light produce the best crop of fruit.

The table showing the number of square inches of land required to produce an apple is inserted here to impress upon the fruit grower the necessity for giving the tree and the soil the best opportunity possible to work at the maximum if they are to produce the largest crops. A lot of wasted energy in the tree and soil will tend very strongly to the holding of the production below the profitable limits.

Table showing the number of square inches of land required to produce one apple of the 138 size:

No. boxes per acre.	No. square inches per apple.
300	175 2-3
600	87 3-4
1000	52 2-3

Orchard Questions

By PROFESSOR O. M. MORRIS, Head Department of Horticulture, Washington State College.

Will you give me a remedy for radish and onion worms? What can I do for leaf curl on tomatoes? Is there a remedy for blight on melons? I have had a great many muskmelons, but they turn yellow and fall off. MRS. A. M.

Lacota Beach, Wash.

There is no sure, well-known method of preventing the root maggot working in radishes and onions. Protecting the beds by mosquito netting and similar cover to prevent the access of the fly which is the parent of the maggot is a successful method, but not always practical.

The leaf curl on tomatoes may be caused by two or three different things. We generally believe that the most common cause of leaf curl on the tomato is root diseases of plant, and that can not be checked after it once starts, but giving the plant a good, vigorous start, starting on land that has not been in tomatoes or potatoes the previous year, will to a large extent help in avoiding the trouble. Pulling the affected plants is generally advised, although not known to be effective in preventing the spread of the disease.

The blight mentioned on muskmelons may be due to drought, or to the lack of insects for cross pollination. Insects are necessary to carry the pollen from the staminate to the pistilate blossoms. If your melons reach the size of an inch or so in diameter before falling, your trouble is not due to the lack of insect activity. Spraying will have no effect whatever on

(Continued on page fifteen.)



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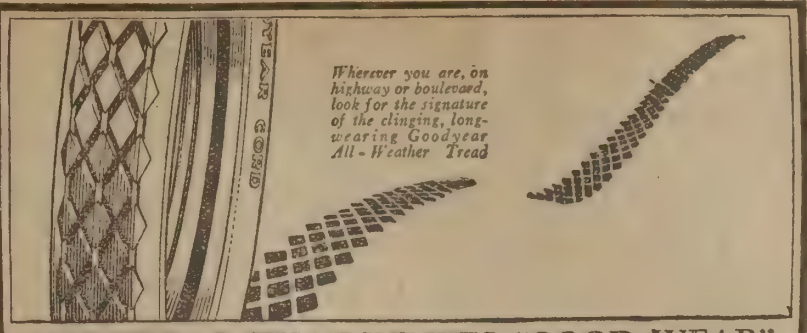
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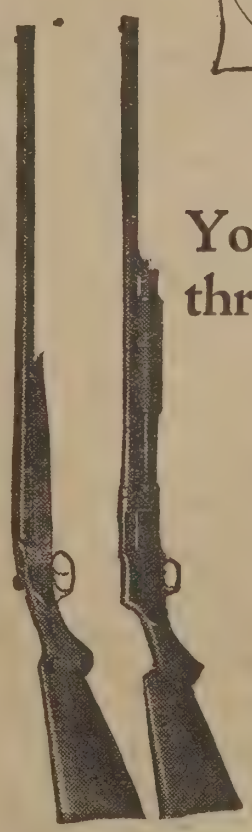
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Fruit Exposition

To Be Held in Seattle Nov. 11-19

The second annual Pacific Northwest Fruit Exposition will be held November 11-19 at the Bell street terminal at Seattle. This is the same location that was used last year, but additional space has been arranged for on the lower floor of the building for commercial and other displays.

The change in date brings the event earlier in the season when more of the soft fruits will be in shape for exhibition. There will be less interference with other dates at this time of the year and the management is assured of a good attendance.

Mrs. Winnie Braden, general manager of the exposition, has already received a large number of both district and county entries and the space is expected to be filled to overflowing. There are also a large number of individual exhibitors, some coming from British Columbia and Oregon points.

The women's department will be managed by Miss Maud Wilson of the State College Extension service. Exhibits of canned goods have been promised from many parts of the state and the interest in this division promises to be very keen.

The Western Washington Potato Growers' association has been given space for exhibiting their many varieties of western grown tubers. The visitors will have an opportunity to sample the different varieties which will be cooked in many ways by some of the women's clubs. The growers are determined to demonstrate that one need not go to another section of the state for good potatoes.

Boys' and girls' club work has also been planned and Miss Almina White, assistant state club leader, will stage a canning demonstration by one of the club canning teams.

A list of judges is given below which is not entirely complete. Others are to be added at a later date:

O. M. Morris, professor of horticulture at the state college; W. S. Brown of the Oregon Agricultural college; C. C. Vincent of the University of Idaho; M. L. Dean of Wenatchee, and T. D. Fuke of Walla Walla.

Report on Crops

Crops generally suffered loss in prospective production during September, but the harvests will be larger than they were last year except in the case of corn, sugar beets and a few minor crops.

Preliminary estimates of production announced by the department of agriculture showed a reduction, as compared with a month ago, of 25,000,000 bushels of oats, 21,000,000 bushels of corn, 8,000,000 bushels of spring wheat, 5,000,000 bushels of white potatoes, 2,800,000 bushels of sweet potatoes and 2,900,000 bushels of apples. There were increases, however, in the forecasts of barley, buckwheat, rice and beans.

Nebraska's corn crop suffered most, showing a reduction of about 13,000,000 bushels from a month ago. The reduction in Illinois was about 12,000,000 bushels, in Missouri 7,000,000 bushels and in Kansas 1,000,000 bushels.

The spring wheat crop was estimated by the department at 268,314,000 bushels, compared with the forecast issued a month ago of a crop amounting to 277,000,000 bushels.

Preliminary estimates for some crops and forecasts based on conditions October 1 for others were announced as follows:

Fall wheat, preliminary, 810,123,000 bushels.
Corn, forecast 2,853,399,000. 78.4 normal
Oats, preliminary, 1,229,774,000.
Barley, preliminary, 196,431,000.
Buckwheat, forecast, 14,051,000, 83.8 normal.
White potatoes, forecast, 105,490,000, 77.3 normal.
Flaxseed, forecast, 11,725,000, 82.6 normal.

Fix Apple Yield.

Peaches, forecast, 56,125,000.
Apples, forecast, 203,667,000.
Sugar beets (tons), forecast, 5,070,000, 85.1 normal.
Grain sorghums, forecast, 95,840,000, 64 normal.
Beans, preliminary, 13,013,000.
Sweet potatoes, 79 normal.

Washington State Crop Report.

Washington has only three-quarters of an apple crop this fall, as compared with ordinary years, according to the federal crop report for October, made public Monday by G. S. Ray, statistician. The total Washington crop this year is estimated at 23,175,000. Last year the state produced 29,062,000 bushels.

"The decrease in apple estimate is due to severe 'worm' damage, which occurred in the orchards around Wenatchee, in many localities throughout the Yakima valley and in the White Salmon district," says the report.

The potato crop will be only 79 per cent of normal, but the total production will be greater this year than last. The Washington crop is estimated at 8,579,000 bushels; the production in 1921 was 7,425,000 bushels.

Spring wheat in Washington hos made but little more than half a crop, according to the report. The average for the state is estimated at 9.2 bushels per acre. The total production for the state is estimated at 10,500,000, as compared with 17,205,000 bushels in 1921.

The oats crop for Washington is estimated at 7,676,000 bushels, as compared with 10,500,000 bushels in 1921.

Shows Difference

Between Good Cows and Poor Ones

An interesting cow testing demonstration was put on by the state college extension service at the Whatcom county fair at Lynden. There were four cows placed on exhibition which came from the herd of J. A. Porter & Sons of Custer, Whatcom county. The entire herd has been in the Whatcom County Cow Testing association for three years, and all figures quoted are taken from the association records.

The records of the following four cows were made in the last year, ending September, 1922: Ruth, age 7, produced 525 pounds of fat at a cost of $71, making a profit of $155 above cost of feed. Blanch, age 4, produced 401 pounds of fat, which cost $51, yielding a profit of $123. Agnes, a 7-year-old cow, has a record of 396 pounds of fat with a feed cost of $153 and a profit of $119. Peg, another 4-year-old, produced only 253 pounds of fat, which cost $43 and returned only $69.

This shows very clearly the contrast between good producers and poor producers. From their general appearance there was very little difference in the animals except with one cow that had a very exceptional udder development. The figures given indicate clearly the necessity of testing in order to know exactly what each cow is returning above the cost of feed. While a few pounds difference of butterfat per day seemingly is of little importance, it may be much to the cow's credit if she can produce this fat at a smaller cost.

The state college extension service, through the help of H. B. Carroll Jr., county agent, is planning on establishing one of the largest cow testing associations in Whatcom county. While they plan on using but one tester, he will be able to handle from 1000 to 1500 cows if this number can be signed up. All the calculating of records will be done at Pullman, and the books returned to the owner at the end of the year. The plans are being made to avoid any advertising of records, but rather to keep them for the benefit of the dairyman himself, who will be able to increase his production by knowing what each cow is doing.

Unite Two Shows

Plans are under way looking toward the merging of the Spokane Interstate fair and the Western Royal Live Stock show. Heretofore the Interstate fair has been held early in September and the Western Royal late in October. If the two are united it is probable that the date will be fixed for early in October.

No change in the plans for the Western Royal this month are being made. The show will be held in Spokane this year, beginning Saturday, October 28, and closmost of the animals shown will be shipped to Portland for the Pacific International. ing Thursday, November 2, after which

To Pool Potato Crop

A. E. Skidmore, county project leader in potatoes, has made the following announcement to all farm bureau members in Stevens county regarding the sale of their 1922 crop of potatoes:

The sale of the 1922 crop will be placed in the hands of a committee of five, the membership of which is as follows: G. M. Jamieson of Rice will represent the entire Columbia river country from Meyers Falls south; C. H. Dotts of Northport, the Columbia river country from Meyers Falls north. The Colville valley country from Addy south will be represented by some one chosen by the Chewelah farm bureau, this member not being named at the present time. The Colville valley country from Addy north to Meyers Falls will be represented by A. E. Skidmore, who will act as chairman of the committee, and the county at large will be represented by D. H. Ulrich, manager of the Stevens county farm bureau.

It is the plan to pool the 1922 crop in a pool whose tenure of life will be for one year only.

HOLD FAIR AT CHENEY.

The first annual Cheney Agricultural fair, under the auspices of the commercial club and directed by the agricultural committee, held its final session October 7, at the Cheney high school. The free-for-all stock judging contest, made up of farmers of the community, was won by T. T. Land, R. M. Watson and E. F. Collier. Second were the Smith-Hughes vocational students of the high school, Clarence Staniker, Frances Keuhl and Clayton Ryan, and third, boys and girls' club winners, Lester Hartley, Paul Cordill and Ted Wynestra. Judges were C. M. Hubbard, state live stock specialist, and John L. Smith of Spokane. John Mans, Four Lakes, won first prize for excellence and variety of vegetables, and Joe Alling second.

Boys' Judging Contest

The boys' judging contest was a part of the school work at the Whatcom county fair at Lynden. There were five teams from five of the high schools, which are carrying on Smith-Hughes classes. The boys were asked to judge a class of aged Jerseys, a class of aged Guernseys, and a group of Berkshire hogs.

The judging was supervised by Don G. Magruder, extension dairy specialist of the state college. Placing of the teams, together with the members of each team, are as follows:

Lynden, first, Clifton Axling, Leonard Woseman and Louis Zweegman; Sumas, second, Glen Tyler, Clarence White and Fred Smith; Ferndale, third, Clarence Westerlund, Richard Harrison and Roy Viroman; Nooksack, fourth, Howard Kinley, Cecil Dunlap and Otto Sorenson; Meridian, fifth, Clarence Willard, Lee Smith and Albert Holz.

BERRIES ON DRAINED LAND.

J. B. Rose of Bellevue, in King county last spring drained a tract of about seven-eighths of an acre of land. His first crop from it was 480 crates of Marshall strawberries. This was at the rate of about 540 crates to the acre, and indicates the possibilities in better crops through proper drainage.

RENEW OAKESDALE FAIR.

Boasting of a two-day attendance of more than 7000, with a total individual exhibit count of 2000, the Oakesdale live stock and farm produce fair closed October 7, after its first annual farm exhibit in nine years. There was a particularly fine display in cattle and hogs, much purebred stuff being exhibited. Judges from Washington State college and the University of Idaho made the awards. Since 1913 the exhibit was not made for war reasons, but it is now expected to make it an annual event again.

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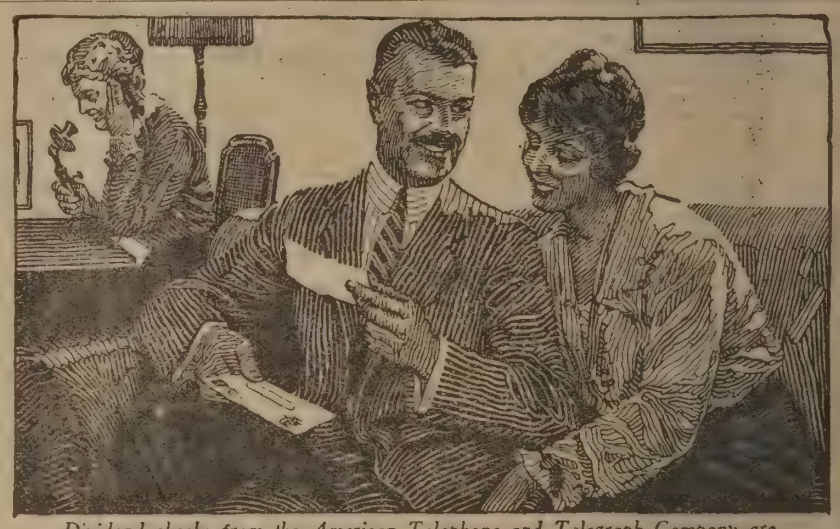
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To make that dream come true required the creation of an organization unlike any other. It demanded a kind of scientific knowledge that was yet to be formulated, as well as a type of equipment still to be devised. And it necessitated the financial and moral support of many communities.

Out of this situation grew the Bell System, bringing not only a new public service, but a new democracy of public service ownership—a democracy that now has more than 200,000 stockholders—a partnership of the rank and file who use telephone service and the rank and file employed in that service. The American Telephone and Telegraph Company exists to serve the people and is owned directly by the people—controlled not by one, but controlled by all.

Evolution is going on. Each year the ownership is more widespread. Each year the various processes of the service are performed more efficiently and economically. Each year new lines and extensions are constructed. The responsibility of the management is to provide the best possible telephone service at the lowest possible cost and to provide new facilities with the growth of demand. To do these things requires equipment, men and money.

The rates must furnish a net return sufficient to induce you to become a stockholder, or to retain your stock if you already are one; after paying wages sufficient to attract and retain capable men and women in the service. They must adequately support and extend the structure of communication.

These are considerations for the interest of all—public, stockholders, employees.

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Want Bee Inspector

The two main honey producing sections of the state, Yakima valley and the Puget sound district, are making an attempt to work together in the establishment of a market quality product as well as to maintain a uniform price. Miss Helen Steiner of Auburn was appointed secretary of the Peninsular Beekeepers' association at their last meeting in July. The association went on record as favoring the appointment of a bee inspector who could spend his entire time in the field, thus giving A. B. Slocum an opportunity to spend his entire time at the state college, where he is needed in the interest of the beekeepers of the state.

The bee industry in the state has reached a total of $3,000,000 and the beekeepers are making an attempt to keep it all in the state by educating the public to demand home-grown honey.

There Was Something Doing

(Continued from page three.)

Fife, Loveland, Alderton and Mountain View.

Perhaps no other department was more representative of the Puyallup valley and adjacent country than was the poultry show. Some of the entries came from Oregon and one was from the New England states. The Barred Rocks were stronger than any other breed, while the competition in the White Leghorns was closer than it has ever been in the past. They came largely from commercial flocks where breeding pens are kept for the purpose of raising their own stock.

There were some good individuals and pens in the Rhode Island Red classes which came from many parts of the Puget sound district. The Brown Leghorns probably ranked next, while the Wyandottes were placed down the list only on account of the lack of numbers.

The class of White Crested Black Polish and Hamburgs were the best that has been shown at Puyallup in the last 20 years, according to Fred A. Johnson of Tacoma, who was superintendent of the department. William Coats had been secured to do the judging, but was unable to be present, so the work was done by Harry Collier and Frank Breed of Puyallup.

There were 200 of the best rabbits in the northwest shown in the poultry building under the supervision of G. A. Marshall of Parkland. Some of the entries came from Vancouver, B. C., while the greater number came from rabbitries in the Puget sound district and one came from Goldendale. The largest class was the New Zealand Reds, which were very good in quality. The Blue Flemish Giants were also large in numbers, while the other colors in the Flemish Giants were also well represented by many of the local breeders.

"There was a good improvement in the quality of all the entries," said Mr. Marshall, "and especially in the New Zealand Red classes. The Blue Flemish Giants are making rapid strides and are bringing out some wonderful animals. The entries in the Himalayan, American Blues, Black Siberians, Checkered Giants and Silver Tips added much to the variety and made a very good show."

John Neeham of Seattle judged all the classes.

The Puyallup fair has always put on a wonderful display of flowers and the last few years has called for a special tent to house the display. The season at this time of the year is ideal for showing some of the dahlias that are grown in large numbers in western Washington. The flower show this year had some of the most wonderful collections of seasonal cut flowers and shrubbery displays. This department is considered a valuable asset to the fair and it always attracts much attention from the visitors.

Orchard Questions

(Continued from page thirteen.)

the pollination problem, and if your fruits are falling because of drought conditions it will not be of any particular value there. It may, however, be used to some extent in preventing the spread of the blight. Spraying with Bordeaux mixture has been recommended and has proven successful in some localities. The trouble is not general enough to have caused any very serious trouble. Extremely cold nights are sometimes the cause of the dropping of the fruits.

What would be the best crop to sow to turn under this fall? I had kale in mind. I would also like to sow again on this fall plowing to turn under in the spring.

Lacota Beach, Wash. MRS. A. M.

If you are seeking for some crop to use to plow under to improve garden or annual crop soil, I think you can have much better returns from field peas or vetch than from the kale. The kale will give as large amount of green material, but will not increase the fertility of the land nearly as rapidly as will the field peas or vetch. The crop turned under in the fall will be of more value to your crop production next year than the crop turned under in the spring. Oftentimes, however, you can grow a crop like winter or hairy vetch on the land during the winter and turn it under in the spring and make a gain that could not be gained if you do not have a crop that will grow during the winter.

STEVENS COUNTY STOCKMEN.

T. C. Bell, Colville, has been elected president for the fifth time of the Stevens County Live Stock association. Harvey T. Skeels, Addy, was reelected vice president. Other officers and committees include: Dr. K. G. McKay, W. W. Campbell, Frank Habein, James Crawford and E. G. Kohlsteadt. The latter was elected president of the Stevens County Shorthorn association and Dr. Kenneth G. McKay was elected secretary-treasurer.



How much Rain do your Shingles absorb?

Shingles that become easily rain-soaked are poor roof protection. Damp, unhealthful farm houses and buildings are the result. And besides, the rain-soaked shingles warp and crack when the sun comes out.

Shingle roofs, to give you the excellent protective service of which they are capable, should receive preservative treatment. ORONITE SHINGLE OIL not only helps keep out moisture, but penetrates the wood fibre sufficiently to retard evaporation of natural oils — a source of life and strength to shingles. A tight, well-laid roof will give full protection when treated with ORONITE SHINGLE OIL.

If you want to mix it with colors, our nearest agent will supply you with formulas. ORONITE SHINGLE OIL is easily applied to roofs or side shingled walls.

STANDARD OIL COMPANY
(California)



ORONITE
SHINGLE OIL

Most Boots Don't Wear Out--They "Crack Out"

WHEN you discard a pair of leather shoes it is probably the soles that are gone, or they're worn out in some other way.

Ordinary rubber boots are different, and especially on the farm where footwear is subjected to the chemicals of the barnyard. The surface of the boot first becomes honeycombed with minute cracks that are visible only when the rubber is bent. These cracks gradually grow in size. Finally the water and the mire get in.

Gold Seal boots are crack proof. They were first made back in the '70s to withstand the gruelling wear of miners and fishermen. We make them from pure virgin rubber that has never been used. We vulcanize them by a special process. We put extra reinforcements where the strain comes.

We make the red sole "Manure" boots to resist the acids and the alkalies of the farm.

Gold Seal boots outwear ordinary boots. You will find them in good stores everywhere in the northwest. Farmers who are out 'o' doors a great deal in the winter time wear Gold Seal oiled clothing, too. Always look for the Genuine Gold Seal label.



Only one Gold Seal label—it's round, and gold colored.

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No connection with any other firm using the name "Goodyear."

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GOLD SEAL BOOTS

Authorized since the '70's to use the name of Charles Goodyear, inventor of vulcanizing.



SYNOPSIS.

Esau Haggerty, a strong man of mature years, and Orlando Medford, a young, slightly built and frail companion, have started from their Illinois home town for the great gold diggings of the west. Esau is pushing a provisions-laden wheelbarrow. Orlando is leading a cow. They struggle slowly westward, meeting up with others also headed for the gold diggings. With a party of men traveling by handcart they all but starve for water on a desert, but dig a well and escape. They meet with a family by the name of Cooper, one member of which is a girl of years and manner that at once captivate young Orlando, who delights in keeping near her prairie schooner as they journey on. Once the entire party gives up the westward trip when they meet discouraged gold seekers returning, but Orlando and Hazel Cooper induce them to turn to the west again. They have many interesting experiences on the way, finally coming upon a great Indian camp. Not many days later they sighted Pike's peak, and a little later plodded into a little frontier town that has since grown to be the great city of Denver, Colorado. Here they learned that a rich gold strike had been made not far away at what was called Gregory's diggings. They mail letters to the folks back home and hurry on toward the place of the strike. At the foot of the mountains the women and children are left in camp to care for most of the supplies, while the men travel on foot into the mountains toward the diggings, which they reach the second day. Every claim is taken, so most of them proceed further and locate claims on Clear creek where they begin actual mining. The first day six of them wash out gold worth $7. Later they built a sluice box and increased their output to $15 or $20. Each day two of the six go hunting to supply game and prospect for better gold diggings. The hunters one day discover bear tracks, and, though fearful of running afoul a grizzly, they hope to get a shot at one of some variety and be able to take home a good supply of meat.

CHAPTER FIFTEEN—(Continued.)

Givens looked almost frightened. "No, no! Let's stick together, Jess! One fellow hasn't any business rambling around here by himself. Even a cinnamon bear might be an ugly customer to tackle. And a man not much used to hunting big game would be nearly dead sure to take the 'buck aguer' and miss the first shot."

"Is some danger of that. All right, then. Together we stay if you say so. Guess maybe a pair of guns would be better than one, in a tight scrape."

Now the two hunters, keeping together, moved slowly around the thicket. After circling it till they had returned to their starting point, they got up courage to push their way through it, the bushes being not very close together. But, numerous though the game tracks were everywhere, the hunters found no game among the aspens. After that they wandered on.

Not far beyond the thicket they noticed a cliff in front of them. While nearing the cliff, they discovered a ravine, or dry watercourse, at its foot. Some peculiar noises that they heard, coming from the ravine, caused them to approach on tiptoe. What they discovered surprised them greatly.

The rocky cliff made the far bank of the ravine. The near bank was five or six feet high, and its top overhung. Under the overhanging bank, it now appeared evident, was a lick; and several mountain sheep were licking there. So far under the bank were their heads that only their hips could be seen from where the hunters had paused.

The unexpected sight of so much big game, almost within reach, left the two men gasping with astonishment. They looked at each other, and then at that row of hips again. Both realized that there was little likelihood of their killing anything by shooting the game in the hips. They could wound an animal or two, doubtless, but not so as to keep them from escaping.

Again the two hunters glanced at each other, questioningly. "Guess we'll have to scare 'em out before we can shoot," whispered Jess.

Givens nodded. "But how?" his lips inquired.

Now they put their heads together and whispered. After agreeing upon a plan, both nervously cocked their guns. A not very large stone was lying in front of Jess. Drawing back his foot, he kicked the stone over the bank. Both men fully expected the sheep to scatter, some running up the ravine and others down in it. So both, with cocked guns in hand sprang forward to the edge of the bank.

But it was the unexpected that happened. Instead of scattering to the right and to the left, all the licking sheep suddenly leaped upward and over the bank. And every one leaped with all his might.

Both men had intended to shoot, and did shoot. Or at least their guns went off. But both were struck and knocked down, the long Jeff sprawling flat on his back. How Jess fell he never quite knew.

By the time the astounded hunters could get upon their feet and grab up the guns they had dropped, the fleeing wild sheep were just disappearing along the mountain side. Now the two, after brushing the dirt from their clothes, looked at each other and grinned—grinned "sheepishly," as Jess always declared when relating the experience.

"What did you hit, Jeff"?

"That cliff over there, I'm thinking. Didn't your gun go off? Thought I heard two shots."

"Guess you did. My gun certainly went off somehow. I recollect that. But for the life of me I can't tell whether I shot, or the gun was discharged when that battering ram knocked me down."

"We had our fingers on the triggers, Jess; and when those wild brutes jumped right into our faces, we just couldn't help pulling the triggers."

"Well, anyhow, we're two loads of ammunition poorer and not a bite of meat to show for it. Rather sorry sort of hunting that is, seems to me like, Jeff."

"Right you are, Jess. And we've got to do better, or there won't be any meat for supper at our diggings.

Now the two tramped on over the mountains and finally reached camp, just at dusk, carrying a half-grown deer. But of all their hunting adventures in the Rockies, there was none that they would remember longer than their experience with the mountain sheep.

CHAPTER SIXTEEN.

Dangerous Neighbors and a Salted Claim.

While eating supper, they learned that they had some new neighbors, or were soon to have. Three new miners had just come in, and were about to buy the claim adjoining theirs up the creek.

The present owner, a man named Mason, had been working his claim alone, and at no small disadvantage. For that reason, and because of the sorry profits, he was discouraged and wanted to return to his home. As he had already informed his neighbors, he had a wife and several children in Indiana. By toiling early and late, he had been able to clean up dust to the value of a hundred and fifty or sixty dollars. The newcomers seemed favorably impressed with Mason's claim, and had already agreed to pay him $300 for it.

Next morning early Mason came down to tell the six partners good-bye. He had already received his $300 in gold dust, and was ready to set out for the states. Before locating here he had sold a claim over in Gregory's gulch for $250. So he now had about $700 in gold to carry back to Indiana with him.

"How do you expect to travel?" inquired Esau.

"Why, I've got a wagon and team down yonder at the foot of the mountains. That is, if some thief hain't run off with 'em. Reckon I'll find somebody to cross the plains with. Wouldn't like to make the trip alone."

And Givens answered: "There'll be scads of people rolling in that direction about this time, I imagine."

When Mason started, two of the miners who had bought him out accompanied him. The other man of the newcomers remained on his claim, and could be seen doing some work.

After eating his supper, Sanders strolled up to have a chat with the lone miner, mainly to show a neighborly interest in him.

On returning to his own camp, not many minutes later, the visitor said: "That fellow don't seem to care much for company. In fact, he's got a sulky look, and you can hardly squeeze a word out of 'im. And there's an ugly-looking old dog there, with about the same kind of a disposition. The brute kept eyeing me all the time, in a sneaking sort of a way, as if he was thinking how he would like to try his teeth on me."



How Jess fell he never quite knew.

"Did the other two men go to Denver?" asked Cooper.

"No; only as far as Gregory's diggings, that fellow said. They expect to get back tomorrow. They went to help Mason carry his camping outfit, and to fetch over some things of theirs that they left in the gulch."

It was late the following day when the two absent miners returned to their claim. One of them, who gave his name as Jeeters, told Cooper that they had accompanied Mason as far as Gregory's diggings, and had there seen him started, in a wagon, on his way to Denver. Jeeters and his partner had brought back the things they had gone for.

But they had also brought something else with them from Gregory's gulch. And that was a jug of whisky.

Not one of the party of six was a drinker. It was mainly for that reason that Sanders had joined them, leaving his former partners, most of whom were prone to visit the liquor tents too often. Hence, to their nearest neighbors, the jug of whisky did not recommend the newcomers very highly. Also their language and general appearance were against them. So profane were they, at times, that the air around them reeked with brimstone. Or at least Givens expressed the opinion that it did.

For a day or two, till the jug was empty, Jeeters and his partners devoted most of their time to that. When their whisky was gone, they could be seen digging up dirt and washing it out at the creek. The three remained on their own claim. And partly because they seemed to prefer to be left alone, and partly because of that savage dog of theirs, the other miners seldom exchanged any words with them.

More gold seekers were coming in constantly. Here on Clear creek claims were changing hands every day. Hence it came about that, before Cooper's party were aware of what was happening, Jeeters and the two men with him had sold their claim and gone. Four new miners, the purchasers, had taken possession of the claim.

As the latest owners were of better appearance than the doubtful three, and had no savage dog to frighten visitors away, all their neighbors were well pleased with the change.

Having no liquor jug, the newcomers fell vigorously to work. But after supper, on their first day, one of them came down to talk with Cooper and his partners.

"Say, how much can you boys wash out in a day here?" he wanted to know.

It was Cooper who answered: "Since we've got our sluice box rigged up, we average about an ounce altogether—$16. A little more than $2.50 apiece."

"That all? But our claim has been pannin' out better'n that?"

"As far as we know, yours hasn't paid as well. Mason, the man who staked out the claim, and who did most of the work on it, always insisted that he wasn't averaging as much as each of us averaged."

"Then—I wonder." The surprised visitor sat gazing into the fire. "From the way everything looks now, me and my pardners has had a lot of shenanigan worked on us."

"How's that?" inquired Sanders.

"Why we was told we could wash out $8 or $10 apiece on our claim—the claim we bought."

"And did you believe that yarn?" asked Givens.

"We did. We shorely did. But not till we thought we had good evidence of it. They let us wash out panful after panful of dirt for ourselves. And we cleaned up at least half a dollar for every panful. On that showin' we planked down $600 for the claim—A $150 apiece."

"Six hundred dollars. You newcomers must be made of money!" exclaimed Holloway. "Jeeters and his bunch bought it for only $300 a week or so before. And we all thought——"

"They did! Why Jeeters declared to us that they'd paid $500 for it!"

Here Givens spoke: "Mason told us $300, just a few minutes before he left here. He thought he was lucky to have got that; and we all thought so, too."

"Jeeters told us their claim hadn't been so very rich, when they bought it. But they'd started a shaft, and had struck better-payin' dirt."

"And how do you find it now? Have you cleaned up half a dollar a panful today?" questioned Esau.

"At first we did. But only for a few panfuls. Since then it's been pannin' out mighty slim. That's what brung me over here—to have a talk with you fellers."

"What do you think?" Orlando asked.

Their visitor laughed. But there was not much amusement in his laughter. "For my part, I ain't doin' much thinkin'. Got past that. I know now. I'm dead shore me and my pardners has been mighty bad humbugged. Whole business was just—just a bare-faced swindle. Our claim was—was——"

"Was salted?" suggested Sanders.

The visitor nodded. "That's what. We've planked down $600 for a claim worth about a hundred."

The man soon returned to his own camp. Next morning Cooper and Sanders went up to inspect the suspicious claim. And the conclusion they and the owners reached was that most of the gold washed out by the present owners had been put into the dirt by Jeeters and his partners.

The new owners kept at work; but all were much disgusted. Having no sluice box, the best they could wash out with their pans was about a dollar a day for each man. Naturally they speculated as to what had become of the swindlers. But it seemed useless to follow them.

Before long came more startling news. A miner who had visited Gregory's diggings brought it back with him.

Some prospectors, while wandering over the mountains between the two camps, had happened upon a dead man. And in one pocket of his clothes they had found a letter addressed to somebody named Mason. If the letter was the dead man's own, as seemed probable, that was his name. That he had been slain was very evident. There was a bullet hole in the back of his head

When the report that one of their number had been murdered had spread through the Clear creek camp, as it very soon did, no little excitement sprang up. The bearer of the news had seen the body, which had been carried on a litter to Gregory's diggings. But, the face having been disfigured somewhat by birds or animals of prey, he had not been able to identify it certainly. He had promised to send over some men who knew Mason well, from having worked near him.

An indignation meeting was held straightway. At that meeting four miners were chosen to visit Gregory's gulch and try to identify the body. Two of those were from the next claim above Mason's;

(Continued on page eighteen.)

Farmers' Want Ads

HELP WANTED—MALE 3

MEN WANTED AT ONCE TO FILL GOOD POsitions. You can qualify in few weeks. Experience unnecessary. Free employment department. Write for free catalogue 100-B, and rates. Modern Automobile and Tractor Schools, W1803 Third ave., Spokane, Wash., or 700 Mercer st., Seattle.

WANTED — SALESMAN WHO CAN SELL high-grade, dependable nursery stock; several counties in Oregon, Wash., Idaho and Montana now open for assignment. Our selling contract will interest you. Address Albany Nurseries, Inc., Albany, Ore.

MEN WANTED EVERYWHERE, RAILWAY mail, government clerks and carriers; experience unnecessary. Write Mokane, Dept. B-21, Denver, Col.

AGENTS WANTED 9

MEN WITH HORTICULTURAL EXPERIence can make good money selling our splendid line of well grown trees and plants. Write for contract. An early start will give you the advantage. Salem Nursery company, 428 Oregon bldg., Salem, Ore.

SELL TREES AND PLANTS FOR US. STOCK reliable and in good assortment. Contract upon request. Write today. Capital City Nursery company, 426 Oregon bldg., Salem, Ore.

SITUATIONS WANTED—Female 18

ELDERLY WIDOW, REFINED, EXPERIenced, wishes place on ranch with children; full charge. Mrs. Grimm, 8161 Browne, Spokane.

SITUATIONS WANTED—Male 21

EXPERIENCED FARMER, SINGLE, WANTS permanent job on ranch; understands irrigation, all kinds of farming; capable of taking charge. Address Idaho Farmer, 308, Boise.

SCHOOLS AND COLLEGES 26

EARN $110 TO $250 MONTHLY, EXPENSES paid, as railway traffic inspector; position guaranteed after 3 months' spare time study or money refunded; excellent opportunities. Write for free booklet G-157, Stand. Business Training Inst., Buffalo, N. Y.

EDUCATIONAL 45

BEHNKE-WALKER BUSINESS COLLEGE of Portland; one of the largest institutions of its kind in America; guarantees a position to every graduate. Enroll now for fall term. A few months training under expert instructors and you are ready to enter business and win. Behnke-Walker graduates are always in demand. Write today for our free success catalogue. Address Behnke-Walker Business College, Fourth, near Morrison, Portland, Ore.

FRESH FOOD PRODUCTS 51-1

"HONEY BRAND" HONEY — ALFALFA, sweet clover product; pure, light, thick, good flavored; gives satisfaction wherever used; I 60-lb. can, $6.50, two for $12.75. Write for circular and prices in pails. Oliver Sires, Wapato, Wash.

NEW HONEY, FINE QUALITY ALFALFA, sweet clover; 60-lb. can prepaid, second zone, $7.29; two, $12.75; not prepaid, 3 10-lb. pails, prepaid, second zone, $4.25. Harry Fisher, Prosser, Wash.

POPULAR BRAND HAPPY HOME HONEY—One 60-lb. can, $6.50; two cans, $12.75; six 10-lb pails, $7.50; comb honey prices on request. H. N. Paul, Mabton, Wash.

FINEST NEW HONEY, 60 POUNDS, $7.50; 2 cans, $14.40; add postage; 10 pounds, $1.90; 5 pounds, $1 prepaid; satisfaction guaranteed. Geo. Bancroft, Hermiston, Ore.

EXTRACTED HONEY—ONE 60-LB. CAN, $6.50; two 60-lb. cans, $12.75, collect; three No. 10 pails, prepaid, third zone, $5. Wells D. Rose, Sunnyside, Wash.

GOLD MEDAL BRAND YAKIMA ALFALFA, sweet clover honey; 60-lb. can, $6.50; two cans, $12.75. C. W. Higgins, Wapato, Wash.

SMOKED SALMON, 5-POUND BOX, $1.25; salt salmon bellies, 5 pounds, $1.25 delivered by mail. Coffin Fish Co., Seattle, Wash.

(Continued on the following page.)

FRESH FOOD PRODUCTS (Continued) 51-1

NEW CROP ALFALFA-SWEET CLOVER honey; 60-lb. can, $4.75; two cans, $9 f. o. b. Rigby. Heckman & Larsen Honey Co., Rigby, Idaho. Quality guaranteed.

NEW HONEY—ALFALFA AND SWEET CLOver; 1 60-lb. can, $6.50; two, $12.75; discount on large quantities. Ernest Sires, Yakima, Wn.

DELICIOUS NEW CLOVER HONEY, 120 pounds, $9.75; 30 pounds, $3.25; won't crystallize. Browne, Box 499, Twin Falls, Idaho.

NICE OREGON PRUNES DIRECT, $7.75 PER hundred. Special 12½-lb. sample bag prepaid $1.80. Kingwood Orchards, Salem, Ore.

HONEY — FRESH ALFALFA-SWEET CLOver honey; one 60-lb. can, $6.50; two cans, $12.75. A. L. Traner, Touchet, Wash.

COMB HONEY AT $4.40 PER 24-LB. CASE, express not prepaid. G. I. Folsom, Route 1, Prosser, Wash.

MERCHANDISE 59

ARMY GOODS—STAG SHIRTS, $3.45; ARMY wool shirts, $3.25; work shoes, $2.95; officers' dress, $3.95; russets, $4.25; wool breeches, $1.95. Price list furnished. Walker's Army store, 501 Trent, Spokane.

MISCELLANEOUS—FOR SALE 60

SASH AND DOORS—O. B. WILLIAMS CO., 1943 First ave. So., Seattle. Chicken house sash, 20" wide by 25" high, 80c; a dozen different sizes in stock for immediate shipment. Skylights for chicken houses, 36"x40"; price, glazed, $2. This is the size recommended by the Western Washington experiment station. We carry them in stock for immediate shipment. Sash and doors for all purposes at lowest prices. All orders receive prompt attention. Our large illustrated catalog No. 35, showing full line of building material and built-in fixtures for the home, free on request. O. B. Williams Co. Established 1899.

SACKS—SECOND-HAND GRAIN AND SPUD correctly sorted and graded; also pipe, new and second-hand, any size; standard roofing paper at a big saving; pumps, engines, belting, cables, etc. Alaska Junk Co., Inc., S120 Adams st., Spokane, Wash.

HOMESPUN TOBACCO SHIPPED COLLECT on delivery. Chewing, 5 pounds, $1.75; 10 pounds, $2.50; 20 pounds, $4.50; smoking, 5 pounds, $1.25; 10 pounds, $2; 20 pounds, $3.50. Farmers' Association, Paducah, Ky.

WALL BOARD—WRITE FOR SAMPLE OF Washington plaster wall board; won't warp, won't burn. Manufactured by Washington Building Products company, 6851 E. Marginal Way, Seattle, Wash.

HOMESPUN SMOKING TOBACCO, MILD and mellow; 10 lbs., $1.50; 20 lbs., $2.75; delivery guaranteed. We furnish free recipe for preparing. Smoking Tobacco Exchange, Sedalia, Ky.

CANE MOLASSES FED TO STOCK MAKES more milk, healthier animals, lower feed costs; cheaper than corn. Write Arthur A. Lewis & Co., distributors, S151 Lincoln st., Spokane.

NATURAL LEAF TOBACCO, CHEWING, 5 lbs., $1.75; 10 lbs., $3; smoking, 5 pounds, $1.25; 10 pounds, $2. Send no money, pay when received. Tobacco Growers' Union, Paducah, Kentucky.

OUR FREE NEW FALL CATALOG OF GROceries and general merchandise will save you big money; a postal card brings it. Write today. Jordan Lawler company, Box 615T, Spokane.

TOBACCO—KENTUCKY'S NATURAL LEAF; smoking, 10 lbs., $2.50; 20 lbs., $4; 100 lbs., $15; chewing, 5 lbs., $1.75; 10 lbs., $3; 20 lbs., $5. Farmers' Tobacco Union, Sedalia, Ky.

FOR SALE — FAIRBANKS-MORSE HOME light plant; 32 volt, 40-light; first-class condition; replaced by power line; cheap. W. S. Dowd, Parkdale, Ore.

CABBAGE CUTTER. SIX KNIVES; CUTS all kinds vegetables rapidly, postpaid $1, three for $2; one free to ladies' aid. Lusher Brothers, Elkhart, Ind.

TOBACCO — KENTUCKY'S PRIDE; EXTRA fine chewing, 10 lbs., $3; smoking, ten lbs., $2; twenty, $3.50. Farmers' Club, Mayfield, Ky.

NATURAL LEAF SMOKING TOBACCO—5 lbs., 75c; 10 lbs., $1.25; 20 lbs., $1.75. Cash with order. United Farmers, Mayfield, Ky.

BUY YOUR ALFALFA HAY AND NETTED Gem potatoes direct from grower. Samuel Shockley, Box 185, Outlook, Wash.

FREE TOBACCO—WRITE FOR SAMPLE OF Kentucky's best smoking tobacco. Hawesville Tobacco Co., Hawesville, Ky.

MISCELLANEOUS—Wanted. 63

EGGS, APPLES, HUCKLEBERRIES—WRITE us. Uncle's Delicious Pies, Inc.; capital stock $50,000. 554 Mississippi avenue, Portland.

WANTED—7 OR 8 CARLOADS FIRST-CLASS hay for dairy cattle. A. Vetsch, Tillamook, Oregon.

STOVE REPAIRING 128

WRITE MYER RUBENS, SPOKANE, ABOUT stove repairs, welding broken parts, nickel plating.

FUR-BEARING ANIMALS 170

SILVER AND CROSS FOXES FOR SALE. William Rambo, 407 Sprague, Spokane.

PETS—Dogs, Birds, Etc. 171

WHEN YOU WANT A DOG, CANARY, PARrot, rabbits or a pet or pet stock supplies, cages, feeds or remedies, write. We are headquarters in the northwest. Routledge Bird, Pet & Animal Co., 174 Union avenue, North, Portland, Ore.

BEAUTIFUL WHITE COLLIE PUPPIES; reasonable prices. Urbandale Farm, Oakley, Idaho.

REAL HUNTING FOXHOUNDS AND PUPS. Harry Hull, Oakland, Ore.

POULTRY 174

1923 WHITE LEGHORN CHICKS FROM FAmous egg strains; Corvallis bred; low price, high quality; enlarged capacity to care for large orders as well as small. Oregon-Corvallis Hatchery, Corvallis, Ore.

DOLLARS FOR YOUR EGGS—WE PAY THE top market prices for your eggs and poultry. Daily cash remittances. McClintock-Trunkey Co., produce department, Spokane.

ANCONAS, COCKERELS FROM PRIZE WINners; egg producing stock; ask us about them. Oscar Dunlap, Junction City, Ore.

SICILIAN BUTTERCUP COCKERELS, $2.50. Also cocks, hens, pullets. Charles Carland, Route 2, Saint Maries, Idaho.

PUREBRED MAMMOTH BRONZE TURKEY toms, $9; hens, $7. H. Betebenner, Midvale, Idaho.

PUREBRED BOURBON RED TURKEY TOMS, hardy stock. Napton & Napton, Homedale, Idaho.

FARMERS' WANT ADS

This is the farmers' "want," "sale" and "exchange" department for small advertisements of farmers, including live stock and poultry.

Advertising rates for ads running 1 to 3 times, 10c per word per insertion, with a special rate to Farmer subscribers, as follows: Ads running 4 to 12 times, 9c per word per insertion; ads running 13 times or more, 8c per word per insertion.

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POULTRY (Continued) 174

PULLETS—1500 APRIL AND MAY HATCHED White Leghorn pullets for sale at attractive prices; hatched from thoroughbred Hollywood and Tancred strains; sired by cockerels 250 to 290 egg strains. We ship at three months of age and guarantee satisfaction or you may return the birds in 3 days. We can give you quality and service. Queen Hatchery, Seattle, Wash.

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WHITE LEGHORN BABY CHIX FOR SUMmer and fall months from stock accredited by Sonoma county farm bureau. We guarantee safe arrival. Write for prices and literature. The Pioneer Hatchery, 422 Sixth street, Petaluma, Cal.

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COCKERELS BRED FROM SELECTED heavy laying O. A. C. hens and Thompson's ringlet prize winning males, $3, $5 each, for October sale. Mrs. E. Lammey, Central Point, Ore. Route No. 2.

FREE RANGE SINGLE COMB BLACK MINorcas; hens, $2; pullets, $1.50; cockerels, $2; few select Single Comb White Minorca cockerels. E. Richardson, Route 2, Prosser, Wash.

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LIVE STOCK 177

WE GUARANTEE TO PAY THE HIGHEST market prices for your poultry and live stock. Owing to the constant changes in the market we are unable to quote prices in this paper from week to week. We will furnish tags and prices when you are ready to ship. Write us what you have to sell. Prompt returns. John Lewis & Co., Spokane, Wash.

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LARGE, HEAVY PRODUCING HOLSTEINS for sale at all times in car lots; tuberculin tested; 150 to 200 head always on hand; well marked heifer calves from registered sires and heavy producing dams; crated for shipment anywhere, $25 f. o. b. Levinson & Balmelli, Yakima, Wash.

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WANTED—FROM 40 TO 200 YOUNG EWES; cattle as part payment. Porter Carter, Blanchard, Idaho.

200 YOUNG REG. HAMPSHIRE EWES; BARgain. C. E. Cleveland, Stanfield, Ore.

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LIVE STOCK (Continued) 177

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WE PAY TOP PRICES FOR YOUR LIVE OR dressed veal, hogs and poultry. Your check by return mail. Shipping tags on request. M. & J. Packing Co., Spokane.

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FOR SALE — REGISTERED GUERNSEY bull. Sam Rodius, Coeur d'Alene, Idaho.

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SEND FOR FREE HARNESS AND SADDLE catalog today; cut out the middleman, buy direct from the manufacturer. Lowest prices in the west; satisfaction guaranteed. Established 1881. Write Pierce Harness Co., Dept. T, Spokane, Wash.

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CHOICE ALFALFA HAY, GREEN AND leafy; the kind that dairymen like to feed. Timothy and wheat hay for horses. Write for delivered prices. J. F. Jacobson, Kennewick, Wash.

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BEST PARCHMENT BUTTER WRAPPERS, 8x11, neatly printed, 100, 60c; additional hundred, 40c. Home Specialty Co., Middleton, Idaho.

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ANY KIND OF HIDE TANNED WITH HAIR on, or for leather. Mohr, 321 Sprague, Spokane.

TAXIDERMISTS 426

TAXIDERMY AND FUR WORK—SATISFACtion guaranteed. Carlson, 1327½ Hawthorne, Portland, Ore.

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FURS—WE BUY FURS AND PELTS. WRITE for prices and tags. Hibbard-Stewart Co., Hibbard bldg., Seattle.

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FARM LANDS—Wanted to Rent 660

WANTED—TO RENT OR TAKE CHARGE OF equipped farm; young married, competent farmer. Address H 7, Idaho Farmer, Spokane.

FOR SALE OR EXCHANGE 702

80 ACRES; 30 CLEARED; 2 MILES FROM town; good soil and running water. For particulars, Joe Johnston, Springdale, Wash.

FOR SALE OR EXCHANGE—320-A. RANCH, also 10 lots in Spokane; want small place. W. D. Slater, Kittitas, Wash. Box 53.

TO EXCHANGE—Real Estate 705

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Pike's Peak or Bust

(Continued from page sixteen.)

the others from the next claim below—Cooper and Orlando Medford.

Having armed themselves, the four men set out at once. On arriving at Gregory's gulch, they viewed the body. And not one of them had any doubt that it was the remains of the man they had known in the Clear creek camp. Now another indignation meeting was held, several hundred miners being present.

At this meeting all the visitors from Clear creek declared their conviction that the men who had bought Mason's claim had murdered him. Indeed, everything considered, it now seemed probable that they had planned to murder him before they bought the claim. Otherwise they would not have planked down so much for it. It was also known that Jeeters and his partners, or three men and a dog of the same description, had passed through Gregory's gulch soon after Mason's claim had been salted and sold again. Now the miners decided to send a party on to Denver, in the hope of capturing the fugitives. In the party went the four men from Cedar creek, who might be needed to identify the murderers.

On arriving at the edge of the plains, the party divided. Most of them hurried on to Denver, to see what they could learn there. The others began a search along the foot of the mountains, in the hope of finding out what had become of Mason's wagon and team.

While doing that, Cooper and Orlando seized a chance to visit Cooper's family in their camp. The family was well, and things were moving along as smoothly as could be expected. The visit was all too short for the younger man; but he managed to have a pleasant little chat with Hazel alone.

A number of camps along here were given up to herding miners' teams. After numerous fruitless inquiries, Cooper and his party located the man with whom Mason had left his wagon and team. But it was only to be told that Mason had been there and taken them away.

On being assured that such a thing was impossible, and given the reason, the man acknowledged that he himself had been up in the mountains prospecting at the time. His son, a half-grown young fellow, had been herding the oxen, and had delivered them and Mason's wagon to the man who called for them. In some confusion, the boy admitted that he had never seen Mason. He had only taken it for granted that the man who came for the wagon and team, and who gave his name as Mason, was the real owner.

But the young ox herder supplied further information. Two other men were in company with the supposed Mason. And when the boy had described the three men and their ugly dog as well as he could the miners from Clear creek knew them to be Jeeters and his partners.

"Now that the scoundrels have got possession of Mason's traveling layout, they're probably far on their way toward the states," Cooper remarked.

"Maybe so; maybe so not. Let's make a bee line for Denver now. If the other boys hain't already got track of the scoundrels there, maybe all of us together can," said another man.

A few minutes later they were on the road. On reaching that fast-expanding town, they learned that the rest of their party had not yet accomplished anything; perhaps for the reason that they had inquired for three foot travelers. Armed with the information that the rogues were in a wagon, the party made further inquiries.

And their perseverance was at length rewarded. As Cooper had suspected, Mason's wagon and team had started back across the plains a few days before. But Mason's murderers had not traveled with it. Instead of that, they had sold the wagon and oxen to some miners who wanted to return home. The last that could be learned of Jeeters and his followers was when they, each with a pack, and attended by their ugly dog, were headed due west toward the mountains.

"They're pointed toward some other diggings, is my guess," was Cooper's opinion.

"Either that, or they've struck out through the mountains, prospectin' on their own hook," another member of the party said. "Whatever they've done or wherever they've went, they'll be ketched up with sooner or later. You can bet your last spoonful of dust on that. And when they're in our hands, then will come a rope and a limb."

As there was nothing else that could be done, the whole party now started back to Gregory's diggings. At the foot of the mountains the others kept on; but Cooper and Orlando spent part of a day and a night in Cooper's camp. To the younger man especially, the brief visit was very pleasant while it lasted. It gave him a chance to see the object of his infatuation again and to talk with her. His stay was all too short, and he was heartily sorry when the time came, next morning, for him and Hazel's father to travel on. Each of them carried some flour on his back as he went.

The end of their day's tramping found them at Gregory's gulch. After a night spent there, they pushed ahead to Clear creek and their own claims.

For several days Mason's murderer was the principal topic of conversation in the camp. There was general indignation, and everybody knew that if the murderers should be captured a rope would end their evil careers speedily. But Jeeters and his partners in crime were not captured; nor was it known that any human being had caught a glimpse of them since they had left Denver for the mountains. It was now commonly believed that, goaded on by the fear of justice which haunts every murderer, sleeping or walking, they had buried themselves deep in the wilds. When they emerged, it would probably be at some of the settlements in Utah, or maybe in California.

After a time the excitement over the matter subsided, and affairs in the Clear creek camp went on as before.

In spite of many high hopes, none of the miners here could wash out, on an average, more than two or three dollars a day. Some, disappointed over not getting rich, as they had expected, sold their claims and sluice boxes for whatever they could obtain for them, and wandered away. But others came in to take their places, and there were always several hundred gold seekers strung up and down this narrow gorge between two mountains.

But for the hunting and fishing and prospecting, the miners here must have found life very monotonous. Besides scouring the surrounding country for game, they could now pick many wild strawberries on the mountainsides. Those they gathered gladly; and they either ate them raw, or made a rude kind of pie, or cobbler, of them. However eaten, the wild fruit served to vary an otherwise monotonous diet. And so did the mountain trout jerked out of the waters of Clear creek.

From about the end of June rain fell in the mountains every day. There was never more than a brief shower, which came down not long after noon. It was understood that most of these showers were confined to the mountains, the weather being more or less dry out in the plains country. And there was a saying in the mining camps that it could rain in your lap without wetting your head.

One day Orlando and Esau, who happened to be out hunting and prospecting at the usual shower time, watched a cloud gather against the mountain side scarcely a stone's throw below them. Soon they heard thunder rumbling and crashing in the clouds and saw pale lightnings flashing. But where they themselves stood the sky showed only a bright blue overhead and the sun was shining dazzlingly. After the shower had rained itself out, the two prospectors went on toward camp.

To shelter themselves from these daily wettings, most of the miners had only brush sheds. A few, who had brought in their wives and children, had their camp sheds covered with wagon sheets or tents. But most of them, greatly disappointed over the amount of gold their claims were panning out, preferred to submit to a daily drenching rather than spend time and gold dust preparing more comfortable quarters.

Even if any of them had expected to remain here long, it would have been a waste of time and money to erect a house of any value. The mountains bordering the creek were very close together; and when winter came, and snow fell deep on the mountain sides, snowslides would bury any kind of a structure that might be built here, as well as anybody rash enough to be living in it. As snow might begin to fall any day from the middle of September on, the period of the miners' stay could not be long.

The party of six, as well as most of the claim holders near them, could still wash out from a dollar to three dollars apiece a day. But all of them had located here in the hope of "striking it rich," and that inside of a few months. So, naturally such a coming down did violence to their feelings.

Though they spoke sometimes of going away, the Hinkson family were still on their claim, and still working it. The man was not very strong, and his wife seemed to be doing most of the digging, as well as most of the washing out of the dirt. However, their cows were still giving milk, and the man still found ready sale for it, when he went up and down the camp with his buckets.

Faithful little Becky kept up her herding. And she did not fail to visit Cooper's party from time to time. More than once, when she and her little drove happened to be close by, she took refuge under their shed when the showers came on.

"What do you do when you're caught out in the rain?" Orlando asked her one day. She, as well as all of the miners in camp, had been driven to shelter by the usual downpour. They were sitting on logs, under the corner of the brush shed which was reinforced by Esau's two-piece tent. It was dry there.

"Oh, all sorts of things. Sometimes I sneak under a rock or a log or stand under a leanin' tree. When I can't find any of them, I do like the cows and the oxens does. I jest stand and take it."

"But don't you get pretty wet?"

"Don't I, though! Wringin' wet. Wet as a dishrag. But when the sun shines out I mighty soon dry."

"Seems to me you ought to have your clothes changed when you git wet," Esau remarked.

"What's the use? They dry on me jest as quick as they would hangin' on a limb. And I don't mind. That is, not much. After this, though, reckon maybe I'll drive down to water jest before shower time; and then I won't drive back till the rain's over. That won't do much good, though, unless I come here. Most of them thar bresh camps leaks like a—like a sifter."

"Well, you're always welcome to come here, Becky. We've got a dry corner to our shed," Orlando told her.

"That's what I'll do. I'll water here at your claim every day, and then I'll be handy."

As a rule the miners in the Clear Creek camp were remarkably healthy. But at one time an epidemic of flu ran through the camp, attacking many, and keeping them from their work for a day or two. The only remedy used was a very simple one; drinking water with parched flour in it. Perhaps the trouble would have passed away of itself; for the epidemic soon ran its course.

After that, however, came an occasional case of what was known as mountain fever. As there were neither doctors nor medicine here, those so attacked, if able to travel at all, were taken by their friends to Gregory's Gulch, or even as far as Denver. Both of these places had been improving with wonderful rapidity, and now had some pretty good buildings in them. Doctors and medicines could be found there.

One day Hinkson failed to appear on his

(Continued on page twenty-two.)

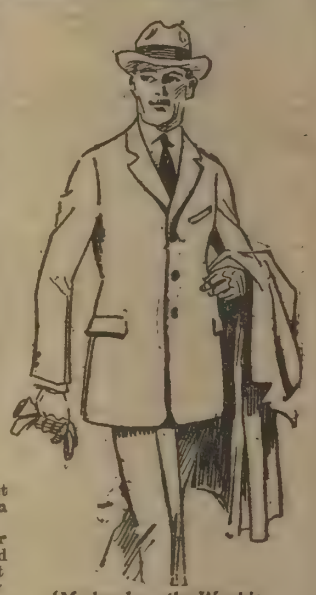
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FAMILY CIRCLE

ALICE BARLAND
EDITORIAL CONTRIBUTOR

Experience Letters

From Our Family Circle Women

Dear Family Circle: You are always so good about responding to my requests that I am sure you will do so again and I want you to put on your thinking caps. We want to have a nice interesting circle during the winter months and I want to hear from you as to any particular subject you would like to find discussed there.

You will want to know something of each other, as to what has been done to make a bit of money during the summer; you will want to know something about labor saving devices worked out by the sisters. You will enjoy letters from women of the circle who live away across the United States, for we have quite a number who do. Write and tell the sort of summer you have had.

I told you a few weeks ago about the greatest ship in the world. Would you like to have a few inches of space given to telling of many of the greatest things achieved by man?

When you write of your homes tell us about the number of rooms you have, how you make them look nice and what you use to do it. Tell us of the part of your housework you dislike the most and why you dislike it. Tell what you like best to do. Do you "just hate" to wash dishes? If you do, tell us how you go at it and all about it.

I know you are busy now and will be till the fall work is done, but be thinking about it and as you get time sit down and have nice little visits with me for the benefit of our many thousand readers.

I would like some letters about what you fill the children's dinner pails with. Please don't wait too long to tell us about that, as now is the time when the women want to know. Your friend,

ALICE W. BARLAND.

This letter came a long time ago:

Dear Mrs. Barland: I have two things in my kitchen that are great helps to me. One is a little piece of white oilcloth tacked to the wall, easily cleaned each day. Onto it each day I pin a quotation, anything that comes to my mind, and the things needed from town as I think of them. I find this a great help.

The other thing is a mirror. We mothers are busy, I know. I am sending off our children to school with lunches, but mothers, just stop a bit and look in the glass and see yourself as others see you. Then a pan of hot water, a comb and brush, a little face cream and a powder puff and notice the difference. Then each into that bottom drawer and get clean apron. By the clock you have lost little time, but as you return to your work there will be a song on your lips and you will feel much refreshed and will soon make up the time.

The pay comes when John and the children come in and tell you that you look like "that old sweetheart of mine" and from the high school children, "Oh, dumsy, but you look peachy!" And if no one should say a word the glass has told you.—Mrs. W. A. F., Ill.

Here is a girl who wrote me a long time ago and asked me about things, but gave no name or address. So she has had to wait a long time:

My Dear Mrs. Barland: I am a young reader of THE FARMER, only 16 years old, and have wanted to write to you for sometime, but have not been sure of your address.

I do not approve of the way young girls comb their hair in fans and ear puffs. Style. I have been urged to bob my hair, to look nice and not altogether out of style. I have been urged to bob my hair but I will not do that if it never grows any longer. It is only 14 inches, very heavy and seems healthy and oily enough. But it will not grow longer. I wash it every two weeks and give it a good shampoo.

I live on a ranch in the summer time and our nearest neighbor is five miles away. I read a letter in THE FARMER last summer from a girl who signed herself L. P. and I would like to write to her. —A Reader of THE FARMER.

My Dear Young Girl: About your hair growing long, will say that not every one has long hair. If yours is heavy and in a healthy condition and doesn't come out you can do it up very prettily by combing it back and making three little coils just at the base of your neck. If it is very straight put it up once or twice a week on some sort of curlers and leave it loose and fluffy when you comb it back. If it is becoming to you to part it, do that.

If I knew your address I could give you the address of L. P., but I can not give it through the paper.

Thank you for the big wedding cake recipe, it will appear in the home recipes.

— A. W. BARLAND.

Dear Mrs. Barland: I am very much interested in the circle and can not commend you too highly for the interesting and useful things you make known to us farmers' wives, especially those of us who are so isolated.

I want to tell about the handiest of all scrapers for kitchen utensils. It is the broad bladed putty knife. It has a very comfortable handle and is not nearly so insanitary and hard to clean as the wire dish cleaner and scraper combined.—B. F., Wash.

Dear Mrs. Barland: I was interested in the letter of the mother who had the little 5-year-old daughter who was so full of mischief. I wish to tell her that I had just such trouble with my older children between the ages of 4 and 7. I found after living in close contact with a good kindergarten teacher what the trouble was.

The little brains of the children are always at work and their hands must be doing something. I supplied my younger children with kindergarten work when they became tired of their regular play. I seated them at the table in high chairs and gave them just one kind to do each day so they didn't grow tired of any of it.

They would make dozens of yards of paper chains. I took rye or wheat straws and cut them into 1½-inch lengths, then cut round or square pieces of bright colored paper or cardboard 3-4 inches in diameter and they would string yards of them with a long darning needle.

Soak dry peas so that toothpicks can be inserted, break some in half and little beds, tables and chairs can be made, according to the ability of the mother.

Heavy wall paper can be cut into diamonds and squares eight inches in diameter and slits cut for bright paper to be woven through and make lovely paper mats. Some paper baskets can be cut all shapes.

There is clay molding, if one can afford to buy the kindergarten clay, and it is wonderful how many little things the little ones can make with it.

Take a large piece of cardboard and help them to cut out cows, chickens, pigs, boys, girls, houses, papas and mammas all they wish to cut out, then with a touch of paste they can make what my children used to call a "home."

There are so many ways to keep them busy, and remember the time isn't thrown away. Teach them to thread their own needles and tie the knots. Always have a box of colored crayons for the little ones and keep each sort of work separate and teach them to put away the things when through, neatly in the proper box.

Last, but not least, don't fail to have a place somewhere in the house where their work can be displayed in an artistic manner. Just observe how much pride they take in showing what they have done. No matter how crude it may be, be sure to praise it. If you will take notice you will see that the children who have had this sort of help at home will forge ahead of the children who have not had such practice when they are sent to school.

I trust this may be of some help to the young mothers and I beg of them to give it a trial at any rate.—Mrs. L. G., Wash.

(I would add to these suggestions which are so good one other, that children will cut out pictures by the hour out of newspapers and catalogues and little blunt pointed scissors can be had at the 10-cent stores. A. W. B.)

A MIXED NATIONALITY.

The census of 1910 showed a foreign-born population of 13,515,886, out of a total population of 91,972,266. Foreign-born persons and those born of double foreign parentage then amounted, together, to 28.7 per cent of our population. In 1920 the number of those of foreign birth had slightly decreased, being 12,498,334, out of an increased total population of 105,710,620. When George Washington became president the population had been little increased from abroad for a hundred years. It was, far more than that of today, an English-speaking populace, in spite of economic conditions making for regional isolation.

Pickle Recipes

Take two dozen green peppers and extract the seeds by making a slit on the side or cutting a round piece from the stem end, making of it a little cover which can be replaced when the pepper is filled and may be held in place with a toothpick. This will keep the peppers whole.

Pour a strong brine over the peppers and let them stand 24 hours, then take them from the brine and drain and soak them in clear water for a day and a night. Pour off this water, scald some vinegar into which put a small piece of alum and pour over the peppers and let them stand for three days. Prepare a stuffing of two hard heads of white cabbage chopped fine, seasoned slightly with salt and a cup of white mustard seed; mix well and stuff the peppers hard and full. Fasten on the covers, place them in a stone jar and pour over spiced vinegar scalding hot and cover tightly.

Peppers made this way are good and look so pretty, green or a beautiful red. I kept mine nearly a year just in a glass jar with a common cover. I found that peppers stuffed from the stem ends are easy to handle, do not break when stuffing. I didn't use the pins, but placed them carefully in a wide-mouthed jar, arranging them standing on end and supporting each other with the "cover" laid on the top. MRS. E. M'C.

Idaho.

Mustard Pickles.

Two quarts each of green tomatoes and cucumbers, two bunches of celery, two quarts of small onions, two cauliflowers, three quarts vinegar, five cups sugar, one cup of salt, one quart of water, two cups flour, two tablespoons of turmeric powder, one small spoon of dry mustard, one can prepared mustard. Put all together except the flour in preserving kettle with water enough to cover and cook until tender, then add the flour mixed smooth in water and allow to boil up till it thickens and remove and put in bottles and seal.—Mrs. W. R. L.

Cucumber Relish.

Twelve large cucumbers, three large onions, a little salt, two cups vinegar, one cup sugar, one tablespoon of mustard seed, one teaspoon each of celery seed, ground pepper and turmeric powder. Peel and slice the cucumbers and onions, sprinkle the salt over them and let stand over night; in morning drain them well and put into a granite pan with the vinegar and all other ingredients, bring to a boiling point then bottle and seal while hot. Do not use ground mustard.—Mrs. L. S. H., Idaho.

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High Points in News of the Week

The United States department of justice has ruled that the prohibition amendment and the Volstead enforcement act applies on American-owned ocean-going vessels as well as on American soil. As a result Attorney General Daugherty has ruled that all vessels are prohibited from having liquor on board. The ruling is applied to the three-mile limit along the coast and to the high seas as well. It also applies to foreign-owned vessels coming into American waters and transacting business in American ports. On and after October 14 neither foreign nor United States vessels will be permitted to bring liquor into the American three-mile limit. Both Attorney General Daugherty and Chairman Lasker of the American shipping board predict court action to determine their power to apply the American prohibition law to foreign ships entering American ports. It is apparently the plan of the department of justice to board all ships entering the three-mile zone and place under lock and later confiscate all liquor on board. Heretofore little attention has been paid to the prohibition laws by the ships operators, it having been generally accepted by them that the prohibition law applied only on land.

* * *

Terms of an armistice were agreed upon between the allies and the Turks last week pending the outcome of a conference which it is hoped will settle the controversy between Turkey and England, France and Italy. The conference has been in progress three or four days, but up to this writing complete agreement has not been reached. The allies have agreed to permit Turkey to again enter and control Thrace on the European side of the Dardanelles, the sea of Marmora and the Bosphorus. While they are willing to permit the Turks to take immediate possession of Thrace in a peaceable manner they insist that military occupation shall not take place for 30 days. On the other hand the Turkish leaders insist on immediate military possession.

Following the conclusion of the war, when the Turks were expelled from Thrace it was largely settled by Greeks. Greece is now insisting that the allies refuse to permit Turkish entrance to Thrace and even suggests that the Greek army will attempt to prevent Turkish occupation even if agreed upon by the allies.

* * *

It has been officially stated that 83 railroads, operating approximately 65,000 miles of trackage, have settled the strike with their striking shopmen. They have reemployed about 125,000 of the strikers. Many of the other roads declare that they are operating successfully with new help employed since the strike was called, together with individual members of shopcrafts who have returned to work. President B. M. Jewell of the shopcraft federation justifies the individual settlement with these 84 roads on three grounds: That it effects a split in the association of railway executives; that it results in an agreement forming a basis for other settlement and that it puts 125,000 men to work, thus enabling them to assist in financing those who remain on strike on the other roads.

* * *

The United States department of justice has started suit against the Dayton Airplane company of Dayton, Ohio, seeking to recover $2,408,000 at 6 per cent interest since June, 1919, alleging this amount to have been fraudulently paid to the company by government officers during the war. This is one case growing out of a recent movement in the department of justice looking toward the prosecution of war-time profiteers. Congress sometime ago made a special appropriation for financing this prosecution and Attorney General Daugherty created within his department a special division for handling the matter.

* * *

About 9,600,000 tons of coal were mined last week, a little less than the previous week. The government geological survey calculates that the present output, notwithstanding the settlement of the strike, is insufficient to allow the country to build up its depleted stocks and at the same time provide for current consumption.

* * *

Since the fire that practically destroyed the Greek port of Smyrna, on the coast of Asia Minor, three weeks ago, 220,000 refugees have embarked for various places of relief and safety. American naval forces and relief workers have cared for 180,000 of these refugees.

* * *

Railway officials announce that the total number of persons killed in railway accidents of every kind in 1921 was 5996. This is the smallest number in any year since 1889. Of this number 1702 were killed where highways cross railroads.

* * *

A survey of the building industry in the United States for the present year results in an estimate that the year will see the expenditure of about $5,000,000,000 in building. About one-third of this is dwellings, the remaining two-thirds being industrial buildings, office buildings, hotels and schools. It is calculated that $610,000,000 is being expended in the construction of school buildings.

* * *

A telephone message from San Francisco to London is reported to be the latest achievement in long distance conversation. The message was transmitted by means of the long distance telephone lines and radio service. While it was very limited in its success, it is declared that words spoken in San Francisco were heard in London.

* * *

An airplane with two aviators aboard remained in the air continuously at San Diego, Cal., last week for 35 hours. This is the longest flight from the standpoint of time in the air on record.

* * *

The American Farm Bureau federation of the western states, meting at Salt Lake City last week, passed resolutions favoring the early passage of the Smith-McNary reclamation bill, the adoption of the amortization plan of payment of deliquent water charges, the adoption of a national policy of reclamation service and the early development of the Muscle Shoals nitrate project.

* * *

During the week ended September 23 the railroads of the country loaded and handled 973,291 cars of freight. The number of cars equaled 96 per cent of the greatest number ever reported in one week, which was reached during October, 1920. There was nevertheless a car shortage reported, shippers having ordered over 107,000 cars more than could be supplied.

* * *

Mrs. W. H. Felton was recently elected United States senator in Georgia. Mrs. Felton is the first woman ever to sit in the United States senate. She is 87 years old, but is declared to be exceptionally active and alert on present-day problems.

* * *

The United States weather bureau announces that the drought conditions throughout the United States threaten serious damage to next season's crop. Plowing and seeding have been greatly retarded in many sections because of lack of moisture.

* * *

General Pershing has again gone on record in favor of a strong standing army as against a reduction, as advocated by many at the present time. The general insists that the regular army should consist of at least 150,000 men and 13,000 officers.

* * *

"The nation has everything to gain, nothing to lose, by recognizing the Russian soviet, and I will start a fight for it at the next congressional session," Senator Borah of Idaho declared in a recent address.

* * *

"The actual help given farmers through the loans made by the war finance corporation does not begin to measure the help which came through this agency," said Secretary Wallace of the department of agriculture recently. "Immediately the act was passed which enlarged its powers, a feeling of renewed confidence swept through the country. Money became easier to obtain. A more liberal policy on farm loans was generally adopted. The sacrificing of grain and live stock was checked and the hope of farmers was renewed.

"The story of the service rendered by this agency serves to illustrate the importance of taking the affirmative rather than the negative view in times of difficulty. There were many people who were disposed to accept the disastrous break in farm prices as inevitable and impossible to relieve by government action."

Just Folks

During one summer vacation of my school days I worked on my uncle's farm. He was not habituated to the more or less nominal courtesies of urban life. He even resented many of these verbal courtesies as mere flummery. He told me as much one day. I have forgotten the incident which brought forth his criticism. Perhaps it was when I thanked him for handing me a pitchfork on a load of hay.

"You don't have to thank me for what I ought to do," said he. "It is part of your business to ask it and part of my business to grant it; that is not something to be thanked for."

At the time and for years afterward, whenever the incident came into my mind, I thought of my uncle as being ignorant of good manners; of saying those things because he did not know any better. I am now wondering if there was not something vital and fundamental in my uncle's attitude of mind.

Is justice and a square deal as deserving of thanks as mercy and good will, and do we not take the bloom off mercy and good will when we use the same words in recognition of deeds of justice?

The square deal is occupying altogether too much of the space in our mind. There are other things at least as worthy of our thoughts as the idea of justice.

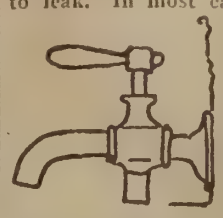
Justice and the square deal seem to be necessary evils in human life. They must be considered and fought for, and have been considered and fought for through bloody days in the past, but in the long run they are makeshifts.

Mercy is greater than justice. Genuine good will surpasses the square deal.

It is not the highest type of man nor the highest type of society that exacts the pound of flesh. In short, the golden rule was not founded on justice and the square deal. E.A.S.

Be Fair With the Faucet

Don't blame the faucet when it begins to leak. In most cases the gaskets have served their full time or have been abused by those who use the faucet. Why turn the faucet off twice as hard as is necessary to stop the water flow? The rubber or composition gaskets or plunger heads lose their pliability much earlier when undue pressure is placed upon them. Also they tend to stick after being shut off tightly, resulting in a break of the surface when again turned on. To be sure, these parts must be renewed occasionally, regardless of the care with which the faucet is used, but leaks will be much less frequent if unnecessary shut-off pressure is avoided.



Farm Business and Markets Outlook

(Continued from page five.)

white, Bluestem, Bart, $1.20; soft white, $1.10; western, $1.09; hard winter, $1.06; northern spring, $1.09; western red, $1.04.

Grain futures: Wheat—Bluestem and Bart, October, November, $1.20; soft white, October, $1.10; November, $1.08; western white, October, $1.09; November, $1.07; hard winter, October, $1.06; November, $1.05; northern spring, October, $1.09; November, $1.07; western red, October, $1.04; November, $1.

Oats—No. 2, 36-pound naturals, October, November, $33; 36-pound clips, October, November, $32; 38-pound naturals, October, November, $34.

Barley—44-pound minimum, October, November, $29.50; 40-pound minimum, October, November, $29.50.

Corn—No. 2 eastern yellow, shipment October, $30.25; November, $30. Mill run—October, November, $25.

SEATTLE, Oct. 7.—Cash wheat—Hard white, $1.10; soft white, $1.10; western white, $1.10 hard red winter, $1.09; soft red winter, $1.09; northern spring, $1.10; western red, $1.07; Big Bend Bluestem, $1.25.

COLFAX, Wash., Oct. 7.—Red, 87c; Club,, 90c; Fortyfold, 91c.

POMEROY, Wash., Oct. 7.—Turkey Red and Hybrid, 90c.

DAYTON, Wash., Oct. 7.—Club, 95c; red, 93c.

DAVENPORT, Wash., Oct. 7.—Bluestem, $1.08; Marquis, 92c; Gold Coin, 90c.

PULLMAN, Wash., Oct. 7.—Red, 88c; white, 91c.

ODESSA, Wash., Oct. 7.—Bluestem and Bart, $1.11; Marquis, $1.01; Turkey Red, 94c; Jones Fife, 90c.

WALLA WALLA, Oct. 7.—Bluestem and Bart, $1.04; Club, 93c; Turkey Red, 88c.

Hay and Feed Grain.

PORTLAND, Ore., Oct. 7.—Millfeed—Price f. o. b. mill: Mill run, ton lots, $27; middlings, $39; rolled barley, $36@38; rolled oats, $42; scratch feed, $44 per ton.

Corn—White, $36; cracked, $38 per ton.

Hay—Buying prices, f. o. b. Portland: Alfalfa, $18@18.50 per ton; cheat, $15; oats and vetch, $20; clover, $18; valley timothy, $20; eastern Oregon timothy, $20@21.

SPOKANE, Oct. 7.—Alfalfa, $22 ton; timothy, $24 ton; mixed hay, $22 ton.

Wheat—Feed wheat, $40 per ton.

Oats—$40 per ton; steam rolled, $42.

Corn—$36 per ton; cracked corn, $36 ton.

Barley—$42; steam rolled, $44.

Bran and shorts—$32 per ton.

General Produce.

PORTLAND, Ore., Oct. 7.—Butter—Cubes, extras, 44c pound; prints, parchment wrapped, box lots, 48c; cartons, 49c. Butterfat, 48c, delivered station; buying price, A grade, 43c.

Eggs—Buying price: Current receipts, 39c per dozen; henneries, 45c per dozen. Jobbing prices: Front street, candled ranch, 47c; selects, 50c; Association, selects, 50c; firsts, 48c; pullets, 42c.

Cheese—Tillamook, 28c; Young Americas, 29c; longhorns, 29c pound.

Poultry—Hens, 13@23c lb.; springs, 21@22c; ducks, 15@23c; geese, 15@20c; turkeys, 45c.

Veal—Fancy, 15c per pound.

Pork—Fancy, 15½c per pound.

SEATTLE, Oct. 7.—Eggs—Selects local ranch, white shells, cases included, 47c per dozen; mixed colors, 45c per dozen; pullets, 36c per dozen. Cases returned to shipper 1c less.

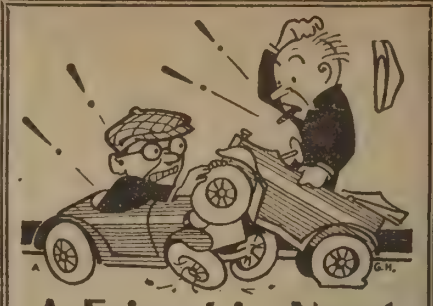
Butterfat—F. o. b. Seattle: A grade, 50c per lb.; raw milk, $2.10 per cwt.

Poultry—Hens, 4½ lbs. and up, 24c per lb.; over 3½ lbs. and under 4½ lbs., 16c per lb.; 3 to 3½ lbs., 12c lb.; 1922 broilers, 1 lb. and heavier, 22c per lb.; old roosters, 10@11c lb.; geese, fat, live, 16c per lb.; do fancy dressed, 24c per lb.; ducks, 3 lbs. and heavier, live, 15c per lb.; turkeys, fat, dry picked, 8 to 15 lbs., 30@33c per lb.; do live, fat, 10 to 15 lbs., 25c per lb.; squabs, large, $4.50 per dozen; pigeons, $2; guineas, $8 per dozen.

SPOKANE, Oct. 7.—Poultry—Fat hens, 17c lb.; light hens, 10c lb.; roosters, 8c lb.; spring chickens, over 2½ lbs., 14c; broilers, 1½@2½ lbs., 16c lb.

Fresh ranch eggs—$9@10.50 case; no storage.

Butterfat—45c a pound.



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STATEMENT OF THE OWNERSHIP, MANagement, circulation, etc., required by the act of congress of August 24, 1912, of The Washington Farmer, published weekly at Spokane, Washington, for October 1, 1922.

State of Washington, county of Spokane, ss:

Before me, a notary public, in and for the state and county aforesaid, personally appeared W. H. Cowles, who, having been duly sworn according to law, deposes and says that he is the president of The Washington Farmer, and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation,) etc., of the aforesaid publication for the date shown in the above caption, required by the act of August 24, 1912, embodied in section 443, Postal Laws and Regulations, printed on the reverse side of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor and business managers are:

Publisher, Cowles Publishing Company, Spokane, Washington; editor, ...; managing editor, Edwin A. Smith, Spokane, Washington; business managers, none.

2. That the owners are: (Give names and addresses of individual owners, or if a corporation, give its name and the names and addresses of stockholders owning or holding 1 per cent or more of the total amount of stock.) Cowles Publishing Company (a corporation), Spokane, Washington; W. H. Cowles, Spokane, Washington; H. C. Cowles, Spokane, Washington; J. F. Young, Spokane, Washington; F. J. Whaley, Spokane, Washington.

3. That the known bondholders, mortgagees and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages or other securities are: (If there are none, so state.) None.

4. That the two paragraphs next above, giving the names of the owners, stockholders and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company, but also in cases where the stockholder of security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association or corporation has any interest, direct or indirect, in the said stock, bonds or other securities than as so stated by him.

COWLES PUBLISHING COMPANY.
By W. H. COWLES, Pres.

Sworn to and subscribed before me this 23d day of September, 1922.

(Seal.) F. J. WHALEY.

(My commission expires Oct. 17, 1923.)

Please mention THE WASHINGTON FARMER when writing advertisers.

Your Health

By Royal S. Copeland, M. D., F. A. C. S.

Every child has occasions when there are "patches" in the throat. Immediately mother is worried for fear the trouble may prove to be diphtheria.



Dr. Copeland.

It is too bad there should be any reason for worry of this sort. Diphtheria can be made just as rare a disease as smallpox.

Do you realize that 50 years ago there were 32 deaths from smallpox in every 100,000 of the population? Such a state of affairs, if it existed today, would mean that with the present population of New York city there would be nearly 2000 deaths every year from this loathsome disease. A thousand deaths would be the annual tribute of Chicago to this enemy of mankind.

Thanks to the protection afforded by vaccination, there has not been a death from smallpox in New York city in 10 years. Undoubtedly Chicago and every other American city is equally fortunate.

There is just as effective a means of protection against diphtheria. If you have a child under your care make sure he is safe from this disease. This may be done by having the Schick test made, which consists of the painless injection of a minute drop of fluid under the skin. If there is a reaction the child should be inoculated with the preventive vaccine.

The tonsil is not a solid mass of tissue with its even surface covered by an unbroken layer of mucous membrane. On the contrary, the surface of the tonsil is very much broken. There are pockets or "crypts" dipping down into the substance of the tonsil. Some of these depressions are remarkably deep, possibly one-quarter of an inch or more.

You can see that, as these pockets are like the pockets in clothing, especially like children's pockets, they are apt to be filled with something or other. The consillar pockets are filled with mucus and food debris.

The crypts make splendid culture tubes. The jelly-like contents, kept warm by the unfailing heat of the throat, offer a suitable soil for the growth and multiplication of germs.

Your child gets wet or chilled while he is skating, he stays too much in the house, he spends his Saturday in a musty or dusty museum, library, basement or attic, instead of in the open air, he overeats the wrong kind of food, he becomes constipated from some cause—the next thing is an attack of tonsilitis.

What I have said about the causes of tonsilitis in children is equally true of the causes of tonsilitis in adults. Exposure, too much indoor life, too little exercise and indulgence in many dietary errors will lower your resistance so that you become the easy victim of the watchful germs lurking in the hidden recesses of your tonsils.

Don't blame your tonsils. Correct your manner of living, and be in daily trim to resist disease.

An Improvement.

Doctor—You cough with much greater ease this morning.

Patient—I ought to; I have been practicing all night.—Medical Pickwick.

An Insinuation.

"I was told," he said, "in my early youth, that if I didn't quit smoking cigarettes I'd be feeble-minded when I grew up."

"Well," answered she, "why didn't you quit?"

Don't Be Uneasy.

The mistress—Really, Justine, you are wearing very pretty silk stockings. The maid—Don't be uneasy, madam; I got these at my last situation.—London Opinion.

Fisherman's Wit.

Owner—Here, what are you doing? Don't you know you're not allowed to take fish out of this water?

Angler (three hours without a catch)—I'm not taking them out. I'm feeding them.

Explained.

"What is your regular business?" asked the judge of the man who had just been convicted of selling a gold brick to an unsuspecting citizen of New York city, which is the only place they can be sold nowadays.

"Your honor," answered the man, "being honest is my regular trade, and I was on my vacation."—Farm Life.

Latest High Class Patterns for the Home

Please order the patterns you desire at least two or three weeks before you wish to use them. Desiring to obtain the latest high-class patterns for its readers, THE FARMER has made arrangements to have them sent direct from the east, and under present mailing conditions it takes about that time for them to reach you.



4117. Girls' dress. Cut in four sizes: 6, 8, 10 and 12 years. A 10-year size requires 3 1-2 yards of 32-inch material. Price 10 cents.

3801-3793. A Chic and charming design. Guimpe 3801, cut in seven sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. Dress 3793, cut in eight sizes: 34, 36, 38, 40, 42, 44, 46 and 48 inches bust measure. A 38-inch size requires 2 5-8 yards of 36-inch material for the guimpe and 3 3-8 yards for the dress of 40-inch material. The width at the foot is about two yards. Two separate patterns, 10 cents for each patterns.

4127. Ladies' cape. Cut in four sizes: Small, 34-36; medium, 38-40; large, 42-44; extra large, 46-48 inches bust measure. A medium size requires 5 1-2 yards of 44-inch material. Price 10 cents.

4125. Misses' dress. Cut in three sizes: 16, 18 and 20 years. An 18-year size requires four yards of 54-inch material. The width of the dress at the foot is 2 3-8 yards. Price 10 cents.

3973. Ladies' dress. Cut in six sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. To make as illustrated requires 3 3-8 yards of figured material 38 inches wide and 2 3-8 yards of plain material 40 inches wide. The width at the foot is about two yards. Price 10 cents.

4134. Child's cape. Cut in four sizes: 2, 4, 6 and 8 years. A 6-year size requires 2 1-4 yards of 44-inch material. Price 10 cents.

3436. Boys' blouse and trousers. Cut in five sizes: 6, 8, 10, 12 and 14 years. A 10-year size requires 1 7-8 yards of 36-inch material for the blouse and 1 3-8 yards for the knickerbockers. Price 10 cents.

4120. Girls' play suit. Cut in four sizes: 4, 6, 8 and 10 years. A 6-year size requires 2 1-2 yards for the rompers and two yards for the smock of 32-inch material. Price 10 cents.

4107. Ladies' waist. Cut in seven sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. A 38-inch size requires three yards of 32-inch material. Price 10 cents.

4126. Ladies' house frock with knickers. Cut in seven sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. A 38-inch size requires 6 1-8 yards of 32-inch material for the dress and 2 3-8 yards for the bloomers. Collar and cuffs of contrasting material, as in large view, will require five-eighths yard. The width of skirt at the foot is about 2 1-4 yards. Price 10 cents.

3719. Ladies' apron. Cut in four sizes: Small, 34-36; medium, 38-40; large, 42-44; extra large, 46-48 inches bust measure. A medium size requires 5 1-4 yards of 27-inch material. Price 10 cents.

4116. Girls' dress. Cut in four sizes: 6, 8, 10 and 12 years. A 10-year size requires three yards of 40-inch material. Price 10 cents.

Fashion Book Notice.

Send 12 cents in silver or stamps for our up-to-date fall and winter 1922-1923 book of fashions, showing color plates and containing 500 designs of ladies', misses and children's patterns, a concise and comprehensive article on dressmaking, also some points for the needle (illustrating 30 of the various, simple stitches), all valuable hints to the home dressmaker.

Please fill in this order and mail with remittance to:
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Enclosed find..... cents for which send me the following:

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Thousands of housewives, happy to be free from the drudgery of coal and wood, are enthusiastic about this amazing new invention. Not only does this invention, the Oliver Oil-Gas Burner—free them from the dirt and muss of heating and cooking the old way but it saves them the expense and worry of coal and wood at this time.

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This is the first letter Florence Dobbs of Jefferson county, Washington, has ever written to us. She wouldn't have known about the Corner if Edna Barrie had not told her about it. Florence and Edna are both in the same grade at school and have the same teacher. They are good friends. Florence is 9. January 22, 1923, she will be 10.

Edith Hunter has a kitten, a doll and three rabbits. Kitty's name is Little White Foot. Edith also writes about a contest in her Sunday school class and about her school work. She is in the third grade this term. The Hunter home is not far from Eloika lake, in eastern Washington. There are three girls and a boy in the family.

In her second letter to us, Hazel Digerness tells us about her lovely vacation. We'll let her tell you in her own words: "We have been camping for three weeks out by Hood canal. We went fishing and dug clams and went in bathing. My birthday was yesterday. I was 12 years old. I got a pair of gloves and a string of beads and a toothbrush and two dress-pins." Hazel's home is in Kitsap county (Wash.) and her letter was written August 21.

Birthday Greetings

THURSDAY, October 12—Esther Bohnet, 10 years old; Madeline Ellis, 10; Edgar Lund, 11; Kenneth Strong, 11.

FRIDAY, October 13—Geneva Bushnell, 8 years old.

SATURDAY, October 14—Maxine Miller, 10 years old; William Steele, 9.

SUNDAY, October 15—Frank Cornwell Jr., 10 years old.

TUESDAY, October 17—Albert Edwards, 11 years old; Kenneth Farnsworth, 11.

WEDNESDAY, October 18—Margaret Anderson, 8 years old; Margaret Cerenzia, 11; Keith Weston, 9.

LETTERS WELCOMED BY AUNT NELLIE.

Among recent letters received by Aunt Nellie are those from cousins whose names follow. A few of these will be published each week in the regular edition of THE FARMER and others will appear from time to time in The Junior Farmer:

Amanda Nickel, Gerrit J. Polinder, Dorothy Galbraith, Fred Lewis Jenkins, Claude Baskett, Gayle Axtell, Edna Barrie, Florence Dobbs, Edith Hunter, Alma Stensaa, Alice Coons, Anneta Shepardson, Elva Blankenship, Martha Floch, Ida Comstock, Alice Halsted.

BEDTIME STORIES

By THORNTON W. BURGESS.

BOBBY COON IS WAKED UP.

Dey's a coming, dey's a coming, dey's a coming mighty soon,
But dey can't come soon enough fo' me!
Dey's a coming, dey's a coming at de turning ob de moon,
Whar Ah waits in mah ol' holler tree!

Unc' Billy Possum was singing to himself as he slowly trudged home from Farmer Brown's henhouse. He was feeling very good, very good indeed, was Unc' Billy Possum. No one appreciates strict-



"Ah guess Mistah Coon done made a mistake."

ly fresh eggs more than Unc' Billy does, and waiting for him in Farmer Brown's henhouse he had found more than he could eat. Now his stomach was full, his house had been cleaned and put to rights, ready for his family when they should arrive from Ol' Virginny, and now he had nothing to do but wait for them. So he trudged along and sang in a funny cracked voice.

Presently he came to his big hollow tree and started to climb up to the door of his house. Half way up he broke off short in the middle of his song. He sat down on a convenient branch, put one ear against the trunk of the tree and listened. Then he put the other ear against the tree and listened. There certainly was a funny noise, and it seemed to come from right inside his hollow tree. Unc' Billy turned and looked up at his doorway, scratching his head thoughtfully with one hand.

"Mah goodness" said Unc' Billy, "it certainly sounds like there was somebody in mah house!"

Then very softly Unc' Billy crept up to his doorway and peeped in. It was dark inside so that Unc' Billy could see little else than his nice, freshly made comfortable bed was all mussed up. But if he couldn't see he could hear. Oh, yes, indeed, Unc' Billy could hear perfectly well, and what he heard was a snore! There was somebody in Unc' Billy's bed!

"Mah goodness! mah goodness!" exclaimed Unc' Billy Possum, and his two sharp eyes began to snap. Then he stuck his head in at the door and shouted:

"Hi yo' alls! What yo' doing in mah house?"

The only answer was another snore. Unc' Billy waited a minute. Then he put his head in once more.

"Yo' better come out of mah house, Mistah Who-ever-yo'-are, before Ah comes in and puts yo' out!" shouted Unc' Billy.

The only answer was a snore louder than before. Then Unc' Billy quite lost his temper. Some one who had no business there was in his house! He didn't know who it was, and he didn't care. They were going to come out or he would know why not. Unc' Billy gritted his teeth and in he went.

My, my, my! Such a rumpus as there was right away in that hollow tree; Peter Rabbit happened to be coming along that way and heard it. Peter stopped and gazed at the hollow tree, his eyes and mouth wide open. Such a snarling and growling! Then out of the doorway began to fly leaves and moss. They were part of Unc' Billy's bed. Then Peter saw a big ringed tail hanging out of the doorway. No one possessed a tail like that but Bobby Coon.

In a minute Bobby followed his tail, hastily backing down the tree. Then Unc' Billy's sharp little old face appeared i the doorway. Unc' Billy looked down a Peter Rabbit and grinned.

"Ah guess Mistah Coon done made mistake when he went to bed in ma house," said he.

And Bobby Coon sheepishly admitte that he did. (Copyright by T. W. Bu gess.)

Pike's Peak or Bust

(Continued from page eighteen.)

milk-peddling round. But, a little later hi wife was seen coming with the same ti buckets her husband had been accustome to carry.

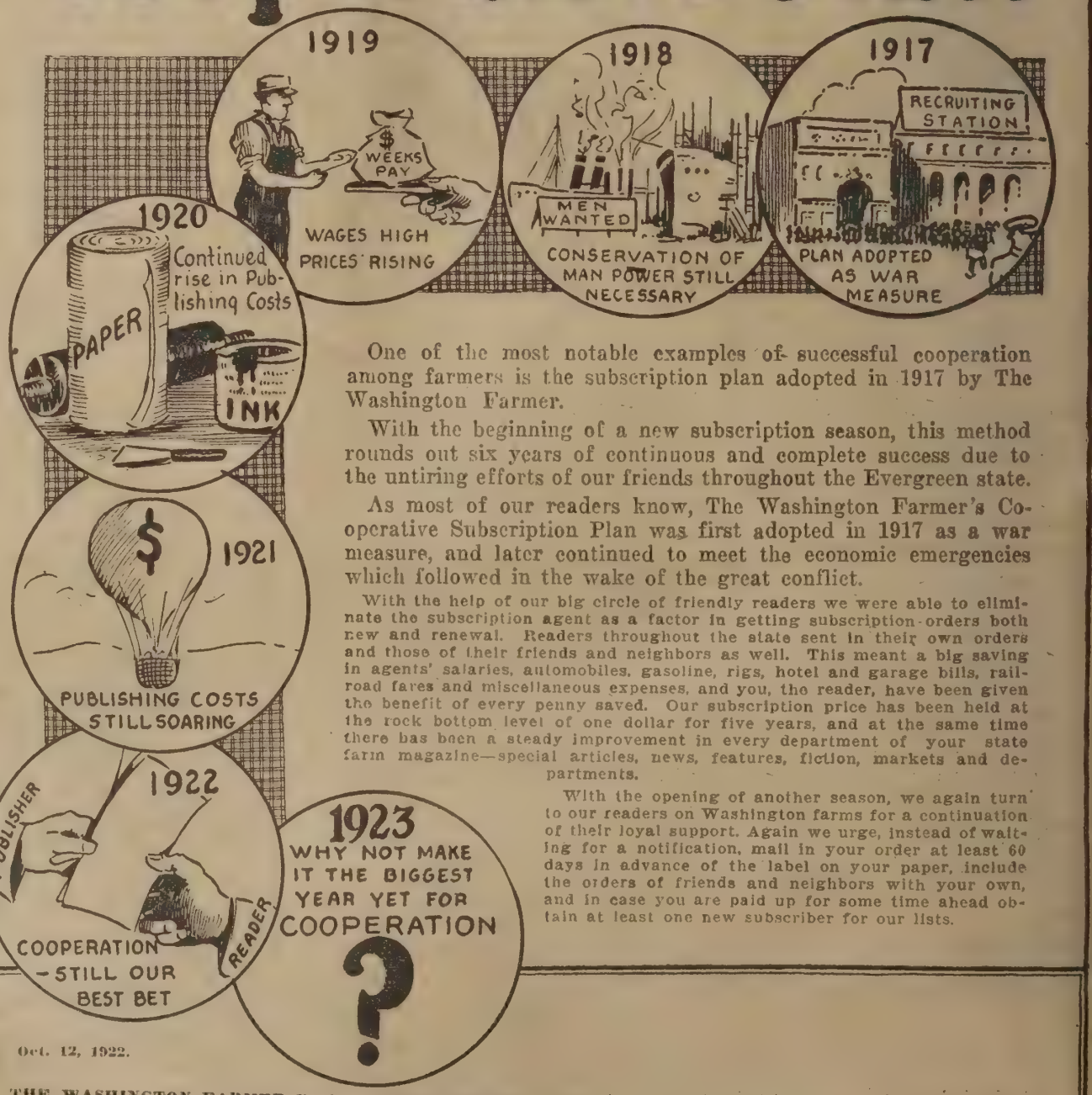
"My old man, he's been tuck sick," sh said in reply to Cooper's inquiry.

"Do you know what's the matter wit 'im?"

"No, I don't. But he has fever all th time. I'm mightily afeared that thar moun tain fever has got a-holt uv 'im. If it has it'll go mighty hard with the pore feller I reckon. He never has been very stout nohow. That's how come I have to tak the lead so much in managin' things."

(To be continued.)

Six Years of Success For Farmers' Cooperative Plan



One of the most notable examples of successful cooperation among farmers is the subscription plan adopted in 1917 by The Washington Farmer.

With the beginning of a new subscription season, this method rounds out six years of continuous and complete success due to the untiring efforts of our friends throughout the Evergreen state.

As most of our readers know, The Washington Farmer's Cooperative Subscription Plan was first adopted in 1917 as a war measure, and later continued to meet the economic emergencies which followed in the wake of the great conflict.

With the help of our big circle of friendly readers we were able to eliminate the subscription agent as a factor in getting subscription orders both new and renewal. Readers throughout the state sent in their own orders and those of their friends and neighbors as well. This meant a big saving in agents' salaries, automobiles, gasoline, rigs, hotel and garage bills, railroad fares and miscellaneous expenses, and you, the reader, have been given the benefit of every penny saved. Our subscription price has been held at the rock bottom level of one dollar for five years, and at the same time there has been a steady improvement in every department of your state farm magazine—special articles, news, features, fiction, markets and departments.

With the opening of another season, we again turn to our readers on Washington farms for a continuation of their loyal support. Again we urge, instead of waiting for a notification, mail in your order at least 60 days in advance of the label on your paper, include the orders of friends and neighbors with your own, and in case you are paid up for some time ahead obtain at least one new subscriber for our lists.

Oct. 12, 1922.

THE WASHINGTON FARMER, Review Building, Spokane, Wash. .....1922.

I desire to take advantage of your Cooperative Plan in securing new and renewal subscriptions.

I enclose herewith $.....for a.....year subscription to THE WASHINGTON FARMER.

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If your subscription is already paid in advance, it will be extended from the date to which it is paid.

Corn for Seed

The best of seed corn is selected from e field instead of from the bin as is ten done, according to Leonard Hegner, crop specialist of the state college.

"Corn of a definite type should be selected for seed. If a smooth corn is anted, select for that type and keep nsistently after the one type. It will rk out better in the crop to grow a iform type and consistent effort for a mber of years shows up very disctly.

"When the crop is selected from the ld, the vigor of the plant, the marity of the corn, how the ear is set on e stalk and the type of ears and kernels ay all be lined up together. If this is ne from the bin, there is no way of tellg what kind of a plant produced a cern kind of ear.

"A few points to be kept in mind when aking the selection for seed purposes is e vigor of the stalk. It is important to lect from vigorous stalks. A type of rn is wanted that matures in good ason and while largeness of growth and ze of ear is desirable the point of marity must govern. The taller the stalk e later it is in maturing. Corn should ot carry the ears too high, for it means late maturing variety.

"Do not select for the number of ears the stalk. It is better to have one od ear on a stalk than two small ones."

An Agricultural Council

Several branches of industry directly lated to farming are represented in the ierce county agricultural council, which as organized a few months ago. Meetgs are held at frequent intervals. It is ie purpose to promote general agriculre for the good of the whole community. At each meeting a round table scussion is held.

Members of the council are: Charles W. rton, president; L. T. Oldroyd, county gricultural agent, secretary; W. H. Paulahus, president of the Puyallup and umner Berry Growers' association, Ed C. rton, Sumner, president of the Washingon Berry Growers' association; N. I. oodreau, president of the Valley Fruit rowers' union; R. E. Darling, manager ierce county branch of the Washington ooperative Egg and Poultry association; arney Reid, manager of the Pierce Coun Dairymen's association; Fred Chamberin, representing the Washington state range; Frank Ross, president of the enninsular Beekeepers' association; omer Tinker, banker of Tacoma; P. M. nider, banker of Puyallup; E. F. Gregory, icoma Chamber of Commerce; E. M. arper, commercial secretary Pierce ounty Farm bureau, and Mr. Sanders of ie poultry feed association.

Cooperation Again Sustained

The validity of a marketing contract tween a producer and a cooperative sociation of which he is a member, reuiring such producer to sell his products rough the association, was again susined last month, this time in the case of the Pacific County Dairymen's association against A. R. Templin, a member of the association. The Pierce county association is a unit of the United Dairy Associations of Washington. The action was brought against Mr. Templin to prevent his selling milk products to other persons than the association. Judge W. O. Chapman ruled that, under the cooperative marketing law as passed by the last legislature, the contract between the association and a member was valid and binding in all respects. He also cited the case in which the Washington Cranberry Growers' association was awarded a like decision by the state supreme court compelling one of its members to market through the association under similar contract. In part his decision reads:

"While holding firmly that any contract creating a monopoly, restraining trade, limiting production and controlling price would be void and unenforceable, the contract in this case is not shown to be of such character, under the interpretation of a similar contract by the supreme court of this state in Washington Cranberry Growers' association vs. A. B. Moore, Washington Decisions, volume 17, page 317, where they held the cranberry growers' association was entitled to injunctive relief against one of its members selling berries to other parties."

Have Ayrshire Bull Club

Clallam county has a bull club, with only three members, but there are approximately 75 cows owned by the members. The bull Chinook Peter Pan Ben, an Ayrshire, is a 3-year-old, sired by Willomoor Peter Pan 11th. He was bred by the state college and was purchased in April, 1921, for the three herds in the vicinity of Port Angeles.



Chinook Peter Pan Ben.

The club members are Orin Babcock, Jensen Brothers and Melford Eacrett. The bull is kept two months at each farm and is taken in a truck from one herd to another. In this way the expense for feed and shelter is equally divided and all have the use of a high-class bull at one-third of the cost that would have been necessary if each man had purchased a herd sire of his own.

ADDS TO HIS RIBBONS.

Chicona Lover Bold, the herd sire on the Wallace & Fordyce Guernsey farm at Sunnyside, is this year not only retaining laurels previouly wons in the show ring, but is adding to them. Against strong competition he was senior and grand champion at the state fair at Yakima in September. As heretofore he will give the judges food for thought at the winter shows if the Wallace & Fordyce herd completes the circuit.



PIG CLUB BOYS.

Pig club boys worsted the men in the swine judging contest staged on the Duroc Jersey tour held in the Sunnyside and Grandview districts recently. There were 23 in the party making the tour and of these there were seven boys. The judging was conducted at the S. D. Cornell place, near Grandview, and at the H. W. Turner place, near Sunnyside. Every one on the tour participated in the judging and the boys did by far the better judging, County Agent A. E. Lovett reports. These boys were members of the Sunnyside Pig club.

RAISES ALFALFA IN ROWS.

C. A. Warren of Vancouver, Wash., breeder of Chester White hogs, is trying out a plan of raising alfalfa in rows 24 inches apart. When planted in this manner the plants make luxuriant growth and weeds can be kept down easily. This crop is cut and fed to the brood sows in order to furnish green feed.

More Money From Hogs!

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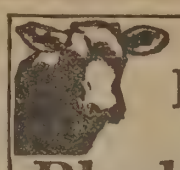
Our book, "Concrete on the Hog Farm" tells how to build permanent, sanitary improvements. Some of the subjects covered in this book are—Hoghouses, Feeding floors, Hog Wallows, Troughs, Waterers, Corncribs, Dipping Vats, Brine Tanks, etc.

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D. BROOKS HOGAN.

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Jersey Bull Maple Ridge Jersey Farm offers bull from R. of M. cow, sired by St. Mawes Susy Olga's Lad, whose three nearest dams aver. 841 lbs. fat. Price right.

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Six young heifers, six calves and one splendid yearling bull.

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Very Richly Embroidered Gabardine DRESS

$2.98



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Order similar style with handsome plush collar, sizes 2 to 6. Order black by No. 52E-5581. Order brown by No. 52E5582. Price either color, $2.98. Pay bargain price and postage.



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They are the best bargains you'll find at anything near this sale price.

Heavy weight flat knit union suits of select long fiber cotton, in popular Jaeger or gray Random color. Heavily brushed fleece lining. Wrists and ankles are elastic knit. Sizes 34 to 46 chest. Buy a year's supply today. **Order Jaeger color by No. 52C1279. Random color by No. 52C1280. Send no money. Pay 99c and postage on arrival.**

Boys' flat knit union suits of fine quality cotton. Sizes 24 to 32 for 3 to 16 years. Order by No. 52C1358. Send no money. Pay 79c and postage on arrival.

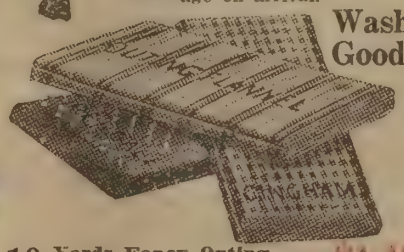
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Where else did you ever hear of an all silk plush coat with fur collar at our price? It is a stunning model, cut on fur coat lines, full 36 inches long with self material belt and turn-back cuffs and deep collar. The lining is durable twill, and every detail of the coat has been carefully worked out. Misses' sizes 16 to 20; women's, 34 to 44. **Order by No. 52E5843. Send no money. Pay $9.98 and postage on arrival.**

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Very choice patterns in fast colors. In white, gray, Calcutta and Indigo blue with neat stripes or dots. State color and pattern. **Order by No. 52F3406. Send no money. Pay $1.49 and postage.**

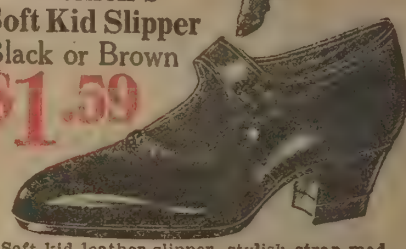
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Women's Soft Kid Slipper

Black or Brown

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Soft kid leather slipper, stylish strap model with two buttons. Medium round toe. Cushion insoles. Medium rubber heels. Solid leather soles. A bargain at our slashed prices. Sizes 2½ to 8. Wide widths. **Order black by No. 52A228. Order brown by No. 52A229. Send no money. Pay $1.59 and postage on arrival. Always mention size.**

WOMEN'S BLACK KID HI-CUT



Send for this handsome shoe in black kid or calf leather. Note the medium toes with pretty imitation perforated tips, the perforation around vamp and on lace stays. Very popular model and really a sensational bargain now. Durable, flexible soles. Sizes 2½ to 8. Wide widths.

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Order black kid by No. 52A122. Pay $1.98 and postage on arrival. Order black calf by No. 52A476. Pay $1.98 and postage on arrival.



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Order by No. 52A733. Send no money. Pay $1.98 and postage on arrival. Order big boys' sizes 1 to 5½ by No. 52A564. Price $1.89. Order little boys' sizes 9 to 13½ by No. 52A565. Price $1.79. Pay bargain price.

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Every woman should get a pair of these sensible broad toe shoes at this amazing price. Uppers of soft kid-finish leather, solid oak leather soles, low rubber heels, comfort cushioned insoles. Sizes 2½ to 8. **Order oxford by No. 52A233. Order high shoe by No. 52A262. Send no money Pay $1.79 and postage on arrival**

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Women's Popular Stitchdown Dark Brown Oxfords

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Classy stitchdown Oxford for women. Wonderfully comfortable and stylish. Uppers of dark mahogany leather. Smooth leather insoles. Flexible stitched-down oak outsoles. Low rubber heels. Sizes 2½ to 8. Wide widths. **Order by No. 52A268. Send no money. Pay only $1.98 and postage on arrival.**

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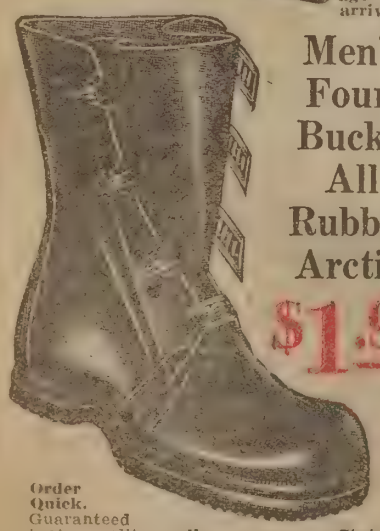


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Women's black patent leather oxford, with imitation shield tip and medallion, perforated vamp, imitation circular foxing and lace stay perforated. Medium rubber heel and medium narrow toe. Sizes 2½ to 8. **Order patent leather by No. 52A64. Pay $1.98 and postage on arrival.**

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Order Quick. Guaranteed best quality, all rubber, 4-buckle hi-cut arctic for men. Made with double thick soles and seams reinforced. Snow-excluding tongue. Furnished in men's sizes 7 to 12. Wide widths. Sensational value. Send quick. **Order by No. 52A990. Send no money. Pay $1.98 and postage on arrival.** State size

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Hip Boots



Men's pure gum hip boots; friction lined; heavy corrugated sole and heel; guaranteed first quality. Made of the very best rubber. Usually retailed at $5. Be sure to order your pair while this great saving offer lasts. Sizes 7 to 12. Wide widths. No half sizes. **Order by No. 52A949.**

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Men's and Boys' Heavy Leather Work Shoes



Order men's sizes 6 to 11 by No. 52A-758. Pay $1.98 and postage on arrival.

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State Size.

Wonderful work shoe for men and boys. Has soft, strong uppers. **Order boys' sizes 1 to 5½ by No. 52A554. Pay $1.89 and postage on arrival. Order boys' sizes 9 to 13 by No. 52A-555. Pay $1.79 and postage on arrival.**

MEN'S and Boys' Hi-Cut BLUCHER



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$1.98 Up

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Same style, 9-in. hi-cut for men. Sizes 6 to 12. Wide widths. **Order by No. 52A769. Send no money. Pay $2.98 and postage on arrival.**

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THE WASHINGTON FARMER

ESTABLISHED 1894

SPOKANE. SEATTLE.



THE WESTERN Royal, Spokane, Oct. 28-Nov. 2. The Pacific International, Portland, November 4-11. The best of the best flocks and herds will be there.

Why Should We Import So Much Foreign Cheese?---Page 7

Wheat Yields

Are Bigger by Four-Year Rotation

Growing only one crop of wheat every four years, in a corn, oats, wheat, clover rotation, without the use of fertilizers, provided the greatest increase in the yield of wheat in a series of experiments conducted 25 years by the University of Missouri, according to M. F. Miller, professor of soils.

Four plots of wheat lay side by side. No. 1 was planted to wheat every year the last 25 years. There was no manure or other fertilizer. The average yield was 9 1-2 bushels an acre.

Plot No. 2 was planted to wheat every year, but was given a heavy application of manure each year. The yield virtually was doubled, being 18.1 bushels, and showing the value of manure as a fertilizer for wheat.

No. 3, however, was the most interesting. A 4-year-old rotation of corn, oats, wheat and clover was grown. The yield of wheat was 23.6 bushels an acre, a substantial increase over the heavily manured plot. The soil was the same, the seeding, the preparation, the variety, the manner of handling—everything was the same as the wheat grown on No. 1, except the crops on land on which it was grown had, throughout the 25 years, been rotated. The result of that rotation had been to increase the yield from 9 1-2 bushels an acre to 23.6 bushels an acre.

On No. 4, where the crop rotation outlined was followed and manure applied heavily in addition the yield was increased almost three bushels, being 26 1-2 bushels an acre.

These yields are the average for the entire 25 years. They are the basis for the statements of Professor Miller that crop rotation is more valuable, in increasing yields, than the application of manure. That doesn't mean Professor Miller would neglect the application of manure. On the contrary, he strongly urges it. But the limited supply of manure is no excuse for low wheat yields, he points out.

Dairying Needs Men

Appointment of a dozen 1922 graduates of the dairy department at the state college of Washington to positions with dairy farms and manufacturers and calls for 10 more than could not be filled, indicate that the dairy industry of Washington offers excellent opportunity for the young man who will prepare himself, says Professor E. V. Ellington, head of the dairy department.

The Pioneer Alpine Dairy of Everett has just made James Bylling of Snohomish foreman. Bylling was active in the Dairy club at the college.

Another Everett organization, the Maple Leaf Dairy Milk Distributing plant, has employed Soren Christensen of South Bellingham, who was also a member of the Dairy club and of the All-Ag. club.

Robert Patrick of Seattle, assistant buttermaker for Swift & Co. in that city, was president of the Dairy club last year, and a member of the dairy judging team and the All-Ag. club. He has thus earned his appointment with one of the largest buttermaking firms in the west.

Rudie Oltman of Bellingham is to have charge this year of vocational agriculture instruction at the Elma high school. He was president of the Dairy club; twice a member of the dairy stock judging teams and successively secretary, treasurer and president of the All-Ag. club.

Donald Saunders of Marysville is now in charge of the Snohomish County Cow Testing association, one of the most progressive in Washington. He served first as secretary and then as vice president of the Saddle and Sirloin club, an organization to bring students into closer contact with breeders and stockmen of the state. He was also a member of the stock judging team.

At Chehalis the Shady Grove herd of purebred Jerseys is being managed now by Merle W. Means of Monroe, president of the Snohomish County club; a member of the dairy stock judging team, the Dairy club and the All-Ag. club.

William T. Putnam Jr. of Lake Cushman is developing his own herd of high class purebred Jersey cattle. Last year he was secretary and treasurer of the Dairy club, a member of the dairy products judging team. He also belonged to the All-Ag. club and was a member of the dairy cattle judging team.

Fred S. Martin, Penawawa, has been made county agricultural agent for Wahkiakum county.

Sheep on Logged-Off Land

Henry Boyd of Port Angeles has 26 Cotswold sheep on his farm near town and believes that he can make more profit from 10 sheep than from one cow and there are not so many chores to attend to. Most of his pasture is on logged-off land and the sheep do much in keeping the land cleared until the stumps can be removed for cultivation.

The herd ram is from the W. M. Shrunk farm at Redmond, Ore. The ewes also are registered animals and two were shown at the county fair at Port Angeles. Last year Mr. Boyd had nearly 100 head of ewes, which were pastured on 25 acres. This was too many for one man to handle in connection with a farm, according to Mr. Boyd's methods, and he sold off all but the registered ewes.

One of the worst enemies to sheep in that district is the wild cat, which inhabits the mountainous districts near by. They are being got rid of by means of dogs and traps and the trouble should not be a serious one.

Spokane County Fights T. B.

The campaign for tuberculosis eradication in Spokane county under the supervision of County Agent O. V. Patton has progressed faster and more completely than was expected. Ninety-nine per cent of the cattle in the northern half of the county have been tested, with less than 1-10 of 1 per cent being found affected with tuberculosis.

The test of cattle is made free of all charge to the farmer, the following agencies cooperating: County agricultural agent, United States bureau of animal industry, state department of agriculture, Inland Empire Dairy Producers' association and the Spokane Milk Distributors.

At the present time there are only 29 counties in the United States which have had a complete test and recognized as tuberculosis-free areas, and only 178 counties which are working for similar recognition. The average per cent of cattle reacting to the tuberculosis test in the United States is 3 9-10 per cent.

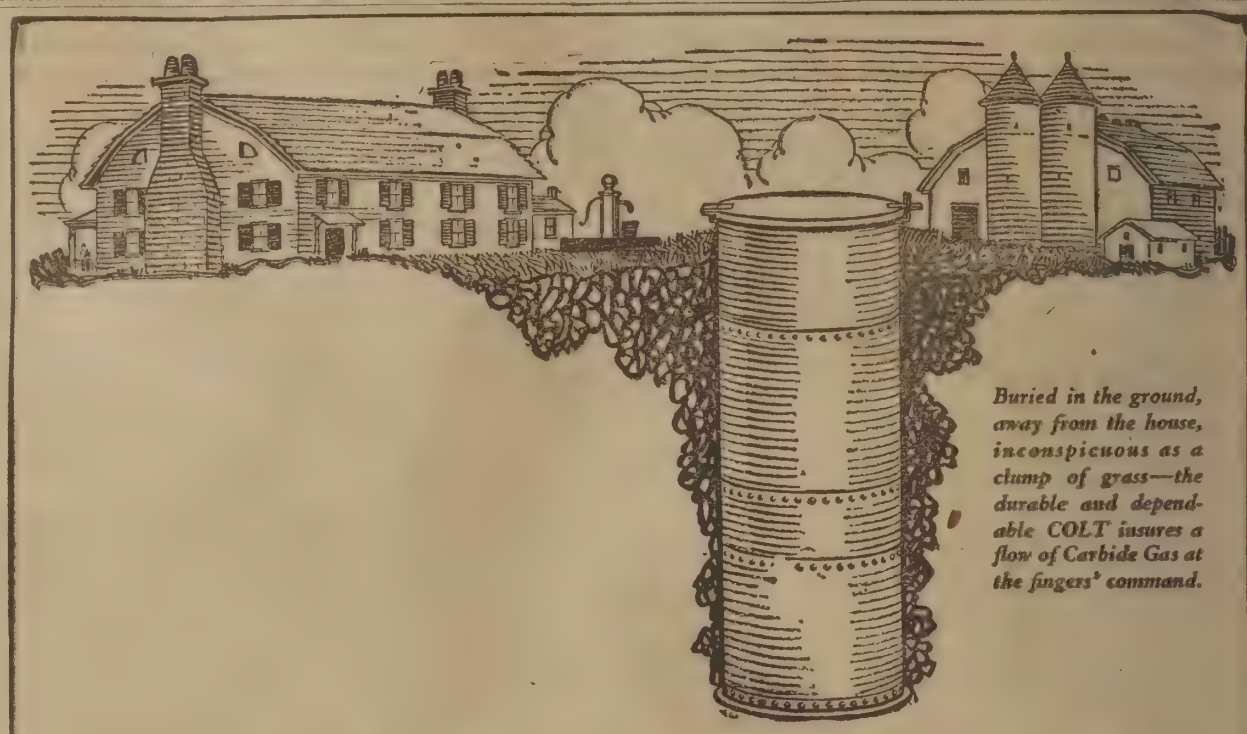
Farmers in Spokane county may make application to O. V. Patton, county agent, stating the number of animals to be tested above 6 months of age, giving location of farm by section, township and range, with directions how to reach place from nearest town.



Send for this free book. It describes the benefits of Agricultural Gypsum. Try some this fall on your alfalfa, clover and other legumes. Watch the result.

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Dept. 62, 111 W. Washington Street
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Your local dealer handles Agricultural Gypsum

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Buried in the ground, away from the house, inconspicuous as a clump of grass—the durable and dependable COLT insures a flow of Carbide Gas at the fingers' command.

Plant a COLT "Gas Well" on your farm NOW!

The months of short days and long nights are on their way.

Six months of evenings to be passed indoors await you!

Will they be lighted by the dim, eye-straining flame of a lamp—or the soft, friendly brilliance of *real* light—CARBIDE GAS LIGHT?

Act *NOW* for *real* light! Get a COLT Lighting and Cooking Plant—generate this wonderful Carbide Gas.

Hundreds of farmers are preparing this month for bright, cheery evenings by installing COLTS. This is the great planting season for COLTS. More are being installed this Autumn than in any other season. Don't risk disappointment—order your COLT *now*, before Winter closes in.

The Health Light for Reading

Carbide Gas Light is *pure white* in color—not *yellow*. Looks exactly like sunlight—restful and soothing to the eyes. Read or sew under it for hours—no eye weariness. The most beautiful as well as the most healthful of artificial lights.

Comes to you at the twist of fingers. Turn a little igniter. . . . . on goes the light! You use no matches.

Carbide Gas for cooking, too—*an added feature of the COLT.* Your wife will certainly appreciate this.

How is the gas made? The COLT does this automatically—mixes Carbide with water.

Study Lighting Plant Costs. Result: You'll Install a Colt

Easy to install—within reach of all. No continual replacement of parts, no adjusting or tinkering necessary, no service required—simplicity itself. The most economical system all the way thru. Comes from Factory to Farm. Sold direct by COLT solicitors—no distributors or dealers to take a profit.

Send Postcard for Full Story

You want *good* light—you want it installed now. Write for full particulars—*then act for BETTER LIGHT!*

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31ST SUCCESSFUL YEAR

THE WASHINGTON FARMER

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Vol. 47. No. 16 THE RANCH PACIFIC DAIRYMAN HORN AND HOOF October 19, 1922

For Good Farming, Attractive Country Homes and Happy Country People

Western Royal Will Open Winter Show Season

The Western Royal Live Stock show is what its name implies—a live stock show, a royal live stock show, a royal live stock show held in the west. This year it is to be a more royal show than in any previous years of its history, notwithstanding the fact that for a time there was uncertainty as to its being held this year.

Next year it may not be held as an early winter show. It may be made a late fall show instead, coordinated with the live stock feature of the Spokane Interstate fair. This is what friends of both affairs are now working on. But next year is not interferring with the management of this year's show, and it is just possible that the event on the Spokane show grounds October 28-November 2 this year will be so successful that it can not logically be consolidated with the earlier fair, though the general sentiment now seems to be to combine the two and put on an agricultural event second to none in the west.

The Western Royal has one outstanding advantage among the many that have made it a great show: It is held downtown. People in any part of the city of Spokane can ride the street car to within two blocks of the entrance. Country folks coming in to do a bit of shopping and visiting and see the big show can put up at the plainest or the swellest hotels, according to their choice, without getting out of sound of the familiar voices of the barnyard. The show will again be held under the elevated tracks of the Union Pacific and the Milwaukee railroad systems within two blocks of the business heart of the city.

Wise Men From the East.

In olden times, it is recorded, wise men came from the east, and history is about to repeat itself in part. Wise men are coming from the east to the Western Royal with some of their best cattle to compete with the product of western ranches and ranges. They are coming because they are wise men.

J. Huston McCroskey, president of the show, has just returned from the east, where he attended the National dairy show and talked Western Royal with easterners who exhibited there. Partially as a result of his visit, and partially as a result of efforts of the Pacific International management, a solid trainload of the notable herds that attended the show at Minneapolis are booked for both these big western events.

The Western Royal and the Pacific International are cooperators. The former closes its doors two days before the latter opens its, thus enabling exhibitors at Spokane to ship straight to Portland and take part in the show that climaxes the season. California, the state noted as the cooperative pioneer, also participates. It holds its big show at San Francisco so as to close five days before the Western Royal opens. That explains why several herds of cattle and hogs are coming from California to Spokane, after which they will go to Portland.

In addition to three or four eastern states that will show out here this year, Washington, Oregon, Idaho, Montana, California, Canada and probably Utah, Wyoming and Colorado will be represented.

Dairy Cattle a Feature.

Notwithstanding the fact that a goodly share of the world record dairy cattle are owned in the Pacific northwest, there is still a lingering feeling in the minds of many that this is a beef cattle country. It is, but it is also a great dairy country, and even were there no outstanding dairy cattle coming from the east the milk-producing breeds would make up a tremendous show at both Spokane and Portland. As it is, it is believed that the greatest dairy cattle shows in the history of the Pacific coast are scheduled.

Taurus Rex 4th, which will be crowned king of the Western Royal during the show, will this year be a dairy animal Last year a beef bull was crowned.

Great as will be the dairy show, it can hardly eclipse the show of beef, in the opinion of J. T. O'Brien, manager. Already sufficient entries in the three great beef breeds—Shorthorn, Hereford, Aberdeen Angus—are on the books to make the show outstanding. There are always strong shows of the Shorthorns and Herefords. This year there will be the greatest show of the black Aberdeen Angus in the history of the northwest. In addition to full strings from the herds of Congdon & Battles and J. A. Scollard, the McGregor herd from Canada, one of the most noted on the continent; the Davis herd from Nevada and the Newman Lake ranch herd of Moab, Wash., will compete, with other smaller representations.

Sheep will include flocks from most of the western states and Canada. Hogs are coming from California, Idaho, Montana, Oregon and Washington.

Horses will represent all the leading breeds popular in the west, especially draft breeds. Indications are that Shires will predominate, with Percherons a close second and a good showing of Belgians.

In addition to the actual live stock display, there will be numerous educational features. The purebred will not have a monopoly. The scrub is to be present to give the general public an opportunity to compare him with his improved cousin. Folks in town are interested, because it will suggest the way they will ultimately get better beef and pork and mutton. The farmer is interested because it will suggested to him how he can furnish the city family the better kinds of meat and make a better profit doing it.

Entertainment Is Planned.

Thirty musically inclined cowboys will furnish brass band music throughout the show. Motion pictures, some educational and some just for entertainment, will be shown, and various entertainment features will be presented afternoons and evenings.

At least two public sales will be held. The Hereford breeders are planning a consignment sale and the two Hercules Baby Beef clubs will sell half of their 40 Shorthorn steers. The other 20 will be taken to Portland and sold at the Pacific International. At the latter show both the Hereford and Shorthorn men will hold sales, while a number of dairy cattle sales and possibly a hog sale will be held.

Support Land Reclamation

Two Big Farm Organizations Are Behind Western Projects

The importance of land reclamation is becoming more and more apparent to leaders throughout the entire country.



C. S. Barrett

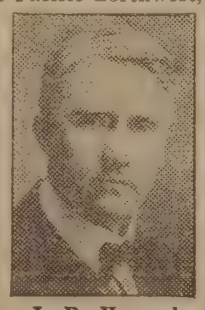
There has just been held in Salt Lake City a regional conference of farm bureaus of 10 western states.

Speaking to these state farm bureau leaders, James R Howard, president of the American Farm Bureau federation, pointed out that the expanding population of the country will make the utilization of unreclaimed land necessary in the near future. He promised if the western states could agree among themselves upon a comprehensive reclamation plan, devoid of selfish sectional interests, that the National Farm Bureau federation could be counted on for support.

Following this comes the news from Washington, D. C., that the committee on reclamation of the national board of farm organizations has decided that Charles S. Barrett, chairman of the board and president of the National Farmers' union organization, should leave as early as possible for the northwest to get further data with regard to the Columbia Basin project.

Already the national board of farm organizations has put itself behind the Columbia Basin project, and the purpose of Chairman Barrett's visit will be to fortify the board with additional information to be presented to members of the house when the Poindexter bill, appropriating $100,000 to investigate the project, comes up at the next regular session of congress in December.

A. A. Elmore, as chairman of the committee, presided at the meeting at Washington which decided to send Mr. Barrett to the northwest. Mr. Elmore is now financial manager of the national board of farm organizations and is well known as a farm leader in the Pacific northwest, having been for some years president of the Washington State Farmers' union.



J. R. Howard

This indorsement of the Columbia basin project and the pronounced action of the national board in sending Mr. Barret across the continent to get further facts is no doubt largely due to the influence of Mr Elmore.

The committee which took this important action adopted the following resolutions:

"The national board of farm organizations recognizes that irrigation is one of the paramount issues and questions of the west.

"The national board wishes it understood that it stands squarely behind a sane, sensible and economical policy for the reclamation of arid and semi-arid lands of the west.

"And, whereas, a condition has been brought to our attention of a certain section in Washington between Spokane and the Columbia river known as the Columbia river basin, where it appears from our information that the farmers in this region are greatly in need of water for irrigation purposes, and since we understand it is the intention of our chairman, Mr. C. S. Barrett, to visit this section in his work as president of the farmers' union, therefore, be it

"Resolved, That we ask Mr. Barrett, as the representative of the national board of farm organizations, to make such investigations regarding reclamation for this particular section as he deems proper and to lend such assistance as in his judgment would be wise and beneficial to the farmers of that state."

Hogs Give Us One-Tenth of Our Dollars

"You represent one of the greatest industries of the nation," said Henry C. Wallace, secretary of the department of agriculture, in a recent address before the National Swine Growers' association. "Upon the skill and art and science with which you conduct your breeding operations the welfare and growth of the great swine industry depends. You and the men who have gone before you have molded the animal form, not only to satisfy the eye of the lover of good live stock and to satisfy the taste of the epicure, but to meet the needs of commerce. You are artists whose materials are not the colors and brushes and canvas of the painter, nor the clay and marble and tools of the sculptor, but living flesh and blood, molded and shaped in conformity with the divine laws of heredity. Working with unseen forces, year after year, you finally produce in living form the ideal which your brain conceived. You give to the unborn animal the color and form and size, and shape of the nose, and pitch of the ear, and curl of the tail, which satisfies your sense of the beautiful as well as of the useful. You change the form as needs require, adding to it or taking from it, producing more fat or more lean, more bacon or more lard, larger hams or smaller hams, as the changing character and supply of feed or the changing tastes of the consumer make necessary. In short, you furnish the seed which is needed year by year to produce the great swine crop, which plays such an essential part in our domestic economy and in our foreign trade.

Our annual hog crop represents about 10 per cent of the total value of our agricultural production, and from 10 to 12 per cent of the total value of our agricultural exports. If we exclude cotton, our pork exports constitute about 20 per cent of our total agricultural exports. During the time of the great world crisis in 1918 our pork exports grew to almost one-third. In our domestic economy swine not only provide a considerable percentage of our agricultural income, but pork and pork products have always constituted one of the most important items in the family menu. For many years the per capita consumption of pork and lard has exceeded that of any other meat product.

No great meat-eating nation ever suffered famine from crop failure. Our live stock furnishes the greatest storage plant for our grains and grasses. Our hog crop represents a great national plant for refining many foods not suitable for human consumption; a great national condensing factory which condenses more than one-third of our corn crop, in addition to a large amount of our grasses, into a highly palatable, concentrated food product; a great national storage reservoir in which huge quantities of grains and grasses are stored up for future use, food reserves, the importance of which few people realize, and, in addition, our hog crop serves as a shock absorber for the variation in production of our corn crop, year by year, thus ironing out the inequalities of corn prices. During the last year and a half our hogs have paid for the corn they ate about twice the price per bushel which the corn could be sold for on the grain market.

The rather wide fluctuations in prices of hogs from year to year are bad, both for the producer and the consumer. If prices could be more nearly stabilized so that the producer could have more assurance of a reasonable profit year after year he could afford to produce hogs more cheaply than under present conditions, and the consumer would benefit with him. One reason for these widely fluctuating prices is lack of knowledge of the number of hogs in the country from year to year. Our statistics have not been as full and reliable as we would like. During the last 18 months we have given especial attention to this matter. We have greatly strengthened our statistical organization and we are hoping very soon to be able to keep hog producers informed regularly of the number of hogs that are being grown, as well as of conditions which are likely to influence demand.

On the economic side we are making very careful studies into the cost of production and the cost of marketing, as well as better methods of marketing. Included in our marketing studies are investigations into the foreign markets for hog products. We have men overseas who are studying these foreign markets and trying to promote an enlarged consumption of our pork. We are trying to learn why it is that American bacon does not sell as high in the English market as bacon of some other countries, and are trying to help our own people make such changes as are necessary, whether in breeding or in curing. We are watching closely the changes in the demand of the consumer and shall promptly place in the possession of our own packers everything we can learn which will be of help to them in meeting foreign competition and satisfying the tastes of foreign consumers.

100 Per Cent Record

The Connell's Prairie Garden club is one of the most active clubs in Pierce county, according to Miss Hulda B. Hainke, the county club leader. There are 11 members in the club and their holdings are not limited to gardens. In addition to the three acres of garden there are 12 cows and heifers, 64 rabbits and one mule. There are some of the boys as well as the girls that can put up fruit and there are 250 quarts and 38 glasses of jelly which have been put up by the members during the summer.

The club is one of the few that has handed in a 100 per cent record for the year. Walter Vandermark, one of the members, has done more work with his garden than with any other branch of work and has succeeded in propagating some new varieties of flowers as well as potatoes. He introduced the Connell's Prairie dahlia and a new kind of coxcomb, both of which originated in his own garden.

Members of the Connell's Prairie club are as follows: Evert Bjordal, Louis Imhof, Victor Imhof, Bessie McIntosh, Clara Rohde, Willie Schodde, Fredde Schoddy, Herman Schodde, Alice Tillotson, Walter Vandermark and Kathleen McMannus.

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There to Answer Questions

Those who attended the Western Washington fair at Puyallup and went through the agricultural building, could not help but stop and admire the display of fruits and vegetables exhibited by the Mason county people.

It was not only the size of the grapes and the quality of the vegetables that held one's interest, but the manner as well in which the booth was attended by two members of the Shelton commercial club. These men were relieved from time to time by other men from the county, but their main thought was to tell the visitors everything they wanted to know about Mason county. The questions asked most frequently were: "Where is Mason county?" "What kind of grapes are those?" and "Will they grow that large in other counties?"

True, the attractiveness of the booth was partly the cause of so much interest, but it was plain to be seen that the two men who were on hand to answer all questions, were kept busy all hours of the day and put in a good word for their community.

As to $3,750,000 in Additional Taxes

It is conceded by the advocates of initiative measure No. 46, or the 30-10 school plan, that it will increase state taxation $10 per school child, or $3,750,000 per year on a basis of 375,000 children of school age, as estimated by the state department of education.

This additional sum in taxes must be raised from the property owners in the state. Farm land must pay its full share, as farm lands can not be hidden from the assessor's visit. Every citizen, whether he owns land or property or not, must pay his share. Merchants and manufacturers and those engaged in commerce of all kinds will pass the tax on to the people in general.

There is no doubt at all that if the 30-10 school plan becomes a law this $3,750,000 per year must be raised by taxation.

Those who advocate the 30-10 plan contend that the additional sum raised by the state at large will reduce school district levies. On the other hand, those who have made state taxation a study declare that the actual indisputable fact is that the school district levies for 1920 under the 20-10 plan exceeded those for 1919 under the 10-10 plan by $3,792,805.44. The total increase in state school, county school and school district taxes the first year after the starting of the 20-10 amounted to $7,579,481.21. Reduced to an average daily attendance basis the district levies in 1919 were $63.06, and in 1920, $74.58.

The 30-10 school plan reduces the maximum current expense levies of local districts from 20 to 17 mills, and it is claimed that this of itself will reduce the amount raised by school districts.

But it has been ascertained that in 1922 85 per cent of the districts levied less than 17 mills under the present law, and a large number even less than 10 mills, so the so-called curb, if it worked at all, would be effective in only 15 per cent of the school districts in the state.

If one is to indulge in suppositions of what school districts may do, and we are to judge the future by the past, it would seem more probable that with the additional money from the state the school district levies would be increased in far more cases than they would be decreased.

Is an additional state tax of $3,750,000 per year for school purposes justified at this time?

If the 30-10 school plan becomes a law, these additional millions must be raised. Any rebates which may come from reduced district levies are a doubtful quantity. Are these the days when certainty should give way to doubt at the polls?

At another time we will discuss the so-called "equalization" feature of the 30-10 school plan.

The Banker and the Calf Club

Not long ago in this state an 11-year-old boy, who as a member of a calf club had borrowed the money from a local bank to pay the first installment on a $100 heifer calf at three or four months of age, sold the heifer in a public sale. He had taken all the care of her, and boyishly estimated the actual cost of raising her at $25. It may have been more, but he won $20 in prizes on the calf at the local fair last fall and had this to apply on the cost account. In the meantime, of course, he had enjoyed all the advantages of club membership and training under the county agricultural agent and a well-known breeder of the community who acted as club leader. He and 10 other boys had met regularly to discuss type, pedigrees, feeding and care of animals, and they learned something about parliamentary procedure in club meetings, and about business dealings with the bank as well. The heifer sold for $230 at 16 months.

Was this an answer to the banker of the same county who asserted at a gathering of pure breeders on the evening before the sale that in his opinion this business of loaning considerable sums of money to immature boys and girls for investment in purebred live stock is being carried too far; that when he was a boy he had to earn the money which he used; and that he feared the consequences of establishing in the minds of today's youth the concept of easy credit? Or is it possible that the bankers of Jefferson county, of Clallam county, of Whatcom, Skagit and Snohomish counties, of Kittitas, Yakima, Spokane and Walla Walla counties, are all wrong in granting liberal terms to serious-minded youngsters for live stock purchases, and that this banker is right? Does it mean nothing that boys and girls all over the state are paying their first club debts and becoming established customers of the banks in live stock enterprises of considerable magnitude? The Washington Farmer thinks not.

Bankers tell us that in making loans the moral hazard is given more serious consideration than the financial one. Club boys and girls make good moral risks—bankers never yet have lost through loaning to them. And many bankers confess that they have loaned to boys and girls whose fathers could not obtain similar sums. The fathers' names are on the notes, as a matter of law, but it's the youngsters' signatures that count in most cases.

The Way to Reduce Taxes

The only effective way to reduce taxes is to cut public expenditures. Schemes without number have been advanced to shift the tax burden. These schemes have always provided for the creation of new sources of revenue and new sources of revenue have always meant more money, not less, for public expenditure.

The only proper solution of the tax problem lies in cutting public expenditures to a level consistent with good business management.

State Farm News

L. G. Colyn of Onalaska, T. P. Snively, J. E. Stines and S. H. Olsen of Chehalis and E. F. Hilborn of Centralia were named a committee to report a definite plan of organization of a cooperative organization of fruit and berry growers of Lewis and adjoining counties at a meeting of growers held at the citizens' clubrooms in Chehalis September 29.

Dan W. Bush was chairman and Glen Reid secretary. Upward of 100 acres of berries were pledged as a starter toward making the new organization a success. It is planned to work out a cooperative central selling arrangement to handle the fruit from the district, working in conjunction with other cooperative growers' organizations in the state.

* * *

The contract for grading, declining and graveling 12.21 miles of the North Bank highway between Underwood and Lyle, Klickitat county, has been let to K. L. Goulter & Sons of Ilwaco for $334,135.

* * *

Jack Richardson of Monitor, Chelan county, has a Delicious tree in his orchard that has been yielding an exceptionally beautiful red apple. The Delicious is normally a striped red variety.

This Delicious tree is 11 years old. The apples have always been solid red since the tree came into bearing. The apples mature earlier than on the common Delicious trees in the same block.

* * *

Three purebred bulls were bought in Island county durduring the month of August through the assistance of County Agent W. W. Henry. This makes 28 purebred sires purchased in this county since January 1.

* * *

Fifty thousand pelts, mainly from Alaska and Siberia, were sold at Tacoma recently at the regular fur auction and buyers from various parts of the country—and one from Germany—paid $150,000 for the lot. Muskrat and mink furs were about 15 per cent lower since July, but marten showed an advance in price. The demand of the buyers for beaver, red, blue, cross and white fox and ermine was keen and prices were well sustained.

* * *

To supply the needs of Spokane for all purposes, 12,677 gallons of milk, produced by 6593 cows, are required daily, according to figures compiled by the city health office.

* * *

The Pend Oreille county fair, which was held at Dalkena last month, showed improvement in the quality of exhibits over other years, especially in the poultry, vegetables and fruits, according to County Agriculturist E. E. Hupp. The exhibit rooms were filled to capacity.

The judges, from Washington State college, were Professor R. T. Smith, live stock; N. C. Donaldson, farm products, and Miss Maude Wilson, cooking, canning and sewing.

Mrs. Elsie Linder, age 65, gave a demonstration of carding and spinning wool. She also has sweaters, sox and other garments which she knitted from wool she prepared.

* * *

The Yakima county commissioners have disposed of a drainage bond issue of $77.500 to Carstens & Earles of Seattle, whose bid was $101.05 on the hundred.

* * *

County Agricultural Agent Henry J. Plumb, realizing the value of the potato industry of Stevens county, particularly seed production, has for the last three years put up a prize of $25 to be given to the farmer exhibiting the best half bushel of seed potatoes of the four standard varieties, Netted Gem, Carman, Earliest of All and Early Ohio.

This prize was taken in 1920 by Fred Thoni of Addy; in 1921 by G. C. Lorenz, Colville. in 1922 by Franklin Brothers, Colville. These are all representative potato growers of Stevens county and much interested in producing a high-class article.

* * *

Steinhardt & Kelly, New York city, are taking practically all winter pears grown in the White Salmon and the Underwood districts. Eleven cars were shipped up to the first of October.

* * *

The biggest crowd that ever attended the Cowlitz county fair at Woodland thronged the fairgrounds September 30, when large numbers of Kalama, Kelso and Castle Rock people attended.

First prize for the best individual exhibit went to E. R. Goerig of Woodland, whose displays of home-grown vegetables and fruits, comprising several hundred varieties, have won this prize ever since the fair started. The Kramer display from Ariel took second prize and that of Sherman Vogel of Kelso third prize. The Woodland grange booth took first prize among the grange booths, with Castle Rock grange second and Kalama grange third.

* * *

The 15 Filipino students at the State College of Washington, Pullman, have organized a club. Each man has contributed $10 to a loan fund for any of their number who should find himself short of money during the second semester. Casiano Limod Baliwag was elected president.

* * *

Governor Hart, James Allen, state highway commissioner, and C. L. Babcock, state treasurer, October 3 opened bids on the Yakima-Ellensburg link of the Inland Empire highway, 20.51 miles, known as the river grade. Grant Smith & Co., Seattle, was awarded the contract for $556,739. It is understood that money on hand from the federal government and that appropriated by the legislature makes something like $750,000 that can be used for this road, and it is said the highway commission will probably gravel the road as well as grade it.

* * *

Pacific county is planning one central fair and a committee is already at work raising money to buy seven acres of land on the paved boulevard between South Bend and Raymond for use as county fairgrounds.

* * *

Business was suspended in Centralia and Tenino for the afternoon on September 29 while the two cities were celebrating the completion of paving on the Pacific highway between Grand Mound and Tenino.

* * *

At Wilbur, Lincoln county, 50 out-of-town pupils in the grades and high school are taking advantage of the hot lunches served by the school. The pupils bring lunches, but in addition are served with soup, a hot vegetable or cocoa at a cost of about 10 cents a week for each.

FARM BUSINESS AND MARKETS OUTLOOK

That general business and trade face gradual improvement and expansion in coming months is the consensus of opinion of financial prophets. Many regard this swing of the cycle as "secondary inflation," but the "inflation" is apt to be a much milder form than the rank and file of the public associate with the term. Partly because of this mildness all industries will not be affected uniformly as is already evident in the recent building boom, and the activity of automobile makers while farmers are laboring under a tremendous handicap of low prices for their products.

Farmers are concerned more immediately in the maintenance of fairly profitable prices for live stock, dairy products and eggs during the week and by higher prices for wheat, corn and oats, partly an outgrowth of car shortage. Sales of grain from the farm apparently are up to normal. The car situation may slowly improve after October which is often a peak month in freight movement. Railroads now report fewer cars in need of repair than on July 1, when the strike of shopmen began.

Cattle Movement at High Tide.

The fall beef harvest is in full swing in all sections and cattle supply is the heaviest of the season. Only in 1917 and 1918 were receipts at leading markets as heavy at this period as they have been in the last two weeks.

Under a meager supply at Chicago and marked scarcity or complete absence at other points, daily advances featured the market for prime and choice steers, the top reaching $12.90, a gain of 45 cents for the week, and the highest since December, 1920. The market was a two-way affair once more with low grades at 25 to 50 cents decline for the week, westerns going to killers as low as $6.25.

The market for choice and prime steers is charting an independent course and may go higher or lower, depending on just how scarce they become. The demand for them will continue strong, at least until holiday needs are satisfied early in December.

Danger Signal in Feeder Movement.

Final figures for all markets are not yet at hand, but shipments of stocker and feeder cattle to the country in September evidently established a new record for that month. August showed the same situation. Purchases last week were largest of the season and, in view of the temper of the country, October also may see a new record hung up.

With a prospect of a big hog crop and an abundance of poultry, meat trade channels may become clogged during the winter.

Hog Movement at Record Level.

Receipts of hogs continue at a record level for the corresponding season. Eleven markets received approximately 500,000 head last week, compared with a 10-year average for that week of 382,000 head.

Domestic consumption of hog meats and lard is more satisfactory than the export outlet, although the latter has improved.

Lamb Mart Has a Setback.

Receipts of western lambs expanded last week, according to expectancy, but the combined run of sheep and lambs at seven markets was only two-thirds of normal for the season. The increase in the last two weeks has been sufficient to take the wire edge off the dressed lamb trade, with prices quoted from $1 to $4 lower in the east.

Feeders may not lose much on the purchases made in the last few weeks, but it is doubtful if they will make much. Speculators have reaped a rich haul through contracting lambs early in the season.

Heavy horses were in demand last week. Choice kinds were bought at Chicago to go to New England as high as $275, while plain sorts went to loggers at a range of $175 to $220. Coal mines took pit horses up to $190.

The wool market was strong last week, with prices slightly higher. Mills are buying more freely and all cheap offerings in seaboard markets are snapped up. Interest is increasing in combing wools, especially.

Foreign markets are strong, with prices trending upward, due mostly to British and Continental buying.

Decrease in Europe's Wheat Crop.

The latest report of the department of agriculture places the wheat crop of Europe, exclusive of Russia, at 985,650,080 bushels, compared with 1,238,000,000 bushels last year and a five-year pre-war average of 1,275,157,000 bushels. France has 27 per cent less than last year and Germany 35 per cent less. The shortage is much greater than any previous compilation has shown.

The department of agriculture also estimates world production for 1920 at 3,012,000,000 bushels, compared with 3,049,000,000 bushels last year. Counting the carryover of 180,000,000 bushels this year, compared with 224,000,000 bushels last year, the total supply would be 3,192,000,000 bushels, compared with 3,274,000,000 bushels a year ago.

The foregoing statistics give the wheat situation more strength than it has appeared to have heretofore.

Congestion of shipping facilities, both in the United States and Canada, however, is dominating the price trend in wheat. Up to this time importing countries have been disposed to run on light stocks and draw on North America as needed, but the transportation tieup is putting that plan awry, as the wheat is not being cleared fast enough to take care of needs. On passage stocks have been reduced to 40,144,000 bushels, which is less than three weeks' supply for importing countries, and British wheat and flour stocks are about half as large as last year. Wheat at Liverpool has advanced more than in the United States. Inability to obtain cheaper Canadian wheat as fast as needed has revived buying of United States wheat via the Gulf.

Small Changes in Crop Estimates.

The October forecasts of the department of agriculture made but small changes in crop yields as a rule. Spring wheat was placed at 268,314,000 bushels, a decline of 8,351,000 bushels in September. Total wheat production was placed at 810,123,000 bushels. Of the spring wheat in Minnesota, the Dakotas and Montana, 78,016,000 bushels were durum.

The corn crop declined less than expected, the yield being forecast at 2,853,000,000, or 227,000,000 bushels less than last year. The oats crop estimated was 1,229,774,000 bushels, or 169,000,000 bushels more than a year ago. The barley crop is estimated at 196,431,000 bushels, or 44,000,000 bushels more than last year. Flax is 11,725,000 bushels, or 3613 bushels more than a year ago.

World Rye Crop Not Excessive.

Although the United States and Canada together have the largest rye crop they have ever grown in any one year, the European crop is small in practically all countries with the exception of Poland. The combined yield of North America and fifteen European countries, for which comparable figures are obtainable, is only 717,254,000 bushels, compared with 711,098,000 bushels last year, and an average of 792,314,000 bushels for 1909-1913.

The range of cash prices for the week ending October 11 was as follows:

CHICAGO.—Wheat—No. 2 red, $1.15@1.18 3-4; No. 2, $1.13@1.18; No. 2 hard, $1.09 3-4@1.11 1-2; No. 3, $1.09@1.10 1-2. Corn—No 2 mixed, 66 1-2@68 1-4c; No. 3, 66@67c; No. 4, 65 3-4@67c; No. 2 yellow, 66 1-2@69c; No. 3, 66@68 1-2c; No. 4, 65 1-2@67 1-4c; No. 2 white, 66 3-4@68 1-2c; No. 3, 66 1-8@68c; No. 4, 65 1-2@67 1-4c. Oats—No. 2 white, 40@43 1-2c; No. 3, 39@41 3-4c; No. 4, 38 1-2@41c. Rye—77c. Barley—59@69c.

Clover and timothy prices are holding up well. Reports of clover yields from many sections are disappointing and the big timothy seed movement is over.

CHICAGO.—Per bushel—Clover, $14.50@19 Timothy, $5@6.25.

TOLEDO.—Per 100 pounds—Clover, $11.75@12.25; Timothy, $3.25.

The feed market has subsided, as demand is light and offerings have increased. Export buying is a minor factor. Wheat feed production is at a high level. This year's production of cottonseed meal and linseed meal is expected to run 25 per cent higher than last year.

Prices per ton (100-pound bags) in carlots: Chicago—Bran, $23; standard middlings, $24; flour middlings, $26; cottonseed meal, 36 per cent, $39; 43 per cent, $43; hominy feed, $26.50; gluten feed, $32.35; old process oil meal, $48; tankage, $60.

Hay Market Firm.

Both receipts of hay at the leading markets and country offerings are light. Dealers' stocks are moderate also. Prices are firm, as demand is improving. Car shortage is restricting the movement to some extent.

Prices per ton in carlots: Chicago—No. 1 timothy, $21@23; No. 2, $20@21; No. 3, $12@15; No. 1 light clover mixed, $21@22; No. 1 clover, $14@16; No. 1 clover mixed, $16@17; upland prairie, $17@19; midland prairie, $14@17; rye straw $12@13; oats and wheat straw, $9@11.

Egg Surplus Disappearing Fast.

The preliminary report on cold storage holdings of eggs on October 1 was 7,902,000 cases, compared with 6,275,000 cases last year and a five-year average of 5,926,000 cases. The reduction during October amounted to 1,704,000 cases, the largest on record for that month. The five-year average October decrease is 867,000 cases. Prices continued to advance last week.

Poultry prices are declining with still lower levels not improbable. Buying for storage is getting under way, although the season is starting nearly a month later than usual.

Storage Butter Regulating Prices.

The volume of storage butter seems to be the chief factor in regulating butter prices at the present time. Current receipts are insufficient and storage operators are offering just enough to sustain the market or maintain a slight upward trend.

Butter is disappearing into consumption at an unusually rapid rate.

Prices for 92 score fresh butter on October 11 were: Chicago, 43 1-2c; New York, 45c; Boston, 45c; Philadelphia, 45c; San Francisco exchange quotation, 58c.

Broad consuming demand for cheese is sustaining the market. Prices were firm last week, with a fairly active trade reported on the leading distributing markets.

Prices on No. 1 American cheese on October 11 were: CHICAGO.—Flats, 24 1-2c; Twins, 23@23 1-4c; S. Daisies, 23 1-2@24 1-4c; D. Daisies, 23@24c; square prints, 26 1-2c; Longhorns, 24 1-2@25c.

Fruits and Vegetables.

The potato market sagged last week, although the carlot movement from producing sections declined. Such shipments were not above normal for this season of the year, but since this is the period in which marketings usually reach high point the pressure is still heavy.

Prices at Nebraska and Idaho shipping points range around 50 cents a hundred pounds in wagonloads.

The carlot apple movement is around 1000 cars daily, which is about normal or a little above. Storage buying is under way, as it is believed that the supply, especially of late keepers, is not so excessive as it appeared early in the season. Grimes Goldens are quoted at $4 to $4.50 and Jonathans at $4 to $5 a barrel in the Chicago market. Northwestern extra fancy boxed Jonathans are bringing $2.50 to $2.85 in the same market.

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LATEST QUOTATIONS.

The Live Stock Market.

PORTLAND, Ore., Oct. 14.—Cattle—Choice steers, $6.50@7.50; medium to good steers, $5.75@6 50; fair to medium steers, $5.25@5.75; common to fair steers, $3.75@5.25; choice heifers, $5@5.25; choice cows and heifers, $4.50@5; medium to good cows and heifers, $350@4.50; common cows, $1.50@2; canners, $1.50@2; bulls $4@4.50; choice feeders, $5@5.50; fair to good feeders, $4@5; choice dairy calves, $8.50@9.50; prime light calves, $8.50@9.50; medium to light calves, $7.50@8.50; heavy calves, $5@7.

Hogs—Prime light, $10.25@10.75; smooth, heavy, 250 to 300 pounds, $9.50@10; smooth, heavy, 300 pounds up, $9@9.50; rough, heavy, $7@8.50; fat pigs, $10@10.50; feeder pigs, $10@10.75; stags, subject to dockage $5@7.

Sheep—East of mountain lambs, $10@11; choice valley lambs, $9.50@10.50; medium valley lambs, $8.50@9.50; common valley lambs, $7.50@8.50; cull lambs, $6.50@7.50; light yearlings, $8@8.50; heavy yearlings, $8@8.50; light wethers, $6.50@7.50; heavy wethers, $5.50@6; ewes, $2@6.

SPOKANE, Oct. 14.—Cattle—Prime steers, $6.25@7; good to choice steers, $5@6; medium to good steers, $4.50@5; fair to medium steers, $4@4.50; common to fair steers, $3@4; choice cows and heifers $5@5.50; good to choice cows and heifers, $4@5; medium to good cows and heifers, $3.50@4; fair to medium cows and heifers, $2.50@3.50; canners, $1.50@2.50; bulls, $2.75@4.50; light veal calves, $7@8.50; heavy veal calves, $5@7.50; stockers and feeders, $3.50@5.

Hogs—Prime mixed, $10.50@10.85; medium, $9.50@10.50; heavies, $7.50@9.85; fat pigs, $9.25@10.25; stockers and feeders, $9@9.75.

The sheep market was entirely without an offering and nothing reported in transit for this market. The market on lambs has been good up until the latter part of the week, when a slight falling off in prices was noticed. Butcher ewes were also affected and a like decline reported.

The Grain Market.

PORTLAND, Ore., Oct. 14.—Wheat—Hard white, Bluestem, Bart $1.24; soft white, western white, $1.14; northern spring, $1.14; hard winter, $1.12; western red, $1.09.

Grain futures: Wheat—Bluestem and Bart, October, November, $1.24; soft white, western white, October, $1.14; November, $1.13; hard winter, October, $1.12; November, $1.10; northern spring, October $1.14; November, $1.12; western red, October, $1.09; November, $1.06.

Oats—No. 2, 36-pound naturals, October, November, $34; 36-pound clips, October, November, $32.50; 38-pound naturals, October, November, $35.50.

Barley—Forty-four-pound minimum, October, November, $30.50; 40-pound minimum, October, November, $30.

Corn—No. 2 eastern yellow shipment, October, November, $31; No. 3 eastern yellow shipment, November, $30.

SEATTLE, Oct. 14.—Hard white, soft white, western white, hard red winter, soft red winter, northern spring, $1.14; western red, $1.11; Big Bend, Bluestem, $1.25.

DAVENPORT, Wash., Oct. 14.—Bluestem, $1.09; Marquis, 93c; Gold Coin, 91c.

POMEROY, Wash., Oct. 14.—Turkey red and hybrid, 95c.

WALLA WALLA, Oct. 14.—Bluestem and Bart, $1.08; Club, 98c; Turkey red, 93c.

RITZVILLE, Wash., Oct. 14.—Bart, $1.15; red, 98c; Fife, 96c.

ODESSA, Wash., Oct. 14.—Bluestem and Bart, $1.14; Marquis, $1.03; Turkey red, 97c; Jones Fife, 92c.

DAYTON, Wash., Oct. 14.—Club wheat, $1; red, 97c.

Hay and Feed Grain.

PORTLAND, Ore., Oct. 14.—Millfeed—Price f. o. b. mill: Mill run, ton lots, $29; middlings, $41; rolled barley, $36@38; rolled oats, $42; scratch feed, $43 per ton.

Corn—White, $36; cracked, $38 per ton.

Hay—Buying prices f. o. b. Portland: Alfalfa, $18@18.50 per ton; cheat, $15; oats and vetch, $20; clover, $18; valley timothy, $20; eastern Oregon timothy, $20@21.

SPOKANE, Oct. 14.—Wheat—Feed wheat, $40 ton.

(Continued on page twenty-four.)

Range of Live Stock Prices, Week Ending Oct. 11

CATTLE.	Chicago.	Spokane.	Portland.	N. S. Lake.
Choice, prime heavy steers (1100 lb. up)	11.00@12.80			
Good heavy steers	8.85@11.25			
Medium heavy steers	7.25@ 9.10			
Common heavy steers	5.85@ 7.50			
Choice, prime light steers (1100 lb. d'n)	10.80@12.65			
Good light steers	8.75@11.10			
Medium light steers	7.15@ 9.10	6.25@ 7.50	6.30@ 7.75	6.00@ 6.75
Common light steers	5.65@ 7.50	4.00@ 6.25	4.50@ 6.50	4.00@ 6.00
Common to choice butcher heifers	4.65@ 9.25	3.25@ 6.00	3.50@ 5.75	3.50@ 5.50
Common to choice butcher cows	3.65@ 8.25	2.75@ 5.00	2.75@ 5.25	3.00@ 5.00
Bologna and beef bulls	3.50@ 6.40	2.75@ 4.50	3.00@ 4.50	2.00@ 3.50
Canners and cutters, cows and heifers	2.60@ 3.65	1.50@ 2.50	1.50@ 2.00	1.50@ 3.00
Canner steers	3.50@ 4.50	2.25@ 3.50	2.25@ 3.50	2.00@ 3.50
Medium to choice light veals	6.75@12.00	7.00@ 8.50	8.00@10.00	7.50@ 8.25
Common to choice heavy veals	3.50@ 6.50	5.00@ 7.50	5.00@ 7.00	
Common to choice feeders (1000 lb. up)	5.65@ 8.25			
Com. to choice feeders (750-1000 lb.)	5.65@ 7.75	3.50@ 5.00	4.00@ 5.50	4.50@ 5.50
Common to choice stocker steers	4.00@ 7.50			
Com. to choice stocker cows, heifers	3.50@ 5.25			
HOGS.				
Top of market	10.10	11.25	10.60	9.75
Bulk of sales	7.75@10.00	10.50@11.10	10.00@10.50	9.15@ 9.50
Heavy (250 lb. up)	8.65@ 9.95	10.00@11.10	9.50@10.25	9.00@ 9.25
Medium (200-250 lb.)	9.50@10.00	10.25@11.25	10.00@10.50	9.25@ 9.50
Light (150-200 lb.)	9.35@ 9.95	10.50@11.25	10.25@10.60	9.25@ 9.75
Light lights (130-150 lb.)	9.00@ 9.60	10.00@10.75	10.00@10.25	9.00@ 9.50
Smooth packing sows (250 lb. up)	7.50@ 8.50	8.25@ 9.25	8.25@ 9.00	6.50@ 7.25
Rough packing sows (200 lb. up)	7.00@ 8.00	7.50@ 8.25	7.00@ 8.50	6.00@ 6.50
Medium to choice pigs (130 lb. down)	8.50@ 9.25	8.50@10.50	10.00@10.25	9.00@ 9.25
Stock pigs		8.50@10.00	10.00@10.50	8.50@ 9.00
SHEEP AND LAMBS.				
Medium to prime lambs (84 lb. down)	12.25@14.40	8.50@10.50	9.00@11.00	9.50@11.50
Culls and common lambs	8.50@12.25	6.50@ 8.50	6.50@ 9.00	7.50@ 9.50
Medium to prime yearling wethers	8.75@12.25	7.00@ 8.00	7.50@ 8.50	6.00@ 7.50
Medium to prime wethers	6.25@ 8.75	6.00@ 7.50	5.50@ 7.50	4.00@ 6.50
Medium to choice ewes	3.50@ 6.75	3.00@ 5.00	3.00@ 5.50	3.00@ 4.50
Culls and common ewes	2.00@ 3.75	1.50@ 3.00	2.00@ 3.00	
Full-mouth to yearling breeding ewes	4.50@11.50			
Feeder lambs	12.75@14.75	5.00@ 7.00		

Snohomish County Stages Livestock Show

By RALPH ERSKINE

In order to put on a real dairy show in a real dairy county, the three county breed associations with a united effort held their first annual Snohomish County Dairy and Live Stock exposition at Everett on October 12, 13 and 14 and it was extended until the night of the 15th. The organization which was responsible for the success of the show was the Snohomish County Breeders' association, a combination of the county Guernsey, Holstein and Jersey clubs.

Since there were no buildings that are spacious enough to house the 140 head that came in on the first call for entries the management rented six large circus tents and erected them at the city ball park on the outskirts of town. The arrangements of the tents were in a double line, one on each side of the grounds, which allowed ample room in the center for the judging ring and the concessions.

While dairy stock were the main exhibits there were also a number of hogs in the swine division, which was included by special request of the dairymen. As a result of the liberal premiums offered there were four of main breed of hogs shown, being fairly representative of the herds in the county.

Calf Club Members.

The Snohomish county boys' and girls' calf club members were also invited by special premiums and the opportunity to enter a judging contest. County agent W. D. Love was able to get the entire membership to show their animals and they came from three different parts of the county: Stanwood, Silvana and Snohomish.

The poultry breeders of the community asked to be included, which request was granted at the last minute and they were given one of the large tents for their coops of crowing and cackling birds. A milk goat department was added and the classes were filled by M. P. Eggus of Woodenville, who showed 17 head of his does and bucks.

The entertainment feature was given over to Captain J. McCleave of Victoria, B. C., who brought his performing and jumping horses. The daily performances were staged in front of the large grandstand, one in the afternoon and the other at night. The greater part of the crowd, however, were much interested in the judging of the cattle. W. T. McDonald, commissioner of agriculture at Victoria, B. C., judged the classes and was asked to give his reasons for the placings for the benefit of the onlookers.

Officers of the show were: Dr. H. K. Stockwell, president; C. H. Grewe, secretary; C. H. Krassin, assistant secretary. T. C. Simmons, manager of the show, was responsible for much of the success of the event. Both he and Mr. Krassin spent much time and effort getting the grounds ready and the entries ready in time for the opening day. The members of the board of directors also put in some good licks getting the show in readiness. They are: Fred J. Vetter, John Patty, Dr. E. E. Heg, Don McRae, Ed Hoem, A. J. Robinson, J. E. Wrage, Herman Steffen and W. D. Love.

Turnout of Guernseys.

There was a good turnout of Guernseys on the grounds although the greater number came from two breeders from other counties. There are many breeders of the fawn and white cattle throughout the county, but there are many herds which are just getting started in the purebred game and there are a still larger number of herds that have grade animals, headed by registered bulls. Two of the purebred herd owners, however, were tied up with work at home and could not enter their cattle.

The herd from the Dr. A. McRae Smith farm near Bellingham, showed in competition with the Orchard Hill farm animals of Redmond, and those from the H. J. Weiser farm of Everett. J. D. Barker of Snohomish entered an aged bull, which was from the Dr. H. A. Wright herd on Lopez island. Other single entries were made by E. C. Entzminger of Arlington and John Patty of Gold Bar.

The junior and grand champion bull was Fircrest La France's Rival, a senior calf in the herd. The calf is a son of the grand champion cow, La France of Bralee, the 5-year-old that has been winning heavily wherever shown.

Jersey Winnings.

The Jerseys were from the Midfields farm at Chehalis. There were 15 head in all, a large part of which were young animals. The two outstanding winnings were the grand champions, both being chosen from the junior classes. Fussy's Fern Noble, a junior yearling with an extremely typy Jersey head and even topline, was made the junior and grand champion. He is out of Sailor's Lucy of S. B., one of the cows in the Harry West herd in Oregon. The grand champion female was Midfields Cicily Winkle, a junior calf of exceptional type and quality. She was sired by Imported Fussy Fern's Noble and has been undefeated in her class at seven shows this fall. The senior champion bull was Champion of Midfields, a 3-year-old bull with an abundance of type quality and substance. Curtis Rose, a 4-year-old cow, was the senior champion only because of the exceptional showing made by the younger animal.

Black and Whites.

In the tent where the black and whites were quartered, the visitor could readily see that this breed was favored to a great extent throughout the county. There was only one herd from out of the county and that was from just across the line in King county, and the Carnation animals are as well known to the people of Snohomish county as to the King county folks.

The balance of the show was from seven local breeders who brought out some of their best females and there were a few herd bulls. Dr. H. K. Stockwell of Monroe entered seven head of females from the Tualco Valley farm and a yearling bull. Dykstra & Wynstra of Everett showed four heifers and a cow in milk. Herman Steffen of Monroe brought out six of his splendid herd, including the herd bull. There were 11 of the purebreds from the Martin Treosti herd at Snohomish. He also exhibited his herd bull, a son of Chimacum King Korndyke Sadie Vale, of the Bishop herd. Ed Hoem of Snohomish entered seven head of cows and heifers while C. W. Krassin, a neighbor, brought out three of his best individuals. Henry Heg exhibited eight head from the herd at East Stanwood, which is known as belonging to Dr. E. E. Heg and Sons. The death of Dr. Heg, which occurred the week before the show, threw a damper on the showing of this splendid herd.

Carnation Stock farms had both of the grand champions. Colantha Matador Delma, a senior calf, was the junior and grand champion bull, while Matador Oregon Machthilde, was made senior and grand champion female. The surprise of the day, however, came when Sir Mercedes of Sadie Vale, the aged bull owned by Martin Theosti was placed at the head of the class over Segis Walker Matator, the Carnation animal that was grand champion at Puyallup. Carnation Matador Christmas, a junior yearling heifer in the Carnation herd, was the junior champion female.

While the Carnation herd won many of the first placings, there was some keen competition for the seconds and thirds and some of the smaller breeders who came out deserve more credit than is shown by the above list of the champions.

The Carnation cup, offered for the best dairy cow shown on the grounds, went to La France of Bralee of the Dr. A. McRae Smith herd. The Carnation herd, however, did not compete for this prize. The Carnation herd won the $25 prize for the best display.

Ayrshire Classes.

The Ayrshire classes were filled by the E. W. Van Tassel herd from Wenatchee. The senior champion bull was Queen Scottish Cavalier, a son of the senior champion female, Glengary's Scottish Queen. The grand champion bull was a senior calf, Roy of Wenatchee. Wenatchee Cherry, a junior heifer calf, was the junior and grand champion female.

Although there were no competitors in this breed, there were some hard classes to place and Mr. McDonald had no easy task in making the decisions.

There were nine calves entered by the members of the Snohomish boys' and girls' calf club, and some of the animals made a good showing in the open classes. The Stillaguamish club boys were: Leland Grissim, Swend Larson, Lief Brue and Harvey Galbraith. Those from the Silvana club were: William Jackson and Elmer Larson. Norman Morgan of Snohomish, who is just under club age, entered one animal and expects to be doing regular club work next year.

Four Breeds of Swine.

The swine division consisted of four breeds and was representative of the herds that are found throughout the county. There were eight head of Hampshires from the Tualco Valley Stock farm, owned by Dr. H. K. Stockwell of Monroe. The nine Chester Whites included two sows with litters and were shown by Arthur M. Wade of Marysville. The Durocs had the largest number of any breed, 14 head in all. They came from the A. Turley farm at Monroe. There was a Poland China boar shown by E. Brotz of Monroe.

Since all of the breeds were shown by single exhibitors there was not competition between breeds and each herd took all awards in the classes filled.

George S. Bulkley of Seattle judged the classes.

The Poultry Show.

The poultry show was by no means a one-breed show. In fact it was almost a toss-up between five of the leading breeds as to number of birds entered. If any breed could be named first it would probably be the Rhode Island Whites. The Rhode Island Reds were not far behind the Whites and the Barred Plymouth Rocks were also well represented, as were the White Leghorns and the Black Minorcas.

There was also a good turnout of many of the other breeds and there were some good waterfowl entered. The show was managed by Andrew Eckstrom and H. B. Stubbs, the superintendents, who had only a short time to get the coops ready and the birds entered. There was, however, a strong demand for a show of this kind since there were more than 150 entries that had to be turned away because of the shortage of space.

The following list of exhibitors of poultry show that the greater part of the birds entered are from local breeders.

J. F. Zimmerler, Everett; Arthur M. Wade, Marysville; G. W. King, Everett; A. A. Weeks, Everett; L. R. Barns, Everett; H. B. Stubbs of the Paramount Poultry farm, Everett; A. Hollings, Seattle; G. Rolstra, Everett; C. W. Brewster, Everett; P. W. Haries, Edmonds; G. Esch, Everett; A. Marcuson, Everett; H. L. Wilder, Everett; R. L. Burk, Snohomish; A. Eckstrom, Everett; Carl Carpenter, Machias; J. C. Chitty, Everett; Mrs. A. A. Alfredson, Hartford; Harry Hoffman, Arlington; J. L. Horrow, Everett; J. E. Travis, Pinehurst; H. C. Harrop, Seattle; Ed Severson, Everett; Roy Greenhalgh, Everett; Arthur Johnson, Snohomish; A. L. Tenny, Everett; W. F. Sheets, Alderwood Manor, and R. C. Simpson of Seattle.

Shut the Gate With Paint

Painting should have been done earlier, but in most localities the weather man has been good to those of us who have neglected this fall to protect our property. There are thousands and thousands of little gates standing wide open on most of our places. They are tiny gates, but large enough to admit water into the plow beams, the wagon wheel hubs, the walls of the machine shop and most other wooden articles on the farm. And once water makes its entrance it starts trouble. The first thing we know the wooden parts of our machinery and buildings will be showing signs of deterioration and then some day when we most want them to be safe and sound and strong we will find a difficult repair job necessary. The same is true in considerable degree with iron parts—more so in some cases. Water is the daddy of rust, and rust is the greatest enemy of iron implements.



Paint would shut the gates and keep out this destructive element. It is no use to shut the gate after the horse has been stolen, but it is a good plan to shut it before the thief arrives. Look over the premises today and see if there is not a lot of these little gates that should be shut with a good coat of waterproof paint.

WILL SELL HOLSTEINS.

S. W. Shoemaker, proprietor of the Garfield Stock farm near Garfield, Whitman county, has announced a sale of purebred Holsteins at the farm on Wednesday, October 25, with Colonels Gue and Cranke on the block and in the ring, respectively. The sale will include seven granddaughters of King of the Pontiacs.

Tieton Community Fair

The second annual Tieton community fair in Yakima county, which opened October 12, covered a wider scope than last year and many of its departments were considerably extended. As a consequence of the forward stride made this season C. K. Garey, chairman of the general fair committee, says that it is the committee's ambition to erect an adequate building for use next year to house the exhibits and display their products to better advantage.

There was keen competition in the apple exhibits. The same height of color and perfection of fruit was shown this year as was shown last year. There were from a dozen to over 20 entries in each of the main standard varieties.

In the farm crops and vegetable department a dry land exhibit by H. W. Henry, J. B. Burk and J. C. Perkins was a prominent feature and excellent products of all kinds were shown. The potatoes competed with those grown under irrigation, and squashes and pumpkins, plenty big enough, were on exhibition. W. F. Weimar had a fine garden display to show what can be done with a little attention.

Chickens, ducks, geese and turkeys are well represented. The exhibit was housed in a large tent. The auto display was particularly fine.

Mrs. J. M. Cox had charge of the juvenile department and she was especially proud of the fine canning display made by the canning club, which she sponsored this summer and which won a couple of ribbons at the state fair.

Another interesting feature was the baby clinic, in charge of Mrs. J. A. Cadwallader.

DON'T BREAK A LEG.

Put eave troughs on the buildings, especially over the doors. It will avoid falls on the ice this winter.

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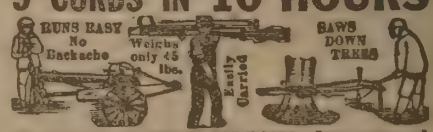
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We Are Eating Too Much Foreign Cheese

In recent years the United States has been an importer of cheese. In the year ended June 30, 1922, 34,271,000 pounds were imported, compared with 16,585,000 pounds in the preceding year. Italy, Argentina, Swizerland, France and The Netherlands have been the principal outside sources. Exports in the last fiscal year were 7,471,000 pounds and 10,826,000 pounds in the preceding year. The permanent tariff bill, which places a duty of at least 5 cents a pound, but in no case less than 25 per cent ad valorem on imported cheese, is expected to reduce the volume of imports materially.

Cheese production in the United States has been increased in the last two years—a result of the inevitable tendency of hard times to force the farmers to depend upon the cow—but the increase has been much less than in the field of buttermaking.

Cheese can be made on the farm, but for the most part it is a factory proposition, while farm buttermaking is a more simple matter. Creameries and cream stations are much more widely and thickly disseminated so that an addition to the supply of milk or cream for butter production is readily absorbed. Cheese ripening, furthermore, has certain climatic limitations which confine it to the northern states or the higher altitudes for the most part, while butter production is easily possible in all arable sections of the United States.

Receipts at Market Increase.

The best current barometer of the volume of cheese production is found in weekly receipts at the five leading markets, Chicago, New York, Boston, Philadelphia and San Francisco. Summing these up over a sufficiently long period in order to eliminate weekly fluctuations will show the general drift. Receipts of cheese at these points in the first 38 weeks of 1922 and comparative figures for the corresponding period in the three preceding years are: 1922, 147,428,000 pounds; 1921, 137,703,000 pounds; 1920, 124,771,000 pounds; 1919, 145,369,000 pounds.

Production in 1922 as measured in this way, is running practically unchanged, compared with 1919, but shows an increase of 18 per cent over 1920. Butter production by the same method of measurement shows an increase of 27 per cent over 1920.

Consumption of cheese also has increased. Adding total receipts from January 1 to September 23, 1922, at the five leading markets to the cold storage holdings at those points on January 1 and subtracting from this total supply the storage holdings at the end of the period gives a rough measure of the amount of cheese disappearing into consumptive channels in the interval. The "disappearance' in the first 38 weeks of each of the last four years has been as follows: 1922, 138,480,000 pounds; 1921, 132,969,000 pounds; 1920, 126,089,000 pounds; 1919, 125,277,000 pounds.

This method of analysis is not mathematically exact because of duplications in receipts due to intermarket movements.

It's Made to Eat.

It is highly significant that compared with the average of the three preceding years the increase in consumption in 1922 has practically kept pace with the increase in production.

Storage holdings at the beginning of the current year were below the average of the three preceding years. They continued in this position until shortly after the storing season started—it came a month to six weeks earlier than usual this year—then they exceeded the average for a time. The season in which storage stocks accumulate came to an end a month sooner than usual and at present storage stocks are about as far below the three-year average as they were on the first of January.

Lower prices partly explain the increase in cheese consumption but improved industrial conditions have been an important factor. Betterment in the agricultural situation in the south also has been giving aid and comfort to the cheese market.

Thus far, there has been no overproduction of cheese as a result of the increase which has taken place in the last 24 months, as consumption has expanded proportionately. Nor is overproduction at an early date probable, since cheese factories can not be built over night and time is required to produce a dairy cow. Further improvement in industrial and agricultural conditions should expand the domestic market for cheese. Although the outlook for the cheese producer and the dairymen who produce milk for cheese factories can be described as reasonably bright.

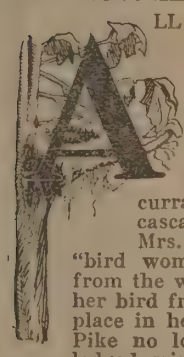
Winter is the period of light production, naturally, and June is the high month. Fluctuations in receipts from week to week are much more marked than is the case with butter.

The middle of May has been the turning point in storage stocks on the average in the three years, 1919 to 1922, and the last weeks of September have marked the finish of the accumulation period.

AVOID PIG RHEUMATISM.

Can you wonder that the pigs do not thrive when they are compelled to sleep in wet, cold quarters? Give them a dry pen, at least dry, warm beds of straw.

Food for the Birds



ALL around the Pike home, on Hillcrest way at Yakima, there are planted native shrubs and trees that abound in food for the birds. Mountain ash, syringa, spirea, snowberry, high bush cranberry, wild cherry, sumach, wild currant, elderberry, dogwood, cascara—all are there. For Mrs. Granville Ross Pike, the "bird woman," was wont to bring from the wilds the favorite foods of her bird friends, and to give them a place in her beautiful garden. Mrs. Pike no longer sits at the deep-ledged window where she used to take delight in her gay little feathered pensioners. But the same thoughtful bounty greets them today as when the gentle patroness of winging things inhabited the spot.

There are pictures, taken with a camera she used to operate, that attest the intimate terms on which Mrs. Pike existed with her birds. One shows a bold little chickadee who, curious to say, after literally stuffing himself on her Christmas banquet spread for him, had hopped upon a pair of scales, where his weight is registered in the picture. Mrs. Pike operated the camera by means of a cord extension to the shutter.

The beautiful cedar waxwing lights in the tallest boughs of the old cherry. From there, if the coast is clear, he swoops upon the bush cranberry and, hanging to the twigs, eats of the berry, keeping a feverish lookout. The flicker, so nicely exacting in his ideas of a nest, has been known to abandon his own good beginning for the well constructed nest Mrs. Pike had provided. Even the shy hermit thrush has built in her gracious garden.

Mr. Pike, who maintains today the winter's spread for the blithe little brothers of song, is as much interested in them as was his late wife. He is also a student of religion and meditates a book on the subject, already in outline. He is an orchardist in the region as well.

Want Crops for Rotation

"We are strongly in need of more cultivated crops in this district in order to furnish a rotation crop for our grain," says Carl Dean of Coupeville, Island county, who has a large wheat and dairy farm a short distance south of town. "Such crops as potatoes, squash or corn would afford an opportunity to keep down weeds and have the land in readiness for hay and grain crops the following season.

"Field peas have done well in this section and will produce from 10 to 15 sacks to the acre when planted alone. Wheat, however, is considered the most convenient crop to grow because it generally produces 60 bushels to the acre and sometimes more, and in most cases can be seeded at the fall. Wheat and vetch is often used as a hay crop, and the stock are very fond of it."

Mr. Dean is trying out a field of Hubbard squash for the fall market, and expects them to be good as a rotation crop. That requires less work than do many of the other cultivated crops.



Makes poor cows good and good cows better

LILLY'S DAIRY FEED is based on the findings of experts who studied the results of different formulas in the cases of thousands of animals. Therefore it is a thoroughly scientific formula.

Lilly's Dairy Feed is mill-mixed and absolutely standardized. Therefore it is always the same, always dependable.

Lilly's Dairy Feed positively makes poor cows good and good cows better. Our capacity is taxed to the utmost to supply the demand.

Feed Lilly's Golden Dairy Feed and watch results. It "puts milk in the pail and cream in the milk."

FOR CALVES—a milk equivalent at a fraction of milk cost

Millions of calves are killed at birth because it does not pay to raise them on their mother's milk. LILLY'S CALF MEAL is a perfect equivalent for butter fat, at a fraction of the cost.

Says John Lindbeck, R. F. D. Kent, Route No. 2: "I bought a ton of your Golden Dairy Feed and wish to state it is the finest feed I ever fed. Every one of my cows showed considerable gain in milk. I would pay $20 per ton more for your dairy feed than mill run. I bought two tons more of your feed today."

Mrs. Robert McCleary, Arlington, Wash., bought for $5 a calf one week old and raised her wholly on Lilly's Calf Meal. At two years of age she was giving 30 pounds of milk daily.

ASK YOUR DEALER

THE CHAS. H. LILLY CO.
Seattle Portland



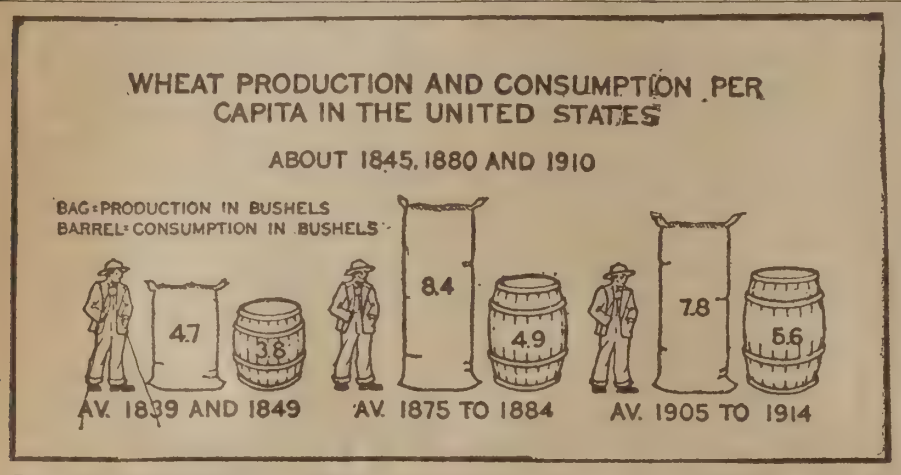
Wheat Consumption Increases; Production Per Capita Increases

Per capita consumption of wheat in this country has been increasing steadily during the last 80 years at least. This has been due partly to great improvement in milling processes, which make bread more attractive; to increasing prosperity, which enables more people to eat white bread, and to an increasing proportion of our population in cities.

It is certain that city dwellers consume more wheat per capita than do those who live in villages and in the country. This probably is due in part to the lack of gardens in cities and in part to the comparative cheapness of bread and the further fact that no cooking is required. The proportion of the total population living in cities is increasing rapidly, which is a factor in the present and future trend of wheat consumption.

Per capita consumption increased from 2.8 bushels, the average of 1839 and 1849, to 4.9 bushels as the average from 1875 to 1884, and 5.6 bushels as the average from 1905 to 1914. This rising trend, interrupted by the World war, doubtless now has been resumed. How much longer will it continue? In some countries of Europe, especially Belgium and France, per capita consumption has risen to about eight bushels of wheat annually.

With increasing population, increasing per capita consumption and decreasing per capita production, there is a steadily increasing demand for our wheat at home. In comparatively a few years, if present trends continue, we shall be eating all that we produce. Of course, production can and will be increased if the prices paid for wheat will make such an increase profitable. The greatly increased wheat production during the war, occurring under the stimulus of very high prices and of patriotism, was partly at the expense of well-balanced rotations and other principles of sound farming. As wheat prices become better in future, production can be increased through the use of more fertilizer and the farming of less productive land. As production and consumption tend to become equal new sources of supply must be sought in order to feed the increasing population. The needed supply may be grown at home or imported from Canada, Argentina and other countries where lands and labor are cheaper than in the United States.



Per capita production has reached its maximum and is slowly declining, while per capita consumption slowly rises.

CARSTAIRS PRAIRIE PROJECT.

The proposed Carstairs Prairie irrigation project in Mason county has been examined by D. A. Scott of the department of conservation and irrigation, who found that there were 600 to 1000 acres of good gravelly soil with a gravity flow of water in adequate quantity from Bingman creek. A soil survey has been made by the state college and it finds that it would be suitable for small fruits, grains and grasses.

The department experts believe that 600 acres can be developed at a cost not to exceed $30 per acre. If 1000 acres were developed the cost would be reduced to about $20 per acre.

FREIGHT AS MUCH AS PRICE.

Eastern buyers who are taking the fruit from peach orchards in the vicinity of Palisades, Col., point out that the cost of moving the fruit to market is as much as the price of the peaches here, packed and loaded on board cars.

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makes a brilliant, silky polish that does not rub off or dust off and the shine lasts four times as long as ordinary stove polish.

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A Shine in Every Drop

Read the "Want Ad" page this week for good offers of all kinds.

Home Water System

By PROFESSOR L. J. SMITH,
Head of Department of Agricultural Engineering, Washington State College.

We are putting in a home water syste and would like to know if we put in an attic tank of 200 gallons would we have to do any extra bracing and would there be pressure enough for sink and bath when we have only a nine-foot ceiling?
Granger, Wash. J. L. R.

I would advise you to put your 200-gallon tank directly over some good-sized partition between the rooms below. This will brace it and carry the load. You probably would build a round tank for storing the water. In any case, it should have a shallow pan underneath to catch any dripping in case the outside of the tank sweats or in case any leakage develops. A pipe should run from this dripping pan to the eaves trough or on the outside of the house, where it would be noticed in case dripping developed. It would also be a good idea to put two four-by-fours across your ceiling joists to carry the tank. In this way you can stretch your pressure over a good many of the joists, which would keep the tank more even.

I do not think you would have any difficulty from lack of pressure at the sink or bath or faucets. I would suggest, however, that you use one size larger tap or faucet and pipe for your connection. This will make the water run more readily and you will have no difficulty because of the fact that the tank is only 10 or 11 feet above the bungalow floor level.

Making Wood Charcoal

By W. D. BUCHANAN.

I would like some information regarding the making and sale of wood charcoal. What is the best method of burning the wood into charcoal. Where can there be found a market for such a plant and at what price per sack? Does wood have to be seasoned before it can be burned? Is there any market for charcoal made from fir and hemlock timber?
Snohomish, Wash. H. C. B.

The above is somewhat out of my line, but will say that the best method is to have a brick kiln where the wood can be burned without blazing. It can also be burned by digging a pit about three feet deep in clay soil, piling it full of wood, covering with clay to keep out the air, but leaving a ventilator at one end and a draft at the other to get it started. Any good feed concern will buy the product if it is well graded. Wood does not have to be seasoned. There is a market for charcoal made from fir and hemlock, although hardwood charcoal is preferred.

Fit

Why Billy Buster Shoes are kind to boys' growing feet They take the shocks, scuffs, wear and tear—and smile for more. But that's only half the story of Billy Buster Shoes. They are more than successful foot-armor. Boys' growing feet—thousands of them—were studied while working and playing in various type shoes. The exact causes for chaffing, premature holes in stockings and lame feet were located. Then Billy Buster Shoes were built on the principles thus discovered. Feet that walk in these shoes are comfortable. Boys who wear them are freed of foot trouble. Now Billy Buster Shoes are known by tens of thousands of boys and their parents for their kindness to growing feet as well as their ability to "rough it." They have purchased their first pairs of Billy Buster Shoes years ago and now know the name "Billy Buster" as an accurate guide to shoe wear, fit and dollars-and-cents economy. If your regular shoe man is out of stock, we gladly will tell you where they may be obtained. For your protection, Billy Buster is stamped across the sole of the genuine.

Billy Buster

"BIG VALUE SHOES FOR BOYS"

Fire in the Hay!

Storing Uncured Feed Dangerous

"Many destructive fires have been caused by spontaneous combustion of hay," says the Farmer's Bulletin No. 904, in discussing the prevention and control of fire on the farm. Clover and alfalfa hay are said to be especially subject to ignition of this kind. The first cutting of alfalfa seems to be the most dangerous. If it has had rain or dew on it or if the shocks are not cured thoroughly when it is put up, the moisture will cause fermentation which may produce sufficient heat to start a fire. The fire always starts in a part of the mow or stack at some distance from the surface but it can not continue long without oxygen from the outside. It may cease without ever having come to the surface. Its presence may be detected by a peculiar sooty odor or by smoke, irritating to the eyes. It may occur any time from a few days to several weeks after the hay is put up.

There is little danger from this source if the hay is properly cured. Spontaneous combustion has been known to take place in damp fodder or straw, and bins of grain and feed are also said to be dangerous in this regard if not thoroughly dry.

Cloth, waste and sawdust or any other inflammable material saturated with oil are even more subject to spontaneous ignition than hay. Such oils unite with oxygen when exposed to the air and heat is thereby produced. The accumulation of such materials should be guarded against. Oiled cloths or dust cloths used in the house and oily waste or bags used in the garage or machine shop should always be kept in metal containers with air-tight metal covers.

Utilize Wild Flowers

A large percentage of the surplus honey of western Washington comes from white clover and red raspberry blooms, while the logged-off lands furnish a good quality of honey from the fire weed, according to J. W. Peterson of the Edgewood district of Pierce county, who has about 60 stands of bees.

"There are many spring plants that contribute to the building up of the colonies, such as willows, maples, dandelions, plums, cherries and apples. The bees do not store up their surplus from these blossoms, but they build the foundation for the honey crop that is to follow."

Mr. Peterson told of the many acres of wild flowers that could easily be utilized if there were more bees in the logged-off districts. In fact, there are more kinds of blooms than one would suppose could be utilized by the bees and Mr. Peterson has already listed nearly 75 different kinds, and there are perhaps that many more.

Mr. Peterson has hit upon a plan to place his honey before the people in a way that will make them appreciate a high-class product. One of the Tacoma grocers helped him arrange a display in one of his show windows.

"In the center we placed a one-frame observatory hive of Italian bees," said Mr. Peterson. "On one side of this a like hive with no bees, but a full depth frame of well-sealed honey, and labeled it, explaining that it was just as it came from the hive ready to be extracted. On the other side of the bees we placed another, containing a comb after the honey had been taken from it.

"Around these hives were arranged glass jars holding pints, quarts, and some tall jars holding about 18 ounces, also some sections of comb honey. Above all we placed a large card calling attention to the fact that this honey is not strained honey, but extracted by the most modern and sanitary methods. The location of this window was prominent and the display attracted no little attention."

Both the storekeeper and Mr. Peterson were well pleased with the exhibit, since it caused an increase in the sale of honey, both in the comb and extracted. Mr Peterson reports a fairly good honey crop this year, considering that the season was not the best. He had 30 colonies this spring, and extracted nearly a ton of honey, and increased his bees to 60 colonies.

One-Day Schools

A series of one-day schools for women who are interested in bettering the household exhibits at their county and community fairs was conducted in the state of Washington during July and August by Miss Maud Wilson, state home demonstrator leader, and Miss Sutherland, extension clothing specialist. These schools were held at 14 centers in 10 counties. Four hundred and twenty-five women and girls, representing 70 communities, attended the schools. The women brought articles to use as practice work in judging.

Many of the articles were brought by sewing, cooking and canning club members, who weren't a bit behind their mothers when it came to skill in cookery and needlework or in the ease with which they grasped the principles of judging. At Hanford, in Benton county, two boys, members of the cooking club, brought a delicious lemon pie and crisp sugar cookies as their part of the display.

Miss Wilson and Miss Sutherland had score cards for everybody. "A score for everything, and everything judged by its score" seemed to be their motto. The score cards prepared by the state college are conveniently arranged with clear and complete explanations of each point. They are printed on small cards with a hole in the top, for convenience in attaching to articles scored.

This series of schools was only the beginning of this work. Each person who attended is expected to make use of the helps she received. Club girls will apply them in preparing their contest exhibits. Fair committee members will be able to arrange their exhibits more attractively and systematically, while those who plan to compete for premiums will apply the points received to the choice and preparation of their own entries. Almost every woman took extra score cards for her neighbors who could not come to the school. A great many came as representatives of rural women's clubs and planned to give talks on judging at their club meetings.

Dairy Herd on Fruit Farm

That a dairy herd is a paying undertaking in connection with a fruit ranch, even if one makes only expenses for the first few years, is the opinion of P. T. Kayse, who has a 20-acre hay and fruit farm on the reservation at Parker. While the orchard will evidently be the main project on the farm, Mr. Kayse is developing a Guernsey herd with nine females and the use of a purebred bull owned by a neighbor. Part of the females are registered animals, and Mr. Kayse expects to build up a purebred herd in due course of time.

"There is nothing better than a dairy farm for building up the land," said Mr. Kayse, "and we find that the two kinds of work do not interefere greatly, except for certain times during the harvesting season. We are keeping all of our heifers as well as the registered calves, and expect to have some fairly good milch cows in a few years.

"We have had to rent some land for the raising of hay and other crops because it is considered dangerous to feed hay from the orchard because of the spray which covers it. There are some who still cut the alfalfa from an orchard, but it is considered poor practice, since the soil usually needs all the humus and fertility it can get. We find it better to have a separate field for the growing of hay, since it also affords some pasture in the late fall and winter months."

What Testing Reveals

A very striking incident showing the value of cow testing was brought out by Louis Zweegman, who is doing the testing and taking care of the Leonard Koole herd of grade Guernseys near Lynden. He calculates that keeping the milk records, testing the milk and figuring up the totals at the end of the year take only four hours a month for a small herd and the returns are many fold.

"It does not pay to be without a record book, nor to try to guess at which cows are making the highest production," he said. "We found one cow that was making a yearly production of 441 pounds of fat, at a cost of 16 1-2 cents per pound of fat, giving a net return of $74. Another cow gave only 241 pounds of fat, with a net profit of $44. We tried feeding the latter cow heavier on grain, but she would not respond, so we cut her feed down to a point where she was making the best returns for her feed. This could not have been discovered by any other means than testing."

TO INDUCE LAYING.

When the birds are 5½ months old and you really want them to start laying, cut down the sprouted oats from 5 pounds to 3½ for every 100 birds, and start feeding grain and mash, in balanced proportions.

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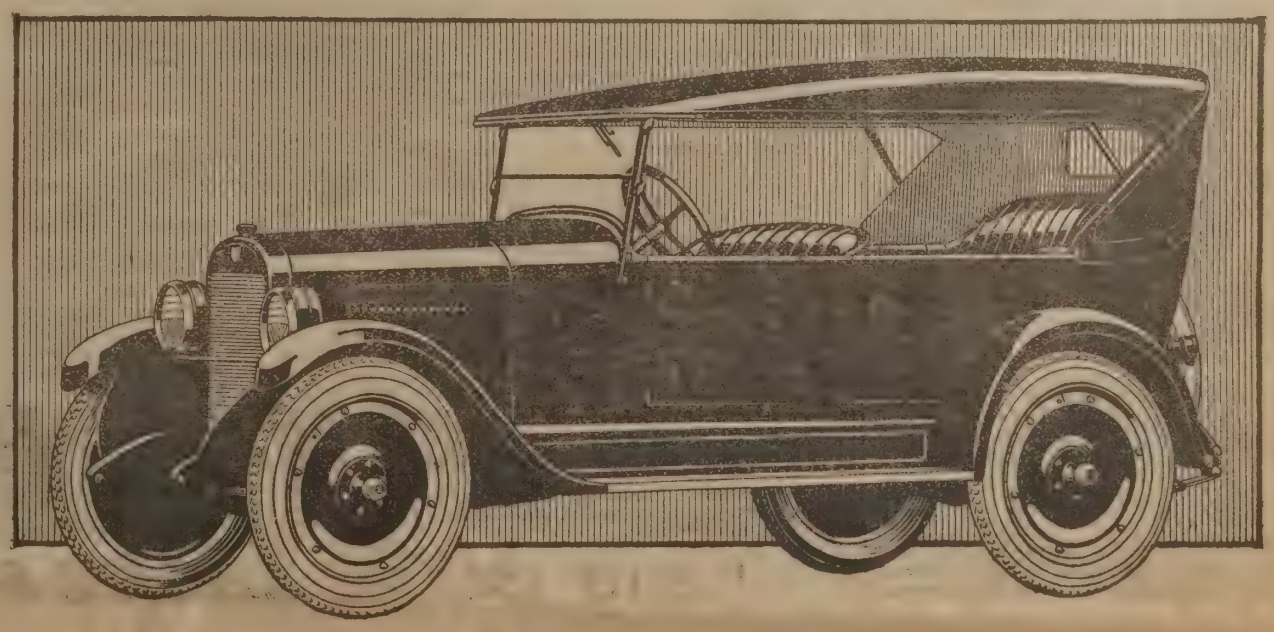
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LIVESTOCK AND DAIRY

Starting With Calves

The American Hereford Breeders' association believes that for the average individual it is a good plan to start into the purebred live stock game with calves rather than with mature animals. While the advice is given with special reference to the white faces, the principles appear equally adapted to those who select other breeds of cattle. Advantages of starting with calves are given as follows:

1. A modest investment enables one to get started. Calves, of course, may be purchased for less money than mature stock.

2. Beginners unfamiliar with methods of handling purebreds can start with calves, grow them out, and thus gain valuable knowledge and experience before the cattle reach the producing age.

3. There is less risk of disease with young stock than with old stock. Tuberculosis, abortion and other dread bovine diseases are not so apt to attack calves.

4. Calves may be shipped, fed and handled at less expense than mature stock, and require less space and equipment.

Selection of calves for the founding of purebred herds and for seed stock should be made from well bred herds known to produce a high quality of cattle. The character of the seed stock you select determines the quality of offspring that will follow.

Gives Boys a Start

W. J. Morris of Lynden, a breeder of Berkshire hogs, has adopted a novel plan of placing his pigs on different farms in the neighborhood. Last year he placed six sow pigs with as many boys who wished to take an animal and care for her until the litter of pigs came and then return the sow and one pig, keeping the rest of the litter as his own property or vice versa.

Mr. Morris gives the boys their choice of the sow or all but one of the litter for the care and feed and feels that there is but little difference in the choice. In either case the sow gets better attention and more milk than if she were to remain in the herd where milk is not so plentiful. The boys agree to give the sow the best of care and not to have her bred until she is 9 months old. The boar service is furnished by Mr. Morris, who has the privilege of selecting the boar to be used.

All of the boys who have taken pigs on the above plan have been more than satisfied with their results.

LIFE PRESERVERS FOR LIVE STOCK

By DR. E. E. WEGNER, W. S. C.

DIGESTIVE TROUBLES. ARTICLE X.

Floating Colon (Continued.)

If the gas which has collected in the bowel is not removed the animal suffers very severely and soon begins to absorb the gas into the system and when this occurs there is little hope of recovery, as the gas is very poisonous, and if any considerable amount is so absorbed the chances of recovery are slight unless the action is stopped immediately and the gas removed artificially.



I have purposely discussed the effect of the gas absorption in this article, since it occurs so frequently when the floating colon is involved, but the effect upon the system is the same if, for any reason, the gas is present and can not escape as fast as it is formed. Of course, when the amount of gas is small there may be very little absorption and it remains for it to accumulate in sufficient quantities to become under some pressure before the danger of poisoning is great. A little bloating is, therefore, not dangerous, but it must be carefully watched to see that it does not suddenly increase in amount and cause serious trouble before aid can be obtained. Any bloating is the sign of a digestive trouble that should not be neglected.

When the floating colon is impacted the most effective treatment is through the rectum as a general thing, since medicines that have to travel the entire length of the digestive tube to reach the place have to go a great distance and are, therefore, slow to act and besides in most of these cases there is sufficient quantity of fluid just ahead of the obstructing mass and no more is necessary. It, therefore, remains for a system of treatment to succeed that will soften the mass, if such can be done. Rectal injections are very commonly of value and do aid in softening the offending mass if it is not too far forward within the tube. Very great caution must be exercised not to injure the wall of the bowel in giving the enema. The water must not be too hot and must not contain any irritating substance, nor can it be used safely with a common rubber hose, as the end is so harsh and rough that the wall of the bowel is very certain to be injured unless the end of the tube is covered to prevent the above accident. The hand may be introduced with the tube and held over the end to protect the wall of the bowel.

The solution that had best be used may be made by rubbing hand soap into warm water until a good soapy solution is made. Laundry soap is too caustic to be used in this way and may irritate the lining of the bowel. It is an advantage to have the animal stand with the fore feet lower than the hind, as it causes the fluids to flow forward and find their way farther into the bowel; then, too, they are not so liable to expel the fluid when in this position.

Mistakes are common when the matter of enemas is approached, as some men feel that the more water that is injected the better, but the fluid that is immediately expelled is of practically no value. It is the water that is retained that does the good, so if a pailful of water is given and retained it may do ever so much more good than a tubful given and expelled at once.

In cases of digestive impactions some are of the opinion that some startling and drastic drug like croton oil should be given, as they think that it may do the wonderful feat of causing the removal of the offending mass. In fact, however, this kind of treatment should never be advised unless possibly it is a case of life and death, and when it is used it is always death, so why try it? It is much safer to use a somewhat slower, but much more dependable method and I would never recommend the use of the drastic acting drugs.

When gas is troublesome it is well to give drugs that have a tendency to reduce the fermentive changes that are the cause of the gas formation. Small doses of lysol or creolin are usually available and, while slow in action, are as satisfactory as most home remedies.

For purgatives in cases of impaction of the floating colon the same may be used as recommended for the great colon.

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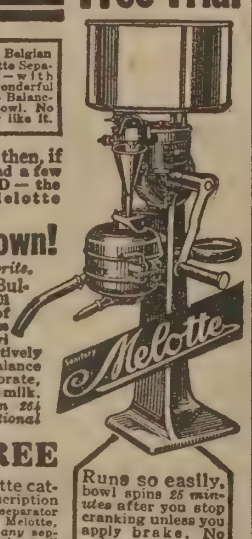
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Runs so easily, bowl spins *25 minutes* after you stop cranking unless you apply brake. No other separator needs a brake. Bowl chamber is *porcelain lined.*

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Keep them healthy—
Free from worms—
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I spent 30 years in perfecting this Tonic.
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Conditioner—Worm Expeller

It contains *Tonics*—That give a hog a healthy appetite—keeps his digestion good.

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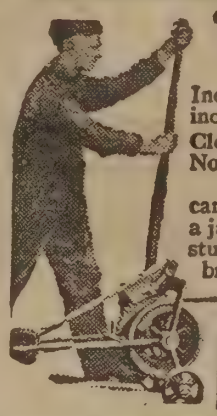


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Dr. Hess Dip and Disinfectant Kills Hog Lice



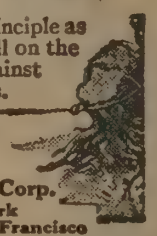
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Securing Good Seed

The great number of people engaged in poultry raising and dairying are ataching added importance to mangels and kale as winter forage crops, says M. E. McCollam, agronomist, western Washington experiment station. It is quite desirable to get large yields of these crops from small acreages because of the expense incidental to their culture.

The use of poor seed means a very appreciable loss, since it results in either a poor stand or a large percentage of scrubby and misshapen plants. To be sure of good seed, and to have the opportunity of improving the crop with very little extra labor are advantages which home seed production offers.

The experience of this station in growing kale seed and mangel seed has been quite satisfactory, and it is offered in the hope that more farmers will interest themselves in the matter.

Kale—Seed is produced during the second year of growth. The best plants should be marked for seed production. Desirable characteristics to look for when choosing seed plants are large size, great leaf surface, branched stalk and ability to retain lower leaves. All these good points should be held in mind when plants are being chosen, since the development of one characteristic, such as large size, without the other characteristic would not be very desirable.

When the seed plants are chosen they may be left in the field, or if they are in the way of field operations they may be transplanted in the early spring to a convenient place. Stakes are placed at each plant so that the plant may be tied and given support to prevent breaking or falling down. In selecting a place for the seed plants to grow it is also well to have in mind that kale crosses readily with other related plants, such as cabbage, mustard, etc., when each are blooming at the same time, and a place as far from the blooms of these other plants as possible should be chosen.

Seed is usually ripe in August, and at that time the seed stalks are cut or broken off, bundled together and placed on a large piece of muslin or canvas. Upon this they are exposed to the sun for a few hours, or longer if there are many green pods to dry out. Harvesting the seed stalks should not be delayed until the pods begin to pop open and scatter the seed. After drying in the sun the seed may be beaten out upon the canvas with a flail or club.

The seed may contain considerable moisture, and if it is not thoroughly dry before putting away in a container it may become moldy. Before putting the seed away it is best to spread it out on a table or floor for several days to allow it to dry out and cure.

One plant will usually produce about four ounces of seed, at least, thus four to six seed plants will be more than ample for any one except those who grow a very large acreage of kale.

Mangels—Mangel seed grown on the station has always proved to be more vigorous, to produce better stands and to outyield purchased seed.

Like kale, the mangel produces seed the second year. It is necessary to select roots, store these over winter in a dry place where they will not freeze, and set them out again in the spring for seed production.

Large, smooth, well-shaped mangels, solid and without forked roots, are desirable for seed production. Care in topping the mangels to be used for seed should be exercised so as not to cut off or destroy the crown, since this will affect the number of seed stalks produced. One root will usually produce about six ounces of seed. It is a good plan to select a greater number of roots than is actually needed for seed, to compensate for any losses which may occur over winter in storage.

The selected roots may be set out in the spring during April. They are placed in the ground on a slant, deep enough so that the crown is covered with an inch or two of soil. A well-drained soil is quite essential. Usually it is desirable to stake up the seed stalks to prevent breaking, but if the roots are planted about two feet apart the stalks will stand up very well and staking may not be necessary.

The seed stalks are harvested and bundled in small bundles before the seed starts to shatter. These bundles are then hung up in a dry place for several days and allowed to dry and cure. The bundles may then be beaten with a flail and the seed gathered. A screen with round perforations a little larger than the mangel seeds is very useful to separate any trash or pieces of stalk from the seed. Leaving the seed spread out in a thin layer on a table or floor for curing will prevent molding when it is put away.

Inspect Chinese Eggs

The following letter from E. F. Benson, formerly Washington state commissioner of agriculture, will be read with interest. Mr. Benson is now manager of the department of immigration and industry for the Northern Pacific Railway company:

"To the Editor of THE FARMER: I noticed in THE FARMER of August 17, page 7, a brief reference to Chinese eggs. I enclose herewith a letter of mine on that subject, published in the monthly news letter from Olympia, November-December, 1920. You probably saw this at the time, but it contains some information that I have not seen elsewhere and I thought might be of some interest to you. The point I make is that the American poultrymen's protection against Chinese eggs does not lie in a protective tariff as much as in sanitary regulations, and it is imperative that Chinese factories be under American supervision if their product is to be sold in this country. I doubt very much if we will ever make much progress based on the argument that the Chinese hens are not kept in as sanitary conditions as the American hens. We all know that a hen is a scavenger, anyway, and if there is any filth they will get it; and it doesn't appeal to me as being a very good argument tending to increase the egg consumption in the United States to try to point out that the egg inside the shell may be inherently bad if produced under some conditions.

"The importation of shell eggs from China should, I think' be restricted to the cooler period of the year, when the eggs

(Continued on page eighteen.)

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DU PONT

Two Baby Beef Clubs Compete

Early last spring two baby beef clubs were organized under the regular boys and girls' club division of the state college extension service. The clubs were both started to demonstrate the use of roughage on the farms and to get the young folks interested in the raising of high-class farm animals. Frank M. Rothrock of the Hercules Shorthorn farm, Sprague, furnished the steers, which were from grade beef cows and sired by registered bulls. Each boy or girl signed a note for the payment for his two animals and agreed to show them at the local county fair and again at the Western Royal Live Stock show at Spokane, where half of them are to be sold, the balance to be taken to the Pacific International at Portland and shown and sold.

Yakima and Kittitas counties were selected for the two clubs and one was started in the vicinity of Mabton and the other in the Ellensburg district. There were eight boys and girls in one club and 11 in the other; each member took two animals. Trips were planned from time to time during the summer and the members given instructions on feeding and care of their animals. When the time came, each club was ready for his local fair and it was a hard matter to pick out the best animals from the lot.

The Kittitas Hercules Baby Beef club has eight members, all living in the neighborhood of Ellensburg. S. L. Woodhouse acted as their local club leader and gave the members valuable assistance during the summer. When the animals were shown at the Kittitas county fair at Ellensburg, Nora Waite had both the champion steer and the champion pair of steers. In fact the three girls in the club, Nora Waite, Meta Bennett and Jessie Woodhouse, were among the first five places in the awards.

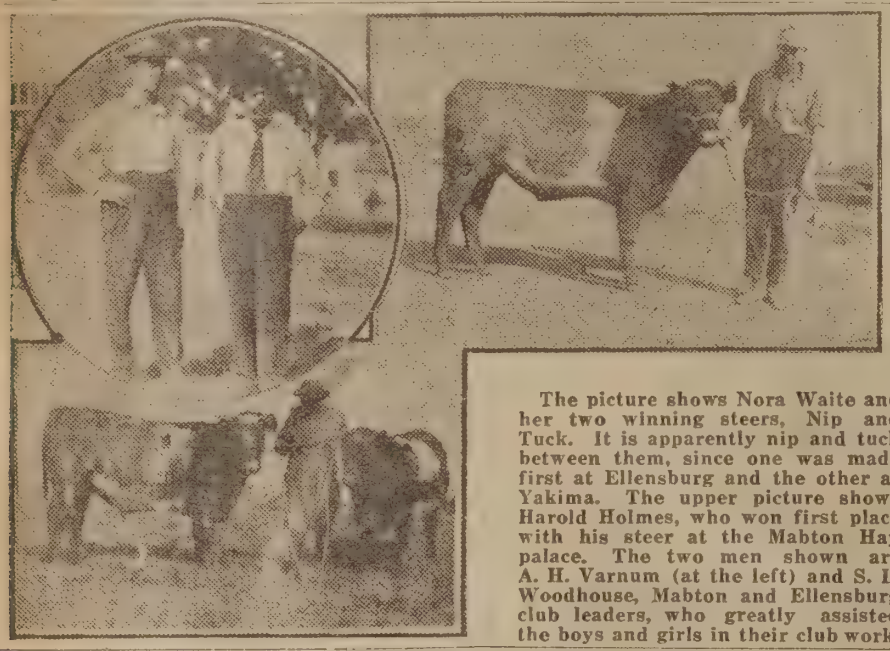
The other club, the Mabton Hercules Baby Beef club, exhibited their calves at the Mabton Hay palace the same week, which was just prior to the state fair at Yakima, but they did not enter the animals to be judged as pairs. Harold Holmes won first at this show and his brother, Fred, won second and third.

The next week there were nine animals from each club that were brought to the state fair, some of which wer eentered in the open classes. The order of their placing was interesting, since it was the first time since being taken up by the members that so many of the animals had been shown together.

Nora Waite took first and third with her champion pair and Fred Schlien of Mabton won second place. William Wadron of Ellensburg won fourth place, while Harold Holmes, who was first at Mabton, was given fifth place. Harvey Varnum came seventh and Fred Schlien's other steer was given eighth place. Meta Bennett's second animal won ninth and Chester Schlien ranked 10th.

The club members as well as a number of onlookers were interested to see how the animals were changed from their first placing at the county fair. Nora Waite's steer, Tuck, was first at Ellensburg, but it was the other animal, Nip, that was set at the head of the list at Yakima. Similarly, Fred Schlien won over his brother, who took first at Mabton. Other changes which occurred emphasized to the youngsters what every experienced stockman knows, that there are no two judges that see an animal in exactly the same light.

The club members are planning on a still better showing at the Western Royal October 28-November 2. Each club member will probably sell one of his animals at one fair and hold the other for the Portland show if he can make arrangements to attend both.



The picture shows Nora Waite and her two winning steers, Nip and Tuck. It is apparently nip and tuck between them, since one was made first at Ellensburg and the other at Yakima. The upper picture shows Harold Holmes, who won first place with his steer at the Mabton Hay palace. The two men shown are A. H. Varnum (at the left) and S. L. Woodhouse, Mabton and Ellensburg club leaders, who greatly assisted the boys and girls in their club work.

Potato Show at Spokane

Plans are rapidly being perfected for the second annual Pacific Northwest Potato Show and Growers' conference, to be held at Spokane, November 21 to 24.

The exhibition this year will be staged under the auspices of the agricultural bureau of the Spokane Chamber of Commerce uniting with the Pacific Northwest Potato Growers' association.

It has been decided to feature only two classes. Class A will include certified seed potatoes and class B commercial potatoes.

E. R. Bennett of Boise is secretary of the show and W. P. Romans, Chamber of Commerce building, Spokane, is general manager.

BANK BOOSTS PIG CLUBS.

Thirteen embryonic swine breeders of all shades of preference participated in the distribution of nearly $75 in prize money paid by the Security State bank of Chehalis has added stimulus to pig club contests at the Southwest Washington fair this year. Prizes totaling $100 were offered, but there were only 13 contestants and not all the money was used. The contest was open only to Lewis county boys and girls and was promoted by H. F. Alexander, a farmer, of Chehalis, who is an officer in the bank and who has taken unusual interest in club work. It is interesting to note that in spite of this extra inducement to good work with pigs, a Grays Harbor county contestant, rather than one from Lewis county, won the district club contest. Ralph Detering was the proud winner of the $20 first prize, and Wilfred Painter and Helen Medlicott each won $10 for the next best showing. The four next in rank were Vernon Smith, Raymond Reynolds, Daniel Cheney and Keith Lawton, who won $5 each, and Lafy Schmidt, Alfred White, Lester Halverson, Everal Chowning and Orin Svinth each won $2.50. Floyd Forth "drew down" $1. The contest was close, the winner scoring 76, the next two 75 and none of the first 10 less than 70.

Mason County Fair

The 12th annual Mason county fair, which closed October 1, witnessed one of the most successful years in its history. The attendance was good in spite of the bad weather which occurred during the week. The exhibits came largely from the Agate, Skokomish, Matlock, Dayton, Lake Cushman, Shelton Valley, Oakland Bay and Hartstine communities. The live stock department was a big part of the fair and the better babies contest was equally attractive for those who had an entry. There was also a good poultry show and the concessions had their place.

The Shelton-Mason County Commercial club entertained visiting commercial club members from Olympia and other points at a dinner at the Shelton hotel Saturday night, to celebrate the opening of the pavement between Olympia and Shelton, and these visitors were also guests of the fair.

A new building which was constructed to house the grange and community exhibits proved inadequate, but the displays attracted much attention and admiration. Agate grange won the silver cup for the third time, which entitles it to permanent ownership. W. T. Putnam of Lake Cushman put on a complete farm exhibit which was worthy of special mention. The best was chosen from these exhibits to make a county exhibit to send to the Puyallup fair.

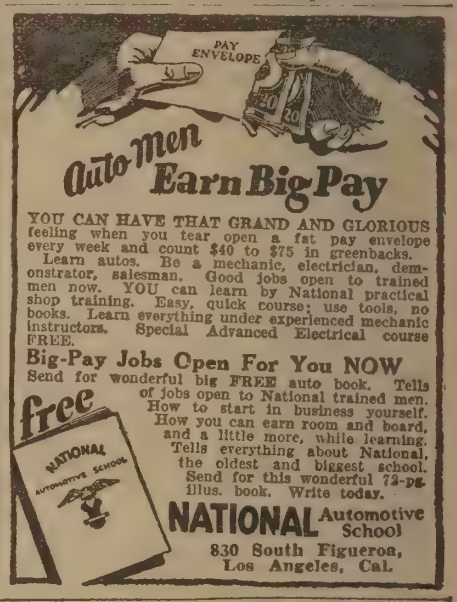
The Mason county fair enjoys a unique position. It is an agricultural fair in a county where farmers pay about 5 per cent of the taxes. All the exhibits are from within the county. No entry fees are charged, stock is transported on trucks to and from the fair and cared for while there at county expenses and liberal prizes are offered in all departments.

This fair brings out a fine spirit of cooperation among the residents of the county. Much credit is due Miss Rose Fredson, president of the woman's auxiliary, and H. E. Drew, county agent, for putting this fair over and making it a success.

ADVERTISE THE APPLE.

The Eat Wenatchee Apples, Inc., an organization formed to boost "the big red apple," has started a campaign of advertising in all big market cities by means of newspapers, billboards and magazines. The latter will feature a table of the prize apples, Delicious, Winesaps, Jonathans, Rome Beauties, Winter Bananas and Stayman Winesaps.

Forty boxes of these prize apples have been shipped to St. Paul for exhibition at the food and household exposition.





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What's the Latest Style in Meats?

A former speaker of the house of representatives, himself rather ponderous, once declared that "no gentleman ever weighs over 200 pounds."

In determining values in the live stock market weight varies in importance from the inconsequential to a factor at times transcending even quality and finish.

For a century the drift of market preference has been toward lighter and lighter cattle, hogs and sheep. The tallowy mountains which formerly constituted the standard of perfection in beef production have been superseded by the tidy yearling. The lardy leviathans which walked to market in the days when Cincinnati, then the chief packing center, was known as "Porkopolis," have given way to the "regulation lights" weighing 160 to 190 pounds. Fashion likewise has turned from the heavy wether to the 80-pound lamb.

The smaller carcass is less wasteful, both for the retailers and the consumer, and the smaller sized retail cuts are a better fit for the purse and for the average family size of the present day. Being from younger animals as a rule than the heavier carcass, all parts are comparatively tender. From the producer's standpoint, there is economy also in production for sale at a younger age, but such a factor does not induce the market to pay a higher price.

While the general rule is that lighter weights have the preference, there are exceptions and the amount of discount, if any, on heavyweights varies greatly at different times. While the rank and file of consumers want the cuts from lighter carcasses, the hotel, restaurant, dining car and steamboat trade requires a more or less constant supply of heavy beef. Likewise a few heavy wethers can be sold. These outlets are easily glutted, however, and if a few too many arrive they must be sold at a sacrifice. On the other hand, since this trade is rather fastidious, scarcity will place such animals at a premium.

Heavy steers, which mean those weighing 1350 or over, generally are in their heyday during the late summer and fall months. Such cattle can only be produced by a long period on feed. Feeders must be purchased during the fall or early winter and fed a full grain ration for five or six months. When the busy season on farms arrives along with hot weather and fly time, during which cattle do not gain well, most feeders order cars. Only a few are carried beyond this period so that they can virtually command their own price. For the same reason fat yearlings also are apt to be scarce at that season so that the actual premium on weighty steers over yearlings is not apt to exceed 50 cents per 100 pounds at the outside.

Winter is the chief cattle feeding season. Feed lots throughout the corn belt are filled during the late fall and the cattle fattened on whatever feed is available. Almost invariably the result is an excess of heavy finished steers during the spring months, which must be sold at a discount.

Once in a while exceptions occur. The disappointing cattle market in the first half of 1921 led many feeders to hold on through the summer, hoping the market would recover and enable them to avoid losses. Marketing these cattle was not completed till December. Last fall more light feeders were taken out than normally, so that heavy fat steers were not at as great disadvantage as usual during the last spring.

It follows that the purchase of light feeders during the fall months to be fattened for the spring market is desirable. On the other hand, producers of stockers and feeders will find weight more of an asset during the fall than at other seasons of the year.

In the calf market weight is an exceedingly prominent factor in determining values. Speaking broadly, the well finished calf seven weeks old weighing 150 pounds is most desirable. Slightly lighter weights do not ship well, especially in cold weather, they are apt to be less muscular; and still lighter weights running down below 100 pounds may not meet inspection requirements as to age. Heavy calves get beyond the real "veal" age at about 225 pounds, when they sometimes are called "heavy killing calves," and sell far under prime veals, no matter how well finished they are. Tastes differ here, as the southern and the western markets take more kindly to heavy calves than the middle west and the east, where most vealers are dairy bred.

Before the day of lard substitutes heavy hogs sometimes sold at a distinct premium in the winter because they have a slightly higher dressing percentage than light hogs and the product from both sold at about the same price. In recent years the demand for fresh pork and for bacon has expanded so that hogs weighing 160 to 190 pounds which produce the cuts which have sold at a premium most of the time. During November, December and January, light hogs from spring farrow are always abundant so that the general average of light hog prices has fallen below the average of heavy hogs even though choice light hogs were selling at the top of the market. The premium on lights is most marked in the summer months when such hogs are scarce and the bulk of the supply consists of fat sows and heavy barrows.

The public insists upon the lamb weighing 80 pounds or thereabouts because of the more desirable sized roasts and chops and also for assurance that it is getting lamb. New lambs, in load lots, exceed this figure very much until the late winter and spring, when the feeding season is on. Discrimination against excessive weight is rather sharp, begins when averages run above 85 pounds and may easily amount to $1 per 100 pounds for lambs which are 15 pounds too heavy.

The nearer yearlings come to the specified weight for lambs the better they are substituted for lamb in the dressed trade. Wethers and ewes also sell much better if they do not scale over 100 pounds.

Organizing Beef Club

A beef club is being organized in the Wiley City district of the Yakima valley. According to the plan, farmers entering the club will furnish, each in rotation, a steer a week, and the different cuts will be rotated among the members of the club so that by the time that each has furnished a steer each member will have sampled all the different cuts from as many different steers. One man is to do the butchering. It is thought that 25 men will go into the club.

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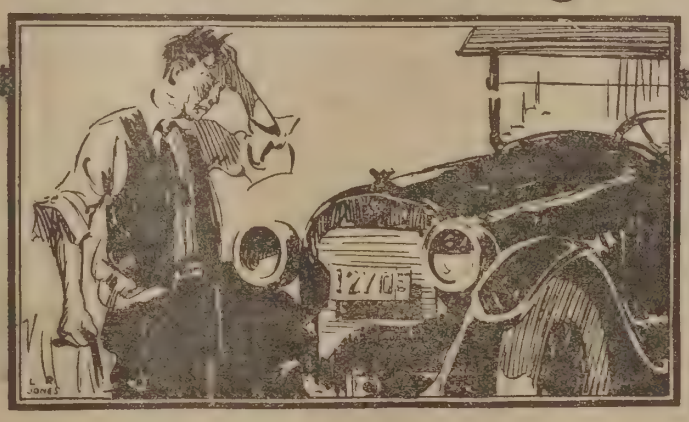
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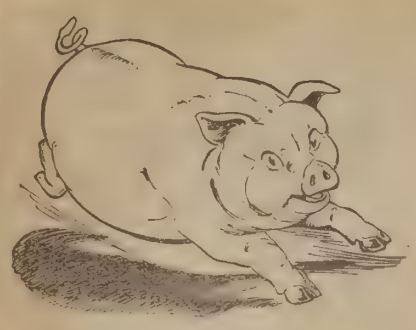
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October 11, 1923, 65 open gilts and boars.

HERD BOARS

Big Buster, grandson of Giant Buster.

Giant Liberator, by Bendena Giant, dam by Liberator.

Get your name on our mailing list. We have a few real outstanding boar prospects to sell now.

Fred D. Entermille
BAKER, OREGON.

Meadowbrook Farm Herefords

150 head of Anxiety bred Herefords for sale; 50 head of bulls, ages from 10 months to 2 years old; 25 head of open heifers and 75 head of young cows, bred or calves by side. All priced to sell.

H. F. Deardorff
MALTA, IDAHO.

HEREFORDS

45 at 45 AUCTION

Annual Western Royal Sale

By NORTHWEST HEREFORD CATTLE BREEDERS' ASS'N.

Wed., Nov. 1st. 1:00 P. M.

SPOKANE, WASHINGTON.

A purebred HEREFORD steer won grand champion over all breeds at the 1921 Western Royal.

Herefords pay—on the range and in the feed lots.

This sale will contain

RANGE BULLS BY THE CARLOAD

Young breeding females and prospective sires.

For Catalogues Address

R. P. BANKS, Sale Mgr.,
Spokane Hotel, Spokane, Wash.

Auctioneer, D. C. ("SANDY") KEITH, Davenport, Wash.

HERCULES SHORTHORN

CONSIGNMENT TO THE

PACIFIC INTERNATIONAL SALE to Be Held at PORTLAND, OREGON, THURSDAY, NOVEMBER 9th.

HERCULES CONQUEROR, Roan, Junior Yearling Bull, by a son of Gainford Perfection and out of a daughter of Doune Radiance. First in class—Junior and Grand Champion, Spokane and Yakima, 1922.

HERCULES BANDMASTER, White, Senior Bull Calf by Hercules Topsman and out of Moss Rose 42d. First and Junior Champion at Helena, 1922.

HERCULES STATESMAN, Roan, Senior Bull Calf by Gainford Perfection and out of Matchless 47th.

HERCULES IDEAL, Roan, Senior Bull Calf by Lavender Stamp and out of Hercules Rosabella, a Gainford Perfection Heifer.

HERCULES RADIANCE, Roan, Senior Bull Calf by Doune Radiance and out of Nancy Queen.

HERCULES VICTORIA 4th, white, Junior Yearling Heifer by Village Sultan and out of Victoria Princess.

HERCULES MISSIE 4th, Roan, Senior Heifer Calf by Doune Radiance and out of Lady Missie 10th by Superb.

HERCULES VIOLET 6th, Roan, Senior Heifer Calf by Doune Radiance and out of Sweet Violet 9th.

This is our best consignment to this sale. See them at the Pacific International.

DAY and ROTHROCK COMPANY
SPOKANE, WASH.

KING OF THE PONTIACS
The World's Greatest Sire

WEDNESDAY, OCTOBER 25th

We will sell seven granddaughters of this great sire, from one of his best sons—King Pontiac Segis of Brookside, his dam a 27-lb. daughter of Pontiac Clothilde DeKol 2d. Butter, 7 days, 37.21 lbs.; butter, one year, 1271.60. World's record when made. His dam's sire, from the same dam as the great King Segis.

Twelve cows in this offering will be bred to this splendid bull. Three of them are full sisters to a 27-lb. cow from a 22.5 lb. dam made at ten years old. We will sell the dam and daughter of a 28-lb. cow. Two daughters of the noted Marks bull—Sir Ormsby Burke Segis, a splendid yearling bull from one of these cows.

A few yearling heifers and some splendid summer calves will be sold.

Garfield Stock Farm

HOLSTEIN CATTLE. BIG TYPE DUROCS.
S. W. SHOEMAKER, Prop., Garfield, Wash
GUE & CRANKE, Auctioneers. J. E. MILLER, Clerk.

Poland China Boars

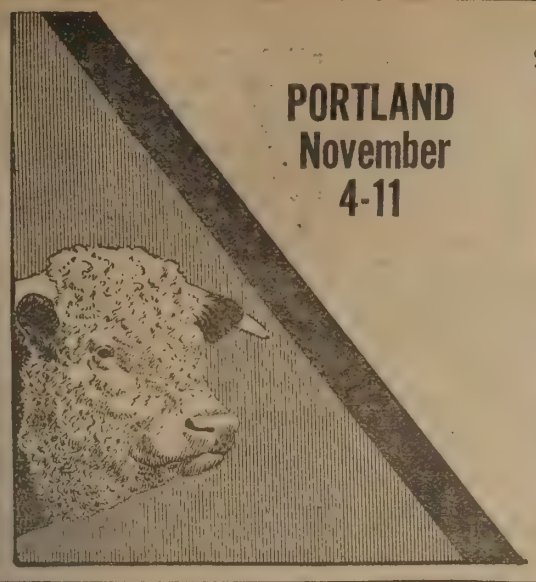
12 grand young boars, all sons of Paramount, grand champion, Idaho state fair and three other fairs in Idaho, 1921 and 1922. Sire of junior champion at four fairs and grand champion at one fair, 1921, and sire of junior champion boar and junior champion sow Idaho state fair, 1922.

THE FINE BOARS are the tops of our 1922 litters. Every one a grand individual and will make ideal herd boars. Prolific breeders. Every boar from a litter of 10 or more.

WILL BE SOLD AT PRIVATE SALE—We will have no auction sale this season, but are offering these fine young boars at prices that will surprise you. Write us.

Kin-Son Stock Farms

A. L. WILSON & SONS, Managers, Route 5, Nampa, Idaho.



PORTLAND
November
4-11

See the Champions at the

Pacific International Livestock Exposition

Largest Livestock Show in America—10 acres under one roof

More than 3,500 pure bred animals
Auction sales of beef and dairy breeds
Western dairy products show
Manufacturers' and land products show



Reduced Fares on All Railroads

HEREFORDS
105 at 105
AUCTION

THE BEST THE WEST AFFORDS

1922 promises another "Whiteface" year on the Northwest Winter Show Circuit.

A Purebred HEREFORD Steer won Grand Champion over all breeds at the 1921 Pacific International.

A carload of Purebred HEREFORD Steers won Grand Champion over all breeds at the 1921 Pacific International.

Herefords pay—on the range and on the feedlot.

1922 Portland Sale Events

Wednesday, Nov. 8, 1:00 p. m.
Union Stock Yards, North Portland.
First Annual Sale, Thiessen Herefords.

45 Registered Bulls and Females—including cows with calves at foot. Sired by Bonnie Lad Jr., Beau Perfection 26th and Prince Rupert 80th. Cows in calf to Bonnie Lad Jr. and King Meadow Glade.

Henry Thiessen, Owner.
Sweetwater, Idaho.

Friday, Nov. 10th 1:00 P. M.

Annual Pacific International Sale by Northwest Hereford Cattle Breeders' Ass'n.

60 Registered Bulls and Females—representing such direct blood lines as Prince Rupert, Beau Carlos, Beau Blanchard, Panama, Beau Perfection, Debonair, Bonnie Lad, Fairfax and other proven Sires.

Range Bulls by the Carload

Selected Breeding Females—
Proven and Prospective Herd Sires.

Sale Committee.
HERBERT CHANDLER, Baker, Ore.
HENRY THIESSEN, Sweetwater, Ida.
WM. GAINOR, Winthrop, Wash.
CLYDE WEATHERFORD, Dayton, Wash.
WILL PLATT, Genesee, Idaho.

For catalogues address
R. P. BANKS, Sales Mgr.
Spokane Hotel, Spokane, Wash.

Auctioneers:
ARTHUR W. THOMPSON, York, Neb.
D. C. ("SANDY") KEITH, Davenport, Wash.

Annual Pacific International SHORTHORN SALE

Portland, Ore., Thursday, November 9, 1922

50 HEAD — 25 Bulls — 25 Females — 50 HEAD

This sale is full of herd heading bulls and prize winning females. They have been selected from the leading herds of the Northwest and are the type of cattle that breed on. In this year's offering will be State Fair Champions and prize winners.

If you need a new herd bull, or desire a female or two to build up your herd attend this sale.

Shorthorns lead in the northwest and will continue to do so if you breed the right kind. Beef has started back up hill. Start in the business now while prices are low.

For detailed information and a catalogue write to

A. E. LAWSON, Sales Manager.
205 Exchange Bank Bldg.,
Spokane, Washington.

SALE UNDER AUSPICES OF PACIFIC NORTHWEST SHORTHORN BREEDERS' ASSOCIATION

First Pacific International Sale Milking Shorthorn Cattle

DUAL PURPOSE CATTLE - MILK AND BEEF
THE FARMERS' CATTLE

PORTLAND, OREGON
FRIDAY, 10 A. M., NOVEMBER 10, 1922

Twenty head of bulls and females have been selected for this sale. They are all of strictly milking Shorthorn breeding and have milk and butter records behind them. Besides, they will all be shown at the Pacific International Live Stock exposition. Many of those entered have been prize winners at other shows.

There has been an enormous demand for milking Shorthorns and this sale presents the only opportunity you will have to make selections this fall.

Consignors—FOOTHILLS FARM, J. D. Rowe & Sons;
NORTHWOOD FARM, E. C. Truesdell.

For detailed information and catalogue write

A. E. LAWSON, Sales Manager.
205 Exchange Bank Bldg.,
Spokane, Wash.

Quick Growth, Large Type O. I. C. Swine of Highest Quality

Large, smooth, large litters, easy fattening at all ages. Carry blood from best individuals to be found anywhere. Choice weaned pigs at reasonable prices. Registered free in purchaser's name. Sent on approval.

RINGGOLD FARM. **J. H. WEST, R. 1, Centralia, Wash.**

AUCTION SALE

FRIDAY NOVEMBER 10 10:30 A. M.

AT

Pacific International Live Stock Exhibition

North Portland, Ore.

70 HEAD 70

REGISTERED HOLSTEINS

All quality stock. Many of the blue ribbon animals of last year's show will be sold after being exhibited.

They are the finest lot of show cattle ever offered in a western sale.

Also high record bulls that will be shown and have won blue ribbons.

A great sale with cattle from prominent breeders.

For Particulars Write

GEORGE A. GUE

Auctioneer.

Yakima Wash.

LET'S GO!

News for Breeders

MADE GOOD INVESTMENT.

"I never made a better investment than when I shipped one of our best cows about 800 miles to be bred to a Langwater bull," said J. O. Johnson, a breeder of registered and grade Guernseys near Sumas, Whatcom county. "We got a fine bull calf from her and he is now the herd sire. We have had some excellent calves from him and he has improved the production of the herd. We tried milking the herd three times a day for six months and it made a difference in the production, but we dropped back to twice a day when the grass became short. The grade cows in the herd will average as high as 450 pounds on good feed and there are some of the purebreds that will make between 600 and 700 pounds." Mr. Johnson has one of the largest herds of Guernseys in the county. There are 60 head in the entire herd and there is a good bunch of heifers coming on.

LOSES HIS CLUB CALF.

Stanley Plaster of Ferndale, one of the members of the Hub Guernsey Calf club, had the misfortune to lose his calf, Hillsdale Goldie May, a junior yearling heifer, by infection which started by a rope injury. The heifer was from the Dr. A. McRae Smith herd at Lynden and Stanley has spoken for a full sister of Goldie which he will keep as his club calf.

AVERAGE 400 POUNDS OF FAT.

Nels Jordal and Son of Ferndale are known as purebred Jersey breeders and have shown their herd at the county fair for the last 10 years. The herd was started with the Eminent and Golden Fern's Lad stock, there being 17 head of direct descendants from this foundation in the herd at the present time.

Two Waikiki heifers have been added to the herd and one has been making an exceptional record of 500 pounds of fat with her first calf. This, however, is a private record. Another one of the heifers in the Jordal herd is Sunlight's Golden Model, a senior yearling whose sire is a half brother to Vive la France.

The nine head that are milking at the present time have come through the year with a herd average of 400 pounds of fat, which is also a private record. For pasture the herd is run on 45 acres of uncleared land which affords good feed at least six months of the year. For hay crops, Mr. Jordal uses red clover on the upland meadows and has found kale and mangles to be a valuable green feed.

CRESTLAND BOB WINS.

Herewith is shown a snapshot of Crestland Bob, an outstanding 2-year-old Berkshire boar owned by the Simonson Hog company at Buena, Wash. He was



awarded the senior and grand championship at the Washington state fair this year.

NEW GUERNSEY HERDS.

Foundations for several new Guernsey herds in the district around Goldendale, Wash., were laid at the northwest breeders' sale in Portland this summer by members of an association which is using a purebred community bull of Langwater breeding, Fawndale Mariner by name and a product of the Wallace & Fordyce farm at Outlook, Wash. Members purchased their first females at this sale. W. E. Hornbrook and H. D. Roberts each bought a heifer consigned by Henry Schick of Buhl, Idaho, both sired by Imp. Meredith of Mountain View, and both out of imported dams. M. O. Dayton paid $230 for a strongly bred Langwater heifer and D. Admiral $300 for a bred heifer sired by Glenwood King of Edgemoor, making a total of $1045 invested by four of the six association members.

WINS JERSEY HONOR.

Sultan's Olga Boy is one of the outstanding Jerseys in the Ericson Brothers herd near Yakima. So good is this aged bull that he has added several blue and



purple ribbons to his winnings this season. He was senior and grand champion at the Washington state fair.

HOLSTEIN SALE DISAPPOINTS.

The consignment sale of registered Holsteins which was held at the state fairgrounds on Wednesday, September 20, under the auspices of the Washington State Holstein-Freisian association resulted in the disposal of 50 out of the 70 animals consigned. Although the top animal brought $320 and was sold to Daniel Beardsley of Yakima, the average was low. Nineteen of the animals were withdrawn from the sale. Governor Hart was present and bought two animals to add to the state herd at Fort Steilacoom. The majority of the sales, however, were to local breeders, while Ralph Tuttle of Walla Walla purchased three head. George A. Gue cried the sale and was assisted by Robert Koostra of Tolt. George S. Bulkley, acting secretary of the Washington State Holstein-Freisian association, acted as clerk.

A HERD OF GOOD CHESTERS.

While Chester Whites are not the most common grade of hogs found in western Washington, C. A. Warren has a herd at Vancouver which is a credit to the community. At present there are four sows and the herd boar. At other times a much larger number of brood sows are kept through the winter. The herd boar, a 2-year-old, is sired by the Ed. Shoels herd, Albany, Ore., and is out of one of Mr. Warren's own brood sows. He is a good animal and shows true Chester White type. The sows averaged nine pigs to the litter this spring.

RAMS SELL WELL.

Fifty-two purebred Hampshire ram lambs averaged a little more than $31 at the second annual Kittitas County Hampshire association sale, held at Ellensburg, early in September. This was regarded as a good figure as most of the rams go to the range.

The following is the list of principal purchasers with the number of head bought: Robert Blastock, Fily, Idaho, 22 head; Coffin & Son, Yakima, Wash., 9; Archie Prior, Yakima, Wash., 6; Prosser Sheep Co. (J. F. Sears), Yakima, 6; K. C. Kohle, Ellensburg, 2; Ed Forguer, Granger, 2; Charles Luver, Ellensburg, 2.

The sheepmen present were impressed with the size and bone carried by the majority of the rams. Two facts were demonstrated in connection with the sale: First, that quality counts and is paid for by the purchasers; second, that the big, husky, well-grown lamb sells at a prebetter ram sale in 1923.

mium. Range ram buyers and breeders alike are looking forward to a bigger and

CHIMACUM BULL ASSOCIATION.

First of the 12 members of the Chimacum Bull association to realize on the services of their Todd sire is Tom Yarr, one of whose junior 2-year-olds recently dropped a calf by this bull and subsequently made 21 pounds in seven days. The bull will not be 2 years old until December, but about 40 cows are in calf to him and half that number will freshen this fall. He is a son of Sir Korndyke Ormsby Piebe and Cascade Blossom, former world champion 305-day milk producer.

SELL FOUR REGISTERED JERSEYS.

Four registered Jerseys were sold to the Matson farm at Vancouver, B. C., by John R. Martin and E. L. Brewer of Satsop. Mr. Martin sold three head of cows for a total of $2150 while the animal from the Brewer herd brought $500. This makes a total of $2650 for the four head.



SELDOM SEE a big knee like this, but your horse may have a bunch or bruise on his ankle, hock, stifle, knee or throat.

ABSORBINE TRADE MARK REG. U.S. PAT. OFF.

will clean it off without laying up the horse. No blister, no hair gone. Concentrated—only a few drops required at an application. $2.50 per bottle delivered. Describe your case for special instructions, and Book 8 R free. ABSORBINE, JR., the antiseptic liniment for mankind, reduces Painful Swellings, Enlarged Glands, Wens, Bruises, Varicose Veins; allays Pain and Inflammation. Price $1.25 a bottle at druggists or delivered. Liberal trial bottle postpaid for 10c.

W. F. YOUNG, Inc. 371 Temple St., Springfield, Mass.



THERE'S FUN IN BUCKING THE RAIN—IF YOU WEAR A TOWER'S FISH BRAND REFLEX SLICKER

$4.50 A. J. TOWER CO. BOSTON DEALERS EVERYWHERE

TOWER'S FISH BRAND

When answering advertisements don't fail to mention this paper.

$91.50 2 H-P. F.O.B. Factory. OTTAWA LOG SAW



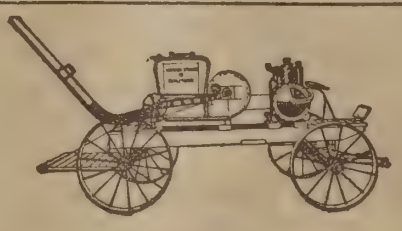
4 H-P. 2 H-P. saws 8-in. logs as well as 5-ft. logs; Light weight; wheel mounted; easy to move. 4 H-P. saws logs, limbs; fells trees. Fast cutting. Start or stop saw while engine runs. Use engine for general belt work.

30 Days' Trial 10-YEAR GUARANTEE

BIG FUEL SHORTAGE! Make big money sawing and selling wood. OTTAWA quickly pays for itself. Shipped direct from Factory or 9 branches at big saving. Write today for FREE Book.

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F-23 Niagara Power Duster.

NIAGARA

Power and Hand Dusters for All Dusting Purposes

Also a Complete Line of Niagara Dusting Materials.

Niagara Soluble Sulphur Compound

Unexcelled as a dormant spray.

Write for Complete Catalogs and Prices.

Niagara Sprayer Company

342 Washington St., San Francisco, Cal.

Paradichlorobenzene kills peach tree borer. Bulletin and prices on request.

Breeders' Dept.

Wood Live Stock Company

Spencer, Idaho

Leads the World in Hampshire Sheep, Both for Quantity and Quality. Prices Quoted.

F. J. Hagenbarth

President

MEADOW BROOK FARM AYRSHIRES

Herd is now headed by Willowmoor Sentinel 23d, whose sire is Willowmoor Sentinel, only son of former world record cow Serranton Dora 2d, on the dam's side. Willowmoor Sentinel 23d is equally well bred, being out of that widely known world record cow, Carsten's Eveline, the best breeding cow of the day, who is also the dam of Willowmoor Miss Carsten, the champion living two-year-old, who is said by good judges to be the best individual living, and who is valued by owner at $25,000. I have some nice young stock of this breeding ready to ship.

Meadow Brook Farm

HARRY WILSON, Owner, Montesano, Wash.

MILCH GOATS

Does for sale on installment plan. The milk they give soon pays for them and you own the doe.

FAIRMOUNT GOAT DAIRY, Eugene, Ore.

Registered Belgian Horses A few choice bred mares and two very choice young stallions.

WALTER W. MILLER, R. 2, Filer, Idaho.

TREES

The Kirkman Guarantee

supplied to each customer on request, is at

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the selling price of trees, that they bear true to name.

More than five million trees and vines in our nurseries in California and Oregon.

No spectacular specialties, but well-grown, properly graded stock propagated from parent trees selected for their productivity and quality of fruit.

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149 California Street

SAN FRANCISCO, CALIFORNIA

Member Nurseryman's Bud Selection Association

Breeders' Dept.

Holstein Bull Calves

From tested dams; accredited herd, free from tuberculosis, ranging in age from two to 18 months. These bulls are from high record cows, bred from the best families of Holsteins. Prices reasonable.

ALOYS SCHULER
Route 1, New Plymouth, Idaho.

HOLSTEINS FOR SALE

Bull calves, yearling bull and 4-year-old sire by Johanna McKinley Segis, from a 31-lb. cow, at farm prices. Prizes at county fair this fall; 4 firsts and 1 junior champion out of 4 entries.

R. H. Kidd & Sons
BEAVER, WASH.

6 Holstein Bull Calves

about six months old, from extra fine cows, with semi-officials records; well marked, fine top lines, fine individuals, low prices.

INTERMOUNTAIN INSTITUTE, Weiser, Ida.

Holstein Bull Calves

Out of grand champion at state fair. Two sired by full brother of world's champion Holstein cow, with record of 160 pounds milk in one day. Prices reasonable.

HERMAN WEICK, Notus, Idaho.

Holsteins--Poland Chinas

Musser & Musser, breeders of registered Holsteins. King Segis 10th breed.

Registered Poland China hogs. Seven spring boars, big type, 25 spring and fall gilts.

MUSSER & MUSSER, Nampa, Idaho.

Holstein Bulls at Farmer Prices

Sired by son of former world's champion and out of cows that make good at the pail.

S. D. CORNELL, Grandview, Wash.

Registered Holstein Bull

18 months old, from high producing herd. Prices reasonable.

A. J. MILLER, Waukon, Wash.

100 SHORTHORN HEIFERS

GRANDDAUGHTERS OF THE GREAT SIRES RINGMASTER, SUPERB AND GOLDEN GOODS.

Some with calves, some bred, some open. In good pasture condition. Prices right. A few young bulls of the same breeding for sale.

Willowdale Farm
M. R. BIGGS, Proprietor, Prineville, Ore.

Boise Valley Shorthorn Breeders' Association

Can supply one or two carloads of good, strong young bulls at any time. Address

LELAND HANNA, Sec., Notus, Idaho.

Milking Shorthorns

Cows and young bulls by Peerless Knight, by Beau of Glenside, carrying 93¾ per cent of champion milch cow, Rose of Glenside.

J. E. DANIELS, Murphy, Ore.

Send for Free Booklet

"Some Suggestions to Live Stock Advertisers," outlining the practices of successful men of long experience. Helps in determining how much to spend, the mediums to select, preparing advertisements, handling inquiries, the use of photographs, etc. Write today.

THE PACIFIC NORTHWEST FARM TRIO
Dept. L. Spokane, Wash.

DIAMOND B RANCH

Pure Bred Hereford Cattle

Herd Sires:
DON FAIRFAX,
BEAU GOMEZ, JR.

A Few Choice Yearling Bulls.

M. J. Beall, Mgr.,
LOWELL (Lane County), ORE.

Polled Herefords

9 young registered bulls, raised in the hills; fit for range service anywhere.

Robert Clark, Horseshoe Bend, Idaho.

Meadow View Jersey Farm

again scores a winning at the big show at the state fair.

Junior champion bull—1st R. of M. cow, with two of her progeny. 1st dairy herd—This is a winning worthy of your consideration.

Five daughters of one bull—They have never been defeated in group for dairy herd. These cows have four gold and three silver medals to their credit. Let us quote you a price on a young bull.

MEADOWVIEW JERSEY FARM, Turner, Ore.

Jersey--Gold and Silver Medal Sire

Ashnook Farm offers a few heifers and young bulls, sired by the gold and silver medal sire, Silver Chimes, of S. B., sire of ex-world champion heifer, Silver Chimes Gwendola, and 20 register of merit daughters, and more qualifying.

DEL PERKINS, Carlton, Ore.

Jersey-St. Mawes Bulls

Registered bulls, rich in blood of St. Mawes Lad, from high testing dams. Priced for immediate sale. Shortley Bros. CHANNEL VIEW JERSEY FARM. ORCAS, WASH.

Allandale Jersey Farm

Bulls of any age for sale, from R. of M. dams. Priced right.

A. A. BIXBY, Freewater, Ore.

Jersey Bulls at Bargain Prices

Send today for our special sale list of registered Jersey bulls from R. of M. dams. Easy terms, liberal credit.

WARREN GRAY, Box T, Jefferson, Ore.

Silver Medal Jerseys

Young bulls out of heifers qualifying for silver medals with first calf, and will make their sire a silver medal bull.

JOHN KOPPLIN, Gaston, Ore.

Registered Guernsey Bull Calves

from imported and American dams. Bred for quality and production. Write for description, breeding and prices.

J. T. HARSHBERGER & SONS, Filer, Idaho.

Guernsey Bull Calf

31 tested dams average over 600 lbs. fat. Dam now on test. $150, express prepaid to your express office. Foshay Farm.

O. & M. L. VOGET, Hubbard, Ore.

Young Guernsey Bull

11 months, dam official tested, milk 9080.70; b. f. 415.04, at two years; May Rose breeding. Price $175.

J. M. MILLER, Burlington, Wash.

Brown Swiss Stock Farm

Breeders of Brown Swiss cattle, the farmers' dairy cow. Young stock for sale.

THEO BRUGGER, Route 3, Gresham, Ore.

Aberdeen Angus Bull Calves

"Bred in the Purple." Splendid individuals. Best only. Prime condition; from selected sires and dams. Prices right.

HORNET CREEK CATTLE CO., Council, Ida.

HAMPSHIRES

Heart o' the Valley Ranch

NOW OFFERING

BRED FALL GILTS FOR SEPTEMBER AND OCTOBER FARROW.

Sired by Model Defender, grand champion boar Pacific coast, 1921.

CHEROKEE LAD AND GEN. TIPTON BREEDING.

HAYS & HARTER
Grants Pass, Ore.

HAMPSHIRE SWINE

20 bred gilts and a few tried sows. Good blood lines. Satisfaction guaranteed.

J. M. FRUITTS, Cambridge, Idaho.

Home Farm Hampshire Hogs

Weanling pigs, service boars, gilts and sows. Latter bred to son of Exalted Ruler, if desired. Good stock, reasonable prices.

EDGAR P. CANFIELD, Carlton, Ore.

Orchard Hill Farm Dispersal Sale

40 REGISTERED GUERNSEYS 40

WEDNESDAY, NOVEMBER 22, 10 A. M.

On the farm at Redmond, near Seattle, Washington.
UNITED STATES GOVERNMENT ACCREDITED HERD, NO. 7271.
40 head, 35 females, 20 direct descendants of the famous cow, Sammamish Topsy.

THE FINEST Guernsey sale ever held in the Northwest. You have a rare opportunity to buy beautiful high producing Guernseys. No like opportunity has been offered for years, to get such high producing animals, QUALITY—PRODUCTION.

Write for catalogue to
ORCHARD HILL FARM, Redmond, King County, Washington,
or to
DR. PARK WEED WILLIS, Owner, 1256 Empire Bldg., Seattle, Washington.
GEO. GUE, Auctioneer.

BLANCHARD HEREFORD RANCH

PUBLIC SALE OF REGISTERED HEREFORDS

November 15, 1922 **Buhl, Idaho**

I will sell at auction 30 registered cows and heifers, 5 yearling bulls. All fine young stock of the best of blood lines. All cows are bred to my herd sire, except yearlings sell open.

HERD BULLS IN SERVICE

Bonnie Lad ..... By Bonnie Brae 21
Director ..... by Disturber
Prince Barre 3d ..... Grandson of Generous
Herd Accredited. Write for Catalog.

WALTER BLANCHARD, Owner, Buhl, Idaho
Ranch 1½ miles N. E. Col. E. A. Walters, Auctioneer.

HEREFORD BULLS

We can supply one bull or three carloads of coming 2-year-olds, from Anxiety 4th line of breeding, splendid individuals, in prime condition for range bulls or herd headers.

HEREFORD HEIFERS

To reduce stock will sell from one to 60 fine coming 2-year-old heifers, same breeding as these bulls. No better Herefords anywhere. Prices to suit the times.

MIDLAND BREEDING FARMS, L. L. Young & Sons, Nampa, Idaho.

Holsteins Dispersal

Absolutely the greatest producing herd (consisting of 27 head) of registered and high grade Holsteins, in Ada county, will be sold at my farm, 3 miles north of Meridian, Idaho, on October 26th. All of the cows are bred to my herd sire, Segis Walker Pietertje Lad 7th, a grandson of King Segis 10th, the sire that produced the world's record cow. A great opportunity for young breeders to procure foundation stock. If you can not attend the sale, send mail bids to A. D. Stanton, Meridian, Idaho, clerk of the sale, or to

W. G. MESSERSMITH, Owner, Boise, Idaho.

Richards' Champion Durocs

At the recent Montana state fair our Durocs won all championships and 14 first prizes. At the Utah state fair we won grand champion boar and sow, three out of four championships and 12 first prizes. At the southeastern Idaho fair at Blackfoot we won senior and grand champion sow and 10 first prizes. We have over 200 big type spring and summer pigs, the best we ever raised. They are priced to sell and guaranteed to please. Write us your wants.

RICHARDS LIVE STOCK COMPANY.
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POULTRY AND RABBITS

Winter Coming

Many a farm gets few eggs in winter because the conditions under which the hens are housed and fed are poor, as well as because of lack of laying characteristics in the birds themselves. The best hen will be a poor layer if her feed and care are poor. No doubt, she will lay more eggs than will the scrub hen, but that is no excuse for giving her poor treatment.

If the poultry house is not already prepared for the cold and wet season, right now is the time to put it in order. In doing so, one should remember a few fundamental principles.

The hen uses a great deal of oxygen. Probably no other animal of her size requires as much. This means that she must have fresh air.

Likewise, she breathes off a great deal of moisture. This moisture must be supplied in the form of drink, and provisions must be made for letting it out of the hen house. Otherwise the walls and ceilings become damp and clammy.

Both these facts mean one thing and mean it emphatically—good ventilation.

But in ventilating, do not permit drafts to blow upon the hens. Probably the best method of providing fresh air is to have three sides of the house closed tightly, leaving the fourth side open. This will admit plenty of fresh air and at the same time prevent the undesirable draft.

Make that side of the house open that faces away from the prevailing storm winds and toward the winter sun if possible. Sunlight is the best of all disinfectants. In the damp season of the year every bit of sunlight should be utilized for the warmth of the birds and the drying and sweetening of the henhouse.

It is well to have the house screened in, with duck or other semi-transparent cloth curtain that may be dropped when it becomes too stormy or cold to justify free access to the open.

In front of this open side where the light is good is the best place for the scratching floor. Be sure that it is a good floor. Do not have cracks in it that will permit the fine part of the litter and some of the grain to drop through and form an insanitary, decaying mass under the building. Build the floor up off the ground far enough to insure against dampness from the soil and against surface water running in when it rains or when the snow melts.

Do everything possible to keep the house dry—floor, walls, ceiling. Dampness is a great enemy of hens. Many diseases are contracted because of it.

Be sure not to have the hen overwarm. Colds come from too warm quarters more often than from too cold.

Provide a watering system that will insure plenty of water, not too cold, throughout the winter days. Fresh water and plenty of it is one of the cheapest poultry "feeds" and conditioners. Arrange it so that the birds can not make it foul. Keep it clean; keep it fresh; keep the ice off of and out of it.

And then, clean the house regularly and often. If it smells unclean to you when you go in in the morning, you may be sure that it is unclean. If the odor in it is unpleasant to you, it is certain that it is not only unpleasant, but unhealthful to the hens.

If you want eggs, give the hens a chance to lay them. If they expend all their energy trying to overcome adverse conditions of feeding or housing, they have no energy left with which to produce eggs.

Inspect Chinese Eggs

(Continued from page eleven.)

could be gathered and shipped under conditions that would most likely leave them in fairly good condition at this end. It is a cinch eggs can't be very fresh when gathered along the Chinese coast and river points, then shipped two weeks across the Pacific afterwards. It seems to me, therefore, that the shell eggs do not constitute the big egg menace which the egg product business does constitute for the American poultry raiser. E. F. BENSON."

The Monthly News Letter, to which Mr. Benson refers, is published by the Washington state department of agriculture. Its issue for November-December, 1920, contained a letter of Mr. Benson's, written during his tour of the orient. In this letter Mr. Benson says the most remarkable thing about China that he saw was the small number of hens in a place, three or four being the rule, sometimes two or three, seldom over six. Yet these few hens in a place produced in 1917 poultry and eggs to the value of $462,000,000, the eggs alone being valued at $262,000,000. The poultry and fresh and frozen eggs exported that year from China was 12,000,000 tael, being worth a little more than our $1.

There are large foreign concerns operating egg product factories in China. One factory at Hankow has a capacity for handling 90 tons of eggs a day, and another factory at Nanking was nearly as large. Two large factories are located at Shanghai for frozen and dried eggs and shell eggs. One of them has a capacity of over 1,000,000 eggs a day. There was a factory at Tsingtao and one at Tientsin. There are some hundreds of native factories and their total output greatly exceeds the total output of all the foreign factories.

Visiting one of these large factories, Mr. Benson found that the care shown in the place visited by him to put out a clean and sanitary product suggested the danger that may lie in the output of a less careful concern, and especially the small native factories.

The average Hankow eggs are only a little over half the size of our "standard" eggs. The factories always buy eggs by the pound. The six principal factories at Hankow have a daily capacity of 251,000 pounds of dried eggs or about 16,000,000 eggs.

The egg exports from China are:

1. Shell eggs—which must be refrigerated and well handled to compete with our eggs.
2. Frozen eggs—wholes, whites and yolks.
3. Dried eggs—wholes, whites and yolks.

Mr. Benson says that it seems plain to him that the Chinese egg products should be excluded from all markets of the United States until every factory is inspected by some competent person and each case or package stamped and certified as being fully up to the requirements of the United States department of agriculture. He believes such inspectors should probably report to and be under the United States consul of the district in which the factory is located, but should be appointed by the United States department of agriculture.

When he suggested this inspection to several persons, each one said:

"It would not work in the orient."

"Then the egg product shouldn't be allowed on the markets of the United States," was Mr. Benson's comment in reply.

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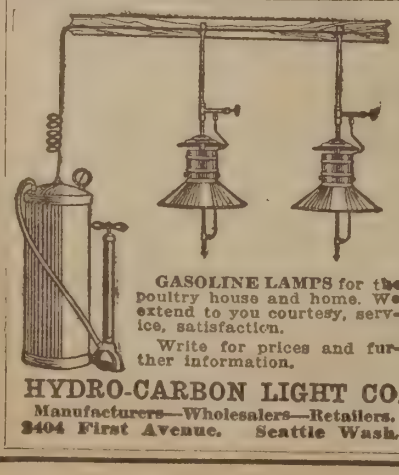
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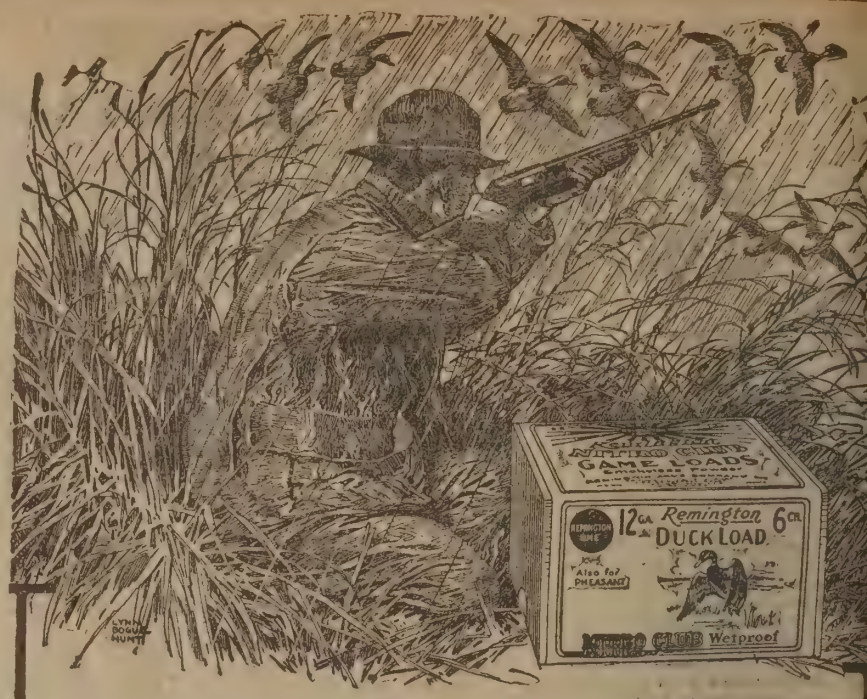
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ORCHARD AND GARDEN

Care of Himalaya Blackberries

By O. M. MORRIS, Head Department of Horticulture, Washington State College.

Could you inform me how to take care of Himalaya blackberries, how to train them and when and how to prune them? Also how many stocks should I leave to the hill? C. J. C.
Vancouver, Wash.

The Himalaya blackberry is a very strong growing plant and naturally best results will be obtained by setting the plants about 16 to 18 feet apart in the row and the rows about six or eight feet apart. The plants should be trained on a four wire trelis. Leave about 8 to 15 canes per hill. Train them four in each direction along the trellis. The best form of trellis consists of posts, placed about every 30 to 36 feet, with cross-arms, to which are attached wires, about No. 9 in gauge. These cross-arms support two wires about 12 to 15 inches apart and equal from the ground. Cross stake supports are placed on these wires and the canes are simply woven above and below these cross-arms. The young shoots are usually kept on the lower wires about two or two and one-half feet from the ground, and the fruiting canes are kept on two wires similarly placed about two feet above the lower wires.

The pruning work should be done practically the same as for all of the blackberry family. The old blackberry canes are cut away each year and the young shoots of the last season's growth are placed on the top wires for fruiting. Some summer pruning in the form of cutting away the wide branches that develop is necessary, and can be done two or three times during the summer with very good results.

Cherries for Canning

By C. C. VINCENT

I have 40 acres of land in western Washington and want to set out 100 canning cherry trees. Would you advise me which kind of trees would be best for this purpose? Should I get them all of one kind or two or three different kinds? I also want to set out 100 crabapple trees for making jelly. What trees would be best for that purpose? J. P. E.
Quartzburg, Idaho.

If there is a cannery in the vicinity where your land is located then it might be advisable for you to plant rather extensively to pie cherries, such as the English Morello. The English Morello is a very poor shipping cherry and therefore, if you do not have access to a cannery, it would not be advisable to plant this particular sort. Sweet cherries for canning are the Royal Anne, Bing and Lambert. The Royal Anne is used more generally for this purpose than the Bing and Lambert. The last two named varieties are very firm and of dark color and are grown quite extensively for shipping. At the present time very few canneries are using the Bing, although many housewives prefer this variety to the Royal Anne for canning. If you plant the sweet cherries it will be necessary to use the Long Stemmed Waterhouse or the Black Tartarian as a pollinizer as the three above-named varieties are intersterile. One tree in 10 would be sufficient for pollination.

Possibly the Hyslop and Transcendent crabapples are the best varieties to grow for jelly making.

Northwest for Bees

By GEORGE W. YORK.

A Californian who claims to be the "largest shipper of bees by the pound in the world" recently took a trip lasting two months through northern California, Oregon, Washington, Idaho, Montana, Wyoming and Nevada, and has this to say upon his return, in a letter to the writer dated September 17, 1922:

"From what I saw of the northwest in general I believe it is a much better bee country than the south, from a honey-producing standpoint."

Having been a resident of the northwest for 10 years, and noting reports of beekeepers operating in the states mentioned, I believe my correspondent is correct.

There is any amount of honey still going to waste every year in the territory referred to for lack of bees to gather the nectar from the myriads of blossoms that "waste their sweetness" through evaporation.

If there is one industry above another that should be encouraged in every possible way through legislation and otherwise, I think that industry is beekeeping. I know of no other line of effort that will yield such great returns from so small an investment. I think the only reason why legislators do not vote all necessary financial assistance is from a lack of understanding the needs, and also from such a limited familiarity with the importance of honey bees in their relation to pollenization of fruit and other blossoms, which, when properly aided by the visits of honey bees, results in largely increased crops.

The northwest is rapidly coming to be the "fruit basket" of the United States, if not of the world. And, as this fruitful condition is bound to grow, naturally the bee industry should keep pace with it. So more and more will the northwest be the beekeepers' paradise.

Cabbage Aphis Attacks Rape

By E. G. SCHAFER, Department of Farm Crops, Washington State College.

Will you kindly give me the information on planting fall rape for hog pasture? What kind would you suggest as best for this vicinity? What time of year should it be planted? F. W. L.
Lamont, Wash.

Rape is best adapted to a cool growing season, and largest yields are obtained in moist, rich soils. It is generally planted in the spring, except in districts having mild winters. It is a biennial plant and may be planted in the fall where it will survive the winter. In the south fall sowing is said to be most satisfactory.

Dwarf Essex rape is a variety most generally used. Rape, in common with other plants of the cabbage type, is frequently attacked by the cabbage aphis. This insect occurs so generally that it practically prevents the successful production of rape in eastern Washington.

PRIZES FOR CLUB WORK.

Nearly $750,000 in prize money is being offered to boys and girls in club work this year in the United States. This is exclusive of the Smith-Lever funds appropriated by the government and matched by the states to conduct the work.



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By LEWIS B MILLER

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SYNOPSIS.

Esau Haggerty, a strong man of mature years, and Orlando Medford, a young, slightly built and frail companion, have started from their Illinois home town for the great gold diggings of the west. Esau is pushing a provisions-laden wheelbarrow. Orlando is leading a cow. They struggle slowly westward, meeting up with others also headed for the gold diggings. With a party of men traveling by handcart they all but starve for water on a desert, but dig a well and escape. They meet with a family by the name of Cooper, one member of which is a girl of years and manner that at once captivate young Orlando, who delights in keeping near her prairie schooner as they journey on. Once the entire party gives up the westward trip when they meet discouraged gold seekers returning, but Orlando and Hazel Cooper induce them to turn to the west again. They have many interesting experiences on the way, finally coming upon a great Indian camp. Not many days later they sighted Pike's peak, and a little later plodded into a little frontier town that has since grown to be the great city of Denver, Colorado. Here they learned that a rich gold strike had been made not far away at what was called Gregory's diggings. They mail letters to the folks back home and hurry on toward the place of the strike. At the foot of the mountains the women and children are left in camp to care for most of the supplies, while the men travel on foot into the mountains toward the diggings, which they reach the second day. Every claim is taken, so most of them proceed further and locate claims on Clear creek where they begin actual mining. The first day six of them wash out gold worth $7. Later they built a sluice box and increased their output to $15 or $20. One day it is learned that Mason, who has the claim next to them, has sold it to three new miners for $300 in gold dust and expects to return to his family in Indiana. When Mason started the next morning, two of the new miners accompanied him as far as Gregory's diggings. Next day they returned to their claim with a jug of whisky. Claims on Clear creek were changing hands every day and before the Cooper party were aware of what was happening, the three had sold their claim and gone. Four new miners took possession of the claim and soon made friends with the Cooper party. After a few days' work they find that they can not wash out $8 or $10 apiece as the claim was represented and they concluded that the claim was salted, as they had paid $600 for it. Before long a miner from Gregory's diggings brings the news that two prospectors had found a dead man between the two camps. The body was later identified as that of Mason. Upon investigation they find that Mason's wagon and team had been taken by the doubtful trio and sold to some miners who wished to return home. At Denver they learned that the trio had left for the mountains, and it would be useless to try to follow them.

CHAPTER SEVENTEEN.

The Clear Creek Camp Stampedes.

"Some of us will be up a little later, to see if there's anything we can do for i'm," Cooper called after the woman, as she passed on to deliver her milk.

When supper was over, three or the party walked up to the Hinkson camp. After talking with the sick man they agreed that he was probably entering a long spell of the fever. They and others, taking turns, sat up with him during the night. When morning came he was no better, and they proposed to send to Gregory's Gulch for a doctor. But the sick man's wife thought it better to move her whole family over to the gulch.

"With him sick abed, I cain't do nothin' at minin' here," she told them. "And me and Becky can sell our milk to the miners over thar as well as we can here. That'll make us a livin', I 'low."

"All right, Mrs. Hinkson. That might be best," Cooper told her. "We'll take care of your claim, and see that nobody jumps it. Or we'll sell it for you, just as you choose."

"Reckon maybe it would be better for us to sell out, if we can."

"Then we'll try hard to sell the claim for you. What price must we name?"

After she had talked with her husband and others it was agreed that the claim ought to bring $200. But an hour later, when some newcomers arrived, they washed out a few panfuls of dirt and offered $150 for it. Several of the miners insisted upon holding for a better price. But the woman consulted her husband again, and they together decided to accept the offer. It was fortunate for them that they did, as everybody admitted a few days later.

Soon the wagon was on its way. Jess Holloway and Orlando Medford accompanied the family. As usual, the woman persisted in driving her own team, Holloway walked by the wagon, or rode in it, to look after the sick man. But Orlando tramped along behind, he and Becky driving the cows and calves. Again and again he urged the girl to ride in the wagon, but she always refused.

"These here cows knows me, and they don't know you," she told him. "If I was to leave 'em alone with a stranger they might act up. So I 'low it's better for me to help drive."

"All right. Just as you say, little Becky girl. Must confess I don't like to have cows 'actin' up' around me."

When the party arrived at Gregory's Gulch, the two young miners selected a camping place and helped the family to establish a camp. The spot chosen was just beyond the edge of the mining camp, so that Becky could find pasture for her cows. Afterward Orlando summoned a doctor, and he and Jess spoke to several miners who had families here, who promised to see that the sick man and his family lacked for nothing. Those things attended to, the two men returned to the Clear Creek diggings.

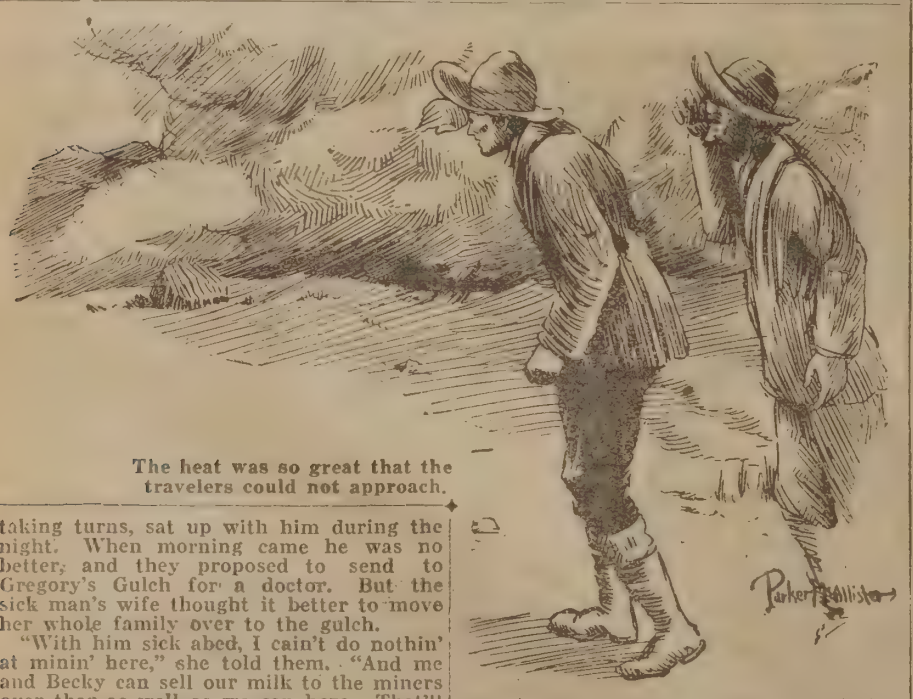
Less than a week later some news reached this camp which produced very prompt and very surprising results.

A Mexican pack train that arrived with flour and meal for sale reported the recent discovery of some very rich diggings. The place was in the southeast corner of South Park, and almost due west from Pike's Peak. So rich were the new diggings, it was reported, that miners already there were washing out an ounce of gold a day for each man.

Sixteen dollars a day that was. And it was far better than most of the men were doing in the rich mines of Gregory's diggings. Nearly all the miners here had been disappointed over arriving too late to get claims in Gregory's Gulch. Their mining on Clear Creek being unprofitable, they resolved to be in good time at those new diggings.

At once the stampede began. And before the day ended it was complete. As often happened in these mining camps, when once the moving impulse set in, it swept everything before it. Here not one man announced his determination to stay.

That was unfortunate, for many reasons. Claims which might have sold for $150 the day before were now utterly worthless.



The heat was so great that the travelers could not approach.

Also the sluice boxes, long toms and riffle boxes, being too heavy to move, would have to be abandoned.

Like all the others, Cooper and his partners were quickly preparing to abandon their claims and start for the new diggings. Some would have preferred to travel straight through from here. But Cooper wanted to visit his family first, and the whole six would have to return to Cooper's camp for supplies.

Just after dinner Brindle was saddled, and what she would carry was packed on her. The rest of the party's things were loaded on the cart. Now two of the men buckled on their harness, one stood between the shafts, two others seized a rope and one got behind to push, and away they went.

As they were passing out of the narrow gorge, Orlando, who was behind, pushing the cart, turned his head and gazed back. He was thinking of the weeks he had spent there, and of the many new and strange experiences that had come to him there as a miner. And he wondered, vaguely, if he would ever see that abandoned camp again.

The road was rough, and it was after noon when the party entered Gregory's Gulch. For dinner they stopped near the Hinkson's camp. They found the sick man neither better nor worse, apparently, and the family were getting along reasonably well—better than in the Clear Creek camp. Becky was now selling the milk. For some reason, perhaps because of her father's sickness, or her own quaint little, old-womanish ways, she was receiving more money for it than the man had received.

An hour or two only the party spent here, most of it among the busy sluice boxes. By this time there was no doubt of the richness of these diggings, and numerous improvements, many of a substantial character, were fast being made.

(Continued on page twenty-two.)

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SELL TREES AND PLANTS FOR US. STOCK reliable and in good assortment. Contract upon request. Write today. Capital City Nursery company, 426 Oregon bldg., Salem, Ore.

AGENTS WANTED Continued 9

$5 TO $16 DAILY EASY, INTRODUCING NEW style guaranteed hosiery; must wear or replaced free. No capital or experience required; just show samples, write orders. Your pay in advance. We deliver and collect. Elegant outfit furnished, all colors and grades, including silks, wool and heathers. Mac-O-Chee Mills Co. Desk 12611, Cincinnati, Ohio.

SITUATIONS WANTED—Male 21

EXPERIENCED FARMER, SINGLE, WANTS permanent job on ranch; understands irrigation, all kinds of farming; capable of taking charge. Address Idaho Farmer, 308, Boise.

EDUCATIONAL 45

BEHNKE-WALKER BUSINESS COLLEGE of Portland; one of the largest institutions of its kind in America; guarantees a position to every graduate. Enroll now for fall term. A few months training under expert instructors and you are ready to enter business and win. Behnke-Walker graduates are always in demand. Write today for our free success catalogue. Address Behnke-Walker Business College, Fourth, near Morrison, Portland, Ore.

FRESH FOOD PRODUCTS 51-1

"HONEY BRAND" HONEY — ALFALFA, sweet clover product; pure, light, thick, good flavored; gives satisfaction wherever used; 1 60-lb. can, $6.50, two for $12.75. Write for circular and prices in pails. Oliver Sires, Wapato, Wash.

POPULAR BRAND HAPPY HOME HONEY—One 60-lb. can, $6.50; two cans, $12.75; six 10-lb. pails, $7.50; comb honey prices on request. H. N. Paul, Mabton, Wash.

FINEST NEW HONEY, 60 POUNDS, $7.50; 2 cans, $14.40; add postage; 10 pounds, $1.90; 5 pounds, $1 prepaid; satisfaction guaranteed. Geo. Bancroft, Hermiston, Ore.

NEW CROP ALFALFA-SWEET CLOVER honey; 60-lb. can, $4.75; two cans, $9 f. o. b. Rigby. Heckman & Larsen Honey Co., Rigby, Idaho. Quality guaranteed.

EXTRACTED HONEY—ONE 60-LB. CAN, $6.50; two 60-lb. cans, $12.75, collect; three No. 10 pails, prepaid, third zone, $5. Wells D. Rose, Sunnyside, Wash.

GOLD MEDAL BRAND YAKIMA ALFALFA, sweet clover honey; 60-lb. can, $6.50; two cans, $12.75. C. W. Higgins, Wapato, Wash.

DELICIOUS NEW CLOVER HONEY, 120 pounds, $9.75; 30 pounds, $3.25; won't crystallize. Browne, Box 499, Twin Falls, Idaho.

3-POUND BOX ABSOLUTELY BONELESS codfish; fine white, new catch fish, delivered by mail, $1. Coffin Fish Co., Seattle, Wash.

NICE OREGON PRUNES DIRECT, $7.75 PER hundred. Special 12½-lb. sample bag prepaid $1.80. Kingwood Orchards, Salem, Ore.

(Continued on the following page.)

Why Risk Your Health?

THE path of the coffee or tea drinker is beset with dangers to health and comfort. These dangers lurk in the irritant, caffeine, which is the active principle of both coffee and tea.

For those who enjoy a well-made cup of coffee or tea, but find that it makes them nervous, wakeful and irritable, there's satisfaction and freedom from discomfort in delicious Postum—the table beverage of no regrets.

Its fragrant aroma and rich, full-bodied flavor are delightful. Postum is made from roasted wheat and contains no caffeine, nor any other harmful ingredient whatsoever.

Order from your Grocer TODAY!

Postum comes in two forms: Instant Postum (in tins) prepared instantly in the cup by the addition of boiling water. Postum Cereal (in packages, for those who prefer to make the drink while the meal is being prepared) made by boiling fully 20 minutes.



Postum

FOR HEALTH

"There's a Reason"

Made by Postum Cereal Company, Inc.
Battle Creek, Mich.

FRESH FOOD PRODUCTS (Continued) 51-1

NEW HONEY, FINE QUALITY ALFALFA, sweet clover; 60-lb. can prepaid, second zone, $7.29; two, $12.75; not prepaid; 3 10-lb. pails, prepaid, second zone, $4.25. Harry Fisher, Prosser, Wash.

HONEY — FRESH ALFALFA-SWEET CLOver honey; one 60-lb. can, $6.50; two cans, $12.75. A. L. Traner, Touchet, Wash.

MERCHANDISE 59

ARMY GOODS—STAG SHIRTS, $3.45; ARMY wool shirts, $3.25; work shoes, $2.95; officers' dress, $3.95; russets, $4.25; wool breeches, $1.95. Price list furnished. Walker's Army store, 501 Trent, Spokane.

MISCELLANEOUS—FOR SALE 60

SASH AND DOORS—O. B. WILLIAMS CO., 1943 First ave. So., Seattle. Chicken house sash, 20" wide by 25" high, 80c; a dozen different sizes in stock for immediate shipment. Skylights for chicken houses, 36"x40"; price, glazed, $2. This is the size recommended by the Western Washington experiment station. We carry them in stock for immediate shipment. Sash and doors for all purposes at lowest prices. All orders receive prompt attention. Our large illustrated catalog No. 35, showing full line of building material and built-in fixtures for the home, free on request. O. B. Williams Co. Established 1899.

SACKS—SECOND-HAND GRAIN AND SPUD correctly sorted and graded; also pipe, new and second-hand, any size; standard roofing paper at a big saving; pumps, engines, belting, cables, etc. Alaska Junk Co., Inc., 8120 Adams st., Spokane, Wash.

HOMESPUN TOBACCO — CHEWING, 5 pounds, $1.75; 10 pounds, $3; 20 pounds, $5; smoking, 5 pounds, $1.25; 10 pounds, $2; 20 pounds, $3.50. Send no money, pay when received. Cooperative Tobacco Growers, Paducah, Ky.

HOMESPUN TOBACCO SHIPPED COLLECT on delivery. Chewing, 5 pounds, $1.75; 10 pounds, $2.50; 20 pounds, $4.50; smoking, 5 pounds, $1.25; 10 pounds, $2; 20 pounds, $3.50. Farmers' Association, Paducah, Ky.

WALL BOARD—WRITE FOR SAMPLE OF Washington plaster wall board; won't warp, won't burn. Manufactured by Washington Building Products company, 6851 E. Marginal Way, Seattle, Wash.

HOMESPUN SMOKING TOBACCO, MILD and mellow; 10 lbs., $1.50; 20 lbs., $2.75; delivery guaranteed. We furnish free recipe for preparing. Smoking Tobacco Exchange, Sedalia, Ky.

CANE MOLASSES FED TO STOCK MAKES more milk, healthier animals, lower feed costs; cheaper than corn. Write Arthur A. Lewis & Co., distributors, 8151 Lincoln st., Spokane.

NATURAL LEAF TOBACCO, CHEWING, 5 lbs., $1.75; 10 lbs., $3; smoking, 5 pounds, $1.25; 10 pounds, $2. Send no money, pay when received. Tobacco Growers' Union, Paducah, Kentucky.

OUR FREE NEW FALL CATALOG OF GROceries and general merchandise will save you big money; a postal card brings it. Write today. Jordan Lawler company, Box 615T, Spokane.

TOBACCO—KENTUCKY'S NATURAL LEAF; smoking, 10 lbs., $2.50; 20 lbs., $4; 100 lbs., $15; chewing, 5 lbs., $1.75; 10 lbs., $3; 20 lbs., $5. Farmers' Tobacco Union, Sedalia, Ky.

CABBAGE CUTTER. SIX KNIVES; CUTS all kinds vegetables rapidly, postpaid $1, three for $2; one free to ladies' aid. Lusher Brothers, Elkhart, Ind.

TOBACCO — KENTUCKY'S PRIDE; EXTRA fine chewing, 10 lbs., $3; smoking, ten lbs., $2; twenty, $3.50. Farmers' Club, Mayfield, Ky.

NATURAL LEAF SMOKING TOBACCO—5 lbs., 75c; 10 lbs., $1.25; 20 lbs., $1.75. Cash with order. United Farmers, Mayfield, Ky.

BUY YOUR ALFALFA HAY AND NETTED Gem potatoes direct from grower. Samuel Shockley, Box 185, Outlook, Wash.

FREE TOBACCO—WRITE FOR SAMPLE OF Kentucky's best smoking tobacco. Hawesville Tobacco Co., Hawesville, Ky.

MISCELLANEOUS—Wanted. 63

EGGS, APPLES, HUCKLEBERRIES—WRITE us. Uncle's Delicious Pies, Inc.; capital stock $50,000. 554 Mississippi avenue, Portland.

WANTED—7 OR 8 CARLOADS FIRST-CLASS hay for dairy cattle. A. Vetsch, Tillamook, Oregon.

RADIO EQUIPMENT 89

RADIO — SPECIAL PRICE ON DETECTOR tubes, $4.50; amplifying, $5.75; postage prepaid. Send money order today. Sound Radio Sales, 600 Tacoma bldg., Tacoma, Wash.

STOVE REPAIRING 128

WRITE MYER RUBENS, SPOKANE, ABOUT stove repairs, welding broken parts, nickel plating.

FUR-BEARING ANIMALS 170

SILVER AND CROSS FOXES FOR SALE. William Rambo, 407 Sprague, Spokane.

PETS—Dogs, Birds, Etc. 171

WHEN YOU WANT A DOG, CANARY, PARrot, rabbits or a pet or pet stock supplies, cages, feeds or remedies, write. We are headquarters in the northwest. Routledge Bird, Pet & Animal Co., 174 Union avenue, North, Portland, Ore.

FOR SALE—FOX HOUND PUPS; BEST TREE dogs on the coast. J. E. Bateman, Gales Creek, Ore.

THOROUGHBRED AIREDALE PUPS. FOR particulars write Marshall Bros., Marysville, Wash.

BEAUTIFUL WHITE COLLIE PUPPIES; reasonable prices. Urbandale Farm, Oakley, Idaho.

POULTRY 174

COCKERELS, BARRED ROCKS, BRED FROM high producing O. A. C. hens and Tompsons Ringlet prize winning males; beauties, $3 to $5 each. Also standard bred White Rock pullets, 300-egg strain, $18 doz. Mrs. E. Lammey, Central Point, Ore.

40 QUALITY R. I. RED COCKERELS, $5 and up. Write your wants. Can please you. J. Nonnenmacher, Route 3, Yakima, Wash.

ANCONAS, COCKERELS FROM PRIZE WINners; egg producing stock; ask us about them. Oscar Dunlap, Junction City, Ore.

SICILIAN BUTTERCUP COCKERELS, $2.50. Also cocks, hens, pullets. Charles Carland, Route 2, Saint Maries, Idaho.

PUREBRED MAMMOTH BRONZE TURKEY toms, $9; hens, $7. H. Betebenner, Midvale, Idaho.

PUREBRED BOURBON RED TURKEY TOMS, hardy stock. Napton & Napton, Homedale, Idaho.

FARMERS' WANT ADS

This is the farmers' "want," "sale" and "exchange" department for small advertisements of farmers, including live stock and poultry.

Advertising rates for ads running 1 to 3 times, 10c per word per insertion, with a special rate to Farmer subscribers, as follows: Ads running 4 to 12 times, 9c per word per insertion; ads running 13 times or more, 8c per word per insertion.

All commercial and land advertising 10 cents per word each insertion. Open also to nonsubscribers.

In using these columns advertisers must observe: (1) No advertisements will be inserted for less than $1.00. (2) Every word, number and initial, including name and address, must be paid for. (3) New advertisements, changes of copy or cancellations must reach general office, Spokane, Wash., 10 days in advance of publication date. (4) Cash must accompany order.

Above rates include insertion in The Washington Farmer, The Idaho Farmer and The Oregon Farmer, which constitute the Pacific Northwest Farm Trio, 40 Review Building, Spokane, Wash.

POULTRY (Continued) 174

PULLETS—1500 APRIL AND MAY HATCHED White Leghorn pullets for sale at attractive prices; hatched from thoroughbred Hollywood and Tancred strains; sired by cockerels 250 to 290 egg strains. We ship at three months of age and guarantee satisfaction or you may return the birds in 3 days. We can give you quality and service. Queen Hatchery, Seattle, Wash.

WILLAMETTE VALLEY BARRED PLYmouth Rocks. Over fifteen hundred young birds in 1922; heavy laying strain, dark and beautifully barred; cock birds and cockerels for sale; only the very best allowed on the Dimick stock farm; bank references. F. C. Waldron, R. F. D. 2, Hubbard, Ore.

CERTIFIED - WHITE LEGHORN BABY chicks, hatched in the world's largest electric hatchery; choice free range, high egg producing breeding flocks, inspected by the Sonoma county farm bureau. Safe arrival guaranteed. Must Hatch Incubator Co., 445 Seventh st., Petaluma, Cal.

POULTRYMEN — SEND EIGHT TWO-CENT stamps for special three months' trial for the best and oldest exclusive poultry journal in the west. The articles and advertisements are of special interest to poultry breeders. Northwest Poultry Journal, Salem, Ore.

WHITE LEGHORN BABY CHICKS, FROM free range Hoganized stock; breeding flocks inspected by Sonoma county farm bureau; accredited hatchery inspector. Full count and safe arrival guaranteed. For price write to Lafranchi Hatchery, Petaluma, Cal.

WHITE LEGHORN BABY CHIX FOR SUMmer and fall months from stock accredited by Sonoma county farm bureau. We guarantee safe arrival. Write for prices and literature. The Pioneer Hatchery, 422 Sixth street, Petaluma, Cal.

BABY CHICKS OF HIGH GRADE ARE EASY to raise if hatched in our Petaluma electric or hot water incubators. Prices reduced. Ask for free literature. Petaluma Electric Incubator Co., Petaluma, Cal.

FOR SALE—MAMMOTH BRONZE TURKEY toms, very large, well marked. Price before Nov. 1st, $12. Our birds are exceptionally large, strong and vigorous and can't be beat. L. N. Fry, Allard, Wash.

BABY CHICKS—OREGON'S BEST AT REAsonable prices. Leghorns, R. I. Reds, Anconas, Minorcas, Barred Rocks, White Rocks. Order early. Catalog free. C. N. Needham, Salem, Ore.

BABY CHICKS — WE GUARANTEE OUR chicks to be from the highest producing hens in Petaluma. Write for further information. The White Hatchery, Petaluma, Cal.

DOLLARS FOR YOUR EGGS—WE PAY THE top market prices for your eggs and poultry. Daily cash remittances. McClintock-Trunkey Co., produce department, Spokane.

SINGLE COMB WHITE LEGHORN COCKERels; exhibition quality; from 265 to 302 egg record hens. L. Borpt, 152 East 20th South, Portland, Ore.

SINGLE COMB ANCONAS, SHEPPARD'S strain; one-year-old hens, $1.50 each; cockerels, $3. R. P. Irwin, Tonasket, Wash.

GIANT BRONZE TOMS, $10, AND ARISTOcrat Barred Rock cockerels, $3.50. Dec. delivery. Mrs. Roy Watkins, Olex, Ore.

S. C. BROWN LEGHORNS, COCKERELS, hens, pullets; none better; stock guaranteed. E. H. Rosenkranz, Colfax, Wash.

TURKEY TOMS, GOLD BRONZE STRAIN; range stock; $10 each. Henry Weber, Rose Lake, Idaho.

CHOICE BARRED ROCK COCKERELS FROM heavy laying strain, $2.50 each. Earl Hoag, Blalock, Ore.

ALLEN'S ROCKS AND LEGHORNS WIN, LAY and pay. Write your wants. D. W. Allen, La Conner, Wash.

FOR SALE—HIGH CLASS ANCONA COCKerels and pullets. Geo. W. Fonner, Weiser, Idaho.

LIVE STOCK 177

SAVE THE CALVES—"SAVACALF," A POWerful germicide, is used for treating contagious abortion in cows. It drives the disease from those that have it, and prevents the clean herds from getting it. Simply mix it with the salt and treat the whole herd at once. Costs 25 cents per head per year. Every breeder should use it. $5 package postpaid. Absolutely guaranteed, or money refunded. H. C. Babbitt, Boise, Idaho.

WE GUARANTEE TO PAY THE HIGHEST market prices for your poultry and live stock. Owing to the constant changes in the market we are unable to quote prices in this paper from week to week. We will furnish tags and prices when you are ready to ship. Write us what you have to sell. Prompt returns. John Lewis & Co., Spokane, Wash.

LARGE, HEAVY PRODUCING HOLSTEINS for sale at all times in car lots; tuberculin tested; 150 to 200 head always on hand; well marked heifer calves from registered sires and heavy producing dams; crated for shipment anywhere, $25 f. o. b. Levinson & Balmelli, Yakima, Wash.

DEWEY'S BIG TYPE, REGISTERED, OHIO Improved Chester Whites; yearling sows, boars and pigs. Frank Dewey, Olympia, Wash.

TOP FANCY LIGHT VEAL, 12½C. JONES AND Williams, 8101 Division st., Spokane, Wash. Prices subject to fluctuations.

50 YOUNG REGISTERED SHROPSHIRE ewes; also yearling rams. Write McK. Edwards, Valley, Wash.

REGISTERED RAMBOUILLET AND HAMPshire rams, also Essex hogs. Dolph Phipps, Medford, Ore.

200 YOUNG REG. HAMPSHIRE EWES; BARgain. C. E. Cleveland, Stanfield, Ore.

FOR SALE—SPOTTED POLAND CHINA hogs. B. S. Brown, Lingle, Wyo.

MILCH GOATS, BRED DOES, $15 TO $30. Fannie Branson, Dallas, Ore.

LIVE STOCK (Continued) 177

WE PAY TOP PRICES FOR YOUR LIVE OR dressed veal, hogs and poultry. Your check by return mail. Shipping tags on request. M. & J. Packing Co., Spokane.

DUROC BARGAINS—WEANED PIGS: BEST pedigree, $8.50, with papers, or $10 registered and crated. Shadeland Farms, Amity, Ore.

FOR SALE—SIR VIOLET BLOSSOM, THREEyear-old high grade registered Holstein bull for graded cows. Box 181, Bothell, Wash.

MILKING SHORTHORNS, GLENSIDE AND Clay breeding. A few bulls and heifers for sale. DeGraaff Bros., Lynden, Wash.

REGISTERED DUROC-JERSEY WEANED pigs of best breeding; shipped on approval. Herman E. Conner, Angora, Idaho.

HARNESS and SADDLERY 189

SEND FOR FREE HARNESS AND SADDLE catalog today; cut out the middleman, buy direct from the manufacturer. Lowest prices in the west; satisfaction guaranteed. Established 1881. Write Pierce Harness Co., Dept. T, Spokane, Wash.

HAY FOR SALE 200

CHOICE ALFALFA HAY, GREEN AND leafy; the kind that dairymen like to feed. Timothy and wheat hay for horses. Write for delivered prices. J. F. Jacobson, Kennewick, Wash.

ALFALFA HAY, GUARANTEED QUALITY; prompt shipment; buy direct and save money. Prices upon application. Ernest T. Freepons, Walla Walla, Wash.

ALFALFA HAY—WRITE OR WIRE ME FOR quotations. Irving S. Gleason, Kennewick, Wash.

JOB PRINTING 372

BEST PARCHMENT BUTTER WRAPPERS, 8x11, neatly printed, 100, 60c; additional hundred, 40c. Home Specialty Co., Middleton, Idaho.

TANNING 425

WE WILL TAN YOUR COW OR HORSE hides for robes or coats at the right prices and guarantee our work, as we are custom tanners and manufacturers. We also buy hides, furs, wools and pelts. Write for prices. Spokane Fur Tanning Co., 9 Pine st., Spokane.

ANY KIND OF HIDE TANNED WITH HAIR on, or for leather. Mohr, 321 Sprague, Spokane.

TAXIDERMISTS 426

TAXIDERMY AND FUR WORK—SATISFACtion guaranteed. Carlson, 1327½ Hawthorne, Portland, Ore.

WE MOUNT ANYTHING FROM A FLEA to elephant. Mohr, 321 Sprague, Spokane.

FURRIERS 429

FURS TO ORDER, REPAIRED, REMODeled and for sale. Mohr, 321 Sprague, Spokane.

HIDES, PELTS AND WOOL 430

HIDES—WE BUY HIDES OF ALL KINDS. Write for prices and tags. Hibbard-Stewart Co., Hibbard bldg., Seattle.

FURS—WE BUY FURS AND PELTS. WRITE for prices and tags. Hibbard-Stewart Co., Hibbard bldg., Seattle.

MATERNITY HOMES 497

MATERNITY HOSPITAL; STRICTLY PRIvate; doctor in attendance; prices reasonable. Mrs. Elizabeth Peel, matron, W1324 Broadway, Spokane.

PERSONAL 537

WIDOWER, 38, WISHES TO CORRESPOND with lady or widow, 35 to 38, who owns ranch. I own home, have three children. Enclose photo. Object, matrimony. Address Olympia, Wash., R. F. D. 3, Box 4, Lincoln, East Side.

YOUNG FARMER WANTS WIFE, 20 TO 30; confidential; best references. H 9, Idaho Farmer, Spokane, Wash.

BUILDING MATERIAL 588

TO PATCH A HOLE OR BUILD A HOME, use Perfection Plaster wallboard. Easily handled with hammer and saw; fireproof, waterproof. Western Wallboard Co., Seattle, Wn.

BUILDERS, CONTRACTORS, HOME OWNERS, write for free 1922 catalog. Tacoma Sash & Door Co., Tacoma, Wash.

NURSERY STOCK 621

ISLAND BELLE GRAPE PLANTS FOR SALE —Write for the grape book, giving directions how to grow them successfully, etc. Issued by E. H. Urban, Box 777, Bremerton, Wash., grower of Island Belle grape vines.

NURSERY STOCK, ITALIAN PRUNE TREES and trees of all kinds. Berries and small fruits of all varieties. Buy direct and save 50 per cent. Brooks Nursery, Lafayette, Ore.

BEST VARIETIES FOR THE WEST; HANDsome 48-page descriptive catalogue free. Routledge Seed & Floral Co., 145 Second st., Portland, Ore.

FARM LANDS FOR SALE 651

MOSES LAKE, GRANT COUNTY, WASHINGton, electric power district. Forty acres irrigated; six acres Winesaps, Romes; yield, eighteen hundred boxes; four room plastered house, outbuildings; seven miles to railroad, two miles school; on state highway. Price seven thousand five hundred; fifteen hundred cash, balance crop payment. Four hundred acres, same settled community; ten to forty acre tracts, irrigated; price and terms to suit purchaser. Detailed information on application. W. W. Hopkins, Ephrata, Wash.

FOR SALE—80 ACRES FINE ALDER AND crabapple land; 26 acres cultivated; 25 slashed, picked and burned; rest brush; on fine county road; three miles from thriving town; 60 miles Seattle. Cream route, rural mail, school bus. Priced for quick sale, $5500; $3000 will handle, balance easy terms. Box 188, Oak Harbor, Wash.

MONTANA STOCK RANCH; WILL TRADE for western farm. A. Millard, Kinsey, Mont.

FARM LANDS FOR SALE (Continued) 651

HIGHEST TYPE PRODUCTIVE SOIL FOR general farming; ideal berry and poultry district; abundant moisture, many springs; easy clearing; near town, good schools, markets and transportation; center of large agricultural district, with improved ranches in every direction. Immediate and steady employment for land buyers within walking distance; several thousand acres to select from; all good land; $15 to $45 per acre; unusually easy terms. At Onalaska, Wash., in Newaukum river valley (15 miles southeast Chehalis.) See salesman Onalaska, until Nov. 1st, thereafter, shown by appointment through Seattle office. New addition just opened. Graham Land company, 1008 American Bank bldg., Seattle.

PAYING FARMS AT LOW COST—160-ACRE farms, improved or unimproved; 30 to 160 acres irrigable land on each parcel; near Lethbridge, in sunny southern Alberta; can be bought for $15 to $40 an acre. No need for pioneering. Well settled country, good roads, railways, schools, telephones; agreeable social conditions; fertile land; success of irrigation farming here already demonstrated; irrigation system being constructed under government supervision; water available in 1923. Write for information concerning crops grown and description and location of farms to the province of Alberta, Irrigation Council, 12 Provincial building, Lethbridge.

CUTOVER LANDS, EASY TO CLEAR; $8 TO $20 per acre; 25 miles north of Spokane; on hard-surfaced highway; Great Northern and Milwaukee railways; excellent opportunity for dairying and stock raising, with Spokane markets and creamery near at hand. Will help the man who will live upon this land and agree to clear a part each year by giving lumber to help start his buildings, and a purebred Jersey bull to groups of farmers. Interest and payments low. Write Milan Farms Development company, Dept. T, Old National Bank bldg., Spokane, Wash.

BIG OPENING SALE OF YAKIMA VALLEY farm land, under an assessed state and government approved irrigation project; good, deep soil; close to town, railroads and state highway. We sell in tracts to suit purchaser at $25 per acre and up, on easy terms. Our many sales to farmers show that this land is a good investment. Western Lands, Inc., owners, 913 Green bldg., Seattle.

LOGGED-OFF LANDS IN STEVENS COUNTY, Washington, at greatly reduced prices. Most of land sells at $5 to $20 per acre; thickly settled community, good schools, hard surfaced and paved roads to Spokane; best country in state for dairy and stock raising; most places water can be found at shallow depths. Write for folder. Phoenix Lumber company, Dept. T, Spokane, Wash.

MUNICIPAL LANDS FOR SALE BY THE DIStrict; no agents, no commission; interested only in getting home-builders on the project. Longest growing season in the northwest. Gardens and fruits thrive; schools, highways and railroads the best. Junction Snake and Columbia rivers. Write for terms and folder. Address Burbank Irrigation district No. 4, Burbank, Wash.

STOCK FARMS—80, 120, OR 320 ACRES; IN north central Washington; the best stock country; river bottom lands; good summer range near by; good climate, good schools, good roads, good markets; good stock cattle offered with farms. Inquire of Riste Bros., Oroville, Wash.

ON ACCOUNT OF OLD AGE WISH TO REtire. Will sell at once, 120 acres rich grain and fruit land near Walla Walla; in one field or will divide. Will grow 40 bushels wheat, alfalfa or fruit without irrigation. Address owner, Box 561, Walla Walla, Wash.

FOR SALE—37 ACRES, 30 ACRES UNDER cultivation; buyer gets one-third present crop; fine timber, orchard, house, barn; near school; $3000 cash or trade for income property. Gus Hubert, 1882 Bayard st., Portland.

7000 ACRES SEQUIM LAND SETTLEMENT project, containing the finest berry and dairy land in the state, now offered for settlement at attractive prices and terms. Free booklet. Thos. G. Mortland, Sequim, Wash.

456-ACRE DAIRY RANCH; GOOD MILK route; 2 miles county seat; good water right, $40 acre. Sacrificing on account of old age. G. F. Nelson, Box 536, Deer Lodge, Mont.

CHEAP—4800 ACRES, 1700 UNDER KENNEwick project; fine sheep range, including 10,000 acres leased land. Also lots and acreage in Yakima. D. G. Goodman, Yakima, Wash.

SELL YOUR PROPERTY QUICKLY FOR cash; no matter where located. Particulars free. Real Estate Salesman company, 501 Brownell, Lincoln, Neb.

PUGET SOUND COUNTRY; WATER FRONTage farm lands; free map to landseekers. Charles Somers Co., Alaska bldg., Seattle.

FIFTY-ACRE FARM, NEAR MULINO; BUILDing; $3500 down. V. Kimmel, Rt. 1, Canby, Ore.

FARM LANDS—Wanted 654

FARMS WANTED—SELL YOURS QUICKLY for cash, no matter where. Particulars free. R. A. McNown, 319 Wilkinson bldg., Omaha, Neb.

FARM LANDS FOR RENT 657

440 ACRES HAY AND DAIRY; 1 MILE FROM high school; 8 from Cheney normal; will consider 5-acre improved for equipment and hay and feed. Hentges, Valley, Wash.

IRRIGATED LANDS—For Sale 663

FARMERS AND STOCK MEN—THE COLUMbia irrigation district has several tracts of irrigated lands of various sizes, in the famous Kennewick valley, with plentiful water supply. The district wishes to get these tracts into the hands of good farmers who will put them to work, and will make very low prices and long terms to such men. No speculators need apply. One tract 580 acres, especially suitable for stock or dairy ranch. Write the secretary, Columbia Irrigation District, Kennewick, Wash.

10-ACRE CHICKEN RANCH, IRRIGATED; all in asparagus, grapes and alfalfa; 1200 laying hens and pullets; electric lighted, running water; one mile to school and high school; six miles to Kennewick, Wash.; on gravel road. Carl Mathews, Kennewick, Wash. R. 1, Box 106.

10 ACRES; 5 IN FRUIT, 5 HAY; HOUSE AND barn; on Hayden lake irrigation tract 191; good roads. Owner, Margaret Bonett, Aberdeen, Wash.

FOR SALE OR EXCHANGE 702

80 ACRES; 30 CLEARED; 2 MILES FROM town; good soil and running water. For particulars, Joe Johnston, Springdale, Wash.

160 ACRES; 50 IN CULTIVATION; GOOD water. For full particulars address O. B. Mason, Ford, Wash.

TO EXCHANGE—Real Estate 705

1300-ACRE GRAIN AND STOCK RANCH; trade for small dairy or fruit ranch. H 8, Oregon Farmer, Spokane.

Pike's Peak or Bust

(Continued from page twenty.)

After returning to camp, the party took leave of the sick man and his family, then traveled on.

Night overtook them in the mountains, and they camped by the trail. But early morning found them moving again. The trail had recently been changed, and for the better. Instead of passing over a high mountain, where the wagons going down had to drag trees, it now followed a gloomy canyon, between rock walls hundreds of feet high, and along a swift, noisy stream. At one place it led through what had recently been a pine forest. But a fire which had broken out had left only the blackened remains of half-burnt trees.

It was high noon when the six men, moving at a brisk gait, emerged from the mountains. Half an hour later they made their appearance at the place where the Cooper family was in camp.

Only the remainder of the day was spent here. But a very delightful piece of a day it proved to Orlando, who would have been glad to linger a month. For to him matters had reached such a stage that this camp at the foot of the mountains was the center of the earth. If the truth must be told, his thoughts were here far more than in his Illinois home. It was not that he cared for his home less, but he cared for this wilderness camp more.

However, if his party were to reach the new diggings in time to stake out good claims it was all-important that they get started in that direction as soon as possible. Like the other miners, Orlando had come to this wild region in the hope of digging much gold out of the mountains. As yet he had found only a little of it, and of even that the greater part had had to go for food, the lumber for their sluice box, and similar costly things—everything was costly out here—which they could not well do without. Now, more than ever before in his life, he was eager to have something of his own, and to do something that would prove him capable of performing a man's share of the world's work.

Up to this time the party had expected to go by way of Pike's Peak. From there a pass through the mountains leads into South Park. By that route they could take their supplies, or most of them, on Sanders' cart. But, when morning came, so eager were they to reach the new diggings that they decided to travel as straight across the mountains as a compass could guide them. They had no pack horse, but Brindle, better in some respects, would carry part of their supplies. For the rest, each of the six partners would go with a good-sized pack strapped to his own back.

The sun had not yet risen when the men said goodby to Mrs. Cooper and her children, then tramped away. It took Orlando far longer than anybody else to say goodby to Hazel. So the other five were half a mile on their way before he and Brindle started. By urging the cow to a faster gait than usual, he overtook his party just as they were turning into the mountains.

For mountain climbing, Brindle had been supplied with some additional harness. A breast strap of buffalo hide would keep the pack saddle and pack from slipping back, and breeching, around her hams, would keep them from shipping forward onto her neck and over her head.

After getting well into the mountains the six partners, now traveling alone, found themselves in the wildest country they had ever yet seen. With the exception of a game path now and then, there was no trail of any kind. But they had a map and a compass, and knew in what direction they wanted to go. They found an abundance of game, and would have no trouble providing themselves with meat, of which they carried very little in their packs. They had some fear of Indians, for it was known that the mountain tribes were at least unfriendly, and might be actually hostile. But as each man of the party had a gun on his shoulder and a six-shooter at his belt, with plenty of ammunition, they hoped to be able to take care of themselves if attacked.

The first night overtook them in a pine forest. They camped in a mountain gorge, and on a steep mountainside. Not many yards below them was a torrent, whose roar echoed from the mountains that shut it in. They had hoped to find a better camping place, but darkness had overtaken them here. The pine needles, being perhaps a foot deep, had made the traveling both slow and hard.

Those same pine needles made it dangerous to light a campfire, and the travelers had to content themselves with a dark camp. For supper they managed to get along with dried buffalo meat. Brindle, after being unsaddled, was hobbled and belled, and then turned loose to forage for her supper.

But the thing that would cause the travelers to recall this night long after other nights were forgotten was the trouble they had sleeping. The mountainside was so steep and the pine needles proved so slippery that the six men had scarcely lain down when they began to slide, a few inches at a time.

"Bet a dollar I take a scoot before morning, and land kersplash in that blasted creek!" growled long Jeff Givens, the grumbler of the party.

"Is a little danger of that," admitted Esau. "This stuff we've spread down our blankets on has got a funny way of slippin' and slidin' over itself. You slip every time you move, and then every time you don't move."

"Get you a tree, boys! Hunt the upper side of a tree That's the way I've done!" called out Orlando.

"Too dark in these thick woods to find trees," somebody answered.

But two or three did grope about till they felt tree trunks, against which they managed to brace themselves. At least one slept with a leg on each side of a rough pine trunk. The others found themselves several feet farther down the mountain when morning came than they had been when they fell asleep.

Breakfast here was out of the question, and the party prepared to travel on the first minute they could see. But they were delayed the greater part of an hour, hunting for Brindle. That thrifty brute had kept browsing till she found a grassy place, a few hundred yards around the mountain. There she had first filled herself with grass, and then lain down in it. And she lay so quietly that her bell made no sound till she happened to turn her head to lick herself.

Now she was quickly brought back to camp, where her saddle and pack were fastened on. Then every man strapped on his own pack, buckled on his six-shooter and shouldered his gun, and they began to climb the mountain again.

It was two or three hours later when they emerged from the forest and the roughest of the mountains, and found a good camping place. There they ate their breakfast; and, in order to give their pack cow plenty of time, they also ate their dinner there. After that they got ready and moved on once more.

As the six wanderers made their way across the mountains, day after day, they finally began to notice smoke ahead. But they tramped a good many miles—almost a whole day—before finding themselves near the smoke. They had fully expected to look upon a forest fire. But great was their surprise to see little or no timber in the burning country. Smoke was issuing from the ground in many places. Evidently something beneath the earth's surface was burning. And not only was there much smoke rising from an extensive tract of country, but the heat was so great that the travelers could not approach close enough to investigate the strange subterranean fire.

The burning district being directly in their course, they had to turn aside and pass around it. They camped for night not a great distance off, and most of the party approached the smoking ground to see if they could solve the mystery. But the heat drove them back again, and they returned to camp no wiser than they had left it.

(Being eager to reach the new diggings, the party of six, who were gold seekers rather than scientists, never learned what was burning there. But the state geologist of Colorado, to

(Continued on page twenty-six.)

GENERAL ADVERTISING.

Color Your Butter

"Dandelion Butter Color" Gives That Golden June Shade and Costs Really Nothing. Read!

Before churning add one-half teaspoonful to each gallon of cream and out of your churn comes butter of Golden June shade to bring you top prices. "Dandelion Butter Color" costs nothing because each ounce used adds ounce of weight to butter. Large bottles cost only 35 cents at drug or grocery stores. Purely vegetable, harmless, meets all State and National food laws. Used for 50 years by all large creameries. Doesn't color the buttermilk. Tasteless.

Wells & Richardson Co., Burlington, Vt.

WOOL CARDING

Have you prepared for those cold winter nights?

Custom scouring and carding given special attention.

Wool batt comforts and mattresses. Ship your wool to

CRESCENT BATT & BEDDING CO.
Stayton, Oregon.

Shave, Bathe and Shampoo with one Soap.—Cuticura

Cuticura Soap is the favorite for safety razor shaving.

Glance over the bargains on the "Want Ad" page.

VITAMINES



are supplied to the growing infant body by

DENNOS

The Milk Modifier. Try it for your baby. Ask your doctor. All druggists sell Dennos. Sample free.

DENNOS FOOD CO., Portland, Ore.



Protect Your Precious Teeth

In stormy weather your family is protected by rubber clothes and boots to prevent colds and other diseases.

In good weather or bad, the enamel of your teeth (the protective outer covering) needs to be cared for against the constant attack of decay. Mothers and school teachers should see that the teeth are brushed at least twice a day with a safe dental cream, to remove food particles in which the harmful decay germs breed.

The U. S. Public Health Service says that a dental cream should not contain grit. Harsh grit in a dentifrice may damage the precious protective enamel. You can be sure of a *safe* and sensible, non-gritty, drugless dental cream, suitable for *all* the family, when you buy Colgate's Ribbon Dental Cream.

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Doesn't Scratch or Scour

Colgate's contains a specially prepared fine chalk. It has no harsh grit, no strong drugs or chemicals. The refreshing, delicious flavor makes tooth brushing a pleasure.

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Please send me *samples* of the following articles. I enclose amount of stamps shown for each one checked.

[ ] Face Powder 6c
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FAMILY CIRCLE

ALICE BARLAND
EDITORIAL CONTRIBUTOR

Experience Letters

From Our Family Circle Women

Dear Mrs. Barland: I have been reading THE FARMER for seven or eight years and am interested in the Family Circle and especially the good cooking recipes.

I have had much experience cooking in hotels and camps when I was younger and will give you here a recipe for bread starter which never fails. This yeast never sours if kept in a cool place.

To start it, after peeling, boil three large or four small potatoes until done, mash very fine, add 1 cup granulated sugar, 1-4 cup salt, 2 cakes of yeast foam previously dissolved in a little lukewarm water; stir altogether thoroughly in an earthen crock and add 2 quarts of warm water. Make this at noon the day before baking, then cover and let stand until morning. Stir it well then dip out about a pint for a start next baking; put it in a glass jar well scalded first, and cover closely and stand away in a cool place till you need it for your next baking.

To set your bread add flour to the remainder of your starter till it has the consistency of common cake batter, beat it well and set it to rise in a warm place, not too near the stove. By the time breakfast is over and dishes washed it will be ready to mix. Add sufficient flour to make a stiff, smooth dough, knead well and let rise a couple of hours, knead down again, let it get light again and then mold into loaves. Allow them to rise to double their size and put into a medium hot oven and bake steadily for an hour or longer if the loaves are large, about one and one-quarter hours. You will have sweet, well flavored bread.

When baking day comes next time proceed just as you did before only do not use any yeast cakes but prepare your potatoes, sugar, salt and water and then put in the "starter" which you had put away in your glass jar.

This never makes as good bread at first starting as later and grows better with age. After using it six months or a year if it seems to rise a little slower add half a yeast cake to the starter.

MRS. A. C., Oregon.

Winter Vegetables

By MISS H. L. LYNAN.

Sweet Potatoes, Fancy Style—Boil the potatoes until tender, let stand in the water a few minutes, then pour off the water and let them steam a few minutes. Add two tablespoonfuls of butter and let heat well, sprinkle with a little brown sugar and a little powdered cinnamon and let brown in the oven.

Baked Pumpkin.—Cut the pumpkin in pieces for serving, remove the seeds and string portion, brush with molasses, season with salt, pepper and a few grains of red pepper; bake until soft, add one tablespoonful of butter and serve in the shell. Garnish with sprigs of parsley.

Squash Croquettes.—Beat up one egg until light, add one-half cupful of milk, a pinch of salt, a few grains of red pepper, sift in one cupful of flour, add one tablespoonful of olive oil and one cupful of stewed squash. Mix until smooth and glossy and drop by spoonfuls into smoking hot fat. Fry eight minutes or until a golden brown, drain on white paper and serve hot.

Carrots and Rice.—Two medium-sized carrots, boiled and chopped fine, and one cupful of boiled rice. Place alternate layers in a buttered casserole and pour over all a sauce made of one and one-half cupfuls of milk, one tablespoonful of flour, one tablespoonful of butter, a pinch of salt, dash of pepper and one-half teaspoonful of kitrhen bousquet. Put buttered bread crumbs on top and bake in hot oven 20 minutes.

Women's Dress

The effects of color in woman's dress is taken up in a bulletin by Lila Morris O'Neale of the household art department of the Oregon Agricultural college. The following is an extract from the bulletin:

Effect of Colors on Apparent Size:

1. Colors like fire, yellows, reds, pinks and oranges are said to "advance." They throw the figure into sharp relief against the usual backgrounds and because it becomes conspicuous, it seems larger.

2. Colors like air, sky and water, those with blue predominating, are "retiring" colors. These melt into the background and the figure seems to be smaller because of the lack of contrast with the background.

Effect of Colors on the Complexion:

1. They should be in harmony with coloring of hair, eyes and complexion, which are in natural harmony with each other.

2. Light tints make one's own coloring seem darker by contrast; dark shades seem to absorb the color in face and eyes, making it paler. For this reason, a light collar on a dress or suit, or lighter hat facing is almost always an aid to one's appearance.

3. Extremely sallow or very dark, florid complexions are emphasized by pale colors near them. Transparent collars of organdie, lawn, georgette crepe, are pleasing transitions in such cases.

4. Contrasts, when the colors are bright, may be most unbecoming.

What Colors to Combine:

1. Subdued, grayed colors may be brightened by bits of embroidery, ribbons or linings of gay silks.

2. Any colors may be put together if kept dark and dull, and also any which are light and pale. In either case no one color asserts itself.

3. Study the magazine covers and printed silks for hints. A dull or a pale group of colors almost always contains a small spot of bright contrast. Try matching these hues with silks if you are planning embroidery, noticing the relative proportions which make the effect pleasing. Often the colors used seem unusual in combination until you recognize their likeness by their neighboring positions in the color circle.

Family Circle Girls

Dear Girls of the Family Circle: I learn from your letters that you girls have many perplexing questions which arise to trouble and confuse you. I would like you to write to me freely and fully and let us talk over things together, the same as your mothers and I have done. I believe we will all enjoy it and will be mutually benefited. Be sure to give your name and address when you write. I may never want to publish the name, but for many reasons I can serve you better if I know who you are and where you live.

I will give you a letter here that came just the other day:

"Dear Mrs. Barland: I have never written to the Family Circle, but have been reading the letters tonight and thought to pass the time by writing. I am the only one of the children at home. There are six of us girls. I will be 17 years old in November, have light brown, bobbed hair and grey eyes and weigh about 120 pounds.

"Do you think it all right for a young girl to keep company with a young man about five years older than herself and for both to be sincerely in love?

"Do you think the millinery trade a good one for a girl to study who has never had a chance to attend high school and who didn't quite finish the eighth grade?

"When a girl sees her young man friend coming down the street and she knows he doesn't intend to stop just then, is it proper for her to go out and stop him and talk?

"Should a girl kiss her friend goodnight or let him kiss her goodnight?

"Do you think it wrong for a girl to roll her sox?

"If you were me would you keep your hair bobbed for a while longer or let it grow as soon as it will? Your friend,

"TINNIE."

My Dear Tinnie: I am glad you wrote and some of your questions are being asked by many girls of your age. I will answer your questions as best I can in the order you give them.

If the young man is self-respecting and honorable in his intentions toward the girl five years younger than himself, I think it proper for her to accept such attention. I think you mean to ask my opinion as to the possibility of such attentions leading up to sincere love.

I believe it possible and know of cases like the one cited culminating in happy marriages. But, my dear girl, I have known of many which didn't bring happiness, especially when the girl married so young. Few, if any, girls of 16 or 17 have sufficiently mature minds to settle questions of such vital importance to their happiness. I will write more of this later.

If a girl has a decided taste for millinery there is no better thing she could do than to fit herself to follow it. She will find that her lack of schooling will hamper her as little in this trade as any.

It would not be proper or even good sense to stop a young man when he was passing and might even be an annoyance to him, if he were detained when in the pursuit of his work. If you want young men to appreciate you, always allow them to seek your society and never seek theirs.

(Continued on page twenty-six.)



What Farm Boys Want in Food

There are several ways to keep boys satisfied to stay on the farm. One way is to give them flavory, energizing food.

The automobile, moving pictures, the telephone, and now the radio—all make farm life more enjoyable to the boy.

Add the foods he likes each day and you've made the attraction just about complete.

But that food must be more than merely tasty. It must be energizing, too. For those who work hard must have the sapped energy replaced.

Rare Food Value in This Pie

No other dessert equals a luscious raisin pie made with big, plump, tender Sun Maid seeded raisins.

Raisins furnish 1560 calories of energizing nutriment per pound — more of this kind of nourishment than eggs, meat or fish.

Raisin Pie.

Two cups Sun-Maid Seeded Raisins, 1½ cups boiling water, ½ cup sugar, 2 tablespoonfuls cornstarch, 2 tablespoonfuls lemon juice, 1 tablespoonful grated lemon rind, juice of 1 orange, 1 tablespoonful grated orange rind, 1 cup chopped walnuts.

Cook raisins in boiling water for 5 minutes, pour into it sugar and corn starch, which have been mixed. Cook until thick, remove from fire and add other ingredients. Bake between two crusts. Walnuts may be omitted if desired.

All measurements for this recipe are level.



Blue package (seeded) best for pie and bread.

That's due to fruit sugar in the raisin. This sugar practically predigested by the sun, so it revives a tired man almost immediately after eating.

Raisins furnish food-iron also—fine food for the blood So these delicious seeded raisins are both good and good for you.

Try the recipe for raisin pie printed on this page. Make it with your own delicious pie crust. The juice of the raisins forms a luscious sauce. You've never tasted better pie, nor has that boy of yours.

He wants delicious food like this that energizes.

Let him try it. See what he has to say. Add this touch to the other home attractions.

Sun-Maid *Seeded* Raisins

Get delicious Sun-Maid Seeded Raisins. Big, plump, tender, juicy raisins. Made from finest California table grapes. Full of flavor, energy and iron.

Mail coupon for valuable free book of recipes.

Sun-Maid Raisin Growers

Membership 13,000

Dept. B-3110, Fresno, California

CUT THIS OUT AND SEND IT.

Sun-Maid Raisin Growers,
Dept. B-3110, Fresno, Calif.
Please send me copy of your free book, "Recipes with Raisins."

Name .....

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High Points in News of the Week

The outstanding event of the last week from the standpoint of world interest was the signing of an armistice between the Turks and the allies, bringing to an end the warfare that has been waged in Asia Minor and in the region of the Dardanelles for the last several weeks and preventing its further spread. The terms of the armistice require that the Greeks shall withdraw from Thrace on the western side of the Dardanelles, turning over to the allied governments the civil authority of the region, the allies in turn turning over this authority to the Turks. Such military forces as are absolutely necessary for normal police protection will be permitted to accompany the Turks on their return to Thrace.

Thus Turkey is again permitted to enter Europe, from which she was driven during the recent World war. As an outgrowth of the disturbances of recent weeks and of the armistice agreement, a general peace conference is to be called in the near future with France, Italy, England, Turkey and Russia as the principal nations participating. The conference is of such importance, however, that nearly all nations will be directly or indirectly interested, including the United States, though the latter will have no official delegates at the conference itself.

* * *

Partially as an outgrowth of the Turkish troubles, the British government is experiencing a political disturbance that may require Premier Lloyd George to submit his official position to a general election within a few months. Under the British cabinet system of government, when a premier discovers a wide-spread questioning of his policies he may resign, permitting another to take his place and form a new cabinet or he may submit the entire question to the people at a general election, standing for reelection or rejection. The Lloyd George cabinet has been representative of both major political parties, being known as a coalition cabinet. It is now declared that the liberal faction is about to break away and deny Lloyd George further support. The premier last week defended his policies in a public address but did not state definitely whether he would resign, submit to an election or cling to his present office without either action, pending further developments. It is freely predicted, however, that a general election will be called before Christmas.

* * *

Sixteen railroad companies, including some of the larger roads of the country, were reported last week to have entered into agreements with employees who took the places of striking shopmen, under which both employer and employee will abide by the decisions of the United States railway labor board as to wages and working conditions, the employees agreeing not to use a general strike as a weapon to secure their demands.

While a large percentage of the strikers who walked out July 1 are still idle, settlements have been made in a considerable number of cases on individual roads and the other companies report satisfactory progress in building up crews of new employees.

* * *

Secretary of Labor Davis of the president's cabinet last week declared himself in favor of abolishing the government's railway labor board. He takes the position that the board is unnecessary, it being preferable that the duties now performed by it be performed by a division of the labor department.

* * *

President Harding has expressed the intention of calling an extra session of congress immediately after the election next month. He desires action by congress on the ship subsidy bill before the opening of the next regular session in December. He expressed the hope that with the extra session and the regular session which will close March 4 or earlier, business could be cleaned up so that congress would not have to be in session continuously next year.

* * *

Senator McNary of Oregon has prepared a rural credit bill for early presentation to congress creating a revolving fund of $12,000,000 for short-term loans to farmers on warehouse receipts and other similar security. The measure would allot $1,000,000 of this fund to each of the federal reserve districts. Security given for these loans would constitute collateral for short-time bond issues which would, as loans increase, increase the amount of money available for this class of farm credit.

* * *

The government railway labor board last week granted a 2-cent an hour increase in wages to approximately 450,000 members of the maintenance of way and shop workers on the railroads. This is an increase of about $9000 an hour, $72,000 a day or about $22,000,000 a year to these workers.

* * *

President Harding has appointed Archie Roosevelt, son of the late Theodore Roosevelt, as executive secretary of the United States Near East relief commission. President Harding has called upon the American people to contribute a large sum of money to aid in relieving those in distress as a result of Turkish depredations in Asia Minor.

* * *

The interstate commerce commission has ordered eastern railroads to deliver to western roads 3400 refrigerator cars within the next 10 days to aid in handling the northwestern fruit crop. This action follows an appeal made by northwestern senators and representatives in congress. The commission declares that there are not enough refrigerator cars in the United States to meet the present emergency adequately. The 3400 now ordered into this territory are but a small percentage of those needed. More than 10 times this number are needed to handle the fruit crop of the Pacific northwest. It is expected, of course, that others will become available as the shipping season advances.

* * *

President Spreckles of the Federal Sugar Refining company predicts an early drop in the price of sugar. His prediction is based upon the prospects for an unusually heavy crop in Cuba and large production in the sugar beet districts of Europe. He forecasts no exportation to Europe within six months. The sugar factories in Cuba are expected to begin operation about December 1 this year, a month earlier than usual.

* * *

Former Premier Clemenceau of France expects to sail for America November 11 for the purpose of delivering a series of lectures in this country with a view to bringing about in America a better understanding of French policies.

* * *

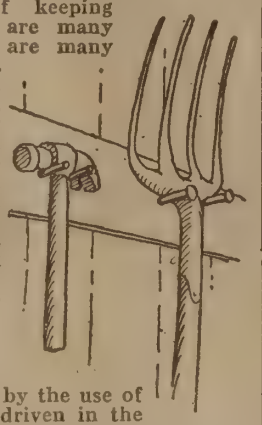
A New York federal court last week granted a temporary injunction against the department of justice, which recently issued a ruling that neither American nor foreign ships operating to or from American ports would be permitted to carry intoxicating liquors either for sale or consumption on board. The injunction forbids the putting into effect of the ruling on some of the principal ship lines pending a hearing to be held this week. Upon the recommendation of President Harding the department of justice has postponed the order in so far as foreign ships are concerned until Saturday, October 21, one week later than originally intended. Heretofore it has been generally held that the prohibition amendment and enforcement laws did not apply to ships beyond the three-mile limit. The ruling of the department of justice, which is now brought into court under the injunction, would make them effective on ships entering American waters.

* * *

The United States treasury department last week offered for sale an issue of $500,000,000 in 30-year government bonds bearing 4 1-2 per cent interest. The bonds were oversubscribed by investors within a short time, applications being made for about $1,000,000,000 of such bonds. The issue is for the purpose of refunding parts of the federal debt now falling due, including a considerable portion of the Liberty and Victory bond issue.

Hang 'Em Up on the Wall

A couple of nails make a handy rack on which to hang tools. No doubt, a well arranged tool chest is preferable to any other system of keeping tools, but there are many tools, but there are many put in a chest. Many that might better be so kept, may be cared for much better than the average person now does it by hanging them on the wall of the workshop or shed. The pitchfork garden rake, shovel, pick, hammer or almost any other common tool may be hung on the wall in a regular place by the use of one or two nails driven in the right position to take the particular tool. And it is a great satisfaction to be able to turn at once to the tool that is needed. It can be found easily, even in the dark, if it has a certain place to hang and is always put there when one is done using it.



Cold storage holdings of cheese on October 1 were 49,694,000 pounds, compared with a five-year average of 62,853,000 pounds. The reduction in stocks during September was 700,000 pounds more than the five-year average.

October Crop Report

According to the October 1 report of G. S. Rea, agricultural statistician, the spring wheat crop of Washington, with an estimated yield of 9.2 bushels per acre, is placed at 10,552,000 bushels (preliminary estimate), as compared with 17,205,000 bushels in 1921 and 19,256,000 bushels the 10-year average. The yield per acre this season is one of the lowest on record. In 1921 spring wheat averaged 15 bushels per acre, while the average for the 10 years, 1911-1920, is 17.1. The quality of the crop this year averages 84 per cent against 91 per cent last year.

The Washington oat crop is placed at 7,676,000 bushels (preliminary estimate), as compared with 10,500,000 bushels in 1921 and 12,227,000 bushels the 10-year average. The yield per acre this season is 38 bushels, against 50 bushels in 1921 and 44.8 bushels the 10-year average. Quality this year averages 87 per cent, against 90 per cent last year.

Preliminary estimates place the yield of barley this season at 23 bushels per acre, as compared with 36.8 bushels in 1921 and a five-year average yield of 30.2 bushels. This yield of 23.0 bushels per acre predicts a total crop of 1,610,000 bushels.

The corn crop of Washington, averaging 90 per cent of normal on October 1, is expected to amount to 2,268,000 bushels, as compared with 2,400,000 bushels in 1921.

Pastures in Washington on October 1 averaged 70 per cent of normal.

Potatoes in Washington on October 1 averaged 79 per cent of normal and gave promise of a crop of 8,579,000 bushels, as compared with the September 1 estimate of 7,920,000 bushels and the 1921 crop of 7,425,000 bushels.

INSECT CONTROL.

In its insect-control work in the southern Oregon-northern California points (forests of the northwest) this year, the United States department of agriculture treated 69,710 acres; 7079 trees, containing 6,672,490 board feet, were felled and the infested bark containing the broods of destructive beetles removed and burned. It is thought that a reduction in the infestation of at least 50 per cent will result.

Farm Business and Markets Outlook

(Continued from page five.)

Oats—$40 per ton; steam rolled, $42.

Corn—$36 per ton; cracked corn, $38 per ton.

Barley—$42; steam rolled, $44.

Bran and Shorts—$32 per ton.

Alfalfa—$22 per ton; timothy, $24 per ton; mixed hay, $22 per ton.

General Produce.

PORTLAND, Ore., Oct. 14.—Butter—Cubes, extras, 45c pound; prints, parchment wrapped, box lots, 48c; cartons 49c. Butterfat, 48c, delivered station; buying price, A grade, 43c.

Eggs—Buying price: Current receipts, 39c per dozen; henneries, 45c per dozen. Jobbing prices: Front street, candled ranch, 48c; selects, 50c; association selects, 50c; firsts, 48c; pullets, 42c.

Cheese—Tillamook triplets, price to jobbers, f. o. b. Tillamook, 29c; young Americas, 30c; longhorns, 30c pound.

Poultry—Hens, 13@23c lb.; springs, 21c; ducks, 15@23c; geese, 15@20c; turkeys, live, 30@32c; dressed, choice, 40c.

Veal—Fancy, 14c lb.

Pork—Fancy, 15 1-2c lb.

SPOKANE, Oct. 14.—Poultry—Fat hens, 17c lb.; light hens, 10c lb.; roosters, 8c lb.; spring chickens, over 2 1-2 lbs., 14c; broilers, 1 1-2@2 1-2 lbs., 16c lb.

Fresh Ranch Eggs—$9@13.50 case, according to quality.

Butterfat—46c lb.

SEATTLE, Oct. 14.—Eggs—Select local ranch, white shells, cases included, 47c per doz.; mixed color, 45c per doz; pullets, 36c per doz. Cases returned to shipper 1c less.

Butterfat—F. o. b. Seattle: A grade, 50c per lb.; raw milk, $2.10 per cwt.

Poultry—Hens, 4 1-2 lbs. and up, 24c lb.; over 3 1-2 lbs. and under 4 1-2 lbs., 16c lb.; 3 to 3 1-2 lbs., 12c lb.; 1922 broilers, 1 lb. and heavier, 22c lb.; old roosters, 10@11c lb.; geese, fat, live, 16c lb.; do fancy dressed, 24c lb.; ducks, 3 lbs and heavier, live, 15c lb.; turkeys, fat, dry picked, 8 to 15 lbs., 30@33c lb.; do live, fat, 10 to 15 lbs., 25c lb.; squabs, large, $4.50 per doz; pigeons, $2; guineas, $8 per doz.

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Peter—You didn't have a very good time at your birthday party yesterday.

Paul—I did so.

Peter—You did? Then why ain't you sick?

Not Because of Love.

"I know a man that has been married 10 years and spends all his evenings at home."

"That's what I call love."

"Oh no; it's paralysis."

Ain't Paw Smart?

"Paw, what's this here telephone amplifier?"

"That, my son, is one of those saps who grins into the transmitter and makes gestures while he's carrying on a phone conversation."—Pacific Telephone Magazine.

No More Required.

"Yessir," said Sag Peters, the Snagtown philosopher, "that young writin' feller went back to the city. He came out here to get atmosphere for his next novel, and right after he run on to me an' Cram Ellis skinnin' skunks he hustled back to the depo'. Said he had enough atmosphere to last him 10 years!"—Capper's Farmer.

Not Puppy Love.

The first time a boy falls in love, the greatest sufferer is his dog. Even the nice pats the girl gives the poor animal do not recompense him for having to give up the fine hunts in the creek bottom.—Country Gentleman.

Table Manners.

A Texas father was dining with his son in a Texas hotel, and in the course of dinner the son got into an argument with a cowboy. The cowboy called the son an offensive name, and the young fellow grabbed his knife in his fist and started around the table to be avenged.

But his father seized him by the coattails.

"Ain't ye got no table manners?" the old man hissed.

"But, pop, ye heered what he called me, didn't ye?"

"Yes, I heered all right, but that ain't no ground for yer forgettin' yer table manners. Put down that there knife and go at him with yer fork."—Detonator.

Logical.

Near Bridgport, Ill., west of Vincennes, is an oil field where the Illinois pipe line empties a large pool of crude petroleum.

The other day a man was seen sitting fishing in that oil pool.

"What you doing?" yelled the amazed attendant.

"Fishing," was the laconic reply.

"Did you ever, you dumb-bell, hear of catching fish in oil?"

"Dumb-bell yourself! Never hear of sardines?"

And the man went right on fishing.—Farm Life.

That's Business.

"Hiram, what makes you say 'By gosh!' so much and go around with a straw in your mouth,"

"I'm gettin' ready for them summer boarders that's comin' next week. If some of us don't talk an' act that way, they'll think we ain't country folks and won't stay."—The Farm Journal.

There's a Reason.

Ez.—Wha's thet cow yu' said you was a'going to sell me for $2?"

Eph.—She got well.

The Chronic Optimist.

A group of war veterans were discussing Thanksgiving. One of the guests was a veteran who had lost both legs.

"And what have you to be thankful for?" they asked.

"Lots," he replied. "I've got cork legs, and I can put on my socks with thumbtacks."—American Legion Weekly.

Picking Up What?

"How are conditions here," asked the stranger who was sojourning in the public square.

"My business is picking up," answered the park attendant, stooping to gather another armful of waste paper.—Orchard and Farm.

Latest High Class Patterns for the Home

Please order the patterns you desire at least two or three weeks before you wish to use them. Desiring to obtain the latest high-class patterns for its readers, THE FARMER has made arrangements to have them sent direct from the east, and under present mailing conditions it takes about that time for them to reach you.



3852. Ladies' dress. Cut in six sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. A 38-inch size requires 4 1-2 yards of 44-inch material. Price 10 cents.

4102. Girls' coat. Cut in five sizes: 6, 8, 10, 12 and 14 years. A 10-year size requires four yards of 44-inch material. Price 10 cents.

4135-4113. Ladies' costume. Waist 4135 cut in seven sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. Skirt 4113, cut in seven sizes: 25, 27, 29, 31, 33, 35 and 37 inches waist measure. The width at the foot is 2 1-8 yards. To make this costume for a medium size requires 6 7-8 yards of 32-inch material. Two separate patterns, 10 cents for each pattern.

4160. Ladies' dress. Cut in seven sizes: 36, 38, 40, 42, 44, 46 and 48 inches bust measure. A 38-inch size requires 4 3-4 yards of 40-inch material. The width of the skirt with plaits extended is 2 1-2 yards. Price 10 cents.

4153. Girls' dress. Cut in four sizes. 8, 10, 12 and 14 years. A 10-year size requires 3 1-2 yards of 32-inch material. Price 10 cents.

4162. Lady's house dress. Cut in seven sizes: 36, 38, 40, 42, 44, 46 and 48 inches bust measure. A 38-inch size requires 6 1-8 yards of 32-inch material. The width at the foot is 2 3-8 yards. Price 10 cents.

3692. Lady's apron. Cut in four sizes: Small, medium, large and extra large. A medium size requires 3 3-4 yards of 36-inch material. Price 10 cents.

4150. Girl's dress. Cut in four sizes: 4, 6, 8 and 10 years. A 6-year size requires 2 1-2 yards of 32-inch material. Price 10 cents.

3862. Child's romper. Cut in four sizes: 1, 2, 3 and 4 years. A 2-year size requires 1-8 yards of 27-inch material. Price 10 cents.

3778. Harlequin suit. Cut in five sizes: 8 and 10-12 years for children, 14-16 years for misses, and 38-40 and 42-44 inches bust measure for adults. A 10-12 year size requires 5 1-2 yards of 27-inch material for the suit, and 5-8 yard for the cap. A 38-40 inch size requires 8 3-4 yards of 27-inch material for the suit and 7-8 yard for the cap. Price 10c.

3745. Man's night shirt. Cut in eight sizes: 32, 34, 36, 38, 40, 42, 44 and 46 inches breast measure. A 38-inch size will require 5 7-8 yards of 27-inch material. Price 10 cents.

4165. Girl's undergarment. Cut in five sizes: 4, 6, 8, 10 and 12 years. A 10 year size requires 2 5-8 yards of 27-inch material. Price 10 cents.

Fashion Book Notice.

Send 12 cents in silver or stamps for our up-to-date fall and winter 1922-1923 book of fashions, showing color plates, and containing 500 designs of ladies', misses' and children's patterns, a concise and comprehensive article on dressmaking, also some points for the needle (illustrating 30 of the various simple stitches), all valuable hints to the home dressmaker.

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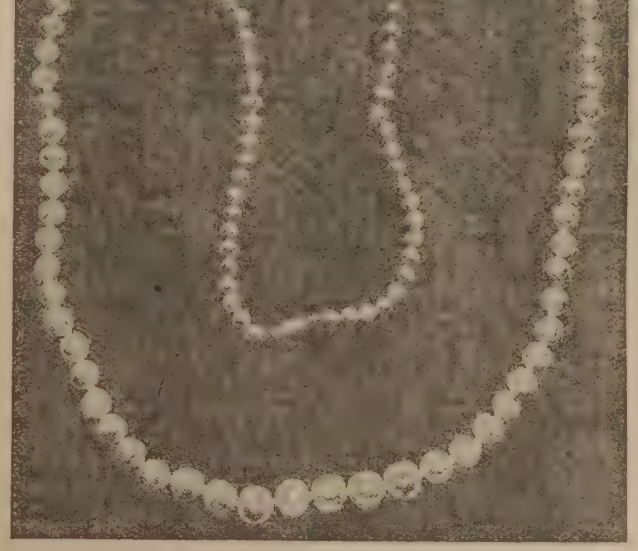


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Your Health

By Royal S. Copeland, M. D., F. A. C. S.

Fear is at the foundation of many of our ills.

It is strange that human experience goes for so little when we measure our own disabilities, or those of our immediate family We are sane enough when other folks are troubled, but in estimating the significance of our own symptoms too many of us lose all sense of proportion.



Dr. Copeland.

The natural tendency of disease is toward recovery. Remember that. If it were not so the first illness would be likely to prove fatal. Before your last sickness arrives you will have a hundred illnesses from which you will recover fully.

The trouble with society is it has a subconscious conviction that its manner of life is wrong, and when illness arrives it brings the fear that nature has rebelled at last and will enforce her claims.

No wonder the tribes of the earth have sought to find some drug to rob the human heart of fear.

If you are afraid of high places, avoid them. If you are fearful you will fall, keep away from the heights.

If you are afraid every time you get sick, avoid the manifest causes of ill health. You know how to keep well, or you can be taught how to keep well.

But if you live the wrong sort of a life and then when you do get sick are scared half to death, you will be assisted in that direction pretty rapidly.

Likewise, if those about you, your family and friends, have hearts filled with fear, you will be given little real assistance toward recovery. If every symptom you have—headache, running nose, paleness, a cough—excites the family, you will react to their fears and be fearful yourself.

Use common sense about acute illness and about persistent ill health. With the exception of the contagious diseases, for each of which there is a specific germ, there are underlying, even though obscure, causes for sickness.

Illness is rarely a suddenly sent thing. It does not comes like a bolt out of the blue. It gives warning of its approach. There may be a cloud on the horizon no larger than a man's hand. But that cloud gives warning of what may happen.

Almost always illness is due to neglect. There are certain very commonly overlooked causes for sickness. You can not expect to have good health if there is an organ growing the germs of disease. Yet lots of people have that state of affairs going on in their bodies and never give the matter a thought until acute illness arrives. Then there is a frenzy of fear.

Bad teeth and gums, and diseased tonsils are responsible for many ailments. A germ-laden intestine is another breeding place for disease-producing germs. Ulcerative and pus-forming conditions of other organs constitute a fourth chief cause for ill health.

The interesting and striking thing about these centers of infection is that the exciting trouble is usually painless, and unless the causes of ill health are sought for they may be overlooked.

If you are not well don't give way to a panic of fear. Sit down calmly and study yourself and your habits.

What is wrong about you?

What is wrong with your ways of living?

Knowledge dispels fear.

Just Folks

Siberia is the new America.

A masterly retreat is close to victory.

Take your medicine and forget the bitterness.

To be precise in all things is to destroy the virtue of precision.

Nobody has a universal recipe for success, not even the wisest person.

Nobody has said the last word in defining success.

Most of our own unhappiness is caused by envying the success of somebody else.

The noble struggle resulting in failure may be more of a success than the ignoble struggle resulting in so-called success.

Is popularity success? Popularity is built on the quicksands of time. Are numbers success? But numbers are deceptive. One of the old New England reformers of 75 years ago was fond of repeating that "one and God make a majority."

You are alone in your opinion and are anything but a success. Yet if your opinion is worth while you may believe with Emerson that the whole world will come around to you in 20 years. Go with the crowd and you will have 20 opinions in 20 years and none of them an accomplishment that is worth while.

In fact, a lot of time is wasted in thinking and talking about success just as a lot of precious time is wasted in trying to have a good time.

Poise is true success and poise comes by a better understanding of the needs of life.

Death is a part of life just as much as birth. Death is not to be pondered over but simply accepted. Accepting death as a part of life is poise.

Pike's Peak or Bust

(Continued from page twenty-two.)

whom the writer referred the matter for an explanation suggests that in various parts of that region seams of coal have burned near the surface; that some are on fire at the present time, and have been for years. What the six miners saw was doubtless the burning of a coal seam not far underground.)

Pushing ahead next morning, they soon found themselves in a blackened, desolate-looking region, apparently destitute of either plant or animal life. As they could see, this country had once had underground fires, like the country just passed. But the fires had burned out and the ground had cooled. Not only was every living thing destroyed here, but the very boulders, the travelers discovered, had been so burned that a shovel could be pushed into any of them.

(To be continued.)

Family Circle Girls

(Continued from page twenty-three.)

or show great eagerness to have them show you attention. Men do not like to be "chased."

I would not express myself at this time concerning your fourth question about kissing young men friends goodnight. But listen, girls, I want all of you who read this to write and tell me what you think about it yourselves. This is an important question and we will give it a hearing.

I certainly have some strong opinions about the rolling down of sox. You ask if I think it "wrong." I think it is vulgar and unladylike. I have never been able to understand how any woman could desire to expose her person to public gaze in the manner which has been common for many months. It has gone from bad to worse till it seems to some of us looking on that many women and girls have parted with all modesty.

Concerning the bobbed hair: So many lovely and sensible girls have bobbed their hair that it has ceased to be conspicuous. I do not wonder that they are enjoying the freedom from hairpins and the ease of washing and drying. The fashion will result finally in better hair and thicker. If you are happier with your bobbed hair and if it is becoming to you, why, just go on enjoying it and when you tire of it that way tuck it snugly into a net and it will look, while growing out, very much as if it were done up. Goodby, Tinnie.

Your friend,
ALICE W. BARLAND.

BEDTIME STORIES

By THORNTON W. BURGESS.

UNC' BILLY'S FAMILY ARRIVES.

Unc' Billy Possum came proudly down the Lone Little Path through the Green Forest toward the big hollow tree, which he had made his home. Peter Rabbit was the first to see him coming. Peter hurried to meet him, for Peter had prepared a surprise party to greet Unc' Billy and his family.

When Unc' Billy Possum saw all the little meadow and forest people gathered there to greet him and all the good things they had brought to eat, he was as surprised as Peter had hoped he would be. But Unc' Billy didn't show it. Oh, my, no! Unc' Billy never lets on that he is surprised at anything—he just grinned and grinned, as only Unc' Billy Possum can grin.

"What you-alls doin' at mah hollow tree?" demanded Unc' Billy, grinning more broadly than ever.

"It's a surprise party for you and your family," said Peter Rabbit. "We thought that Mrs. Possum and the children would be hungry, so every one has brought something to eat. We want you to know how much we think of you and how glad we are that you are going to stay right here in the Green Forest. I hope you will like the party."

Unc' Billy made a very low bow. "Ah certainly am obliged to you-alls for sech a right smart welcome to muh family," said Unc' Billy. "Ah reckon we-alls are going to stay right here in the Green Forest because you-alls have made it so pleasant."

Now all this time every one had been looking for Unc' Billy's family, and Danny Meadow Mouse could hold his curiosity no longer.

"But where is your family, Unc' Billy," he interrupted.

Unc' Billy grinned even more broadly than he had before. "Ah done left 'em back a piece so as to see if the road was clear. Ah'll go and fetch them."

So Unc' Billy turned back along the Lone Little Path, hurrying as fast as he could go, and everybody gathered close around his hollow tree and watched to see his family arrive. Pretty soon they saw him coming back down the Lone Little Path and behind him came old Mrs. Possum. She looked so much like Unc' Billy that Johnny Chuck giggled right out loud. Her gown was just as thin and just as rumpled as Unc' Billy's old suit. Her face was just as sharp and just as crafty as Unc' Billy's. But while Unc' Billy was grinning old Mrs. Possum had never a smile; in fact, Mrs. Possum looked cross. She looked so cross that Peter Rabbit forgot all the nice things he had planned to say to her. You see, old Mrs. Possum had

(Continued on page twenty-seven.)



She looked so much like Unc' Billy that Johnny Chunk giggled right out loud.

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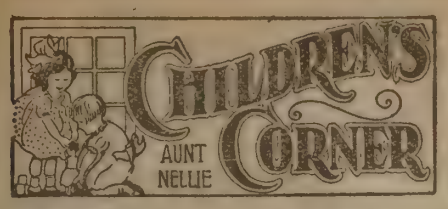
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In writing advertisers, be sure to say you saw their advertisement in The Washington Farmer.



Orena Seiber, a new cousin writes: "I am a little girl in Stevens county, Washington. I should like to join the Corner. I have two brothers. My little brother, Richard, will be 3 years old in November. We have lots of fun with him. We call him Koolee for a nickname. We called him Cutie, then he called himself 'Koolee.' My big brother, Crick, is 10 years old and I am 9. Both of us go to school and both are in the fifth grade. We go to the Waits lake school. We have six children in school. Our pets are two kittens, one dog, a pig and two sheep. I planted a little patch of potatoes and took care of them myself. I got 1 1-2 sackfuls. I sold them and got $2.25. I like the Bedtime Stories in THE FARMER."

The following letter comes to us from Christian Larsen, a cousin in the Big Bend country, eastern Washington. "I am going to school now. I am in the third grade. Our teacher's name is Miss Jones. There are eight pupils in our school."

Raymond Larsen, also of the Big Bend country, Washington, has never gone to school, but he will as soon as he is old enough to go. Raymond was 5 October 23, 1922. He says his papa is not through threshing yet.

Helen Jackson lives on a farm 12 miles from town in the Palouse country, eastern Washington. She says: "I like to go to school. I like to read the Children's Corner in THE FARMER. My birthday is January 22. I am 7 years old." (Write us another letter, Helen.)

Birthday Greetings

THURSDAY, October 19—Dorris Eddings, 10 years old; Harold Hardesty, 10; Frances Zumwalt, 10.

FRIDAY, October 20—Vera Louise Kinsey, 10 years old; Emma Miller, 10; Helen Pattinson, 10.

SATURDAY, October 21—Walter Colley, 8 years old; Charles Hepler, 11; Marjorie Kelso, 11; Florence Waugh, 10.

SUNDAY, October 22—Doris Groff, 8 years old; Ruth Warwick, 6.

MONDAY, October 23—Thordis Fjerlie, 9 years old. Evelyn Seleen, 10; Raymond Larsen, 5.

TUESDAY, October 24—Mildred Blessing, 10 years old; Bessie Choufty, 11.

WEDNESDAY, October 25—Esther Pershall, 11 years old; Hubert Sparber, 9.

LETTERS WELCOMED BY AUNT NELLIE.

Among recent letters received by Aunt Nellie are those from cousins whose names follow. A few of these will be published each week in the regular edition of THE FARMER, and others will appear from time to time in the Junior Farmer.

Matilda Anderson, Mildred Slye, Myrtle Martin, Ellen Arlene Lathrop, Mary Wuotila, Carl Sieveke, Helen Jackson, Orena Seiber, Emily Dowell, George Lenhart, Alice Herndon, Adelma Rossell, Christian Larsen, Raymond Larsen, Olive M. Willard, Raymond Linvar, June Johnson, Dorothy Watson, Signa Nieme, Alice Vance, Mary Jane Liscum, Lester Kelso, Louise Evans, Irene Fleming, Roloff Huberd.

Bedtime Stories

(Continued from page twenty-six.)

had a long journey, for she had come all the way from "Ol' Virginny" and she was tired. The fact is, old Mrs. Possum had not wanted to come at all.

Now, every one had thought that Unc' Billy Possum had a big family, and when they saw no one but old Mrs. Possum looking so cross they didn't know what to make of it, but every one was too polite to ask any questions. Each came up in turn and was introduced by Unc' Billy. Mrs. Possum just grunted to each one until Jimmy Skunk came along. Jimmy Skunk brought with him a big goose egg and offered it to Mrs. Possum with a very low bow. There is nothing in the world that Mrs. Possum likes better than fresh eggs, and this big goose egg made her smile in spite of herself. She just couldn't help it.

"It's fresh and there are more where that one came from," said Jimmy Skunk. "I certainly do hope you will like the Green Forest, Mrs. Possum. May I ask where your family is?"

"Certainly, sah; they are in my pocket," said she.

"Did—did—I understand you to say that you had brought your family in your pocket?" Peter Rabbit asked hesitatingly.

"You certainly did, Bre'r Rabbit," replied old Mrs. Possum.

Every one looked at every one else, very much puzzled. Finally Prickly Porky cleared his throat. "Have—have you got your pocket with you?"

It was such a foolish question that everybody laughed. Unc' Billy laughed harder than any one else, unless it was old Mrs. Possum herself.

"Of course I brought mah pocket with me," said she. "Would you-alls like to see mah family?"

"If you please," said Jimmy Skunk, who never forgets to be polite.

Old Mrs. Possum climbed up on a stump where all could see her. My, how they did crowd around! Then very slowly she opened the big pocket in her gown and began to call one name after another. As she called, out of that big pocket popped one head after another until there were eight little heads sticking out of that big pocket and every little head was the exact image of Unc' Billy Possum.

For a few minutes no one could say a word. It was so surprising that every one rubbed their eyes to make sure that they saw aright. Then Peter Rabbit hopped up on a log and made a speech. It wasn't very much of a speech, but he told old Mrs. Possum how he had planned this surprise party and how the surprise was really theirs and not hers. He finished by suggesting that it was time to eat. Then everybody brought out the good things which they had prepared and all began to eat and talk at once. (Copyrighted by T. W. Burgess.)

That's True, Too.

"Children are so much trouble," tired parents often say, but they should consider how much trouble parents are to their children.—The National Population.

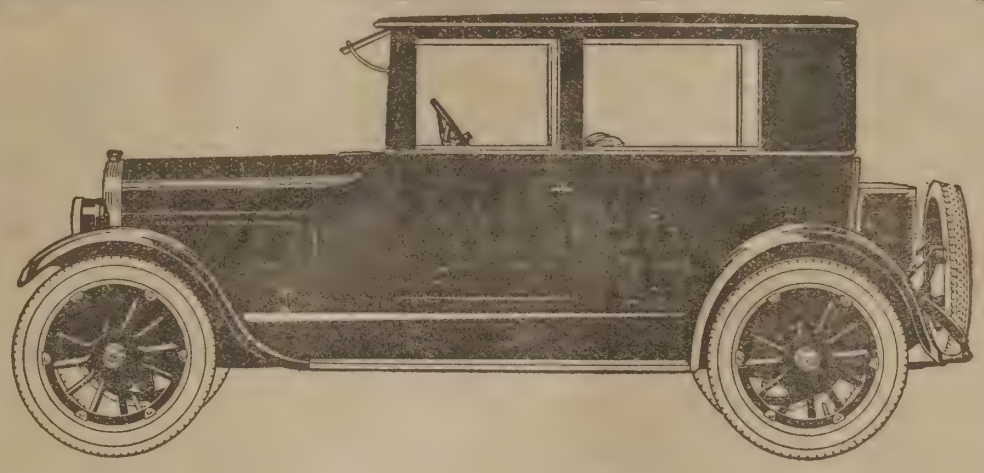
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OAKLAND MOTOR CAR COMPANY, PONTIAC, MICHIGAN
Division of General Motors Corporation

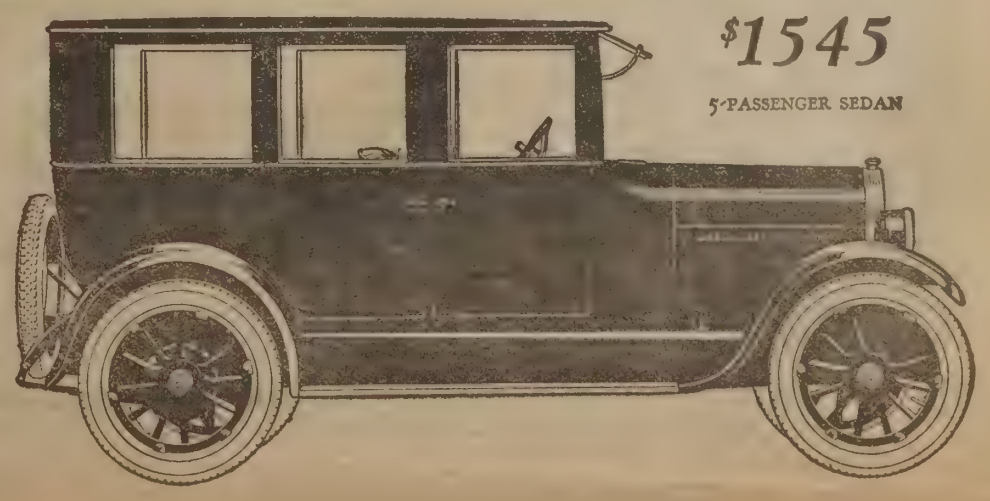
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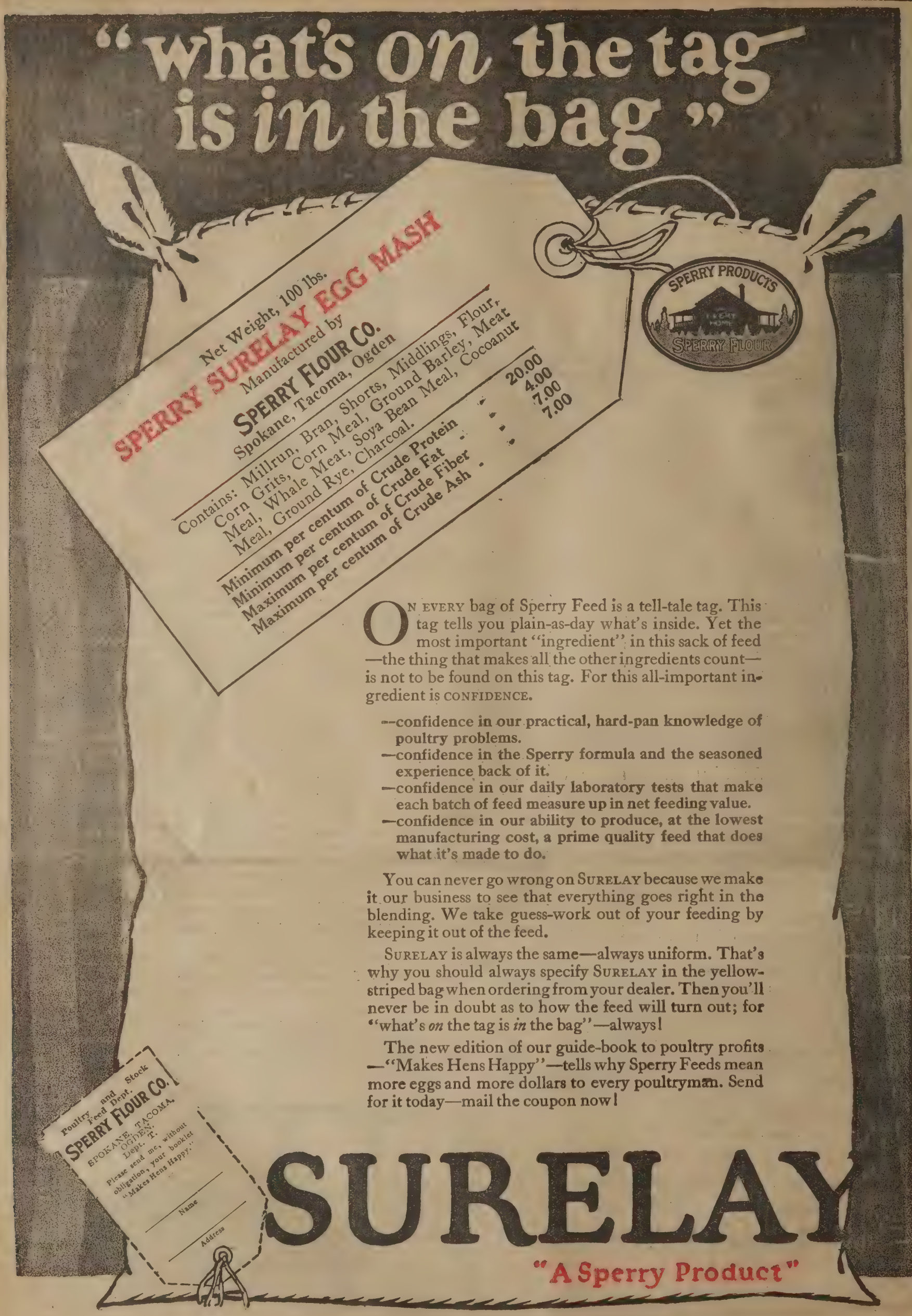
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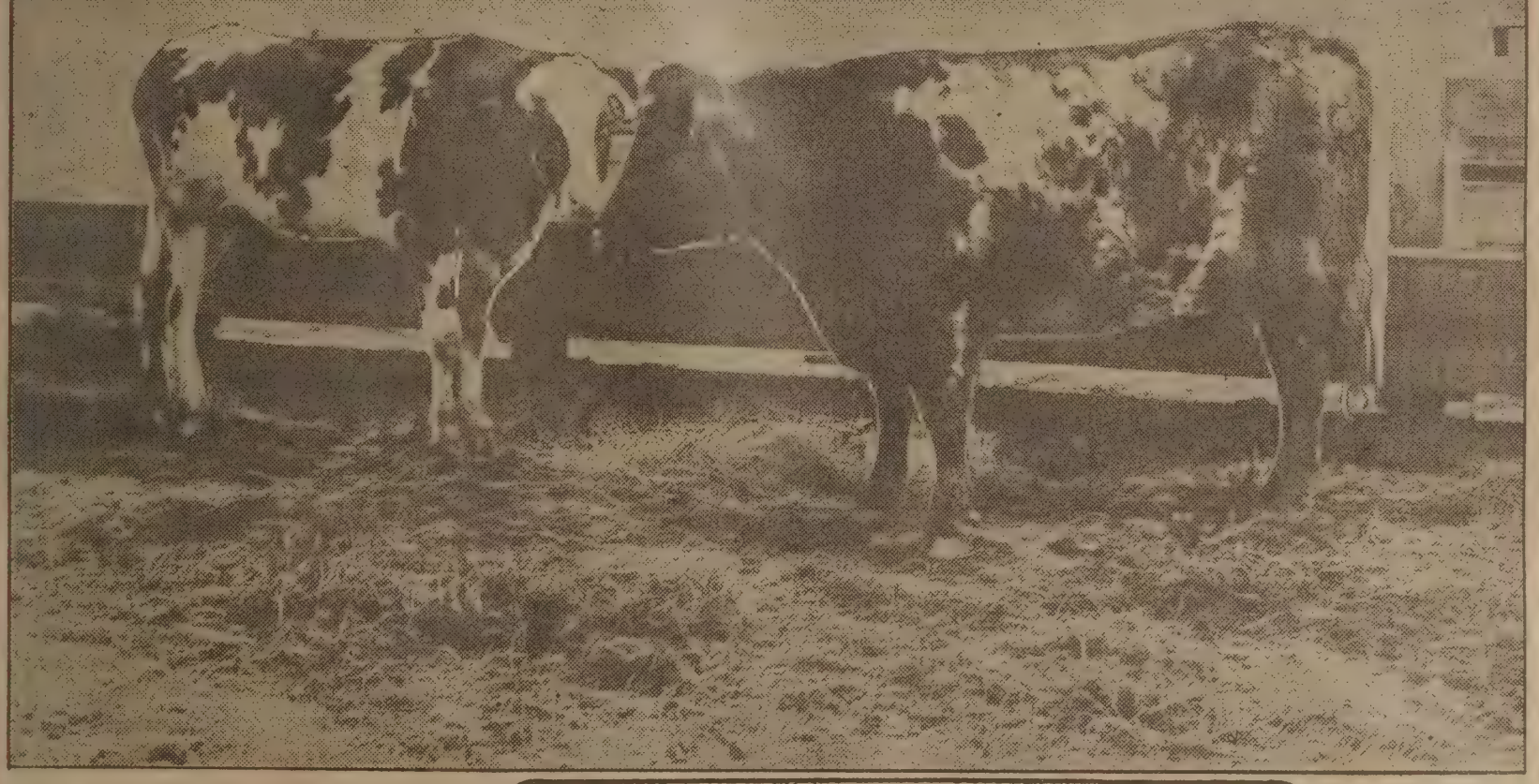
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BETTER SIRES PAY. Hercules Stock Farm Sprague Wash



THE campaign for the improvement of herds and flocks by means of purebred sires is sweeping the country. The principle involved applies to cattle, horses, sheep, hogs, poultry and rabbits—all species, all breeds. The picture above tells a story more forcefully than can words. It was taken at the Spokane Union stockyards some time ago, when Frank M. Rothrock of Hercules farm, showed the two animals as "exhibits A and B" to prove the value of the purebred sire over the scrub. The lesson is too plain to need explanation. From pigeons to beef cattle it is applicable, and he who would succeed can no longer ignore it.

Why Is It That One Man's Steers Bring More Money Than Another's?—Page 9

Fruits for Fairs

Growers Using Care in Selection

The fruit growers of western Washington have been more careful in the selection of their fruits for exhibition at the fall fairs. There have been fewer blemishes, less insect injury and disease, according to C. O. Weiss, district horticultural inspector at Everett. Mr. Weiss was asked to judge a number of exhibits at the fairs and is well pleased with the improvmeent of the exhibits.

In each district the growers selected varieties that were typical for that part of the state. The apples were splendid samples of Yellow Transparents, Gravensteins, Kings, Winter Bananas, Northern Spy, Grimes' Golden, Wolf River, Gloria Mundi, Baldwins, in both plate and box displays. Some of the boxes of fruits on display were well packed and compared favorably with the packed boxes of east of the mountains fruit.

There were plenty of Bartletts, Clapps' Favorite, Anjou, Comice and Bosc pears and the samples that were exhibited were wonderful specimens. The Bosc, or as many choose to call it, the "russet," seems to be a coming pear in the Snohomish county district. The Claireegeau, Bonne de Jersey and dound pears were exhibited to a large extent.

The rains that came seemed to have been at the right time to put the size on the fruit. The orchards that were cultivated and fed produced fine, large samples of fruit and plenty of it. The orchards in sod were set back quite a bit by the drought and the type of fruit that was developed, although it had splendid color, lacked size. Cherries and berries were on display at the earlier fairs and there one saw splendid samples of Bings, Lamberts, Royal Anns, Montmorency, Early Richmonds, Morellos, Wraggs, Cuthbert raspberries, Antwerp and Marlborough and Marshall strawberries.

At one of the fairs the local organization of the North Pacific Berry Growers' association had an exhibit of berry canes of raspberries, logans and blackberries, showing the length of growth of the new canes and the maturity of canes as well. This same fair had a splendid display of ginseng and golden seal. This grower displayed the plants showing one, two, three and five-year-old plants, and it was quite an educational feature.

A prominent fruit grower had a booth of his own, showing the various varieties of fruits raised on his place, as Bartletts, Anjou, Comice, Bosc and Claireveau pears, also some Gravenstein, Wealthy and King apples. It was educational and showed what can be grown in western Washington if the proper care is given. The blight does not trouble pears here and there were no displays that were not splendid samples of large, clean pears, and pears of high quality.

"Pike's Peak or Bust"

"All right, send The Washington Farmer instead of the Oregon Farmer, provided it has the same continued story as the Oregon. If it hasn't, we don't want it in the house."

Nothing ambiguous about that, is there? W. A. Tate, formerly of Holton, Ore., now of La Center, Wash., intends to finish "Pike's Peak or Bust." The mere fact of his moving from one state to another will not be allowed to stand in the way.

Mr. Tate has spent many years in Oregon, principally in the eastern part, but is now moving from Columbia county, Oregon, to a farm three miles from La Center, Clarke county, where he plans eventually to specialize in the production of "baby beef." He has about 40 acres of land, 11 of which are cleared.

Washington Invades Montana

Three prominent herds of Washington cattle competed at the Montana state fair this year, each bringing home a large share of the awards in the three breeds in which they competed.

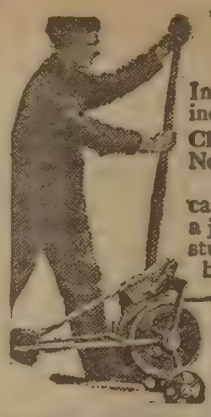
Jerseys—Glen Tana farm of Spokane showed Jerseys winning the following awards. First aged bull, first senior yearling bull, first senior bull calf, first and second junior bull calf, first ayed cow, first 2-year-old heifer, first and second junior yearling heifer, first, third and fourth senior heifer calf, first junior heifer calf, first in graded herd, young herd and calf herd, first and second in get of sire and produce of cow and all championships as follows: Senior and grand champion bull on Glen Tana Perfection, junior champion bull on Glen Tana Moroco Majesty, senior and grand champion cow on Glen Tana Sibyl 2d, and junior champion heifer on Glen Tana Moroco Inez.

Guernseys—H. E. Angel & Son of Mabton showed Guernseys and won as follows: First aged bull, third senior yearling bull, second and third senior bull calf, first junior bull calf, second aged cow, first 2-year-old cow, third 2-year-old heifer, second senior yearling heifer, first and third senior heifer calf, first graded herd, young herd, get of sire and produce cow; first and third calf herd and the following championships: Senior and grand champion bull on France's May King and junior champion heifer on Ruby Dell Butter Queen.

Shorthorns—Hercules farm, belonging to Day & Rothrock, Spokane, showed Shorthorns, winning as follows: First junior yearling bull, first, second and third, senior bull calf; first and second, senior yearling heifer; first and second junior yearling heifer; first, second and third, senior heifer calf; first yearling herd, first and second calf herd, first and second get of sire, first group of three bulls, first and second group of two bulls, and the following championships: Junior champion bull on Hercules Conqueror, junior and grand champion heifer on Perfection Lady.

Dress Forms Interest Women

The farm women of Stevens county have been greatly interested in the demonstrations of the making of dress forms by the extension service of the Washington State college. There are, however, a lot of communities that have not had the dress form demonstrations, and, while it is not possible for the county agent's office to furnish some one from the college to demonstrate, Mrs. J. F. Golder of Colville and Mrs. Ray W. Hall of Orin, both farm ladies, are in a position to demonstrate the making of these dress forms. Bulletins are on file at the county agent's office which tell how to make them.



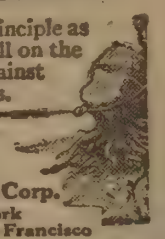
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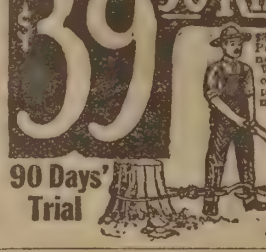
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Pulled 300 stumps in 5 days. Some were 24 in. through. C. Noss, Big Falls, Minn.

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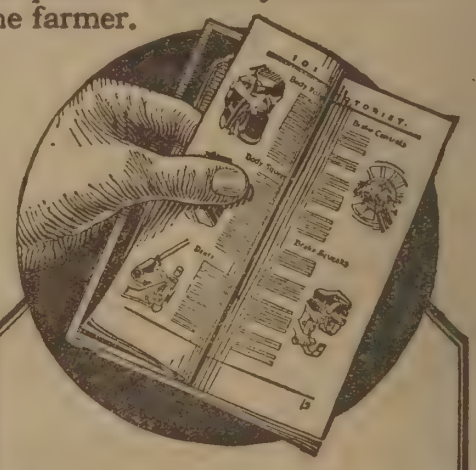
Automobile manufacturers adopt it—"101 Economies" was first published a few months ago. Overnight the book became famous. Experts praised it. Motorists everywhere sought copies of it. Already 17 prominent automobile manufacturers are sending out "101 Economies" in the side pocket of each new car, with their instruction books. Car agents and distributors the country over are following the same plan to get this unique and practical booklet into your hands.

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THE WASHINGTON FARMER

SUCCESSOR TO

Vol. 47. No. 17 THE RANCH PACIFIC DAIRYMAN HORN AND HOOF October 26, 1922

For Good Farming, Attractive Country Homes and Happy Country People

Which Shall It Be, the Cocoanut or the Cow?

By J. A. SCOLLARD,
President United Dairy Associations of Washington

If present plans are followed, the next few weeks will see launched in the state of Washington the most vigorous and systematic campaign against butter and milk substitutes ever attempted in the west.



J. A. Scollard.

The fact has, seemingly, just dawned upon the minds of all persons interested in the production, manufacture and distribution of dairy products that something must be done to stop the steady march of butter and milk substitutes or a vital industry will be destroyed.

There is much more to the subject than the mere economic proposition of pure dairy products versus milk and butter substitutes. The matter not only involves the upbuilding or destruction of one of the chief industries of the state, but it also involves the health and well-being of the present and future generations of our people. As scientific investigations on this point are brought nearer to completion it becomes more certain that the vital elements contained in milk and dairy products are essential to the proper growth of children and necessary for the maintenance of health and vigor in the adult.

The Public Doesn't Know

That ignorance of the true effects of the substitution of vegetable oils for butterfat in the dietary is responsible for the increasing use of imitations is the belief of those interested in the coming campaign, and the actual effects of the use of these inferior, foreign vegetable fats will be shown in their every phase. The campaign, therefore, will be of an educational nature and will be continued until the public is made fully acquainted with the menace which the substitutes constitute, both from an economic and a health standpoint.

Few persons, excepting among those directly interested in the production and manufacture of dairy products, realize the extent to which inferior vegetable oils have replaced butterfat in the last decade. Here are a few figures that are astounding: In 1916, but 563,000 pounds of coconut oil were used in margarines or butter substitutes; in 1920 there were used for this purpose over 80,000,000 pounds, or more than 140 times as much as in 1916. These figures are for coconut oil only and do not include peanut oil, cottonseed oil, oleo oil, lard oil and others. The actual gain in butter substitutes from 1916 to 1920 reached the stupendous figure of 224,183,000 pounds.

If there is any question as to whether this vast quantity of inferior product displaces pure butter, to dispel such doubt we need only refer to government statistics on the per capita consumption of butter in the United States. These show that in 1909 the average consumption of butter per person was 17 1-2 pounds, while 10 years later (in 1919) the average consumption per person had fallen to 15 1-2 pounds. In this period the population increase was, conservatively, 10 per cent, and yet the per capita consumption of butter fell off more than 11 per cent. You can make your own deductions and see the extremity to which the dairy industry is being pushed. If you doubt that the encroachment of butter substitutes is steady, glance at these figures from recent government statistics: The increase in reported sales of margarines for June, 1922, over June, 1921, was 2,426,356 pounds. This is the increase and not the total sales, for these latter reached 10,040,280 pounds. The increase in July, 1922, over July, 1921, was 3,853,776 pounds, with a total sales for July (of this year) of 14,973,800 pounds.

Bring the Effect Home.

Can you see what is happening, Mr. Citizen of a dairy state? Do not flatter yourself that it does not affect you. To localize the matter so that you can get a better grasp of the true situation, consider this: That in December, 1921, one concern in Seattle distributed 193,000 pounds of one brand of imitation butter. Where was it made? you ask. Probably in New Jersey—certainly not in Washington. Let us analyze these figures and see what they mean to Washington industrially. It would require at least 8000 average cows to produce the butter which this one brand of substitute displaces, and since the average herd in western Washington is about 10 cows, it displaces 800 herds, or probably 800 dairymen and their families. We do not know how many naked South Sea islanders were employed in gathering the necessary coconuts to make this vast slab of imitation butter, nor how many persons were employed by the New Jersey corporation to dress it up and make it saleable from its crude state in the South Sea islander's hands to the Washington consumer's table, but we do know that the Washington merchants sell naught to the South Sea island aborigines and naught to the men on the New Jersey payroll. We do know, however, that 800 farmer families are consumers of what Washington manufacturers produce and what Washington merchants sell. What do you think of it, Mr. Citizen of a dairy state? Do you want to join in this campaign to put pure dairy products and the dairy industry where they belong for the good of your business and for the good of your state and its people?

Creamery Men Take It Up.

The United Dairy Association of Washton, with 6000 producing dairymen in its membership, have, for some time, been formulating plans for a campaign against substitutes, and recently W. E. Turner, president of the Washington Creamery Operators, Butter and Cheese Makers' association, has made known to its membership that one of the principal subjects to be dealt with at their coming convention in Seattle on November 2 and 3 will be "Substitutes and the Best Manner in Which to Combat Them." This will, undoubtedly, result in the institution of an intelligent campaign by that organization.

Commercial organiations in dairy districts in Washington realize the seriousness of the situation. Women's clubs and health and welfare organizations every where are alive to the vital need of the elimination of butter and milk substitutes, and it is believed the entire effort can be merged into one campaign which will be effective in results.

You, Mr. Dairyman, will be asked to cooperate to the fullest possible extent in this campaign, so be ready to do your part when the call comes. We will be called upon to measure strength with a tough foe. The pockets of old man "Substitute" are bulging with money, but he has little else with which to gain favor, while we have every argument with which to win intelligent public opinion if only we can get the facts before the people—and this we propose to do.

New Bridge Spans Columbia

Pasco-Kennewick Structure Is Given Formal Dedication

Half a dozen years ago the old site of Fort Walla Walla, on the Columbia, a few miles below Pasco, was the scene of a notable celebration. A fleet of steamboats making the voyage from Lewiston to Portland halted at this point to give a visible demonstration of the effect of opening the Columbia to traffic by the completion of The Dalles-Celilo cannal. By this improvement the Columbia river was made navigable from the ocean to Priest rapids, about 415 miles, and the Snake river for light craft boats about eight months in the year, nearly 200 miles from its mouth or about 550 miles from the ocean.

Within the year past there was another notable celebration, this time in Pasco itself, at which representative people from throughout the northwest were present to give a united support to the great Columbia basin project, which will open up an irrigated empire of nearly 3,000,000 acres of land.

Last Saturday a third significant celebration was held. This time Kennewick as well as Pasco participated. This was the dedication of the Pasco-Kennewick bridge built by the Benton-Franklin Intercounty Bridge company. Fourteen hundred stockholders, living in all parts of Washington, in Lewiston, Idaho and in Oregon, contributed over $430.000 for the construction of the bridge. Congressman John W. Summers of Walla Walla ventured to say in his address "that not another great bridge has been built across a major stream by popular subscription and without state or federal aid, as this one has been."

These three great celebrations in the vicinity of the junction of the Columbia and Snake rivers typifies three great planes of development which should be more or less parallel in all efforts to build up the great possibilities now more or less dormant throughout the Pacific northwest.

The increasing and more or less prohibitive rates in railroad transportation are making the people look more and more to water transportation on our navigable streams and on the seas. The development of irrigable lands in a large way will furnish production which will make the development of river navigation more and more a necessity.

The third celebration, and not the least important, is that of the statewide and nationwide improvement of public highways, by just such big undertakings as that of the building of the Pasco-Kennewick bridge.

In the marketing of farm products the transportation question looms big, and this transportation question can be solved only by linking river navigation with that of the highways in order to supplement railway traffic. In fact, railway traffic has simply fallen down under the load which has been imposed upon it.

Moreover, all of these three events are significant in their influence of uniting the people of not only the state of Washington, but of the four states of the Pacific northwest in working for their own good most effectively by uniting and pushing common projects. The development of navigation of the Snake and Columbia rivers means much to Washington, Idaho and Oregon. The Columbia basin project is typical of what might come to pass through the opening up of great areas of irrigable lands in all the Pacific northwest. Good roads certainly unite the whole country as well as sections of the country, not only in supplementing and cheapening auxiliary freight traffic, but in bringing tourists from all parts to the scenic beauties of the northwest and making the tourist crop one of the most profitable.

He Selected the Best

Frank Binns of Shelton found some white Beauty of Hebron potatoes in his field and saved them out for seed. They grew true to color and he kept saving the best seed from this variety and he now has a good-sized patch which he will hill-select and get enough seed to plant a much larger acreage next year. For a seed crop the tubers were planted late in June, but they made a good growth before the worst of the dry weather affected them. The early fall rains put the plants in fine shape to produce a good crop.

SHIPS LARGEST WHEAT CARGO.

With 369.000 bushels of wheat, the largest cargo to go from Portland this year, a British steamship has just left for Europe.

Farmer's Union Will Meet

National President Barrett Is Expected to Be Present

The annual convention of the Farmers' Union of Washington and Northern Idaho will assemble in Spokane December 12, at which time numerous matters of importance to the organization and its members will be considered.

President J. Q. Adams and other officials of the organization are hopeful that Charles S. Barrett, national president, will not only be in attendance at the state convention, but that he will be in the west for several days in the interest of the farmers' union work. President Adams has been in communication with Mr. Barrett in an effort to have him come to this state, and word has been received indirectly that it is his plan to come on November 30.

The national board of farm organizations, with headquarters in Washington, D. C., on the assumption that Mr. Barrett was coming west recently adopted a resolution requesting him to make such investigations as he deemed proper of reclamation in Washington, with a view to giving the national board the benefit of his opinion on the need and the practicability of the Columbia basin irrigation project. President Adams is preparing a tentative program of meetings throughout the district for the period that it is expected Mr. Barrett will be here. The meetings will be so arranged as to enable him to meet and address many members of the farmers' union and at the same time carry out the request of the national board in securing information concerning the Columbia basin.

"The members of the farmers' union are quite enthusiastic over the proposed Columbia basin project," says President Adams, "and we hope to be able, with the assistance of the Columbia basin committee, to devote a portion of Mr. Barrett's time to a first-hand study of the project."

Goodwin Endorses Columbia Basin Project

F. M. Goodwin, assistant secretary of the interior, has filed a report with Secretary Fall, indorsing the Columbia basin irrigation project. Mr. Goodwin sometime ago made a personal investigation of the proposed project. He expresses in his report the belief that the cost per acre can be greatly reduced from that estimated a year ago by General George W. Goethals. The latter estimated a total cost of $145 per acre. Mr. Goodwin believes the project can be completed at a cost of perhaps little above $100 per acre. In his report to the secretary he made the following five recommendations:

1. The project is worthy of unqualified support by the department.
2. The first essential step is passage by the house of the $100,000 bill directing you to investigate and report. Consideration is expected by the house committee as soon as congress reconvenes.
3. The necessity for such an investigation and report is apparent, that there may be an authoritative official certification of essential facts and plans. This calls primarily for the assimilation of data already in hand.
4. The completion of field work as to some features is necessary, either to eliminate or include same in the project.
5. The available data is complete as to soil, climate, crops, transportation, land values, damages from overflow, land levels, water supply and field surveys for the construction program proposed by the state of Washington. If the gravity system should be accepted the field data are sufficiently complete, except for the secondary storage, perhaps, to let contracts. Changes in plans will require revisions.

"TEACH IT TO THE KIDS."

The cooperative spirit among farmers is based upon the knowledge of what cooperation has done and what it can do in making farming more profitable and in pushing this cooperative movement among farm folks, some one rises and exclaims, "Teach it to the kids," and "Do not confine it to agricultural college students."

POULTRYMEN SEEK BETTER SIRES.

It is interesting to note that the poultrymen are boosting for better sires as well as are the live stock breeders. At the poultry meeting at Seattle in August there were 47 out of the 51 present who voted in favor of the use of cockerels from 225-egg record hens.

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Filled Milk and National Welfare

Reference has already been made in THE FARMER to Dean H. L. Russell's address at the celebration of the 50th anniversary of the establishment of the Wisconsin Dairy association.

Another point taken up by Dean Russell was "The Menace of Filled Milk." He notes that the withdrawal of the natural milk fat, which was bringing 30 cents to 40 cents a pound, and its replacement with a capital vegetable fat, cocoanut oil, that could then be purchased at seven cents or eight cents a pound, curtailed in no small degree the full use of milk for the manufactured dairy product.

It is pointed out that this intrinsically cheaper substitute was customarily retailed to the consumer at nearly the same price as was asked for the standard condensed evaporated milk. "It is a pertinent question for America to ask itself," says the dean, "whether it wants to build up the farm oil industry of the tropics 'where food falls from the trees,' to the detriment of the dairy industry of the temperate zone with its steady employment and substantial homes. We could open up our gates to the flock of orientals with their low living standards and thus secure cheap labor for the industry, but as a nation we realize that there are some things to consider in the welfare of a people other than debasing the working standard to the lowest living point."

The question of "filled milk" is of importance to all the people as well as to the dairymen in particular. It is a question of health as well as one of business. It is a question of giving children a good start in life physically.

How 30-10 Plan Would Work

There is a serious educational problem in the state of Washington which needs to be solved, namely, the education of 2.6 per cent of the state's children who are getting less than eight months of schooling.

The 30-10 bill is called by its friends an "equalization" measure on the claim that it would equalize educational advantages for all the children in the state.

Is this claim justified? On the other hand, is it not contrary to the fact?

According to the proposed measure 1500 small rural districts would receive $1,107,092, an average of $738 each, and 910 large districts (including most of the cities) would receive $10,171,588, an average of $11,177 each. Furthermore, these same 1500 little districts would pay into the state, according to the bill, $2,015,294 and would only draw out $1,107,092. In other words, for every dollar they paid in they would get back from the state for their schools only 55 cents; while the 120 largest districts would receive back $1.34 for each dollar paid in.

It is true that the children in these 1500 little districts would draw $79 each for daily attendance, while the children in the 120 largest districts would draw only $46 each for daily attendance, but the taxpayers in the little districts would have to pay $143 in order to get that $79, while the taxpayers in the largest districts would only have to pay $35 in order to get their $46 for each child to be educated.

But more serious yet is the provision in the bill which forbids any school district to make a levy over 1.7 per cent of the assessed value of all the taxable property of such district for purposes other than for the payment of interest or principal of bonded indebtedness. Under the present law 10 mills may be levied without a special election. Under the 30-10 plan any district will be able to levy up to 17 mills without calling a special election, and the payment of interest or principal of any bonded indebtedness may be made by additional levies over and above the 17 mills.

It is a serious question whether this would not open the floodgates of reckless expenditure and would be likely to increase taxes in unexpected ways.

In the next article a method will be given by which it is possible to gain the desired end of aiding the short-term rural schools in a much simpler and safer manner.

A Growing Institution

Farm folks are taking eagerly to the rightly managed community fair. There is the Neuwaukum Fair association in King county, which outgrew all bounds and this year it was necessary to hold the fair at the Farmers' picnic grounds at Enumclaw. The reports speak of an exceptionally fine display of farm produce and fruits, while the poultry department housed entries of many of the flock owners in the neighborhood. The live stock division is an entirely new department, added this year. All the entries in this division were dairy cattle and came from some of the many high class herds of the southeastern part of the county.

Larger Returns From Better Cows

A dairyman does not have to wait years before getting good results from cow testing associations. In fact, he may get the biggest proportionate result at the end of the first year. This was the case in the grade herd of Jerseys on the J. A. Porter & Sons farm in Whatcom county. In 1918 the herd average 283 pounds of fat. In 1919, the following year, the average was increased to 404 pounds, and in 1920 to 408 pounds.

A careful study of the records furnished by the cow testing association and better feeding brought the gratifying results. Weeding out the cows that failed to respond to heavy feeding was an important factor in larger production per cow.

LOOKING INTO OTHER FARM FIELDS

The soy bean is rapidly taking a place as a major crop in the farming systems of the corn belt, replacing oats to a considerable extent and taking part of the corn acreage, says the United States department of agriculture. Although primarily used for forage, pasture and ensilage, the growing of seed during the last few years has become a very profitable industry.

* * *

The California Land Settlement association has been formed at San Francisco by 150 representatives of realty men of the state and has announced its chief purpose is to attract settlers and to "pull the teeth of the land sharks." Lower interest rates to settlers and assistance in financing those of small means are urged, and the association was formed to promote constructive measures in colonizatioon.

* * *

France's 1922 wheat crop is estimated at 235,000,000 bushels, a 27 per cent decrease from the crop harvested last year. Forced by this small wheat crop, the French government has decreed that all grain, except bran and refuse kernels must be used in the preparation of flour for human consumption. The manufacture of flour also is compulsorily conducted in such a manner as to extract from the wheat grain the maximum of bread flour.

State Farm News

A contract for wrecking 15 buildings consisting of barracks and quarters at old Fort Spokane has been let to a Spokane firm. The lumber is to be assorted and piled for use in construction of a hospital for Indians on the old fort grounds, which have been turned over by the war department to the Indian department for school and hospital purposes.

Congress will be asked for an appropriation of $100,000 for construction of the hospitals, reconstruction of water system and building new quarters for employees. This hospital is designed to serve Indians over the northwest.

* * *

George Lamping, Seattle port commissioner, says that there will be considerably more than 1,500,000 boxes of apples shipped to Europe via the water route this year.

* * *

The Neuwaukum fair was held this year at the farmers' picnic grounds at Enumclaw, being larger and better than ever before. Officers of the association are: John Jones, Auburn, president; Harold Hanson, Enumclaw, vice president, and Harvey Hagerman, Auburn, general manager. A. B. Nystrom, county agricultural agent and Miss Edna Walker, home demonstration agent, did much in helping to get the fair in readiness. The exhibits were judged by M. E. McCollam, agronomist of the western Washington experiment station.

* * *

The oat crop of the Skagit valley this year will be between 1,500,000 and 2,000,000 bushels. it is estimated by county officials. The yield is estimated at between 100 and 150 bushels an acre. Growers now are being paid $30 a ton for oats.

* * *

Pierce county has a potato grower's organization which stands for the improvement and development of the potato industry from the selection of the seed to grading and marketing.

The following officers have been elected to serve until the regular meeting, which will be held in January: H. S. Prescott, president, Parkland; E. E. Eiker, vice president, Puyallup; C. E. Deardorff, secretary-treasurer, Orting; Frank Kehr, director, Puyallup Heights; Tony Roesli, director, North Puyallup.

* * *

Nutrition work will be carried on in practically every school district in Lewis county before the present school year is over, according to plans laid when the executive committee of the Lewis County Anti-Tuberculosis league met in Chehalis recently.

* * *

The third western Washington egg-laying contest at Puyallup will close October 31 and promises to be one of the most interesting of the three. The birds are doing well and George R. Shoup, who has charge of the contest, believes that by feeding young kale and increasing the lights the fall molt can be withheld until after the close of the contest. The records this year indicate that the last year's record will be raised and there is going to be a close run for first place in the individual bird record.

* * *

County Agent W. H. Talley of Walla Walla has announced that he will become secretary of the Washington farm bureau federation on November 1. He will maintain temporary offices at Walla Walla until January 1, when a permanent location will be decided upon.

* * *

The contractors building a link of state road No. 22 from Inkster lake to River Homes, on the Spokane river expect to have the road finished about December 1.

This new road will connect the lower Spokane valley and the Hunters region in Stevens county direct with Spokane, via Davenport and the Sunset highway, avoiding mountain climbing on other outlets, which are generally blocked by snow in winter.

* * *

John P. Winkler's closing out sale of Holstein grade milch cows October 6 at Adna brought fair prices only, 35 animals making an average of nearly $62. The highest priced cow brought $112.50. Six 2-year-old heifers sold for $40 each, six younger heifers $30 each and seven calves $12.50 each. A horse and a mare sold for $107.50, while another team brought but $50.

* * *

Two men invaded "No Man's Land" at the western Washington fair at Puyallup and were awarded first honors for needlework. The winners are James Oliver, a Tacoma tailor, and R. D. Balou, member of the Tacoma fire department. Oliver won his first prize with a filet trimmed luncheon set and Balou's winning display was a luncheon set trimmed with tatting.

* * *

Raising more than 125 bushels of corn from an acre is what N. C. Sybouts of Moxee expects from a field of 21 1-2 acres. He has raised 125 bushels from a measured acre, and says he is certain his land will this year average between 125 and 150 bushels an acre. Twelve years ago, he says, it was thought almost impossible to raise corn in paying quantities in his locality.

* * *

Approximately $10,000 in cash was paid out to Pullman and Moscow farmers by J. M. Davis of Pullman for 2480 sheep, shipped to Chicago.

The sheep made a train of 26 cars. They were purchased in small flocks, 1600 of which were assembled near Pullman and 880 near Moscow.

* * *

E. T. Huntting of Silver Creek, whose home-dried prunes have for several seasons found ready sale locally and in the northwest cities, has just completed drying his 1922 crop. The yield was somewhat short, but made up in quality for the deficiency. Mr. Huntting has one of the most up-to-date plants of its kind in the state.

* * *

Chris Unger of Duvall, John Sinn of Novelty, Will Adair of Tolt and Ralph Totten of Falls City each have erected a home-made wooden hoop silo, in readiness for the harvesting of corn and other silage crops.

* * *

Some $25,690,283 worth of peanuts—245,867 metric tons of them—is Senegal's 1921 record, says Consul Yerby, Dakar, Senegal, in a report to the department of commerce. In 1920 this French-African colony produced 239,195 metric tons, valued at $45,686,874. Gambia, Britain's West African colony, last year produced 59,175 metric tons, valued at $3,060,232, compared with 85,190 tons, worth $11,670,829 in 1920.

* * *

After using up the better part of a day, the judges at the Cranberry fair at Long Beach awarded first prize to A. Lundquist of Long Beach.

FARM BUSINESS AND MARKETS OUTLOOK

Fresh evidence of expanding business and trade is disclosed every week. Business failures are decreasing. Freight car loadings for the week ended September 22 were within 3 per cent of the highest on record, notwithstanding the serious car shortage in the west.

The commodity price level is rising, the combined commondity index number being about 18 per cent higher than in May, 1921. Prices of farm products are still lagging, but most of them are higher than a year ago and the majority advanced during September.

Forces tending to bring about higher prices include: The abundance of credit (only one-third of the potential supply being used), the tariff law, the tendency to higher labor costs in the case of manufactured goods and the fact that wholesale and retail stocks are not large. The disastrous results from the previous period of inflation and the inability of Europeans to buy are the retarding influences.

That the country generally can flourish with farmers laboring under their present handicap is beyond belief. Either higher prices for farm products are coming or general business will lose its present bloom.

Too Many "Inbetween" Cattle.

The cattle market has had too many steers of the intermediate sort, upon which prices declined $1 to $1.50 at Chicago from the high point late in September. In the last 10 days, however, total receipts at seven markets shrank 12 to 15 per cent for the first time in a month and a recovery of 15 to 50 cents on intermediate and lower grades occurred. Car shortage was a factor in the decreased supply.

Prime steers became still more scarce last week, reaching $13.50 at Chicago, although sales above $12 are few, the bulk of beef steers going to killers between $9 and $10.50. Cows and heifers responded along with steers to the lighter supply.

Hogs Trending Lower.

Receipts of hogs declined slightly last week, but were equal to the highest on record for that week in previous years. New crop hogs, many of them underfinished, were numerous, so that weight qualifies for a premium and the price spread has narrowed sharply. Fresh pork prices were weak early, but hardened toward the close and demand in general is broad. Foreign purchases are increasing as stocks abroad are said to be light. Britain is able to pay for all she needs and central Europe, in spite of depreciated exchange, is taking a fair quota. Hog prices are apt to work lower until receipts are more nearly up to winter volume.

Lamb Run Lightens.

Receipts of lambs declined last week in seasonal fashion, although the run was already far below normal for this season of year. Dressed lamb prices sagged further, but toward the close a return of strength was evident. Feeder lambs lost $1.50 from the recent high point and are now at a slight discount below fat westerns, but have started upward again. The total feeder movement from the 12 leading markets in the week ended October 7 was 170,401 head, the largest in several years, but the total for the season to date is

Big Horses Good Property.

Sound horses with weight have advanced $20 to $30 per head recently. Loggers, miners and coal dealers finally entered the market and their competition has lifted values. Horses scaling around 1800 pounds are bringing $275 at Chicago, loggers taking plainer sorts, especially if hairy legged, as high as $225, and rugged workers scaling 1500 to 1650 pounds are clearing at $175 to $215. Wagon horses are in demand again at $125 to $200.

Wool Prices Rising.

Seaboard markets report wool prices strong and advancing. Mills are picking up all low-priced offerings and dealers are indulging in speculative operations. Advances have not been pronounced, but more are expected, especially on fine wools. The holdings of 1,200,000 bales of crossbred wools in the hands of the British Australian Wool Realization association tends to keep the market on such wools in leash, although foreign auctions are reported 5 to 10 per cent higher than a month ago. Most manufacturers are marking up prices of goods.

Bullish Revisions in Wheat Statistics.

Revisions in world wheat and rye production figures, which now give them a bullish aspect, together with maintenance of a keen demand for wheat in position for quick shipment to mills or to the seaboard, resulted in a substantial advance in prices last week.

With the total supply of wheat outside of Russia and Mexico actually less than last year, when more was consumed than was produced, the existence of a large surplus in North America becomes less serious, especially since the movement from the latter to date has been absorbed without difficulty.

Besides the decline of 250,000,000 bushels in European wheat production compared with last year, the rye crop is about 100,000,000 bushels less, so that a big increase in European wheat and rye needs is evident. These have been augmented by wet weather during harvest, which lowered the quality and necessitated the use of a high percentage of dry foreign wheat in milling. Substitutes, high extraction in milling and war bread are already being used in some European countries and will be relied upon still further if possible, but the shortage is too great to be made up by such means.

Reports from Russia are not rosy, but most of the home needs will be provided for, so that the 24,000,000 bushels imported last year may not be necessary, affording a partial offset to the increased needs of the rest of Europe. Non-European importing countries may take 25,000,000 to 50,000,000 bushels less than last year, but these deductions still leave a large increase in total import requirements to be provided for.

Under the conditions, the financial ability of the importing countries to buy as much wheat as they need seems to be the limiting factor in the long-time trend of prices.

The car shortage is becoming more acute and receipts at primary markets have declined in spite of the advance in prices. Canadian wheat is coming forward rapidly, more rapidly, in fact, than the surplus can be gotten out of the country, so that it is backing up to some extent.

Corn prices have advanced even more than wheat from the low point of the year and are now the highest since January, 1921. Receipts have been larger than usual for this time of the year.

Oat prices are trailing after corn. There is some export demand and domestic distribution is satisfactory, as the high quality of the new crop is attractive to consumers who were loathe to take the inferior oats produced last year.

CHICAGO—Wheat—No. 2 red, $1.18 1-2@1.21 1-2; No. 1 hard, $1.16 1-4@1.20; No. 2, $1.16@1.20 1-2; No. 1 northern, $1.18@1.32. Corn—No. 2 mixed, 71 3-4@74 3-4c; No. 2 yellow, 71 1-2@75c; No. 3, 71 1-2@74 3-4c; No. 4, 70 3-4@73 3-4c; No. 2 white, 71 1-2@74 1-2; No. 3, 71 1-2@74 1-4. Oats—No. 2 white, 44@46c; No. 3, 42@45 1-2c. Rye—81 1-2@84 1-4c. Barley—62@70c.

Big Increase in Clover Seed.

The crop of clover seed this year was estimated officially on October 1 at 44 per cent larger than last year. Prices advanced last week. The timothy seed market also maintains a strong tone. Alfalfa seed is not moving as rapidly as usual from producing sections.

Chicago, per 100 pounds—Clover, $15@19; timothy, $5@6.50. Toledo, per bushel—Prime red clover, $12.15; prime timothy, $3.40.

Feed Prices Maintained.

Although buying is said to be limited, feed prices have been well sustained. The advance in coarse grains is a supporting influence. Flour mills are operating above a nurmal rate and production of oil meal is large.

Prices per ton (100-pound bags) in car lots: Chicago—Bran, $24; standard middlings, $25.50; flour middlings, $28; cottonseed meal, 36 per cent, $42; 43 per cent, $46; hominy feed, $28; gluten feed, $33.85; old process oil meal, $50; tankage, $65.

Hay Market Firm.

Hay markets remain firm and are gradually working upward. Fall demand is fairly brisk, while receipts and country loadings are light notwithstanding the big crop. Car shortage is interfering with shipments.

Prices per ton in car lots: Chicago—No. 1 timothy, $21@23; No. 2, $20@21; No. 3, $12@15; No. 1 light clover mixed, $20@21; No. 1 clover, $14@16; No. 1 clover mixed, $16@17; No. 1 to choice alfalfa, $23@25; rye straw, $12@13; oat and wheat straw, $10@12.

Egg Prices Holding Well.

The fresh egg market has advanced 75 per cent from the low point of the year which was reached in August and the higher level is well sustained. Receipts at the leading markets since October 1 have been a little lighter than last year, but counting the reduction in cold storage holdings the rate of consumption is larger than a year ago. The huge surplus of storage eggs is not being drawn upon as rapidly as during September, however. Further advances in fresh-egg prices are probable, as they become more scarce, but storage eggs are apt to be relatively cheap all winter.

Poultry receipts since October 1 have not been as heavy as in the same period last year in spite of the increase in poultry production. Storage stocks have not begun to increase materially as yet.

Chicago—Eggs—Checks, 15@19c; fresh firsts, 31@35c; ordinary firsts, 25@26c. Live poultry—Hens, 22c; springers, 19c; roosters, 14c; ducks, 23c; geese, 21c; turkeys, 30c.

Advance in Butter Resumed.

After a short breathing spell the advance in butter prices has been resumed. Receipts at leading markets have fallen off in the last week or two and the rate of consumption remains unusually high. A feature of the week was improved demand for undergrades and centralized storage butter. Prices on 92 score fresh butter on October 18 were: Chicago, 44 1-2c; New York, 46c; Boston, 46c; Philadelphia, 47c.

Cheese Market in Firm Position.

An advance at country markets was followed by broader buying at higher prices on the main distributing markets. Held cheese is moving fairly freely at steady to firm prices. The net movement out of storage at the four markets is running about 200,000 pounds daily. Prices on No. 1 American cheese on October 18 were: Chicago—Flats, 25 1-2c; Twins, 25@25 1-2c; single daisies, 25 1-2@26c; double daisies, 25@25 3-4c; longhorns, 25 1-2@26c; square prints, 26 1-2c.

Fruits and Vegetables.

The 19 leading late potato-producing states had shipped about 16,000 fewer cars up to October 14 than to the same date last year. Their crops considerably larger than a year ago, so that dissatisfaction with prices and car shortage are largely responsible for the retarded movement. Some of the northern states are giving potatoes priority over grain to facilitate disposal of the crop before freezing weather. Northern round whites, sacked, are quoted at 95c to $1.50 per 100 pounds on midwestern markets, No. 1 Brown Beauties and Russets are bringing 60 to 65 cents, sacked, in wagonloads at Colorado shipping points, while Rurals are bringing 60 to 75 cents at Idaho points.

The department of agriculture confirms the prevalent opinion that the increase in the apple crop this year is more largely in the early varieties than in the late keepers. Shipments of barreled apples thus far have been about 40 per cent larger than to the same date last year, while boxed apples show a decline in the carlot movement of about 50 per cent. The market for winter varieties is slowly gaining strength with A 2 1-2 Midwest Jonathans quoted at $5 to $6.50 and Grimes Golden at $4.50 to $6 a barrel on the leading central western markets. Northwestern extra fancy large Jonathans are bringing $2.75@$3 a box at Chicago.

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Range of Live Stock Prices, Week Ending Oct. 18

CATTLE.	Chicago.	Spokane.	Portland.	N. S. Lake.
Choice, prime heavy steers (1100 lb. up)	11.00@13.50	.....	.....	.....
Good heavy steers	8.85@11.50	.....	.....	.....
Medium heavy steers	7.25@ 9.35	.....	.....	.....
Common heavy steers	5.75@ 7.50	.....	.....	.....
Choice prime light steers (1100 lb. dn.)	10.80@13.25	.....	.....	.....
Good light steers	8.75@11.25	.....	.....	.....
Medium light steers	7.15@ 9.25	5.75@ 7.00	6.00@ 7.50	5.75@ 6.75
Common light steers	5.50@ 7.25	4.00@ 5.75	4.25@ 6.00	4.50@ 6.00
Common to choice butcher heifers	4.65@ 9.75	3.25@ 6.00	3.50@ 5.50	3.50@ 5.25
Common to choice butcher cows	3.65@ 8.25	2.50@ 5.00	3.00@ 5.00	3.00@ 4.50
Bologna and beef bulls	3.75@ 6.75	2.75@ 4.50	3.00@ 4.50	2.00@ 3.50
Canners and cutters, cows and heifers	2.65@ 3.65	1.50@ 2.50	1.50@ 2.75	1.50@ 3.00
Canner steers	3.50@ 4.25	2.75@ 3.50	2.50@ 3.50	2.50@ 3.50
Medium to choice light veals	7.25@11.50	7.00@ 8.50	7.50@ 9.50	7.50@ 8.25
Common to choice heavy veals	3.50@ 7.50	5.00@ 7.50	5.00@ 7.00	.....
Common to choice feeders (1000 lb. up)	5.65@ 8.10	.....	.....	.....
Common to choice feeders (750-1000 lb.)	5.65@ 8.00	3.50@ 5.00	4.00@ 5.50	4.00@ 5.50
Common to choice stocker steers	4.25@ 7.65	.....	.....	.....
Common to choice stocker cows, heifers	3.25@ 5.25	.....	.....	.....
HOGS.				
Top of market	9.85	11.00	10.75	9.60
Bulk of sales	8.15@ 9.75	10.25@10.85	9.50@10.50	8.50@ 9.25
Heavy (250 lb. up)	8.65@ 9.80	10.25@10.85	9.50@10.25	8.25@ 9.00
Medium (200-250 lb.)	9.15@ 9.70	10.50@11.00	10.00@10.50	8.75@ 9.25
Light (150-200 lb.)	8.90@ 9.65	10.50@11.00	10.25@10.75	9.15@ 9.60
Light lights (130-150 lb.)	8.75@ 9.35	9.50@10.75	9.00@10.50	8.25@ 9.25
Smooth packing sows (250 lb. up)	7.80@ 8.75	8.25@ 8.85	7.75@ 8.25	6.50@ 7.00
Rough packing sows (200 lb. up)	7.35@ 8.10	7.75@ 8.25	7.00@ 8.00	6.00@ 6.50
Medium to choice pigs (130 lb. down)	8.50@ 9.25	8.25@10.25	10.00@10.50	.....
Stock pigs	.....	9.00@ 9.75	10.00@10.75	8.50@ 9.00
SHEEP AND LAMBS.				
Medium, prime lambs (84 lb. down)	12.25@14.50	8.50@10.00	9.50@11.00	10.00@11.50
Culls and common lambs	8.50@12.25	7.00@ 9.00	6.50@ 9.50	8.00@10.00
Medium to prime yearlings wethers	8.50@12.00	7.00@ 8.00	7.50@ 8.50	7.00@ 7.50
Medium to prime wethers	6.25@ 8.50	6.50@ 7.50	5.50@ 7.50	4.00@ 5.50
Medium to choice ewes	3.50@ 7.25	3.50@ 5.50	3.00@ 6.00	3.00@ 4.50
Culls and common ewes	2.00@ 4.50	2.00@ 3.50	2.00@ 3.00	2.00@ 3.00
Full-mouth to yearling breeding ewes	4.50@11.50	.....	.....	.....
Feeder lambs	12.75@14.25	5.00@ 7.00	.....	10.00@10.50

LATEST QUOTATIONS.

The Live Stock Market.

SPOKANE, Oct. 21.—Cattle—Prime steers, $6.25@7; good to choice steers, $5@6; medium to good steers, $4.50@5; fair to medium steers, $4@4.50; common to fair steers, $3@4; choice cows and heifers, $5@5.50; good to choice cows and heifers, $4@5; medium to good cows and heifers, $3.50@4; fair to medium cows and heifers, $2.50@3.50; canners, $1.50@2.50; bulls, $2.75@4.50; light veal calves, $7@8.50; heavy veal calves, $5@7.50; stockers and feeders, $3.50@5.

Hogs—Prime mixed, $10.50@11; medium, $9.50@10.50; heavies, $7.50@9.85; fat pigs, $9.25@10.25; stockers and feeders, $9@9.75.

Sheep—Prime lambs, $9.25@10.25; fair to medium, $8@9.25; yearlings, $7@8; wethers, $6.50@7.50; mutton ewes, $3@6.50; feeder lambs, $6@7.

PORTLAND, Ore., Oct. 14.—Cattle—Choice steers, $6.50@7.50; medium to good steers, $5.75@6.50; fair to medium steers, $5.25@5.75; common to fair steers, $3.75@5.25; choice heifers, $5.50@5.25; choice cows and heifers, $4.50@5; medium to good cows and heifers, $3.50@4.50; common cows, $1.50@2; canners, $1.50@2; bulls, $4@4.50; choice feeders, $4@5; fair to good feeders, $4@5; choice dairy calves, $8.50@9.50; prime light calves, $8.50@9.50; medium to light calves, $7.50@8.50; heavy calves, $5@7.

Hogs—Prime light, $10.25@10.65; smooth, heavy, 250@300 pounds, $9.50@10; smooth, heavy, 300 pounds up, $9@9.50; rough, heavy, $7@8.50; fat pigs, $10@10.50; feeder pigs, $10@10.75; stags, subject to dockage, $5@7.

Sheep—East-of-mountain lambs, $10@11; choice valley lambs, $10@11; medium valley lambs, $9@10; common valley lambs, $8@9; cull lambs, $6.50@8; light yearlings, $8@8.50; heavy yearlings, $8@8.50; light wethers, $5.50@6; ewes, $2@6.

The Grain Market.

PORTLAND, Oct. 21.—Wheat—Hard white, Bluestem, Bart, $1.25; soft white, western white, $1.15; northern spring, $1.12; hard winter, $1.10; western red, $1.07.

Grain futures—Wheat—Bluestem and Bart, October, November, December, $1.25; soft white, western white, hard white, October, November, $1.15; December, $1.14; northern spring, October, $1.12; November, December, $1.11; western red, October, November, $1.07; December, $1.06.

Oats—No. 2, 36-pound naturals, October, November, December, $34.50; 36-pound clips, October, November, December, $33.50; 38-pound naturals, October, November, December, $36.

Barley—44-pound minimum, October, November, December, $32.50; 48-pound minimum, October, November, December, $32.

SEATTLE, Oct. 21.—Wheat—Hard white, soft white, western white, $1.17; hard red winter, soft red winter, northern spring, $1.16; western red, $1.14; Big Bend Bluestem, $1.25.

COLFAX, Wash., Oct. 21.—Red, 92c; Club, 95c; Fortyfold, 96c.

POMEROY, Wash., Oct. 21.—Turkey red and hybrid, 95c.

DAVENPORT, Wash., Oct. 21.—Bluestem, $1.17; Marquis, $1.01; Gold Coin, 97c.

PULLMAN, Wash., Oct. 21.—Red, 94c; white, 97c.

(Continued on page sixteen.)

What the Farmer Has Won at the National Capital

Work of the Farm Bloc in Congress Reviewed by U. S. Senator Poindexter

I have had many inquiries as to what this congress has done for the farmer. As a matter of fact more legislation has been enacted by the present congress for the benefit of the farmer than has been enacted in any other congress in the history of congresses and I doubt very much if all the legislation taken together by all congresses preceding the present one, intended particularly for the solution of agricultural problems, equals that of this single congress.

Farmers will remember the newspaper publicity which has been given to the so-called "agricultural bloc." While this was more or less informal and varied in strength on different measures, nevertheless it existed in fact. A great many senators from purely agricultural states devoted themselves to cooperating with one another for the passage of a number of cardinal measures in the interests of the farmers of the country. Much of this legislation received the hearty support of many senators from manufacturing states who believed in its merit and justice, although not considering themselves members of the farm bloc.

It was reported to the senate that among the things in which farmers were especially interested was federal aid for roads. There was much opposition to this from the old states whose road systems are of a more advanced condition than ours, and who opposed it on the ground that most of the taxes necessary for the measure would be paid by them and little of the benefits would be enjoyed by them Nevertheless through the labors of a number of prominent senators the vast sum of 695,000,000 was appropriated by the present congress for the construction of roads in cooperation with the highway departments of the several states to which the money was apportioned.

The postal savings banks advocated largely by country communities have been extended and developed and now constitute one of the important economic factors of the county.

Rural free delivery, which has had a great deal to do with improved conditions of agricultural life, has been enlarged and put upon a most stable footing.

The appropriations for the department of agriculture with its vast work of county agents, bureau of markets, bureau of plant industry, including the study of plant diseases; bureau of animal industry, including the scientific study of animal diseases and improvement of the quality of live stock; the publication and distribution of bulletins on various subjects of practical value to farmers have been maintained, and the activity of these various services are promoted.

The parcel post has been improved and developed and is coming into more constant use in communities which have not had the benefit of railroads and express offices.

Three hundred and forty-two million dollars has been loaned to agricultural interests through the war finance corporation, whose powers were enlarged and authority extended for this purpose.

The meat packers, who were alleged by representatives of the live stock interests to monopolize the live stock markets of the country and control them in a manner that was injurious to farmers engaged in live stock production, have been for the first time put under government regulation and control.

The Chicago Board of Trade or wheat exchange and other similar exchanges, which were charged to be injuriously affecting the grain market in causing violent fluctuations in the price of wheat and other grain by speculative dealings, have been put under government regulation, inspection and control by an act of the present congress.

The right of farmers to organize for the purpose of marketing their crops and of carrying on their farming operations has been cleared up and established beyond question by an act of the present congress, largely framed and promoted by the special representatives of those engaged in farming.

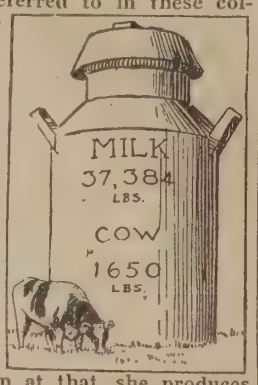
Without exception I have supported these measures, as I regard them all eminently just and meritorious. Some objection was made to the enactment of the cooperative marketing bill on the ground that it was class legislation. How empty and shallow this opposition is, is apparent from consideration of the fact that every other important element in our industrial life is and for a long time has been organized on an enlarged scale except the farmers. It would not, in fact, have seemed necessary to pass a bill expressly authorizing farmers to form cooperative associations in view of the very evident organizations of business and labor, but for the fact that in Chicago and some other places dairymen's associations had been attacked as violating the Sherman anti-trust law.

It is not necessary even to call attention to the fact that for some time vast organizations of capital in such industries as the smelting and refining of metals, manufacturing of steel, transportation and refining of oil, manufacturing and sale of farm implements, etc., has all been organized on a very large scale, so that it was manifestly a discrimination against the farmers to undertake to prevent them from pursuing the same course in the industrial struggle in which they are engaged.

MILES POINDEXTER.

Twenty Times Her Weight

The Pacific northwest has produced a cow, frequently referred to in these columns, that holds the world record for milk production of more than 37,000 pounds of milk in a year. Though familiarly known as Prospect, this black and white pure-bred is registered in the Holstein herd book as Segis Pietertje Prospect. She is no vest pocket edition cow, since she tips the scales at approximately 1650 pounds. Even at that, she produces more than 22 times her own weight in milk per year, or did during the test under which she established the world record. Prospect is the result of Idaho breeding and careful development and milking on Carnation farms in Washington.

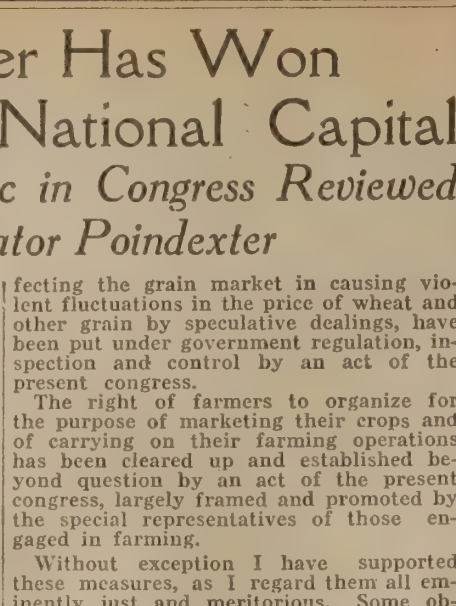


Tappet Adjustment

Is Important in Gas Engine Work

By PROFESSOR L. J. SMITH, W. S. C.

One of the most important items in the running of a gas motor, is the movement of the valves. Each cylinder has an inlet and exhaust valve. These must open and close at the correct time. They are operated by push rods or tappets which in turn get their movement from the cams on the camshaft. There is a certain amount of clearance required between the push rod and valve stem, from one hundredth of an inch or more on large cylinder kerosene burning tractors to several thousandths on the high grade automobile motors.



As the motor gets well into the middle of its season's run, the valves tend to seat farther down on the valve seat, which reduces the clearance. This is especially true of the exhaust valves.

Many a tractor motor, and also automobile motors, finish the season with some of the exhaust valves having no clearance, which means that the valve lacks several thousandths of closing. This means loss of power, poor fuel economy, and burnt valves and seats.

When setting the tappets after grinding the valves, the usual practice is to turn the crankshaft until both valves are closed on a given cylinder, then set the adjusting screws for the proper clearance (see amount in the instruction book). This is all right if the cam shaft is true; but this is not always the case. To be absolutely sure, turn the crank over until the inlet valve comes to its seat (the end of the suction stroke), then turn the crank a little over a half turn more, which brings the piston to the beginning of the working stroke.

Now make the proper adjustment, and the valves will be sure to be closed during the working stroke which is the most vital of the four cycles of the piston.

On 50-50 Basis

Boy and Father Are in Partnership

Norman Phillips of the Thrift community, in Pierce county, planted one-quarter acre of Antwerp raspberries last year on a partnership basis with his father. He agreed to divide the profits on a 50-50 basis. The father furnished the land and the berry plants, while the son was to do the work and market the fruit.

As the berry season approached Norman began to wonder where he was going to sell his crop, so he joined the local berry association and signed over his entire crop. This move was upon the advice of the local club leader, Ralph Towne.

The results of the season's crop was such that Norman has made plans to put out two and a half acres more berries next spring. He will plant the Cuthberts, since he believes the local demand is greater for this than some of the other varieties.

Norman is one of the best workers in the Thrift Berry club and he follows all of the state college bulletins in regard to berry culture. All of the land which is to be set out to berries next spring has been planted to vetch, which will be turned under early in the spring.

The club put up a booth at the western Washington fair at Puyallup. There were three kinds of berry plants that had been transplanted from the field into soil in a large tray.

Hog Feeding Experiments

The results of three years' experimental work in hog feeding have just been published in bulletin form, general bulletin No. 169, by the Washington experiment station at Pullman. Professors Howard Hackedorn, head of the department of animal husbandry, and Jerry Sotola of that department, are authors of the bulletin.

"The state of Washington and adjacent states do not produce sufficient pork to supply the demand within this territory," says the bulletin. "All of the larger butchers and packers testify that pork has to be shipped in to meet the fresh-meat demand. Evidence of this condition is reflected by the fact that the price of hogs on foot at the Union Stockyards, Spokane, during the last two years ranged from 1 to 3 cents above the price for similar grades at the Union Stockyards in Chicago. It is apparent that the market for hogs in this territory is good.

"Crops such as barley, wheat, corn, peas, etc., all suitable for hog feeds, are grown successfully in this state. At the main experiment station, Pullman, the average yield of barley for the last six years has been 3115 pounds per acre, which is 634 pounds more than the average for spring and winter wheat for the same period. Barley and wheat have a feeding value practically equivalent to that of corn. Corn, as a grain crop, is grown successfully in some of the irrigated sections. Alfalfa and peas are used extensively as forage crops and aside from furnishing a superior forage for hogs, they aid in conserving nitrogen of the soil."

The following are some of the outstanding results of the experiments, which are discussed in detail in the bulletin:

1. Fish meal and digester tankage have, from a practical standpoint, an equal feeding value.

2. Cocoanut meal can be successfully submitted for millrun in hog rations. It is not a satisfactory protein supplement when fed with rolled barley to the exclusion of tankage or fish meal.

3. Linseed meal does not produce as big and as economical gains, nor as satisfactory growth as tankage and fish meal.

4. Mixtures of linseed meal with either tankage or fish meal have no apparent advantage over either tankage or fish meal, but they do produce better results than linseed meal alone.

5. Cane molasses was equivalent in feeding value, pound for pound, to barley, when fed on pea forage, when used in replacing only one-half of the barley in the ration. It did not prove as efficient when fed in dry lot, nor when substituted for one-half of the barley in the ration at the rate of one and one-half pounds of molasses for one pound of barley.

6. Peas, yielding 15.5 to 17.0 bushels per acre, pastured off by hogs produced 145.8 to 222.9 pounds of pork per acre. In general, the grain saved by producing the pork on pear forage, as compared with dry lot was practically equivalent to the yield of peas. This with the labor saved in harvesting the peas, as well as the advantage of increasing soil fertility, recommend peas as a practical forage crop for hogs under eastern Washington conditions.

7. An acre of alfalfa, which yielded approximately two tons of hay the first cutting, produced during the remaining part of the summer and fall, when pastured, from August 11 to October 15, a total of 81 pounds of pork.

"CRATES," NOT "QUARTS."

In the September 28 issue of The Washington Farmer there appeared an item regarding the growing of strawberries in the Yelm district. The item stated that "with 3000 acres under cultivation, 350 of which were brought under this year, the Yelm district shipped 200 tons of fruit this season, the strawberries averaging 275 quarts an acre and red raspberries 300 quarts."

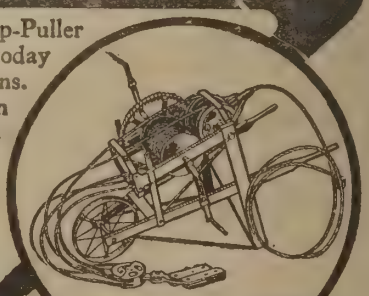
This should have read 275 "crates" of strawberries and 300 "crates" of red raspberries, instead of that many "quarts."

CHESTER SCHLIEN WON FIRST.

In the report of the Washington State fair appearing in The Washington Farmer, it was stated that Nora Waite of Ellensburg was winner in the beef cattle contest. It developed, however, that Chester Schlien of Mabton was winner of the first prize in this contest. Chester is a boy 13 years old in his first year in high school. He lives on a farm three and a half miles from Mabton.

672 Men Cannot Equal the Great Power of this One-Man Stump-Puller

This marvelous One-Man Wheelbarrow Stump-Puller actually has the strength of 672 men. It is today the marvel of all Land Clearing Demonstrations. Positively outclassed all competition last season by pulling 64 stumps in 3 hours—ONE man doing all the work of operating machine and hitching to stumps.



MARTINSON WHEELBARROW STUMP-PULLER

Made of best steel; light, handy and easily operated. Mounted like a wheelbarrow, easy to push any place in the field. Cable has tensile strength of 23 tons, enough to pull any stump. Has two speeds, continuous pull, shifts without loosening hold on stump. "My girl and boy, 8 and 10 years respectively, pulled a 12-inch stump with the Martinson," writes John Scottino, of Arnold, Minn. "The best machine out," says A. J. Engfer, Prior Lake, Minn.

64 Stumps in 3 Hours

FREE

To prove everything we say about this wonderful machine we will send it to you for FREE trial. If the Martinson fails to make good, return it and the deal is off. It is the stump-puller for the poor man who does not wish to hire expensive help.

Martinson Mfg. Co.,
1901 Lincoln Building, Duluth, Minn.

"My machine is a wonder. Have 19 acres ready for the plow.—stumps all pulled with the Martinson." Isreal Phillips, Akeley, Minn.

Try the Martinson. You will be glad of it as long as you live.

Write for full particulars.

"The Busy Thirteen"

Makes Record of 100 Per Cent

"The Busy Thirteen," a girls' sewing club of the Trafton district at Arlington, has finished its fourth year of club work with a 100 per cent record. While the club is this year working at sewing it has also worked along other lines. During its first year the girls put on a garden exhibit at the Puyallup fair. The next year they took a general club exhibit to the state fair at Yakima, while in their third year they made a showing at the Spokane Interstate fair.

The work of the members for the last year has been largely with sewing, and under the direction of Mrs. T. M. Clapsaddle of Arlington and Mrs. Harriet D. Stowe, the county home demonstration agent. The club members supervised a community fair on October 7 at Arlington and the girls demonstrated the different kinds of work which have been carried on among their members.

Credit is also due the girls for planning and carrying on a club picnic at Lake Goodwin last August, where they had a very sociable day in company with many of the parents and friends of the members. The girls are planning a similar outing for next summer.

Members of the club are: Ruth Miller, Sarah Jorgerson, Hazel O'Conner, Myrtle Mount, Mary Campbell, Maude Roark, Lucy Roark, Agnes Jorgerson, Elizabeth Clapsaddle, Victoria Hedman, Ruby Bergdahl, Viola Huff and Frances Robbins.

The final goal for the year was the one-day fair which was staged at Arlington on October 7. In addition to the sewing work from the girls there were garden products from some of the boys and a few of the girls as well. A canning exhibit was shown and one of the girls gave a demonstration on the making of hats, while another explained the process of the alteration of patterns.

The club members are planning on a greater fair for next year and there will be two new clubs organized to work in cooperation with the Trafton club. One is to be at Oso and the other at Cicero. Miss Ruth Miller, president of the club for the last year, will act as the local leader for the two new organizations.

Started With Two Cows

The DeGraff herd of 28 milking Shorthorns at Lynden, Whatcom county, was started with two foundation cows which were brought from Ohio and later there were two more cows shipped from a New York farm, and still a third shipment from Pennsylvania. It was in the last shipment that the bull, Glenside Roan Prince, then a mere calf, was purchased and he now heads the herd as a 4-year-old.

As the herd of purebred cows were being built up the DeGraff Brothers used a herd of grades to keep up the milk production, and all the cows were bred to the registered bull. There are now 20 head of these high grade cows in the herd and their quality is improving with each generation. The grade animals, however, are being replaced with registered animals as fast as the purebred calves freshen to take their place.

"We have found that two months is the best age to veal off the grade bull calves," said Mr. DeGraff, "since a greater profit can be realized at this age than later. If we had an unlimited amount of unimproved pasture it might pay to keep them until they were larger, but since we have to feed milk and grain it soon runs into money.

"For our pasture land we use clover and timothy, which is used for hay the first two or three years and pastured in the fall. The two grasses make a good combination for pasture and the timothy holds on for several years and produces an excellent feed. When the moss begins to come up in the meadow it is better to plow the entire field up and reseed.

"Oats and peas have also been grown extensively as a rotation crop and the second grade of peas used for fattening hogs. We know of no better way to raise hogs than by feeding skimmed milk until the shoats are of the right size then fatten with peas. In fact, any dairyman should have hogs as well as dairy cows to keep the farm running in the most profitable manner. The pigs will need some pasture, but they can make better use of the surplus feed than anything else that can be raised."

The DeGraff Brothers have 30 head of Chester Whites and find them a very practical breed for western Washington conditions.

Orchard Grass for Pasture

There are 80 acres of land on the J. I. Hutchin farm at Lynden, part of which is yet uncleared, but makes very good pasture for the dairy cows. Most of the hay land is seeded to red clover and orchard grass and used for pasturing after the hay has been taken off. Orchard grass is considered a very good hay and pasture grass, since the roots increase as the clover dies out. It will also stand more tramping on wet ground than will some of the other grasses and all stock are very fond of it both as forage and hay.

Orchard grass is one of the plants recommended by the western Washington experiment station at Puyallup, since it is a hardy grass and does well in this locality. Tall oat grass is another that has been showing up well at the station and it has been found to greatly increase the tonnage of hay to the acre and the aftermath makes an excellent pasture where the rainfall is light.

West Washington Potato Show

Although the Pacific Northwest Fruit exposition, to be held in Seattle November 11-19, primarily is for the display of fruit products of Washington, the first annual Western Washington Potato show, to be held in connection with the exposition, promises to be one of its big features. Every county on the West Side has entered the competition for a purse of $750. A. B. Nystrom, King county agricultural agent, is manager of the potato show.

KLICKITAT COUNTY FAIR.

The Klickitat county fair at Goldendale brought out a good variety of agricultural products, swine and poultry. There was also a fine display of needlework and the boys and girls' clubs featured strongly in several kinds of work. The whole event lasted four days and was run as a sort of family affair, since the games and contests were among the most interesting parts of the entertainment programs. The fair has been held regularly for the last 25 years.

Exide
BATTERIES



Delivering the goods

The horse is being driven closer to his stable; the gas truck (started and lighted by an Exide Battery) goes on long hauls; and through the great zone in between, the electric street vehicle is coming into its own. Propelled by an Exide Battery, it delivers the goods — with least trouble and most economy.

You will find Exide Batteries playing an important part in all manner of industries. Exides supply current for the telephone system; they run mine locomotives, operate railway signals, and propel a majority of the world's submarines beneath the waves.

Rugged, simple Exide Batteries supply the current for most of the farm light and power plants, and they are famous for lasting for years without getting out of order.

You are, perhaps, most interested in the Exide built for starting and lighting your automobile. It is known as *the long-life battery*. It keeps its dependable power so much longer that it is not merely a great convenience but is the most economical battery to buy.

Exide BATTERIES SERVICE STATION

The nearest Exide Service Station has a battery the right size for your car. If your present battery needs repairs, no matter what make it is, it will be repaired skillfully and reasonably. If not in your telephone book, please write us for the address.

The Electric Storage Battery Company
Philadelphia
Service Stations Everywhere
Branches in Seventeen Cities

THE LONG-LIFE BATTERY FOR YOUR CAR

LIVESTOCK AND DAIRY

Milk Is King

As a Food It Is the Most Valuable

Ever since the day when human beings rose to a form of agriculture which included domestic animals, milk has been considered the master food, says the Rural New Yorker. In his attempt to trace the growth of habit in man Wells states that milk was first regarded as an unnatural food, but that its evident effect upon life and growth made it permanent. It would be easy to show how, again and again, down through history, the world was subdued or conquered by milk consumers. In ancient times, as men became cultured and gathered in cities, their food habits changed, and milk was largely eliminated from their diet. How far this will account for their mental and physical decline we can not say, but it undoubtedly had some effect. The human swarms who spread down through Italy and captured Rome were milk consumers, living very largely on the produce of flocks and herds. The races and tribes which used milk freely in their diet have always been superior in size and quality. This we think will be found true even of African tribes. The Zulus and other peoples which have been noted as breeders of cattle were naturally milk consumers, and are usually superior in size, intelligence and spirit. The early settlers in New England were noted for their strength, hardiness and intelligence, and there seems no doubt that this condition was chiefly due to their diet of boiled corn and other cereals and milk. There is no escaping the fact that milk is the master food. The habit of consuming at least one suart of milk each suming at least one quart of milk each any child can acquire. This habit should be started on the farm, and not left to city people.

Cost of Feed for Herd

In calculating the feed cost for his herd of Berkshire hogs, for the last summer, J. W. Morris of Lynden finds that his brood sows will cost about $2.55 per month each. This figure is made upon the basis of buying all grain and running the hogs on pasture. In the winter it will run about $1 more per month, since it is necessary to feed alfalfa meal mixed in with the feed. This is a better plan than feeding the hay in racks, since it avoids all waste. Mr. Morris plans on each sow eating about two pounds of hay a day.

"In fact, I find that pork can be produced at 8 cents a pound under average conditions," said Mr. Morris, "and it will make the returns more certain if skimmed milk is used in the ration. No hog breeder should attempt to raise animals for butchering if he does not have milk of some kind to feed. I believe that there should be one sow for every five cows kept. This will, of course, take care of the young pigs as they come on and give them all the proper amount of supplement.

"I have made a rule never to change my feeding except during farrowing time and then make the cut in quantity rather than quality," said Mr. Morris. "The feed should be gradually increased after the sow has farrowed, until she is getting the proper amount. It is a mistake to leave out some of the more important parts of the ration at this time, but the amount of feed can be reduced if it is increased again as the animal can take care of it."

Crosses Durocs and Tamworths

I. J. Oder of Yakima has for many years been raising hogs on the outskirts of town and has featured prominently in the show ring at the state fair and other live stock shows of the state. He is one of the few men in the state who has made a success of raising hogs on garbage. He has had very little trouble, if any, with disease and no trace of cholera has ever been found on the farm.

The plans are to run from 100 to 150 hogs on the river pasture land, which is used mainly for range. There are times when it is necessary to buy a few feeders to keep the number large enough to clean up all the feed obtainable. Most of the hogs are Tamworths, while there are a few head of Durocs and some grade sows. Mr. Oder is convinced that a cross with a Duroc or grade sow with a Tamworth boar makes an early maturing hog which has excellent bacon qualities.

Increasing the Lamb Crop

In six years' work the United States department of agriculture has found that by extra feeding (commonly called "flushing") at breeding time its Southdown ewes yielded 198 more lambs per 1000 ewes than Southdown ewes otherwise given the same care and kept under the same conditions.

Flushing increases the size of the lamb crop in two ways—it puts the ewes in better condition to make sure of their getting in lamb and it increases the proportion of twin lambs, says the department. Sheep breeders are constantly striving to increase the proportion of lambs born to the number of ewes in their flocks, but they have in most cases paid little attention to the condition of the ewes at breeding time. A little extra care and attention just as the breeding season opens will bring results next spring.

Grain Mixture

By A. B. NYSTROM.

What is the best grain mixture for a milch cow on dry hay? A. J. H.
Rocklyn, Wash.

The kind of hay and grain you use both have a direct bearing on the question. With clover and grass hay a mixture of 300 pounds of mill run or bran, 200 pounds of ground corn or barley and 100 pounds of linseed oil meal will be found satisfactory. If all clover or all alfalfa is given use only 200 pounds of mill run and 50 pounds of the oil meal. Soy bean meal may replace half of the linseed oil meal.

VETERINARY

By DR. S. B. NELSON.

Lump on Jaw—I have a cow that freshened in August. Ever since that time she has had a small lump under her jaw. It seems to be getting larger and her jaw is swollen quite a bit. Is there a remedy?
Cliffs, Wash. J. F.

There is one of two things probably the matter with your cow. Either there is an infection in the jaw from a diseased tooth or the cow has lumpy jaw. In either case she would need an operation; the tissues removed and packed with a tincture of iodine pack. The cow should be put on potassium iodide, 1 dram, in one pint of water once daily for 10 days; stop a week and repeat for 10 days.

Tubercular Cattle.—What compensation is made by the state for a cow that is pronounced as tubercular by the veterinarian? READER.

The problem of receiving pay for a cow pronounced as tubercular by the veterinary is prescribed by law and it is the duty of the state department of agriculture through its representative, Dr. Pelton of Olympia. You can receive first-hand information regarding this by writing to Dr. L. C. Pelton, supervisor of dairying, Olympia, Wash.



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Smith's Steers Outsell Brown's

PART I.

"Why did my neighbor's cattle sell for 10 cents a pound, while mine, marketed at the same time and weighing about the same, brought only 7 cents a pound? What points do buyers consider in determining what prices they can pay for different bunches of steers?"

Such is the substance of an inquiry from a reader. As this answer is being written prime beef steers are selling as high as $12.90 a hundred pounds on the Chicago market, while common light steers are selling down to $5.50 and canner steers as low as $3.50. Evidently the differences in value are tremendous or the slaughterers would not discriminate so much.

If a steer buyer for one of the packing companies were asked to enumerate the primary reasons for the wide range in value, it is probable that he would say that the poor and the good steers showed three important differences.

1. In dressing percentage or percentage of carcass to live weight.

2. In the proportion of the weight of the carcass which is in the most valuable wholesale cuts.

3. In the character of the meat itself, consumers being willing to pay a much higher price for meat from the higher grades of steers.

The best steers reaching market will dress as high as 63 to 65 per cent of carcass to live weight, while common beef steers may dress as low as 48 per cent, with canner steers still lower. Thin, old dairy cows sometimes produce only 37 per cent or even less of carcass. This means that the offal varies from about 36 per cent of the live weight in the best steers to 63 per cent in cast-off "shells" from the dairy.

The offal includes the hide and hair, the blood, the feet and legs up as far as the knees and hock joints, the heart, liver, kidneys, some loose internal fat and the digestive tract with its contents. The hide makes up about 7 to 8 per cent of the live weight or from one-fourth to one-third of the offal. The tallow varies from a negligible quantity to as much as 4 per cent of the live weight. Hides at present are worth from 19 to 22 1-2 cents a pound, which is more than the average value of the carcass. Other parts of the offal are worked up into byproducts, but so much of the weight is in the stomach, intestines and their contents that its average value per pound is much less than that of the carcass.

It is easy to understand why the probable dressing percentage is a prominent factor in the mind of the buyer in deciding how much he can bid for a bunch of cattle. Many packing companies require their buyers to record their estimates of dressing per cents each time they make a purchase and the buyers are furnished the actual record later on, so that they become expert in making estimates. Rarely will they miss the actual percentage over one point on the average.

If a steer which sells for $12 a hundred pounds on the present market dresses out 63 per cent of carcass worth 18 cents a pound, then a steer dressing 58 per cent, assuming that other factors, such as cost of slaughter, value of byproducts and of the carcass per pound were the same, would be worth only $11.10 or 90 cents per hundred pounds less. For there would be five pounds less beef worth 18 cents a pound in each hundred pounds of weight on the hoof. Likewise a steer dressing only 48 per cent would be worth only $9.30. It happens, however, that the carcass from the steer dressing only 48 per cent would not be worth 18 cents a pound, so that the difference in value on the hoof would be much greater than the dressing per cent alone would make.

The proportion of the weight of the carcass which is in the most valuable wholesale cuts and which materially affects the price received for the steer, will be considered in the next article.

Many Soils Need Sulphur

Sulphur is recognized as one of the essential elements of plant growth. It is found in greater or less amounts in all soils and in all plants. In general the soil supply has been found adequate to meet the needs of the average crop. On some soils and for particular crops which are heavy feeders, alfalfa and cabbage, for instance, the addition of sulphur-bearing materials has been found profitable in many instances.

Under most systems of cultivation where manure and commercial fertilizer are used the supply of sulphur is in large measure maintained. The same thing is true with sulphur as with nitrogen or potash, that when only the one element is deficient it is most profitable to supply the one element in concentrated form. In the case of sulphur the use of the fine ground sulphur is usually the most economical.

The increases in yield following the application of sulphur to alfalfa land have been in many cases noteworthy.

Sugar beets and cabbage also are reported to have given substantial increases in yield, due to the use of sulphur.

In addition to its value in improving soil fertility sulphur is one of the two great fungicides, the other being copper.

Apparently the efficiency of sulphur as a soil fungicide is dependent on its oxidation to sulphuric acid. In the case of potato scab control the problem appears to simplify itself into one purely of soil reaction. It is quite definitely established that certain bacteria actually perform this work of oxidizing sulphur in the soil. Some soils contain these proper bacteria, while many do not. In order that the sulphur may be effective these bacteria must be introduced. This is accomplished through the use of inoculated sulphur.

Oats and Peas for Feed

Fred Morgan, a Guernsey breeder of Oak Harbor had a crop of hay that produced 38 loads on six acres. The mixture consisted of clover, timothy and Italian rye grass. "The loads would run close to a ton each," said Mr. Morgan and I consider six tons to the acre a good yield, even though the land had been well manured. The hay was an old crop that was running largely to timothy and did not make the best of cow feed, but it was cut early enough to make it a fairly good feed."

A field of oats and peas are to be cut for the silo and used for succulent feed during the winter. Mr. Morgan has raised corn for the silo and has had some good results, but feels that oats and peas are easier to raise and make about as good a feed if properly harvested.

WASHINGTON IS HIGHEST.

Washington dairymen may well be proud of the fact that the state stands highest in the seven western states in the average fat production, with 31.62 pounds per cow. This figure is taken from the cow testing association records only, and includes seven associations, with a total of 2437 cows. California, the next highest state has a production of 31.01 pounds per cow from 16 associations and 18,047 cows. Oregon ranks third, with 30.78 pounds per cow, and Idaho is fourth, with 29.27 pounds.

Washington also has the honor of having the highest milk production per cow of any state in the Union, according to the federal census of 1920. The figure is given as 571 gallons per year for each cow and was taken as an estimate from the owners' records at the time the census was taken.

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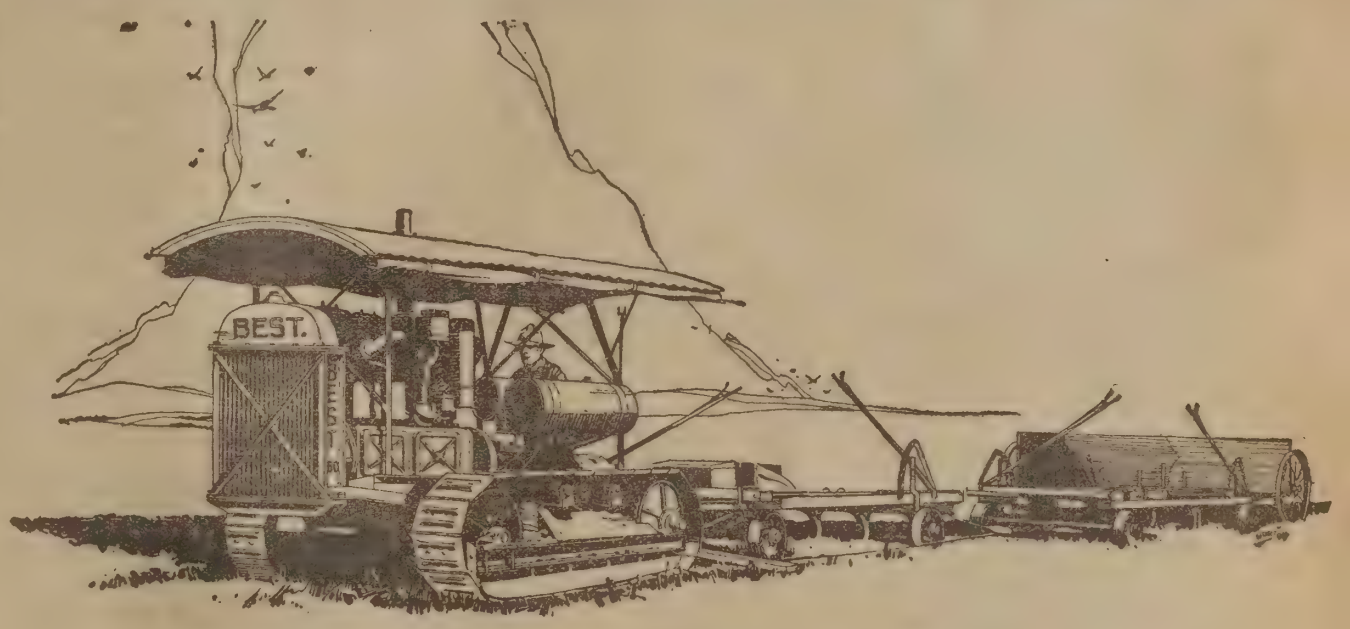
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BEST TRACTORS



POULTRY AND RABBITS

Lighting the Hens

By GEORGE R. SHOUP, Poultryman, Western Washington Experiment Station.

The lighting of old birds for market eggs has shown the best results when the birds were allowed to rest till December 1. The lights brought on at this time result in a heavy winter lay and the birds go through the season in good health with a continuous lay and very little mortality. Whereas, the continuous lighting of the old birds starting in September results in a fairly good lay of October and November standard eggs, and helps out in making the standard pack. But the total number of eggs laid by the flock and the flock average are far less than where the December 1 date is used for starting lights. Many of the September lighted old birds fall by the wayside and the spring and summer lay is less than that of the birds which have had a period of rest.

The lighting of the old birds for hatching eggs should never be practised except where thebirds have gone well through January without laying. The breeders should be fully molted, should have stored up all necessary supplies for reproduction and their combs should be up and bright red by the 15th of January. If they are too long coming into lay there is serious danger of their becoming too fat, their egg producing organs will not function properly and soft-shelled and misplaced eggs are apt to result. Often just a few days night lighting is all that is required about January 15 to start them laying. It is claimed that breeding houses facing east have an advantage over the south front for breeders in that the birds are up earlier in the morning in the east front house and that they require no light at all.

The lighting of the larger breeds results in fully as great an increase in lay as with birds of the Mediterranean class, but when the birds are intended to be used as breeders in their second year we have found it advisable to allow them considerable outside range all the year round to keep them in good condition, whereas the pullets of the smaller breeds are confined to the laying house from October 1 to March 1.

The large breeds respond much better to morning lighting where outdoor range is given, when they procured all the green feed they needed outdoors and it is impossible to bait them down off the roosts at night with even the most succulent kale stalk. Over-lighting of the large breeds is even more injurious to their hatching eggs in the following year than with the smaller breeds. These breeders should be given as nearly natural conditions as is consistent with their health and your retaining their ownership.

The use of any kind of artificial light, even the ordinary barn lantern, results in increased egg lay in winter, but the electric light is much more convenient and trustworthy than any oil lighting equipment. Remember this artificial light offered your poultry is like an edged tool—if you put on too much pressure you are certain to spoil the job. If carefully and intelligently applied it will add at least $1 net profit per pullet.

Swatting the Louse

It is true that lousy hens will lay some eggs, but it is equally as true that they would lay more eggs if they were free of lice. We find that the high-producing hens usually stop laying and become quite light in weight when they are badly infested with lice. The low-producing hens usually stop laying when they are badly infested with lice. One of the ways to eradicate the lice on the chickens is to apply equal parts of commercial blue ointment and pure lard, well mixed, about one inch below the vent and on the back between the wings, thoroughly rubbing the diluted ointment into the skin. Commercial powdered sodium fluoride is to be recommended when the blue ointment is not to be had. For best results, the sodium fluoride should be applied in a dry state, by thoroughly dusting the powder into the feathers. Six to 10 pinches between the thumb and fingerr, distributed over the body, are sufficient. A sodium fluoride water bath is effective also against the lice, but is not a suitable cold weather treatment.

One should examine his hens frequently for lice. It is not sufficient to believe that they are not infested.

Combating the Intestinal Worm

"In order to get the maximum number of eggs from the hens we must first expel and destroy all intestinal worms," says J. E. Layton, poultryman for Albers Brothers, who declares that large numbers of flocks in the Pacific northwest are affected by this pest. "This is not an easy task. We find pumpkins to be a very good expeller of intestinal worms in poultry when fed for a period of 30 days or longer. Chickens like pumpkins and will consume many of them when cut open and placed where they can get at them. Poultrymen should make a regular practice of growing a lot of pumpkins each year for feeding in the fall, beginning at the time the pullets and hens are placed in their winter quarters. Pumpkins will expel the intestinal worms, but will not destroy them. This makes it necessary to rake all the droppings off the dropping boards every morning before the chickens have had a chance to pick up the worms expelled during the night. This should be done daily, as long as the pumpkins are being fed to the chickens. It is best to mix the droppings containing the expelled worms with air slaked lime which will destroy the worms as fast as they are hatched, before they have a chance to develop and lay eggs. Where the pumpkins are not to be had, thoroughly mix in each 100 pounds of the dry mash to be fed, three pounds fine tobacco dust. Continue this treatment until the birds are free of the intestinal worms. Tobacco, though, does not always expel all the worms, as we have been led to believe.

"Where the ground on which the chickens run is infected with worms it will be necessary to heavily lime and spade or plow the ground. This should be done frequently until all worms are destroyed. The best time to lime and turn the ground under is during the spring and summer months, when the worms are hatching and developing from the eggs."



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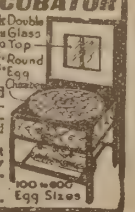
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Alex Woelffer, of Watertown, Wisconsin, says the only belt he ever used that really held the pulleys and ran trouble-free is the Goodyear Klingtite Belt. "Even during and after rains, it delivers without a miss," he says. "There is never any tension to endanger the engine through overheating; never any re-setting. It does not stretch, shrink or stiffen.

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ORCHARD AND GARDEN

How Worms Get In

If you want to keep the pig out of the potato patch, all the holes in the fence must be smaller than the pig. In like manner, if we are to keep the worm out of our apples, there must be no unsprayed places on the apple big enough for him to get through.

This is something of the philosophy of A. L. Lovett of the Oregon experiment station, in explaining why apple orchards are showing this season a comparatively high worm injury. It is the general experience of orchardists throughout the Pacific northwest that, notwithstanding thorough spraying in most sections, the worm damage is unusually large. Mr. Lovett believes that this is in part due to the fact that the fruit developed unusually rapidly early in the season, spreading the first cover spray so that it became too thin to kill the worm as he made his entrance. Another reason given is the exceptionally favorable climatic condition during the period of the first brood moths, permitting them to increase greatly their usual quota of eggs. In an article in the Oregon Grower, he says:

"Ordinarily the first brood of coddling moths works under rather unfavorable conditions. The nights are cool as a rule; rains are not infrequent and sudden drops in temperature of several days duration below the point where eggs can be laid, are not unusual. Under such circumstances, the vitality of the moth is affected. Many infertile eggs are laid and the total number of eggs deposited is materially lessened.

"This year the season was unusually late, but when favorable temperature for growth developed they came with a rush. There was temperature suitable for egg laying a week before the moths came out, and such weather was a rule during the period of egg laying. The first brood worms were, therefore, exceptionally numerous and started life under the most auspicious circumstances.

"The prevailing high temperature, so favorable for worm development, had a similar effect on the young fruit. The increase in size with a corresponding increase in circumference made our standard spray program entirely too tardy and our regular spray covering inadequate for a protection. Our regular 30-day coddling moth cover spray was put on 15 days after the calyx spray. There should have been another spray two weeks later. The expansion of the surface of the apple during this period rendered the spray covering inadequate to afford protection. Late season worms were due mostly, simply to the exceptional abundance of the worms present, and where so many try to get in some are sure to get the fruit. In many orchards where late sprays were carefully applied the later attacks resulted largely in stings, but of these there was an unusual abundance."

Dish This Out to the Mice

James Silver of the United States biological survey, who spends his entire time working on the rodent control problems of orchardists and farmers, offers the following formula for destroying orchard mice:

Mix one tablespoonful of gloss starch in one-half teacup of cold water and stir into one pint of boiling water to make a clear paste.

Mix one ounce of powdered strychnine with one ounce (approximately one tablespoonful) of baking soda and stir into the starch to make a smooth, creamy paste. Stir in one quarter pint of heavy corn sirup and one tablespoonful of glycerine. Apply to 12 quarts of wheat, free from dirt and chaff, and mix thoroughly to coat each kernel.

This poison bait should then be scattered along runaways or about places where the mice operate. A small teaspoonful at a place is sufficient. In order to protect the poison from rain and also prevent birds and other animals from getting it, it may be placed in almost any container where it will be dry, but where it will be of ready access to the mice. Tin cans are sometimes used. Place the bait in small quantities in the cans, mashing them so as to leave only room for a mouse to enter. Lay the can in the runway or at the base of a tree where the mice are working. The bait may also be placed under boxes or boards, in drain tile or other similar places. Mice do not like to work in the open, but nearly always pick out places where they are sheltered, such as under piles of rubbish, lumber, brush or in the accumulation of vegetable matter resulting from cover crops. These are ideal places to put the bait.

Pruning the Prune Tree

The Italian prune tree should not be pruned too heavily during the first three years after planting, according to the Washington State college extension service, which graphically illustrated this point by pictures, samples of the tree itself and boxes of fruit, which were shown at a number of the fall fairs this season. One tree which was pruned heavily during the first three years produces only one-half a box of fruit the fifth year, another Italian prune tree received very little pruning during its early period, and, now 5 years old, produces three boxes of prunes.

"Young prune trees need only enough pruning to secure well-formed tops," said a placard which was tacked near by. "Older trees need more in order to take out such limbs as are interfering with each other, and are causing the tree to become misshaped. In all cases, however, the limbs should be cut back close in order that they will heal over properly."

A few branches were shown which had been pruned to leave a stub of an inch or two on the main branch, but in a short time it had caused decay, or injury of some kind to the main branch.

Chuckholes and Rotten Apples

There may seem to be no connection between the chuckhole in the road and the rotten apple in the warehouse, but there is often a very close relationship. Apples often rot or otherwise deteriorate because of bruises. Bruises often result from rough treatment, and chuckholes in the road are notorious for their lack of respect for the fellow who rides over them.

It is time well spent for the fruit growers of any section to go over the road carefully before hauling time. Every chuckhole should be filled and every rock or bump removed. The vehicle in which the hauling is done should be well equipped with shock absorbers in the form of springs, if possible.

From the time the hand touches the apple on the tree until it is displayed before the prospective purchaser in the market place, the fruit should be handled with extreme care.

WORK OF COUNTY AGENTS.

County extension agents, in carrying the results of research by the United States department of agriculture and the experiment stations of the state agricultural colleges to the farmer, visited 650,000 farms in 1921 and held 125,000 community and other meetings, with an attendance of 6,000,000.

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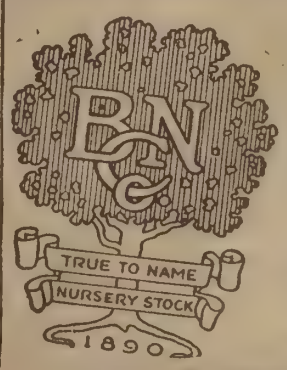
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As the world's largest producers of sulphur we can serve you best. Texas Gulf Brand contains 99 1-2 per cent pure sulphur and is supplied in three different forms, as above.

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We Have Kept Faith

For 32 years the Benedict Nursery has sold "True-to-Name" Nursery stock in the Northwest.

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Benedict Nursery Co.
BENEDICT BROTHERS, PROPS.
185 East 87th North Portland, Oregon

A LITTLE "WANT AD" FREQUENTLY OFFERS A BIG BARGAIN. MAKE IT A PRACTICE TO READ OUR "WANT ADS"

Live Stock Need Minerals

Health and Development Are Influenced by This Element

By GEORGE A. OLSON.

Until recently students of agriculture have looked upon fertilizers as something which, when added to soil, modifies the physical condition, or supplies the crops with minerals which apparently are needed, otherwise increased crops would not be obtained.

Recently it has been discovered tha tthe minerals which are required by plants are not as well balanced for animal needs as formerly supposed. Restricting a ration or utilizing only such feed as is produced on the farm may produce disastrous results. It may be a distortion of the thorax, or the development of abnormal organs, or porosity of bone, or rickets, or abortion. It is very likely that incursions of various diseases commence soon after abnormal development. At any rate there is abnormal development and disease. Just how closely the one is associated with the other will be learned from the investigations which are now in progress.

The plant does not develop normally on account of unbalanced mineral conditions and in a somewhat similar manner the animal is affected. However, the minerals which may be inadequate for plant needs are not necessarily deficient for animal requirement. For example, the plant requires considerable potassium and this element is found in large quantities with nitrate nitrogen in the early development of the plant. It is also found in proportionately large quantities in the various cereals and may comprise as much as 50 per cent of the mineral content. Sodium, on the other hand, is found in comparatively small quantities in cereals and its importance as a plant food is difficult to prove. Yet the blood, serum and various other body fluids contain more sodium than they do potassium. In practice sodium is fed to stock in the form of sodium chloride (rock salt) and lately calcium carbonate has been recommended in view of the fact that a large portion of the mineral content of the animal is comprised of the mineral calcium. The cereals are deficient in the minerals sodium, calcium and chlorine. Iodine has also been found essential and when administered big neck, hairlessness and other well-known abnormalities are corrected. The quantity found in plant tissues varies and likewise many of the soils are found deficient in this element. But if it is present in the soil the plant evidently utilizes it, since in some districts the animals are not affected, while in other well-defined areas these abnormal conditions frequently occur.

It is obvious that the minerals operate somewhat differently in plants compared with animals. It is also apparent that the various minerals have special functions to perform. In one class of crops the requirements for a certain mineral are greater than is the case in another class. Thus it is found that root crops as a rule demand large quantities of potassium, while cereals require considerably less. Root crops contain very little phosphorus, while cereals contain appreciable quantities of this element. In case of legumes, tobacco, cotton, onions, etc., it is found that the plants contain as much or more sulphur than phosphorus.

It is known that sulphate sulphur leaches out of soil at a very rapid rate. Very little phosphorus is lost in this manner. On the other hand, some sulphur is returned to the soil by means of rains, while phosphorus usually is not. Aeolian conditions may be the means of increasing the supply of the various elements of plant food and the same forces may strip the soil of these components. In fact, changes in composition of soil are continually occuring and the success or failure in growing crops is partly due to such changes.

The practice of growing various kinds of crops in a system of rotation does not imply that such a practice conserves plant food. It merely shows that better yields can be obtained through such a practice. The reason for these differences in yield is attributed to variation in the appropriation of plant food by different kinds of plants. A rotation of corn, oats and wheat is very much like growing either one of these for a period of years, since their food requirements are very much alike. However, it matters very little as to the kind of crop which is grown, since all crops contain elements which have been taken out of the soil. The legumes are capable of supplying the nitrogen required without drawing on the soil supply and generally this eyement is increased in the soil due to this relationship. In other respects the legume draws on the soil supply of plant food.

The available portions of the plant food are most readily removed and in many instances subsequent decomposition of soil particles is too slow for the immediate needs of plants. Under these conditions it is found expedient to add fertilizers in order to assure large crops or modify the soil conditions so that larger quantities of the elements are made available.

A vital factor involved in the use of fertilizers is the combination of ingredients best suited to the particular needs. There are many soils which are low in sulphur plant food, but fairly well supplied in phosphorus, for example. In order regions the soils are low in both phosphorus and sulphur.

A soil kept in a high state of fertility contains ample quantities of plant food for plant needs. The crops are also well balanced in minerals and undoubtedly better suited for the feeding of stock. Alfalfa, which contains more sulphur than phosphorus, also contains large quantities of calcium, all of which are very important in animal nutrition. Undoubtedly the mineral balance of alfalfa is one oi the important factors which commends it as a food for stock. Alfalfa and other legumes should, therefore, be more extensively grown and fed.

GENERAL ADVERTISING.

New Lamp Burns 94% Air

Beats Electric or Gas

A new oil lamp that gives an amazingly brilliant, soft, white light, even better than gas or electricity, has been tested by the U. S. Government and 35 leading universities and found to be superior to 10 ordinary oil lamps. It burns without odor, smoke or noise—no pumping up, is simple, clean, safe. Burns 94% air and 6% common kerosene (coal-oil).

The inventor, W. W. Johnson, 31 N. Fifth St., Portland, Ore., is offering to send a lamp on 10 days' FREE trial, or even to give one FREE to the first user in each locality who will help him introduce it. Write him today for full particulars. Also ask him to explain how you can get the agency, and without experience or money make $250 to $500 per month.—Adv.

"Farm Mechanics"

A volume entitled "Farm Mechanics," and written by Crawshaw and Lehmann, has come to our hands fresh from the press. It treats of subjects ranging from woodwork, blacksmithing, sheet metal and concrete work to the repairing of machinery. Belting and care of belts, the use of ropes, the care and repair of harness, are a few of the topics taken up within its some 400 pages; lighting and sanitary system for the farm home are also given attention. A table showing the uses for which various woods are suitable is an attractive feature. The following extract, having to do with the seasoning of timber, will illustrate fairly well the character of the book.

"One of the most important processes in the preparation of wood for construction use is its seasoning, or drying. A properly seasoned board is lighter than one not seasoned. It is stronger, and is not subject to change of volume which causes checking and warping. Of the several methods of seasoning, the best is natural air drying, which takes from two to six years. In this process, boards are piled up with broad surfaces horizontal and separated one from another by thin strips of wood known as sticks. The boards in a particular layer are placed so that edges will not touch; hence, air is permitted to circulate throughout the pile and come in contact with all surfaces. The piles are set up a foot or more from the ground, one end being a few inches higher than the opposite one. They are covered with boards to protect the drying lumber from rain and sun.

"In order to produce lumber quickly for construction use, it is artificially seasoned or kiln-dried. This reduces the moisture of the wood to perhaps five per cent, whereas, in the natural process, 10 per cent is the approximate minimum. However, kiln-dried lumber will more quickly re-absorb moisture. As most lumber nowadays is seasoned by some artificial means, it is advisable to pile it in shops as for air-seasoning. In case there is a tendency to warp, it is sometimes advisable to clamp a board to a flat surface, concave surface down, or clamp two boards together with the concave surfaces facing each other.

"When a board is dressed it is well to plane both broad surfaces, especially in the case of air-dried lumber, in order to open the pores, as it were, on both sides and thus make the exposure conditions uniform throughout. If the ordinary means of overcoming warping are not sufficient, it is sometimes possible to straighten a board by heating the convex side and, possibly, at the same time moistening the concave side. The heating can be done by laying the board on top of a furnace."

The book is illustrated, both with line drawings and half-tones, rather fully. It is from the Manual Arts Press at Peoria, Ill. We note the price to be $2.

Osmosis

A Vital Factor in Life of Plants

A horticultural friend recently showed Dr. H. A. Surface of the department of biology of the Susquehanna university some peach trees on which the tips or tip halves of the leaves had turned white and dead, as though scalded, and asked him what had caused that peculiar condition. Immediately Dr. Surface replied, "Too much nitrate of soda." He said, "It is possible for nitrate of soda was used on the soil around these trees, but could such an application on the ground affect the foliage?" It was not enough to say, "It was due to osmosis," without explaining further what "osmosis" is and how it works, says the doctor in the Packer.

Osmosis is the passage of a less dense liquid through a membrane to one that is more dense on the other side. A neat little way of showing this very important phsio-chemical demonstration is to drain the contents of an eggshell from a hole in the small end, then pick away some of the shell from the spot that is not attached to the membrane or shell-skin at the large end, leaving the membrane uninjured. Then fill the shell three-fourths full of strong salt water and float it in fresh water. Enough fresh water will be taken through the membrane to fill it and sink it. Now reverse the operation. Fill it nearly full with fresh water and let it float in strong salt water, and it will rise higher, because the fresh water passes out through the membrane and mingles with the salt water below.

From the above experiment we learn that a less dense liquid passes through a membrane toward a more dense liquid, and this is called "osmosis." A plant takes up sap and sends it on up by "root pressure" because the soil moisture is normally less saturated or less dense than the liquid in the plant, and the osmotic flow is through the root hairs toward the plant. Thus the leaves get a constant supply of moisture which they continue to evaporate into the air. Thus they keep fresh and alive.

However, when a readily soluble material is applied to the soil and the solution of the soil moisture is stronger than that in the roots the direction of the osmotic flow is reversed, and instead of the sap flowing into the tree it is reversed and flows out and thus the water is taken away from the leaves instead of added to them, and the effect is a scalded appearance. This effect can easily be obtained by the use of salt or any other readily soluble substance on plants. It illustrates one of the great physiological principles of absorption in both plant and animal life.

System in Bee Keeping

Frank Ross of Puyallup reports a return of approximately 120 pounds of honey to the colony, or about six tons from the 100 stands of bees, spring count. The season has been a very favorable one for the beemen and the colonies have increased at least 50 per cent, according to Mr. Ross.

While bees are generally kept as a side line, Mr. Ross finds that it pays to gi the bees the best care possible, even the expense of his regular work. By g ting system into the day's work it can managed so that a small amount of ca can be given each day and none of t colonies will go neglected for the want time to look after them.

Much labor can be saved by giving t bees plenty of room in the hive and the is not so much danger of swarming. It generally considered that from 50 to colonies are enough for one man to lo over in a day. By spreading the wo over 10 days' time it can easily be ha dled by one man in his spare time.

Mr. Ross is one of the state's most a tive beekeepers and has done much to e courage beginners in getting their bees shape for honey production. He is al one of the main boosters in the Peninsul Beekeepers' association.

SWEDEN WANTS RED APPLES.

White Salmon, Wash., reports that Sw den is in the market for red apples th year. A carload of Jonathans handled b the White Salmon pool will be sent to th country in a vessel sailing from Portlan

Do You Want Your Farm Removed Ten Times Farther From Town?

What would you take to have your farm removed bodily 10 times as far from the nearest town as it is now located? What would you take to have the town reduced to just one-tenth of its present size? The chances are that you would demand a substantial figure if you agreed to either change at all. You realize that being near to a thriving town is worth a good deal to you finincially, and has other values which can not be measured in dollars and cents. Being close to a ready market; having stores, churches, doctors and nurses convenient; being in a position to reach your banker or lawyer on short notice are all benefits which come from being within range of town. That being the case, it is to the interest of us all to build up our own home communities. One of the best ways to do this is to patronize the local stores and industries as much as possible, because all of the other benefits mentioned above follow in the wake of commercial activity, and perish when there is no business being transacted in the trading center.

Farmers' Want Ads

HELP WANTED—MALE

MEN WANTED EVERYWHERE, RAILWA mail, government clerks and carriers; e perience unnecessary. Write Mokane, Dep B-21, Denver, Col.

AGENTS WANTED

MEN WITH HORTICULTURAL EXPERI ence can make good money selling our splen did line of well grown trees and plants. Writ for contract. An early start will give you th advantage. Salem Nursery company, 428 Ore gon bldg., Salem, Ore.

SELL TREES AND PLANTS FOR US. STOC reliable and in good assortment. Cont'ac upon request. Write today. Capital City Nurs ery company, 426 Oregon bldg., Salem, Ore.

SALESMEN WANTED

MEN WITH CAR TO SELL RIM TOOL; MAK from $100 to $150 per week. Box 772, Spo kane.

SCHOOLS AND COLLEGES

EARN $110 TO $250 MONTHLY, EXPENSE paid, as railway traffic inspector; positio guaranteed after 3 months' spare time stud or money refunded; excellent opportunities Write for free booklet G-157, Stand. Busines Training Inst., Buffalo, N. Y.

EDUCATIONAL

BEHNKE-WALKER BUSINESS COLLEG of Portland; one of the largest institution of its kind in America; guarantees a positio to every graduate. Enroll now for fall term A few months training under expert instruc tors and you are ready to enter business an win. Behnke-Walker graduates are always i demand. Write today for our free success cata logue. Address Behnke-Walker Business Col lege, Fourth, near Morrison, Portland, Ore.

FRESH FOOD PRODUCTS

"HONEY BRAND" HONEY — ALFALFA sweet clover product; pure, light, thick, goo flavored; gives satisfaction wherever used; 60-lb. can, $6.50, two for $12.75. Write for cir cular and prices in pails. Oliver Sires, Wa pato, Wash.

CHOICEST YAKIMA VALLEY HONEY. 1 60 lb. can, $6.50; 2, $12.75; 6 10-lb. pails, $7.50 12 5s, $8; 24 2½s, $8.50; 12 2½s, $4.50. Dis count five-case orders, 10 per cent. Wm. F Sires, Wapato, Wash.

NEW HONEY, FINE QUALITY ALFALFA, sweet clover; 60-lb. can prepaid, second zone $7.29; two, $12.75; not prepaid; 3 10-lb. pails prepaid, second zone, $4.25. Harry Fisher, Pros ser, Wash.

FINEST HONEY, 60 POUNDS, $6.50; 2 CANS $12.75; add postage; 10 pounds, $1.70; 5 pounds, 90c, both postpaid. Satisfaction guar anteed. Geo. Bancroft, Hermiston, Ore.

POPULAR BRAND HAPPY HOME HONEY— One 60-lb. can, $6.50; two cans, $12.75; six 10-lb. pails, $7.50; comb honey prices on re quest. H. N. Paul, Mabton, Wash.

NEW CROP ALFALFA-SWEET CLOVER honey; 60-lb. can, $4.75; two cans, $9 f. o. b. Rigby. Heckman & Larsen Honey Co., Rigby, Idaho. Quality guaranteed.

EXTRACTED HONEY—ONE 60-LB. CAN $6.50; two 60-lb. cans, $12.75, collect; three No. 10 pails, prepaid, third zone, $5. Wells D. Rose, Sunnyside, Wash.

GOLD MEDAL BRAND YAKIMA ALFALFA sweet clover honey; 60-lb. can, $6.50; two cans, $12.75. C. W. Higgins, Wapato, Wash

DELICIOUS NEW CLOVER HONEY, 120 pounds, $9.75; 30 pounds, $3.25; won't crystallize. Browne, Box 499, Twin Falls, Idaho.

SMOKED SALMON, 5-POUND BOX, $1.25; salt salmon bellies, 5 pounds, $1.25 delivered by mail. Coffin Fish Co., Seattle, Wash.

NICE OREGON PRUNES DIRECT, $7.75 PER hundred. Special 12½-lb. sample bag prepaid $1.80. Kingwood Orchards, Salem, Ore.

HONEY — FRESH ALFALFA-SWEET CLOVER honey; one 60-lb. can, $6.50; two cans, $12.75. A. L. Traner, Touchet, Wash.

HONEY—CLOVER AND ALFALFA. TWO sixty-pound cans, $9.50. J. M. Ruyts, Buhl, Idaho.

MERCHANDISE

ARMY GOODS—STAG SHIRTS, $3.45; ARMY wool shirts, $3.25; work shoes, $2.95; of ficers' dress, $3.95; russets, $4.25; wool breeches $1.95. Price list furnished. Walker's Army store, 501 Trent, Spokane.

MISCELLANEOUS—FOR SALE

TOBACCO—THREE-YEAR-OLD KENTUCKY leaf. Pay for tobacco and postage when received, 3 lbs. chewing, $1; 4 lbs. smoking, $1. 7 lbs., No. 2 smoking, $1. Kentucky Tobacco Ass'n., Hawesville, Ky.

ALL WOOL KNITTING YARN FOR SALE direct from manufacturer, at 95c, $1.35, $1.6 per lb.; postage paid on $5 orders. Free samples. H. A. Bartlett, Harmony, Maine.

NATURAL LEAF SMOKING TOBACCO—5 lbs., 75c; 10 lbs., $1.25; 20 lbs., $1.75. Cash with order. United Farmers, Mayfield, Ky.

(Continued on the following page.)

FARMERS' WANT ADS

This is the farmers' "want," "sale" and "exchange" department for small advertisements of farmers, including live stock and poultry.

Advertising rates for ads running 1 to 3 times, 10c per word per insertion, with a special rate to Farmer subscribers, as follows: Ads running 4 to 12 times, 9c per word per insertion; ads running 13 times or more, 8c per word per insertion.

All commercial and land advertising 10 cents per word each insertion. Open also to nonsubscribers.

In using these columns advertisers must observe: (1) No advertisements will be inserted for less than $1.00. (2) Every word, number and initial, including name and address, must be paid for. (3) New advertisements, changes of copy or cancellations must reach general office, Spokane, Wash., 10 days in advance of publication date. (4) Cash must accompany order.

Above rates include insertion in The Washington Farmer, The Idaho Farmer and The Oregon Farmer, which constitute the Pacific Northwest Farm Trio, 46 Review Building, Spokane, Wash.

MISCELLANEOUS—FOR SALE (Continued) 60

SASH AND DOORS—O. B. WILLIAMS CO., 1943 First ave. So., Seattle. Chicken house sash, 20" wide by 25" high, 80c; a dozen different sizes in stock for immediate shipment. Skylights for chicken houses, 36"x40"; price, glazed, $2. This is the size recommended by the Western Washington experiment station. We carry them in stock for immediate shipment. Sash and doors for all purposes at lowest prices. All orders receive prompt attention. Our large illustrated catalog No. 35, showing full line of building material and built-in fixtures for the home, free on request. O. B. Williams Co. Established 1899.

SACKS—SECOND-HAND GRAIN AND SPUD correctly sorted and graded; also pipe, new and second-hand, any size; standard roofing paper at a big saving; pumps, engines, belting, cables, etc. Alaska Junk Co., Inc., S120 Adams st., Spokane, Wash.

HOMESPUN TOBACCO — CHEWING, 5 pounds, $1.75; 10 pounds, $3; 20 pounds, $5; smoking, 5 pounds, $1.25; 10 pounds, $2; 20 pounds, $3.50. Send no money, pay when received. Cooperative Tobacco Growers, Paducah, Ky.

WALL BOARD—WRITE FOR SAMPLE OF Washington plaster wall board; won't warp, won't burn. Manufactured by Washington Building Products company, 6851 E. Marginal Way, Seattle, Wash.

HOMESPUN SMOKING TOBACCO, MILD and mellow; 10 lbs., $1.50; 20 lbs., $2.75; delivery guaranteed. We furnish free recipe for preparing. Smoking Tobacco Exchange, Sedalia, Ky.

CANE MOLASSES FED TO STOCK MAKES more milk, healthier animals, lower feed costs; cheaper than corn. Write Arthur A. Lewis & Co., distributors, S151 Lincoln st., Spokane.

NATURAL LEAF TOBACCO, CHEWING, 5 lbs., $1.75; 10 lbs., $3; smoking, 5 pounds, $1.25; 10 pounds, $2. Send no money, pay when received. Tobacco Growers' Union, Paducah, Kentucky.

OUR FREE NEW FALL CATALOG OF GROceries and general merchandise will save you big money; a postal card brings it. Write today. Jordan Lawler company, Box 615T, Spokane.

BUY YOUR ALFALFA HAY AND NETTED Gem potatoes direct from grower. Samuel Shockley, Box 185, Outlook, Wash.

FREE TOBACCO—WRITE FOR SAMPLE OF Kentucky's best smoking tobacco. Hawesville Tobacco Co., Hawesville, Ky.

AGATES, JUST AS FOUND, NO CHOICE, 3 for 25c. F. S., Box 55, Port Orford, Ore.

MISCELLANEOUS—Wanted. 63

EGGS, APPLES, HUCKLEBERRIES—WRITE us. Uncle's Delicious Pies, Inc.; capital stock $50,000. 554 Mississippi avenue, Portland.

RADIO EQUIPMENT 89

RADIO—SPECIAL PRICE ON AERIAL WIRE. Number 14 bare, hard drawn copper, 55c per 100 feet. Address Sound Radio Sales, 600 Tacoma bldg., Tacoma, Wash.

STOVE REPAIRING 128

WRITE MYER RUBENS, SPOKANE, ABOUT stove repairs, welding broken parts, nickel plating.

FUR-BEARING ANIMALS 170

SILVER AND CROSS FOXES FOR SALE. William Rambo, 407 Sprague, Spokane.

PETS—Dogs, Birds, Etc. 171

WHEN YOU WANT A DOG, CANARY, PARrot, rabbits or a pet or pet stock supplies, cages, feeds or remedies, write. We are headquarters in the northwest. Routledge Bird, Pet & Animal Co., 174 Union avenue, North, Portland, Ore.

FOR SALE—FOX HOUND PUPS; BEST TREE dogs on the coast. J. E. Bateman, Gales Creek, Ore.

CHOICE SHEPHERD PUPPIES, WORKERS. Leslie G. Foster, Pasco, Wash.

POULTRY 174

PETALUMA ELECTRIC BROODERS ARE world beaters for raising chicks. No danger of fire, less care, better chicks. They grow faster, and are stronger and more vigorous than by any other plan. Our brooders give them "pep." Send for free literature. Petaluma Electric Incubator Co., Petaluma, Cal.

WILLAMETTE VALLEY BARRED PLYmouth Rocks. Over fifteen hundred young birds in 1922; heavy laying strain, dark and beautifully barred; cock birds and cockerels for sale; only the very best allowed on the Dimick stock farm; bank references. F. C. Waldron, R. F. D. 2, Hubbard, Ore.

ANSWER THIS AD AND RECEIVE FOUR months' trial subscription to the west's oldest and best exclusive poultry magazine. Send only 25c. Expert writers on practical poultry subjects. Latest poultry news. Illustrated. Special offer, two years, $1. The Pacific Poultryman, Seattle, Wash.

BABY CHICKS FROM TRAPNESTED NORTHern-grown stock; noted for great egg production; large white eggs and vigor; flock averages 225 eggs; $20 per 100. Order early. Catalogue free. Highmount Poultry Ranch, Empire bldg., Seattle, Wash.

COCKERELS, BARRED ROCKS, BRED FROM high producing O. A. C. hens and Tompsons Ringlet prize winning males; beauties, $3 to $5 each. Also standard bred White Rock pullets, 300-egg strain, $18 doz. Mrs. E. Lammey, Central Point, Ore.

BABY CHICKS—OREGON'S BEST AT REAsonable prices. Leghorns, R. I. Reds, Anconas, Minorcas, Barred Rocks, White Rocks. Order early. Catalog free. C. N. Needham, Salem, Ore.

GIANT BRONZE TURKEYS FROM MY OREgon state fair and Pacific International winners. Sold on approval. Herbert Stoneberg, Route B, Eugene, Ore.

FOR SALE—ANCONA PULLETS, APRIL hatched, $1. White Holland turkey toms, $7 and hens, $5. Jesse Wheeler, Vale, Ore.

40 QUALITY R. I. RED COCKERELS, $5 and up. Write your wants. Can please you. J. Nonnenmacher, Route 3, Yakima, Wash.

ANCONAS, COCKERELS FROM PRIZE WINners; egg producing stock; ask us about them. Oscar Dunlap, Junction City, Ore.

SICILIAN BUTTERCUP COCKERELS, $2.50. Also cocks, hens, pullets. Charles Carland, Route 2, Saint Maries, Idaho.

PUREBRED MAMMOTH BRONZE TURKEY toms, $9; hens, $7. H. Betebenner, Midvale, Idaho.

PUREBRED BOURBON RED TURKEY TOMS, hardy stock. Napton & Napton, Homedale, Idaho.

BARRED ROCK PULLETS, $1.25 EACH. MRS. Newell Reed, Clem, Ore.

POULTRY (Continued) 174

PULLETS—1500 APRIL AND MAY HATCHED White Leghorn pullets for sale at attractive prices; hatched from thoroughbred Hollywood and Tancred strains; sired by cockerels 250 to 290 egg strains. We ship at three months of age and guarantee satisfaction or you may return the birds in 3 days. We can give you quality and service. Queen Hatchery, Seattle, Wash.

CERTIFIED WHITE LEGHORN BABY chicks, hatched in the world's largest electric hatchery; choice free range, high egg producing breeding flocks, inspected by the Sonoma county farm bureau. Safe arrival guaranteed. Must Hatch Incubator Co., 445 Seventh st., Petaluma, Cal.

POULTRYMEN — SEND EIGHT TWO-CENT stamps for special three months' trial for the best and oldest exclusive poultry journal in the west. The articles and advertisements are of special interest to poultry breeders. Northwest Poultry Journal, Salem, Ore.

WHITE LEGHORN BABY CHICKS, FROM free range Hoganized stock; breeding flocks inspected by Sonoma county farm bureau; accredited hatchery inspector. Full count and safe arrival guaranteed. For price write to Lafranchi Hatchery, Petaluma, Cal.

WHITE LEGHORN BABY CHIX FOR SUMmer and fall months from stock accredited by Sonoma county farm bureau. We guarantee safe arrival. Write for prices and literature. The Pioneer Hatchery, 422 Sixth street, Petaluma, Cal.

BABY CHICKS — WE GUARANTEE OUR chicks to be from the highest producing hens in Petaluma. Write for further information. The White Hatchery, Petaluma, Cal.

DOLLARS FOR YOUR EGGS—WE PAY THE top market prices for your eggs and poultry. Daily cash remittances. McClintock-Trunkey Co., produce department, Spokane.

SINGLE COMB ANCONAS, SHEPPARD'S strain; one-year-old hens, $1.50 each; cockerels, $3. R. P. Irwin, Tonasket, Wash.

GIANT BRONZE TOMS, $10, AND ARISTOcrat Barred Rock cockerels, $3.50. Dec. delivery. Mrs. Roy Watkins, Olex, Ore.

S. C. BROWN LEGHORNS, COCKERELS, hens, pullets; none better; stock guaranteed. E. H. Rosenkranz, Colfax, Wash.

TURKEY TOMS, GOLD BRONZE STRAIN; range stock; $10 each. Henry Weber, Rose Lake, Idaho.

CHOICE BARRED ROCK COCKERELS FROM heavy laying strain, $2.50 each. Earl Hoag, Blalock, Ore.

ALLEN'S ROCKS AND LEGHORNS WIN, LAY and pay. Write your wants. D. W. Allen, La Conner, Wash.

FOR SALE—HIGH CLASS ANCONA COCKerels and pullets. Geo. W. Fonner, Weiser, Idaho.

PURE BRED PEKIN DUCKS, HENS, $2; drakes, $2.50. Edna Ferguson, Porthill, Idaho.

LIVE STOCK 177

SAVE THE CALVES—"SAVACALF." A POWerful germicide, is used for treating contagious abortion in cows. It drives the disease from those that have it, and prevents the clean herds from getting it. Simply mix it with the salt and treat the whole herd at once. Costs 25 cents per head per year. Every breeder should use it. $5 package postpaid. Absolutely guaranteed, or money refunded. H. C. Babbitt, Boise, Idaho.

WE GUARANTEE TO PAY THE HIGHEST market prices for your poultry and live stock. Owing to the constant changes in the market we are unable to quote prices in this paper from week to week. We will furnish tags and prices when you are ready to ship. Write us what you have to sell. Prompt returns. John Lewis & Co., Spokane, Wash.

LARGE, HEAVY PRODUCING HOLSTEINS for sale at all times in car lots; tuberculin tested; 150 to 200 head always on hand; well marked heifer calves from registered sires and heavy producing dams; crated for shipment anywhere, $25 f. o. b. Levinson & Balmelli, Yakima, Wash.

BUY YOUR BOY A BERKSHIRE; HAVE some very good pigs, both sexes; also a one-year-old boar; all registered stock. Mooers & Hatch, Grangemont, Idaho.

WE PAY TOP PRICES FOR YOUR LIVE OR dressed veal, hogs and poultry. Your check by return mail. Shipping tags on request. M. & J. Packing Co., Spokane.

FIVE TOP NOTCH REGISTERED AYRshires, Peter Pan breeding; opportunity for foundation stock; sold ranch. Virgil Mayes, R 1, Sunnyside, Wash.

DUROC BARGAINS—WEANED PIGS; BEST pedigree, $8.50, with papers, or $10 registered and crated. Shadeland Farms, Amity, Ore.

DEWEY'S BIG TYPE, REGISTERED, OHIO Improved Chester Whites; yearling sows, boars and pigs. Frank Dewey, Olympia, Wash.

REGISTERED DUROC-JERSEY WEANED pigs of best breeding; shipped on approval. Herman E. Conner, Angora, Idaho.

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CHAPTER EIGHTEEN.

New Claims on Tarryall Creek.

Passing over the fire-blackened tract, they moved on in the direction they had been traveling.

It was somewhere on this journey across the mountains, though whether near the burning country or not is not clear after so many years, that the party discovered some hot springs. There were several of these, and the six men stopped to rest near them and to examine them. Most of the springs seemed hot enough to boil an egg or to cook meat. Yet only a few feet from the hot springs was another spring, almost ice-cold.

On this trip the party learned that descending a long mountain slope was harder on them than climbing the same distance. Brindle must have found a similar difficulty, for, when going down, she would sometimes swing round suddenly and face in the opposite direction. The men readily understood why she did it. After making their way downhill a few miles they themselves always felt a strong inclination to turn round and climb a while.

Not till they were about to emerge from the mountains did any of the wanderers catch sight of an Indian. And there was only one. The red fellow must have been very much afraid of the white. For when they first discovered him he was running like a deer. Some of the gold seekers called to him. But, if any difference, that only made him run the faster.

Now Cooper said: "Boys, that's one redskin, and he runs a streak to get away from us. But, you may be sure, there's a village of his kind somewhere not far off. And when he carries word to that village we may have a pack of them nosing our trail."

"Then I'm 'lowin' we'd better do somethin' to throw 'em off of the scent," suggested Esau.

"That wouldn't be a bad idy," Cooper agreed.

"Yes; it won't hurt anything to try a little strategy before we go to sleep tonight," was Sanders' opinion.

The sun was very high when they found themselves on the last mountain, where they could gaze out over that great tract of level, grassy country known as South Park. They camped down in the park, but against the foot of the mountain.

A big campfire was kindled, and by that the travelers cooked their supper and ate. And they lingered by the fire till night had shut down around them. Then, after saddling and packing Brindle they all took up their burdens and away they went. They were now headed southward.

Not till they had tramped several miles farther did they camp again. This time they made only a dark camp. They had been keeping near the edge of the park and were still at the foot of the mountains.

Whether any redskins were on their trail they did not know. But they slept the more soundly for the precaution they had taken.

When morning came they were up early and had their breakfast cooked and eaten before the sun rose. After that two or three of them climbed far up the mountainside for a look around. But no Indians could they discover, or signs of Indians. Brindle had already been milked, and when she had grazed long enough they saddled her and fastened on her pack. After that the men strapped on their own packs, shouldered their guns and moved on toward their destination.

In time they began to see other travelers, all moving in the same direction. Those were traveling in all sorts of ways, but most of them were on foot. Some had pack ponies or burros to carry their things. But fully as many of them were trudging along under their own packs.

It was about the middle of an afternoon when the party of six arrived at the new diggings. These were at the foot of the mountains, where a wide canyon, or gulch, opened into the park. The stream flowing out of this gulch was probably the one later known as Tarryall creek.

Here the newcomers gazed upo na scene similar to the one they had been accustomed to, on Clear creek. News that gold had been discovered in this gulch had spread rapidly, with the result that 500 or 600 miners were already here. And more were arriving almost every hour. Brush sheds, cabins and tents were strung up and down the gulch for a long distance. Near the gulch's mouth was some almost level land, and on that was more room for a populous camp than on Clear creek.

Halting at the outskirts of the mining camp, Cooper and those with him cooked and ate their dinner. Being eager to reach the diggings, they had not stopped to eat at the usual time. The meal ended, they moved through the big, bustling camp in quest of information.

And what they learned, from men longer here, was far from encouraging.

One claim was paying well. That was the first claim taken up. It had paid well from the start, and the owners were still washing out an ounce or more of gold a day. It was reports concerning the richness of this claim that had brought all these hundreds of miners here. But, as much digging had already proved, the ground surrounding the paying claim was not equally rich. Indeed, most of the claims were panning out so little as to be scarcely worth working.

However, the fact that gold was actually being obtained so close by had a stimulating effect. Many a miner was toiling like a slave on a claim that did not clean up half enough to buy what he ate.

"Well, boys, I don't know what the rest of you think. But to me it looks a right smart like we've been sold," Cooper remarked to his partners, when they had all come together at their camp again. "We've hopped out of the frying pan into the fire. Clear Creek, as we all know, wasn't anything to brag on for richness. But, from what I've picked up here, it was away ahead of what we've come to."

"That's just how the matter appears to me," answered Sanders. "Back yonder every saint and sinner of us was washing out $2 or so a day. That is, after we got our sluice box and other boxes. But claims a-plenty here are not panning out a red cent, I'm told."

"Yes; and ever so many more pan out only a few cents," spoke up Orlando. "I've talked with man after man who assured me that they've slaved from daylight till dark, with less than half a dollar's worth of gold to show for it."

"Question for our layout to decides is: What're we going to do about it, now that we've pulled up stakes and come traipsin' so fur?" Esau Haggerty remarked.

"Same old question that several hundred other sick-and-sore galoots are asking themselves, I'm thinking," was Given's comment.

And Holloway said: "It won't pay to hang around here, and it won't pay to right-about-face and mosey back. So it's a puzzle any way you view the thing."

However, after arguing the matter up and down, the party agreed to take up claims. So they went to the upper edge of the camp, where each staked out a claim fronting 50 feet on the stream. And it was on one of those claims that they kindled their campfire, just as night was filling in the gulch.

All slept well, from much tramping. When morning came they felt rested and far more hopeful. One miner was washing out gold here every day; and there was no reason others shouldn't do as well. At least there was a chance. So the six began to look about them for a place to sink a shaft.

The only way to test the dirt was to wash out some of it. And they were all soon busy with their picks and pans. But not till they had tested spot after spot did they find the color of gold—discover a little fine dust in their pans. Even with the sorry encouragement they began to dig.

During the first day after starting their shaft the six partners worked hopefully enough. Almost every hour new miners were arriving, often in numerous bands. And claims still farther away from the paying one were being fast taken up. Soon Cooper and those with him had gone back to their old way of working. Four remained at camp to carry on the mining while two went up into the mountains every day to hunt and to prospect.

The first day Orlando went hunting he returned at dusk with some startliny news.

"You couldn't guess who it was I saw over yonder in the far edge of the camp," he said, in cautious tones, to his partners, busy with supper around their fire. "Nobody—nobody—nobody in the round world but—but our one-time neighbor on Clear creek—Jeeters!"

"What! Air you shore tbout that?" demanded Esau.

"Yes, I am. Or well nigh sure. He had a little more black hair and a little more black beard, maybe, but otherwise he was the same fellow. Of course the light wasn't so very good and I might not have noticed him if he hadn't been gazing at me so straight. The moment I looked at him he turned his head away, and then he turned his back. But not before I got the impression that I'd seen 'im somewhere. Then I caught sight of an ugly-looking brute of a dog close by, and at once I recognized old Jock."

"Seems a little strange that that red-handed gang would dare venture into this camp," Cooper commented, thoughtfully. "They know, or ought to know, that the miners will give 'em a short shift if they ever catch 'em. Are you sure you didn't make a mistake, Lando? Maybe you just saw some black-bearded chap that looked like Jeeters, and in the dim light you couldn't tell the difference."

"Well, as I said, I didn't get such a clear view of the man. But I did get a pretty good look at old Jock, as they called 'im. Doesn't seem to me I could have been mistaken in the dog."

"Easier to be mistaken in the dog than in the man, to my way of thinking," spoke up Givens. "Lots of dogs look alike."

"All so, that is," Jess Holloway answered. "But not many dogs look like that ugly old brute of theirs. Doubt if I could forget him."

After the party had discussed the matter "up one side and down the other," as Holloway expressed it, Sanders voiced the general conclusion when he said:

"We're all tired tonight, and it's already dark. Even if we traipsed down there, Lando's not sure he could pick out the particular camp where he saw Jeeters. So we might have to pass from camp to camp, making inquiries. Dark as it is now we'd have to light a pine knot and go peering into every bearded miner's face till we ran across the right man—if we did run across the right man. Some of the miners are already asleep, maybe, and they'd git hot under the collar at being roused up. And if it should turn out that Lando was mistaken, after all, the whole business would look rather foolish on our part."


Orlando Sees a Familiar Pair.

"I'm reasonably sure I could pick out the right camp in daylight. But camps, like most other things, look very much alike in the dark," Orlando admitted.

And Cooper's opinion was: "I'm thinking we'd better let the whole matter rest till morning. Then some of us or all of us can take a stroll down that way. In broad daylight we ought to recognize any of the Jeeters outfit. If they're in camp, Jeeters or any of 'em, we can soon get miners enough together to surround 'em and arrest 'em. If they're really here, not halfway likely they'll light out before morning."

Orlando, himself not a little excited over the matter, was disappointed at this decision. But he could do nothing alone, and the whole party was soon asleep.

When morning dawned Orlando was the first to awake. And he was eager to visit the suspected part of the camp first thing. But the others thought it just as well to wait till after breakfast. So he milked Brindle, watered her and moved her to fresh grass and then sat down to eat. After that, in company with Cooper and Sanders, he started off to see what could be learned.

On coming to the particular brush camp that he thought must be the right one, the young man ran his eyes everywhere, but could see neither Jeeters nor Jeeters' dog. A lone miner was under the shed, and a glance showed that he was in anything but a pleasant humor. The three men approached the camp, and Orlando addressed the miner:

"Wasn't there another man here last night?"

"Yes, the' was," was the surly response. "He was a man with a black, shaggy beard, the man that I mean. And there was an ugly-looking dog with im."

"Was jist sich a man here last night, and jist sich a dog, too."

"And where are they now?" demanded Cooper.

"Wish to my soul I knowed! I'd like to clap eyes on 'em for jist about 60 seconds! I'd fix 'em, dadgast their onery hides"

"So the sly rascal slid out, did he? Well now, that's news. When did he go?" questioned Sanders.

The miner shook his head. "Jist when's more'n I know. Some time betwixt dark last night and daybreak this mornin'."

"But how did he come to go?" said Orlando.

"How does any sneak thief come to go?"

"Thief! Did he steal something from you?"

The miner laughed harshly. "Well, I reckon! About everything loose he could lay his dirty hands on! If my claim hadn't been staked down at every corner, guess he'd ha' toted that off."

"But what did he actually take?" demanded Cooper.

"Well, first and fo'most, he cabbaged on my bag of gold dust. Then he packed off every dust of flour I had, and every scrap of bacon. Plain fact is, left me jist about strapped."

Now Sanders inquired: "How did the rascal come to be here?"

"Why, he blowed into camp late yisterday evenin', him and that ugly dawg varmint of his'n. Stopped out yander where I's at work. Said he'd washed out a good big pile of dust some'r's else, and he wanted to buy my claim. He camped with me last night, him and his varmint. When me and him went to sleep, or anyhow, when I went to sleep, we'd ackshally traded. He was to plank down five hundred for my claim this mornin'. I thought he come to my terms mighty easy—the black-hearted rascal. He seemed to like my claim better'n any other, and that fooled me. To prove to 'im that I'd washed out as much gold as I said I had to show 'im my bag of dust, and let 'im handle it. He must ha' saw me put it under my head before I went to sleep. Anyhow, it was clean gone when I woke up, and the things with it. I had a little cold bread left for breakfast, but not a speck of flour."

"Did he tell you his name?" questioned Orlando.

"Yes. Johnson he told me it was."

"Got a new name since he slid out of Clear Creek camp," remarked Sanders.

"What was his name where you fellers knowed 'im?"

"That nobody knows. He went by the name of Jeeters. But guess he's got a name for every camp."

"Changes his name oftener than he changes his duds," added Cooper.

"Did you hear his dog's name?" Orlando wanted to know.

"Time and ag'in. He called the ugly varmint—Jack. No, that don't seem quite right. Reckon hit must ha' been, though."

"Maybe it was Jock," suggested Orlando.

"That's it—Jock! I thought Jack didn't sound quite right. Yes, he called the ugly varmint Jock. Called 'im that a dozen times, I reckon."

"It was Jeeters all right," remarked Orlando to his partners.

"Yes," answered Cooper. "He changed his own name, but he didn't have gumption enough to change his dog's name. The devil will show his cloven foot."

"Can't keep from it," declared Sanders.

"What do you fellers know about that scalawag?" the miner now demanded.

Cooper answered: "We know he's a dangerous man."

"And we know there's a rope waiting for 'im up at Gregory's Diggings," added Orlando.

"You may have got off light," Sanders informed the gloomy-faced miner. "He bought out a man in the Clear Creek diggings and then tolled 'im off into the mountains and murdered 'im. Got everything the miner had, and his claim to boot. And that wasn't all. He afterwards——"

"Well now, I wonder if the rogue didn't have somethin' like that up his sleeve for me," the miner broke in. "Yisterday evenin' he mentioned to me that he'd found a likely place to prospect, and he wanted me to go with 'im today and take a squint at it. Of course he knowed well enough that wherever I went my bag of gold dust would be with me. I promised 'im I'd go, too. But when mornin' come he wasn't here. Must ha' changed his mind somehow."

Here Orlando spoke up: "And I know the reason. He saw me pass your camp last night at dusk, and he knew that I saw him. From that he understood well enough that these diggings were no safe place for such as he is. There's a $500 reward out for him and his partners at Gregory's Gulch."

"If you seed 'im last night and knowed who he was, I wish to thunder you'd ha' told me what kind of a blacklaig I was harborin'. It would ha' been gold dust in my pocket and bread and meat in my belly."

"That was just what I had in mind to do, but——" Orlando was beginning, when Cooper said: "Yes, this young man informed us last night he thought he'd seen Jeeters over here somewhere. But as he wasn't sure he could come back to the right claim in the dark, and as after night is hardly the best time to attend to such

(Continued on page eighteen.)

FAMILY CIRCLE

ALICE BARLAND
EDITORIAL CONTRIBUTOR

Experience Letters

From Our Family Circle Women

Dear Mrs. Barland: I like the Family Circle and it helps me very much and I feel I should do my part to pay for the help I get.

I am a young mother of 33 years of age and have four children from 14 to 5 years, one girl and three boys. I was married when only 17, so you will know I had very much to learn and have gone through some hard years since. The first years of my married life my health was so poor and the doctor's bills were so large that our first little farm had to be sold to pay up the bills. There were two children at that time.

My health improved and we started again on raw stump land and it has been a hard pull to make good, but we are thankful today that we have a good start again. Since my health has been so good my husband has been out weeks and months together working in the camps, sometimes coming home nights and many times only Saturday nights and I would be alone with the milking, caring for the home and the children, but all went fine.

During the hard years we have passed through I have learned the strictest sort of economy and even now, though we are almost out of debt, I save every rag and make use of everything as long as there is anything left of it.

We have only a little shack with four small rooms, a tiny pantry and storeroom, but I find by having a place for everything and keeping it there, I know just where to go for articles as they are needed.

In my storeroom I have shelves and boxes and sacks and use them for certain kinds of things; for instance, when garments wear out I cut them up, all parts hopelessly worn go into a sack for the junk man (I used to make rag rugs, but I don't any more as I like bare painted floors or covered with linoleum as they are more sanitary and rag rugs were always rolling about one's feet). The good parts of the garments I put in a box or on a shelf and I save every thing that is at all good of all kinds of clothing whether men's, women's or children's. In making over for the children I always find use for my stores of pieces. Good stocking legs I always save and have made drawers for the children and by sewing several legs together lengthwise I have made good little skirts for the little girls. I hem the bottom and make the waists of flour sacks.

After everything worth making over is put aside into the place assigned for it, I have another box or sack into which I put all the leftover pieces too poor for making over and then I choose a nice day, pull my sewing machine out onto the porch and selecting large worn pieces, I sew the small ones in my sack, scraps from cutting out garments, old worn stockings too far gone for further use, all these things I sew onto the larger pieces which I use as a foundation and I make a good batting for a quilt at no expense whatever. Old worn out blankets are good to sew the pieces onto or old dress skirts, any thing strong enough to hold the sewing. A batting of this kind is better in some ways than the regular kind as the quilts can be washed and it is unnecessary to tie them as closely as when cotton batting is used.

Doing all these things becomes much less of a hardship because of the system followed. Keeping the things sorted and in a regular place instead of cluttered up in some cupboard or under the stairs, all in a muss, makes the work easier and eliminates the disgust one would feel on trying to get order out of a mass of soiled old clothes. I used to do things that way and have learned by experience how much more joy can be found in hard work when all is in order and have found happiness even in a small shack.

I sort the shoes and have a box to keep those unfit for wet weather and when the dry season comes I get them out. I keep the summer things in a trunk, mended and ready for use. When the cold weather comes I take out the winter garments which I have put away in mothballs, mended and ready for use and put away the summer things.

I turn the worn sheets, removing the thin center parts and hem and use for the half or three-quarter beds and the pillow slips I treat the same way by cutting out the centers worn thin and sewing them together at the ends for the small pillows. I have sometimes left both ends open of the slips and this makes them wear longer.

I have just made a set of first clothes for an expected baby at the cost of but $1, thanks to my store of saved up old material and new leftover pieces. I have made three little quilts for a good-sized crib, using pieces of new outing flannel saved for years, for the top, and filled with scraps for batting same as I make large quilts; I lined two with new outing, which I got very cheap, and the third I lined with flour sacks, dyed a lavender color. I tied these quilts with lavender for one and red cotton for the other ones and they will wash without getting bunches in them. I made three nighties out of bottoms of children's worn-out ones, four pinning blankets from two old outing flannel skirts, and six bibs, better than one can buy, out of the same material, with new goods for the binding. I made eight short skirts out of old white pieces from my bag of scraps and helped out with lace from my lace bag. Six short skirts from old lawn waists and the tails of hubby's shirts, and made four long dresses from new cloth for the skirts, and waists from my useful bag of scraps. I have made a great number of diapers out of all sorts of old soft white goods. I have enjoyed doing this work as I know I am helping to get ahead by this saving. Some think it a great hardship to save in all these ways, but I see no sense in wasting money in buying things that one can make by using things already in the home. and thereby help the husband to make a living. I can not go out of the home to earn money and the husband may not realize all it means, for a woman to save and plan at the time, but I have the satisfaction of knowing within my own heart that I have done my best to help.

When one is known to be skillful in making over garments one's friends often pass over old clothing to her and that has been the case with me and I have ripped and sorted and washed and made over and it has helped a great deal.

MRS. H. C. J., Wash.

(This letter was long and next week you shall hear how this mother gets work out of her boys and they think they are playing.—A. W. B.)

Your Health

By Royal S. Copeland, M. D., F. A. C. S.

Frequently we hear the expression, "the one best bet." There is one "best bet" in medicine. No matter how sick and how perilously close to death a person may appear to be, he is very likely to get well.



Dr. Copeland.

Never forget that the natural tendency of disease is toward recovery. If it were the other way the first severe illness you ever had would have ended your career.

What made me think of these things was the memory of a case I saw years ago. A New York doctor called me in consultation to examine the eyes of one of his patients. I found her in bed, with snoring breathing, eyes rolled up, pulse almost imperceptible, skin like wax and the surface of her body bathed in cold perspiration.

More out of courtesy than for any other reason, I examined the eyes as best I could. I made a report of my findings to the doctor, but said:

"It makes no difference, of course, because your patient will be dead before night."

There is a sort of unwritten law among doctors not to discuss unpleasant experiences. We particularly hate to bring up a topic which may appear to hint at any failure on the part of a colleague. It is the business of doctors to keep folks alive, so we always have a sense of failure even when an apparently incurable patient dies.

Of course, I never referred to the patient I have mentioned. What was my shock and amazement, five or six years later, to have that dear old lady walk into my office! She didn't die, after all. My own lack of faith did not discourage her doctor, who stayed by and turned the scale.

Several experiences like this and observation of other doctors' experiences have taught me that it is never safe to prophesy fearful things. There is ample foundation for bounding optimism. When I am sick I want my doctor to hang on till the undertaker drives him out. The more resourceful and hopeful the doctor, the more likely he is to restore you to health and usefulness.

Hope gives strength and encouragement. So long as there is life there is hope.

Never give way to despair.

Determine to get well.

Think recovery and health

How it helps a doctor to have a trusting and confident patient!

Half the battle is believing you will get well.

Then it is so much easier for the nurse and family if the patient is responsive and helpful.

"God helps him who helps himself," is certainly a well-founded adage.

Let's all get well and keep well.

Home Recipes

Tomato Soup—Seven quarts of ripe tomatoes, 7 stalks of celery, 7 stalks of parsley (this may be omitted), 4 stalks of bay leaves, 10 whole cloves, 4 onions (leeks are better if one has them), 1-4 pound of butter, 6 teaspoons salt, 1 teaspoon black pepper, 3-4 cup sugar, 1 cup flour.

Cook the tomatoes, celery, parsley, bay leaves, cloves and onions together till all are tender, melt the butter and blend with the flour, add the pepper and sugar, put with the pulp, cook a few minutes and seal. When ready to use take as much of the tomato as you wish, add a pinch of soda and after it foams add an equal amount of milk. It is better to heat the two in separate pans. This is excellent.

MRS. N. R., Oregon.

Mock Mincemeat—One cup each of raisins and bread crumbs, 2½ cups chopped apples, 1 tablespoon of butter, ½ cup each of sirup and good vinegar, 1 teaspoon each of cinnamon, cloves and allspice, add water to thin and cook till the apples are soft.

MRS. ED NEELY.

Lookingglass, Ore.

Cream Sponge Cake—Four egg yolks, 1 cup sugar, 3 tablespoons cold water, 1 cup flour, 1 1-4 teaspoons baking powder, 4 egg whites, ½ teaspoon salt. Beat yolks of eggs and sugar together, till light and thick, add the cold water, sift the flour and baking powder together three times and stir in the mixture gradually; put the salt into the whites of the eggs and beat till stiff, mix with the other ingredients. Add the vanilla and do not grease the cake pan. Bake in a moderate oven 40 minutes. Use a cream frosting.

MRS. JACK C., Idaho.

Delicious Quick Caramel Pudding—One-half cup each of sugar, raisins and milk, 1½ cups flour, 1 teaspoon baking powder, mix and put in a pan greased with butter. Make a sauce of 1 cup dark brown sugar and 2 cups boiling water and a lump of butter, size of a walnut; pour this over your batter, put in the oven and bake moderately but till brown. When you dip out your pudding your sauce, too, is ready. Try it.

MRS. T. A. W., Wash.

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THE WORLD'S GREATEST BAKING POWDER

High Points in News of the Week

While there is more active interest displayed in partisan politics and the contests between party candidates for congressional offices on the eve of the coming election than in any other issue at stake, the prohibition question is a live one. A campaign is being made over the entire United States by an organization known as the Association Against Prohibition Amendment. The effort is being made to increase in congress the number of representatives and senators favorable to modification of the prohibition laws at least to the point of permitting the manufacture and sale of light wines and beer, if not to the point of repealing this legislation. The wet association is reported to have indorsed over 200 candidates for the senate and lower house whom they consider favorable to a return of liquor. A statement by the association's secretary says that party lines are being ignored and that some of the candidates indorsed are republican and some democratic. "It should be further distinctly understood that the association's indorsement of a candidate does not necessarily mean that he has directly advocated our platform," says this statement. "It does mean, however, that for reasons satisfactory to us we are willing to indorse him."

Pre ident Harding in a recent statement to a delegation of persons favoring vigorous enforcement of the prohibition laws declared that he felt sure the people of the United States would never drastically modify the present prohibition laws.

At midnight last Saturday night the order of the department of justice, issued by Attorney General Daugherty, went into effect prohibiting the transportation and the sale or consumption of intoxicating liquors on American ships at sea. The order also prohibits the presence of liquors on foreign ships within three miles of the United States coast. Court proceedings were started last week by representatives of foreign ships in an endeavor to annul the ruling of Attorney General Daugherty with reference to foreign ships.

Up to this time the federal prohibition amendment and the accompanying enforcement laws have not been enforced on ships traveling the seas.

* * *

Another interesting feature in the coming election is the presence of 21 women on the ballot, running for congress. The women include six democrats, six socialists and five republicans. At present there is only one woman member of congress, Miss Alice Robertson of Oklahoma.

* * *

Walter E. George has received the democratic nomination for United States senator from Georgia to succeed the late Thomas E. Watson. A democratic nomination in Georgia is virtually an election. If elected Senator George will succeed Mrs. W. H. Felton, who recently received an appointment from the governor of Georgia to fill the vacancy caused by the death of Senator Watson, pending the election in November. A legal technicality has made it impossible for Mrs. Felton to be seated as a United States senator.

* * *

Premier Lloyd George of England last week tendered his resignation as prime minister, following a seven-year period of service in that capacity. Lloyd George served three years during the war and four years during subsequent reconstruction. His resignation was accepted by King George. The king immediately called Andrew Bonar Law and requested him to accept appointment as premier and proceed to the formation of a new cabinet.

One of the immediate results of the resignation of Premier Lloyd George will be the calling of an election with a view to securing the expression of the people on the question of sympathy with the new or the old premier.

Under the British system of government the recognized leader of the majority party or of a coalition of parties is selected as prime minister. Upon his selection he forms a cabinet corresponding somewhat to the president's cabinet in the United States. After a period of service if he discovers himself no longer the recognized leader of the majority party he resigns and the person who succeeds him as such leader forms a new cabinet. The cabinet of Premier Lloyd George was a coalition cabinet. His resignation followed the secession of the unionist group from his support, Mr. Bonar Law being a leader in bringing about this secession.

Reports indicate that French statesmen are pleased with the downfall of the Lloyd George cabinet. It will be remembered that during the negotiations with Germany during recent years over vital questions, including those of reparation payments, Premier Lloyd George has held out for liberality in treatment of Germany, whereas France has vigorously maintained the necessity of an unrelenting attitude toward their former enemy. It is reported also that the downfall of Lloyd George and his cabinet is hailed with delight in Turkey It was Lloyd George's policy of showing force that prevented the invasion of Thrace by the Turkish nationalist army recently and brought about the signing of an armistice with Turkey and the calling of a peace conference looking toward the settlement of the Near Eastern problems by peaceable means.

* * *

November 13 has been named as the tentative date on which the peace conference will convene to discuss the questions involved in the Near East. The conference will include delegates from England, France, Italy, Turkey, Russia and a considerable number of other nations directly or indirectly affected.

* * *

President B. M. Jewell of the federated railway shopcrafts held a lengthy conference last week with Chairman Hooper of the United States railroad labor board. President Jewell notified Chairman Hooper that the shopcrafts would soon present a petition for reopening of its case against the New York Central railroad involving establishment of the piece-work system in shops in Indiana. The meeting between the two officials was declared to be cordial and perhaps to a slight degree, indicates a coming resumption of harmony between the labor board and the railway workers.

* * *

Congressman Siegel is responsible for a statement that twice as many Japanese are entering this country now as would be permitted under the letter of the immigration law if it were strictly enforced. They are coming under the so-called "gentlemen's agreement." Congressman Siegel declared that if the gentlemen's agreement continued to permit the Japanese to come in in the large numbers that are now arriving, a Japanese exclusion act will be placed before and passed by congress before the end of the year.

* * *

On November 17 a meeting of the Open River association will be held at Pendleton, Ore., to take up problems of the development of the upper Columbia river. The use of the river for power, irrigation and transportation will be considered. Eight years have passed since any previous definite effort was made to make use of the waters of the Columbia river as is now suggested.

* * *

The government of France has worked out a proposal under which, if it is adopted, the allies would take over complete control of all German finances with the power to veto expenditures, regulate taxation and dictate the arrangement of the budgets of the German state. It is the opinion of certain French leaders that in no other way can Germany be placed on a sound financial basis and the allies be guaranteed the reparations due them.

* * *

The failure of eastern railroad systems to return cars to western lines is blamed by northwestern officials for bringing about one of the most serious car shortages of recent years. Officials at Portland declare that only 40 per cent of the orders received are being filled and that the available car supply is dwindling rapidly because loads are going east as rapidly as cars are supplied and no empty cars are being returned. The fruit industry is especially hard hit by the car shortage. It has been freely predicted that unless the shortage is relieved at once, which now seems highly improbable, fruit growers of Oregon, Washington and Idaho will lose many millions of dollars through fruit spoilage.

* * *

The department of labor last week announced that during the month of September retail food prices throughout the United States fell an average of about 1 per cent. A decrease of about 9 per cent was reported during the year since September, 1921. Prices remained, however, about 36 per cent higher than in September, 1913.

* * *

A report is gaining circulation that the Great Northern, the Northern Pacific and the Burlington railroads are contemplating a merger into one big railroad system. The proposed merger must be presented to and acted upon by the interstate commerce commission before it can become effective.

* * *

Reports indicate a greatly improved condition in the lumber industry in the Pacific northwest. In the 41 weeks ended October 14 mills holding membership in the West Coast Lumbermen's association cut a total of 3,394,000,000 feet of lumber, as compared with 2,098,000,000 feet in the same period last year.

* * *

General William Mitchell of the United States army air service has set a new airplane speed record by making about a mile at the rate of 248 miles an hour.

* * *

A report of the comptroller of the currency says there are now 8,873,000 persons in the United States having savings deposits in the banks and that these deposits total $3,046,000,000. This is an increase of about $88,000,000 over last year's.

Milk Exports Fall

The export movement of milk and milk products has been much less so far this year than last year except in the case of powdered milk. Figures of exports are:

	Condensed.	Evaporated.	Powdered.
August, 1922.....	3,220,185	8,026,531	289,737
August, 1921.....	7,556,765	22,802,953	1,598,921
Jan.-Aug., 1922..	41,612,040	97,415,935	5,283,627
Jan.-Aug., 1921..	62,659,539	116,409,527	5,051,111

Cuba was the heaviest buyer of condensed milk, with 978,468 pounds. The other large buyers were: Germany, 265,328 pounds; China, 399,220 pounds; Hong Kong, 215,700 pounds; Japan, 225,284 pounds; Straits settlements, 243,600 pounds; Philippine islands, 115,400 pounds; British South Africa, 100,600 pounds. The evaporated milk went principally to: France, 492,000 pounds; Germany, 208,395 pounds; Russia in Europe, 2,543,904 pounds; Turkey in Europe, 884,148 pounds; Ukraine, 1,956,446 pounds; Panama, 302,359 pounds; Mexico, 177,433 pounds; Cuba, 147,840 pounds; French Guiana, 177,220 pounds; China, 109,506 pounds; Straits settlements, 136,380 pounds; Philippine islands, 225,004 pounds.

Wheat Discounts

A supplementary schedule of mixed wheat discounts of the crops of 1922 and 1923 has been drawn up by the executive committee of the board merchants' exchange association. The schedule is similar to that adopted by the Spokane association and it is regarded as probable to be adopted by the merchants' association of Seattle. This schedule became effective in Portland September 25. The following discounts applied to cents per bushel:

	Over 10% to 15%	Over 15% to 25%
Northern spring—mixed with		
Dark hard winter wheat	3	4
Hard winter	3	4
White or white and red wheat	5	6
Red spring—mixed with		
Any other red wheat	3	4
White wheat	5	6
Hard winter—mixed with		
Dark northern spring wheat	3	4
Northern spring	3	4
White or white and red wheat	5	6
Yellow hard winter—mixed with		
Any other red wheat	3	4
White wheat	5	6
Red winter—mixed with		
Any other red wheat	2	3
White wheat	3	4
Western red—mixed with		
Any other red wheat	2	3
White wheat	3	4
Soft white and western white—mixed with		
Any red wheat	3	5
Western white—mixed with		
Any red or Durum wheat	3	5

Wheat containing over 25 per cent of other classes not deliverable on contracts.

Farm Business and Markets Outlook

(Continued from page five.)

WALLA, Oct. 21.—Bluestem and Bart, $1.09; Club, 99c; Turkey red, 93c.

ODESSA, Wash., Oct. 21.—Bluestem and Bart, $1.20; Marquis, $1.07; Turkey red, $1.03; Jones Fife, 99c.

DAYTON, Wash., Oct. 21.—Club, $1; red, 97c.

Hay and Feed Grain.

PORTLAND, Ore., Oct. 21.—Millfeed—Price f. o. b. mill: Mill run, ton lots, $29; middlings, $41; rolled barley, $36@38; rolled oats, $43; scratch feed, $44 per ton.

Corn—White, $37; cracked, $39 per ton.

Hay—Buying price, f. o. b. Portland: Alfalfa, $18@18.50 per ton; cheat, $18; oats and vetch, $20; clover, $18; valley timothy, $20; eastern Oregon timothy, $20@21.

SPOKANE, Oct. 21.—Wheat—Feed wheat, $42 ton.

Oats—$42 per ton; steam rolled, $44.

Corn—$10 per ton; cracked corn, $42 per ton.

Barley—$42; steam rolled, $44.

Bran—$28 ton.

Bran and shorts—$29 per ton.

Alfalfa, $23 ton; timothy, $26 ton; mixed hay, $24 ton.

General Produce.

PORTLAND, Ore., Oct. 21.—Butter—Cubes, extras, 44@45c lb.; prints, parchment wrapped, box lots, 48c; cartons, 49c. Butterfat, 48c, delivered Portland station, buying price, A grade, 45c.

Eggs—Buying price: Current receipts, loss off, 44@45c dozen; henneries, 48@50c dozen. Jobbing prices: Front street, candled ranch, 50c; selects, 52c; association selects, 53c; firsts, 51c; pullets, 45c.

Cheese—Tillamook triplets, price to jobbers, f. o. b. Tillamook, 30c; Young Americas, 31c; longhorns, 31c pound.

Poultry—Hens, 13@28c lb.; springs, 20@21c; ducks, 15@23c; geese, 15@20c; turkeys, live, 30@34c; dressed, choice, 40c.

Veal—Fancy, 14c per pound.

Pork—Fancy, 15½c per pound.

SPOKANE, Oct. 21.—Poultry—Fat hens, 17c lb.; light hens, 10c lb.; roosters, 8c lb.; spring chickens, over 2½ lbs., 14c; broilers, 1½@2½ lbs., 16c lb.

Fresh ranch eggs—$9@13.50 case, according to quality.

Butterfat—46c a pound.

SEATTLE, Oct. 21.—Eggs—Selects, local ranch, white shells, cases included, 47c per dozen; mixed color, 48c per dozen; pullets, 40c per dozen. Cases returned to shipper 1c less.

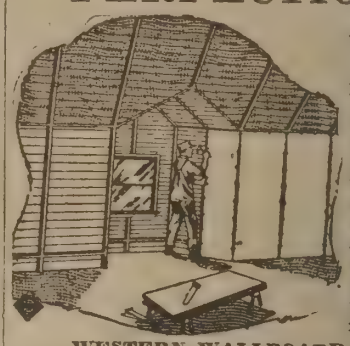
Butterfat—F. o. b. Seattle: A grade, 50c per lb.; raw milk, $2.10 per cwt.

Poultry—Hens, 4½ lbs. and up, 24c per lb.; over 3½ lbs. and under 4½ lbs., 16c per lb.; 3 to 3½ lbs., 12c lb.; 1922 broilers, 3 lbs. and heavier, 20@23c per lb.; old roosters, 10@12c lb.; geese, fat, live, 16c per lb.; do fancy dressed, 24c per lb.; ducks, 3 lbs. and heavier, live, 15c per lb.; turkeys, fat, dry picked, 3 to 15 lbs., 30@33c per lb.; do live, fat, 10 to 15 lbs., 25c per lb.; squabs, large, $4.50 per dozen; pigeons, $2; guineas, $3 per dozen.

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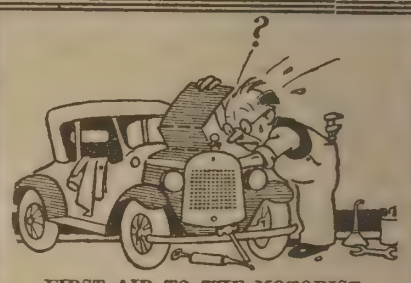
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Glance over the bargains on the "Want Ad" page.

Bits of Fun for Everyone

Not Unlikely.

Weary Willie—I may be poor now, but when I was young I had me own carriage.

Leary Louise—Yep, and yer maw pushed it.

Some Service.

"Now, suh," said the colored bellhop at the Southern inn. "When you-all wants t' be called in th' mohnin', jes press de button at de head ob youah bed an' we'll come up an' call you'."—Orchard and Farm.

Premonition.

"What's de name ob youah hoss, Sam?"

"Blue Streak am his name, and yo' might as well lay yo' pile on him now. He am sho gonna win dis race!"

"G'long, niggah, wid yo Blue Streak, Don't ah know fast colohs kaint run!"

In Extenuation.

"So your nephew has been sent to the legislature?"

"Yes," replied Farmer Fumblegate. "But I hope you'll believe me when I tell you that all the time he was living with us he never stole anything."—Country Gentleman.

Near Tragedy.

"My, what an awful waste!" exclaimed the garbage man.

The fat woman, just passing, was so angered that she struck him over the head with her umbrella.—Orchard and Farm.

Very Considerate.

"Why do they put corn meal on a dance floor?

"To make the chickens feel at home."—Exchange.

The Leader.

It was the custom of the congregation to repeat the Twenty-third psalm in concert, and Mrs. Armstrong's habit was to keep about a dozen words ahead all the way through.

A stranger was asking one day about Mrs. Armstrong. "Who," he inquired, "was the woman who was already by the still waters while the rest of us were lying down in green pastures?"—Metropolitan.

A Bar to Bigamy.

"Boys," interrogated the Sunday school teacher, "can any of you quote a verse from Scripture tto prove that it is wrong for a man to have two wives?"

"Well, Thomas," encouraged the teacher as a bright boy raised his hand.

Thomas stood proudly up.

"'No man can serve two masters,'" he quoted.—Orchard and Farm.

Getting Better.

For years she heard her husband say:
"Can't you make bread like mother used to make?"
At last she cried: "Of course I can, you jay,
When you make dough like father used to make."

Resignation.

"Dorothy," cried mother, "if you aren't good you will never go to heaven. Think of that!"

"Oh, well," answered Dorothy, "I've been to the circus and the chautauqua already. I can't expect to go everywhere."

Latest High Class Patterns for the Home

Please order the patterns you desire at least two or three weeks before you wish to use them. Desiring to obtain the latest high-class patterns for its readers, THE FARMER has made arrangements to have them sent direct from the east, and under present mailing conditions it takes about that time for them to reach you.



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3894. Girl's Dress. Cut in four sizes: 10, 12, 14 and 16 years. A 12-year size requires 4 1-8 yards of 42-inch material. Price 10 cents.

4142. Boy's Play Suit. Cut in four sizes: 2, 3, 4, and 5 years. A 2-year size requires 1½ yards of 40-inch material. To trim as illustrated requires 5-8 yard of contrasting material 32 inches wide. Price 10 cents.

4154. Girl's Dress. Cut in four sizes: 8, 10, 12 and 14 years. A 10-year size requires 3½ yards of 32-inch material. Price 10 cents.

3713. Boy's Coat. Cut in five sizes: 6, 8, 10, 12 and 14 years. A 12-year size requires 2 5-8 yards of 44-inch material. Price 10 cents.

4139. Child's Dress. Cut in four sizes: 2, 4, 6 and 8 years. A 6-year size requires 3 1-4 yards of 32-inch material. To trim as illustrated requires 5-8 yard of 32-inch contrasting material. Price 10 cents.

4145-3847. Lady's Costume. Coat 3847 cut in seven sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. Skirt 4145 cut in six sizes: 25, 27, 29, 31, 33 and 35 inches waist measure. To make the suit for a medium size will require 5 1-8 yards of 54-inch material. The width of the skirt at the foot is 3 1-4 yards, with plaits extended. Two separate patterns, 10 cents for each pattern.

4159. Lady's Dress. Cut in seven sizes, 34, 36, 38, 40, 42, 44 and 46 inches bust measure. A 38-inch size requires 5 yards of 40-inch material for the dress and 1 1-2 yards of 32-inch material for the tucker. The width at lower edge of the dress is 2 yards. Price 10 cents.

3975. Lady's House Dress. Cut in seven sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. A 38-inch size requires 4½ yards of 40-inch material. The width at the foot is 2 1-8 yards. Price 10 cents.

4136. Lady's Waist. Cut in seven sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. A 38-inch size requires 3 1-8 yards of 32-inch material. Price 10 cents.

4147. Lady's Skirt. Cut in seven sizes: 25, 27, 29, 31, 33, 35 and 37 inches waist measure. A 27-inch size requires 2½ yards of 44-inch material. The width at the foot is 2 3-8 yards. Price 10 cents.

4136. Lady's Apron. Cut in four sizes: Small, 34-36; medium, 38-40; large, 42-44; extra large, 46-48 inches bust measure. A medium size requires 4 3-4 yards of 27-inch material. Price 10 cents.

Fashion Book Notice.

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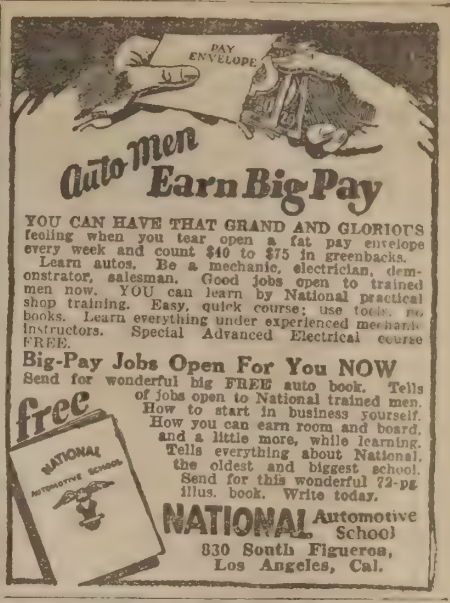
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Dick Williams, a Spokane county (Wash.) boy, has great fun at school, but he has to walk a mile and a half to get there. He rides his pony after the cows at night, 14 of them and he milks one cow. There are also 15 horses and a colt at the Williams home.

We are glad to welcome Luella Howard to our corner. Luella lives in Spokane county, Washington.

Birthday Greetings

THURSDAY, October 26—Mary Aharn, 9 years old; Isabel Pettichord, 9; Laurene Van Leuven, 11; Marle Wyatt, 8.

FRIDAY, October 27—Irene Goetz, 8 years old; Isabella Barnard, 11.

SATURDAY, October 28 — Raymond Blankinship, 11 years old; Lucile Downing, 10.

SUNDAY, October 29—Irene Borowski, 10 years old; Archie Hansen, 11; Margaret Mitchell, Bennie Nead, 10; Jay Atkinson, 11.

WEDNESDAY, November 1—Bernis Godsey, 11 years old; Thelma Thompson, 11.

LETTERS WELCOMED BY AUNT NELLIE.

Among recent letters received by Aunt Nellie are those from cousins whose names follow. A few of these will be published each week in the regular edition of THE FARMER and others will appear from time to time in The Junior Farmer:

Arthur Webb, Sylvia Sweet, Hazel Durland, Alice Loyos, Inez Brown, Calvert Plummer, Lloyd Leverson, Donald McKay, Doris Nelson, Marie Feichlin, Agnes Runolfson, Ruth Olson, Ruth Treadwell, Elsie Reifenberger, Mildred Jones, Helen Owen, Francis Jones, Doris Hale, Esther Simila, Amalia Schaal, Sylvia Lampi, Verna Stevens, Everett Ohlson, Evelyn Gronawert, Warner Britton, Eileen Cromer, Evelyn Holmes, Hilmie Manson, Isabel Pettichord, Bertha Holmes, Victoria Wedam, Luella Haward, Emrose Corbin, Dick Williams, Lois Disney, Ethel Stiltner, Lois Lane, Vera Ayers, Ida Jackson, Laura Main, Goldie Pier, Lydia Anderson, Mildred Rae, Marion Lovelace.

BEDTIME STORIES

By THORNTON W. BURGESS.

DIGGER THE BADGER ARRIVES.

The little people who live down on the Green Meadows were envious of the little folks who live in the Green Forest. There was Prickly Porky Porcupine, who came down from the North Woods, and there was Unc' Billy Possum and his family, who came from O' Virginny.

Johnny Chuck and Jimmy Skunk and Danny Meadow Mouse sat in Johnny Chuck's doorway taking it all over.

"It isn't fair," said Johnny Chuck, carefully brushing sand from the seat of his trousers. "It isn't fair at all."

Jimmy Skunk stretched himself out lazily and yawned. "That's right, Johnny Chuck," said he. "Anyway, the Green Meadows are the prettiest."

"Of course they are," put in Danny Meadow Mouse. "Why there isn't anywas nothing in the world so beautiful as Green Meadows."

"All the daisies growing near," nodded Jimmy Skunk, for he, too, thought there was nothing in the worl dso beautiful as the Green Meadows.

Johnny Chuck stood up and looked away across the Green Meadows to the Crooked Little Path coming down the hill. Suddenly he straightened up on tiptoes and shaded his eyes with his hands.



Nearer and nearer came the stranger.

"Who's that coming down the Crooked Little Path?" he exclaimed.

Danny Meadow Mouse stretched as high as he could, but Danny is so short that though he did his best he couldn't see over the meadow grass.

"Climb up on my shoulders," said Johnny Chuck, who is always good-natured. So Danny climbed up on Johnny Chuck's shoulders. He looked where Johnny Chuck pointed and then he nearly fell off, because, you know, he was so excited by what he saw.

"Hi, Jimmy Skunk! Here comes a stranger, and he's coming right straight down into the Green Meadow!" cried Danny.

Jimmy Skunk yawned. Then he got up slowly and lazily to look for himself. Danny Meadow Mouse was right. Coming down the Crooked Little Path was a sure enough stranger.

Nearer and nearer came the stranger. He had short legs, very short legs, but they were the stoutest legs that Johnny Chuck or Jimmy Skunk or Danny Meadow Mouse had ever seen. And the stranger was quite as stout as his legs. He wore a grayish coat with a light-colored waistcoat, and his face was sharp and pointed. He came along slowly as if he had come a great way and was very, very tired. When he reached Johnny's Chuck's dooryard he stopped.

"How do you do?" said Johnny Chuck in his most polite manner.

"Howdy," replied the stranger gruffly.

"Have you come far?" inquired Jimmy Skunk.

The stranger sighed. "I should say I have. I've come out of the Great West," he replied.

"And may I ask who you are?" inquired Danny Meadow Mouse in his squeaky little voice.

"Sure, son," replied the stranger, his eyes twinkling. "I'm Digger the Badger."

(Copyright by T. W. Burgess.)

Pike's Peak or Bust

(Continued from page fourteen.)

matters, the rest of us decided to wait till morning. That was our mistake. Lando's not to blame for it, though. As much my fault as anybody's. Now it seems too late to do anything."

"Did two other men come with your visitors?" inquired Sanders. "I haven't heard you mention any others. But Jeeters had two partners."

The miner shook his head. "He said somethin' about some pards of his'n. But I understood they hadn't come in yit."

Ere long it developed, however, that the partners of Jeeters had reached this mining camp about the same time that their leader had appeared. Whether the three had actually arrived together was not known. But they had spent the night—or part of it—with miners here. And it soon came out that they had followed exactly the same course that their leader had followed.

Each of the two had stopped at the camp of a lone miner, whose claim he, at the time of going to bed, had been on the point of buying, at the miner's own price. But, when morning came, the supposed buyer was gone, leaving the miner poorer by a bag of gold dust and some provisions.

When the three men thus robbed had got together to compare notes it came out that Jeeters had visited the other camps after dark. There, while pretending not to be acquainted with his partners, he had managed to have at least a few words with them, in private. That was doubtless to warn them that there was at least one Clear Creek miner already here, and that the three fugitives from justice would not dare show themselves in this camp in daylight.

At any rate, the rascally trio were gone, and nobody knew in what direction.

"Strangest thing to me is that they'd have the—the brass to show their faces in a big camp like this," Cooper remarked thoughtfully.

"So it looks to me, Mr. Cooper," OrLando said. "But then we must keep in mind that criminals never have first-class sense. If they did have, they wouldn't be criminals."

"That must be true, Lando. Yes, it is true, I've no doubt. In fact, I guess you'll never utter a truer word."

"If that's the case, are men really responsible for being criminals?" asked Sanders.

Here Esau spoke: "Tell you my idy, boy.s Men don't turn crooked because they hain't got good sense. They may ha' had as good sense as anybody when they turned crooked. But the Old Scratch they went pardners with up and stole their sense away. Sorter like the fellers these men slep' with stole about all they had. No matter how much sense a feller's borned with, the minute he quits usin' it he begins to lose it. Sleepin' with the devil, I've noticed, or chasin' 'im around a stump, either, is death on brains."

(To be continued.)

Hot School Lunches

By MERYL V. NAPTON.

Every household magazine today publishes articles on the malnutrition of children, but the practical way to overcome it is more to the point. Children are undernourished from one or two causes or both, improper food or food improperly prepared. Dr. Copeland states in one of his articles that cooking for children, vegetables especially, is a fine art. The vegetable should be cooked in a small amount of water and the water allowed to evaporate as the vegetable cooks do. By this method all the vitamines and mineral salts, so necessary to body growth and vitality, are retained.

School children, particularly those in rural districts, lack proper food. They must get up early, eat an early breakfast, walk or ride a long distance to school in all kinds of weather and eat a cold lunch at noon.

From observation I know these lunches more often contain improper food poorly prepared than not. Many times they are made up of the left-overs of the breakfast table with a huge piece of cake or pie to tempt the appetite. I have seen lunches which were composed of a hard fried egg between a baking powder biscuit with a piece of mince pie to top it off. Can you imagine anything more indigestible? The cake or pie is usually eaten and the rest discarded. No wonder the youngster is irritable and perverse or slow at his studies in the afternoon and tired out by night. Every cell in his growing body is crying out for nourishing food.

How to give the growing child this proper food is the question at issue. The hot lunch has solved this problem in many one or two room country schools. Of course, it is impossible as well as impractical to serve a complete hot lunch in the school room, but one or two simple, nutritious dishes can easily be prepared and served, letting the youngsters supplement it with light bread sandwiches, fresh or stewed fruit and a piece of plain cake from home. There is no harm in cake if it is preceded by something more substantial.

One school in which I taught was equipped for hot lunches by the parent-teachers' association. By giving entertainments of various kinds they were able to collect enough money to purchase a two-burner oil stove with oven, a stew kettle, a large fork and spoon for use in cooking, a teakettle, dishpan, cups and saucers, soup plates and aluminum spoons. Each mother hemmed a tea towel and some father made a cupboard for the dishes and supplies. A small cellar was constructed in the school yard, where vegetables donated by the parents were stored. A small fund was placed at the disposal of the teacher to buy the few foodstuffs which could not be raised. This fund was raised by subscription or through an entertainment.

The food was prepared and served by the seventh and eighth grade girls under the teacher's supervision. Two girls worked together one week, two the next, and so on. These girls also cleaned up and washed the dishes, assisted by two girls from the lower grades. Boys might be persuaded to help with this part of the work and thus even things up.

Some of the hot dishes served were bacon and beans, soups of all kinds, cocoa, baked apples and potatoes, hash and rice.

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One "Half-Century" Sire Left

The death some time ago of Judge Segis, senior herd sire at Hollywood farm, lends added interest to the fact that he was one of two northwest Holstein bulls which during the first six months of 1922 were added to the list of sires having 50 or more A. R. O. daughters. Further, it gives point to the statement that there is now living but one such bull in the northwest—Matador Segis Walker, senior sire at Carnation Stock farm.

"The Judge," with 62 A. R. O. daughters; "Mat," with 64, and Johanna McKinley Segis, with 94, are the only three bulls in this section (there are only five on the Pacific coast) in the "half century" list, and it is notable that these three are closely related to King Segis, admittedly one of the greatest bulls of the breed—Judge Segis and Johanna McKinley Segis being sons and Matador Segis Walker being a grandson. Johanna McKinley Segis is far enough along toward the "century" mark so that his attainment of it seems assured; Judge Segis has enough daughters living and on test so that Hollywood farm feels confident he will attain it, and Matador Segis Walker, whose real work began much earlier in life, can scarcely fail to do so.

Judge Segis was 12 years old at the time of his death, which was attributed to entirely natural causes. Judge Lyon, his maternal half brother, for which the late Fred S. Stimson scoured the entire country to secure the ideal bull to mate with years, but the quality shown by his get Judge Segis' daughters, now becomes senior herd sire. He, too, is well along in has convinced his owners that his selection was an admirable one.

SHIP GUERNSEY BULL EAST.

Fred J. Jenner of Oso, Snohomish county, recently shipped to J. H. Hammond of New York state the Jenner Guernsey herd sire, Masher's May King of Dellwood. Mr. Jenner secured the bull from Mr. Hammond in 1917 as a 4-month-old calf. He has been in use continually in the Jenner federal accredited Guernsey herd. All of the cows in the Jenner herd at the present time are daughters of this bull with the exception of two of the most desirable of their foundation cows. It cost $469 to ship the bull east by express, including insurance charges. "We feel that May King has served us and Washington well," says Mr. Jenner. "He has left us a beautiful herd of his daughters and a number of his sons are in herds throughout the state, especially in Snohomish county."

M'LEOD COW WINS MEDAL.

Double St. Mawes, a senior 4-year-old Jersey owned by David McLeod of Bellingham, recently became a gold medal cow. Her record of 10,636 pounds of milk and 683.53 pounds of fat was made under average farm conditions with two milkings a day. She was never kept in a box stall and received no feed except pasture and native hay with a grain ration. The record was made in 305 days instead of 365 as was allowed and she carried a calf 230 days during the test. Double St. Mawes was sired by St. Mawes of Eadendale, an Ed Cary bull. She is out of Missionary St. Mawes, owned by Judge Hardin of Bellingham.

MAKE GOOD SHOWING.

There are 22 registered Holsteins out of the 35 milch cows on the dairy farm of Dykstra and Wynstra, a short distance from Everett. The herd sire is Aaggie Jewel Fobes, an animal sired by Chief Fobes, a Yakima bull. Native pasture has given good results for a big part of the year and some of the best animals were shown at the Live Stock show at Everett. These animals received no special fitting, but were brought in from pasture, and made a good showing against some heavy competition.

STARTS GUERNSEY BREEDING.

King county, Washington, is to have a new Guernsey breeder, since Emery Ashbury, who recently resigned as United States consul of Wales, has purchased the Ostrem ranch at the Edgewood interurban station, King county. He has begun the establishment of a dairy farm and has secured an 18-month-old bull of Dr. A. McCrae Smith breeding from William J. Morris of Buckley. The animal is registered as Reedie of Bryn-y-Fred and will head a herd of grade Guernseys.

COMPLETES 300-DAY RECORD.

Lady Stewart of Menie, the 17-year-old cow of the E. W. VanTassel herd at Wenatchee, has recently completed her 300-day record with 14,679 pounds of milk and 524.7 pounds of fat. She carried a calf 180 days out of the 300, which gives her one of the highest records, if not the highest for any cow of her age in all breeds.

MORTON SELLS JERSEYS.

The bidding was brisk at the sale of 22 head of purebred Jersey cattle by J. R. Morton of Winlock. The top price was $479, which W. T. Churchill of Tenino paid for St. Mawes Golden Vandillah. The total receipts were about $3500.



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$9.98



The exquisite softness, the deep pile of this handsome material is hard to distinguish from seal fur. And you may ask any one how this sturdy material wears. It is built for real service. Where else did you ever hear of an all-silk plush coat at our price? This is a handsome model cut on fur coat lines, full 36 inches long, with self material belt, turn-back cuffs, and deep shawl collar. Durably lined with black twill and finished in every detail. Misses' sizes, 16 to 20—women's, 34 to 44. Order by No. 53E5843. Send no money. Pay $9.98 and postage on arrival.

Fine Fur-Trimmed Coat *for* Girls Only

$3.98



A sensational bargain—a handsome coat of Pressed Velour in navy blue or brown, regular $7 value. Has collar of genuine Kit Coney, which buttons snugly around throat. Belt all around, two novelty pockets and two buttons at back. Sizes 7 to 14 years. Order Brown by No. 53E5595. Navy by No. 53E5596. Send no money. Pay $3.98 and postage on arrival.

Order similar style with handsome plush collar, sizes 2 to 6. Order black by No. 53E-5581. Order brown by No. 53E5582. Price either color, $2.98. Pay bargain price and postage.

Manchurian Wolf Fur Scarf

B'g Value

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In Black or Brown



Sharrood offers an unusual value at a price within the reach of every one. This scarf is about 46 inches long and 12 inches wide. It is stylish as wel las warm. The lining is good quality satin, and there is an extra ruching laid around the neck inside, so as to protect the fur from wearing. Order black Manchurian wolf scarf by No. 53E5193. Order brown by No. 53E5194. Send no money. Pay only $4.49 and postage on arrival. If not satisfied your money will be refunded. Be sure to state color wanted.

Exquisitely Embroidered Gabardine Dress

$2.98



This delightful model is sure to be one of the favorites of the season. It is of beautiful cotton gabardine in navy blue or brown. The vestee, smart bell sleeves and fashionable panels are richly embroidered. The self material belt ties gracefully at back. Sizes 16 to 44 Order navy by No. 53E5525.

Order brown by No. 53E5526. Send no money. Pay $2.98 and postage on arrival.

Men's Winter Underwear

99c



Heavy weight flat knit union suits of select long fiber cotton in popular Jaeger or gray random color. Heavily brushed fleece lining on inside. Wrists and ankles are elastic knit. Sizes 34 to 46 chest. Buy a year's supply right now—today. Jaeger color No. 53C-1279. Gray Random No. 53C1280. Send no money. Pay 99c and postage on arrival. State size. Boy's flat knit union suits of fine quality cotton. 22 to 34 for 3 to 16 years. Order by No. 53C1358. Price 79c. Pay 79c and postage on arrival.

Women's Kid or Gun-metal High-Cut Shoes



Send for this handsome rich black kid-skin shoe. Note the medium toes with pretty imitation perforated tips, the perforation around vamp and on lace stays. Very popular model and really a sensational bargain now. Durable, flexible soles. Sizes 2½ to 8. Wide widths.

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Order black by No. 53A122. Pay $1.98 and postage on arrival. Order same style as above in durable black gun metal finished leather by No. 53A476. Pay $1.98 and postage on arrival. State size.

Give Size

Order black by No. 53A122. Order gun metal by No. 53A476. Pay $1.98 and postage on arrival.

Wash Goods



10 Yards Fancy Outing Flannel $1.25

Ideal weight for nightgowns and undergarments. In fancy stripes, checks and plaids, white grounds, with pink, blue or tan designs. 26-inch width. State pattern and color. Order by No. 53E3425. Send no money. Pay $1.25 for 10 yards and postage on arrival.

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Ribbon-Trimmed Felt Slippers, Priced Low

98c



Fine grade wool felt in A, American Beauty and Fawn combination; B, Copen and Fawn; C, Lavender and Fawn. Sizes 3 to 8. Order A by No. 53A389; B by No. 53A390; C by No. 53A391. Send no money. Pay 98c for any color. State size.

Women's Popular Dark Brown Stitchdown Oxfords

$1.98

Give Size

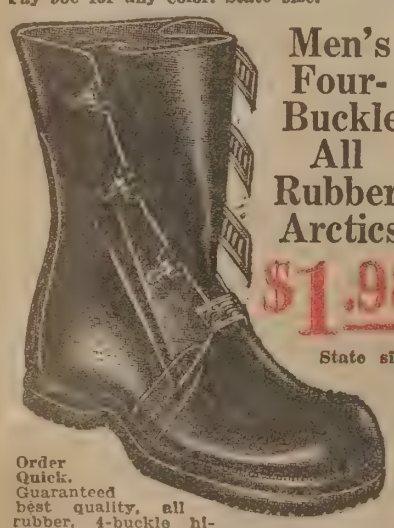


Classy stitchdown Oxford for women. Wonderfully comfortable and stylish. Uppers of dark mahogany leather. Smooth leather insoles. Flexible stitched-down oak outsoles. Low rubber heels. Sizes 2½ to 8. Wide widths. Order by No. 53A268. Send no money. Pay only $1.98 and postage on arrival.

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State size



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$1.98 Up

State size.



Same style, 9-in. hi-cut for men. Sizes 6 to 12. Wide widths. Order by No. 53A769. Send no money. Pay $2.98 and postage on arrival.

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$1.98



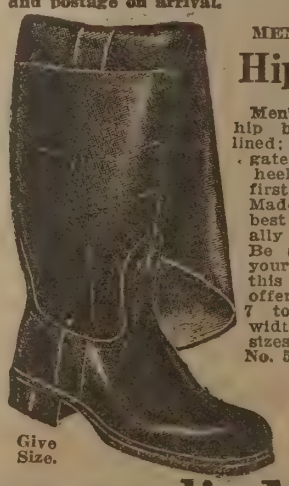
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Men's pure gum hip boots; friction lined; heavy corrugated sole and heel; guaranteed first quality. Made of the very best rubber. Usually retailed at $5. Be sure to order your pair while this great saving offer lasts. Sizes 7 to 11. Wide widths. No half sizes. Order by No. 53A949.

$2.98

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THE WASHINGTON FARMER

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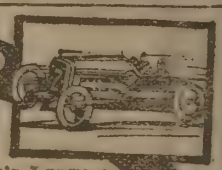
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For Good Farming, Attractive Country Homes and Happy Country People

Which Protein Feeds Are Best for Hogs?

By JERRY SOTOLA, Department of Animal Husbandry, W.S.C.

The purpose of certain recent hog investigations at the Washington agricultural experiement station was to ascertain, as far as possible, the value of digester tankage, fish meal and linseed oil meal, fed singly and in combinations, as constituents of balanced rations of fattening pigs. The study deals with the following questions: (a) Do protein-rich feeds from vegetable sources, as linseed oil meal, contain proteins of the proper quality to supplement the proteins of the smaller grains and of their byproducts? (b) Are the animal byproducts, as tankage, more effective protein supplements than plant byproducts, as linseed oil meal? (c) Would combinations of tankage with linseed oil meal and of fishmeal with linseed oil meal prove more effective as supplements than any of them used alone?

From our analysis of the feeds used during these feeding trials, and with digestion coefficients worked out with pigs for similar feeds, it was calculated that the feeds contain the following percentages of digestible crude protein: Barley 5.31, millrun 15.64, linseed oil meal 31.15, digester tankage 36.20 and fish meal 41.36. In all of the feeding trials the grain mixtures have been adjusted to supply a sufficient, but not an excessive amount of protein. As the pigs gained in weight the proportion of the supplement was decreased.

The experiments were conducted with 47 head of purebred Poland China and Duroc Jersey pigs, farrowed on the college farm. The distribution in the various lots was uniform as to breed, type, condition and quality as far as possible. No runts were included in the test, and all pigs were hand-fed twice daily, and besides had free access to a mineral mixture consisting of five parts steamed bone meal, four parts air-slacked lime and one part of salt, fed in self-feeders.

All lots were fed a base grain mixture consisting of three parts by weight of rolled barley and of millrun. Lot 1 received tankage in quantities sufficient to balance the ration. Lots 2 and 3 were fed fish meal and linseed oil meal, respectively. Lot 4 was fed a protein supplement consisting of equal parts by weight of tankage and linseed oil meal. A summary of the 110-day test is given in the table on this page.

From the table it is apparent that the fish meal lot (lot 2) made the highest average daily gain of 1.074 pounds, followed by 1.060, for those fed tankage and .974 pounds for those receiving equal parts of tankage, linseed oil meal. The lot fed linseed oil meal made the owest gain of .922 pounds. The grain required to produce 100 pounds gain folows in the same order. At the close of the test, the pigs in lot 3 were in slightly higher condition than those in lots 1 and 2, but they were "chubbier" and not grown out as well. The daily gains in the respective lots are not high and undoubtedly could have been increased by more liberal feeding, but it would have meant the waste of feed. Only such quantities of feed were fed daily as the pigs would consume completely, no feed being permitted to stagnate in the troughs.

The results indicate that there is very little difference in the feeding value of tankage and fish meal when fed on the basis of their digestible protein. This is an agreement with the results of the two previous years. The vegetable protein supplements did not produce as good gains and as satisfactory growth as the protein rich feeds of animal origin. The mixture of equal parts of tankage and linseed oil meal produced gains only seven pounds greater for the entire 110-day period than the pigs receiving lineseed oil meal, and appears to have no advantage.

From the economic standpoint the fish meal gave the best results. This is largely due to the lower price of this feed and to its higher content of digestible protein, smaller quantities being necessary to obtain a balanced ration. The mixture of tankage and linseed oil meal was least economical. A gain of 100 pounds cost $6.68 when fish meal was fed as the protein supplement. The gains of the linseed oil meal lot cost $7.40. The results with fish meal are significant because of the availibility of this feed in the Pacific northwest section.

Summary of Dry Lot Feeding Experiments December 4-March 23, 1921-22; 110 Days.

	I.	II.	III.	IV.
Number pigs	12	12	12	11
Average initial weight	50.240	51.193	50.000	51.319
Average final weight	166.889	159.278	151.403	158.439
Total gain	116.649	118.085	101.403	107.120
Average daily gain	1.060	1.074	.922	.974
Feed per 100 pounds gain—				
Barley	286.95	289.25	314.81	306.02
Millrun	96.01	96.39	105.19	101.58
Tankage	53.79	.....	.....	33.78
Fish meal	.....	45.80	.....	.....
Linseed oil meal	.....	.....	81.52	33.78
Mineral mixture	1.93	1.09	.41	1.93
Total	438.68	432.53	501.93	477.09
Average daily ration—				
Barley	3.043	3.105	2.902	2.981
Millrun	1.019	1.035	.970	.989
Tankage	.570	.....	.....	.329
Fish meal	.....	.492	.....	.....
Linseed oil meal	.....	.....	.751	.329
Mineral mixture	.020	.117	.004	.117
Total	4.652	4.749	4.627	4.745
Cost per 100 pounds gain	$7.16	$6.68	$7.40	$7.49

Feed prices per ton: Barley, $30; millrun, $20; tankage, $70; fish meal, $60; linseed oil meal, $40 mineral mixture, $20.



Squirrels a Pest

To the Editor: I have been told that if I should write to you you would help me in the squirrel question. I live in the Rock Lake township. I have 490 acres this year. The squirrels ate 50 acres of fall wheat. I put out 22 ounces of strychnine, but the neighbors around me would not cooperate and put out poison, so the squirrels came in, anyway, and I could not keep them out.

If everybody would put out poison it would not be so hard. The squirrels destroy more birds than do some animals upon which there is a bounty.

Now I say, make a man poison the squirrels or make him pay for having it done. This is the only way we will ever get rid of the pests. E. CALVERT.

Amber, Wash.

TO COMBAT FOUL BROOD.

Beekeepers declare that the one million dollars' worth of honey now produced in the state could be greatly increased several times if foul brood, poisonous orchard spray, etc., could be eradicated.

If You Are in Doubt, Vote No

THE FARMER is asked, "What about the initiative and referendum measures that are to be voted upon November 7?" Our invariable reply is that the voter should vote on all the initiative or referendum measures on the ballot; that he should vote for those measures only that are clearly understood and have his approval.

On the other hand, if a voter has not had time or opportunity to make a thorough study of other measures, and to come to an independent judgment, he or she should vote NO on them.

That is the safe rule of action—vote yes for those things that you clearly understand and approve; vote NO against those things that you do not approve or do not clearly understand.

Unless that rule is generally applied by the voters, the people will wake up and find that a great deal of unsound and costly legislation has been put over in their state by small, aggressive minorities. One minority will be for one thing; another minority will want another; and various other minorities will also be active in putting over their pet measures. The rule we have just advised will block that danger, and it is tremendously important that it be blocked at this time, when taxes are burdensome to the point of confiscation, yet aggressive, well-organized minorities are back of initiative and referendum measures that would still further increase taxation.

Once more, for safety, and in the interests of good government—vote NO on every initiative or referendum measure that you do not approve or that you do not clearly understand. Vote on all these measures. Your vote is needed—against measures that you do not clearly understand or approve, to save your state from minority manipulation, much of it conceived in selfishness, some of it in ignorance and some of it in pursuit of dangerous fallacies.

Who Is Selfish?

The charge is made by advocates of 30-10, initiative No. 46, that opposition to the bill comes from "selfish interests."

What is the truth?

Opposition is voiced by the farmers' union of Garfield county, the president of the Cowlitz county grange, the superintendent of schools of Franklin, of Douglas and of Lewis counties, the farmers and taxpayers of Lincoln, Adams, Whitman, Walla Walla, Columbia and other wheat-growing counties, the taxpayers' associations, composed of parent-taxpayers in 25 counties of the state, the county assessors, the state superintendent of public instruction, the state tax investigation committee, the public school administrative code commission, the president of Whitman college, school boards, school administrative officers, commercial clubs, civic bodies and many of the leading parent-teacher workers and officers of the state.

Can these be counted as representative of "selfish interests"?

On the other hand, the principal support for the measure comes from the Washington Education association, an organization exclusively of teachers, which is raising, by its own announcement, a fund of $10,000 to finance the campaign for the bill.

And of the extra $3,800,000 state tax provided for by the bill, 67 per cent, or $2,470,000 will go for teachers' salaries.

This is what corporations call practical idealism.

Initiative No. 46 is a selfish interest bill. Vote NO.

LEAGUE OF TAXPAYERS' ASSOCIATIONS.

High Line Canal

Take Water From Tieton Dam

One of the most important high line diversion irrigation canals is that desired to convey the waters stored in the Tieton dam at Rimrock onto 37,000 acres of land lying in the Wenas, East Selah and the Moxee valleys, in central Washington. Engineers have been at work on the plans for the past four or five years and they were recently reviewed and approved by national experts. These plans call for an irrigation canal 50 miles in length that carries 500 second feet of water under two rivers and through three miles of tunnels before delivery on the lands.

The intake of the canal will be on the Tieton river about five miles from its mouth. The canal will go along the Tieto to a point where that stream empties into the Naches and will convey its waters under the Naches through a siphon. The first tunnel will pierce the divide between the Naches and Wenas valleys. This tunnel will be three-fourths of a mile in length.

Emerging in the Wenas the canal will follow the contour of the basin of the Wenas creek around to the headwaters and down on the other side, and 10,000 acres of land will be irrigated in this section. In making this loop there is a tunnel through a hill a half mile in length.

Reaching the mouth of the Wenas, the water will be conveyed by a siphon over the Yakima river into the East Selah, where it is proposed to irrigate about 5000 acres. The third tunnel will be two miles in length and will bring the water into the Moxee basin where it is proposed to irrigate about 22,000 acres of land lying above any other canals or pumping units now constructed. In the Moxee there will be four pumping units with an aggregate of 6600 acres. The rest of the land will be irrigated by gravity flow.

The lands in question have been organized into the Yakima irrigation district, which has contracted with the reclamation service for 160,000 acres of feet water, which is to be delivered from storage at Rimrock. This project, like many others, is awaiting the passage of the Smith-McNary bill, by congress.

PLANS SILVER FOX FARM.

Louis Gottlieb has leased from the city of Walla Walla 10 acres above the present water system intake and announces that he will establish a silver fox farm. He is to pay $50 a year for five years for the lease.

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See What Washington Escaped!

Many of our readers will recall that when the Carlyon $40,000,000 road bonding measure was before the voters two years ago advocates of that extravagant scheme argued that the spending of $40,000,000 would be in the interest of true economy, because when concrete roads were built the item of maintenance would be cut out and there would be a big saving over the upkeep of graveled roads.

At the time THE FARMER exposed the fallacy of that argument. We showed by actual records that the cost of maintaining, repairing and rebuilding concrete roads per mile was higher than the cost of maintaining gravel roads.

During the Carlyon bill campaign its advocates had a great deal to say about the inspiring example set by California; how far Washington was behind that progressive state. It is true that California plunged in the building of concrete roads, and now, according to the report of its highway commission, is paying dearly for its recklessness. The highway commission reports that California will need the colossal sum of $65,000,000 in the next five years for highway reconstruction and resurfacing. Most of this giant expenditure is needed for the reconstruction and resurfacing of about 1400 miles of concrete pavement that is crumbling for one reason or another. More than 228 miles of concrete have already been resurfaced with asphaltic concrete and it is estimated that next year 300 miles will be resurfaced with blacktop.

Editorial comment by the Los Angeles Times is illuminating. That newspaper says: "The repair of the base alone is estimated at $5,000,000. The patchwork designed to cover up the early errors of the commission is to be applied to 1400 miles of state roads during the five-year period of the budget, and is to cost $33,000,000, which is in excess of $23,500 a mile."

These figures are interesting in view of the fact that some of the advocates of the Carlyon bill contended that concrete roads could be built for about the money that California now must pay to repair concrete roads. Speaking of the original cost, the Times says: "To this is to be added $23,000 more a mile, and the prediction is freely made that we shall not have a satisfactory or durable road when this further sum is expended."

Further comment by the Western Highway Builder on California's dilemma proves that the voters of Washington were wise when they defeated the Carlyon bill. It finds that the voters of California have approved three bond issues totaling $73,000,000, and goes on to say: "At each succeeding election the principal argument advanced in support of the issues has been the crying necessity for the completion of a state system and the assurance that the issue in question would accomplish this objective." That authority then says that an additional $80,000,000 will be needed to complete the system of state highways, and "thus we will have an original cost of $150,000,000, plus the item of reconstruction of the present system, which represents in the neighborhood of $65,000,000, or a grand total of $200,000,000."

Into a like quagmire of indebtedness the Carlyon boosters would have led the people of Washington. Fortunately our people rejected that unsound advice and Washington is now on the safe and sane basis of paying as it goes for its state highways.

Economic Substitute for 30-10 Plan

The practical problem brought to the front by the 30-10 school plan simmers down to the fact of aiding 7768 children in the back-country districts who are now getting less than eight months' schooling.

In place of raising $3,750,000 additional in state taxes, would it not be better and far more economical to render financial aid directly to these 7768 children? There are 149 school districts now giving only six months' schooling. The direct award of $1000 to each of these districts would furnish immediate relief and the cost would be only $149,000. It is possible that as many as 500 districts out of the 2595 districts in the state might need help. If $1000 were given to each (and many of them would not need much) the total would only be $500,000. Compare this with the $3,750,000 which the 30-10 plan proposes to raise.

When any district can not provide the minimum required education without going above the legal rate of 10 mills, in the proposed substitute plan, it shall apply to the superintendent of public instruction for aid. The state has invested funds derived from the sale of school lands amounting to $16,340,000, the interest of which amounts to $710,776 a year. It is proper that this interest, wholly or in part, should be used for the relief of needy school districts and their children. President Stephen B. L. Penrose of Whitman college, who proposes this substitute plan, points out that all that is required in such cases is for the legislature to give authority to the superintendent of public instruction, under the direction of the state board of education, to use the interest derived from these invested funds for the relief of needy school districts that can not provide the minimum of education without exceeding the legal levy.

Even if $500,000 would be required for the needy rural schools, that would come from present invested funds, would require no additional taxation and could be distributed without delay to the district which actually needed it. If such power should be given to the superintendent of public instruction the inequalities which are found at present would disappear. Here is a simple, economic and effective solution of the problem which has the merit of requiring no increase of taxes and of relieving distress promptly.

Yakima Lambs Restore Optimism

From the time that the first trainload of "hothouse" lambs went to Chicago early in July, Yakima lambs have been rolling steadily to market all summer and fall, and the unusually high prices which have obtained are large factors in the restoration of optimism among the woolgrowers of the valley.

Yakima lambs have repeatedly topped the Chicago market, as recently when C. H. Ballard sold 1131 head weighing 75 pounds each at $14 per hundred, and Ernest Berg 1104 head weighing 74 pounds each at the same figure. The peak price of the season was $14.75. Early in October there was a slump to $13.75, due probably to the fact that 34,000 head were offered in one day, but the market recovered and higher prices were again expected.

State Farm News

According to C. A. Lodge, county agricultural agent, more than 40,000 acres of wheat in Whitman county is being planted this fall with seed which has been treated with copper carbonate dust as a smut preventive. Mr. Lodge says that by using copper carbonate, one peck less of seed is required to the acre than when bluestone or formaldehyde is used. By changing to the new copper carbonate treatment Mr. Lodge is confident that at least $8000 has been saved in seed wheat in Whitman county this year. Tests made during the last crop year in Whitman county show a lower per cent of smut where copper carbonate was used in comparison with other smut treatments, he announces.

* * *

Prune picking has begun and the Allen Evaporating company dryer is running at full capacity day and night. The prunes are of fine quality and growers have been delivering them faster than the dryer could handle them. The capacity of the dryer is about 75 tons in 24 hours.

Growers are receiving $20 a ton delivered at the dryer.

* * *

Bringing their total investment to approximately $10,000 the Ed Schlager greenhouse will immediately commence construction on two more units to be added to their business at Port Angeles.

Twenty thousand bulbs were received at the greenhouse from Holland and France. Ten thousand of these bulbs will be sold in the bulb and the other 10,000 have been planted to be sold as potted flowers.

If spring justifies it, Mr. Schlager announces he will construct two additional greenhouses, bringing his total to five.

He plans to have one greenhouse for cucumbers alone and one for carnation culture.

* * *

Apples and potatoes from the Grays Harbor district are being used by the home economics department of the state college in experiments that are being carried on to ascertain the best methods of cooking. The varieties used are the Burbank and Gold Coin potatoes, while the apples include Wolf River, Gravensteins and Northern Spys.

* * *

The Walla Walla county commissioners have recommeided A. W. Kasten for county farm agent to succeed W. H. Talley, who has resigned, effective November 1, to become secretary of the state farm bureau. Mr. Kasten is Smith-Hughes' instructor in vocational agriculture at the Walla Walla high school. The appointment requires confirmation by Dr. S. B. Nelson, head of the extension department of the state college.

Mr. Kasten is secretary-treasurer of the county farm bureau. He is a graduate of the University of Wisconsin and was in charge of agricultural work in Wisconsin for a year.

* * *

Superintendent R. P. Bean of the state experiment farm at Prosser has purchased 878 head of feeder lambs. Last year Mr. Bean conduced successful experiments in methods of feeding lambs and will continue the same methods with additional experiments. The result of last year's work was valuable to farmers and flock masters.

* * *

Road work aggregating 38 miles and costing approximately $281,500 will have been done in Chelan county before the coming of winter. The greater part of the summer program has been completed, says County Engineer John Duff. Two grading and surfacing jobs will be completed early in November.

Part of the improvements are to be paid for out of the $830,000 road bond issue of 1919. The permanent highway and road and bridge funds take care of part of the work.

* * *

Apples in the Parker Heights district of Yakima are not coloring up as well as was expected, according to W. P. Sawyer of that district. Practically all fruit of the district will be harvested by the end of October.

* * *

A permit has been issued at Olympia by the department of conservation and development to the Macleay-Lindsey irrigation district giving them permission to divert the waters of Dungenness river for the purpose of irrigation, farm power and domestic supply. The irrigation project comprises 7415 acres of land, all of which will be put under irrigation and cultivation as soon as possible. The project will cost approximately $150,000, so it is estimated. It is located in Clallam county.

* * *

J. C. Castle of Mazama, Okanogan county, has purchased a sorghum mill and intends to test out his sugar cane, which is over nine feet high. Mr. Castle came from Kentucky and has had experience with sugar cane.

* * *

A new class in dairying was introduced at the Tolt fair. Only cows that had finished a year in the cow testing association were eligible. The scoring was done on the basis of individual production, individual conformation and net profit per cow on the herd from which the cow came. County Agent A. B. Nystrom of King county reported that this class was the most popular at the fair. There were exhibits from four herds in the class and a prize of $50 was divided among them.

* * *

The annual picnic of the Jersey cattle club was held at Grays River, with 100 people present. Two classes of dairy cattle were judged by members of the calf club and adults.

* * *

Daryl Leonard of Chehalis, a graduate of the state college, plans on getting into the purebred Shorthorn business. At present he has but one registered animal, a Scotch-bred female, Miss Rosa. This animal was mated to George Bertrand's herd sire, Max Mill Criterion, and recently freshened with a bull calf, which Mr. Leonard expects to keep as his herd sire. The calf is a splendid individual.

* * *

Fifty-five persons attended the septic tank demonstration given by A. B. Crane, drainage specialist from Washington State college, Pullman, at the home of Mrs. O. B. Newton, Oakville, October 12. The hole was dug and the forms made ready for pouring the cement. A similar demonstration was held October 13 at the home of Hubert Osborne, Elma.

* * *

Part of the third cutting of alfalfa hay in the Yakima valley is reported damaged by the early October rains. The hay, however, is not damaged enough to prevent its being fed to stock at home, although some of it is not fit for baling and shipping.

FARM BUSINESS AND MARKETS OUTLOOK

Prime steer prices highest in nearly two years.
Lamb prices on a high level.
Hog market well sustained in spite of heavy receipts.
Wheat the highest in three months.
Corn the highest since January, 1921.
Oats the highest since March, 1921.
Raw cotton the highest since October, 1920.
Butter prices highest since December, 1921.
Cheese prices highest since March, 1921.
Fresh eggs the highest since last February.

These were some of the encouraging developments in the market for farm products last week.

Since meats, butter and eggs are regarded to some extent as luxuries, they are benefiting most from full employment of the laboring classes. Cotton and wool likewise are affected favorably by the business revival and expansion in volume of manufacture.

The car situation which has been acute for several weeks seems to be clearing up in certain sections. Concerted efforts are being made to relieve congestion and after October, which is a peak month normally, conditions may gradually become better, especially if favorable weather prevails.

Reports upon industrial activity are optimistic. Steel mills and blast furnaces report further increases in operations, although new orders are less urgent and the present rate is believed to be sufficient to supply the demand. In fact, steel and pig iron prices are easing. Coal production is gradually gaining and the continuous drop in prices since the middle of August is still under way.

Bank reports continue to reflect business expansion. Loans are increasing, the federal reserve ratio is dropping and interest rates show further hardening. Banks are said to be putting gold into circulation freely apparently in an effort to raise rates. One result of a tighter money market is the decline in prices of Liberty bonds.

Abroad conditions remain in turmoil. The change in the British cabinet unsettled sterling exchange after it had reached nearly the highest point of the year. Marks dropped to a new low of about one eleven hundredth of their normal value because of a fresh reparations crisis and the possibility of Germany becoming a voluntary bankrupt. Chilled by the prospect of payments from Germany being deferred, French exchange dropped to the lowest levels of the year. Italian and Belgian exchange were similarly affected.

Prime Steers Skyrocketing.

Prime steers advanced to $13.60 at Chicago last week, a price much higher than the most optimistic hoped for a few months ago. Only extreme scarcity has made the advance possible as but few sales at a few markets are being made above $12. Early in the week intermediate and lower grades advanced 25 to 60 cents, the wide outlet to feedlots being a factor. Cows were 25 to 40 cents higher, heifers were 50 cents to $1 higher and calves rose 75 cents to $1.

Receipts at 10 markets increased slightly in the last few days, but were not above normal for this time of year. Prices on the lower grades of steers and on butcher she stock lost part of their recent gains.

But little beef has been put into freezers or "sharping plants" thus far. Stocks on October 1 were only 34,645,000 pounds compared with 44,296,000 pounds a year ago, and a five-year average on that date of 116,538,000 pounds.

Shipments of stocker and feeder cattle countryward show no abatement, the week ending October 14 being the largest in several years.

Tremendous Consumption of Hog Products.

Hog slaughter during September was of record volume, but stocks of lard in the United States declined 44,000,000 pounds compared with a five-year average decrease in that month of 37,000,000 pounds. Stocks of frozen pork and pickled and dry salt pork, both cured and in process of cure, decreased 130,000,000 pounds compared with a five-year average decrease of 145,000,000 pounds. These figures show that consumption, including exports, has been exceptionally heavy. Stocks of lard at Chicago show a further notable decrease since October 1.

Receipts at leading markets are increasing, but are not at a record level for the season as they were until a few weeks ago. The run of packing sows which continued all summer is now at an end.

Lamb Feeders Loading Up.

Lamb feeders are buying as fast as suitable offerings can be had and in the week ending October 14 took 192,315 head from the 12 leading markets. The movement countryward at present is larger than at this time last year or two years ago, but October is always the peak month, so that the present rate will not last much longer and the season's total will be a light one. Shipments in August and September were the lightest in at least six years. More are believed to be on feed in the west than last year, however.

Fat lamb prices are around $14.75 at Chicago. As soon as the western run shrinks, a moderate advance will be in order and the buyers of feeders even at $14 may yet be successful.

Horse Buyers Increase.

Horse buyers are more numerous of late and no proportionate increase in receipts has taken place, so that the market is doing better.

Wool Market Creeping Higher.

Wool prices were advanced last week under general buying by manufacturers who are supplied with orders which will keep them busy for the next few months and have not provided for their raw material needs. Further advances in cloth prices are rumored.

Tension in Wheat Market Relieved.

Some of the tension in the wheat market, due to shortage of supplies in position for immediate shipment abroad, has been relieved in the last few days and prices receded moderately.

European millers have obtained enough wheat for their immediate needs, native wheat is coming forward more rapidly in some of the chief importing countries, world shipments have increased and stocks on passage to Europe have been built up slightly. In addition the car situation is slightly better in our own southwest, and progress is being made to clear up congestion at Buffalo which has been checking the movement of Canadian as well as United States wheat to the eastern seaboard.

Domestic milling demand which has been unusually brisk has ebbed slightly as flour buyers have supplied their most pressing wants.

Factors coloring the more distant outlook favor higher rather than lower prices.

It seems premature to raise fears for the next crop, but the reports of drouth in the winter wheat belt beyond the Missouri river can not be ignored as they may become market factors later. About 25 per cent of the total winter wheat acreage is said to be affected, some sections reporting the worst condition in nearly three decades with Kansas, Oklahoma and Nebraska worse off than last year.

New Corn Prices Show Big Advances.

The advance in corn prices is indicated by the first sales of new corn at Chicago at approximately 73 cents a bushel compared with slightly less than 40 cents last year.

More Oats for Export.

Export demand for oats improved decidedly last March and has continued on the better level ever since. A measure of the change is shown by clearances from United States ports of 5,576,000 bushels in the eight weeks ending October 21 compared with 57,000 bushels in the same period last year and 309,000 bushels two years ago.

Visible supplies of oats in the United States are but little more than half as large as those at this time a year ago and are decreasing. Primary receipts are running slightly below the average for this time of year and there has been no accumulation at terminals whatever from the crop recently harvested.

Cash Grain Markets.

The range of cash grain prices for the week ending October 25 were: Chicago—Wheat: No. 2 red, $1.17@1.17 1-2; No. 3, $1.14@1.15 1-2; No. 2 hard, $1.14 1-2@.16; No. 3, $1.14 1-2@1.14 3-4; No. 2 northern, $1.17 1-2; No. 3, $1.09 3-4. Corn—No. 2 mixed, 68 1-2@71 1-2c; No. 3, 68 1-4@70 3-4c; No. 4, 67 1-2@70 1-4c; No. 2 yellow, 68 3-4@71 3-4 No. 3, 67 1-2@71 1-4c; No. 4, 68@70 1-2c; No. 2 white, 68 1-2@71 3-4c; No. 3, 65 1-2@70 3-4c. Oats—No. 2 white, 423-4@45c; No. 3, 41 1-2@43 1-2c; No. 4, 40 1-2@42 1-4c. Rye—78 1-2@79 1-2c. Barley—56@69c.

Seed Markets Performing Well.

Although seed markets lost part of their recent gains, they are by no means week. Timothy seed especially is showing a strong undertone. The cloverseed crop this year is estimated at 2,033,000 bushels compared with 1,411,000 bushels last year and 1,760,000 bushels two years ago. Alfalfa seed thus far has been marketed more slowly than last year.

Chicago, per 100 pounds—Clover, $15@20.50; timothy, $5.50@6.75. Toledo, per bushel—Prime red clover, $12.35; prime timothy, $3.30.

Feed Markets Firm.

With feed grains advancing, by-product feeds also have remained firm and in many cases are the highest since the decline started last spring. Production is at a high rate and stocks are adequate with those in transit or stored increasing. Prices are largely nominal as actual buying is said to be limited.

Prices per ton (100-pound bags) in carlots—Chicago—Bran, $26.50; standard middlings, $27.50; flour middlings, $29; cottonseed meal, 36 per cent, $44; 43 per cent, $49; hominy feed, $29; gluten feed, $34.85; old process oil meal, $53; tankage, $65.

Hay Receipts Remain Light.

Shortage of cars is curtailing shipments of hay and receipts at leading markets are light. Chicago has received 35,148 tons since July 1 compared with 37,508 in the same period last year when the movement also was limited. There is no urgent demand for alfalfa with cattle and lamb feeders as well as dairymen in the market, and good grades of timothy are moving readily.

Prices per ton in carlots—Chicago—No. 1 timothy, $21@23; No. 2, $20@21; No. 3, $12@15; No. 1 light clover mixed, $20@21; No. 1 clover mixed. $16@18; No. 1 to choice alfalfa, $24@26; upland prairie, $20@21; midland prairie, $14@16; rye straw, $12@13; oat and wheat straw, $9@11.

Fresh Eggs Strong; Storage Eggs Weak.

Fresh egg prices advanced last week to new high figures for the season. Diminishing receipts and keen demand for fine eggs were the causes. Storage eggs are moving more freely than in September, but not rapidly enough to cut the enormous holdings down to normal volume. Apparently, the market must endure more pressure from this source before the stocks are distributed.

Although it is six weeks since the season at which frozen poultry uually begins to accumulate in storage, it has not begun to do so this year. Receipts are increasing and prices are slowly working lower.

New High in Butter Market.

Butter prices reached a new high level for the year at the close of last week. Light receipts coupled with maintenance of broad consumptive demand were the factors responsible. Prices on 92-score fresh butter on October 25 were: Chicago, 45 1-2c; New York, 47c; Boston, 46 1-2c; Philadelphia, 48c; San Francisco exchange quotation, 48 1-2c.

Sharp Advance in Cheese Markets.

Cheese markets have advanced about 2 cents a pound on all styles in the last 10 days. Buyers are disposed to curtail purchases at the higher level and the market is more or less unsettled with some doubt expressed as to the maintenance of the advance.

Prices on No. 1 American cheese on October 25 were: Chicago—Flats, 25@26c; Twins, 25@25 1-2c; S. Daisies, 25@26c; D. Daisies, 25@25 3-4c; Young Americas, 26c; Longhorns, 25 1-2@26c; Square Prints, 26 1-2c.

Fruits and Vegetables.

Carlot shipments of potatoes from the leading late producing states up to October 14 totaled 16,000 cars less than to the same date last year when the smaller crop was shipped at unusual speed. The present movement is not quite up to normal for this time of year. Prices were firmer last week for eastern potatoes where the crop is small, but weaker for western and northern stock. F. o. b. prices range around 60 cents per 100 pounds for Brown Beauties at Colorado shipping points and 40 cents for Rurals and 60 cents for Russets at Idaho points.

Carlot shipments of apples at present are below normal for October, due to a decline in shipments from the boxed apple states. The quantity reported in cold storage on October 1 was considerably above normal for that date, especially in the case of barreled apples. Wholesale prices have been gaining as the market is not oversupplied with good apples. Extra fancy large Northwestern Jonathans are quoted at $2.75 to $3 a box at Chicago with medium sizes at $2.50.

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Range of Live Stock Prices, Week Ending Oct. 25

CATTLE.	Chicago.	Spokane.	Portland.	N. S. Lake.
Choice, prime heavy steers (1100 lb. up)	11.65@13.60	.....	.....	.....
Good heavy steers	9.35@11.75	.....	.....	.....
Medium heavy steers	7.50@ 9.50	.....	.....	.....
Common heavy steers	5.75@ 7.50	.....	.....	.....
Choice, prime light steers (1100 lb. d'n)	11.50@13.35	.....	.....	.....
Good light steers	9.25@11.65	.....	.....	.....
Medium light steers	7.25@ 9.35	5.75@ 7.00	6.00@ 7.50	5.75@ 6.50
Common light steers	5.50@ 7.25	3.75@ 5.75	4.25@ 6.00	4.50@ 6.00
Common to choice butcher heifers	4.75@10.15	3.50@ 5.50	3.75@ 6.00	3.50@ 5.50
Common to choice butcher cows	3.50@ 8.35	2.50@ 5.00	2.75@ 5.00	3.25@ 4.50
Bologna and beef bulls	3.60@ 6.75	2.75@ 4.50	4.00@ 4.50	2.00@ 3.50
Canners and cutters, cows and heifers	2.75@ 3.65	1.50@ 2.50	1.50@ 2.50	1.50@ 3.00
Canner steers	3.50@ 4.25	2.00@ 3.50	2.00@ 3.50	2.75@ 3.50
Medium to choice light veals	8.25@11.75	7.00@ 8.50	7.50@ 9.50	7.50@ 8.25
Common to choice heavy veals	3.50@ 8.00	5.00@ 7.50	5.00@ 7.00	.....
Common to choice feeders (1000 lb. up)	5.75@ 8.10	.....	.....	.....
Com. to choice feeders (750-1000 lb.)	5.65@ 8.00	3.50@ 5.00	4.00@ 5.00	4.50@ 5.50
Common to choice stocker steers	4.40@ 7.75	.....	.....	.....
Com. to choice stocker cows, heifers	3.25@ 5.50	.....	.....	.....
HOGS.				
Top of market	9.75	11.00	10.65	9.75
Blk of sales	8.25@ 9.70	10.00@10.75	10.00@10.50	8.25@ 9.50
Heavy (250 lb. up)	8.60@ 9.65	10.25@10.75	10.00@10.40	8.00@ 9.25
Medium (200-25 lb.)	9.10@ 9.65	10.25@10.75	10.15@10.50	8.25@ 9.50
Light (150-200 lb.)	9.00@ 9.45	10.35@10.75	10.25@10.65	9.00@ 9.75
Light lights (130-150 lb.)	9.00@ 9.35	10.00@10.50	10.00@10.50	8.50@ 9.25
Smooth packing sows (250 lb. up)	7.90@ 8.75	8.25@ 9.00	7.75@ 8.50	6.75@ 7.50
Rough packing sows (200 lb. up)	7.50@ 8.15	7.50@ 8.25	7.00@ 7.75	6.00@ 7.00
Medium to choice pigs (130 lb. down)	8.75@ 9.40	9.25@10.25	10.00@10.50	8.50@ 9.50
Stock pigs	.....	9.00@ 9.75	10.00@10.75	8.50@ 9.00
SHEEP AND LAMBS.				
Medium to prime lambs (84 lb. down)	12.75@14.75	9.50@10.25	9.00@11.00	10.00@11.50
Culls and common lambs	8.75@12.75	7.50@ 9.50	6.50@ 9.50	7.50@10.00
Medium to prime yearling wethers	8.50@12.75	7.00@ 8.00	7.50@ 8.50	6.50@ 7.50
Medium to prime wethers	6.25@ 9.00	6.50@ 7.50	5.50@ 7.50	4.50@ 5.50
Medium to choice ewes	4.50@ 7.75	3.50@ 6.50	4.00@ 6.00	3.50@ 4.50
Culls and common ewes	2.50@ 4.75	2.00@ 3.50	2.00@ 4.00	2.00@ 3.50
Full-mouth to yearling breeding ewes	4.50@11.00	.....	.....	.....
Feeder lambs	13.00@14.75	5.00@ 7.00	.....	10.00@10.50

LATEST QUOTATIONS.

The Live Stock Market.

PORTLAND, Ore., Oct. 28.—Cattle—Choice steers, $6.50@7.25; medium to good steers, $5.75@6.50; fair to medium steers, $5.25@5.75; common to fair steers, $3.75@5.25; choice heifers, $5.50@5.75; choice cows and heifers, $4.50@5; medium to good cows and heifers, $3.50@4.50; common cows, $1.50@2; canners, $1.50@2; bulls, $4@4.50; choice feeders, $4@5; fair to good feeders, $4@5; choice dairy calves, $8.50@9.50; prime light calves, $8.50@9.50; medium to light calves, $7.50@8.50; heavy calves, $@7.

Hogs—Prime light, $10.25@10.85; smooth heavy, 250-300 pounds, $9.50@10; smooth heavy, 300 pounds up, $9@9.50; rough heavy, $7@8.50; fat pigs, $9.50@10; feeder pigs, $8.75@9.25; stags, subject to dockage, $5@7.

Sheep—Eeast-of-mountain lambs, $10@11; choice valley lambs, 10@11; medium valley lambs, $9@10; common valley lambs, $8@9; cull lambs, $6.50@8; light yearlings, $8@8.50; heavy yearlings, $8@8.50; light wethers, $6.50@7.50; heavy wethers, $5.50@6; ewes, $2@6.

SPOKANE, Oct. 28.—Cattle—Prime steers, $6.25@7; good to choice steers, $5@6; medium to good steers, $4.50@5; fair to medium steers, $4@4.50; common to fair steers, $3@4; choice cows and heifers, $5@5.50; good to choice cows and heifers, $4@5; medium to good cows and heifers, $3.50@4; fair to medium cows and heifers, $2.50@3.50; canners, $1.50@2.50; bulls, $2.75@4.50; light veal calves, $7@8.50; heavy veal calves, $5@7.50; stockers and feeders, $3.50@5.

Hogs—Prime mixed, $10.50@11; medium, $9.50@10.50; heavies, $7.50@9.85; fat pigs, $9.25 10.25; stockers and feeders, $9@9.75.

Sheep—Prime lambs, $9.25@10.50; fair to medium, $8@9.25; yearlings, $7@8; wethers, $6.50@7.50; mutton ewes, $3@6.50; feeder lambs, $5@7.

The Grain Market.

PORTLAND, Ore., Oct. 28.—Wheat—Hard white, western white, $1.17; northern spring, $1.13; hard winter, $1.12; western red, $1.10.

Grain futures—Wheat—Bluestem and Bart, October, November and December, $1.28; soft white, western white, October, $1.17; November and December, $1.16; hard winter, October and November, $1.12; December, $1.11; western spring, October, $1.13; November, $1.12; December, $1.11; western red, October, $1.10; November and December, $1.09.

Oats—Thirty-eight-pound naturals, October, November and December, $35.25.

Barley—Forty-four-pound minimum, October, November and December, $33; 40-pound minimum, October, November and December, $32.

Corn—No. 2 eastern yellow, shipment October, $34; November, $32; December, $31; No. 3 eastern yellow, shipment October, $33.50; November, $32; December, $30.75.

SEATTLE, October. 28.—Wheat, hard white,

(Continued on page sixteen.)

Farm Bloc Legislation

United States Senator Poindexter Urges Agricultural Producers to Use Cooperative Principle

The question is often asked, "How may benefit for the farmers be derived from the number of measures enacted by this congress for their benefit?" There is no doubt at all that many farmers have been relieved financially by the credits extended to them directly or indirectly by the war finance corporation. Of course the federal land bank, passed by an earlier congress, has also been of assistance through the hundreds of millions of dollars of credit extended to farmers at comparatively low rates of interest.

The dairymen's associations which had been prosecuted for violation of the Sherman anti-trust law can testify to the benefit that the cooperative marketing bill has been to them. The live stock growers also feel an increased measure of independence by reason of the removal of the abuse of the monopoly of the live stock markets in the packing centers by the meat packers, and if the reports of farmers' organizations and members of congress representing agricultural communities can be relied upon, the control of grain exchanges by the government ought to bring substantial relief to the grain growers.

The reflection has occurred to me that there may be needed some machinery by which, without delay or expense, these various measures and others enacted by congresses in the hope of promoting and improving the agriculture of the country, can be brought into play for the relief of the farmer and this suggests one aspect of a still larger question. The individual farmer ordinarily has neither time nor means to bring his case before the proper governmental authorities and prosecute abuses of the law from which he may be suffering along with his fellows. Government authorities of course can not be informed of the private situation or experience of the farmers unless some one brings it to their attention.

So it would seem that if the farmers are to gain full benefit from this vast mass of legislation enacted in their interests, it would be necessary for them to take advantage of their rights, made still greater by the act authorizing cooperative associations and organize for their mutual benefit. Through organization, adequate means can easily be provided for the prosecution of abuses arising from violations of these several enactments.

Something more is needed than the mere passage of laws. Even the government itself can not operate merely because of the enactment of laws or the adoption of a constitution. All these would fail, however excellent they may be, if there were not people to put them into execution.

So it is, that while I have been glad to support and in many instances actively promote the various farm bloc measures, at the same time I have felt that there is a greater need for cooperation among the farmers in definite and specific way before they could receive full benefit of these enactments or of any other enactments in their behalf.

In the first place, there are many things, of course, beyond the power of government, but as to those things which are clearly within the proper limits of government activities, the active interest of some organization especially concerned in their enforcement is absolutely essential. It would seem perfectly obvious that a large group of farmers could make a much better deal in purchasing from the manufacturers a large quantity of farm implements and machinery than one individual farmer could make in buying a single implement. So it would also seem that a large group of farmers could market to a much better advantage a large quantity of farm products than any individual member of the group could secure in marketing his own individual output.

Of course, this has long since passed the domain of conjecture. In California, farmers' organizations have revolutionized agriculture and brought prosperity to all their members. What has been done there can be done here and elsewhere. However, there is this to be said about it, in order to be successful, such organizations must be of sufficient size and strength to employ high class men to represent them in all the various phases of the business involved, just as labor and business concerns would do in their transactions in which they have become so successful and so powerful.

Another essential is that such associations should be conducted within themselves on sound principles of absolute integrity, economy and justice so as to avoid the inevitable failure and disintegration which the contrary principles would bring about.

After all, our government is founded upon the principle of "self-help." It can not bring prosperity and fortune to every individual. This is up to him. What the government can do and what it ought to do in so far as is humanly possible, is to offer an opportunity to every citizen to secure comfort and happiness in so far as he is able to do with the faculties with which he is endowed.

MILES POINDEXTER.

Too Little Water

By PROFESSOR L. J. SMITH, W. S. C.

I have a small stream of water on my place which I intend damming up for power. I can put in a six-foot dam, 12 feet wide, which will back up the water for 75 feet or more. From this dam I could get an inch and a half pipe of steady water. Could you give me information as to what kind of wheel to install to get the greatest power and what power can I expect? Would like to use it for running a generator for lighting the farm.

Uniontown, Wash. A. J. J.

I am afraid that you have not a sufficient volume of water with a sufficient fall to make it worth your while to install a generating plant. With a six-foot fall you would have to have a very considerable volume of water in order to generate even a few horsepower.

For example, if you were using a water turbine, which you would have to use for small falls such as in your case, if you had an eight-foot fall and 109 cubic feet of water per minute going over the fall, a small turbine would only develop a little less than one and a half horsepower. From these figures you can readily see that you would not get sufficient amount of water to make it worth while to install a power developing proposition on your place.

THANKSGIVING IS COMING.

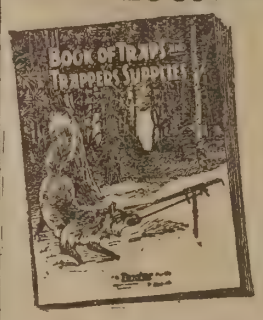
Large flocks of turkeys are reported from Okanogan county. H. H. Green of Tunk Creek has 500 that he is herding on the grain fields. Oswal Behimer has nearly that many. J. C. Dodge, a few miles east of Riverside, has nearly 100.

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Railroads Asleep on the Job

Interstate Commerce Commission Also Naps While Fruit Perishes for Lack of Cars

For the enormous losses suffered by the fruit growers of the Pacific northwest, losses that spell disaster in many instances, the railroads that serve this region are chiefly to blame. They are trying to shift the responsibility to the strikers and to the eastern lines for grabbing their cars and delaying their return to the west. But the railroads went into the shopmen's strike totally unprepared. They had allowed their rolling stock to run down, and when 400,000 shopmen quit work there was, to start with, an extraordinarily large number of out-of-order cars and locomotives. Of course the strike made a bad matter worse, and the strikers are also to blame for the heavy losses now suffered by the orchard owners. The further excuse that eastern lines have grabbed the cars of western roads is itself a confession of negligence. The western roads should have taken steps to stop that practice. They should have done a little grabbing themselves.

Had Adequate Warning.

Nor can the northwestern roads deny that they have had ample warning and sufficient protest growing out of previous failures to supply cars in sufficient numbers. At a hearing before the interstate commerce commission at Washington nearly two years ago O. O. Calderhead, rate expert of the Washington state department of public works, testified:

"I think it is just as well to inform the interstate commerce commission that last year, on account of the failure of the railroads to properly provide equipment, on apples alone from the Wenatchee district, claims have been filed with the Great Northern railway, which undoubtedly they will have to pay, in excess of $1,000,000. They were unable to furnish refrigerator cars and it is one of the matters which I would consider inefficient railroad operation, due to the fact that they knew approximately the amount of freight that would have to be moved, years in advance. It is not a matter that came on them suddenly. The trees were planted years ago, and the railroads knew approximately how many tons of apples they would have to move out of there. They did not provide refrigerator cars, and last year the loss to the apple growers and the loss to the railroads was in excess of $3,000,000, more than $1,000,000 of which will have to be paid by the railroads."

Asleep on the Job.

There is now grave reason to fear that the losses this year will run far into the millions of dollars. It looks as if everybody who has a responsibility was asleep on the job. Some time ago the interstate commerce commission gave a priority order to the railroads, giving preference to fruits, perishable goods and fuel over other commodities. Railroads and shippers have been ignoring that priority order, and it does not appear that the interstate commerce commission has sufficiently concerned itself with the vigorous enforcement of its order.

The law properly confers almost autocratic powers on the commission to deal with just such emergencies, to issue priority orders. But of what good is a law that is not enforced? Of what service to the fruit growers is a priority order that is not obeyed? The thing to do, and to do quickly, is to enforce that priority order.

The recent supplemental order of the commission, directing the eastern railroads to deliver 3500 cars to the western lines at Chicago, is just making the motions of relief. In the first place, it was a physical impossibility to deliver that number of cars by October 12, the date set; and, in the second place, even if the cars had all been there to be started west it would be two or three weeks before they could reach the orchard districts.

The railroads have drifted into this calamity, and are primarily to blame for it.

San Juan Fair

An excellent display of fruits, vegetables and grains was shown at the San Juan county fair at Friday Harbor October 13 and 14. This was the second annual county fair, and the exhibitors turned out in true community fashion in all departments.

In addition to fruits, vegetables and home products there was also a good turnout of live stock and poultry. Guernseys and Jerseys, of course, predominated in the live stock department, while the poultry were of many breeds and came from all parts of the county.

A number of interesting commercial displays helped to make the fair complete, and the state college demanded attention from the visitors by the exhibits which were set up by the extension service.

The flower department included many seasonal varieties from the local home gardens, including some very good specimens of dahlias and asters.

The county schools were represented by exhibits of work done by the pupils, and the better baby show was the big attraction for all mothers who possessed a husky infant to enter.

Much credit for the success of the fair, which was pronounced to be bigger and better than last year, should be given to C. J. Sandwitch, president of the fair committee, and the many department superintendents. W. W. Henry, county agricultural agent, gave much valuable assistance in getting the entries and the entire fair developed into such splendid shape.

A 100 Per Cent Record

The Gerard Creek Sewing club of Grays Harbor county has handed in a 100 per cent record for the year, to their club leader, Miss Mabel Webber. Their work consisted of the making of four garments, holding six club meetings and in addition each girl gave her mother a vacation from one or more household duties. At the final meeting for the club year the girls exhibited their articles and signed up the cards for the next year's work.

Members of the club are Verna Lemmon, president; Ruth Bleckschmidt, secretary; Lenora Carlson, Esther Olsen, Audrey Bleckschmidt and Marie Crisswell.

This is only one of the many similar clubs that have been working out the same plan under the direction of their local leader and Miss Webber. All clubs have taken a great interest in their work and the enrollment for next year looks very promising.

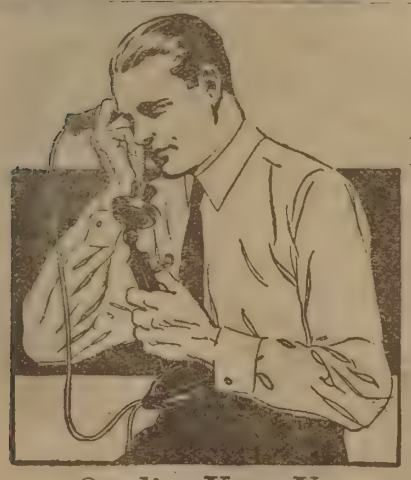
Farm Fair at High School

High school students are becoming interested in agriculture. There is an agricultural club, composed of students attending the Lewis and Clark high school in Spokane.

Last year high school students in Yakima held an apple show. This week they are holding a regular agricultural fair, some 800 exhibits having been entered. Nearly 500 of these are cereals and vegetables grown by students.

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LIVESTOCK AND DAIRY

Smith's Steers Outsell Brown's

PART II.

Everybody knows that all parts of the carcass do not bring the same price per pound. The housewife will pay much more for steak or roast than she will for stew cut from the same beast. Naturally a steer whose carcass is relatively heavy in the valuable parts should outsell one whose weight was more largely in the cheaper cuts.

In cutting up a side of beef into wholesale cuts it is divided into fore and hind quarter, generally between the last two ribs. The "round" is separated from the other two by a cut about half way between the hips and tail head down to the hind flank a short distance in front of the stifle joint. Another cut from the rear of this flank to the middle of the last rib separates the "loin" above from the "flank" below. In dividing the fore quarter the "foreshank" is cut off at the shoulder joint and the "plate" below is separated from the "rib" and "chuck" above by a cut from near the middle of the last rib forward through the shoulder joint. The "rib" and "chuck" are separated from each other by a cut between the fifth and sixth ribs, which lie just at the rear of the shoulder blade.

The prices per pound of these different parts of the carcass are shown in the first column of figures in the table which follows. The loin, rib and round are much the most valuable. These include the upper half of the steer's body from the rear of the shoulders on back to and including the thigh. The cheaper cuts include the lower and forward part of the body. The third column of figures in the table shows the usual percentage of the carcass weight that is found in each wholesale cut and the fourth gives the percentage of the value of the entire carcass in each cut when prices are as given in the first column of figures.

At the time this article was written the Chicago wholesale prices of high and low grade beef and relative importance of the wholesale cuts are given in the following tables:

Beef cuts.	High grade.	Low grade.	Percent of carcass weight in the cut.	Per cent of carcuss value in the cut.
Sides of beef	18 cents	7 cents	100 per cent	100 per cent
Hind quarters	23 cents	..	48 per cent	66 per cent
Forequarters	11 cents	..	52 per cent	34 per cent
Loins	38 cents	15 cents	17 per cent	37 per cent
Ribs	28 cents	7 cents	9 per cent	14 per cent
Rounds	15 cents	9 cents	23 per cent	20 per cent
Flanks	13 cents	..	4 per cent	3 per cent
Chucks	11 cents	6 cents	26 per cent	17 per cent
Plates	8 cents	..	13 per cent	6 per cent
Foreshanks	4 1-2 cents	..	4 per cent	1 per cent
Tallow	7 1-2 cents	..	4 per cent	2 per cent

At the present time hind quarters are selling for more than twice as much per pound as fore quarters. Loins, whence come porterhouse and sirloin steaks, are worth more than twice as much as the average value of the carcass as a whole. The loin and rib combined have 26 per cent of the weight of the carcass, but they contain, at these prices, 51 per cent of its value.

Records from the slaughter of large numbers of animals show that in some cases the loin makes up 15 per cent of the weight of the carcass, in others 19 per cent. The rib varies from 8 to 11 per cent, or the rib and loin combined may vary from as low as 23 per cent up to 30 per cent.

After all is said, however, this second requirement made by the steer buyer, that as much weight as possible be in the high-priced cuts, is the least important of the three. Variations in it are less pronounced and more difficult to perceive.

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Cattle Prospects Improving

The general feeling among Idaho stockmen is to the effect that although October 1 prices of cattle are unsatisfactory, market prospects are improving, with prices on the advance, according to the October live stock report, issued for the first time by the department of immigration, labor and statistics of the University of Idaho extension department. Ranges have not been overstocked this year and cattle are coming off in good condition. Reports indicate that the number of cattle on hand is less than usual. Lack of fall rain has left pastures and ranges generally dry, but considerable food is present in the harvested fields. Except in northern Idaho, which has experienced a dry season, hay supplies are ample. It is expected that much stock will be fed in the irrigated sections in the southern parts of the state. The average farm price of hay in north Idaho is $18 per ton, while in the southern part of the state, but $7.50 per ton is realized.

Hogs Need Minerals

Many farmers make the mistake of not including mineral elements in their hog feed. The minerals are needed for general body development, especially for blood and bone. The State of Washington animal husbandry department recommends a mineral ration made up of 25 pounds of salt, 50 pounds of bone meal and 50 pounds of charcoal or wood ashes. The charcoal and ashes act as a destroyer of worms and a general cleanser of the system. The salt, of course, is recognized as an essential in all animal feeding. The bone meal tends to aid in development of a stronger frame needed for the heavy hog.

CANADA'S DAIRY BUTTER OUTPUT.

Figures giving the total quantity of dairy butter produced last year in Canada show that the total output for 1921 was 122,776,580 pounds, valued at $45,893,082. This is an increase over the previous year of 11,084,862 pounds.

Increased production is shown by all the provinces with the exception of Prince Edward island, the largest proportionate increase, 36 per cent, being recorded by British Columbia. In order of dairying importance the provinces rank: Ontario, Quebec, Alberta, Manitoba, Saskatchewan, Nova Scotia, British Columbia, New Brunswick and Prince Edward island.

AN ESSENTIAL ELEMENT.

Salt should always be available to the live stock.



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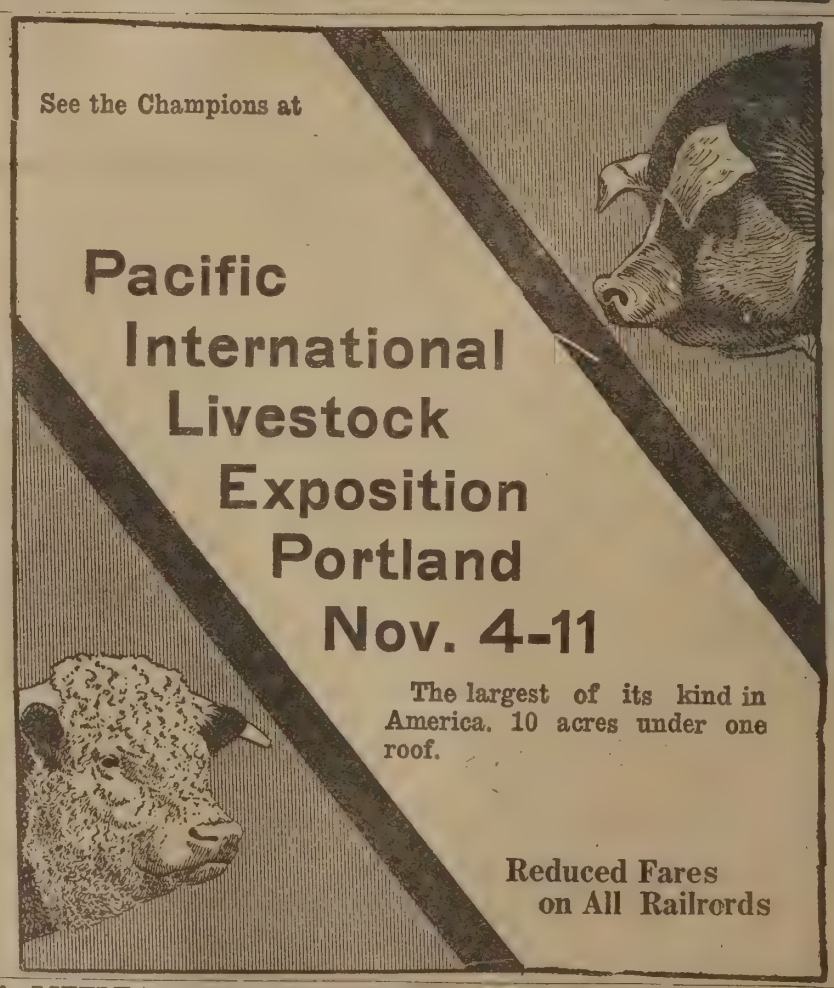
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Japanese Ruled Out

Must Give Up Reservation Leases

Japanese are barred in the future from leasing, subleasing or being employed as laborers on the Yakima Indian reservation. A year ago the United States department of interior ruled that no further leases of land could be made to Japanese and recently Secretary Albert Fall issued an order that any white man who should sublease to Japanese under labor contract would have his lease cancelled, and further that the Japanese could not work as laborers on the reservation.

It has been shown that in many instances white men have during the past season subleased through subterfuge to Japanese. There has, therefore, been further agitation by members of the American legion, which was instrumental in bringing the matter of leasing to Japanese to the attention of the department last year, for further rulings to effectively exclude the Japanese from any agricultural occupation whatsoever on the reservation, with the result that the recent order by Secretary Fall was issued.

There are said to be 1290 Japanese on the reservation and besides growing the bulk of the truck crops, such as cantaloupes, watermelons, onions and tomatoes, they have this season produced one-fourth of the potato crop of the Yakima valley. There has been a strong sentiment all through the valley that the Japanese should be excluded from the reservation in order that the farming of these lands might be left in the hands of the whites and the Indians.

It is recognized that because of a lower standard of living of the Japanese and because the whole family works in the fields, including the women and the children, the whites can not compete with them, or pay as high rents as they have paid. The truck gardening has been nearly monopolized by them and they have been a large factor in the production of vegetables and potatoes on the reservation. Last year a percentage of the leases expired and of those remaining in force 80 per cent expired this fall and the balance will run through next year. Therefore, a year from this time the last of the Japanese will be obliged to leave the district.

The Japanese, through their spokesmen, have made a strong plea for permission to remain and work on the reservation, and point out that during the war they subscribed to one-third of the Liberty bond quota of the district and came through 100 per cent in the Red Cross drive. They assert that Wapato and Toppenish bankers and merchants will lose $250,000 by the exclusion of the Japanese as this is the amount which they owe at this time. The Japanese made money on the reservation during the war, but are now heavily in debt, and if they can not remain and work, they will be unable to pay their debts, they declare.

These presentations have had little force with the interior department or with the local post of the American legion, as it is pointed out that many of the Japanese ar here illegally, having been smuggled into the United States from Mexico during the war. Sentiment is strong in favor of having the rich reservation lands farmed by white men instead of allowing aliens who do not have American ideals or live up to the standards of Americans to prosper at the expense of the white population.

CLARKE COUNTY NUT TREES.

A bumper crop of walnuts will be harvested in Clarke county this year, according to Dudley Eshelman of Lake Shore, who has 100 bearing walnut trees scattered through his prune orchard. The yield is expected to reach 150 pounds to the tree and the price per pound will be at least 20 cents, an average of $30 to the tree. Walnut trees around the city of Vancouver are loaded to the breaking point with nuts of unusually large size, and the quality of Clarke county walnuts is considered superior to the California product.

Convenient Farm Homes

Floor plans for a dozen conveniently arranged farm houses are illustrated in a new bulletin (No. 91) just issued by the extension service of the State College of Washington. Professor L. J. Smith, head of the department of agricultural engineering; Professor Rudolph Weaver, head of the department of architecture, and Miss M. Minerva Lawrence, extension specialist in home management, collaborated in its preparation from the material resulting from the competition held jointly by the college and the American Institute of Architects for the women of Washington.

The competition was on plans for three sorts of houses: Five, six and seven room bungalows; three or four room bungalows and six, seven or eight room houses of two stories. Each plan was to include a bath and a man's washroom on the ground floor, where the farmer, his sons and helpers could "clean up" before coming in to meals.

Nine business firms in the state furnished prizes for the competitors, all of whom were required to be women who actually had lived on a farm and, therefore, knew the farmer's wife's problems. The prize winning plans and those receiving special honorable mention are brought together in this bulletin and are the work of Mrs. J. C. Curry, Ferndale; Mrs. L. M. Goldsmith, Yelm; Mrs. Charles D. Gaines, Odessa; Mrs. Izola McKibben, Mount Vernon; Mrs. O. H. Prentice, Spokane; Miss Orilla Miner, Pullman; Emma Hefty, Bellingham; Mrs. A. J. Latimer, Kahlotus; Mrs. Lee Haddan, Vancouver; Miss Edith M. Cox, Kennewick, and Mrs. C. G. Waterman, Deer Park. The home of J. A. Adams, Fairfield, is shown on the cover.

Those planning to build, or to remodel an old farm house, will find the bulletin a help in deciding where windows, doors, closets, sink and other plumbing should be placed to make the home most convenient and save the housewife many steps.

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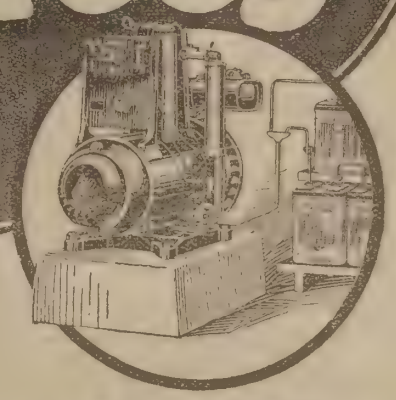
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POULTRY AND RABBITS

Poultry Problems

By W. D. BUCHANAN,
Poultry Specialist, State College of Washington.

I would like some information on raising geese. We have a half acre of alder bottom land well drained, with a small creek flowing through, and all kinds of green stuff grows easily. How many geese could we have? And would they live on what they could forage there? Could we hatch geese in an incubator? How much per dozen would the eggs be? Would we have to have a shed to shelter them at night? What kind of feed do they require from first to last? Do you think we could raise 300 geese with a good profit? Would a three-foot fence be high enough to keep them in?
Milton, Wash. MRS. E. S. H.

Geese need lots of pasture and are seldom profitable when pasture or waste vegetables is limited. You could probably carry about 25 on the half acre mentioned. They could live on the land so long as pasture is abundant, but the young goslings, and the geese during laying season, should be fed. Eggs could be hatched in an incubator, but the usual practice is to hatch with hens or geese. The price of eggs varies. They can sometimes be bought for 25 cents, but some breeders will charge $1. A light, dry shed is necessary for goslings, and is recommended for geese in bad weather. Bread and milk is excellent feed for goslings. So is equal parts of millrun and ground corn with milk. If milk is not available add 5 per cent meat scraps and mix with water. The latter ration is suitable for laying geese. All feed should have about 5 per cent, by weight, of fine sand. There is profit in geese if well handled. A three-foot fence will hold them.

THE MALE PIGEON.

Please tell me how to tell the male pigeon from the female. MRS. M. P.
Deer Park, Wash.

Sex is not easily determined, but if two squabs hatch in the same nest, the one that hatches about 12 hours ahead of the other is the male. When both hatch at the same time they are likely to be of the same sex. After this it is almost impossible to tell the male from the female till they are 5 months old. Mating in pigeons is always confined to a single pair, so that there is nothing to be gained by trying to pick the male. Hand mating, that is, placing two birds of opposite sex together, is almost always a failure. Voluntary mating is usually for life.

DROPSICAL CONDITION.

Can you tell us what is the cause of water around the bowels of chickens? The back of the body becomes heavy and almost drags on the ground. The chest becomes thin, and in one case the bowels were hard and inflamed. We haven't been able to treat them so that they could recover and have had to kill them. Will you kindly tell us what to do for them?
Langley, Wash. MRS. P. N. C.

Hens sometimes have what is termed a dropsical condition, the lower part of the abdomen becoming filled with a watery fluid. It is usually caused, I believe, by ovarian trouble, though it might sometimes be traced to digestive troubles. There is no cure for it when it reaches the stage you describe, and no cure at any time except to prevent it by giving the chickens more normal living conditions.

TREATMENT FOR SCALEY LEGS.

My yearling hens are bothered some with a scale or hard crust on their feet and legs and sometimes a swelling will come on the bottoms of their feet. They don't care to walk, but want to sit most of the time. Can you explain to me the cause and also a remedy for the trouble?
Sumner, Wash. L. L. C.

Scaley leg is caused by a small parasite, or mite, that burrows under the scales of the legs, causing a scab or crust. The mite develops in muck or filth. To cure it remove the cause and bathe the legs in coal oil and lard or dip them in some good stock dip. It would be well at the same time to spray the roosts and dropping boards with crude oil or single oil.

FEATHER EATING.

My 4-month-old pullets have free range. I feed them corn, wheat developing mash, charcoal and some fish meal and bone meal. There is plenty of fish meal and bone meal in the mash, yet they eat feathers. Can you tell me what it is they lack? Do chickens at this age get the white diarrhea? I lost one that seemed to have diarrhea. In case it is, what shall I do? MRS. G. A. O.
Hillyard, Wash.

The fact that a chicken eats a feather occasionally is not serious. If they eat many, however, or pluck them from the bodies of their mates, it is serious. The cause is sometimes crowding, or poorly-ventilated houses. At other times it is a lack of something in the ration. In your case it might be a lack of crude fiber. If so, a little sprouted oats would stop it. Chickens are not likely to show symptoms of white diarrhea at 4 months of age, though they may show the effects of it. There is very little of this disease in Washington. The case you mention was probably caused by some digestive trouble.

FORMULA FOR EGG MASH.

Please publish a good formula for egg mash that is economical. SUBSCRIBER.

An economical egg mash under present conditions could be made as follows: One hundred pounds ground wheat, 100 pounds bran or millrun, 100 pounds ground corn, 50 pounds ground oats, 50 pounds good grade meat scrap or fish fiber, 20 pounds old process oil meal, 30 pounds alfalfa leaves and blossoms, 20 pounds bone meal and 15 pounds flake charcoal. If milk is available, the oil meal could be omitted.

A CULLING PRINCIPLE.

Culling can be accurate only when hens are kept under uniform conditions, since it is a comparison of hens that have had like opportunities. Housing, feeding, freedom from parasites and contagious diseases, and good management, should apply alike to all birds compared. When these conditions are poorly met even good layers may be culled out, especially at certain seasons when they are not laying.

SPOTTING THE BOARDER.

Unprofitable hens usually have combs with long, narrow serrations, which are hard and shrunken and covered with whitish scales, says the O. A. C. extension service. The eye is usually sunken and not prominent seen from the front, and has a dull, lusterless expression. The long beak and narrow, crow-like head are never found on high record hens.

AS VITAL AS FOOD.

Water is essential to animal life.

UTILIZE YOUR GOOD MATERIALS.

Any woman can make fine caps for her men and boys of partly worn, cast-off garments. Besides materials she already has, she needs good flexible stiffenings, especially for the vizor. These are to be had, accurately cut, ready to use, with patterns and detail directions, for 30 cents, silver or money order, of Fullworth Mfg. Co., 4322 6th Northeast, Seattle, Wash. Their method assures a fit. Put this in your scrap book.—Adv.

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Turkey Geese	3½	1-⅛	2¾	1	2½	⅞	* 2 & 4
Brant Large Ducks	3¼	1-⅛	2¾	1	2½	⅞	4 in flight 6 over decoys
Medium Ducks Grouse Prairie Chicken	3¼	1-⅛	2½	1	2¼	¾	6
Squirrels Rabbits	3	1	2½	1	2¼	¾	6
Small Ducks Pheasants Pigeons Doves	3¼	1-⅛	2½	1	2¼	¾	7½
Quail Snipe Woodcock Shore Birds	3	1 or 1-⅛	2½	1	2¼	¾	8
Reed Birds	3	1	2½	1	2¼	¾	10
Trapshooting	3	1 ⅛	2½	1	2¼	¾	7½

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If BALLISTITE (*dense*) Powder is desired order by grains.
A comparison follows of *Bulk* and *Dense* Loads:

DRAMS		GRAINS	DRAMS		GRAINS
3½	equivalent to	28	2½	equivalent to	20
3¼	" "	26	2¼	" "	18
3	" "	24	2	" "	16
2¾	" "	22	1¾	" "	14

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ORCHARD AND GARDEN

Oyster Shell Scale

One of the commonest pests of fruit trees in western Washington is the oyster shell scale and it also affects other trees and shrubs as well as commercial orchards, according to Arthur Frank, plant pathologist of the western Washington experiment station at Puyallup. It is most noticeable on such trees as pears, apples and cherries.

It should be remembered that this pest is a parasite on the trees and consequently draws vitality from the tree, thus causing injury if allowed to become abundant.

There are a large number of eggs which are held over the winter by means of the protection afforded by the scales. These are very small and pearly colored. About the time apple blossoms fall in the spring these eggs hatch and the young scale comes forth. The young appear pin-point-like, white in color and wander about on the bark of the twigs of the tree. After a time they settle down and insert their beak-like mouth tube into the bark and begin sucking the juires of the plant. They also begin to form over themselves the hard scaly covering. There is only the one brood per year.

The control of the insect is accomplished in two ways. Spraying with the lime sulphur at the dormant time, that is, just before the buds begin to swell, will kill most of the eggs. The lime sulphur is particularly effective if not put on until just before the eggs hatch as at that time the eggs are very sensitive. Usually where trees are sprayed consistently each year for the dormant spray and also for scab there is not much trouble from the oyster shell scale.

Another way to attack the pest is to wait until the young scales are seen running about on the bark. Then spray with black leaf 40 at the rate of one-third pint to 50 gallons of water. This application kills them all.

If the oyster shell scale is allowed to go unchecked for a number of seasons it will eventually cover the bark of the tree and also get on fruit and may kill the tree or parts of it.

Disks Orchard Alfalfa

"There are about four different types of soil on our orchard land along the lake," said Walter Olive of Manson, Chelan county, Wash., "Some of them are slightly sandy, but there are none that are light enough to allow for the continuous alfalfa cover crop without disking. In sections where the soil does not pack badly it will work better, but we find that some cultivation is really necessary for best results.

"One orchard of Delicious has an alfalfa crop which is a little more than a year old, but it will need some disking this fall. The hauling of the spray machines through the rows causes the soil to pack slightly and a disk will loosen it up in fine shape and still do no harm to the alfalfa. This could hardly be done last year because the plants were young and we wanted them to get a good start. From this year on the crop will be given a good disking each fall.

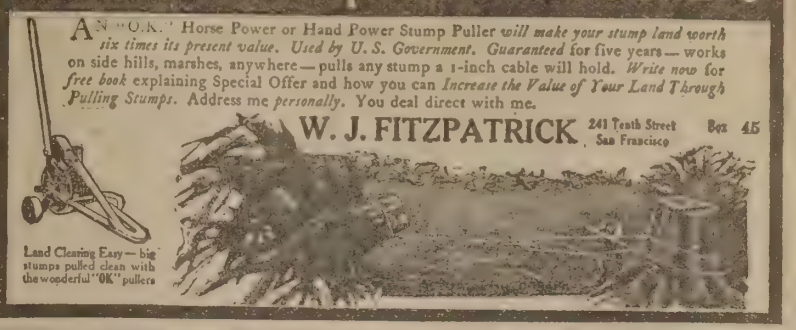
"The practice of turning such a crop under with a disk is very good for the soil, since it prevents packing, returns much humus to the soil and allows for more water to be taken up. By preventing a dry mulch at the surface the humus has a better chance to decay and thus become available for use by the trees."

One disadvantage to the system is mentioned by Mr. Olive. The apple harvest usually lasts until late in November and by this time it is almost time for cold weather to set in. In cases where it freezes up before the disking can be finished the work must be held over until the early spring, which is not as beneficial for the soil.

Turn Your Stump Land into Dollars

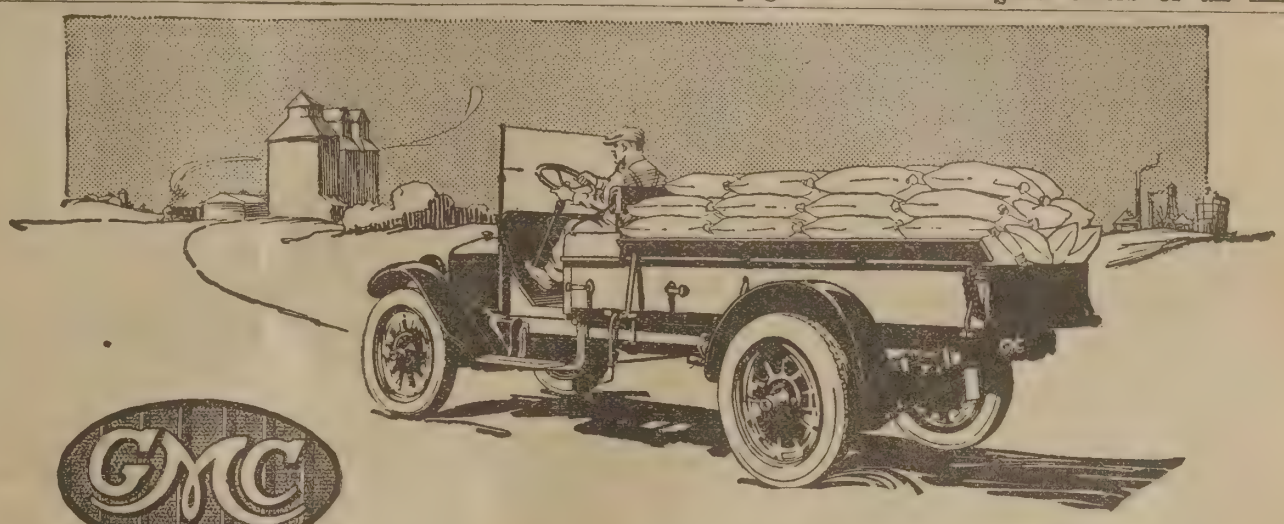
An "O.K." Horse Power or Hand Power Stump Puller *will make your stump land worth six times its present value. Used by U. S. Government. Guaranteed* for five years—works on side hills, marshes, anywhere—pulls any stump a 1-inch cable will hold. *Write now for free book* explaining Special Offer and how you can *Increase the Value of Your Land Through Pulling Stumps.* Address me *personally.* You deal direct with me.

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A "Jim-Dandy" Truck

Model K-16, One Ton

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Chassis only—at the factory

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For general farm use, on hard roads or in rough fields, the Model K-16 one ton GMC provides more pulling power, more speed, and more economy than other trucks of the same capacity.

Moreover, this "Jim-Dandy" truck is built from truck parts exclusively—no passenger car parts used. Consequently it has the sturdiness and enduring performance that is demanded for hauling over all kinds of roads and in all kinds of weather.

The exclusive features of GMC construction, developed from more than ten years of successful truck building, have provided this truck with more continuous performance and lower operating and maintenance costs. Due to its advanced design there is not a single wearing part in this truck that cannot be replaced. Such refinements as Removable Cylinder Walls, Removable Valve Lifter Assemblies, Pressure Lubrication, and Instantaneous Governor action all give to this truck the dependability that is so vital in farm trucking.

In every detail of construction the Model K-16 has been built according to the most approved and most advanced practices.

Magneto ignition, electric lights and starter with conduit wiring entirely separate from the ignition wiring, radius rods, thermo-syphon cooling, oversized brake drums, interchangeable brake rods, complete instrument board, pressure chassis lubrication, cord tires—

All these are universally accepted as the best for motor truck use—all these are standard in this GMC.

Measured by any standard this one ton truck has no superiors—and its cost, considering its quality, is much lower.

Write for an illustrated booklet, "Motor Trucks on the Farm."

GMC Chassis list at factory as follows: One Ton, $1295; Two Ton, $2375; Three and One-half Ton, $3600; Five Ton, $3950; tax to be added

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Fall Sowing

Sow in the fall and secure an early start in the spring.

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The Inland Seed Co.

Spokane Washington

Hold Club Contests

An interesting feature of the first annual dairy and live stock exposition held recently at Everett was the boys and girls' club contest, which took place on Saturday, the third day of the show. The boys were divided into two classes as listed below, together with their winnings.

In class A, including boys of 10 to 14 years, inclusive, first place was won by Harvey Galbraith of East Stanwood, a member of the Stillaguamish Purebred Calf club; second place was won by Svend Larson of East Stanwood of the same club; third place by Lief Brue and fourth place by Leland Grissom.

The prizes offered in this class were: First, $10; second, $7.50; third, $5, and fourth, $2.50. A beautiful silver loving cup offered by Batcheldor & Corneil, clothiers of Everett, for the best showing made in this class was won by Harvey Galbraith.

In class B, boys 15 and over, Norman Refling of Snohomish Purebred Dairy Calf club won first place, winning a silver cup donated by Don McRae, prominent Jersey breeder of the county. He also won a $10 cash prize. No other prizes were awarded in this class.

The two representatives of the Silvana club were close contestants for prizes in class A, one of them losing out by only one point.

The boys were also allowed to show their animals in open competition. Leland Grissom's heifer won third in the junior yearlings, while Harvey Galbraith's heifer, a Guernsey, took third place in the senior calf contest and Lief Brue's fourth place in the junior yearlings. The interest shown by farmers and others at the show ring during the time the judging was going on was very noticeable and some of the boys themselves were on hand to see their calves judged. W. D. Love, the county agent, who has acted as club leader, helped the boys care for their animals and prepare them for the show ring.

Aims to Spray at Right Time

J. H. Fraser, whose orchard is in the Lower Naches of the Yakima valley, sprayed his apple trees only twice this year, one calyx spray and one cover spray. While worms may be plentiful in some orchards, Mr. Fraser reports but one-half of 1 per cent of worms this year in his orchard. He says he aims to spray at the right time and in the right way.

He has two outfits at work all the time and the third one stands ready for use should either one of those running break down. Seventy-five acres of orchard are thus handled with two outfits running constantly while the spraying season is in progress.

It may also be stated that the community is composed of commercial growers of fruit and there are no neglected orchards to infest the district. Mr. Fraser reports the largest crop he has ever had and expects to get 45,000 boxes from the 75 acres. Jonathans are an especially fine crop with him this season. All his apples are hauled to Yakima for packing.

Keeps Check of Costs

While cherries are grown successfully in western Washington, they are not grown on a commercial scale as a general rule, but Rudolph Baer of Ferndale has 85 trees on which he kept a close check of all costs. From the 85 trees he received a gross income of $913. The cost for harvesting was $208, while other incidentals amounted to $4, which brought the net return to a little over $700.

It should be remembered that these figures were produced in an exceptionally dry year when other crops were below normal. The illustration points out the value of diversified crops to insure a steady return to the farmer.

To Check Fire Menace

As a step toward checking the smoke nuisance, which is common to all parts of western Washington during the summer months, the second annual forestry convention at Seattle suggested a ban on all fires, except the burning of forest debris in piles in open clearings.

A further recommendation was made which called for screened windows for smoking compartments of railroads and stages which would prevent fires from starting by lighted matches or cigars thrown from the window. Other measures were suggested, all of which will help curtain the fire menace if made a part of the state laws.

Reforestation measures were drawn up and the lawmakers will be asked to make adequate appropriations for replanting the cut-over lands and make them productive. This, of course, applies to lands that are not suited for agricultural purposes. The cutting of Christmas trees from replanted lands was condemned as a serious setback to reforestation.

The conference was held under the auspices of the forestry committee of the Seattle Chamber of Commerce and was held in the lobby of the latter organization. Dean Hugo Winkenwerden, of the school of forestry at the University of Washington, was chairman of the convention.

Women's Fair Exhibit

"I have never seen more splendid exhibits," said Miss Maud Wilson, extension state home demonstration leader of the Washington State college, in speaking of the women's departments at the different fairs over the state. "Not only was the quality of entries high, but they were attractively and conveniently displayed. I especially noted their freshness and the care with which they had been prepared for entry. There were few articles that were not distinctly modern, and in a sewing, fancy work or millinery exhibit, out-of-date articles are as little to be desired as in a woman's wardrobe.

"The big need in most of the fairs is more room for display. I found that superintendents had spent days in arranging exhibits, where hours would have been sufficient had more room been provided.

Farmers' Want Ads

SALESMEN WANTED 12

MEN WITH CAR TO SELL RIM TOOL; MAKE from $100 to $150 per week. Box 772, Spokane.

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BEHNKE-WALKER BUSINESS COLLEGE of Portland; one of the largest institutions of its kind in America; guarantees a position to every graduate. Enroll now for fall term. A few months training under expert instructors and you are ready to enter business and win. Behnke-Walker graduates are always in demand. Write today for our free success catalogue. Address Behnke-Walker Business College, Fourth, near Morrison, Portland, Ore.

FRESH FOOD PRODUCTS 51-1

PRUNES—LEIGHTON ITALIAN EXCELS ALL other varieties for profit; 40 per cent larger than Italian; 25 per cent more sugar; tests 40 per cent dried. General line of other stock. Lafayette Nursery Co., Lafayette, Ore.

FRESH FOOD PRODUCTS (Continued) 51-1

SIRES' PURE YAKIMA HONEY, BEST PRODUCED from alfalfa and sweet clover; 60-lb. can, $6.75; two for $13.20; six 10-lb. pails, $7.20; twelve 5-lb. pails, $7.80; 60-lb. can, insured, parcel post to second zone, $7.50. Theodore Sires, Route 4, Yakima, Wash.

CHOICEST YAKIMA VALLEY HONEY. 1 60-lb. can, $6.50; 2, $12.75; 6 10-lb. pails, $7.50; 12 5s, $8; 24 2½s, $8.50; 12 2½s, $4.50. Discount five-case orders, 10 per cent. Wm. R. Sires, Wapato, Wash.

NEW HONEY, FINE QUALITY ALFALFA, sweet clover; 60-lb. can prepaid, second zone, $7.29; two, $12.75; not prepaid; 3 10-lb. pails, prepaid, second zone, $4.25. Harry Fisher, Prosser, Wash.

FINEST HONEY, 60 POUNDS, $6.50; 2 CANS, $12.75; add postage; 10 pounds, $1.70; 5 pounds, 90c, both postpaid. Satisfaction guaranteed. Geo. Bancroft, Hermiston, Ore.

POPULAR BRAND HAPPY HOME HONEY—One 60-lb. can, $6.50; two cans, $12.75; six 10-lb. pails, $7.50; comb honey prices on request. H. N. Paul, Mabton, Wash.

EXTRACTED HONEY—ONE 60-LB. CAN, $6.50; two 60-lb. cans, $12.75, collect; three No. 10 pails, prepaid, third zone, $5. Wells D. Rose, Sunnyside, Wash.

GOLD MEDAL BRAND YAKIMA ALFALFA, sweet clover honey; 60-lb. can, $6.50; two cans, $12.75. C. W. Higgins, Wapato, Wash.

DELICIOUS NEW CLOVER HONEY, 120 pounds, $9.75; 30 pounds, $3.25; won't crystallize. Browne, Box 499, Twin Falls, Idaho.

3-POUND BOX ABSOLUTELY BONELESS codfish; fine white, new catch fish, delivered by mail, $1. Coffin Fish Co., Seattle, Wash.

NICE OREGON PRUNES DIRECT, $7.75 PER hundred. Special 12½-lb. sample bag prepaid $1.80. Kingwood Orchards, Salem, Ore.

(Continued on the following page.)

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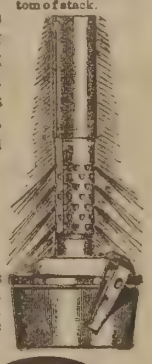
The DUNN
With Improved Lower Stack, Umbrella Cover and Removable Top Cover.



It is important that orchardists insure their crops against frost and freezes—because when killing frosts do come—the loss is appalling. These losses can be eliminated. DUNN Orchard Heaters completely solve the problem.

650 thousand DUNN Orchard Heaters in use by California citrus growers. Hundreds of thousands this type used elsewhere in U. S. Most effective because of exclusive patented features. Improved lower stack with perforations depressed to **inside**, radiates heat to side **and down**—with most heat at bottom of stack. Perfect combustion. All heat—no smoke. Joints fit tightly. **Only draft** is through patented **downdraft tube.** Heat generated rapidly; maximum protection secured at once.

Improved stack with perforations depressed to *inside*. Radiates heat to side and to ground—with most heat from bottom of stack.



The DUNN Orchard Heater

is the only orchard heater with **permanent asbestos** lighting wick. Lights quickly and stays lit. Burns clean as a gas jet. Uses less oil. 9½ gallon heater burns 20 hours at 100% efficiency, without refilling. Patented swedge on bowl is hand grip for carrying heater. Made of 24 gauge extra heavy Keystone Copper Bearing Steel. Seamless bowl and cover.

Orchard Heaters Needed Everywhere

Growers of oranges, grape fruit, limes—apples, peaches, pears, plums, cherries, berries—every orchardist—from largest to those with less acreage—you should make **prompt inquiry as to the DUNN Orchard Heater and how it protects profits.**

Records—everywhere—show DUNN Orchard Heaters **do** pay hundreds of dollars on investment. First cost—except for fuel—is only cost. Depreciation based on actual facts, less than 2 per cent for 8 years.

Investigate! Write Us Today

You need DUNN Orchard Heaters. Write for booklet which gives facts and valuable information on how to protect YOUR crops and insure profits. Every orchardist should have it. Write today. No obligation. A postal will do. Address

WANTED: AGENTS
Representatives wanted in every county. Good pay weekly. Good territory open. Write today.
DO IT NOW

Geuder, Paeschke & Frey Co.

1576 St. Paul Avenue (Established 1881) MILWAUKEE, WIS.

Special Representatives Everywhere

Representatives in every fruit growing territory. Upon request we will give you name of one nearest you. Also other valuable information that will assist you to increase profits.



Where DUNN Orchard Heaters are manufactured. The plant of the Geuder, Paeschke & Frey Co. A well known, long established company—who have built a successful manufacturing enterprise by selling at lowest possible prices and rendering prompt, efficient service.



Blast 1/2 more stumps per dollar

BY using Pacific Stumping Powder, you can cut the cost of clearing your land. For 50 cents more than you pay for 85 sticks of any standard stumping powder, you can buy 130 sticks of Pacific Stumping.

Every stick of Pacific Stumping has approximately the same strength as a stick of standard stumping powder, and for land-clearing it shoots with it, stick for stick. And it is non-headache and *non-freezing*. Your saving is 2½ cents (or 30%) per stick.

Think what this new explosive means to you! Nearly ½ more acres cleared at the same cost, or the same number of acres cleared at the saving of about ⅓ in cost of dynamite.

Buy Pacific Stumping at your local dealer's. Write for booklet "The Development of Logged-off Lands."

E. I. DU PONT DE NEMOURS & CO., Inc.
Seattle Spokane Portland

NON-HEADACHE DU PONT NON-FREEZING
PACIFIC
STUMPING POWDER

FRESH FOOD PRODUCTS (Continued) 51-1

"HONEY BRAND" HONEY — ALFALFA, sweet clover product; pure, light, thick, good flavored; gives satisfaction wherever used; I 60-lb. can, $6.50, two for $12.75. Write for circular and prices in pails. Oliver Sires, Wapato, Wash.

NEW CROP ALFALFA-SWEET CLOVER honey; 60-lb. can, $5; two cans, $9.50, f. o. b. Rigby. Heckman & Larsen Honey Co., Rigby, Idaho. Quality guaranteed.

HONEY — FRESH ALFALFA-SWEET CLOver honey; one 60-lb. can, $6.50; two cans, $12.75. A. L. Traner, Touchet, Wash.

HONEY—CLOVER AND ALFALFA. TWO sixty-pound cans, $9.50. J. M. Ruyts, Buhl, Idaho.

MERCHANDISE 59

ARMY GOODS—STAG SHIRTS, $3.45; ARMY wool shirts, $3.25; work shoes, $2.95; officers' dress, $3.95; russets, $4.25; wool breeches, $1.95. Price list furnished. Walker's Army store, 501 Trent, Spokane.

MISCELLANEOUS—FOR SALE (Continued) 60

SASH AND DOORS—O. B. WILLIAMS CO., 1943 First ave. So., Seattle. Chicken house sash, 20" wide by 25" high, 80c; a dozen different sizes in stock for immediate shipment. Skylights for chicken houses, 36"x40"; price, glazed, $2. This is the size recommended by the Western Washington experiment station. We carry them in stock for immediate shipment. Sash and doors for all purposes at lowest prices. All orders receive prompt attention. Our large illustrated catalog No. 35, showing full line of building material and built-in fixtures for the home, free on request. O. B. Williams Co. Established 1899.

TO INTRODUCE OUR THREE-YEAR-OLD TObacco, will sell 10 pounds "regular smoking," 95c; best weak smoking, $1.45; best smoking, $2.25; best Burley smoking, $2.95; medium chewing, $1.95; best chewing, $3.25; 3 pounds best Burley, $1; 100 fine cigars, $3.95. Pay when received. Pound sample prepaid, 30c. Satisfaction guaranteed. Catalogue free. Kentucky Tobacco Co., Owensboro, Ky.

SACKS—SECOND-HAND GRAIN AND SPUD correctly sorted and graded; also pipe, new and second-hand, any size; standard roofing paper at a big saving; pumps, engines, belting, cables, etc. Alaska Junk Co., Inc., S120 Adams st., Spokane, Wash.

HOMESPUN TOBACCO — CHEWING. 5 pounds, $1.75; 10 pounds, $3; 20 pounds, $5; smoking, 5 pounds, $1.25; 10 pounds, $2; 20 pounds, $3.50. Send no money, pay when received. Cooperative Tobacco Growers, Paducah, Ky.

TOBACCO—THREE-YEAR-OLD KENTUCKY leaf. Pay for tobacco and postage when received, 3 lbs. chewing, $1; 4 lbs. smoking, $1; 7 lbs., No. 2 smoking, $1. Kentucky Tobacco Ass'n., Hawesville, Ky.

WALL BOARD—WRITE FOR SAMPLE OF Washington plaster wall board; won't warp, won't burn. Manufactured by Washington Building Products company, 6851 E. Marginal Way, Seattle, Wash.

HOMESPUN SMOKING TOBACCO, MILD and mellow; 10 lbs., $1.50; 20 lbs., $2.75; delivery guaranteed. We furnish free recipe for preparing. Smoking Tobacco Exchange, Sedalia, Ky.

CANE MOLASSES FED TO STOCK MAKES more milk, healthier animals, lower feed costs; cheaper than corn. Write Arthur A. Lewis & Co., distributors, S151 Lincoln st., Spokane.

NATURAL LEAF TOBACCO, CHEWING, 5 lbs., $1.75; 10 lbs., $3; smoking, 5 pounds, $1.25; 10 pounds, $2. Send no money, pay when received. Tobacco Growers' Union, Paducah, Kentucky.

OUR FREE NEW FALL CATALOG OF GROceries and general merchandise will save you big money; a postal card brings it. Write today. Jordan Lawler company, Box 615T, Spokane.

FREE—EVERYBODY CAN BUY GROCERIES wholesale. We accept orders of $10 and up. Write for our free list. Save dollars. People's Grocery Company "M." 701 Olive st., Seattle.

ALL WOOL KNITTING YARN FOR SALE, direct from manufacturer, at 95c, $1.35, $1.60 per lb.; postage paid on $5 orders. Free samples. H. A. Bartlett, Harmony, Maine.

BUY YOUR ALFALFA HAY AND NETTED Gem potatoes direct from grower. Samuel Shockley, Box 185, Outlook, Wash.

MISCELLANEOUS—Wanted. 63

EGGS, APPLES, HUCKLEBERRIES—WRITE us. Uncle's Delicious Pies, Inc.; capital stock $50,000. 554 Mississippi avenue, Portland.

STOVE REPAIRING 128

WRITE MYER RUBENS, SPOKANE, ABOUT stove repairs, welding broken parts, nickel plating.

FUR-BEARING ANIMALS 170

SILVER AND CROSS FOXES FOR SALE. William Rambo, 407 Sprague, Spokane.

PETS—Dogs, Birds, Etc. 171

WHEN YOU WANT A DOG, CANARY, PARrot, rabbits or a pet or pet stock supplies, cages, feeds or remedies, write. We are headquarters in the northwest. Routledge Bird, Pet & Animal Co., 174 Union avenue, North, Portland, Ore.

PEDIGREED SMOOTH FOX TERRIERS; best ratters, pups, spayed females and brood matrons. Pinecroft Kennels, Olympia, Wash.

FOR SALE—FOX HOUND PUPS; BEST TREE dogs on the coast. J. E. Bateman, Gales Creek, Ore.

CHOICE SHEPHERD PUPPIES, WORKERS. Leslie G. Foster, Pasco, Wash.

POULTRY 174

WILLAMETTE VALLEY BARRED PLYmouth Rocks. Over fifteen hundred young birds in 1922; heavy laying strain, dark and beautifully barred; cock birds and cockerels for sale; only the very best allowed on the Dimick stock farm; bank references. F. C. Waldron, R. F. D. 2, Hubbard, Ore.

ANSWER THIS AD AND RECEIVE FOUR months' trial subscription to the west's oldest and best exclusive poultry magazine. Send only 25c. Expert writers on practical poultry subjects. Latest poultry news. Illustrated. Special offer, two years, $1. The Pacific Poultryman, Seattle, Wash.

BABY CHICKS FROM TRAPNESTED NORTHern-grown stock; noted for great egg production; large white eggs and vigor; flock averages 225 eggs; $20 per 100. Order early. Catalogue free. Highmount Poultry Ranch, Empire bldg., Seattle, Wash.

BABY CHICKS—OREGON'S BEST AT REAsonable prices. Leghorns, R. I. Reds, Anconas, Minorcas, Barred Rocks, White Rocks. Order early. Catalog free. C. N. Needham, Salem, Ore.

FARMERS' WANT ADS

This is the farmers' "want," "sale" and "exchange" department for small advertisements of farmers, including live stock and poultry.

Advertising rates for ads running 1 to 3 times, 10c per word per insertion, with a special rate to Farmer subscribers, as follows: Ads running 4 to 12 times, 9c per word per insertion; ads running 13 times or more, 8c per word per insertion.

All commercial and land advertising 10 cents per word each insertion. Open also to nonsubscribers.

In using these columns advertisers must observe: (1) No advertisements will be inserted for less than $1.00. (2) Every word, number and initial, including name and address, must be paid for. (3) New advertisements, changes of copy or cancellations must reach general office, Spokane, Wash., 10 days in advance of publication date. (4) Cash must accompany order.

Above rates include insertion in The Washington Farmer, The Idaho Farmer and The Oregon Farmer, which constitute the Pacific Northwest Farm Trio, 46 Review Building, Spokane, Wash.

POULTRY (Continued) 174

PULLETS—1500 APRIL AND MAY HATCHED White Leghorn pullets for sale at attractive prices; hatched from thoroughbred Hollywood and Tancred strains; sired by cockerels 250 to 290 egg strains. We ship at three months of age and guarantee satisfaction or you may return the birds in 3 days. We can give you quality and service. Queen Hatchery, Seattle, Wash.

BABY CHICKS OF BEST QUALITY ARE hatched in our Petaluma electric or hot water incubators. Buy chicks hatched in Petaluma incubators or hatch for yourself. Send for free literature and let us tell you something worth dollars to you. Petaluma Electric Incubator Co., Petaluma, Cal.

CERTIFIED WHITE LEGHORN BABY chicks, hatched in the world's largest electric hatchery; choice free range, high egg producing breeding flocks, inspected by the Sonoma county farm bureau. Safe arrival guaranteed. Must Hatch Incubator Co., 445 Seventh st., Petaluma, Cal.

WHITE LEGHORN BABY CHICKS, FROM free range Hoganized stock; breeding flocks inspected by Sonoma county farm bureau; accredited hatchery inspector. Full count and safe arrival guaranteed. For price write to Lafranchi Hatchery, Petaluma, Cal.

COCKERELS, BARRED ROCKS, BRED FROM high producing O. A. C. hens and Tompsons Ringlet prize winning males; beauties, $3 to $5 each. Also standard bred White Rock pullets, 300-egg strain, $18 doz. Mrs. E. Lammey, Central Point, Ore.

WHITE LEGHORN BABY CHIX FOR SUMmer and fall months from stock accredited by Sonoma county farm bureau. We guarantee safe arrival. Write for prices and literature. The Pioneer Hatchery, 422 Sixth street, Petaluma, Cal.

PEDIGREED ANCONA COCKERELS FROM hens with 333-egg record in 365 days. Prices, $3 to $10, half usual price for such excellent breeding. Prompt shipment. Smith's Ancona Farm, Nampa, Idaho.

BABY CHICKS — WE GUARANTEE OUR chicks to be from the highest producing hens in Petaluma. Write for further information. The White Hatchery, Petaluma, Cal.

DOLLARS FOR YOUR EGGS—WE PAY THE top market prices for your eggs and poultry. Daily cash remittances. McClintock-Trunkey Co., produce department, Spokane.

GIANT BRONZE TURKEYS FROM MY OREgon state fair and Pacific International winners. Sold on approval. Herbert Stoneberg, Route B, Eugene, Ore.

BRONZE TURKEYS $15 PAIR; EMBDEN geese, $9; Plymouth Rock cockerels, $2; purebred stock; order now. Emma Moehnke, Hoff, Ore., R. 1.

PUREBRED MAMMOTH BRONZE TURKEY toms, $9; hens, $7. Purebred Barred Rock cockerels, $3. H Betebenner, Midvale, Idaho.

WHITE WYANDOTTE COCKERELS, REGAL Dorcas strain; exchange for turkeys, geese, Runner ducks. E. C. Lane, Olympia, Wash.

40 QUALITY R. I. RED COCKERELS, $5 and up. Write your wants. Can please you. J. Nonnenmacher, Route 3, Yakima, Wash.

SINGLE COMB ANCONAS, SHEPPARD'S strain; one-year-old hens, $1.50 each; cockerels, $3. R. P. Irwin, Tonasket, Wash.

S. C. BROWN LEGHORNS, COCKERELS, hens, pullets; none better; stock guaranteed. E. H. Rosenkranz, Colfax, Wash.

ANCONAS, COCKERELS FROM PRIZE WINners; egg producing stock; ask us about them. Oscar Dunlap, Junction City, Ore.

S. C. BUFF LEGHORNS, BREEDING STOCK; trios, five dollars; fine stock; order direct. M. H. Mann, Woods Cross, Utah.

PURE MAMMOTH BRONZE TURKEYS; prize winning stock. Mrs. Frank Browning, Nampa, Idaho. R. 1.

BRONZE TOMS, NOVEMBER DELIVERY, eight and ten dollars. Harry McGuane, Route 2, Auburn, Wash.

RANEY STRAIN RHODE ISLAND RED cockerels, direct. Write Mrs. Rominger, Underwood, Wash.

PUREBRED S. C. WHITE MINORCA COCKerels and hens, $2 each. Mrs. Andrew Schmidt, Charlo, Mont.

ALLEN'S ROCKS AND LEGHORNS WIN, LAY and pay. Write your wants. D. W. Allen, La Conner, Wash.

CHOICE MAMMOTH BRONZE TURKEY toms, $10; hens, $5. Amelia Reimers, Eagle, Idaho.

FOR SALE—HIGH CLASS ANCONA COCKerels and pullets. Geo. W. Fonner, Weiser, Idaho.

GOOD MAMMOTH BRONZE TOMS, $8; HENS, $6. Geo. Bain, Castle Rock, Wash.

BARRED ROCK PULLETS, $1.25 EACH. MRS. Newell Reed, Clem, Ore.

LIVE STOCK 177

SAVE THE CALVES—"SAVACALF," A POWerful germicide, is used for treating contagious abortion in cows. It drives the disease from those that have it, and prevents the clean herds from getting it. Simply mix it with the salt and treat the whole herd at once. Costs 25 cents per head per year. Every breeder should use it. $5 package postpaid. Absolutely guaranteed, or money refunded. H. C. Babbitt, Boise, Idaho.

WE GUARANTEE TO PAY THE HIGHEST market prices for your poultry and live stock. Owing to the constant changes in the market we are unable to quote prices in this paper from week to week. We will furnish tags and prices when you are ready to ship. Write us what you have to sell. Prompt returns. John Lewis & Co., Spokane, Wash.

BUY YOUR BOY A BERKSHIRE; HAVE some very good pigs, both sexes; also a one-year-old boar; all registered stock. Mooers & Hatch, Grangemont, Idaho.

WE PAY TOP PRICES FOR YOUR LIVE OR dressed veal, hogs and poultry. Your check by return mail. Shipping tags on request. M. & J. Packing Co., Spokane.

LIVE STOCK (Continued) 177

LARGE, HEAVY PRODUCING HOLSTEINS for sale at all times in car lots; tuberculin tested; 150 to 200 head always on hand; well marked heifer calves from registered sires and heavy producing dams; crated for shipment anywhere, $25 f. o. b. Levinson & Balmelli, Yakima, Wash.

DEWEY'S BIG TYPE, REGISTERED, OHIO Improved Chester Whites; yearling sows, boars and pigs. Frank Dewey, Olympia, Wash.

REGISTERED DUROC-JERSEY WEANED pigs of best breeding; shipped on approval. Herman E. Conner, Argora, Idaho.

FOR SALE—REGISTERED BIG TYPE POland China and Chester White hogs. Elton Webb, New Plymouth, Idaho.

TOP FANCY LIGHT VEAL, 12½C. JONES AND Williams, S101 Division st., Spokane, Wash. Prices subject to fluctuations.

SPOTTED POLAND CHINAS, CHOICE SPRING boars, large, smooth and easy keeping. Henry Mitchell & Son, Joseph, Ore.

50 YOUNG REGISTERED SHROPSHIRE ewes; also yearling rams. Write McK. Edwards, Valley, Wash.

FOR SALE—SHORTHORN CATTLE, HAMPshire hogs, Oxford sheep. Cottonwood Stock Farm, Molalla, Ore.

CHOICE, PUREBRED, BROWN SWISS COWS, heifers and bull calves. G. W. White & Son, Meridian, Idaho.

MILCH GOATS, BRED DOES, $15 TO $30. Fannie Branson, Dallas, Ore.

HARNESS and SADDLERY 189

SEND FOR FREE HARNESS AND SADDLE catalog today; cut out the middleman, buy direct from the manufacturer. Lowest prices in the west; satisfaction guaranteed. Established 1881. Write Pierce Harness Co., Dept. T, Spokane, Wash.

HAY FOR SALE 200

CHOICE ALFALFA HAY, GREEN AND leafy; the kind that dairymen like to feed. Timothy and wheat hay for horses. Write for delivered prices. J. F. Jacobson, Kennewick, Wash.

ALFALFA HAY, GUARANTEED QUALITY; prompt shipment; buy direct and save money. Prices upon application. Ernest T. Freepons, Walla Walla, Wash.

ALFALFA HAY—WRITE OR WIRE ME FOR quotations. Irving S. Gleason, Kennewick, Wash.

JOB PRINTING 372

BEST PARCHMENT BUTTER WRAPPERS, 8x11, neatly printed, 100, 60c; additional hundred, 40c. Home Specialty Co., Middleton, Idaho.

TANNING 425

WE WILL TAN YOUR COW OR HORSE hides for robes or coats at the right prices and guarantee our work, as we are custom tanners and manufacturers. We also buy hides, furs, wools and pelts. Write for prices. Spokane Fur Tanning Co., 9 Pine st., Spokane.

ANY KIND OF HIDE TANNED WITH HAIR on, or for leather. Mohr, 321 Sprague, Spokane.

TAXIDERMISTS 426

TAXIDERMY AND FUR WORK—SATISFACtion guaranteed. Carlson, 1327½ Hawthorne, Portland, Ore.

WE MOUNT ANYTHING FROM A FLEA to elephant. Mohr, 321 Sprague, Spokane.

FURRIERS 429

FURS TO ORDER, REPAIRED, REMODeled and for sale. Mohr, 321 Sprague, Spokane.

HIDES, PELTS AND WOOL 430

HIDES—WE BUY HIDES OF ALL KINDS. Write for prices and tags. Hibbard-Stewart Co., Hibbard bldg., Seattle.

FURS—WE BUY FURS AND PELTS. WRITE for prices and tags. Hibbard-Stewart Co., Hibbard bldg., Seattle.

MATERNITY HOMES 497

MATERNITY HOSPITAL; STRICTLY PRIvate; doctor in attendance; prices reasonable. Mrs. Elizabeth Peel, matron, W1324 Broadway, Spokane.

BUILDING MATERIAL 588

FIX BROKEN PLASTER WALLS WITH PERfection plaster wallboard; nailed on like lumber; takes calcimine or paint; sample and booklet from Western Wallboard Co., Seattle, Wash.

BUILDERS, CONTRACTORS, HOME OWNERS, write for free 1922 catalog. Tacoma Sash & Door Co., Tacoma, Wash.

NURSERY STOCK 621

GROW NEW PEDIGREED WASHINGTON asparagus; best in the world. Roots now ready. Ask for circular. Cherries, pears, peaches, apricots, soy beans for silage and soil building. For lumber, shade, windbreak plant Siberian elm. Special prices on berries, grapes and asparagus for commercial planting. Home Nursery, Richland, Wash.

ISLAND BELLE GRAPE PLANTS FOR SALE —Write for the grape book, giving directions how to grow them successfully, etc. Issued by E. H. Urban, Box 777, Bremerton, Wash., grower of Island Belle grape vines.

NURSERY STOCK, ITALIAN PRUNE TREES and trees of all kinds. Berries and small fruits of all varieties. Buy direct and save 50 per cent. Brooks Nursery, Lafayette, Ore.

BEST VARIETIES FOR THE WEST; HANDsome 48-page descriptive catalogue free. Routledge Seed & Floral Co., 145 Second st., Portland, Ore.

STRAWBERRY PLANTS $4.50 PER 1000; raspberry, loganberry and other plants reasonable. Red Feather Berry Farm, Clackamas, Oregon.

DWARF IRIS, HARDY, BRIGHT BLUE, bloom early; strong roots, 20c. Mrs. Len Haley, Box 443, Goldendale, Wash.

STRAWBERRY PLANTS, $5 1000; NINE VArieties. Briggs Fruit Ranch, Olympia, Wash.

FARM LANDS FOR SALE 651

1000 ACRES STOCK AND DAIRY FARM; IN Snohomish county, Wash.; all fenced; well watered by river, creeks and springs; on paved highway, ¼ mile to P. O., railway station and store; 3-hour stage and train service. Silt loam soil, is growing large and small fruits, vegetables and crops; improved with 2 houses, garage, 5 barns, 3 sheds, 2 granaries, 6 other outbuildings, complete farm equipment; electric light plant, modern sewage system; hot water heating system; pure water. A modern, income-producing country estate, second to none; in a climatically attractive district. For sale as a whole. Priced at $100 an acre. Write for complete detailed information. Carter, MacDonald & Miller, 208 Columbia st., Seattle, Wash.

PAYING FARMS AT LOW COST—160-ACRE farms, improved or unimproved; 30 to 160 acres irrigable land on each parcel; near Lethbridge, in sunny southern Alberta; can be bought for $15 to $40 an acre. No need for pioneering. Well settled country, good roads, railways, schools, telephones; agreeable social conditions; fertile land; success of irrigation farming here already demonstrated; irrigation system being constructed under government supervision; water available in 1923. Write for information concerning crops grown and description and location of farms to the province of Alberta, Irrigation Council, 12 Provincial building, Lethbridge.

CUTOVER LANDS, EASY TO CLEAR; $8 TO $20 per acre; 25 miles north of Spokane; on hard-surfaced highway; Great Northern and Milwaukee railways; excellent opportunity for dairying and stock raising, with Spokane markets and creamery near at hand. Will help the man who will live upon this land and agree to clear a part each year by giving lumber to help start his buildings, and a purebred Jersey bull to groups of farmers. Interest and payments low. Write Milan Farms Development company, Dept. T, Old National Bank bldg., Spokane, Wash.

BIG OPENING SALE OF YAKIMA VALLEY farm land, under an assessed state and government approved irrigation project; good, deep soil; close to town, railroads and state highway. We sell in tracts to suit purchaser at $25 per acre and up, on easy terms. Our many sales to farmers show that this land is a good investment. Western Lands, Inc., owners, 913 Green bldg., Seattle.

ALFALFA, STOCK RANCH—125 ACRES ALfalfa and stock ranch fully equipped; in eastern Washington, on banks of Columbia river; beautiful place to live; nearby grade and high schools, churches, etc.; splendid soil; specially priced for quick sale. H. W. Frieling, Box 62, Seattle, Wash.

A. F. HORTON, NEWPORT, WASH., PEND Oreille county, cut-over lands, $5 to $15 per acre; good roads, schools, fine mountain water. For trade, 320-acre ranch, in Douglas county; on the banks of the Columbia river; all fenced; 70 acres under cultivation; small house, barn, spring.

40 ACRES FINEST VALLEY LAND, MOST all cultivated; fine creek, good orchard and buildings; near grade and high school, paved roads; snap at $5500; easy terms. Write us for dairy, fruit and poultry farms. Chas. D. Edwards Co., Centralia, Wash.

BIG LUMBER CO. LAND SALE IN SKAGIT county; 40 acres, $1400; 20 acres, with new house, $1500. Lumber furnished for building. Lots of work for the settler; splendid district, roads, schools and towns. H. C. Peters, 726 3d ave., Seattle.

7000 ACRES SEQUIM LAND SETTLEMENT project, containing the finest berry and dairy land in the state, now offered for settlement at attractive prices and terms. Free booklet. Thos. G. Mortland, Sequim, Wash.

CHEAP—4800 ACRES, 1700 UNDER KENNEwick project; fine sheep range, including 10,000 acres leased land. Also lots and acreage in Yakima. D. G. Goodman, Yakima, Wash.

SELL YOUR PROPERTY QUICKLY FOR cash; no matter where located. Particulars free. Real Estate Salesman company, 501 Brownell, Lincoln, Neb.

PART OR ALL FINE HAY AND DAIRY farm; joining town; nice trout stream, good soil. For particulars, W. B. Ashley, Springdale, Wash.

SACRIFICE PALOUSE QUARTER, NEAR Tekoa; will lease place; additional leases. Address J 1, Care of Idaho Farmer, Spokane.

PUGET SOUND COUNTRY; WATER FRONTage farm lands; free map to landseekers. Charles Somers Co., Alaska bldg., Seattle.

FOR SALE—STOCK OR DAIRY RANCH, Open range; best water right. Write Clara Wagner, Hornbrook, Cal.

280 ACRES, 65 CULTIVATION; GRAVITY water system; stocked. A. M. Mowrey, Rt. 2, Boring, Ore.

960 ACRES STOCK AND GRAIN RANCH, well located; sell cheap. Owner, 545, Heppner, Ore.

FARM LANDS—Wanted 654

FARMS WANTED—SELL YOURS QUICKLY for cash, no matter where. Particulars free. R. A. McNown, 310 Wilkinson bldg., Omaha, Neb.

WANTED—FARM OR CITY PROPERTY. Write Box 582, Prosser, Wash.

FARM LANDS FOR RENT 657

440 ACRES HAY AND DAIRY; 1 MILE FROM high school; 8 from Cheney normal; will consider 5-acre improved for equipment and hay and feed. Hentges, Valley, Wash.

IRRIGATED LANDS—For Sale 663

FARMERS AND STOCK MEN—THE COLUMbia irrigation district has several tracts of irrigated lands of various sizes, in the famous Kennewick valley, with plentiful water supply. The district wishes to get these tracts into the hands of good farmers who will put them to work, and will make very low prices and long terms to such men. No speculators need apply. One tract 580 acres, especially suitable for stock or dairy ranch. Write the secretary, Columbia Irrigation District, Kennewick, Wash.

ACRE TRACTS FOR SALE 669

FOUR-ACRE HOME, SOME STOCK; $700 down. Mrs. W. Jones, Box 161, Willamette, Ore.

FOR SALE OR EXCHANGE 703

160 ACRES; 50 IN CULTIVATION; GOOD water. For full particulars address O. B. Mason, Ford, Wash.

TO EXCHANGE—Real Estate 705

160 ACRES, KANABEC COUNTY, MINNEsota; 11 miles from Mora, county seat; rural delivery; consolidated school; 8 acres cleared; 40 natural meadow; live creek; small house and barn; holding at $30 acre; will exchange for fruit acreage or farm land. J. D. Hartley, W127 14th, Spokane.

OKLAHOMA MINERAL LAND; TRADE; ASsume. Earl Boyd, Kettle Falls, Wash.

PIKE'S PEAK OR BUST

By LEWIS B MILLER

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CHAPTER NINETEEN.

Away to the End of the Rainbow.



MUCH excitement and indignation blazed up in that big mining camp when the news spread abroad, as it very soon did, that three robbers and murderers had spent a night there. Had Jeeters and his two followers been captured at the time there is scarcely a doubt as to what would have been done with them. But they had made good their escape; and, with a world of wilderness to hide in, it was now a question as to whether they would ever be captured.

The excitement soon subsided, and the picks and pans were again as busy as ever. It was still true that, with the exception of the first claim discovered, none of the claims was really paying. Of the great army of miners now here, some were toiling on in the hope of striking "pay" dirt sooner or later, but more of them because they did not know anywhere else to go or anything else to do.

Cooper and those with him worked ahead steadily, for about the same reason. They were not washing out much gold; so little, in fact, that they were disgusted with themselves for having come. But the Clear Creek claims had not been rich enough to tempt them back to that now deserted camp. They were using their pans only. None of them cared to spend the little gold dust they had saved to buy costly lumber for a sluice box.

Every day, while four of their number remained at the camp, busy with picks and shovels and pans, two wandered away over the near mountains, hunting and prospecting. No mineral was discovered by the prospectors, but they easily kept their party supplied with meat. This went on day after day.

But one night, as the six men sat in a circle around their campfire, Sanders broke a rather lengthy, gloomy silence by saying: "Boys, I don't know how the rest of you feel. But, for one, I'm just about ready to shake the dust of these diggings off of my feet. Even if we shouldn't better ourselves by moving, I don't see how we can do much worse."

"We're all ready for a move, I'm guessing," Cooper answered. "But the hard question is: Where can we go and fare better?"

And Esau Haggerty said: "One place that won't pay is about as good as another, it looks to me like."

Now many suggestions were offered, not one of which was very satisfactory, even to the man who offered it.

Esau kept silent, listening to the others. At length he spoke out: "To my way of lookin' at it, we've made one big mistake up to this time. We've follered the crowd. The men that's struck it rich out here has always cut loose and made their discoveries by theirselves. After that the crowd flocked to them. Even then they'd ha' been better off without the crowd. When you're by yourself, you may be a little lonesome, but you can prospect wherever you feel like and dig wherever you're a mind to."

"Something in that," Cooper admitted.

"Yes, there's a whole lot in it," declared Sanders. "If we figger on ever making any great spect, we've got to hustle out and dig where no miner has ever stuck a pick."

But where'll that be? Where'll we go?" demanded Givens.

And Jess Holloway remarked: "This is a whale of a country. Mighty lot of big mountains out here; more than I ever saw piled up anywhere else. So far as we know, too, there's just as apt to be gold in one place as another. Esau's right. About the best thing we can do is to get away from where others have prospected. Worlds of room for that, too."

"As the sun was setting today, behind that great snow-roofed range over to the west, I was up on the mountainside yonder and watched it. And it occurred to me that I'd like to cross that range and gaze down upon the far side. I'd like to see what's over there." Orlando was speaking.

"Just some more mountains, I'd guess," Givens answered. "Mostly mountains from here on till you strike the Pacific ocean, I've heard tell."

"Yes, I know. This is all a mountainous region." Orlando was speaking again. "It's only the more interesting on that account. But I'd like to see those mountains. Over there, it's pretty safe to say, no prospector has ever yet set foot. And that ought to be our best show to dig up some gold."

"We'd have as good a chance there as anywhere," was Cooper's opinion.

"And even if we didn't find much gold, we'd see some new country," Holloway suggested.

"But we'd be a long, long ways from our base of supplies," objected Esau.

"If we hadn't been in such an all-fired rush to get to these new diggins we might have done some prospecting on our way across the mountains," Givens remarked.

"Yes, and we'd have had just as good a chance to strike pay dirt there as anywhere," said Sanders.

"And we'd be in reach of our supplies," urged Givens.

Till late the six partners discussed the question. Orlando was still in favor of striking out west, though to himself he had to admit that that would be getting rather far away from camp between Denver and the mountains. Still, as long as he had to be separated from the object of his infatuation he might as well go farther if prospects were better. But the farther they went the more danger there would be from Indians. So, when the party fell asleep they had pretty nearly decided to return to the mountains they had crossed and prospect there.

Morning came, and the six men ate breakfast very early. The question as to what they should do was still undecided, however. After that they remained under their camp shed, debating whether to go or stay.

Finally Cooper spoke out: "Well, boys, this is not getting the baby a shirt, or paying for the one it's got. I'm for doing something, and that forthwith. Let's go to tramping, or else hustle back to our digging. One or the other, and that right quick."

"I'm tired of digging for my salt. I'm ready to strike out myself. Somewhere, anywhere. Not much matter, as I see," was Holloway's answer.

"I'm with you," said Orlando. "But I still think the snowy range over yonder is the place for us. I'd like to wade some snow in summer time."

"And you'd be pretty apt to wade into some redskins' camp," Givens told him.

"Snow or what not, redskins or what not, gold or what not, I'm for setting out somewhere," declared Sanders, springing to his feet.

At once the six men began to pack up. In a very short time they were ready to travel. They had kept their own counsel, and the first intimation their neighbors had of the matter was when Cooper called out to the miner nearest them: "Goodby to you! We're off to greener pastures!"

"And any feller hankerin' for these claims of our'n can jump 'em and welcome!" added Esau.

"Where to now?" the miner called back.

And Sanders answered: "That we don't know yet. The Rockies are all before us to choose from. We've going to wander to and fro and up and down till we strike a mountain of gold, or something smaller."

"Well, goodby, and good luck to you," the miner shouted.

Away the party marched, their faces turned northward. They were keeping near the foot of the mountains, as they had come.

During the next few days the six wanderers moved here and there, sometimes down in the park, oftener up in the mountains. They were making their way back toward the mountains they had crossed after leaving Denver; but all were doing more or less prospecting as they went.

One morning they awoke very early and had started by the time they could see. They moved at a brisk pace and had tramped a few miles before the sun appeared. While the sun was still invisible to them, Orlando turned his eyes toward the west and northwest, and saw it shining dazzingly against the white roof of a great snowy range. He gazed in that direction longingly.

The snow roof looked all the whiter, more dazzling because it was set in relief against a black cloud. The sky above the range was covered by the cloud. Rain must have been falling from it, for already a rainbow appeared there.

The rainbow was complete and very distinct, all its colors showing brilliantly. And each end of it disappeared behind the great snow banks of the range top. Soon all the party were gazing at it admiringly.

"Rainbow in the mornin', sailors take warnin'," quoted Esau.

"Oh, nothing of the kind" exclaimed Orlando, impatient at the old weather saying. "I can tell you something better than that. 'Go to the end of the rainbow and you'll find a pot of gold.' I've been hearing that all my life, but I've never yet tried it, or met anybody that had. Now, for once, though, I'd like to see what's in the old saying. I'd like to run that pot of gold down and find out of it's really there."

Rather oddly, the suggestion struck several of the party in a favorable light.

"Does look rather interesting over there," admitted Sanders. "Don't know but what I'd like to see what's on the other side of that big snowdrift."

"I can tell you what's over there, without goin' a step," Esau assured him. "It's the jumpin'-off place."

"Then let's go and see it," spoke out Holloway. "I've been hearing of that place all my life, and now at last I'd like to catch a glimpse of it. Of course we can see it without jumping off."

"Some danger of redskins over there, I suppose," Cooper suggested.

"And they're all known to be hostyle," said Esau.

"No hostile redskins in mine, if you please!" Jeff Givens hastened to say. "I had trouble enough with the friendlies on our way out here—them and their lousy buckskins. The Lord save me from any of 'em that's trotting the warpath."

"There's a little danger, of course, but not a great sight, I guess." Holloway was speaking. "That trapper from St. Louis told us, you recollect, that he'd trapped all over this western country. If he had the spunk to trap there alone, we ought to have the spunk to prospect there six together."

"Even if the mountain Indians are dangerous, their villages are few and far between, they say," Orlando argued. "By keeping a sharp lookout we can dodge 'em. That's how trappers do. In fact, we might wander about over there for a year without seeing any of 'em, or being seen by 'em.

The rainbow was still visible, and the party were still tramping northward. All were now in favor of turning west but Jeff Givens and Esau Haggerty.

Finally Esau said: "Jeff, it's four ag'in two. I never did believe in the tail waggin' the dawg. Let's give in—wha'd'ye say? I'm beginnin' to like the looks of that big snow bank myself."

"Oh, all right, then! I'm not going to be bullheaded about it! If the five of you are crazy enough to strike out chasing rainbows to the jumping-off place, I'll chase 'em with you. And I'll jump off with you if you say so! Here goes!"

At this Orlando, who was driving his cow and leading the way, turned Brindle's head toward the west—somewhat north of west.

"Hey there, Lando!" called out Holloway, gaily. "Two ends to every rainbow! Which end is the pot of gold at? Just tell us that, will you?"

"I've never heard anybody say as to that, Jess. Must be two pots—one at each end. I'm making for the right end, though—the right-hand end. Fellow that goes right can't well go wrong."

Gradually the rainbow faded out. At last not a trace of it remained.

"Now where's your guide post, you rainbow chasers?" scoffed Givens.

Orlando answered: "Rain may have washed it out. But I know well where it was—where the end of it was. See that little white point reaching down from the main snow cap? Bow's right end was exactly behind that."

The party were now traversing an almost level prairie, thickly overgrown with high grass and abounding in game of many kinds. Here and there they could follow a game path. Just as often, though, they had to plow their way through thick, waist-high grass. Sometimes a grove or a lone tree dotted this great meadow. And it was in one of these groves, on the bank of a little stream, that the gold seekers halted for dinner.

While resting, after eating, and allowing Brindle to rest, they bathed their feet in the stream. Later they saddled the cow, strapped on their own packs, took up their guns and tramped on. And after that they pushed ahead steadily, always toward the northwest.

Just how long it took the party to cross the open country is not clear at this distance. But at length they found themselves at the edge of a great forest. From there on their course led through pine woods.

The traveling had been hard enough before, but now it suddenly became harder. There was much fallen timber, and on Brindle's account they were under the necessity of making their way around all but the smallest logs.

"Wouldn't this forest make a terrible fire?" remarked Sanders, who knew something of the great fires in the piney woods of Michigan.

The others had been accustomed to forests, but not to pine forests. And not till Sanders had explained to them did they understand the danger here. In the forests they had been familiar with a fire meant the burning of all the dead leaves and all or most of the dry wood.

(To be continued.)

Bits of Fun FOR Everyone

By Request.

Customer—I say, do you ever play anything by request?

Delighted Musician—Certainly, sir.

Customer—Then I wonder if you'd be so good as to play a game of dominoes until I've finished my lunch.—Exchange.

Depends on Meaning.

"Well, my boy, do you like to go to school?"

"Yes, goin' to school and comin' from school are all right, but it's a awful long time between!"——Orchard and Farm.

The Modern Rube.

"Say, Cy, I jest found out what a rube is."

"Thet so, Hiram? What it is?"

"Why, it's one o' them 41-hour, $95 a week labor guys that thinks a farmer is goin' to sell him food cheap."—New York World.

Bad Practice.

Mrs. Reddy—Why don't you let your Willie play baseball with the other boys?

Mrs. Green—A part of the game is stealing bases, and I'm afraid it might have a bad influence.—Topics of the Day.

His Vocation.

It was the first day of school and the teacher was taking the names of the children, those of their fathers and the business of each one. Small Lucy gave her name and that of her father, but hesitated and became silent when it came to his business. Urged by the teacher, she blushingly said:

"He is Aunt Jane that does the woman's page and the beauty column of the Daily News."—Orchard and Farm.

Slipped One Over.

Casey—Ye're a har-d worruker, Dooley. How many hods o' morther have ye carried up that ladther th' day?

Dooley—Whist, man, I'm foolin' th' boss. I've carried this same hodful up an' down all day, an' he thinks I'm worrukin'!—Cleveland Leader.

Square With the World.

Casey—Did that lawyer prove yez not guilty of stealing that watch?

Murphy—He did that.

Casey—How did yez pay him?

Murphy—I gave him the watch.—American Legion Weekly.

Guilty.

"Sir, I am entirely a self-made man!" magniloquently asserted the Hon. Boanerges Blawhaw.

"It is very commendable in you to own up to it," said old Gaunton Grimm. "Many a man would have blamed it on his wife."

Just Folks

Talking with one of the national leaders of the boys' and girls' club movement, I found him well grounded in the opinion that if you want to get this boys' and girls' club work into the busy thoughts of influential men, you must put the boy first and his work second: "This is the boy who did this work," and not "This is the work done by this boy."

Worth while boys and girls attract the attention of the biggest folks in the country. To waken up the boys and girls, it seems to be necessary to get them together in clubs and awaken their interest by offering prizes for the best work done. Rivalry is a great energizer.

The club leader pointed out that when a boy's mind is really awakened, the matter of not getting a prize could not put him to sleep. The boy might regret and might for a time lament over it, but you could not keep him away from the line of work which had aroused his ambition.

I remember one instance of a teacher who presided over a backwoods school of western Washington some years ago. She aroused the community spirit. The school site, hewn out of the forests, became the center of neighborhood attraction. Soon there was a loud call for a new school house, and the new schoolhouse became a reality largely through the volunteer work of the men and women of the district. The teacher dedicated the old schoolhouse to manual training work, which in turn became the central attraction of the pupils of the district. Soon the report leaked out that the boys would break into that old schoolhouse Saturdays and Sundays, as they could not forego the continuous pleasure of that manual training work.

Boys and girls readily respond to doing something along the line of what fathers and mothers in the community are doing. They take to the big woods "accomplishment" and "achievement." Their hearts are enlisted in this kind of work as well as their heads; in fact the heart is the inspiration of the head.

EAS

FAMILY CIRCLE

ALICE BARLAND
EDITORIAL CONTRIBUTOR

Experience Letters

From Our Family Circle Women

Dear Mrs. Barland: I always turn to the Family Circle for helps and decided to tell the sisters my method for dressing geese and ducks. The old way is very tedious, and I am sure all who try it will be delighted with my quick, easy method.

Tie the fowl by the feet, hang it up and pick off all the feathers you care to save, then kill the bird. Have a sack of powdered rosin ready, sift the powder through the feathers allowing it to sift into the downy feathers close to the body, which are so hard to remove. Have a boiler of boiling water ready and dip the fowl in, entirely covering it, and the feathers will roll and rub off as easily as from a chicken. I would be pleased to have a good recipe for making salt rising bread. Mrs. Thos. A. Whalen, Wash.

(Mrs. Whalen sends in some fine recipes which will appear in the Home Recipes. —A. W. B.)

Dear Mrs. Barland: I have often wanted to write to the Circle and now will do so. I live eight miles northeast of Choteau, an old cattle town, and 15 miles from the famous Flying U ranch, but it is all cut up into small ranches now. We are 35 miles from the main Rockies and I wish you could see them sometimes, as I know from your letters to the Circle that you are a lover of beauties in nature. In the winter the mountains are like great sugar loaves with their snow-covered peaks, and when the sun comes up and paints them pink with dark blue streaks they almost take one's breath away. They are hidden with smoke these days and last night the sun went down a great pink ball into the smoke.

A half mile from us is a small alkali lake called Priest lake, at the foot of a butte called Priest butte, because the Indians killed a priest there at one time.

We have a fairly good crop this year, will get 15 bushels of grain to the acre I think, but have not had more than $1000 worth of grain on 160 acres of land in the past three years. The pests are frightful; there are weeds, cutworms, grasshoppers, noseflies, horseflies, deerflies, flying ants and mosquitoes.

We came here from the Camas prairie, Idaho, in 1918, to make our fortune and have lost the $5000 we brought with us and in debt that much now. I have made over clothing till I hate to think of it. I have three children, Frances, 6 years, Eugene, 3 years, and Phyllis, 7 months. She was born in the middle of a night when it was 10 degrees below zero, before either doctor or nurse got there and only my husband was with me and he got in the house only 10 minutes before little Phyllis arrived. My husband had gone to a neighbor to ask him to go for a doctor. We had a boiler full of boiling water and everything was as sanitary as in a hospital and we got along as those who live far from town have to do.

I am telling you all this because I feel I am writing to a motherly woman who understands our troubles. I lost my mother in 1921 and I do miss her so much. There was to have been a golden wedding on September 15, 1922, and we were all planning to go, all nine of us left from her family of 12 children. There are now six girls and three boys. We were all given a high school education and some went to college and normal and we were not rich, either.

Have you ever tried tying children's hands as a punishment for the naughty little things they do? I call their fingers soldiers and sometimes write a note to their daddy and send them to him with it. It cures them.

We have been today six miles away to the Teton river for gooseberries, but they were all gone. There is nothing in the fruit line here but buffalo berries and chokecherries and there are not even those this year as they have all been picked when green.

Though we live in such a dry country my little ones find many beautiful things to enjoy. A cloud to them is like a beautiful flower, or the sun shining on a bird's wing. They keep the house full of wild flowers. To some women these things are "trash" and are things "dirty," but I want my children to remember the days when mother would let them have their flowers in the house.

MRS. K. S., Mont.

Family Circle Girls

Dear Mrs. Barland: In a recent issue of THE FARMER I read Tinnie's letter and your reply. I am taking advantage of your invitation and am going to give my opinion concerning kissing friends goodnight.

I think kissing boy friends absolutely wrong. If it did nothing worse, it most assuredly does cheapen love. The young folk of today act as if there was nothing but the present to think of, and they must get as much fun (as they consider it) out of the springtime of their life as possible, regardless of self-respect that is lost by permitting familiarity.

I can not understand how self-respecting girls can permit a boy friend to kiss her. I am 18 years old and I am proud to say I have never been kissed by a boy and I do not intend to be until I have promised to be some man's wife.

I think girls of today do not stop to think how things may turn out. Perhaps their parents do not give them the right kind of training. What real man would want for his wife a girl who had flirted with every Tom, Dick and Harry who came along. If she did it before marriage what would keep her from doing it afterward?

What conception of love can a girl have who has permitted "petting parties," as they are called. If she is a real girl with a true womanly heart she surely looks forward to a home of her own in God's good time, a home wherein the leading element will be a true and never ending love between herself and her life partner.

If she has allowed promiscous love making from different men, how is she to recognize true love on the part of a man when it comes to her? Married life is or should be far more serious than a common flirt would make it. The boys who take advantage of these thoughtless girls are not real friends, but are only amusing themselves and are sure to drop the friendship as soon as they settle down and begin to take life seriously. I feel sure you will agree with me, Mrs. Barland. I wouldn't say so much, but I get so disgusted in school watching the girls try first one boy and then another to gain

(Continued on page seventeen.)

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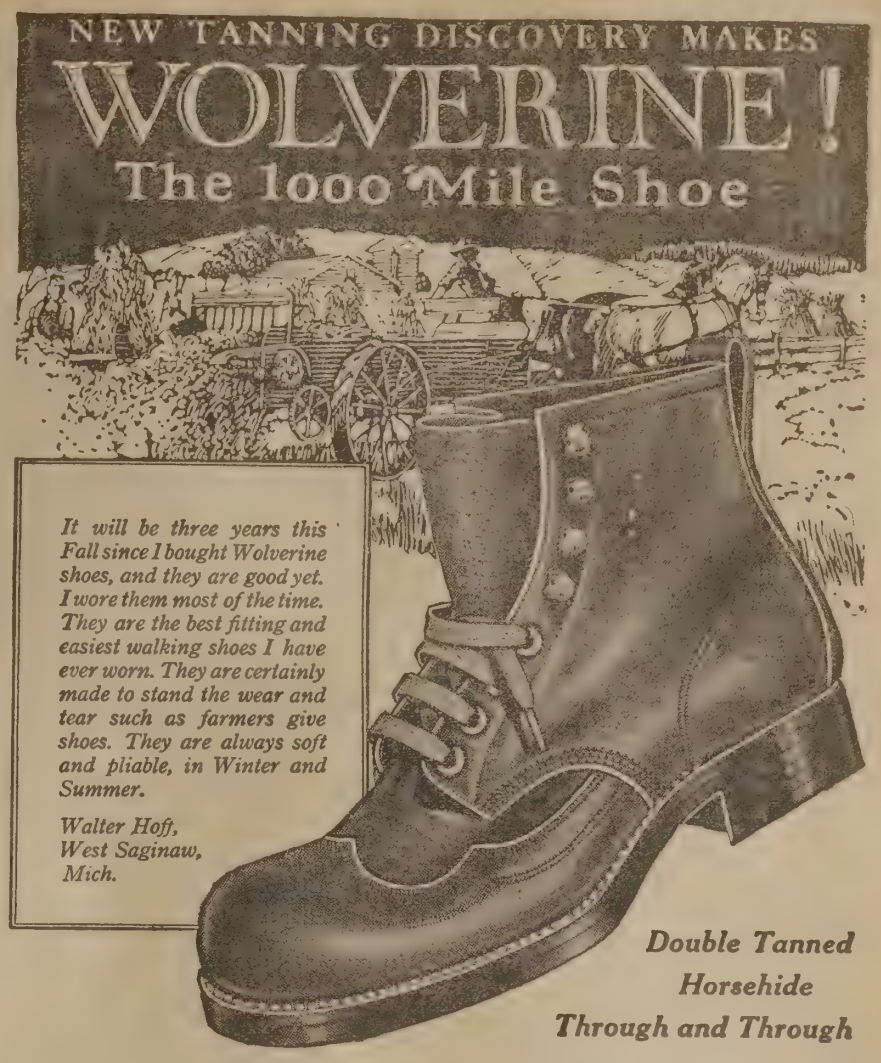
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High Points in News of the Week

Chief interest throughout the United States this week lies in the election which will be held throughout the country on November 7, next Tuesday. This is the first general election since the presidential election of 1920, and in many states will indicate somewhat the pupular opinion of the Harding administration up to this time.

In the state of Idaho chief interest probably centers about the contest between C. C. Moore, republican, and Moses Alexander, democrat, for governor. Special interest is felt in the fact that Alexander was governor preceding the election of Governor Davis.

In Oregon there are a multitude of vital issues. Keen interest is being expressed in the race for governor between Walter Pierce of La Grande, democrat, and Governor Olcott, republican. Prominent also is the so-called compulsory education bill which would, if adopted, require that all children attend the public schools up to and including the eighth grades. The measure is opposed by those organizations conducting private schools. The measure that would give the city of Portland the right to bond itself in a sum of $3,000,000 for the support of the proposed 1927 exposition, is also of vital interest in Oregon.

In Washington keenest interest is apparently felt in the race for United States senate between Senator Miles Poindexter, republican, and former Congressman C. C. Dill, democrat. The initiative and referendum measure in which most interest is being expressed are the 30-10 school plan under which the state would be required to raise $30 per school child and the county $10 (the state now raises $20 and the county $10 per child); the bill by means of which parents in city schools might exempt their children from physical examinations by school physicians upon written request; the bill requiring voters to state their party preference when registering and requiring them to vote only in the primary of that party at the primary election, and the bill that would require any public service corporation to secure from the state director of public works a "certificate of necessity" before entering a field already served by a similar corporation.

* * *

From a world standpoint deep interest centers in the reports from Europe that a liquor organization is joining hands with the liquor interests of America in a fight for the "modification" of the present liquor laws in this country. As stated in last week's issue of THE FARMER, there is a well-organized campaign in this country looking toward electing of senators and representatives in congress favorable to modification if not actual repeal of the present prohibition enforcement laws.

The movement is organized under the name of the International League Against Prohibition. Organizers of the league say that they have little to fear from the prohibition forces in Europe. Their chief concern is to give every possible assistance to American wets. It is urged that the European liquor forces do not want to make the same mistake that the American prohibitionists did when they came to Europe preaching prohibition. Officers in the new organization will communicate with the anti-dry leaders of America to offer the full support of their organization.

"We are not going to America to ask the United States to overthrow prohibition," said Jean Couprie, one of the French delegates to the Brussels convention, which organized the league. "We would probably be politely but firmly ejected if we did and rightly so. However, we believe our cause is just as legitimate as that of the prohibitionists. American supporters of prohibition have taken the liberty of sending their apostles to Europe. We believe we have at least the right to offer our wholehearted support to American wets if they will accept. **They will find our organization amply backed financially and with a 100,000,000 advocates back of it.**

The president of the new anti-prohibitionist international organization is a former deputy and president of one of the largest champaign companies in France. He was formerly an extensive exporter to the United States.

* * *

The new British premier, Andrew Bonar Law, who has succeeded Premier Lloyd George, who resigned recently when the unionists element withdrew its support from his administration of the affairs of England, has begun the formation of a new cabinet. England is now deeply engrossed in the pre-election campaign for the new parliament. Following the resignation of Lloyd George the king dissolved parliament, necessitating an election of a new one. The election is a test between the policies of the outgoing and the incoming premiers.

* * *

At a meeting recently of the Pan-Pacific league a leading Japanese citizen delivered an address urging all nations holding lands in tropical waters of the Pacific ocean to adopt an open door policy toward the Japanese. He declared that there are now great areas of tropical lands undeveloped that the Japanese would gladly enter and upbuild if permitted to do so. He urged the necessity of his country finding outlets for its ever increasing population. His suggestion was received by anti-Japanese as but another step in the scheme of "peaceful invasion" by the orientals.

* * *

Another request that the United States actively participate with the allied governments in the settlement of European difficulties, this time involving the establishment of peace between Turkey and the allies and the status of the Dardanelles and the Bosporus straits, was received last week by the Washington government.

Its formal presentation by the British ambassador and representatives of France and Italy was followed by an authoritative statement from the state department that this government had instructed its ambassadors in London, Paris and Rome to inform those governments that it could not officially participate in the Near East conference at Lausanne, Switzerland.

At the same time, it was pointed out that there were important interests in the Near East and treatment of these by the conference in which this government was interested.

Outstanding among these were said to be that of protection of racial and religious minorities in Turkish territories and other humanitarian considerations, including those of the great missions and educational institutions. Apart from these, but regarded as of equal importance to Americans' welfare in the Near East was the problem of opening the Dardanelles and Bosporus straits.

Regarding the decision not to be represented through appointed delegates, it was said the United States never had been at war with Turkey, and, therefore, did not believe it could appropriately take part in framing a treaty of peace with that nation in association with the allied conferees.

* * *

The situation in Ireland has taken what looks like a turn for the better. Last week a constitution was adopted that one member of the Irish parliament described as "the greatest triumph for Ireland since the battle of Kinsale." It puts Ireland on about an equal footing as a member of the United kingdom with Canada, Australia, South Africa and New Zealand.

The leaders of British parties have made it clear that the overthrow of the Lloyd George government and the temporary return to power of the conservatives will not alter the attitude of Great Britain toward the new Irish constitution. The treaty will be scrupulously observed by any government that is likely to come into power in Great Britain.

* * *

Approximately $9,000,000 will be expended by the American Red Cross during the fiscal year ending next June for the relief of former service men disabled during the World war.

* * *

Belated action is taken to provide western fruit growers with at least a portion of the number of cars they need to handle their crop. The car shortage has become acute. Last week the car service division of the American Railway association ordered the eastern roads to return to the western lines at once the cars belonging to the latter. The interstate commerce commission has also played a part in the situation. The present order involves 4400 cars, enough to aid in meeting the crisis, but not enough to prevent losses unless others follow, which it is believed they will. United States Senator Miles Poindexter wired the interstate commerce commission last week urging that it put forth the maximum effort to meet the emergency "to prevent a catastrophe in the northwest." He declared that he was advised that the cars are not being moved by the railroads in accordance with the commission's orders.

Secretary of Labor James J. Davis has taken up the fight of Washington shippers for relief from the car shortage, urging President Harding to take steps to avert disaster threatening northwestern orchardists.

Secretary Davis' entrance into the car shortage situation was made following a request by Senator Miles Poindexter that action be taken at the national capital to relieve the situation.

Secretary Davis' telegram to President Harding, as reported from Seattle, follows:

"Shortage of refrigerator and box cars on railroads serving the Yakima and Wenatchee valleys in Washington threatens disaster to thousands of apple growers whose crops must be moved or rot. Anything that can be done at Washington to relieve the situation and avert the disaster threatening the great industry should be done at once."

* * *

The allied reparations commission is meeting in Berlin to get a first-hand viewpoint of the German situation and meet German exports in an effort to solve the difficult situation existing in that country's finances.

It is generally believed that the fall of the Lloyd George cabinet in England will tend to give the allies a solid front in their negotiations with Germany, whereas heretofore England has taken a more lenient attitude toward Germany than has France, with a result that Germany's attempts to get out from under part of her obligation have not been effectively forestalled.

There is a definite movement on foot in the allied organization looking toward strengthening the German industrial and financial situation, a collapse being feared.

* * *

Federal Judge Page Morris has issued an order temporarily restraining the operation of the grain futures act, on application of the Minneapolis Chamber of Commerce, until its constitutionality has been passed upon by the United States supreme court. A hearing was set for November 9.

Twenty Boxes to a Tree

An average of 20 boxes of Gravenstein apples to the tree is the experience of A. T. Linstad, a fruit grower of Vashon, King county. From seven trees Mr. Linstad realized $2 per box this year and there was a good demand for all he could produce.

"The Gravenstein is one of the best apples we can raise west of the Cascades," said Mr. Linstad. "It will always bear a crop and will sell at a premium on any market. I have a few trees of the red Gravensteins which usually sell at a 50-cent premium per box above the ordinary Gravenstein."

Mr. Linstad is one of the prominent fruit growers of the county, and has 15 acres, five of which are devoted entirely to fruit.

APPLE PRICES IN ENGLAND.

A shipment of Oregon Yellow Newtown apples was sold at Liverpool at prices ranging from $2.96@3.52. California Gravensteins sold at $1.67 to $1.79 at London; Washington Jonathans at Glasgow, $2.35 to $3.57.

Late car lot sales in the Pacific northwest were at the following prices: Wenatchee Delicious, extra fancy, medium to large, $2.25; Winesaps, extra fancy, 10 per cent, five-tier, $1.65; Romes, medium to large, extra fancy, $1.35; fancy, $1.10; Yakima Winesaps, extra fancy, 10 per cent five-tier, $1.65; fancy, $1.40@1.45; choice, small to very small, 85 cents; Delicious extra fancy, medium to large, $2@2.25. In other districts extra fancy Newtowns, large to very large, sold at $1.40@1.50; Delicious, orchard run, bushel baskets, $1.50@1.75; Jonathans, orchard run, bushel baskets, 90c@$1.

Farm Business and Markets Outlook

(Continued from page five.)

$1.20;; soft white, western white, $1.19; hard red winter, soft red winter, $1.17; northern spring, $1.18; western red, $1.16; Big Bend Bluestem, $1.30.

COLFAX, Wash., Oct. 28.—Red, 96c; white, 99c.

RITZVILLE, Wash., Oct. 28.—Bart, $1.23; red, $1.03; fife, $1.01.

POMEROY, Wash., Oct. 28.—Turkey Red and Hybrid, 95c.

WALLA WALLA, Oct. 28.—Bluestem and Bart, $1.12; club, $1.01; Turkey Red, 94c.

ODESSA, Wash., Oct. 28.—Bluestem and Bart, $1.23; Marquis, $1.06; Turkey Red, $1.03; Jones' Fife, $1.01.

Hay and Feed Grain.

PORTLAND, Ore., Oct. 28.—Millfeed—Price f. o. b. mill: Mill run, ton lots, $30; middlings, $42; rolled barley, $39@41; rolled oats, $44; scratch feed, $44 per ton.

Corn—White, $30; cracked, $41 per ton.

Hay—Buying prices, f. o. b. Portland: Alfalfa, $18@18.50 per ton; cheat, $18; oats and vetch, $20; clover, $18; valley timothy, $20; eastern Oregon timothy, $20@21.

SPOKANE, Oct. 28.—Alfalfa, $23 ton; timothy, $26 ton; mixed hay, $24 ton.

Wheat—Feed wheat, $42 ton.

Oats—$42 per ton; steam rolled, $44.

Corn—$40 per ton; cracked corn, $42 ton.

Barley—$42; steam rolled, $44.

Bran—$29 ton.

Bran and Shorts—$30 ton.

Shorts—$32 ton.

General Produce.

PORTLAND, Ore., Oct. 28.—Butter—Cubes, extras, 44@45c lb.; prints, parchment wrapped, box lots, 48c; cartons, 49c. Butterfat, 48c, delivered Portland station, buying price. A grade, 45c.

Eggs—Buying price: Current receipts, loss off, 48c dozen; henneries, 51c dozen. Jobbing prices: Front street, candled ranch, 51c; selects, 53c; association selects, 55c; firsts, 53c; pullets, 45c.

Cheese—Tillamook triplets, price to jobbers, f. o. b. Tillamook, 30c; Young Americas, 31c; longhorns, 31c pound.

Poultry—Hens, 18@23c lb.; springs, 18@20c; ducks, 15@23c; geese, 15@20c; turkeys, live, 30@31c; dressed, choice, 40c.

Veal—Fancy, 12c per pound.

Pork—Fancy, 15½c per pound.

SEATTLE, Oct. 28.—Eggs—Select local ranch, white shells, cases included, 52c per dozen; mixed color, 50c per dozen; pullets, 42c per dozen. Cases returned to shipper 1c less.

Butterfat—F. o. b. Seattle: A grade, 50c per lb.; raw milk, $2.10 per cwt.

Poultry—Hens, 4½ lbs. and up, 24c per lb.; over 3½ lbs. and under 4½ lbs., 16c per lb.; 3 to 3½ lbs., 12c lb.; 1922 broilers, 3 lbs. and heavier, 20@28c per lb.; old roosters, 10@12c lb.; geese, fat, live, 16c per lb.; do fancy dressed, 24c per lb.; ducks, 3 lbs. and heavier, live, 15c per lb.; turkeys, fat, dry picked, 8 to 15 lbs., 30@33c per lb.; do live, fat, 10 to 15 lbs., 25c per lb.; squabs, large, $4.50 per dozen; pigeons, $2; guineas, $3 per dozen.

Beef—Steers, fat, 7c per lb.; cows, fat, 5c per lb.

Veal—Fancy light, 14@15c per lb.; do medium, 10@14c per lb.

SPOKANE, Oct. 28.—Poultry—Fat hens, 17c lb.; light hens, 15c lb.; roosters, 8c lb.; spring chickens, over 1½ lbs., 14c; broilers, 1½@2½ lbs., 16c lb.

Fresh Ranch Eggs—$10.50 to $12 case, according to quality.

Butterfat—46c a pound.



THE surest way to window shades that neither side-slip nor jam, neither fall nor refuse to rise, is through the use of perfect rollers. This is undoubtedly the reason why for windows of importance, *Hartshorn* Rollers are invariably chosen.

Are you getting the perfect shade service you should?

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9 CORDS IN 10 HOURS



BY ONE MAN. It's KING OF THE WOODS. Saves money and backache. Send for FREE catalog No. B64 showing low price and latest improvements. First order gets agency. Folding Sawing Machine Co., 1005 East 75th St., Chicago, Ill.

Glance over the bargains on the "Want Ad" page.

Family Circle Girls

(Continued from page fifteen.)

their attention. They do not realize that the boys think much more of the girls who take no notice of the notes they throw and such cheap attentions. I always manage to get my share of pleasure out of life without chasing the boys.

Should there be a girl with opinions like mine I wouldn't mind writing to her if it can be arranged through you. M. P.

Dear Mrs. Barland: I have never written to the Circle, but have read it and think it great. I am just a little country girl 18 years old and there are some questions I want to ask about. I have never been any place, never traveled in my life and want to know the proper way to conduct myself when I do travel. What should one do when going to a restaurant; does each person in the company order his own meal or if there is a man along does he order for all?

I have red hair, brown eyes and a few freckles. What colors should I wear. Hoping to see answers to my questions in THE FARMER soon. PEGGY SMITH.

My Dear Peggy: There is not, so far as I know, any set rule about who should order a meal in a restaurant. When a man is taking out a lady or ladies to eat at a restaurant he should, of course, give each an opportunity to choose what she desires. That being done, he can give the order to the waiter for all and I think this is the best form in case they are his guests. But when a lady is paying for her own meal she should give the order to the waiter herself.

One with your color of hair and eyes always looks well in brown and dark shades of tan and greens are good. Avoid pink and, in fact, all shades of red. For a real dressy gown your complexion favors a certain shade of blue. It is hard to tell you what shade, but would be easy enough if you were present to try on the shade. Any conscientious and capable sales woman would help to select the shade for you. ALICE W. BARLAND.

Latest High Class Patterns for the Home

Please order the patterns you desire at least two or three weeks before you wish to use them. Desiring to obtain the latest high-class patterns for its readers, THE FARMER has made arrangements to have them sent direct from the east, and under present mailing conditions it takes about that time for them to reach you.



4100. Ladies' coat. Cut in four sizes: Small, 34-36; medium, 38-40; large, 42-44; extra large, 46-48 inches bust measure. A medium size requires 5 1-2 yards of 44-inch material. Price 10 cents.

3743. Child's coat and cap. Cut in four sizes: Six months, 1 year, 2 and 4 years. A 2-year size will require 2 1-2 yards of 27-inch material for the coat and three-fourths yard for the cap. Price 10 cents.

4158. Ladies' dress. Cut in seven sizes: 36, 38, 40, 42, 44, 46 and 48 inches bust measure. A 38-inch size requires 3 1-4 yards of 54-inch material. The width at the foot with plaits extended is about 2 1-4 yards. Price 10 cents.

4152. Girl's dress. Cut in four sizes: 6, 8, 10 and 12 years. A 10-year size requires 2 3-4 yards of 44-inch material. Price 10 cents.

4138-4148. Ladies' costume. Waist 4138, cut in seven sizes: 36, 38, 40, 42, 44, 46 and 48 inches bust measure. It requires 2 3-8 yards of 40-inch material for a 38-inch size. The skirt 4148, is cut in six sizes: 25, 27, 29, 31, 33 and 35 inches waist measure. A medium size requires 3 5-8 yards of 44-inch material. The width of the skirt at the foot is 2 3-8 yards. To make a girdle and the facings on the panel of contrasting material will require 1 1-4 yards 40 inches wide. Two separate patterns, 10 cents for each pattern.

4003. Ladies' "apron frock." Cut in four sizes: Small, 34-36; medium, 38-40; large, 42-44; extra large, 46-48 inches bust measure. A medium size requires 4 1-4 yards of 36-inch material. The width at the foot is about 2 1-8 yards. Price 10 cents.

3860. Girl's dress. Cut in four sizes: 6, 8, 10 and 12 years. A 10-year size requires two yards of 27-inch material for the guimpe and 2 1-4 yards of 36-inch material for the dress. Price 10 cents.

4004. Misses' dress. Cut in three sizes: 16, 18 and 20 years. A 16-year size requires 4 5-8 yards of 36-inch material. The width at the foot with plaits extended is about 2 1-4 yards. Price 10 cents.

4161. Ladies' house dress. Cut in seven sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. A 38-inch size requires five yards of 40-inch material. The width at the foot is 2 1-4 yards. Price 10 cents.

4143. Boy's suit. Cut in four sizes: 3, 4, 5 and 6 years. A 4-year size requires two yards of 44-inch material. Price 10 cents.

4140. Girl's dress. Cut in four sizes: 2, 4, 6 and 8 years. A 4-year size requires 3 1-4 yards of 32-inch material. Price 10 cents.

3674. A comfortable corset substitute. Cut in four sizes: Small, 34-36; medium, 38-40; large, 42-44, and extra large, 46-48 inches bust measure. A medium size requires 1 1-2 yards of 32-inch material. Price 10 cents.

Fashion Book Notice.

Send 12 cents in silver or stamps for our up-to-date fall and winter 1922-1923 book of fashions, showing color plates, and containing 500 designs of ladies', misses' and children's patterns, a concise and comprehensive article on dressmaking, also some points for the needle (illustrating 30 of the various, simple stitches), all valuable hints to the home dressmaker.

Please fill in this order and mail with remittance to:
PATTERN DEPT., PACIFIC NORTHWEST FARM TRIO, Spokane, Wash.

Enclosed find..... cents for which send me the following:

Pattern No..... Size ..... Pattern No. ..... Size.....

Pattern No..... Size ..... Pattern No. ..... Size.....

Name .....

Postoffice ..... State.....

R. F. D..... Box No..... St. No.....

Be sure to give the pattern number and the correct size.

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For Women and Children



FARM life tests the wear and warmth of underwear. R. A. Underwear stands the test.



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When you see R. A. Underwear, you will want it, so ask your dealer to show you the R. A. Points of Excellence.

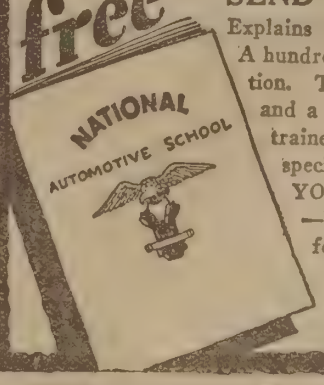
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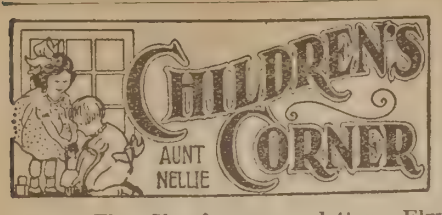
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—FREE. It means big money and a big future for YOU. Write today—NOW!

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From Elry Shouf comes a letter. Elry is a Cowlitz county (Wash.) boy and he is 10. His teacher is ill in the hospital and he has another teacher now. He is in the eighth grade. He says: "We have one cow, five calves, a team, three cats and about 40 chickens. We are digging potatoes today and expect to have them all dug by tonight.

Birthday Greetings

THURSDAY, November 2—Mary Walsh, 11 years old.

SATURDAY, November 4—Dorothy Kline, 11 years old.

SUNDAY, November 5—Virginia Frances Littell, 10 years old.

MONDAY, November 6—Eva Charlotte Cole, 10 years old; Estella Felmley; Lois Wright, 9; Warner Britton, 9.

WEDNESDAY, November 8—Florence Thaden, 11 years old.

LETTERS WELCOMED BY AUNT NELLIE.

Among recent letters received by Aunt Nellie are those from cousins whose names follow. A few of these will be published each week in the regular edition of THE FARMER and others will appear from time to time in The Junior Farmer:

Bertha Johnson, Dilla Fisher, Elizabeth Thomas, Hazel Detering, Bertha Van Derschelden, Gertrude Reimann, Helen Trupp, Kathleen Mary Stuhr, Dorothy Peterson, Patricia M. Stuhr, Anna Bergh, Leonard Wood, Kathryn Eby, Esther Kiehn, Grace Stewart, Marian Hayes, Anna Van Derschelden, Hannah Carlson, Grace Swanson, Bessie Harvey, Olive Lucile Laughlin, Sylvia Tennison, Jack Walker, Opal Carpenter, Gladys Haines.

BEDTIME STORIES

By THORNTON W. BURGESS.

DIGGER DECIDES TO STAY.

Digger the Badger crawled out from under a little bush on the edge of the Green Meadows. It was very early in the morning, so early that no one was astir but Old Mother West Wind. Digger watched her coming down the Purple Hills with her big bag over her shoulder and wondered what she could be carrying in it.

Digger had reached the Green Meadows only the night before. He had come all



"That settles it," said Digger the Badger, right out loud. "I'm going to make my home right here on the Green Meadows."

the way from the Great West and that is the reason he had slept under the little bush. You see, he was a stranger there, and had no home at all. He had met Johnny Chuck and Danny Meadow Mouse and Jimmy Skunk, who had been very polite, very polite indeed to him. They had pleased him so much that when he had curled up under the little bush for a good night's sleep, he had almost made up his mind to stay on the Green Meadows and make his home there.

Now, as he carefully brushed his coat and smoothed all the wrinkles out of his waistcoat, he watched Old Mother West Wind, and the longer he watched the more he wondered what she could possibly have in that big bag. When she reached the middle of the Green Meadows she stopped. Then she opened her big bag, turned it upside down and shook it. Out tumbled all her children, the Merry Little Breezes, and began the funniest little dance among the buttercups and daisies, and as they danced they began to sing. Digger the Badger stopped brushing his clothes and listened, and as he listened he began to smile; for this is what he heard:

We're the Merry Little Breezes,
And we love to romp and play,
We're the Merry Little Breezes,
And we're happy all the day.
Oh, we love the pretty flowers,
And the little birds that sing.
And we love the Sun and Showers
Of the summer and the spring.
So we play and romp and frolic
From dawn till day is through.
But most of all we're happy
When there's some good deed to do.

"That settles it," said Digger the Badger right out loud. "That settles it. I'm going to make my home right here on the Green Meadows."

"Is that so? Who invited you to, I want to know?"

Digger whirled around. There sat Reddy Fox. Reddy had swelled himself up to look as big as he could, and was trying hard to look very fierce, for you know Reddy Fox is a bully. But all the time he was taking great care not to come too near, for bullies are almost always cowards.

Digger the Badger grinned. "I reckon it isn't any of your business who invited me," said he. "I'm going to make my home right where I please."

"You can't unless I say so," replied Reddy Fox, showing his teeth.

Then Digger the Badger opened his mouth and yawned. Yes, sir, he yawned right in the face of Reddy Fox. And when he yawned Reddy saw such long, strong teeth that he backed away just a little. But still he tried to appear very fierce and important.

"You can't unless I say so," he repeated.

Digger the Badger looked at him a whole minute. Then suddenly he threw a whole handful of sand right in the face of Reddy Fox.

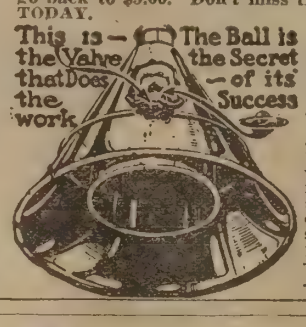
"Bah!" shouted Digger the Badger. What do you think Reddy Fox did? Why, he put his tail between his legs and just sneaked away. And all the time he could hear Digger the Badger laughing fit to kill himself.

(Copyrighted by T. W. Burgess.)

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If you want the very best that can be made, here it is. We have sold over 300,000 tin washers, and they have given perfect satisfaction, but, of course, the solid copper is much better. We are just selling a few at $2.50 to introduce them. After which the price will go back to $5.00. Don't miss this wonderful chance. Tell your friends about it. SEND TODAY.

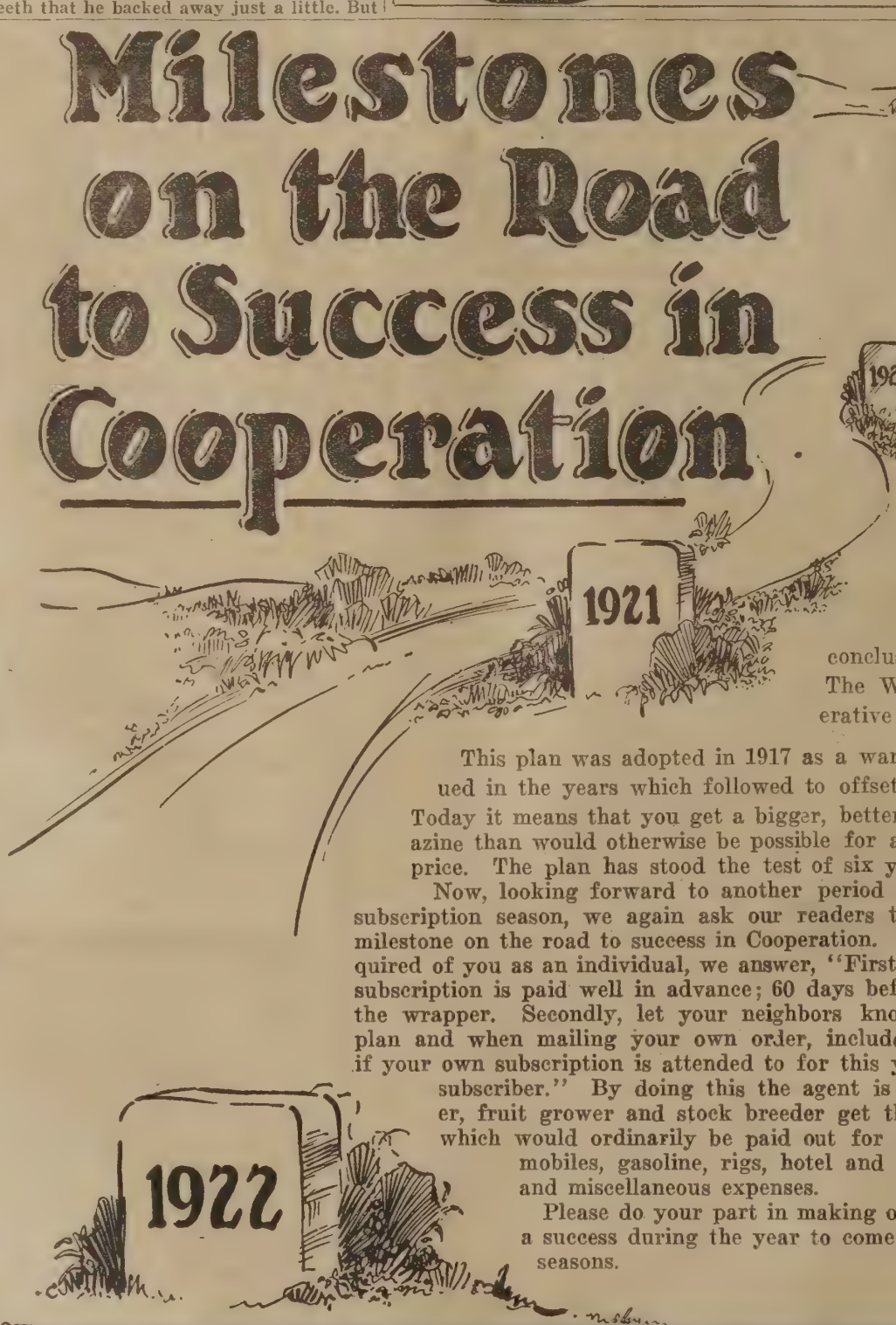


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wash a tubful of anything washable in three minutes. Blankets, lace, socks, cuffs, silks, underwear, curtains, towels, handkerchiefs, ANYTHING. Hands do not come in contact with the water, therefore it can be scalding hot. So easy to operate that a child can do it. Will not wear out your clothes. The Duplex forces the boiling suds through the clothes, NOT the clothes through the suds. Will save your back and many hours of needless toil. An ordinary weekly wash can be washed, blued and on the line in one hour. Your money back without question if it will not do all we claim and more. DON'T MISS THIS SPECIAL OFFER. Send only $2.50 and this ad TODAY and we will send you the solid copper Duplex Vacuum Washer, regular price $5.00, by parcel post to any address. Agents wanted.

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Milestones on the Road to Success in Cooperation



That there is a big army of loyal boosters throughout Washington for the principal of Cooperation is shown conclusively by the success of The Washington Farmer's Cooperative subscription plan.

This plan was adopted in 1917 as a war measure, and was continued in the years which followed to offset the tide of rising prices. Today it means that you get a bigger, better, more helpful home magazine than would otherwise be possible for a rock bottom subscription price. The plan has stood the test of six years.

Now, looking forward to another period of long evenings, a new subscription season, we again ask our readers to help us set up another milestone on the road to success in Cooperation. If you ask us what is required of you as an individual, we answer, "First of all, see that your own subscription is paid well in advance; 60 days before the expiration date on the wrapper. Secondly, let your neighbors know about our cooperative plan and when mailing your own order, include theirs as well. Thirdly, if your own subscription is attended to for this year, find us just one new subscriber." By doing this the agent is eliminated, and the farmer, fruit grower and stock breeder get the benefit of every penny which would ordinarily be paid out for the agents' salaries, automobiles, gasoline, rigs, hotel and garage bills, railway fares and miscellaneous expenses.

Please do your part in making our Cooperative plan as big a success during the year to come as it has been in previous seasons.

Nov. 2, 1922.

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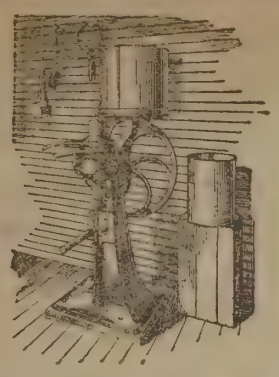
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Caution! U. S. Bulletin 201 shows that vibration of the bowl causes *cream waste!* The Melotte bowl is *self-balancing*. Positively cannot get out of balance therefore cannot vibrate. Can't remix cream with milk. *The Melotte has won 25 Grand and International Prizes.*

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Will Hold Many Live Stock Sales

The two big live stock shows next week and the following week will offer a multitude of opportunities for farmers and stockmen to inspect the best herds and flocks of the west and make such purchases as they may desire for building up their own live stock. The shows are always the occasion of many private sales and purchases and this winter will be no exception to this rule. There are also scheduled a large number of auction sales at which many animals of excellent breeding will be offered, including a considerable number of those shown in competition. The only auction sale at the Western Royal at Spokane so far announced is that of the Hereford Breeders' association, which will offer 45 head of animals consigned by several breeders. This sale will take place Wednesday, November 1. Half a dozen auction sales are scheduled for Pacific International week at North Portland. Two Hereford sales, one of Henry Thiessen of Sweetwater, Idaho, and one a consignment sale, including cattle from several of the prominent herds of the Pacific northwest, will be held. Two Shorthorn sales, one a consignment sale of the beef strain, including 50 head, and one of milking Shorthorns, including 20 head, will be held. In the dairy breeds there will be at least two sales. A consignment sale of 70 head of purebred Holsteins, including a considerable number of animals competing in the show, and a similar sale of Jerseys made up of consignments from several of the best producing herds of the Pacific northwest, will be held. The Hereford sales will be managed by R. P. Banks of Spokane, the Shorthorn sales by A. E. Lawson of Spokane, the Holstein sale by George A. Gue of Yakima and the Jersey sale by E. A. Rhoten of Salem.

JUNIOR HERD HEADER.

The picture herewith is that of Majesty's Cowslip's Noble, the Jersey junior herd sire on the farm of Nichols & Plunkett,



near Ellensburg. The sire of this bull was formerly owned by C. M. Talmadge when the latter was farming near Newport, Wash. His dam was Majesty's Boutilier.

TWO SONS OF GREAT COW.

Allen Reynolds of Walla is the owner of one of the only two bull calves born to Sammamish Topsy, the world-record Guernsey cow of the Dr. Park Weed Willis herd, which died after contracting pneumonia on the fair circuit the past season. Dr. Willis stills owns the other son of this cow. Topsy not only held the record for Guernsey cows west of the Mississippi at the time of her death as an aged cow, but as a 2-year-old held the state record with a production of 629 pounds of butterfat. Three daughters, 14 granddaughters, one great-granddaughter and one son of Topsy are now in the Willis herd, which is to be dispersed at public sale at Orchard Hill farm, Redmond, November 22.

PLAN THREE BERKSHIRE SALES.

The Washington State Berkshire association is planning to hold three sales about the middle of February. The first will be held at Prosser February 13, the second at Yakima February 14 and the fifth at Ellensburg February 15. Kenneth Wilcox of Wapato is secretary of the state association and also secretary of the association promotion committee for the upbuilding of the Berkshire breeding business in this state. This committee is already planning for a junior and senior futurity at next year's state fair. The committee is composed of J. A. Bull of Ellensburg, Fred Sinnes of Prosser and R. C. Woodruff of Yakima.

DREAM GIRL OF HOPE FARM.

One of the registered Guernseys on the Leland J. Clark farm at Gold Bar is making a record that promises to be one of the top-notchers of the state. This heifer, Dream Girl of Hope Farm, is but a 2-year-old and is producing 45 pounds of milk daily, with a test of 5.4 per cent. At this rate she would make close to 70 pounds of fat per month.

OXFORD RAM TO HEAD FLOCK.

C. J. Sandwith of Friday Harbor, San Juan county, recently purchased a new Oxford ram to head his flock of sheep on the farm a few miles from town. The animal is a yearling and won heavily at some of the larger fairs of the state this fall. He was secured from the H. W. Hastings flock of Thornton, Wash.

Breeders' Dept.

Final Advice

If you have not yet gotten a catalog for the

Pacific International Jersey Sale

Wednesday, Nov. 8, 1922

DO IT NOW

QUALITY
Both in Production and Show

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Daughters and Granddaughters of Fussy's Fern Noble.
Daughters and Granddaughters of St. Mawes Chimes.
Daughters and Sons of Gold Medal and Medal of Merit Dams.
Do you want anything better than these animals?
They are not to be purchased. Every animal strictly inspected.
This is a sale of Merit. Write for Catalog.
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Ashnook Farm offers a few heifers and young bulls, sired by the gold and silver medal sire, Silver Chimes of S. B., sire of ex-world champion heifer, Silver Chimes Gwendola, and 20 register of merit daughters, and more qualifying.
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Jersey-St. Mawes Bulls Registered bulls, rich in blood of St. Mawes Lad, from high testing dams. Priced for immediate sale. Shortley Bros. CHANNEL VIEW JERSEY FARM. ORCAS, WASH.

Jersey Bulls at Bargain Prices
Send today for our special sale list of registered Jersey bulls from R. of M. dams. Easy terms, liberal credit.
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Young bulls out of heifers qualifying for silver medals with first calf, and will make their sire a silver medal bull.
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Milking Shorthorns Cows and young bulls by Peerless Knight, by Beau of Glenside, carrying 93¾ per cent of champion milch cow, Rose of Glenside.
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Breeders of Brown Swiss cattle, the farmers' dairy cow. Young stock for sale.
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8 Big-Type Duroc Boars
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I will sell at auction 30 registered cows and heifers, 5 yearling bulls. All fine young stock of the best of blood lines. All cows are bred to my herd sire, except yearlings sell open.
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Uncertainty Clouds Future of Western Royal Livestock Show---Page 6

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Don't send one cent. Just letter or postcard brings any of these smashed price bargains. No obligation or risk. Merely give number and size of each article you want. Pay nothing till goods arrive, then only the smashed price and postage. If not delighted with your bargain after examination and try-on, return goods and we cheerfully return your money instantly. Don't put it off. Send now.

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$4.49

This scarf is about 46 inches long and 12 inches wide. It is stylish as well as warm. The lining is good quality satin, and there is an extra ruching laid around the neck inside, so as to protect the fur from wearing. Only the most expensive fur scarfs have the features which we offer you at this bargain price. **Order black Manchurian wolf scarf by No. 51E5193. Order brown by No. 51E5194. Send no money. Pay only $4.49 and postage on arrival. If not satisfied your money will be refunded. Be sure to state color wanted.**

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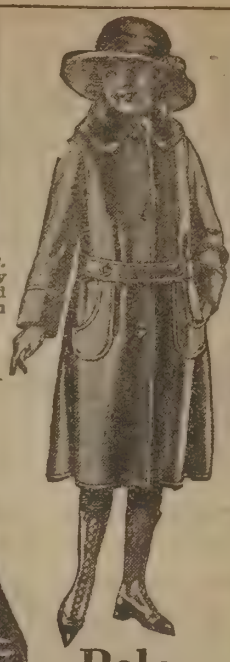
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Where else did you ever hear of an all-silk plush coat at our price? This is a handsome model cut on fur coat lines, full 36 inches long, with self material belt, turn back cuffs and deep shawl collar. Durably lined with black twill and finished in every detail. Misses' sizes 16 to 20; women's 34 to 44. **Order by No. 51E5843. Send no money. Pay $9.98 and postage on arrival.**

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Order similar style with handsome plush collar, sizes 2 to 6. brown No. 51E5581. Blue No. 51E5582. Price, either color, $2.98. Pay bargain price and postage.

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We positively guarantee that—quality for quality—there is not the equal of this garment under $12.00 anywhere else in the country. Note the snappy lines, the deep coney fur collar, the self-material belt, the side patch pockets and two muff pockets besides. Misses' sizes. 14 to 20 only. **Order No. 51E5657. Send no money. Pay $9.98 and postage on arrival. State size.**

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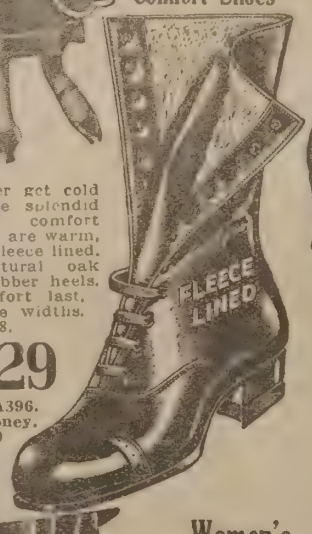
Send for this black kid or calf shoe. Note the medium toes with pretty imitation perforated tips, the perforation around vamp and on lace stays. Very popular model and really a sensational bargain now. Durable, flexible soles. Sizes 2½ to 8. Wide widths.

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Women's Fleeced Comfort Shoes



You'll never get cold feet in these splendid kid-finished comfort shoes. Uppers are warm, thick cream fleece lined. Splendid natural oak soles; low rubber heels. Roomy comfort last, built in wide widths, sizes 2½ to 8.

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Extra high-cut or regulation height felt shoes. Thick soles and heels. Sizes 6 to 12. wide widths. **Order high-cut by No. 51A880. Price $1.98.**

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Men's pure gum hip boots; friction lined; heavy corrugated sole and heel; guaranteed first quality. Made of the very best rubber. Usually retailed at $5. Sizes 7 to 12. Wide widths. No half soles. **Order by No. 51A949.**

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Boys' scout shoe of soft pliable brown leather. Absolutely guaranteed barnyard proof; reliable, sturdy soles; low broad leather heels, leather insoles, reinforced leather back stay, guaranteed to stand hardest wear. Wide widths. Sizes 6 to 12.

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Four buckle style, fleece lined; bright gum rubber bottoms and selected rainproof cloth tops, with wide toe and low heel, or for military heels and medium narrow toes. Sizes 2½ to 8, either style.

Order military heel style by No. 51A920. Order low heel style by No. 51A921. Send no money. Pay $2.98 and postage, either style.

MEN'S and Boys' Hi-Cut BLUCHER



Double oak soles, sewed and nailed; bellows tongue. Roomy last. **Order big boys' sizes 1 to 5½ by No. 51A570. Price $2.48. Order small boys' sizes, 9 to 13½ by No. 53A571. Price**

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State size.

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Made with double thick soles and seams reinforced. Snow-excluding tongue. Furnished in men's sizes 8 to 12. Wide widths. Sensational value. Send

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Brown Leather Work Shoes



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State Size.

Wonder-ful work shoe for men and boys. Has soft, strong uppers. **Order boys' sizes 1 to 5½ by No. 52A554. Pay $1.89 and postage on arrival. Order boys' sizes 9 to 13 by No. 52A555. Pay $1.79 and postage on arrival.**

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THE WASHINGTON FARMER

SUCCESSOR TO

Vol. 47. No. 19 THE RANCH PACIFIC DAIRYMAN HORN AND HOOF November 9, 1922

For Good Farming, Attractive Country Homes and Happy Country People

Farmers Are Thoroughly Aroused

Charles Barrett Says a Farm Organization Must Be an Organization Of, By and For the Farmer

Through the kindness of J. Q. Adams, president of the Washington State Farmers' union. The Farmer is favored with an advance copy of the annual address to be delivered by Charles S. Barrett, president of the National Farmers' union, at the convention in Lynchburg, Va., November 21, 1922.—Editor.

During the 12 months that have rolled around since last we met in national convention I have devoted my time, perhaps as never before, to coming to grips with farming conditions. In this time I have traveled more miles, attended more meetings, got face to face with more folks and visited more farmers' business activities than in any other year of my life. No one can say, therefore, that I have not had an exceptional opportunity to find out what is in the minds of hundreds of thousands of farmers.

Out of the Maelstrom.

A great change is coming over the American farmer. He has been sorely disappointed, bruised and battered, and all but submerged in the economic maelstrom. The farmer will not soon forget the billions upon billions of dollars losses which he has suffered during the long period of deflation. For some little time he was stunned, bewildered, as a man fighting for life usually is; but now, glory be, he is coming to his senses in more ways than one.

Farmers' Business Awakening.

For a moment I shall discuss the business side of the farmers' reawakening before dwelling upon the more spectacular reentry of the farmer into the arena of politics.

Wherever I have been I have closely studied the progress of our cooperative associations and business institutions and it is very plain to me that our membership throughout the many states are, with renewed and determined vigor, throwing their energies into and behind our self-help institutions.

Our cooperative live stock, shipping and centralized commission companies are upon a most satisfactory basis and are doing a volume of business almost undreamed of a few years ago. A similar situation exists upon the part of our cooperative grain elevators, the managements of which are still pressing forward with all commendable zeal toward the goal which they had in mind; viz: The gradual and orderly absorption of the farmers' grain until present unnecessary and positively harmful speculative middlemen can no longer exact their toll in the handling of the farmers' products.

In this connection it may not be inappropriate to say, now that the ill-advised and ill-starred U. S. Grain Growers, Inc., has resulted only in self-acknowledged failure, that the way for legitimate cooperative pooling effort on the part of self-help organizations has been made easier. As a feeder for membership in a certain so-called farm organization, from the outset financially backed by the Chicago Board of Trade, the U. S. Grain Growers was for a time fairly successful; but as the legitimate national cooperative grain marketing movement, it has taken a header into the ditch as was only to be expected by those who were familiar with the origin and chief backers of the enterprise.

In addition to the highly satisfactory situation in the cooperative marketing of live stock and grain great progress has been made along the other well established lines of farmers' union effort, both in the selling of farm products and the effecting of legitimate savings in the purchase of the farmers' requirements. Cooperative insurance, including hail, fire and life, is progressing safely and rapidly.

In addition there is a strong indication that within a comparatively short time the membership will have organized a number of cooperative banking institutions following the example of practically every great industry which has found it advisable and necessary to become a part of the banking system of the country. Recently in Arkansas, I attended the organization of the first farmers' cooperative bank, where an enthusiastic group of farmers' union members made a 100 per cent subscription to their bank.

The Farmers in Politics.

On the political side of the farmers' activities I am frank to say that I have never seen them so determined to play their part in governmental affairs, and on the other hand, I don't believe I ever saw the old political war horses more determined to prevent them from getting their minds on things political. One need not pose as a prophet to predict that at least several of the newly nominated United States senators will, when they enter congress, give considerably more attention to and show more interest and sympathy in the problems that are concerning organized agriculture. The fact is that our farmers have been thoroughly aroused. They say they have been fooled with too long and there is bound to be more upsetting of the apple cart if the farmers do not get the recognition they are entitled to.

Recognition of Agriculture.

When I speak of recognition of agriculture, I am referring, of course, to those legitimate aims and needs of agriculture which spring into being and become articulate from the experience and consciousness of the organized agricultural producers.

It is very clear that the viewpoint of the farmer who has things largely his own way, through good fortune, inheritance or special privilege, would not necessarily be a viewpoint which would at all fairly reflect the condition of American agriculture.

Such a fortunate individual might fairly radiate a well-fed contentment and feel at peace with all mankind. Having an abundance of life's necessaries and luxuries, such things as the lack of fair markets for farm products, the exorbitant interest rate, the discrimination and boycotting of chambers of commerce and boards of trade which injure the average farmer might give him no concern. Often enough his viewpoint on such matters as the Esch-Cummins law, the excess profits tax, ship subsidy bill or the gambling of the speculative middleman would be bad, as we folks see it.

There are many farmers of this sort with their little gardens of Eden, and whose complacent indifference toward the evils and abuses which exist in our human society make them a positive menace to the program of general advancement for all.

And for every one of these complacent producers there is usually another so-called farmer to match him, who, upon investigation, will prove to be a banker-farmer, a lawyer-farmer or a political farmer, whose income is principally derived from interests which have nothing to do with the growing of crops.

It is almost wholly from these two classes of nonrepresentative farmers that men are being considered for positions in government departments, boards and commissions. As I have said on former occasions, just dirt farmers won't do. There are other requirements besides the ownership and operation of a farm.

Trying to Think for the Farmer.

For the last two or three years a powerfully financed movement has been attempting to do the farmers' thinking for them and quite naturally it has attempted to do much of its work through the two types of farmers I have named.

Generally speaking the organization known as the American Farm Bureau federation has throughout its state units been officered and led by the "complacent" farmer and the banker or politician-farmer, and it has been in the activities of the farm bureau movement that one could best see the efforts of a certain group of financial, manufacturing and political magnates to direct and to mold the destiny of American agriculture.

No one can truthfully say that I have ever been unfair to the farm bureau. The fact is that I am surprised at the forbearance and toleration which I have shown toward a movement which, deep in my heart, from the very first, I instinctively knew was destined to become consciously or unconsciously a plaything and a tool of certain great vested interests. Some of these interests have ever been determined to rob the farmer of initiative, to lull him into paths of industrial indolence, to do both his business and his thinking for him, to keep him happy and contented with the growing of bumper crops.

I do not intend to make any extended or specific statement with reference to the record of the farm bureau movement. Those who are interested in the record and would have proof in black and white might secure a copy of the farmers' union statement: "Who and What Are Behind the American Farm Bureau Movement," copies of which probably can be secured from Secretary A. C. Davis.

My business now is to deal with certain conclusions with respect to the unenlightened attitude of those who feel called upon to guide and direct the farmers' affairs.

Farmers Won't Be Fooled Long.

The first outstanding conclusion is that the dream of a generation, the dream to make the farmer safe and sane in the eyes of the business world has been tried out and failed.

The dream that farmers can be taught to remain patient, plodding producers of food and clothing materials, that farmers would continue to permit exploiting middlemen to take these products at their own prices under the law of supply and demand, which business interests are forever tampering with and making inoperative, the dream that leaders could be set up in every rural community who would take their economic doctrines from the hands of the exploiters, has been shattered into a thousand bits.

What mighty backing, what wondrous publicity, what powerful personages have thrown their influence into the farm bureau scale! What a fair trial they had in doing this.

The great manufacturing interests, the most powerful financial interests on earth, have proved to their satisfaction, let us trust, that nobody can run the farmers' business, but the farmers themselves. Great men have smeared their fingers in the pie. Men who wanted to see that the farmers were organized and belonged to a "respectable" sort of farm organization. Great captains of industry have thrown their mighty influence behind the movement that would "weed out the sheep from the goats." The great metropolitan press, the biggest magazines, with their millions of readers, the wiseacre reviews and digests of current affairs, all, or nearly all, decided that the farmer had been, or should be, organized in a safe and sane manner. Large sums of money and time were spent in this direction. Even the greatest government in the world acting through the department of agriculture in conjunction with these other gigantic interests, with the biggest brains in the country planning and advising each step, was not able to make a go of the farm bureau movement.

After 20 years of experience in farm organization work with nothing else on my mind during the whole time, I unqualifiedly declare that there is not enough brains, money and influence and power in the world to put over on the American farmer the wrong sort of organization and make a permanent institution of it.

The Reason and the Remedy.

Why? Because what the business world, what politicians, what government has been trying to do in this matter runs counter to human nature. The farmers naturally resent an interference from quarters which experience and intuition tell them is not working to their best interests.

Farmers have never tried to dictate the policies of the business groups. They do not go to the bankers or the manufacturers or conventions expecting to be seated as delegates or to be received as confidential advisers.

They accept the general run of manufacturers, bankers, railroad magnates for what they are, individuals largely imbued with the present day spirit of money-making and of acquiring vast economic or political power.

Steadily, inevitably, the bonafide farm organization member has been building toward a better condition for himself and for civilization through a cooperative system of purchase and sale which recognizes the value of the individual as higher than the almighty dollar.

The organized farmer expects as time goes on that the soundness and justice of the cooperative program will leaven the crass commercialism of the nation and make it a better place for all to live in; but our farmers do not expect this to come about all in a minute. What they do expect is to be left alone, free from any tampering or manipulation.

That is why they have resented and repudiated the attempts of those who have set up or backed the farm bureau as a movement to dominate and control the farmers' affairs. I can not help commenting on the sad, the sorry spectacle presented by those who have tried to put the rings in the farmers' noses and lead them from the paths of their own choosing. And what a great economic and social loss must result from these pitiable, misguided efforts.

Well Wishers Fooled.

It certainly is true that not all are bad who have entered into the designs to "educate" the farmer. Some of these manufacturers and bankers, for instance, and many of the educators in the nation have been and are sincerely interested in being of help to agriculture. What a pity, therefore, that they have been in such abysmal ignorance of the way to do it. What loss has resulted in their lack of knowledge—for, in regarding the wholesale program of agricultural cooperation, they have retarded the general prosperity of the nation—a loss of prosperity in which they themselves must eventually share.

So many of our city brothers think they have been helping agriculture, when they have simply been following some red herring drawn across the trail. A city friend

(Continued on page eight.)

C. S. Barrett Is Here Next Month

President C. S. Barrett of the National Farmers' union will spend at least two weeks in the Pacific northwest in the interests of the order, beginning Thursday, November 30. During his visit he will attend the annual convention of the Washington and northern Idaho union and that of Oregon, the former at Spokane and the latter at Lebanon. He will also attend several farmers' union meetings throughout Washington and Idaho and while doing so will make a personal survey of the proposed Columbia basin project at the request of the national board of farm organizations, with which he is prominently identified at Washington, D. C. State President J. Q. Adams of the farmers' union and representatives of the Columbia basin committee have worked out the following schedule for Mr. Barrett while in the northwest:

November 30—Arrives in Spokane. On account of this being Thanksgiving day, no special activities have been arranged.

December 1—Columbia basin executives escort Mr. Barrett to Sandpoint and arrange boat trip to show him Lake Pend Oreille, a secondary storage reservoir for the Columbia basin.

In the evening Mr. Barrett will address a meeting of the farmers' union, delegates to be invited from all parts of northern Idaho. Farmers' union officials in charge of night meeting.

December 2—Mr. Barrett will be escorted to the Albany falls dam-site on the Pend Oreille river by executives of the Columbia Basin Irrigation league, and will go to Spokane for a conference with the Columbia basin committee.

December 3—Sunday.

December 4—At noon Mr. Barrett will be the special guest of the agricultural bureau of the Spokane Chamber of Commerce. For this meeting invitations will be sent to leading agriculturists of the state college, state university and the officials of farmers' union and other similar bodies.

In the afternoon Mr. Barrett will be taken to Pullman for a visit to the Washington State college and will address a farmers' union meeting there in the evening.

December 5—Craigmont, Idaho, under auspices of farmers' union.

December 6-10—In Oregon for Oregon state convention.

December 11—Probably will address the general assembly of the Spokane Chamber of Commerce. This will be the only meeting to which all of the business and professional men of the city will be invited.

Farmers' union convention opens its sessions at 1:30 p. m. and Mr. Barrett will be escorted from the Chamber of Commerce to the union meeting in time for the opening ceremonies.

December 12-13-14—State convention of farmers' union.

December 15-16—Mr. Barrett will be taken onto the Columbia basin area and meetings will probably be arranged at Ephrata, Mansfield and Connell. This part of the itinerary to be worked out later.

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"The Living Wage" Is a Makeshift and a Guess

In his dissenting opinion to the decision of the United States railroad labor board increasing the pay of maintenance of way employees two cents an hour, A. O. Wharton, labor member of the board, maintained that the law of supply and demand, which operated in private industries to fix the price of labor, should not be taken as a basis by the labor board.

He contended that the basis should be "the living wage," but the majority of the board found that his proposed "living wage" was confessedly based upon a makeshift and a guess. The board finds that if the 48-cent minimum hourly wage demanded by maintenance of way workers were granted and corresponding differences were made for other classes of railway employees, an increase of more than 50 per cent in wages would be necessary, adding $1,249,390,994 to the annual wage bill of the railroads. That, of necessity, would have to come out of the producers and consumers.

In the arguments for the proposed increase some advocates declared that common labor on the railroads should have a 75-cent hourly minimum wage in order to maintain their families in reasonable comfort. The board finds that such an advance, with corresponding differentials for other classes, would mean an increase of 125 per cent in the nation's railroad wage bill.

The board's conclusion that the phrase "living wage" as used in this connection is "a bit of mellifluous phraseology well calculated to deceive the unthinking" seems harsh, but it is the cold economic truth. Of necessity we must deal here with a difficult and sometimes impossible adjustment to the varying needs of individual workers. A liberal "living wage" for a worker with a family of five or six dependents would enable a single man or woman to live in luxury. Apply, for illustration, this test to agriculture.

Of what avail would it be to rail at nature because a wheat farm or an orchard refuses to double its yield when its single owner marries and takes on the responsibility of a family?

Unfortunately, all other industries have like limitations. The transportation industry has its limits of collectable wealth, just as the soil has its limitations.

This impossible doctrine, that common labor in the railroad industry should be paid wages that would enable an employee to support a large family in comfort and educate his children according to exacting American standards, and that corresponding differentials should be paid to the skilled employees, has been advanced with increasing emphasis since the war, as if that demoralizing conflict had been productive and constructive instead of consumptive and destructive.

Farmers and other well-informed producers know beyond peradventure that freight rates are excessive and that relief must come from a lowering of these burdensome charges. But reductions would be impossible if the railway employees were granted their demands as to wages, hours of employment and easy working conditions. Quite to the contrary, existing freight rates, already excessive to the point of confiscation in many instances, would have to be still further increased, to the ruin of industry, and especially of agricultural industry in the Pacific coast region.

Make More Use of Schools

That the schools, high and low, throughout the country can be made of more use for the common good of the people, is a fact which is being recognized. A news item from Seattle says that caring for 80,000 Chinook salmon eggs for the federal government will be part of the work this fall of fisheries students at the University of Washington who help to conduct the college of fisheries hatchery.

They Are "Yes-Butters"

"Farmers will admit that it should be done, but—"

This significant comment on the attitude of Thurston county farmers toward the construction of manure sheds on their farms appears in the annual report of County Agent E. B. Stookey. "Manure conservation, while admittedly a very much worth-while project, is a difficult one on which to make headway," he says. "Our program of work called for the construction of 31 sheds this year, but only two have been built. Farmers admit that sheds are a good thing, all right, but they have too many other things that they think are of greater importance."

Corn for Silage in Snohomish

Corn is a standard silage crop. Corn for silage is being grown more and more throughout the Pacific Northwest.

D. J. Barker of Snohomish, in western Washington, finds corn silage one of the most profitable feeds for his herd of dairy cattle. He makes a specialty of the milk business.

There are 12 acres of Minnesota corn on the Barker farm this year, which he says will produce around 12 tons to the acre.

Mr. Barker is enthusiastic over the crop and declares corn for silage should be grown to a larger extent by farmers in Snohomish county.

LOOKING INTO OTHER FARM FIELDS

It is estimated that 15,000 to 20,000 tons will be the grape harvest in the Niagara grape belt of Ontario, Canada. The growers expect from $80 to $125 a ton. A large part of the grapes will be shipped to the United States for making grape juice.

* * *

The world's corn crop is estimated at around 500,000,000 bushels short of last year, the greater part of the decrease being in North America, but reports from Italy and Rumania show heavy losses as compared with 1921 in these two countries. Export clearances for the 1921-22 season promise to be the largest since 1900, when the total was 90,000,000 bushels, and no material letup in the outward movement is expected, although Argentine corn is in better condition now for export.

* * *

The California fruit and vegetable standardization act of 1921, under which the state department of agriculture was given power to decide what oranges should be considered too badly frozen for shipment, has been declared invalid by the state supreme court.

The act delegated it to the state department of agriculture to determine what should constitute frozen oranges within the meaning of the law, but the court held this to be improper, since it vested an administrative body with legislative power.

* * *

The Satsuma orange industry is a rapidly growing one in Alabama. Last year there were 160 cars produced and this year there is an increase of over 100 per cent. With the new acreage, which will come into bearing next year, a crop of 600 cars is expected. The first trees were put out 15 years ago. The Satsuma orange belongs to the Mandarin citrus fruit. One of its characteristics is the ease with which the rind is removed, giving it the name of "kid glove" orange. The oldest known Satsuma tree was in the garden of the emperor of China. This tree is now 300 years old and is still bearing. The name, "Satsuma," was given to the tree by the emperor of China, who named it and the fruit in honor of his favorite wife.

State Farm News

A 40 per cent increase has been made in the beekeeping industry of Washington in the last 10 years, according to A. B. Slocum, bee specialist of the state college extension service, who has recently made a comparison of the 1910 and 1920 census reports. This means that the state ranks second in the United States in the increase of colonies, but 24th in the number of colonies owned. The total value of the bee industry was estimated at $1,000,000 in 1920. Three thousand Italian queens have been introduced into the state and 13 bee associations have been formed during the last three years. The average yield per colony in the state is estimated at 75 pounds.

* * *

The people of Tonasket, in Okanogan county, are rejoicing over the fact that immediate construction of the Whitestone project is promised. The maximum price of raw land has been fixed at $50 per acre and the water cost is estimated to run between $60 and $70, making a combined cost of $120 per acre.

* * *

A conference has just been held at Montesano regarding the proposed Carstairs prairie irrigation project, which is expected to develop 400 acres, to be increased to 600 and 1000 acres later. H. E. Drew, county farm agent for Mason county, and Earl F. Dickinson, constructing engineer of Shelton, were in conference with H. S. Shorey, engineer, and Robert Cowan, farm agent for Grays Harbor county. While located in Mason county, this district is tributary to Chehalis river points and is a matter of interest to the people of Grays Harbor county.

* * *

A shipment of cabbage seed valued at $28,000, totaling 70,000 pounds, has just been shipped to Detroit from Burlington. Other shipments from several farms will also be made. The Skagit valley has become one of the greatest cabbage seed districts in the country.

* * *

According to the annual report of County Agent Fowler of Lewis county, there are 2600 people engaged in farming in that county. Agent Fowler spent 219 days in the field and 78 in the office, made 886 calls and 748 callers were received at the office. Seventy-eight farm demonstrations were completed during the year. There are 22 more purebred sires in the county this year than last and the tuberculin cattle tested total 5000.

* * *

Alvin Anderson of Deep River purchased a purebred Jersey bull from J. E. Johnson of Grays River to head his herd of 21 cows.

* * *

King county ranks 11th in the state in the production of honey per hive, averaging 43 pounds. This year, however, the average over the entire state was 35 pounds, which shows that King county was slightly above normal for this season. As a result of the cleanup campaign which has been carried on, bee diseases have been decreased 20 per cent in the county. There is, however, danger of foul brood, and all beekeepers have been warned to keep a lookout for this disease.

* * *

County Agent Love of Snohomish county reports that the Snohomish Valley Cow Testing association has completed its second year's work and will continue along the same organization plan for part of next year.

* * *

One of the busiest packing houses in the mid-Columbia district may be found on the Gilmer place of the Mount Adams Farm company, which is said to be the largest tract of o'Anjou pears in the United States. This company, which also owns a heavy acreage of apple trees, has shipped 33 carloads of d'Anjous from White Salmon, and eight cars of Bartletts were dispatched.

The big Klickitat county orchard place employs 80 harvest hands throughout the fall months. The place is well equipped with dormitories and commissary.

* * *

A ton of rolled oats and 100 ounces of poison were used in Yakima in preparation for the winter campaign against field mice. J. F. Finley of the United States biological survey and A. E. Lovett, county agricultural agent, supervised the mixing and the poisoned grain was distributed to farmers who are being troubled with the pest.

* * *

A new potato growers' organization is planned for Lewis county to promote standardization and better selling methods.

* * *

Captain McDonald, pioneer river man, has purchased a steamer, Gleaner, which is being repaired and which he will put on the Skagit river to assist the Harvester in the transportation of oats and potatoes that are being shipped to various points in the United States. About 100,000 sacks of grain were shipped by the river route last year and about the same amount is ready for shipment this year.

* * *

The Holstein club of Skagit county is planning to organize bull associations during the winter in different sections of the county.

* * *

The apple harvest at the Mount Adams farm above Husum has begun and Manager Hamlin places the yield at 40 carloads, which will be packed on the farm and shipped from Underwood. The farm has 400 acres in apple and pear trees and 42 cars of pears has been shipped this fall.

* * *

At a recent Holstein sale at Elma, eight farmers purchased 14 purebred animals at a cost of $1815. County Agent Robert Cowan reports that five of these dairymen bought their first purebred females.

* * *

The annual report of County Agent W. H. Talley of Walla Walla on extension work shows 216 meetings held during the year, with an attendance of 19,042. Two hundred and sixty-five farms were visited and 4063 farmers visited the office for advice. Demonstrations were given of best methods of orchard pruning, potato diseases, sunflower silage, water smut, fruit thinning, etc., making saving to members estimated at $37,621.

Live stock, dairy feeding, bee and poultry demonstrations are estimated to have saved $10,632. Women of the county saved $8993, it is estimated, through making dress forms, dresses, hats, etc.

The orchard of Mr. and Mrs. Dahling of Omak, in Okanogan county, was so severely damaged by a recent hailstorm that their crop was considered a total loss. Mr. and Mrs. Dahling, however, are people who are not easily discouraged. They are making apple sirup from hail-marked fruit for which they report a ready market. While the hail marked the apples so as to render them unsaleable, the flesh was firm and good.

FARM BUSINESS AND MARKETS OUTLOOK

A near-by view of industrial and trade conditions involving the next few months or the next year presents a fairly pleasing picture in all but one or two sections of our economic life, but when the focus is adjusted to cover a longer span of time, clouds can be seen on the horizon. Since the rate of turnover in farm production is so much longer than is the case with other lines of endeavor, the far view is quite important.

The close up outlook covers universal employment of labor at high wages, industries operating at a high rate, steady gains in bank clearings measuring volume of trade, rising commodity prices, freight loadings far above normal with those of general merchandise especially heavy, car orders about 15 per cent in excess of the supply, reports from wholesalers and retailers corroborating other signs of broad demand for consumers' goods, comparatively cheap money, gains in savings deposits, declines in commercial failures, and increases in our export trade. Even farmers, who have benefited least, have reduced their indebtedness a great deal. General sentiment is the most hopeful since 1920. Indeed, much more progress in industrial revival has been made than seemed possible with the farmer's buying power reduced and European conditions as unsatisfactory as they have been.

Some further improvement in activity is expected in the next few months and it may extend through much of next year, but the opinion is becoming more prevalent that ultimately a relapse must take place before all fundamental conditions will be sound. Labor and fuel are too high, so that costs of fabricated goods are out of line, building costs make investments in construction unsafe, transportation costs are exorbitant, taxes must come down and some progress must be made toward healing the economic wounds of Europe instead of making new ones all the time.

Just when the turning point will be reached, assuming that this view is correct, remains to be seen, but presumably the usual signals will be given. No change is expected before some time next year, at least, and it may be still longer deferred.

In any case farmers will be least harmed by virtue of the already overdeflated status of prices for most of their products. In fact, it should be of benefit to them in the long run by bringing prices for other products more nearly into alignment with their own.

Big Run of Short Fed Steers.

Chicago and Kansas City were gorged with the largest run of cattle in nearly two years early last week and the total around the market circle was the largest for the corresponding week with one exception in at least eight years. Both rangers and short fed steers increased in number and a few Canadian steers arrived, part of them smuggled over the border line. Prices on intermediate and low grades lost part of the recent advance. Short fed steers were 25 to 50 cents lower, butcher she stock 15 to 25 cents lower and bulls 5 to 25 cents lower. Another influx of calves caused a drop of practically $1 on veals at Chicago. In spite of the decline on short fed steers, most of those returning after 80 to 100 days on full feed show a substantial margin over first cost.

Prime steers became still more scarce and are still quoted at $13.60 at Chicago, but the average price for all beef steers is in the vicinity of $10.50 so that the $13.60 figure is deceptive in registering the approximate level of cattle values. That the average price is so high, however, in the season of heaviest slaughter, with hogs selling considerably lower, is quite encouraging. Not only is the demand for beef of broad proportions, but hides and other byproducts are moving at satisfactory prices.

Prime and choice steers will not be numerous for six weeks or so, but by that time some of the heaviest cattle taken out in recent months will be ready to make the return journey to market. This fact, combined with the passing of the holiday demand for high class beef, is quite apt to result in lower prices for the best grades.

Demand for feeder cattle has slackened slightly in the last two weeks, although the movement from the leading markets appears to be above normal for this season of the year. Scarcity of cars curtailed shipments from some points.

Hog Values Still Shrinking.

Receipts of hogs at the leading markets are running only slightly above the 10-year average for the corresponding period, but they are increasing nearly every week and prices are shrinking, the loss last week being nearly $1. Eastern shipping demand in the middle west has not attained large volume, as a shortage of cars restricts it to some extent. Packers are determined to put prices down to a lower level before the winter accumulating period begins and conditions are apt to be favorable to their program for a few weeks longer at least.

Lamb Feeders Going Strong.

Shipments of sheep and lambs from the 12 leading markets to feedlots for the week ending October 20 totaled 212,948 head, the largest on record since this data has been reported. Shipments in the corresponding week last year were 145,850 head and two years ago 103,249 head. Both of these two years, however, were below normal, so that the increase is not as serious as it appears. If the same pace is maintained during the next month feedlots will be more completely filled than seemed probable 30 days ago. No comprehensive report has been made and scattered observations are rather contradictory, but the bulk of the evidence indicates that the movement of lambs direct from the range to the feedlot as well as the number retained for winter feeding in the range states is larger than last year.

Prices for fat lambs at Chicago dropped 50 to 75 cents last week. Receipts increased and are not so much below normal as they were a few weeks ago, but with the large share which feeders are absorbing, the number to be absorbed by packers remains abnormally small.

Big horses are bringing $25 to $50 per head more than six weeks ago. Medium sized chunks are not easy to move, but the demand for sound horses weighing above 1600 pounds is larger than the supply with New York, New England and other industrial centers in the market. Loggers are taking the plainer big horses rather freely also.

Wool Markets Strong.

Wool prices are gradually working higher as stocks in producers' and dealers' hands are small and mills are obliged to buy. The Texas fall clip is meeting a splendid reception. Retail demand for clothing is active and both yarn and cloth markets are brisk. Although August was a dull month, consumption of wood by mills was approximately 71,600,000 pounds reduced to a grease equivalent or only slightly lower than at the peak of the 1920 boom. No substantial reduction in activity, if any, has occurred in the last six weeks. Foreign wool markets are firm, the London auction closing 5 to 20 per cent higher than the previous sale with some American buying in evidence.

The Boston market is quoted as follows: Oregon—Eastern No. 1 staple, $1.27@1.32; fine and fine medium combing, $1.15@1.20; eastern clothing, $1.10@1.15; valley No 1, $1.12@1.18. Territory—Fine staple choice, $1.35; 1-2 blood combing, $1.18@1.25; 3-8 blood combing, 97c@$1; 1-4 blood combing, 85@90c.

Advance in Wheat Resumed.

After two weeks of hesitation the wheat market is again responding to the factors favorable to higher prices. The main features in the situation show but little change. Car shortage and port congestion are responsible for scarcity of wheat in position for quick shipment. Canadian wheat is still coming from farms at a phenomenal rate and is piling up at lake ports, but is not exerting much pressure on the world market. World shipments each week are not running as large as the estimated average requirements of importing countries. Domestic mills are operating and, presumably, acquiring wheat at above the normal rate for the season.

Unusual Strength in Corn.

Unofficial reports show a farm carryover of old corn of approximately 168,000,000 bushels and a new crop of 2,796,000,000 bushels, making a total supply, including visible stocks at terminals of 2,973,000,000 bushels compared with 3,385,076,000 bushels a year ago, a decrease of 412,000,000 bushels or 12 per cent.

The range of cash grain prices for the week ending November 1 was as follows: Chicago—Wheat—No. 2 red, $1.20@1.23; No. 2 hard, $1.19@1.20 3-4; No. 2 northern, $1.16@1.17 3-4. Corn—No. 2 mixed, 67 1-2@70 3-4c. No. 3, 66@70c; No. 4, 64@68 3-4c; No. 2 yellow, 68 1-4@71 1-4c; No. 3, 66@70 1-2c; No. 4, 64@70c; No. 2 white, 67 3-4@70 3-4c; No. 3, 65 1-2@70 1-2c; No. 4, 64@69 1-2c. Oats—No. 2 white, 43 1-2@44 3-4c; No. 3, 41 1-2@43 1-2c; No. 4, 40 1-2@42 1-2c. Barley—59@70c. Rye—82@83 5-8c.

Hay Markets Firm.

Feed markets have become easier in the last few days with wheat feeds $1 to $2 lower and jobbers quoting $1 below mill prices. The southwest remains the principal buyer and dairy sections are said to be doing little. Stocks of feed are generous and the rate of production is up to normal at least.

Prices per ton (100-pound bags) in carlots—Chicago—Bran, $25.75; standard middlings, $26.75; flour middlings, $28.50@29; cottonseed meal, 36 per cent, $44; 43 per cent, $48; hominy feed, $29.50; gluten feed, $34.85; old process oil meal, $52.50; tankage, $65.

Small Change in Clover Seed.

Clover seed prices show little change compared with a week ago. Scattered reports point to a lighter yield of red than the last official estimate indicated. Foreign yields are said to be small and of poor quality. The department of agriculture reports that about one-third of the red clover and one-half of the alsike clover seed crops had been sold by growers by October 14.

Chicago, per 100 pounds—Clover, $15.50@20.50; timothy, $6@6.50.

Toledo, per bushel—Prime red clover, $12.80; prime timothy, $3.45.

Car shortage and high transportation costs are keeping down receipts of hay and prices on most markets remain firm. Demand is not especially urgent except for best grades. The supply of alfalfa at Kansas City has expanded moderately and that market has lost some of its recent snap.

Prices per ton in carlots—Chicago—No. 1 timothy, $21@23; No. 2, $20@21; No. 3, $12@15; No. 1 light clover mixed, $20@21; No. 1 clover, $16@18; No. 1 clover mixed, $16@18; No. 1 to choice alfalfa, $25@27; upland prairie, $20@21; midland prairie, $14@16; rye straw, $12@13; oat and wheat straw, $9@12.

Advance in Egg Markets.

Fresh egg prices have advanced sharply in the last 10 days as a result of pronounced scarcity. Further contraction in receipts at the leading markets will be due in the next month. Storage egg prices are not keeping pace with the advance in fresh eggs and have been weak much of the time recently.

Poultry receipts are increasing but the accumulation of frozen poultry in storage at the four leading markets during October was only 1,023,000 pounds compared with 6,276,000 pounds last year. Prices have declined and are not much above the level at which extensive buying for storage seems ready to enter the market.

Light production of butter as shown by reports from numerous creameries and by receipts at the leading markets resulted in a further advance in the butter market last week. Fancy butter was easy to clear as usual at this season of the year, but the shortage in receipts was sufficient to help the lower grades materially. Prices have advanced much more rapidly than in other countries and it is reported that several cars of fancy Canadian butter are en route to this country as well as small quantities from Denmark and England. The amounts are too small to be of much consequence, but if disposed of profitably, more may come later.

Prices on 92-score fresh butter on November 1 were—Chicago, 47c; New York, 49 1-2c; Boston, 48 1-2c; Philadelphia, 50 1-2c.

Advance in Cheese Checked.

The advance in cheese prices seems to have checked the demand as buyers purchased only small quantities for immediate needs. The reduction in storage stocks during October was a little larger than last year.

Prices for No. 1 American cheese on November 1 were—Chicago—Flats, 25@25 1-2c; Twins, 24@25c; S. Daisies, 24@25 1-2c; Young Americas, 25c; Longhorns, 25@26c; Square Prints, 26@26 1-2c.

Fruits and Vegetables.

Carlot shipments of potatoes in the week ending October 28 filled 8469 cars, the largest movement for one week for the season to date. The three-year average for the corresponding week is 7140 cars. Minnesota, Wisconsin, Maine, New York and North Dakota are the leading shippers. Prices were only steady to weak in western potatoes, but eastern markets were higher as the eastern crop is small and car shortage is restricting the movement of supplies. The Kansas City market is quoted at $1.10 per 100 pounds on sacked Russets.

The carlot movement of apples in the week ending October 28 aggregated 6462 cars compared with an average of 7711 cars during the corresponding week in the three preceding years. Prices are practically steady in consuming markets while shipping points are advancing. The British apple market is said to be advancing and export sales during the winter promise to be fairly large. Midwestern Jonathans range from $4.50 to $6 a barrel in city markets with northwestern extra fancy large Jonathans at $2.25 to $2.50 per box in the Chicago carlot market.

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Range of Live Stock Prices, Week Ending Nov. 1

CATTLE.	Chicago.	Spokane.	Portland.	N. S. Lake.
Choice, prime heavy steers (1100 lb. up)	11.75@13.70			
Good heavy steers	9.15@11.75			
Medium heavy steers	7.25@ 9.35			
Common heavy steers	5.50@ 7.50			
Choice, prime light steers (1100 lb. d'n)	11.65@13.35			
Good light steers	9.00@11.65			
Medium light steers	7.15@ 9.25	5.75@ 7.00	5.75@ 7.50	5.75@ 6.50
Common light steers	5.40@ 7.25	3.75@ 5.75	3.75@ 6.00	4.00@ 5.75
Common to choice butcher heifers	4.50@10.00	3.00@ 6.00	3.50@ 6.25	3.25@ 5.00
Common to choice butcher cows	3.40@ 8.25	2.50@ 5.00	2.50@ 5.00	2.25@ 4.25
Bologna and beef bulls	3.40@ 6.50	2.75@ 4.50	3.75@ 4.50	2.00@ 3.50
Canners and cutters, cows and heifers	2.50@ 3.50	1.50@ 2.50	1.50@ 2.50	1.50@ 2.00
Canner steers	3.50@ 4.00	2.00@ 3.50	2.50@ 3.50	2.00@ 3.50
Medium to choice light veals	7.50@11.25	7.00@ 8.50	7.50@ 9.50	7.50@ 8.25
Common to choice heavy veals	3.25@ 7.50	5.00@ 7.50	5.00@ 7.00	
Common to choice feeders (1000 lb. up)	5.50@ 8.00			
Com. to choice feeders (750-1000 lb.)	5.40@ 8.00	3.50@ 5.00	4.00@ 5.00	4.50@ 5.50
Common to choice stocker steers	4.35@ 8.00			
Com. to choice stocker cows and heifers	3.25@ 5.40			
HOGS.				
Top of market	9.40	11.00	10.85	8.75
Bulk of sales	7.90@ 9.35	10.25@10.85	10.25@10.75	8.25@ 8.75
Heavy (250 lb. up)	8.00@ 9.30	10.25@10.85	9.50@10.25	8.00@ 8.60
Medium (200-250 lb.)	8.30@ 9.30	10.50@10.85	10.00@10.65	8.25@ 8.75
Light (150-200 lb.	8.20@ 9.20	10.75@11.00	10.25@10.85	8.50@ 8.75
Light lights (130-150 lb.)	8.20@ 9.15	10.50@10.75	10.25@10.75	8.25@ 8.60
Smooth packing sows (250 lb. up)	7.30@ 8.65	8.25@ 9.00	7.75@ 9.00	6.75@ 7.50
Rough packing sows (200 lb. up	6.85@ 8.00	7.50@ 8.25	7.00@ 7.75	6.00@ 6.75
Medium to choice pigs (130 lb. down)	8.25@ 9.25	9.25@10.25	9.50@10.00	
Stock pigs		9.00@ 9.75	8.75@ 9.25	8.50@ 9.00
SHEEP AND LAMBS.				
Medium to price lambs (84 lb. down)	12.65@14.75	9.25@10.25	9.50@11.00	11.00@11.75
Culls and common lambs	8.75@12.75	8.00@ 9.25	6.50@ 9.50	8.00@10.00
Medium to prime yearling wethers	9.25@13.00	7.00@ 8.00	8.00@ 8.50	5.50@ 7.50
Medium to prime wethers	6.25@ 9.50	6.50@ 7.50	5.50@ 7.50	4.50@ 5.50
Medium to choice ewes	4.50@ 7.75	4.50@ 6.50	4.00@ 6.00	3.50@ 4.50
Culls and common ewes	2.75@ 5.25	3.00@ 4.50	2.00@ 4.00	
Full-mouth to yearling breeding ewes	5.00@10.75			
Feeder lambs	12.25@14.75	5.00@ 7.00		10.00@10.50

LATEST QUOTATION.

The Live Stock Market.

PORTLAND, Ore., Nov. 4.—Cattle—Choice steers, $7@7.50; medium to good steers, $6.25@7; fair to medium steers, $5.50@6.25; choice heifers, $5@5.25; common to fair steers, $3.75@5.25; choice cows and heifers, $4.50@5; medium to good cows and heifers, $3.50@4.50; fair to medium cows and heifers, $3@3.50; common cows, $1.50@2; canners, $1.50@2; bulls, $3@4; choice feeders, $5@5.50; fair to good feeders, $4@5; choice dairy calves, $8@8.50; prime light calves, $7.50@8; heavy calves, $5@5.50.

Hogs—Prime light, $10@10.25; smooth heavy, 230@300 pounds, $9@9.50; smooth heavy, 300 pounds up, $8@9; rough heavy, $7@8.50; fat pigs, $9.50@10; feeder pigs, $8.75@9.25; stags, subject to dockage, $5@7.

Sheep—East-of-mountain lambs, $10.25@11.25; choice valley lambs, $10.25@11.25; medium spring lambs, $9.25@10.25; common valley lambs, $8.25@9.25; cull lambs, $6.50@8.25; light yearlings, $8@8.50; heavy yearlings, 7.50@8; light wethers, $6.50@7.50; heavy wethers, $5.50@6.50; ewes, $2@5.

SPOKANE, Nov. 4.—Cattle—Prime steers, $6.25@7; good to choice steers, $5@6; medium to good steers, $4.50@5; fair to medium steers, $4@4.50; common to fair steers, $3@4; choice cows and heifers, $5@5.50; good to choice cows and heifers, $4@5; medium to good cows and heifers, $3.50@4; fair to medium cows and heifers, $2.50@3.50; canners, $1.50@2.50; bulls, $2.75@4.50; light veal calves, $7@8.50; heavy veal calves, $6@7.50; stockers and feeders, $3.50@5; prime mixed, $8.75@9.25; medium, $8.25@8.75; heavies, $6.25@8.25; fat pigs, $8@8.50; stockers and feeders, $7.50@8.50.

Hogs—Prime mixed, $8.75@9.25; medium, $8.25@8.75; heavies, $6.25@8.25; fat pigs, $8@8.50; stockers and feeders, $7.50@8.50.

Sheep—Prime lambs, $9.25@10.50; fair to medium, $8@9.25; yearlings, $7@8; wethers, $6.50@7.50; mutton ewes, $3@6.50; feeder lambs, $5@7.

(Continued on page twenty.)

Six States Compete at Western Royal

Strong Show Fails to Attract; May Consolidate With 1923 Interstate Fair

Those who attended the Western Royal Live Stock show at Spokane October 28 to November 2 saw about 950 head of cattle, horses, hogs and sheep that averaged higher in quality than did those at any of the three previous Western Royal shows. Those who did not attend missed a display of live stock such as is seldom offered to the public. The disappointing feature was that neither the people of the city of Spokane and neighboring towns nor of the rural districts of the Inland Empire were led to take advantage of their opportunity.

Result: The fourth annual Western Royal was a heavy loser financially, notwithstanding an ideal location in the very heart of Spokane and in the geographical center of an immense territory with wonderful endowments favoring live stock production. Result No. 2: When the doors closed late on the night of November 2 the hinges squeaked what was probably the swan song of the show—a sort of "Good Night, Ladies," in a minor key. It seems to be the consensus of opinion that they will "rust in peace." If the doors again open it will be perhaps in conjunction with the Spokane Interstate fair, though there are a large number of die-hard friends of the Royal who are hoping for a continuation of the show as a winter event on the circuit with the Pacific International and the San Francisco shows.

Uncertainty has hovered over the show since the 1921 event closed with a deficit, and it was not until late in September that it was finally decided to hold it again this year. Hence, there was inadequate time for widespread advertising and the working up of features that would attract attendance by people whose interest in and appreciation of live stock is secondary. A strictly educational affair can not compete successfully with political rallies and moving picture shows, and Spokane had these latter features in abundance during Western Royal week. The stock show had comparatively little to attract any but the lover of good live stock.

Unfortunately, it would seem, a movement was started a month before the opening of the show looking toward the consolidation of the Western Royal and the Spokane Interstate fair, with the result that a general impression got out that the Royal was going into the discard. This no doubt chilled the ardor of many who otherwise would have been boosters.

Thus it was that when the breeders loaded out Friday for the Pacific International at Portland, the big question was: "Have we seen the last of the Western Royal?" That question is troubling many stockmen and business men of the Inland Empire who are loath to give up. Many remember the struggles through which the Pacific International at Portland went in its early days, when only the bulldog tenacity of a few never-dies saved it from the ash can and made possible the great, permanent exposition that it now is. The never-dies of the Western Royal are now looking for a Moses to lead them on to a promised land like that reached by the Portland show.

That the live stock industry of the Pacific northwest needs a real live stock show such as the Western Royal promised to be, and such as the even present development of the live stock industry could make, is the consensus of opinion among the stock men and many business men. In spite of all its handicaps, the show this year was proof that the cattle, horses, hogs and sheep are available. They were present in their finest fettle, but they must have been disappointed at the indifference shown by the general public.

THE BEEF CATTLE SHOW.

While the beef cattle show was not as large as a year ago, the average quality was fully as good if not better than ever before, for there were very few animals shown of which it could not be said they were high class. Differing from any previous Western Royal, Herefords had a greater number of entries present than the Shorthorns. This is accounted for by the fact that a sale of Herefords was to be held, and, while the tops were of the best quality, there were more ordinary individuals among the white faces than among the reds, whites and roans.

Shorthorns.

One herd of Shorthorns from California and one from Oregon added much to the show made by Washington breeders. The Idaho University showed several head, as did the Washington State college. These two institutions had entries in all the beef breeds, as well as in some other departments, and each won a fair share of prizes. The Pacheco Cattle company of Hollister, Cal., won both grand championships. Their 2-year-old bull, Pacheco Lad 215th, that won the premier bull honors, is a pure white of large size, most approved Shorthorn type and wonderful quality showing in his hair as well as his smooth, even covering of flesh and his typical, masculine head. The junior champion, Hercules Conqueror, a Day & Rothrock junior yearling entry, has great depth of body, well-sprung rib, length, a good head, but might be just a little better in the crops. In the opinion of most observers, the junior yearling heifer, Knight's Lassie, that was made junior and grand champion, was a little the finest thing in the show. She had won similar honors wherever shown in her own state and, while she met some great opponents, both in class and in the other champions, there never seemed much doubt of her standing above all other females. Hercules Topsy 5th, the heifer that stood second to her; the Dunn 2-year-old, Supremacy 2d; the senior yearling, Hercules Matchless 3d, and others, all looked good in their classes, but Lassie has such wonderful breed type, depth and roundness of body, short neck and such pleasing outlines all over, as to make her easy to pick by a much less competent judge than Frank D. Tomson, long head of the publicity department of the American Shorthorn association, who placed the ribbons in a manner to win the approval of all breeders and exhibitors, even when they lost. Orange Blossom Lady, the Washington State college entry, with calf at foot, was made senior champion. She defeated G. W. DeLay's great cow, Scottish Jane 4th, that won most of the way around the fall circuit. While not carrying quite as much flesh, she had the same true breed type and was a little smoother over the hips.

Group of three bulls owned by exhibitor: 1 and 3, Day & Rothrock, Spokane, Wash.; 2, Pacheco Cattle company, Hollister, Cal.; 4, A. D. Dunn, Wapato, Wash. Group of two bulls, bred and owned by exhibitor: 1, 3 and 4, Day & Rothrock; 2, Pacheco Cattle company.

Bulls: Aged bull—1, G. W. De Lay, Hot Lake, Ore., on Village Reserve; 2, E. G. Kohlsaedt & Son, Colville, Wash., on Tribute; 3, J. W. Fox, Cedonia, Wash., on Captain. Two-year-olds—1, Pacheco Cattle company, on Pacheco Lad 215th (senior and grand champion); 2, De Lay, on Hercules Cornerstone; 3, Dunn, on Matchless King. Senior yearling—1, State College of Washington, on Hercules Rex. Junior yearling—1, Day & Rothrock, on Hercules Conqueror (junior champion); 2, Pacheco Cattle company, on Pacheco 284th; 3, Dunn, on White Clipper; 4, J. H. Matheson, Buena, Wash., on White Forest; 5, De Lay, on Linden Laddie. Senior calf—1, 2, 3 and 4, Day & Rothrock, on Hercules Ideal, Hercules Radiance, Hercules Marshal and Hercules Bandmaster; 5, Dunn, on Dunbro Lad; 6, State College of Washington, on Village Cup. Junior calf—1, Pacheco Cattle company, on Pacheco Fair Play; 2 and 3, Day & Rothrock, on Hercules Brilliant and Hercules Marquis; 4, State College of Washington, on Doune Sultan; 5, De Lay, on Royal Villager.

Females: Aged cow—1 and 2, De Lay, on Scottish Jane 4th and Ruberta's Missie; 3, Dunn, on Queen of Dunbro; 4, Fox, on Cedonia Bell. Two-year-olds—1, Dunn, on Supremacy 2d. Senior yearling—1, Pacheco Cattle company, on Knight's Lassie (junior and grand champion); 2 and 3, Day & Rothrock, on Hercules Matchless 3d and Perfection's Lady; 4, De Lay, on Village Missie. Junior yearling—1, 3 and 4, Day & Rothrock, on Hercules Topsy 5th, Hercules Victoria 4th and Hercules Jasmine 2d; 2, Pacheco Cattle company, on Pacheco Lass 280th; 5 and 6, Dunn, on My Lassie and Bonnie Girl. Senior calf—1 and 5, Pacheco Cattle company, on Pacheco Lass 292d and Pacheco Lass 293d; 2, 3 and 6, Day & Rothrock, on Hercules Silvia 3d, Hercules Violet 6th and Hercules Missie 5th; 4, Dunn, on Cup's Princess. Junior calf—1 and 2, Earl McDonald, Fenn, Idaho, on Mc's Sweetheart and Lady Kelmscott 3d. Cow, any age, with calf at foot—1, State College of Washington, on Orange Blossom Lady (senior champion); 2, De Lay.

Aged herd—1, Dunn; 2, De Lay. Young herd—1, Day & Rothrock; 2, Pacheco Cattle company; 3, Dunn; 4, De Lay. Calf herd—1 and 3, Day & Rothrock; 2, Pacheco Cattle company; 4, Dunn. Get of sire—1, 2 and 4, Day & Rothrock; 3, Dunn.

The Herefords.

Six exhibitors, with practically full herds, besides a few small exhibitors, made a Hereford show great in numbers, and with some excellent individuals. Herbert Chandler of Baker, Ore., was the largest winner, annexing eight firsts, besides a number of other prizes. The Methow Valley Live Stock company of Winthrop, Wash.; Henry Thiesen of Sweetwater, Idaho, and the University of Idaho, each won three blues, while Clyde Weatherford of Dayton, Wash., won two. Competition was close in many classes. Had Chandler's aged bull, Bonnie Prince, not been lame it is believed by a good many that he would have been senior and grand champion. But the Thiesen entry, Rupert's Model 14th, that won the honor, has excellent type, length of body and great bone, but was a little thin in flesh. The senior yearling, Beau Stewart, awarded junior and grand championship, shown by the Methow Valley company, was wonderfully finished, is a deep and smooth fleshed animal, with best of breed type, has a wonderful front and strong back, but is just a little narrow behind, a fault which he may grow out of. The aged cow, Catherine 10th, that was made grand champion, has been senior champion many times, but has been beaten by her 2-year-old stable mate, Mary Debonair, that was first in class at this show. The junior champion female, Semolina 3d, a senior yearling, has breed type, good size and smoothness of covering. Both are owned by Chandler. Herefords were judged in a very satisfactory manner by W. L. Carlyle of Alberta.

Group of three bulls owned by exhibitor—1, Herbert Chandler, Baker, Ore.; 2 and 4, Methow Valley Live Stock company, Winthrop, Wash.; 3, Henry Thiessen, Sweetwater, Idaho. Group of two bulls, bred and owned by exhibitor—1, Methow Valley; 2, Thiessen; 3 and 4, Chandler.

Bulls: Aged bull—1, Chandler, on Bonnie Prince; 2, Herman Nordby, Lewiston, Idaho, on Blanchard. Two-year-old—1, Thiessen, on Rupert's Model 14th (senior champion); 2, Chandler, on Debonair 119th; 3, Methow Valley, on Chewuck Panama 14th. Senior yearling—1, Methow Valley, on Beau Stewart (junior and grand champion); 2, Clyde Weatherford, Dayton, Wash., on Don Blanchard 3d; 3, Platt Bros., Genesee, Idaho, on Beau Type 1st. Junior yearling—1 and 7, Weatherford, on Majesty Fairfax and Don Blanchard 12th; 2 and 6, Chandler, on Prince Debonair and Rupert's Debonair; 3, Methow Valley, on Commander Junior; 4 and 5, Thiessen, on Lord Carlos and Disturber Carlos. Senior calf—1 and 5, Chandler, on Prince Donald and Prince Claude; 2 and 4, Thiessen, on Bonnie Master and King Rex; 3 and 7, Methow Valley, on Prince Perfect and Prince Chewuck 2d; 6, Nordby, on Don Rupert 7th. Junior calf—1, University of Idaho, on Militant Lad; 2 and 3, Methow Valley, on Beau Sunshine and Sir Radio; 4 and 7, Thiessen, on Ideal Bonnie and Bonnie Brummel 2d; 5, Chandler, on Bonnie Prince 4th; 6, Weatherford, on Don Blanchard 20th.

Females: Aged cow—1 and 2, Chandler, on Catherine 10th (senior and grand champion) and Semolina 2d; 3, Thiessen, on Miss Rupert 3d; 4, Methow Valley, on Jeanette 2d; 5, Weatherford, on Ruby Lass. Two-year-olds—1 and 4, Chandler, on Mary Debonair and Salome Generous; 2, Methow Valley, on Florence Debonair; 3, Thiessen, on Cherry Blossom 3d; 5, Platt Bros., on Esther Fairfax. Senior yearling—1 and 3, Chandler, on Semolina 3d (junior champion) and Princess Debonair; 2, Thiessen, on Bonnie May; 4, Platt Bros., on Lady Type 11th. Junior yearling—1, Thiessen, on Bonnie Jane; 2 and 3, Methow Valley, on Princess Lily and Blossom's Joy; 4 and 5, Chandler, on Princess Donald and Princess Donald 2d; 6 and 7, Nordby, on Miss Perfect Rose 5th and Miss Perfect Rose. Senior calf—1, 4 and 5, University of Idaho, on Donna Perfect 3d, Princess Donna and Tantille Lass; 2 and 6, Methow Valley, on Lady Annabelle and Miss Frances; 3 and 7, Weatherford, on Betty Blanchard 20th and Betty Blanchard 21st. Junior calf—1, Weatherford, on Betty Blanchard 23d; 2, Chandler, on Bonnie New Year; 3 and 4, Methow Valley, on Wild Rose and Wild Cherry; 5, Platt Bros., on Lady Type 16th.

Aged herd—1 and 4, Chandler; 2, Thiessen; 3, Methow Valley. Young herd—1, Methow Valley; 2, Chandler; 3, Thiessen; 4, Platt Bros. Calf herd—1, University of Idaho; 2 and 5, Methow Valley; 3, Chandler; 4, Thiessen. Get of sire—1, Thiessen; 2, University of Idaho; 3, Methow Valley; 4 and 5, Chandler. Produce of

(Continued on page nine.)

GENERAL ADVERTISING.

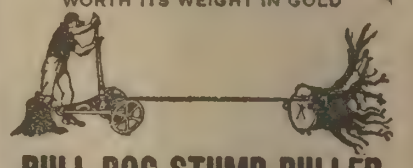
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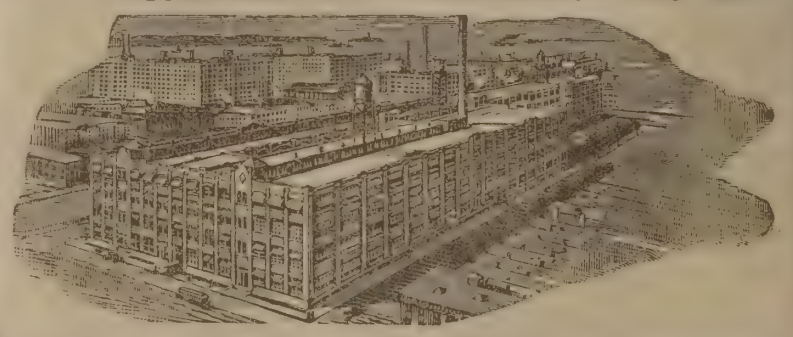
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A-M-F Bars are made for all standard mowing machines and for any width cut. Built stronger than old style bars—rust-proofed too by the Intraloy Process.

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If you took a knife and sliced it through—

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Not just a shell of rubber and stiffened fabric—but the real explanation of the rugged strength that gives to "U. S." Boots extra months of wear.

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A flange shaped sole of one single, solid piece of rubber, extending all the way from toe to *back* of the heel—

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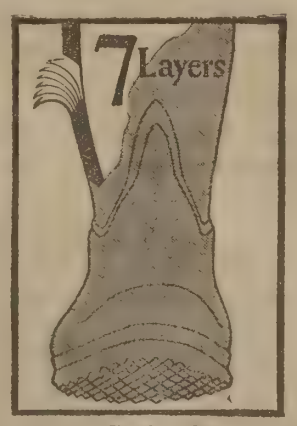
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United States Rubber Company

Trade Mark

Ask for

"U.S." Boots

Farmers Are Thoroughly Aroused

(Continued from page three.)

recently told me that he had done his bit to help our movement along. It seems he had subscribed to a certain proprietary farm paper which is about as much in sympathy with the farmers' union as I am with the boll weevils in my cotton patch. But this man was honest in his belief that he had been doing his bit to help us on the way, and there are thousands of decent individuals who would like, but do not know how, to help bring prosperity to agriculture, which they instinctively know is the bed-rock of general prosperity.

U. S. Department of Agriculture.

With the United States department of agriculture, I ask you to show a broad-minded and tolerant spirit. In many respects it has been and can be a power for good. It rests largely with the enlightened organized farmers of this nation to say what the department of agriculture shall do. There is no doubt that many of the department's chieftains were sincere in their belief that they were increasing the influence of the department by trying to build up in every agricultural county in the various states and nationally the farm bureau movement.

Departmental leaders and directors have gathered widely in the farm bureau conclaves, quite largely directed its activities, furnished advisors on the U. S. Grain Growers committee, believing that they were doing something of a beneficial nature. Instead they find that they have antagonized a very large number of farmers. They are facing cuts in their appropriations and they see their efforts instead of helping have retarded.

I say that we must stand by the department of agriculture and together with all bonafide self-help farm organizations help to make it retain the confidence and the respect of the American farmer. And what I say of the United States department of agriculture applies also to the state agricultural colleges, many of which, I regret to say, have upon their own initiative or because of federal pressure, been carrying farm bureau banners and ignoring, if not attacking, the movements which years ago naturally and properly sprang up upon their native heaths.

These state agricultural colleges will learn, if they have not already done so, that the farmer himself must work out his own salvation. They can help him do it if they will by throwing their efforts in the direction of his cooperative activities. But if they do not choose to do so they must at least confine their efforts to the two blades of grass theory and not attempt to dictate his economic program.

When I think of all the splendid men and women in the agricultural colleges and state extension work, and of the many folks in other classes of society who really have a desire to be of help to the farmer, I wonder why, if they really wished to help, they did not throw their support behind the farmers' union movement and other great self-help organizations that for years have been doing the important and necessary things for the farmer along economic lines. Why, when the farmers' union already had over 6000 local business institutions, many of them federated into strong centralized activity, did our self-confessed well-wishers fail to throw their support behind us?

We, and other self-help organizations, have long been upon the right road. Then why have not these great chambers of commerce that have given such large cash grants to the farm bureau, why have not the politicians and the money lenders given us their hearty support?

Can it be that these institutions and individuals have felt that we were not going fast enough? Or, can it be barely possible that we are making too much headway?

State Aid Versus Self-Help.

A considerable number of farmers joined the farm bureau, believing it worthy of their support. There are members of the farmers' union who belong to the county farm bureaus. I have no criticism to make of them. There might be a way to make the farm bureau a useful institution. Whatever it may be in some particular county, or even in a state or two, as a national movement it is not wholesome or helpful.

There are too many middlemen, too many bankers, coal operators, industrial overlords in and behind the membership, and too many designing politicians have wound their tentacles around the movement.

A legitimate farm organization must be an organization of, by and for the farmer. This the farm bureau is not. In the main it permits any citizen to belong to it. This feature alone is enough to bring it everlasting harm.

But in addition to being a purely farmers' movement a farm organization must be self-help, that is, it must be financed solely by the farmers. I will stand for no hair splitting by those who say that the national farm bureau movement is wholly supported by the dues of the membership. The fact is, and no one can deny it, that the movement was builded upon county agricultural agents who are supported by federal, state and county funds. The officials themselves have said that the county agent is the keystone of the farm bureau movement. Lincoln said, "No nation can exist half slave and half free."

Agricultural cooperators know that no farmers' organization can exist in the interest of the farmers when the general taxpayers' money is furnishing the keystone to the arch.

The testimony of the world's great agricultural leaders points the way for the farm bureau if it has the will to become a real farm organization. Purge the membership to its non-farmer members, the banker, the lawyer, the politician and the industrial magnate. They already have their clubs and associations; let them gather there.

Let the farm bureau cast off all its state aid associations and the leading strings of state and federal supervision and stand on its own feet.

Adhering to the principle that all my time and energy belong to the farmers' union, I have steadily and resolutely rejected all invitations to serve in other capacities, complimentary and even flattering as some of these invitations have been. I am devoted to agriculture and whatever of power and influence I may possess will be used to promote our cause. Of course I have given aid on boards and commissions where agriculture was entitled to a voice, but without pay.

During the year just passed I have produced a book entitled "Uncle Reuben in Washington." I expect no revenue. Neither will I accept any personal profit from its sale. If it is extensively distributed I believe it will prove a valuable agency in getting over to a large part of the public the story of the farmer, a story which is little known and therefore not appreciated. In this book I try to tell the tale of the farmers' trials, tribulations, sorrows and difficulties, and also something of his success.

I try to show how he has been tripped, fooled, camouflaged, skinned and humbugged. But the book, I trust, carries a message of good cheer and hope to the farmers. In it I try to show, I think successfully, how agriculture may, by its own efforts, pull itself out of the ditch and eventually become a cooperative and articulate power that will be able successfully to defend itself against the designs of the confederated interests. I regard the production of this book as entirely in line with the commission you have repeatedly given me to serve as head of our magnificent organization.

West Washington Apples

"The trouble with our western Washington apples is not the fact that they are grown in a milder climate, but because they seldom receive the proper care," says Peter Nelson of Keyport, Kitsap county. "We can raise apples that are as high in quality, with the possible exception of color, as are grown in eastern Washington. If we were to give the trees the attention they do in the apple-producing districts we could raise apples that would demand a better price on the local market."

As for varieties to raise, Mr. Nelson recommended the Gravenstein and King, since they are both good producers, sell well on the local marketss and bring a fair price. As yet he has had no trouble in disposing of either variety and in many cases could have sold more than was produced on a few trees on the Nelson farm.



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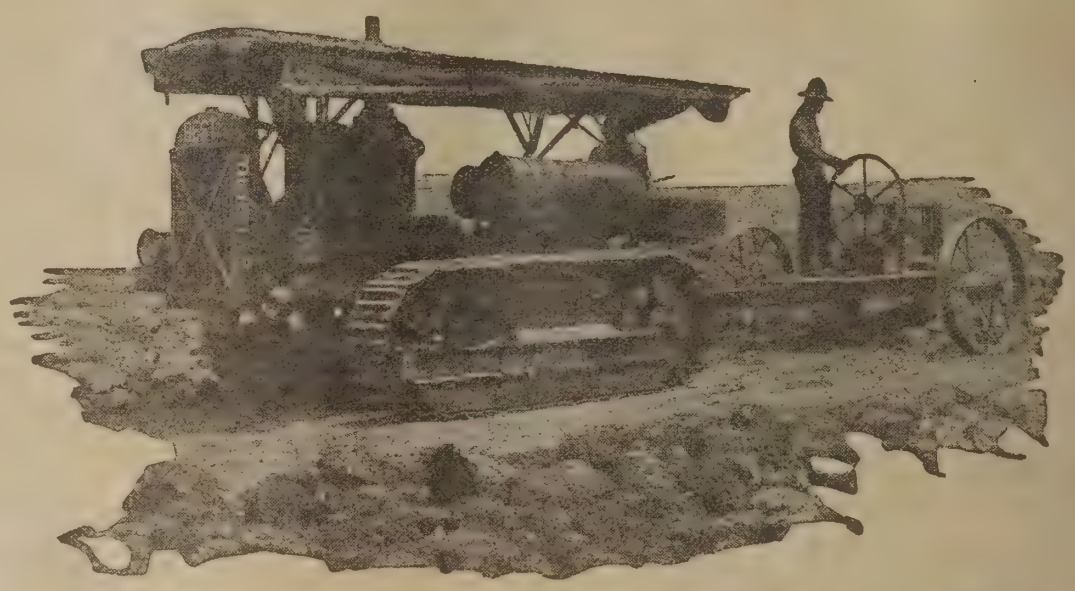
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1922-2

Six States Compete

(Continued on page six.)

cow—1 and 5, Chandler; 2 and 4, Methow Valley; 3, Thiessen.

The Aberdeen Angus.

L. A. Wells, Trout Creek, Mont., the only exhibitor of Aberdeen Angus, showed in all but the aged bull classes. His entire herd, which is mainly of the Queen Mother strain, were well fitted and of excellent Angus type. His champions were: Senior champion bull, Quiet Lad of Dundee; junior and grand champion bull, Prince L. A.; senior and grand champion cow, Queen of Granite; junior champion heifer, Queen of Dundee.

Milking Shorthorns.

Two herds of milking Shorthorns, both well fitted and both of good type, gave a good representation for the dual purpose idea. Frank D. Tomson judged these, as well as the beef Shorthorns, and, while he did not lose sight of the dairy quality, he did want substance and constitution in any animal he put up. Northwood farms of Redmond, Wash., had a little the better of Foothills farm of Carlton, Ore., winning eight firsts to five for Foothills. Northwood's senior and grand champion bull, Gretna Challenger, is large, has a good back, great length and is deep bodied and masculine. This farm had the junior champion bull also in their senior yearling, Northwood Pride, a masculine, deep-bodied youngster. They won senior and grand championship on the great white cow, Billing White Ruth, milking close to 50 pounds a day, right now, and showing in good enough form, almost, for a beef show. The junior champion female, Foothills Kismet 11th, is a sweet senior yearling, showing enough dairy type, without losing her Shorthorn characteristics.

Bulls: Aged bull—1, Northwood Farms, Redmond, Wash., on Gretna Challenger (senior and grand champion). Two-year-old—1, Foothills Farm, Carlton, Ore., on Foothills Milkman; 2, Northwood Farms, on Northwood Defender. Senior yearling—1 and 3, Northwood, on Northwood Pride (junior champion) and Northwood Viscount; 2, Foothills Farm, on Foothills Bagpipe. Junior yearling—1 and 3, Foothills Farm, on Foothills Prior and Foothills Milkman's 2d; 2 and 4, Northwood Farms, on Northwood's Cyrus and Northwood Surprise.

Females: Aged cow—1 and 4, Northwood Farms, on Billing White Ruth (senior and grand champion) and Glenside Winnie; 2 and 3, Foothills Farm, on Glenside Rose and Glenside Daphne. Three-year-olds—1 and 2, Northwood Farms, on Mollie and Lady Susie 3d. Two-year-olds—1, Northwood Farms, on Vera's Snowdrop; 2, Foothills Farm, on Foothills Kismet 9th. Senior yearling—1 and 2, Foothills Farm, on Foothills Kismet 11th (junior champion) and Foothills Kismet 13th; 3, 4 and 5, Northwood Farms, on Moss Rose of Pokelawn, Northwood Winnie 2d and Northwood Rose. Senior calf—1 and 2, Northwood Farms, on Northwood Jessie and Northwood Susan 2d.

Aged herd—1, Northwood Farms. Young herd—1, Foothills Farm. Get of sire—1, Foothills Farm. Three cows in milk—1, Northwood Farms.

THE DAIRY CATTLE SHOW.

All four of the dairy breeds were well represented, Jerseys with four exhibitors, Guernseys with three, Holsteins with two, and Ayrshires with one. In the first two breeds named, competition was keen almost from first to last class shown and it was close in some classes in the Holsteins. Two California herds of Jerseys and a Wisconsin herd of Guernseys made the competition interesting from a standpoint of state and district pride. The show, while not large, was high class throughout.

The Holsteins.

John L. Smith of Spokane and the University of Idaho made the Holstein show, the former with almost a full herd. Good type and good condition prevailed with most of the animals shown, and the show was one of all around quality. Smith won all firsts except on mature cow, where the university's grand old cow, Idaho Segis Walker Colantha, a daughter of Matador Segis Walker, defeated a strong class and won. Perhaps the most interesting contest was for grand championship on bull. The calf that was made junior champion here and at the Pacific International last year was showing in great form as a senior yearling. He had to meet the great old show bull, Segis Pietertje Clothilde, also owned by Smith. But so good was the younger animal he had no difficulty in winning. He has plenty of size, a great back, long, straight hips and much quality. Smith's 2-year-old, Hazelwood Leda Heilo Korndyke, won senior championship over the Idaho cow and was made grand champion. She was showing in excellent bloom and is a promising heifer, as is the senior yearling, Hazelwood Ormsby Heilo Duchess, junior champion. John B. Irwin of Minneapolis, Minn., judged all dairy cattle.

Bulls: Aged bull—1, John L. Smith, Spokane, Wash., on Segis Pietertje Clothilde (senior champion); 2 and 3, University of Idaho, on King Segis Violet Posch Idaho and Matador Violet Idaho. Junior yearling—1, Smith, on Hazelwood Heilo Butter King (junior and grand champion); 2, University of Idaho, on King Posch Segis Idaho. Senior calf—1, Smith, on Hazelwood Stella Champion; 2, University of Idaho, on Idaho Matador Conqueror. Junior calf—1 and 2, Smith, on Hazelwood Heilo Homestead and Sir Bessie Segis.

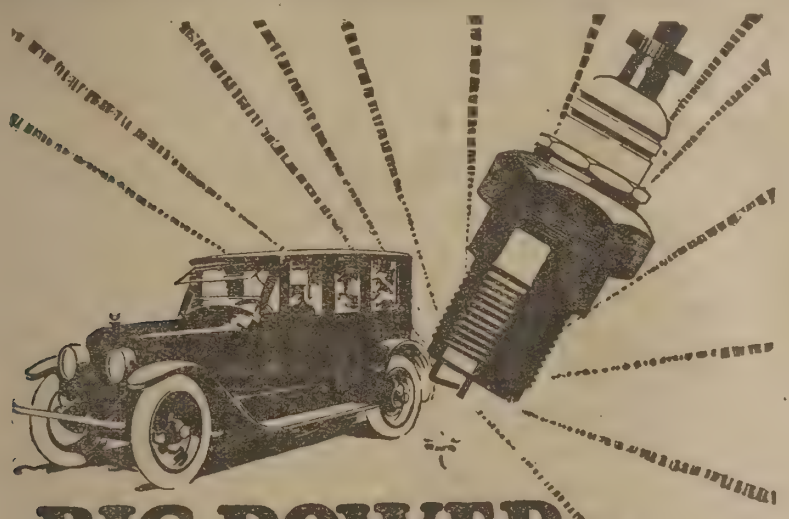
Females: Aged cow—1, University of Idaho, on Idaho Segis Walker Colantha; 2 and 3, Smith, on Lady Bracelet Jewel and Hazelwood Leda Korndyke Ormsby. Two-year-olds—1 and 2, Smith, on Hazelwood Leda Heilo Korndyke (senior and grand champion) and Hazelwood Johanna Skylark; 2, University of Idaho, on Idaho U Segis Colantha. Senior yearling—1 and 2, Smith, on Hazelwood Ormsby Heilo Duchess (junior champion) and Hazelwood Bessie Pauline; 3, University of Idaho, on Idaho U DeKol Korndyke Violet. Junior yearling—1 and 2, Smith, on Hazelwood Heilo Piebe Homestead and Hazelwood Heilo Fobes Tritomia. Senior calf—1, 2 and 4, Smith, on Hazelwood Ormsby Duchess, Hazelwood Heilo Posch Ormsby and Hazelwood Heilo Fayne Bessie; 3, University of Idaho, on Idaho Matador Countess. Junior calf—1 and 2, Smith, on Hazelwood Ormsby Butter Girl and Hazelwood Bessie Pauline Posch.

Aged herd—1, Smith; 2, University of Idaho. Young herd—1, Smith. Calf herd—1, Smith. Get of sire—1 and 3, Smith; 2, University of Idaho. Produce of cow—1 and 2, Smith; 3, University of Idaho.

The Jerseys.

One full herd, two partly full and consignments from two more made a real show and hot competition in Jerseys. Glen Tana farm of Spokane, the largest exhibitor, was the largest winner, securing three of the championships, 12 of the 16 blue ribbons, and other prizes. J. E.

(Continued on page eleven.)



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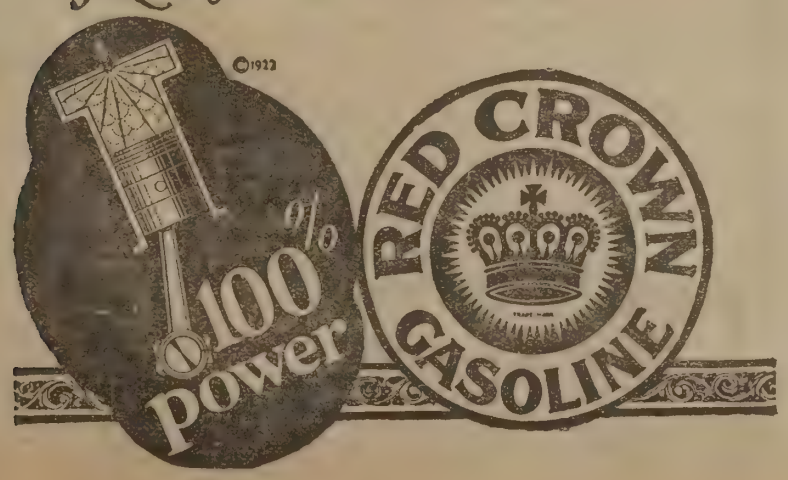
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LIVESTOCK AND DAIRY

Smith's Steers Outsell Brown's

Part III.

The table given last week makes clear the third of the primary requirements of the steer buyer, namely, that the meat must please the consumer. Prime native steer carcasses are worth 18 cents a pound, while plain cows bring only 7 cents a pound. Even this price range does not tell the whole story, for the carcasses of canners are unsuitable for selling over the butcher's block, but are worked into other forms, such as canned beef. The retailer will pay 23 cents for loins from the best steers, but he can pay only 15 cents for others and hope to sell them at a profit. The better grades of beef are more tender, palatable, juicy, nicely flavored, more nutritious as well as more attractive in appearance than the low grades.

Besides having a dressing percentage of around 63, the $12 steers on the present market would produce beef worth about 18 cents a pound. They probably would have a little more of their carcass weight in the valuable cuts. The $5.50 steers would be low dressers and their carcasses worth only about 10 cents a pound. Canner steers selling at $3.50 would dress out still more poorly and produce beef worth only 6 to 8 cents a pound.

Whether a steer will have a high dressing percentage or not depends on how fat he is, on the degree of paunchiness he shows and the amount of weight in his hide, head and legs.

When a steer is fattened the weight put on is added mostly to the carcass, while the parts going into the offal are changed but little. A 1000-pound feeder steer gaining 400 pounds in a five months' feeding period would increase his dressing percentage perhaps 10 to 12 per cent. A broad body, full and plump in every part, deeply covered with mellow flesh indicating a thick carcass and high finish, goes with a high dressing per cent for the same reason. The cattle buyer, usually mounted in the larger yards, will handle the animal, pressing along the spine over the loin and along the ribs to see how deeply they are covered. Other signs that the animal is highly fattened and, therefore, will be a high dresser found in the size of the tongue fat, or "wattle," between the lower jaws, the "roll," which the fat steer pushes up at his hind flank when he walks, and the fat on the ends of the pin bones.

Paunchiness is due to an excessive quantity of feed and water in the digestive tract. It is the custom to "fill" cattle with hay and water when they reach market. If the cattle "fill" excessively, because of hot weather or some other cause, so that their sides project decidedly beyond straight lines from the shoulder to the hip, the buyers will expect them to be low dressers and will make low bids or will delay making any bid at all until the cattle have lost some of the fill. It can be shown that each 10 pounds of fill which a 1000-pound steer takes reduces its value per hundredweight about 1 per cent, but since cattle are always assumed to be filled when they are offered for sale, the seller is the loser if they have not had the customary feed and water.

Although a heavy hide lowers the dressing percentage, it is not discriminated against on that account unless excessively dirty, because hides as a rule are worth more than the average value of the carcass. There is no similar compensation when the dressing percentage is lowered by a big, coarse head or coarse legs and joints.

From what was said before with reference to the location of the high and low priced cuts it follows that animals which have short legs, short necks, are broad over the crops and along the back, loin and rump, thick and bulging in the thighs and are full and low in the twist and which lack prominence at the shoulders, hips and tailhead would have a high percentage of weight in the high-priced parts.

VETERINARY

By DR. S. B. NELSON.

Mange—Will you please give me a good treatment for mange? SUBSCRIBER.

One of the good treatments for mange is to use a mixture of petroleum and sulphur, mixing an ointment that is semi-liquid. Apply this with a brush all over the body and leave it. Give a second treatment in five days and another in five or six days more.

Growth on Hip.—One of my hogs has a large growth on one hind quarter. I first noticed this to appear when the pig was about 6 weeks old. At first it was only the size of a quarter and looked like a patch of mud. Now it is about 10 times as large and bleeds and looks sore. Will it be necessary to remove this growth with the knife? A. T.

Try using a 1 per cent solution of picric acid in water two or three times daily on the sore.

Lump in Udder—We have a cow just fresh about five weeks that has a hard lump forming in the front teat at the end, which seems to have almost entirely closed the opening. It is nearly impossible to force any milk through, but there seems to be no soreness. K. M. R.

Try applying United States Farmacopis iodine ointment to the lumpy part of the udder, using it morning and evening after milking, with a reasonable amount of massage.

Dehorning.—When is it best to dehorn a cow, before or after freshening? Our cow will be fresh about the middle of January and we would like to have her dehorned right away if advisable. W. A. H.

If you are in a position to handle the cow without too much injury in restraint you might dehorn her right now. If you have no stanchion into which you could fasten her you might try one of the good simple ways of handling the animal. One way is to tie her up very short to a post and push the body around to the side of the fence, so as to crook her head, and hold her steady by means of a long plank, 2x6. When the horn on the outside has been taken off push her around to the other side of the fence and remove the remaining horn. If she is pretty nervous and you do not have a good place to fasten her without the possibility of injury to her you had better wait until she freshens.

SORE UDDER—I have a cow that has pimples all over her teats. Occasionally these pimples break and they are bloody. J. B. R.

Wash the teats and udder of the cow in a 2 per cent solution of lysol in water before and after milking. After milking and when the udder has been dried, apply a little mercuric oxide ointment to the sores and pimples.



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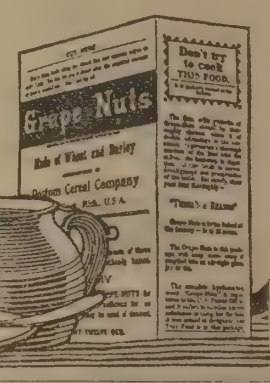
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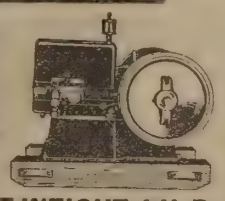
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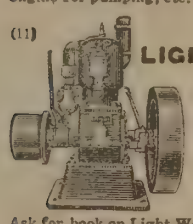
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Six States Compete

(Continued from page nine.)

Thorpe of Lockeford, Cal., had two firsts; Waterloo farm of Lockeford, Cal., one, and the University of Idaho one, while Glenwood farm of Buckeye, Wash., just missed first on junior calf, on a close decision, after the judge had looked long at the Glenwood calf and the Glen Tana calf that beat her. Perhaps the most outstanding animal is Glen Tana's senior and grand champion bull, Glen Tana Perfection. Three years old and well developed, he has a wonderfully strong back, deep, round body, good length and a head to please the most fastidious. All three of the aged bulls were strong show animals. Biddy's King of Mossdale, that stood second, is a son of Financial King. He has long, straight hips and wide pin bones. To the writer's view the third prize bull, Jolly Senator Raleigh, has the best head of the three and an exceptionally deep middle, but is the least bit rough over the tail setting. Eminent Jimps Owl, the grand old cow that was senior champion at the Pacific International Stock show last year and grand champion the year before, was given that honor at the Western Royal. Her udder seems hardly as good as a year ago, but her great length of body, sweet head and good back, are still hard to turn down in a cow of her age.

Bulls: Aged bull—1, Glen Tana Farm, Spokane, on Glentana Perfection (senior and grand champion); 2 and 3, J. E. Thorpe, Lockeford, Cal., on Biddy's King of Mossdale and Jolly Senator Raleigh. Two-year-olds—1, Waterloo Farm, Lockeford, Cal., on Financial Corrector. Senior yearling—1, Glen Tana Farms, on Glen Tana Morocco Wonder (junior champion). Junior yearling—1, Thorpe, on King's Tip of Mossdale. Senior calf—1, University of Idaho, on Idaho Baronet Hero; 2, Glen Tana Farms, on Glen Tana Morocco Guenom; 3, Thorpe, on Nomie's King of Mossdale; 4, Waterloo Farm, on Financial Corrector's Gold. Junior calf—1 and 2, Glen Tana Farms, on Glen Tana Morocco Majesty and Glen Tana Morocco Sultan; 3, University of Idaho, on Idaho Torono Experimentor.

Females: Aged cow—1 and 4, Glen Tana Farms, on Eminent Jimps Owl (senior and grand champion) and Glen Tana Sibyl 2d; 2, Thorpe, on Goldie's Nehalem Cowslip; 3, University of Idaho, on Owlet's Louise of Waikiki. Two-year-old—1, University of Idaho, on Waikiki's Pilot's Bessie; 2, Glen Tana Farms, on Glen Tana Dorothy; 3, Thorpe, on Gertie of Mossdale; 4, Waterloo Farm, on Goldie's Dame Onota. Senior yearling—1, Thorpe, on Wardress of Mossdale; 2, Waterloo Farm, on D. L. K.'s Aljibe. Junior yearling—1 and 2, Glen Tana Farms, on Glen Tana Morocco Inez and Glen Tana Golden Girl; 3, Thorpe, on King's Miss of Mossdale; 4, Glenwood Farms, Buckeye, Wash., on Fern's Bonnie Lady. Senior calf—1 and 3, Waterloo Farm, on Financial Corrector's Foxola (junior champion) and Financial Corrector's Viola; 2, Glen Tana Farms, on Glen Tana Morocco Lady; 4, Thorpe, on Miss Golden Gate of Mossdale. Junior calf—1, Glen Tana Farm, on Glen Tana Morocco Fairy; 2, Glenwood Farm, on Laddie's Ethleen of Glenwood; 3, Waterloo Farm, on Financial Corrector's Glory; 4, Thorpe, on King's Daughter.

Aged herd—1, Glen Tana Farms; 2, Waterloo Farm; 3, Thorpe. Young herd—1, Glen Tana Farm; 2, Thorpe; 3, Glenwood Farm. Calf herd—1, Thorpe; 2, Glen Tana Farms. Get of sire—1 and 3, Glen Tana Farms; 2, Waterloo Farm. Product of cow—1 and 2, Glen Tana Farms; 3, Thorpe.

The Guernseys.

Another real contest all down the line was in the Guernsey classes. Three herds competed, although they did not all fill all classes. All had good, typy herds, but the F. J. Reuping herd from Fon du Lac, Wis., showed perhaps a little more type and the arrivals were a little more highly fitted. They won the lion's share of the first prizes. Their old bull, Superb of Edgemoor, that has been grand champion most of the way around the Eastern circuit, was defeated by their 2-year-old, Gay Girl's Golden Secret of Owland. This is the young bull's first time to win the honor, though he has never been defeated in class. He has wonderful depth and long, wide hips, together with most approved type. Wallace & Fordyce's junior champion, Fawndale Morose, a junior yearling, is a promising youngster, with best of type, constitution and capacity—a real bull. Judy of Thatch Meadow, the Thousand Springs entry that, as a yearling, won junior championship last year, was made senior champion. She is just as sweet as a year ago, with a strong constitution, fine head, and an excellent udder. The junior and grand championship went to Reuping's senior heifer calf, Corium Nancy's Cassie, a beautiful calf with plenty of constitution, that has been winning in class in the east and was second at the National Dairy show.

Bulls: Aged bull—1, F. J. Rueping, Fond du Lac, Wis., on Superb of Edgemoor; 2, Wallace & Fordyce, Sunnyside, Wash., on Chicona Lover Bold. Two year old—1, Rueping, on Gay Girl's Golden Secret of Owland (senior and grand champion). Senior yearling—1, Thousand Springs Farm, Wendell, Idaho, on Masterpiece Ultra King of Edgemoor. Junior yearling—1, Wallace & Fordyce, on Fawndale Marose (junior champion); 2, Rueping, on Corium Brownie's Count. Senior calf—1, Thousand Springs Farm, on Deacon of Thousand Springs; 2, Rueping, on Corium Nellie's Rosa's Delos. Junior calf—1, Rueping, on Corium Ladock Jennie's Prince; 2 and 3, Wallace & Fordyce, on Fawndale Boulder and Fawndale Bold Laddie.

Females: Aged cow—1, Wallace & Fordyce, on Edna of Mountain View; 2, Thousand Springs Farm, on Imp. Fascination 2d of Oakes Farm; 3 and 4, Rueping, on Topsy of City View and Imp. Ladock Jenny. Two year old—1 and 3, Thousand Springs Farm, on Judy of Thatch Meadow (senior champion), and Yeoman's Mixter Babbette; 2 and 4, Rueping on Jeanette of Louis Corners and Mabel's May Queen. Senior yearling—1, Rueping, on Corium Beulah; 2 and 3, Thousand Springs Farm, on Imp. Chinc Fascination of Thousand Springs, and Mixter May Hopeful. Junior yearling—1, 3 and 4, Rueping, on Corium Rose de Houards, Corium Ladock Jenny's Cloe and Corium Caroline; 2, Wallace & Fordyce, on Anchor Rose of Fawndale. Senior calf—1 and 4, Rueping, on Corium

(Continued on page fourteen.)

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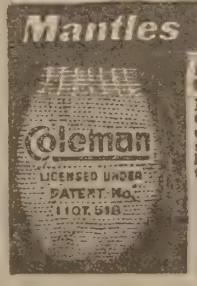
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POULTRY AND RABBITS

The Longer Day

Use Hen House Lights With Care

The lighting of houses for young pullets is no doubt a profitable practice when not carried to excess and is destined to become a permanent and very valuable adjunct to commercial poultry keeping, says George R. Shoup of the western Washington experiment station. Records at the station have shown an average November and December lay of 60 per cent or better with lights and only about 30 per cent for November and 40 per cent for December without them. The beginner especially is prone to use this very effective means of increasing production to an excess, which usually causes his ultimate financial loss through broken down birds and a premature molt, and later makes his yearlings much less fit for the breeding pens.

Morning lighting is more efficient than evening lighting in proportion to the number of hours of illumination given, continues Mr. Shoup. The birds are very hungry in the morning and the advent of the light insures every healthy bird leaving the roosts and attempting to appease the craving for food. Thus, if they are given a feed at 4 a. m. their egg-making organs have three more hours in which to work than if they had been fed at 7 a. m. and apparently these three extra hours are about all that is needed to reproduce the daylight prevailing during the spring, when production is normally the heaviest. Without evening lighting the pullets go to roost about 4 p. m. during the cloudy winter day in this lattitude and they utilize about 12 hours for feeding when lights are given at 4 a. m. The inconvenience to the caretaker in getting up at this early hour can be remedied to some extent by having an electric light switch in the house or an alarm clock may be adjusted to turn on the current.

If pullets are at all backward in starting, or if the lay has not reached 50 per cent when those of the smaller breeds are 6 months old and the large breeds 7 1-2 months old, both morning and evening light should be given for a period. The main fault found with morning lighting other than the inconvenience is that the pullets may have access to frozen green food or to ice water which may develop through a sudden drop in temperature during the night. The early morning period before dawn is often the coldest of the entire 24 hours and, unless the birds have plenty of deep straw to work in and plenty of grain in the straw which was placed there the night before, they are likely to catch cold. When they leave the roosts they are always warm from close contact with each other during the night and idleness is likely to produce the greatest menace to which commercial poultry handling is subject—a cold which is often the forerunner of roup and kindred ailments. The practice of feeding at night for the morning consumption also invites many rats and mice, and a consequent loss of grain. The germinated oats are much more palatable if fed warm out of the sprouter, and they are quite certain to freeze and to cause serious indigestion if placed in the litter on a cold night.

In many cases where the pullets are going through a partial molt and the production is down to 30 per cent the caretakers have either used an excessive amount of morning and also evening light and the birds have been forced past their powers of recuperation, or else the birds have been eating frozen food in the morning before the caretaker got around. Therefore, if morning light is given the green food and water should be removed the night before on cold nights, or else the caretaker should get out and give personal supervision as soon as the lights are turned on.

The practice of lighting only in the evening has seemed the wisest to recommend to poultrymen in general. It is almost impossible to overdo evening lighting, as the birds will go to roost or stand idle after the crop is entirely filled, and the time of giving the various feeds is entirely in the caretaker's control. If the first feed is given at 7 a. m. it is only a short while before the day starts to warm up and there is less danger of colds. It is also possible for the feeder to remove the frozen green food before the birds get to it, and to refill the drinking vessels with fresh water which is not ice-cold. Hot water is still better.

In order to make adequate use of the evening light it is necessary to withhold some highly relished food until a period of the evening later than would be necessary in spring and summer. The wet mash which may carry some fresh animal food should be fed about 6 o'clock and this followed by a green food supply sufficient to last till 10 a. m. the next day. The green food is fed after supper, and the craving for this very necessary and palatable part of the ration insures a full attendance on the floor until the lights are turned out at 9 o'clock.

It takes several days for the pullets to become accustomed to the use of the night lights, but it is not uncommon in November and December to find more birds on the floor and a more general consumption of food at 9 o'clock than at 6 o'clock or earlier.

Whenever the production approches 65 per cent the lights are turned out at 8:30 p. m. and sometimes even 8 p. m. There are, of course, many individuals in a large flock which can stand a higher lay than 60 per cent, but we have found that a flock lay of approximately 60 per cent is about the limit that the average flock can produce, keep on laying continuously and come through the season in good condition.

The physical condition is easily determined by examining the keel or breastbone. If the breast is well filled out and there is not more than one-quarter of an inch of the breastbone which protrudes past the flesh the bird is in good laying condition. When the flesh recedes till one-half inch of bone protrudes she is in poor condition and has had too great a strain on her digestive system and will likely die if she keeps on laying. If such a hen stops laying she very rarely makes a good bird for the breeding pens.

The Time of Molting

Hens are always doing one of three thigs, namely, laying, molting or fleshing. Hens usually start molting when they stop laying, unless they are broody or sick. Therefore, the later in the year the hens lay the later they will molt. The earlier in the year the hens stop laying the earlier they will start molting. The late molters are the persistent, or high producers and best payers. The early molters usually are the low producers and, therefore, the poor payers. It is true that we do find some early molters that are high producers, but usually they have laid about all their eggs when the price was low. It is equally as true that we do find some late molters that are low producers, but usually these hens have either been sick, broody or both. Remember that egg production controls molting, and not molting egg production.

To keep up flock egg production it is necessary to cull out all hens that stop laying and start molting early, regardless of their individual production in the past. Oftentimes we cull out and move these early molters to other quarters by themselves and they soon come back to laying and produce many eggs. This, no doubt, is mostly due to their not having had the opportunity to get the necessary kind and amount of food while in the former quarters. We usually find that many of the early molting hens are whipped and kept away from the mash hoppers by the better layers. When placed by themselves they have much more of a chance to get to the mash hopper and secure what they desire and need, therefore, they usually resume egg production.

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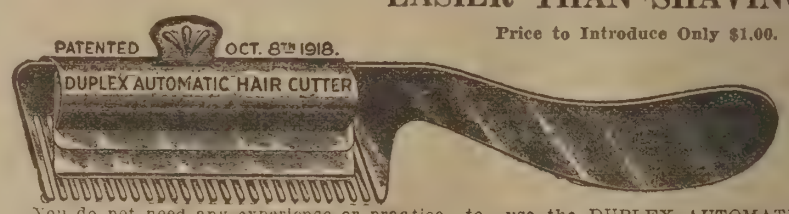
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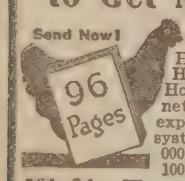
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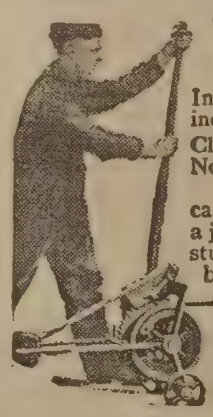
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LOOK AT THE GOOD FARM BARGAINS THAT ARE OFFERED ON THE FARMERS' "WANT AD" PAGE THIS WEEK.

ORCHARD AND GARDEN

Pit the Cabbage

By C. L. VINCENT,
Department of Horticulture, Washington State College.

Housewives are often heard to remark in the winter and spring that cabbage is dry and not crisp and juicy like it is when it first comes from the garden. This dryness in cabbage can be prevented by properly pitting the heads in the fall.

There are various ways of pitting the cabbage for winter use. One of the most common ways is to open up a trench in the fall one and one-half feet to three feet wide, according to the number of heads to be stored on the bottom layer, on a well-drained slope which has a sandy or gravelly soil. It will depend somewhat on the size of the heads as to what width to make the trench and also on the amount of cabbage you have to store. If two heads are placed side by side probably one and one-half feet will be sufficient, but if three, four or more heads are to be placed side by side in the trench the width will have to be greater. The depth of the trench will vary from six inches to one foot, depending on the size of the heads to be stored.

The cabbages to be pitted are pulled roots and all and placed in the trench, heads down. Do not remove the outer leaves. After filling the bottom of the trench, which may be two, three or four plants wide, the next layer of heads must be placed so that the heads will fit between the stalks and the roots of the bottom layer. For example, if the bottom layer is four plants wide then the second layer will be three plants wide, or if the bottom layer is only two plants wide then the second layer will contain only one row of plants. After packing the heads together in this fashion put a covering of burlap or a thin layer of straw over the plants in the trench, to protect them from the layer of dirt which is to be put on next. Only a sufficient amount of soil to protect the plants from severe freezing should be put on at this time. After severe winter weather sets in, a sufficiently large amount of manure or straw should be put on to prevent severe freezing and alternate freezing and thawing. This will also enable the grower to remove the heads as the market or home desires them during the winter.

The outside leaves of the heads will have rotted some by late spring, but this does not affect the flavor of the cabbage in any way. After removing the decayed leaves you will have a beautifully bleached head of cabbage which is crisp and juicy and consequently of higher quality than heads simply stored in the dry cellar or basement without paying any attention to the humidity of the air.

If only a few heads are to be stored for winter use, the following is suggested: Cut the heads from the stems of the plants and wrap them first in the large outer leaves of the plant and then in paper and pack between layers of sand in a barrel or in boxes. The sand should be kept moist, but not wet. Keep the barrel in a cool cellar. In this case also the outer leaves will decay, but as suggested before the flavor is in no way impaired.

Orchard Problems

By O. M. MORRIS, Head Horticultural Department, Washington State College.

Can you tell me what to do for my apricot trees? One of them started spreading or literally separating the thin outer bark. It just seemed to pull apart. This was followed by deep breaks in the soft inner bark reaching to and exposing the heart of the wood, which seems to be infested and turns brown. The other tree is beginning the same way and the disease grows very rapidly. The trees have had cultivation, pruning and commercial fertilizer. E. E. G.
Olalla, Wash.

From your brief description, I am led to believe that your trees are suffering the result of the winter injury done either last year or two years ago. There is probably little or nothing that you can do other than see that the plant has plenty of soil fertility and water, and that insects do not harbor under the bark that is peeled back. In case large sections or wounds are left open, exposing the sap wood, it would be a wise plan for you to bridge graft this. A few months ago directions were given in the columns of The Washington Farmer for bridge grafting work. Very detailed directions can be secured from the United States farmers' bulletin 710, if you did not save the copy of The Washington Farmer.

BROWN SPOTS IN PEARS.

I would like to know what is wrong with my D'Anjou pears. They are very large and look good. When you cut them open there are brown spots in them about the size of a pea and smaller. The skin is not marred at all. They are juicy and sweet. The trees look healthy and this is the first year we had much of a crop. The trees are about 9 years old. They are in clean cultivation and there don't seem to be any insects. C. E. G.
Yakima, Wash.

In all probability what you are noticing in your D'Anjou pears is the result of the extreme fluctuations of drought and moisture supply that existed during the summer. You will remember that during the early part of July your section was visited by a few days of extremely hot, dry weather. Many pear trees lost their leaves entirely. The leaves before droping turned practically black. This was apparently due to the extreme dry weather drying the leaves on the trees on account of the trees not being able to supply them with water. This happened in some cases where trees were standing in wet ground. The trees after losing some of their foliage or being badly checked by drought, started again into very vigorous growth. The cell tissues were probably killed or ruptured, and now show this effect.

It is not a disease, and probably will not reoccur. It will only to a very slight extent, if at all, reduce the keeping quality of your fruit. It has already done its damage in reducing their acceptability for market.

Unripe Honey

"The term, 'unripe honey,' is used to designate honey that is extracted before it has been capped over by the bees," according to W. L. Cox of Elma, who is noted for his success with bees and for the production of queens. "The bees allow all honey to stand in the open cell for a few days before putting on the caps. This allows all the moisture to evaporate before the comb is sealed with wax. If such combs are taken out and extracted it is apt to ferment. In any case the honey should be stored in a warm room to prevent its becoming damp and sweaty."

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Six States Compete

(Continued from page eleven.)

Nancy's Cassie (junior and grand champion) and Corium Pretty Maid's Cora; 2, Wallace & Fordyce, on Fawndale Leading Lady; 3, Thousand Springs Farm, on Susette of Thousand Springs. Junior calf—1 and 2, Rueping, on Corium May Queen's Donna and Corium Nellie Calongis Dawn; 3, Thousand Springs Farm, on Topsy of Thousand Springs.

Aged herd—1 and 2, Rueping; 3, Wallace & Fordyce. Young herd—1 and 2, Rueping. Calf herd—1, Rueping; 2, Thousand Springs Farm. Get of sire—1 and 2, Rueping; 3, Wallace & Fordyce. Produce of cow—1 and 2, Rueping; 3, Wallace & Fordyce.

Ayrshires.

E. W. Van Tassell of Wenatchee, Wash., was the only exhibitor of Ayrshires, showing about 20 head and winning all awards in a full class. His champions were: Senior and grand champion bull, Queen's Scottish Cavalier; junior champion bull, Peter Pan's Choice of Wenatchee. Senior and grand champion cow, Empress Lady of Wenatchee; junior champion heifer, Wenatchee Blossom.

THE SWINE SHOW.

The swine show was not as large as a year ago. The quality exhibited averaged higher than a year ago, with the tops about the same. A larger proportion of extra good hogs were shown. Poland Chinas and Durocs led in numbers, as usual, but Chester Whites were closer to them than any time before, and made a strong show. California, Oregon and Idaho vied with Washington in the leading breeds and premiums were fairly well divided.

Poland Chinas.

This show has never had a better lot of Poland Chinas, taken as a whole. The high quality and lack of poor or indifferent hogs were at once noticeable. Competition was close and often decisions were made by the closest margins. There was, however, no question as to the grand champion boar, Headliner, shown by A. Kloppenberg of Spokane. He might have a bit more length, but he has such great bone, good feet, strong back, depth and quality for a boar of his age as to properly place him a "headliner." Idaho Buster, the junior champion boar, shown by A. W. Johnson of Nampa, Idaho, is stretchy, high backed, has good bone and feet and promises to make a great breeding boar. Probably on senior champion sow competion developed keener than anywhere else. It was won by Idaho Queen 6th, shown by A. J. Firkins & Son of Nampa, Idaho, and her hardest competition was perhaps in her own class. Her own sister, shown by Johnson, was a close contender, and Hugh Walters of Townsend, Mont., had in Montana Gianteess, a sow that might have defeated her had she not for some reason been showing badly just at the moment the judge saw her. D. F. Kammerzall & Sons of Colfax, Wash., won junior champion honors, with Sammie's Chess Girl, a junior pig of large size, but showing femininity and quality. O. E. McConnell of Idano judged both Poland Chinas and Durocs.

Boars: Aged boar—1, A. Kloppenburg, Spokane, Wash., on Headliner (senior and grand champion); 2 and 3, Hugh Walter, Townsend, Mont.; 4, P. L. Sain, Oakesdale, Wash. Junior yearling—1, 2 and 5, A. J. Firkins & Son, Nampa, Idaho; 3, Walter; 4, D. F. Kammerzell & Sons, Colfax, Wash. Senior pig—1, A. W. Johnson, Nampa, Idaho, on Buster (junior champion); 2, Johnson; 3, Firkins; 4, Sain; 5, Walter. Junior pig—1 and 2, Firkins; 3 and 4, Kammerzell; 5, Walter.

Sows: Aged sow—1, 4 and 5, Kloppenburg; 2, Firkins; 3, Walter. Senior yearling—1, Kammerzell; 2, Walter. Junior yearling—1, Firkins, on Idaho Queen 6th (senior and grand champion); 2, Johnson; 3 and 4, Walter; 5, Firkins. Senior pig—1, Johnson; 2, Firkins; 3, Kammerzell; 4 and 5, Walter. Junior pig—1, Kammerzell, on Sammie's Chess Girl (junior champion); 2, Firkins; 3, Kammerzell; 4, Johnson; 5, Walter

Aged herd—1, Firkins; 2, Walter; 3, Kammerzell. Young herd—1, Kammerzell; 2, Johnson; 3, Firkins. Herd bred by exhibitor—1, Firkin; 2, Walter; 3, Johnson. Get of sire—1, Firkins; 2, Walter; 3, Kammerzell. Produce of sow—1 and 3 Firkin; 2, Walter.

Duroc-Jerseys.

If competition was warm in Poland China classes, it was even more so with Duroc-Jerseys, all down the line. Nearly every class had large numbers of high-class entries and often the result was so close as to leave the impression that one or more besides the one placed first was good enough for the place. Busch's Royal Pathfinder, shown by Frank P. Busch of Johnson, Wash., with his great length, good feet, heavy bone, strong back and smoothness, had to win. But for junior champion it was not so easy. Joe's Sensation, shown by Lester Daily of Palouse, Wash., had his hardest competition in his class of senior pig. He is a boar of much masculinity, great size, strongest of feet and legs and most approved big type. Joe Orion's Sensation, shown by S. L. Banks of Tekoa, Wash., is a smoother pig, has neater shoulders and a good back, but he was a little smaller and lacked the masculinity of the other, and this was the big deciding factor with the judge. Thousand Springs farm's entry, from Wendell, Idaho, was plenty good enough for first place, had he not met such hot competition. This farm had an outstanding sow for senior and grand champion in Queen Mammoth Sensation, that won the same honor at the Pacific International last year. She has a wonderfully strong back, great length, good feet and great depth. Thousand Springs farm won junior honors, also on a most promising junior pig, Island Lady Sensation.

Boars: Aged boar—1, Frank P. Busch, Johnson, Wash., on Busch's Royal Pathfinder (senior and grand champion); 2, J. E. Thorpe, Lockford, Calif.; 3, Oscar Miller, Spokane, Wash. Senior yearling—1, E. A. Goodhue, Spokane; 2, S. L. Banks, Tekoa, Wash.; 3, Miller; 4, Thorpe. Junior yearling—1, Thousand Springs Farm, Wendell, Idaho; 2, Thorpe; 3, Busch. Senior pig—1, Lester Bailey, Palouse, Wash., on Joe's Sensation (junior champion); 2, Banks; 3, Thousand Springs Farm; 4, Thorpe; 5, Miller. Junior pig—1, Bailey; 2, Busch; 3 and 5, Thousand Springs Farm; 4, Thorpe.

Sows: Aged sow—1, Thousand Springs Farm, on Queen Mammoth Sensation (senior and grand champion); 2, Thorpe. Senior yearling—1, Thorpe; 2, Banks; 3, Thousand Springs Farm; 4, Goodhue. Junior yearling—1, Thorpe; 2 and 4, Thousand Springs Farm; 3, Brown & Adams, Spokane; 5, Busch. Senior pig—1, Thousand Springs Farm, on Island Lady Sensation (junior champion); 2, Thousand Springs Farm; 3, Thorpe; 4, Banks; 5, Brown & Adams. Junior pig—1 and 2, Bailey; 4 and 5, Thorpe; 3, Busch.

Aged herd—1, Thorpe; 2, Thousand Springs Farm; 3, Busch. Young herd—1, Bailey; 2, Thousand Springs Farm; 3, Thorpe. Herd bred by exhibitor—1, Thorpe; 2, Busch; 3, Thousand Springs Farm. Get of sire—1, Thousand Springs Farm; 2, Bailey; 3, Busch. Produce of sow—1 and 2, Busch; 3, Bailey.

Berkshires.

The Berkshire exhibit was small, but of excellent quality, although big type was not quite so universal as in the two breeds that go before. All the Berkshires shown were in good condition. Indian City farm, of Spokane, won both senior championships, but both junior championships were taken by Lester Barrows, a club boy of Shaw, Ore., whose pigs were shown by Cass A. Nichols, Chester White breeder. Young Barrows had two outstanding barrows, as well as the few breeding stock he showed, and not only won in Berkshire barrow classes, but his pig brought grand championship on barrow of the entire show to the Berkshire breed.

Boars: Senior yearling—1, Indian City Farm, Spokane, on Matchless Lee's Royal (senior and grand champion). Junior pig—1, Ashlane Farms, Pleasant Grove, Utah, on Ashlane Laurel Prince (junior champion); 2, Lester Barrows, Shaw, Ore.; 3, Indian City Farm.

Sows: Aged sow—1, Indian City Farm, on Iowana Lenore 76th (senior and grand champion). Senior pig—1, Indian City Farm. Junior pig—1, Lester Barrows, on unnamed (junior champion); 2, Ashlane Farms; 3, Barrows; 4 and 5, Frederick Barrows.

Young herd—1, Indian City Farm. Get of sire—1, Lester Barrows. Produce of sow—1, Lester Barrows.

Chester Whites.

C. M. Meenach of Sharon, Wash.; H. S. Curtis of Palouse, Wash; and Cass A. Nichols of Salem, Ore., put up a white hog show to be proud of. J. H. T. Smith, who judged Chester Whites, Berkshires and Hampshires, was not inclined toward big type to the extent of the other judge. C. H. Meenach's Wildwood Boy, that was made senior and grand champion, while well fitted and with good bone and feet, is hardly the modern type. He won over the formerly undefeated Oregon Buster, owned by Nichols. Meenach had the junior champion boar, also, in a stretchy junior pig, Sharon Buster. And Nichols' senior and grand champion sow, Marjorie B., is of the long-bodied, high-backed, modern type, and Curtis' junior champion, Opal's Sensation 1st, is quite stretchy, and has good feet and bone.

Boars: Aged boar—1, C. M. Meenach, Sharon, Wash., on Wild Wood Boy (senior and grand champion); 2, H. S. Curtiss, Palouse, Wash.; 3, Cass A. Nichols, Salem, Ore. Senior pig—1, Meenach, on Sharon Buster (junior champion); 2, Nichols. Junior pig—1, Nichols; 2 and 5, Homer Bray, Salem Ore.; 3, Curtiss; 4, Meenach.

Sows: Aged sow—1, Nichols; 2, 3 and 5, Curtiss; 4, Meenach. Senior yearling—1, Nichols, on Marjorie B (senior and grand champion); 2, Curtiss. Junior yearling—1, Meenach; 2 and 5, Nichols; 3 and 4, Curtiss. Senior pig—1, Curtiss, on Opal's Sensation 1st (junior champion); 2 and 3, Nichols; 4, Meenach; 5, Curtiss. Junior pig—1 and 3, Nichols; 2, Curtiss; 4 and 5 Bray.

Aged herd—1, Nichols; 2 and 3, Curtiss. Young herd—1, Curtiss; 2 and 3, Nichols. Herd bred by exhibitor—1, Curtiss; 2 and 3, Nichols. Get of sire—1 and 3, Nichols; 2, Curtiss. Produce of sow—1, Curtiss; 2, Nichols; 3, Bray.

Hampshires.

Harold W. Hastings, Thornton, Wash., the only exhibitor of Hampshires, received all awards in a fairly well filled class. He won the following championships: Junior champion boar, Homeland's Buster; senior and grand champion sow, Betty Dawson; junior champion sow, Little Betty.

THE HORSE SHOW

The horse show was very small, but of good quality. Clydesdales were the only breed with anything like full classes and some divisions of that breed had no entries. But for the number on exhibition the horses were well shown and attracted their share of attention. W. L. Carlyle, formerly dean of the Idaho State university and now in charge of the prince of Wales estate in Alberta, placed the ribbons.

The Percherons.

Three stallions and a 2-year-old mare made up the Percheron show. There were no poor animals and the two champions are a credit to the show as well as creditable representatives of the breed.

Stallions: Four years or over—1, Fred Balmer, Odessa, Wash., on Pershing; 2, Carl Schigger, Hillyard, Wash., on Buster. Three-year-olds—1, E. W. Pratt, Rockford, Wash., on Colonel Dean (champion).

Two-year-old mare—1, H. C. Doepke, Fairfield, Wash., on June Waltz (champion).

The Clydesdales.

A good lot of Clydes faced the judge. While this breed is usually credited with being a little more leggy than most drafters, the judge showed his preference for plenty of substance, especially in his selection of champions.

All awards in Clydesdales went to Robert C. McCroskey, Garfield, Wash., except first on stallion four years or over, which went to H. T. Whitman, Rosalia, Wash., on Majesty's Best. McCroskey's champions were: Champion stal-

(Continued on page sixteen.)



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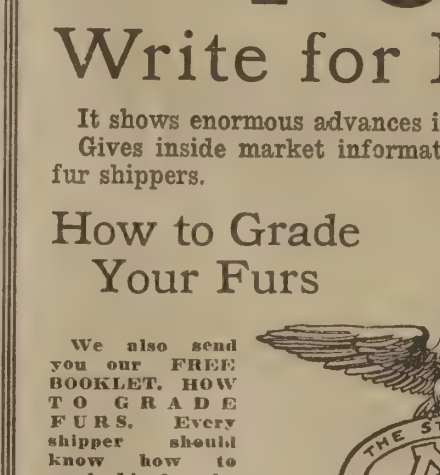
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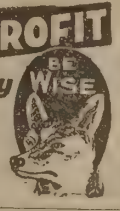
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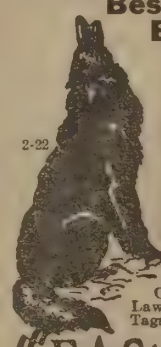
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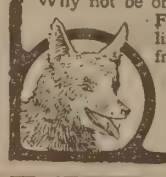
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The same methods by which one can capture a coon will not result in the capture of a coyote or a muskrat. Each animal has its own life habits, and the successful trapper is the one who learns these habits and hunts or traps in accordance with them. The boy or the man who wants to enjoy trapping this winter should find out exactly what animals there are in his community and write to some of the widely known fur dealers for information as to how valuable their fur is and what the most successful methods of trapping them are. One should never go at it hit-and-miss fashion. Not only is he sure to have poor luck, but he is likely to injure the furs of the few animals he does catch.

It is poor policy to set out traps and leave them for days at a time. If an animal is caught he may keep up a struggle that will damage his fur, and may even twist or gnaw off the foot that is trapped. This is the money2side of the question only—the humane side is even more vital. One should bear in mind that the creature he catches suffers both in mind and body and should be relieved as soon as possible after being caught. In some cases, animals can be so taken that death will quickly result, but this is not possible in the majority of cases. Where it is not, the traps should be visited as frequently as possible without the danger of driving away the game.

Whatever you are out to catch, leave as few signs of your presence as possible. Unless your dog is a direct aid in the capture (which he is not in most cases) leave him at home. Remember, trapping is a fine art. You have to outwit the animal you are after.

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1. Before killing clean off as much as possible all manure, dirt, mud, etc., and during skinning keep the hides and skins clean and free from blood especially.
2. In bleeding cattle always stick the throat lengthwise, never crosswise.
3. In skinning use the knife carefully and no more than is necessary. Avoid cutting the hide or skin.
4. Make all ripping cuts with straight, smooth edges, not jagged ones.
5. Pay attention to the pattern of the hide and see that it is properly distributed among the shoulder, belly and butt sections.
6. Take off a hide or skin free from meat, sinews, bag, tail bone, horns, dewclaws and split shanks.
7. Keep the hide or skin clean and away from water.
8. After removing the hide or skin from the animal allow the hide or skin to lie separate in a cool, dry, dark place from 6 to 12 hours, with the flesh side up, until the animal heat has escaped.
9. Do not let the hide or skin dry out either before or after salting.
10. Do not allow the hide or skin to freeze.
11. Use only fresh, clean salt.
12. Use plenty of salt; too much will do no harm; too little will. Use about one pound of salt to each pound of hide.
13. Salt more thoroughly the heavy parts, such as the head and neck, and also open up any folds that may be stuck together and sprinkle them with salt.

Ranchmen desiring complete information on this subject should write to the division of publications, United States department of agriculture, Washington, D. C., for free copy of farmers' bulletin 1055, "Country Hides and Skins."

To Loosen Wool on Pelt

By H. HACKEDORN,

Department of Animal Husbandry, Washington State College.

What solution is best to use to loosen wool on pelt so it may be pulled? What solution is best to wash wool in after pulling? L. E. S.

Hampton, Ore.

One of the easiest methods is to use a lime water solution. Make a saturated solution, allowing the lime to settle, pour off the clear liquid and then allow the pelt to soak in it until the wool is loose. You will get better results if you use warm water.

If you have a small amount of wool to wash I would suggest that you make a strong solution of common laundry soap and water and wash the wool much as you would clothing. I have known some people to use a washing machine and they stated that it was very satisfactory. Hot water will work much more satisfactory than cold. I would suggest that you wash the wool in two soap solutions and rinse three times.

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If you will write me, you will receive an attractive booklet FREE that tells all about it. I am now making a special Low Price Offer, including a 30-day Free Trial, and am also looking for good, live distributors. If you are interested I will tell you how to earn $500 a month, or, in only your spare time, how you can make $100 a month. Write to me today. Address Mr. B. M. Oliver, 2121-K Oliver Building, St. Louis, Missouri.—Adv.



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Then Make Big Money Pulling Stumps for Others

Pull out your old stumps and hedges. Make every foot of your richest soil grow money-making crops. Then make big money pulling stumps and hedges for others. Write and get my price on our new improved Hercules Stump Puller—the fastest, easiest, cheapest land clearing machine ever made. Yanks 'em out, big or little, quick and clean. Easy to operate and move. Both horse and hand power machines. $10.00 down—easy payments.

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Catalog No. 414

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To learn the best methods of curing meat, write to E. H. Wright Co., 852 Broadway, Kansas City, Mo., and get absolutely free a new $1 book, "Meat Production on the Farm," which tells all about meat curing. Free to farmers only. Send name today.—Adv.

Please mention THE WASHINGTON FARMER when writing advertisers.

Horticultural Meet

State Association in Spokane in December

What the railroad strikes have done to the northwest fruit industry and what is to be done about it, is one of the live topics to be discussed at the annual meeting of the Washington State Horticultural association to be held in Spokane December 12 to 14. This probably will take the form of a round table discussion, led by some of the most prominent individual and association shippers in the state. The importance of transportation has been as keenly realized in Washington this year as during the cold snap two years ago, and the necessity of avoiding as far as possible such tieups in future, probably will make the discussion of this subject among the "snappiest" at the conference.

Publicity and marketing problems will be given some attention, and D. M. Botsford of Portland, one of the foremost advertising men of the northwest, has been secured to address the association on "Advertising and Its Relation to the Northwest Fruit Industry." A symposium on codling moth control promises, in view of the trouble Washington growers have experienced with this troublesome "bug" this season, to bring out some valuable information, and another on horticultural conditions in Europe probably will be participated in by a half dozen prominent growers of the state who have visited on the other side of the Atlantic within the last 18 months.

Plans for the meeting are in the hands of President H. L. Geary of Underwood and Secretary M. L. Dean of Wenatchee. The gathering will be followed by the annual state grade and pack conference.

Six States Compete

(Continued from page fourteen.)

lion—Meg's Chief, a three-year-old. Champion mare—Garfield Bell, a two-year-old.

The Belgians.

Belgians had only three representatives, of which two were mares. The champion mare has the others outclassed, but the show was good as far as it went.

Albert Owes of Amber, Wash., the only exhibitor, showed three head, winning the stallion championship on Avenerde Bell, a four-year-old, and the mare championship on Dora, a three-year-old.

THE SHEEP SHOW.

The sheep show was small, but it included some as good animals of the breeds shown as were in any department of the entire show. The University of Idaho showed a few Lincolns and Rambouillets, and were the only exhibitors, with entries that would be creditable in a show with strong competition. The university showed a few Hampshires, also. But it was Mrs. Minnie Miller, proprietor of Thousand Springs farm, of Wendell, Idaho, showing a full flock of Hampshires, who made the sheep show really worth while. She had a number of imported Hampshires that had been prize winners, even up to champions, at the Chicago International. They were shown in the best of condition and won, whether with or without competition.

Harold W. Hastings of Thornton, Wash., exhibited a nearly full flock of Oxfords, and J. E. McGoran of Valleyford, Wash., a few. They were not highly fitted, but were good typy specimens of the breed. Archie Pryor of Yakima, Wash., judged all sheep breeds in an impartial and satisfactory manner.

Hampshires.

Rams: Aged ram—1, Thousand Springs Farm, Wendell, Idaho. Yearling ram—1 and 3, Thousand Springs farm; 2, University of Idaho. Ram lamb—1, 2 and 3, Thousand Springs Farm; 4, University of Idaho.

Ewes: Aged ewe—1 and 2, Thousand Springs Farm; 3, University of Idaho; 4, Harold W. Hastings, Thornton, Wash. Yearling ewe—1 and 2, Thousand Springs Farm; 3, University of Idaho; 4, Hastings. Ewe lamb—1, University of Idaho; 2 and 3, Thousand Springs Farm.

Flock—1 and 2, Thousand Springs Farm; 3, University of Idaho. Pen of four lambs, bred by exhibitor—1 and 3, Thousand Springs Farm; 2, University of Idaho. Get of sire—1 and 3, Thousand Springs Farm; 2, University of Idaho.

Champion ram and champion ewe—Thousand Springs Farm.

Oxfords.

Rams: Aged ram—1, Harold W. Hastings, Thornton, Wash. Ram lamb—1 and 3, Hastings; 2, J. E. McGoran, Valleyford, Wash.

Ewes: Aged ewe—1 and 2, Hastings; 3, McGoran. Yearling ewe—1 and 3, McGoran; 2, Hastings. Ewe lamb—1 and 3, Hastings; 2, McGoran.

Flock—1, Hastings; 2 and 3, McGoran. Pen—1, Hastings; 2, McGoran. Get of sire—1, Hastings; 2, McGoran.

Champion ram—Hastings. Champion ewe—McGoran.

Rambouillets.

All awards in Rambouillets went to the University of Idaho, except third place in aged ewe, which was won by A. S. Sharp, Dubois, Idaho. The university showed a full class and was awarded both championships.

Lincolns.

The University of Idaho showed two Lincolns on which both championships were awarded.

FAT STOCK SHOW.

One carload of cattle in the yards and two cars of fat hogs in the show made up the carload lots. The champion carload of hogs, Chester Whites, were a very even lot of 50 head and well worthy of the honors received. The winning of champion barrow of the show by Lester Barrows, a club boy of Shaw, Ore., might be called the outstanding feature of the fat stock show. This is a good Berkshire pig in every respect, with breed type as well as perfect fitting. The fat wethers shown by the University of Idaho and the State College of Washington were all highly fitting and commendable exhibits for the awards.

Fat Cattle.

Steer or Martin heifer: Purebred senior yearling Shorthorn—1, University of Idaho. Purebred junior yearling Shorthorn—1 and 2, State College of Washington; 3, Northwood Farms, Redmond, Wash.; 4, A. D. Dunn, Wapato, Wash. Purebred senior calf Shorthorn—1 (champion), State College of Washington; 2 and 3, University of Idaho. Purebred junior Shorthorn calf—1, University of Idaho; 2, State College of Washington. Purebred junior yearling Hereford—1, University of Idaho; 2, Methow Valley Live Stock Co., Winthrop, Wash.; 3, Archie Kane, Moscow, Idaho. Purebred senior Hereford calf—1, State College of Washington (champion); 2, University of Idaho; 3, Platt Bros., Genesee, Idaho. Purebred junior Hereford calf—1, University of Idaho. Purebred Hereford herd—University of Idaho. Purebred junior yearling Aberdeen Angus—1, State College of Washington (champion). Purebred senior Aberdeen Angus calf—1, University of Idaho. Grade junior yearling—1, Harold Holmes, Mabton, Wash.; 2, University of Idaho; 3, Nora Waite, Ellensburg, Wash. Crossbred senior calf—1, University of Idaho, on Hereford-Aberdeen Angus cross (champion); 2, Platt Bros. Crossbred herd—1, University of Idaho.

Best carload of beef cattle—John Napier, Sprague, Wash.

Fat Hogs.

Carlot of 50 head, 175 to 225 pounds—1, Kraber Bros., Spokane, Wash., on Chester Whites. Carlot of 50 head, 225 pounds or over—1, Kraber Bros., on Chester Whites. Pen of three purebred barrows—1 and championship, Kraber Bros., on Chester Whites; 2, Cass A. Nichols, Salem, Ore., on Chester Whites; 3, H. S. Curtiss, Palouse, Wash., on Chester Whites. Pen of three senior pigs—1, State College of Washington, on Berkshires. Pen of three junior pigs—1, Kraber Bros., on Duroc Jerseys.

Champion barrow of the show—Lester Barrows, Shaw, Ore., on Berkshire.

Fat Sheep.

Pen of three wethers—1 and 4, University of Idaho; 2 and 3, State College of Washington. Pen of three lambs—1, State College of Washington; 2 and 3, University of Idaho. Champion pen—University of Idaho.

THE CLUB DEPARTMENT.

While there was a much smaller club show than last year, the quality of the exhibits and of the work done was good. The outstanding feature of the club work was the showing and sale of the Shorthorn steers of the Hercules Baby Beef clubs of Ellensburg and Mabton. The steers were purchased last spring of F. M. Rothrock of Hercules farm, Sprague, who took the notes of the young buyers on condition that the steers were to be cared for during the year and part of them shown and sold at the Western Royal and part at the Pacific International, after which the notes were to be paid.

In the contest the Kittitas Valley Boys and Girls' club won as follows:

Nora Waite, 1st and 4th; Meta Bennett, 7th and 17th; Jessie Woodhouse, 6th; Walter White, 21st and 18th; Eugene Wilson, 8th and 31st; Erling Hansen, 22d and 26th; William Waldron, 5th and 20th; Robert E. Kresge, 28th. All are from Ellensburg.

The winner of the Yakima Valley club were are follows:

Gerald Varnum, 11th and 25th; Harvey Varnum, 10th and 15th; Chester Schlein, 9th and 12th; Fred Schlein, 3d and 13th; Floyd Hager, 24th; Harold Holmes, 2d and 16th; James Gordon, 14th and 29th; Kay Olson, 23d and 27th.

In the sales, which were conducted by D. C. Keith, the champion steer owned by Nora Waite was bought by the John Lewis Meat company of Spokane at 31 cents per pound or a total of $332. Prices on the other 18 head that were sold ranged from $76 to $122. They were nearly all purchased by Spokane business firms or clubs.

Scoring 1175 points out of the possible 1500, the Whitman county stock judging team won first place. The team consisted of John Hendricks and Eugene and Antone Harms. The Pend Oreille county team, consisting of George Da Vaz, Alfred and Edwin Pease, won second with 1100 points, and the Spokane county team, composed of Paul Cordell, Lester Hartley and Ernest Hueter, with 1082 points, won third.

NEXT YEAR'S SILAGE.

Don G. Magruder, specialist in dairying, says: Start this week to provide homegrown protein for your dairy cows by sowing vetch with grain for next year's silage.

Farmers' Want Ads

SALESMEN WANTED 12

MEN WITH CAR TO SELL RIM TOOL; MAKE from $100 to $150 per week. Box 772, Spokane.

SITUATIONS WANTED—General 24

MAN AND WIFE DESIRE TO RUN YOUR sheep ranch on percentage. Address A. Rawlings, care of W. J. Simmons, Camps Pass, Mont.

EDUCATIONAL 45

BEHNKE-WALKER BUSINESS COLLEGE of Portland; one of the largest institutions of its kind in America; guarantees a position to every graduate. Enroll now for fall term. A few months training under expert instructors and you are ready to enter business and win. Behnke-Walker graduates are always in demand. Write today for our free success catalogue. Address Behnke-Walker Business College, Fourth, near Morrison, Portland, Ore.

SCHOOLS AND COLLEGES 26

EARN $110 TO $250 MONTHLY, EXPENSES paid, as railway traffic inspector; position guaranteed after 3 months' spare time study or money refunded; excellent opportunities. Write for free booklet G-157. Stand. Business Training Inst., Buffalo, N. Y.

FRESH FOOD PRODUCTS 51-1

SIRES' PURE YAKIMA HONEY, BEST PRODUCED from alfalfa and sweet clover; 60-lb. can, $6.75; two for $13.20; six 10-lb. pails, $7.20; twelve 5-lb. pails, $7.80; 60-lb. can, insured, parcel post to second zone, $7.50. Theodore Sires, Route 4, Yakima, Wash.

PRUNES—LEIGHTON ITALIAN EXCELS ALL other varieties for profit; 40 per cent larger than Italian; 25 per cent more sugar; tests 40 per cent dried. General line of other stock. Lafayette Nursery Co., Lafayette, Ore.

CHOICEST YAKIMA VALLEY HONEY. 1 60-lb. can, $6.50; 2, $12.75; 6 10-lb. pails, $7.50; 12 5s, $8; 24 2½s, $8.50; 12 2½s, $4.50. Discount five-case orders, 10 per cent. Wm. R. Sires, Wapato, Wash.

"HONEY BRAND" HONEY — ALFALFA, sweet clover product; pure, light, thick, good flavored; gives satisfaction wherever used; 1 60-lb. can, $6.50, two for $12.75. Write for circular and prices in pails. Oliver Sires, Wapato, Wash.

NEW HONEY, FINE QUALITY ALFALFA, sweet clover; 60-lb. can prepaid, second zone, $7.29; two, $12.75; not prepaid; 3 10-lb. pails, prepaid, second zone, $4.25. Harry Fisher, Prosser, Wash.

FINEST HONEY, 60 POUNDS, $6.50; 2 CANS, $12.75; add postage; 10 pounds, $1.70; 5 pounds, 90c, both postpaid. Satisfaction guaranteed. Geo. Bancroft, Hermiston, Ore.

POPULAR BRAND HAPPY HOME HONEY—One 60-lb. can, $6.50; two cans, $12.75; six 10-lb. pails, $7.50; comb honey prices on request. H. N. Paul, Mabton, Wash.

NEW CROP ALFALFA-SWEET CLOVER honey; 60-lb. can, $5; two cans, $9.50, f. o. b. Rigby. Heckman & Larsen Honey Co., Rigby, Idaho. Quality guaranteed.

EXTRACTED HONEY—ONE 60-LB. CAN, $6.50; two 60-lb. cans, $12.75, collect; three No. 10 pails, prepaid, third zone, $5. Wells D. Rose, Sunnyside, Wash.

HONEY — FRESH ALFALFA-SWEET CLOVER honey; one 60-lb. can, $6.50; two cans, $12.75. A. L. Traner, Touchet, Wash.

GOLD MEDAL BRAND YAKIMA ALFALFA, sweet clover honey; 60-lb. can, $6.50; two cans, $12.75. C. W. Higgins, Wapato, Wash.

NEW HONEY—ALFALFA AND SWEET CLOVER; 1 60-lb. can, $6.50; two, $12.75; discount on large quantities. Ernest Sires, Yakima, Wn.

DELICIOUS NEW CLOVER HONEY, 120 pounds, $9.75; 30 pounds, $3.25; won't crystallize. Browne, Box 499, Twin Falls, Idaho.

SMOKED SALMON, 5-POUND BOX, $1.25; salt salmon bellies, 5 pounds, $1.25 delivered by mail. Coffin Fish Co., Seattle, Wash.

NICE OREGON PRUNES DIRECT, $7.75 PER hundred. Special 12½-lb. sample bag prepaid $1.80. Kingwood Orchards, Salem, Ore.

HONEY—CLOVER AND ALFALFA, TWO sixty-pound cans, $9.50. J. M. Ruyts, Buhl, Idaho.

MERCHANDISE 59

ARMY GOODS—ARMY WOOL UNDERWEAR, $1.25 garment; heavy wool union suits, $2.25; heavy wool socks, 25c, $2.50 per dozen; army wool shirts, $2.95; regulation wool navy shirt, $2.75; moleskin breeches, button bottom, $3.65; new army blankets, $3.50. Walker's Army Store, 501 Trent, Spokane.

MISCELLANEOUS—FOR SALE 60

SASH AND DOORS—O. B. WILLIAMS CO., 1943 First ave. So., Seattle. Chicken house sash, 20" wide by 25" high, 80c; a dozen different sizes in stock for immediate shipment. Skylights for chicken houses, 36"x40"; price, glazed, $2. This is the size recommended by the Western Washington experiment station. We carry them in stock for immediate shipment. Sash and doors for all purposes at lowest prices. All orders receive prompt attention. Our large illustrated catalog No. 35, showing full line of building material and built-in fixtures for the home, free on request. O. B. Williams Co. Established 1899.

SACKS—SECOND-HAND GRAIN AND SPUD correctly sorted and graded; also pipe, new and second-hand, any size; standard roofing paper at a big saving; pumps, engines, belting, cables, etc. Alaska Junk Co., Inc., S120 Adams st., Spokane, Wash.

HOMESPUN TOBACCO — CHEWING, 5 pounds, $1.75; 10 pounds, $3; 20 pounds, $5; smoking, 5 pounds, $1.25; 10 pounds, $2; 20 pounds, $3.50. Send no money, pay when received. Cooperative Tobacco Growers, Paducah, Ky.

TOBACCO—THREE-YEAR-OLD KENTUCKY leaf. Pay for tobacco and postage when received, 3 lbs. chewing, $1; 4 lbs. smoking, $1; 7 lbs., No. 2 smoking, $1. Kentucky Tobacco Ass'n., Hawesville, Ky.

WALL BOARD—WRITE FOR SAMPLE OF Washington plaster wall board; won't warp, won't burn. Manufactured by Washington Building Products company, 6851 E. Marginal Way, Seattle, Wash.

HOMESPUN SMOKING TOBACCO, MILD and mellow; 10 lbs., $1.50; 20 lbs., $2.75; delivery guaranteed. We furnish free recipe for preparing. Smoking Tobacco Exchange, Sedalia, Ky.

CANE MOLASSES FED TO STOCK MAKES more milk, healthier animals, lower feed costs; cheaper than corn. Write Arthur A. Lewis & Co., distributors, S151 Lincoln st., Spokane.

NATURAL LEAF TOBACCO, CHEWING, 5 lbs., $1.75; 10 lbs., $3; smoking, 5 pounds, $1.25; 10 pounds, $2. Send no money, pay when received. Tobacco Growers' Union, Paducah, Kentucky.

OUR FREE NEW FALL CATALOG OF GROceries and general merchandise will save you big money; a postal card brings it. Write today. Jordan Lawler company, Box 615T, Spokane.

FREE—EVERYBODY CAN BUY GROCERIES wholesale. We accept orders of $10 and up. Write for our free list. Save dollars. People's Grocery Company, "M." 701 Olive st., Seattle.

ALL WOOL KNITTING YARN FOR SALE, direct from manufacturer, at 95c, $1.35, $1.60 per lb.; postage paid on $5 orders. Free samples. H. A. Bartlett, Harmony, Maine.

BUY YOUR ALFALFA HAY AND "NETTED Gem" potatoes direct from grower; cabbage, one cent pound. Samuel Shockley, Outlook, Wn.

EASTERN BROOK TROUT, FISH AND EGGS, fry and fingerlings for sale. Echo Fish Farm, Fortine, Mont.

(Continued on the following page.)

FARMERS' WANT ADS

This is the farmers' "want," "sale" and "exchange" department for small advertisements of farmers, including live stock and poultry.

Advertising rates for ads running 1 to 3 times, 10c per word per insertion, with a special rate to Farmer subscribers, as follows: Ads running 4 to 12 times, 9c per word per insertion; ads running 13 times or more, 8c per word per insertion.

All commercial and land advertising 10 cents per word each insertion. Open also to nonsubscribers.

In using these columns advertisers must observe: (1) No advertisements will be inserted for less than $1.00. (2) Every word, number and initial, including name and address, must be paid for. (3) New advertisements, changes of copy or cancellations must reach general office, Spokane, Wash., 10 days in advance of publication date. (4) Cash must accompany order.

Above rates include insertion in The Washington Farmer, The Idaho Farmer and The Oregon Farmer, which constitute the Pacific Northwest Farm Trio, 46 Review Building, Spokane, Wash.

MISCELLANEOUS—Wanted. 63

EGGS, APPLES, HUCKLEBERRIES—WRITE us. Uncle's Delicious Pies, Inc.; capital stock $50,000. 554 Mississippi avenue, Portland.

STOVE REPAIRING 128

WRITE MYER RUBENS, SPOKANE, ABOUT stove repairs, welding broken parts, nickel plating.

FUR-BEARING ANIMALS 170

SILVER AND CROSS FOXES FOR SALE. William Rambo, 407 Sprague, Spokane.

PETS—Dogs, Birds, Etc. 171

WHEN YOU WANT A DOG, CANARY, PARrot, rabbits or a pet or pet stock supplies, cages, feeds or remedies, write. We are headquarters in the northwest. Routledge Bird, Pet & Animal Co., 174 Union avenue, North, Portland, Ore.

PEDIGREED SMOOTH FOX TERRIERS; best ratters, pups, spayed females and brood matrons. Pinecroft Kennels, Olympia, Wash.

FOR SALE—FOX HOUND PUPS; BEST TREE dogs on the coast. J. E. Bateman, Gales Creek, Ore.

POULTRY 174

"HENACRES" BABY CHICKS FOR 1923. IT is time to plan your poultry work for next spring and we suggest that you write for our free illustrated catalog now. The booklet contains lots of information on poultry management, gives our feeding formulas, etc., besides describing our stock. "Henacres" Leghorns have made good all over the northwest, so you take no chances in buying them. Some one in your neighborhood knows us, ask him. We have already sold 40,000 chicks for 1923. "Henacres," Box A, Presser, Wash.

PULLETS—1500 APRIL AND MAY HATCHED White Leghorn pullets for sale at attractive prices; hatched from thoroughbred Hollywood and Tancred strains; sired by cockerels 250 to 290 egg strains. We ship at three months of age and guarantee satisfaction or you may return the birds in 3 days. We can give you quality and service. Queen Hatchery, Seattle, Wash.

PET STOCK—POULTRY, DOGS, CATS, RABbits, white peafowl, white Guinea fowl, white, red and bronze turkeys, Siamese cats. Can furnish fancy and utility stock almost all kinds, from best breeders. Order turkeys before choicest are gone. Is not too early to book egg orders for spring hatching. I fill in rotation. B. Hocking, 541 E. 33d, Los Angeles, Cal.

BABY CHICKS—TRAP NESTED NORTHERN grown White Leghorns, noted for great egg production; large eggs and vigor; average 225 eggs; $20 per 100. "Cleared $1400 first year on chicks." "In four months cleared $650 on 267 pullets," that's what they write. See catalog, free. Order early. Highmount Poultry Ranch, Empire bldg., Seattle, Wash.

WILLAMETTE VALLEY BARRED PLYmouth Rocks. Over fifteen hundred young birds in 1922; heavy laying strain, dark and beautifully barred; cock birds and cockerels for sale; only the very best allowed on the Dimick stock farm; bank references. F. C. Waldron, R. F. D. 2, Hubbard, Ore.

ANSWER THIS AD AND RECEIVE FOUR months' trial subscription to the west's oldest and best exclusive poultry magazine. Send only 25c. Expert writers on practical poultry subjects. Latest poultry news. Illustrated. Special offer, two years, $1. The Pacific Poultryman, Seattle, Wash.

CERTIFIED WHITE LEGHORN BABY chicks, hatched in the world's largest electric hatchery; choice free range, high egg producing breeding flocks, inspected by the Sonoma county farm bureau. Safe arrival guaranteed. Must Hatch Incubator Co., 445 Seventh st., Petaluma, Cal.

WHITE LEGHORN BABY CHIX FOR SUMmer and fall months from stock accredited by Sonoma county farm bureau. We guarantee safe arrival. Write for prices and literature. The Pioneer Hatchery, 422 Sixth street, Petaluma, Cal.

DAY-OLD PULLETS, GUARANTEED S. C. White Leghorn day-old pullets, also day-old broilers; established 1912. Eureka Hatchery, 628 D st., Petaluma, Cal. James K. Hirst, Prop. Refs. gladly furnished.

BABY CHICKS OF HIGH GRADE ARE EASY to raise if hatched in our Petaluma electric or hot water incubators. Prices reduced. Ask for free literature. Petaluma Electric Incubator Co., Petaluma, Cal.

BABY CHICKS—OREGON'S BEST AT REAsonable prices. Leghorns, R. I. Reds, Anconas, Minorcas, Barred Rocks, White Rocks. Order early. Catalog free. C. N. Needham, Salem, Ore.

BABY CHICKS AND HATCHING EGGS—DR. Duganne's trap nested White Leghorns and M. J. McCaleb's Hollywood strain. Write for catalog prices to Mark A. Webster, Corvallis, Ore.

BABY CHICKS — WE GUARANTEE OUR chicks to be from the highest producing hens in Petaluma. Write for further information. The White Hatchery, Petaluma, Cal.

DOLLARS FOR YOUR EGGS—WE PAY THE top market prices for your eggs and poultry. Daily cash remittances. McClintock-Trunkey Co., produce department, Spokane.

ROSE COMB RHODE ISLAND COCKERELS for sale; both colors, Whites and Reds. Prices, $3, $5 and $7 each. O. C. Brauch, Fargo, Oklahoma.

40 QUALITY R. I. RED COCKERELS, $5 and up. Write your wants. Can please you. J. Nonnenmacher, Route 3, Yakima, Wash.

SINGLE COMB ANCONAS, SHEPPARD'S strain; one-year-old hens, $1.50 each; cockerels, $3. R. P. Irwin, Tonasket, Wash.

ANCONA COCKERELS, SAME BREEDING AS my pullets at western Washington laying contest. Oscar Dunlap, Junction City, Ore.

1923 BABY CHIX FROM TANCRED AND EXperiment station strain White Leghorns. Wax's Poultry Farm, Kent, Wash.

S. C. BROWN LEGHORNS, COCKERELS, hens, pullets; none better; stock guaranteed. E. H. Rosenkranz, Colfax, Wash.

S. C. BUFF LEGHORNS, BREEDING STOCK; trios, five dollars; fine stock; order direct. M. H. Mann, Woods Cross, Utah.

PEDIGREED HOLLYWOOD STRAIN WHITE Leghorn cockerels, 5 months. W. Ottevanger, Sunnyside, Wash.

RANEY STRAIN RHODE ISLAND RED cockerels, direct. Write Mrs. Rominger, Underwood, Wash.

PUREBRED S. C. WHITE MINORCA COCKerels and hens, $2 each. Mrs. Andrew Schmidt, Charlo, Mont.

ALLEN'S ROCKS AND LEGHORNS WIN, LAY and pay. Write your wants. D. W. Allen, La Conner, Wash.

BARRED ROCK PULLETS, $1.25 EACH. MRS. Newell Reed, Clem, Ore.

POULTRY (Continued) 174

WHITE LEGHORN BABY CHICKS, FROM free range Hoganized stock; breeding flocks inspected by Sonoma county farm bureau; accredited hatchery inspector. Full count and safe arrival guaranteed. For price write to Lafranchi Hatchery, Petaluma, Cal.

PEDIGREED ANCONA COCKERELS FROM hens with 333-egg record in 365 days. Prices, $3 to $10, half usual price for such excellent breeding. Prompt shipment. Smith's Ancona Farm, Nampa, Idaho.

Turkeys.

PUREBRED MAMMOTH BRONZE TURKEY toms, $8; purebred S. C. Buff Orpington, 1-year-old hens, $1.50; cockerels, $3. Mrs. Floyd Angstrom, Creston, Wash.

GIANT BRONZE TURKEYS FROM MY OREgon state fair and Pacific International winners. Sold on approval. Herbert Stoneberg, Route B, Eugene, Ore.

BRONZE TURKEYS $15 PAIR; EMBDEN geese, $9; Plymouth Rock cockerels, $2; purebred stock; order now. Emma Moehnke, Hoff, Ore., R. 1.

GIANT STRAIN PUREBRED MAMMOTH Bronze turkey toms, $12; choice S. C. White Leghorn cockerels, $3.50. W. A. Conrad, Harrington, Wash.

NORTHERN AURORA STRAIN M. BRONZE toms, $15; pullets, $7; S. C. pure Ancona cockerels, $2. Mrs. Richard Morris, Sterrenberg, Mont.

FOR SALE—PUREBRED MAMMOTH BRONZE turkey toms; very vigorous; excellent markings, $8. Finley Arnett, Columbia Falls, Mont.

PURE MAMMOTH BRONZE TURKEYS; prize winning stock. Mrs. Frank Browning, Nampa, Idaho. R. 1.

BOURBON RED TURKEY TOMS, $8; HENS, $7, during November. I. H. Evans, White Salmon, Wash.

CHOICE MAMMOTH BRONZE TURKEY toms, $10; hens, $5. Amelia Reimers, Eagle, Idaho.

FOR SALE—PUREBRED MAMMOTH BRONZE turkeys. S. L. Maltby, Rogerson, Idaho.

PUREBRED BRONZE TOMS, $9; PULLETS, $6. Bertha Gray, Winlock, Wash. Route 2.

GOOD MAMMOTH BRONZE TOMS, $8; HENS, $6. Geo. Bain, Castle Rock, Wash.

LIVE STOCK 177

SAVE THE CALVES—"SAVACALF," A POWerful germicide, is used for treating contagious abortion in cows. It drives the disease from those that have it, and prevents the clean herds from getting it. Simply mix it with the salt and treat the whole herd at once. Costs 25 cents per head per year. Every breeder should use it. $5 package postpaid. Absolutely guaranteed, or money refunded. H. C. Babbitt, Boise, Idaho.

WE GUARANTEE TO PAY THE HIGHEST market prices for your poultry and live stock. Owing to the constant changes in the market we are unable to quote prices in this paper from week to week. We will furnish tags and prices when you are ready to ship. Write us what you have to sell. Prompt returns. John Lewis & Co., Spokane, Wash.

LARGE, HEAVY PRODUCING HOLSTEINS for sale at all times in car lots; tuberculin tested; 150 to 200 head always on hand; well marked heifer calves from registered sires and heavy producing dams; crated for shipment anywhere, $25 f. o. b. Levinson & Balmelli, Yakima, Wash.

BUY YOUR BOY A BERKSHIRE; HAVE some very good pigs, both sexes; also a one-year-old boar; all registered stock. Mooers & Hatch, Grangemont, Idaho.

WE PAY TOP PRICES FOR YOUR LIVE OR dressed veal, hogs and poultry. Your check by return mail. Shipping tags on request. M. & J. Packing Co., Spokane.

FOR SALE—2-YEAR-OLD HOLSTEIN BULL, Sir Elma Oak Chimacum, No. 313243. Write for photo and prices. C. L. Phillips, Friday Harbor, Wash.

FOR SALE—TWO SPOTTED POLAND CHINA males; six months old; bargain at $25; can furnish papers. Cloyd Clark, La Grande, Ore.

REGISTERED DUROC-JERSEY WEANED pigs of best breeding; shipped on approval. Herman E. Conner, Argora, Idaho.

FOR SALE—REGISTERED BIG TYPE POland China and Chester White hogs. Elton Webb, New Plymouth, Idaho.

TOP FANCY LIGHT VEAL, 12½C. JONES AND Williams, S101 Division st., Spokane, Wash. Prices subject to fluctuations.

SPOTTED POLAND CHINAS, CHOICE SPRING boars, large, smooth and easy keeping. Henry Mitchell & Son, Joseph, Ore.

50 YOUNG REGISTERED SHROPSHIRE ewes; also yearling rams. Write McK. Edwards, Valley, Wash.

FOR SALE—SHORTHORN CATTLE; HAMPshire hogs, Oxford sheep. Cottonwood Stock Farm, Molalla, Ore.

10,000 EWES FOR SALE; ALSO THOROUGHbred Hampshire and Rambouillet. J. LeRoy Davis, Boise, Idaho.

CHOICE, PUREBRED, BROWN SWISS COWS, heifers and bull calves. G. W. White & Son, Meridian, Idaho.

FOR SALE—100 HEAD GRADE EWES, BRED. Bert Padgham, Sunnyside, Wash.

MILCH GOATS, BRED DOES, $15 TO $30. Fannie Branson, Dallas, Ore.

HARNESS and SADDLERY 189

SEND FOR FREE HARNESS AND SADDLE catalog today; cut out the middleman, buy direct from the manufacturer. Lowest prices in the west; satisfaction guaranteed. Established 1881. Write Pierce Harness Co., Dept. T, Spokane, Wash.

HAY FOR SALE 200

ALFALFA HAY, GUARANTEED QUALITY; prompt shipment; buy direct and save money. Prices upon application. Ernest T. Freepons, Walla Walla, Wash.

HAY FOR SALE (Continued) 200

CHOICE ALFALFA HAY, GREEN AND leafy; the kind that dairymen like to feed. Timothy and wheat hay for horses. Write for delivered prices. J. F. Jacobson, Kennewick, Wash.

ALFALFA HAY—WRITE OR WIRE ME FOR quotations. Irving S. Gleason, Kennewick, Wash.

JOB PRINTING 372

BEST PARCHMENT BUTTER WRAPPERS, 8x11, neatly printed, 100, 60c; additional hundred, 40c. Home Specialty Co., Middleton, Idaho.

TANNING 425

WE WILL TAN YOUR COW OR HORSE hides for robes or coats at the right prices and guarantee our work, as we are custom tanners and manufacturers. We also buy hides, furs, wools and pelts. Write for prices. Spokane Fur Tanning Co., 9 Pine st., Spokane.

ANY KIND OF HIDE TANNED WITH HAIR on, or for leather. Mohr, 321 Sprague, Spokane.

TAXIDERMISTS 426

WE MOUNT ANYTHING FROM A FLEA to elephant. Mohr, 321 Sprague, Spokane.

FURRIERS 429

FURS TO ORDER, REPAIRED, REMODeled and for sale. Mohr, 321 Sprague, Spokane.

HIDES, PELTS AND WOOL 430

HIDES—WE BUY HIDES OF ALL KINDS. Write for prices and tags. Hibbard-Stewart Co., Hibbard bldg., Seattle.

FURS—WE BUY FURS AND PELTS. WRITE for prices and tags. Hibbard-Stewart Co., Hibbard bldg., Seattle.

MATERNITY HOMES 497

MATERNITY HOSPITAL; STRICTLY PRIvate; doctor in attendance; prices reasonable. Mrs. Elizabeth Peel, matron, W1324 Broadway, Spokane.

BUILDING MATERIAL 588

TO PATCH A HOLE OR BUILD A HOME, use Perfection Plaster wallboard. Easily handled with hammer and saw; fireproof, waterproof. Western Wallboard Co., Seattle, Wn.

BUILDERS, CONTRACTORS, HOME OWNERS, write for free 1922 catalog. Tacoma Sash & Door Co., Tacoma, Wash.

NURSERY STOCK 621

ISLAND BELLE GRAPE PLANTS FOR SALE —Write for the grape book, giving directions how to grow them successfully, etc. Issued by E. H. Urban, Box 777, Bremerton, Wash., grower of Island Belle grape vines.

NURSERY STOCK, ITALIAN PRUNE TREES and trees of all kinds. Berries and small fruits of all varieties. Buy direct and save 50 per cent. Brooks Nursery, Lafayette, Ore.

BEST VARIETIES FOR THE WEST; HANDsome 48-page descriptive catalogue free. Routledge Seed & Floral Co., 145 Second st., Portland, Ore.

STRAWBERRY PLANTS $4.50 PER 1000; raspberry, loganberry and other plants reasonable. Red Feather Berry Farm, Clackamas, Oregon.

STRAWBERRY PLANTS, $5 1000; NINE VArieties. Briggs Fruit Ranch, Olympia, Wash.

FARM LANDS FOR SALE 651

ALFALFA AND FRUIT LAND FOR SALE— Would you be interested in owning a farm in the fine alluvial soil of the San Joaquin county, in the heart of the dairy and fruit center, ¼ mile from fine grammar school, three miles from big high school, and three miles from railroad center, connecting with all of the larger markets, where people are making fortunes in grapes and dairies? 800 acres of this fine land, with lots of water, is being subdivided into small farms putting on house, barn, tank house and irrigation plant, all ready for occupancy. You can be the lucky owner of one of these farms for a small payment down, six per cent on all deferred payments, and contract to extend over a period of nine years. The owners will do more than the above development and help finance orchards, vineyards, alfalfa or purchase dairy cows. For further information address owner, F. F. Copp, 430 E. Mariposa st., Stockton, Cal.

20-ACRE OKANOGAN FRUIT RANCH; 500 apples and peaches; good income from established orchard; excellent chance for poultry; on improved road; close to town; overlooks Okanogan lake; about 8 acres tillage; lots of timber; 250 apple trees, Rome Beauties, Jonathans, Winesaps, McIntosh Reds; 250 peaches, Elbertas, Crawfords, Triumphs, St. Johns; plums, cherries; dwelling with grand view distant mountains and orchard-covered valley; barn; to settle affairs, $3000 gets it, tools included; only $1000 needed; immediate possession. G. Y. L. Crossley, West Summerland, B. C.

LAND—STEADY EMPLOYMENT. MOST PROductive farming lands in Western Washington, surrounded by prosperous farm and dairy community; level valley and bench; ideal for berries or poultry; near town, good schools, railroads and markets. Steady work for years to come; within walking distance for land buyers. Only $15 to $45 acre. Exceptionally long easy terms. Graham Land company, 1008 American Bank bldg., Seattle.

DO YOU WANT A HOME IN A RICH IDAHO valley near Spokane, on three transcontinental railroads, where soil is perfect, rainfall ample, summers cool, winters moderate—the kind of stump land that pays to clear? Timothy and clover green eight months in the year; natural stock country. Land cheap; 10 yearly payments at 6 per cent. Humbird Lumber Co. Box 5, Sandpoint, Idaho.

PART OR ALL FINE HAY AND DAIRY farm; joining town; nice trout stream, good soil. For particulars, W. B. Ashley, Springdale, Wash.

280 ACRES, 65 CULTIVATION; GRAVITY water system; stocked. A. M. Mowrey, Rt. 2, Boring, Ore.

FARM LANDS FOR SALE (Continued) 651

PAYING FARMS AT LOW COST—160-ACRE farms, improved or unimproved; 30 to 160 acres irrigable land on each parcel; near Lethbridge, in sunny southern Alberta; can be bought for $15 to $40 an acre. No need for pioneering. Well settled country, good roads, railways, schools, telephones; agreeable social conditions; fertile land; success of irrigation farming here already demonstrated; irrigation system being constructed under government supervision; water available in 1923. Write for information concerning crops grown and description and location of farms to the province of Alberta, Irrigation Council, 12 Provincial building, Lethbridge.

CUTOVER LANDS, EASY TO CLEAR; $8 TO $20 per acre; 25 miles north of Spokane; on hard-surfaced highway; Great Northern and Milwaukee railways; excellent opportunity for dairying and stock raising, with Spokane markets and creamery near at hand. Will help the man who will live upon this land and agree to clear a part each year by giving lumber to help start his buildings, and a purebred Jersey bull to groups of farmers. Interest and payments low. Write Milan Farms Development company, Dept. T, Old National Bank bldg., Spokane, Wash.

TEN TO FORTY ACRE TRACTS OF MY OWN land in Macleay-Lindsay irrigation district, Clallam county, Wash., containing 7350 acres fine, level land, rich soil; Olympic highway runs through; railroad in center. $175,000 being spent on irrigation system at cost of $24 per acre; annual cost of water less than $2 per acre; work guaranteed to June 1, 1923, when ditches will be completed. $10 per acre cash, balance on or before ten years at purchaser's option. Write for particulars. J. W. Lindsay, Port Angeles, Wash.

BIG OPENING SALE OF YAKIMA VALLEY farm land, under an assessed state and government approved irrigation project; good, deep soil; close to town, railroads and state highway. We sell in tracts to suit purchaser at $25 per acre and up, on easy terms. Our many sales to farmers show that this land is a good investment. Western Lands, Inc., owners, 913 Green bldg., Seattle.

MUNICIPAL LANDS FOR SALE BY THE DIStrict; no agents, no commission; interested only in getting home-builders on the project. Longest growing season in the northwest. Gardens and fruits thrive; schools, highways and railroads the best. Junction Snake and Columbia rivers. Write for terms and folders. Address Burbank Irrigation district No. 4, Burbank, Wash.

ALFALFA, STOCK RANCH—125 ACRES ALfalfa and stock ranch fully equipped; in eastern Washington, on banks of Columbia river; beautiful place to live; nearby grade and high schools, churches, etc.; splendid soil; specially priced for quick sale. H. W. Frieling, Box 62, Seattle, Wash.

A. F. HORTON, NEWPORT, WASH., PEND Oreille county, cut-over lands, $5 to $15 per acre; good roads, schools, fine mountain water. For trade, 320-acre ranch, in Douglas county; on the banks of the Columbia river; all fenced; 70 acres under cultivation; small house, barn, spring.

40 ACRES FINEST VALLEY LAND, MOST all cultivated; fine creek, good orchard and buildings; near grade and high school, paved roads; snap at $5500; easy terms. Write us for dairy, fruit and poultry farms. Chas. D. Edwards Co., Centralia, Wash.

BIG LUMBER CO. LAND SALE IN SKAGIT county; 40 acres, $1400; 20 acres, with new house, $1500. Lumber furnished for building. Lots of work for the settler; splendid district, roads, schools and towns. H. C. Peters, 726 3d ave., Seattle.

7000 ACRES SEQUIM LAND SETTLEMENT project, containing the finest berry and dairy land in the state, now offered for settlement at attractive prices and terms. Free booklet. Thos. G. Mortland, Sequim, Wash.

CHEAP—4800 ACRES, 1700 UNDER KENNEwick project; fine sheep range, including 10,000 acres leased land. Also lots and acreage in Yakima. D. G. Goodman, Yakima, Wash.

FOR SALE AT A SACRIFICE—25 ACRES, IN Willamette valley; 8 miles from Portland; highly improved; all good buildings. Write owner, Tina Grea, Conconully, Wash.

CHEAP; EASY TERMS; SOME TRADE; 200 acres, 150 cultivated; can irrigate 40, balance wooded. Write for particulars. Thomas Land Company, Goldendale, Wash.

SELL YOUR PROPERTY QUICKLY FOR cash; no matter where located. Particulars free. Real Estate Salesman company, 501 Brownell, Lincoln, Neb.

PUGET SOUND COUNTRY; WATER FRONTage farm lands; free map to landseekers. Charles Somers Co., Alaska bldg., Seattle.

FOR SALE—STOCK OR DAIRY RANCH, Open range; best water right. Write Clara Wagner, Hornbrook, Cal.

FARM LANDS—Wanted 654

WANT TO HEAR FROM OWNER HAVING farm for sale. Give particulars and lowest price. John J. Black, 80th st., Chippewa Falls, Wis.

IRRIGATED LANDS—For Sale 663

FARMERS AND STOCK MEN—THE COLUMbia irrigation district has several tracts of irrigated lands of various sizes, in the famous Kennewick valley, with plentiful water supply. The district wishes to get these tracts into the hands of good farmers who will put them to work, and will make very low prices and long terms to such men. No speculators need apply. One tract 580 acres, especially suitable for stock or dairy ranch. Write the secretary, Columbia Irrigation District, Kennewick, Wash.

10 ACRES, IRRIGATED; NEAR RICHLAND, Wash.; fenced; good house; outhouses; cemented well; federal loan $650, balance $600 cash. For particulars address George Bancroft, Hermiston, Ore.

FOR SALE OR EXCHANGE 702

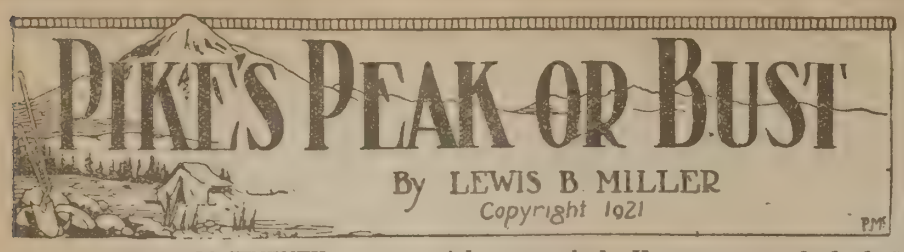
FOR SALE OR TRADE—160 ACRES LAND, near Roseberry, Idaho, for something near here. Address J. F. Janisch, Kirksville, Mo.

160 ACRES; 50 IN CULTIVATION; GOOD water. For full particulars address O. B. Mason, Ford, Wash.

TO EXCHANGE—Real Estate 705

GOING TO CALIFORNIA, WILL SELL OR exchange for improved property, all or part 240 acre level land; agricultural district; suburban to Vancouver, British Columbia; city water, electric car lines; good prospects of being enveloped by great growing city. Owner, J. D. Westenhaver, present address, Astoria, Ore.

160 ACRES, KANABEC COUNTY, MINNEsota; 11 miles from Mora, county seat; rural delivery; consolidated school; 8 acres cleared; 40 natural meadow; live creek; small house and barn; holding at $30 acre; will exchange for fruit acreage or farm land. J. D. Hartley, W127 14th, Spokane.



CHAPTER TWENTY.

Attacked in the Night.

"If this forest got afire on a windy day no human being would have a chance to escape. That is, if he was unlucky enough to be in front of it," the man from Michigan told them. "The fire would jump from tree top to tree top, so fast that a race horse couldn't outrun it."

"Would even the green trees burn?" asked Esau.

"Burn they certainly would! Green trees, dry treesall together. They wouldn't burn up, maybe. But all their tops would burn off, leaving only blackened trunks and snags. You saw that burnt-over ground there close to Denver. And of course all this bed of pine needles we're tramping over would turn to fire. Oh, this whole region would soon be a roaring furnace, you'd better believe!"

When night came, the party camped in a little prairie, where grew plenty of grass for Brindle. And they let her graze rather late neyt morning, because the traveling was as hard on her as on the men. Besides the fallen timber and thickets to be avoided, the pine needles were deep nearly everywhere. And they had a provoking tendency to let one's feet slip and slide as he tramped over them.

When at length the wanderers traveled on they were still in forest, and the country became more and more broken as they neared the snowy range. From time to time, and from the highest points, the adventurers caught glimpses of that great snow roof. But usually they could see nothing, so dense and high was the pine forest surrounding them.

Much game was here, especially elks. The bull elks had great spreading horns. And it seemed a marvel that they could dash through the thick, tangled forest with them as well as they did. But they would raise their heads high, so as to lay their horns back against their bodies. and go tearing away at a breakneck speed.

There were also bears here. The wandering rainbow chasers, as they now jokingly called themselves, caught sight of black bears from time to time during the day. They did not attempt to kill any of them. As they were well aware, there were also grizzlies in this primeval forest, though those larger, fiercer bears did not seem numerous. Perhaps they were asleep in their dens during the day, only coming out at night in quest of prey. Of these dangerous creatures all the party were more or less afraid. They were constantly on their guard to keep from being surprised by one. And they always had their weapons in readiness to shoot.

Once or twice during the afternoon the six men halted at streams to wash out some sand. They found no gold; nor did they travel very far. The nearer they approached to the great mountain range the more broken the country became. And the forest that covered it was even more dense and tangled than before.

As night was drawing nigh, the wanderers in the wilds went into camp at the foot of a great rock. Here was a little open spot, and a tiny spring, trickling out from under the rock, afforded all the water that the campers and Brindle would need. There was also plenty of grass for the cow in the opening.

After carefully clearing away a patch of grass the party started a campfire. They didn't want it to spread into the surrounding forest. Later Holloway and Orlando found a sloping place at the back side and, by boosting and pulling each other, succeeded in mounting to the top of the big rock, to get a view of the surrounding country. Now that mighty, snow-roofed range seemed almost to overhang them.

After the travelers had finished with supper they sat by their roaring campfire and talked. It was now about the end of August. But at this high altitude, and so near to that field of snow, the night was almost cold. When the time came for sleep Orlando first went out to see if Brindle was all right. Frisk, lying by the fire, sprang up and followed him.

The cow had grazed her fill and was lying in the grass, contentedly chewing her cud. Her owner paused and patted her neck.

"Good old Brindle! Good old milk horse! I don't know how we rainbow chasers would get along without you."

After making sure that her rope was securely tied to a bush the young man returned to the campfire.

"Chilliest August night I ever got into," he shivered, as he stood in the light and warmth.

"I'm guessing we're likely to strike a chillier place than this before long," Sanders remarked. He was now ready for bed.

"Where's that?" Orlando inquired.

"Why, when we come to that white country, that region of everlasting frost."

"Yes, chances are it will be a little bit cool up there. In fact, some of that coolness has already slid down the mountainside. I'm happy that we don't have to burn buffalo chips here."

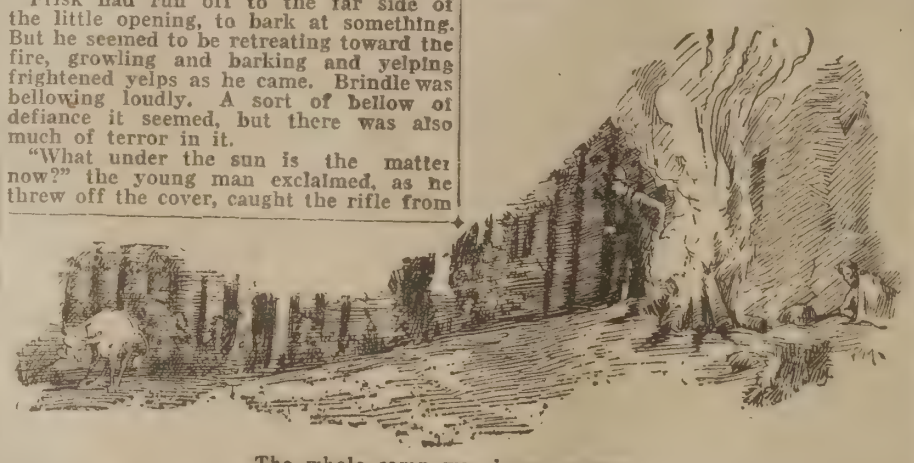
In a little while all the party were in bed and asleep, or ready to sleep. They were bedded in pairs, and were glad to "scrooch" up together to keep warm. They also had their feet near the fire. The three pairs of sleepers occupied three sides of the campfire, and Frisk had curled himself up in the middle of the remaining space.

Thus it was when Orlando rose to his elbow, just before falling asleep, for a final look around. All the rest of the party were asleep, as he could tell from their regular breathing. Even the dog seemed to be slumbering peacefully, soundly.

But when Orlando awoke, some hours later, the whole camp was in an uproar.

Frisk had run off to the far side of the little opening, to bark at something. But he seemed to be retreating toward the fire, growling and barking and yelping frightened yelps as he came. Brindle was bellowing loudly. A sort of bellow of defiance it seemed, but there was also much of terror in it.

"What under the sun is the matter now?" the young man exclaimed, as he threw off the cover, caught the rifle from



The whole camp was in an uproar.

under the edge of his bed and leaped to his feet. The others were already doing the same.

Nobody answered at first, for nobody knew for certain what the tumult meant. Some were throwing more pine wood on the fire. Others were examining the locks of their guns by the firelight, to make sure that the caps were all right. Soon all were standing with their guns in their hands, thumbs on hammers and fingers on triggers. Every man was trying hard to penetrate with his eyes the darkness where the growling and barking and bellowing were still going on. When the uproar had subsided somewhat, one of the party said:

"What in the world can be the matter out there? Brindle and Frisk both seem scared frantic!"

Cooper advanced a few steps and again tried to peer into the darkness beyond as he answered: "Of course I don't know for certain. But my guess—my guess would be that—that there's a—a grizzly close around. And the animals scent 'em."

At the mere mention of a grizzly bear, that monster of these wilds which, so it was believed, no rifle bullet could stop, every man of the party felt a shiver of cold fear run through him. And the bellowing of the cow, ringing out loudly a little later, seemed to inspire a feeling of terror in all of them.

Ere long the wood just tossed upon the fire was blazing brightly, throwing its strong light afar. By that light the men could now make out the cow, and they could assure themselves that there was no beast of prey near her. Her terror must have come from seeing some animal farther on. Or possibly she only scented him. Frisk was somewhere beyond the cow, but could not be seen.

All the campers had their boots off, and most of them were now dressed only in their underclothes. But as soon as there was light enough to make sure that the grizzly, if grizzly it was, had not begun an attack, they made haste to clothe themselves better.

"No great fun to fight a grizzly, even when you've got all your duds on," Cooper remarked. "I'd like to be excused from—from——"

"From having a tussle with one when you're naked?" laughed Sanders. "Yes, and so would I. Though I don't imagine clothes would be much production if the monster raked you with those terrible paws of his."

"You may be sure they wouldn't, Abe. No more than clothes would protect you from bullets or Indian arrows. I never had but one encounter with the beasts. Twenty years ago that was. It happened while I was wagoning on the Santa Fe trail. We were out on the plains at the time. The grizzlies had a way of leaving the mountains and coming out there, numbers of 'em. Early travelers crossing the plains used to declare that they'd counted as many as a hundred in one day."

"They must all have deserted the mountains." Orlando was speaking.

"Most of 'em did, it seems," Cooper continued. "They came out for the reason that no end of good eating could be found there. They'd keep close to those great herds of buffaloes migrating north or south, to feast on buffalo meat. When they——"

"Did they travel in a pack, a huntin' pack, them bears? Or would every bear run in a gang to hisself?" Esau wanted to know.

"They didn't all come out from the mountains together, if that's what you mean. I think they commonly traveled in pairs, a he bear and a she bear. Man and wife. But they hunted singly. Or at least they often did. A hungry she grizzly is just as capable of dragging down a buffalo and killing it as her old man would be."

"And did you actually get into a scrimmage with one?" questioned Givens.

"Well, yes. Guess that's what you'd call it, Jeff. One night, while our wagon train was in camp, a hundred miles or more from the mountains, a grizzly plunged right into our corral. He came in through an opening we'd left at one end. I've often wondered what possessed 'im to do such a thing. Meanness, I'd guess. Or maybe the camp just happened to be in his way, and it was beneath his dignity to go to the trouble to pass round it."

"Must have made a lot of excitement," Orlando was moved to remark.

"Excitement was no name for it, Lando, boy. It was a stampede—the wildest stampede you ever heard of."

"Took all of you by surprise, I'd guess," Givens commented.

"Well, no. Not just by surprise. You see, Jeff, we had sentinels out. In fact, we kept sentinels around the camp every night, from the day we rolled out of Council Grove, on the Neosho, till the day we rolled into Santa Fe. But it was a dark night. Or at least there was no moon. Of course our campfires had gone out. We had only little fires, because we were using buffalo chips for fuel. You all know how long those last. You've tried 'em."

"You're in bully good luck if you can make 'em last till supper's cooked," chuckled Esau.

"Well, of course, our horses and mules gave the sentinels warning. They were all staked not far from the wagons and the instant they scented the grizzly they began to snort and roar and then to try to break their lariats or pull up their stake pins. As soon as the sentinels caught sight of the grizzly—the one at that end of the camp—they blazed away at 'im. After that they dashed back into the wagon corral, with the bear right at their heels."

"In a wagon corral with a grizzly, eh? Pretty close quarters, it seems to me," laughed Holloway.

"Altogether too close to be comfortable, Jess. A few of the boys, maybe, were asleep in their wagons—those that had sleeping room. But most of us had our beds on the ground near our wagons. At the first shot we all jumped clear of our blankets and grabbed our guns. Every man of us slept with his weapons within reach. That was the captain's orders. At first we supposed it must be an attack by redskins, till one of the sentinels yelled:

"'Look sharp there, boys! Here comes a bear'"

"And then you ought to have seen us climb! Safe to say you never saw a more active set of bull-whackers. We couldn't climb——"

"Climb! What was there for you to climb, Mr. Cooper?" inquired Orlando. "That is, if you were out on the bald plains, as I understood you to say you were."

"Oh, there wasn't any tree to climb, nor anything else of the kind. But there were wagons a plenty, and the instant we jumped out of our blankets and snatched up our guns we went up a wheel or the side of a wagon. Some stood on top of a wheel and some crawled into their wagons. And as soon as anybody reached a place of safety he began to pop away at the bear. We had a lively time in that camp for a few minutes, I can tell you!"

"And how did the scrimmage wind up? Did the grizzly devour any of you?" Jess Holloway wanted to know.

"Not one. We all got off without a scratch. No, not all. There were some dogs in the camp, and one of them, a half-grown pup, was foolhardy enough to run up close and bark at the bear. But it was that pup's last barn. He let out one sharp yelp as the grizzly's paw struck 'im, and that was the end. As I told you, all of us teamsters got off unhurt. I don't suppose the bear was hungry. At any rate, he kept right on. Maybe we made too much noise for 'im. He didn't stop to attack anybody. Only knocked the pup out of his way. After passing through the corral he dived under a wagon or between two wagons and disappeared. That was the last we saw of 'im."

(To be continued.)

Bits of Fun FOR Everyone

Safety First.

Teacher—Johnny, if you don't behave I'll have to send a note to your father.

Johnny—You'd better not. Ma's as jealous as a cat.—American Legion Weekly.

Good Ruler Wanted.

Mr. Blimp—Remember, the hand that rocks the cradle rules the world. Don't forget that, dear.

Mrs. Blimp—Then you come right in and rule the world a while. I'm tired.—Good Hardware.

How Old Was She?

A candidate for the position of the world's meanest man has appeared in the person of the editor of a small Missouri newspaper, who published the following item in his "Social Gossip" column:

"Miss ——, a young lady of 20 summers, is now on a visit to her twin brother, age 30."—Selected.

Father Breaks the News.

"That young man of yours," said father as daughter came down to breakfast, "should be in a museum for living curiosities."

"Why, father!" exclaimed the young lady in tones of indignation, "what do you mean?"

"I noticed when I passed through the hall late last night," answered the parent, "that he had two heads upon his shoulders."—The Soldier-Worker (Butte).

Times Have Changed.

Not so very long ago when the gang rolled in to spend the evening you would hear the women talking among themselves and usually the conversation was along the following lines: "You take three cups of sugar, add a pinch of soda, four cups of flour and bake in a slow open." The men's conversation covered: "Sure, I intend to vote for Donivan; you must stand by the party."

But today it's different. Over in a corner the women are saying: "I won't vote for him, I don't like the way he treats his wife." But listen to what the wild men are saying: "Be sure to allow the cherries to stand five days, then squeeze out the juice and add——"—Wayne Winner.

Mean Papa.

Stern pa: Will you be able to treat my daughter in the way to which she has been accustomed?"

Suitor: "No, but I can treat her decently."

Me-ow.

"I want to tell you," said one of our little brides the other morning, "what a fright I got on my wedding day."

"You needn't," said the envious girl, "I saw him on the street with you yesterday."—Selected.

It Died Hard.

"It's clear," remarked one traveling salesman to another, as they sat at dinner in a farmhouse in the middle west, "that the man who raised this spring chicken was tender-hearted."

"How in the world do you make that out?" asked the second.

"Because he hesitated so long before striking the fatal blow."—Exchange.

A Saturday Night Episode.

"That's my week's wages. Are you going to take it?"

"Yes," said the footpad, briefly.

"Then shoot a hole through my hat."

"What for?"

"I want to submit it as evidence to the missus. The last time I told her I was robbed it started an argument that kept me up until 2 o'clock in the morning."—Birmingham Age-Herald.

FAMILY CIRCLE

ALICE BARLAND
EDITORIAL CONTRIBUTOR

Experience Letters

From Our Family Circle Women

Dear Mrs. Barland: One day not long ago I was crowded with work and my daughter was called away to help a sick neighbor. It being vacation it was up to me to get help from my three boys, as I was in the midst of house cleaning. The first thing I did on that morning after breakfast was to make each of my three a cook's cap and apron out of flour sacks, which took but a few minutes to run up on the sewing machine, and I told them they must be my cooks for that day. The boys were delighted and those caps and aprons worked wonders. They never grumbled once all day. The oldest boy, age 12, went right ahead and washed the dishes and the next one, age 7, wiped them, while the young 5-year-old did what he could, and by 9 o'clock in the morning all the kitchen work was done. From 9 till 10:30 the two older boys went fishing and came home with a nice mess of fish, which they cleaned and fried as well as any one could do. They baked spuds and set the table and with the fish and whatever was ready in cold food in the pantry they prepared a fine dinner and I never stopped my work to do a thing. They cleaned up the dinner work the same as they had the morning work and they were happy and there was no grumbling. Those caps and aprons did the business and have been in use many times since and work well when my oldest girl is away working. When she is home the song is changed and I try not to ask too much of them when she is home. However, I do bring them into service when it is necessary to rush work through, as when we are to go to meeting on Sunday mornings.

Training children is a difficult matter and requires study, as no two are alike. I agree with one mother who wrote on child training who said parents must set good examples for the children if they want them to be well behaved. If father is careless and throws his hat and coat into a corner or on a chair, beats the dust out of his gloves or mittens in the house, half washes his hands and leaves a blot of dirt on the clean towel you can be very certain that the boys will do the same. If the mother remonstrates in her desire to bring up the boys to good habits she will be pretty likely to hear those boys say, "Papa does that way." A mother can about wear herself out trying to combat an influence like this and will fail after all, in many cases.

The same holds good with the training of girls. Mother must set a good example if she wishes her girls to be neat and tidy in appearance and become good housekeepers. My girl is slow, but does her work well. I, too, was slow once and I trust my girl will grow swifter.

I often take the boys and clean up the yard, raking up and burning scraps and litter. Just a little work now and then keeps the outside appearance of the home place neat and attractive. With all I try hard to teach my children that cleanliness is next to godliness, whether it be bodies or minds, the inside of the house or the outside. MRS. H. C. J.

Washington.

Just Folks.

A happy family is the happiest thing in life. In my school days for two winters I did chores in a happy family for my room, meals and washing. It is needless to say that the happiest recollections of my school days are associated with those two winters.

The family consisted of father, mother, one son and four daughters. The home was on the outskirts of the town, there being ample grounds around the house and stable. The father of the family was a business man in town. He had a black horse and a family carriage in which he drove to and from his place of business, generally accompanied by his son, who was in business with the father, and three of the children who attended school in town.

Nig, the horse, was as fat as a butter ball, with a black, shiny coat of hair. You can depend upon it there was no racing back and forth to business. The horse was too fat to race and his driver was too happy a man to waste his happiness by driving faster than a jog trot. Nig was happy, too. There was only one regulation imposed upon me in feeding him, and that was to see that he had enough to eat. So I saw to it that Nig had all the hay he could eat and came pretty near giving him all the oats he would eat as well.

There were two cows to milk; the older cow, an easy milker, and the heifer that gave undue exercise to my wrist. The cows also were happy in having all they wanted to eat. So we had all the milk and cream the family could use and more, too.

The good mother, with the help of the oldest daughter and the spasmodic help of the other children, did all the housework. The mother and eldest daughter were of the same warp and woof in the web of life—with a quiet joy meeting the duties and happenings of the day, and with a poise taking the sting out of the little ripples of youthful temper on the part of the younger children.

The son enjoyed music as a side line and I remember reading one or more of Dickens' novels to the rhythm of his piano playing in the next room. One of the younger daughters was a spitfire, and the happy way in which the father and mother overcame those spitfire episodes would be a revelation to many a scientific child manager.

It was an old-fashioned church-going family and one of the happiest scenes was to see the family carriage packed to the limit as Nig jogged his way to church on Sunday morning

I would not decry the value of books on child training, but I do not remember to have seen such a book in that happy family; nor do I remember seeing any of the other hundred and one ways by which happy homes are made. That was simply a happy family. Perhaps it just happened so; perhaps there were hidden struggles of self-denial that had something to do with it. Passing by all that it gives me happy thoughts today to think of that happy family of long ago. E A S

Can Anyone Tell?

Will some one tell how to prepare pine needles for pin cushions, when to gather them and will fir needles do as well?

Will some one tell us how to put up the large green peppers such as can be had at the stores? They are put up some way in vinegar and sweet oil.

Also will some one tell how the pimento peppers are put up, if it can be done in the home? And what kind of peppers are used for these? Several readers want to know.

Will some one send in a recipe for making pickles of cucumbers, onions, apples, grapes, etc., in some way so they make their own vinegar? A sister wants to know.

Can some one tell us if they have ever had success putting away ripe tomatoes or string beans in brine for winter use? Tell us of any other vegetable you may have preserved successfully in brine.

Can some one tell how to set the bristles in a shaving brush or any brush?

Will some one tell how to make milk chocolate candy, such as we buy in stores, and has some one a recipe for French pastry?

A sister says she set out two geraniums at the same time and both are alike thrifty, but one has bloomed constantly and the other never a bud. Who knows why?

The Holiday

By JULIA M. MARTIN.

Oh, proudly, noble country, in thy name
The thousand throats of brazen trumpets blare;
The pennon flutters crimson, white and blue;
And pomp is marching by, and torches flare.
And they who late carouse, and loudest brawl,
Profess thy name. What—shall the shout be all?

Not in the flash of rocket, roll of drum,
Not in the scream of eagle, vapid boast,
Not in the threat of steel, or flaunt of gold,
Shall men discern thy soul, defend thy coast.
Alike the true, the false, they thus proclaim.
Oh, purer burn my country's altar flame!

Not all our joy in thee, our songs to thee,
Not all the grace of those three colors twined
May keep thee free and honored, if thy sons
Withhold the earnest toil of hand and mind.
While Pleasure oft prefers a sordid spot,
Men say they love thee who can know thee not.

My country, stronger hearts and clearer minds
Bring other, nobler offering to thee.
The grov'ling beast itself may pleasure know,
But only men may guard a nation free.
And hands that labor, hearts that earnest beat
Bring fairest gift, my country, to thy feet.

Observe Educational Week

President Harding has assured Commissioner Tigert of the United States bureau of education that he will issue a proclamation urging the observance of the third national week for education, December 3 to 9, inclusive. Commissioner Tigert says that the purpose of this week is to center attention upon the needs of our schools, especially on Americanization, better trained and better paid teachers, more adequately equipped buildings, eradication of illiteracy, improvement of rural schools and physical education and hygiene. The American legion and the National Educational association are cooperating in plans for the observance of the week.

Library of Apiculture

By GEORGE W. YORK.

It may be of interest to know that Dr. C. C. Miller, the nestor of American beekeeping, who passed away in September, 1920, has just been honored by having established "The Dr. C. C. Miller Memorial Library of Agriculture" at the Wisconsin State university, in Madison, Wis. Already over $1400 has been contributed by admirers of Mr. Miller, and the income from the endowment will be used to maintain the library.

Dr. Miller was 89 years old when he passed away, and had been a beekeeper for over 60 years. During the last 25 years of his life he had answered 10,000 questions propounded by beekeepers in the question and answer department of the old American Bee Journal.

Dr. Miller wrote more on the subject of bees and beekeeping than any other man of his time. He lived at Marengo, Ill., for over 60 years, and was an intimate friend of the writer for nearly 30 years.

These Are Good to Have

Recent farmers' bulletins which may be of value to northwest farmers and which may be obtained free upon application to the chief of the division of publications, U. S. D. A., Washington, D. C., include the following: School Lunches (F. B. 712); Sheep-Killing Dogs (F. B. 1268); Celery Growing (F. B. 1269); the Stock-Poisoning Death Camas (F. B. 1273); Use of Rural Community Buildings (F. B. 1274), and Game Laws for 1922 (F. B. 1288).

CROPS ALWAYS FALLS SHORT.

Of every 100 bushels of corn that farmers set out to grow, only 64 bushels are realized, according to figures compiled by the United States department of agriculture over a period of 13 years. The difference between the potential crop and the quantity harvested is due to weather conditions, defective seed, plant disease and insect and animal pests.

SIGN OF HARD WINTER.

Southern California hunters report finding high up in the trunks of dead trees an unusually large supply of acorns cached in holes, and declare that in each acorn is a juicy grub well fattened to be pecked out as a part of the winter ration of the woodpeckers. This is regarded as a sure hard winter sign.



Here's your stove polish!

Here it is—the Stove Polish which, for 30 years, has stood alone in the field—the favored way to beauty and protection for your stove.

The majority of housewives prefer it because it is so easy to apply and *outlasts* all others. It anneals to the iron and will not rub off or dust off. When a salesman wants to show a stove to the very best advantage he uses Black Silk Stove Polish. Why not have it on *yours?* Get a can today. Money back if not the best you ever used.

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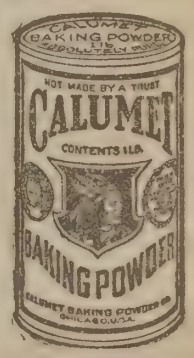
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The Economy BAKING POWDER

the most dependable of all leaveners. It is made in the most careful and scientific manner. The materials are absolutely pure, they remain pure in the baking and insure wholesome healthful food.

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THE WORLD'S GREATEST BAKING POWDER

High Points in News of the Week

President Harding last week officially designated Thursday, November 30, as Thanksgiving day. His proclamation follows:

"By the president of the United States of America:

"A proclamation: In the beginning of our country the custom was established by the devout fathers of observing annually a day of thanksgiving for the bounties and protection which divince providence had extended throughout the year. It has come to be perhaps the most characteristic of our national observances and as the season approaches for its annual recurrence it is fitting formally to direct attention to this ancient institution of our people and to call upon them again to unite in its appropriate celebration.

"The year which now approaches its end has been marked, in the experience of our nation, by a complexity of trials and triumphs, of difficulties and of achievements, which we must regard as our inevitable portion in such an epoch as that through which all mankind is moving. As we survey the experience of the passing 12-month, we shall find that our estate presents very much to justify a nation-wide and most sincere testimony of gratitude for the bounty which has been bestowed upon us. Though we have lived in the shadow of the hard consequences of great conflict, our country has been at peace and has been able to contribute toward the maintenance and perpetuation of peace in the world. We have seen the race of mankind make gratifying progress on the way to permanent peace, toward order and restored confidence in its high destiny.

"For the divine guidance which has enabled us in growing fraternity with other peoples, to attain so much of progress, for the bounteous yield which has come to us from the resources of our soil and our industry, we owe our tribute of gratitude and with it our acknowledgment of the duty and obligation to our people and to the unfortunate, the suffering, the distracted of other lands.

"Let us in all humility acknowledge how great is our debt to the providence which has generously dealt with us and give devoted assurance of unselfish purpose to play a helpful and ennobling part in human advancement. It is much to be desired that in rendering homage for the blessings which have come to us we should earnestly testify our continued and increasing aim to make our own great fortune a means of helping and serving, as best we can, the cause of all humanity.

"Now, therefore, I, Warren G. Harding, president of the United States of America, do designate Thursday, the 30th day of November, as a day of thanksgiving, supplication and devotion. I recommend that the people gather at their family altars and in their houses of worship to render thanks to God for the bounties they have enjoyed and to petition that these may be continued in the year before us.

"In witness whereof, I have hereunto set my hand and caused the seal of the United States to be affixed.

"Done at the city of Washington, this 2d day of November, in the year of our Lord, one thousand nine hundred and twenty-two, and of the independence of the United States of America, the one hundred forty-seventh.

"WARREN G. HARDING."

* * *

President Harding was 57 years old last Thursday, November 2. No special observation of the day was held at the White House, the president carrying out his usual program of official duties.

Social functions at the White House are practically discontinued, owing to the ill health of Mrs. Harding, who is still confined to her room, though reported to be recovering from illness that was considered serious a few weeks ago.

* * *

The American Farm Bureau federation last week wired the interstate commerce commission urging that an embargo be placed on Canadian wheat passing through the United States and using American cars and boats. It was claimed that the embargo would release enough boats on the Great Lakes to move 20,000,000 bushels of American wheat before the winter closing of navigation and would also release 21,000 cars that are now carrying wheat from Buffalo to the Atlantic coast. The farm bureau was later joined by other grain shipping interests in urging the embargo.

* * *

Secretary Mellon of the United States treasury, last week stated that the public debt had been reduced $3,784,000,000 from its peak of over $26,000,000,000 at the close of the war.

* * *

Municipal elections held in London and other British cities last week resulted in heavy losses by the labor party. Out of 574 labor candidates in 70 leading boroughs, 215 were elected; out of 450 conservative candidates 350 were elected. In the city of London the number of seats in the councils held by the labor party was reduced from 573 to 253.

* * *

United States Senator Borah of Idaho has, during the election campaign which closed Monday this week, renewed his appeal for the election of the president by direct vote of the people.

* * *

It may be a crime to possess liquor under the prohibition amendment and the Volstead enforcement act, but it is not a crime to steal it. This is the opinion of Judge Marsh of Santiago, Cal., who last week dismissed a case in which it was charged the defendant had stolen $10,000 worth of intoxicants. The judge ruled that in the sight of the law liquor now has no actual value.

* * *

The United Mine Workers of America have filed a formal application with the United States coal commission created by congress at the request of President Harding asking that all coal mines be unionized. The organization argues that this action would result in stabilizing of wages and working conditions in all coal fields and would prevent future strikes.

* * *

Thomas N. Page, former ambassador to Italy, died last week at his home in Virginia.

* * *

A semi-peaceful revolution has taken place in Italy recently, resulting in what appears to be a victory for the conservative element of the Italian people. Benito Mussolini, leader of the so-called fascisti troops, has been appointed premier by the king and has begun the formation of a new cabinet in somewhat the same manner as did Mr. Bonar Law, the new British premier. The Italian situation is looked upon as a defeat of communism.

* * *

Notwithstanding repeated efforts on the part of the railroad companies and the interstate commerce commission to supply the west with adequate cars for handling the fruit crop, the car shortage situation appears to have grown worse rather than better during the last few weeks. Heavy losses have already been incurred by growers of early varieties of apples and other perishable fruits and even greater losses are in prospect. Governor Hart of Washington has started a movement looking toward a conference in Sacramento, Cal., for the purpose of forming an association of fruit growers of all the Pacific coast states. The primary object of the association would be the prevention in the state of catastrophes similar to that experienced by the fruit growers this season.

The interstate commerce commission has given the public service commissions of western states power to distribute the available supply of cars wherever it seems most urgent that they be delivered, the idea being that the most perishable produce be handled first and that all districts shall share alike in what cars are available.

* * *

The new British census gives the population of London as 7,480,000.

* * *

Prohibition is perhaps the outstanding feature in the election in New Jersey this year. The fight seems to be centered on the race between Governor Edwards, the liquor candidate, and Senator Frelinghuysen, the dry candidate. The former is a democrat and the latter republican.

* * *

It is reported that there are now $700,000 subscribed to the proposed $1,000,000 fund for the endowment of a Woodrow Wilson foundation designed to provide annual awards to persons rendering distinguished service in the advancement of peace.

* * *

The new grain futures law, which gives the secretary of agriculture regulative power over the buying and selling of grain on grain exchanges, went into effect November 1. Two of the leading grain exchanges have secured court conjunctions against the enforcement of the anti-futures feature of the law. On all other exchanges this feature of the law will be vigorously enforced, according to Chester Morril, who is in charge of the grain futures law administration for the department of agriculture.

* * *

If the entire United States potato crop is to be consumed this year, each person in the country, large and small, will have to eat four bushels, or an average of that amount. The production is estimated at 433,000,000 bushels, against 347,000,000 bushels last year.

* * *

The legislature of the Philippine islands has adopted a resolution requesting the United States to call a Philippine convention for the purpose of adopting a constitution and forming an independent republic of the Philippine islands.

Dedicate Recreation Building

A large crowd was present at Buckley, in Pierce county, when Senator Miles Poindexter dedicated the recreation building of the school district. The building is 80 feet long, 40 feet wide and is for the accommodation of the pupils of grades one to six during the rainy weather. It is also to be used as a grade school auditorium and as a lunch room. All the windows are so arranged that they may be quickly swung outward and plenty of ventilation obtained. A stage at one end of the hall assures facilities for a grade school assembly. Folding doors in the center make it possible to convert the building into two large play rooms, one for boys and the other for the girls.

The people of Buckley are proud of their school system. With a total of 10 buildings, including four rural school buildings, two of them having play sheds, a modern high school building, an up-to-date grade building, a large gymnasium and swimming pool and now the recreation building, the citizens feel that they have the beginning of a plant which will have no superior in the state. Four large busses bring in high school pupils from South prairie, Burnett, Wilkeson, Marion, Spiketon and Connell's prairie, swelling the high school enrollment to 203 pupils.

To Sell 40 Guernseys

On Wednesday, November 22, the entire herd of Guernseys at Orchard Hill farm at Redmond, King county, owned by Dr. Park Weed Willis of Seattle, will be sold at public auction. Forty head of this well-known herd will go, Dr. Willis being compelled to give up his farming interests so as to devote all his time to his profession in Seattle.

One of the best known animals of this farm was Sammanish Topsy, an advanced register cow that was born on the place and had a record of 831.58 pounds of fat in class A. At the time of her death, last September, she held the record of highest producing Guernsey west of the Missouri river. There are three of her daughters and 12 granddaughters in the sale. Topsy's Robin Hood of Orchard Hill, a 3-year-old, one of the herd bulls, a great-grandson of King of the May and out of Sammanish Topsy, will be sold. He has produced 15 heifer calves out of 20.

There are about 20 daughters and granddaughters and one son of Sammanish Topsy in the sale and several of her stable mates, including Sammanish Roxie. Five of the number to be sold are bulls. The rest being cows in milk and heifers. The entire herd is government accredited and there are a number of cows that have A. R. records. The farm can easily be reached by stage from Seattle. The sale starts at 10 a. m.

WOULD STORE POTATOES.

Report comes from Yakima that the potato growers who are in a position to do so are figuring on placing their potatoes in cold storage.

Farm Business and Markets Outlook

(Continued from page five.)

The Grain Market.

PORTLAND, Ore., Nov. 4.—Wheat—Hard white, Bluestem, Bart, $1.33; soft white, western white, $1.19; northern spring, $1.18; hard winter, $1.15; western red, $1.14.

Oats—No. 2, 36-pound naturals, November, $35; 38-pound naturals, November, December, $35.

Barley—44-pound minimum, November, December, $33.50; 40-pound minimum, November, December, $32.75.

Corn—No. 2 eastern yellow, shipment November, $33.75; December, $32.75; No. 2 eastern yellow, November, $32.75; December, $31.75.

SEATTLE, Nov. 4.—Wheat—Hard white, $1.24; soft white, western white, $1.23; hard red winter, soft red winter, $1.21; northern spring, $1.22; western red, $1.20; Big Bend Bluestem, $1.46. Yesterday's car receipts: Wheat, 46; corn, 3; hay, 6; flour, 17; oats, 2.

POMEROY, Wash., Nov. 4.—Turkey red and Hybrid, 96c.

RITZVILLE, Wash., Nov. 4.—Bart, $1.26; red, $1.05; Fife, $1.02.

COLFAX, Wash., Nov. 4.—Red, 98c; club, $1.01.

DAYTON, Wash., Nov. 4.—Club, $1.05; red, $1.01.

DAVENPORT, Wash., Nov. 4.—Bluestem, $1.21; Marquis, $1.01; Gold Coin, $1.01.

ODESSA, Wash., Nov. 4.—Bluestem and Bart, $1.26; Marquis, $1.09; Turkey red, $1.05; Jones' Fife, $1.02.

Hay and Feed Grain.

PORTLAND, Ore., Nov. 4.—Millfeed—Prices f. o. b. mill: Mill run, ton lots, $32; middlings, $44; rolled barley, $39@41; rolled oats, $44; scratch feed, $44 per ton.

Corn—White, $30; cracked, $31 per ton.

Hay—Buying price, f. o. b. Portland: Alfalfa, $18.50@19 per ton; cheat, $18.50@19; oats and vetch, $21; clover, $19; valley timothy, $21; eastern Oregon timothy, $21@22.

SPOKANE, Nov. 4.—Alfalfa, $23 ton; timothy, $26 ton; mixed hay, $24 ton. Wheat—Feed wheat, $42 ton. Oats—$42 per ton; steam rolled, $44. Corn—$40 per ton; cracked corn, $42 ton. Barley—$42; steam rolled, $44. Bran—$30 ton. Bran and shorts—$31 ton. Shorts—$33 ton.

General Produce.

PORTLAND, Ore., Nov. 4.—Butter—Cubes, extras, 44@45c lb.; prints, parchment wrapped, box lots, 48c; cartons, 49c. Butterfat, 48c, delivered Portland station; buying price, A grade, 45c.

Eggs—Buying price: Current receipts, pullets, 39c; case count, loss off, 45c; henneries, 51@52c dozen. Jobbing prices: Front street, candled ranch, 52c; selects, 54c; association select, 55c; association firsts, 53c; association pullets, 45c.

Cheese—Tillamook triplets, price to jobbers, f. o. b. Tillamook, 30c; Young Americas, 31c; longhorns, 31c pound.

Poultry—Hens, 13@23c lb.; springs, 16@20c; ducks, 15@23c; geese, 15@20c; turkeys, live, 30@32c; dressed, choice, 40c.

Veal—Fancy, 11@12c per pound.

Pork—Fancy, 15c per pound.

SEATTLE, Nov. 4.—Eggs—Select local ranch, white shells, cases included, 50c per dozen; mixed color, 49@50c per dozen; pullets, 37c per dozen. Cases returned to shipper 1c less.

Butterfat—F. o. b. Seattle: A grade, 50c per lb.; raw milk, $2.10 per cwt.

Poultry—Hens, 4½ lbs. and up, 24c per lb.; over 3½ lbs. and under 4½ lbs., 16c per lb.; 3 to 3½ lbs., 12c lb.; 1922 broilers, 3 lbs. and heavier, 20@28c per lb.; old roosters, 11c lb.; geese, fat, live, 18c per lb.; do fancy, dressed, 24c per lb.; ducks, 3 lbs. and heavier, live, 18c per lb.; turkeys, fat, dry picked, 8 to 15 lbs., 30@35c per lb.; do live, fat, 10 to 15 lbs., 30c per lb.; squabs, large, $4.50 per dozen; pigeons, $2; guineas, $8 per dozen.

SPOKANE, Nov. 4.—Poultry, live weight—Fat hens, 17c lb.; light hens, 15c lb.; roosters, 8c lb.; spring chickens, over 1½ lbs., 14c; broilers, 1½@2½ lb., 16c lb.

Fresh ranch eggs—$10.50 to $12 case, according to quality.

Butterfat—46c a pound.

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Champions
For Every Engine Everywhere



Economy
In
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7/8 Regular
For Dodge cars.
Now 75 cents.

Your cost is nothing compared to your saving in gas and oil, as the increased mileage per gallon with a new set of CHAMPIONS will show this saving for you within a few hundred miles driving.

Ask your dealer to sell you a full set.

CHAMPION SPARK PLUG CO. TOLEDO, OHIO

Your Health

By Royal S. Copeland, M. D., F. A. C. S.

Don't you feel sorry for a person who is so disgusted with life that he looks bored every moment, and spends much of his time covering half-concealed yawns?



Dr. Copeland.

That blase, weary, sophisticated, drooping manner ill becomes any person, young or old, who assumes it.

Undoubtedly it is a manner which, in most instances, is assumed. If it is not assumed, I am inclined to believe it is founded on physical or mental disability. Itis impossible to conceive of any perfectly sane and normal individual becoming so bored with life as to wear a perpetual mask of disgust or indifference. It is not natural to be so unimpressed by the events of daily life.

There are some unfortunate persons who are bashful and retiring. Some of these attempt to hide their embarrassment by assuming various mannerisms—haughtiness, toughness or an air of being bored.

Don't be bored.

If you are human there is something of interest in every moment. Try to get the best out of life. Look for good and pleasing things. You can't be bored a single minute if you have any powers of observation and the capacity to appreciate what you see and hear.

If you want to be like a block of wood, or to assume to be as immobile as a stone statue, go ahead! Nobody will love you but your parents, and they just have to—they wouldn't if they could help it. A bored person is not fit company for man or beast.

It isn't good for your health to be bored. Yor heart must have emotional stimulation in order to beat as it should.

You want to have a good complexion, to be bright-eyed and red-lipped, to have rosy cheeks and warm hands. You can't have these without a strong and forceful circulation.

You want a good appetite, perfect digestion and normal action of all the organs. You can not have these without proper heart action.

Happiness, good nature, exuberant spirits, mental alertness, human interest, enthusiasm, laughter—all these are heart stimulants. They are better than a jugful of medicine. Indeed, they are nature's agents of good health.

Occasionally there is an individual who might admire the sphinx. He might even seek the companionship—or rather should I say, company—of the sphnix.

What we call "personality" is really the magnetism of a happy and winning nature. No bored person is possessed of magnetism.

Therefore, if you would be loved, and if you would be healthy, you will cultivate enthusiasm instead of indifference. You will be interested and blase.

Latest High Class Patterns for the Home

Please order the patterns you desire at least two or three weeks before you wish to use them. Desiring to obtain the latest high-class patterns for its readers, THE FARMER has made arrangements to have them sent direct from the east, and under present mailing conditions it takes about that time for them to reach you.



4151. Girls' Dress—Cut in four sizes, 6, 8, 10 and 12 years. A 10-year size requires 3 1-4 yards of 32-inch material. Price 10 cents.

3849. Ladies' Dress—Cut in seven sizes, 36, 38, 40, 42, 44, 46 and 48 inches bust measure. A 38-inch size requires 4 7-8 yards of 42-inch material. The width at the foot is a little more than two yards. Price 10 cents.

3969. Ladies' House Dress—Cut in seven sizes, 36, 38, 40, 42, 44, 46 and 48 inches bust measure. A 38-inch size requires six yards of 36-inch material. Price 10 cents.

4164. Ladies' Apron—Cut in four sizes: Small, 34-36; medium, 38-40; large, 42-44; extra large, 46-48 inches bust measure. A medium size requires four yards of 36-inch material. Price 10 cents.

3853. Boys' Suit—Cut in four sizes, 8, 10, 12 and 14 years. A 10-year size will require 3 1-8 yards of 44-inch material. Price 10 cents.

3711. Boy's Suit—Cut in four sizes, 3, 4, 5 and 6 years. A 6-year size requires 3 3-8 yards of 27-inch material. If made as illustrated trousers and collars will require 1 7-8 yards of material and blouse 1 1-2 yards. Price 10 cents.

4156. Misses' dress—Cut in three sizes, 16, 18 and 20 years. It requires 4 1-2 yards of 40-inch material for the 18-year size. The width of the dress at the foot with plaits extended is about 2 1-2 yards. Price 10 cents.

4137.-4146. Ladies' Costume—Waist 4137, cut in seven sizes, 34, 36, 38, 40, 42, 44 and 46 inches bust measure. Skirt 4146, cut in six sizes, 25, 27, 29, 31, 33 and 35 inches waist measure. The width at the foot is two yards. To make the dress as illustrated will require 3 3-8 yards of figured material and 3 3-4 yards of plain material 40 inches wide. To make of one material requires 6 7-8 yards. Two separate patterns, 10 cents for each pattern.

3912. Ladies' Coat Dress—Cut in seven sizes, 34, 36, 38, 40, 42, 44 and 46 inches bust measure. A 38-inch size requires 4 1-2 yards of 44-inch material. The width of the dress at the foot is about two yards. Price 10 cents.

4141. Infants' Dress and Slip—Cut in one size. The dress requires 3 3-4 yards of 36-inch material. The slip requires 2 1-4 yards. Price 10 cents.

4149. Girls' Dress—Cut in four sizes, 4, 6, 8 and 10 years. An 8-year size requires three yards of 40-inch material. Price 10 cents.

4155. Girls' Coat—Cut in five sizes, 6, 8, 10, 12 and 14 years. A 10-year size requires 2 1-2 yards of 54-inch material Price 10 cents.

FASHION BOOK NOTICE.

Send 12 cents in silver or stamps for our UP-TO-DATE FALL AND WINTER 1922-1923 BOOK OF FASHIONS, showing color plates, and containing 500 designs of ladies', misses' and children's patterns, a concise and comprehensive article on dressmaking, also some points for the needle (illustrating 30 of the various, simple stitches) all valuable hints to the home dressmaker.

Please fill in this order and mail with remittance to:

PATTERN DEPT., PACIFIC NORTHWEST FARM TRIO, Spokane, Wash.

Enclosed find..... cents for which send me the following:

Pattern No..... Size ..... Pattern No. ..... Size.....

Pattern No..... Size ..... Pattern No. ..... Size.....

Name .....

Postoffice ..... State.....

R. F. D..... Box No..... St. No.....

Be sure to give the pattern number and the correct size.

Home Recipes

Beet Salad.

Select young tender beets and cook till tender, slip off skin by placing in cold water and instantly rubbing; remove from water, cut into dice, add a tablespoon of butter, one of sugar, a little vinegar and water, one tablespoon of flour or cornstarch, allow to boil, then serve in a dish or on a lettuce leaf. Very good.—Mrs. W. R. L.

Meat Balls With Tomato Sauce.

One pound hamburger sauce and one-half pound pork sausage, one onion minced fine. Put some bacon or other fryings into a pan and cook the onion to a light brown, mix with meat and make into flat balls and roll in flour and fry. After they are done add a can of canned tomatoes or cut up ripe fresh ones and put over and cook an hour all together. —Mrs. W. R. L.

Brown Sugar Cookies.

Two cups brown sugar, two cups shortening (meat drippings are good), one cup sour or butter milk, one full teaspoon of soda, cinnamon or other spice as desired. If no eggs are handy they may be omitted, but will make more cookies if two are added. One-half teaspoon of salt, three cups of flour and mold as soft as can be handled and sprinkle white sugar over the tops before cutting out, and roll softly with rolling pin.—Mrs. W. R. L.

Blackberry Dumplings.

One or more boxes of blackberries; if out of season used canned. Place in a stewpan with about two cups of water or a little more if needed; add sugar to make quite sweet. Before serving add a good thick dumpling dough made of one cup of milk, one teaspoon baking powder, pinch of salt and one egg. Drop into the berries in spoonfuls and cook with the cover on for about 15 minutes. Juice of the fruit makes a good sauce or cream may be used.—Mrs. W. R. L.

Home Helps

By ELIZABETH QUAKER.

When hanging the clean curtains, or wherever it is necessary to run tape, ribbon or string through casings, an ordinary hairpin is excellent. If the casings are wide enough to permit, a bone hairpin runs more smoothly than a wire one.

A bit of sour dough or starter yeast is easy to keep on hand in cool weather and is very handy. Bread, a tin of rolls and batch of raised doughnuts can be made from the same dough.

Nearly all fresh fruits will make their own juice when baked in a pie and to most such pies a tablespoonful of flour needs to be mixed with the required sugar to thicken the juice and so prevent its running out over the oven. Some cooks prefer finely crushed cracker crumbs for this.

If the mixed pickle or chow-chow in open jars has a tendency to mold it may be necessary to reheat the batch. First, remove the mold, then place in granite kettle on stove, add a little fresh vinegar and let come to a boil. Scald the jar it was in and refill, covering with a thin layer of paraffin or an oiled paper cut to fit smoothly directly against the pickle. This covering helps to guard against another attack of mold.

Wool Comforts

By Mrs. E. M. Anderson.

People here make ideal wool comforts from their own wool by washing it themselves in plenty of good soap suds, using several waters and rinsing thoroughly. It is then nice and white, with no objectionable odor of grease, and can be used in challis or other dainty coverings with perfectly satisfactory results. After washing the wool we simply pick it into fine pieces by hand, spread it evenly over the comfort lining, put on the top, and tie a trifle more closely than cotton.

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WATERBURY
Radiolite



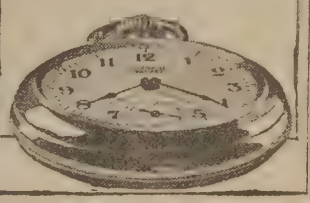
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THE WATERBURY Radiolite, like the famous Ingersoll Yankee, leads in its field. It is the best watch that $5 will buy—a *jeweled* watch that combines stamina and style. It is the small, popular 12-size, and graceful from antique bow to fine, open face that glows in the dark. A "silver" dial harmonizes with the polished solid nickel case.

Here is a watch with a sturdy 4-jeweled movement of modified bridge construction, built to combine enduring accuracy with lasting good looks.

Ingersoll Yankee $1.50

This is the reasonable, reliable, famous American Watch—the best known time-piece in the world.



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As a special introductory offer, a 300 Candle Power Sunray Lantern worth $5.50 will be given absolutely Free with the first purchase of a Sunray Lamp. Lights up the yard or barn like a searchlight. Cheap to operate. Find out about this special offer.

No Wicks to Trim
No Smoke
No Smell

300 Candle Power

SUNRAY lamps and lanterns operate 80 hours on a few cents' worth of kerosene or gasoline. Better than gas or electricity. Whitest light ever produced. Nothing to wear—simple—safe. 15 days' trial. Satisfaction guaranteed. Write for special offer on FREE lantern and agency proposition. Act Now.

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Order today from these prices. Save time and money. Army wool hose, now 23c
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to first pupils in a community who study our *New One Note* at a Time lessons; *Simple* as *A B C*. We teach *Standard Note* music *only*. You play melody 3 lessons, waltz in 6. Over 50 pieces included. Learn at home: *Surprise* friends. Pupils 9 to 70. Lessons only cost. *Easy Terms. You write today, we guarantee success.* State if you have violin.

IMPERIAL MUSIC SCHOOL
3009 16th Street
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When answering ads, please don't fail to mention this paper.



What is the first thing a man plants in his garden? His foot. What does a walnut say? "Don't put your teeth in me." These two are from Clara Peterson. Clara's home is near the Canadian border in Whatcom county, Washington. She is 11 years old. Her birthday is March 6.

Aunt Nellie was glad to hear from Dora Urquhart of Grant county, Washington. Dora is eight years old now and she is in the sixth grade. She says there are six children in her class. February 28, 1923, she will be 9.

Lois Disney writes to us again. Lois lives in the country near Kettle river, in northeastern Washington, and she doesn't have far to go to school. She has one sister, Leona. Lois and Leona have two dogs and four cats for pets. They think The Junior Farmer is a fine paper. February 7 is Lois' birthday.

About the middle of the school term Ethel Stiltner expects to pass into the seventh grade. She says teacher is a good helper and is a fine domestic science teacher. At one time she was supervisor of the home economics department of the Albany, N. Y., schools. Ethel is 11. She had a good vacation this summer. Her home is near Cowlitz river in western Washington.

"I have a pet cat and a pony," writes Freda Johnhson, a western Washington girl. "I milk two cows. We have 12 cows milking.

Thirty-five children go to school where Bertha Holmes attends in Okanogan county, Washington. Bertha is in the third grade and there are 10 in her class. She has two sisters and a brother. They are Evelyn, Dorothy and Cletus.

Evelyn Holmes is having a nice visit with her auntie, who came from Carthage, Mo., to visit them. Auntie is packing apples. Evelyn lives in northern Washington. She has a sister, Dorothy, whose birthday is December 21. Brother's birthday is January 21.

BEDTIME STORIES

By THORNTON W. BURGESS.

DIGGER MAKES A HOME.

Digger the badger, was busy. He was so busy that he could hardly stop to brush the sand out of his hair. From the corners of his eyes he could see the little



Peter's big eyes nearly popped out of his head.

meadow and forest people gathering around to watch. And as he worked he sang, and this was his song:

Dig, dig, dig, I make the sand to fly;
The yellow sand, the golden sand, I toss it up and high,
And deep, deep down, way under ground
My home so snug is always found.

Peter Rabbit was the first to discover Digger at work. Peter's eyes opened wide. Never in his life had he seen sand fly so. When he had first seen it he didn't know what to make of it. He had been coming down the lone little path. Looking across the great meadows he had seen the sand flying in a perfect shower, and he couldn't see what made it fly. At first he thought that Johnny Chuck must be at work on a new house. But Johnny Chuck never had made the sand fly like that in the world, not even when he had won a digging match from Reddy Fox.

Peter hitched up his trousers and hurried over toward the flying sand lipperty, lipperty, lip, as fast as he could go. When he got there nothing was to be seen but a hole in the ground, out of which the sand poured in such a steady stream that it seemed to Peter that there must be several diggers at work down underground.

In a few minutes the sand stopped flying and Peter saw a pair of stout legs and the seat of a pair of pants, very much covered with sand, coming up out of the hole. Peter's big eyes nearly popped out of his head, for Peter did not recognize those stout legs at all, and he was sure that he never had seen that pair of pants before. Who could it be? Peter grew nervous and ran back a little way. Then he sat up very straight with eyes and mouth wide open and his heart going pit-a-pat, he didn't know but this stranger might be dangerous.

In a minute out backed Digger the badger and shook the sand out of his clothes. Then he turned and saw Peter Rabbit with eyes popping out and mouth wide open and Peter looked so funny and foolish that Digger the badger couldn't help laughing right out.

"Howdy friend?" said Digger the badger. "You must be little cousin of big Jack Rabbit, who lives out where I came from."

Peter closed his mouth and found his tongue.

"I'm Peter Rabbit, and I have a cousin Jack who lives way out west. May I ask who you are and where you come from?" said he.

"Sure, sure!" replied Digger heartily. "I'm old man Badger and I've come from the great west, and now I'm going to live on the Green Meadows. I'm very fond of your cousin Jack and I guess you and I are going to get along fine. Will you shake hands?"

"I'm sure we are," replied Peter, holding out his hand. And Digger the badger shook it so hard that Peter afterward declared that it was lame for a week.

(Copyrighted by T. W. Burgess.)

Birthday Greetings

THURSDAY, November 9—Bella Harvey, 8 years old; Delma Hedington; Hannah Wells, 10.

FRIDAY, November 10—Chester Gabriel Abernathy, 8 years old; Sarah Edwards, 10; Louise Gentry, 11; Freeda McCaul, 9; Dorothy Provo, 11; Helen Staadt, 9.

SATURDAY, November 11 — Gaylus Adams, 10 years old; Geraldine DeGooyer, 11; Viola Erickson, 11; Hilma Johnson, 11; Elizabeth Reykjalin, 11.

MONDAY, November 13—Leona Case, 7 years old; Ruby Irene Downing, 6; Thelma Duckworth, 11.

TUESDAY, November 14—Martha Keelmer, 11 years old.

LETTERS WELCOMED BY AUNT NELLIE.

Among recent letters received by Aunt Nellie are those from cousins whose names follow. A few of these will be published each week in the regular edition of THE FARMER and others will appear from time to time in The Junior Farmer:

Frances Zumwalt, Sylvia Wilson, Beryl McCarthy, Elry Shouf, Aileen Grainger, Katie Harvey, Virginia Weldert, Lauretta Schuman, Magdalene Lindh, Audrey Wagner, Evelyn Lindh, Harold Thaden, Freda Johnson, Clara Peterson, Dora Urquhart, Edith McCarty, Hope Lane, Walter J. Frenz, Ida May Riley, Vernice Maurer, Agnes Maurer, Lucille Lemmon, Marie Clark, Maxine Chiles, Edna Richards, Louis Skok, Alice Ritchie, Laura Stringfield, Ruth Stuhr, Daniel Trupp, Olga Foster, Dorothy Schidleman, Edna Crable, Vina Kimm, Marguerite Edlin, Helen H. Howe, Johnny Best, Howard Gallaher, Alene Hensley, Iona Easton, Virginia Hunt, Katherin Oltmar, Thelma Cruse, Jean Cruse, Margaret Littell, Helen Enzler, Ernest Long, Clara Nelson, Rose Hakala, Clara Breitmeier, Edwin Warpala, Madge Black, Jessie Shaw, Thelma V. Heimen.

—A Chain Which Hasn't Developed a Weak Link in Six Years of Constant Use



The strain of six years is a pretty hard test for a car, an implement, or a plan; yet a test of that duration has been given the Cooperative Subscription Plan introduced by The Washington Farmer in 1917, and it has stood up under the trial in every way.

As most of our readers know, this plan sought the elimination of the traveling subscription agent, who for years had been an important factor in obtaining circulation.

We said to our friends, and still say: "Send your subscription orders to us direct. Get your neighbors to do the same. This will save the large sums which would ordinarily be paid out for the agents' salaries, automobiles, gasoline, rigs, hotel and garage bills and miscellaneous expenses. We will give you, the reader, the benefit of every penny saved, first in the form of a low subscription price; second, in an improved paper."

Readers throughout the state have done their part for six years to make this plan a notable example of the savings which can be effected through the right sort of cooperation.

A new subscription season is now beginning. Our cooperative plan is still in effect, and we again look to our friends to put their shoulders to the wheel. Once more the request is made that instead of waiting for a notification, you mail in your order at least 60 days in advance of the address label of your paper, include your neighbor's orders with your own and in case your subscription is paid well in advance, secure at least one new subscriber for our lists. If each one does his share, our cooperative plan will have another highly successful year to its credit.

November 9, 1922.
THE WASHINGTON FARMER,
Review building, Spokane, Wash.

I desire to take advantage of your Cooperative Plan in securing new and renewal subscriptions.

I enclose herewith $.....for a.....year subscription to
THE WASHINGTON FARMER.

(Rate: $1 for five years; 50c for three years; 25c for one year. In Canada 1c a copy extra.)

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If your subscription is already paid in advance, it will be extended from the date to which it is paid.

A GRAND CHAMPION MARE.



The picture herewith shows Nig, the 7-year-old mare with which E. L. Mulhall of Buena, Yakima county, won the senior and grand championship in the Percheron division at the Washington State fair in September.

RADER GETS SHORTHORN BULL.

Ralph Rader of Walla Walla recently purchased the Shorthorn bull, Good Mariner, by Bapton Mariner, Imp. His dam, Choice Lassie 2d, by Choice of All, son of Choice Goods, was twice grand champion of the Chicago International and once reserve grand champion. Choice Goods, it will be remembered, was the sire of Golden Goods, the bull made famous in the herd of W. O. Minor of Heppner, Ore. He is a rich roan, scaling close to 2400 pounds, and not fat. Mr. Rader and his father, Carey M. Rader, who takes time from his law business in Walla Walla to enjoy himself with the Shorthorns, now have about 75 head, of which quite a number are straight Scotch and some Scotch topped. These gentlemen expect to see beef prices yet come back to normal.

LEASES HOLSTEIN BULL.

A. F. Bernard of Alfalfa, Yakima county, Wash., is leasing Vonheim Aaggie Hartog, a 5-year-old Holstein bull, from the L. G. Stickney farm of Toppenish, for his 22 head of registered Holstein cows. The junior herd sire on the Bernard farm is Chinook Pontiac Segis, a 3-year-old, which came originally from the state college. There are some of the 5-year-old bull's daughters in the herd which makes it necessary to keep the second herd sire. Mr. Bernard is starting a new foundation family, made up largely of daughters of Vonheim Aaggie Hartog, and there are some that trace to the Bessie breeding, and are from a son of Jessie Fobes Bessie Homestead. The original stock came from the old Monroe herd at Spokane.

BUILDING UP PUREBRED HERD.

R. Trenckmann of Elma, has six purebred Jersey females and a registered bull with which he is building up a herd of purebreds to replace the grade animals already on the farm. His first purchase of registered animals was at the time E. L. Brewer of Satsop dispersed a large part of his herd and Mr. Trenckmann bought a heifer calf and a bull. Two purebred cows and a heifer were purchased at the Jersey sale at Elma, one of which has just freshened with a heifer calf. All of the animals in the Trenckmann herd promise to do their part in making this a real herd of registered Jerseys.

LIKES THE GUERNSEYS.

D. J. Barker of Snohomish has a herd of 28 grade Guernseys, which are headed by a registered bull, Governor of Lopez. He is a 4-year-old and comes from the Dr. H. A. Wright herd on Lopez island, San Juan county. Another bull, the junior herd bull, has produced 11 heifer calves out of 14. There are 34 head of animals on the farm and Mr. Barker feels that he has selected one of the best breeds for his section of the county.

Breeders' Dept.

LET THE LITTLE FELLOWS PAY OFF YOUR MORTGAGE.
Silver Fox Ranches Make Big Profits.
Finest Quality Imported Prince Edward Island Stock.



All Pedigreed and Registered. Fully Guaranteed.
Full Particulars free. Write today.
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River Banks Berkshires
Long, smooth, deep, grand champion kind. Strong in the blood of most popular families of nation.
RIVER BANKS FARMS, Grants Pass, Ore.
CLYDE E. NILES, MGR.

Choice Berkshires
Few choice boars and gilts for sale; sired by Festline's Rus, junior champion Portland show.
PEARL WOOD. Gervais, Ore.

Riverby Orchard Berkshires
Oldest established Berkshire herd in the northwest. Young pigs and bred sows for sale. Address
D. C. BUNN. Prosser, Wash.

ORCHARD HILL FARM
DISPERSAL SALE
Wednesday, November 22, 10 A. M., at the Farm, Redmond, Near Seattle, Washington
40---REGISTERED GUERNSEYS---40
Professional business takes my interest from the farm. Therefore, I must dispose of my complete herd immediately at whatever prices are offered.

THE FINEST Guernsey sale ever held in the northwest. You have a rare opportunity to buy beautiful high-producing Guernseys. No like opportunity has been offered for years, to get such high producing animals, QUALITY, PRODUCTION.



Buyers wishing terms can make arrangements by writing, or calling upon the owner in advance of sale. Write for catalog to ORCHARD HILL FARM, Redmond, Washington, or to DR. PARK WEED WILLIS, 1256 Empire building, Seattle, Washington.

UNITED STATES GOVERNMENT ACCREDITED HERD, which bred and raised Sammamish Topsy, the Guernsey holding the best record west of the Missouri river, 831.58 pounds butterfat in one year. On this occasion will be sold the progeny of this famous cow, one son, three daughters, fourteen granddaughters and one great-granddaughter.

HOW TO GET OUT THERE—Orchard Hill Farm is located one mile north of Redmond, near Seattle. Ferries leave at the foot of Madison street, Seattle, at 7:15 and 8:30 a. m. for Kirkland, and a stage will meet the Ferry going direct to the farm. Those coming by automobile can take the New Bothell highway out of Seattle to Bothell, Woodinville, past Hollywood Farm, and on through to Orchard Hill Farm on the paved highway.

It has also been arranged for stages to leave the Frye hotel, Third and Yesler, at 9 a. m., going direct to the farm.

ORCHARD HILL FARM, Redmond, Wash.
DR. PARK WEED WILLIS, Owner. 1256 Empire Bldg., Seattle.

MAPLE LEAF CHESTER WHITES
Breeding stock and weanling pigs of both sexes. Chief Justice 2d, Big Buster, Buster Giant and other best blood lines.
ED SCHOEL, Albany, Ore.

Royal Ranch Durocs
We have the best big type boars we ever raised. Sired by Royal Marker High Orion 2d and Orion Joe. We have one of best herd boar prospects sired by Royal Marker we ever raised. He is a line bred Pathfinder. We have breeding stock of all kinds for sale. Write us your needs in Durocs.
ROY SHUTWELL, Boise, Idaho.
ROUTE NO. 3. PHONE 77R3.

8 Big-Type Duroc Boars
Three sired by Royal Marker and out of High Orion 2d dam; five sired by a son of Joe Orion and out of a Great Orion Sensation dam. These are the pick of 52 head of extra choice pigs from our 1922 litters, every one a grand individual and good herd header. No better boars anywhere. Last spring's pigs weigh 260 each. Prices reasonable.
D. W. BLANKSMA, Rt. 1, Nampa, Idaho.

Bred Duroc Gilts and weaning pigs. Great Wonder and Sensation breeding. All eastern bred stock. Satisfaction guaranteed.
S. D. CORNELL, Grandview, Wash.

The Big Wonder Herd
of big type Poland Chinas, offers a few choice boars, ready for service; sired by such boars as the 1200-lb. Giant Buster and Saint Peter, a great son of Peter Pan. Satisfaction guaranteed on all orders.
E. O. LOE, Silverton, Ore.

Stillings' Poland Chinas
Young boars and weaned pigs at farmers' prices, from prize winning stuff. My pigs please everywhere.
H. J. STILLINGS, Hermiston, Ore.

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PUBLIC SALE OF REGISTERED HEREFORDS
November 15, 1922 **Buhl, Idaho**
I will sell at auction 30 registered cows and heifers, 5 yearling bulls. All fine young stock of the best of blood lines. All cows are bred to my herd sire, except yearlings sell open.
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Bonnie Lad ..... By Bonnie Brae 24
Director ..... by Disturber
Prince Barre 3d ..... Grandson of Generous
Herd Accredited. Write for Catalog.
WALTER BLANCHARD, Owner, Buhl, Idaho
Ranch 1½ miles N. E. Col. E. A. Walters, Auctioneer.

Oreglow Jerseys
Come see our cattle at the Pacific International, Nov. 4-11. We will exhibit 4 royally bred Golden Glow bull calves beside their dams.
OREGLOW FARM.
D. BROOKS HOGAN, Owner, Boring, Ore.

3 Young Jersey Cows $500
2 Golden Glow's Chief blood lines. All have good private records. Could give part time. A few young bulls of Golden Glow's Chief and Hood Farm breeding.
HOMER M. CARNES, North Powder, Ore.

Jersey-St. Mawes Bulls Registered bulls, rich in blood of St. Mawes Lad, from high testing dams. Priced for immediate sale. Shortley Bros. CHANNEL VIEW JERSEY FARM.
ORCAS, WASH.

Fourth Gold Medal Jersey Bull
now in use in my herd. No other herd ever had so many. Young stock for sale.
ED CARY, Carlton, Ore.

Maple Ridge Farm offers richly bred young bull ready for service; 3 nearest dams average 841 lbs. fat; dam is R. of M. daughter of St. Mawes Noble. Bargain. Terms
J. C. BROWN & SONS, Shedd, Ore.

Allendale Jersey Farm Fine bull calf, 1 month old, $25 if taken at once. Golden Glow's Chief breeding, a little broken in color.
A. A. BIXBY, Freewater, Ore.

Jerseys 797 lbs. of fat, the highest record 3-year-old tested in 1920 is dam of a high class young bull we have to offer.
J. J. VAN KLEEK & SONS, Box T.
BEAVERTON, ORE.

Northwood Herd of Milking Shorthorns
The general farmer's cattle are the kind that will produce milk and beef. Milking Shorthorns fill this requirement. We want to place out bull calves where they will improve the herd. We are pricing our calves within the farmer's means. Will give terms on satisfactory references. We solicit your inquiries.
NORTHWOOD FARMS.
Redmond, Washington.

Milking Shorthorns We are offering some choice bulls and heifers at bargain prices. Over 70 head in our herd, all registered.
HIGHWAY DAIRY.
LEWISTON OR LAPWAI, IDAHO.

Holstein Bargains
To make room for daughters of my herd sire, I offer at bargain prices from my federal accredited herd: One bred A. R. O. cow, two bred registered heifers, one bred high grade heifer. I also offer one typy bull almost ready for service and two baby bulls. Inquiries promptly answered.
OSCAR DUNLAP, Junction City, Ore.

Holstein Bulls sired by son of world record cow, from dams sired by brother to Segis Pietertje Prospect. Prices low.
H. E. BOOMER, Payette, Idaho.

When answering advertisements don't fail to mention this paper.

Read the "Want Ad" page this week for good offers of all kinds.

what method of feeding do you use—

trust-to-luck or trust-to-cluck





THE difference between a poor-paying flock and a profit-paying flock is the difference between take-chances and take-NO-chances. Indifferent, haphazard, "trust-to-luck" feeding will never pay. It can't! Nothing will rob you of your rightful profits as quickly as blind feeding. True, your hens may live and be fairly healthy on a poor ration. But—

You are in the poultry business to make money. The more eggs you get the more money you net. You must realize, then, that it takes an excessive amount of a hen's energy to convert poor feed into money as against converting good feed into money. So that—far from saving mo[illegible]—the only result of a "cheap" ration is a *higher cost* for each do[illegible]ggs produced.

A tasty, well-balanced ration is absolutely necessary for maximum production—that's sure! Equally sure is the fact that a uniform, quality-feed like SURELAY pays its way—and more! Its slight added cost comes back to you many times over in the extra eggs produced.

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NOVEMBER 16, 1922. Washington's Great Farm Magazine EVERY THURSDAY

THE WASHINGTON FARMER

ESTABLISHED 1894

SPOKANE. SEATTLE.



Potato Shows Are Becoming the Order of the Day—Page 3

Ptomaine Poisoning Like Lightning

Ptomaine poisoning is like lightning—one never knows where next it will strike, or who will be the victim. A news dispatch from Wenatchee, Wash., reports the death of three ranchers living in Tumwater canyon, on the Columbia river, 35 miles east of Okanogan, from eating contaminated canned beans.

Another news item from Helena, Mont., says that tests of samples of home-preserved corn show the presence of the botulism germ, which caused the death of a school teacher in Prairie county.

At the annual convention of food commissioners at Kansas City last week an address by Dr. Charles Thom of the United States bureau of chemistry dealt learnedly with the problem of protecting the public against impure foods.

Dr. Thom believes that botulinus organisms are distributed by rodents and other vermin which infest food-handling establishments. In addition, dirt, filth and all the accidents and contacts of handling, including both human and animal carriers, provide ample opportunity to pass contamination from product to product. The somewhat alarming conclusion is reached by this expert that the consumer of such a product, without knowledge of its history, has little or no protection from his senses. All investigations agree on that point.

On the other hand, it is encouraging to be assured that any cooking process in which the entire mass approximates the boiling point will destroy these deadly germs entirely. Canned food, if it keeps at all, must be cooked at a heat far higher than that necessary to kill the fatal germs. Infections of this kind are, therefore, unlikely from products direct from the can.

The danger, then, from food in cans comes largely from defective cans that allow the product to spoil after it leaves the cooking chamber of the cannery. The precaution should always be taken to examine the can before the contents are served at the table. A can in which active growth is found becomes a "springer" first, and then a "swell," with odor unnatural to the product. Dr. Thom advises dealers that no "swell," "springer," "dripper" or "leaker" should be accepted or sold by them. He further advises that a supply of botulism antitoxin should be maintained in centers accessible to every section of the country. Saving the sufferer, he says, is a problem that may be left to the medical profession. THE FARMER wonders to what extent the physicians of the Pacific northwest are alert to this danger and are taking precaution to keep a supply of antitoxin.

Dr. Thom clearly points to a very general failure to appreciate the danger of bacterially contaminated and of spoiled food. He advises that food to be eaten raw should be fresh, clean, sound—free from stale odors, from slimy, rotting, areas, from discolorations and from mold, and should be carefully washed in an abundance of clean drinking water. Sound food, freshly cooked, does not cause food poisoning.

Moist or soft cooked foods, if held more than a few hours, should be kept in a good refrigerator. If such refrigerator is impossible the food, even though showing no sign of spoilage, should be recooked before serving.

This eminent authority justly concludes that responsibility for preventing the consumption of spoiled food rests equally upon the packer, the dealer and the person who prepares it for the table. Every person, he declares, handling any kind of foods should be familiar with standards of quality, appearance, odor and texture of the product, whether handled in bulk or in sealed containers. We wonder how many persons who handle food in one way or another measure up to that qualification.

In the meantime, report has been made of an exhaustive investigation over a period of several years of the medical schools of Harvard and the University of California, and Stanford university, in cooperation with the United States public health service, says, using figures supplied by the California investigating authorities:

"During the year 1920 there were more than 97,000 deaths from tuberculosis in the United States, more than 3000 from dysentery, more than 1700 caused by accidental poisoning by products other than foods, nearly 5000 from drowning and more than 400 persons killed by lightning. When we compare these with the average annual death rate from botulism of less than 25, the position of botulism among the causes of death becomes insignificant.

"If we accept, for the sake of argument and without qualification, the statement that a total of 29 outbreaks of botulism have been caused in the United States by commercially canned foods (an average of less than three outbreaks per year) the number is still relatively small in comparison with the total pack. We should bear in mind that during recent years the annual total pack of canned foods of the United States has been not far from 4,000,000,000 cans. There has, therefore, been less than one outbreak of botulism ascribed to commercially canned foods for every billion cans that have been packed since botulism has been recognized as a disease that might be possibly caused by canned foods."

And yet, if that one fatal case happens to come to a member of your own family, there is not much comfort in the ninety and nine, or the nine hundred and ninety and nine that may escape. There is no gainsaying the fact that this is a subject of vital importance that well may engage the study of farm organizations at their conferences and social sessions. The best scientific advice can be freely had by writing to your state agricultural college or to the department of agriculture at Washington, D. C.

BRINGS LOW PRICES.

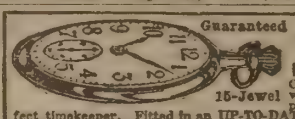
The Hereford sale during the Western Royal Stock show resulted in low prices and only part of the animals was sold. Most of the consignments were in fair sale condition and some of them were in high flesh and show condition. But the buyers were not there.

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THE WASHINGTON FARMER

SUCCESSOR TO

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For Good Farming, Attractive Country Homes and Happy Country People

Potato Shows Are Growing in Interest

The Four States of the Pacific Northwest Will Unite in Big Show and Conference in Spokane

Remarkable interest in the potato growing industry is seen all over the northwest and potato shows are a common occurrence. This week there is being held in connection with the Pacific Northwest Fruit exposition the Western Washington Potato show. There has just been held in Olympia the Thurston County Potato show. Sandpoint, Idaho, also has been the scene of the Sandpoint and Bonner County Third Annual Seed Potato show, the winning exhibits to be taken to the Idaho State Seed show, the Yakima Potato show and the Pacific Northwest Potato show. The last named show will be held November 21-24, inclusive. There will also be held in Spokane on the same dates the Pacific Northwest Potato Growers' conference. The potato show exhibits will be in the Chamber of Commerce assembly room and will be open to potato growers and exhibitors from 9 a. m. to 12 and from 1 p. m. to 10 p. m., the show will be open to the public, admission free.



The potato growers' conference will be held in the Davenport hotel, opening at 1:30 p. m. Tuesday, November 21, with an address of welcome by J. K. McCornack, chairman of the agricultural bureau of the Spokane Chamber of Commerce, the response by H. F. Schedler of Sandpoint. This will be followed by the annual address of the president, G. J. Cannon of Buckeye on "Relation of the Seed Potato Growers to the Growers of Commercial Stock." Dr. G. K. K. Link, bureau of plant industry department of agriculture, will discuss that most important topic of potato growers, "Mosaic and Leaf Roll; the Menace to the Potato." "What Can We do to Regulate the Potato Planting Industry?" is the subject of the address by C. W. Eckman. The closing address of the afternoon will be by Dean E. C. Johnson of the State college of Washington on "Educational Needs of the Potato Grower of the Northwest."

Wednesday afternoon, November 22, the conference will begin with an address by Dr. William Stuart of the bureau of plant industry, United States department of agriculture, on "Potato Growing From a National Standpoint." The next item on the program will be a report and discussion of the "Season's Experimental Work on Potatoes," by Professor G. R. Hyslop of the Oregon Agricultural college; Professor O. M. Morris of the State College of Washington; Professor C. C. Vincent of the University of Idaho and Professor F. M. Harrington of the Montana College of Agriculture. E. R. Bennett, horticultural specialist of the extension division of the University of Idaho, will talk on "Lessons From Field Observations During the Last Season." J. E. Currey, Washington state seed inspector, will discuss "Efficient Method of Growing Seed Potatoes." The closing address of the afternoon will be given by Professor George R. Hyslop of the Oregon Agricultural college on "Methods of Utilizing Cull Potatoes and Surplus Stock."

Thursday is Certified Seed Day, the program beginning at 2 o'clock in the afternoon with an address by H. N. Werner of the University of Nebraska on "Certification for Potatoes in the Plains States." Business committees will be appointed, including a committee to draft rules for commercial grades and standards of potatoes to be recommended to enforcement officials of the four northwestern states.

The annual dinner, with George J. Cannon as toastmaster, will take place Thursday evening, the chief address being made by Dr. W. J. Hindler, educational director of the Washington state retailing association, on "Marketing of the Northwestern Potato From the Retailer's Point of View."

Friday is "Commercial Grades and Standards Day," the program beginning at 1:30 in the afternoon. "Potato Grades and Their Enforcement" will be discussed by Charles A. Park, president of the Oregon state horticultural division; Charles L. Robinson, Washington state supervisor of horticulture; W. H. Wicks of the Idaho department of agriculture, and William L. Schovell of the Montana horticultural division. This will be followed by a report of the committee on commercial grades and standards. This report, after final adoption, will be submitted to authorities of Oregon, Washington, Idaho and Montana, with the recommendation that they be incorporated in their state rules and regulations.

Rates of fare and one-half have been adopted on the certificates from all parts of Washington, Oregon, Idaho and part of Montana west of Great Falls and Bozeman, to become effective when 150 receipts have been received.

The Pacific northwest is sending millions of dollars each year for seed potatoes, while this part of the country has the soil, altitude and climatic conditions necessary for the production of the best kinds of seed potatoes. The Northwest Potato show is for the purpose of encouraging the development of an industry that will keep these millions of dollars at home, make profitable the development of thousands of acres of land now idle or only partly productive and furnish to the potato growers of our large potato-growing districts a seed grown under conditions that will assure good results backed by a certification that will guarantee quality. Another important function of the show will be to assist in bringing together the buyer and the grower of seed potatoes for their mutual benefit.

W. P. Romans, general manager of the Pacific Northwest Potato show at Spokane, reports increased interest taken in the potato show this year, as compared with last year. Exhibits are coming in from Montana, Idaho, Washington and Oregon. Mr. Romans also reports that the growers are especially concerned over mosaic and leaf roll, as menacing the potato industry, and are anxious to learn of the most effective means of eradicating these potato diseases. There will also be a special interest taken in the subject as to how far it is practicable to regulate potato planting acreage.

A study of potato production in the United States during the last 40 years shows not only a growth in the amount produced, but in the per capita consumption as well. In the decades previous to 1905 there were produced in the United States three bushels of potatoes per capita. For the decade ended 1915 there was produced 3.7 bushels and in the years following 1915 to 1921, inclusive, the average production has been 3.5 bushels for each man, woman and child in the country. In later years people have found potatoes more desirable as a food and greater qualities have been consumed. There has also been an increase of yield per acre. From 1880 to 1900 the average yield was approximately 77 bushels per acre; for the last 20 years the average has been about 90 bushels.

In the '80s the biggest crop was in 1883, when about 210,000,000 bushels of potatoes were raised. This yield was not equalled again until 1891, when more than 250,000,000 bushels were produced. In 1895 the yield went up to nearly 300,000,000 bushels, and the average total production during the last few years has been around 350,000,000 bushels. There is, however, a great difference in the quantity of the potato crop from year to year. For example, in 1919 the production in the United States was 323,000,000 bushels. In 1920 it went up to 403,000,000 bushels, and in 1921 back to 347,000,000 bushels.

In 1920 Montana produced 4,400,000 bushels; in 1921 5,060,000 bushels. In 1920 Idaho produced 8,100,000 bushels; in 1921 10,545,000 bushels. In 1920 Washington produced 8,215,000 bushels; in 1921 7,425,000 bushels. Oregon's production in 1920 was 5,590,000 bushels and in 1921 3,870,000 bushels.

It is noticeable that the potato crop of the United States is produced and consumed practically entirely within the 12-months' period.

Graded Potatoes

"Practically all other farm products except the potato have been standardized, and many of them packed in special packages," says M. D. Armstrong, extension horticulturist of the state college. "If the potato were standardized much in the same manner as apples it would greatly increase the returns to the growers and cut down the tonnage shipped.

"In the first place, grading would overcome the surplus that is being experienced this year. It would bring more money to the grower for what he does sell. It would also save resorting at the wholesale houses.

"An increased consumption would be the result of a more attractive potato. An even sized, smooth tuber is always preferred by the housewife and more would be used.

"When potatoes are not graded the grower pays freight on the culls, which are thrown away. If all market potatoes were carefully graded and the culls left at home for the stock feed it would cut down the total tonnage from 10 to 20 per cent. This would eliminate part of the freight charges, and yet the total returns would be as great, if not greater than they are by the present system.

"In Idaho and Colorado the potato growers have come to realize that they must grade their product and they get from 20 to 40 cents more per 100 pounds from the eastern market than do the growers from some of the potato sections in the middle west. The dealers buy the potatoes on their reputation and when once a district has established a name for putting out a good product it is an easier matter to handle the succeeding crop.

"A careful study of the potato grades established by the United States department of agriculture will help any grower sorting over his crop for the market. Some growers are already using this standard with good results. There are times when two of the grades can be combined and sold as a combination No. 1 and No. 2, but it would not pay on a year like this when there is already a surplus. It is best under such conditions to market only the best grades and keep the rest at home.

"When possible it is a good plan to put out a fancy grade, which is one of the United States grades," concluded Mr. Armstrong. This, of course, is for special trade, and in most cases they want them selected carefully for size and shape. The returns from such a grade more than compensate for the extra trouble of putting it up. The small tubers that are sorted out can often be sold to restaurants for boiling, and in this way save feeding them to stock.

Thurston Has Potato Show

The Puget potato properly prepared is
Pleasing to the palate.
Such propaganda, properly promulgated,
Promotes permanent prosperity.

The above jingle painted on a canvas was the keynote of the Thurston County Potato show, held in one of the Olympia garages November 3 and 4. And it was properly promulgated, with special emphasis on quality. Some of the local potato growers and E. B. Stookey, the county agent, thought their motto complete, but another farmer, whose market had not been the best, added the following:

"Provided proper prices prevail."

The potato show was the result of an effort to get the farmers and merchants together in the marketing of the local crop. Good potatoes have demanded a better price at all the stores, but the home-grown potatoes very seldom came up to the standard of the ones shipped in from the potato-growing sections.

Careful grading and close adherence to the varieties are demanded by the average housewife, the long white tuber being given as the best solution to the problem of selling the home-grown tuber. The White Star was shown in greater numbers, while the Burbank and Pride of Multnomah were well represented. There were also a few Netted Gems and Beauty of Hebrons.

The exhibits, which were in 100-pound and 32-tuber classes of seed and market stock, were placed on long tables. Each group was labeled and after the judging was finished by M. D. Armstrong, the extension horticulturist of the state college, the name of the exhibitor and the placing were added.

There was splendid cooperation shown by the Olympia Chamber of Commerce and the merchants, who furnished the prizes for the classes. A Champion potato digger, offered by the chamber of commerce for the best 100 pounds of White Star, Burbank or Improved Pride of Multnomah, was won by Roy Taylor of Olympia, while his father, Guy Taylor, took second. Both had Burbanks. The other placings were Irving Lassen, third; Sam Madden, fourth; F. A. Johnson, fifth, and Walter Smith of Lacey, sixth.

In the seed potato classes Roy Taylor again won over his father on certified Burbanks. For White Star, F. A. Johnson stepped to first place and Roy and his father took second and third. With the uncertified Burbank seed Sam Madden won first, Roy Taylor second and Guy Taylor third. Guy Taylor won first and F. A. Smith second with Beauty of Hebron seed. Guy Taylor was the only entrant for the Pride of Multnomah.

In the table stock classes F. A. Johnson took first on White Star, while Guy and Roy Taylor won second and third. Guy Taylor won over Roy with the Burbanks. In the Pride of Multnomahs Guy Taylor won first, Walter Smith second and F. A. Smith third.

The sweepstakes prize was taken by F. A. Johnson, who showed White Star table stock. Roy Taylor took the sweepstakes on seed potatoes with his first prize Burbanks, thus winning the bushel of Burbank certified seed offered as the prize. In most cases the prizes were merchandise, while some of them were in the form of savings accounts given by the local banks.

A potato grader had been set up at one corner of the room. It was the type advocated by the state college and was built by Sam Madden of Olympia, at a cost of $1.75 for material. A sack of ordinary local-grown potatoes had been purchased from one of the stores and placed on the grader. Mr. Armstrong was asked to grade the tubers and he found that fully 35 per cent should have been placed in a lower grade.

The sack, of course, was not sold as No. 1, but it was what the housewife is forced to accept when she buys local potatoes. Mr. Stookey pointed out the fact that this was one reason why it was difficult for the Thurston county farmer to sell his potatoes. The growers in some of the potato-producing sections are more careful about what they send out and they are better able to get good prices.

In order to show the cooking qualities of the different varieties, Miss Ruth Kennedy, county home demonstration agent, prepared three of the main varieties and displayed them on plates. The time required for cooking each variety was indicated.

There was little difference in the time required for the Burbank, White Star and Netted Gem, since each took one hour to bake and from 28 to 36 minutes to boil. Steaming, however, took from 38 to 50 minutes. As a direct contrast to the long white type, the Gold Coin was cooked in the same three ways. This potato is the round white type and is not advocated for this section of the state. When baked it was found to be very mealy and it required but 45 minutes in the oven. Steaming took 35 minutes, while boiling required but 22. For the last two purposes, however, it proved to be inferior to the other three varieties, since it all cooked down to a mash. This feature discounted the variety as a potato for general use in the kitchen.

Potato Crop in Germany

In the three years before the war Germany was producing about 44,000,000 tons of potatoes a year, only 12 million of which were consumed as human food—less than one-third of the crop. The rest was used largely for the feeding of live stock and for industrial purposes. It was this enormous surplus of potato production that enabled Germany to go through the four years of war without actual starvation, and it has also enabled them to get on since the war, by greatly increasing potato consumption and reducing bread consumption.

The following table shows the pre-war and post-war utilization of potatoes in Germany:

	Pre-war Tons.	Post-war Tons.
Human food	12,000,000	18,000,000
Seed	5,200,000	5,000,000
Starch	1,400,000	150,000
Alcohol	2,500,000	100,000
Animal food	17,600,000	2,000,000
Spoiled	4,300,000	1,000,000
Total	43,000,000	26,250,000

The human consumption of potatoes

(Continued on page twenty.)

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Railway Excuses Will Not Satisfy the Northwestern Fruit Growers

Rufus Woods, editor of the Wenatchee World, and Benton Bangs, representing the fruit growers' committee of the Wenatchee Commercial club, made a spectacular appeal to Yakima to join Wenatchee in a systematic campaign to save the fruit growing industry from the destructive consequences of the break-down in the service of the transcontinental railroads. They traveled by airplane from Wenatchee to Yakima and put before the people of the Yakima valley a statement that has constructive merit.

Their first appeal is to public opinion, "which is the strongest argument in America today," "for a coordinated call on the interstate commerce commission to turn its attention toward an immediate diversion of cars to take care of the perishable crops."

They also ask "for immediate opening of the Spokane gateway and that a representative of the interstate commerce commission be stationed at Spokane to see that this diversion is properly complied with." The Wenatchee delegates then add in their statement:

"This program aims at quick and immediate relief, so far as it is physically possible to give it now, but, beyond that, it looks to a far-seeing, permanent preventive of a repetition of the present disaster."

The heads of the transcontinental railroads are making excuses, but their explanations are not convincing. It is clear that they have been drifting without systematic coordination, or even energetic and sagacious action by individual railway systems to supply the orchard industry with the necessary cars and locomotives to move the perishable fruit crops to market.

The Result of Reclamation

The people of the great manufacturing districts of the east and middle west appear slow to realize the value to them of the development of the arid and otherwise waste land of the west. They do not realize the increase that will result in their business when these lands are developed and made the homes of large numbers of prosperous people.

On this point some interesting figures have been prepared by the Western States Reclamation association. The figures apply to five projects in Washington and Idaho, namely, the Minidoka, Twin Falls south side, Twin Falls north side, Yakima and Nachez Valley projects. They show that during the year 1920 the railroads of the Union Pacific system alone shipped to these five projects a total of 18,975 carloads of manufactured goods and other merchandise from 38 of the 48 states of the Union. In addition to this, millions of dollars of merchandise in less than carload quantities were shipped to the same projects. The state of Massachusetts, little larger than some of these irrigation projects, and situated on the Atlantic coast, shipped eight full carloads of goods to the people of these formerly waste lands. New Jersey, also on the Atlantic coast, shipped 25; New York, 48; Pennsylvania, 26; Ohio, 97; Michigan, 213; Illinois, 283; and so on.

Such figures as these should convince the most skeptical easterner that he should be interested in the development of these western lands, and that he should support rather than oppose legislation in congress looking to that end.

Stupendous Changes Wrought

Death has called John H. Bartlett, who settled at Port Townsend, in this state, in 1852. Washington was then a part of Oregon territory, and Port Townsend and Olympia had high expectations of growing into the metropolis of the Puget sound region. Ezra Meeker, who with his brother rowed the full length of Puget sound in a skiff in 1852, then noted that Port Townsend, rising impressively on its heights, had an appearance of great activity. That was the period of the extraordinary growth of San Francisco, and Port Townsend harbor was dotted with sailing vessels loading lumber and shingles for the California market. Port Townsend was booming in 1853. Its boosters argued that they had the strategic position for the coming trade with the orient, but Olympia countered with the boast that it was the point where the ships would make the nearest approach to the products of the interior.

All eyes were then on Port Townsend and Olympia; Tacoma was not even a beginning. The only thing at Seattle was Yesler's sawmill, and the small population gathered around that pioneer activity had little to boast of and laid claim to no great expectation.

As for agricultural development, it was only in its beginning in the vast wilderness north of the Columbia river. The Willamette valley in Oregon, by 1852 and 1853, had become a region of considerable productiveness and was finding a profitable market for its products in San Francisco. But north of the Columbia settlement was only starting on the few open spaces or comparatively open prairies, on some of the islands and in the river valleys.

As for the vast region east of the Cascade mountains, it was still nearly as wild and untenanted by white men as when Lewis and Clark broke into it in 1805. A few stockmen had invaded the Walla Walla valley, but the Palouse country, the Big Bend region and the rich prairie parts of northern Idaho and eastern Oregon were grazing grounds for Indian ponies.

Eighteen hundred and fifty-two seems a long way into pioneer history. It was 70 years ago, but even so, Mr. Bartlett was a youth of 17, and in those days youths of 17 played a man's part in the pioneer communities. His was a life of extraordinary changes, not only in this region but in the Union and the whole world as well.

LOOKING INTO OTHER FARM FIELDS

Bananas valued at $19,088,000 were imported into the United States during the year 1920. Imports of bananas during the previous two years were valued at about $15,000,000.

* * *

In New York city unloads of Texas onions during April and May amounted to 832 cars, and in the same period the following equivalent carloads arrived from foreign countries: Egypt, 300; Bermuda, 72; Chile, 56; Australia, 20; Argentina, 16, and Mexico, 8.

* * *

The monthly report of the ninth federal reserve district, issued from Minneapolis, sees expansion in the northwest of the sheep raising industry, as this part of the country has been placed in the strongest strategic position by the new tariff on wool and sheep products.

* * *

The Southern Pacific company has placed an order with eastern steel plants for 75,000 gross tons of rails, valued at between $3,000,000 and $4,000,000, for delivery in 1923, it was announced at San Francisco by the company. Approximately 50,000 tons will be used on the Pacific system of the company, providing a total of 330 miles of rails in the west.

State Farm News

Dr. Paul W. Allen, Cortland, N. Y., has been appointed bacteriologist of the experiment station at Washington State college to succeed W. I. Nightengale, resigned. Dr. Allen received his early training at St. Lawrence university, Cornell university and the University of Illinois, receiving his doctor's degree from the latter institution. He was associate in dairy bacteriology at the University of Illinois and in the agricultural experiment station of that institution from 1914 to 1918, inclusive.

* * *

Dairymen of Clallam county held their second annual banquet in connection with the Clallam county fair. County Agent A. W. Holland and Extension Dairy Specialist F. W. Kehrli were speakers on the program.

* * *

J. W. Peterson, a beekeeper of the Edgewood district, in Pierce county, reports two colonies each of which produced 200 pounds of surplus honey. In addition he increased his 30 colonies to 60, some of which were made from natural swarming, while others by division, which was done before the honey flow was over. All hives are strong and a good strong queen is used in each.

* * *

Anticipating more or less of a car shortage to be an annual occurrence for many years, W. F. Gwin of the North American Fruit Exchange believes that more cold storage and more paved roads, as well as more transportation, is needed for the Wenatchee district.

* * *

Although the car shortage is being keenly felt in the fruit districts of the state, shippers have been taking advantage of every means of transportation. Many coal cars that have come in loaded have been reloaded with hay, grain, fruit or potatoes and covered with a large canvas before being shipped out. It is estimated that over 200 cars loaded in this manner have been sent from the Yakima valley in one week.

* * *

It is estimated that the sugar beet crop of the Yakima valley grown on 3200 acres this year will yield as large a tonnage as was harvested from 6000 acres last year. One farmer on the reservation, A. B. Bartlett, reports harvesting 294 tons from 15 acres, an average of 19 1-2 tons of beets to an acre.

* * *

The fruit packers of Yakima are confident that a new record in packing boxed apples has been made by Mrs. Minnie Markel. One day she packed 225 boxes of Rome Beauties and another day at the Yakima Orchards company plant at Moxee her total was 216 boxes. Mrs. Markel is reported to make daily packs of Winesaps of between 150 and 180 boxes, while the fastest man packer is credited with a daily average of 150 boxes.

* * *

W. H. Talley, the newly appointed secretary of the Washington Farm Bureau federation, will make his home in Yakima. He was formerly county agent in Walla Walla. Mr. Talley says that one of his first activities will be a drive for a greater farm bureau membership through the state.

* * *

Donald Urquhart has transferred to Mr. Lich at Colfax his holdings near Wilson Creek, comprising more than 6000 acres. Part of the land is irrigated from Crab creek and the ranch is considered one of the finest in the county for grazing. The reported consideration is in the neighborhood of $200,000. Mr. Urquhart settled on part of this land in 1886.

* * *

Bellingham may ship its first carload of head lettuce, sending the product to Montana. The lettuce was bought from growers at $1.75 per crate.

* * *

Seattle has had a short-lived milk "war" of about a week, the cut of 2 cents a quart being restored. Under the regular winter price delivery is to be made at the rate of 13 cents a quart and eight cents a pint, with a price at the retail stores 1 cent less in each instance.

* * *

Kittitas and Yakima counties, constituting horticultural district No. 5, will have 32 delegates to the state grade and pack convention at Spokane early in December, according to W. L. Close, Yakima county horticultural inspector. The representation is based on production, one apple delegate for each 750 carloads produced in 1921, and one for each 300 cars of potatoes.

Preliminary meetings will be held in each county this month to select delegates.

* * *

Squash farming has been unusually successful in Skagit county and squash canning is a feature of the packing industry there.

* * *

The best yield of wheat reported this year is that of R. H. Schroeder of Mount Vernon, whose production is given as 105.6 bushels per acre. This recalls the record yield of 117 bushels that was produced by the Comstock brothers of Coupeville, which is said to be a world's record.

* * *

The canning season for the Mount Angel Packing company has closed with a total of 32 cars disposed of and, although about 14 cars still are in the warehouse, most of the product has been sold. The packing and shipping probably will require several months and the management is planning on having things pretty well cleaned up by January 1. The plant is a growers' cooperative concern.

* * *

There were 274 predatory animals killed by federal hunters in the month of September. Of this number there were 4 stock-killing bears, 255 coyotes, 2 foxes and 1 wildcat. This report comes from Glenn R. Bach, predatory animal inspector.

* * *

The total production of cauliflower in California and New York this year is estimated at 6340 cars by the U. S. department of agriculture. Production last year was 5567 cars.

* * *

Sixty-three students of the agricultural department of the Yakima high school put on a remarkable fair in the Yakima Commercial club rooms. The apple display was particularly fine for its selection. There were 274 plate displays of fruit and 21 varieties of apples shown. The fruits were judged by W. L. Close, district horticultural inspector and the vegetables and grains by County Agent A. L. Lovett. Awards were made on corn, watermelons, pumpkins, squash, potatoes, beans, tomatoes, cucumbers, carrots, onions, popcorn, shelled and sheaf grains, alfalfa, timothy, red clover, sunflowers, wool, hops, eggs and canned exhibits.

FARM BUSINESS AND MARKETS OUTLOOK

Although it is universally recognized that agriculture has benefited least of any of the major industries from the business improvement which has occurred in recent months, yet farmers are much better off than they were.

A measure of the change that has taken place is furnished by a comparison of present prices with those prevailing at the corresponding time last year. The table below gives average prices of the leading farm commodities early in November this year, and on the same date in 1921, together with the percentage of change. Of the 22 commodities 17 are higher than last year and in most cases the gains are quite substantial. With but a few exceptions the advance is not at the expense of crop yields or quantity of production of live stock or live stock products. In the five instances in which prices are lower than last year, decidedly increased production was a factor.

Commodity.	Nov. 7, 1922.	Year ago.	Per cent increase.
Fat hogs, cwt.	$ 8.30	$ 7.55	10.0
Steers, cwt.	10.20	7.70	33.8
Lambs, cwt.	13.75	8.80	56.3
Sheep, cwt.	6.65	4.00	66.3
Wool, lb.	.57	.35	63.0
Butter, lb.	.485	.43	12.8
Cheese, lb.	.23	.20 1-4	17.3
Eggs, doz.	.425	.51	16.7 (a)
Hens, lb.	.18	.225	20.0 (a)
Wheat, bu.	1.185	1.015	16.8
Corn, bu.	.71	.47	51.1
Oats, bu.	.44	.35	25.7
Rye, bu.	.863	.77	12.0
Barley, bu.	.655	.495	32.3
Kaffir, cwt.	1.70	.91	86.8
Hay, ton	22.00	21.50	2.3
Flax, bu.	2.575	1.725	45.8
Cotton, lb.	2.63	.1875	40.3
Beans, cwt.	7.00	4.40	59.1
Potatoes, cwt.	.95	1.725	44.9 (a)
Onions, cwt.	1.65	3.75	56.0 (a)
Apples, bbl.	5.50	2.25	33.3 (a)

(Note: (a) decrease.)

This is not the only evidence in the case. Last year farmers were hard pressed for funds to carry on their activities and the war finance corporation was making extensive loans. These loans are now being repaid at the rate of $14,000,000 a month. Furthermore, in some sections, at least, most farmers are paying off their bank obligations in advance of the due date.

High taxes and interest have not eaten up all the increment, as farmers are buying more general merchandise than last year. Two of the leading mail order houses sell largely to farmers, hence it is significant that one reports an increase in its Ortober sales of 35.31 per hent over October, 1921, and the other a gain of 17.7 per cent in the same interval.

Slump in Cattle Checked.

Liquidation of short fed steers from the corn belt was checked at last, after values had declined from 50 cents to $2 below the October high spot and a small upturn was scored. The range supply also gave signs of running out, especially on southwestern markets. The dressed beef market has been congested by heavy slaughter in the last few weeks, but showed a prompt return to health as soon as the fast cure was applied, indicating that a broad demand for beef persists in spite of the competition from pork and poultry.

Car shortage has delayed the movement of westerns and the run promises to remain more heavy than usual during November. In the southwest, however, it is reported that a cleanup will be affected in another week. Some Canadian cattle are still coming into this country in spite of the tariff.

Prices on prime steers probably have reached the crest and from this time on the trend of values will be downward. Prices on intermediate grades will be influenced by the rate at which the large number now on feed are returned to market. Always there are many feeders without shelter, or enough feed or faith in the market to continue feeding well into the winter. Broad demand for beef may maintain values somewhere near the present level, but there is little prospect of fully recovering the recent loss.

The movement of stockers and feeders remains heavy and would be still greater if cars could be obtained for shipment from the central markets. Prices have declined in the last few days, especially on heavy feeders. Stock cows and heifers are unusually cheap in view of the level of cattle values, most of those going out from Chicago at from $3.50 to $4.75.

Hog Market Looking for Bottom.

Lighter receipts of hogs and greater willingness of packers to purchase when prices at Chicago approached the $8 level brought about a moderate upturn for a few days. A further addition of 25 per cent to the supply is probable in the next six weeks and further declines in values are to be expected. The increase will be offset in part by an increase in purchases for eastern shipment, which at the present time are only about 60 per cent of those at the corresponding period last year. All observations in the country indicate that the hogs are reaching market condition at a rapid rate and a heavy run during the late fall and early winter months is assured. At the present time $8 at Chicago seems to be the fighting level, but it will not be surprising to see numerous dips to $7.50 when the movement is at high tide.

Consumptive demand remains broad and the movement for export is heavy. The number of hogs slaughtered during October appeared to be about 13 per cent above the average.

Recovery in Lamb Market.

After the worst break in a number of months, due to heavy runs at Chicago, Buffalo, and a break in the eastern dressed lamb trade, growers shut off the supply and prices have recovered about half of the loss. This week receipts at 10 markets have dropped about 40 per cent and with feeders taking their full quota the number for slaughter is limited. Lamb feeders have been made cautious by the break in fat lambs and prices of thin lambs have not come back so rapidly. Range lambs arriving now are mostly in feeder condition.

Wool Market Continues Firm.

The wool market continues firm, with prices slowly working higher. The goods market is healthy and mills are about as active as they ever become. Only the limited supply of wool in the hands of dealers or growers prevents the consummation of larger sales. Foreign markets are strong and give evidence that prices are not yet at the top. Growers are primarily interested in the prospective value of the new clip and predictions of materially higher prices appear justified. Some of the fed lambs now returning to market have been shorn, as feeders are looking for higher wool prices.

Wheat Prices Maintained.

Wheat prices remain close to the highest figure of the season since the 1922 crop began to move in volume. Mills are the chief factor in the market and the scarcity of choice wheat was exemplified by the sale of Canadian wheat to a Chicago mill notwithstanding the 30-cent duty. Moderate sales for export are being reported every day, mostly Manitobas, but clearances of wheat alone from United States ports have been averaging over 3,000,000 bushels each week. Sterling exchange is fairly firm, but the weakness in francs and marks is hampering business with those countries.

Rains in the southwest have vastly improved prospects for winter wheat planted in that section, but the entire dry area was not relieved and reports continue to point to a decrease of approximately 10 per cent in the acreage.

The first official report on the coming Argentine crop shows an increase of 3,000,000 acres over last year and a crop of 216,820,000 bushels, compared with a final estimate of 181,000,000 bushels last year. The surplus for export according to the official estimate is 148,000,000 bushels. The increase in the Argentine crop over last year largely offsets the decrease in the Australian prospect, so that the total surplus from the southern hemisphere should be about the same as a year ago.

The wheat situation remains a merchandising affair, with prospects of higher prices later on if importing countries can finance the purchase of as much wheat as they need.

Corn and Oats.

The government's estimate upon the new crop and carryover were 110,000,000 bushels higher than the private reports. However, the former showed a total supply, including stocks at terminals of only 3,084,000,000 bushels, compared with 3,385,000,000 bushels last year and an actual disappearance of 3,197,000,000 bushels in the last 12 months.

Production of oats in 27 countries for which comparable data are available totaled 3,017,538,000 bushels in 1922, compared with 2,742,438,000 bushels last year, 3,269,712,000 bushels in 1920 and an average of 3,007,788,000 bushels in the five years, 1909-1913.

Cash grain markets—The range of cash grain prices for the week ended November 8 was as follows: Chicago—Wheat—No. 2 red, $1.22 3-4@1.25 1-4; No. 3, $1.18 1-2@1.22 1-2; No. 2 hard, $1.17@1.20 1-2 Corn—No 2 mixed, 69 1-4@72 1-4c; No. 3, 66 3-4@71 1-4c; No. 2 yellow, 69 1-2@72 1-2c; No. 3, 67 3-4@72c; No. 2 white, 70@72 1-4c; No. 3, 66@71 1-2c. Oats—No. 2 white, 43 1-4@45c; No. 3, 42 1-4@44 1-4c; No. 4, 41 1-2@43 1-4c. Barley—60@70c. Rye—84@86 3-4c.

Seed Market Gaining.

The seed market is gradually advancing, with timothy especially showing a sustained upward trend. Receipts are fairly heavy, but the demand is ample to absorb them. The tariff has practically shut off imports of European clover seed.

Chicago, per 100 pounds—Clover, $15.50@21; timothy, $6@6.75;. Toledo, per bushel—Prime clover, $13.40; prime timothy, $3@5.

Feed prices are firm, with the strength in coarse grains the most obvious sustaining influence.

Prices per ton (100-pound bags) in carlots: Chicago—Bran, $25.50; standard middlings, $26.50; flour middlings, $28; cottonseed meal, 36 per cent, $45.50; 43 per cent, $49.50; hominy feed, $29.50; gluten feed, $34.85; old process oil meal, $52.50; tankage, $65.

Hay Market Slightly Easing.

Receipts of hay have increased slightly and the market shows an easier tone as demand remains unlimited. Price changes were slight.

Prices per ton in car lots: Chicago—No. 1 timothy, $21@23; No. 2, $20@21; No. 3, $12@15; No. 1 light clover mixed, $20@21; No. 1 clover mixed, $17@19; No. 1 alfalfa, $25@27; upland prairie, $20@21; midland prairie, $13@15; rye straw, $12@13; oat and wheat straw, $9@12.

Fresh Eggs Extremely Scarce.

Fresh eggs are becoming more and more scarce on the leading markets and a further advance in values occurred last week. The period of greatest scarcity generally arrives from November 15 to December 15. Storage eggs, however, are still abundant.

Receipts of poultry are running above the average for this time of year, but the rate of consumption also is above the average and storage stocks of frozen poultry are accumulating very slowly. The increase in holdings at the four leading cities during October was only 16 per cent of that of last year.

Another Advance in Butter.

Butter prices advanced again last week as the supply on the leading markets declined and consumptive demand remained strong, although a part of the consuming public is turning to substitutes. Medium and undergrades and storage butter were helped by the advance on top scores.

Prices for 92 score fresh butter on November 8 were: Chicago, 48 1-2c; New York, 49 1-2c; Boston, 49c; Philadelphia, 50 1-2c.

Cheese markets were decidedly irregular last week. Chicago reported a very weak tone, with dealers overstocked and ready to sell at prices below the Wisconsin country market. Eastern markets, on the other hand, were firm and absorbing large quantities of cheese.

Prices for No. 1 American cheese on November 8 were: Chicago—Flats, 24 3-4c; twins, 23 1-2@24 1-2c; single daisies, 24@24 1-2c; double daisies, 24@24 1-2c; young Americas, 24 1-2@25c; longhorns, 24@24 1-2c; square prints, 25 1-2c.

Fruits and Vegetables.

Potato markets have been glutted during the last two or three weeks and extremely low prices have prevailed. During the next month, however, a decrease in shipments from producing sections of 50 per cent or more can be looked for confidently and values as a result should recover. Large quantities are being left undug and a period of cold weather would enhance values by destroying unharvested potatoes and causing heavy losses or shipments in transit, but few of which are now moving in refrigerator cars. Northern sacked round whites are quoted at 85 cents to $1.25 on midwestern consuming markets.

Shipments of apples likewise are due to decline in the next 30 days, but, owing to the limited movement of boxed apples, thus far, the heavy shipping season is apt to be strung out over a longer period than usual. Car shortage is partly responsible. Prices have held steady to slightly higher in the last week, with extra fancy large Jonathans quoted at $2 to $2.50 per box in the Chicago car lot market.

LATEST QUOTATION.

The Live Stock Market.

PORTLAND, Ore., Nov. 11.—Cattle—Choice steers, $7@7.50; medium to good steers, $6.25@7; fair to medium steers, $5.30@6.25; common to fair steers, $4@5.50; choice heifers, $5.50@6.25; choice cows and heifers, $4.50@5; medium to good cows and heifers, $3.50@4.50; common cows, $1.50@2; canners, $1.50@2; bulls, $3@4; choice feeders, $5@5.50; fair to good feeders, $4@5; choice dairy calves, $8@8.50; prime light calves, $8@8.50; medium light calves, $7.50@8; heavy calves, $5@5.50.

Hogs—Prime light, $9.25@9.75; smooth heavy, 230-300 pounds, $8@9; smooth heavy, 300 pounds up, $7.50@8; rough heavy, $6@7.50; fat pigs, $8.75@9.25; feeder pigs, $8.75@9; stags, subject to dockage, $4@6.

Sheep—East-of-mountain lambs, $10.50@11.50; choice valley lambs, $10.50@11.50; medium valley lambs, $9.50@10.50; common valley lambs, $8.50@9.50; cull lambs, $6.75@8.50; light yearlings, $8.50@9; heavy yearlings, $@8.50; light wethers, $7@8; heavy wethers, $6.50@7; ewes, $2@5.50.

SPOKANE, Nov. 11.—Cattle—Prime steers, $6.25@7; good to choice steers, $5@6; medium to good steers, $4.50@5; fair to medium steers, $4@4.50; common to fair steers, $3@4; choice cows and heifers, $5@5.50; good to choice cows and heifers, $4@5; medium to good cows and heifers, $3.50@4; fair to medium cows and heifers, $2.50@3.50; canners, $1.50@2.50; bulls, $2.75@4.50; light veal calves, $7@8.50; heavy veal calves, $6@7.50; stockers and feeders, $3.50@5.

Hogs—Prime mixed, $9@9.50; medium, $8.50@9; heavies, $6@8.50; fat pigs, $8.25@8.75; stockers and feeders, $7.75@8.75.

Sheep—Prime lambs, $9.25@10.50; fair to medium, $8@9.25; yearlings, $7@8; wethers, $6.50@7.50; mutton ewes, $3@6.50; stockers and feeders, $5@7.

The Grain Market.

PORTLAND, Ore., Nov. 10.—Wheat—Hard white, Bluestem, Bart, $1.37; soft white, western white, $1.22; northern spring, $1.20; hard winter, $1.17; northern red, $1.14.

Oats—Thirty-eight-pound naturals, November, December, $36.

Barley—Forty-four-pound minimum, November, December, $33.75; 40-pound minimum, November, $33.25; December, $33.

(Continued on page twenty.)

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Range of Live Stock Prices, Week Ending Nov. 8

CATTLE.	Chicago.	Spokane.	Portland.	N. S. Lake.
Choice, prime heavy steers (1100 lb. up)	11.60@13.50	.....	.....	.....
Good heavy steers	9.15@11.60	.....	.....	.....
Medium heavy steers	7.00@ 9.25	.....	.....	.....
Common heavy steers	5.50@ 7.25	.....	.....	.....
Choice, prime light steers (1100 lb. d'n)	11.50@13.35	.....	.....	.....
Good light steers	9 00@11.50	.....	.....	.....
Medium light steers	6.85@ 9.15	5.50@ 7.00	6.00@ 7.50	5.75@ 6.50
Common light steers	5.40@ 7.15	3.50@ 5.50	4.00@ 5.00	4.00@ 5.75
Common to choice butcher heifers	4.25@10.00	3.25@ 5.75	3.50@ 5.75	3.50@ 5.00
Common to choice butcher cows	3.30@ 8.00	2.50@ 5.00	3.00@ 4.75	2.75@ 4.25
Bologna and beef bulls	3.50@ 6.50	2.75@ 4.50	3.00@ 4.00	2.00@ 3.50
Canners and cutters, cows and heifers	2.50@ 3.30	1.50@ 2.50	1.50@ 2.50	1.50@ 2.75
Canner steers	3.00@ 3.75	2.00@ 3.00	2.50@ 3.25	2.25@ 3.00
Medium to choice light veals	7.75@10.50	7.00@ 8.50	7.50@ 8.50	7.50@ 8.25
Common to choice heavy veals	3.25@ 7.00	5.00@ 7.50	5.00@ 5.50	.....
Common to choice feeders (1000 lb. up)	5.00@ 7.75	.....	.....	.....
Com. to choice feeders (750-1000 lb.)	5.00@ 7.75	3.50@ 5.00	4.00@ 5.50	4.50@ 5.50
Common to choice stocker steers	4.25@ 7.90	.....	.....	.....
Com. to choice stocker cows, heifers	3.00@ 5.25	.....	.....	.....
HOGS.				
Top of market	8.75	10.00	10.25	8.25
Bulk of sales	7.90@ 8.70	9.25@10.00	9.25@10.15	7.75@ 8.25
Heavy (250 lb. up)	8.00@ 8.75	9.25@10.00	9.00@ 9.50	.....
Medium (200-250 lb.)	8.30@ 8.70	9.25@10.00	9.50@10.25	7.75@ 8.25
Light (150-200 lb.)	8.25@ 8.65	9.25@10.00	9.50@10.25	8.00@ 8.25
Light lights (130-150 lb.)	8.25@ 8.60	9.25@10.00	9.50@10.25	7.75@ 8.25
Smooth packing sows (250 lb. up)	7.30@ 7.90	8.00@ 8.75	8.00@ 8.50	6.50@ 7.25
Rough packing sows (200 lb. up)	6.85@ 7.60	7.00@ 8.25	7.00@ 8.00	6.00@ 6.75
Medium to choice pigs (130 lb. down)	8.35@ 8.75	8.75@ 9.50	9.50@10.00	.....
Stock pigs	.....	8.50@ 9.00	8.75@ 9.25	7.50@ 8.25
SHEEP AND LAMBS.				
Medium to prime lambs (84 lb. down)	12.50@14.35	9.00@10.50	9.50@11.25	11.00@11.75
Culls and common lambs	8.75@12.50	8.00@ 9.00	6.50@ 9.50	8.00@11.00
Medium to prime yearling wethers	9.25@12.75	7.00@ 8.00	7.50@ 8.50	6.00@ 7.50
Medium to prime wethers	6.50@ 9.50	6.50@ 7.50	5.50@ 7.50	4.50@ 5.50
Medium to choice ewes	4.50@ 7.75	3.00@ 6.50	3.50@ 5.00	3.50@ 4.50
Culls and common ewes	2.75@ 4.75	2.00@ 3.00	2.00@ 3.50	.....
Full-mouth to yearling breeding ewes	5.00@10.75	.....	.....	.....
Feeder lambs	12.00@13.90	5.00@ 7.90	.....	10.00@10.50

Washington Ranks High at Pacific International

The Best Livestock of the West Divide Honors in the Climax of the Winter Livestock Show Season

Well balanced, strong in every department and a great show from whatever angle it is viewed—this in a word expresses the correct view of the 12th annual Pacific International Live Stock show at Portland, November 4-11. It had everything to make it a great stock show, and it had so many great features as to make it hard to say just what deserves most commendation.

The Northwest Land Products show, in the industrial division, is a show alone that does what its name implies. The perfect fruit, splendid corn, potatoes, cereals and other products of the soil made up a show that well represents the productive capacity of the great northwest. Added to this the Northwest Dairy Products show, exploiting the many uses of milk; the exhibits of the Oregon Agricultural college, the Washington State college and the Idaho university, all strictly educational shows, on which one might well spend days taking in the lessons taught, and the exhibit of the United States dairy division, with its colored and illuminated charts showing farms properly managed and the effect of dairy farming, all made up a section of the show that meant much valuable information to those who studied them properly.

The night horse show, the great entertainment feature, was even better than a year ago and the seating capacity of the big pavilion was frequently taxed.

The poultry show was the mecca of many a visitor and did its part to hold the great interest manifest through the week.

The attendance, when this was written, promised to equal and possibly surpass the record of 101,000 made last season. All the foregoing features helped to awaken and hold the interest of the public; to overcome the handicaps inevitably met with and to give full right to still call the Pacific International "the greatest live stock show on earth."

It is one thing to get a lot of animals together and quite another to make a show of them—such a show as the public wants to see. The Pacific International building, covering 10 acres with one roof, is arranged for the purpose of display. It was the result of years of effort on the part of the management, and the 1922 exposition was the result of a full year's planning and hard work.

The dairy division was easily the outstanding feature of the show. Holsteins led in numbers, with Jerseys a good second, then Guernseys, next Ayrshires, and, for the first time, Brown Swiss. It is no exaggeration to say all breeds averaged just a little better in quality than ever before. The spectacular features of this division were the Jersey Islands barn, in imitation of unhewn stone, in which the world record cow of the breed, Lad's Iota, was housed with her stable mate, Rinda Lad's Lady, and the special quarters suggestive of Holland, in which the world record milch cow, Segis Pieterje Prospect, Holstein, was domiciled. A Dutch windmill, actually running, added to the picturesqueness of the setting. These two cows, with their unique surroundings, drew crowds at all hours of the day. While the Guernseys had not as elaborate a booth, they did have an inviting rest room, and at its end was the breed's world record 4-year-old, Edna of Mountain View, owned in Washington. The tent of the American Jersey Cattle club, in charge of the A. J. C. C. field man, Mr. Astroth, was an added attraction.

THE BEEF CATTLE SHOW.

With every beef breed except the Hereford showing an increase over last year in the number of cattle on exhibition in the big wing under the superintendency of E. J. Fjelsted, it was not difficult for this department to roll up almost a 20 per cent increase in total number exhibited, the actual count showing 558 head of all breeds, as compared with 469 in 1921. The absence of such outside Shorthorn herds as those of the Maxwell-Miller herd of Colorado, the Pacheco Cattle company and T. S. Glide, both of California, and the Hereford herd of A. B. Cook of Montana, made the competition less interesting and perhaps brought down to some extent the general tone of the show.

The Shorthorns.

No less a connoisseur than Frank Thompson, formerly editor of Shorthorn in America, declared that each year of the Shorthorn show at the Pacific International has shown improvement in quality, and he has been here every year for four years. Not only that, but the greater uniformity shown in the various classes indicates a little better established type, and it is entirely fair to say that the better entries are in the same class with the better ones at the Chicago International or any other of the foremost middle western shows.

Hercules breeding of the younger generation "showed its heels" to competition and carried off both of the major purples, though interest was lent to the awards by the winning of senior championships by George Bertrand of Castle Rock, Wash., a comparatively new breeder, and by Washington State college.

Judge: Captain T. E. Robson, London, Ontario, Canada.

Group of three bulls owned by exhibitor—1 and 3, Day & Rothrock, Spokane, Wash.; 2, A. D. Dunn, Wapato, Wash.; 4, George Bertrand, Castle Rock, Wash.; 5, G. W. DeLay, Hot Lake, Ore.; 6, State College of Washington; 7, W. A. Heater, Sublimity, Ore.; 8, A. Chalmers, Forest Grove, Ore.

Group of two bulls bred and owned by exhibitor—1, 2 and 4, Day & Rothrock; 3, Dunn; 5, Foothills Farm, Carlton, Ore.; 6, Bertrand; 7, Heater; 8, DeLay; 9, Chalmers.

Bulls: Aged bull—1, Bertrand on Max Hill Criterion (senior champion); 2, DeLay on Village Reserve; 3, Heater & Brown, Sublimity, Ore., on Gainford Modus; 4, A. H. Tarbell, Warren, Ore., on White Cup; 5, Chalmers on Superb Lad 3d; 6, J. W. Fox, Cedonia, Wash., on Captain. Two-year-old—1, Dunn on Matchless King; 2, DeLay on Hercules Cornerstone; 3, Foothills Farm on Clover Meadow Victor. Senior yearling—1, T. J. Dannen, Shedd, Ore., on White Cup 2d; 2, State College of Washington on Hercules Rex. Junior yearling—1, Day & Rothrock on Hercules Conqueror (junior and grand champion); 2, Dunn on White Clipper; 3, Bertrand on Criterion 2d; 4, John Matheson, Zillah, Wash., on White Forest; 5 and 6, DeLay on Linden Laddie and Village Baron; 7, Chalmers on Seaforth King 2d. Senior calf—1, 2, 3 and 4, Day & Rothrock on Hercules Ideal, Hercules Radiance, Hercules Marshall and Hercules Bandmaster; 5 and 7, Foothills Farm on Cloverland Choice and Craigielea Guard; 6, Bertrand on Criterion 3d; 8, State College of Washington on Village Cup; 9, Dunn on Dunbro Lad; 10, DeLay on Missie's Villager; 11, Heater on Gainford Silvertip. Junior calf—1 and 3, Day & Rothrock on Hercules Brilliant and Hercules Marquis; 2, State College of Washington on Doune Sultan; 4, Bertrand on Criterion 5th; 5 and 7, Heater on Little Gainford and Gainford Nugget; 6, Matheson on Marcellas; 8, DeLay on Royal Villager.

Females: Aged cow with calf at side—1, State College of Washington on Orange Blossom Lady (senior champion); 2, R. H. Parsons, Hilts, Cal.; 3 and 4, DeLay on Dunbro Maid and Scottish Jane 3d; 5, Chalmers on Rose Queen. Aged cow—1 and 2, DeLay on Ruberta's Missie and Scottish Jane 4th; 3, Dunn on Queen of Dunbro; 4, Fox on Cedonia Bell. Two-year-olds—1, Dunn on Supremacy 2d; 2, Heater on Memory's Roan Lady. Senior yearling—1 and 2, Day & Rothrock on Hercules Matchless 3d (junior and grand champion) and Perfection Lady; 3, DeLay on Village Missie; 4, Heater on Memory's Snowdrift; 5, Bertrand on Red Velveteen Cow; 6, Chalmers on Straphstay Rose. Junior yearling—1, 2 and 3, Day & Rothrock on Hercules Victoria 4th, Hercules Topsy 5th and Hercules Jasmine 2d; 4 and 7, Foothills farm on Scotch Heather 6th and Red Rose B.; 5, Bertrand on Erma Criterion; 6, Heater on Thistle Bloom 2d; 8 and 9, Dunn on Bonnie Girl and My Lassie; 10, DeLay on Village Maid. Senior calf—1 and 5, Foothills farm on Craigielea Coral and Craigielea Lovely; 2, 3 and 4, Day & Rothrock on Hercules Sylvia 3d, Hercules Missie 5th and Hercules Violet 6th; 6, Dunn on Cup's Princess; 7 and 8, Bertrand on Bessie Criterion and Cup's King's Pride; 9, Heater on Memory's Roan Beauty; 10, Delay on Village Duchess D. Junior calf—1, Parsons on Dale's Marigold; 2, DeLay on Gainford Beauty; 3, Chalmers on Superb Rose 2d.

Graded Herd—1, Dunn; 2, DeLay. Yearling herd—1, Day & Rothrock; 2, Dunn; 3 and 5, DeLay; 4, Bertrand; 6, Chalmers. Calf herd—1 and 2, Day & Rothrock; 3, Foothills farm; 4, Dunn; 5, Bertrand; 6 and 8, DeLay; 7, Chalmers. Get of sire—1 and 2, Day & Rothrock; 3, Foothills farm; 4, Dunn; 5, Bertrand; 6 and 8, DeLay; 7, Heater; 9, Chalmers.

The Herefords.

Though Herefords showed some falling off in number from last year, the difference was not large (29 head), and the general condition of the white-faces exhibited quite made up for it. Standards of type were well maintained, not only by the regular exhibitors, whose presence contributes so much to the success of the show, but also by newer ones, chief among whom was the Methow Valley Live Stock company, which brought 18 head of well-fitted animals. All three of the female championship honors were well won by Herbert Chandler of Baker, Ore., and Henry Thiessen, another veteran at the game, took senior and grand champion honors on bulls. The University of Idaho broke into the purple ring with a junior champion bull. There were 150 head of Herefords in the show.

Judge: James L. C. Painter, Reggen, Col.

Group of three bulls owned by exhibitor—1, Henry Thiessen, Sweetwater, Idaho; 2 and 4, Methow Valley Live Stock Co., Winthrop, Wash.; 3, Baldwin Sheep Co., Madras, Ore.; 5 and 7, Herbert Chandler, Baker, Ore.; 6, A. H. Barnum, Moro, Ore.; 8, Herman Nordby, Lewiston, Idaho; 9, W. G. Haworth & Son, Monroe, Ore.; 10, Platt Bros., Genesee, Idaho.

Group of two bulls bred and owned by exhibitor—1, Thiessen; 2, 3 and 8, Methow Valley Live Stock Co.; 4, 6 and 7, Chandler; 5, Baldwin Sheep Co.; 9, Barnum; 10, Weatherford Bros., Dayton, Wash.

Bulls: Aged bull—1, Baldwin Sheep Co. on Chesney Lad 70th; 2, Chandler on Bonnie Prince; 3, Barnum on Beau Carlos; 4, Nordby on Blanchard; 5, Haworth & Son on Happy Fairfax. Two-year-olds—1, Thiessen on Rupert's Model 14th (senior and grand champion); 2, Methow Valley Live Stock Co., on Chewuch Panama 14th; 3, Baldwin Sheep Co., on Oregon 3d; 4, Herbert Chandler on Debonair 119th. Senior yearling—1, Methow Valley Live Stock Co. on Beau Stewart; 2, Weatherford Bros. on Don Blanchard 3d. Junior yearling—1 and 6, Weatherford Bros. on Majestic Fairfax and Don Blanchard 12th; 2 and 3, Thiessen on Disturber Carlos and Lord Carlos; 4 and 8, Barnum of Young Beau Carlos and Carlos Donald; 5 and 9, Chandler on Prince Debonair and Rupert Debonair; 7, Methow Valley Live Stock Co., on Commander Junior; 10, Richard Hanna, Pullman, Wash., on Bonnie Rex. Senior calf—1 and 4, Chandler on Prince Donald and Prince Claude; 2 and 6, Thiessen on Bonnie Master and King Rex; 3 and 9, Nordby on Dan Rupert 7th and Dan Rupert 5th; 5 and 8, Methow Valley Live Stock Co. on Prince Perfect and Prince Chewuch 2d; 10, Platt Bros. on Beau Type 14th. Junior calf—1, University of Idaho on Militant Lad (junior champion); 2 and 9, Chandler on Bonnie Prince 4th and Peaceful Prince; 3 and 5, Methow Valley Live Stock Co., on Beau Sunshine and Sir Radio; 4, Weatherford Bros. on Don Blanchard 20th; 6 and 8, Thiessen on Ideal Bonnie and Bonnie Brummel 2d; 7, Barnum on Deacon Carlos 2d; 10, Haworth & Son on Waveland Fairfax.

Females: Aged cow—1 and 2, Chandler on Catherine 10th (senior and grand champion) and Semolina 2d; 3, Methow Valley Live Stock Co. on Jeanette 2d; 4 and 7, Baldwin Sheep Co. on Gold Dust and Ruth; 5, Thiessen on Miss Rupert 3d; 6, Weatherford Bros. on Ruby Lass; 8 and 9, Barnum on Ora May and Lone Beauty 3d. Two-year-olds—1, Methow Valley Live Stock Co. on Florence Debonair; 2, Thiessen on Cherry Blossom 3d; 3 and 4, Chandler on Mary Debonair and Salome Generous; 5, Platt Bros. Senior yearling—1 and 3, Chandler on Semolina 3d (junior champion) and Princess Debonair; 2, Thiessen on Bonnie May; 4, Platt Bros. on Lady Type 11th. Junior yearling—1, Thiessen on Bonnie Jane; 2 and 5, Methow Valley Live Stock Co. on Blossom's Joy and Princess Lily; 3, Baldwin Sheep Co. on King's Pomona; 4 and 7, Chandler on Princess Donald 2d and Princess Donald; 6, 8 and 9, Barnum on Rcena Princess, Miss Bonnie Lad and May Carlos; 10, Nordby on Miss Perfect Rose. Senior calf—1, 4 and 5, University of Idaho on Donna Perfect 3d, Princess Donna and Tantelle Lass; 2 and 3, Weatherford Bros. on Betty Blanchard 20th and Betty Blanchard 21st; 3 and 7, Methow Valley Live Stock Co. on Lady Annabel and Miss Frances; 6, Thiessen on Miss Rosebud; 9, Nordby on Evalina Rupert 2d; 10, Chandler on Ethel Rupert. Junior calf—1, Chandler on Bonnie New Year; 2 and 7, Methow Valley Live Stock Co. on Wild Cherry and Wild Rose; 3, Baldwin Sheep Co. on Severn's Emma; 4, Weatherford Bros. on Betty Blanchard 23d; 5 and 6, Barnum on Lone Beauty 8th and Roena Princess 2d; 8, Platt Bros.

Graded herd—1 and 4, Chandler; 2, Thiessen; 3, Methow Valley Live Stock Co. Calf herd—1, University of Idaho; 2 and 7, Methow Valley Live Stock Co.; 3, Thiessen; 4, Chandler; 5, Nordby; 6, Weatherford Bros. Get of sire—1, University of Idaho; 2, Thiessen; 3 and 8, Methow Valley Live Stock Co.; 4 and 5, Chandler; 6, Nordby; 7, Barnum.

The Aberdeen-Angus.

With the advent of a third herd, that of L. A. Wells of Trout Creek, Mont., in competition with the herds of Congdon & Battles of Yakima, Wash., a circuit standby,

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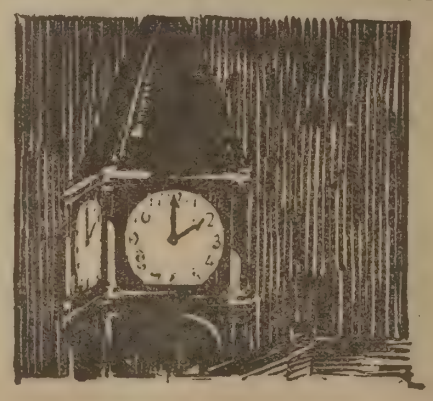
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and of J. A. Scollard of Chehalis, Wash., the "doddies" registered an almost 50 per cent increase in numbers over their show of 1921. The mere presence of the Yakima herd is a guarantee of quality in any Aberdeen-Angus show, and the judge in these classes took particular occasion to commend the exceptional type and smoothness which he found in them. Better animals, he said, he had never seen anywhere, his admiration being reflected in the awarding of 12 out of 14 blue ribbons on individuals, all four on groups, and all six championships, to their owners. There were 65 head in the Aberdeen show.

Judge: T. Milton Tudor, Iowa City, Iowa.

Group of three bulls owned by exhibitor—1, Congdon & Battles, Yakima, Wash.; 2, J. A. Scollard, Chehalis, Wash.; 3, L. A. Wells, Trout Creek, Mont.

Group of two bulls bred and owned by exhibitor—1, Congdon & Battles; 2, Scollard; 3, Wells.

Bulls: Aged bull—1 and 2, Congdon & Battles, on Prizemere 9th (senior and grand champion) and Prizemere 10th. Two-year-olds—1, Scollard, on Ericman C. B. 5th; 2, Wells, on Quiet Lad of Dundee. Senior yearling—1, Congdon & Battles, on Prideman C. B. 14th. Junior yearling—1 and 3, Congdon & Battles, on Blackbirdman of Rosemere and Queenmere 15th; 2, Scollard, on Blackmead 2d; 4 and 5, Wells, on Chester L. A. and Prince L. A. Senior calf—1, 2 and 3, Congdon & Battles, on Blackmere 16th (junior champion), Blackcapper of Rosemere 3d and Ericman C. B. 8th; 4, Wells, on Horatio L. A. Junior calf—1, Scollard, on Gloriamead; 2 and 4, Congdon & Battles, on Eileenmere 7th and Queenmere 18th; 3, Wells, on Ruben L. A.

Females: Aged cow—1, Congdon & Battles, on Ridgelawn Barbara 2d; 2 and 4, Wells, on Queen on Granite and Necomas; 3, Scollard, on Kannia K. 4th. Two-year-olds—1 and 3, Congdon & Battles, on Pride of Rosemere 37th (senior champion) and Queen of Rosemere 13th; 2, Scollard, on Rose of Rosemere 8th; 4, Wells, on Doris of Dundee. Senior yearling—1, Congdon & Battles, on Erica C. B. 4th; 2, Scollard, on Blackcap of Broadmead; 3, Wells, on Queen of Dundee. Junior yearling—1, 2 and 3, Congdon & Battles, on Barbara of Rosemere 33d (junior and grand champion), Irene C. B. 4th and Queen of Rosemere 15th; 4, Scollard, on Erica of Broadmead; 5, Wells, on Fair Beauty L. A. Senior calf—1 and 2, Congdon & Battles, on Barbara C. B. 2d and Erica C. B. 6th; 3, Scollard, on Blackcap of Broadmead 2d; 4, Wells, on Estelle L. A. Junior calf—1, Congdon & Battles, on Queen of Rosemere 16th; 2, Scollard, on Erica 4th of Broadmead; 3 and 4, Wells, on Midnight L. A. and Bula L. A.

Graded herd—1, Congdon & Battles; 2, Scollard; 3, Wells. Yearling herd—1 and 2, Congdon & Battles; 3, Scollard; 4, Wells. Calf herd, bred by exhibitor—1, Congdon & Battles; 2, Scollard; 3, Wells. Get of sire—1 and 2, Congdon & Battles; 3, Scollard; 4, Wells.

THE DUAL PURPOSE CATTLE.

The Milking Shorthorns.

There was a decided increase in the number of milking Shorthorns exhibited, this breed ranking next to Aberdeen-Angus in percentage gain, and two of the greatest bulls of the breed were shown in the aged bull class by Santa Rosa Stock farm of Santa Rosa, Cal., and Northwood farms of Redmond, Wash. More bulls of that type would mean much to the success of this popular farmer's breed. The Harrison entry won the grand championship, while Foothills farm of Carlton, Ore., took the junior honors on males. The latter took senior and grand champion female, in competition far from being as keen as that on bulls, and a California exhibitor won the minor purple. There were 96 head exhibited, giving the breed third rank in number shown.

Judge: W. J. Hardy, Willoughby, Ohio.

Bulls: Aged bull—1, Thos. Harrison, Santa Rosa, Cal., on Count Tickford (senior and grand champion); 2, Northwood Farms, Redmond, Wash., on Gretna Challenger. Two-year-olds—1, Northwood Farms, on Northwood Defender; 2, Foothills Farm, Carlton, Ore., on Foothills Milkman; 3, Alexander & Kellgg (J. D. Rowe & Sons, lessees), Davis, Cal., on Innisfail Perfector; 4, E. C. Truesdell, Centralia, Wash., on Fancy Jeweler. Yearlings—1 and 4, Northwood Farm, on Northwood Pride and Northwood Viscount; 2, Foothills Farm on Foothills Bagpipe; 3, Harrison on Count Marshall; 5, Truesdell on Walgrove Protector. Under 1 year—1 and 5, Foothills Farm on Foothills Milkman 2d (junior champion) and Foothills Prior; 2, 4 and 6, Harrison, on Count Idaho, Count Royston and Count Madrigal; 3 and 7, Alexander & Kellogg on Galvina and Innisfail Lad; 8, Truesdell on Roan Jeweler 2d.

Females: Five years or over—1, 3, 7 and 10, Foothills Farm on Glemide Daphne (senior and grand champion), Glemide Rose, Rose Darlington and Glemide Elora; 2 and 4, Alexander & Kellogg on Bellevue Daisy and Alma; 5, Northwood Farms on Billing White Ruth; 6, Harrison on Bessborough Curlew 2d; 8, Truesdell on Fancy Question; 9, A. Chalmers, Forest Grove, Ore., on Mary of Scots. Three years and under five (in milk)—1 and 3, Alexander & Kellogg on Gypsy Girl and Beggar Maid's Beauty 2d; 2 and 4, Northwood Farms on Molly and Lady Susie 3d; 5 and 6, Foothills Farms on Foothills Gentian and Foothills Vanity. Two-year-olds—1, 6 and 8, Foothills Farms on Foothills Kismet 4th, Foothills Kismet 9th, and Foothills Purity; 2, Northwood Farms on Vera's Snowdrop; 3 and 4, Harrison on Lovely Perfection and Roan Bess; 5 and 9, Truesdell on Roan Jewel and White Jewel; 7, Alexander & Kellogg on Countess Innisfail. Senior yearling—1, Alexander & Kellogg on Innisfail Betty (junior champion); 2, Foothills Farm on Foothills Kismet 11th; 3, Harrison on Santa Rosa Naomi; 4, Northwood Farms on Moss Rose of Oaklawn. Junior yearling—1 and 6, Harrison on Countess Lavendar and Santa Rosa Rosebud; 2, Foothills Farm on Foothills Kismet 13th; 3, 7 and 8, Alexander & Kellogg on Madge Wildfire 2d, Innisfail Evelyne and Countess Fern; 4, Truesdell on Ora Jewel; 5, Northwood Farms on Northwood Rose. Senior calf—1 and 9, Harrison on Countess Clementine and Countess Rose; 2, 6 and 7, Northwood Farms on Northwood Winnie 2d, Northwood Jessie and Northwood Susan 2d; 3 and 8, Truesdell on Anna Jewel and Petite Jewel; 4 and 5, Alexander & Kellogg on Flower Girl 5th and Innisfail Maid 2d. Junior calf—1 and 3, Foothills Farm on Foothills Kismet 15th and Foothills Kismet 17th; 2 and 4, Harrison on Countess Utility and Countess Yolo; 5, Truesdell on Missie Jewel.

Graded herd—1, Harrison; 2, Alexander & Kellogg; 3, Northwood Farms; 4, Truesdell. Yearling herd—1, Foothills Farm; 2, Harrison. Calf herd—1, Harrison; 2, Alexander & Kellogg; 3, Truesdell. Get of sire—1 and 3, Foothills Farm; 2 and 4, Harrison; 5, Alexander & Kellogg; 6 and 7, Truesdell.

The Red Polled.

F. H. Porter of Halsey, Ore., practically swept the boards of awards in the Red Polled classes, taking most of the blues and all of the championships. His only competition was furnished by C. F. Sargent of Scio, Ore.

Judge: W. J. Hardy, Willoughby, Ohio.

Bulls: Aged bull—1, F. H. Porter, Halsey, Ore., on Peach Knott (senior and grand champion). Two-year-old—1, C. F. Sargent, Scio, Ore., on Senator. Junior yearling—1, Porter on Treston 6th. Senior calf—1 and 2, Porter on Salem (junior champion) and Hanon. Junior calf—1, Porter on Treston 7th; 2, Sargent on Noble Boy.

Females: Aged cow—1 and 2, Porter on Pansy (senior and grand champion) and Violet. Two-year-olds—1 and 2, Porter on Rhoda and Pansy 7th. Senior yearling—1, Sargent on Polly; 2, Porter on Peona 3d. Junior yearling—1 and 2, Porter on Jennie and Senna; 3, Sargent on Queene. Senior calf—1 and 3, Porter on Pascola (junior champion) and Neva; 2, Sargent on Lily. Junior calf—1 and 3, Sargent on Sadie and Marie; 2, Porter on Friette.

Graded herd—1, Porter. Young herd—1, Porter; 2, Sargent. Calf herd—1, Porter; 2, Sargent. Get of sire—1 and 3, Porter; 2, Sargent. Produce of cow—1 and 3, Porter; 2, Sargent.

THE DAIRY SHOW.

Nothing but superlatives can be used in describing the great dairy show that filled to overflowing the east wing of the show pavilion. Superintendent G. C. Finley, who had more than 800 head of valuable animals to look after, stated that there were 127 more entries than at any dairy show previously held in this country, and that there were acutally 100 more animals in the ring than at this year's National. Feature exhibits like the world champion Holstein, Segis Pietertje Prospect, and the world champion Jersey, Lad's Iota, attracted the attention of thousands, and the judging was followed with even more enthusiasm than usual by ringside fans. Holsteins led in the number on exhibition and Jerseys were second. Both showed an increase over last year. There were a few more Guernseys also, while Ayrshires showed a slight falling off. Brown Swiss were admitted for the first time, but brought 45 head.

Holsteins.

"Superb production and superb conformation—a very splendid show," was the way the Holstein judge described the

(Continued on the following page.)

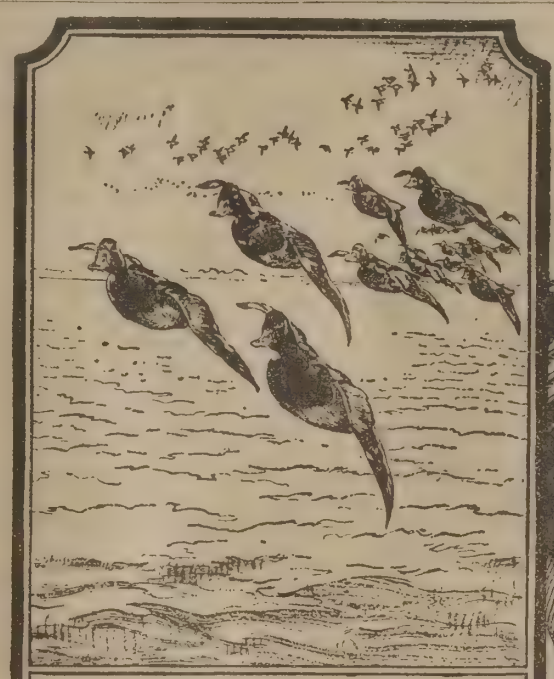
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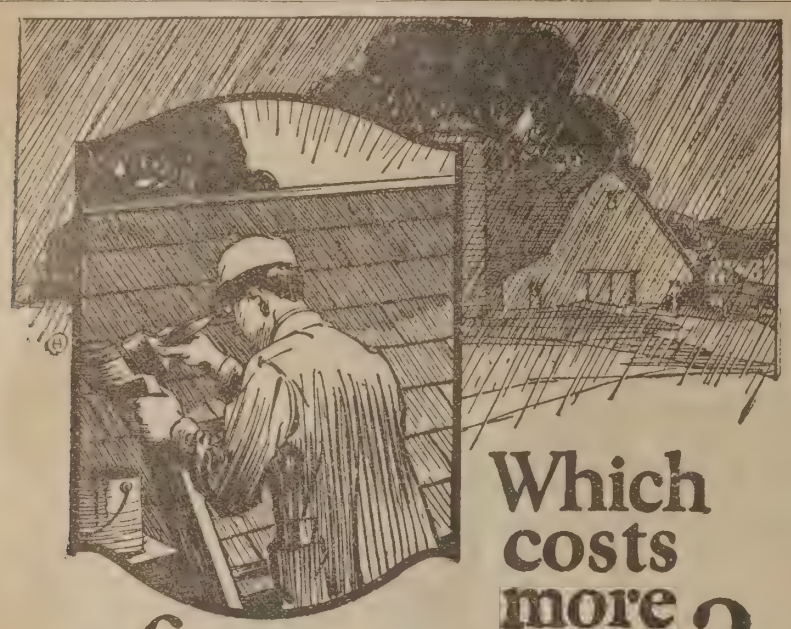
exhibition, the female classes of which were considerably better than the male, but the tops of which, more than one eastern visitor declared, would place well anywhere. The management was disappointed that the eastern and California herds which were entered did not arrive, but there were entries from all parts of Washington, Idaho and Oregon, almost 300 head all told, and owned by 47 exhibitors. Bull classes were small and some of them inferior, but there was a wealth of high quality females, and the aged cow class of 22 animals, headed by a Carnation cow that is in the midst of a test on which she is expected to make 30,000 pounds of milk, was easily comparable to the corresponding class at the National. The first two groups in the get of sire class was declared by F. T. Price, manager of the Holstein-Friesian World of Syracuse, N. Y., to be the best that he has seen this season, and he has seen four state fairs, the dairy cattle congress and the National Dairy show. The major honors went to Carnation Stock farm of Seattle, and E. A. Stuart, owner of the farm, won the silver set offered for the first time this year by the eastern breeders who visited the show in 1921 for the best produce of dam. The coveted Segis Matador Walker trophy, for the best get of sire, was won for the second time by John L. Smith of Spokane, who thus has two "legs" on the huge cup and must win it only once more to keep it permanently.

Judge: W. S. Moscrip, Lake Elmo, Minn.

Bulls: Four years or over—1 and 7, Carnation Stock Farms, Seattle, Wash., on Matador Segis Walker 6th (senior and grand champion) and Segis Matador Prospect; 2, University of Idaho, on King Segis Violet Posch Idaho; 3, John L. Smith, Spokane, Wash., on Segis Pietertje Clothilde; 4, William Bishop, Chimacum, Wash., on Skagit Korndyke Pietertje; 5, F. R. Beals, Tillamook, Ore., on Glenco Perfection; 6, David McKeown, Gresham, Ore., on Steve Lady Matador; 8, J. P. Vandecoevering & A. J. Evers, Forest Grove, Ore., on Matador Segis Walker Lad. Three-year-olds—1, Klein Bros., Silverton, Ore., on Matador Segis Walker Gerben; 2, University of Idaho, on Matador Violet Idaho; 3, Oregon Agricultural College, on Oregon Pontiac Jerome. Two-year-olds—1, Hugh Nisbet, Chimacum, Wash., on Segis Pontiac Beets; 2, Max Arp, Eugene, Ore., on Aaggie Colantha Gerben; 3, Charles Kohlstrand, Warren, Ore., on King Clorinda Segis; 4, Western State Hospital, Steilacoom, Wash., on Sir Pietertje Ormsby Blossom. Senior yearling—2, L. F. Krassin & Son, Snohomish, Wash., on Wild West Segis DeKol Mead; 3, Arp, on King Bonheur Alcartra Pontiac; 4, W. A. Elmer, Trout Lake, Wash., on Glenwood Mead Cornucopia Lad. Junior yearling—1, Smith, on Hazelwood Hello Butter King; 2, J. C. Chamberlin, Chehalis, Wash., on Harry Waldorf of Cerealia; 3, William Messersmith, Boise, Idaho, on Blue Valley Segis Pietertje Prince; 4, University of Idaho, on King Pasch, Segis Idaho. Senior calf—1, Smith, on Hazelwood Stella Champion; 2, Carnation Stock Farms, on Ensign Matador Model Abbekerk; 3, Beals, on Aaggie Johanna Gerben; 4 and 7, State College of Washington, on Chinook Piebe Adam and Chinook Piebe Count; 5, Western State Hospital on Steilacoom Sir Ormsby Veeman; 6, University of Idaho, on Idaho Matador Conqueror. Junior calf—1 and 2, Smith, on Hazelwood Sir Bessie Segis (junior champion) and Hazelwood Fayne Ormsby Posch; 3, Elmer, on unnamed calf; 4, Arp, on King Pontiac Bonheur Alcartra; 5, Beals, on unnamed calf; 6, Nisbet, on Sir Segis Canary Beets; 7 and 10, Carnation Stock Farms, on Colantha Matador Delmer and unnamed calf; 8, William McKeown, Gresham, Ore., on Sir Walker Matador 3d; 9, Klein Bros., on Segis Matador Wapato.

Females: Five years or over—1 and 3, Carnation Stock Farms, on Tillamook Daisy Butter King DeKol (senior and grand champion) and Hazelwood Aaggie Hartog; 2, Bishop, on Hazelwood Pietertje Jewel; 4, State College of Washington, on Prilly Pietertje Johanna Fayne; 5, Smith, on Lady Bracelet Jewel; 6 and 8, Tom Nisbet, Chehalis, Wash., on Lady Bell Washington 2d and Lady Marjorie Irene; 7, Beals, on Carnation Fayne Segis; 9, Mrs. E. R. S. Heg, Seattle, Wash., on Sheridan Zozo Johanna; 10, Hugh Nisbet, on Canary Maid Boon. Four-year-olds—1, Carnation Stock Farms, on May Walker's Skylark; 2, Beals, on Lady Dora Aaggie Pontiac; 3, Hugh Nisbet, on Melberk Glassa Fobes; 4, J. H. Wist, Scappoose, Ore., on Beauty Josephine Segis. Three-year-olds—1, William McKeown, on Beauty Oregon Artis; 2 and 3, Carnation Stock Farms, on Carnation Matador Queen and Carnation Matador Queenie; 4, Thomas Yarr, Chimacum, Wash., on Jewel Cornucopia Wayne Boon; 5, Smith, on Piebe Lilith Fayne; 6, Arp, on Lucy Freela Pontiac 2d; 7 and 9, McKeown, on Hazelwood Hello Ormsby DeKol and Lady Douglas Fayne Johanna; 8, University of Idaho, on Idaho Segis Walker Colantha; 10, Hugh Nisbet, on Princess Till DeKol Korndyke. Two-year-olds that have freshened—Smith, on Hazelwood Leda Hello Korndyke; 2, William McKeown, on Hazelwood Ormsby Heilo; 3, David McKeown, on Hazelwood Hello Spofford; 4, Bishop, on Jewell Hazelwood DeKol; 5 and 6, Carnation Stock Farms, on Matador Oregon Mechthilde and Carnation Matador Addie Segis; 7, State College of Washington, on Hazelwood Hello Josephine Ormsby; 8, University of Idaho, on Idaho U Segis Colantha; 9, Krassin & Son, on Lillith Veeman Wayne; 10, Smith, on uncatalogued; 11, Beals, on Colantha Johanna Prilly Canary. Two-year-olds, never freshened—1 and 2, Smith, on Hazelwood Johanna Skylark and Hazelwood Queen Heilo; 3, Vandecoevering & Evers, on Verboort Lady Matador; 4 and 5, Carnation Farms, on Carnation Matador Starlight and Carnation Matador Orilla Korndyke; 6, David McKeown, on Wapato Lyons Bonheur; 7, A. H. Buck and Ed Hoem, Snohomish, Wash., on Glenwood DeKol Parthena. Senior yearling—1 and 2, Smith, on Hazelwood Bessie Pauline Heilo (junior champion) and Hazelwood Ormsby Heilo Duchess; 3 and 4, Thomas J. Killen, Boise, Idaho, on Colantha Lou Segis Quoque and Aaggie Prilly Burke Lena Segis; 5, Beals, on Kathryn Ormsby Bos DeKol; 6, Bishop, on Chimacum Sycamoore Wayne; 7 and 10, Vandecoevering & Evers, on unnamed calves; 8 and 9, Carnation Stock Farms, on Carnation Matador Lena Kann and Carnation Matador Coquette; 11, Chamberlin, on Laurie Prilly of Cerealia. Junior yearling—1 and 3, Carnation Stock Farms, on Carnation Sylvia Segis and Carnation Matador Christmas; 2 and 5, Smith, on Hazelwood Heilo Piebe Homestead and Hazelwood Heilo Fobes Tritonia; 4, Adam's Eden Farm, Warren, Ore., on Adamseden Canary Segis Fayne; 6, Western State Hospital, on Steilacoom Bonnie Ormsby Lass; 7, Hugh Nisbet, on Blossom Cornucopia Johnson; 8, David McKeown, on Clothilde P. Matador; 9, Tom Nisbet, on Riverview Queen Ormsby 2d; 10, Vandecoevering & Evers, on Bessie Hartog Pontiac Fayne; 11, Intermountain Institute, Weiser, Idaho, on Institute Snowball Soldene. Senior calf—1, Tom Nisbet, on Olympic Greenbank Queen; 2 and 4, Smith, on Hazelwood Ormsby Duchess and Hazelwood Hello Posch Ormsby; 3, Beals, on unnamed calf; 5 and 9, Carnation Farms, on Carnation Prospect Johanna and Carnation Matador Mercedes Selh; 6, Western State Hospital, on Steilacoom Mollie Ormsby; 7, Beals, on Bracelet Gerben Posch; 8, Killen, on Princess Ruth Quoque Segis; 10, University of Idaho, on Idaho Matador Countess; 11, David McKeown, on Pauline Fayne Matador. Junior calf—1 and 3, Beals, on unnamed calves; 2, Western State Hospital, on Steilacoom Jewel Pontiac Korndyke; 4 and 6, Carnation Stock Farms, on Valley Farm Pontiac and Segis Matador Bonnell; 5 and 7, Smith, on Hazelwood Bessie Pauline Posch and Hazelwood Heilo Butter Girl; 8 and 9, Hugh Nisbet, on eSgis Star Beets and Blossom Pontiac Beets; 10, Bishop, on Chimacum Jewel Ormsby; 11, A. Mikkelson, Eaton, Idaho, on Weiser Ruth Etolia.

Cow with yearly record begun at five years or over—1 and 3, Carnation Farms, on Segis Pietertje Prospect and Leila Tulip Gem Butter King; 2, Tom Nisbet, on Lady Marjorie Irene; 4, Killen, on Aaggie Prilly Burke Quoque; 5, Krassin & Son, on Parthena Ormsby Kakenstein. Cow with official yearly record under five years of age—1 and 2, Carnation Stock Farms, on May Walker Skylark and Carnation Matador Queen; 3, State College of Washington, on Prilly Pietertje Johanna Fayne; 4 and 6, University of Idaho, on Idaho U Segis Colantha and Idaho Segis Walker Colantha; 5, Arp,



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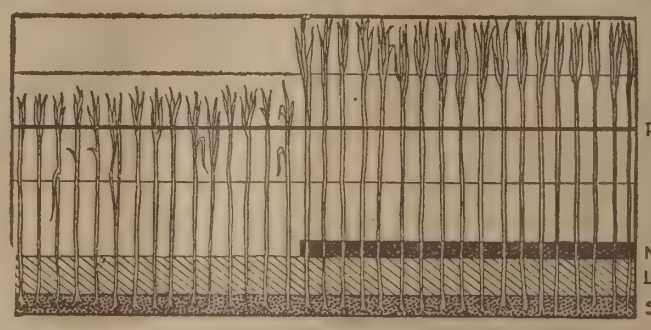
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on Lucy Freela Pontiac 2d; 7, Vandecoevering & Evers, on Verhoort Lady Annis; 8, Musser & Musser, Nampa, Idaho, on Echo Matador Segis; 9, Buck & Hoem, on Glenwood Pearl Ormsby DeKol. Advanced registry cow shown with two progeny, all owned by exhibitor—1 and 2, Carnation Stock Farms, on La Reina Hengerveld 3d and Segis Pietertje Prospect; 3, Arp, on Lucy Freela Pontiac 2d.

Exhibitor's herd—1 and 3, Carnation Stock Farms; 2, Smith; 4, University of Idaho; 5, Bishop; 6, Beals; 7, Hugh Nisbet; 8, David McKeown; 9, Vandecoevering & Evers. Young herd—1 and 4, Smith; 2 and 3, Carnation Stock Farms; 5, Klein Bros.; 6, Hugh Nisbet; 7, David McKeown. Calf herd—1 and 3, Smith; 2, Carnation Stock Farms; 4, Hugh Nisbet; 5, Klein Bros. Dairy herd of five cows in milk—1 and 2, Carnation Stock Farms; 3, Smith.

Get of sire—1 and 3, Carnation Stock Farms; 2 and 6, Smith; 4, Beals; 5, University of Idaho; 7, Western State Hospital; 8, William McKeown; 9, Killen; 10, Vandecoevering & Evers. Produce of cow—1 and 2, Carnation Stock Farms; 3, University of Idaho; 4, William McKeown; 5 and 6, Smith; 7, Vandecoevering & Evers; 8, Western State Hospital; 9, David McKeown; 10, Hugh Nisbet.

State herds—1, Washington; 2, Oregon; 3, Idaho.

Jerseys.

High point in numbers was reached at the show two years ago, but this year marked high point in quality. And numbers were a few greater than a year ago. Nearly every class was large and in the senior heifer calf class 27 entries faced the judge; 22 in the 2-year-old heifer class, and 21 cows, five years or over. The mature bull class saw last year's champion, Noble Majesty of L, win first in a class of five, and he went on to grand champion, without serious danger of defeat, although he had to meet the 3-year-old Glen Tana Perfection, that was grand champion at Spokane, a great bull, with fine head and pleasing lines all over. The junior champion, Mollie's Chimes of S. B., is a handsome senior calf, with a beautiful head, not quite in as good condition as he might be.

The greatest interest centered in the grand championship on cow. Eminent Jimps Owl, the grand old cow that was grand champion two years ago and senior last year, again won first in her class of over 5 years old, with 21 other competitors, and this in spite of the fact that her udder shows some signs of breaking. She has such wonderful type and so few faults she could hardly be turned down. But the great 4-year-old Rinda Lad's Lady was too much for her. The younger cow is in fine bloom, has one of the most perfect udders, great constitution and with it all type and beauty. The junior champion heifer, Midfields Cicily Winkle, is a wonderful junior calf, having much refinement, but great constitution, and while the older cow had no trouble in winning, the baby made a strong show against her.

Judge: Charles Graves, Liberty, Mo.

Bulls: Four years or over—1, John M. Heldt, Rosburg, Wash., on Noble's Majesty of L (senior and grand champion); 2, A. C. Power, Sandy, Ore., on LaBelle's Noble Fern; 3, J. E. Thorpe, Lockeford, Calif., on Jolly Senator Raleigh; 4, Fox Bros., Silverton, Ore., on Foxhall's Chief Engineer; 5, Erickson Bros., Yakima, Wash., on Sultan's Olga Boy. Three-year-olds—1, Glentana Farm, Spokane, Wash., on Glentana Perfection; 2, N. C. Sorenson, Chehalis, Wash., on Firwood's Gwendola's St. Mawes; 3, Thorpe on Biddy's King of Mossdale; 4, L. A. McCormack, Tillamook, Ore., on Damsel's St. Mawes Poppy. Two-year-olds—1, Erickson Bros., on Raleigh's Fancy Lad; 2, H. West, and L. G. Smith, Scappoose, Ore., on St. Mawes Chimes; 3 and 10, David McLeod, Bellingham, Wash., on St. Mawes Santa and Walata Mac of St. Mawes; 4, Waterloo Jersey Farm, Lockeford, Calif., on Financial Corrector; 5, C. F. Bates, Salem Ore., on Gertie's Royal St. Mawes; 6, B. J. Bagley, Vancouver, Wash., on Sophie's Oregon Pogis; 7, G. W. Lawson, McMinnville, Ore., on St. Mawes Babe; 8, Fred J. Meindl, Portland Ore., on Emerald's Kelchis Jos; 9, Sears & Little, Winlock, Wash., on Champion of Midfields. Senior yearling—1, A. Malar, Jr., Boring, Ore., on Helen's Poppy's St. Mawes; 2, Sears & Little on Fussy's Fern's Noble; 3, Erickson Bros., on Sultan's Bonnie Lad; 4, Ray H. Wisecarver, McMinnville, Ore., on Oregon Raleigh; 5, Sorenson on Firwood's Rosaires St. Mawes; 6, and 8, West & Smith, on Fussy's Fern Noble 34th and Fussy's Fern Noble 33d; 7, Glentana Farm on Glentana Morocco Wonder. Junior yearling—1, D. C. Howard, Beaverton, Ore., on Captain Tristram's St. Mawes; 2, Thorpe on King Tip of Mossdale. Senior calf—1 West & Smith on Molly's Chimes of S. B. (junior champion); 2, Thopre on Nomie's King of Mossdale; 3, Glentana Farms on Glentana Morocco Guenon; 4, Malar, Jr., on Onota's Poppy Boy of F. F.; 5, C. J. Reid and Lorenzen Bros., Dayton, Ore., on unnamed calf; 6, Chester L. Mulkey McMinnville, Ore., on Little Pauline's Lad; 7, A. A. Markkanen, Yankton, Ore. on Lily's Pet Pride of Oregon; 8, University of Idaho on Idaho Baronet Hero; 9, Waterloo Jersey Farm on Financial Corrector's Gold; 10, O. P. Dosland, Grays River, Wash., on Fancy's Normand. Junior calf—1, D. Brooks Hogan, Boring, Ore. on unnamed calf; 2, Sears & Little, on Diploma's Royal Boy; 3, Glentana Farm on Glentana Morocco Majesty; 4, W. M. Ladd, Portland, Ore., on Oreglow Vive Owl; 5 Thorpe on Nobleman of Tintagel; 6 and 7, Ericson Bros., on Sultan's Lad of J. H. and Sultan's Roscoe of J. H.; 8, Fox Bros., on Glory's King of S. C.; 9, Malar, Jr., on Firwoodeen's Onota Lad of F. F.; 10, McLeod on Captain Walata.

Females: Five years or over—1, Glentana Farm on Eminent Jimps Owl; 2, Dosland on LaCreol's Alta KR; 3, Thorpe on Salome of Mossdale; 4 and 5, J. L. Bowman, Portland, Ore. on Lady Trilby DuVal and Onota's Fancy Girl; 6, Howard on St. Mawes Blossom's Rosaire; 7 and 9, West & Smith on Fox's Golden Lina and Fox's Golden Lina's Fern; 8, Ladd on Birdie's Owl of M. L. P.; 10, Waterloo Jersey Farm on Valet's Grace Dereen of L. Four-year-olds—1, S. J. McKee, Independence, Ore., on Rinda Lad's Lady (senior and grand champion); 2 Mulkey on Maggie of Laurchester; 3 and 9, Glentana Farm on Glentana Celia and Glentana Sibyl; 4 and 5, Ericson Bros. on Sultan's Flower Girl and Sultan's Violet Rose; 6, Sorenson on Firwood Forest Girl; 7, Ladd on Darling Glow Josey; 8, Sears & Little on Curtiss Rose; 10, West & Smith on Fussy's Jolly Berna. Three-year-olds—1, 4 and 5, Mulkey on Fairy's Queen of Laurchester, Fern's Lass of Laurchester and Verna of Laurchester; 2, Ladd on Vive Glow Salvia; 3, Sears & Little on Star of Yewloa; 6, University of Idaho on Owlet's Louise of Waikiki; 7, Hogan on Bluster's Miss Euridia; 8, Thorpe on Queen Bess of Mossdale; 9, Fox Bros., on Foxhall's Violet of S. C.; 10, Malar, Jr., on LeConeyetta. Two-year-olds—1 and 2, Bates on Ethel May's Surprise and St. Mawes Golden Beauty; 3, Glentana Farm on Glentana Morocco Lois; 4, University of Idaho on Waikiki's Pilot's Bessie; 5, Thorpe on Girlie of Mossdale; 6, Waterloo Jersey Farm on Goldie's Dame Onota; 7, Sorenson on Firwood Blossom; 8, Malar, Jr., on Onota's Golden Saviour; 9, Mulkey on Mary's Maiden Laurchester; 10, Bowman on Heiler's Sweet Lass. Senior yearling—1 and 2, Thorpe on King's Bessie of Mossdale and Wardress of Mossdale; 3, Lewis E. Judson, Salem, Ore., on St. Mawes Pogis Violet; 4, West & Smith on Fussy's Elanor of St. B.; 5, Mulkey on Poppy's Fern of Laurchester; 6, Malar, Jr., on LeConeyetta You'll Do; 7, Waterloo Jersey Farm on D. L. K.'s Aljibe; 8, Fox Bros., on Spozza's Princess of S. C.; 9, Ericson Bros., on Sultan's Vesta Lass; 10, Heldp on Lad's Lady Bertha. Junior yearling—1 and 10, Bowman on Halcyon's Bluebell and Halcyon's Blossom; 2, Ladd on Oneida Glow Galanta; 3, Bates on Golden Beauty's Gerty; 4, Thorpe on King's Miss of Mossdale; 5, Glentana Farm on Glentana Morocco Inez; 6, State College of Washington on Waikiki's Pilot Mary; 7, Lawson on St. Mawes Bess; 8, West & Smith on Fussy's Fern Rozel; 9, Ericson Bros., on Flower's Lassie. Senior calf—1, Howard on Dream of St. Mawes; 2, Bowman on King's Fairy Girl; 3, Mulkey on unnamed calf; 4, Waterloo Jersey Farm on Financial Corrector's Foxola; 5 and 8, West & Smith on Princess Verna of S. B. and Chimes Mollie of S. B.; 6, Ladd on Vive Glow Birdie Coin; 7, Bagley on Flossie's Favorite Pogis; 9, Ericson Bros., on Zillah's Fancy Queen; 10, Malar, Jr., on Onota's Golden V. of F. F. Junior calf—1, Sears & Little on Midfield's Cicely Winkle (junior champion); 2, Wisecarver on unnamed calf; 3, Hogan on Oreglow Darling My Goldie; 4, Waterloo Jersey Farm on Financial Corrector's Glory; 5 and 7, Thorpe on Gipsy May of Mossdale and King Lass of Mossdale; 6, State College of Washington on Chinook Landseer Kitty; 9, Glentana Farm on Glentana Morocco Fairy; 9, Ericson Bros., on Olga's Bonnie Babe of J. H.; 10, Sorenson on Firwood Rosaire.

Cow with official record begun at five years or over—1, Glentana Farm on Eminent Jimps Owl; 2, Dosland on LaCreol's Alta; 3, Waterloo Jersey Farm on Valet's Grace Dereen of L.; 4, Fox Bros., on Spozza's Foxhall of F. O.; 5, Sorenson on Gwendola Rosaire. Cow with official record begun under five years—1, McKee on Rinda Lad's Lady; 2, 3 and 10, Mulkey on Fairy Queen of Laurchester, Fern's Lass of Laurchester and Poppy's Pretty Maid of O. F.; 4, Ericson Bros., on Sultan's Figgis of J. H.; 5, Ladd on Birdie's Owl of M. L. P.; 6, Bowman on Noble's Marigold; 7, Sears & Little on Star of Yewloa; 8, McLeod on Double St. Mawes; 9, Malar, Jr., on LeConeyetta. Advanced registry cow shown with two progeny, owned by exhibitor—1, Bowman on uncatalogued; 2, Thorpe on Salome of Mossdale; 3, Fox Bros., on Spozza Foxhall of F. O.; 4, Ladd on Darling Glow Jersey; 5 and 7, Sorenson on Firwood Forest Girl and Gwendola Rosaire; 6, Malar, Jr., on LeConeyetta.

Exhibitor's herd—1, Glentana Farm; 2, Thorpe; 3, Sears & Little; 4, Sorenson; 5, Ericson Bros.; 6, West & Smith; 7, Frox Bros.; 8, Waterloo Jersey Farm; 9, Meindl. Young herd—1, Thorpe; 2, Sears & Little; 3, Glentana Farm; 4, West & Smith; 5, Ericson Bros.; 6, Mulkey. Calf herd—1, Sears & Little; 2, Glentana Farm; 3, West & Smith; 4, Ericson Bros.; 5, Thorpe; 6, Mulkey; 7, Fox Bros.; 8, Waterloo Jersey Farm. Dairy herd of five cows in milk—1, Ericson Bros.; 2, Bowman; 3, Mulkey; 4, Thorpe; 5, Sorenson; 6 Fox Bros.; 7, Malar, Jr. Get of sire—1, Mulkey; 2 and 6, Thorpe; 3, Glentana Farm; 4,

(Continued on page eleven.)

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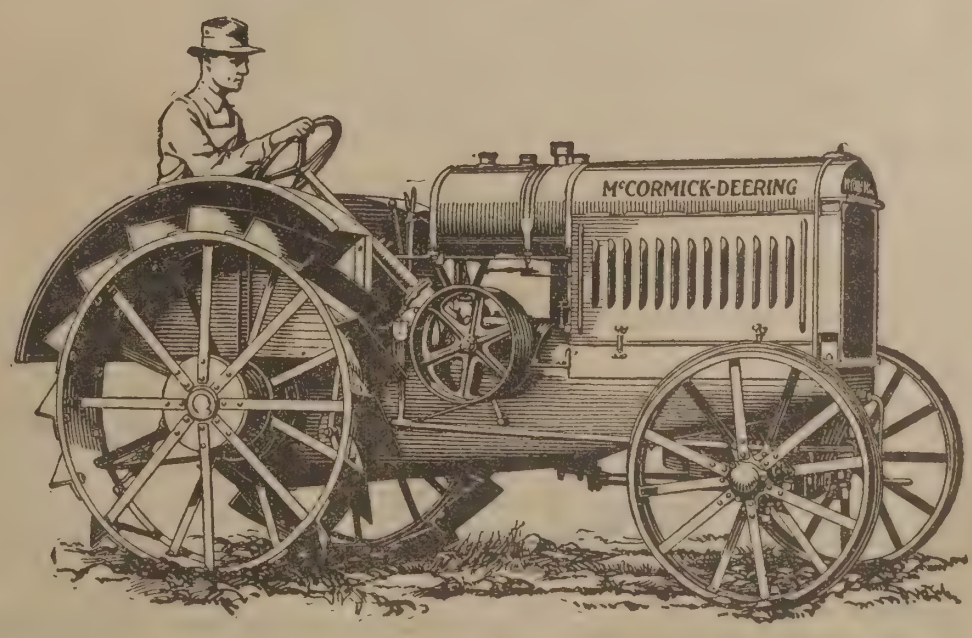
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LIVESTOCK AND DAIRY

Smith's Steers Outsell Brown's

Part IV.

The consumer wants meat that is tender, palatable, attractive in appearance, juicy and nutritious. The carcass of the animal that is fat, thick-muscled and not coarse in bones or muscle fiber will produce meat of this sort.

The most important factor in making the carcass satisfactory to the consumer is the finish or degree of fatness, the signs of which have already been described. The steer should not be so fat that it is "gobby" and uneven, but smoothly fleshed, otherwise the carcass is unattractive and the cuts are wasteful. With a proper finish there is a smooth layer of outside fat over the carcass, which preserves it in the process of ripening and improves its appearance. Also there is sufficient fat deposited between the muscle fibers to give the meat a "marbled" appearance when it is cut across the grain.

Steers possessing general quality, indicated by the refinement of the bone, head, skin and hair and by the smoothness and springiness of the flesh when handled, will have quality in the meat from its carcass.

To sum up the argument, the buyer can feel confident that steers of correct beef form, of fine quality and highly fattened, will have high dressing percentages, will be well developed in the choice cuts and that the consumer will pay a high price for the meat cut from its carcass.

There are other things which affect cattle values to a limited extent. One of these is weight. Large carcasses furnish retail cuts too large for the family trade, although hotels and restaurants use them and to some extent favor them. Small carcasses are highly desirable if well finished. Whether yearlings or heavy cattle will bring the high dollar depends on their respective numbers in relation to the demand for each.

Horned loads may be discounted 10 to 30 cents a hundred pounds under hornless ones because the buyer fears scratched, bruised carcasses and damaged hides. Horned cattle are more restless in shipment, so that their carcasses are darker in color. Horned loads also do not have such keen competition from feeder buyers as they do if dehorned.

Brands reduce the value of the hide from 1 to 5 cents a pound or from 60 cents to $4 for the entire hide, depending upon their number, location and size.

Besides the things the buyer can see, he likes to know where the cattle came from and how and by whom they were fed. Cattle shipped long distances are apt to have more bruises, but they have been shrunk out, so that they have high dressing percentages. Exercise before slaughter tends to make the carcass retain blood and kill out dark. This fault crops out in range cattle, which travel much for their feed and "mill" about a good deal under confinement when shipped to market.

Some producers have developed a reputation for good cattle that kill out well and buyers may pay a premium because they feel confident of the results. Corn feeding produces the most attractive carcasses as the fat is whiter, the lean a brighter red and more marbled. Grass produces watery flesh, although there is great difference in the grass from different sections. Beet pulp produces watery flesh, but "pulpers" are high dressers and sell well. Wheat is reputed to produce a fiery red color in the lead meat.

In one or more of these factors given in this series of articles will be found the reason for differences in prices which cattle sell for. Together they are responsible for some steers selling for $12.80, while others are bringing only $3.50 on the same day at the same market.

LIFE PRESERVERS FOR LIVE STOCK

By DR. E. E. WEGNER, W. S. C.

SWINE DISEASES. ARTICLE 1.

Certainly within the memory of those of us who are alive today there has never been a time when a great deal of consideration was given to hog raising. This animal has raised as many or more mortgages than any other and is to be found quite constantly on farms of all kinds, as he is able to thrive on the waste of nearly any farming process. But regardless of his general distribution and substantial value his existence has been accepted as a matter of course and if he has thrived on our farms it is in many instances in spite of the fact that he has had to overcome difficulties that other domestic animals have not been subject to.

It is difficult to understand how the opinion got so widely spread that the hog could thrive on any kind of food and could live in quarters where other animals would certainly die, but it has been his lot in many instances. Why the hog must eat kitchen refuse and all the garbage of the barn, while the cow and horse have clean food, is hard to understand, and why he must be housed in the small, muddy pen in winter and be required to occupy the small, dusty one in the summer is equally hard to understand, but such has been the lot of this mortgage raiser.

We learned long ago that filth wa a breeder of disease and the association became so clearly evident that we had to protect our other animals from it. We did so by preparing a clean foaling place for the mare and caring for the navel of the foal; we did a similar service for the cow to prevent the infections that are so frequent just after birth; clean lambing sheds for the ewes are in many places considered a necessity, but we have been slow to realize that the hog is also subject to disease that threaten to exterminate this animal and so far we have been slow to provide the protection that the hog deserves.

It is true that a hog enjoys a flop in the cool mud by the side of the stream on a hot summer day, but that does not mean that he likes to have a pen that is floored with filth and mud from 2 to 10 inches deep. Yet I have seen this condition on many farms. It doesn't mean that he enjoys a damp bed on cold winter nights, yet he is frequently neglected to that extent. His quarters are seldom cleaned, as the stables of the cows or the horses are, and yet we expect him to remain as healthy as the other farm animals. Indeed, he did so for many generations, even though living closely housed in the combined filth of many generations.

We in the west have not yet realized from experience the error of our ways in treating the hog, but in certain sections of the middle west this has been brought home in a way that can not be mistaken nor disregarded. The hog himself simply refused to be a party longer to the method of treatment afforded him. He could not be induced to thrive and present a profit,

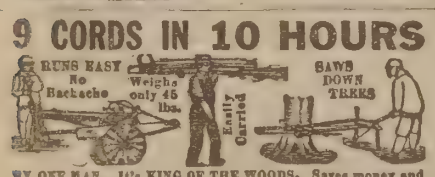
(Continued on page twenty-three.)

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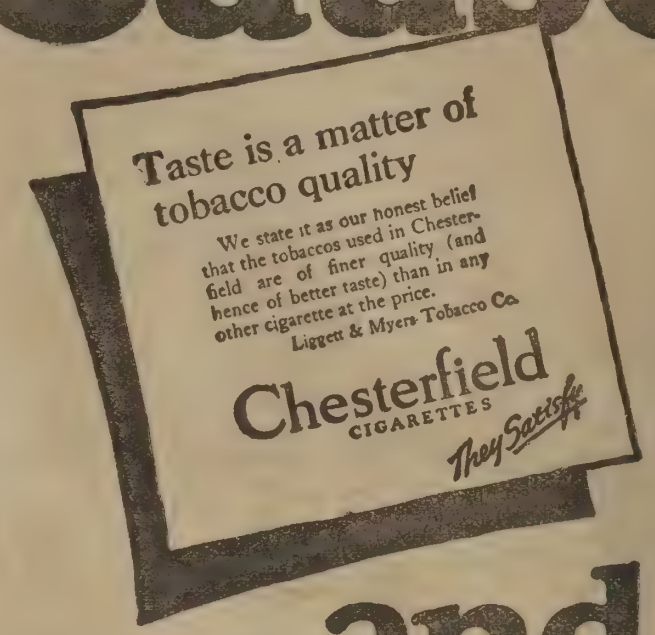
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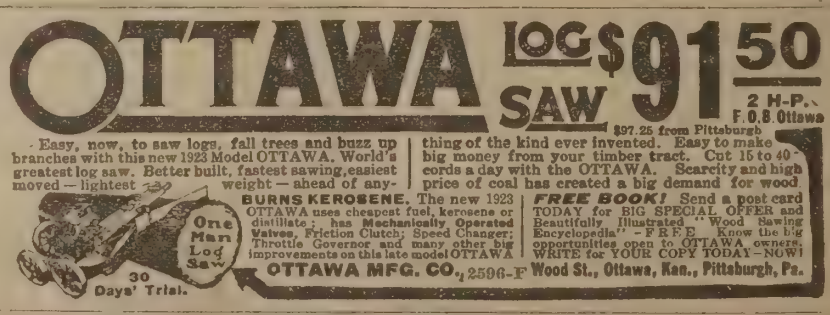
Every farmer should read "Meat Production on the Farm," a new illustrated book which is being distributed free to farmers only. It tells how to cure, smoke and sell every kind of meat and explains quick, easy methods that produce fancy high-priced sugar-cured meats with no more trouble than plain "salt stuff." It also tells how to save spare parts and make sausages, head cheese, pickled meat and other delicacies.

Send your name to the E. H. Wright Co., 852 Broadway, Kansas City, Mo., and this book, priced regularly at $1, will come to you free. Write for it today—a card will do.—Adv.

Cause and Effect







Washington Livestock Ranks High

(Continued from page nine.)

Ericson Bros.; 5, Sears & Little; 7 and 9, Malar, Jr.; 8, West & Smith; 10, Sorenson. Produce of cow—1 and 3, Mulkey; 2, Bates; 4 and 9, Glentana Farm; 5 and 8, Malar, Jr.; 6, Thorpe; 7, Ericson Bros.; 10, Sorenson.

Guernseys.

Though the Guernsey show gained but little in numbers over that of last year, there was material improvement in quality. Classes were far more uniform, and it was evident from this and from the condition in which the animals appeared that the breeders are taking to heart the advice of judges in former years to leave inferior animals at home and to spend more time on those which they bring to the show. Only one large exhibitor was missing from last year, and there were were several new ones, including one from Montana, three from Oregon and two from Washington. Idaho and Wisconsin were also represented, more states contributing than to any other of the dairy shows. The judge was particularly impressed by the quality in the bull classes, the first four junior yearlings, he said, being the most uniform lot he ever saw. The first three or four in the senior bull calf class, he said, would take first at any state fair he has seen this season, and that included the one in New Jersey, the best of the eastern shows.

Judge: John S. Clark, Hardwich, Mass.

Bulls: Four years or over—1, F. J. Rueping, Fond du Lac, Wis., on Superb of Edgemoor (senior and grand champion); 2, Ira G. Lance, Tillamook, Ore., on Jelly Fermaine; 3, A. Macrae Smith, Bellingham, Wash., on Kulshan Hayes May King; 4 and 5, Hawkins & Riggs, Springfield, Ore., on Reporter Boy and Ross Langdon; 6, A. L. Gile, Chinook, Wash., on Chicona Buster; 7, Shannon B. Shafer, Deer Island, Ore., on Chicona Bill Rose. Three-year-olds—1, Wallace & Fordyce, Sunnyside, Wash., on Chicona Lover Bold; 2, Oregon Agricultural College, on Flora's Secret of Vimiera. Two-year-olds—1, Rueping, on Gay Girl's Golden Secret of Owland; 2, Homer Mason, Tillamook, Ore., on Beauty 14th of The Forget's Royal Knight; 3, W. O. Bohart, Bozeman, Mont., on Fantassia's Jewel Bill Bella. Senior yearling—1, Thousand Springs Farm, Wendell, Idaho, on Masterpiece's Ultra King of Edgemoor; 2, C. A. Bradt, Kalama, Wash., on Kulshan Jethro. Junior yearling—1, Ben H. Ridgway, Chimacum, Wash., on Khedive Ketahene of Sequin P. (junior champion); 2, Wallace & Fordyce, on Fawndale Marose; 3, John A. Hilles, Hood River, Ore., on Chicona Jason; 4, Rueping, on Corium Brownie's Count; 5 and 6, David H. Looney, Jefferson, Ore., on Laird of Alsea and H. B.'s Prize. Senior calf—1, Rueping, on Corium Nellie's Rosa's Delos; 2 and 5, Smith, on Fircrest La France Rival and uncatalogued; 3, Thousand Springs Farm, on Deacon of Thousand Springs; 4, Gile, on Chicona Luke; 6, Looney, on unnamed. Junior calf—1, Rueping, on Corium Ladock Jenny's Prince; 2, Smith, on Fircrest French Boy; 3 and 7, Gile, on Chicona Deemster and Chicona Terence; 4, 6 and 10, Wallace & Fordyce, on Fawndale Boulder, Fawndale Bold Laddie and Fawndale Comet; 5, Shafer, on Columbia Boy of Clover Hill; 8 and 9, Looney, on unnamed and Francis Khedive.

Females: Five years or over—1 and 5, Smith, on La France of Braelee and Brookdale's Pink; 2 and 3, Rueping, on Topsey of City View and Imp. Ladock Jenny; 4, Wallace & Fordyce, on Edna of Mountain View; 6, Thousand Springs Farm, on Imp. Fascination 2d of Caches Farm; 7, 8 and 10, Cottonwood Farm, Tillamook, Ore., on Janis of Sequoia, Governor's Blossom of Valevue and Oregon Queen; 9, Shafer, on Merry Maid's Beauty of Clover Hill. Four-year-olds—1, Gile, on Jewel of Rose City (senior and grand champion); 2, Rueping, on Meta of Louis Corners; 3, Calkins & Riggs, on Chene Quintine; 4, Cottonwood Farm, on Gail of Sequoia. Three-year-olds—1, Rueping, on Vera's Pride of Hammond; 2 and 4, Wallace & Fordyce, on Filipina of Groton Farms and Catherine's Dimple Queen; 3, Ridgway, on Jasmine of Rose City; 5, Calkins & Riggs, on Middledale Virginia 2d. Two-year-olds—1 and 4, Thousand Springs Farm, on Yeoman's Mixter Babbett and Judy of Thatch Meadow; 2 and 3, Rueping, on Jeanette of Louis Corners and uncatalogued; 5, Cottonwood Farm, on Ra's Belle's Daisy of Few Acres; 6, Gile, on Arleta of Chicona; 7, Calkins & Riggs, on Virginia's April Rose; 8, Smith, on Fircrest Bettey Maid; 9, Wallace & Fordyce, on Molly of Lavaland. Senior yearling—1, Gile, on Doris of Chicona; 2 and 5, Thousand Springs Farm, on Imp. Chene Fascination of Thousand Springs and Mixter May Hopeful; 3 and 7, Smith, on Fircrest La France's Pride and Fircrest May Blossom; 4, Rueping, on Corium Beulah; 6 and 9, Looney, on Chehulpum's Bessie and Chehulpum Francine; 8, Shafer, on Art's Beulah of Clover Hill. Junior yearling—1, 3 and 10, Rueping, on Corium Caroline (junior champion), Corium Rose Des Houards and Corium Cadock Jenny's Chloe; 2, Thousand Springs Farm, on Rosanne of Thousand Springs; 4 and 9, Wallace & Fordyce, on Anchor Rose of Fawndale and Dot of Fawndale; 5 and 8, Cottonwood Farm, on Grumby's Glenda of Greenacres and Evangeline's Princess of Few Acres; 6, Gile, on Sunlight of Chicona; 7, Shafer, on May Rose Babe of Clover Hill. Senior calf—1 and 3, Rueping, on Corium Nancy's Cassie and Corium Pretty Maid's Cora; 2, 4 and 7, Thousand Springs Farm, on Noreen of Thousand Springs, Betty of Thousand Springs and Suzette of Thousand Springs; 5 and 10, Gile, on Lavinia of Chicona and Diana of Chicona; 6, Wallace & Fordyce, on Fawndale Leading Lady; 8 and 9, Looney, on Hermoine Chehulpum and Khedive's Augusta.

Junior calf—1, Rueping, on Corium May Queen's Donna; 2, Gile, on Patience of Chicona; 3 and 8, Shafer, on unnamed calves; 4, 6 and 7, Looney, on Khedive Patricia, Khedive Zeilpha and Khedive Hermoine; 5, Oregon Agricultural College, on Oregon Valentine Bell; 9, Ridgway, on Jasmine of Sequim Princess; 10, Cottonwood Farm, on Gail's Anna Belle of Few Acres.

Cow with official record begun at five years or over—1, Smith, on Brookdale's Pink; 2, Cottonwood Farm, on Janis of Sequoia; 3, Thousand Springs Farm, on Imp. Fascination 2d of Caches Farm. Cow with official record begun under five years—1, Gile, on Jewel of Rose City; 2, Smith, on La France of Bralee; 3, Rueping, on Imp. Ladock Jenny; 4, Wallace & Fordyce, on Edna of Mountain View; 5, Cottonwood Farm, on Oregon Queen; 6, Calkins & Riggs, on Middledale Virginia. Advanced registry cow shown with two progeny owned by exhibitor—1 and 2, Smith, on La France of Bralee and Brookdale's Pink; 3, Rueping, on Imp. Ladock Jenny; 4, Wallace & Fordyce, on Edna of Mountain View; 5, Ridgway, on Jasmine of Rose City; 6, Calkins & Riggs, on Middledale Virginia.

Exhibitor's herd—1 and 3, Rueping; 2, Smith; 4, Gile; 5, Wallace & Fordyce; 6, Shafer; 7, Cottonwood Farm; 8, Calkins & Riggs. Young herd—1 and 2, Rueping; 3, Shafer; 4, Smith; 5, Gile; 6, Looney; 7, Cottonwood Farm. Calf herd—1, Rueping; 2, Shafer; 3, Smith; 4, Thousand Springs Farm; 5, Looney; 6, Gile. Dairy herd of five cows in milk—1, Rueping; 2, Wallace & Fordyce; 3, Cottonwood Farm; 4, Calkins & Riggs. Get of sire—1 and 3, Rueping; 2, Shafer; 4, Wallace & Fordyce; 5, Gile; 6 and 7, Looney; 8, Smith; 9, Cottonwood Farm. Produce of cow—1 and 4, Smith; 2 and 7, Rueping; 3, Shafer; 5, Ridgway; 6, Cottonwood Farm; 8, Calkins & Riggs; 9, Gile; 10, Wallace & Fordyce.

Lady Oregonian Trophy, presented by the late F. S. Peer, Guernsey importer, to be awarded to the owner of the best group of four Gernsey females, was won by A. Macrae Smith of Bellingham. It was won last year by Appletree Point Farms of Vermont. It must be won twice in succession to become permanent property of winner.

The Ayrshires.

"The best strictly northwest Ayrshires show that has ever been held" fairly describes the exhibition of specimens of this handsome breed, for while as a whole the show lacked something of last year's "class" because of nonparticipation by eastern breeders, it was a distinct credit to the Washington and Oregon herds competing. E. W. Van Tassell of Wenatchee, Wash., was the largest exhibitor and won one championship, but Oregon Agricultural college and Russell Catlin of Albany, Ore., the latter a new exhibitor, captured the major purples. Earlcrest Stock farm of Eagle creek won senior champion on its aged bull.

Judge: J. B. Fitch, Manhattan, Kan.

Bulls: Four years or over—1, Earlcrest Stock Farm, Eagle Creek, Ore., on Happy Triune (senior champion); 2, E. W. Van Tassell, Wenatchee, Wash., on Queen's Scottish Cavalier. Three-year-old—1, Walter J. Domes, McCoy, Ore., on Edgewater Peter Pan 2d. Two-year-

(Continued on page fourteen.)

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Hill Hydraulic Rams

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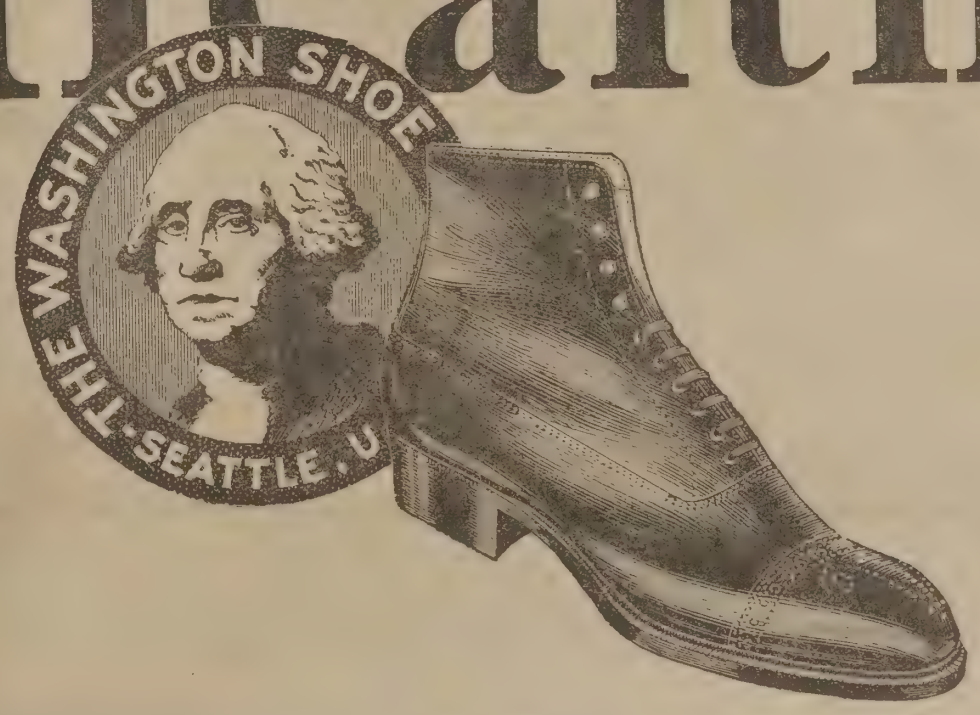
Oil Light Beats Electric or Gas

Burns 94% Air

A new oil lamp that gives an amazingly brilliant, soft, white light, even better than gas or electricity, has been tested by the U. S. Government and 35 leading universities and found to be superior to 10 ordinary oil lamps. It burns without odor, smoke or noise—no pumping up, is simple, clean, safe. Burns 94% air and 6% common kerosene (coal oil).

The inventor, W. W. Johnson, 31 N. Fifth St., Portland, Ore., is offering to send a lamp on 10 days' FREE trial, or even to give one FREE to the first user in each locality who will help him introduce it. Write him today for full particulars. Also ask him to explain how you can get the agency, and without experience or money make $250 to $500 per month.—Adv.

Health



"Inside" and "Outside" Shoe Health ⤷ **After a long, hard day's work—on your feet all the time—over rough ground—are your feet all in, down and out? If they are—as many men find—your shoes are NOT giving you "inside" health. Washington Dry Sox Shoes are built to fit feet—support them—keep them healthy and fresh through the day's "grind."** ⤷ The "outside health"—do your shoes protect you month after month from rough usage and wet—yes, wet—for Dry Sox Shoes DO keep feet DRY? Enjoy these comforts—wear the brand that is providing them to thousands of others—get Washington Dry Sox Shoes ⤷ Your dealer likes to sell Dry Sox Shoes—not alone for the features enumerated—but because of the extra value he can give you in them. ⤷ The reason! He can carry a complete stock on a very small investment. The nearness of our factory permits filling broken lines on exceedingly short notice—ofttimes over night. Thus he avoids the usual heavy investment in reserve stock—on which interest, insurance, etc., must be figured in the selling price. Saving these charges and turning his stock oftener, he can afford to sell on a much smaller margin of profit—to your benefit and his own.

Washington

Dry Sox

KLIMATICALLY KORRECT SHOES FOR MEN

POULTRY AND RABBITS

Table Poultry

Prices for the Heavy and Light

(From the American Poultry Journal.)

Leghorn breeders feel that of late a great deal of detrimental propaganda has been directed against their favorites, and they are particularly sensitive about the difference in price quoted for heavy and light table poultry.

The breeders of heavy breeds feel that there is too much propaganda favorable to the Leghorn finding expression in spoken word and printed page. These breeders of heavy and dual purpose types point to the fact that the highly specialized state agricultural experiment stations are exponents of the Leghorns and have furnished an immense amount of data on the economic advantages of the specialized egg-type fowl, to the disparagement of the heavier breeds.

It is a fact that we hear very little on the advantage of weight in poultry. One would almost conclude that there was no advantage in size, particularly when he hears a Leghorn man say: "I wouldn't grow the cockerels if I could tell the sex of my chicks as they come from the incubator, and I could afford to throw away the carcasses of my hens after their laying season, for eggs, eggs, eggs are the only thing I want, the only thing in which there is any profit."

The poor old hen that sets in her maternal way and rears a brood of chickens, and then puts on some flesh and fat, seems to be a type accursed by the specialized egg farmer. However, since there are so many of the matronly type, it might be well to see what good there is in them. This will require a comparison, and since comparisons have long been known to be distasteful we shall endeavor to simply produce facts and figures.

We are indebted to John S. Martin for the following data on the subject:

On June 23, 1922, Mr. Martin shipped 70 White Leghorn hens to M. P. Mallon, receiver and exporter of all kinds of poultry, Toronto, Canada. These 70 hens weighed 213 pounds, or a little less than three pounds per head. They brought 10 cents a pound, or $21.30 for the lot. The express on the shipment was $6.20 and the money order for the remittance was 12 cents, so Mr. Martin received exactly $14.98 for the 70 hens.

On July 5, 1922, John S. Martin shipped to the same M. P. Mallon, commission dealer of Toronto, 69 White Wyandotte hens. These 69 hens weighed 450 pounds, or 6 1-2 pounds each. They brought 21 cents per pound, or $94.50 for the lot. The express on the shipment and the return of the empty crates amounted to $7.49, leaving a total of $87.01, which was paid to Mr. Martin by check.

Seventy hens net the shipper $14.98. Sixty-nine hens net the shipper $87.01. That is equivalent to saying that a 6 1-2 pound Wyandotte hen is worth six three-pound Leghorn hens when the carcasses reach the butcher block.

It might appear that this is an unusual case because of an 11-cent differential between light and heavy hens.

A subscriber in Los Angeles sends us the market quotations in that market for September 28, 1922. Hens of 3 1-4 pounds are quoted at 19 cents; hens, colored, of four pounds and up, 30 cents a pound. There again is a difference of 11 cents per pound.

In Chicago October 4, 1922, live fowls of four pounds and over were quoted at 23 cents; small hens and Leghorns, 14 cents. In New York October 4, 1922, heavy fowls were quoted at 27 cents; fancy heavy, 1 to 2 cents more; fowls, poor, 20 to 22 cents; Leghorns, 20 to 22 cents.

These are the facts, recorded here without prejudice on our part. We are just as willing and ready to show that the Leghorn eats less feed in the course of a year, that it loses less time in broodiness, that it produces a white shelled egg which commands a premium in some markets. It is equally important, however, as a matter of fairness, to admit the advantages of a beef or dual purpose hen over a dairy hen, when the two carcasses ultimately reach the market.

Get After Those Mites

The red mite is a very small insect, but does large damage, because there usually are so many of them to do damage. They stay in the cracks and crevices of the walls, perches, supports and nests, where they may be found in countless numbers. The red mites come out from their hiding place and crawl upon the birds during the night, fill up with blood and then crawl back again. The more mites present, the more blood the chickens have to give up each night. We must destroy the mites if we are to receive the maximum number of eggs from the hens. This can only be done by thoroughly painting or spraying the walls, perches, supports and nests with a good disinfectant, such as cresote or shingle oil. The oil drained from the crank case of automobiles is to be highly recommended when it is applied hot with a brush or old broom. It is odorless, inexpensive and, best of all, is very effective for a long period of time, since it evaporates very slowly. The poultry keeper who knows that his poultry house is infected with mites and does not try to destroy them deserves no eggs from his hens.

Stiff in the Legs

By W. D. BUCHANAN,

Could you tell me what is the matter with my cockerel? It is lame and seems to be stiff in the legs. Otherwise it seems fine. It sits down most of the time. When it walks it walks stiff-legged. What can I do for it? R. A.
Tenino, Wash.

If the cockerel appears to be in perfect health, in good physical condition, a good red comb, and still walks lame and sits down most of the time, as you suggest, I would say that he had been injured in some way, but if he appears pale about the head and a little light in weight I would say that he very likely has a case of indigestion, due possibly to too much crude fiber or a lack of green feed. If he appears weak it might be due to intestinal worms. If it appears to be indigestion I would suggest a teaspoonful of castor oil, followed by light grain feeding and plenty of green feed. Lameness is sometimes caused by tuberculosis, but from your description I do not think this is the trouble.

WATCH HER SCRATCH.

While more active and nervous than a low-producing hen, the high producer is more easily caught and handled. The high producer is friendly, while the shy layer is sly, stays on the roost or outer edge of flock and squawks when caught. Hens first off the roost in the morning and last on at night are the birds that lay lots of eggs.

NO ROOM FOR HIM.

Nobody has room for the grouch.

Unbounded Faith

Years ago Grandmother learned that the secret of health is to keep the powers of resistance strong. That is why her faith in

Scott's Emulsion

remains unbounded. For fifty years it has had world-wide recognition as a tonic which is rich in health-building vitamines, *to nourish and help keep the powers of resistance strong.*



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Stop Hatching Weak Chicks

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It's a shame to waste your time and eggs hatching weak, wobbly chicks in cheap incubators, when everyone knows that

Queen Incubators

Hatch Strong, Healthy Chicks—That Live and Grow!

A good incubator is the start to profitable poultry production—it's the cheapest thing you can buy.

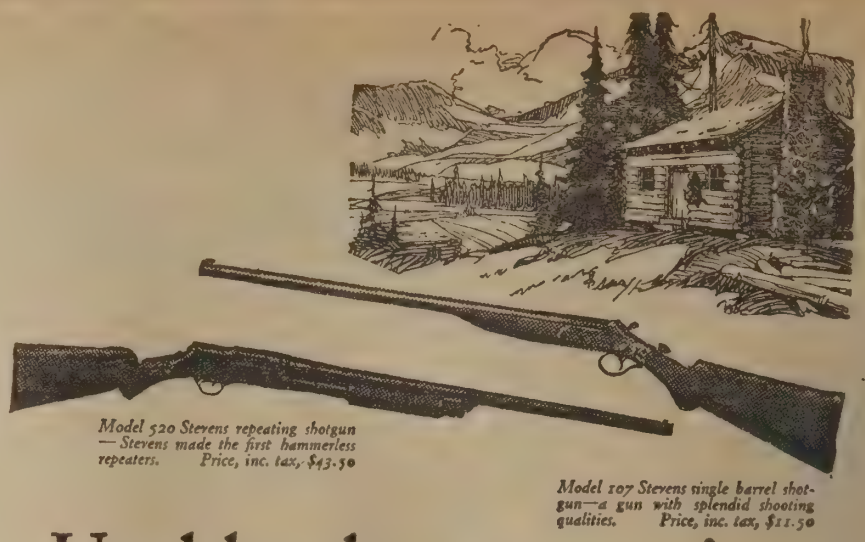
One dealer who has sold Queen machines for 9 years says: "I can get hundreds of testimonials of stronger chicks and almost perfect hatches with the Queen."

You, too, will hatch better chicks with a Queen Incubator and raise more of them with the Queen Brooder. Ask about the remarkable Queen Brooder Stove. If your dealer doesn't sell Queens, write us. Catalog free. (54)

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Model 520 Stevens repeating shotgun — Stevens made the first hammerless repeaters. Price, inc. tax, $43.50

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THE sturdy Stevens shotgun made its first "kills" in the hands of our grandfathers. With it our fathers first experienced the joys of hunting.

And today young men treasure it, not only for its past, but because right today, the good old Stevens still maintains its unbroken record for hard and straight shooting.

In many cases we have found that identically the same gun has been handed down from grandfather to father to son.

You can buy a more expensive gun than a Stevens; but you cannot buy better shooting qualities.

Shotgun or rifle—a Stevens firearm is accurate

When a Stevens barrel is bored or drilled, the final reaming cuts away *less than one-half of a thousandth of an inch.*

A slow method—but when finished a Stevens barrel is *accurate.*

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Stevens

1000 EGGS IN EVERY HEN

If You Keep Chickens CUT THIS OUT

"The great trouble with the poultry business has always been that the laying life of a hen was too short," says Henry Trafford, International Poultry Expert and Breeder, for nearly eighteen years Editor of Poultry Success.

The average pullet lays 150 eggs. If kept the second year she may lay 100 more. Then she goes to market. Yet, it has been scientifically established that every pullet is born or hatched with over one thousand minute egg germs in her system—and will lay them on a highly profitable basis over a period of four to six years' time if given proper care.

How to work to get 1000 eggs from every hen; how to get pullets laying early; how to make the old hens lay like pullets; how to keep up heavy egg production all through cold winter months when eggs are highest; triple egg production; make slacker hens hustle; $5.00 profit from every hen in six winter months. These and many other money making poultry secrets are contained in Mr. Trafford's "1000 EGG HEN" system of poultry raising, one copy of which will be sent absolutely free to any reader of this paper who keeps six hens or more. Eggs should go to a dollar or more a dozen this winter. This means big profit to the poultry keeper who gets the eggs. Mr. Trafford tells how. If you keep chickens and want them to make money for you, cut out this ad and send it with your name and address to Henry Trafford, Suite 11035 Herald Bldg., Binghampton, N. Y., and a free copy of "The 1000 EGG HEN" will be sent by return mail. —Adv.

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In writing advertisers, be sure to say you saw their advertisement in The Washington Farmer.

When you write to advertisers, be sure to say that you saw their advertisement in this paper.

ORCHARD AND GARDEN

Owl and Hawk

Real Menace to Mice in Orchards

That hunters are making a grave mistake in shooting owls and hawks is the statement of John Finley of the United States biological survey, who is in Yakima county, Wash., conducting demonstrations in methods of combating orchard mice. He regards it as poor policy to kill off these enemies of the mice and thereby increase the chances for injury to the orchards. The loss the farmers may sustain through these birds preying on chickens amounts to very little and does not justify the killing of them, said Mr. Finley.

"We have come across quite a few instances where hawks and owls have been killed and left on the ground, indicating that they were merely killed for the fun of it," said Mr. Finley. "Evidently the hunters are in the habit of picking them off as they come along flying low. There is no sense in killing the owls or the hawks. Only two hawks in this region habitually prey upon chickens and they are rarely ever seen. These are the sharp-skinned hawk and the rough-leg hawk.

"Certain owls may have the habit of preying upon chickens, the same as some dogs will kill sheep, but we do not kill all the dogs because some of them have the sheep-killing habit.

"That owls devour a great many mice, we have abundant evidence to prove. It is not uncommon to find as many as 1000 skulls of mice under one perch affected by an owl. I certainly would suggest to hunters and to farmers that they desist from killing owls and hawks, as the depredations which they make on flocks of chickens is so slight as to be of no consequence as compared with the damage that mice do in orchards."

Wintering Bees

By H. A. SCULLEN.

Shall I pack my bees this winter? This is a question many beekeepers are seriously asking after suffering a heavy loss the past winter. No one will doubt that the bees will come through the winter stronger and with less consumption of honey when some protective covering is used. But is the gain enough to pay for the labor and cost of materials? Judging from the testimony of those who have consistently packed for several years we must say it does pay.

The writer is trying out two methods on his personal colonies and the college apiary, using the Williams packing case, such as has been used by a number of beekeepers in the Portland district—a light-weight, one-colony packing case made of cedar.

A similar case has been used by a successful beekeeper of Clarke county, Wash., for many years. It is essential that any packing case used on the west side of the state be water-tight. When painted and well made these cases should last 15 years or even longer. Not counting labor, the individual case will cost little less than 20 cents per year per colony, assuming that it can be used for 10 years or more.

Another method being used by the writer is to wrap the colonies individually with tar paper, allowing enough space between the paper and hives for one inch of dry planer shavings. One roll, costing about $1.60 locally, will wrap an average of 14 colonies at a cost per colony of between 10 and 15 cents. Two men working together can wrap about 10 colonies in an hour. The method followed is similar to the one described by Demuth in Gleanings in the October issue for 1921, page 616, the only difference being that two-inch strips are not used around the bottom. The paper is tacked to the bottom boards, using lath to hold it.

The importance of bringing the colony through the winter strong in order to be better able to hold in check European foul brood can not be overemphasized.

A second essential factor is to see that the bees go into winter with sufficient stores. Remember that in this milder climate more stores are consumed than in colder sections where there are fewer days warm enough for flight. Fifty pounds is not too much to aim at for a winter supply. Some beekeepers have followed with success the practice of feeding 10 pounds of good sugar sirup to every colony, whether it is short of stores or not, about the time brood rearing stops in the fall. This sirup is then consumed by the bees during the winter and practically all of the honey remains for spring brood rearing.

A third condition necessary for good wintering is a large force of young bees. Since it is now too late to build up a colony weak in young bees, the next best thing is to winter two weak colonies together in one hive with a screen partition between.

Storage of Vegetables

Some vegetables must be kept cool and moist, others warm and dry. Professor W. E. Loomis of the department of vegetable gardening of the New York State College of Agriculture, summarizes storage requirements for vegetables as follows:

All root crops and celery—Cool and moist.

Potatoes—Cool and moderately dry.

Onions—Cool and dry.

Squash and sweet potatoes—Warm and dry.

The professor adds:

"There are three classes of injury that must be guarded against; mechanical injury, disease and overmaturity. Vegetables to be stored should be carefully handled to avoid bruising and should be given such protection from freezing and drying as the nature of the product demands. Diseases are favored by high temperatures and moist conditions. The stored vegetables should therefore be kept dry and cool. Overmaturity is best seen in fruits, but is also a cause of loss in vegetables, particularly cabbage, celery and similar crops. Vegetables first lose in quality and then break down and rot. Low temperatures and proper ventilation are the remedy."

TREATING THE FOUL BROOD.

A new method of treating foul brood is being tried out at Elma, Wash., by W. L. Cox, who has had much experience with bees. The treatment consists of a sodium hypofloride spray which is applied hot to the brood combs after caging the queen. The same chemical is fed to the bees in a sugar syrup and promises to be a good means of combating the disease.



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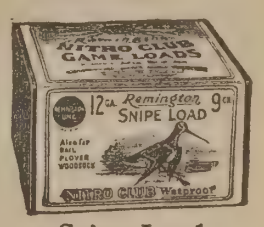
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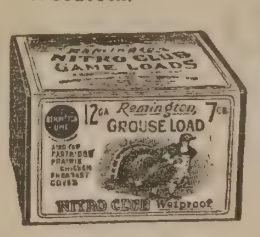
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(Continued from page eleven.)

old—1, Oregon Agricultural College on Cacapon Major Douglas; 2, Domes on Domes' Masterstroke; 3, Van Tassell on Wenatchee Robin; 4, Russell Catlin, Salem, Ore., on Catlin's Robinhood. Senior yearling—1, Catlin on Wenatchee Peter Pan (junior and grand champion); 2 and 3, Oregon Agricultural College on Oregon Peter Pan Q and Oregon Peter Pan L; 4, Domes on Aloha Boy. Junior yearling—1, Van Tassell on Peter Pan's Choice of Wenatchee; 2, Domes on Sadie Boy. Senior calf—1, State College of Washington on Chinook Cavalier Karton; 2, Van Tassell on General Peter Pan of Wenatchee; 3, Earlcrest Stock Farm on Earlcrest Bruce; 4 and 5, Oregon Agricultural College on Oregon Peter Pan W, and Oregon Peter Pan V. Junior calf—1, Oregon Agricultural College on Oregon Major Douglas B; 2 and 5, Domes on Peter Panie and Billie Boy; 3, Wilford J. and Alton F. Domes, McCoy, Ore., on Shorty; 4, Van Tassell on Wenatchee Prince Robin; 6, Catlin on unnamed calf.

Females: Five years or over—1, Earlcrest Stock Farm on Bruce Belle of Wenatchee; 2, 4, 6, 7 and 8, Van Tassell on Stewart Girl of Wenatchee, Glengary's Barcheski of Waikiki, White Muriel of South Farm, Glengary's Beauty of Waikiki, and Lady Stewart of Menie; 3, Catlin on Triune's Model of C. H. A. F.; 5, Domes on Fondula Girl of C. H. A. F. Four-year-olds—1, Catlin on Mearn's Juliaetta; 2, 3 and 6, Earlcrest Stock Farm on Ester Marea Sentinel's Gem of Meadow Brook and Sentinel's Flora of Meadow Brook; 4, Domes on Dolly Edgewater; 5, State College of Washington on Chinook Peter Pan Elsie. Three-year-olds—1, Oregon Agricultural College on Oregon Panetta K (senior and grand champion); 2, Earlcrest Stock Farm on Bruce Belle of Wenatchee 2d; 3, Domes on Ben Hur Sadie Netherhall. Two-year-olds—1 and 3, Van Tassell on Empress Lady of Wenatchee and Lady Bruce of Wenatchee 4th; 2, Domes on Happy Daisy; 4, Oregon Agricultural College on Oregon Panetta Q; 5, Catlin on Rena Mary Lisetta. Senior yearling—1, 2 and 3, Van Tassell on Wenatchee Blossom (junior champion), Betty Bruce of Wenatchee and Stewart Lassie of Wenatchee; 4, 6 and 7, Earlcrest Stock Farm on Bruce Belle of Wenatchee 4th, Earlcrest Flora Carston and Earlcrest Gresham Belle; 5 and 9, Domes on Miss Peter Pan of C. H. A. F. and Sylvia of C. H. A. F.; 8, Oregon Agricultural College on Oregon Panetta R. Junior Yearling—1 and 2, Domes on Ada of C. H. A. F. and Stella of C. H. A. F.; 3 and 4, Oregon Agricultural College on Oregon Panetta X and Oregon Panetta Y. Senior calf—1 and 2, Van Tassell on Ellen Scott of Wenatchee and Wenatchee Snowball; 3 and 7, Domes on Dulla of C. H. A. F. and Beauty of C. H. A. F.; 4 and 8, Oregon Agricultural College on Oregon Rena Douglas E. and Oregon Rena Douglas C.; 5, State College of Washington on Chinook Cavalier Elsie; 6, 9 and 10, Earlcrest Stock Farm on Earlcrest Pet Carston, Earlcrest Ester Marea and Earlcrest Euphemia's Gem. Junior calf—1 and 3, Oregon Agricultural College on Oregon Rena Douglas F. and Oregon Rena Douglas G.; 2 and 4, Van Tassell on Wenatchee Sally and Wenatchee Clover; 5, Earlcrest Stock Farm on Earlcrest White Lady; 6 and 7, Domes on Bessie Belle and Daisy Belle.

Cow with yearly record begun at five years or over—1, Earlcrest Stock Farm on Bruce Belle of Wenatchee; 2 and 3, Van Tassell on Stewart Girl of Wenatchee and Lady Stewart of Menie. Cow with official record begun under five years—1, Oregon Agricultural College on Oregon Panetta K.; 2, State College of Washington on Chinook Peter Pan Elsie; 3 and 4, Van Tassell on Glengary's Barcheski of Waikiki and White Muriel of South Farm; 5 and 6, Earlcrest Stock Farm on Bruce Belle of Wenatchee 2d and Ester Marea. Advanced registry cow, shown with two progeny owned by exhibitor—1, Van Tassell on Lady Stewart of Menie; 2, Earlcrest Stock Farm on Bruce Belle of Wenatchee.

Exhibitors herd—1 and 3, Van Tassell; 2, Earlcrest Stock Farm; 4, Oregon Agricultural College; 5, Domes. Young herd—1, Van Tassell; 2, Oregon Agricultural College; 3, Earlcrest Stock Farm; 4 and 5, Domes. Calf herd—1, Van Tassell; 2, Oregon Agricultural College; 3, Domes; 4, Earlcrest Stock Farm. Dairy herd of five cows in milk—1, Van Tassell; 2, Earlcrest Stock Farm; 3, Domes. Get of sire—1 and 2, Van Tassell; 3 and 4, Oregon Agricultural College; 5, Earlcrest Stock Farm; 6, Domes. Produce of cow—1, Oregon Agricultural College; 2, 3 and 5, Van Tassell; 4, State College of Washington; 6, 7 and 10, Earlcrest Stock Farm; 8 and 9, Domes.

Brown Swiss.

The enterprise which the Brown Swiss Cattle Breeders' association showed in offering prizes amounting to half the total offered by the exposition management, in order to secure a classification for this breed, was not matched by the western Brown Swiss breeders. One Montana breeder and three from Oregon entered 43 head, but their exhibits were hardly up to the standard of what this show should maintain. The classes were small and not of top quality, though the first prize 3-year-old and grand champion female was an outstanding individual.

Judge: Professor J. B. Fitch, Manhattan, Kan.

Bulls: Four years or over—1, Theodore Brugger & Son, Gresham, Ore., on Jessie's Lot (senior and grand champion); 2, W. O. Bohart, Bozeman, Mont., on Sunny Hill Bob. Three-year-olds—1, Bohart, on Mick Master's Second. Two-year-old—1 and 2, Bohart, on Bessie's Boy and Jura Master's Don. Senior yearling—1, Bohart, on Bob's Masterpiece; 2, John Boeckli, Linnton, Ore., on Albis. Junior yearling—1, Bohart, on Alice's Beauty (junior champion); 2, Brugger & Son, on Victor Granger. Senior calf—1, C. M. Lounsbury, Boring, Ore., on Billy Sanford; 2, Bohart, on Tessa M's Beauty; 3, Boeckli, on Weisenstein. Junior calf—1 and 2, Bohart, on Mascot's Dick and Bozeman 2d; 3, Brugger & Son, on Lad; 4 and 5, Boeckli, on Napf and Gurten.

Females: Five years or over—1, Bohart, on Nellie B. Cook; 2 and 3, Brugger & Son, on Ruby's Gem and Multnomah Lily; 4 and 5, Boeckli, on Sarnen and Patty B. Three-year-olds—1, Bohart, on Bob's Mascot (senior and grand champion); 2, Brugger & Son, on Rosebud B.; 3 and 4, Boeckli, on Limmat and Aare. Two-year-olds—1 and 2, Bohart, on Dick's Gellatin Girl and Bob's D. 2d; 3, Brugger & Son, on Lady Tarbelle B.; 4 and 5, Boeckli, on Rhone and Rhein. Senior yearling—1, Bohart, on Bob's Jura; 2, Brugger & Son, on Bella; 3, Boeckli, on Reuss. Junior yearling—1, Bohart, on M. A. Lucille (junior champion); 2, Brugger & Son, on Birdy Snowflake; 3, Boeckli, on Glass. Senior calf—1 and 2, Bohart, on Dick's Helena and Bob's Beauty; 3, Brugger & Son, on Rosy; 4 and 5, Boeckli, on Kander and Sarnen. Junior calf—1, Brugger & Son, on May Belle; 2 and 3, Bohart, on Beauty's Alice H. and Lucille 2d; 4, Brugger & Son, on Whity.

Cow with official yearly record begun at five years or over—1, Bohart, on Nellie B. Cook. Cow having official record begun under five years—1, Bohart, on Bob's Mascot.

Exhibitor's herd—1 and 2, Bohart; 3, Brugger & Son. Young herd—1, Bohart; 2, Brugger & Son; 3, Boeckli. Calf herd—1, Bohart. Dairy herd of five cows in milk—1, Bohart; 2, Boeckli. Get of sire—1 and 2, Bohart; 3, Brugger & Son; 4, Boeckli. Produce of cow—1 and 2, Bohart; 3 and 4, Brugger & Son; 5 and 6, Boeckli.

THE HORSE SHOW.

The draft horse show was not large—not as large as it ought to have been, for some revival of interest in the drafter is evident the country over. But it was large enough to make a good show, with competition enough to make it interesting from start to finish. While judging was done the first day of the show, before the crowds came, the number of people about the ring showed this interest. The horses shown were all worthy representatives of their breeds, and as the big stallions and blocky mares were lined up or put through their paces they showed as handsomely as any other department of the show.

Percherons.

With the exception of one stallion, the Percheron show was made by A. C. Ruby and D. F. Burge. The one stallion, shown by B. G. Boedigheimer, Mouton by name, made a place for himself in the show by winning senior and grand championship. He is a big horse of correct type, but had no easy time defeating Burge's 3-year-old, Careno, a black that is big and handsome, with plenty of bone and much quality. Ruby's senior champion mare, Lamaladrerie, is a big boned, handsome mare, but the real sensation of the show was the junior champion filly, Cassetta, that finally won grand championship. This is an under year colt, bred and shown by Burge. She is a filly of wonderful quality, of good size, hard, large bone, a fine head and scarcely a fault that can be found anywhere.

Judge: E. L. Potter, Corvallis, Ore.

Stallions: Eight years or over—1, B. G. Boe-

(Continued on page sixteen.)

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When the hairy coat of a mammal is densely set and soft and fine in texture, the name fur may be applied to the coat. The use of the fur to the animal is usually to give warmth and thus frequently it is found that the winter coat constitutes a much more valuable product than the summer one. A notable example is the weasel, whose winter coat, under the name of ermine, is one of the most costly of furs. For the same reason, as a general rule, the furs which are most prized are those which are obtained from mammals—as the bear and the arctic fox—inhabiting high latitudes, for it is in these that the coat is densest.

The importance of fur to the beaver is especially its power of throwing off water so as to prevent the chilling of the surface of the skin.

Fur is used both for the purposes of dress and, separated from the skin, for felting in the manufacture of hats. Rabbit fur is used largely for felting. Many of the furs used both for felting and for clothing are really the fine, woolly undergrowth of the skin, and in the unprepared skin are mixed with, or even covered by, a growth of coarser hair. When the hair is to be used for felting these coarser fibers must first be removed.

Many of the most important furs are derived from small animals of the weasel tribe, such as ermine, mink, sable and marten.

The fur trade is a prehistoric antiquity in Asia, while it first appeared in Europe about the sixth century, when sable skins were brought to Rome. Italian traders introduced Asiatic furs into western Europe, but for centuries their use was confined to persons of wealth and restricted by law. Royal personages reserved certain kinds of furs, as ermine, and nobles of various ranks of religious orders kept for themselves some other sorts. The opening of America to trappers and traders offered an apparently inexhaustible supply of excellent furs at steadily lessening prices, and the use of furs rapidly became general in all the varied forms of robes and garments now familiar.

The enormous amount of furs sent to Europe during the seventeenth and eighteenth centuries is almost beyond belief and at the same time constantly increasing supplies were furnished by Asia. The result was a general use and cheapness far greater than at present, when furs of the better sort have again become a luxury.

In recent years the United States has become the chief center of the fur industry of the world.

One of the curiosities of the fur trade is that many furs are sold under names that are not correct and the following is a list of the most common misdescriptions:

American sable is sold as "real Russian sable"; dyed fitch as "sable"; dyed goat as "bear" or "broadtail"; dyed marmot as "mink," "sable," or "skunk"; dyed mink as "sable"; dyed musquash as "mink" or "sable"; pulled and dyed musquash, pulled and dyed nutria and sheared and dyed rabbit as "seal," "electric seal," "Red River seal," and "Hudson seal"; pulled natural nutria as "beaver" and "otter"; sheared and dyed opossum as "beaver"; pulled and dyed otter as "seal"; dyed rabbit as "sable" or "French sable"; white rabbit as "ermine"; white dyed rabbit as "chinchilla"; dyed wallaby as "skunk"; white hare as "fox." In addition white hairs are inserted in foxes and sables to make "silver fox."

In the Markets

It is often said that the packers utilize everything but the squeal. But little besides moisture is lost in slaughtering and the variety of direct and indirect products which result is astounding.

From the bones obtained in the ordinary process of slaughter and in the preparation of boneless cuts, tallow, both edible and inedible; glue, bone meal and a variety of manufactured bone products such as buttons, knife handles, pipestems, tooth brush handles, combs, crochet needles and ornaments are made. The bone meal may be raw or steamed, and used for feed, fertilizer, in case hardening steel or as a filter in sugar refining.

The horns are used for combs, hairpins, hair and other ornaments, buttons, knife, cane and umbrella handles or for fertilizers. The outer shell of the hoof goes as far as possible for the same uses as horns. The inner portion yields neat's foot oil, used as a harness and shoe dressing, stearine and glue and fertilizer.

The hides and skins furnish all kinds of leather goods, automobile and furniture leather, shoes, harness, whips, beltings, bags, suit cases, footballs and drum heads.

Bristles and hair are used in making paint and scrub brushes, artist's brushes, curled hair for upholstering and plaster hair. Pulled wool goes into all manner of woolen goods. Wool as well as hides is usually sold to other companies for manufacture.

Intestinal fats and fat trimmings which are part of the offal are used in the production of soaps, oleomargarine, stearic acid, red, torpedo and heavy lubricating oils, illuminating oil, ointments, candles, cosmetics, polishing compounds and glycerine, either medicinal or explosive.

Meat scraps and blood are made into meal, feeding or fertilizer, tankage and blood meal.

From the intestines, containers for sausage, lard and snuff are obtained, tennis strings, ukelele, harp, violin, and other musical strings, drum snares, gold beater's skins, fancy bottle caps, and surgical ligatures. Ox gall is used in paints and dyes and by laundries and dry cleaners, as a dye fixing agent. Gallstones are used for ornaments.

Nearly a score of gland and other extracts are made for use in treating such maladies as goitre, rickets, mental backwardness, influenza and in obstetrics and other surgical cases. The gland extracts are pituitary, pineal, thyroid, parathyroid, thymus, pancreatin, suprarenalin, pepsin, spleen, uretic, avarian, corpus luteum, and mammary. Other medical preparations from animal tissues include kephalin, lecithin, thromboplastin and red bone marrow.

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Read the "Want Ad" page this week for good offers of all kinds.

Washington Livestock Ranks High

(Continued from page fourteen.)

dighelmer, Stayton, Ore., on Mouton (senior and grand champion); 2, D. F. Burge, Albany, Ore., on Casino; J. A. C. Ruby, Portland, Ore., on Chieftain. Four years and under eight—1, Burge, on Careno (reserve champion); 2 and 3, Ruby, on Forrest and Forrest King. Three-year-olds—1, A. R. Hunter, Island City, Ore., on Kroumir Jr.; 2, Ruby, on Rufus. Two-year-olds—1, Ruby, on Roscow. Yearlings—1, Ruby, on Dude (junior champion). Colt—1, Ruby, on Oregon.

Mares: Eight years or over—1 and 3, Ruby, on Lamaladrerie (senior and reserve champion) and Kossue; 2, Burge, on Coquette. Four years and under eight—1, 2, 3 and 7, Burge, on Gravette, Jujap, Grainetta and Mauvette; 4, 5 and 6, Ruby, on Diana, Norma and Ora. Three-year-olds—1, Burge, on unnamed; 2, Ruby, on Nora. Filly colt—1, Burge, on Casetta (junior and grand champion); 2 and 3 Ruby, on Kossue's Princess and Leona. Mare and foal—1, Burge, on Grainetta; 2 and 3, Ruby, on Kossue and Ora. Get of sire—1 and 2, Ruby. Produce of dam—1, Burge; 2 and 3, Ruby. Five animals owned by exhibitor—1, Ruby; 2, Burge.

Belgians.

Outside of the aged stallions, A. C. Ruby was the only exhibitor. While few in numbers, it was a thoroughly representative show, with good type from start to finish. Ruby won all but senior champion stallion, which went to Andrew Schwab on Gascon. The 2-year-old Iams, that was made grand champion, is an outstanding colt, with best of type as well as good size and heavy bone. Both female champions are good, but again in this case the junior animal is a wonderful representative of the big, blocky breed.

Judge: George Heyl, Washington, Ill.

Stallions: Eight years or over—1 and 2, A. C. Ruby, Portland, on Nicephone and De Jonkherr. Four years and under eight—1, Andrew Schab, Aumsville, Ore., on Gascon (senior and reserve champion); 2, George Macha, Boring, Ore., on Governor; 3, J. J. Frey, Dallas, Ore., on Lewis. Three-year-olds—1, Ruby, on Indicator. Two-year-olds—1 and 2, Ruby, on Iams (junior and grand champion) and Horace. Yearlings—1, Ruby, on Royal Joe. Colts—1, Ruby, on Buster R.

Mares: Eight years or over—1, Ruby, on Ada W. Four years and under eight—1 and 2, Ruby, on Christabel (senior and grand champion) and Della. Two-year-olds—1, Ruby, on Duchess (junior and reserve champion). Colts—1, Ruby, on Ada. Mare and foal—1 and 2, Ruby, on Ada W. and Christabel. Get of sire—1 and 2, Ruby. Produce of dam—1 and 2, Ruby. Five animals owned by exhibitor—1, Ruby.

Shires.

More competition developed in the Shire classes, probably, than any other of the draft horses, although the show was small. Ruby won senior and grand champion and junior champion also, while A. R. Hunter has the reserve champion in a 3-year-old. Ruby won the senior and grand championship on mare as well, and W. R. Ledbetter was given reserve championship on a mare in the aged class.

Judge: E. L. Potter of Corvallis, Ore.

Stallions: Eight years or over—1 and 3, A. C. Ruby, Portland, Ore., on George B. (Senior and grand champion) and Major; 2, W. R. Ledbetter, on Wilson Idol. Four years and under eight—1 and 3, Ruby, on Durand and Mountain King; 2, Dick Carranga. Three-year-olds—1, Hunter, on Fairfield King (reserve champion). Colts—1, Ruby, on Royal George (junior champion).

Mares: Eight years or over—1, Ledbetter, on Osco Princess. Four years and under eight—1 and 3 Ruby, on Lady Silver (senior and grand champion) and Royal Babe Surprise; 2, Ledbetter, on Fairfield's Exilma (reserve champion). Mare and foal—1, Ruby, on Lady Silver. Produce of dam—1 and 2, Ruby. Five animals owned by exhibitor—1, Ruby.

Clydesdales.

Like the other breeds, the Clydesdales show was not large, but of choice quality. Robert C. McCroskey of Garfield, Wash., and the Dominion experimental farm of British Columbia made practically the entire exhibit. McCroskey had the larger exhibit and a very representative lot of entries, but the Dominion farm won three of the championships.

Judge: George Heyl, Washington, Ill.

Stallions: Eight years or over—1, H. S. Currie, Steveston, B. C., on Edward Garnet (senior and grand champion); 2, R. C. McCroskey, Garfield, Wash., on Hope's Pride. Three-year-olds—1, McCroskey, on Meg's Chief. Two-year-olds—1, Currie, on Adventure. Yearlings—1, Dominion Experimental Farm, Agassiz, B. C., on Topline Buchlyvie (junior champion); 2, Currie, on Drumburle's Best; 3, McCroskey, on Prince. Colts—1 and 2, Dominion Experimental Farm, on Topline Cross and Scotland's Topline.

Mares: Eight years or over—1, McCroskey, on Colony Nancy. Four years and under eight—1, 3 and 4, McCroskey, on Lady Ramsay 2d, June and Fairholme Meg; 2, Dominion Farm, on Doune Lodge Bell Heather. Three-year-olds—1, Dominion Farm, on Melita Pride (senior and grand champion). Two-year-olds—1 and 2, McCroskey, on Garfield Bell and Bonnie Brae Jean. Yearlings—1, McCroskey, on Lady May (junior champion); 2, Dominion Farm, on Topline Chosen. Colts—1 and 2, McCroskey, on Bonnie Brae Topsy and Bonnie Brae Gem. Mare and foal—1, Dominion Farm, on Doune Lodge Nell Heather; 2 and 3, McCroskey, on Maid's Darling and Fairholme Meg.

Get of sire—1 and 3, McCroskey; 2, Dominion Farm. Produce of dam—1 and 2, McCroskey; 3, Dominion Farm. Five animals owned by exhibitor—1, Dominion Farm; 2, McCroskey.

THE JACK SHOW.

A representative lot of big Kentucky jacks was shown by two breeders. These "Missouri canaries" sang very little and their mild manners harmonized with their quietude. They were the object of fully their share of interest and added to the show.

Four years or over—1, A. C. Ruby, Portland, Ore., on Captain Hardison (senior and grand champion); 2, George Macha, Boring, Ore., on Allen Robinson (reserve champion). Three-year-olds—1, Ruby, on Joe Clark. Two-year-olds—1, Ruby, on Sam (junior champion). Yearlings—1, Ruby, on Harold; 2, Macha, on Orphan Boy. Colts—1, Ruby, on Rigg's Boy. Produce of dam—1 and 2, Ruby. Five jacks—1, Ruby.

Willis Sale Holds Spotlight

When Sammamish Topsy, the high-record old Guernsey cow of the Park Weed Willis herd at Redmond, died on the fair circuit a few weeks ago, she little dreamed that before Thanksgiving her children and grandchildren would be dispersed to the four corners of the Pacific northwest. But such is the case, and the sale that will scatter them is the leading event in Guernsey circles next week. The entire herd of Orchard Hill farm, including 19 direct offspring of the great old cow, will go at public auction on the farm Wednesday, November 22, Dr. Willis being compelled to devote his entire time to his medical and surgical practice in Seattle. The farm is but a few miles out of Seattle, and special arrangements have been made to carry the people who will attend by stage and other means.

Farmers' Want Ads

AGENTS WANTED 9

SELL TREES AND PLANTS FOR US. STOCK reliable and in good assortment. Contract upon request. Write today. Capital City Nursery company, 426 Oregon bldg., Salem, Ore.

FRESH FOOD PRODUCTS 51-1

PRUNES—LEIGHTON ITALIAN EXCELS ALL other varieties for profit; 40 per cent larger than Italian; 25 per cent more sugar; tests 40 per cent dried. General line of other stock. Lafayette Nursery Co., Lafayette, Ore.

CHOICEST YAKIMA VALLEY HONEY. 1 60-lb. can, $6.50; 2, $12.75; 6 10-lb. pails, $7.50; 12 5s, $8; 24 2½s, $8.50; 12 2½s, $4.50. Discount five-case orders, 10 per cent. Wm. R. Sires, Wapato, Wash.

"HONEY BRAND" HONEY — ALFALFA, sweet clover product; pure, light, thick, good flavored; gives satisfaction wherever used; 1 60-lb. can, $6.50, two for $12.75. Write for circular and prices in pails. Oliver Sires, Wapato, Wash.

POPULAR BRAND HAPPY HOME HONEY—One 60-lb. can, $6.50; two cans, $12.75; six 10-lb. pails, $7.50; comb honey prices on request. H. N. Paul, Mabton, Wash.

FRESH FOOD PRODUCTS (Continued) 51-1

SIRES' PURE YAKIMA HONEY, BEST PRODUCED from alfalfa and sweet clover; 60-lb. can, $6.75; two for $13.20; six 10-lb. pails, $7.20; twelve 5-lb. pails, $7.80; 60-lb. can, insured, parcel post to second zone, $7.50. Theodore Sires, Route 4, Yakima, Wash.

NEW HONEY, FINE QUALITY ALFALFA, sweet clover; 60-lb. can prepaid, second zone, $7.29; two, $12.75; not prepaid; 3 10-lb. pails, prepaid, second zone, $4.25. Harry Fisher, Prosser, Wash.

NEW CROP ALFALFA-SWEET CLOVER honey; 60-lb. can, $5; two cans, $9.50, f. o. b. Rigby. Heckman & Larsen Honey Co., Rigby, Idaho. Quality guaranteed.

EXTRACTED HONEY—ONE 60-LB. CAN, $6.50; two 60-lb. cans, $12.75, collect; three No. 10 pails, prepaid, third zone, $5. Wells D. Rose, Sunnyside, Wash.

3-POUND BOX ABSOLUTELY BONELESS codfish; fine white, new catch fish, delivered by mail, $1. Coffin Fish Co., Seattle, Wash.

HONEY — FRESH ALFALFA-SWEET CLOVER honey; one 60-lb. can, $6.50; two cans, $12.75. A. L. Traner, Touchet, Wash.

GOLD MEDAL BRAND YAKIMA ALFALFA, sweet clover honey; 60-lb. can, $6.50; two cans, $12.75. C. W. Higgins, Wapato, Wash.

NEW HONEY—ALFALFA AND SWEET CLOVER; 1 60-lb. can, $6.50; two, $12.75; discount on large quantities. Ernest Sires, Yakima, Wn.

DELICIOUS NEW CLOVER HONEY. 120 pounds, $9.75; 30 pounds, $3.25; won't crystallize. Browne, Box 499, Twin Falls, Idaho.

NICE OREGON PRUNES DIRECT, $7.75 PER hundred. Special 12½-lb. sample bag prepaid $1.80. Kingwood Orchards, Salem, Ore.

HONEY—CLOVER AND ALFALFA. TWO sixty-pound cans, $9.50. J. M. Ruyts, Buhl, Idaho.

MERCHANDISE 59

ARMY GOODS—ARMY WOOL UNDERWEAR, $1.25 garment; heavy wool union suits, $2.25; heavy wool socks, 25c, $2.60 per dozen; army wool shirts, $2.95; regulation wool navy shirt, $2.75; moleskin breeches, button bottom, $3.65; new army blankets, $3.50. Walker's Army Store, 501 Trent, Spokane.

MISCELLANEOUS—FOR SALE 60

MANUFACTURER OF GARDEN TRACTOR now doing business in all parts of the world is offering extensive territory to dealers and agents. This is a sturdy, practical and proven power cultivator for truck farmers, nursery men, florists, home gardeners, suburbanites and small fruit growers. Big profits. Unlimited field. Machinery experience unnecessary. American Farm Machinery Co., 2538 University ave., S. E., Minneapolis, Minn.

MISCELLANEOUS—FOR SALE (Continued) 60

SASH AND DOORS—O. B. WILLIAMS CO., 1943 First ave. So., Seattle. Chicken house sash, 20" wide by 25" high, 80c; a dozen different sizes in stock for immediate shipment. Skylights for chicken houses, 36"x40"; price, glazed, $2. This is the size recommended by the Western Washington experiment station. We carry them in stock for immediate shipment. Sash and doors for all purposes at lowest prices. All orders receive prompt attention. Our large illustrated catalog No. 35, showing full line of building material and built-in fixtures for the home, free on request. O. B. Williams Co. Established 1899.

TO INTRODUCE OUR THREE-YEAR-OLD TOBACCO, will sell 10 pounds "regular smoking," 95c; best weak smoking, $1.45; best smoking, $2.25; best Burley smoking, $2.95; medium chewing, $1.95; best chewing, $3.25; 3 pounds best Burley, $1; 100 fine cigars, $3.95. Pay when received. Pound sample prepaid, 30c. Satisfaction guaranteed. Catalog free. Kentucky Tobacco Co., Owensboro, Ky.

TOBACCO—THREE-YEAR-OLD KENTUCKY leaf. Pay for tobacco and postage when received, 3 lbs. chewing, $1; 4 lbs. smoking, $1; 7 lbs., No. 2 smoking, $1. Kentucky Tobacco Ass'n., Hawesville, Ky.

WALL BOARD—WRITE FOR SAMPLE OF Washington plaster wall board; won't warp, won't burn. Manufactured by Washington Building Products company, 6851 E. Marginal Way, Seattle, Wash.

HOMESPUN SMOKING TOBACCO, MILD and mellow; 10 lbs., $1.50; 20 lbs., $2.75; delivery guaranteed. We furnish free recipe for preparing. Smoking Tobacco Exchange, Sedalia, Ky.

CANE MOLASSES FED TO STOCK MAKES more milk, healthier animals, lower feed costs; cheaper than corn. Write Arthur A. Lewis & Co., distributors, 8151 Lincoln st., Spokane.

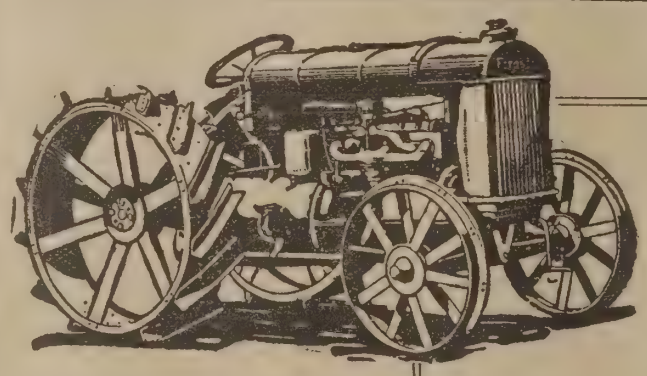
NATURAL LEAF TOBACCO, CHEWING, 5 lbs., $1.75; 10 lbs., $3; smoking, 5 pounds, $1.25; 10 pounds, $2. Send no money, pay when received. Tobacco Growers' Union, Paducah, Kentucky.

OUR FREE NEW FALL CATALOG OF GROceries and general merchandise will save you big money; a postal card brings it. Write today. Jordan Lawler company, Box 615T, Spokane.

NATURAL LEAF TOBACCO—CHEWING, 5 lbs., $1.75; 10 lbs., $3; 20 lbs., $5.25; smoking, 5 lbs., $1.25; 10 lbs., $2.25; 20 lbs., $4. Hickory Ridge Farms, Mayfield, Ky.

$1.50 STROPS KEEP YOUR RAZOR IN SHAPE without honing. Paul Lundgren, Port Angeles, Wash.

(Continued on the following page.)



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THRESHES
Grades Roads—Pumps Water
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Name ....

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MISCELLANEOUS— FOR SALE (Continued) 60

SACKS—SECOND-HAND GRAIN AND SPUD correctly sorted and graded; also pipe, new and second-hand, any size; standard roofing paper at a big saving; pumps, engines, belting, cables, etc. Alaska Junk Co., Inc., S120 Adams st., Spokane, Wash.

HOMESPUN TOBACCO — CHEWING, 5 pounds, $1.75; 10 pounds, $3; 20 pounds, $5; smoking, 5 pounds, $1.25; 10 pounds, $2; 20 pounds, $3.50. Send no money, pay when received. Cooperative Tobacco Growers, Paducah, Ky.

FREE—EVERYBODY CAN BUY GROCERIES wholesale. We accept orders of $10 and up. Write for our free list. Save dollars. People's Grocery Company "M." 701 Olive st., Seattle.

ALL WOOL KNITTING YARN FOR SALE, direct from manufacturer, at 95c, $1.35, $1.60 per lb.; postage paid on $5 orders. Free samples. H. A. Bartlett, Harmony, Maine.

BUY YOUR ALFALFA HAY AND "NETTED Gem" potatoes direct from grower; cabbage, one cent pound. Samuel Shockley, Outlook, Wn.

EASTERN BROOK TROUT, FISH AND EGGS, fry and fingerlings for sale. Echo Fish Farm, Fortine, Mont.

MISCELLANEOUS—Wanted. 63

EGGS, APPLES, HUCKLEBERRIES—WRITE us. Uncle's Delicious Pies, Inc.; capital stock $50,000. 554 Mississippi avenue, Portland.

STOVE REPAIRING 128

WRITE MYER RUBENS, SPOKANE, ABOUT stove repairs, welding broken parts, nickel plating.

FUR-BEARING ANIMALS 170

SILVER AND CROSS FOXES FOR SALE. William Rambo, 407 Sprague, Spokane.

PETS—Dogs, Birds, Etc. 171

WHEN YOU WANT A DOG, CANARY, PARrot, rabbits or a pet or pet stock supplies, cages, feeds or remedies, write. We are headquarters in the northwest. Routledge Bird, Pet & Animal Co., 174 Union avenue, North, Portland, Ore.

RABBITS and HARES 173

FOR SALE—NEW ZEALANDS FOR WINTER shows. Stud buck, 1st, Vancouver, B. C. Many other winners. Harvey Norris, Goldendale, Wash.

THE BEST RABBIT MAGAZINE PUBLISHED, copy 10c. Harvey Norris, Goldendale, Wash.

POULTRY 174

"HENACRES" BABY CHICKS FOR 1923. IT is time to plan your poultry work for next spring and we suggest that you write for our free illustrated catalog now. The booklet contains lots of information on poultry management, gives our feeding formulas, etc., besides describing our stock. "Henacres" Leghorns have made good all over the northwest, so you take no chances in buying them. Some one in your neighborhood knows us, ask him. We have already sold 40,000 chicks for 1923. "Henacres," Box A, Prosser, Wash.

PULLETS—1500 APRIL AND MAY HATCHED White Leghorn pullets for sale at attractive prices; hatched from thoroughbred Hollywood and Tancred strains; sired by cockerels 250 to 290 egg strains. We ship at three months of age and guarantee satisfaction or you may return the birds in 3 days. We can give you quality and service. Queen Hatchery, Seattle, Wash.

BUY YOUR BABY CHICKS FROM THE White hatchery, member of the Sonoma county farm bureau accredited hatcheries. All flocks approved by farm bureau inspector. We handle accredited "A" grade chicks and "AA" grade for the poultryman who wants something better. Write us at once for information, prices, etc. White Hatchery, Petaluma, Cal.

BABY CHICKS—TRAP NESTED NORTHERN grown White Leghorns, noted for great egg production; large eggs and vigor; average 225 eggs; $20 per 100. "Cleared $1400 first year on chicks." "In four months cleared $650 on 267 pullets," that's what they write. See catalog, free. Order early. Highmount Poultry Ranch, Empire bldg., Seattle, Wash.

WILLAMETTE VALLEY BARRED PLYmouth Rocks. Over fifteen hundred young birds in 1922; heavy laying strain, dark and beautifully barred; cock birds and cockerels for sale; only the very best allowed on the Dimick stock farm; bank references. F. C. Waldron, R. F. D. 2, Hubbard, Ore.

WHITE LEGHORN BABY CHIX FOR SUMmer and fall months from stock accredited by Sonoma county farm bureau. We guarantee safe arrival. Write for prices and literature. The Pioneer Hatchery, 422 Sixth street, Petaluma, Cal.

DAY-OLD PULLETS, GUARANTEED S. C. White Leghorn day-old pullets, also day-old broilers; established 1912. Eureka Hatchery, 628 D st., Petaluma, Cal. James K. Hirst, Prop. Refs. gladly furnished.

BABY CHICKS—OREGON'S BEST AT REAsonable prices. Leghorns, R. I. Reds, Anconas, Minorcas, Barred Rocks, White Rocks. Order early. Catalog free. C. N. Needham, Salem, Ore.

BABY CHICKS AND HATCHING EGGS—DR. Duganne's trap nested White Leghorns and M. J. McCaleb's Hollywood strain. Write for catalog prices to Mark A. Webster, Corvallis, Ore.

GET THE BEST PRICES FOR YOUR POULtry, eggs, turkeys, geese, veal and hogs. Write for quotations. Hotchkiss Produce Co., Spokane.

40 QUALITY R. I. RED COCKERELS, $5 and up. Write your wants. Can please you. J. Nonnenmacher, Route 3, Yakima, Wash.

SINGLE COMB ANCONAS, SHEPPARD'S strain; one-year-old hens, $1.50 each; cockerels, $3. R. P. Irwin, Tonasket, Wash.

1923 BABY CHIX FROM TANCRED AND EXperiment station strain White Leghorns. Wax's Poultry Farm, Kent, Wash.

S. C. BROWN LEGHORNS, COCKERELS, hens, pullets; none better; stock guaranteed. E. H. Rosenkranz, Colfax, Wash.

S. C. BUFF LEGHORNS, BREEDING STOCK; trios, five dollars; fine stock; order direct. M. H. Mann, Woods Cross, Utah.

PEDIGREED HOLLYWOOD STRAIN WHITE Leghorn cockerels, 5 months. W. Ottevanger, Sunnyside, Wash.

RANEY STRAIN RHODE ISLAND RED cockerels, direct. Write Mrs. Rominger, Underwood, Wash.

ALLEN'S ROCKS AND LEGHORNS WIN, LAY and pay. Write your wants. D. W. Allen, La Conner, Wash.

BABY CHICKS, THE OLD RELIABLE TRAPnested stock, $20 100. Yesterlaid Egg Ranch, Kent, Wash.

1949 COCKERELS, 49 VARIETIES; HATCHING eggs. Free book. Aye Bros., Blair, Neb. Box 14.

BARRED ROCK PULLETS, $1.25 EACH. MRS. Newell Reed, Clem, Ore.

FARMERS' WANT ADS

This is the farmers' "want," "sale" and "exchange" department for small advertisements of farmers, including live stock and poultry.

Advertising rates for ads running 1 to 3 times, 10c per word per insertion, with a special rate to Farmer subscribers, as follows: Ads running 4 to 12 times, 9c per word per insertion; ads running 13 times or more, 8c per word per insertion.

All commercial and land advertising, 10 cents per word each insertion. Open also to nonsubscribers.

In using these columns advertisers must observe: (1) No advertisements will be inserted for less than $1.00. (2) Every word, number and initial, including name and address, must be paid for. (3) New advertisements, changes of copy or cancellations must reach general office, Spokane, Wash., 10 days in advance of publication date. (4) Cash must accompany order.

Above rates include insertion in The Washington Farmer, The Idaho Farmer and The Oregon Farmer, which constitute the Pacific Northwest Farm Trio, 46 Review building, Spokane, Wash.

POULTRY (Continued) 174

PETALUMA ELECTRIC BROODERS ARE world beaters for raising chicks. No danger of fire, less care, better chicks. They grow faster, and are stronger and more vigorous than by any other plan. Our brooders give them "pep." Send for free literature. Petaluma Electric Incubator Co., Petaluma, Cal.

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PIKE'S PEAK OR BUST

By LEWIS B. MILLER

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CHAPTER TWENTY-ONE.

The Night Marauder Repulsed.

"Wasn't he even wounded?" asked Orlando.

"I doubt it. At any rate there wasn't a drop of blood on his trail, when we looked for it next morning. That wasn't at all surprising. A crowd of excited men seldom hit anything when they're all shooting together. The wonder is that in our excitement we didn't wound or kill some of our own party."

By this time the cow had ceased her bellowing, but she could be heard lowing, in a restless, uneasy way, every now and then. Frisk had retreated to the campfire, but his erect bristles could only mean that he was angry and suspicious of danger.

"There must have been a bear not far off," Sanders said. "Of course it might have been a bear without being a grizzly. Animals will make a great to-do over any big beast of prey. The scent of such a beast is dead sure to alarm farmyard stock."

"Could ha' been a mountain lion, too," Esau suggested.

"Whatever it was, the varmint came close enough to give Brindle a good scare," remarked Brindle's owner.

"What could we do if a grizzly was to attack us?" Givens wanted to know.

It was Cooper that answered: "If a grizzly charged down on us we could climb some of those trees out there, or maybe this rock. That is, if all of our rifles and six-shooters together couldn't stop the varmint. Bullets enough will kill one of the brutes. Not a doubt of that. Of course if a mountain lion came we'd have to fight it out with 'im on the ground. He could climb faster than any of us. But they're not so hard to put an end to. One good bullet in the right spot will lay any of them out cold."

"Wish—wish I had Brindle up here close to the fire," the cow's owner said. "Don't suppose either a grizzly or a mountain lion would dare to venture very near to a light. At least I've always heard they won't."

"Not close to a big, bright light. Not close to a great, crackling fire like this," Cooper answered. "But it's not recorded that a bear is as much afraid of mere firelight as many people imagine."

"Do you think it would be safe for me to take a blazing chunk and go out and bring the cow in?" inquired Orlando, addressing his question to Cooper.

"Ye-es. I rather reckon it would. But you needn't venture out there alone just now. Some of us or all of us can go with you. Boys, two or three of you grab up a chunk of fire apiece and we'll help Lando escort Mrs. Brindle up close to camp and safety. Too valuable an animal—altogether too valuable an animal, that old packhorse of ours is, for us to let her be made bear feed of."

"Fire's a bully thing to fight any kind of a big varmint with," Givens remarked, while moving round to where he could get hold of a good-sized, blazing stick.

And Holloway answered: "Fire's all right. Not much doubt about that. But here's a boy that proposes to take a chunk of it in one hand and a shooting iron in the other.

Soon four of the party, each armed with a gun, his six-shooter and a blazing pine stick, began to move along near the foot of the great rock, toward where the cow was tied. At this Frisk, regaining his lost courage, ran on ahead of them. Passing across the open ground, he disappeared into the thick woods and thicker darkness beyond.

Scarcely had the four men got well away from the campfire when they heard a series of sharp barks, followed by a roar of rage. And the roar was quickly followed by a terrified yelp. Somewhere out in the woods Frisk had come upon some lurking beast of prey. Either the beast, whatever it was, had been lingering all the time not far beyond the opening, uncertain about approaching, or he had gone away for a little while and Frisk had met him returning.

And not long after that meeting did the frightened dog linger out there. Uttering yelp after yelp, he came rushing back. And close behind him rushed that big beast of prey, pouring out roars of rage as he charged.

In his flight Frisk passed close by the cow. And Brindle, already in a state of panic from her previous fright, suddenly began to pour out terrified bellows as she turned and dashed away.

She was running toward the campfire. Perhaps she was fleeing to the men for protection. Just as probably, though, she was fleeing in that direction because that roaring beast of prey was approaching from the opposite side. Quickly she lunged against the lariat that held her. It was a strong rope, but the pine bush it was tied to was jerked up by the roots.

Here came the cow, bursting through the men with torches! And she ran bellowing on! But a few yards behind her charged the huge, ungainly form of a grizzly bear!

Cooper, from the moment Frisk had uttered that first frightened yelp, had known that some big beast of prey was coming. On seeing the great bear rushing out of the darkness he wanted to shoot, but could not with one hand.

Struck almost in the face by that fiery chunk, the brute started back, growling out a terrible roar of rage as he retreated.

But not far did he retreat. The blazing stick bounced away, and the bear was quickly charging his enemies again. Able now to use both hands, Cooper sent a shot at him from his rifle. Whether, in the semi-darkness and excitement, the bear was hit is uncertain. But he came on as fast as before.

Straightway all the men began a hasty retreat toward the campfire. But all were retreating backwards. And Cooper, quickly transferring his empty rifle to his left hand, jerked the six-shooter from the scabbard at his belt and began to use that. Shot after shot roared out, a stream of fire spouting from his wagon every time he pulled the trigger. But the grizzly still came on.

Others had also been popping away. Orlando had no gun, but, having one hand free, he had drawn his revolver and taken a hasty, excited shot at the bear.

But all their shooting failed to stop the big brute or even to check his speed, and the retreat promptly became a rout. Before turning to run, each hurled his stick at the onrushing beast. Torch after torch flew toward the grizzly's head. Each torch checked his speed for a few moments only, then he came on again—came charging and roaring straight toward the men. At once the rout became a panic.

Now, fully inspired with the belief that no weapon of theirs could stop that bullet-proof monster, the four men made a wild, terrified dash for their campfire. Abe Sanders and Jeff Givens, both of whom had remained by the fire, now cocked their guns and ran out to meet the onrushing tumult. But such was the rush that they were quickly swept back to where they had started from.

"Bullets won't check 'im, boys. Give 'im fire—feed 'im fire!" Cooper yelled to his partners.

Some were prompt to act upon the suggestions. Grabbing up blazing-ended chunks from the campfire, they hurled them with all their might. Others, having regained their lost courage when close to the fire, began to discharge shot after shot from guns or six-shooters.

Any person who has had experience at shooting in the dark knows how hard it is to hit anything. And it is even harder to hit any object off in the dark while the marksman is in the light. What real harm was done to the grizzly will never be known. Not very much, it seems safe to say. But between the flying bullets and the hurled firebrands, with the shouting of the men, the barking of the dog and the bellowing of the cow, the bear must have decided that he had stirred up a hornet's nest.

Though still growling and roaring all the time, the brute stopped, apparently bewildered and uncertain what to do. Perhaps that big, crackling campfire, now but a few yards ahead, also helped to frighten him. And when a blazing pine knot struck him full in the face, he promptly turned tail and fled. And his going was even faster than his coming.

When he had vanished into the darkness his assailants ceased to hurl fire and to shoot. In the silence that followed they could distinctly hear grunts of disgust and rage as the grizzly continued his retreat into the black forest.

"Well, boys, by hard scrabbling we finally drove 'im back!" Cooper remarked, as all six of them stood there in anxious, listening silence.

"That we did! That's just what we did! But it was the fire that stopped 'im rather than our firearms," Jess Holloway answered.

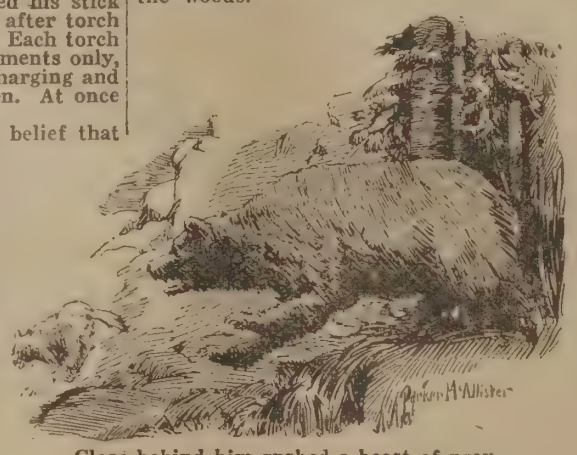
"That varmint does shorely despise bullets!" exclaimed Givens. "I'd hate—yes, I'd hate like blazes to be the lone man to tackle 'im. Wouldn't be a grease spot left of the poor chap."

"I'm afraid most of our bullets flew off harmlessly through the air—those that the tree trunks out yonder didn't stop. That ferocious varmint stirred up too big a rumpus among us and too much wild excitement for straight shooting," Sanders told his party.

Now that the grizzly had taken to flight, and did not seem likely to return, Orlando found himself growing anxious about another matter.

"I wonder—I'm wondering what has gone with old Brindle."

"Last I saw of that cow brute she was clattering by here at a mile a minute, and bellowing at every jump," Givens informed him. "Her stake rope and a pine brush were trailing behind her, and keeping up with the cow. It's doubtful if she stopped running till she was a mile or two out in the woods."



Close behind him rushed a beast of prey.

And the cow's owner said: "I do hope our old pack horse hasn't butted her head against a tree trunk and knocked her poor brains out. And even if she didn't do that, there's danger that some big booger like that grizzly will drag her down and make a meal of her before morning."

"Why, oh why, didn't you have your bell on her, Lando?" asked Holloway. "With that you could find her easily now.

"Of course! But I wasn't prophet enough to foresee that a big brute was going to come ripping and roaring in and make her break loose. I'm not in the habit of belling her when I tie her up."

Orlando was greatly worried over the loss of his cow. And the whole party were worried with him at the thought of losing their only pack animal. What they would do with all that load she had been carrying was more than any of them could even guess.

"Don't you suppose she'll find her way back to camp sooner or later, Lando?" asked Sanders.

"Who knows? She could do such a thing, of course. But the chances are she won't, so it seems to me. She's never been bad to wander away when I turned her loose. But I've always hobbled her, and that makes a difference. And tonight she's had such a terrible fright here I'm afraid she won't stop running till she's miles off in the woods. And then, even if she has a mind to come back, there's not more than one chance in a hundred that she can find the way. More likely, after her scare at this place, she'll be so disgusted with the neighborhood that she won't care to return to it. Which means that she'll wander on and on till beasts of prey put an end to her. And that, of course, won't be long."

"I'm of the opinion we may be able to hustle out and trail her when daylight comes. In that way we ought to overhaul her if she's still alive," Cooper said.

"Give us bare ground to trail her on, and I'm sure we could find her, or what the varmints leave of her," Sanders answered. "But on these pine needles, deep-bedded like they are, I've got my doubts. Yes, I've got my doubts. A redskin might follow the trail; but, ten to one, our poor eyesight isn't keen enough. We can try, though. And we will—of course we will."

After talking the matter over till all realized that, without the cow, they would have to abandon this whole prospecting trip, they decided not to wait till morning to get out and do some hunting for her. There were so many beasts of prey in these primeval wilds, a lone animal, and especially a farm-raised animal, could hardly survive many hours when unprotected.

"I'm thinkin' it's a good idy for us to follow her along the way she went tearin' off, and see what we can find," Esau said.

"We'll be 10 times more likely to stumble over another grizzly bear or over a mountain lion tonight than we will to bring up against any lost cow," declared Givens.

"Well, if we rustle up grizzly No. 2, or grizzly No. 1 the second time, there'll be trees a-plenty for us to shin up," Cooper answered. "And if we run afoul of a mountain lion, all of us together ought to be able to settle his hash. By common report they don't wear bullet-proof hides, like grizzlies do."

Now Sanders said: "One thing we clean forgot, boys. Or at least I forgot it. That cow's trailing a rope. And not only a rope, but a pine bush at the end of it. A cow's hoofs won't leave much sign in the pine needles; but a dragging rope and a bush ought to mark out and sweep out a pretty plain trail."

"Of course they ought. Plain enough for us to foller it, even by torch light," spoke out Esau. "And we'd better move fast, too. Won't do us much good to find a passle of wolf-gnawed bones.

"Indeed it won't," answered Holloway. "If we lose our old pack horse and milch cow, we're not likely ever to run across any other brute that will do double duty for us like she did."

(To Be Continued.)

Bits of Fun for Everyone

The Strategic Moment.

Citizen—That's my car. The thief is just fixing a blowout.

Policeman—All right, I'll go over and arrest him.

Citizen—Sh-h-h! Wait till he gets the tire pumped up.—The American Legion Weekly.

Silence.

Mrs. Light—What do you think, John? I peeped into the parlor and saw that rich Mr. Fatwallet sitting at the piano with May, and he's holding both her hands!"

Mr. Light—Oh, that's only a scheme of his to keep her from playing the piano.—Selected.

Where It Might Have Helped.

"Don't talk to me about colleges" scoffed the self-made man. "Look at me! Do you suppose I would have been any more successful than I am if I'd had a college education?"

"No," admitted the professor, "but you might have been less inclined to brag about it."—Judge.

He Found Them.

"When I was a little boy," sweetly piped the hard-boiled sergeant, "I had a set of wooden soldiers. One day I lost those soldiers, and I cried very much, but my mother said, 'Never mind, Johnny! Some day you will get your wooden soldiers back.' And, believe me, you bunch of wooden-headed blockheads, that day has come."—Judge.

Now Look at It.

"I won't wash my face!" said Dolly defiantly.

"Naughty, naughty," reproved grandmother. "When I was a little girl I always washed my face."

"Yes, and now look at it," exclaimed Dolly.—Selected.

The Drawback.

The Bride (inspecting the wedding gifts)—They're awfu' fine, Wullie.

The Bridegroom—Ay, but maist o' them are from folks no' yet marrit, Jean.—Punch, London.

Paddling and Padding.

Willie was being measured for his first made-to-order suit of clothes.

"Do you want your shoulders padded, my little man?" inquired the tailor.

"No," said Willie significantly; "pad the trousers."—Answers, London.

Why, It's Outrageous.

"Out after hours again, hey?" said the father.

"Only 10 minutes late," replied his son.

"Well, go at once to your room, sir, lock yourself in, and bring me the key. This thoughtlessness must be checked!"

Just Folks

As a boy of 9 or 10 I was on a visit to my grandfather's farm in New Hampshire. The "old family horse" on the farm was a mare a dozen years old. She was colored like a Holstein cow, only she was brown and white instead of black and white, being locally classed as a "Rocky mountain" animal.

This mare had lead a strenuous life, having been in harness since a 2-year-old colt. She was no pampered animal as to feed or grooming, although she was in tolerable condition. She had produced a numerous progeny of colts, some of them the pride of the neighborhood. Her temper was pretty well under control except when she had a colt at her side; then look out! But I didn't know that. My cousins on the farm did. So when grandfather came out and wanted the mare harnessed to go to town my cousins hesitated in starting out to bridle the mare, she being lose, feeding in the field with her small colt. I perked up and said I would catch her. I thought myself conversant with horses, as I was a pretty fair rider on a pony. I marched bravely up to the Rocky mountain mare, and just about the time I lifted the bridle the mare rose on her hind legs and with her open mouth gave me a slap on the side of my head, laying me flat on my back, and then deliberately walked over my body without touching me with her feet.

I do not know whether that was a good or bad experience. It certainly knocked a good-sized chunk of self-assurance out of my system and I have never regarded a horse in just the same light since.

Just when the big head in a boy or girl needs to be reduced is a problem which is not as easy of solution as it might at first seem. Experience, however, seems to take that problem out of the hands of parents, teachers and other mentors of youth now and then.

E.A.S.

FAMILY CIRCLE

ALICE BARLAND
EDITORIAL CONTRIBUTOR

Experience Letters

From Our Family Circle Women

Dear Family Circle: I send you this little poem to read and read again and think about. If anything has been omitted to round out a noble character I do not know what it is. A. W. B.

IF.

If you can keep your head when all about you
Are losing theirs and blaming it on you;
If you can trust yourself when all men doubt you
But make allowance for their doubting, too;
If you can wait and not be tired by waiting,
Of being lied about, don't deal in lies,
Or being hated don't give way to hating,
And yet don't look too good, nor talk too wise;

If you can dream—and not make dreams your master;
If you can think—and not make thoughts your aim,
If you can meet with Triumph and Disaster
And trust these two impostors just the same;
If you can bear to hear the truth you've spoken
Twisted by knaves to make a trap for fools,
Or watch the things you gave your life to, broken,
And stoop and build 'em up with worn-out tools;

If you can talk with crowds and keep your virtue,
Or walk with Kings—nor lose the common touch,
If neither foes nor loving friends can hurt you,
If all men count with you, but none too much;
If you can fill the unforgiving minute
With sixty seconds' worth of distance run,
Yours is the Earth and everything that's in it,
And—which is more—you'll be a Man, my son!

—Rudyard Kipling.

Dear Mrs. Barland: I have been reading THE FARMER for six years and I always turn to the Circle page first. I want to tell the sisters that I make stockings last twice as long by running the heels closely with silkaline before they are worn. I also mend or make over canvas gloves by ripping out the worn palms. Beginning at the seam where the thumb is sewed in rip it all around all the fingers and down to the wrist from the little finger, and then cut the palm out up the middle of the fore finger, then I press out all the seams and lay on new material I have for the purpose. I use heavy canton flannel, cutting the cloth a seam larger than the old one, and sew in the new palm on the sewing machine and in a few minutes I have as good as a new pair of gloves.

Idaho. MRS. M. T.

Dear Mrs. Barland: As a young mother of two little children under school age I am interested in Circle topics in general.

I wonder if the Circle will not be interested in making plans for a devotional service in the home for the Sunday school hour when living too far away from a regular Sunday school. My children dearly love the Sunday school, but since we can not take them the year around I have started a little service of our own.

I allow the children to take part in everything, but insist upon strict attention when the scripture lesson for the day is being read. We study about different Bible characters and use the sand table; we sing hymns and close with the Lord's prayer. It takes a great deal of patience to repeat a prayer, sentence by sentence, but the little tots are so earnest about it all that the effort is well repaid.

My husband isn't a church man, but this doesn't bar me from the responsibility of training the little folks so they shall grow up in the knowledge of God and learn to trust to him for guidance over the rough ways of life. I am aware that this is an age when many scoff at the these things, but Washington and other great men have been strong believers in religious training and the foundations of our government rest upon the good old gospel of Jesus Christ. MRS. M. B.

SELECTING THE RIGHT APPLE.

As a help in selecting the right apple at the right time, extension specialists recommend, for eating apples during November the Delicious, Gravenstein, Jonathan, King David, Grimes Golden and Winter Banana. Cooking apples for this month include the Jonathan, Grimes Golden, Gravenstein and King David.

Apples which are good to eat during December and January include: Delicious, Spitenburg, Jonathan, Grimes Golden, Winter Banana, White Pearmain, Stayman Winesap, Wagener, Rome Beauty and Ortley. When it comes to apple pies, dumplings or sauce, use the Jonathan, Spitzenburg, Rome, Wagener, Grimes Golden, Red Cheek or Ortley.

Family Circle Girls

Dear Mrs. Barland: I have just finished reading Tinnie's letter and I think it very fine for the girls to write and I think it would be nice if the girls were to write to each other.

I have been thinking of bobbing my hair, but have been advised not to do so as it is very long and thick. Do you think it helps hair to bob it?

Is it right to go with the same young man very long? I have been going with the same boy for almost a year, but have met another whom I like better. Is it right to quit going with the first one? Some say I am too young to go with boys, but I would have to stay home most of the time if I didn't go out with them. For my part, I think it all right to go out with boys if they behave themselves.

I am in high school but I don't care much about it. What do you think would be a good thing for me to take up? I like to sew and read. I make a good many of my own clothes. I don't like to cook, but I have a lot of it to do. I will soon be 17 years old.

Is it wrong to dance? "BILLIE."

My Dear "Billie": Don't bob your hair. You say it is long and heavy and therefore there is no good reason for bobbing it and the fashion has passed now anyway and will soon be ancient history. It was only a fad. If hair is short and thin bobbing is likely to help it, though it doesn't always do so.

There is no harm in going with the same boy all the time if both are satisfied, but since you have met another one whom you like better or think you do, it is perfectly proper for you to accept his attentions. That is your privilege and in fact is quite likely a wiser thing to do than to settle down at your age to the first boy you go out with.

The best advice I can give is that you stimulate your interest in high school and finish with credit. But if you have not the determination to do this I think if you like to sew dressmaking would be a good thing to take up. I will discuss dancing some other time. What do you girls think about it?

ALICE W. BARLAND.

Home Recipes

Ginger Cookies—One pint each of molasses and corn sirup, to this add 1 level tablespoonful of soda and ½ cup of butter or a mixture of lard and butter, 1 tablespoonful of ginger (level). Mix thoroughly and set aside, then beat the yolks of three eggs well, add 3-4 cup of sour milk and 1 level tablespoonful of soda and add to the sirup mixture and use flour enough to roll out and bake in a moderate oven.

When baked ice them with the following—Two and one-half cups of granulated sugar and 1 cup water, boil until it threads then pour over the beaten whites of 3 eggs. Take note that there are 2 level spoons of soda in these cookies. These are fine and the frosted cake delights the kiddies. MRS. T. A. W.

Deer Park, Wash.

Salad Dressing—One beaten egg, ½ cup vinegar, small lumps of butter, pepper, salt and mustard to taste. Put all over the fire, boil till it thickens, stirring to keep smooth and remove from fire to cool. It can be thinned with cream or milk or buttermilk or used without thinning.

MRS. A. M., Wash.

Chocolate Cream Fudge—Two cups light brown sugar, 1 cup thick cream, 1 teaspoon butter, 2 squares chocolate, or cocoa can be used. Let it cook till it will form a soft ball in cold water, stirring occasionally to keep from burning. Season with vanilla and pour over nut meats. It should be stirred till it is thick, but must be poured before it sets.

MRS. M. L. T., Wash.

Boston Roast—Press 1 pound well cooked kidney beans through meat grinder or coarse strainer. Add ½ pound grated cheese and bread crumbs to make a stiff mixture, season to taste with salt and pepper, bake in a moderate oven basting as necessary with hot fat and a little warm water. Serve with thick tomato sauce.

GENERAL ADVERTISING.

Color Your Butter

"Dandelion Butter Color" Gives That Golden June Shade and Costs Really Nothing. Read!

Before churning add one-half teaspoonful to each gallon of cream and out of your churn comes butter of Golden June shade to bring you top prices. "Dandelion Butter Color" costs nothing because each ounce used adds ounce of weight to butter. Large bottles cost only 35 cents at drug or grocery stores. Purely vegetable, harmless, meets all State and National food laws. Used for 50 years by all large creameries. Doesn't color the buttermilk. Tasteless.

Wells & Richardson Co., Burlington, Vt.

Had Your *Iron* Today?



Good November Food

For Men on Farms

The reading of newspapers and farm journals in easy chairs calls for different kinds of food than plowing days require.

Inactivity is particularly the foe of good health on the farm.

You need foods then that tend to do what exercise does during busy times.

Stewed Raisins Are Luscious and Effective.

Stewed raisins served with cream is a most delicious breakfast fruit-dish, and one that brings real winter benefits.

Eat them frequently when exercise is lacking. For raisins are 75 per cent fruit sugar in practically predigested form.

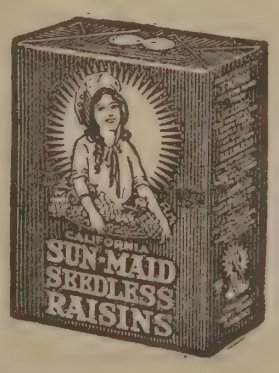
Stewed Raisins

One package Sun-Maid Raisins; 1 slice orange or lemon rind; 2 cups cold water.

Put raisins and water in saucepan and bring to boiling point. Add slice of orange or lemon and cook for 30 minutes. Sugar may be added, but it is not necessary. Stewed raisins being very rich should be served in small portions.

Sun-Maid Raisins should cost you no more than the following prices:

Seeded (in 15-oz. blue pkge.)—20c.
Seedless in 15-oz. red pkge.)—18c.
Seeded or Seedless (11 oz.) —15c.



Red package (Seedless), best for stewing.

And this sugar and the raisins skins make a mildly laxative food that's the most effective natural fruit-laxative we know.

Raisins furnish **food-iron** also—fine food for the blood.

You need but a tiny bit of iron daily, but that need is vital. Stewed raisins will help you get your daily portion of it in a most attractive way.

The fact is, you will like this dish so well that it will be your regular morning fruit-food the year round.

Try it now and note how delicious. Try it every morning for ten days as a test. Decide then if it's also a health food that you need.

Always ask for

Sun-Maid Raisins

Get delicious Sun-Maid Seedless Raisins from your grocer. Stew them as directed in the column to the left.

Mail coupon for valuable free book, "Sun-Maid Recipes," describing scores of other luscious raisin foods.

Sun-Maid Raisin Growers
Membership 13,000
Dept. B-3111, Fresno, California

CUT THIS OUT AND SEND IT

Sun-Maid Raisin Growers,
Dept. B-3111, Fresno, California.

Please send me copy of your free book, "Recipes with Raisins."

Name .....
Street .....
City ..... State .....

High Points in News of the Week

The election of last week brought to an end one of the most interesting campaigns in recent years, and resulted in numerous changes in congress and state offices. From a national point of view the election of C. C. Dill, democrat, over United States Senator Miles Poindexter, republican, of Washington, and the election of Elton Watkins, democrat, over Congressman C. N. McArthur, republican, of Oregon, are most interesting in these states. Throughout the country as a whole there was a democratic gain. The republican majority in the lower house of congress was reduced from 165 to about 15, according to latest reports. There was a considerable reduction of the republican control in the senate, but it is apparent that there are now 53 republican senators out of the total of 96. Among the interesting features is the election of Lynn J. Frazier of North Dakota to the United States senate. Frazier, former nonpartisan league governor, ran on the republican ticket.

Especially significant is the winning in Michigan of a democrat for senator over the republican candidate. The new senator was elected on a platform of opposition to the seating of Newberry of Michigan, and goes to the senate with the announced purpose of reopening the Newberry case with a view to unseating him. The opposition charges that Newberry obtained his election two years ago at the end of a campaign in which he spent $195,000 in campaign expenses, in violation of the corrupt practices act. Newberry's friends admit the spending of the money, but maintain that corruption did not enter into the campaign.

The liquor question was also prominent in the election last week. Anti-prohibition leaders claim victories, but the liquor law enforcement leaders declare that no appreciable gain has been made by the liquor forces in congress, notwithstanding a definite move for the election of senators and congressmen who would vote for the modification or repeal of the liquor enforcement laws. It is interesting to note that Congressman Volstead of Minnesota, author of the Volstead enforcement act, was defeated for reelection. Of interest also is the election of Edward I. Edwards, democrat and an avowed "wet," to the senate from New Jersey over Senator Frelinghuysen, republican and a "dry." On the other hand, California, the center of the grape industry in America, voted last week to make the prohibition amendment and the federal prohibition enforcement laws part of the state law of California.

Of special interest in the three Pacific northwestern states were the following election results:

Washington—Election of C. C. Dill over Senator Poindexter by nearly 5000 plurality; defeat of the 30-10 school bill; repeal of the poll tax; reelection of all five republican members of the lower house of congress; defeat of the "certificate of necessity" bill; defeat of the bill requiring voters to register their party affiliation and to vote in the primary of that party only; defeat of the constitutional amendment raising the salaries of members of the legislature.

Oregon—Election for governor of Walter Pierce of La Grande, democrat, over Governor Olcott, republican, by a majority of over 34,000; adoption of the compulsory school bill, the measure requiring that all children attend public school; defeat of the proposal that the city of Portland be permitted to raise $3,000,000 by tax levy for the 1927 world exposition; defeat of Congressman McArthur, republican, by Elton Hawkins, democrat; the reelection of Congressmen Sinnott and Hawley.

Idaho—Election of C. C. Moore, republican, for governor over H. F. Samuels, progressive, and Moses Alexander, democrat; reelection of both of Idaho's present congressmen; election to the legislature of a majority of members favoring the enactment of a state-wide primary law.

* * *

The interstate commerce commission last week denied the application of the railroad companies for permission to give lower rates to Pacific coast points, such as Seattle, Tacoma and Portland, than to interior points, such as Yakima, Spokane, Pendleton, Boise and Salt Lake, on freight originating east of the Rocky mountains or being shipped from the west to eastern points. This action follows a series of hearings by a representative of the commission during the last year and will result in the maintenance of rates to all western points on the mileage basis rather than on the coast-and-back basis. The application of the railroads was based on the old-time claim that water competition in shipments to and from Coast points necessitated lower railroad rates to such points than to interior points where water transportation was not available. The decision of the commission was based on the provision of the interstate commerce act, which provides that no charge for a short haul shall be greater than for a longer haul.

* * *

An earthquake of considerable power occurred somewhere in the Pacific ocean last Saturday, probably near the coast of Chile, where greater damage was done. Tidal waves, however, resulted in the Hawaiian islands and as far north on the American coast as Los Angeles. A considerable number of deaths resulted from the disturbance in Chile.

* * *

The United Stated court of claims has reconvened with a large calendar of important causes for the winter term. Actions involving approximately $350,000,000 arising out of the country's activities during the World war are pending and the influx of these cases has hardly begun. The ultimate aggregate of such claims is estimated by the attorney general at between $2,000,000,000 and $3,000,000,000. These actions are brought into the court by plaintiffs having claims against all departments, including actions for requisitioning of ships and railroads, transportation of troops, ammunition and supplies, infringement of patents for high explosives, submarine boats and torpedoes, wireless and radio apparatus, contracts for anti-aircraft engines and guns, military and naval supplies and ammunition, appropriation of camp sites and naval bases, together with contracts for manufacturing and acts of commandeering of almost endless diversity.

* * *

President Harding has issued a call for the opening of congress in a special session November 20. It is understood that he is especially anxious that this session take up the ship subsidy bill and enact it into law.

* * *

Armistice day was observed throughout the United States and in other allied countries November 11. A feature of it in this country was the formal placing of a wreath on the tomb of the "unknown soldier" by President Harding in the Arlington National cemetery.

* * *

Former President Woodrow Wilson appeared at his residence in Washington, D. C., on Armistice day and spoke for five minutes to a crowd of friends who had gathered to pay him honor. It was his third public appearance since he left the White House March 4, 1921.

* * *

In an Armistice day address in New York, General Pershing warned his hearers that this country must be constantly prepared for national defense. He declared that the situation in the Near East, brought about by the defeat of the Greeks by the Turks, was menacing to the peace of this country.

* * *

Former Premier Clemenceau of France sailed November 11 from Havre for the United States, where he will spend a few weeks with a view to bringing about a better understanding between this country and France. The former premier, who was at the helm of the French government during the war, is 82 years old.

* * *

The peace conference between the allies and Turkey will open at Lausanne on November 20, the object being to solve, if possible, problems resulting from Turkish aspirations for return to Europe.

* * *

A statue of former President Roosevelt was unveiled and dedicated in Portland last Saturday, Armistice day. Unable to be present in person, President Harding sent a personal message, which was read at the ceremony.

* * *

Andrew Bonar Law, the new British premier, at a recent meeting expressed a desire that influence be brought to bear on the United States to get this country to join the league of nations.

* * *

There is now pending before congress a resolution proposing a constitutional amendment to put an end to the issuance of tax-exempt securities. High government officials and members of congress express the desire that this resolution be acted upon as soon as congress reconvenes for the short regular session in December. President Harding is understood to be giving the measure his personal support. It is argued that capital is seeking investment in tax-free securities in ever increasing amounts, not only causing direct and large loss in taxation to both the federal and state governments, but tending to attract investment away from industrial enterprises that must bear taxes.

Potato Shows Grow in Interest

(Continued from page three.)

since the war has increased about 50 per cent, while the consumption of bread has decreased about as much, showing a clear substitute of potatoes for bread. Also, the use of potatoes as stock food has fallen to a very low figure, consequently reducing live stock production.

Commenting on these figures a writer in the Rural New Yorker says that the point of special interest to the American potato grower with a large surplus of potatoes, which occurs every two or three years, is the utilization of the crop for other purposes than human food. Even if the production of starch or industrial alcohol may be out of the question, it seems to him that the utilization of potatoes as stock feed in this country has never been fully appreciated. Fed either raw or cooked they furnish a succulence to either dairy cattle or pigs.

Inspect Seed Potatoes

Carl W. Grayson, Idaho, county agent, spent two days recently visiting with J. H. Rearden, assistant county agent leader, the plots of certified seed potatoes. The potatoes on the whole were found not to be very good, due to the severe season, and as fields none of them passed the second inspection. Mr. Rearden stated, however, that they were about as good as the average over this part of the state and with a favorable season next year they would probably come back to type. The quality of the spuds were good and very little disease was found. Most of the growers will not have any to sell, as they expect to plant all they have grown next season.

Mr. Rearden advised a few of the men who will have some to spare that they could get them certified by grading them to standard. When this is done the county agent will inspect the bags. If they are found to come up to the standard the sacks will be sealed and tagged.

In spite of the fact that the crop has not shown up very well this year, the men planting the good seed are well pleased with their venture and all made the statement that this seed has yielded many more marketable potatoes than their own seed, and they expect to plant an increased acreage next year. They appreciate the advisability of standardizing the product and the agent considers that the project has been a very good success, even under the adverse conditions under which they have worked this year.

Canned Milk Shortage

Not long ago there was a surplus of condensed and evaporated milk, which sold so slowly that condensers curtailed their outputs. Reduced supplies and a constant whittling away of the reserves have led to a much firmer market, with advances in both advertised and nonadvertised brands. One New York broker, to find sufficient supplies of current make, wired a number of his connections in various sections. One large packer of evaporated came back, saying: "We are forced to buy to cover our October commitments and consequently have nothing to offer." A buyer who covered the middle western producing sections says that it is next to impossible to buy now, with little prospect of improvement for another month. A maker with a monthly capacity of 100,000 cases in the middle west, says: "It was so dry and hot in September that we have nothing to offer." Another packer wires: "There is a temporary shortage here, as we are oversold for 30 to 40 days." "We will have no milk to offer for the balance of the calendar year," says still another.

Farm Business and Markets Outlook

(Continued from page five.)

Corn—No. 2 eastern yellow shipment, November, $34; December, $33; No. 3 eastern yellow, shipment November, $32.50; December, $32.50.

Mill run, November, December, $30.

WALLA WALLA, Nov. 11.—Bluestem and Bart, $1.18; club, $1.04; Turkey Red, 98c.

RITZVILLE, Wash., Nov. 11.—Bart, $1.32; red, $1.08; Fife, $1.04.

DAVENPORT, Wash., Nov. 11.—Bluestem, $1.28; Marcus, $1.05; Gold Coin, $1.05.

Hay and Feed Grain.

PORTLAND, Ore., Nov. 11.—Millfeed—Price f. o. b. mill. Mill run, ton lots, $32; middlings, $44; rolled barley, $39@41; rolled oats, $44; scratch feed, $46 per ton.

Corn—White, $40; cracked, $42 per ton.

Hay—Buying price, f. o. b. Portland: Alfalfa, $18.50@19 per ton; cheat, $18.50@19; oats and vetch, $21; clover, $19; valley timothy, $21; eastern Oregon timothy, $21@22.

SPOKANE, Nov. 11.—Wheat—Feed wheat, $42 ton. Oats—$42 per ton; steam rolled, $44. Corn—$40 per ton; cracked corn, $42 ton. Barley—$42; steam rolled, $44. Bran—$31 ton. Bran and shorts—$32 ton. Shorts—$34 ton.

General Produce.

PORTLAND, Ore., Nov. 11.—Butter—Cubes, extras, 43@44c lb.; prints, parchment wrapped, box lots, 48c; cartons, 49c. Butterfat, 48@49c, delivered Portland; station buying price, A grade, 46@48c.

Eggs—Buying price: Current receipts, pullets, 39c; case count, loss off, 45c; henneries, 48@50c dozen. Jobbing prices: Front street, candled ranch, 50@52c; selects, 53@54c; association selects, 55c; association firsts, 53c; association pullets, 45c.

Cheese—Tillamook triplets, price to jobbers, f. o. b. Tillamook, 30c; Young Americas, 31c; longhorns, 31c pound.

Poultry—Hens, 13@23c pound; springs, 16@20c; ducks, white, 20c; geese, 15@18c; turkeys, live, 30@32c; dressed, choice, 38c; No. 2, 33c.

Veal—Fancy, 11½@12c per pound.

Pork—Fancy, 14@14½c per pound.

General Produce.

SEATTLE, Nov. 8.—Eggs—Select local ranch, white shells, cases included, 50c per dozen; mixed colors, 40@50c per dozen; pullets, 37c per dozen; cases returned to shippers, 1c less.

Butterfat—F. o. b. Seattle: A grade, 50c per lb.; raw milk, $2.10 per cwt.

Poultry—Hens, 4½ lbs. and up, 23c per lb.; over 3½ and under 4½ lbs., 16c per lb.; 3 to 3½ lbs., 12c per lb.; do dry picked, 2c above live; broilers, under 2 lbs., 19c per lb.; old roosters, 11c per lb.; Belgian hares, 3½ lbs. and heavier, 11c per lb.; geese, fat, live, 18c per lb.; ducks, 3 lbs. and heavier, live, 18c per lb.; turkeys, fat, dry picked, 8 to 15 lbs., 35c per lb.; do live, fat, 10 to 15 lbs., 30c per lb.; squabs, large, $4.50 per dozen; pigeons, $2; guineas, $8 per dozen.

SPOKANE, Nov. 11.—Poultry, live weight—Hens, 4 lbs. and over, 17c; light hens, under 4 lbs., 12c; springs, all sizes, 16c; old roosters, 8c; ducks, 15c; geese, 15c.

Fresh ranch eggs—$10.50@12 case, according to quality.

Butterfat—46c a pound.

Cooperators Join Grain Exchange

Announcement has been made that the Northwest Wheat Growers, Associated, has secured a seat on the grain exchange of the Minneapolis Chamber of Commerce. The right to the use of the marketing facilities of the exchange was secured through a membership obtained by Fred L. Jeklin, Minneapolis sales agent.

"The Northwest Wheat Growers, Associated, of course, will not enter into speculative trading in any form," according to an announcement issued by General Manager Jewett. "The membership has been obtained only to facilitate actual selling of the wheat pooled by members of the state organizations.

"There are two distinct divisions of the grain exchange. One is the 'pit,' where speculators play their choices on the ups and downs of the market. The other is the establishment for actually selling wheat—long rows of tables upon which samples are placed for inspection by millers, exporters and foreign buyers. This is the part of the exchange to be made use of by the cooperative organization."

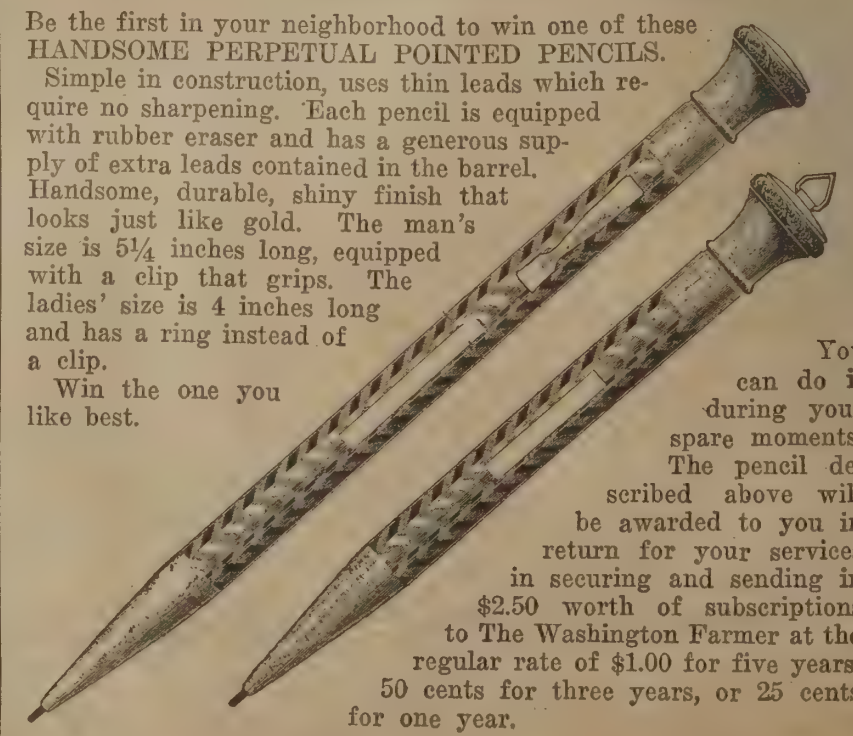
Officers of the association say that the seat was imperative if members were to get the best prices for their pooled wheat.

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Simple in construction, uses thin leads which require no sharpening. Each pencil is equipped with rubber eraser and has a generous supply of extra leads contained in the barrel. Handsome, durable, shiny finish that looks just like gold. The man's size is 5¼ inches long, equipped with a clip that grips. The ladies' size is 4 inches long and has a ring instead of a clip.

Win the one you like best.



You can do it during your spare moments. The pencil described above will be awarded to you in return for your services in securing and sending in $2.50 worth of subscriptions to The Washington Farmer at the regular rate of $1.00 for five years, 50 cents for three years, or 25 cents for one year.

Your Health

By Royal S. Copeland, M. D., F. A. C. S.

Covering the brain are certain supporting and protecting tissues called the "meninges." Like all other tissues of the body, inflammation may seat itself here. When it does the disease is called "meningitis."



Dr. Copeland.

Before there is actual inflammation there may be congestion for a considerable period. But unless this is controlled the actual inflammation occurs.

All brain disturbances have headache as an early symptom. In meningitis this is severe, almost agonizing. Neuralgia, here and there through the head, is another sign of this disease. There is great sensitiveness to noise. Sleep is disturbed on this account.

Stiffness of the muscles of the neck and often of other parts of the body is noted. Sometimes the head is drawn backward by the contracted muscles. The muscles of the abdomen are drawn inward. There may be twitching of the muscles here and there, and also convulsions.

There are various paralyses. One eye may turn outward or inward, due to a paralyzed muscle. The lid may droop. The side of the face may be paralyzed.

Grinding of the teeth, delirium, stupor and unconsciousness are other symptoms.

It is unusual for meningitis to be a primary disease. That is, it usually follows some other disease. For instance, it may complicate tuberculosis. But all the infections—like influenza, measles, typhoid, etc.—may have meningitis following. Bright's disease, the wasting diseases of children, and some forms of heart disease produce this disease.

Sunstroke and blows on the head may cause it.

There must be absolute quiet. Rest in bed in a cool and darkened room must be insisted upon.

An ice-pack to the head will help.

The family doctor will take charge of the medication and search out the cause of the difficulty.

In the Meat Department.

"Hogs are funny things," mused the assistant meat cutter as he whacked off some slices of bacon.

"As to which?" asked the head meat cutter.

"They have to be killed before they can be cured."

Latest High Class Patterns for the Home

Please order the patterns you desire at least two or three weeks before you wish to use them. Desiring to obtain the latest high-class patterns for its readers, THE FARMER has made arrangements to have them sent direct from the east, and under present mailing conditions it takes about that time for them to reach you.



4027. Lady's Dress. Cut in seven sizes: 36, 38, 40, 42, 44, 46 and 48 inches bust measure. A 38-inch size requires 6 3-4 yards of 40-inch material. The width of the skirt at the foot is about 2 yards. Price 10 cents.

4051. Misses' Dress. Cut in three sizes: 16, 18 and 20 years. An 18-year size requires 5 1-8 yards of 32-inch material. For trimming as illustrated 1 3-8 yards is required. Price 10 cents.

4176. Lady's Dress. Cut in six sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. A 38-inch size requires 5 1-4 yards of 40-inch material. The width at the foot is 2 1-2 yards. Price 10 cents.

3026. Girl's Gymnasium Suit. Cut in five sizes: 8, 10, 12, 14 and 16 years. It requires 3 3-4 yards of 27-inch material for the blouse, and 3 3-8 yards for the bloomers, for a 12-year size. Price 10 cents.

4182. Junior's Dress. Cut in three sizes: 12, 14 and 16 years. A 14-year size requires 3 3-4 yards of 40-inch material. Price 10 cents.

3953. Child's Dress. Cut in four sizes: 2, 4, 6 and 8 years. A 4-year size requires 3 1-4 yards of 27-inch material. Price 10 cents.

3815. Girl's Dress. Cut in four sizes: 8, 10, 12 and 14 years. A 12-year size requires 3 3-8 yards of 44-inch material. Price 10 cents.

3738. Lady's Apron. Cut in four sizes: Small, 34-36; medium, 38-40; large, 42-44; extra large, 46-48 inches bust measure. A medium size will require 2 7-8 yards of 36-inch material. Price 10 cents.

4179. Lady's House Dress. Cut in six sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. A 38-inch size requires 4 5-8 yards of 32-inch material. The width at the foot is 2 1-8 yard. Price 10 cents.

4194. Set of Bibs for Baby. Cut in one size. To make either style will require 5-8 yard of 36-inch material, this affords making the bibs in 3-ply. Price 10 cents.

4195. Set of Serviceable Bags. Cut in one size, medium. No. 1 will require 1-2 yard, No. 2 requires 1 1-4 yards, No. 3 requires 3-8 yard. Price 10 cents.

4064. Girl's Under Garment. Cut in six sizes: 2, 4, 6, 8, 10 and 12 years. A 6-year size requires 2 1-8 yards of 36-inch material. Price 10 cents.

Fashion Book Notice.

Send 12 cents in silver or stamps for our up-to-date fall and winter 1922-1923 book of fashions, showing color plates, and containing 500 designs of ladies', misses' and children's patterns, a concise and comprehensive article on dressmaking, also some points for the needle (illustrating 30 of the various, simple stitches), all valuable hints to the home dressmaker.

Please fill in this order and mail with remittance to:
PATTERN DEPT., PACIFIC NORTHWEST FARM TRIO, Spokane, Wash.

Enclosed find..... cents for which send me the following:

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Be sure to give the pattern number and the correct size.

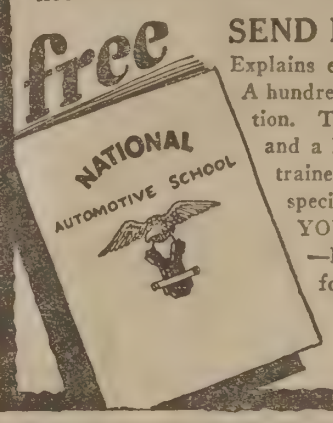
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Read the "Want Ad" page this week for good offers of all kinds.



This is the first time we have heard from Eva Lillian Hood for nearly two years. (We are glad to hear from you again). Eva Lillian is 11 years old. Her birthday is July. 13. She says Constantinople is a hard word to spell. Can you spell it? I-t.

Mildred Dazarn wants to join the Corner. (Come, Mildred—the more the merrier.) Mildred writes: "I am 9 years old and I am in the fifth A grade. I like my teacher. She is nice. I like the Corner. I also like THE FARMER. We have one cow and about 40 chickens and 105 ducks. Some are white and black." Mildred has three brothers. Her birthday is February 7.

Linnea Gord, a western Washington girl, writes us a short letter. She is 11. She attends the Lowell school and is in the sixth A grade. She has three teachers. Her birthday is February 11.

We have a letter from Grace Johnson of eastern Washington, Whitman county. Six children in the Johnson home attend school, two boys and four girls. When it rains brother drives, so they will not have to walk. Grace attended a program and pie social on Halloween. She will be 11 January 14, 1923.

The following is from an eastern Washington boy: "I live on an 880-acre farm in Douglas county. My name is Chester Brown. I was 11 years old June 16, 1922. I can drive an eight-horse team. Next spring I am going to help seed wheat. We have nine head of horses, one cow and a calf." Chester has read his friend's Junior Farmer and he likes the stories in it. (Welcome to our Corner, Chester.)

Birthday Greetings

THURSDAY, November 16—Ralph Dean Cain, 10 years old; Hazel Farley, 10; Bessie Wagner, 11.

FRIDAY, November 17—Allen Hutchins, 10 years old.

SUNDAY, November 19—Kirstine Hansen, 11 years old; Dorothy Harbour, 11; Cecil Jellison, 11; Kenneth McClelland, 11; David Slemp, 8.

MONDAY, November 20—Benn Everett Nesbitt, 11 years old; Jack Reid, 11; Loyd Van Wechel, 9.

TUESDAY, November 21—Ethel Leroy Bowen, 8 years old; Fern Hall, 11; Sylvia Lampi, 11; Edna Yochum, 10; Nelson Chrisman, 10.

WEDNESDAY, November 22—Harriett Cook, 11 years old; Laveryne Cox, 11; Kenneth Albert Leamer, 11; Hazel Schafer, 10.

BEDTIME STORIES

By THORNTON W. BURGESS.

BOWSER MEETS HIS MATCH.

Peter Rabbit and Digger the badger had become the best of friends. Every morning Peter stopped at Digger's new home to tell him the news of the Green Meadows, for Digger was so busy that he had little time to go about. Then Peter, who is a great gossip, would go about among his neighbors and tell them what a fine fellow Digger the badger is.

Now, on the green meadows and in the green forest no one is feared like Bowser



"You had better be afraid of me," growled a deep voice.

the hound. When his voice comes booming on the air all the little meadow and forest people, excepting those who fly, shiver and hide, all but Prickly Porky the porcupine, who knows his thousand little spears will protect him, and Unc' Billy Possum, who one time fooled Bowser and is sure that he can do it again. So when Peter Rabbit boasted about Digger the badger and what a big, strong fellow he is, Peter's neighbors shook their heads and said, "Wait until he meets Bowser the hound. Just wait. Then we will see."

Of course, Peter told Digger all about Bowser the hound and what a terrible fellow he is. Digger just laughed.

"I'm not afraid," said he.

"But you don't know him. You don't know what a great, big, fierce fellow he is," protested Peter. "You just better watch out!"

Then one day when jolly, round, red Mr. Sun was smiling his broadest, Bowser the hound took it into his head to go down the lone little path into the green meadows, and there he surprised Digger the badger out for a walk. Bowser stopped and pricked up his ears. He had never before seen such a queer fellow, and he didn't know just what to make of him, for Digger just stood still and grinned at him until he showed all his teeth.

"Bow, wow, wow!" shouted Bowser in his deepest voice that carried terror to all the little forest and meadow people.

Still Digger the badger just grinned. The hair stood up on Bowser's neck and back until he looked very fierce and savage.

"You had better be afraid of me," growled Bowser in a deep voice.

"But I'm not," said Digger the badger, "not the least little bit."

"Then I'll make you afraid," snarled Bowser, springing on Digger the badger.

Then followed such a fight as the green meadows had never seen. The merry little breezes spread the news of it, and soon all the little meadow and forest people gathered about in a great circle.

Over and over in the meadow grass rolled Bowser the hound and Digger the badger, snarling and growling and biting and clawing. Soon Bowser's smooth, glossy coat was torn and Digger's gray coat was in tatters.

Reddy Fox watched from a safe distance and grinned, "Now," thought Reddy, "this will be the end of Digger the badger, and I'm glad of it."

But it wasn't the end of Digger. Oh, my, no! The first thing they all knew Bowser the hound was actually running away. Yes, sir, with his tail between his legs Bowser the hound was hurrying up the lone little path, whimpering, with the tears rolling down his cheeks. The little meadow and forest people looked at each other. They could hardly believe their eyes. Then they gave a great shout and all hurried up to shake hands with Digger the badger and tell him what a wonderful fellow he was—all but Reddy Fox, who ground his teeth and sneaked off in disappointment.

(Copyrighted by T. W. Burgess.)

LETTERS WELCOMED BY AUNT NELLIE.

Among recent letters received by Aunt Nellie are those from cousins whose names follow. A few of these will be published each week in the regular edition of THE FARMER and others will appear from time to time in The Junior Farmer.

Hjordis Fjerlie, Edna Amend, F. E. Ragsdale, Anita M. Ebeling, Bessie Cyran, Verna Rowell, Edith Clifford, Inez Tillotson, Delma Lenora Powell, Bertha Mae Holderby, Gladys Hesner, Mabel Deeter, Bernice Dicken, Madge Black, Jessie Shaw, Thelma V. Helmen, Gilbert Gord, Allie Brunink, Leslie Smyth, Alma Abrahamson, Joyce Louise Wise, Catherine Maland, Violet Miller, Doris Irwin, Chester Brown, Inez Bennett, Linnea Gord, Grace Johnson, Eva Lillian Hood, Mildred Dazarn.



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To prove that the Conow Burner is exactly as represented, the manufacturers agree to send the outfit on 30 days' trial and let you see how it works before deciding to keep it. Write today for free literature, which explains all.

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WRITE OUR ADVERTISERS

It will pay you to write for free booklets and information offered in the advertising columns; and when you do write, please mention THE WASHINGTON FARMER.—Adv.



FARMERS' COOPERATIVE SUBSCRIPTION PLAN-

Another year of success for our farmers' cooperative subscription plan is the mark we have set for ourselves as we look back upon the remarkable record of achievement for this revolutionary method of securing and renewing subscriptions.

Farmers and fruitgrowers in all parts of the state have congratulated us upon the adoption of this plan, being interested in any effort designed to give the farmer the things he needs for less money by eliminating the expense of getting the articles into his hands.

We say to our friends, and again repeat; first of all see that your own subscription is paid well in advance, preferably sixty days before the expiration date on the wrapper. Secondly, let your neighbors know about our cooperative plan and when mailing your own order include theirs as well. Thirdly, if your own subscription is attended to for the year find us just one new subscriber.

By doing this the agent is eliminated and the farmer, fruitgrower and stock breeder gets the benefit of every penny which would ordinarily be paid out for the agent's salary, automobiles, gasoline, rigs, hotel and garage bills, railway fares, and incidental expenses.

If you are a believer in the principle of cooperation please do your part in making this cooperative plan a success in your neighborhood.

Nov. 16, 1922.

THE WASHINGTON FARMER,
Review Building, Spokane, Wash. .....1922.

I desire to take advantage of your Cooperative Plan in securing new and renewal subscriptions.

I enclose herewith $.....for a.....year subscription to THE WASHINGTON FARMER.

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Prevent disease and save feed by providing your hogs with clean, warm, comfortable quarters.

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In writing advertisers, be sure to say you saw their advertisement in The Washington Farmer.

Ayrshires Coming to Front

Not to be outdone, proportionately, by other breeds, northwest Ayrshires are coming to the front. The latest issue of the Ayrshire Digest credits a Washington State college cow, Willowmoor Ila, with producing more butterfat during the month of July than any other Ayrshire cow on official test in the entire country during that period. At the age of 7 years, this animal led the list of 89 mature cows (class A) that produced 50 pounds or more in July, with a monthly credit of 1369.1 pounds of milk and 80.09 pounds of fat. Her nearest competitor was a Pennsylvania cow that made 77.09 pounds. "Ila's" supremacy is the more remarkable in that she had been on test longer (217 days) than any other cow in the list except two, her total credit for the seven months' period being 10,065.3 pounds of milk and 523.24 of fat. Oregon Agricultural college also has a cow in the list, and there are several from this territory among the younger animals producing a proportionate amount of fat for their age and reported by the Digest.

Among 18 senior 4-year-olds that made 47.5 pounds or more, appear Chinook Peter Pan Bessie, owned by Washington State college, and Oregon Robinetta M., owned by Oregon Agricultural college. The former was second in the list with 65.91 pounds to her credit during her seventh month on test, and the latter was twelfth with 52.71 pounds, also in her seventh month. They are both "college bred" heifers.

Ester Marea, owned by Earlcrest Stock farm, and Oregon Robinetta R., owned by O. A. C., brings Oregon to the front among junior 4-year-olds, for they stood seventh and eighth, respectively, among 22 heifers that made 45 pounds in July. Their records were 56.85 and 56.83 pounds, the former in her sixth month on test and the latter in her third. E. W. Van Tassell of Wenatchee, Wash., had a heifer among nine senior 3-year-olds that made 42.5 pounds or more, another among 13 junior 3s that made 40 pounds, and still another among 32 senior 2s that made 37.5. His three animals produced 45.15, 50.86 and 53.34 pounds each, respectively. O. A. C.'s Oregon Panetta H. was among the honored junior 3s, and its Oregon Panetta J., a junior 2-year-old, lead the list of heifers of that age, which produced 35 pounds or more in July, her record being 54.48 pounds of fat from 1210.6 of milk in her tenth month on test. O. A. C. had another of its own breeding in the junior 2-year-old honor list, and W. S. C. had one also.

Willowmoor Ila was of course A. R. state leader in Washington for the month of July, and O. A. C.'s mature cow, Robinhood's College Douglas, was state leader for Oregon. The two states had 13 cows in the 50-pound list, out of 211 for the entire country, five herds and 35 cows being on test out of 124 herds and 993 cows for the United States.

Life Preservers

(Continued from page ten.)

and we know on certain farms in the middle west hog raising was discontinued because they would not thrive. The reasons are the basis for a few articles on hog diseases that will follow this introductory one.

The condition mentioned above has not been brought to my attention here in the west as yet, but it is coming as certainly as the present conditions are continued and, while hog raising has not become as great an industry here as in the corn belt, it is nevertheless important now and must become more important still as diversified farming becomes more prevalent. Now while there may be no farms where hog raising is impossible there certainly are farms where the industry is not as profitable as it should be. Where, instead of a thrifty litter, there is a runty, scaley bunch, you may rest assured that there is trouble at the source that is going to become more troublesome as time goes on and will result in an unprofitable venture until conditions surrounding the hog are changed. I think hogs can be raised profitably in any part of the United States, but the present system can not continue.

This is the first of a series of articles by Dr. Wegner that will, if the advice in them is heeded, add thousands of dollars to the incomes of the farms of this state.—Editor.

BUILDS UP SHORTHORN HERD.

W. G. Cordiner of Walla Walla, Wash., exhibited his show herd of Shorthorns at Union, Ore.; Walla Walla and Yakima, Wash., and Salem, Ore., this year, securing a fair share of the prizes at each place. At Union he received nine firsts, three seconds and two thirds. His white bull calf, Captain Radium, was junior champion at Walla Walla. Mr. Cordiner's herd sire, Hedgewood Hopeful, is by Rosewood Radium. He was bred by W. A. Forsyth & Son of Missouri. The bull is deep fleshed, has a fine, silky hide, is long bodied and has a typical Shorthorn head. A number of big matronly cows make up the breeding herd, all of straight Scotch breeding except two. Mr. Cordiner has three yearling heifers and three senior calves by Rosewood Radium and they constitute an excellent lot of young stock. Owing to the recent death of his brother, Mr. Cordiner may decide to disperse his entire herd.

Breeders' Department

Dispersal Sale of Registered Holsteins

consisting of 51 head of richly bred cows, heifers and bulls. Seven bulls, including my herd sire, from a 31-pound granddaughter of King Segis Pontiac Alcastra. The females include a daughter of Judge Segis, with a fine heifer calf, a valuable addition to any Holstein herd in the west. There are a number of fine females from dams with records up to 39 pounds. All young and in prime condition. Only two of the females are over three years old.

The entire herd is tuberculosis tested and sold on a 60-day retest. The best lot of Holsteins offered in Idaho in years. A rare opportunity to get foundation stock or improve your herd.

Sale will be held at my farm one-half mile east of the fairgrounds.

Filer, Idaho, November 21

Beginning promptly at 1 o'clock. Terms will be given. Kindly bring bank references. Send mail bids to A. L. Madland, clerk of sale, care of Earl O. Walter, Filer, Idaho.

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100 head for sale. A fine lot of sows and gilts, either bred or open. Also a number of choice young boars, ready for service. A lot of fall pigs. These are all of the big litter kind. Everything priced to sell. Write your wants and for prices.

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One year old. Both from splendid dams and sired by the eastern bred bull Lord Ireby, who carries seventy-five per cent of the blood of the most approved imported families. These bulls will make real herd sires as they are richly bred as well as being exceptional individuals that carry plenty of beef. Price $200 each. Guaranteed.

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Young boars and weaned pigs at farmers' prices, from prize winning stuff. My pigs please everywhere.

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Milking Shorthorns We are offering some choice bulls and heifers at bargain prices. Over 70 head in our herd, all registered.

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NOVEMBER 23, 1922. Washington's Great Farm Magazine EVERY THURSDAY

THE WASHINGTON FARMER

ESTABLISHED 1894

SPOKANE. SEATTLE.





What Have They to be Thankful For?

A Fundamental Decision in Freight Rate Regulation—Page 6

The Pacific International Show

Last week's issue contained the major report of the Pacific International Live Stock show at Portland. The following divisions were omitted owing to lack of space:

THE SWINE SHOW.

The swine show, while not equal in numbers to the great show of a year ago, was the best for breed type and all around quality the exposition has ever had, and probably the best that has even been assembled in the west. The fact that there were just a few empty pens, instead of an overcrowded barn, made the show much easier for visitors to see and far easier for exhibitors to get to and from the show ring. High quality was predominant in every breed shown and the most encouraging thing about the exhibit was the fact that there was scarcely a poor pig in the show. Champions from other shows gathered and competed, occasionally being defeated by new or unknown entries, but always competition was close and keen and the show was often spectacular in the great number of outstanding show animals

Duroc Jerseys.

Duroc Jerseys were second only to the Poland Chinas in numbers, and their average quality was almost if not quite as high. Oregon breeders, who were conspicuous by their absence last year, were well represented and, while they had competition from California and Idaho, they gave a good account of themselves. The sensational feature of the show was the winning of five of the six champions, two of them grand champions, by H. C. Compton of Boring, Ore. The fact that one boar and his offspring were the winners made the win still more sensational. This was the senior yearling, Red King Giant, that was senior and grand champion, and his son and daughter, junior champions, the latter grand champion as well. The senior champion sow, Wonder Madge, owned by J. E. Thorpe of Lockeford, Cal., is a great animal, with length of body, good feet and back. She had defeated the great sow, shown by Thousand Springs farm of Wendell, Idaho, as well as others, and some bystanders, without in any way criticising the great quality of the younger sow, would have given Madge premier honors.

Judge: W. L. McNutt, Ord, Neb.

Boars: Aged boar—1, Frank T. Busch, Johnson, Wash., on Busch's Royal Pathfinder; 2, J. E. Thorpe, Lockeford, Calif., on Prince You'll Do; 3, A. J. Hall, Troutdale, Ore., on Sensation I Am. Senior yearling—1, H. C. Compton, Boring, Ore., on Red King Giant (senior and grand champion); 2, Thorpe on King Sensation. Junior yearling—1, Thorpe, on Diamond Bar Sensation; 2, Thousand Springs Farm, Wendell, Idaho, on Sensation's Island King; 3, Busch on Idaho Pathmarker; 4, Oregon Agricultural college on Ona's Orion. Senior pig—1, L. S. Berry, Gaston, Ore., on Sheik Alhammed; 2, Thorpe, on Happy Sensation Lad; 3, Thousand Springs farm, on Sensation High Boy. Junior pig—1, Compton, on Red King Junior (junior champion); 2 and 5, Busch, on Skcokum Pathfinder and Hama Pathfinder; 3, Thorpe, on King You'll Do; 4 and 6, Thousand Springs farm, on Sensation Gay Lad and Sensation Sampson.

Sows: Aged sow—1, Thorpe, on Wonder Sensation Girl; 2, Thousand Springs farm, on Queen Mammoth Sensation; 3, Oregon Agricultural college, on Lucille's Ona. Senior yearling—1, Thorpe, on Diamond's Sensation Lady; 2, Thousand Springs farm, on Belle Wonder Sensation. Junior yearling—1, Thorpe on Wonder Madge 3d (senior champion); 2 and 4, Thousand Springs farm, on Sensation's Orion Lady 1st and Island Sensation Maxine; 3, Oregon Agricultural college, on Ona's Sister; 5 and 6, Busch on Woodland's Model 1st and Woodland's Model 2d. Senior pig—1 and 3, Thousand Springs farm, on Island Lady Sensation and Island Belle Sensation; 2, Thorpe, on Pathfinder Wonder Girl 7th; 4 and 6, Busch on Sunset 1st and Sunset 2d; 5, Oregon Agricultural college on Lassie Sensation. Junior pig—1, 2 and 3, Compton, on Junie (junior and grand champion), and unnamed pigs; 4, Thousand Springs farm, on unnamed pig; 5 and 6, Thorpe, on Sensation Miss of Mossdale and Miss Sensation Again of Mossdale.

Aged herd—1, Thousand Springs farm; 2, Thorpe; 3, Busch. Young herd—1, Compton; 2 and 5, Thousand Springs farm; 3 and 6, Busch; 4, Thorpe. Young herd bred by exhibitor—1, Compton; 2 and 5, Thousand Springs farm; 3 and 6, Busch; 4, Thorpe. Get of sire—1, Compton; 2 and 6, Thousand Springs farm; 3 and 5, Busch; 4, Thorpe. Produce of sow—1 and 3, Busch; 2, Thorpe; 4 and 5, Thousand Springs farm.

Chester Whites.

Chester Whites had a number of small exhibitors, including more club boys than any other breed, but their quality suffered little, if any, thereby. In fact, a club boy, J. W. Raynard from Laurel, Ore., had the junior champion boar in Midway Wonder, a splendid, growthy junior pig. The great big type boar, Oregon Buster, owned by Cass A. Nichols of Salem, Ore., that lost to a boar of more compact type at the Western Royal, was given grand championship at Portland. He is a very perfect specimen of the big type. Nichols had the junior champion sow, also. The senior and grand champion sow, Sadie, a mature sow of great depth of body, good back and up on her feet, was shown by C. F. Sargent of Scio.

Judge: E. H. Hughes, University of California.

Boars: Aged boar—1, Cass A. Nichols, Salem, Ore., on Oregon's Buster (senior and grand champion); 2, Ed Scholl, Albany, Ore., on Iowa Lad; 3, C. F. Sargeant, Scio, Ore., on Galloway Giant. Junior yearling: 1, Sargeant on Woodrew the 16th. Senior pig—1, Nichols on King of Brookside; 2, Scholl on Chief Justice Junior; 3, Sargeant on unnamed pig. Junior pig—1, J. W. Raynard, Laurel, Ore., on Midway Wonder (junior champion); 2, Homer Bray, Salem, Ore., on Rolling Stone; 3, Nichols, on Brookside Monster; 4, Scholl on Prince; 5 and 6, Sargeant on Toney and Steve.

Sows: Aged sow—1 and 3, Nichols, on Model Maid and Chief's Snowball; 2, Scholl, on Oregon Queen; 4, Sargeant, on Snowball. Senior yearling—1 and 3, Sargeant, on Sadie (senior and grand champion) and Hazel; 2, Nichols on Marjorie B 3d. Junior yearling—1 and 2, Nichols on Miss Buster C and Billiken Betty; 3 and 4, Scholl on Benton Queen and Benton Pride; 5 and 6, Raynard on Midway Sue and Midway Pride. Senior pig—2, Scholl on Buster's Kind; 2 and 3, Nichols on Model B Rose and Model Maid Rose. Junior pig—1 and 2, Nichols on Brookside Beauty (junior champion) and Brookside Wonder; 3 and 4, Bray on Wild Nell and Betty Bunce; 5, Sargeant on Lassie; 6, Scholl on Bettie.

Aged herd—1 and 3, Nichols; 2, Scholl. Young herd—1 and 3, Nichols; 2, Bray; 4, Scholl; 5, Sargeant. Young herd bred by exhibitor—1, Nichols; 2, Scholl; 3, Sargeant. Get of sire—1 and 3, Nichols; 2, Bray; 4, Scholl; 5, Sargeant. Produce of sow—1 and 5, Nichols; 2, Bray; 3, Scholl; 4, Sargeant.

Berkshires.

No breed was superior to the Berkshires in either tops or average quality. The Italian Vineyards company of Guasti, Cal., with one of the recognized best herds in the United States, made the principal exhibit. They had all but one of the championships, Ashlane farm of Pleasant Grove, Utah, having junior champion boar. The senior and grand champion sow, Violet Festline, bred by the Oregon Agricultural college, has been shown 11 times without defeat. She has size, back, bone, and type and is said by good judges to be the

(Continued on page eleven.)

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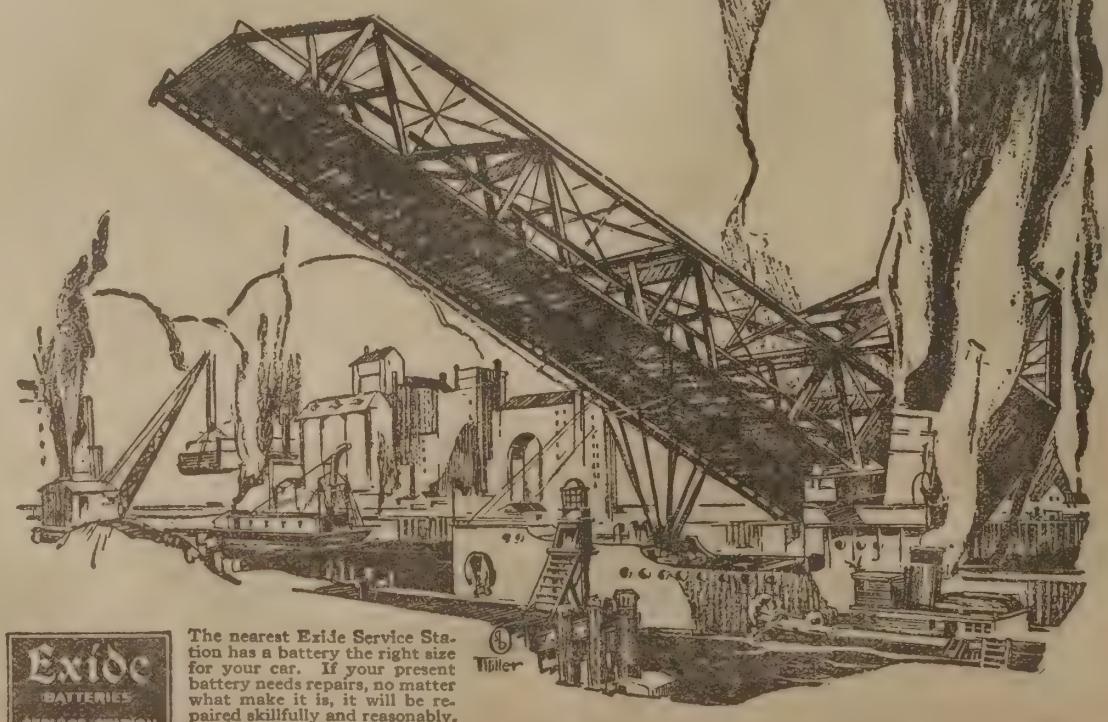
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THE WASHINGTON FARMER

SUCCESSOR TO

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For Good Farming, Attractive Country Homes and Happy Country People

Washington's Finest Fruits Meet at Seattle

By RALPH ERSKINE

Washington fruits, arrayed in their finest polish, were "at home" to the visiting public at the second annual Pacific Northwest Fruit exposition held at the Bell street terminal dock in Seattle, November 11 to 19. In prim and shining rows they stood waiting to be admired—ruddy-cheeked apples, luscious golden pears, purple and light clusters of grapes, and all manner of Washington seasonal fruit.

Queen Pippin, Miss Guendolyn Bowman of Charleston, Kitsap county, and her court of five "peaches," all chosen by a state-wide vote conducted by the Seattle Times, reigned over the affair in royal style.

There was an abundance of entertainment provided in addition to the educational and instructive features of the show. The home demonstration program conducted by four county home demonstration agents was exceptional, and was well attended. There were also a number of lectures by men of prominence in horticultural circles given in the assembly hall. The Seattle Chamber of Commerce cooperated with the exposition officials in staging the show and valuable assistance was also given by the Seattle women's clubs, which, in addition to other services, provided a hostess room for visiting women.

The exposition was held in the same location as last year, the Bell street terminal at the Port of Seattle, which made an ideal home for the show, though a little removed from the city center. While the general arrangement of the booths was similar to last year's plan, there was more uniformity and a neater appearance in this year's arrangement, due in great part to the supervision of Mrs. Winnie Braden, manager of the exposition, who had entire charge of the arrangement.

As one passed the main entrance he was impressed by an immense arbor with blossoms hanging a few feet above his head. The entire exhibit floor was thus covered with a canopy of salal and huckleberry, with lights hanging through here and there. Each booth was lighted with large lights on the corner posts. The plan gave a uniform effect and helped draw the attention to the center of interest, the fruit.

The single, five and ten box entries were arranged in a long block in the center of the main aisle near the entrance. The fruit was entered largely from the apple producing districts of eastern Washington, although there was other districts represented. Western Washington growers were more prominent in the plate exhibits at the farther end of the hall. Tray entries were not called for in this year's premium list.

All of the first section of the building was devoted to the community, individual and organization booths, while the commercial displays were set up at the other end. A large bandstand was built in the center of the main building and a dance floor put in at the extreme end of the hall. The concessions were given space on the lower floor.

Spokane Wins Sweepstakes.

The district exhibit from the Spokane valley won the sweepstakes prize. It was made up of 12 varieties of apples admirably displayed. No visitor passed the booth without stopping to admire the shining red and yellow beauties, arranged in a double tray exhibit, against a background of white. A miniature of Mount Spokane set in the center, with Miss Spokane pouring a horn of plenty down its snowy slopes, carried the thoughts of the visitors to the prosperous orchard district in the extreme eastern part of the state.

The Wenatchee district was second, the Greater Wenatchee Irrigation district third and White Salmon second. The Omak district won first for the largest number of first prizes won by individual exhibits, and thus wins for the second time the trophy given for this honor. The trophy will belong to Omak if the district wins at the 1923 show.

An interesting display of nonirrigated fruit was shown from the White Salmon district in Klickitat county. A solid block of tray apples brought out a play of colors by arranging the different varieties. To complete the exhibit there were some plates of apples, pears, quinces and nuts.

The Wenatchee district display was among the best decorated booths at the show. A tall pillar of canned fruit in glass jars was lighted from the center, giving a rich red and gold effect, which illuminated the two displays of tray apples on each side. A number of cards emphasized the district's new slogan, "Eat Wenatchee Apples."

The same county was again represented by a similar booth from "Greater Wenatchee Irrigation project," which showed the project proposed by the department of conservation and development of the reclamation division. Its display of tray apples, commercial and home canned fruits, as well as samples of dried products, were interesting to all who passed by.

First Prize for Individuals.

A very attractive booth was the one arranged by Huntington Johnston of the Johnston orchards in the Naches Heights district in the Yakima valley. The boxed apples were arranged in perpendicular rows with the varieties alternated so as to mingle the dark red and yellow colors. Plates of such fruits as pears, quinces, prunes, grapes and nuts helped to set off the display. A few samples of glace fruits were shown as the product of a new industry that Mr. Johnston is starting at the orchard. This exhibit won first prize for individual displays. Other individual booths were: First, Johnston orchards; second, R. T. Ried. For the cranberry display Pacific county won first and Grays Harbor second. Awards of merit were given to Kitsap county, Hanford community, Seattle schools, Skookum packers, the Chrysanthemum show, the Island Belle Grape association, Camp Fire Girls, Northwest Fruit exchange, A. A. Quaranberg, Jim Hill apples, and the Okanogan government project.

Grays Harbor county had a strikingly decorated booth of cranberries which were in boxes with a background of apple green and white decorations. There was also a cross section of a cranberry bog in which the vines were growing. Eleven different ways of cooking cranberries were shown in glass jars. The entire showing was put up by Robert Cowan, county agent, and Miss Mabel Webber, county home demonstration agent.

R. T. Reid had a splendid assortment of fruits from his farm at Bellevue. While the center of interest was with the Island Belle grapes, there were also some Vergennes and Delawares, both of which are light grapes, which added greatly to the color effect. The apples were also locally grown and showed what could be raised if given proper care.

The College Booth.

On the opposite side of the room the state college extension service had three booths, two of which were in the potato show and separate from the fruit exposition. The third, however, was a lesson in thinning apples. Branches of both thinned and unthinned trees were set up side by side, illustrating the difference of size obtained from thinning out the surplus fruit. In addition there was some miniature trellises showing how to train the loganberry, raspberry and the blackberry. Proper methods of pruning fruit trees was illustrated by pieces of limbs, some of which had been treated both right and some improperly. There was also some samples of bridge grafting.

An exhibit of different apple grades was shown in the fourth state college booth, which brought out the importance of selecting perfect and well colored apples. "It is by careful methods of grading and packing that the northwest has become famous all over the United States for its high quality of fruit," read a large sign in front of the extra fancy grades. Mr. Armstrong held a grading and packing demonstration in this booth twice each day.

In another section was a showing by the Island Belle Grape association. The perfection of these grapes was worthy of notice and there were also some grape cuttings, nursery stock and basket materials, all of which were advocated by the association.

A solid bank of bright red cranberries represented Pacific county. There were nearly 60 boxes of this holiday fruit from growers at Ilwaco and Long Beach, made up of two varieties, the McFarlane and the Howe. In the center was a miniature cranberry bog, which showed the fruit growing and lined off ready for picking. A large sign above the exhibit, "Pacific County Cranberries," was made of small cranberries and presented a pleasing effect.

The home economics department of the exposition, under the management of Miss Maud Wilson of the state college, had a display of home canned fruits from women's organizations in different parts of the state. The quality and type of these exhibits were said to be among the best showings of its kind ever exhibited in the state. The department called for both group and single entries.

A similar section was entered by the canning clubs from many parts of the state. Here also were some high quality products, some of which had won high honors at their local fairs in competition with products shown by their elders.

An interesting and educational feature of this department was the cooking demonstration held daily in the center of the section. A stove had been installed for preparing fruits and potatoes in many different ways. Miss Mabel Webber, home demonstration agent of Grays Harbor county, demonstrated cranberry cooking, while Miss Ruch Kennedy, in charge of the same work in Thurston county, produced a number of grape dishes. Potato varieties were shown, each cooked in three ways by Miss Edna Walker, home demonstration agent of King county. This work, however, was a part of the potato show. A canning demonstration was staged twice each day by the South Bay canning team of Thurston county. Miss Ruth Haydeen and Gladys Taylor, the members, held the state championship in canning work in 1920. The girls also made jellies, pectin and dried fruit and demonstrated the canning of fruits in tin.

A neat showing of Anjou pears was fitted by F. F. Miller of Bothell.

A novel display of fruits, canned goods, and nuts was put up by four Seattle people from the South End gardens, who had gathered the exhibits from their home gardens. Those who helped with the display were Mrs. S. Hillstrand, Mrs. C. E. Sullivan, Mr. and Mrs. Jim McPherson, all of the Rainier valley, a section of Seattle. The products shown were high class and showed that good fruit can often be produced in home yards as well as in commercial orchards.

In another booth there was a large collection of boxed apples from the Chelan-Manson district on Lake Chelan. Some excellent apples of many of the commercial varieties were shown and the blend of colors was handled effectively.

Grant county also had a booth with a collection of apples from Soap Lake, Grant

(Continued on page eight.)

Hold West Side Potato Show

Potato producers of the Western Washington Potato Growers' association from 10 western Washington counties staged their first annual potato show at Seattle in conjunction with the Pacific Northwest Fruit exposition.

The main plan of the show was to demonstrate to the consuming public that an excellent potato is being produced in west Washington. Growers west of the mountains believe that many people look to other potato producing sections for their supply on the ground that West Side tubers are not well standardized or put on the market in such a manner as will attract most favorable attention and best prices.

The quality of tubers displayed indicated that the local potatoes need not be second choice when they have once become standardized. The Netted Gem and the Burbank were represented in larger numbers from all counties than were any of the other varieties, while the Pride of Multnomah ran a close third. These were shown largely in market stock entries of 60 pounds each. There were also a large number of fancy bakers and entries of certified seed. A special class was allowed for bakers.

"The entire turnout was very good and as large as any of us expected," said A. B. Nystrom, manager of the show. "It proves that West Side growers can produce tubers that are equal to those raised in other sections of the state, and that we only lack standardization to make them a preferred product on our local market.

Snohomish Leads the Field.

While there were some heavy contestants from Skagit and Thurston counties, the exhibitors from Snohomish county walked away with the most prize money, $145. Whatcom county, while ranking second in the amount of prize money received, was awarded the silver cup for the 10 highest scoring exhibits from any one county. In this they beat Snohomish county by a very close margin. Other counties represented were Pierce, King, Clarke, San Juan, Kitsap and Lewis. The county agents of all the western Washington counties helped greatly in making the show a success.

The state college extension service fitted a booth showing the value of different potato grades, which was educational even to a grower who might be well versed in potato culture. A number of wire baskets were filled with potatoes which had been graded as they came from the field, showing the amount of culls that are ordinarily sorted out by the dealer before sold to the consumer. M. D. Armstrong, who was in charge of the booth, pointed out the fact that the grower should save the freight on the cull potatoes by sorting them out before shipping. A number of samples of U. S. fancy grade potatoes were also shown.

The following interesting facts were printed on large cards and tacked in prominent places about the booth: "Graded potatoes (1) decrease loss from decay; (2) decrease waste in paring; (3) decrease freight bills; (4) increase consumption and demand; (5) increase the consumers' satisfaction and the growers' profit." Another card had the following appeal:

> Mr. Consumer, the best are the cheapest. One hundred pounds of graded potatoes waste only 15 pounds in paring. Mr. Producer, the culls are too expensive to market. One hundred pounds of ungraded potatoes waste 30 pounds in paring.

The second potato booth, a demonstration of treating potato diseases, was arranged by George E. Zundel, plant pathologist of the state college. Two methods of dipping the tubers into the solution were shown, one of which used a small two-bushel barrel with holes bored around the sides, while the other was a large frame containing six trays. In each case a windlass was used to lift the potatoes from the solution. A simpler method was described which consisted of a number of barrels set on two benches of different height, which allowed the solution to run from one barrel to another after the potatoes had been treated. Charts described the mosaic disease of potatoes. No remedy is given for this trouble except the selection of disease-free seed, since no treatment has been found that produces satisfactory results.

In order to demonstrate the cooking qualities of local grown potatoes, Miss Edna Walker, county home demonstration agent, cooked six different varieties in three ways, boiled, steamed and baked.

The round white tuber did not prove as good for boiling, although it showed excellent qualities for baking and stood up fairly well when steamed, but it broke down when boiled. The two varieties of this type were tried, namely, the Earliest of All and the American Wonder.

Miss Walker also had a number of potato dishes prepared and gave samples to the visitors who were interested.

The Netted Gem, Burbank, Pride of Mult-

dividual winners included the following:

Certified seed—Roy R. Taylor, Olympia; Charles H. Greely, Ridgefield, and Hugo E. Engler, Ridgefield.

Uncertified seed—R. A. Baer, Ferndale; Roy Taylor; Guy R. Taylor, Olympia; Eckman & West, Mt. Vernon; John G. Stewart, Auburn; Anderson Bros., Bow; L. R. Campbell, Snohomish; M. F. Snelson, Burlington; R. P. Roberts, Blaine.

Market potatoes—Guy R. Taylor, R. A. Baer, Walter Jensen, Ferndale; Clarence Matthews, Hartford; Arthur Buottner, Ferndale; C. W. Ritter, Ferndale; L. R. Campbell, Paul Kortbein, Snohomish; B. J. Connor, Sedro-Woolley; Carl Belson, Marysville; C. H. Bennett, Nisqually; Walter Larson, Yoman; N. S. Dow, Kent; E. R. Cupp, Renton; Sebastian Hmura, Graham; P. J. Stilling, Puyallup; John Regan, Marysville; A. J. Biggar, Kent, and Charles J. Greely.

Baking potatoes—R. A. Baer; Charles Wood, Friday Harbor; John Regan, Clarence Matthews, L. J. Ganwick, W. F. Baer, Ferndale; Paul Kortbein, L. R. Campbell, John G. Stewart, Carl Nelson, Henry Lark, Arlington; George Stanton, Marysville; N. S. Dow, Sebastian Hmura, R. D. Bates, Sedro-Woolley, and Charles Alexis, Suquamish.

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Study Agriculture by Mail

Courses in agriculture are being taken by the men in the marine corps and other branches of the service, by means of correspondence. These men are availing themselves of the opportunity to utilize their spare time and fit themselves for work on the farms when their term of enlistment is over.

Of course the greater percentage of the courses are given in other lines, but the fact remains that there are a number that desire to get back to the soil. Prominent among the courses are such subjects as fruit growing, poultry raising, dairying and live stock.

Exchange of Orchard Help

A good example of exchanging orchard help was found in the Fairview district of Yakima, where four orchardists, E. Remy, Clarence Starcher, Sam Kelsay and C. L. Miller, picked and packed their fruit with one crew.

Each man had his fruit of one variety picked in turn, and, when the rounds had been made, the crew began work on another variety. Each man's fruit was kept separate after being packed and a careful check made on the time spent on his place. Clarence Starcher acts as foreman of the picking crew and C. L. Miller superintends the packing.

When one thinks of how many years this plan has been carried out with threshing crews one wonders why it is not done more with the fruit men. Could not more efficient picking and packing crews be employed for a longer time during the fruit season by the above plan than by each man looking after his own orchard separately?

The Future of Gray's Harbor

It is significant of a general awakening to the importance of providing for the future of districts now largely dependent on natural resources, such as timber and fish, that the Hoquiam Commercial club recently appointed committees to work with similar committees from other organizations in outlining a scheme of agricultural development and land colonization which will at least partially insure the future of Grays Harbor county and particularly of the Grays Harbor district, as its two big resources are used up.

Portions of the county which have been long settled, particularly those in the vicinity of Montesano, are already contributing considerably through agriculture to its annual income, but on "the harbor" little has been done toward salvaging logged-off acres, draining wet ones or making the best use of those immediately available.

The agricultural production of the Montesano district now totals about $750,000 annually, that of the county $2,000,000, and in the next five years it is expected to reach $5,000,000. There are 850,000 acres of timber land in the county, besides an enormous territory north and west of the Olympics as yet untouched.

Ultimately, it is anticipated, there will be as great an income from agriculture as there is now from the mills, totaling $15,000,000 to $20,000,000 annually. Before that day comes many problems will have to be solved—such, for example, as that of what to do with 1000 tons of potatoes in the Grays Harbor country right now, with no cars in which to ship them, no market if there were cars, no storage facilities, and a quality rendering storage impossible even if there were warehouses.

Some lines of agricultural industry have made good progress in production and marketing, but it is none too early for commercial organizations with concern for the future of the cities they represent to begin taking thought for that future. Hoquiam has taken a step in the right direction.

The Bugle Call for Action

More than one town, big or little, more than one farming community in this state, big or little, needs a tonic like that administered to Wenatchee by its Daily World:

What's the matter with us, anyhow, around this community? Here we have been parading around the country, patting ourselves on the back, telling ourselves about the great and ga-lorious firm of We, Us & Co.!

And while we have been doing that apples have been rolling down the Columbia river to the seas which should have been turned into a million dollars' worth of manufactured products. Apples—thousands of cars are being dumped while some wiser ones are picking up a few carloads at $6 a ton and shipping them in gondolas to Seattle to be manufactured into vinegars and jellies and butters and other products.

We tried out a little proposition here like the asbestomine plant and because of lack of capital it didn't work out. And because of having tried one thing and failed, we seem to be afraid to tackle anything at all.

The waste of apples that ought to be turned into products worth a million dollars is one of the tragedies of the year 1922. And we haven't done a thing to remedy matters. We know that in many of the biggest manufacturing plants of the country, the by-products turned out mean the difference between loss and failure in many years. Yet here we are allowing what should be our by-product to become a liability on our hands instead of an asset.

If we think that this kind of waste is to go on and that any community can stand up under such passive profligacy, we are liable to wake up some cold morning with a mortgage-ridden community. And what are we doing?—skipping out to California and letting the other fellow work it out. And the other fellow isn't doing it!

Some one has asked, "Why doesn't the commercial club work out something?" Just as though the commercial club were something else besides just us. Hang the thing onto the commercial club or some one else! That's just what we are doing.

We are spending considerable time in cussing the Great Northern for not furnishing cars—but we are not doing a thing to help ourselves to take care of the waste which is bound to come every year. And we know it is going to continue.

And so we need somebody to write a little ditty for us all to sing, entitled "Wanted, a Sanity Committee," or "What's the Matter With Us, Anyway?" Or we might utilize that one to the tune of "Little Brown Jug," which runs:

Fine little town, sure as sin,
We will finish what we begin.
Fine little town, sure as sin,
Darn good town for the shape she's in.

And all season the Shepard products plant is idle on account of the lack of a little money with which to operate.

Wanted: Men big enough to grab a condition by the seat of the trousers and the nape of the neck and shake a result out of it!

Natural resources are here in abundance. The capacity to do things is in our people. Leadership is either active or dormant in every community.

How shall we be aroused to do the things that should be done and that must be done in order to measure up to our opportunities?

Perhaps the Wenatchee World has pointed out the way.

LOOKING INTO OTHER FARM FIELDS

Of the 872,584 pounds of cheese received in New York last week, 532,408 pounds came from state factories, 199,007 pounds from Wisconsin and 119,930 pounds from Illinois. The other supplies originated in eight other states, with 257 pounds from Canada.

* * *

The right of a cooperative marketing organization to enjoin its members from selling their products by other means than through the cooperative organization is denied in the superior court of Pomona county, California. In its opinion the court made it plain that the association can not secure such an injunction, but must proceed through ordinary legal procedure against growers in suit for damages for violation of contracts.

* * *

The average rate of wages for male farm labor for the entire United States, October 1, was $28.97 a month with board, according to the first of a regular series of quarterly reports from 1300 county crop reporters to the United States department of agriculture. The average for the year 1921 was $30.14. By the month without board the average, October 1, was $41.58, compared with $43.32, the average for 1921. Day wages with board, October 1, were $1.57, compared with $1.63 last year, and day wages without board were $2.08, compared with $2.18 in 1921.

* * *

Deseret News: One hears much today about keeping the boy on the farm. It calls to mind the condition 80 years age when the slogan was, "Back to the city." After a tour of the United States in 1834, Harriet Martineau, the English writer, recorded that many Americans were disturbed because the young men were leaving the centers of population and going out to carve farms for themselves out of the wilderness. Industry and commerce were suffering through this countryward exodus of the able-bodied men; help in the cities was not to be had and immigrants could not be held there to do the necessary work.

The perusal of this passage in the English traveler's book ought to be sooting to those who are now bewailing what they call the tendency of young men to turn their faces cityward. It shows that life is not static, that the stream can be reversed again.

State Farm News

The company, of which W. H. Wright and V. C. Campbell are in charge, own 2000 acres in the vicinity and plans to irrigate an additional 2000 on the first and second benches. Marshal lake, covering 300 acres, has two streams flowing into it with no outlet, except in high water in June. Without storing, there will be an ample supply from this lake for irrigation. The building of a dam 100 feet long and six feet high will care for the irrigation of 200 acres.

The company owns all of the land surrounding the lake, except one 40-acre tract. The property adjoins the Kaniksu national forest, with unlimited range for stock. It plans to raise alfalfa and to allow the cattle and sheep to graze in the forest during the summer.

* * *

Information comes to The Washington Farmer of sunflower plants grown by E. P. Gorig at Woodland, southwestern Washington, which measure 20 feet high and 22 inches across flower.

* * *

Martin Iverson, for a number of years a resident of the Eagleton neighborhood, west of Adna, Lewis county, has made an exchange with W. J. Young of Outlook, Wash., for a farm east of the mountains. Mr. Young takes Mr. Iverson's 80-acre farm on a basis of $16,000 and the latter takes the Young place at Outlook on a basis of $14,000 for the 40 acres. Mr. Iverson has moved his family to Yakima county and Mr. Young and family now become Lewis county residents. Other realty deals recently closed involving holdings in Lewis county are as follows: John O. Harms, 73 acres on the Chehalis river to F. Blosl for $12,000; a five-acre tract near Chehalis to C. H. Bailey, recently from Oakland, Cal., for $2500; Hade Morris bought a 50-acre farm near Onalaska for $8500.

* * *

A report from Ridgefield, Clarke county, says that on the ranch of William Katz Jr., 1530 sacks of Burbank potatoes were harvested from seven acres.

* * *

The Union Pacific scholarship in the short winter "ag" course at Washington State college, for the boy between 16 and 21 ranking highest in boys' and girls' club work in 1922, was won in Yakima county by Ray Banks of Selah, who has conducted successful Poland China pig clubs for three years past. The winner was chosen from among boys ranking highest in county club projects, rank in club work counting 75 per cent and activity in community affairs 25 per cent. Five acres of corn, 10 acres of wheat or one acre of potatoes was grown by each competitor. F. L. Audrain, state club leader; Miss Mae Mark, county school superintendent, and A. C. Davis, city school superintendent, picked the winner from among nominees of E. C. Scott, county club agent.

* * *

W. E. Turner of Seattle was elected president of the Washington creamery operators, butter and cheese makers' association, which met at Seattle recently.

Professor O. F. Hunziker of Chicago scored as high as 95 samples of butter submitted by the creamerymen of the state. E. L. French, state director of agriculture, declared that dairying is fast moving to the front among the industries of Washington.

Other officers chosen were Andrew Snell, Puyallup; Carlyle Hall, Seattle, and A. B. Amundson, Wenatchee, vice presidents, and L. W. Hanson, Mt. Vernon, secretary-treasurer.

* * *

The Marshal Lake Power and Land company is developing an irrigation project about five miles from Newport, on the second bench above the Pend Oreille river. The company owns a water right on Marshal lake, and will irrigate 4000 acres by the use of 5000 feet of concrete ditch and wood flume.

The flume is ready to put water on 150 acres, and more will be constructed this winter. The flumes are being built from timber cut on the place. About 140,000 feet were sawed this year, and there is enough to finish the work.

* * *

To promote greater interest in the growing of better potatoes in Skagit county, the first annual potato show was held in Mount Vernon November 3 and 4.

O. W. Eckman and Byron West were the high point winners and took away four sweepstakes prizes. They also won several other smaller awards. The class 1 prize winners follow:

Burbank, Culver Holt, Mount Vernon. Netted Gem, Eckman & West, Mount Vernon. American Wonder, Anderson Brothers, Sedro-Woolley. Pride of Multnomah, B. J. Conner, Sedro-Woolley. Sweepstakes, Eckman & West, Mount Vernon.

* * *

Drainage bonds for district No. 3, in Clarke county, which includes Shillapoo lake, have been sold to the Fred Glenn company of Portland. The company agreed to take not less than $250,000 and not more than $325,000 worth of the bonds at 7 per cent. The bonds were sold at par. The project, which was held up two years ago because of the lack of a market for the bonds, is one of the largest ever attempted here.

FARM BUSINESS AND MARKETS OUTLOOK

The Business Outlook.

The barometers of business continue to indicate expansion in trade and industry.

Freight car loadings in the week ended October 28 were above 1,000,000 for the sixth time on record, and were never exceeded with the exception of one week in October, 1920. Loadings of general merchandise were by far the largest ever known. The tremendous car shortage is a natural outcome. Unfilled orders for cars in the week ended October 30 reached 175,523, the largest on record, and 17 per cent of the total number loaded in that week. Furthermore, railroad officials hold out but little hope that the car shortage will improve soon, although the peak of freight loadings generally is reached about this time of the year.

Building trades are unusually active. Textile mills are operating at a high per cent of capacity. Pig iron output for October was the greatest since December, 1920. The steel industry is running at 75 per cent of capacity and producing more steel than in the best times before the war. Automobile and truck production is phenomenal, with the total for the first 10 months of 1922 but little short of the output for the full year in 1920, which until now has constituted a record.

Retail business in most lines is good. A comprehensive survey shows that retail sales in October were 15 per cent above the five-year average. Sales to farmers were 22 per cent higher than in September and 6 per cent below the five-year average.

Wholesale trade is thriving, as the public is buying and distributors show a greater disposition to stock up ahead than at any time in months. The periodical bulletins of banks are almost uniformly favorable with the note of caution less prominent than for two years or more.

Part of the expansion is merely the return to normal from the extreme contraction of industry which became most acute about 18 months ago. But the pendulum is swinging up on the prosperity side and is apt to go further before turning back. Most views favor an additional year or more of progress in the direction we are now going.

Relatively low prices for farm products, the European situation and the possibility that too much capital will be put into fixed forms such as residential and industrial construction are the forces which may check the expansion process.

If this analysis is correct, demand for farm products in general will be broad as long as the expansion lasts. Practically universal employment of labor means heavy consumption of foods, especially those representing a higher standard of living, such as meats, butter and eggs, which eventually assists the grains used in their production. Wool is aided likewise, and the decrease in recent cotton crops more than offsets any decline in foreign demand, so that this fiber is benefiting greatly from the revival of domestic business.

Cattle Receipts Diminish.

The cattle run is diminishing in seasonal fashion. Kansas City reports the movement of grassers to that market completed, westerns are becoming less numerous at Chicago and even short-feds and warmed-up steers from the corn belt did not troop to market in such large numbers after the early November break. As a result immediate grades of steers recovered about 50 cents, with some yearlings quoted 75 cents higher at Chicago, beef cows and heifers moved up 25 to 50 cents and cutters and bulls made small gains.

Although demand for beef remains broad, beef trade channels remain congested from the heavy slaughter of recent weeks and the days of cheap pork and the popular season for poultry are just ahead, so that a further decline in receipts may be necessary in the next 30 to 60 days to maintain values.

Stock cows and heifers are still selling at bargain prices, but feeders are on a rather high level.

Hog Values Working Lower.

Receipts of hogs last week were approximately 12 per cent above the 10-year average for the corresponding weeks. Eastern markets were well supplied, so that shipping demand was not large and fresh pork prices in the east were quoted lower. Prices held fairly well at first, as packers evidently are vending the product at a profit, but weakness set in toward the close, Chicago reaching the lowest point since early January. Eleven markets received about 560,000 head during the weak, whereas runs of 800,000 head or more are probable before the winter movement begins to ebb. Under the circumstances it is hard to believe that prices have touched botton. However, the difficulty packers are experiencing in getting prices below $8 at Chicago indicates that extremely low prices are not probable this winter. Lightweights on corn belt markets remain at a small discount below medium and heavyweights.

New High on Lambs.

Lighter receipts of lambs caused an advance to a new high for the season of $15 at Chicago, but with a further break in the dressed lamb trade the gain was not held. In the last six weeks receipts at seven leading markets have shrunk 36 per cent, while the number being taken out as feeders shows no contraction as yet. Fed lambs are beginning to predominate and most of the arrivals direct from the range are in feeder condition. Feeders are still buying freely, as they realize there will be few thin lambs to be had when the range season is over.

Horse Market Firm.

All horses reaching the large markets are clearing easily at the advance except light, blemished, unsound or nondescript sorts, which remain a drug on the market. Most horses arriving at Chicago are going east with a few to the northern woods. Coal mines and coal dealers are buying. Above 1550 pounds it is mostly a $225 market or better, with a few up to $275. Wagon horses are bringing up to $190 if they are choice. In spite of 25-cent cotton, southern trade in light chunks is unresponsive.

Wool Buyers More Cautious.

Wool markets report more caution on the part of buyers, although mills are still disposed to purchase whenever they can at prices ruling recently. The goods market continues healthy and the American Woolen company is operating at 90 per cent of capacity, compared with 80 per cent a few weeks ago. Most primary wool markets abroad are firm, although reports are not so uniform as they were a short time ago.

Wheat at Season's High Point.

Continuation of brisk domestic milling demand for wheat, together with moderate sales for export, have lifted wheat prices to the highest point of the season. A lull in sales to mills, together with evidence of a heavier movement from the southwest, caused a setback for a few days, but the loss was more than recovered.

Just how long the demand from mills will continue is not clear. Evidently the invisible reserves of flour have been allowed to run extremely low in the last year or two. When these are replaced, milling demand may taper off. This loss may be offset, however, by a lighter movement from farms. Export demand shows little change.

Political uncertainties are interfering with sales to France, Germany and Italy, but their needs are admittedly large and must be filled some time or other. Latest reports to the department of commerce place the total crop in Europe, exclusive of Russia, at 194,000,000 bushels less than last year. This is some improvement over a month ago, but means much larger imports than last year in spite of extensive use of substitutes.

The situation after January depends more or less on the procedure of Argentine growers. Already foreign interests are beginning the old game of playing off Argentine wheat against North America. Speaking broadly, based on past records, Argentine growers are not likely to sacrifice their surplus, even though it is a large one.

Big Export Business in Rye.

Germany alone is believed to have bought 40,000,000 bushels of rye in North America this season and she is still buying. Large sales have been consummated in the last few days in spite of political disturbances and the vanishing mark. Probably three-fourths of the calculated surplus from the United States has already been sold.

Although export demand for corn has practically ceased because of low offers from the Argentine, domestic feeding demand has been brisk and prices for future delivery reached the highest point since the early spring of 1921.

Cash Grain Markets.

The range of cash grain prices for the week ended November 15 was as follows: Chicago—Wheat—No. 2 red, $1.24@1.29; No. 2 hard, $1.17 1-2@1.20 1-4. Corn—No. 2 mixed, 69 1-4@72 3-4c; No. 3, 66 1-4@72c; No. 2 yellow, 69 1-4@73 1-4c; No. 3, 68@72 3-4c; No. 2 white, 69 1-2@73 1-4c; No. 3, 66 1-4@72c. Oats— No. 2 white, 43 1-2@45 1-2c; No. 3, 42@44 1-2c; No. 4, 40 3-4@43c. Rye—85 1-2@88 3-4c. Barley—60@69c.

Clover Seed Crop Above Average.

The November estimate upon the clover seed crop was 1,878,000 bushels, compared with 2,033,000 bushels a month ago. But last year's yield was only 1,411,000 bushels and the average of the five years, 1916-1920, is 1,564,000 bushels. Prices for both clover and timothy seed are firm.

Chicago, per 100 pounds—Clover, $15.50@20.50; timothy, $6@6.75. Toledo, per bushel—Prime clover, $13.10; prime timothy, $3.45.

Feed.

Demand for feeds is said to be light, with little export buying. Production of all classes is rather heavy and the car situation is loosening up slightly, so that the movement is improving. As a result markets are unsettled, with wheat feeds slightly easier.

Prices per ton (100-pound bags) in carlots: Chicago—Bran, $25.50; standard middlings, $26.25; flour middlings, $29; cottonseed meal, 36 per cent, $48.75; 43 per cent, $53; hominy feed, $29.50; gluten feed, $35.85; old process oil meal, $52; tankage, $65.

Hay Prices Unchanged.

The small changes in hay prices in the last six weeks have been toward a higher level. Light receipts sustain the market and a little improvement in demand is noted at some points as a result of buying by the cotton belt.

Prices per ton in carlots: Chicago—No. 1 timothy, $21@23; No. 2, $17@18; No. 3, $14@16; No. 1 light clover mixed, $20@21; No. 1 clover, $17@19; No. 1 clover mixed, $1 @19; No. 1 to choice alfalfa, $25@27; upland prairie, $20@21; midland prairie, $13; rye straw, $12@13; oat and wheat straw, $9@12.

Big Reduction in Storage Eggs.

The reduction in storage holdings of eggs in the United States during October was 2,150,000 cases, which was larger than expected, based on partial returns, and the largest for that month since the records have been compiled. The remainder on November 1, however, was 5,715,000 cases, the largest ever known on that date. Since fresh receipts usually are lighter in November and December than in October, distribution of storage eggs during those months should be as great as or greater than in October.

Advance in Butter Checked.

The advance in butter prices was checked last week as a result of an unexpected increase in receipts, due partly to the arrival of delayed shipments and to larger intermarket shipments of storage butter. At the same time the trade output declined either because of a lull in consumptive demand as a result of high prices or because retailers are operating in a more hand to mouth fashion.

Prices for 92-score fresh butter on November 15 were: Chicago, 49c; New York, 30c; Boston, 49c; Philadelphia, 51c.

Better Tone in Cheese Market.

After a slow start the cheese market developed considerable activity before the close of last week.

Since storage holdings on November 1 were as small as they usually became by January 1, the situation from the angle is favorable.

Prices on No. 1 American cheese on November 15 were: Chicago—Flats, 24 3-4@25c; twins, 24@24 1-2c; single daisies, 24 1-2@25 1-4c; double daisies, 24 1-2@25 3-4c; young Americas, 24 1-2@25c; longhorns, 25 1-2@26c; square prints, 24 1-2@25c.

Fruits and Vegetables.

Potato shipments from producing sections are falling off so that prices in city markets show more stability, but no upturn has been effected. Recent cold weather has damaged a large quantity before digging and in transit. A further increase in the movement from first hands is due in the next few weeks and values should respond, as potatoes are not apt to come out of storage at this level. Brown Beauties are quoted at 45 to 50 cens per 100 pounds sacked f. o. b. Colorado points and Rurals at 30 to 35 cents, with Russets 50 to 60 cents f. o. b. Idaho points.

Apple markets are dull, with the movement from producing sections lighter, although the movement of boxed apples is rather heavy. Extra fancy northwest Jonathans, medium to large sizes, are bringing $2.25 to $2.50 per box at Chicago.

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Range of Livestock Prices for Week Ending November 15, 1922

CATTLE.	Chicago.	Spokane.	Portland.	N. S. Lake.
Choice, prime heavy steers (1100 lb. up)	11.60@13.50			
Good heavy steers	9.45@11.75			
Medium heavy steers	7.15@ 9.60			
Common heavy steers	5.50@ 7.25			
Choice, prime light steers (1100 lb. d'n)	11.50@13.35			
Good light steers	9.25@11.60			
Medium light steers	7.00@ 9.50	6.00@ 7.00	6.00@ 7.50	5.75@ 7.25
Common light steers	5.25@ 7.10	4.50@ 6.00	4.50@ 6.00	4.25@ 5.75
Common to choice butcher heifers	4.50@10.50	3.25@ 6.00	3.50@ 6.00	3.25@ 5.00
Common to choice butcher cows	3.40@ 8.00	2.50@ 5.00	2.75@ 5.25	2.75@ 4.25
Bologna and beef bulls	3.50@ 6.50	2.75@ 4.50	3.00@ 4.00	2.00@ 3.50
Canners and cutters, cows and iheifers	2.40@ 3.50	1.50@ 2.50	1.50@ 2.50	1.50@ 3.00
Canner steers	3.00@ 3.75	2.00@ 3.00	2.00@ 3.00	2.25@ 3.25
Medium to choice light veals	8.00@10.75	7.00@ 8.50	7.50@ 8.50	7.50@ 8.25
Common to choice heavy veals	3.00@ 7.00	5.00@ 7.50	5.00@ 5.50	
Com. to choice feeders (1000 lb. up)	5.00@ 7.75			
Com. to choice feeders (750-1000 lb.)	5.00@ 7.75	3.50@ 5.00	4.00@ 5.50	4.50@ 5.50
Common to choice stocker steers	4.25@ 7.75			
Com. to choice stocker cows, heifers	3.00@ 5.25			
HOGS.				
Top of market	8.70	9.50	9.75	9.00
Bulk of sales	8.00@ 8.65	8.25@ 9.25	8.75@ 9.50	7.75@ 8.25
Heavy (250 lb. up)	8.10@ 8.65	8.00@ 8.50	8.50@ 9.25	7.50@ 8.50
Medium (200-250 lb.)	8.20@ 8.65	8.25@ 9.00	8.50@ 9.50	8.00@ 8.75
Light (150-200 lb.)	8.15@ 8.55	8.50@ 9.50	9.25@ 9.75	8.25@ 9.00
Light lights (130-150 lb.)	8.15@ 8.50	8.50@ 9.50	9.25@ 9.75	8.25@ 9.00
Smooth packing sows (250 lb. up)	7.60@ 8.25	7.50@ 8.25	6.75@ 7.50	6.50@ 7.00
Rough packing sows (200 lb. up)	7.25@ 7.80	6.00@ 7.50	6.00@ 6.75	6.00@ 6.50
Medium to choice pigs (130 lb. down)	8.15@ 8.65	8.25@ 8.75	8.75@ 9.25	
Stock pigs		7.75@ 8.75	8.75@ 9.00	7.50@ 8.25
SHEEP AND LAMBS.				
Medium to prime lambs (84 lb. down)	13.00@15.00	8.50@10.50	10.00@11.50	10.50@11.75
Culls and common lambs	9.25@13.00	8.00@ 9.50	6.75@10.00	8.00@10.50
Medium to prime yearling wethers	9.75@13.25	7.00@ 8.00	8.00@ 9.00	6.50@ 7.50
Medium to prime wethers	6.75@ 9.75	6.50@ 7.50	6.50@ 8.00	4.50@ 5.50
Medium to choice ewes	4.50@ 8.00	4.50@ 6.50	4.00@ 5.50	3.50@ 5.00
Culls and common ewes	2.75@ 5.25	2.00@ 4.50	2.00@ 4.00	
Full-mouth to yearling breeding ewes	5.00@10.75			
Feeder lambs	12.25@14.35	5.00@ 7.00		10.00@10.50

LATEST QUOTATIONS.

The Live Stock Market.

PORTLAND, Ore., Nov. 18.—Cattle—Choice steers, $7@7.50; medium to good steers, $6.50@7; common to fair steers, $4@5.50; choice heifers, $5.50@6.25; choice cows and heifers, $4.50@5; medium to good cows and heifers, $3.50@4.50; common cows, $1.50@2; canners, $1.50@2; bulls, $3@4.50; choice feeders, $5@5.50; fair to good feeders, $4@5; choice dairy calves, $7@7.50; prime light calves, $7@7.50; medium light calves, $6.50@7; heavy calves, $4@5.50.

Hogs—Prime light, $9.25@9.60; smooth heavy, 230-300 pounds, $8@9; smooth heavy, 300 pounds up, $7.50@8; rough heavy, $6@7.50; fat pigs, $8.75@9.25; feeder pigs, $8.75@9; stags, subject to dockage, $4@6.

Sheep—East-of-mountain lambs, $11@11.50; choice valley lambs, $11@11.50; medium valley lambs, $10@11; common valley lambs, $9@10; cull lambs, $6.75@9; light yearlings, $9@9.50; heavy yearlings, $8.50@9; light wethers, $7.50@8.50; heavy wethers, $7@7.50; ewes, $2@6.

SPOKANE, Nov. 18.—Cattle—Prime steers, $6.25@7; good to choice steers, $5@6; medium to good steers, $4.50@5; fair to medium steers, $4@4.50; common to fair steers, $3@4; choice cows and heifers, $5@5.50; good to choice cows and heifers, $4@5; medium to good cows and heifers, $3.50@4; fair to medium cows and heifers, $2.50@3.50; canners, $1.50@2.50; bulls, $2.75@4.50; light veal calves, $7@8.50; heavy veal calves, $5@7.50; stockers and feeders, $3.50@5.

Hogs—Prime mixed, $9@9.50; medium, $8.50@9; heavies, $6@8.50; fat pigs, $8.25@8.75; stockers and feeders, $7.75@8.75.

Sheep—Prime lambs, $9.25@10.50; fair to medium, $8@9.25; yearlings, $7@8; wethers, $6.50@7.50; mutton ewes, $3@6.50; feeder lambs, $9@11.

The Grain Market.

PORTLAND, Ore., Nov. 18.—Cash wheat—Hard white, Bluestem, Bart, $1.48; soft white, $1.26; western white, $1.25; hard winter, northern spring, $1.20; western red, $1.16.

Oats—Twenty-eight-pound naturals, November, December and January, $36.50.

Corn—No. 2 eastern yellow, shipment November, $34.75; December, $34; January, $33.50; No. 3 do, November and December, $34; January, $33.25.

SEATTLE, Nov. 18.—Cash wheat—Hard white, soft white, western white, $1.25; hard red winter, soft red winter, northern spring, $1.23; western red, $1.21.

WALLA WALLA, Nov. 18.—Cash wheat—Bluestem and Bart, $1.08; Club, $1.11; Turkey red, $1.

DAVENPORT, Wash., Nov. 18.—Cash wheat—

(Continued on page twenty.)

Long and Short Haul

Oregon Wool Growers' Association and Washington Wool Growers' Association Win Sweeping Victory

In a decision the other day by the interstate commerce commission the Oregon Wool Growers' association and the Washington Wool Growers' association win a sweeping victory.

Since 1913 the transcontinental railroads have been building up Portland as the wool center of the northwest. In violation of the fourth section of the transportation law of congress they have been charging much higher rates on wool shipped from interior points to the east than on wool shipped from Portland and other terminals to the same eastern destination.

The rate from Portland and other terminals on the long haul to Boston was only $1.50 per 100 pounds on wool in the grease in bales, the form in which most of the wool moves. At the same time the railroads were charging for the shorter haul a rate from Spokane to Boston of $2.39 a hundred, from Boise of $2.70, from Butte of $2.40 and from Salt Lake of $2.35 1-2.

Under these discriminating and unlawful rates it was actually cheaper for interior wool growers to ship their product west to Portland and then pay the Portland rate on the long haul than to pay the through rate from the interior shipping point to Boston.

But the railroads were not satisfied with that and petitioned the interstate commerce commission for authority to reduce the Coast rate to $1.35 per 100 pounds. That was the last straw that broke the camel's back. Wool growers all over the interior arose in protest and fought the matter out before the commission at Washington. The commission now decides that the roads must not charge more for the short haul from the interior to Boston than they charge for the longer haul from Portland to Boston.

In the same connection the interstate commerce commission decided the long standing and hard fought intermountain rate case in favor of the interior producers and communities.

For several years the vast interior country between the Cascade mountains on the west and the region on the eastern slope of the Rocky mountains has had terminal rates. That is to say, the roads have not been allowed to charge interior communities and producers more for the short haul from the east to the Pacific coast terminals. With the ending of the war ships came back into service through the Panama canal and have taken a part of the business that was enjoyed exclusively by the transcontinental railroads when the country was at war and the ships were out of service. In May, 1921, the transcontinental railroads went before the interstate commerce commission with a request that they be allowed to reduce rates about 20 per cent to the Pacific coast terminals, but without granting any relief from war-time freight rates to the interior.

The commission decides against the railroads on every point. It holds that the proposed cut at the terminals would be in violation of sections three and four of the interstate commerce law. The commission further decides that "it clearly would defeat the intent of congress to foster transportation by rail and water in full vigor if the rail carriers were permitted, at practically little or no profit to themselves, to operate so as to deprive water carriers of traffic which the water carriers would naturally handle.

As THE FARMER had previously pointed out, if the railroads in this case had been allowed to engage in cut-throat competition with the ships at the Pacific coast terminals the only beneficiaries would have been the mercantile interests of Seattle, Tacoma and Portland, and the inevitable effect would have been to compel the railroads to compensate themselves for that unprofitable business by charging war-time rates on other transportation service. That would have fallen with crushing weight upon the producers. The interstate commerce commission holds to that same view. In its decision it says:

"Moreover, it must be borne in mind that where the out-of-pocket theory is used as a rate basis (the railroad proposal) there is inevitably thrown upon the rest of the traffic the task of providing the bulk of the net returns contemplated in section 15-A of the law. Too wide an extension of the out-of-pocket theory would transfer the entire burden of producing dividends and interest and in meeting the fixed charges upon a part only of the traffic carried."

The decision is clearly against the railroads, both on points of law and on the folly, from the viewpoint of their own interests, of the cut rates which the railroads wanted to put in at the terminals. The upshot is that the commission tells the roads they were trying to do a foolish thing and to break the law to do it.

We congratulate the wool growers and other farm producers upon this substantial victory. The decision confirms the judgment of President Harding, stated in his message to congress of December 6, 1921, as follows:

"The existing scheme of adjusting freight rates has been favoring the basing points until industries are attracted to some centers and repelled from others. A great volume of uneconomic and wasteful transportation has attended, and the cost increased accordingly. The problem may well have your earnest attention."

The commission's decision is practically unanimous. It is concurred in completely by nine of the 11 members, and in part by the other two. Moreover, it confirms a deepening suspicion in the minds of many observers that the railroad managers generally have not been using the best judgment in rate making.

Short Courses

For Western Washington Farmers

The following courses are free to residents of the state. Persons wishing to enroll in any of these courses should apply not later than December 1 to the director of the western Washington experiment station, Puyallup, Wash.

Poultry Courses.

Opens second Monday in January. In this course about equal time is devoted to lectures and practice work. Three lines of study are included in the lectures, poultry management, construction of poultry houses and equipment and the control of poultry diseases.

The study of poultry management includes lectures on types and varieties of chickens, principles of feeding and breeding of poultry, handling the breeding flock, incubators, brooding chicks and management of laying flock, and is in charge of Mrs. George R. Shoup, poultry specialist.

Lectures and demonstration on laying out a poultry plant, the construction of laying houses and brooders, equipment for poultry buildings and convenient labor-saving devices are given by George R. Shoup, poultryman.

The study of common diseases of poultry and the maintenance of health in the poultry flocks is in charge of Dr. W. T. Johnson, veterinarian.

Half of the time each day is given to practice work taking care of the 2500 station birds, tending incubators, caring for young chicks and all lines of work incident to the handling of a commercial poultry plant.

Dairying and Farm Crops.

Opens the second Monday in January. The dairying course includes lectures and demonstrations on the care and management of dairy cattle, on soils and crops and on the control of diseases of dairy cattle.

The lectures on feeding, management, breeding and judging of dairy cattle, testing and handling of milk and home buttermaking are given by H. E. McNatt, dairyman.

The study of types of soils, soil management, maintenance of fertility, drainage, production of farm crops adapted to western Washington is in charge of M. E. McCollam.

Lectures on the common diseases of dairy cattle, their prevention and cure are given by Dr. W. T. Johnson, veterinarian.

Course in Berry Growing.

Opens the fourth Monday in January. The course in berry growing includes three lines of study; soils, general culture and diseases of berries. Lectures are given in the forenoon and practice work in the afternoons.

The study of soil formation and classification, soil moisture, drainage, soil fertilizers, tillage and cover crops is in charge of M. E. McCollam, agronomist.

Lectures and demonstrations on berry types and varieties, propagation, location, planting, training, summer culture, harvesting and care of fruit are given by J. L. Stahl, horticulturist.

The study of diseases and insects of berry plants and their control is under the direction of Arthur Frank, plant pathologist.

When weather permits the afternoons are given to practice work in handling and training of berry plants.

Opens the first Monday in February. The tree fruit course includes a similar study of soils, general culture and diseases of tree fruits to that given in the preceding course in berry growing. Considerable importance is given to a study of tree physiology and of fruit buds and practice in pruning, top-grafting, identification of fruit tree diseases, mixing and applying sprays. The work is under the direction of the same instructors in charge of the berry course.

COMBINATION OF STOCK.

"One of the best ways to maintain good pastures for a dairy herd is by keeping a definite system of crop rotation," said B. C. Vander Griend, one of the partners of Vander Griend Brothers' Guernsey farm of Lynden. "It is our custom to raise hay for two or three years and then pasture for three more years. After some of the best grasses begin to die off it pays to turn the crop under, raise grain and clover crops for at least two years and then seed it back to clover and timothy.

It is not hard to carry out a systematic rotation. For silage crops we have tried both corn and sunflowers, but prefer oats and vetch or oats and peas, since the yield is greater and the crop can be harvested earlier in the season. Clover, however, is often used for summer silage, especially in a wet season when it is difficult to cure it for hay. There are times when we find it advisable to let the grain crop ripen instead of using it for silage. We grow as much of our own grains on the farm as possible."

Besides the 35 to 40 head of cattle cared for on this farm there are 400 chickens and two or three brood sows kept in order to utilize the skimmed milk. The hens and the calves get all the milk they can use, and surplus goes to the pigs.

Mr. Vander Griend feels that a combination of stock is necessary for best results in his community. There are times when the proceeds of the cows will not be as large as it should be, and as a general rule the profit from the poultry house will offset any disadvantage in milk production. In any case the work required for a small flock of chickens does not interfere greatly with the care of dairy cows.

Mosaic in Potatoes

"Mosaic disease is becoming more and more troublesome throughout the potato growing sections of the state," according to George E. Zundel, plant pathologist of the state college. "This," he said, "is a virus disease which is spread both by tubers from diseased plants and by aphids.

"So far no remedy has been found for treating either the seed or the plants. The only way the grower can be assured of clean seed is by selecting the plants before the growing season is over. No tubers should be used from diseased plants, since they carry the infection to the next year's crop. There is no way to distinguish the disease in the tuber after digging, but the disease generally results in fewer potatoes in the hill.

"Rogueing of the seed plot is strongly advised, and all vines pulled that show any mottled appearance of the leaves. Plant pathologists are working to find a remedy for the trouble," concluded Mr. Zundel, "and it is possible that some solution can be found in the near future."

Meet in Spokane

The executive committee of the National Wool Growers' association, one of the oldest and largest live stock organizations in the entire country, has selected Spokane as the place for holding the 58th annual convention, and has named the dates of Wednesday to Friday, January 24 to 26, 1923. The Washington Wool Growers' association will hold its 21st annual convention in the same city on Monday and Tuesday of the same week, January 22 and 23, so that a big time is assured wool growers of Washington and the Pacific northwest.

This arrangement gives all members of the Washington association the unusual opportunty of attending the national convention, and officials of the latter have been assured that the state organization will furnish an attendance of 300 or 400. The Washington Wool Growers' association has the reputation of being the best in the country, and consequently considerable will be expected of it. Every sheepman in the state is being urged to make his plans for attending, and an unusual program of education and entertainment is being provided. Headquarters for Washington wool growers will be at the Spokane hotel, while those for delegates to the national will be at the Davenport.

The National Grange

The national grange convention is in session at Wichita, Kan. Later issues of THE FARMER will contain liberal reports of this important convention.

Notable in the opening days of the convention was the address of Master S. J. Lowell. An outstanding point in his address, a digest of which will be given later, was a declaration against the proposed ship subsidy as planned in a measure now being urged upon the extra session of congress, which opened this week.

Pittsburgh, Pa., has been chosen as the place for the 1923 convention.

BANS HEAVY MOTOR VEHICLE.

Operations of all heavy motor vehicles over dirt and gravel roads in Snohomish county during the winter months has been baned by the county commissioners.

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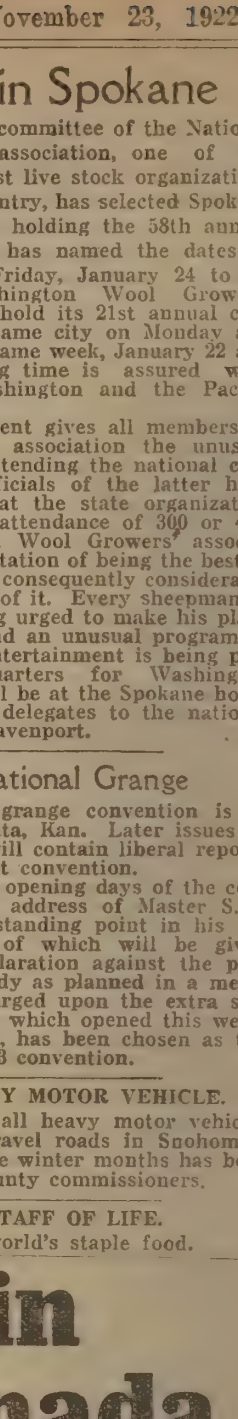
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The Farm Bureau Movement

As Seen by A. C. Davis, Secretary National Farmer's Union

The following telegram to President Howard of the American Farm bureau explains the position of THE WASHINGTON FARMER when giving the news of farm organizations.—Editor.

Spokane, Wash., Nov. 15, 1922.

James R. Howard,
President American Farm Bureau,
Chicago, Ill.

The Washington Farmer is publishing President Charles S. Barrett's address to annual convention of National Farmers' union and is also publishing an abstract of Secretary A. C. Davis' statement regarding farm bureau. We believe farmers are entitled to know what great farm organizations are doing and saying. Shall be glad to receive from you statement for publication regarding the questions involved.
THE WASHINGTON FARMER.

In his annual address to the Farmers' union convention in Lynchburg, Va., and already published in THE FARMER, President Charles S. Barrett referred to a copy of the Farmers' union statement prepared by A. C. Davis, the secretary of the national union and entitled "Who and What Are Behind the American Farm Bureau Movement."

This is quite an extensive document and "has been prepared in answer to an overwhelming demand of Farmers' union officials and members who insist the time has come to speak plainly," in the words of Mr. Davis.

The statement goes back to the first county farm bureau, which was organized in Broome county, New York, a little more than 10 years ago as a branch of the Binghampton Chamber of Commerce. An agent was put in charge of this bureau as other men were in charge of other departments of the chamber of commerce and, since his functions were confined to Broome county, they called him the county agent. In that way the farm bureau and the county agent became established terms. And right here, according to the viewpoint of the Farmers' union officials, the "unholy alliance" was entered into by the farm bureau. The statement quotes from an addent of the Chicago Board of Trade, before the president's agricultural conference in Washington, D. C., in January, 1922. Mr. McDugall said: "The board of trade looks on the farm bureau movement as the greatest forward step taken by American agriculture in the last 40 years. The board of trade helped start this movement and feels considerable pride in its rapid growth and power. The first farm bureau in the United States—Broome county, N. Y.—recently celebrated its 10th birthday and the speakers of the day pointed out how the financial cooperation of the Chicago Board of Trade, with the agricultural and other local interests, initiated this movement successfully and put it on its feet. In this way the crop improvement committee of the board of trade was a sort of grandfather to the farm bureau movement. A cash grant of $1000 was made to each of the first 100 farm bureaus formed, beginning with the one in New York state and spreading to Iowa and other middle western states."

Then the statement goes on to say "Former Secretary of Agriculture Houston, a member of the southern educational board of Mr. Rockefeller's general educational board of New York, used his power and influence while secretary of agriculture to build up the farm bureau movement; that he sent out word through the several thousand county agents and agricultural extension workers to the farmers to hurry up and form and join the county farm bureau, in order, as he expressed it, to constitute a bulwark against what he chose to call the growing spirit of unrest existing among the farmers. While Mr. Houston was secretary of agriculture many hundreds of thousands of dollars of Rockefeller money was used in and spent annually by the department of agriculture."

According to Dr. T. C. Atkeson, Washington representative of the national Grange, the statement says, the idea of the American Farm Bureau federation "originated here in Washington following the armistice, with Messrs. Hoover, Baruch and Julius Barnes. Dr. Atkeson has stated a number of times that during President Wilson's first industrial conference Mr. Hoover talked to him on several occasions and said in substance that there ought to be 'some authoritative farm organization so that the sheep could be separated from the goats' and that the movement could very well be built around the county agents."

The statement finds a "close relationship and understanding" between Mr. Hoover and the Curtiss Publishing company, which "resulted in a widespread agitation of Mr. Hoover for the presidency in 1920. He apparently also induced the publishing company to stake the farm bureau with tens of thousands if not hundreds of thousands of dollars for free publicity." The statement quotes from a statement before the house banking and currency committee July 20, 1921, in which it was brought out that in December, 1919, J. W. Coverdale, who at that time signed himself "temporary secretary," wrote to S. L. Strivings, president of the New York State Farm bureau: "I am enclosing herewith two copies of an advertisement of the American Farm Bureau federation prepared by the Country Gentleman which is to be placed in 61 leading daily newspapers of the United States which have a total circulation of over five millions. These ads are to be paid for by the Country Gentleman without expense to the federation."

Claims that the farm bureau leaders are hobnobbing with the business interests more than is good for the farming industry are given in the statement; where these farm leaders are consulting with bankers, financiers, railway men and chambers of commerce. For instance, "at a luncheon in Chicago where Mr. Howard was a prominent guest, J. Ogden Armour arose and, pointing affectionately to the head of the farm bureau federation, said, 'There sits the man who should be secretary of agriculture. He is the only farm leader who is able to talk in our language.'"

Gray Silver, legislative representative of the American Farm Bureau federation, is charged with earnestly requesting that effective control of the meat packers be stricken out of the republican platform by the committee of the convention in 1920, but that his request was emphatically rejected. The statement also says that President Howard's indorsement of the ship subsidy measure does not generally represent the view of the farmers.

Considerable of the statement is taken up with the history of the U. S. Grain Growers, Inc., and the declaration made that "the national farm bureau does not believe that the relationship existing between the county agents and the farm bureau is in the interests of the farmers"; that this relationship is contrary "to the spirit and letter of the Lever act and works to the disadvantage of all self help to farm organizations; "that these criticisms led to a memorandum of understanding signed by Dr. True of the states relation service of the U. S. department of agriculture and Mr. Howard, president of the American Farm Bureau federation, by which the county agent is to aid the farm people "in a broad way with reference to problems of production, marketing and formation of farm bureaus and other cooperative organizations, but will not themselves organize farm bureaus or similar organizations" or "take part in other farm bureau activities which are outside of their duties as extension agents"; "but that these fine discriminations are better in words than in practice. That the farm bureaus are made up more or less of those who are not dirt farmers."

USED SODIUM NITRATE.

E. E. Fitzgerald of Ferndale has harvested a bumper crop of Baldwin apples. It is unusual for this variety to yield so heavy, and Mr. Fitzgerald attributes the crop to the use of sodium nitrate in his orchard last spring.

The trees were thinned during each summer, but still there is a heavy crop of fruit on all trees, with the exception of the check row which was left without fertilizer.

Mr. Fitzgerald also has a few pear trees that have made a good showing in spite of the dry season. He believes that pears will become one of the main orchard crops of this section.



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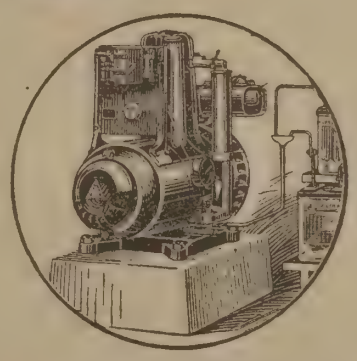
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Would Put Great River to Work

Picturing the Columbia river as a sleeping giant that should be awakened from his age-long slumbers to water thousands of acres of fertile soil, float millions of tons of farm produce to the sea and operate industry and light homes and factories with electric power, the open river conference at Pendleton last week wound the clock and set the alarm for the giant's early awakening.

"Whereas, The secretary of war is authorized and directed to appoint a board of engineers to examine the Columbia river from Vancouver to Priest Rapids, and the Snake river from its mouth to Asotin, Wash.," reads a resolution, "and to study and report with a view to canalization of these rivers for barge navigation and for the development of hydro-electric power, in cooperation with local interests in connection with such canalization to be used for the irrigation of arid lands adjacent to these rivers, now therefore,

"Be it resolved by this association, That the secretary of war be requested to appoint such body of engineers and to see that a full report is submitted in order that the same may be had by the reclamation department or the federal power commission or any other department of the federal government or board authorized by congress to proceed with such work if the same is to be found feasible."

Another part of the resolution went vigorously on record in favor of the early enactment of the Smith-McNary reclamation bill now before congress. The resolution reads:

"Be it resolved, That as part of the canalization of the Columbia river and for the development of hydro-electric power and for the irrigation of now waste land, this association believes that the Umatilla rapids presents a project worthy of immediate consideration and action by the general government, and that as one means of procuring necessary government funds for the purpose of reclaiming arid land this association strongly urges the enactment of the Smith-McNary bill now pending in congress."

From every direction came pleas for water for more arid land, for more and cheaper electrical power and for easier transportation of the products of the Inland Empire to tidewater.

That there are immense possibilities for all three tied up in the great river was admitted by all. River transportation was pictured not as a competitor of rail transportation so much as a cooperator with it.

"Changes in methods of land transportation require and compel changes in methods of water transportation if the waterway is to be economically usable," said J. N. Teal of Portland, one of the leading speakers. "And unless it can serve a useful purpose there is no justification for the expenditure of public moneys on waterways. In the face of the widespread and very intelligently directed propaganda against the expenditure of public money for the improvement of waterways and the difficulties placed in the way of their use, it behooves the friends of the waterways to act with prudence, discretion and wisdom.

"Moreover, the various forms of transpotation must supplement and complement each other," continued Mr. Teal. "Whether this generation of transportation managers must go the way of all flesh before the warfare, both open and concealed, on waterway improvements and transportation will cease I can not tell. But this much is certain, if we are to compete in the markets of the world with the nations of the world we must have the use of the cheapest and best forms of all kinds of transportation agencies, and the nation's welfare will ultimately be the yardstick by which this question will be measured.

"Furthermore, it is not prudent, even were it now possible, to depend only upon the railroads to furnish all the needed transportation facilities for the business of the country. It would cost too much money, even if sufficient rail transportation could be secured, and it is doubtful if with our constantly expanding commerce rail transportation alone would be able to care for it. Even if this were possible, the billions it would require to furnish all the needed transportation would be too heavy a charge on industry and commerce to even contemplate. While water transportation is the cheapest, commerce requires all forms of transportation, and one could not exist without the other. Therefore the form the transportation should take should be determined as is any economic question. Where rail is best it should be used, where water is best it should be used. But the proponents of neither form should look on the other as an enemy to be done away with."

The Smith-McNary reclamation bill, which was indorsed by the conference, provides for the creation of a federal fund of $350,000,000 to be known as a revolving fund. As irrigation development progressed, portions of this fund would be repaid and the money again made available for development in other localities.

The conference was well attended by representatives of all parts of the Inland Empire and from other parts of Oregon, Washington and Idaho.

Install Labor Savers

A total of 463 home conveniences was purchased by members of testing circles recently conducted among rural women in the state of Washington, under the supervision of the extension workers of the United States department of agriculture. A testing circle is usually a group of six women in a community who try out one article at a time in their homes, and then pass it on in exchange for another piece of desirable eequipment. Testing circles were formed in rural communities all over the state.

As a result of trying out labor-saving devices in their homes 105 women bought pressure cookers for canning and cooking, 96 bought fireless cookers, 75 bought dishwashers, 70 selected utility tables, 60 wanted steam cookers, 24 purchased gasoline irons, 20 installed bread mixers and 13 obtained vaccum cleaners. It is interesting to note that the dish drainer apparently saved more actual time to each individual user than any other device except the pressure cooker, which, it is estimated, will save Washington housewives 32,445 hours of time annually. Moreover, a dish drainer saves energy as well as time, since the operation of wiping the dishes is eliminated. This would not be true in the case of a cooking device, because the housewife would not necessarily have been active every minute while the food cooked. Each of the 75 women who bought a dish drainer expected to save 180 hours a year, or half an hour a day by its use.

Washington's Finest Fruits Meet

(Continued from page three)

Orchard, Stratford, Moses Lake and Hiawatha Valley. They were all grown under irrigation from power pumps. The idea of the display was to show what can be produced in the Columbia basin under the new irrigation project which will cover 1,700,000 acres in Grant county alone.

The Okanogan-Omak district display was a very beautiful assortment of Wenatchee apples in a tray arrangement. Red apples were used in building the words, "Okanogan-Omak."

Okanogan county was represented again by a display from the United States government irrigation project, which contained two displays of tray apples with plates of fruit in the center. Large maps were tacked up to show the location of the project and the value of the crops in this district.

An exhibit of different apple grades was given in one of the state college booths which brought out the importance of selecting perfect and well colored apples for the fancy and extra fancy packs. "It is by careful methods of grading and packing that the northwest has become famous all over the entire United States for its high quality of fruit." The above was printed on a large sign and displayed in front of the extra fancy grades. Mr. Armstrong held a grading and packing demonstration in this booth twice each day.

Clarke County Nuts Shown.

A. A. Quaranberg of Vancouver, Clarke county, Washington, had his usual display of nuts, which was as large if not better than his exhibit shown last year. Mr. Quaranberg is a pioneer nut grower of the state, and has originated new varieties from seedlings. He is very optimistic as to the possibilities of nut growing on the Pacific coast.

The Hanford district of Benton county entered a display of grapes, peaches, pears and quinces from their new project along the Columbia river. The quality of this fruit indicates great possibilities for this section as a fruit raising district. The Mossyrock districts of eastern Lewis county were unfortunate in not receiving their supply of fruit in time for the opening of the show. Their decorations, however, were unique, since they consisted of a moss background with the name of the districts in moss letters.

The display nearest the main gate was the Kitsap county booth, which had an exhibit of canned goods put up by the boys' and girls' clubs. The jars were uniform in size and labeled with their own sticker bearing the trade name of the "Four H Brand." In the center of the display was the club motto: "To Make the Best Better." Another sign called attention to the fact that Kitsap county was a district "Where the Boys and Girls on the Farm Have a Chance."

The Seattle public schools had a display of canned goods in the next booth. The work represented 31 different schools, part of the work having been done at home and some of it class work.

The Seattle Chamber of Commerce occupied the next space, which was decorated with natural foliage as a ceiling and background. The space was used partly as an information booth and reception room.

In the commercial department at the end of the building were a large number of booths representing different business houses, among them being a display of cased eggs from the Washington Cooperative Egg and Poultry association. Cards were exhibited which told about the different egg grades and of the value of buying eggs under the association's new sealed cartons of one dozen each.

The Seattle Milk Shippers' association displayed their wares by means of Pierce county's milk-drinking doll, which attracted much attention. From this booth the association distributed many cases of bottled milk daily, free of charge, to children visiting the show. The association produces and ships into Seattle 2000 10-gallon cans of milk daily.

The North Pacific Cooperative Berry Growers of Seattle set up a miniature strawberry patch which showed three systems of planting. There were also some canned berries in tin and some barrels of strawberries preserved in sugar.

WIN POTATO CONTEST.

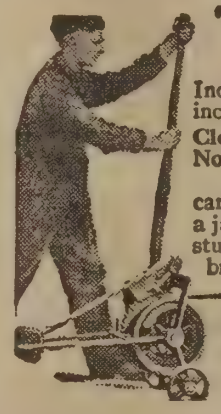
The boys and girls' judging contest at the recent Olympia Potato show resulted as follows: First, Robert Adair; second, Roy Taylor; third, Archie Haydeen. There were six boys in the entire club, all of which were in the Thurston County Garden club.

Sweet Clover for Pasture

A. F. Bernard of Alfalfa, Yakima county, believes in the raising of sweet clover for a pasture crop, and has between 15 and 20 acres which was seeded with the grain crop last season. By so doing the crop lasts two years and is seeded again as needed in other grain crops. Some of the bottom lands, however, are kept permanently seeded to sweet clover by letting each year's crop go to seed late in the fall. Some of this land, however, is subirrigated and needs no water, while some of the higher spots require a little attention.

There were 17 head of stock pastured on four acres of sweet clover for the biggest part of six months, according to Mr. Bernard. One of the strong points in favor of sweet clover as a pasture crop is the fact it holds on until the latter part of October each year and it also is one of the first pasture crops to come through the ground in the spring and it does not bloat.

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Alfalfa in the Colville Valley

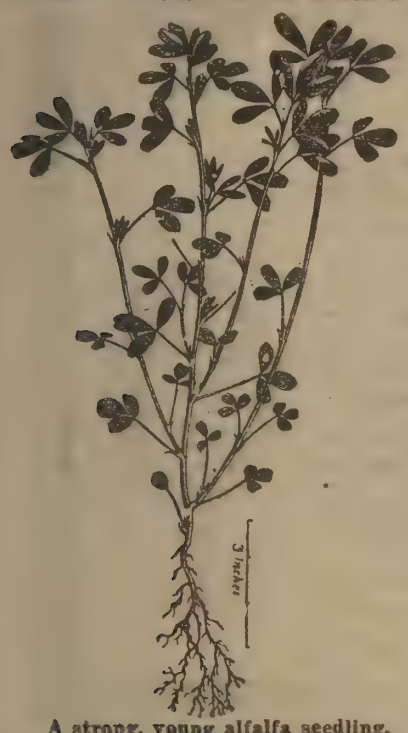
Farmers of the Colville valley complain that last winter there was a more or less killing of alfalfa, with a reduction in stand, perhaps due to otner causes as well. This loss in stand varied from almost nothing to 50 per cent or more.

An investigation has been made by Professor Hegnauer, specialist in soils and crops, of the Washington State college, in cooperation with Henry J. Plumb, county agent.

In their report just issued these men find that in most fields where there was considerable loss there were spots where the alfalfa was almost totally killed, whereas in other parts of the field the stand was very satisfactory.

While Colville valley has a wide variation in soils, three types prevail, silty clay loam, muck, and sandy loam. It has been found that in the clay loam and in the muck there are occasional spots where alkali runs rather high, and is consequently injurious to growing crops, especially to alfalfa. The remedy for this is better drainage. Drainage will not only wash out the alkali, but will also lower the water table, which would make it much safer for alfalfa growing.

The silty loam soils are by far the best and safest for alfalfa growing, because the drainage is good and the roots of the



A strong, young alfalfa seedling.

plants are able to penetrate the soil to normal depth. This type of soil also gives up its plant food easily and regularly.

In the case of both the silty loam and the muck soil it would be much safer to grow clover or timothy, or a mixture of the two, than alfalfa. These poorly-drained lands afford the real problem in alfalfa growing in Stevens county.

Many of the present troubles in alfalfa in the Colville valley may be overcome by better cultural methods. There is no crop that requires greater care and attention in the preparation of a seed bed than alfalfa. The seed bed must be fine, clean and well packed with a shallow mulch on the surface. It is best to plow the ground in the fall, and if the ground is weedy, summer fallowing might be advisable.

Fall plowing and subsequent working in the early spring will help greatly in controlling weeds. It will also help in securing proper moisture conservation.

In early spring plowing it will be necessary to pack the ground after plowing with a roller, in order to approach the condition which is ordinarily brought by fall plowing. It is doubtful if spring plowing will ever do as well as plowing in the fall for alfalfa.

Under average conditions May 1 to 15 is a good time to sow alfalfa.

Unless irrigation farming is practiced, a nurse crop should not be used. On the nonirrigated lands the nurse crop draws too heavily on the moisture supply so that the alfalfa will be stunted during the early period of its growth. Moreover, when the nurse crop is harvested the hot sun strikes the young alfalfa plants too strongly and a poor or weakened stem results.

Where irrigation water is at hand it will be possible to sow about one bushel of spring wheat per acre as a nurse crop with alfalfa. The application of water must be made so as to favor the alfalfa as well as the wheat.

Good clean seed is very important in alfalfa growing. Never use old seed or seed that is infested with weed seeds. Twelve to 15 pounds per acre of good seed should, under favorable conditions, insure a satisfactory stand. The seed may be sowed either in drills or broadcasted. From one-half to three-fourths of an inch covering is ideal, provided the soil is in the right condition.

In the main it is a good practice to inoculate the soil as a matter of insurance

Weed control and winter injury are both dependent on field management. As soon as the weeds begin to appear and are of such size that they can be clipped without injury to the alfalfa—clipping should be done. If there are only a few weeds here and there it often pays to pull them by hand when the alfalfa is yet very young. This is especially true of such weeds as mustard and others of that type.

After the stand of alfalfa is once well established it will be necessary to cultivate at least once a year and sometimes more.

Early spring cultivation is recommended as soon as the soil is dry enough, so that it will work well. Use a spring-tooth harrow, alfalfa renovator, disc or even a good sharp spiked-tooth harrow. Where the weeds are abundant or where the ground is hard severer treatment is required than where conditions are more favorable. It may be necessary to give fall tillage as well as spring tillage. Where fall tillage is given a light application of manure might well be put on just before the tillage work is done.

Last winter there was more than the ordinary amount of injury to alfalfa in the Colville valley. This was doubtless largely due to severer winter conditions, which does not necessarily mean low temperature only. Rapid alternate freezing and thrawing, ice, absence of snow, severe drying winds, too much warmth on the surface or in the soil, late fall cutting or heavy pasturing—one or more of these might be contributive causes to the common injury known as winter injury.

An examination of the weakened stands in various fields showed that they are not all injured in the same way.

To reduce or avoid injury, keep the ground in good physical condition, see that water does not stand on or near the surface of the ground, keep the plants strong and vigorous by giving them a chance to make sufficient fall growth after the last cutting, and fertilize the ground whenever possible.

Careful Grading

A Help to Local Potato Market

I, Lassen of Little Rock, Thurston county, produced some good White Star potatoes last season, which run about 13 tons to the acre. He is a strong believer of the White Star as a marketable potato for his section of the county since they produce well and they sell well on the markets. As to size Mr. Lassen says that they are comparatively even, and from four tons he found only a few individuals that were oversize.

"I dug 15 tubers out of one hill that were unusually large, and weighed nearly one pound each. This, of course, was too large for general market purposes and they only grow this way where moisture and soil conditions are the very best. It shows, however, that the variety produces uniform tubers if given the right treatment.

"I am also trying a few Irish Coblers, but find that they mature a much larger potato and a few of them have hollow centers. This, of course, may be due to our own partcular soil. It is black silt loam, and it does not get as dry as some of the upland soils.

"I tried some super-phosphate on the two varieties last summer, and found that it helped them both in making a quick growth of vines. There was a difference, however, with the varieties when the leaf spot got started. The White Star withstood the disease much longer than did the other variety, which seemed to indicate that it was more resistant to diseases. There is a possibility, of course, of this being a mere chance, and it may turn out different another season."

Mr. Lassen said that he felt there was a need for careful grading since it would help to put the local potatoes on the home markets. He had, however, managed to sell the biggest part of his crops to the logging camps, which are not far from his section of the county.

Chickens and Potatoes.

There are 35 acres of cleared land on the Mike Walter farm in the Black Lake district of Thurston county. Mr. Walter is operating a diversified farm, having 2000 chickens and has nearly four acres of potatoes. Other crops include such green feeds as are needed for the chickens, and grain and hay crops.

Mr. Walter has several types of soil on his place and finds that the White Star potato is a good variety for some of the soils on the lower land. This year, however, he raised three acres of Green Mountain on upland soil and found them a fair yielder and they sold well on the local market. The Netted Gem did not produce as good results on the upland as did the White Star, but he feels that they will bring a greater return on lower land.

A novel method of grading the potatoes was used as he placed the crop into the cellar soon after digging. A long shoot was built from slats which had had the top corners rounded off. By running the potatoes down this shoot the dirt and injured tubers were removed before the main potatoes were stored in the cellar. Such a method, he said, saves much time in grading at the time the crop is sold.

SCHOOL FOR VETERINARIANS.

Early in January, probably January 9-12, inclusive, there will be held a postgraduate school for veterinarians at the State College of Washington. In cooperation with the state veterinarian societies of Oregon, Washington, Idaho and British Columbia, the college department of veterinary science is arranging plans to bring noted doctors from the east to lecture during the four days of the course.

During the annual short course for farmers at the agricultural college, January 8-March 3, there will be offered a six weeks' series of lectures on home treatment of animal ailments, including the care of sick horses, cattle, sheep and swine.

BABY BEEF CLUB FORMED.

An Aberdeen-Angus beef club has been formed in Kittitas county to be known as the Kittittas County Rosemere Baby Beef club. The club is being financed by O. V. Battles and the calves are to be purchased from the John Smithson herd. Boys now in the club are Alvo and Rodeger Pays, John Deonigi, Harry and Tow Newton and George Bliboky. H. W. Roseburg is club leader.

BEEKEEPERS SHOULD LEARN.

"Bee inspectors are a necessity under our present condition," remarked T. W. Ware, a veteran beekeeper of Puyallup. "But if each bee owner would learn to take care of his own bees we would need no inspection. There is plenty of other work for our inspectors to do and it would in no way throw them out of a job.



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LIVESTOCK AND DAIRY

Live Stock Reports

The United States department of agriculture announces that its new service for forecasting current live stock productions, marketable supplies and commercial movements has been organized. It will cover the corn belt and western range states and will function through state statisticians already connected with the department's crop estimate work. The cooperation of many railroads, stockyards, packing plants and producers' organizations for furnishing data has already been secured.

This live stock reporting service is part of the department's program for disseminating information of an economic character bearing on agriculture, in an effort to influence the organization of the farm business on a sound economic basis. It is believed that statistics on present and prospective live stock production, and information of current market movements, will enable producers better to correlate supply with the demand, thereby preventing gluts or shortages in supplies for consumptive purposes, and the attendant fluctuations in prices to both the producer and the consumer. The following reports are proposed to be issued from time to time:

1. Monthly reports of changes in number of live stock on farms. These reports will show the number of births, purchases, sales, farm slaughters and deaths each month on a large number of farms used as samples from which ratios of changes are determined. The reports will cover the entire country.

2. Semi-annual pig surveys will be made in March and November through rural mail carriers.

3. Monthly reports of receipts and shipments of live stock from the corn belt and western states, based upon information secured from railroads, stockyards and other sources, will be issued.

4. Other monthly reports will show the condition of live stock expressed in percentage of normal and live stock prices on the range.

5. Estimates of the number of cattle on feed will be made December 1, January 1 and possibly February 1 each year.

A number of other reports will also be made periodically.

Feeding Raw Potatoes

By A. B. NYSTROM.

Are small potatoes good feed for a cow fed raw, and, if so, what value are they as a milk producer? F. T.
The Dalles, Ore.

Raw potatoes may be fed to dairy cows in limited amounts and will take the place of other succulence. It is not wise, however, to feed over 20 pounds a day to each cow. Potatoes have a loosening effect on the bowels, and also give the butter a peculiar taste, which is objectionable. When corn silage is worth $8 per ton, I would consider potatoes worth about $5 per ton. When supplementing potatoes, be sure to feed plenty of good legume hay, such as alfalfa or clover, or if this is not available, feed a high protein grain ration.

The Babcock Test

By A. B. Nystrom.

What is the correct way to use a Babcock milk tester? S. G.
McMinnville, Ore.

The following is a brief outline of the successive steps in the making of a Babcock test:

1. Be sure the sample is properly taken, and that it is representative of the lot of milk to be tested.

2. Temper milk to between 60 and 70 degrees F. by placing jar in water of that temperature.

3. Mix the sample thoroughly by pouring from one jar to another.

4. Use a standard pipette and draw 17.6 cc of milk immediately after mixing. To measure correctly have the bottom of the curved line in the pipette even with the 17.6 cc mark.

5. Transfer to a clean 8 per cent milk test bottle, being careful to lose no milk in the transfer.

6. Mark each bottle on the etched surface before adding acid.

7. Add 17.5 cc of sulphuric acid to 1.82 to 1.83 sp. gr.

8. Acid should be about the same temperature as the milk.

9. Add the acid slowly, turning the neck of the test bottle slightly to wash down milk.

10. Mix gently with a rotary motion until all curd disappears and liquid is a dark brown color.

11. Place bottles in the centrifuge so they balance and whirl for five minutes at the proper speed. A 12-inch wheel requires 1000 revolutions and an 18-inch wheel 800 revolutions per minute.

12. After the first whirling of five minutes stop and add hot soft water, 150 to 180 degrees F., to the base of the neck.

13. Whirl again at same speed for two minutes, after which fill with hot water to about 8 per cent mark.

14. Whirl again for one minute.

15. Place the tests in hot water, 135 degrees to 140 degrees, for five minutes, making sure the water in tempering vat is as high as the fat in the neck.

16. Measure the fat column as soon as it comes from the tempering bath.

17. Measure from the extreme lower point of the fat to the extreme top of the fat column.

18. A divider with fine points makes the reading easy.

VETERINARY

By DR. S. B. NELSON.

Cow Has Cough—I have a cow that will freshen soon. She is in good shape, but coughs night and morning. F.

Try giving the cow two ounces three times daily of the following mixture: Guiacolis, four ounces; Olei Lini, one quart.

Tuberculosis of Udder—Is there such a thing as tuberculosis of the udder and what are the symptoms? Would my cows be apt to get it if cows kept on this ranch four or five years ago had it? M. B.
Morton, Wash.

Yes, cows sometimes have tuberculosis of the udder and it is the most dangerous type of tuberculosis which affects the cows as far as the transmissibility of the disease to the human race is concerned. A few of the principal symptoms are inflammation of the udder gland situated in the upper back part of the udder. Garget, which comes and goes rather periodically. If it is four or five years ago since the farm which you are on had cows on it which were tubercular, there will be no danger except possibly through the stalls where there are cracks in the floor and where it has been rather moist. There might be some little danger there. This can be overcome by thoroughly disinfecting. Disinfect that part of the stables.

Milk Fever.—I have a cow that had milk fever last time she freshened. Is she likely to get fever next time and can anything be done to prevent it? H. N.
Tonasket, Wash.

She may get milk fever again if you are feeding her heavy milk-producing rations. It would be well, if she is in pretty good shape and a heavy milker, to change the feeding 10 to 14 days before she freshens by putting her on to poor, dry hay, giving her plenty of water to drink, but cutting down on all feeds, and in order to prevent digestive trouble with this change give her one handful of epsom salts in a quart of water once daily if necessary. Of course, you must make the change slowly, taking three or four days to make it.



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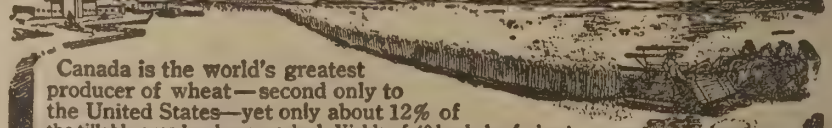
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Pacific International

(Continued from page two.)

best Berkshire sow in the country. The senior and grand champion boar, Enhancer, is almost as outstanding an animal.

Judge: E. H. Hughes, University of California.

Boars: Aged boar—1, Italian Vineyard Co., Guastie, Calif., on Enhancer (senior and grand champion). Junior yearling—1 and 2, Italian Vineyard Co. on Guastie's Rival and Hazen's Rival. Senior pig—1, Oregon Agricultural college on Maybelle's Dominator; 2, Italian Vineyard Co. on Kintyre Dominator. Junior pig—1, Ashlane farms, Pleasant Grove, Utah, on Ashlane Laurel Prince (junior champion); 2 and 3, Italian Vineyard Co. on Monrack Royal Superb and Enhancer's Leader; 4, Lester Barrows, Shaw, Ore., on unnamed pig; 5, Kenneth Hinshaw, Goldendale, Wash., on unnamed pig; 6, Oregon Agricultural college on Real Dominator.

Sows: Aged sow—1 and 2, Italian Vineyard Co. on Violet Festline (senior and grand champion) and Greatwood Rose 6th. Senior yearling—1, Mrs. Charles E. Virden, San Francisco, on Festline's Rival 3d; 2, Italian Vineyard Co. on Guastie's Lady Rookwood. Junior yearling—1, 2, 3 and 5, Italian Vineyard Co. on Violet's Laddie, Lady Good's Rookwood, Violet's Lassie 2d, and Guastie's Wondrous; 4, Oregon Agricultural college on Lady Rookwood 3d. Senior pig—1 and 2, Italian Vineyard Co. on Choice Wondrous (junior champion) and Rincon's Wondrous; 3 and 4, Oregon Agricultural college on Maybelle Dustin and Maybelle Diamond. Junior pig—1, Ashlane Farms on Ashlane Laurel Princess; 2, 3 and 6, Italian Vineyard Co. on Guastie's Royal Lady 2d; Guastie's Royal Lady 4th and Guastie's Royal Lady 3d; 4 and 5, Barrows on unnamed pigs.

Aged herd—1 and 2, Italian Vineyard Co. Aged herd bred by exhibitor—1, Italian Vineyard Co. Young herd—1 and 2, Italian Vineyard Co.; 3, Oregon Agricultural college. Young herd bred by exhibitor—1, Oregon Agricultural college. Get of sire—1 and 3, Italian Vineyard Co.; 2, Barrows; 4, Oregon Agricultural college. Produce of sow—1 and 2, Italian Vineyard Co.; 3, Oregon Agricultural college; 4, Barrows.

Poland Chinas.

Four states contributed to the great show made by the Poland China breed. California, Idaho, Washington and Oregon all had representatives. But it must be admitted a couple of club boys were all who held up the Washington banner. Prizes in general were pretty well divided, although two championships went to one man and one other to his father-in-law, making three to Idaho. Liberator Wonder, the senior and grand champion boar, has about all that could be asked of a boar of his age. He is deep bodied, has great bone and a strong back. But the class of the show was the senior and grand champion sow. In fact, the junior yearling sow class, in which she was found, was sensational. About 25 head were in the ring. Not only were there no poor ones, but several of them would be rated as extreme tops anywhere. Lady Patriarch, shown by Hugh Walter of Townsend, Mont., has more size than the others without losing any quality. She has about everything that could be asked—best of bone and feet, strong back, great length and depth of body. Big classes were out in all the younger divisions, and quality was of the best.

Judge: W. L. McNutt, Ord, Neb.

Boars: Aged boar—1 and 3, Hugh Walter, Townsend, Mont., on Cooper's Choice and Big Smooth Orphan; 2, A. Buckland & Son, Fresno, Cal., on Giant Prospect. Senior yearling—1 and 3, C. K. Loe, Silverton, Ore., on Loe's Designer and Bob Clan; 2, Herbert Willard, Dayton, Ore., on Kin-Son Bob. Junior yearling—1 and 3, A. J. Firkins & Sons, Nampa, Idaho, on Liberator's Wonder (senior and grand champion) and Idaho Timm 4th; 2, Buckland & Son on The Tempest; 4, R. W. Hogg, Salem, Ore., on Black Oak; 5, J. F. Torgason, Suver, Ore., on Maplehurst Master; 6, Walter on E's Jumbo. Senior pig—1 and 2, Ambrose W. Johnson, Nampa, Idaho, on Idaho Buster 2d (junior champion) and Idaho Buster 3d; 3, M. G. Gunderson, Silverton, Ore., on G's Big Joe; 4 and 6, Walter on Liberty Bob and Bob Jones; 5, Stephen Rentz, Gervais, Ore., on Rentz's Masterpiece. Junior pig—1 and 2, Firkins & Sons on Nutwood Clan and By Gosh; 3, Gunderson on Peter; 4, Johnson on Arch Problem 2d; 5, Walter on King Liberator 2d; 6, Buckland & Son on Model Jones.

Sows: Aged sow—1, Firkins & Sons on Idaho Queen 2d; 2, Buckland & Son on Evergreen Hutch; 3, Walter on Belle W. 4th; 4, Gunderson on Giant's Goldie; 5, Willard on Flossie Wonder. Senior yearling—1 and 2, C. K. Loe on Loe's Wonder and Loe's Wonder 1st; 3, E. O. Loe, Silverton, Ore., on Lady Jones; 4, Walter on Baby Ruth. Junior yearling—1, Walter on Lady Patriarch (senior and grand champion); 2 and 3, Firkins & Sons on Idaho Queen 6th and Idaho Queen 5th; 4 and 5, Buckland & Son on Graceful Lady 1st and Miss King Kole; 6, Hogg on May Oregon Equal. Senior pig—1, Johnson on Peter's Prize Lady; 2 and 4, Buckland & Son on Show Girl and Prospect Maid; 3 and 5, Gunderson on Lady Alice and Lady Bell; 6, Oregon Agricultural College on Montana Julia. Junior pig—1, Johnson on Problem's Prospect (junior champion); 2, Walter on Hazel; 3, Buckland & Son on Maid's Model 1st; 4, Firkins & Sons on Miss Nutwood 5th; 5, Hogg on Black Oak Susie; 6, B. F. Kammerzell & Sons, Colfax, Wash., on Archdale's Best.

Aged herd—1, Firkins & Sons; 2, Walter; 3, C. K. Loe; 4, Buckland & Son; 5, Willard; 6, Hogg. Aged herd bred by exhibitor—1, Firkins & Sons; 2 and 4, C. K. Loe; 3, Walter. Young herd—1, Johnson; 2, Gunderson; 3, Walter; 4, Firkins & Sons; 5, Buckland & Son; 6, Kammerzell & Sons. Young herd bred by exhibitor—1, Johnson; 2, Gunderson; 3, Walter; 4, Firkins & Sons; 5, Hogg; 6, Buckland & Son. Get of sire—1, Firkins & Sons; 2, Buckland & Son; 3, C. K. Loe; 4, Gunderson; 5, Johnson; 6, Walter. Produce of sow—1 and 6, Firkins & Sons; 2, Buckland & Son; 3, C. K. Loe; 4, Walter; 5, Gunderson.

The Poland China Futurity.

Junior yearling boars—1 and 3, A. J. Firkins & Sons, Nampa, Idaho, on Liberator's Wonder and Idaho Timm 4th; 2, A. Buckland & Son, Fresno, Cal., on The Tempest; 4, R. W. Hogg, Salem, Ore., on Black Oak; 5, Hugh Walter, Townsent, Mont., on E's Jumbo.

Junior yearling sows—1, 2 and 5, Firkins & Sons on Idahn Queen 6th, Idaho Queen 5th and Idaho Queen 4th; 3 and 4, Buckland & Son on Graceful Lady 1st and Miss King Kole; 6, Hogg on Susie Equal.

Senior boar pigs—1 and 2, A. W. Johnson, Nampa, Idaho, on Idaho Buster 3d, and Idaho Buster 2d; 3, M. G. Gunderson, Silverton, Ore., on G's Big Joe; 4, 6 and 7, Walter on Liberty Bob, Ranger Bob and Bob Jones; 5, Stephen Rentz, Gervais, Ore., on Rentz's Masterpiece; 8, F. O. Cooper, Willow Creek, Mont., on Spotlight.

Senior sow pigs—1, Johnson on Peter's Prize Lady; 2, Buckland & Son on Show Girl; 3 and 4, Gunderson on Lady Alice and Lady Bell; 5, Oregon Agricultural college on Montana Julia; 6, C. K. Loe, Silverton, Ore., on Mollie; 7 and 8, Walter on Mildred and May Belle.

Senior litters—1, Gunderson on Long Lady; 2, Walter on Miss Jones; 3, C. K. Loe, Silverton, Ore., on Mollie Buster; 4, Herbert Willard, Dayton, Ore., on Oregona 5th; 5, Buckland & Son on Fresno Girl.

Junior litters—1, Firkins & Sons on Idaho Queen 6th; 2, Walter on Little Sweetheart; 3, Buckland & Son on Model Maid; 4, Hogg on Susie Equal; 5, B. F. Kammerzell & Sons, 6 and 7, Johnson on Idaho Bustress and Idem; 8, B. F. Kammerzell & Sons, Colfax, Wash., on Fashion's Pet.

Hampshires.

Hayes & Harter's Heart o' the Valley Farm, Grants Pass, Ore., made most of the Hampshire show. They were awarded most of the first prizes and all four championships. A few club boys and the herd of Adams Eden farm of Warren, Ore., competed with them. While all the champions are extra good Hampshires, the senior and grand champions of both sexes are of such wonderful type and quality as is seldom seen. Good feet and large bone hold up good bodies and strong backs. A peculiar circumstance is that the grand champions are litter brothers and sisters and the same is true of the junior champions.

Judge: E. H. Hughes, University of California.

Boars: Aged boar—1, Hayes & Harter, Grants Pass, Ore., on Model's Defender; 2, Adams Eden farm, Warren, Ore., on Emergency Lad. Junior yearling—1 and 2, Hayes & Harter on Cherokee Duke (senior and grand champion) and Nehawka Masterpiece; 3, Adams Eden farm on Gen. Tipton's Duplicate. Senior pig—1, Hayes & Harter on Cherokee Roamer (junior champion). Junior pig—1, Emil Wells, Kirby, Ore., on Cherokee Pat; 2, Adams Eden farm on Dinty Moore.

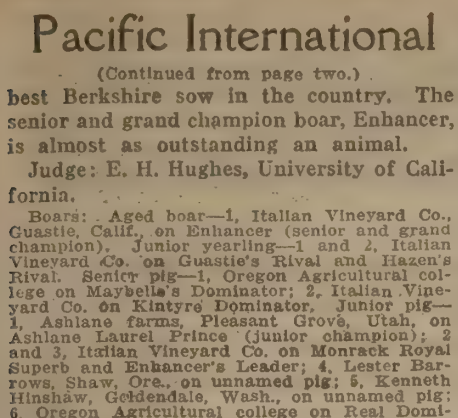
Sows: Aged sow—1 and 2, Hayes & Harter on O. U. R. Baska Tipton and O. U. R. Cantatrice; 3, Adams Eden farm on Winter Wren. Senior yearling—1 and 2, Adams Eden farm on Maggie Jiggs and Polly Perkins. Junior yearling—Hayes & Harter on Lady Princess (senior champion) and Belle Flower. Senior pig—1 and 2, Hayes & Harter on Cherokee Bonnie (junior and grand champion) and Cherokee Belladora. Junior pig—1, Ronald Tycer, Kirby, Ore., on unnamed pig; 2, Hayes & Harter on unnamed pig; 3 and 4, Adams Eden farm on Eden Pride and Eden Polly.

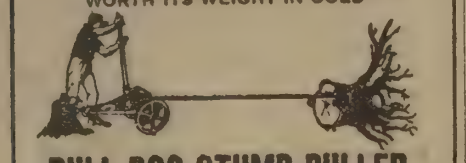
Aged herd—1, Hayes & Harter; 2, Adams Eden farm. Young herd—1, Hayes & Harter; 2, Adams Eden farm. Young herd bred by exhibitor—1, Hayes & Harter; 2, Adams Eden farm. Get of sire—1 and 2, Hayes & Harter; 3, Adams Eden farm. Produceof sow—1, Adams Eden farm.

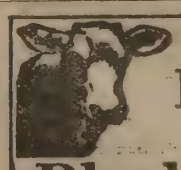
THE SHEEP SHOW.

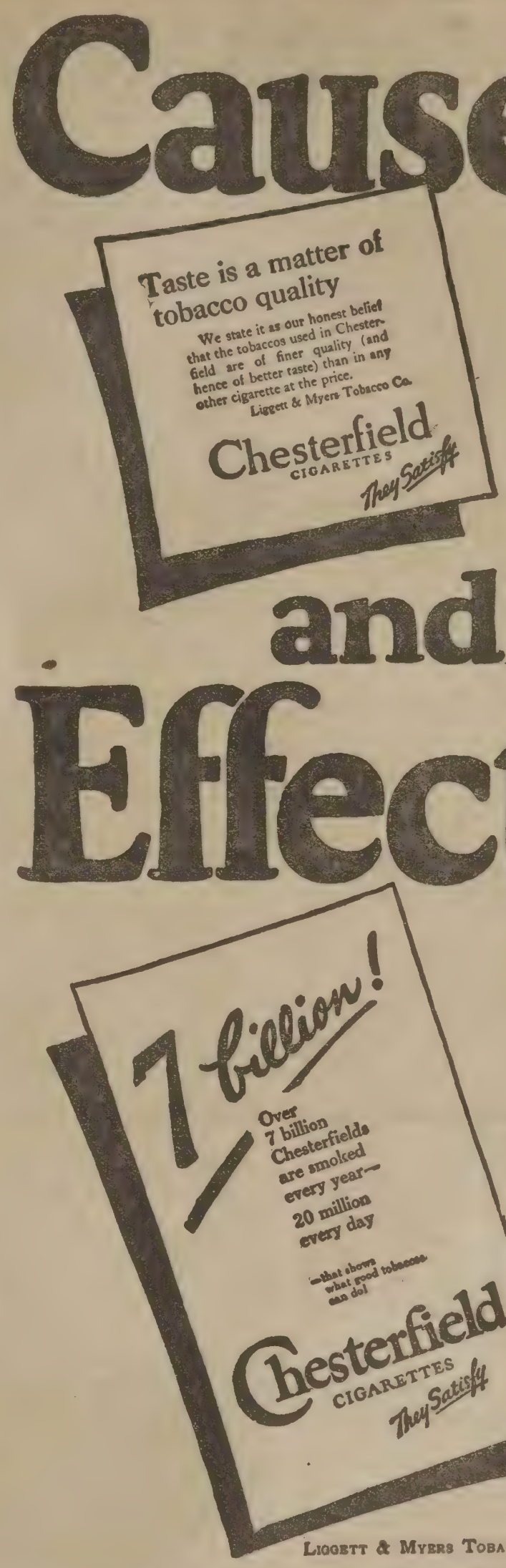
According to figures prepared by Superintendent O. M. Nelson, the sheep show was considerably larger than that of a year ago, which up to that time was the high

(Continued on page fifteen.)





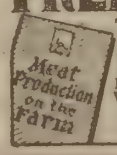






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POULTRY AND RABBITS

Breeding Flock

Selection and Care Important

Every flock owner looks to the constant cash income week by week and by forethought arranges to have a goodly flock of pullets for the fall and winter cash income, says Mrs. George R. Shoup, poultry specialist at the western Washington experiment station. Many are disappointed in the returns from these pullets and if this low production happens year after year the owner must either find the reason therefor, or else concede that "chickens don't pay, anyway."

To remedy this disappointing condition one must first get the possibilities of the flock clearly fixed in the mind. There are two distinct branches of the work that are maintained in every well-balanced flock, and success depends upon the right handling of these two divisions. One division is the market egg producers, which include all pullets or females hatched the current season, and such older females as may be kept for market egg production. The second division is the hatching egg producers, which should include only such females as are selected as worthy of being the foundation stock of the plant.

The function of the market eggers is to bring in the cash income especially during the fall and winter, laying enough eggs this first season, if pullets, to prove themselves fit for the breeding flock, or if older birds, to help the pullets give the owner his share of revenue over cost of production.

The specific function of the breeding hens when mated to desirable males is to produce good hatching eggs from which the flock is to be renewed, and later in the season help market receipts. They have passed at least one season of laying, with presumably enough eggs to their credit to warrant their selection as breeders. They have also passed successfully through a complete molt, by these two accomplishments showing conclusively that they possess vigor enough to both lay eggs and grow feathers—two highly important functions.

When either the market egg producing flock or the hatching egg producing flock fails in its share of the work the business becomes lop-sided and shortly thereafter unprofitable. This is to say, if the market eggs are not produced while the prices are highest as well as during the rest of the year, the owner's share of the income is a disappointing quantity, often none at all, but if the breeding hens do not lay strong, fertile eggs, that hatch well and give livable chicks, the consequent supply of pullets gives out, and then the fall and winter production is gone, materially reducing the net profits of the plant. Thus it is that, whether willing to consider it so or not, the subject of selection and handling of birds that will reproduce themselves is of first importance to poultrymen everywhere.

Do not be so absorbed in the care of the fascinating pullets that the careful selection of the potential mothers is neglected. The best time to make one's choice of breeders is just before the birds begin their annual fall molt, say September and October. By handling the birds while still in lay, there is the best possible chance of forming a right opinion of the stock, and in conjunction with the trapnest record sheets which show by convenient symbols number of eggs laid, cycle of lay size of egg, color of egg, broken eggs, broodiness and toe-punch and with wing band (showing parentage), one has a nearly complete history of the bird in hand. To grade a bird as to breeding quality, slip the left hand under the keel and judge the weight (close to four pounds), look the bird square in the face to watch for head defects, such as scurvy comb, swollen eyes; grasp the beak and quickly open and look for canker of mouth and throat. Making sure that the head is healthy, judge for laying capacity. Outstanding eye, small head, medium fine comb, texture and bleached beak combine to indicate a good layer.

Next note plumage. Close, well-patterned plumage, well worn and shabby means a good worker. A hen that has kept her feathers in good show condition by the end of a laying year has neglected the nest, depending on her owner's eye for beauty to pay her bills.

The back should not only be wide at the shoulders, but long also. The nearer a long rectangle the whole back describes the longer time the bird will lay. Birds sometimes lay 16 months if hatched so they begin to lay in July.

The body depth shows how much feed a bird can use in manufacturing eggs, so that the deeper the body, with the accompanying pliability of body and skin, the better the production. The right hand does most of the work of examining, but the left hand senses the length of keel and whether or not it is crooked. Should it be kinked or crooked, it more than likely shows a heavy feeder as a growing pullet and usually a good layer. A glance at the shanks shows whether or not they are yellow and taken with the rest of the body information, bleached legs on a strong, vigorous female means a long period of lay.

This brings us to the examination of the pelvic or lay bones and fluff. Medium sized bones, pliable and spread two or three inches apart, and covered with muscle, not gristle, show a bird that will lay the next year. Pliable skin on a deep fluff—that is, a wide spread from the end of the keel or breastbone to the vent—shows ample storage room for developing eggs as well as large capacity organs of digestion.

The points that show a good breeder have thus been taken in the order in which they are seen on a bird in laying form that has every chance of becoming a good breeder, and in this short article it is deemed unwise to try to describe the varying grades below this one.

Having such a bird in hand, if her chart symbols show besides her high egg record, that she neither lays tinted eggs nor small-sized ones, nor breaks what she does lay, you have a choice bird that has laid 200 or more eggs and deserves every kindly attention needed through her next trying period, which is the full natural molt.

Shows Benefit From Culling

Following a culling demonstration cradried on in Mason county by W. D. Buchanan, poultry specialist of the state college, 45 hens which were culled out layed only two eggs in seven days. The remaining 160 hens laid 315 eggs during the same week.

This indicates the benefit from eliminating the poor producers and thus improving the flock. In the above instance the average lay of the hens left in the flock was increased 6 per cent, which will amount to approximately $50 for the entire year.

"If this flock had not been culled, one hen out of every five would have been kept at a loss of 85 cents per year," points out Mr. Buchanan. "The loss must be divided equally among the good producing hens, thus lowering the net income of the entire flock."

TACOMA PLANS POULTRY SHOW.

At a meeting of poultrymen in Tacoma it was decided to hold a show in that city late in December.

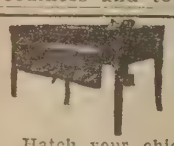
Charles E. Boughner was unanimously elected show secretary and will have as his assistants Ray Leftwick, Mrs. L. J. Jacobsen, Ellis Jennings, H. K. Carter and J. H. Nichols. The new secretary suggested that the English plan of poultry shows be adopted for the coming event here and the idea caught the approval of all those present

Poultry experts will give talks on correct feeding, breeding and housing for exhibition and eggs, and a big auction sale of exhibition and utility stock will wind up the show.

The western zone meet of the entire country for members of the American Barred Plymouth Rock club will be held at this show and $100 for extra premiums has been voted for this class. Other specialty clubs will be invited to hold their meets here.

KEEP POULTRY RECORD.

R. N. Miller, farm management demonstrator, says: Obtain a poultry record book from your county agent or the extension service and keep accounts.



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Read the "Want Ad" page this week for good offers of all kinds.

ORCHARD AND GARDEN

Orchard Problems

By O. M. MORRIS, Head Department of Horticulture, Washington State College.

Will you kindly tell me what peaches are best suited to this section of the state, both for cannery purposes and home use? Would also appreciate a description of the following varieties? Tuscan Cling, Lemon Cling, Orange Cling, Elberta, J. H. Hale, Muir. MRS. E. L. N.
Clarkston, Wash.

I think you will find the J. H. Hale and Elberta distinctly the leading varieties for your section. The Muir is generally considered too soft a tissue and coarse grained to be highly desirable, although it is a fruit of very fine flavor.

The following brief descriptions will serve to give you, I think, most of the information needed:

Elberta: Tree vigorous, but not the most hardy. Upright and spreading, fruit matures at mid-season, large, roundish, oblong, somewhat flattened, usually with a slight blush at one side. The depression or cavity around the stem is deep. Color, greenish-yellow, changing to orange-yellow, one-fourth to three-fourths overspread with red. Mottle or even over the entire surface. Skin thick and tough. Flesh yellow stained with red near the pit. Juicy, stringy, firm but tender. Good in quality.

J. H. Hale: Tree vigorous, large, probably more hardy than the Elberta. Fruit midseason three inches long, round, regular, uniform. The apex roundish with small tip. Color, lemon-yellow, overspread with attractive dark red, showing mottles and splashes of carmen, down thin-like color. Skin thick, tuff, clings tenaciously to pulp. Flesh yellow, red around the pit, juicy, fine grained, firm, very good quality. Stone free.

Lemon Cling: This represents a general group of varieties of very similar characteristics and it is difficult to know when the true lemon cling is possessed. Tree vigorous and highly productive. The fruit large, oval, resembling a lemon form, apex terminating in a large nipple; skin deep yellow, brownish-red where exposed; flesh firm with deep lemon color, red at the stone; juicy, sprightly, very good when perfectly ripe. A perfect clingstone—ripens late.

Orange Cling: Tree, medium vigor, fruit large, round with distinct suture. Skin deep orange with dark red cheek. Flesh dark yellow, firm, juicy. Medium quality. Season about the same as Lemon Cling. This variety is seldom as well worth planting as the Lemon Cling.

Grafting of Chestnuts.

What kind, or kinds of oak—white or black—can chestnuts be grafted onto successfully? L. A. M.
Riddle, Ore.

It is not at all probable that you could succeed in grafting chestnuts upon any oak. The common Quercus Prinus, or chestnut oak, more nearly resembles the chestnut than any other, but they belong to an entirely different genus and it is not at all probable that you will get as much as one in one hundred to grow. The common kinds of chestnuts may be grafted or budded on another, but the white or black oaks are very different in tissue and growth habits from the chestnut.

Blossom End Rot

By F. D. HEALD, Plant Pathologist, Washington State College.

For several years my summer squash have been a disappointment. The plants have been very thrifty with a profusion of blossoms, but when the little squash get from three to five inches long they begin to wither at the blossom end. When the weather becomes cool in the fall they do not seem to be affected. I think something must sting them, but I do not know a remedy.

I also wish to ask the cause and remedy of tomatoes having a black spot or decaying on the end opposite the stem. They seem to be affected more seriously on the west side of the mountains than here, where it is dry. Sometimes the green ones are affected, but more frequently it is the ripe ones. MRS. A. W.
Wenatchee, Wash.

I believe it will be better to consider the tomato disease first, since the discussion of this trouble will perhaps throw some light on the squash disease. Your tomatoes apparently were affected with the nonparasitic disease known as blossom end rot. I will give you a quotation from one of our textbooks on plant diseases which will give you a summary of information concerning the nature of this trouble and the conditions which seem to favor it. The writer makes the following statement:

"Blossom end rot, also known as point end rot, may be found wherever tomatoes are grown. It is a disease of the fruit only. In some seasons 50 per cent or more of the fruit crop is ruined by it. It seems to be serious in dry weather and on light soils.

"Symptoms.—Infection is manifested as a watersoaked spot at the blossom end of the fruit. The size of the spot may be that of a pinhead, or it may spread so rapidly as to involve half of the tomato. A few days later the water-soaked spot becomes black and leathery and ceases to make further progress.

"Plants subject to frequent slight wilting produce a greater number of defective fruits. There seems no doubt but that the water supply in the soil is an important factor in limiting or increasing blossom end rot. The factors of drainage and cultivation are, therefore, important considerations. Although dry soils and drought favor the increase of the disease, the state of health of the plant itself seems equally important.

"The use of fertilizers, too, seems to influence the trouble. Heavy applications of manure or of potash seem to increase the rot, as do fertilizers in the form of ammonium compounds. This is especially true on sandy loams. On the other hand, nitrate of soda or lime acts as a check. In controlling blossom end rot the moisture of the air in the greenhouse seems also an important factor. On bright, sunny days, it is not advisable to keep the air dry. However, care should be taken not to keep the air of the house dry during the night, as this encourages numerous fungous diseases."

It is my opinion that the trouble affecting your summer squash was of a nature very similar to the blossom end rot of the tomato. We have no specific information concerning blossom end rot of this plant, but I have seen a similar trouble in watermelons. In order to make positive identification, it would be necessary that diseased specimens be sent to us for examination.

Fruit Growers Up in Arms

The Wenatchee apple growers are up in arms. They are no longer satisfied with the action of shippers and traffic associations. Four hundred of these growers, represented by delegations from every fruit growing section in the Okanogan and Columbia river valleys from Oroville to Wenatchee, assembled in Wenatchee, warmly discussed the situation and adopted the following resolutions:

(1) Support of the Wenatchee Southern railway and the furtherance of this project for the relief of the fruit industry by petitions to the interstate commerce commission bearing the names of every grower in north central Washington.

(2) Enlisting the aid of the department of public works of this state, the governor and the people in other communities of the state of Washington in the problem of saving the fruit industry of this part of the state.

(3) Opening of the Spokane gateway to the more southerly routes to the markets of the east for the purpose of securing immediate relief in the situation.

On the motion of I. A. Van Valkenberg, a resolutions committee was appointed and withdrew to frame resolutions after there had been a general discussion of the problems in the meeting.

Packing Apples on Farm

The Yakima valley reports that more apples have been packed on the farm this year. By packing at home the growers claim that they save 25 per cent of the haul charge to the city, for the apples as they come out of the orchards in loose boxes pack out 75 per cent and it costs as much per box to haul loose in the box as packed.

In some instances a few growers have cooperated in the packing and also in the picking. Four members of the horticultural union in Fairview, Ed Remy, Clarence Starcher, Sam Kelsay and C. L. Miller, have employed the same picking crew, managed by one of them, for picking the apples of the group. One of them superintended the packing.

The arrangement has worked out well in all respects, and they have made a very matrial saving, besides the work of harvesting has proceeded more smoothly and more economically. The crew has picked each variety of apples in turn in each of the four orchards.

Protecting Bees in Winter

"The best way to protect bees for the winter is to cover the hives with building paper in order to keep out all moisture," said J. W. Peterson, a well known beekeeper in the Edgewood district near Puyallup. "Last year I covered one hive in this manner, and the bees did so well that I decided to pack every hive this way for the next winter. There was very little dampness and no mold.

"The top board is given a similar cover with the edges folded down in order to shed all rain. It is a good plan to pack the top super with burlap, or other dry material to keep the colony warm. I have estimated that it takes approximately six feet from a roll of building paper to cover one hive. At this rate the whole apiary can be protected at a very nominal cost."

Mr. Peterson has 60 colonies of bees, which he is carrying over winter, and plans on keeping all colonies strong and in a healthy condition to begin work when the honey flow starts next spring.

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Lifelong Trapper

Adventures of R. A. Lewellen

Robert A. Lewellen lives near Bend, in eastern Oregon. He was in Portland the other day, disposing of his furs. "I have lived in Oregon since 1911," said Mr. Lewellen to Fred Lockley of the Oregon Journal.

"I was born in Texas 42 years ago. My father was born in Scotland. Before coming to Oregon I trapped in the Lolo Pass country and on across the Rockies into Idaho, and on the McGruder fork of the Clearwater. When I came to Oregon I trapped on the headwaters of the Minam and in the Looking Glass country.

"When I was 6 years old we moved from Texas to Montana. In 1907 I went to Alaska, intending to try my luck mining, but I found I could make more money with my gun and my traps, so I put in four years in the Yukon district, trapping martens, minks, wolverines, lynxes, and blue, silver, cross and black foxes. I got $1100 for black fox pelts from a fur buyer at Atlin. I ran a 100-mile trap line, having nine cabins on the line. It took me from six to nine days to cover the trap line. In addition to the smaller animals I have mentioned I also killed 12 grizzlies and a large number of other bears. I used a .32 special Winchester with a soft nosed bullet that tore a large hole as it came out.

"The biggest bear I got was an old grizzly that weighed 1400 pounds. The most dangerous bear in the Yukon country is the black bear with a white face. They lack poise, have an ugly disposition and will fight at the drop of a hat, or they will fight because you don't drop it. If one of these bears smells you he will beat it, but if he sees you he seems to lose his temper and comes for you. They are not large bears. They weigh 200 to 250 pounds, but they are nasty scrappers. What is called the glacier bear—the light gray bear—is quite inoffensive and good-natured. They ignore you if you will do the same by them. The cinnamon bear will also attend to its own business if you do likewise, except the female cinnamon when she has cubs. In that case she frequently attacks you.

"If you want to continue a good life insurance risk never shoot a bear in the head, particularly if it is looking toward you. The shape of the skull causes your bullet to glance, and the flesh wound helps to give the bear a nasty disposition. Shoot just behind the foreleg and rather low. A grizzly can carry a lot of lead. I have put seven bullets into a grizzly before I stopped him.

"I use 175 to 300 traps. On one line in Alaska I got on one trip 15 martens, three foxes and two lynxes, but that was unusual. Sometimes you will find every trap empty or a few of them sprung and no animal there. Since 1914 Bend has been my headquarters. I started a fox farm on Little Lava lake, 50 miles west of Bend. I sold it about a year and a half ago. I caught some martens alive and put them into a wire stockade, intending to run a marten farm, but I decided there was more money catching them out in the hills than in raising them. I have nine cabins and run a 100-mile trap line. That is a very wild country up there and hunting and trapping will be good for a long time to come.

"Up where I am I catch martens, foxes, minks, otters and occasionally I get a timber wolf or a cinnamon bear. I have two headquarters camps, one at each end of the trap line. I use snowshoes all winter for travel, for the snow lies deep in the mountains there all winter. I use a little oil of anise seed to advertise the bait. The animals have keen noses and smell it a long distance. I kill a few deer in the fall and hang them up for my winter meat. With my gun, revolver, bait and a few traps I usually carry about a 40-pound pack. Sometimes to my great disgust I catch a skunk. I see lots of deer and elk, but I kill game for meat only, so I leave them alone."

Consumption of Fresh Fruits

It is a matter of encouragement to the berry growers of the Puyallup and Sumner Berry Growers' association that the final returns on fruit shipped for fresh consumption has been greater during 1922 than the previous season. Red raspberries brought an average price of $2.18 per crate, which is considered a good figure since in other parts of the United States fruit rotted on the vines.

Loganberries brought a 7-cent average per pound, a better price than growers in other sections realized. Fresh loganberries brought $2.03 as the season's average.

Red currants averaged $1.53 per crate, while black currants were $1.86. The Blackcap raspberries, which always sell at a premium, brought $3.04 per crate as the average price for the season. The prices per pound on other fruits were: Gooseberries, 6 3-4 cents; Royal Ann cherries, 7 1-2 cents; sweet cherries, 6 cents; sour cherries, 8 cents; Bartlett pears, $30 per ton; prunes and plums, $30.

Although some of this season's crop of strawberries and blackberries are on hand as barreled fruit, W. H. Paulhamus, president of the association, feels that there will be little, if any, of this product being carried over the winter.

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Pacific International

(Continued from page eleven.)

water mark for the Pacific International. Pens were crowded, the tablation showing a total of 550 head of breeding sheep, as compared with 465 head last year, a gain of 18 per cent, while fat sheep showed only a slight increase. Romneys made the greatest gain, the increase from one exhibitor with 12 entries, to three breeders and 34 entries, registering 183 per cent. Cheviots and Leicesters both made big gains, but their numbers still are small, and Shropshires and Rambouillets must be credited with contributing the greatest increases of any of the major breeds. Nine exhibitors of the former showed 88 head, as compared with seven showing 61 in 1821, a 44 per cent gain, and five of the latter showed 77 head, as compared with three showing 53, a 45 per cent gain. Shropshires led in numbers, with Rambouillets second and Hampshires third. The grand total for all sheep was 589 head, compared to 502 head in 1921.

Short and Medium Wools.

As for quality, the judge declared the Shrop show one of the four best in the entire country, and later extended this to include all of the short and medium wool breeds which he judged except Cheviots and Oxfords. He ranked the exhibition with those at the Ohio, Illinois and Wisconsin state fairs, but said that it would hardly equal that at the International. The Canadian government flock he declared the best that he had ever seen.

Judge: W. C. Coffey, St. Paul, Minn.

Hampshires.

Rams: Aged ram—1 and 2, J. G. S. Hubbard & Sons, Monroe Ore.; 3 and 5, Foothills Farms, Carlton, Ore.; 4, Thousand Springs Farm, Wendell Idaho. Yearling ram—1 (champion) and 2, Thousand Springs Farm; 3 and 4, Foothills Farm; 5, University of Idaho; 6, Hubbard & Sons. Ram lamb—1 and 2, Thousand Springs Farm; 3, Foothills Farm; 4, University of Idaho; 5 and 6, Roland Newman, Thorpe, Wash.

Ewes: Aged ewe—1 (champion) and 3, Thousand Springs Farm; 2 and 6, Foothills Farm; 4 and 5, Hubbard & Sons. Yearling ewe—1 and 2, Thousand Springs Farm; 3 and 6, Hubbard & Sons; 4, Foothills Farm; 5, University of Idaho. Ewe lamb—1 and 2, Foothills Farm; 3 and 4, Thousand Springs Farm; 5, Hubbard & Sons; 6, University of Idaho.

Flock—1 and 2, Thousand Springs Farm; 3, Foothills Farm; 4 and 6, Hubbard & Sons; 5, University of Idaho. Flock bred by exhibitor—1 and 3, Hubbard & Sons; 2, Foothills Farm. Pen of four lambs—1 and 4, Foothills Farm; 2 and 5, Thousand Springs Farm; 3, Hubbard & Sons; 6, University of Idaho. Pen bred by exhibitor—1 and 4, Foothills Farm; 2 and 5, Thousand Springs Farm; 3, Hubbard & Sons; 6, University of Idaho. Get of sire—1, Hubbard & Sons; 2, Foothills Farm; 3 and 4, Thousand Springs Farm; 5, University of Idaho. Produce of ewe—1 and 3, Foothills Farm; 2, Newman; 4 and 6, Hubbard & Sons; 5, University of Idaho.

Rambouillets.

Rams: Aged ram—1 (champion) and 2, Bullard Bros., Woodland, Calif.; 3 and 5, J. M. Moran, Starbuck, Wash.; 4, University of Idaho. Yearling ram—1 and 5, University of Idaho; 2 and 3, Bullard; 4, Moran; 6, Ed Schoel, Albany, Ore. Ram lamb—1 and 4, University of Idaho; 2 and 3, Bullard; 5 and 6, Moran.

Ewes: Aged ewe—1 (champion) and 2, University of Idaho; 3 and 5, Bullard; 4 and 6, Moran. Yearling ewe—1 and 5, University of Idaho; 2 and 3, Bullard; 4 and 6, Moran. Ewe lamb—1 and 4, Bullard; 2 and 3, Moran; 5 and 6, University of Idaho.

Flock—1, University of Idaho; 2 and 3, Bullard; 4 and 5, Moran; 6, Schoel. Flock bred by exhibitor—1 and 2, Bullard; 3 and 4, Moran. Pen of four lambs—1, Bullard; 2, University of Idaho; 3 and 4, Moran. Pen bred by exhibitor—1, Bullard; 2, University of Idaho; 3 and 4, Moran. Get of sire—1, Bullard; 2 and 4, Moran; 3, University of Idaho. Produce of ewe—1 and 2, Moran; 3, University of Idaho.

Oxfords.

Rams: Aged ram—1, C. P. Kizer, Harrisburg, Ore.; 2 and 3, Floyd P. Fox, Silverton, Ore. Yearling ram—1 and 2, Kizer; 3, Fox. Ram lamb—1 (champion) and 5, Kizer; 2 and 3, Fox; 4, Hubbard & Sons.

Ewes: Aged ewe—1 (champion) and 2, Fox; 3 and 4, Kizer. Yearling ewe—1 and 3, Kizer; 2 and 4, Fox. Ewe lamb—1 and 4, Fox; 2 and 3, Kizer; 5 and 6, Hubbard & Sons.

Flock—1 and 3, Kizer; 2 and 4, Fox. Flock bred by exhibitor—1 and 2, Kizer. Pen of four lambs—1 and 5, Kizer; 2 and 3, Fox; 4, Hubbard & Sons. Pen bred by exhibitor—1 and 3, Kizer; 2, Fox. Get of sire—1 and 2, Kizer; 3 and 4, Fox; 5, Hubbard & Sons. Produce of ewe—1, Fox; 2 and 3, Kizer.

Dorsets.

Rams: Aged ram—1 and 4, Floyd T. Fox, Silverton, Ore.; 2, Dominion Experimental Farm, Agassiz, B. C.; 3, Walter P. Hubbard, Monroe, Ore. Yearling ram—1, Fox; 2, Hubbard. Ram lamb—1 (champion), Dominion Farm; 2, Hubbard; 3 and 4, Fox.

Ewes: Aged ewe—1 (champion) and 2, Dominion Farm; 3 and 4, Fox; 5 and 6, Vaughn & Downing, Stayton, Ore. Yearling ewe—1 and 2, Dominion Farm; 3 and 4, Fox; 5 and 6, Hubbard. Ewe lamb—1 and 2, Dominion Farm; 3 and 4, Fox; 5, Hubbard.

Flock—1 and 2, Dominion Farm; 3 and 4, Fox; 5, Hubbard. Flock bred by exhibitor—1 and 2, Dominion Farm. Pen of four lambs—1, Dominion Farm; 2, Fox. Pen bred by exhibitor—1, Dominion Farm; 2, Fox. Get of sire—1 and 2, Dominion Farm; 3 and 4, Fox; 5 and 6, Hubbard. Produce of ewe—1, Dominion Farm; 2, Fox; 3 and 4, Hubbard.

Southdowns.

Rams: Aged ram—1 (champion) and 3, J. G. S. Hubbard & Sons, Monroe, Ore.; 2, Archie C. Stewart, Aldergrove, B. C. Yearling ram—

(Continued on the following page.)

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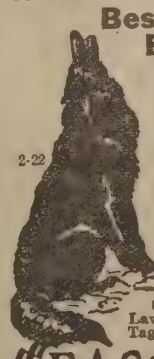
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(Continued from the preceding page.)

1 and 2, Hubbard & Sons; 3, and 4, Stewart. Ram lamb—1 and 4, Hubbard & Sons; 2 and 5, Corriedale Sheep Co., Hollister, Cal.; 3 and 6, Stewart.

Ewes: Aged ewe— 1 (champion) and 5, Corriedale Sheep Co.; 2 and 3, Hubbard & Sons; 4, University of Idaho; 6, Stewart. Yearling ewe—1 and 2, Hubbard & Sons; 3 and 4, University of Idaho; 5 and 6, Stewart. Ewe lamb—1 and 5, Hubbard & Sons; 2 and 4, Corriedale Sheep Co.; 3, University of Idaho; 6, Stewart.

Flock—1 and 2, Hubbard & Sons; 3 and 4, Stewart. Flock bred by exhibitor—1 and 2, Hubbard & Sons. Pen of 4 lambs—1 and 4, Hubbard & Sons; 2, Corriedale Sheep Co.; 3, University of Idaho; 5, Stewart. Pen bred by exhibitor—1 and 4, Hubbard & Sons; 2, Corriedale Sheep Co.; 3, University of Idaho; 5, Stewart. Get of sire—1 and 2, Hubbard & Sons; 3, University of Idaho; 4, Corriedale Sheep Co.; 5, Stewart. Produce of ewe—1 and 2, Hubbard & Sons; 3 and 4, University of Idaho; 5 and 6, Stewart.

Shropshires.

Rams: Aged ram—1 (champion), W. W. Miller, Scio, Ore.; 2 and 5, Floyd T. Fox, Silverton, Ore.; 3 and 4, G. H. & J. J. Thompson, Macleay, Ore. Yearling ram—1 and 3, Corriedale Sheep Co., Hollister, Cal.; 2 and 5, Miller; 4, Fox; 6, Vaughn & Downing, Stayton, Ore. Ram lamb—1, F. A. Doerfler, Silverton, Ore.; 2 and 6, Miller; 3, Corriedale Sheep Co.; 4 and 5, Fox.

Ewes: Aged ewe—1 (champion), Oregon Agricultural College; 2 and 4, Fox; 3, Doerfler; 5 and 6, Corriedale Sheep Co. Yearling ewe—1, Corriedale Sheep Co.; 2, Fox; 3, Miller; 4, Doerfler; 5 and 6, Thompson. Ewe lamb—1 and 4, Doerfler; 2 and 3, Fox; 5 and 6, Thompson.

Flock—1, Doerfler; 2, Corriedale Sheep Co.; 3, Fox; 4 and 6, Miller; 5, Thompson. Flock bred by exhibitor—1, Fox; 2, Miller; 3, Thompson. Pen of 4 lambs—1, Doerfler; 2, Fox; 3 and 6, Corriedale Sheep Co.; 4, Thompson; 5, Miller. Pen bred by exhibitor—1 and 5, Corriedale Sheep Co.; 2, Fox; 3, Thompson; 4, Miller; 6, Doerfler. Get of sire—1 and 6, Corriedale Sheep Co.; 2, Fox; 3, Miller; 4, Thompson; 5, Doerfler. Produce of ewe—1 and 4, Fox; 2 and 5, Miller; 3, Corriedale Sheep Co.; 6, Doerfler.

Shropshire Association specials: Pen of 3 ram lambs—1, Corriedale Sheep Co.; 2, Miller; 3, Thompson. Pen of 3 ewe lambs—1, Thompson; 2, Miller; 3, Corriedale Sheep Co.; 4, W. I. Cooper, Camas, Wash. Pen of 3 yearling rams—1, Miller. Pen of 3 yearling ewes—1, Miller; 2, Thompson. Flock—1, Miller; 2, Corriedale Sheep Co.; 3, Fox; 4, Thompson.

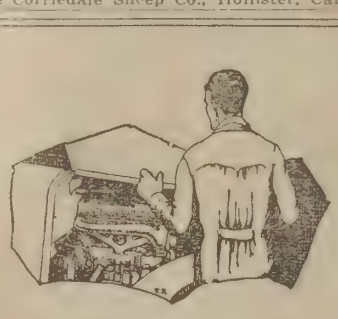
Corriedales.

The Corriedale Sheep Co., Hollister, Cal., the only exhibitor, won all awards in a full class, winning championships on aged ram and aged ewe.

Cheviots.

Rams: Aged ram—1, William Downing, Lyons, Ore. (champion); 2, R. A. Templeton, Halsey, Ore. Ram lamb—1 and 2, Downing; 3, Templeton.

Ewes: Aged ewe—1 (champion), and 2, Downing; 3, Templeton. Ewe lamb—1 and 2, Downing; 3 and 4, Templeton. Pen of four lambs—1, Downing; 2, Templeton. Pen bred by exhibitor—1, Downing; 2, Templeton. Get of sire—1, Downing; 2, Templeton. Produce of ewe—1, Downing; 2, Templeton.



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Coarse Wools.

The largest show of long wools was by the Lincolns, which maintained a good standard of quality. There was a splendid show of Cotswolds, though competition was limited to two exhibitors, and there were a few very high class English Leicesters. The representation of Border Leicesters was only fair. Oregon breeders were the only ones exhibiting Romneys, but their entries were illuminating as to the quality prevailing among the flocks of this section, and the improvement in this department was a matter for congratulations.

Judge: C. L. Hawley, Portland, Ore.

Lincolns.

Rams: Aged ram—1, William Riddell & Sons, Monmouth, Ore. (champion); 2, University of Idaho; 3, Clow Bros., Independence, Ore.; 4, Corriedale Sheep Co., Hollister, Cal. Yearling ram—1, Clow Bros.; 2 and 3, Riddell & Sons; 4, A. C. Stewart, Aldergrove. Ram lamb—1 and 4, Clow Bros.; 2 and 3, Riddell & Sons; 5, William Riddell Jr., Monmouth, Ore.

Ewes: Aged ewe—1 (champion), and 3, Clow Bros.; 2 and 4, Riddell & Sons; 5, Riddell Jr.; 6, Stewart. Yearling ewe—1 and 4, Clow Bros.; 2, University of Idaho; 3 and 5, Riddell & Sons; 6, Stewart. Ewe lamb—1 and 4, Riddell & Sons; 2 and 3, Clow Bros.; 5, Riddell Jr.; 6, Stewart.

Flock—1 and 3, Clow Bros., 2 and 4, Riddell & Sons; 5, Stewart. Flock bred by exhibitor—1 and 3, Clow Bros.; 2 and 4, Riddell & Sons; 5, Stewart. Pen of lambs—1, Clow Bros.; 2, Riddell & Sons. Pen of lambs bred by exhibitor—1, Clow Bros.; 2, Riddell & Sons. Get of sire—1 and 4, Riddell & Sons; 2, Clow Bros.; 3, Stewart. Produce of ewe—1, Riddell & Sons; 2 and 4, Clow Bros.; 3, Stewart; 5, Riddell Jr.

Cotswolds.

Rams: Aged ram—1 (champion), and 3, William Riddell & Sons, Monmouth, Ore.; 2 and 4, D. J. Kirby, McMinnville, Ore. Yearling ram—1 and 2, Kirby; 3 and 4, Riddell & Sons. Ram lamb—1 and 2, Kirby; 3 and 4, Riddell & Sons.

Ewes: Aged ewe—1 (champion), and 4, Kirby; 2 and 3, Riddell & Sons. Yearling ewe—1 and 2, Kirby; 3 and 4, Riddell & Sons. Ewe lamb—1 and 3, Kirby; 2 and 4, Riddell & Sons.

Flock—1 and 3, Kirby; 2 and 4, Riddell & Sons. Flock bred by exhibitor—1 and 3, Kirby; 2 and 4, Riddell & Sons. Pen of four lambs—1 and 3, Kirby; 2 and 4, Riddell & Sons. Pen bred by exhibitor—1 and 3, Kirby; 2 and 4, Riddell & Sons. Get of sire—1 and 3, Kirby; 2 and 4, Riddell & Sons. Produce of ewe—1 and 4, Riddell & Sons; 2 and 3, Kirby.

Romneys.

Rams: Aged ram—1 and 2, William Riddell Jr., Monmouth, Ore., 3 and 4, McCaleb Bros., Monmouth, Ore. Yearling ram—1 and 2, Riddell Jr.; 3 and 4, McCaleb Bros. Ram lamb—1 (champion), and 2, Riddell Jr.; 2 and 4, McCaleb Bros.

Ewes: Aged ewe—1 and 2, Riddell Jr.; 3 and 4, McCaleb Bros.; 5 and 6, Russell Alsip, Monmouth, Ore. Yearling ewe—1 (champion), and 2, Riddell Jr.; 3, McCaleb Bros. Ewe lamb—1 and 2, Riddell Jr.; 3 and 4, McCaleb Bros.; 5 and 6, Alsip.

Flock—1, Riddell; 2, McCaleb Bros. Flock bred by exhibitor—1, Riddell Jr.; 2, McCaleb Bros. Pen of 4 lambs—1, Riddell Jr.; 2 and 3, McCaleb Bros.; 4, Alsip. Pen bred by exhibitor—1, Riddell Jr.; 2 and 3, McCaleb Bros. Get of sire—1, Riddell Jr.; 2 and 3, McCaleb Bros.; 4, Alsip. Produce of ewe—1, Riddell Jr.; 2, McCaleb Bros.; 3, Alsip.

Flock of 1 ram and 2 ewes with 1922 lambs (Romney association special)—1, Riddell Jr.; 2, McCaleb Bros.

Border Leicesters.

Rams: Aged ram—1 (champion), and 3, Corriedale Sheep Co., Hollister, Cal.; 2, E. F. Hubbard, Corvallis, Ore. Yearling ram—1 and 2, Hubbard. Ram lamb—1 and 2, Hubbard.

Ewes: Aged ewe—1 (champion), and 4, Corriedale Sheep Co.; 2 and 3, Hubbard. Yearling ewe—1 and 2, Hubbard. Ewe lamb—1 and 2, Hubbard; 3, Corriedale Sheep Co.

Flock—1 and 2, Hubbard. Pen of 4 lambs—1, Hubbard. Get of sire—1 and 2, Hubbard. Produce of ewe—1, Hubbard.

Leicesters.

The Corriedale Sheep Co., Hollister, Cal., the only exhibitor except of one yearling ram shown by E. F. Hubbard, Corvallis, Ore., received all awards in a fairly well filled class, receiving championships on aged animals. Hubbard received first on his yearling ram.

THE GOAT SHOW.

To round out a show which should be representative of the live stock industry, the goat show was quite complete. Not only were there mohair and milch goats, but the former were shown with both long and short hair. Not quite as many were shown in either class as a year ago, but the division was fairly full and a most representative lot of animals were shown.

Angoras.

Five exhibitors made up the short hair Angora show. William Riddell & Sons were the largest exhibitors, with 29, while R. W. Hogg had 22 and Guthrie Brothers, 18. McCaleb Brothers had about half a dozen. Practically all the entries were excellent and the competition was frequently very close.

Only two exhibitors showed long haired goats. The length and fineness of hair shown was not only a tribute to the humble Angora, but to the climate which will so easily allow of carrying him over without shearing.

Judge: Thomas Brunk, Salem, Ore.

Angora Goats—Short Mohair.

Bucks: Aged buck—1 (champion) and 2, William Riddell & Sons, Monmouth, Ore.; 3, Guthrie Bros., Dallas, Ore. Yearling buck—1 and 4, Riddell & Sons; 2 and 3, Guthrie Bros.; 5 and 6, R. W. Hogg, Salem, Ore. Buck kid—1 and 3, Gurthrie Bros.; 2 and 4, Riddell & Sons; 5 and 6, Hogg; 7 and 8, McCaleb Bros., Monmouth, Ore.

Does: Aged doe—1 and 2, Riddell & Sons; 3 and 4, Guthrie Bros.; 5 and 6, Hogg. Yearling doe—1 (champion) and 4, Riddell & Sons; 2 and 3, Guthrie Bros.; 5 and 6, Hogg; 7 and 8, McCaleb Bros. Doe kid—1 and 4, Guthrie Bros.; 2 and 3, Riddell & Sons; 6 and 7, Hogg; 5 and 8, McCaleb Bros.

Four head—1 and 3, Riddell & Sons; 2, Guthrie Bros.; 4 and 5, Hogg. Four head bred by exhibitor—1 and 3, Riddell & Sons; 2, Guthrie Bros.; 4 and 5, Hogg. Pen of four kids—1, Guthrie Bros.; 2 and 3, Riddell & Sons; 4 and 6, Hogg; 5, McCaleb Bros. Pen of four kids bred by exhibitor—1, Guthrie Bros.; 2 and 3, Riddell & Sons; 4 and 5, Hogg. Get of sire—1 and 3, Riddell & Sons; 2, Guthrie; 4 and 5, Hogg; 6, McCaleb Bros. Produce of doe—1, Guthrie Bros.; 2 and 3, Riddell & Sons; 4 and 5, Hogg. Flock—1, Riddell & Sons; 2, Guthrie Bros.; 3, Hogg.

Angora Goats—Long Mohair.

Bucks: Aged buck—1 and 3, Riddell & Sons; 2, Guthrie Bros. Yearling buck—1 (champion) and 2, Riddell & Sons; 3 and 4, Guthrie Bros.

Does: Aged doe—1 and 2, Riddell & Sons; 3, Guthrie Bros. Yearling doe—1 (champion) and 2, Riddell & Sons; 3, Guthrie Bros.

Three head—1 and 2, Riddell & Sons; 3, Guthrie Bros. Three head bred by exhibitor—1 and 2, Riddell & Sons. Get of sire—1 and 2, Riddell & Sons. Produce of doe—1, Riddell & Sons. Flock—1, Riddell & Sons.

Milch Goats.

Toggenburgs, Seamens and Nubians were all represented in the milch goat classes, with one exhibitor in each of the first two named and three with Nubians and grades. Those who know milch goats say the entries contained some outstanding animals, but that as a whole the exhibit was of only average quality. A special class of grand champion for all breeds was made and kids won in both classes. Cordano's Chief, Joe Cordano's buck champion, is a kid of fine Toggenburg type and good size. The grand champion doe, owned by L. E. Wornom, is not only a kid of splendid Saanen type, but has the distinction of giving some milk without being bred. Her dam is a doe of some fame as a milker and the kid gives much promise of being a worthy follower in her mother's footsteps.

Judge: Dr. C. P. DeLangle, Yountville, Cal.

Purebred Toggenburgs.

Joe Cordano, Portland, the only exhibitor, won the following awards: Buck kid—1 on Cordano's Chief (champion). Aged doe—1 and 2 on Wanetta Teal (champion) and Antonette. Two-year-old doe—1 on Alyse of Hazel Dell. Doe kid—1 on Cordano's Flora.

Purebred Saanens.

L. E. Wornom, Vancouver, Wash., the only exhibitor, received the following awards: Aged buck—1 on Mack (champion). Yearling doe—1 on Fisk's Princess Victoria. Doe kid—1 on Victoria Franz 2d (champion).

Purebred Nubians.

Bucks: Two years or over—1, J. Murphy, Portland, Ore., on Dandy Dick (champion). Yearling buck—1, E. L. Lane, Portland, Ore., on Mt. Mellick Leonard. Buck kid—1, L. E. Wornom, Vancouver, Wash., on Sir John Chandos.

Does: Yearling doe—1, Murphy on Beauty Brown; 2, Wornom on Nona M.; 3, Lane on Mt. Mellick Cleopatra. Doe kid—1, Murphy on Beauty Lilly (champion); 2 and 3, Lane on Mt. Mellick Princess May and Mt. Mellick Lady Betty.

Registered Grade Does.

Two years or over—1 and 2, J. Murphy, Portland, on Banzai Vesta and La Vesta Lores; 3, E. L. Lane, Portland, on La Vesta Ruth; 4, Maney & McGuire, Portland, on Margarita of Glenhaven. Yearlings—1, L. E. Wornom, Vancouver, Wash., on Reindeer Wornom; 2 and 3, Maney & McGuire on Drusilla of Glenhaven and Adeline of Glenhaven; 4, Lane on Mt. Mellick Goldie. Doe kid—1 and 2, Maney & McGuire on Arlaine of Glenhaven and Elaine of Glenhaven; 3, Lane on Mt. Mellick Augusta.

THE FAT STOCK SHOW.

Fat Cattle.

Shorthorns (purebred, grade or cross-bred steer): Senior yearling—1 and 3, University of Idaho on His Majesty (champion) and Ringleader; 2, Foothills Farms, Carlton, Ore., on Craigielea Jock. Junior yearling—1, University of Idaho on Chinook Lad; 2 and 3, State College of Washington on Cumberland's Renown and Chinook Gift; 4 and 5, Northwood Farm, Redmond, Wash., on Northwood Bellboy and Northwood Knight. Senior calf—1 and 3, University of Idaho on Idaho Masterpiece and Silver Model; 2, State College of Washington on Topsman's Type. Junior calf—1 and 3, Foothills Farms on Craigielea Jock 1st and Craigielea Jock 2d; 2, University of Idaho on Hercules Benefactor; 4, State College of Washington on Jim 2d; 5, T. J. Bannen, Shedd, Ore., on Klansman. Herd of three—1 and 2, University of Idaho; 3, Foothills Farm; 4, State College of Washington.

Herefords (purebred, grade or cross-bred steer): Junior yearling—1, A. H. Barnum, Morrow, Ore., on Carlos Model; 2 and 4, University of Idaho on Deserter and Ideal Bonnie; 3, Methow Valley Live Stock Co., Winthrop, Wash., on Mystic Lad 3d. Senior calf—1 and 3, University of Idaho on Idaho Sensation 2d (champion) and Idaho Defender; 2, State College of Washington on Washington Model; 4 and 5, Platt Bros., Genesee, Idaho, on Council and Beau Type 12th. Junior calf—1, University of Idaho on Everlasting. Herd of three—1, University of Idaho.

Aberdeen Angus (purebred, grade or cross-bred steer): Senior yearling—1, Congdon & Battles, Yakima, Wash., on Antler C. B. 4th (champion). Junior yearling—1, J. A. Scollard, Chehalis, Wash. Senior calf—1, State College of Washington on Queenman of Washington; 2

(Continued on page twenty-three.)

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SIRES' PURE YAKIMA HONEY, BEST PRODuced from alfalfa and sweet clover; 60-lb. can, $6.75; two for $13.10; six 10-lb. pails, $7.20; twelve 5-lb. pails, $7.30; 60-lb. can, insured, parcel post to second zone, $7.50. Theodore Sires, Route 4, Yakima, Wash.

HONEY BRAND HONEY—CHOICE ALFALfa, sweet clover honey; quality guaranteed. It will please the little "honeys" and the older ones, too. One 60-pound can, $6.50; two for $12.75. Write for prices in pails. Oliver Sires, Wapato, Wash.

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POPULAR BRAND HAPPY HOME HONEY—One 60-lb. can, $6.50; two cans, $12.75; six 10-lb. pails, $7.50; comb honey prices on request. H. N. Paul, Mabton, Wash.

NEW CROP ALFALFA-SWEET CLOVER honey; 60-lb. can, $5; two cans, $9.50, f. o. b. Rigby. Heckman & Larsen Honey Co., Rigby, Idaho. Quality guaranteed.

EXTRACTED HONEY—ONE 60-LB. CAN, $6.50; two 60-lb. cans, $12.75, collect; three No. 10 pails, prepaid, third zone, $5. Wells D. Rose, Sunnyside, Wash.

GOLD MEDAL BRAND YAKIMA ALFALFA, sweet clover honey; 60-lb. can, $6.50; two cans, $12.75. C. W. Higgins, Wapato, Wash.

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MERCHANDISE 59

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MISCELLANEOUS—FOR SALE 69

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(Continued on the following page.)

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POULTRY 174

"HENACRES" BABY CHICKS FOR 1923. IT is time to plan your poultry work for next spring and we suggest that you write for our free illustrated catalog now. The booklet contains lots of information on poultry management, gives our feeding formulas, etc., besides describing our stock. "Henacres" Leghorns have made good all over the northwest, so you take no chances in buying them. Some one in your neighborhood knows us, ask him. We have already sold 40,000 chicks for 1923. "Henacres," Box A, Prosser, Wash.

PULLETS—1500 APRIL AND MAY HATCHED White Leghorn pullets for sale at attractive prices; hatched from thoroughbred Hollywood and Tancred strains; sired by cockerels 250 to 290 egg strains. We ship at three months of age and guarantee satisfaction or you may return the birds in 3 days. We can give you quality and service. Queen Hatchery, Seattle, Wash.

BUY YOUR BABY CHICKS FROM THE White hatchery, member of the Sonoma county farm bureau accredited hatcheries. All flocks approved by farm bureau inspector. We handle accredited "A" grade chicks and "AA" grade for the poultryman who wants something better. Write us at once for information, prices, etc. White Hatchery, Petaluma, Cal.

BABY CHICKS—TRAP NESTED NORTHERN grown White Leghorns, noted for great egg production; large eggs and vigor; average 225 eggs; $20 per 100. "Cleared $1400 first year on chicks." "In four months cleared $650 on 267 pullets," that's what they write. See catalog, free. Order early. Highmount Poultry Ranch, Empire bldg., Seattle, Wash.

WILLAMETTE VALLEY BARRED PLYmouth Rocks. Over fifteen hundred young birds in 1922; heavy laying strain, dark and beautifully barred; cock birds and cockerels for sale; only the very best allowed on the Dimick stock farm; bank references. F. C. Waldron, R. F. D. 2, Hubbard, Ore.

WHITE LEGHORN BABY CHIX FOR SUMmer and fall months from stock accredited by Sonoma county farm bureau. We guarantee safe arrival. Write for prices and literature. The Pioneer Hatchery, 422 Sixth street, Petaluma, Cal.

DAY-OLD PULLETS, GUARANTEED S. C. White Leghorn day-old pullets, also day-old broilers; established 1912. Eureka Hatchery, 628 D st., Petaluma, Cal. James K. Hirst, Prop. Refs. gladly furnished.

BABY CHICKS—OREGON'S BEST AT REAsonable prices. Leghorns, R. I. Reds, Anconas, Minorcas, Barred Rocks, White Rocks. Order early. Catalog free. C. N. Needham, Salem, Ore.

GET THE BEST PRICES FOR YOUR POULtry, eggs, turkeys, geese, veal and hogs. Write for quotations. Hotchkiss Produce Co., Spokane.

40 QUALITY R. I. RED COCKERELS, $5 and up. Write your wants. Can please you. J. Nonnenmacher, Route 3, Yakima, Wash.

SINGLE COMB ANCONAS, SHEPPARD'S strain; one-year-old hens, $1.50 each; cockerels, $3. R. P. Irwin, Tonasket, Wash.

S. C. BROWN LEGHORNS, COCKERELS, hens, pullets; none better; stock guaranteed. E. H. Rosenkranz, Colfax, Wash.

RANEY STRAIN RHODE ISLAND RED cockerels, direct. Write Mrs. Rominger, Underwood, Wash.

ALLEN'S ROCKS AND LEGHORNS WIN, LAY and pay. Write your wants. D. W. Allen, La Conner, Wash.

BABY CHICKS, THE OLD RELIABLE TRAPnested stock, $20 100. Yesterlaid Egg Ranch, Kent, Wash.

1949 COCKERELS, 49 VARIETIES; HATCHING eggs. Free book. Aye Bros., Blair, Neb. Box 14.

FARMERS' WANT ADS

This is the farmers' "want," "sale" and "exchange" department for small advertisements of farmers, including live stock and poultry.

Advertising rates for ads running 1 to 3 times, 10c per word per insertion, with a special rate to Farmer subscribers, as follows: Ads running 4 to 12 times, 9c per word per insertion; ads running 13 times or more, 8c per word per insertion.

All commercial and land advertising, 10 cents per word each insertion. Open also to nonsubscribers.

In using these columns advertisers must observe: (1) No advertisements will be inserted for less than $1.00. (2) Every word, number and initial, including name and address, must be paid for. (3) New advertisements, changes of copy or cancellations must reach general office, Spokane, Wash., 10 days in advance of publication date. (4) Cash must accompany order.

Above rates include insertion in The Washington Farmer, The Idaho Farmer and The Oregon Farmer, which constitute the Pacific Northwest Farm Trio, 46 Review building, Spokane, Wash.

POULTRY (Continued) 174

CERTIFIED WHITE LEGHORN BABY chicks, hatched in the world's largest electric hatchery, for spring, 1923 delivery. January prices, $4 per 25; $8 per 50; $15 per 100. Special prices, 500 and 1000 lots. Order early chicks now and realize big broiler profits. Choice, free range, high egg-producing breeding flocks, inspected by Sonoma county farm bureau. Safe arrival guaranteed. Must Hatch Incubator Co., 445 Seventh st., Petaluma, Cal.

BABY CHICKS OF BEST QUALITY ARE hatched in our Petaluma electric or hot water incubators. Buy chicks hatched in Petaluma incubators or hatch for yourself. Send for free literature and let us tell you something worth dollars to you. Petaluma Electric Incubator Co., Petaluma, Cal.

WHITE LEGHORN BABY CHICKS FROM egg strains that are making the world look to the Pacific northwest. Vigorous, free-range stock. Low price. Order early. Oregon-Corvallis Hatchery, Corvallis, Ore.

PEDIGREED ANCONA COCKERELS FROM hens with 333-egg record in 365 days. Prices, $3 to $10, half usual price for such excellent breeding. Prompt shipment. Smith's Ancona Farm, Nampa, Idaho.

DOLLARS FOR YOUR EGGS—WE PAY THE top market prices for your eggs and poultry, also turkeys, ducks and geese. Daily cash remittances. McClintock-Trunkey Co., produce department, Spokane.

ANCONA COCKERELS, SAME BREEDING AS my five pullets that laid 1029 eggs, 1921-22 western Washington contest. Booking eggs and chick orders. Catalog on request. Oscar Dunlap, Junction City, Ore.

BABY CHICKS AND HATCHING EGGS—DR. Duganne's trap nested White Leghorns and M. J. McCaleb's Hollywood strain. Write for catalog prices to Mark A. Webster, Corvallis, Ore.

ROSE COMB RHODE ISLAND COCKERELS for sale; both colors, Whites and Reds. Prices, $3, $5 and $7 each. O. C. Brauch, Fargo, Oklahoma.

PACIFIC POULTRYMAN, SEATTLE, WASH., expert writers on practical poultry subjects. Special offer, two years, $1. Four months' trial subscription, 25c.

HUNT'S PRIZE AND UTILITY BARRED Rocks; some dandy cockerels, pullets, trios. Write for prices. W. A. Hunt, Lebanon, Ore. Box 503.

SHIP US YOUR POULTRY AND TURKEYS. Ask your neighbor about our fair dealings. Jones & Williams, S101 Division, Spokane.

FOR THE BEST IN SILVER WYANDOTTES and Silver Spangled Hamburgs, write G. G. Wherry, Payette, Idaho.

WHITE LEGHORN AND BARRED ROCK cockerels; records, 200 to 311. W. M. Roberts, Walla Walla, Wash.

ROSE COMB BLACK MINORCA COCKERELS, $2.50; pullets, $1.25; hens, $2.25. Mrs. Carley, Carley, Wash.

PUREBRED S. C. WHITE MINORCA COCKerels and hens, $2 each. Mrs. Arthur Schmidt, Charlo, Mont.

HALF PRICE FOR SILVER WYANDOTTE cockerels. A. E. Zellmer, Davenport, Wash.

Turkeys.

GIANT BRONZE TURKEYS FROM MY OREgon state fair and Pacific International winners. Sold on approval. Herbert Stoneberg, Route B, Eugene, Ore.

PUREBRED WHITE HOLLAND TURKEYS; toms, $7.50; hens, $5; exceptionally large, healthy birds. Mrs. A. S. Reams, Wendell, Idaho.

WILD TURKEYS FROM WASH. STATE game farm, crossed with domestic bronze hens, $7; toms, $15. T. J. Hartley, Richland, Wash.

MAMMOTH BRONZE TURKEYS FROM EASTern blood lines; large boned type, $8 to $20. Mrs. H. D. Moore, R. 1, Box 21, Hubbard, Ore.

21 YEARS A SPECIALTY BREEDER OF M. B. turkeys; prize-winning stock. Mrs. Frank Browning, R. 1, Nampa, Idaho.

PUREBRED MAMMOTH BRONZE TURKEYS; toms, $10; hens, $6; sure to please. Mrs. J. W. Wagoner, Caldwell, Idaho.

WELL BRED BRONZE TURKEYS AND White Rock cockerels, Dec. delivery. Roger Campbell, Connell, Wash.

PUREBRED MAMMOTH BRONZE TURKEY toms, $10; hens, $8. Mr. George Roseberry, Riverside, Wash.

CHOICE MAMMOTH BRONZE TURKEY toms, $10; hens, $5. Amelia Reimers, Eagle, Idaho.

PUREBRED BOURBON RED TURKEY TOMS, $7; hens, $5. Adolph Miller, Govan, Wash.

FOR SALE—PUREBRED MAMMOTH BRONZE turkeys. S. L. Maltby, Rogerson, Idaho.

BOURBON RED TURKEYS; EXTRA GOOD stock. Mrs. Kate Heideman, Malo, Wash.

GOOD MAMMOTH BRONZE TOMS, $8; HENS, $6. Geo. Bain, Castle Rock, Wash.

PUREBRED MAMMONTH BRONZE TOMS, $8. Mrs. J. Bullis, Midas, Idaho.

LIVE STOCK 177

SAVE THE CALVES—"SAVACALF," A POWerful germicide, used for treating contagious abortion in cows. It drives the disease from those that have it and prevents the clean herds from getting it. Treat the whole herd at once. Costs 25 cents per head per year. Every breeder should use it. $5 package, postpaid. "Money back" guarantee. Write for information. H. C. Babbitt, Box 524, Boise, Idaho.

WE GUARANTEE TO PAY THE HIGHEST market prices for your poultry and live stock. Owing to the constant changes in the market we are unable to quote prices in this paper from week to week. We will furnish tags and prices when you are ready to ship. Write us what you have to sell. Prompt returns. John Lewis & Co., Spokane, Wash.

SPOTTED POLAND CHINAS, CHOICE SPRING boars, large, smooth and easy keeping. Henry Mitchell & Son, Joseph, Ore.

LIVE STOCK (Continued) 177

WE PAY TOP PRICES FOR YOUR LIVE OR dressed veal, hogs and poultry. Your check by return mail. Shipping tags on request. M. & J. Packing Co., Spokane.

CHOICE, PUREBRED, BROWN SWISS COWS, heifers and bull calves. G. W. White & Son, Meridian, Idaho.

CHESTER WHITE BOARS OF SERVICEable age; registered stock. C. I. Ballard, Rickreall, Ore.

REGISTERED CHESTER WHITE, 6 MO. OLD shoats, $15. Meryl Davis, Elberton, Wash.

REGISTERED HAMPSHIRE HUSKY FALL boars. L. C. Lohman, Lohman, Mont.

MILCH GOATS, BRED DOES, $15 TO $30. Fannie Branson, Dallas, Ore.

HARNESS and SADDLERY 189

SEND FOR FREE HARNESS AND SADDLE catalog today; cut out the middleman, buy direct from the manufacturer. Lowest prices in the west; satisfaction guaranteed. Established 1881. Write Pierce Harness Co., Dept. T, Spokane, Wash.

HAY FOR SALE 200

CHOICE ALFALFA HAY, GREEN AND leafy; the kind that dairymen like to feed. Timothy and wheat hay for horses. Write for delivered prices. J. F. Jacobson, Kennewick, Wash.

ALFALFA HAY, GUARANTEED QUALITY; prompt shipment; buy direct and save money. Prices upon application. Ernest T. Freepons, Walla Walla, Wash.

JOB PRINTING 372

BEST PARCHMENT BUTTER WRAPPERS, 8x11, neatly printed, 100, 60c; additional hundred, 40c. Home Specialty Co., Middleton, Idaho.

TANNING 425

ANY KIND OF HIDE TANNED WITH HAIR on, or for leather. Mohr, 321 Sprague, Spokane.

TANNERS AND LEATHER DEALERS—BALZ Leather company, San Francisco, Cal.

TAXIDERMISTS 426

WE MOUNT ANYTHING FROM A FLEA to elephant. Mohr, 321 Sprague, Spokane.

FURRIERS 429

FURS TO ORDER, REPAIRED, REMODeled and for sale. Mohr, 321 Sprague, Spokane.

HIDES, PELTS AND WOOL 430

HIDES—WE BUY HIDES OF ALL KINDS. Write for prices and tags. Hibbard-Stewart Co., Hibbard bldg., Seattle.

FURS—WE BUY FURS AND PELTS. WRITE for prices and tags. Hibbard-Stewart Co., Hibbard bldg., Seattle.

MATERNITY HOMES 497

MATERNITY HOSPITAL; STRICTLY PRIvate; doctor in attendance; prices reasonable. Mrs. Elizabeth Peel, matron, W1324 Broadway, Spokane.

BUILDING MATERIAL 588

FIX BROKEN PLASTER WALLS WITH PERfection plaster wallboard; nailed on like lumber; takes calcimine or paint; sample and booklet from Western Wallboard Co., Seattle, Wash.

POULTRY SASH, 8X10, 4 LIGHT, 65C; ROOFing, skylights. Compare our prices. Save money. Send for price list. Tacoma Sash & Door, Tacoma, Wash.

SEEDS 620

VALLEY COUNTY TIMOTHY-ALSIKE; 1922 grown, mixed, 11c; germination, 93. Timothy, 8c. Recleaned. M. Meador, Norwood, Idaho.

NURSERY STOCK 621

PRUNES—LEIGHTON ITALIAN EXCELS ALL other varieties for profit; 40 per cent larger than Italian; 25 per cent more sugar; tests 40 per cent dried. General line of other stock. Lafayette Nursery Co., Lafayette, Ore.

ISLAND BELLE GRAPE PLANTS FOR SALE —Write for the grape book, giving directions how to grow them successfully, etc. Issued by E. H. Urban, Box 777, Bremerton, Wash., grower of Island Belle grape vines.

NURSERY STOCK, ITALIAN PRUNE TREES and trees of all kinds. Berries and small fruits of all varieties. Buy direct and save 50 per cent. Brooks Nursery, Lafayette, Ore.

BEST VARIETIES FOR THE WEST; HANDsome 48-page descriptive catalogue free. Routledge Seed & Floral Co., 145 Second st., Portland, Ore.

WRITE FOR PREPAID PRICES ON NURSERY stock; especially apple trees; can save you money. Lawson Nursery, Gates, Ore.

STRAWBERRY PLANTS, $5 1000; NINE VArieties. Briggs Fruit Ranch, Olympia, Wash.

FARM LANDS FOR SALE 651

PAYING FARMS FOR SALE—160-ACRE farms, improved or unimproved; 30 to 160 acres irrigable land on each parcel; near Lethbridge, in sunny southern Alberta; $15 to $35 an acre. No pioneering. Well settled country. Good roads, railways, schools, telephones, agreeable social conditions; fertile land—success of irrigation farming already demonstrated. Irrigation system now being constructed under government supervision. Water available in 1923. Write for information concerning crops grown and description and location of farms to the Province of Alberta, Irrigation Council, 12 Provincial bldg., Lethbridge, Alberta.

DO YOU WANT A HOME IN A RICH IDAHO valley near Spokane, on three transcontinental railroads, where soil is perfect, rainfall ample, summers cool, winters moderate—the kind of stump land that pays to clear? Timothy and clover green eight months in the year; natural stock country. Land cheap; 10 yearly payments at 6 per cent. Humbird Lumber Co. Box 5, Sandpoint, Idaho.

160 ACRES, GOOD BUILDINGS, WELL, creek, $16,500; $7000 down. William Helmig, Rt. 1, Molalla, Ore.

FARM LANDS FOR SALE (Continued) 651

ALFALFA AND FRUIT LAND FOR SALE— Would you be interested in owning a farm in the fine alluvial soil of the San Joaquin county, in the heart of the dairy and fruit center, ½ mile from fine grammar school, three miles from big high school, and three miles from railroad center, connecting with all of the larger markets, where people are making fortunes in grapes and dairies? 800 acres of this fine land, with lots of water, is being subdivided into small farms putting on house, barn, tank house and irrigation plant, all ready for occupancy. You can be the lucky owner of one of these farms for a small payment down, six per cent on all deferred payments, and contract to extend over a period of nine years. The owners will do more than the above development and help finance orchards, vineyards, alfalfa or purchase dairy cows. For further information address owner, F. F. Copp, 430 E. Mariposa st., Stockton, Cal.

1900-ACRE IMPROVED CALIFORNIA FARM in high state of cultivation; accept up to $60,000 in part trade, some cash, long time on balance. Splendid proposition for subdivision. Adjoining property being subdivided and selling at $275 to $300 per acre.

5000 acres improved Oregon stock ranch; full equipment horses and machinery; 250 cattle, 50 hogs, 100 sheep. $25,000 will handle. A real buy.

Have several choice mixed dairy, fruit and chicken farms in the famous Willamette valley, also some fine Canadian farms to exchange for properties in Oregon, Washington and Idaho. Arch T. Penwarden, farm land specialist, 806 Lewis bldg., Portland.

FOR SALE—ON THE COQUILLE RIVER, Coos county, Ore.; a ranch of 500 acres, located on the Roosevelt highway, which will be completed in 1924, through ranch; 130 acres of river bottom land, 100 acres of which is under plow and ditched; 160 acres of upland pasture and suitable for raising hay; 100 acres of timber land and all the land on ranch is fertile and productive; bungalow house, barn, modern, size 72x80 ft. This is a very choice location and a fine ranch. We are in the mercantile business and wish to sell to have more working capital. For prices and terms address Sweet Bros., Langlois, Ore.

CUTOVER LANDS, EASY TO CLEAR; $8 TO $20 per acre; 25 miles north of Spokane; on hard-surfaced highway; Great Northern and Milwaukee railways; excellent opportunity for dairying and stock raising, with Spokane markets and creamery near at hand. Will help the man who will live upon this land and agree to clear a part each year by giving lumber to help start his buildings, and a purebred Jersey bull to groups of farmers. Interest and payments low. Write Milan Farms Development company, Dept. T, Old National Bank bldg., Spokane, Wash.

TEN TO FORTY ACRE TRACTS OF MY OWN land in Macleay-Lindsay irrigation district, Clallam county, Wash., containing 7350 acres fine, level land, rich soil; Olympic highway runs through; railroad in center. $175,000 being spent on irrigation system at cost of $24 per acre; annual cost of water less than $2 per acre; work guaranteed to June 1, 1923, when ditches will be completed. $10 per acre cash, balance on or before ten years at purchaser's option. Write for particulars. J. W. Lindsay, Port Angeles, Wash.

160 ACRES; ON IMPROVED ROAD; 15 CATtle, 100 poultry, crops from acre potatoes, 15 a. oats, 35 a. wheat, hay, stove wood, 3 horses, colts, cream separator, implements, tools, etc.; substantial winter income; pleasant home, prosperous future; developments rapid; schools, stores, advantages, city markets; 120 acres black loam tillage, 35-cow pasture, wood lot; good 6-room house, porch, barn, granary, poultry house, etc. Retiring. Low price, $5300 takes all, part cash. L. H. Newville, Wetaskiwin, Alta, Can.

MUNICIPAL LANDS FOR SALE BY THE DISTrict; no agents, no commission; interested only in getting home-builders on the project. Longest growing season in the northwest. Gardens and fruits thrive; schools, highways and railroads the best. Junction Snake and Columbia rivers. Write for terms and folders. Address Burbank Irrigation district No. 4, Burbank, Wash.

BIG LUMBER CO. LAND SALE IN SKAGIT county; 40 acres, $1400; 20 acres, with new house, $1500. Lumber furnished for building. Lots of work for the settler; splendid district, roads, schools and towns. H. C. Peters, 726 3d ave., Seattle.

7000 ACRES SEQUIM LAND SETTLEMENT project, containing the finest berry and dairy land in the state, now offered for settlement at attractive prices and terms. Free booklet. Thos. G. Mortland, Sequim, Wash.

CHEAP—4800 ACRES, 1700 UNDER KENNEwick project; fine sheep range, including 10,000 acres leased land. Also lots and acreage in Yakima. D. G. Goodman, Yakima, Wash.

SELL YOUR PROPERTY QUICKLY FOR cash; no matter where located. Particulars free. Real Estate Salesman company, 501 Brownell, Lincoln, Neb.

A FINE DAIRY AND HOG FARM, ½ SECtion; 180 farming land; 80 acres in winter grain; terms to suit. M. F. Greely, R. 1, Okanogan, Wash.

FOR SALE—42 A. FARM, WHITE SALMON, Wash.; 22 a. cult.; on main road. $4500; $500 cash. E559 Killingsworth, Portland, Ore.

PUGET SOUND COUNTRY; WATER FRONTage farm lands; free map to landseekers, Charles Somers Co., Alaska bldg., Seattle.

FOR SALE—STOCK OR DAIRY RANCH, Open range; best water right. Write Clara Wagner, Hornbrook, Cal.

FARM LANDS—Wanted 654

WANT TO HEAR FROM OWNER HAVING farm for sale. Give particulars and lowest price. John J. Black, 80th st., Chippewa Falls, Wis.

IRRIGATED LANDS—For Sale 663

HOMESEEKERS, WHY LOOK FURTHER? Level irrigated land, adapted to alfalfa, fruits, garden, etc.; plenty water; good roads, schools, climate; no snow. $50 to $150 per a., your own terms. Stock, dairy and mountain ranches, all prices. Write today. G. E. Oaks, Redding, Shasta county, Cal.

10 ACRES, IRRIGATED; NEAR RICHLAND, Wash.; fenced; good house; outhouses; cemented well; federal loan $650, balance $600 cash. For particulars address George Bancroft, Hermiston, Ore.

ACRE TRACTS FOR SALE 669

$10 PER A.—HORSEHEAVEN LAND; WORTH more when ditch is built; cultivated, level; has yielded 24 bu. wheat per a.; want a club of 80 men to buy 800 a., take 10 a.. Only $100; terms. Write J. M. Curtis, Box 596, Pasco, Wash.

FOR SALE OR EXCHANGE 701

FOR SALE OR TRADE—40 ACRES OF IRRIgable farm land; all in cultivation. Address J. P. Claybaugh, R. 3, Caldwell, Idaho.

PIKE'S PEAK OR BUST

By LEWIS B. MILLER

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CHAPTER TWENTY-TWO.

Climbing Over the Snowy Range.

Now the party began hasty preparations. Two or three of them, each carrying a blazing stick, went off a hundred yards or more into the woods till they came to where a big log had rotted. There they picked up several pine knots and returned to camp with them. When those had been hacked on the end and lighted they made good torches.

Now, leaving Cooper to guard the camp, five of the party, accompanied by Frisk, set off through the woods. Each was carrying a gun in one hand and a lighted pine knot in the other.

After moving across the cow's course till they could pick up the trail they turned and followed it as fast as they could. And that dragging bush had swept a rather plain path. Two of the party walked in front, with their pine knots held low, so as to show the pine needles had been recently swept. They followed the trail almost as fast as they could walk. Now they all moved on steadily through the forest.

Before they had been long away from the cheerful warmth of their camp fire, they found in the night air a suggestion of those near-by snow fields. Most of them were now shivering, partly from cold and partly at the thought of coming upon that ferocious grizzly again, or another one just as ferocious.

"I'll feel lots safer when we get out of this," Givens now said. "Makes my blood run cold when I think how easy it would be for a mountain lion to flop right down on top of us from some overhanging limb; or for a grizzly to come tearing out of the dark and kill two or three of us before we could shin up these tall pines."

"Jeff, if you're going to put in your time imagining dreadful, dreadful things like that, it's little business you have with a prospecting party in these unexplored wilds," Holloway told him, laughingly.

"Well said, Jess," answered Sanders. "No end of things could happen out here. But most of 'em don't happen."

"That's right," agreed Esau. "If a feller's goin' to spend time thinkin' all the things that could come to pass will come to pass, he'd better mosey straight back home and help his wife nuss the baby. Huntin' gold in a wilderness calls for men with—with sand in their craws."

"But I'm not imagining things!" protested Givens, a little warmly. "Did I imagine that grizzly tonight? If I did, the rest of you fellows are just about as scary at imaginary enemies as I am."

"No, that was a very real grizzly," Sanders admitted. "But we may never live long enough to see another one. And even if we do, let's not worry about the other one till we see 'im. No more sense in borrowing grizzly bears than there is in borrowing any other kind of trouble. Sufficient unto the day is the grizzly bear thereof."

"We can't explore a wild country without running some risk," Holloway observed.

And Givens answered: "Oh, I don't mind this wild country in daylight, when a fellow can see where he's going and what's about to happen to 'im. But this time of night I feel better by a roaring camp fire."

"When we track down this stampeded cow brute, it oughtn't to take us long to return to the fire," called back Orlando, who was one of those in the lead and following the trail.

"Don't know so well about that. If the cow keeps walking, she can walk fully as fast as we can trail her and maybe faster," Esau reminded them.

"But she's very likely to hang that bush somewhere before long, and have to stop," said Orlando. "I've been expecting that all the time."

At last, when they had been trailing the runaway cow for all of two hours, their ears were greeted by a doleful bawl not a great distance ahead.

"There! I've been hopin' to hear that!" exclaimed Esau.

Hurrying on, but still following the trail, the searchers soon came in sight of the object of their search. As Orlando had expected, that trailing bush had caught fast in a root and had brought her to a standstill. She was not lying down, and her whole appearance indicated that she was still nervous and somewhat frightened. A pleased lowing meant that she had caught sight of the men. They were soon on their way back to camp, Orlando leading her.

The cow's trail had wound here and there, but Sanders, who had brought his compass, had noted from time to time their general direction. And now it was not very hard to follow that direction backwards. When near where camp was believed to be, Esau uttered a long, loud call. Promptly came an answering call from Cooper, and a few minutes later they were all warming themselves by their big camp fire. Brindle had been tied again, this time near the fire.

There was some talk of putting out a guard for the rest of the night. But all were tired and sleepy, and their decision was that Frisk and the cow would scent the grizzly and give them warning if he came again. So all lay down, with their clothes and boots on, and were quickly asleep.

And they slept undisturbed till daylight. After breakfast the packsaddle and pack were fastened on the cow, and the wanderers took up their own packs and wandered on.

From here the country became more broken, and the travelers were soon beginning to climb. Now the timber was not so thick. Steeper and still steeper the slope became, till the party had to halt from time to time to rest and breathe. Their lungs were giving them more or less trouble.

Smaller and smaller grew the timber, till it was little more than as high as their heads; and it was also very scattering. Ere long they began to catch glimpses of something white. They were nearing both the timber line and the snow line. Farther up the timber ceased altogether.

At length the climbers arrived at the snow itself. But they found it more ice than snow, especially at the edge. It had fallen as snow, doubtless; but repeated meltings and freezings had converted much of it into solid ice.

They spoke of halting at the snow's edge to eat some dinner. Numerous tiny streams were trickling down the mountain side from the melting ice. But there was little grass here for Brindle, and they decided to push on till across the snow cap. So they got upon the snow and began to climb.

The ice was very rough, fortunately, and that made their climbing easier. Had it been smooth, they with their packs and guns, and Brindle with her heavy pack, would have found it frightfully hard to make their way up. At last they arrived on the mountain top. From here on they would have rough traveling, but not much climbing.

After trudging a mile or more over the great snow field, some of the men declared that they were tired out, and would have to eat something before they could go farther. So the party halted for dinner.

Kindling a fire here was, of course, out of the question. But they had some bread and a little cooked meat. So warm were they from climbing that there was no need of a fire for warmth. Not caring to sit on the snow, they took off their packs and sat on them. Orlando relieved Brindle of her pack, to give her a chance to rest. But her saddle was left on.

Most of the men began eating with their coats off. But, one at a time, they got up and put them on. And even then they all complained of being chilly.

"Fellow would mighty soon need a blanket or an overcoat up here," Jess Holloway remarked.

"If these mountain tops are like this in August, what must they be in January?" said Orlando.

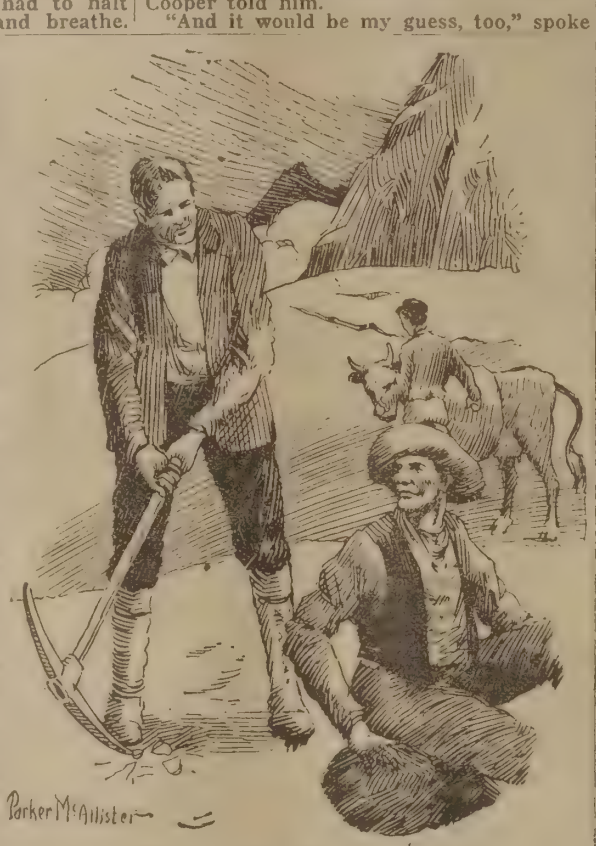
"Wonder how thick this ice is. B'lieve I'll get my pick and dig down and see."

"Yes, that's what you'd better do, Esau," laughed Cooper. "It may be more than a hundred feet thick; or two hundred, or three hundred. You ought to reach bottom in a year or two, if you stick to your job faithfully."

"Do you reckon it's railly as deep as that?" asked Esau, in surprise.

"I don't know. That's just my guess," Cooper told him.

"And it would be my guess, too," spoke up Sanders. "Of course it's likely to be deep in places and shallow in other places."



"Wonder how thick this ice is?"

"Take a mighty long time for a hundred feet of ice to fall as snow," Givens remarked.

"Yes. But this mountain top may not have been entirely clear of snow for a thousand years—or ten thousand," said Sanders. "Some of this ice might have been here when Adam and Eve were in the Garden of Eden."

At first the sun had been shining dazzlingly on the snow. But, while the travelers were still eating, a cloud, which seemed not many yards above their heads, came drifting over them. And scarcely had the sun been blotted out when the party found themselves in a snowstorm.

Faster and thicker the snow fell, till the men could see scarcely twenty yards from where they sat. And from the moment the sun ceased to shine a chill, as of winter, had seemed to pervade the air. Now every man was glad to unroll his blanket and throw one of them around his shoulders. Before covering himself, Orlando spread his horse blanket over Brindle.

Thicker and faster the snow kept falling, till nothing else could be seen for it. There was no steady wind blowing; but every now and then a gust would sweep cuttingly over the bleak snow fields. All the party soon had their blankets over their heads. But for the fact that most of them were very weary, they would have been glad to get up and travel on.

For perhaps half an hour longer the six men sat there under their blankets, resting and shivering. By this time their feet were so cold that they could sit still no longer. Now they fastened Brindle's pack on again, took up their own packs and their guns, and trudged ahead over the ice. They still wore their blankets.

The snowstorm kept raging, so thickly that Sanders thought it prudent to glance often at his compass. Without something to guide, they would have been in danger of losing their way.

At length the snowfall slackened. More correctly, the travelers were passing out from under it. Ere long they came to where no snow was falling and the sun was shining. But they could look back and see snow falling behind them, with that low cloud hanging not far above.

"Never can I live long enough to forget this August day!" Orlando now exclaimed. "All my life I've been used to snowstorms—in the snow season. But this is my first time to pass through a snowstorm in summer."

"How would you like to live up here all the time, Lando?" asked Esau.

"Not while I can find any other place on earth to live, thank you. It would be too much like living at the north pole. I'm not Eskimo enough for that."

"It would certainly be a dreary life up here in the winter season," Cooper remarked. "Those winter storms must sweep over these bald-headed mountains with frightful fury. You recollect what that trapper told us about it—that man from St. Louis? He declared he wouldn't daré try to cross any of the snowy ranges in the wintertime, much less in a winter windstorm."

"Yes," somebody answered. "And he told us a man probably couldn't stand up on top of these mountains when the wind was at its worst."

"They say winter is apt to begin anywhere in the Rockies about the middle of September. But it's two weeks or so ahead of time this year," remarked somebody else.

Once again, while the adventurers were straggling on, slowly and painfully, across the snow field—the roof of the Great Continental Divide it probably was—a low cloud came sweeping over them. And again a snowstorm seemed to swallow them up. But it was only for a few minutes. Then a raw wind swept the cloud and the snowstorm away, leaving the sun shining on an inch or two of new-fallen snow.

Making their way over the ice cap was slow, wearisome work; and the wanderers were a good while longer getting across. Wonderfully relieved were they all when they arrived at the snow field's western edge.

Not long after leaving those white, polar regions behind, the six gold seekers found themselves among dwarfed, scattering pines. And the farther they traveled down the mountain side, the larger and thicker the timber became. Also the air was growing all the time milder.

It was the middle of the afternoon, or later, when the wanderers found themselves in dense forest. Still they kept on till they came to a little stream and some grass together. There they went into camp on a bench of the mountain.

"Well, we've crossed the watershed," Orlando remarked. "You can all see how this branch flows. From here on, I've no doubt, all the streams flow westward; and all the water that runs out of this country eventually helps to fill the Pacific ocean."

And Cooper added: "That must be right. For my part, I'm farther west than I've ever been before."

"Safe to say we're all a right smart fu'ther west than we've ever been till today," answered Esau.

There being abundance of grass here for their pack cow, the travelers soon decided to continue in camp for the remainder of the day and the succeeding night. They themselves were in need of rest. Again they all agreed, as they had more than once before, that, while mountain climbing was hard, coming down a mountain was far harder. Coming down seemed to strain some little-used muscles, so that one was almost in torture at times.

(To Be Continued.)

Bits of Fun for Everyone

Not Stone Blind.

She was complaining of his stinginess, and instanced the unsatisfactory quality of her engagement ring.

"You wouldn't notice these things if you really cared for me," he told her. "I thought love was blind."

She smiled wanly.

"Yes, darling," she replied, "but not stone blind."—Jewelers' Circular.

One-Hand Stunt.

Ted—I hear Tom was in a motor car accident and went over an embankment. Was it one of those dangerous curves?

Ned—Yes. He had his arm around it.

A Popular Move.

"Edith says she would rather dance than eat."

"Well, she'll find plenty of men who would rather sign a dance program than a dinner check."—Boston Transcript.

Revised Spelling.

English spelling is thus satirized in an exchange:

There was once a man who for hiccough
Tried all the known cures he could piccough;
And the best without doubt,
As at last he found out,
Is warm water and salt in a ticcough.

The Fitness of Things.

Bootlegger's wife (to maid)—Marie, I'll have my emerald earrings today—and order the green car for 11:30. They match so well.—Life.

Knew Where It Was.

"What is a vacuum?" asked a high school teacher. "Oh, I know all right," replied the student. "I just can't tell you but I've got it in my head."

That's Probably It.

Mr. Augustus Linkins of Sunville, Ala., was reading an old newspaper in which he chanced upon an item he thought might interest his friend.

"I observes by dis papah," said Mr. Linkins, "dat de smallest cows in de world is to be found in de South seas. Dis papah says dat de average weight of sich a cow does not exceed 150 pounds."

"Does yo' suppose," asked his listener, "dat dat's where dey gits de condensed milk from?"—Harper's Magazine.

Capitalistic.

"She isn't exactly pretty, but she has that indefinable something——"

"So I hear; her father has piles of it."—Judge.

Cash Registered.

May—Do you notice any change in me?

Ray—No, why?

May—I've just swallowed a nickel.—"Topics of the Day" Films.

Would Have to Be.

"Pretty strong girls that can do that, hey?" asked a man of another as they were walking along a business street.

"Do what?" asked the other.

He pointed to a sign: "Wanted—Girls to sew buttons on the third floor."

An Effective Weapon.

"Well, Pat, I suppose you have learned that it's dangerous to pick a quarrel?"

"Sure, I have that," agreed Pat feelingly, readjusting his bandages. "But it's even more dangerous to quarrel with a pick."—Orchard and Farm.

Too Many Prayers.

A Sunday school teacher is a great favorite with her girl pupils. The teacher frequently asks the pupils to commit to memory various bits of the Scripture. The other day the teacher got this note from the mother of one of the pupils:

"Dear Teacher: Please don't teach my Mary any more prayers, as I can hardly get her to bed now."

FAMILY CIRCLE

ALICE BARLAND
EDITORIAL CONTRIBUTOR

Family Circle Girls

Dear Mrs. Barland: I thought I would write to your department, as others are writing. I am a country girl and proud of it. We live on a farm 7 1-2 miles from town, but we are planning to move in to town this winter, so I can go to school. I am 14 years old and will be a freshman this year, as I graduated from the eighth grade last January.

To the Circle members who embroider, here is a hint that I find helpful. The hot iron transfer patterns can be used only once the common way, as you probably know, but I have found that if you will trace with a blue crayon the lines on the side you put next to the cloth you wish to transfer the pattern upon and press with a hot iron, as usual, it will transfer clearly as often as you renew the lines.
Oregon. "SUNSHINE."

Here is a letter which proves that the men read our page. It is unsigned:

"Dear Mrs. Barland: I am an ornery old bachelor, but I do like to read the Family Circle, especially those letters in the last few issues. I admire such a girl as Miss M. P. and I hope she will find plenty of true, pure and honest girls like I think she is, to write to."

Here is a letter from a girl who took on the burdens of life at the same age that I did: A. W. B.

"Dear Mrs. Barland: I am a girl of 16 and my mother has been in poor health since I was 12 years old, so it has been my place to do the cooking and housework.

"When I make corn bread I use cream instead of lard and it makes the corn bread as light as cake.

"I like to live on a farm and I like to milk and I have that job in the summer, as my dad is always busy. I also like to be around horses.

"When children get hard bumps, where it raises a lump, rub the spot lightly with a silver knife and the lump will go away and leave no sore.

"Washington. M. D."

Dear Family Circle Girls: I am glad to hear from you and many letters are coming in, but I can not answer your personal questions through the paper and you must send name and address if you desire your letters to receive attention. I promise you I shall never print your names, but you must trust me to the extent of giving them. I want your age, too, and most of you give it. Please don't forget these things. Always address me in care of THE FARMER and please write your names plainly.

I am giving you girls a chance to express yourselves concerning any question you are interested in. If you don't agree with the opinions of the girls whose letters appear in the Circle write me what you do think and your reasons. There follows a letter with different ideas than those of M. P. Sincerely your friend,
ALICE W. BARLAND.

Dear Mrs. Barland: I read in the last issue of THE FARMER the letter signed M. P. and it made me mad clear through. I think she must be the old-fashioned type of girl. I don't think it wrong for a girl to kiss her boy friends, but I don't think she should go too far. I am 18, with brown bobbed hair and I go to high school. I like a good time and am wild about dancing and all sports. Concerning what M. P. said about love making with many boys, making it uncertain who is the right one, there is no need to worry. I have kissed a good many boys and I don't consider myself below any one, or a wild woman. At the present time I am engaged to a man 26 who loves me with all his heart and I love him just as much. We are going to be married in the spring and I think I can make as good a wife and mother as a girl who has never kissed a boy.

I live in a town of several thousand inhabitants and my father is a sheepman. My fiancee is a wheat grower, owning and working two sections of wheat land. I am sorry if I have said anything I shouldn't. I hope to hear more on this subject and I would like to hear from any one thinking as I do. "BILLY."

Home Recipes

Devil's Food Cake—One cup sugar and ½ cup butter creamed together, 3 tablespoons of cocoa, 1 cup sour milk, 2 beaten eggs, 1 teaspoon vanilla, 1 1-4 cups flour sifted with 1 teaspoon soda. Bake in a round pan. MRS. M. J. D.

Rich fruit cake: Cream one-half pound butter and one-half pound brown sugar until rich and light, then add five eggs well beaten, one cup molasses, two and one-half cups pastry flour, one pound each of seeded raisins and currants, one-half pound thinly sliced citron, which have all been mixed with one-half cup of flour; this makes three cups of flour in all. Add one teaspoon each of nutmeg, mace and cloves and last add one-half teaspoon of soda dissolved in a little warm water. Bake this in a couple of bread pans slowly for about two hours.

Preserved pumpkin: Prepare the pumpkin as you would for pies, that is, peel it and cook as for pies, mash or put through a colander and then can it while boiling hot, same as you can fruit. This will keep all winter.

Devil's food cake: Three-fourths cup of shortening, one cup white sugar, two eggs, two squares of chocolate or six tablespoons of cocoa, one scant cup of sour milk, one teaspoon soda, pinch of salt and flavoring and flour to make a medium dough. To make: Melt the chocolate in a saucer over a teakettle; mix this with the other ingredients, then add the eggs. Stir the soda into the milk and add the salt to the flour, add flavoring and bake either in layers or a loaf. I use either white or chocolate frosting. MRS. K. S. M.
Montana.

Dear Mrs. Barland: Here are a few hints to young housewives: Drop a bay leaf into tomatoes while cooking, add a few crackers or a piece of bread, a piece of butter, salt and pepper to taste and a little sugar if the family like sugar in tomatoes.

To Cook Rice Dry—Wash 1 cup of rice in several waters, rubbing well with the hands, use waters enough so the last will not look milky, add a heaping teaspoon of salt and 4 cups of boiling water, let boil hard for a few minutes without a cover and do not stir; next, place the dish of rice over another dish of boiling water, lifting the rice gently from the bottom of the dish, cover and cook till all water is absorbed and the rice is dry.

To Make Smooth Gravy—Brown required amount of flour for the amount of gravy desired in the grease from cooked meat, add cold water mixed with a little milk or much as desired, stir till it boils and add salt and pepper to taste.

Cottage Cheese—Let the milk stand till it sets thick in the pan, then score with a knife into squares, set in the oven and leave till the whey shows between the squares and the milk is crumbly when tested. Pour into a pointed thin bag and hang up and let drain till dry. Remove from the bag and put in a cool place and if you have made more than desired to eat at once cut off what you need and season with a very little salt and sweet cream, stirring the cream in till all smooth.

Nourishing Drink for Invalid—Put 1 cup of boiling water into a dish, add 1-2 teaspoon of salt and 1 handful of flaked wheat; let boil for 1 minute and strain and serve the liquid.—Mrs. L. A. M., Wash.

Potato souffle: Mix four cups hot mashed potatoes with one tablespoon of melted fat, two teaspoons of milk, one and one-half teaspoons of salt, one-fourth teaspoon of paprika and the well beated yolks of two eggs. Beat all till light and fluffy, then fold in the well-beaten whites of two eggs, pile lightly into a baking dish and bake till the mixture puffs up and becomes a golden brown. Try this.
ALICE W. BARLAND.

Butter Making in Winter—Keep the cream cool for four days, then warm it so as to sour it a little, then put it back in a cool place; this keeps it from getting bitter. Stir it well every time cream is added. The night before churning set the cream in a warm place and in the morning add a little warmed sweet skimmed milk before churning. This takes the sourness out of the cream and makes the buttermilk good. In the winter I churn the cream at 64 degrees and in the summer 60 degrees on account of the temperature of the room.—Mrs. B. E. T., Oregon.



Pain?

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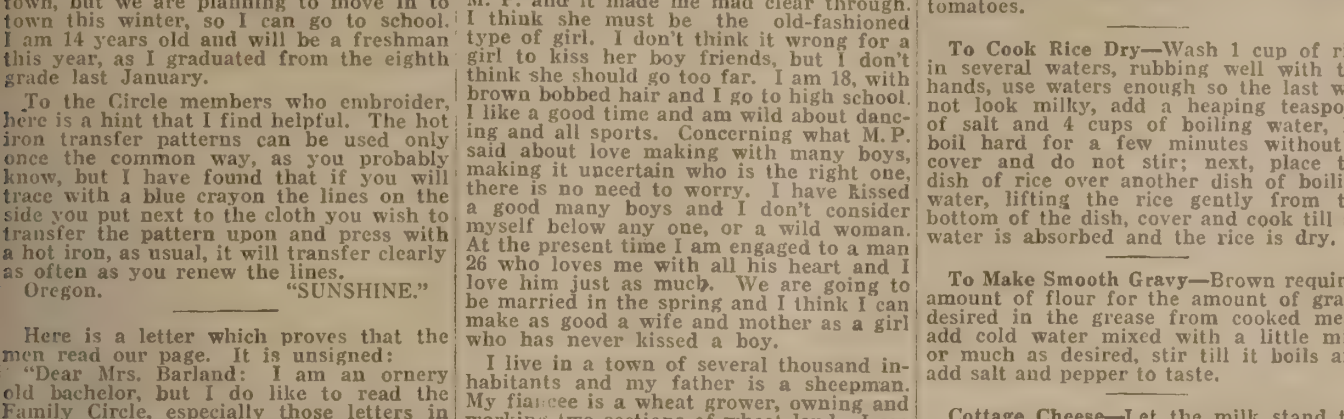
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Dainty Crocheted Yoke

By HELEN KAUFMAN



These dainty yokes are pleasant pickup work and will always make welcome gifts, for camisoles, combinations, or summer nightgowns. In having one started and ready at hand, a few moments now and then will not be missed and the work will progress in the meantime.

Use Cordonnet crochet cotton No. 60 or 70, either white or any of the dainty colors. For this attractive yoke, make a ch the length required to reach around the body, join. First row: 2 ch sts, skip 2 sts, 1 d c into the next st, forming a sp, continue making sps, for this row, join 5 ch sts.

Second row: * 1 s c into d c, 7 ch sts, skip 2 sps, 1 s c into d c, 5 ch sts, repeat *, for this row, you will observe that the loop of 5 ch sts, is over 1 sp, the loop of 7 ch sts, over 2 sps.

Third row: * 5 ch sts, 1 s c into center st of small loop, 5 ch sts, 7 s c over center portion of large loop, repeat *, for this row.

Fourth row: * 5 ch sts, 1 s c into center st of small loop, 7 ch sts, 1 s c into center st of next small loop, repeat *, for this row.

Fifth row: * 5 ch sts, 1 s c into center st of loop, 5 ch sts, 4 s c, 3 ch sts, form 1 p, 4 s c, all over large loop, repeat *, for this row, repeat second row and continue for one more row of p, completing the depth of underarm, to shape your yoke, make the back 4 large loops shorter than the front, allowing 4 large loops on each side for the underarm spaces, continue the pattern across the front, repeating the third row, twice between the p, decrease 1 loop on each side of each row, until you have dropped 2 large loops, then continue straight for the depth desired, finishing with the fifth row.

Next row: * 1 s c into p, 2 ch sts, 1 d c into center of loop, 2 ch sts, 1 d c into center of next loop, 2 ch sts, repeat *, forming a straight line across the top, turn.

Next row: *1 ch st, skip 1 st, 1 d c, repeat *, 7 ch sts, turn.

Next row: Beading, * 1 t c, 1 ch st, skip 1 st, 1 t c, 1 ch st, skip 1 st, start t c, as before, but when it is half done make 1 s c over the centers of 2 t c, then continue t c, 3 ch sts, skip 3 sts, repeat *, 3 ch sts, turn.

Next row: Repeat the row before the beading, then make second and third rows, alternately, for five rows.

Next row: Start shoulder over 2 large loops and 3 groups of 2 small loops, as shown in the illustration, continue for the length required, break thread. Join thread at top of underarm and repeat for the back, and opposite shoulder strap, join the shoulders. Repeat second row, on the inside edge of shoulder straps.

Next row: Around the neck, * 1 s c into center st of small loop, ** 1 ch st, 1 d c, repeat **, 5 times over large loop, 1 ch st, repeat *, for this row.

Next row: * 5 ch sts, 1 s c over ch, repeat *, for each ch.

Around the sleeve, make 1 row of * 1 d c, 1 ch st, skip 1 st, repeat *.

Next row: Repeat second row, then repeat the scallops:

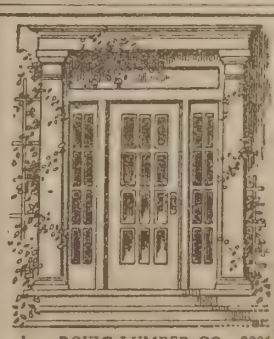
This yoke may be made any size, according to the first ch and any depth desired.

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Glance over the bargains on the "Want Ad" page.

High Points in News of the Week

At the call of President Harding congress has reconvened in extra session for the consideration of important matters that the regular session failed to reach prior to the adjournment for the recent election campaign. The most outstanding subject for treatment is the proposed ship subsidy law, which President Harding has recommended. This measure is strongly supported by one element both in and out of congress and equally as vigorously opposed by another strong group, including some farm organizations. The heads of the American Farm Bureau federation some time ago issued a statement opposing the general principle of a subsidy, but approving the bill now proposed on the ground that the maintenance of an American merchant marine is vital to the welfare of the agricultural producers and industry at large. Some farm bureau leaders are opposed to it. Also many leaders of such organizations as the farmers' union and the grange have expressed opposition to the proposed measure.

While it is doubtful if the present extra session will give any definite consideration to the prohibition question and the bonus question, both of these issues are impressively prominent in the minds of the people at large and of members of both houses and government officials. The recent election will probably cause something of a realignment on these matters even before the newly elected senators and representatives take office next year. There is said to be strong indication that President Harding will modify his own position to some degree on the bonus question, but that he is unchangeable on his prohibition stand. The president, when a senator, voted for the 18th amendment and also for the Volstead enforcement act and is understood to be unreservedly in favor of both at the present time.

* * *

Notwithstanding the fact that the state of California as a whole indorsed national prohibition and the Volstead enforcement act, Congressman Kahn, representing the district in which San Francisco is located, has announced that he will immediately start a movement in congress for the modification of the prohibition laws. The city of San Francisco voted overwhelmingly in favor of such modification at the recent election, but was outvoted by the outlying sections of the state.

* * *

Whther or not Mrs. W. H. Felton of Georgia will be seated as a member of the United States senate is a question of considerable interest, both sentimental and political. Mrs. Felton, a woman of exceptional prominence, was appointed United States senator to fill the vacancy caused by the death of one of Georgia's senators. Since her appointment a permanent successor to the deceased senator has been regularly elected. If Mrs. Felton is seated it will be for perhaps one day only, largely with the view of giving her credit for being the first woman to sit as a member of the upper house of congress.

* * *

Former Premier Clemenceau of France has arrived in the United States for a visit of a few weeks. It is understood that he comes largely on his own initiative, though recognized as a spokesman for the government and people of France. His expressed purpose is to assist in bringing about a closer friendship between France and the United States through the creation of a better understanding in this country of the attitude that France has taken in world affairs during the last few years. The former premier is anxious to secure the moral backing and the practical assistance of this country in putting into effect the French idea of world reconstruction and the establishment of permanent peace. In addition to making a tour of the country and delivering a considerable number of public addresses he is expected to confer personally with President Harding and other high government officials.

* * *

United States Senator Truman H. Newberry of Michigan, whose seat in the senate has been bitterly contested, has tendered his resignation to take effect immediately. The senate last summer voted to seat him, following charges that he had spent excessive sums in securing his election. As a result of the last election it became evident that the contest would be reopened. Senator Newberry in his resignation declared that it was impossible for him to render proper service under what he called continued "partisan political persecution."

* * *

As a result of the election in England last week the new premier, Andrew Bonar Law, who succeeded former Premier Lloyd George upon the latter's resignation, will have a substantial working majority as head of the conservative element in the British parliament. This victory of the conservatives, the apparent failure of the Lloyd George regime to secure reindorsement and the considerable gain shown in the labor strength were the features of the election.

* * *

The United States supreme court last week, in a decision involving Japanese ownership of land, ruled that the Japanese is ineligible for American citizenship and any of its privileges. This action was vigorously commented upon by newspapers in Japan, though many were inclined to be temperate in their criticism of the ruling. Some even went to far as to state that it probably meant the early complete exclusion of the Japanese from this country.

* * *

When the railroad strike was called in July, William Allen White of the Emporia (Kansas) Gazette displayed a poster in his window expressing swmpathy with the strike movement. This was in direct violation of a Kansas law prohibiting expressions of such sympathy in any strike. White was arrested on a charge of violating the law, but his trial has not yet been held. It is now reported that agreement has been reached that the case shall be taken directly to the supreme court of the United States to determine whether or not a law such as that on the Kansas books is constitutional. The decision when rendered will be of national as well as state significance.

* * *

The peace conference between the Turkish government and the European allies is in session at Lausanne, Switzerland. Last week it seemed probable that the impetuous Turkish nationalists, who have driven Greece out of Asia Minor and virtually overthrown the old established Turkish government at Constantinople, would violate the armistice agreement between them and the allies, thus probably making the present conference impossible. Such catastrophe, however, was averted and the conference is in session with reasonable hope of success. The Turkish sultan last week fled from Constantinople to escape a threatened trial for treason by the revolutionary leaders. He made his escape on a British ship to allied territory. The nationalist leaders have demanded his return and it is understood to be possible that he will be remanded for trial.

* * *

A conference of leaders in the present so-called progressive movement has been called for December 11 in Chicago to review the results of the recent election and consider the question of whether or not a third party should be organized for activity during the next general election campaign.

A call for a national conference of progressives to meet in Washington, D. C., December 1 and 2 and organize a progressive group in congress has been issued by Senator La Fallette (Rep., Wis.) and Representative Huddleston (Dem., Ala.), chairman and vice chairman, respectively, of the people's legislative service

* * *

The American Red Cross began its annual membership drive Armistice day. It will continue to Thanksgiving day, November 30.

* * *

The cabinet of Premier Wirth of Germany resigned last week and President Ebert is busily engaged in the formation of a new cabinet. He is reported to be trying to secure a nonpartizan organization composed of men with industrial and economic training from all of the political elements in Germany. At this writing the new premier has not been named.

* * *

Who owns the air is the question that must be answered by the courts. An Illinois radio enthusiast has filed suit in a circuit court in that state asking the court to define the right of one person over another to occupy the space with radio messages.

* * *

Armour & Co. has filed application with the government at Washington for permission to purchase the properties of Morris & Co., another of the "big five" packers.

* * *

The federal court in Chicago last week dismissed the application of the Chicago Board of Trade for an injunction against the enforcement of the new grain futures act. The court, however, ruled that the act should not be enforced against the Chicago Board of Trade until its constitutionality shall have been passed upon by the United States supreme court.

* * *

The Loyal Legion of Loggers and Lumbermen, the organization covering the Pacific northwest, and whose hope is the harmonizing of employers and employees in the lumbering industry, is devising legislation in all three states for a uniform eight-hour law to cover all logging camps.

* * *

The war department is understood to be working out a plan for "an efficiency council or board of control" that would have charge of all resources of the country with authority to conscript them and utilize them in the best way possible to insure success in case of war.

First Large Wheat Crop

The first large crop of grain raised east of the Cascades in either Washington or Oregon was by Charles Russell, says Dan G. Goodman. Mr. Russell, who died about 30 years ago, was a government wagon master during the Indian wars of the 56s. After the Indian trouble had subsided Mr. Russell was put in charge of the government teams at Fort Walla Walla. Much of the time the teams and drivers were idle and in order to keep the horses in condition he used them to plow up and seed about 1000 acres of bunchgrass land located about three miles southeast of Walla Walla. From this tract he harvested and threshed 40,000 bushels of grain.

For many years previous to that time there had been numerous small tracts under cultivation in widely scattered localities, but this was the first attempt at large-scale production. Prior to that time farming had been confined to the creek and river bottoms, moisture being derived from subirrigation or overflow in flood times.

In 1874 Dr. Blalock plowed and seeded to wheat 2000 acres of bunchgrass land situated about half way between Walla Walla and the present location of Milton, Ore.

The most serious problems of the farmer arose after harvest. Transportation was slow and difficult, for long hauls had to be made by wagon. Only a very small portion of the wheat raised was consumed at home, and the rest had to be taken to Wallula, where it was loaded on boats and floated down the Columbia river.

IRRIGATION AT YAKIMA.

A dance for delegates on opening night and an inspection tour of the reservoir project at Rimrock, where the United States reclamation service is building its biggest dam, are among the extra-program inducements offered for attendance at the annual meeting of the Washington Irrigation institute at Yakima November 24 and 25. F. T. Crowe, engineer in charge of Rimrock construction; A. L. Smith, engineer on the proposed Horse Heaven project, and W. B. Armstrong, president of the state farm bureau, are on the program, which was announced by R. K. Tiffany of Spokane, president of the institute.

Farm Business and Markets Outlook

(Continued from page five.)

Bluestem, $1.32; Marquis, $1.08; Gold Coin, $1.08.

PULLMAN, Wash., Nov. 18.—Cash wheat—Red, $1; white, $1.03.

DAYTON, Wash., Nov. 18.—Cash wheat—Club, $1.07; red, $1.02.

POMEROY, Wash., Nov. 18.—Cash wheat—Turkey red, hybrid, $1.

ODESSA, Wash., Nov. 18.—Bluestem and Bart, $1.40; Marquis, $1.13; Turkey red, $1.09; Jones' Fife, $1.05.

Hay and Feed Grain.

PORTLAND, Ore., Nov. 18.—Millfeed—Price f. o. b. mill: Mill run, ton lots, $33; middlings, $44; rolled barley, $44@43; rolled oats, $44; scratch feed, $46 per ton.

Corn—White, $41; cracked, $43 per ton.

Hay—Buying price, f. o. b. Portland: Alfalfa, $18.50@19 per ton; cheat, $18.50@19; oats and vetch, $21; clover, $19; valley timothy, $21; eastern Oregon timothy, $21@22.

SPOKANE, Nov. 18.—Wheat—Feed wheat, $42 ton.

Oats—$42 per ton; steam rolled, $44.

Corn—$42 per ton; cracked corn, $44 ton.

Barley—$42; steam rolled, $44.

Bran—$32 ton.

Bran and shorts—$33 ton.

Shorts—$35 ton.

Alfalfa, $23 ton; timothy, $26 ton; mixed hay, $24 ton.

General Produce.

PORTLAND, Ore., Nov. 18.—Butter—Cubes, extras, 44@45c lb.; prints, parchment wrapped, box lots, 48c, cartons, 49c. Butterfat, 43@49c, delivered Portland; station buying price, A grade, 46@48c.

Eggs—Buying price: Current receipts, loss off, 49@51c; henneries, 53c dozen. Jobbing prices: Front street, candled ranch, 56@57c; selects, 59c; association selects, 60c; association firsts, 58c; association pullets, 50c.

Cheese—Tillamook triplets, price to jobbers, f. o. b. Tillamook, 30c; Young Americas, 31c; longhorns, 31c pound.

Poultry—Hens, 13@23c lb.; springs, 16@20c; ducks, white, 20c; geese, 15@18c; turkeys, live, 25@28c; dressed, choice, 35@36c; No. 2, 30c.

Veal—Fancy, 12@12½c per pound.

Pork—Fancy, 14c per pound.

SEATTLE, Nov. 18.—Eggs—Selects, local ranch, white shells, cases included, 53c per dozen; mixed colors, 52c per dozen; pullets, 40c per dozen; cases returned to shippers, 1c less.

Butterfat—F. o. b. Seattle: A grade, 50c per lb.; raw milk, $2.20 per cwt.

Poultry—Hens, 4½ lbs. and up, 22c per lb.; over 3½ and under 4½ lbs., 16c per lb.; 3 to 3½ lbs., 12c per lb.; do dry picked, 2c above live; broilers, under 2 lbs., 24c per lb.; old roosters, 11c per lb.; Belgian hares, 3½ lbs. and heavier, 11c per lb.; geese, fat, live, 18c per lb.; ducks, 3 lbs. and heavier, live, 18c per lb.; turkeys, fat, dry picked, 8 to 15 lbs., 33c per lb.; do live, fat, 10 to 15 lbs., 28c per lb.; squabs, large, $4.50 per dozen; pigeons, $2; guineas, $8 per dozen.

SPOKANE, Nov. 18.—Poultry, live weights—Hens, 4 lbs. and over, 17c; light hens, under 4 lbs., 12c; springs, all sizes, 16c; old roosters, 8c; ducks, 15c; geese, 15c.

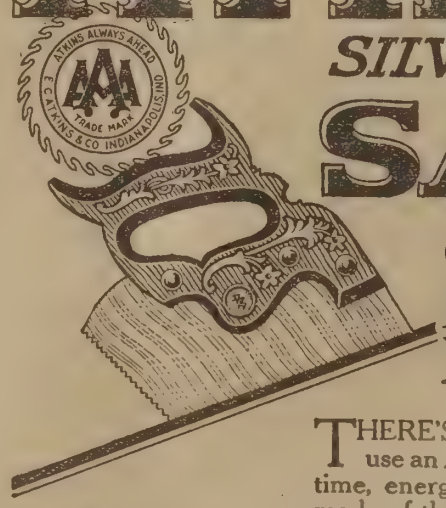
Fresh ranch eggs—$10.50 to $12 case, according to quality.

Butterfat—46c a pound.

ATKINS

SILVER STEEL

SAWS

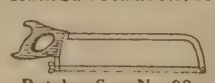


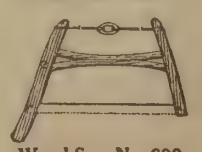
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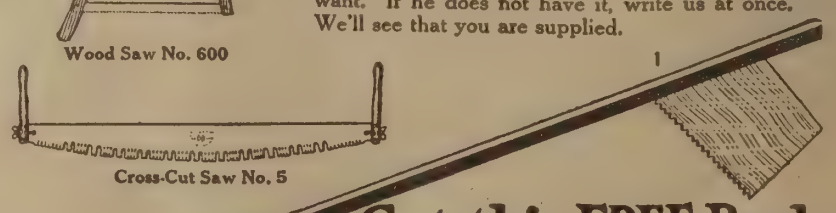
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Your Health

By Royal S. Copeland, M. D., F. A. C. S.

Habit and custom determine our physical comfort, as they determine our conduct generally.

On an August night I walked through the streets of Plymouth England. It was damp and raw. I had my overcoat collar up and my hat pulled down. To me it seemed uncomfortable and disagreeable.



Dr. Copeland.

To the local inhabitants it was a delightful evening. Folks were sitting outside their houses and nobody wore a wrap. Among others I saw a sweet old couple, white-haired and feeble with age.

They sat on a bench in their garden, both without wraps or hats. They appeared as serene and comfortable as my own parents appear on an August evening in Michigan. In England they consider it "childish" to have a grate fire, or to make use of excessive quantities of hot water. By long custom they have become used to their colder climate, and to the conditions of their mode of life. Of course, they have lived this way always, and, to them, these climatic conditions are "natural."

I think there is no doubt that our American ways are enervating in some respects. We make our skins tender by humoring them too much. Needless to say, I consider one day in North America better than two days across the ocean. However, this feeling does not blind me to the weakenesses of our national life.

Americans are unduly timid about fresh air, rain, out-of-door exercise, open windows and cold water. Almost all our public halls are poorly ventilated. Our churches, schoolhouses and homes usually are not hot.

We survive all these things. They are not necessarily fatal. But they do lead to definite difficulties. No doubt chronic nasal catarrh, throat trouble and bronchitis may be produce by continual existence in vitiated and contaminated atmosphere.

If we accustom ourselves to cool air we are less likely to "take cold" on exposure. The body should be hardened by familiarly with open windows.

If a child is brought up from his earliest existence to reasonable exposure he will be a "fresh air fiend" the rest of his life.

Until everybody recognizes the importance of fresh air and cool rooms it will be difficult to readjust our mode of living. You know what a fuss there is if an air advocate opens a window in a public place. Immediately there is a yell about the "draft." But after a while our people will recognize the physical importance of a more sensible attitude toward cool air and ventilation.

Just Folks

Life is a mixture.

To go ahead is the last word.

Death is the background of life.

Fears are the weeds of the mind.

The best publicity "stunt" is preceded, accompanied and followed by quiet, persistent work. You may die before quiet and persistent work gets you anywhere. Fireworks are needed to put you on the map. But fireworks in themselves will not keep you on the map for any length of time.

The circus parade brings out a lot of people who would not otherwise attend the circus. There is, however, nothing of the parade's publicity in preparing for the circus stunts. E A S

IMPIETY

BY JULIA M. MARTIN.

"Dear Lord, what have I been and done!"
Old Sarah moaned, in deep distress.
"Thanksgivin' Day's been here and gone
Without my voicin' thankfulness.
I've just that busy been all week
A-helpin' neighbors down with flu!
Praise be I didn't clean forget
To keep the blessed Sabbath, too!"

The kindly soul was troubled so
At thought of her impiety
That one, who never Christian was
For Sarah's comfort, feigned to be,
And counseled, "Sister, do not grieve.
The Lord is in His temple still.
They also keep the Supper's hour
Who Mercy's great behest fulfill."

God send us more ingratitude,
If Sarah's way the thankless be.
And, such as was her comforter's,
God give us more hypocrisy!

A SERIOUS PROPOSITION.

Life is serious enough at best; inject all the frolic you can.

Latest High Class Patterns for the Home

Please order the patterns you desire at least two or three weeks before you wish to use them. Desiring to obtain the latest high-class patterns for its readers, THE FARMER has made arrangements to have them sent direct from the east, and under present mailing conditions it takes about that time for them to reach you.



4166-4175. Lady's Costume. Waist 4166 cut in six sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. Skirt 4175 cut in seven sizes: 25, 27, 29, 31, 33, 35 and 37 inches waist measure. The width at the foot is 2 1-4 yards. To make this dress with sleeves for a 38-inch size requires 6 3-4 yards of 40-inch material. Two separate patterns, 10 cents for each pattern.

4192. Lady's Cape. Cut in four sizes: Small, 34-36; medium, 38-40; large, 42-44; extra large, 46-48 inches bust measure. A medium size requires 4 3-4 yards of 36-inch material. Price 10 cents.

4189. Girl's Dress. Cut in four sizes; 4, 6, 8 and 10 years. A 6-year size requires 2 1-8 yards of 40-inch material. Price 10 cents.

3850. Lady's Dress. Cut in seven sizes: 36, 38, 40, 42, 44, 46 and 48 inches bust measure. A 38-inch size requires 5 yards of 36-inch material. The width at the foot is about 2 1-4 yards. Price 10 cents.

3441. A Set of "Short Clothes." Cut in five sizes: 6 months, 1, 2, 3 and 4 years. A 2-year size will require 3 3-8 yards of 27-inch material for the dress, 1 3-4 yards for the slip, and 1 yard for the drawers. Price 10 cents.

4170. Boy's Suit. Cut in four sizes: 2, 3, 4 and 6 years. A 3-year size requires 3 3-8 yards of 32-inch material. Price 10 cents.

3362. A Comfortable Negligee. Cut in four sizes: Small, 32-34; medium, 36-38; large, 40-42; and extra large, 44-46 inches bust measure. A medium size will require 8 1-2 yards of 27-inch material. Price 10 cents.

3809. Lady's Work or Home Dress. Cut in six sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. A 38-inch size requires 5 yards of 36-inch material. The width of the skirt at the foot is about 2 yards. Price 10 cents.

4185. Girl's Dress. Cut in four sizes: 8, 10, 12 and 14 years. A 12-year size requires 4 yards of 32-inch material. Price 10 cents.

3805. A Popular Apron and Cap Set. Cut in four sizes: Small, medium, large and extra large. A medium size requires 3 1-4 yards of 36-inch material for the apron, and 3-4 yard of 30-inch or wider material for the cap. Price 10 cents.

2300. An Attractive Set of Toy Animals. The patterns are cut in one size only. It will require 1-2 yard of flannel for the sheep, 3-4 yard for the dog, and 3-8 yard for the pig. Price 10 cents.

2967. A Set of Toy Animals. Cut in one size. The cow requires 5-8 yard of 27-inch material and the horse 7-8 yard of 36-inch material. Price 10 cents.

Fashion Book Notice.

Send 12 cents in silver or stamps for our up-to-date fall and winter 1922-1923 book of fashions, showing color plates, and containing 500 designs of ladies', misses' and children's patterns, a concise and comprehensive article on dressmaking, also some points for the needle (illustrating 30 of the various, simple stitches), all valuable hints to the home dressmaker.

Please fill in this order and mail with remittance to:
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Enclosed find..... cents for which send me the following:

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Pattern No..... Size ..... Pattern No. ..... Size.....

Name .....

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R. F. D..... Box No..... St. No.....

Be sure to give the pattern number and the correct size.

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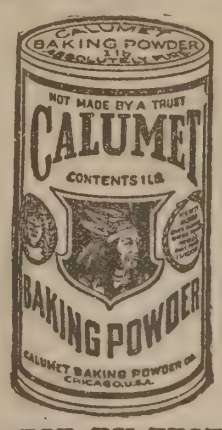
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THE WORLD'S GREATEST BAKING POWDER



Beatrice Warfield is a cousin in Skagit county, Wash. She is 11 years old. March 27, 1923, she will be 12. Last month Beatrice won second prize in the Pioneer story contest in The Junior Farmer. She thinks The Junior Farmer is the best paper she ever read.

"I have two pet kittens, one is black and the other is white; the black one is named Blacky and the other is Whitie," says Ferne Daugherty. Ferne likes the riddles and jokes in The Junior Farmer. She is an eastern Washington cousin.

This fall Roger Stone has picked 300 boxes of apples and he has done this outside of school hours. Roger's dog has a family of puppies. Roger is going to keep one of them. He bought a heifer calf with the money he earned picking apples. He also is a northern Washington boy. He says they are going to have a big bell for the school which he attends.

Alice Pratt, an 8-year-old cousin in Whatcom county, Wash., tells us about her five sisters. Ethel and Esther, younger than Alice, are twins, and then there are Betty and Laura and little sister Joyce, who is three months old. Alice has a friend named Julia Kuchenreuther. May 1 is Alice's birthday.

Nine-year-old Frances Chudek writes her first letter to us. She lives on Bellingham bay, northwest Washington, and has two brothers. Frances' birthday is in October. She says she has two pets, a cat named Tommy and a rabbit named Browney.

This is the first letter we have had from Alvin Eshelman for a year. He says the summer has passed and he has enjoyed every bit of it. He went with his brother to the big stock pasture, 22 miles from his home, several times during the summer. Once when his brother and a companion were on their way to the pasture they saw a bobcat run up a tree. His brother came home for a gun while his companion watched the cat. When his brother arrived with the gun they shot the cat and received a bounty of $5. Alvin is a southern Washington boy.

Marcus Ruth writes that he has a good teacher, but she likes to keep order in her school room. If she catches any one chewing gum, whispering or writing notes she presents them with a little ticket which means 5 per cent off in deportment. Marcus has been presented with two tickets already when he wrote to us November 8. He is one of our new cousins and we are glad to hear from him. He lives in Lewis county, Wash. He is 11 years old.

A farm of 720 acres in eastern Washington is Herbert Boeck's home. Herbert says they have 19 head of horses, four cows, pigs, chickens and geese and Tommy, the cat, who is 6 years old. There are 11 children in the Boeck family, seven sisters and four brothers. They go two miles and a half to school. Herbert was 11 years old March 19, 1922.

Birthday Greetings

THURSDAY, November 23—Leslie John Beardsley, 5 years old; George Amos Stallcop, 11.

FRIDAY, November 24—Jewel Field; Violet Gossau, 11 years old; Fred Reber; Jessie Riether, 10.

SATURDAY, November 25—Helen Magnuson, 10 years old; Charlotte Theadwell, 9.

SUNDAY, November 26—Ruby May Schrag, 9 years old; Harriet Shaw, 11.

MONDAY, November 27—Virginia Estelle Colley, 11 years old; Jessie Rupp, 8.

TUESDAY, November 28—Gladys Cook, 10 years old; Erma Sherry, 10.

WEDNESDAY, November 29—Viano Kohtala, 7 years old; Iva Kostenbader, 11; Aline Owings, 10; Anna Rainbolt, 9.

BEDTIME STORIES

By THORNTON W. BURGESS.

JOHNNY CHUCK GROWS JEALOUS.

Johnny Chuck is usually very happy. In fact, Johnny Chuck long ago discovered the best thing in the world, which is contentment. He has always been satisfied to sit on his doorstep and smile as he watched the world go by, but now a little bit of discontent had crept into Johnny Chuck's peace of mind. The fact is Johnny Chuck has become just a wee, wee bit jealous.

Now jealousy is like the weeds that grow in the garden. You know they start from tiny, tiny seeds, and when they come through the brown earth they are just tiny, tiny plants, but they grow so fast that pretty soon they are great big plants and the farmer has to go along and hoe them out. At first Johnny Chuck was just a little bit troubled. It didn't amount to much, but he couldn't keep it out of his mind, and the more he thought about it the bigger the trouble grew.

Now, what do you suppose it was all about? Why, it was just because he had found some one who could dig faster than he could. Johnny Chuck is a wonderful digger. My, my, my, how he can make the sand fly when he wants to try. He had been very proud because no one else could dig as fast as he could. Peter Rabbit could run faster than he, Happy Jack Squirrel could climb a tree faster than any one else; Little Joe Otter was the fastest swimmer in the smiling pool, but Johnny Chuck didn't care, for no one else had ever been able to dig a hole as fast as he could.

Now, there was a newcomer on the green meadows. Johnny Chuck had been the first one to welcome him and had been very polite and nice to him, and right down in his heart Johnny was very proud of him, but the newcomer could dig. My goodness! how he could dig! In fact his name was Digger the badger.

So Johnny Chuck sat on his doorstep and forgot to smile. He was actually jealous of Digger the badger. The merry little breezes danced across the green meadows and pulled Johnny's whiskers and rumpled his hair. They actually didn't know what to make of it when Johnny Chuck refused to play with them, but just sat and sulked and sulked. Peter Rabbit came hopping along and invited Johnny Chuck to go down to the sweet clover patch, but Johnny refused and just sulked and sulked and sulked. Jimmy Skunk came over to tell him of some tender young cabbage which he had discovered in Farmer Brown's garden, but even that didn't interest Johnny Chuck.



So Johnny Chuck sat on his doorstep and forgot to smile.

It grew worse and worse every day until all the little meadow people knew that something was wrong with ohnny Chuck. He grew so cross that no one could get a pleasant word from him, and then something happened. It all happened through Digger the badger.

(Copyrighted by T. W. Burgess.)

LETTERS WELCOMED BY AUNT NELLIE.

Among recent letters received by Aunt Nellie are those from cousins whose names follow. A few of these will be published each week in the regular edition of THE FARMER and others will appear from time to time in The Junior Farmer:

Elsie Brunner, Mabel Medsker, Helen Wyene, Gladys Penrod, Marian Whitman, Lois Smith, Arnold Robb, Amy Dicken, Howard Tomlinson, Gladys Huffman, Rosella L. Brown, Mae Ensley, Mildred Swanson, Lauretta Schuman, Ralph Gustin, Helen Smith, Leona Robb, Lola Covert, Paul Ylonen, James Dicken, Ethel Boawn, Janie Stewart, Anatha Reiman, Zeita Wood, Marie Adair, Thelma L. Nelson, Grace Warren, Mildred Dicken, Robert Tribe, Lloyal Golding, Laura Stringfield, Mollie Bennett, Ellen Nathrop, Grace Anderson, Grace Brunink, Edrie E. Bradbury, Margaret Irwin, Aune Palola, Mabel Maley, Laura Thomas, Dorothy Hood, Inez Brown, Charlotte Treadwell, Arthur Woolverton, Audrey Ogle, Matilda French, Annie Thompson, Carl Wilson, Alma Marie Schneider, Basil Mulford.



The success of THE WASHINGTON FARMER'S subscription plan has not been of the kind which goes up like a rocket and comes down like a stick. It rests upon such a solid foundation that it has already stood the test of six years, while another season of success and popularity is certain if our readers throughout the state continue to cooperate as loyally as they have in the past.

We have every reason to believe that they will do so and consequently repeat our request that you send in your subscription order at least sixty days in advance of the expiration date on the wrapper of your paper, that you send in your neighbor's order with yours, and that in case your own subscription is attended to for the year you secure at least one order for our lists.

By doing this a great deal of needless expense is eliminated and the subscriber gets the benefit of every penny saved.

Please put yourself upon the records as a booster for cooperation.

Nov. 23, 1922.
THE WASHINGTON FARMER,
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Pacific International

(Continued from page sixteen.)

and 3, Congdon & Battles on Roseman 3d and Black Betsy. Junior calf—1, Congdon & Battles on Blackbirdman C. B. 20th. Herd of three—1, Congdon & Battles.

Grand champion steer of the show—Congdon & Battles on Antler C. B. 4th, Aberdeen Angus.

Car lots: Two years or over—1, A. R. Babcock, Moore, Idaho; 2, J. E. Smith, St. Paul, Ore.; 3, Albert Campbell, New Meadows, Idaho. Yearlings—1, Edward W. Coles, Haines, Ore.; 2, C. A. Hunter, Wallowa, Ore.

Feeder cattle—1, A. Blokland, Island City, Ore.; 2, T. B. Johnson, La Grande, Ore.

Champion carload—Coles.

Purebred Fat Sheep.

Rambouillets: J. M. Moran, Starbuck, Wash., the only exhibitor, won first and champion on wether lamb and first on pen of three.

Southdowns: Yearling wether—1 (champion) and 2, University of Idaho; 3, J. G. S. Hubbard & Sons, Monroe, Ore. Wether lamb—1 and 2, University of Idaho. Pen of three—1, University of Idaho.

Shropshires: Yearling wether—1 (champion), University of Idaho; 2 and 4, State College of Washington; 3 and 5, Oregon Agricultural College. Wether lamb—1 and 2, University of Idaho; 3 and 4, Oregon Agricultural College. Pen of three—1, University of Idaho.

Hampshires: Yearling wether—1 (champion) and 2, State College of Washington.

Oxfords: Yearling wether—1 (champion), Oregon Agricultural College.

Cotswolds: Yearling wether—1 (champion), Oregon Agricultural College.

Lincolns: Yearling wether—1 (champion), J. G. S. Hubbard & Sons.

Grades and cross-breds (medium wool or down types): Yearling wether—1 and 4, Oregon Agricultural College; 2, State College of Washington; 3, University of Idaho. Wether lamb—1 (champion) and 3, State College of Washington; 2 and 4, University of Idaho; 5, Oregon Agricultural College. Pen of three—1, State College of Washington.

Grades and cross-breds (long wool type): Yearling wether—1, University of Idaho.

Champion wether of the show: University of Idaho on yearling Southdown.

Car lots—1 and champion, T. B. Johnson, La Grande, Ore.

Fat Hogs.

Poland Chinas: Barrows, 250 pounds or over—1, 3 and 4, Wendell Willard, Dayton, Ore.; 3, H. G. Avery, La Grande, Ore.; 5, A. Buckland & Son, Fresno, Calif. Barrow under 250 pounds—1 and 3, T. B. Johnson, La Grande, Ore.; 2 and 4, Simpson & Truitt, Bozeman, Mont.; 5, R. W. Hogg, Salem, Ore. Pen of three, 250 pounds or over—1, Wendell Willard; 2, Buckland & Son; 3, Wayne Swaggert, Athena, Ore. Pen of three under 250 pounds—1, Johnson; 2, Simpson & Truitt; 3, Hogg; 4, Buckland & Son; 5, H. S. Loe, Silverton, Ore.

Duroc Jerseys: Barrows, 250 pounds or over—1 and 2, Simpson & Truitt, Bozeman, Mont. Barrow under 250 pounds—1 and 3, Simpson & Truitt; 2 and 5, Frank P. Busch, Johnson, Wash.; 4, Bruce Willard, Dayton, Ore. Pen of three, 250 pounds or over—1, Simpson & Truitt. Pen of three under 250 pounds—1, Simpson & Truitt; 2, Bruce Willard.

Chester Whites: Barrow, 250 pounds or over—1 and 2, Frank P. Busch, Johnson, Wash. Barrow under 250 pounds—1 and 2, Ed Schoel, Albany, Ore.; 3 and 4, Cass A. Nichols, Salem, Ore.; 5, Homer Bray, Salem, Ore. Pen of three.

WHITE FLAME

BURNERS make your old kerosene lamps and lanterns give a brilliant white light better than electricity or gas. Doubles your light. Saves oil. No Mantle to Break. Guaranteed Safe and Reliable. Delights every user. Send now for complete sample postpaid 75 cts., stamps or coin. MONEY BACK IF NOT SATISFACTORY. Live representatives wanted.

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Satisfaction, cut plug smoking, 1-pound lunch basket, regular 05c package for 75c. Get your order in early, while it lasts.

Also a complete line of cigars, cigarettes and smokers' supplies at bargain prices. The only cigar store in the city that wholesales and retails.

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BE COMFORTABLE—Wear the Brooks Appliance, the modern scientific invention which gives rupture sufferers immediate relief. It has no obnoxious springs or pads. Automatic Air Cushions bind and draw together the broken parts. No salves or plasters. Durable. Cheap. Sent on trial to prove its worth. Never on sale in stores as every Appliance is made to order, the proper size and shape of Air Cushion depending on the nature of each case. Beware of imitations. Look for trademark bearing portrait and signature of C. E. Brooks which appears on every Appliance. None other genuine. Full information and booklet sent free in plain, sealed envelope.

MR. C. E. BROOKS

BROOKS APPLIANCE CO., 456 C State Street, Marshall, Mich.

News for Breeders

PLAIN IS AS PLAIN DOES.

Plain Mary of Stoneway is, perhaps, not as plain as her name might imply, for she was awarded second prize in her class at the recent Clallam county fair. She belongs to a club boy, Stacy Stone of



Port Angeles, and if properly cared for, as Stacy promises to care for her, may easily be the start of a successful Jersey herd.

A CHAMPION BERKSHIRE.



This is a picture of the senior herd boar in the Berkshire herd on the farm of W. J. Morris of Lynden, Whatcom county. He is Bonnie's Barron 4th and was champion Berkshire at the Whatcom county fair in September.

HOLSTEIN SALE.

The Lewis County Holstein-Friesian club has taken over the management of the third annual consignment sale of Holsteins at the Southwest Washington fairgrounds on December 9, and Secretary E. A. Donaldson of the club states that there will be about 60 head in the ring, with the probability that they will all be Lewis county cattle.

This club, which is the most active agency boosting black-and-whites in the entire state, is working hard to make Lewis county truly the Holstein center of southwest Washington, and by its efforts has accomplished a great deal toward that end in the last two or three years.

BUYS MILKING SHORTHORN.

N. H. Kandle of Nachez, Wash., recently purchased the fine young milk strain Shorthorn bull, Kirtland Wildeyes, from Kirtland farm of Central Point, Ore. The young bull is by the Kirtland farm herd sire, Foothills Conqueror, and is well bred on his dam's side. Mr. Kandle feels that he has secured a herd leader that will sire milking quality as well as Shorthorn type. The sale was the direct result of an advertisement in The Oregon Farmer.

AYRSHIRE HERD BOUGHT WITH FARM.

A fine herd of about 30 purebred Ayrshires and a great herd sire, Ben Hur, goes with the big farm, known as the Dr. Loughridge farm, three miles from Grants Pass, that was purchased from W. C. Paige by Harold J. Parker, formerly of Wichita, Kansas. The foundation cows in the herd were obtained from H. J. Domes of McCoy and are good producers as well as good individuals.

TO HEAD PUREBRED HERDS.

Andrew Lund of Fairfield, Wash., during the Western Royal Live Stock show, purchased a fine Poland China junior boar pig from P. L. Sain of Oakesdale. Marcee Thom of Ritzville also bought a young boar from Mr. Sain. Both pigs go to head purebred herds.



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Blackleg Aggressin

NATURAL GERM-FREE VACCINE

OR

Blackleg Filtrate

CULTURAL GERM-FREE VACCINE

Scientifically Prepared and Tested

Consult your veterinarian or druggist. Write for booklet on blackleg prevention.

Animal Industry Department OF PARKE, DAVIS & CO., DETROIT, MICH.

Men Wanted

to sell our goods in country and city. Why work for others when you can have a busines of your own with steady income? We sell on time and wait for our money. Team or auto needed for country, no outfit needed in city. Experience unnecessary. We train in salesmanship.

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Mention this paper.

We Buy and Sell
Grade and Pure Bred Dairy Cattle.
We can save you money whether you wish to buy or sell. One or a carload.
Graham Livestock Co.
E2605 Broadway, Spokane, Wash.
NEAR CARSTENS' PACKING PLANT.

Breeders' Dept.

LET THE LITTLE FELLOWS PAY OFF YOUR MORTGAGE.
Silver Fox Ranches Make Big Profits.
Finest Quality Imported Prince Edward Island Stock.



All Pedigreed and Registered. Fully Guaranteed.
Full Particulars free. Write today.
United States Silver Fox Farms Corp.
200 Hutton Bldg. Spokane, Wash.

8 Big-Type Duroc Boars
Three sired by Royal Marker and out of High Orion 2d dam; five sired by a son of Joe Orion and out of a Great Orion Sensation dam. These are the pick of 52 head of extra choice pigs from our 1922 litters, every one a grand individual and good herd header. No better boars anywhere. Last spring's pigs weigh 260 each. Prices reasonable.
D. W. BLANKSMA, Rt. 1, Nampa, Idaho.

DUROCS Fall pigs of both sexes. Sensation breeding. A few spring gilts by Virginia Peacock, either bred or open. Large litters and right type.
CLEAVER & CROUTER, Prairie City, Ore.

Cornell's Duroc sows were undefeated on show circuit. Choice lot of bred gilts priced to sell. Satisfaction guaranteed.
S. D. CORNELL, Grandview, Wash.

DUROCS Boars, gilts, fall pigs. "Sensation," "Pathfinder," "Great Wonder I Am" breeding. Priced to sell. Pedigrees furnished; satisfaction guaranteed.
V. R. FISHER, Orford, Idaho.

River Banks Berkshires
Long, smooth, deep, grand champion kind. Strong in the blood of most popular families of nation.
RIVER BANKS FARMS, Grants Pass, Ore.
CLYDE E. NILES, MGR.

Choice Berkshires
Few choice boars and gilts for sale; sired by Festline's Rus, junior champion Portland show.
PEARL WOOD, Gervais, Ore.

Riverby Orchard Berkshires
Oldest established Berkshire herd in the northwest. Young pigs and bred sows for sale. Address
D. C. BUNN, Prosser, Wash.

In writing advertisers, be sure to say you saw their advertisement in The Washington Farmer.

Buy Quarto Hampshires
Gen. Tipton-Nehawka Blood Lines
All foundation stock from Underhill herd. Fall pigs now ready to go. Two spring boars. Prices and hogs are both RIGHT.
Also a few good Shorthorn bull calves.
Quarto Ranch
W. B. LINDSEY MERLIN, OREGON

Big Type Poland Chinas
100 head for sale. A fine lot of sows and gilts, either bred or open. Also a number of choice young boars, ready for service. A lot of fall pigs. These are all of the big litter kind. Everything priced to sell. Write your wants and for prices.
P. L. SAIN, Oakesdale, Wash.

The Big Wonder Herd
of big type Poland Chinas, offers a few choice boars, ready for service; sired by such boars as the 1200-lb. Giant Buster and Saint Peter, a great son of Peter Pan. Satisfaction guaranteed on all orders.
E. O. LOE, Silverton, Ore.

Stillings' Poland Chinas
Young boars and weaned pigs at farmers' prices, from prize winning stuff. My pigs please everywhere.
H. J. STILLINGS, Hermiston, Ore.

MAPLE LEAF CHESTER WHITES
Breeding stock and weanling pigs of both sexes. Chief Justice 2d, Big Buster, Buster Giant and other best blood lines.
ED SCHOEL, Albany, Ore.

Two Milking Shorthorn Bulls
One year old. Both from splendid dams and sired by the eastern bred bull Lord Ireby, who carries seventy-five per cent of the blood of the most approved imported families. These bulls will make real herd sires as they are richly bred as well as being exceptional individuals that carry plenty of beef. Price $200 each. Guaranteed.
ROGUE RIVER VALLEY CANAL COMPANY.
MEDFORD, ORE.

Northwood Herd of Milking Shorthorns
The general farmer's cattle are the kind that will produce milk and beef. Milking Shorthorns fill this requirement. We want to place out bull calves where they will improve the herd. We are pricing our calves within the farmer's means. Will give terms on satisfactory references. We solicit your inquiries.
NORTHWOOD FARMS.
Redmond, Washington.

Milking Shorthorns We are offering some choice bulls and heifers at bargain prices. Over 70 head in our herd, all registered.
HIGHWAY DAIRY.
LEWISTON OR LAPWAI, IDAHO.

Oreglow Jerseys
Come to Oreglow for Golden Glows. Our 3 herd sires—Silver medal bull Pogis Oneida's Chief, Vive La France's first son, Darling Jolly Lassie's first son.
OREGLOW FARM, Boring, Ore.
D. BROOKS HOGAN, Owner.

Fourth Gold Medal Jersey Bull
now in use in my herd. No other herd ever had so many. Young stock for sale.
ED CARY, Carlton, Ore.

Maple Ridge Farm offers for sale richly bred young bull ready for service; 3 nearest dams of sire average 841 lbs. fat; dam is R. of M. daughter of St. Mawes Noble. Bargain. Terms.
J. C. BROWN & SONS, Shedd, Ore.

AllendaleJersey Farm, Well shaped bull, 1 year old, sire G. G. Chief breeding, closely related to Viva La France and Lulu Alpha. Price $65.
A. A. BIXBY, Freewater, Ore.

Two Jersey Heifers nearly a year old, from my high record test cows. Two Duroc boar pigs, bred from champions, very reasonable.
HANNEMAN JERSEY FARM, Corbet, Ore.

Holstein Bulls sired by son of world record cow, from dams sired by brother to Segis Pietertje Prospect. Prices low.
H. R. BOOMER, Payette, Idaho.

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"Stylish Stout" Gabardine Dress $3.98



This is a special design planned to give long slenderizing lines to stout figures. Note how the collar, revers and panels carry out the long effect. Note, too, the attractive embroidery on sleeves, vestee and panels. The self-material belt ties at back. Sizes 39 to 53. In three popular shades. **Order Navy by No. 54E5470. Order Black by No. 54E5471. Order Brown by No. 54E5472. Send no money. Pay $3.98 and postage for any color on arrival. State size.**

Men's Winter Underwear 99¢



Heavy weight flat knit union suits of select long fiber cotton in popular Jaeger or gray Random color. Heavily brushed fleece lining on inside. Wrists and ankles are elastic knit. Sizes 32 to 46 chest. Buy a year's supply right now—today. **Jaeger color, No. 54C1279. Gray Random, No. 54C-1280. Send no money. Pay 99c and postage on arrival. State size.**

Boys' flat knit union suits of fine quality cot[illegible] Sizes 24 to 32 for 3 to 11 years. **Order by No. 54C1358. Price 89c. Pay 79c and postage on arrival.**

Manchurian Wolf Fur Scarf $4.49



This scarf is about 46 inches long and 12 inches wide. It is stylish as well as warm. The lining is of good quality satin, and there is an extra ruching laid around the neck inside, so as to protect the fur from wearing. Only the most expensive fur scarfs have the features which we offer you at this bargain price. **Order black Manchurian wolf scarf by No. 54E5193. Order brown by No. 54E5194. Send no money. Pay only $4.49 and postage on arrival. If not satisfied your money will be refunded. Be sure to state color wanted.**



Give Size

BLACK GUN-METAL KID HI-CUT $1.98 UP

Send for this handsome rich kid-skin shoe in black kid or gunmetal. Note the medium toes with pretty imitation perforated tips, the perforation around vamp and on lace stays. Very popular model and really a sensational bargain now. Durable, flexible soles. Sizes 2½ to 8. Wide widths.

Orderblack by No. 54A-122. Pay $2.39 and postage on arrival. Order gunmetal by No. 54A476. Pay. $1.98 and postage on arrival. State size.

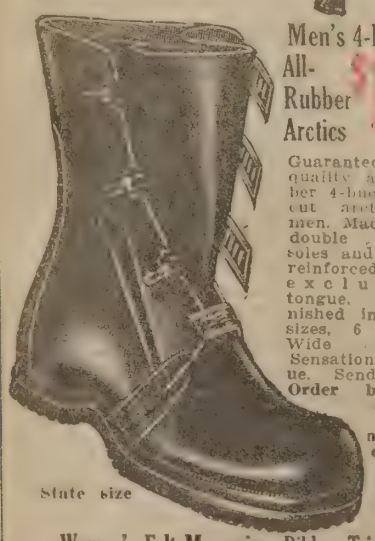
Men's Padded Felt Slippers 99¢

State size.



Men's standard weight and high-grade wool felt Everett slippers. Made in either brown or gray oxford with red plaid collar and novel pipe design on vamp. The soles are of soft, good quality gray chrome leather, heavily padded. Have thick padded heels. A slipper for real comfort and service. Sizes 6 to 11, wide widths. **Order brown by No. 54A816. Gray by No. 54A817. Send no money. Pay 99c and postage on arrival.**

Men's 4-Buckle All-Rubber Arctics $1.98



Guaranteed best quality all rubber 4-buckle hi-cut arctic for men. Made with double thick soles and seams reinforced. Snow excluding tongue. Furnished in men's sizes, 6 to 13. Wide widths. Sensational value. Send quick. **Order by No. 54A990. Send no money. Pay $1.98 and postage on arrival.**

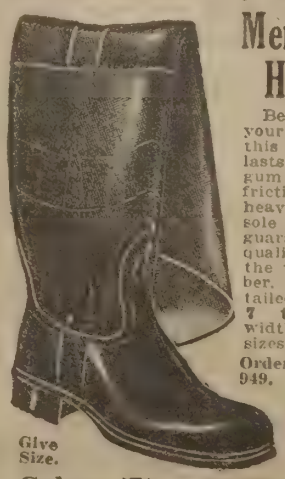
State size

Women's Felt Moccasins, Ribbon-Trimmed 98¢



Fine grade wool felt, with combination of fawn. Sizes 3 to 8. **Order American Beauty by No. 54A389; order copen by No. 54A-390; order lavender by No. 54A391. Send no money. Pay 98c for any color. State size.**

Men's Special Hip Boots $2.98



Give Size.

Be sure to order your pair while this great saving lasts. Men's pure gum hip boots; friction lined; heavy corrugated sole and heel; guaranteed first quality. Made of the very best rubber. Usually retailed at $5. Sizes 7 to 11. Wide widths. No half sizes.

Order by No. 54A-949.



Polo Cloth Coat $9.98

We positively guarantee that—quality for quality—there is not the equal of this garment under $12.00 anywhere else in the country. Note the snappy lines, the deep coney fur collar, the self-material belt, the side patch pockets and two muff pockets besides. Misses' sizes, 14 to 20 only.



Order No. 54E5657 Send no money. Pay $9.98 and postage on arrival.

Girl's Fur Trimmed Coat $3.98

A sensational bargain—a handsome coat of Pressed Velour in Navy Blue or Brown, regular $7 value. Has collar of genuine Kit Coney, which buttons snugly around neck. Belt all around, two novelty pockets and two buttons at back. Sizes 7 to 14 years. **Order brown by No. 54E5595. Order navy by No. 54E-5596. Send no money. Pay $3.98 and postage on arrival. Money back if not satisfied. Always mention size.**

Exquisitely Embroidered Gabardine Dress $2.98

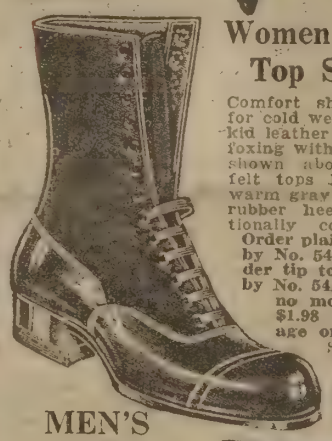


This delightful model is sure to be one of the favorites of the season. It is of beautiful cotton gabardine in navy blue or brown. The vestee, smart bell sleeves and fashionable panels are richly embroidered. The self material belt ties gracefully at back. Sizes 34 to 44. **Order navy by No. 54E5525.**

Order brown by No. 54E5526. Send no money. Pay $2.98 and postage on arrival.

Women's Felt Top Shoes

State size.



Comfort shoes, ideal for cold weather. Soft kid leather vamp and foxing with plain toe, shown above. Black felt tops lined with warm gray felt. Low rubber heels, exceptionally comfortable. **Order plain toe style by No. 54A403. Order tip toe style by by No. 54A407. Send no money. Pay $1.98 and postage on arrival.** Sizes 3 to 8. Give Size.

$1.98

MEN'S HI-CUT

Wonderful 11-inch Hi-Cut Storm Boots of soft brown cowhide leather, absolutely barnyard proof. Solid leather. Double Chrome outsoles, sewed and nailed; solid leather insoles; durable counters; dirt-excluding bellows tongues. Sewed throughout with heavy waxed linen thread. Sizes 6 to 12. wide widths.

$2.98



Order by No. 54A769. Send no money. Pay $2.98 and postage on arrival. State size. Order boys' sizes, 1 to 5½, by No. 54E570. Price $2.48. Order little boys' sizes, 9 to 13½, by No. 54E571. Price $1.98. Send no money. Pay bargain price and postage on arrival.

Men's and Boys' Brown Leather Heavy Work Shoes $1.98

State Size.



Splendid brown leather work shoes. Heavy durable uppers; extra strong solid oak leather soles; leather insoles; low broad leather heels, and reinforced leather back stay. Roomy last. **Order men's sizes 6 to 12 by No. 54A758. Send no money. Pay $1.98 and postage on arrival. Order boys' sizes, 1 to 5½, by No. 54A554. Price $1.89. Order little boys' sizes, 9 to 13½, by No. 54A555. Price, $1.79 and postage on arrival. Mention size.**

Men's Felt Shoes and High Cuts

54A-880—$1.98

54A-889—$1.79

Extra high cut or regulation height felt shoes of excellent quality. Thick soles and heels. Sizes 6 to 12. Wide widths. **Order high cut by No. 54A880. Price $1.98.**



Order regulation cut by No. 54A889. Price $1.79. Send no money. Pay bargain price and postage. State size.

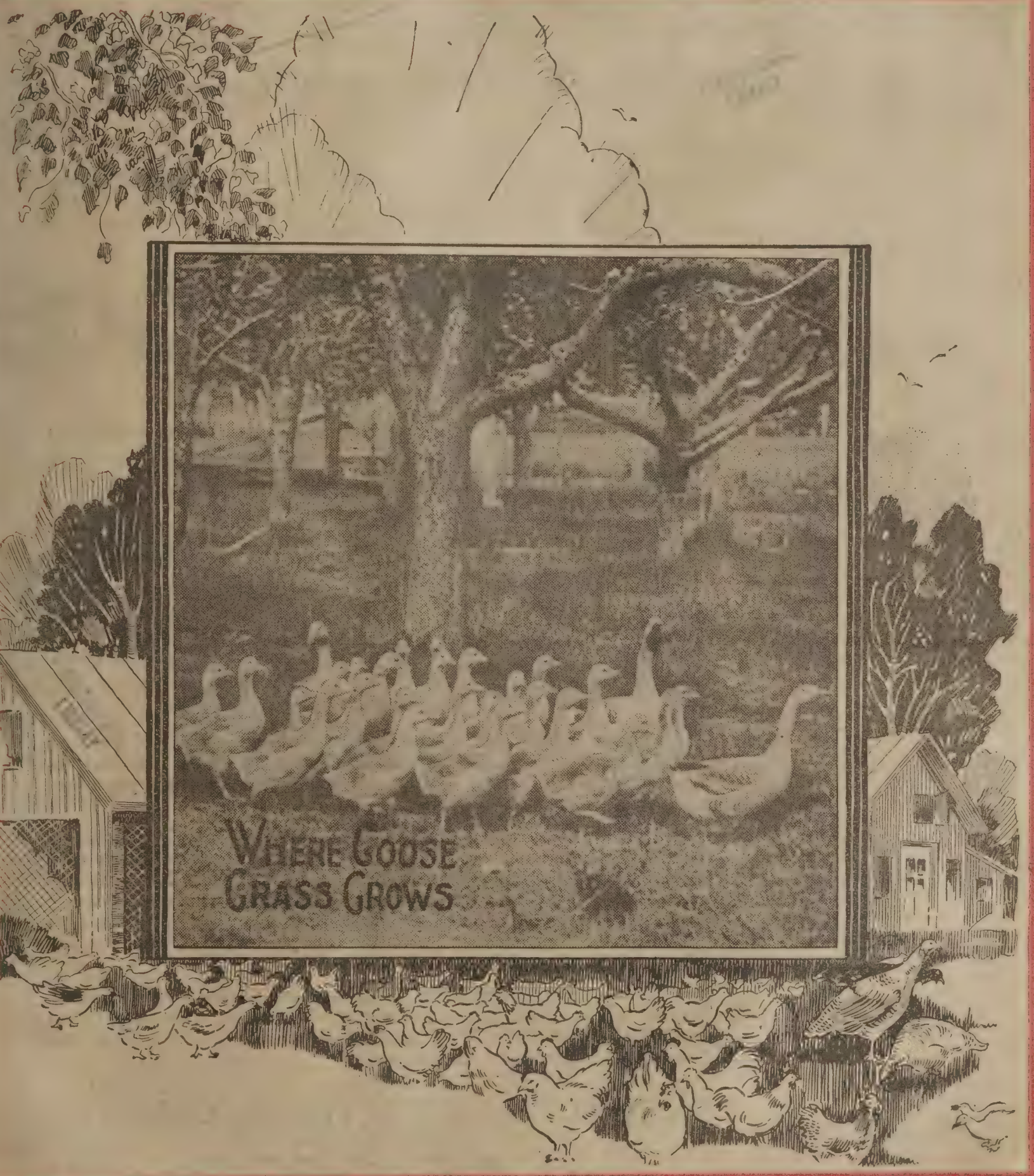
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THE WASHINGTON FARMER

ESTABLISHED 1894

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Clean Up and Kill the Bugs

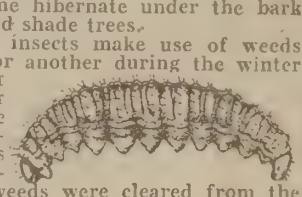
Weeds and Vegetable Roots Tide Pests Over the Winter

By DON B. WHELAN

The proper measures and precautions taken this fall or during the early winter will do much to keep down many of the insects of the farm. It has been often said that "an ounce of prevention is worth a pound of cure," and never was this more true than in the prevention of insect depredations. Many of the insect pests of the garden and field, as well as those of the orchard, can be controlled to a great extent by correct farm practices. The fall and early winter present an ideal time in which to forestall the damages of many insects that otherwise prove to be very serious during the following year. During this time the insects are inactive and can the more easily be controlled. Many insects spend the winter in the egg stage, some on weeds near its food plant, some on the remains of its food plant; others lay their eggs in the ground or in the trunks of trees. Others spend the winter in the larva or worm stage, most generally in silken cases or cocoons of some sort, or else under rubbish. Others may pass the winter in the pupal stage, either in the ground or in some sheltered place. Piles of trash or heaps of brush, or even crevices in the ground, afford protection where the adults may pass the cold months. Some hibernate under the bark of orchard and shade trees.



Millions of insects make use of weeds in one way or another during the winter months for sustenance or shelter while their particular food plants are not growing. If all weeds were cleared from the farm in the fall, particularly from the fields and fence-rows where the insect pests have been bad the previous season, some of our worst insect enemies would soon be forgotten. The favorite food of the sugar beet webworm is the pigweed and lamb's-quarters. The beet leaf hopper relishes the Russian thistle, and sugar beet fields near some uncultivated lands are usually more greatly damaged by this latter pest than are those where there are few weeds. During the earlier part of the year the flea-beetle gives a lot of trouble by perforating the leaves of potatoes, tomatoes and many other of our early garden crops. This small pest passes the earlier part of its life on the roots of weeds. Many of the most destructive of the plant lice spend a portion of their lives on weeds, the remainder of the time they are damaging some particular plant. Thus the rosy apple aphis spends a part of its time on the narrow leaf plantain. The potato aphis that periodically does much damage to the potato in the eastern states also may be found on lamb's-quarters, ragweed and wild lettuce. Weeds not only occupy ground needed for other purposes, taking the nourishment that is needed for our cultivated plants, but they are the bridge that carries many of our worst pests over the winter months.



Clean Farming.

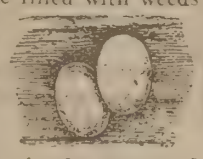
It is a common practice, when a crop has been harvested, to allow the remnants of the plants to remain on the ground all winter. This is true of the stumps of cabbages and cauliflower, and very often of melons and squash vines that have been killed by the frost. The stubble of corn very often proves to be an ideal hibernating place, as does the sheltered ground under the shocks. On the leaves and stumps of cabbages in winter, will be found the eggs and stem-mothers of the cabbage aphis. The writer has bred the adult of the cabbage maggot from rutabagas that had been frozen in the ground all winter. The squash bug and the tarnished plant bugs live under garden refuse, or in sheltered places in the garden all winter. These remnants of the garden are the source of next year's infestation and should be cleaned up and either burned or buried. The man who cleans up the crop refuse around the farm is many times repaid for his labors and the man who does not care to spend the time is conducting a winter resort for our most troublesome insect pests.



Other Practices.

There are many other places where a little care and foresight will save the farmer money by lessening the chances for insect losses. If he can destroy the breeding places or the hibernating places at the time of the year when these spots are vital to the insect's existence he will enjoy a greater freedom from their depredations the following year. For instance, small accumulations of old grain are often left in the corners of the bin when the new grain is placed therein. In this old grain may be found several varieties of insects that eat the germ of the seed, making it unfit for planting. It also causes the grain to heat and acquire a musty, "old" odor that renders it unfit for milling purposes. This old grain with its inhabitants should be destroyed and, if possible, the bin should be fumigated before the new grain is brought in.

The Buffalo tree hopper does more damage in orchards that are filled with weeds than in those that are kept clean, the weeds supplying a part of its food. The eastern plum curculio, the little snout-beetle that stings apples, plums, cherries and other fruits, spends the winter in the grass and rubbish in or near the orchard. The codling moth often spends the winter under loose bark much of which could be scraped from the trees exposing them to birds and other enemies. Piles of prunings from the orchard, left from year to year, will be a source of infestation of fungous as well as insect enemies.



It would undoubtedly be a big task to clean up and destroy all of the insect hibernating places on the farm, but a little more care from day to day during harvesting, and after, will reduce these places to the minimum. Efficiency in farm practices as outlined will bring in just as great a return for the labor expended as anywhere else on the farm.

They Are Improving

Purebreds Take Places of Scrubs

Fifty-six per cent of the beef and dairy sire in Thurston county are purebred, according to the second annual county-wide survey made by community project leaders in conjunction with other live stock work done by the extension service in the county last year. This survey brought out 554 returns, as against 188 the year before, and showed 5632 beef and dairy cows in the county. The federal census showed 6860 dairy cows, so the farm bureau survey is regarded as fairly comprehensive. Beef and dairy sires numbered 233, of which 131 are purebred. From the survey blanks a list of owners of purebreds of different breeds was compiled and published, also a list of scrub and grade owners, which was used to advantage by breeders who had stock to sell. Live stock project leaders also used the names on the list as "prospects," and bankers of the county who saw it urged that purebreds replace the poorer stock.

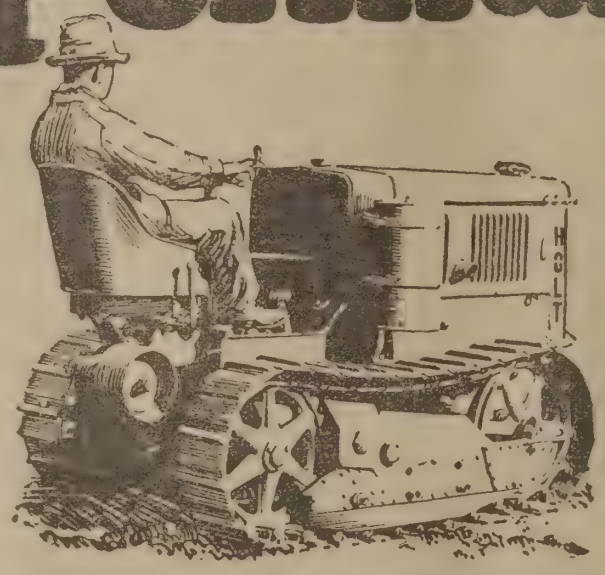
At the same time the survey was taken, project leaders carried purebred sire enrollment blanks, and a total of 54 farmers signed agreements to use only "better sires." This list was published, also, and the work has so stimulated other activities along this line that records show 30 purebred dairy sires and 23 females placed in the county this year, County Agent E. B. Stookey reported.

This was only part of the live stock work, however. Seven farms were visited in one day and an evening banquet held, on the so-called "west side" tour; judging demonstrations and tours included six half-day excursions in which at least one herd visited was in the cow testing association; two all-day breed tours (Jersey and Holstein) were held, which in effect were judging demonstrations; one three-day institute was held at Rochester; and there were six feeding lectures. Testing for tuberculosis was taken up by project leaders when the survey was on, with a county goal of 149 herds. This work went over "with a bang," for the county agent's records show 181 herds tested, and additional work by state and federal agencies sent the number of herds tested to well over 200.

Assistance was given in forming a Guernsey association, which, in cooperation with the Goldendale bull association, made arrangements to import a carload of females from Wisconsin, but difficulty in finding an agent to purchase the cattle resulted in members buying at the Portland and Chehalis consignment sales. The cow testing association had a very successful year. Among other things brought out was the fact that it took five average cows in the poorest herd in the association to make as much profit as one average cow in the best herd. On the strength of association testing, several unprofitable cows were disposed of for beef, which otherwise might still be boarded by their owners.

"CATERPILLAR" T-35 - THE SUPREME SMALL TRACTOR

Permanence



In little more than a year model T35 *"Caterpillar"* Tractor has established a permanent place for itself in the field of power equipment.

The many years of experience in tractor development and the long period of designing, refinement and testing that preceded the first announcement of the model T35 Tractor, a little more than a year ago, assured its success from the start.

But, though much was expected of this tractor, its actual performance in field service has surpassed the highest hopes. And the recognition, by power users, of its superior merit, has established for the T35 a permanent place in the field of power equipment and developed, in comparatively short time, a tremendous market. Increased demand has necessitated increased production, effecting economies that permitted a $375 reduction in price at the start of the second years' production.

If you have not yet heard the complete story of this "Supreme Small Tractor", let us tell you where you can see it at work, or send you literature descriptive of it, or of the larger sizes of the "Caterpillar" Tractor—the 5-ton, Western 10-ton, or 75-horsepower.

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Oregon Representative: J. W. Hill, Henry Bldg., Portland.

THERE'S ONLY ONE "CATERPILLAR"-HOLT BUILDS IT

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For Good Farming, Attractive Country Homes and Happy Country People

Irrigation Institute Urges State Reclamation Policy

By ELIAS NELSON, Yakima, Wash.

Refutation of the oft heard contention that there is no need for further land reclamation since agriculture is now sick was the outsanding feature of the 10th annual meeting of the Washington irrigation institutee at Yakima on November 24-25. The sentiment in the institute was unanimous for no halt in the program of bringing more lands under cultivation, whether by irrigation, drainage or clearing of cut-over lands. Many concrete recommendations, designed to promote successful prosecution of agricultural development were made. Why agriculture is not expanding to meet economic needs was thoroughly discussed and decision upon a definite state policy of land development was favored. In point of valuable suggestions made for future policies in the agricultural progress in the state, the institute maintained its recognized value as an institution.

The organization now has 134 life members and 118 annual members, with about 150 members in attendance. Many addresses were upon the program, but the time was short, there being only three sessions, and discussion was, therefore, rather limited or excluded entirely because of lack of time. Undoubtedly much good from more deliberate discussion was lost through lack of time, and it appears that two days were by far too short a time for a vital meeting of this character.

Advocates Reclamation Policy.

An exhaustive discussion of the question whether there is a need for additional reclamation in the northwest by Professor O. L. Waller of the Washington State college was replete with facts and irrifutable arguments for continuance of developments along such lines. He showed that large acreages of land, once under cultivation or attempted cultivation in the New England states and elsewhere in the United States were going back to forests from which, he said, they should never have been denuded.

In view of large acreages of such lands going back and the fact that nearly all easily available agricultural lands in the United States are now occupied he stressed the necessity of continued development of lands to take the place of these being abandoned. He showed that the per capita increase in cultivated lands was not keeping pace with the increase in population, also increase in food production is not at all commensurate with the growth of the nation, he said.

A definite land development policy for the state was urged by Professor Waller and he declared that this should be outlined and all lands classified and their prospective value as agricultural lands be determined and a policy for reclamation worked out along constructive and economic principles. If there is to be settlement and people are to be induced to come upon the land they must be shown what chance they have to make a living upon them.

Must Have Sound Basis.

Why it is that settlers are not as plentiful now and why agriculture is not adequately attractive as an industry was discussed by Thomas B. Hill, assistant secretary of the Seattle Chamber of Commerce, in an address on "Bridging the Gap—Some Economic and Social Factors in Land Settlement." He declared that agriculture was sick and that the returns from it were no longer attracting new blood. He attributed this to changed social conditions and the various causes of unrest, such as high cost of living and heavy taxation burdens. There are too high values placed upon raw land and there is greatly increased cost of construction and development. Also there is increased cost of distribution, due in part to the shift of population from country to city and to increased service demanded.

He pointed out that formerly there was no competition against land settlement in the west, while now every state is bidding for settlers, and stated that many states have evolved a land settlement policy, notably Wisconsin. Land settlement must be placed upon more sound business methods and this involves constructive legislation and adequate financing. He recommended development of more efficient and economical system of distribution of farm products. Coming, as this recommendation did, from a representative of the business interests of a large city, it is significant of the changing attitude of business men toward the farming industry.

Want Capable Settlers.

Coupled with adequate financing and more orderly distribution should be intelligent weeding out of those applicants for land settlement who are unfit, supervision and direction of the operations of the settlers and guiding them into proper channels of community and social life. Merely placing men upon the land is not sufficient; there must be assurance that they are of the right sort and that they are placed in the way of making a success.

Irrigation development from the angle of increasing taxable wealth was discussed by D. A. Scott, director of the state department of conservation and development. Great progress along such lines in other countries than ours and the wonderful development in the Yakima valley and elsewhere in the state of Washington has been a fertile source of taxable wealth.

E. F. Benson, manager of the department of immigration and industry of the Northern Pacific, in an address upon the subject of "What Others Are Doing in Land Settlement Work," enlarged upon the idea that the settlers should not be left to work out their own salvation, but should be directed into proper methods of farm management through education and actual material assistance.

Would Change the Law.

Two changes in the irrigation district law were recommended by R. B. Williamson of Yakima, who has, through long experience, intimate acquaintance with irrigation laws. The state department of conservation and development should be given larger power of supervision over irrigation districts in order that more sound business policies may obtain in the management of such districts, he declared. He emphasized also the point that the problem of financing irrigation districts being great and perplexing in most instances, coupled with the necessity of adequately protecting the bond holders even against the irrigation districts themselves, appears to call for a limitation on the amount of indebtedness that can be legally incurred. That the irrigation district securities be of unquestioned value is of paramount importance and the problem at this time is how to make them so. His suggestion for limitation of indebtedness was not approved by a number of members of the institute present.

Further, Mr. Williamson threw out two concrete suggestions: First, that it is wrong to tax lands just being brought under irrigation on their speculative value. New lands as soon as water is available are taxed in that way and the principle is economically unsound. It may be fair to the speculator, but not to the settler, and for him to pay taxes on a value which is not there is manifestly unjust and places heavy burdens upon him, said the speaker. There should be placed a taxable value upon such lands only after development and not until the farmer has through his work created that value. If a change to such a plan of taxation were made the settler would be enabled to pay the interest on the bonds as readily as the construction charges. Instead of the profit from increased value of the land going into the speculative pocket it should go into the construction of the irrigation system. Premature taxation is a direct hamper on irrigation development, and the state laws should be enacted to give the state powers to condemn lands coming under new projects so as to obviate this hindrance to the success of the settler.

If this were done, all the projects in central Washington, where the construction cost and the cost of the land together does not exceed $225 per acre, could readily be brought under irrigation, it was declared. In the land development in the Yakima valley, the raw land has cost as much as the construction of the water system and it will be admitted that general farming lands can not stand a higher valuation than $250 per acre, hence the maximum cost of development must not exceed $250 per acre.

The construction cost on the projects in prospect in the Yakima valley is now estimated at about $150 per acre. It was argued that the state should enact laws so as to enable it to condemn lands and to sell the land and the water right at a fixed value per acre.

Make Bonds Gilt Edge.

The second suggestion made by Mr. Williamson was that the governor and the legislature should be thoroughly informed as to the merits of the certification bill, as he regards the certification of irrigation district bonds as a vital necessity for interesting capital in irrigation development. Such laws are in force in California and Oregon. A number of members present were not in accord with this proposal, as it was feared by them that it might tend to exclude meritorous projects in some instances.

Wants Cooperative Marketing.

The growing recognition of the propriety of the farmers themselves taking a hand in the marketing of their products was pointed out by W. B. Armstrong, president of the Washington Farm Bureau federation, in an address before the institute. "The question of stabilizing our agriculture is the uppermost question of the day, for we realize now more than ever that agriculture is the basic or foundation industry of our economic system and, therefore, its instability is shared by all the other departments of industry," said Mr. Armstrong.

"Those questions are receiving from the United States department of agriculture quite a changed attitude from that which has prevailed in the past. In the olden time the department was generally regarded as the essential department of the farmer instead of the public's food department and that department acted upon the belief that the farmers' only concern was production.

"The great change which has taken place in the department's attitude is now shown by its advocacy of farmers' cooperative organizations, for it has become recognized by all students that it is only through organization that the farmers' problems can be solved. To some of us who have stood for cooperation for years it is a source of wonderment how it could be thought that the farmer had no other concern than to produce and had no responsibility for the distribution of his products. It was, however, thought quite the proper thing for the manufacturers of soap or sewing machines to have selling departments organized for the orderly marketing of their products.

"In the matter of finance farmers have been much hampered. The trouble about capital has been that our financial system was never designed to help farmers market their products in an orderly way.

"I would like to point out that the reason the financial arrangements did not fit was because the farmer had neglected the matter. He was not organized to study and explain his needs with relations to the banks or other business institutions, but a changing attitude in the minds of legislators, bankers and business men generally is manifesting itself."

W. C. Muldrow of Kennewick, manager of the Columbia irrigation district, gave a report on concrete canal linings, based upon an examination of practically all such works in the state of Washington and in British Columbia. He found that the kind of mixture was more important than the thickness and that adequate drainage of the soil underneath the concrete was of prime importance. Frost is the enemy of concrete canal linings.

J. C. Scott, manager of the White Bluffs-Hanford state soldiers' settlement project, told of the difficulties, of which there were many, in the development, and the progress made to date. This is an early crop district, the elevation being only 400 feet. Forty wells are already developed and 24 settlers accepted of which 15 are on their places. There has been cleared 122 acres to date and 56 were in crops the last season.

A. L. Smith of Spokane gave an account of the construction features of the Horse Heaven project.

The Resolutions.

The resolutions passed included indorsement of the McNary-Smith bill, request for additional appropriation by the state for stream measurements, advocacy of a law requiring irrigation companies and water users to file annual reports on the use of water, commendation of the work of the branch irrigation experiment station at Prosser and recommendation that real estate dealers be licensed.

Officers elected for the ensuing year are: Ralph Kauffman, Ellensburg, president; W. T. Clark Wenatchee first vice president; S. J. Harrison, Benton City, second vice president; G. A. Phillips of Spokane, R. B. Williamson of Yakima and R. K. Tiffany of Spokane, directors.

Must Standardize Potatoes

Northwest Conference Takes Steps Toward Betterment

Standardizing and stabilizing the potato industry of the Pacific northwest were the outstanding themes of the Northwest Potato show and conference at Spokane last week. Especial stress was laid on the possibilities of seed potato production in this and neighboring states and upon the essential points in producing seed of highest character.

Steps were taken looking toward the ultimate adoption of commercial grades and standards uniform throughout the four northwest states and based upon conditions peculiar to this territory. The conference authorized its officers to urge the department of agriculture at Washington to send a potato expert west to make a personal study of conditions prevailing here with a view to including in the 1923 federal grades and standards provisions equitable to the producers in Washington, Oregon, Idaho and Montana.

George J. Cannon of Buckeye, Wash., was reelected president of the conference, with E. R. Bennett of Boise, Idaho, reelected secretary-treasurer. State vice presidents were chosen as follows: Montana, T. B. Haynes, Creston; Idaho, H. F. Schedler, Sandpoint; Oregon, M. G. Coe, Bend; Washington, R. C. McCroskey, Garfield.

The Potato Show.

The showing of potatoes was small, but of much higher quality than a year ago. This was due to two facts: That producers last year learned the kind of potatoes that should be shown and that they are producing better tubers than a year ago.

Idaho took a large share of the awards with growers of Washington, Oregon and Montana each taking a fair number. The sweepstakes prize went to C. O. Fisher, Dudley, Idaho, on his exhibit of Netted Gem seed. The sweepstakes prize was a $130 modern seeder. His exhibit scored 981 points.

In the awards, which follow, the figures indicate the score of the respective exhibits:

Seed Potatoes.

Netted Gems—First, Charles O. Fisher, Dudley, Idaho (981); second, Weber Brothers, Rose Lake, Idaho (976); third, C. R. Geiger, Bend, Ore. (966); fourth, A. E. Skidmore & Son, Colville, Wash. (962).

Idaho Rural—First, Albert Satterlee, Samuels, Idaho (974); second, H. H. Cummings, Sandpoint, Idaho (972); third, Harold F. Brown, Belmont, Idaho (969); fourth, List & Bierlein, Sandpoint, Idaho (965).

Burbank—Fourth, Charles H. Greeley, Vancouver, Wash. (870).

Bliss Triumph—First, P. E. Farrington, Craigmont, Idaho (938); second, G. E. Sinclair, Baker, Mont. (932); third, L. H. Fitzgerald, Glasgow, Mont. (924); fourth, E. M. Linn, Great Falls, Mont. (919).

Irish Cobbler—Second, A. O. Larson, Waverly, Wash. (885); third, George Cannon, Buckeye, Wash. (880); fourth, Albert Larsen, Plaza, Wash. (875½).

Early Ohio—First, Cannon (978); second, Fred Pohlman, Spokane (959); third, T. B. Haynes, Creston, Mont. (923).

Miscellaneous—Second, Andreas Beasley, La Center, Wash., on Pride of Multnomah (888); third, Oran E. Lingle, Boring, Ore., on American Wonder (875); fourth Spokane Seed Co., Spokane, on Early Rose (850).

Commercial Potatoes.

Netted Gems—First Weber Brothers (974); second, Fisher (970); third, Thomas H. Heirin, Helena, Mont. (968); fourth, Geiger (953).

Idaho Rural—First, Cannon (961); second, Brown (959); third, William Killingsworth, Midas, Idaho (936); fourth, L. G. Partner, Aberdeen, Idaho (933).

Burbank—First, Portland Seed Co. (946); third, Spokane Seed Co. (871); fourth, M. Pappoon, Oswego, Ore. (860).

Bliss Triumph—First, Robert N. Banman,

(Continued on page twelve.)

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Hurrah for Washington!

The farmers and live stock men of this state are deserving of congratulation on their forward movement in the upbuilding of the quality of the live stock they produce. The eradication of tuberculosis in cattle is one of the essentials in a permanent live stock industry, and it is gratifying to find recognition of Washington's progress in this direction:

"Washington is expected to be the first of the 48 states to make definite plans to wipe out all bovine tuberculosis within its borders. In 20 of the 39 counties area eradication work has already been conducted," says the United States department of agriculture. "The commissioner of agriculture and the state veterinarian have planned a state-wide program that will be presented to the legislature in January. The governor is understood to be in favor of the plan, and there is every reason to believe that sufficient money will be appropriated so that with the cooperation of the department on the present basis all the cattle in the state can be tested within a reasonable time, probably two years.

"The light infection of the cattle herds in the state and the fact that most of the cattle already have been tested make the outlook particularly promising. An indication of the low percentage of tuberculosis was found in Spokane county this summer. The veterinarian in charge tested 469 herds, containing 2754 animals, and condemned only 4.

"Ninety-five per cent of the purebred herds in Washington are already under supervision."

A Lasting Christmas Gift

The season is almost at hand when children put in deep thought over lists of the many things they want for Christmas—building blocks, dolls, a coaster or a pair of skates. For weeks before, this list is gone over, new toys are added, and old ones crossed off. The expectation of the youngsters is one of the happiest features of the Yuletide season.

Are we as parents doing our part in this pre-Christmas planning? Are we merely going to check the list of inanimate toys which are so easily destroyed or is there a better plan?

Last year one western Washington farm boy drew from his stocking early Christmas morning a long yellow envelope. He turned it over and over, eyeing it with wonder. When he opened it he found the registration certificate of a purebred calf, on which his own name had been inserted after the word "owner." Nor did he fully realize what the gift meant until later in the day when he went with his father to another part of the valley and helped load the calf into the car. Truly the calf was much like those in his father's herd, except that this one was his own. He would care for it as never a calf was cared for before.

Needless to say the toys on this boy's list were forgotten, but the calf lived on and flourished under the careful supervision of this youthful live stock breeder.

Are there not hundreds of boys in Washington who would rather have the registration papers of a pig, a lamb, or perhaps rabbits than anything on their original list?

Let's Have Higher Producing Cows

The writer recently had the privilege—which belonged to the thousands of people who attended the Pacific International Live Stock show—of looking upon the two outstanding cows in the dairy world. Segis Pietertje (just say Peter and add je to it) Prospect, the Holstein cow that has beaten all others in milk production, averaged 12 gallons of milk a day for a full year, with butter fat enough to make about 1446 pounds of butter, or nearly four pounds a day. Lad's Iota, the Jersey cow that holds the world butter fat record for her breed, averaged just a little more than three and a half pounds of butter a day for a full year.

As I looked upon these great cows I thought of old Brindle. Dear old Brindle used to give about one-eighth as much milk as does Prospect and mother made about half as much butter in a week from it as could be made from Prospect's daily flow. Corresponding comparisons could be made as effectively between Brindle and Iota.

It made the choreboy's arm ache just as badly to tug away at old Brindle's leathery teats as it would to milk Prospect or Iota—probably more so. Brindle took up just as much room in the barn or barn lot and consumed just as much grass in the pasture. She consumed much larger amounts of a small boy's patience than would either of these well-bred animals.

But lay no blame on the stoneless grave of the poor old cow. She was a scrub, but it was not her fault. She did not choose her parents. Neither did any one else choose them. They just happened, and Brindle was the next generation of happenstance. Not only that, but Brindle did not have the best treatment in the world. She often lay out in the corral at night—sometimes on a rainy or a frosty night. She had some carrots or potatoes and hay, now and then, with sometimes a little ground wheat or corn on the cob or possibly shorts. Most of her living and the wherewithal to make that gallon and a half of milk she found in the pasture that was not always as good as it might have been.

Not so the cow of the new day. We are learning to select the parents of our milch cows. Prospect is a daughter of a sire with production records behind him. Likewise the blood of high production flowed in the veins of her dam. So also with Iota and every other first class cow. And these cows do not sleep out in the rain and sleet. They do not break the ice in troughs with their noses on cold winter mornings. They do not get nondescript rations—just whatever is handy and in whatever amounts fancy may suggest. They are fed and otherwise cared for with scientific precision, and in their rations are kindness and orderliness.

Do not blame Brindle. Do not fall down to worship the present day supercow. But get rid of the scrub wherever she appears and substitute in her stead a good cow of known breeding. Unless you want to be an exceptional dairyman or breeder, do not try to beat the records of Prospect and Iota. But unless you are a failure at the game and content to remain so, try to beat old Brindle's.

LOOKING INTO OTHER FARM FIELDS

The United States cranberry crop, October 1, showed an increase over the estimate of September 1 of 55,000 barrels. In Wisconsin harvesting is about over. New Jersey is through picking, while in Massachusetts the crop is still coming in from the bogs.

* * *

The latest official report of area and production of linseed in British India is 17,360,000 pounds for the crop of 1921-22, compared with 10,800,000 pounds for the previous season and 20,466,000 pounds for the average of the five years, 1909-14. The increase for 1921-22, 2,993,000, was smaller by about 9,000,000 acres than the average for 1909-14.

* * *

The Southern Pacific company announced recently that it had contracted for the immediate construction of 7000 freight cars, to cost $8,000,000, says a San Francisco report. The equipment will be delivered next year, a large proportion being constructed on the Pacific coast. The Pacific Fruit Express, in which the Southern Pacific owns a one-half interest, also has a big refrigerator car building program under way.

State Farm News

Francis H. Fassett is setting out four acres of Royal Ann cherries and four of Montmorency sours on his place north of Yakima. He has signed a contract with Libby, McNeill & Libby for 15 years, at a guaranteed price of 6 cents a pound at the cannery.

* * *

John W. Langdon, manager of the Stanton Investment company's 600-acre apple orchard at Walla Walla and one of the leading promoters of the gardening interests in and about that city, has been elected head of the newly organized Walla Walla Lettuce Growers' association.

* * *

Nine hundred selected lambs were recently purchased in Kittitas county for the Prosser branch experiment station by Superintendent Roy P. Bean, for use in continuing a series of experiments with feeders. Last year Bean not only secured results of much value to all feeders of sheep, but also cleaned up a neat profit for the station.

* * *

The first starch factory constructed in the state will be in operation at Toppenish this month. About 800 tons of cull potatoes have been contracted and Manager G. C. Gifford says that the plant will have all the raw material it will be able to use this winter. About 10,000 tons of potatoes are going into storage in warehouses and a large part of them will be available for the starch factory.

* * *

The entire crop of alfalfa grown on the S. B. Rhine ranch, east of Prosser, has been sold to Mercer & Hill, sheepmen. The crop consists of 142 tons harvested from 19 acres, an average yield of nearly eight tons an acre. The total price was $1445 in the stack. The hay is in one immense stack on the Rhine place and has attracted much attention.

* * *

Announcement was made recently at Port Angeles that the Clallam Lumber company and the Blodel-Donovan Lumber company were prepared to log their 6,000,000,000 feet of timber between Fairholm and Quillayute prairie. Work on construction of the railroad will commence in the spring of 1923 and a large crew of men will be placed in the woods for railroad construction and logging work. This will tend to stimulate the market for farm produce in that section.

* * *

A huge paper mill, representing an investment of $1,500,000, will be constructed at Vancouver, Wash., on the waterfront site of the old Pittock-Leadbetter Mill company, it was announced by representatives of the California-Oregon paper mills. Construction of a sawmill will start immediately, to be followed by that of the paper plant. The interest of the California-Oregon company will be transferred to a new corporation known as the Columbia River Paper mills.

* * *

Tacoma has been granted permits by Marvin Chase, supervisor of hydraulics, at Olympia, to divert water from the north fork of the Skykomish river for power purposes and to construct the Lake Cushman reservoir to store 190,000 acre feet of water. The issuance of the permits has been held in abeyance for some time pending the settlement of litigation between the city and the state fisheries board over the appropriation of the water. The estimated cost of building the reservoir is $1,768,000 and for generating 75,000 horsepower the cost will be approximately $6,000,000.

* * *

In the 1922 crop a number of the larger grape vineyards in the Grapeview district of Mason county, formerly known as Detroit, has been estimated at 17,000 baskets. The total from the entire district is estimated at 20,000 baskets, or approximately 50 tons. This figure, however, does not include Harstine island and some of the other sections of the county, which if included would bring the total much higher. Growers have taken extra care not to market the fruit until well ripened, which is very essential for some of the varieties. The market this year was handled in good shape, and the growers report a fair price for their product.

* * *

Puget sound celery growers have the local celery market well in hand and are providing for storages that will take care of the local demand through the holidays, says a report from Seattle. For the first time in the history of the industry it will not be necessary to bring in any stock from California. There has been no loss by freezing so far this season.

There is a brisk eastern demand for Puget sound celery and growers are getting 50 cents per dozen stalks f. o. b. for eastern carload shipment, with 75 cents for the Western avenue trade. It is estimated that from 8000 to 10,000 crates of Puget sound celery have already been stored for the Thanksgiving and holiday trade.

* * *

The Utah-Idaho Sugar company recently distributed $108,000, the amount representing about 60 per cent of the payments that will be made to the beet growers this year in the Toppenish district. This payment covers the amount due the farmers for 18,000 tons of beets delivered to the factory during October. An additional 12,000 tons was handled at the sugar factory in November. The big plant at Toppenish has been in operation night and day and has completed the season's run. The factory during the operating season has employed 250 men, the payroll aggregating $18,000 a month. Final settlement with growers will me February 1. Beet growers are about the only producers in the valley who have not been affected by the car shortage. Their output, delivered at the factory, finds an immediate market at a stipulated price.

* * *

W. H. Paulhamus, president of the Puyallup & Summer Fruit Growers' association, announced recently that the price of evergreen blackberries of shipping quality for the season of 1922 has exceeded by an average of 2 cents a pound the price received by the members of that organization in 1921. The net average to the grower is this year $1.62 a crate, whereas the average price last year was $1.60. Deducting the association charge of 6 cents per crate, covering cost of handling the business, leaves a net return to the grower of $1.56 per crate for evergreen blackberries. "In face of the fact," says Mr. Paulhamus, "that all these berries were marketed during the period that the railroad strike was at its height, under which conditions it was necessary for the shippers to combat many unsatisfactory conditions in order to produce results, the final results are certainly gratifying. An average return of $2.18 on red raspberries, $2.03 per crate on loganberries and $1.62 per crate on Evergreen blackberries, as against the very unsatisfactory conditions prevailing in the marketing of fruits from many other sections of the country should be very pleasing to the growers of the Puyallup valley."

FARM BUSINESS AND MARKETS OUTLOOK

The conclusions of the committee for economic research of Harvard university are based on the most complete statistical analysis of the business situation that has yet been made so that they deserve considerable weight. This committee has recently expressed the following view of the business prospect:

"The recent decline of stock prices has served to generate considerable pessimism, and has led to statements that business conditions have not improved to the extent anticipated, or that the improvement which has taken place will be of a temporary and illusory character. In view of the case, such misgivings are as unjustified today as they were last January, or even earlier, when business first began to emerge from the trough of the depression.

"At every stage since the turning voint in 1921 vessimists have been able to find a multitude of more or less plausible reasons why business could not possibly improve; nevertheless, improvement has developed in the natural course of a normal business cycle. Our "Index of Manufacturers" has arisen to substantially the normal level and the widespread unemployment which existed a year ago has been replaced by an actual scarcity of labor in many localities. These facts seem to leave no doubt as to the character of the movement now under way. Our forecast, therefore, remains unchanged. We forecast an upward movement of prices and further expansion of business activity, with the strong possibility of continuation of the upward swing during the second half of next year."

John Moody, a financial authority whose forecasts of the trend of business have been remarkably close to the mark in the past two years, takes a different attitude as to what may happen after the middle of next year.

Mr. Moody says that "it seems a foregone conclusion that the immediate future of American business is not indicative of a boom; that reaction from the present revival is not many months ahead of us, and that, while the first few months of 1923 may be relatively prosperous, we may run into a period of deflation before the end of 1923.

"What may reasonably happen in 1923 in the security markets is a sharp culmination of the recent long rise in stock prices in the early part of the year; a moderate strain on the money market during the winter and spring, followed by a pronounced ease in interest rates later on, with bond prices holding for a while, then sharply weakening, and finally setting in for a renewed rise, which may be of long duration.

"The only possibility to change this picture would be unexpectedly favorable developments in Europe, but which are not in sight."

Mr. Moody bases his conclusion that the present upward swing will culminate some time next year on the fact that the American farmer, representing one-third of our population, is not receiving an equal chance at prosperity and is unlikely to receive it until Europe is led out of the wilderness and foreign markets for farm products are improved.

Cattle Markets Uneven.

Transition stages in the cattle market brought a decidedly uneven trend last week. The fall cleanup is far along at some points, but at others it is at its height. The proportion of low grades and pasture odds and ends rushed in ahead of cold weather varied accordingly. At Chicago another flood of shortfeds arrived and the supply of all classes was the largest in two years. Well finished sorts were the scarcest of the season and another load sold at $13.60, equaling the previous high mark of the year, but cattle fed only 60 to 90 days lost 25 to 40 cents. Beef cows and heifers were weaker except for those in high finish. Veal calves declined 50 to 75 cents, with competition from poultry a factor.

Western rangers evidently were delayed by the car shortage, as the run is holding up later than usual. The proverbial habit of the western cattle industry to "come back" after a period of disaster is indicated by receipts of 234,800 head at Chicago up to November 21, compared with 135,900 head to the same date in 1921 and 269,000 head two years ago.

At present the market is deluged with partly finished cattle, while prime steers are rare, hence the abnormal spread.

Conditions still point to a big run of half-fat steers in January, when those who do not feed regularly are apt to come back to market.

Feeder Shipments Falling Off.

Demand for stocker and feeder cattle has abated to some extent, while the supply has held up at points to which the western range has contributed freely, so that prices have sagged. A drift to cheap light cattle has been noticeable recently.

Hog Prices Nearing Bottom.

Action of the hog market indicates that prices are nearing bottom, although the low point for the winter may not yet have been touched. On every dip big packers buy freely, current prices for hogs and product seem to be affording a profit to the killer, eastern shipping demand is picking up in the middlewest and a run of 720,000 head at the 11 leading markets last week, which was an increase of 120,000 head over the preceeding week, was absorbed at a minor decline. The daily average at Chicago has dropped below $8, but demand promises to become increasingly active on each decline from this level.

The overseas movement is running heavier than last year and stocks abroad are light.

Average weights are running higher than in any recent year.

Feeder Lamb Movement.

Shipments of feeder lambs and sheep from the 12 leading markets in the 15 weeks ended November 10 totaled 1,834,553 head, compared with 1,471,381 head last year and 1,868,025 head two years ago. Apparently the number on feed is about 20 per cent below the average, based on records extending back to 1916. The movement into Colorado feed lots is said to be the largest ever known.

Dressed lamb prices were higher last week and the fat lamb market shows more health, but packers maintain a bearish front and depress the market whenever liberal receipts give them an opportunity.

Good Horses Moving Well.

Good horses are selling to advantage, but plain horses forced in to avoid wintering expense have surfeited the market and are going at bargain prices. Loggers are buying at $175 to $185 at Chicago, while choice drafters are quoted up to $275.

The wool market is quiet, but prices are firm and the trend is upward. Transactions have been confined mostly to Texas fall shorn wools, which are now moving at a high level. There are rumors of attempts to contract next spring's clip in the west, but no actual deals have been reported. Foreign auctions show an upward trend.

The holdings in the hands of the British Australian Wool Realization association on October 31 comprised 1,034,000 bales, a reduction of 856,000 in the last year and 178,000 bales in the two preceding months.

Advance in Wheat Checked.

The advance in the wheat market, which has progressed irregularly for five weeks, has been checked in the last few days. Although milling demand in the northwest continues brisk, at southwestern points it has subsided noticeably. Some export business is under way practically all of the time, mostly in Manitoba wheat, but there is no special urgency to the foreign demand.

Further letup in the demand for flour will not be surprising during the next month, owing to the approach of inventory time.

The close of navigation is expected to draw more of the foreign demand toward the United States, so that the total requirements to be satisfied out of receipts from week to week should be equal to the supply.

Broomhall, the English authority, estimates the surpluses of exporting countries at 816,000,000 bushels. He places the potential requirements of importing countries at 800,000,000 bushels, showing an unusually close adjustment, but he expects financial conditions and the use of substitutes for wheat to reduce the actual purchases about 80,000,000 bushels below estimated needs. In brief, he does not expect any scarcity of actual wheat to develop.

Argentine wheat is receiving more attention, as it is being offered for shipment from the new crop at a price slightly below the prevailing world level. Recent estimates upon the surplus in that country have been higher than those issued earlier in the season, ranging as high as 200,000,000 bushels of old and new wheat combined. New wheat from the Argentine can scarcely reach Europe before the end of February, so that it is too early to determine just how this competition will affect the market.

The wheat situation remains one in which the purchasing power of importing countries and their ability to buy the amount of wheat they need is the chief factor in the market outlook. Thus far an unusual milling demand has more than offset the unfavorable features in the export trade.

Western Demand Dominates Corn.

The west from Colorado to the Coast has been buying corn in Iowa, Illinois and the other surplus states at prices above the usual level compared with Chicago.

Although primary receipts of oats are above the average for this time of year, it is necessary to draw upon the visible supply right along, showing that the rate of disappearance is above normal.

Seed Markets Hold Their Own.

Price changes in clover and grass seeds have been small, but gains in the last six weeks hae been well held. Chicago, per 100 pounds. Clover, $15@20; timothy, $6@6.50. Toledo, per bushel. Prime clover, $12.85; prime timothy, $3.45.

Contrary to the tone in the feed grains, the byproduct feed market is slightly easier. The output of all kinds of feeds is heavy and shipments from producing centers are increasing.,

Prices per ton (100-pound bags) in car lots: Chicago—Bran, $25; standard middlings, $26; flour middlings, $28.50; cottonseed meal, 36 per cent; $47.50; 43 per cent, $53; hominy feed, $30: gluten feed, $37.85; old process oil meal, $52; tankage, $65.

Hay Market Rising.

The hay market shows a disposition to rise. Demand is moderate, but shipments are light, due to a car shortage and stormy weather in surplus districts.

Prices per ton in car lots: Chicago—No. 1 timothy, $22@24; No. 2, $21@22; No. 3, $15@17; No. 1 light clover mixed, $21@22; No. 1 clover, $20@22; No. 1 clover mixed, $20@22; No. 1 alfalfa, $25@27; upland prairie, $20@21; midland prairie, $11@43; rye straw, $14@15; oat and wheat straw, $11@14.

Egg Prices Show Advance.

Last August when coolers were filled with the largest storage stock of eggs ever known and a heavy supply was still coming, fresh eggs sold at Chicago as low as 18 cents. They have advanced since to 55 cents, a gain of 200 per cent. The market is probably near the upper limit, but should hold near this level for a month or so. Storage eggs are working into a stronger position as the rate of distribution seems to be rapid enough to take care of most of the excess by the first of the year.

Poultry receipts have increased and stocks in storage are beginning to accumulate. Prices are holding much better than seemed possible in view of the big increase in production, although they are lower than two months ago.

Butter prices made further gains last week and closed firm, although a nervous undertone was evident, many dealers feeling that the market had practically reached its upper limit. Butter is being offered from New Zealand, but prices, duty paid, are practically on a parity with those in this country and but small quantities have been bought.

Prices on 92 score fresh butter on November 22 were: Chicago, 51c; Boston, 30c; New York, 32c; Philadelphia, 32 1-2c.

The cheese market was steady to firm last week, although a slightly nervous undertone was apparent. Purchases were on a small scale, for the most part, but stocks were cleaned up without concessions having been made.

Prices on No. 1 American cheese on November 22 were: Chicago—Twins, 25 1-4@25 3-4c; single daisies, 25 1-2@26c; double daisies, 25 1-4@25 1-2c; young Americas, 25 1-2@26c; longhorns, 25 1-2@25 3-4c; square prints, 26@26 1-2c.

Fruits and Vegetables.

Shipments of potatoes have fallen off about 50 per cent in the last month and prices at Chicago, a key market, were stronger, although some other points remained weak. The chief drawback to a general advance has been the lack of buying for winter storage as a result of the unfortunate outcome of storage operations last year. Idaho sack Russets are quoted at $1.60 per 100 pounds at Chicago and $1.30 to $1.35 at Kansas City. Bliss Triumphs at Nebraska shipping points are quoted at 70 cents cash track to growers.

Cold storage holdings of barreled apples on November 1 comprised 4,012,000 barrels, the largest number ever reported on that date. Boxed apple holdings were 4,094,000 boxes, compared with 5,464,000 last year and a five-year average of 3,463,000 boxes. With boxed apples reduced to their equivalent in barrels, total holdings were 5,377,000 barrels, the largest for that date on record. The five-year average is 3,938,000 barrels. Receipts of apples remain liberal, but prices are holding firm. Large to medium extra fancy Jonathans are quoted at $1.70 to $2 a box at Chicago, with large to extra large fancy Delicious at $3.

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Range of Live Stock Prices, Week Ending Nov. 22

CATTLE.	Chicago.	Spokane.	Portland.	N. S. Lake.
Choice, prime heavy steers (1100 lb. up)	11.75@13.60			
Good heavy steers	9.50@11.75			
Medium heavy steers	6.75@ 9.60			
Common heavy steers	5.00@ 7.15			
Choice, prime light steers (1100 lb. d'n)	11.60@13.35			
Good light steers	9.50@11.60			
Medium light steers	6.65@ 9.50	5.50@ 7.00	6.00@ 7.50	6.00@ 7.00
Common light steers	5.00@ 7.00	3.75@ 5.75	4.00@ 6.00	4.00@ 6.00
Common to choice butcher heifers	4.25@10.65	3.25@ 5.75	3.50@ 6.25	3.00@ 5.00
Common to choice butcher cows	3.40@ 8.00	2.50@ 5.00	3.00@ 5.00	2.75@ 4.50
Bologna and beef bulls	3.50@ 6.65	2.75@ 4.50	3.00@ 4.50	2.00@ 3.50
Canners and cutters, cows and heifers	2.40@ 3.60	1.50@ 2.50	1.50@ 2.50	1.50@ 2.75
Canner steers	3.00@ 3.75	2.00@ 3.00	2.00@ 3.25	2.00@ 3.00
Medium to choice light veals	7.75@ 9.75	7.00@ 8.50	6.50@ 7.50	7.50@ 8.25
Common to choice heavy veals	3.00@ 7.25	5.00@ 7.50	4.00@ 5.50	
Com. to choice feeders (1000 lb. up)	5.00@ 7.75			
Com. to choice feeders (750-1000 lb.)	5.00@ 7.75	3.50@ 5.00	4.00@ 5.50	5.00@ 6.00
Common to choice stocker steers	4.00@ 7.75			
Com. to choice stocker cows, heifers	3.00@ 5.25			
HOGS.				
Top of market	8.50	9.50	9.60	8.60
Bulk of sales	7.50@ 8.40	9.25@ 9.50	9.25@ 9.50	8.00@ 8.40
Heavy (250 lb. up)	7.60@ 8.50	9.00@ 9.50	9.00@ 9.50	8.00@ 8.50
Medium (200-250 lb.)	7.60@ 8.40	9.25@ 9.50	9.25@ 9.60	8.00@ 8.60
Light (150-200 lb.)	7.60@ 8.30	9.25@ 9.50	9.30@ 9.60	8.00@ 8.50
Light lights (130-150 lb.)	7.85@ 8.35	8.50@ 9.25	9.00@ 9.40	7.75@ 8.25
Smooth packing sows (250 lb. up)	7.20@ 8.20	7.50@ 8.00	7.50@ 8.25	7.00@ 7.50
Rough packing sows (200 lb. up)	7.00@ 7.75	6.00@ 7.75	6.50@ 7.50	6.00@ 7.00
Medium to choice pigs (130 lb. down)	7.85@ 8.50	8.25@ 9.00	8.75@ 9.25	
Stock pigs		7.75@ 8.75	8.75@ 9.00	7.50@ 8.25
SHEEP AND LAMBS				
Medium to prime lambs (84 lb. down)	13.00@14.90	9.50@10.50	10.00@11.50	10.50@12.00
Culls and common lambs	9.25@12.75	8.00@ 9.50	6.75@10.00	8.00@10.50
Medium to prime yearling wethers	9.75@13.25	6.00@ 8.00	8.00@ 9.50	6.50@ 7.50
Medium to prime wethers	7.00@10.25	5.50@ 7.50	6.50@ 8.50	5.00@ 6.50
Medium to choice ewes	5.00@ 8.00	5.00@ 6.50	4.50@ 6.00	4.50@ 5.50
Culls and common ewes	2.75@ 5.75	3.00@ 5.00	2.00@ 4.50	2.00@ 4.50
Feeder lambs	12.25@14.25	5.00@ 7.00		10.00@10.50

LATEST QUOTATIONS.

The Live Stock Market.

PORTLAND, Ore., Nov. 25.—Cattle—Choice steers, $7@7.50; medium to good steers, $6.25@7; common to fair steers, $4@5.5t; choice heifers, $5.50@6.25; choice cows and heifers, $4.50@5; medium to good cows and heifers, $3.50@4.50; common cows, $1.50@2; canners, $1.50@2; bulls, $3@4.50; choice feeders, $5@5.50; fair to good feeders, $4@5; choice dairy calves, $8@8.50; prime light calves, $8@8.50; medium light calves, $7.50@8; heavy calves, $4@7.

Hogs—Prime light, $9.25@9.65; smooth heavy, 250 to 300 pounds, $8@9; smooth heavy, 300 pounds up, $7.50@8; rough heavy, $6@7.50; fat pigs, $8.25@8.75; feeder pigs, $8.25@8.65; stags, subject to dockage, $4@6.

Sheep—East-of-mountain lambs, $11@12.50; choice valley lambs, $11@12.50; medium valley lambs, $10@11; common valley lambs, $9@10; cull lambs, $6.75@9; light yearlings, $9@9.50; heavy yearlings, $8.50@9; light wethers, $7.50@8.50; heavy wethers, $7@7.50; ewes, $2@6.

SPOKANE, Nov. 25.—Cattle—Prime steers, $6.25@7; good to choice steers, $5@6; medium to good steers, $4.50@5; fair to medium steers, $4@4.50; common to fair steers, $3@4; choice cows and heifers, $4.50@5; good to choice cows and heifers, $3.75@4.50; medium to good cows and heifers, $3@3.75; fair to medium cows and heifers, $2.50@3.50; canners, $1.50@2.50; bulls, $2.75@4.50; light veal calves, $2.75@4.50; heavy veal calves, $4.50@6; stockers and feeders, $3.50@5.

Hogs—Prime mixed, $8.75@8.85; medium, $8@8.50; heavies, $5.75@7.85; fat pigs, $7.50@8; stockers and feeders, $7.50@8.

Sheep—Prime lambs, $10@11; fair to medium, $9@10; yearlings, $7@8; wethers, $6.50@7.50; mutton ewes, $4@6.50; feeder lambs, $9@11.

The Grain Market.

PORTLAND, Ore., Nov. 25.—Wheat—Hard White, Bluestem, Bart, $1.49; soft white, $1.24; western white, $1.22; hard winter, northern spring, $1.16 1-2; western red, $1.12 1-2.

Grain futures: Wheat—Bluestem and Bart, November, December, $1.49; January, $1.48;

(Continued on page sixteen.)

National Grange Takes Stand on Big Issues

MARKED by a small attendance, the national grange, Patrons of Husbandry, in 56th annual session at Wichita, Kan., November 15-24, completed business of national, as well as grange importance.

On the first day's meeting National Master Sherman J. Lowell of New York voiced the stand of the grange on several important legislative measures, particularly ship subsidies.

"The most outstanding legislative issue at present is the proposal for a ship subsidy, which is but one form more of government paternalism, taking from one class of people to help another," he said.

"The only justification for such a proposal is that it might return to the payers its equivalent in enhanced values of commodities or reduce cost of production. Those advocating this measure claim that we can ship out our merchandise cheaper, but are silent on the fact that it will open wider our doors to the agriculture of the world and put us at once in competition with the peasantry just as soon as conditions become stabilized."

In stating the attitude of the grange toward such a measure Mr. Lowell declared there was not a grange in the United States that had challenged the opposition by the national body of the shipping subsidy. He also made a vigorous attack on all forms of paternalism. Liberalism, like socialism and single tax, was decried.

Criticize Department of Education.

Another evil at Washington seen by Lowell was the federal department of education. He maintained that the control of all school systems should be in the hands of the people.

Mr. Lowell called for a sounder policy and procedure in the building of good roads.

National delegations represented by state masters and their wives from 33 states were at the opening session.

The outstanding feature of the meeting was the strong opposition expressed by the grange to government paternalism in any form. This was particularly shown in the stand taken on the Lasker ship subsidy bill now before congress. It was felt that such an act would put America in disastrous and unjust competition with the peasants of other nations. A large part of the session was taken up with the discussion of tax problems.

In general the grange went on record as in favor of lower taxes, assuming that taxes are far too high at present. A nationwide state income tax was also recommended. Tax evasion by issuance of tax-exempt securities or declaration of stock dividends by corporations was commemned and a vigorous resolution by A. S. Goss of Washington calling for the stopping of such practices was passed.

Against Sales Tax.

Another measure that was and will be opposed by the national grange is the sales tax, which was suggested as a means of meeting the cost of the soldiers' bonus.

Closely linked with the question of taxation was the stand of the grange on the payments of war debts owed the United States oy foreign powers. Any cancellation of these debts was opposed by the grange on the grounds that the money for these loans was furnished by the American people, and that if the countries owing the debts do not pay up it will mean a great and needless tax on the people to raise the money wherewith to repay themselves.

A resolution was also passed urging the government to take immediate action on the Muscle Shoals project; that it be leased or sold to private interests or be finished for operation by the government. Whatever its disposal it was resolved that it should be used to the best advantage of American agriculture in the production of nitrates and fertilizers.

Of interest to farmers of the Pacific coast was the condemnation of Japanese immigration by George R. Harrison, state master of California, and the urging of enactment as a law house bill No. 12, 169, which provides for the exclusion of every alien ineligible to citizenship. Orientals are ineligible to American citizenship.

Another resolution called for the deportation of every alien who does not become naturalized within a stipulated time.

Better Farm Credit.

Recommendation of the work of the joint commission on agricultural inquiry was expressed by the national grange. It was urged that the commission continue its work, or that a similar committee be formed, if deemed necessary, to examine the workings of the federal farm loan act, to find whether its original purpose has been carried out, and to provide some means of credit that will enable individual farmers to own their farms.

Drastic need of better marketing facilities in the United States was stressed by Louis J. Tabor, director of agriculture for Ohio.

"Nine-tenths of America's farm crops were produced and sold this year below cost of production to the farmer, yet the consumer is paying all he should be asked to pay," he said. "The remedy for this can be found only in a better marketing organization.

"This is one of the four great problems confronting American agriculture. The others are wise production, elimination of waste and the equalization of taxation."

Great peril was seen for the farmers in the European corn-borer and bovine tuberculosis, and congress was called to help in the eradication of them by liberal appropriations.

More conservative policies in building hard roads were advocated by the national grange. A pay-as-you-go policy was approved. It was strongly urged that all issuance of road bonds be discontinued. It was stated that by issuing bonds a community added $25,000 per mile to the cost of the road.

Against Industrial Court.

An industrial court, modeled after the Kansas industrial court, which was to look after the interests of the people in times of strife between capital and labor under supervision of the national government, was defeated.

Of interest to grangers will be the establishment of the national grange benefit, which will be started immediately and will in due time insure the lives of more than 1,000,000 grangers. Automobile insurance was also established.

Indorsement of the work of the department of agriculture and strong opposition to the proposed transfer of the bureaus of markets and forestry away from that department to the department of labor was voiced by T. C. Atkeson, legislative representative of the national grange at Washington, D. C.

Mr. Atkeson also presented a resolution that congress enact the French-Capper "truth in fabric" bill, as a protection to the cloth buying public and to the husbandry of American sheep.

Opposition of the national grange to the proposed merger of the Armour and Morris packing companies was also voiced by Mr. Atkeson.

Campaign for Membership.

Grange leaders believe that the coming year will see a marked increase in grange membership, as an appropriation of $10,000 has been made for the formation of new granges and a national publicity bureau created.

No election of officers was held at this Wichita session. The election will take place at the session next year, which will be held in Pittsburgh, Pa., at a date to be set later.

RESOLUTIONS ARE SOUND.

We like the sound, progressive resolutions adopted by the national grange as outlined in the foregoing report. Take, for instance, the resolution against further issues of tax-exempt securities, with a proviso that so long as such securities are permitted no repeal should be made of the tax-exempt feature of the federal farm loan act. This is broad and fair. The grange is willing to forego the tax-exempt feature of the federal farm loan bonds provided that the government will see that what is sauce for the goose is also sauce for the gander.

The grange took a sound, American position on immigration. It calls for the deportation of all persons who seek to destroy the American form of government, and asks that foreigners be admitted to this country only on provision that they become American citizens within a reasonable period. We are glad also to note that the national grange reflected the spirit of the Pacific coast membership when it voiced its approval of the enactment of a law to deny permanent residence to all aliens ineligible to citicenship. This is intended as a wise check on Japanese immigration and acquisition of the rich agricultural lands of the Pacific coast by Asiatics.

Another resolution that meets with our unbounded approval is the one demanding that all debts owed to the United States government by foreign powers be paid. The resolution truly declares that the money lent to these foreign governments was granted by the thrift and labor of the American people, and if these debts are not repaid the American people will be taxed heavily to repay them.

The propaganda in support of cancellation of these debts is ridiculous. It is based on the false theory that the allies borrowed about $11,000,000,000 of American money and exended it exclusively for the benefit of the American people. As a matter of fact, a considerable part of the borrowed money was used by the allied governments in payment of debts which they had contracted prior to our entrance into the war. Another part of the borrowed billions went to buy food supplies for the civilian part of their populations. Other parts went to subsidize British, French and Italian agriculture and industries. A fact not generally known to the American people is that nearly $2,000,000,000 of the borrowed money was paid over to the allied governments after the war was over and was used in the reduction of their debts, the rehabilitation of their industries, the building of ships for their merchant marine and some part of it in the extension of their commerce to all parts of the world in competition with American commerce. The selfish proposal is an insult to the intelligence and sense of justice of the American people. It is doubtful if it would have had serious consideration on this side of the Atlantic if it had not been for some American international bankers who want the ally debts canceled so that they can collect the $5,000,000,000 or $6,000,000,000 which they had loaned to the warring countries before America was drawn into the conflict.

We hope the grange and all other American agricultural organizations will hit this outrageous proposition a body blow at every opportunity.

The national grange adopted other sound and patriotic resolutions. With possibly one or two exceptions we can heartily commend and support the sensible, patriotic, well thought out program embraced in the Wichita resolutions. The one notable exception is that favoring an income tax in every state of the Union. We think it is true, as the grange officials decalre, that greater equality of taxation will result if all states enact such a law, but we doubt the wisdom of the adoption of such laws at this time, when taxes are so burdensome and the whole pressure of the grange and other organizations should be for retrenchment and reduction, rather than to seek out new sources of public revenues.

The need at this moment is to put on the brakes, rather than supply more grease for the skids. We have had deflation of industry, and the farmer had to take his first of all and in the heaviest doses. We are gradually getting deflation in other industries, and to a considerable extent there has been deflation in the wages of labor. The cost of government, especially in the states, counties, cities and towns, has had little deflation, and in our judgment there will be no deflation at all if the people obligingly vote for state income taxes to replenish the treasuries of states, counties and municipalities. Let us first have deflation in taxes, and when that is accomplished we can turn our attention to a fairer distribution of the burden. Our objection to this resolution of the grange is on considerations of expediency. We are for it in principle, when the proper time comes for its application.

For the reason that we are opposed to a state income tax now, in addition to the federal income tax, we are thoroughly in accord with the resolution unanimously adoted at Wichita in opposition to a sales tax in any form. The sales tax would simply be another easy means of getting additional taxes out of the people, when the necessity of the hour is to put on the compressor and compel vigorous retrenchment—at Washington, at the state capitals and at the county seats in every state in the Union.—Editor.

The First Thanksgiving Proclamation

Was Issued by Abraham Lincoln in the Gloom of a Civil War

IT has pleased Almighty God to prolong our national life another year, defending us with his guardian care against unfriendly designs from abroad, and vouchsafing to us in His mercy many and signal victories over the enemy, who is of our own household. It has also pleased our Heavenly Father to favor as well our citizens in their homes, as our soldiers in their camps and our sailors on the rivers and seas, with unusual health. He has largely augmented our free population by emancipation and immigration, while He has opened to us new sources of wealth, and has crowned the labor of our working men in every department of industry with abundant rewards. Moreover, He has been pleased to animate and inspire our minds and hearts with fortitude, courage and resolution sufficient for the great trial of Civil war into which we have been brought by our adherence as a nation to the cause of freedom and humanity, and to afford to us reasonable hopes of an ultimate and happy deliverance from all our dangers and afflictions.



Now, therefore, I, Abraham Lincoln, president of the United States, do hereby appoint and set apart the last Thursday of November, next, as a day which I desire to be observed by all my fellow-citizens, wherever they may be, as a day of thanksgiving and praise to Almighty God, the beneficent Creator and Ruler of the Universe. And I do further recommend to my fellow-citizens aforesaid, that, on that occasion, they do reverently humble themselves in the dust, and from thence offer up penitent and fervent prayers and supplications to the Great Dispenser of events for a return of the inestimable blessings of peace, union and harmony throughout the land which it has pleased Him to assign as a dwelling place for ourselves and our posterity throughout all generations.

In testimony whereof, I have hereunto set my hand and caused the seal of the United States to be affixed.

Done at the city of Washington this twentieth day of October, in the year of our Lord, one thousand eight hundred and sixty-four, and of the independence of the United States the eighty-ninth.

ABRAHAM LINCOLN.

By the President:

WILLIAM H. SEWARD, Secretary of State.

Previous to the issuance of the foregoing proclamation, several New England states governors had proclaimed state holidays known as Thanksgiving days. The proclamation by President Lincoln was the first directing the people of the entire nation to observe a common day of thanksgiving.

Willis Guernsey Sale

The complete dispersal sale of the Orchard Hill farm Guernsey herd at Redmond November 22, owned by Dr. Park Weed Willis, brought out over 300 bidders, some from remote parts of the state, and some from Oregon and California. The lively bidding for the daughters and granddaughters of Sammanish Topsy emphasized the keen demand for well selected dairy cattle in the northwest.

The entire herd of 43 animals brought a total of $12,733, or an average of $296. Dr. Willis expressed himself as being well pleased with the outcome. While the greater number of the mature females sold for between $200 and $500 there was one outstanding top, Glenwood Princess Pat of Orchard Hill, a daughter of Sammanish Topsy, that was bid off at $645 to N. B. McCord of Lynden. Her sire was Royal Combination of Westmoorland, the sire also of a number of Orchard Hill females.

Most of the animals went to western Washington breeders, while two were taken to Ellensburg and one to The Dalles, Ore. Eight head were purchased by M. Falk of San Francisco for Troutmere, a country estate at LaHonda, Cal. While Dr. Willis offered credit by special arrangement before the sale, there were few who bought except for cash.

The sale was held at the farm in a large tent. George A. Gue of Yakima cried the sale, while C. E. Payne of Tacoma worked the ring.

The animals sold, the prices and the purchasers are:

Topsy's Robin Hood of Orchard Hill, W. A. Peterson, Renton, $330; Chicona Victor, M. Falk, San Francisco, $510; Topsy's Twinkle of Orchard Hill, J. M. Olson, Elma, $230; Skylark Topsy of Orchard Hill, J. M. Olson, $250; May King's Golden Glow of Orchard Hill, L. R. Palmer, Arlington, $405; Topsy's Captain Barlow of Orchard Hill, W. H. Kirschner, Kent, $335; Topsy's Valley Maid of Orchard Hill, W. D. Nettleton, Seattle, $400; Red Wing of Orchard Hill, Falk, $250; May King's Fire-Fly of Orchard Hill, Henry Brooks, Gold Bar, $400; Glenwood's Bright Light of Orchard Hill, W. H. Jackson, Ellensburg, $285; Flossy Topsy of Orchard Hill, J. M. Olson, $320; Wanda Topsy of Orchard Hill, M. Falk, $500; Glenwood Jolly Tar of Orchard Hill, Brisco School, Kent, $240; Glenwood Bo Peep of Orchard Hill, M. Falk, $350; Katie-Did of Orchard Hill, W. B. Nettleton, $370; Roxie Topsy of Orchard Hill, L. R. Palmer, $310; Sammamish Roxie, W. A. Peterson, Renton, $10; Topsy's Maid of Honor of Orchard Hill, J. M. Olson, $300; bull calf (unnamed), A. E. Griffith Jr., Kirkland, $155; May King's Peggie of Orchard Hill, W. H. Jackson, $265; Ruth Topsy of Orchard Hill, John Ford, Tolt, $265; Juneau Topsy of Orchard Hill, M. Falk, $235; Mythop Sequel Dorothy of Vashon, R. N. Chambers, Roy, $275; Delena S., John Ford, Tolt, $255; April Girl 2d, G. A. Berduin, Lynden, $110; Carnation's Glenwood of Orchard Hill, Thomas Klindt, The Dalles, Ore., $200; Little Red Riding Hood of Orchard Hill, J. M. Olson, $210; Glenwood Spring Maid of Orchard Hill, W. B. Nettleton, $430; Sequel's Milk Maid of Vashon, Olson, $205; Idlewild of Orchard Hill, J. M. Olson, $235; Anna Laurie of Orchard Hill, J. T. Ray, Auburn, $335; Gypsie Girl of Orchard Hill, C. J. Lawson, Puyallup, $500; Glenwood Princess Pat of Orchard Hill, N. B. McCord, Washington, $645; Glenwood Bo Peep of Orchard Hill, Peter Norgaard, Stanwood, $230; unnamed heifer calf, M. Falk, $200; Katie-Did of Orchard Hill, H. W. A. Tramm, Chehalis, $225; unnamed heifer calf, J. M. Olson, $215; unnamed heifer calf, David Whitcomb, Seattle, $80; Glenwood Silver Bells of Orchard Hill, M. Falk, $350; unnamed heifer calf, E. W. Conradi, Kent, $160; Cleo Topsy of Orchard Hill, J. M. Olson, $230; Wildwood Rose of Orchard Hill, John Ford, $375; unnamed heifer calf, M. Falk, $150.

CHANGE THE HOG PEN.

It is not sufficient merely to clean out the hog pen now and then. It can not be cleaned out. The only way to have a clean place for the hogs is to try to clean it out and then change the location. Plow up the old pen and crop it a year or two and you will avoid many hog ailments, the germs of which live over in the polluted soil of the pen.

Berries and Hens

Found to Be Good Combination

The farmer who has a well-chosen variety of crops has advantage over the one who depends on a main crop for his total income; yet, in some cases, there is danger of getting too much diversification, resulting in some of the work being slighted or left undone, according to Sigurd Hendrikson, a berry grower and poultryman, of Puyallup. Mr. Hendrikson has but seven acres of berry land southwest of town, but finds that he has little time to spare after giving his fields the proper attention.

"In fact, I feel that I have just a little too much of a variety on the place," said Mr. Hendrikson, "and I am planning on making more of a specialty of berries and poultry in order that the work can be done more systematically. The two lines go together very well and, since Mrs. Hendrikson looks after gathering the eggs and feeding the mash, it gives me practically all day in the field.

"I don't believe it pays to raise berries without having some kind of live stock on the place to furnish manure. If there is room for a cow it is all the better because the cow and chicken manure can be mixed to good advantage. So far we have not attempted to raise much of the feed for the cow, but this winter we are going to have some oats to feed green, provided the winter is not too severe for it to grow. It takes but a small patch of mangels to supply one cow and a few rows of kale will make a great difference in the egg production of the flock.

"As for the raspberries, there are the three main varieties, the Cuthbert, Antwerp and Marlborough. While there is a difference of opinion as to the kind that is best for the general markets, it seems best to raise the three kinds and not try to supply any special demand. I am putting out a few patches of berries which will replace some of the older fields and the entire acreage will be a little over four acres.

"The eight rows of Evergreen blackberries are a good addition to the varieties, since they come at a later season and there is usually a good sale for the fruit. I am going to try the new plan of training the young canes on high wires. It is proving successful in some parts of the valley, although it involves a little more work and expense.

"I am practicing another method that some growers may not agree with," continued Mr. Hendrikson, "and that is scattering manure in the center of the rows. In many cases the fertilizer is placed around the canes with the idea that the seepage will go down and fertilize the roots. My theory is that there are as many feeder roots out a foot and a half from the bushes as there are directly under them. It also makes it easier to work the manure into the soil and I try to do this in the fall."

The poultry house is 20x45 feet and is large enough to house all the hens that can be conveniently cared for on the farm. It was built after the Shoup plan with the exception of the vents at the top, which are open to the east to avoid a draft and yet allow al foul air to pass out.

Next spring a brooder house will be built with the idea of having four runways, one of which will be used each year. The other three will be planted to cultivated crops in order to keep the soil as free from disease germs as possible.

"From 1000 baby chicks purchased last spring we raised 440 pullets, which we feel is a very good average," said Mr. Hendrikson. "We have in addition about 20 hens left over from last year's flock, but we intend to sell them off as soon as possible. The entire flock is producing a lay of between 65 and 70 per cent. We are watching them closely and we have already begun to cut down on the morning lights in order to avoid any trouble with too heavy production."

In addition to the main farm buildings Mr. Hendrikson has a berry "pickers' shed," which has accommodations for 16 persons. This, he believes, is essential in order to keep competent help throughout the picking season. A stove and bed is furnished to each person as well as plenty of wood and potatoes. The building serves two purposes, since in the winter the rooms are used for the storing of fruit and vegetables.

Scattered through the berry patch and about the buildings are a number of fruit trees of different kinds, among which are the following varieties: Yellow Transparent, Dutchess, Gravenstein, Spitzenburg and 20-ounce Pippin apples and some Winter Nellis pears. Mr. Hendrikson remarked that the tree fruits were a good addition to the main crops, since they came on at a time when the berry crops were finished and yet at a time when there was no other pressing work to be done. He mentioned the Transparents and Duchess as bringing in the greatest return.

WHEAT CROP ESTIMATES.

Aggregate production of around 1,549,000,000 bushels of wheat this year for the United States, Canada, India, Algeria, Tunis, Morocco and Japan is indicated in latest estimates summarized by the United States department of agriculture today. Wheat production in these countries in 1921 totaled 1,440,000,000 bushels. Production this year in 14 countries of Europe is estimated at 892,000,000 bushels, compared with 1,006,000,000 bushels last year. Russia, Germany, Austria, Jugo-Slavia, Czecho-Slovakia, Portugal, Denmark and Holland are not included in the summary. In Manchuria wheat and rice are below average in condition, and in Chosen wheat and rye are poorer than last year. Reports on seeding in Argentina indicate increased acreage of all small grains.

The corn crops of Hungary, Jugo-Slavia and Italy need rain. In Rumania the harmful dought has been broken, and in Bulgaria corn prospects are good. In the Matamoros district of Mexico floods have damaged the crop. The corn yield of South Africa is expected to be smaller than that of last year.

Oats and Vetch for Hay

J. R. Beck has resigned as agricultural agent in Pacific county to become county agent in Lincoln county, Ore.

In his annual report Beck mentions as outstanding features of the year's work the increased acreage of oats and vetch for hay, the increased enrollment and better work by boys' and girls' club members, the great development of community spirit through community fairs, the splendid progress in cranberry culture made through various agencies, and the replacement of scrub bulls by purebreds His recommendations for the future include vigorous continuation of work on cranberries; encouragement of the poultry industry, with particular emphasis on standardization and cooperative marketing of product; extension of acreage in oats and vetch for hay until every farm has five or 10 acres; elimination of two big evils of the dairy industry, overstocking and boarding unprofitable animals; and constant demonstration of balanced programs of production as the only method of farming successfully.

Not to mention the thousand details of his office and field work, but selecting at random a few other items from his report, it may be shown that Beck helped start many farmers on the road to better husbandry. Thirty-eight poultry owners adopted practices recommended by the office; seven farmers were assisted in figuring balanced rations for their cows and nine purebred bulls were placed. Eleven farmers treated seed potatoes and seven seed oats for disease, while 11 started growing oat-vetch hay, nine pruned fruit trees as directed and 18 adopted suggestions for growing berries. Storage work was started on samples from 22 cranberry bogs, and the use of limestone and superphosphate was demonstrated on 15 farms. Eleven farmers acted on fertilizer advice and eight planned drainage systems totaling 303 acres. Work has been started on three of these and completed on 71 acres that were previously laid out. Among the women, 18 labor-saving devices were placed in three testing circles, 22 paper dress forms were made and many articles of clothing and millinery made and fitted.

But for the assistance of 35 community project leaders who contributed 133 days of their own time, all this work would not have been possible, Beck reported.

RUSH WORK ON FAIR GROUNDS.

At a recent meeting of prominent Pacific county business men held in Raymond it was decided to rush work on the new county fair grounds and buildings, to be situated half way between South Bend and Raymond and almost exactly in the center of the county.

The following trustees were elected to sell stock and raise money for the grounds and buildings: H. W. MacePhail and Fred Eichner of Raymond, Jess Shay of Willapa, Dr. G. A. Tripp of South Bend, L. L. Bush of Bay Center, J. A. Morehead of Nahcotta and M. E. Sinclair of Ilwaco. These men will raise $15,000 over the county and immediately begin work on the new institution.

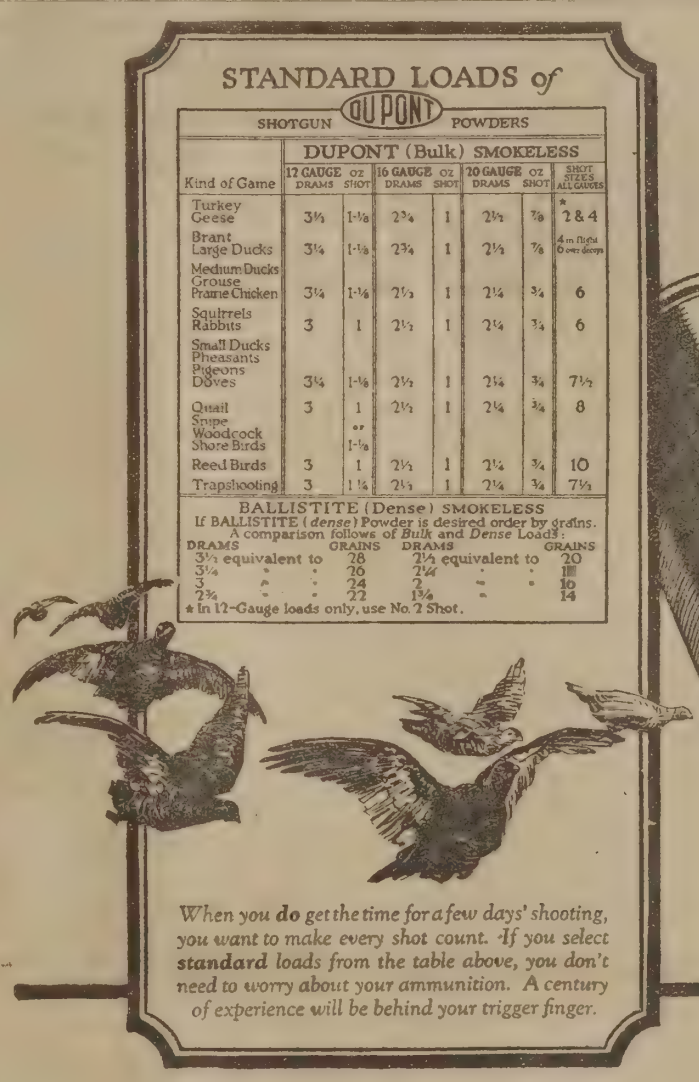
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Kind of Game	DUPONT (Bulk) SMOKELESS 12 GAUGE DRAMS	12 GAUGE OZ SHOT	16 GAUGE DRAMS	16 GAUGE OZ SHOT	20 GAUGE DRAMS	20 GAUGE OZ SHOT	SHOT SIZES ALL GAUGES
Turkey Geese	3½	1-⅛	2¾	1	2½	⅞	* 2 & 4
Brant Large Ducks	3¼	1-⅛	2¾	1	2½	⅞	4 in flight 6 over decoys
Medium Ducks Grouse Prame Chicken	3¼	1-⅛	2½	1	2¼	¾	6
Squirrels Rabbits	3	1	2½	1	2¼	¾	6
Small Ducks Pheasants Pigeons Doves	3¼	1-⅛	2½	1	2¼	¾	7½
Quail Snipe Woodcock Shore Birds	3	1 or 1-⅛	2½	1	2¼	¾	8
Reed Birds	3	1	2½	1	2¼	¾	10
Trapshooting	3	1⅛	2½	1	2¼	¾	7½

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3 " "	24	2 " "	16
2¾ " "	22	1¾ " "	14

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SHOOT DU PONT POWDERS

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LIVESTOCK AND DAIRY

Balance the Feed

Use Alfalfa With Low-Protein, Home-Grown Roughage

By DON G. MAGRUDER,
Dairy Extension Specialist, State College.

If the roughage which you are feeding consists of such feeds as grain or grass hays, corn or grain silage or roots, so that it is low in protein, it will pay you well to buy such high protein feeds as linseed oil meal or soybean meal to balance your ration. In a feeding test which was carried on last winter on a farm where the herd was fed at least as well as the average the owner was able to increase his net profit $2 per cow per month by adding linseed meal and soybean meal to balance the ration.

If the roughage which you have on hand is not sufficient to last you through the winter, so that you will have to buy alfalfa hay in the spring, you might well buy the alfalfa now and feed it with the roughages which you are feeding, so as to raise the protein content of your roughage and allow for the purchase of less high protein concentrate for your grain ration. Digestible nutrients are fairly cheap in alfalfa compared to most other feeds on the market. In alfalfa at $20 per ton a hundredweight of digestible nutrients costs $1.92. In corn at $40 per ton a hundredweight of digestible nutrients costs $2.33. In mill run at $34 per ton a hundredweight of digestible nutrients costs $2.79.

If good alfalfa is chopped a cow can consume considerable more than if it is not chopped and so be able to secure in alfalfa a good portion of the protein which she needs. However, it is better not to buy the alfalfa ground, but to grind it yourself in order to avoid adulterants and a poor grade of alfalfa.

The average 1000-pound cow which is getting 10 pounds of alfalfa hay daily will also eat about 15 pounds of oat hay or its equivalent, such as five pounds of oat hay and 30 pounds of corn silage. If she is in good condition and is not giving more than 10 pounds of 4 per cent milk per day she does not need any concentrates. If she is giving from 15 to 25 pounds daily of 4 per cent milk, one pound of corn for each six pounds of milk would be a good grain ration at the present prices. If she is giving around 40 pounds of 4 per cent milk daily a good concentrate mixture would be six parts of corn to one part of linseed oil meal or soybean meal fed one pound of the mixture to four pounds of milk.

World's Butter Trade

The war caused radical changes in the butter trade of the world, according to an investigation made by the United States department of agriculture. Even as late as 1920 the total volume of butter entering into national trade was only about one-half as great as the annual average during the five years preceding the war. The United kingdom at present constitutes the world's principal market for butter, imports amounting to 395,000,000 pounds during 1921, which was slightly more than double the imports of 1920. In the increase in imports over 1920 New Zealand furnished 79,000,000 pounds, an increase of 158 per cent over 1920. Argentina furnished 45,000,000 pounds, or three times the amount furnished in 1920, and the imports from Australia during 1921 amounting to 104,000,000 pounds, which was four times the quantity for 1920.

During 1921, Australia, New Zealand and Argentina provided one-half of the United kingdom in imported supplies, while before the war less than one-fourth the total came from those sources.

Denmark at the present time constitutes the most important European source of butter supply for all consuming countries of Europe. Formerly the greatest part of Denmark's exports went to the British markets, but now some of her new markets in the order of their importance are: Switerland, United States, France, Sweden, Norway, Belgium and The Netherlands in Germany.

Russia, formerly second only to Denmark as an exporter of butter with an exportation averaging 148,000,000 pounds annually, is now entirely out of the trade.

Germany, which was formerly second to the United kingdom as an exporter with an annual average importation of 111,000,000 pounds, imported only 17,000,000 pounds during 1920, or less than 15 per cent of her perwar average. The production of butter in the United States during 1921 amounted to 1,725,000,000 pounds, an increase of 10.5 per cent over 1920, while there was an increase of 11 per cent in butter consumption in the United States during 1921, as compared with 1920. The difference of 21,000,000 pounds between production and consumption in 1921 was made up of imports and removals from cold storage.

While production of butter in the United States during 1921 increased by 10.5 per cent, the production of oleomargarine decreased 43 per cent, having amounted to 211,840,000 pounds in 1921, compared with 370,730,000 pounds in 1920. This calls attention to the interesting point that the per capita consumption of butter in Denmark, which in 1914 was 17.5 pounds, was reduced during 1920 to about six pounds, while the consumption of oleomargarine in Denmark during 1920 is estimated at 37.5 pounds per capita.

LIFE PRESERVERS FOR LIVE STOCK

By DR. E. E. WEGNER, W. S. C.

SWINE DISEASES—ARTICLE II.

The conditions existing on farms where hog raising had become impossible were such as are found on many farms today and these conditions become worse as time goes on. The great difficulty is not that old hogs will not thrive, but that it is impossible to raise the pigs, many in each litter dying soon after birth from causes that lie in the environment, and the others living as runts. These conditions become so bad that without change in their living conditions no one can make hog raising profitable.

The reason for the above is found in the fact that pigs are raised in the same pens and same lots year after year without any serious attempt being made at cleaning them thoroughly or protecting the little ones from the infection that multiplies in the ground, pens and troughs. These hog quarters become a regular hotbed of infection, with all sorts of parasite eggs thrown in, and it is no wonder that the new-born piggie finds conditions very unfavorable to his development and dies a victim of careless methods of handling.

We have learned a few new things regarding certain parasite eggs in the past few years and one important thing is that simple disinfectants do not kill them. We used to recommend that the hog lots be sprayed with a disinfectant or limed occasionally to kill the dangerous germs and parasites, but when we find out that certain eggs can be kept for months in a two per cent solution of formalin without harming the egg in any way we know that our former advice was not as effective as we supposed, and we know that the reason we failed is that we depended too much on the disinfectant which did not kill.

Change the Location.

One failure, however, is not sufficient to discourage any one and if disinfectants are not to be depended on we can do something else and the next thing was to recommend that the hog lots be changed and placed on new ground and the old lot plowed up and put in crop. Now, how long the eggs of certain parasites will remain alive in the plowed ground we do not know, but as far as we are concerned we can assure them a long wait at least, because it is not necessary to use the old ground for many years in most instances and it is likely that the eggs will not survive any such length of time.

If the hog lots were to be moved every year or so the danger would never be very great, as the ground would never become so dangerously contaminated, but even then the contamination starts as soon as the hogs are placed on it and for that reason it is not advisable to place the young pigs in with the old ones until they are several weeks old, as the danger period in the hog's life is within the first few weeks or months.

Now, the men who attempted to raise hogs on the places in the middle west where the previous attempts had failed realized the cause of this failure and sought to avoid it. They took the sows that were about ready to farrow and washed them thoroughly with soap and water to remove all dirt and filth which usually contains the parasite eggs and bacteria and such vermin, then after the sow was clean they placed her in a farrowing place that had been previously disinfected by the use of boiling water, or with a small amount of lie added. This treatment will actually kill the eggs. She was kept here during the farrowing period and in a clean place for several days after. The pigs were not returned to the hog lots, however, for several months, but were


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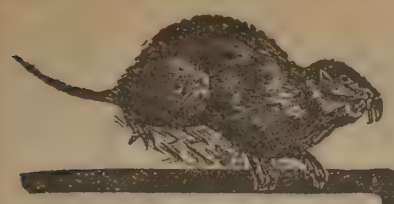
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taken to the open fields and allowed the freedom of the pasture where there is little or no contaminating influences.

It was found that by the above method it was possible to raise hogs on this place as well as they had ever been raised and that there were no unthrifty ones in the bunch. The reason is that they were protected from the contaminating influences of the infected hog lot. When this lesson becomes more widely known and practiced we will find it possible to build a profitable industry on the remains of an unprofitable one, but I hope that our hog raisers will heed in time and not allow contaminating influences to undermine their herds before they take advantage of the present known methods of protection and improvement. It is easier to start better methods before necessity compels us to do so.

Hides Not All Alike

"Packer hides" are those removed in the larger packing houses where the method of taking off and curing is uniform, and are closely sorted as to grade. "Country hides" are those taken off on farms or in small slaughter houses. They vary in method of cutting, are seldom properly cured, are gashed more than packer hides, and are not sorted to uniform grades.

Packer hides are classified into steers, bulls and cows, in each of which the subclasses are "natives" and "branded," and into calf hides subdivided into "kips," "packer calves" and "slunks."

Native steers are graded as "spready" when at least six and one-half feet wide, measured while stretched flat. "Heavy" native steers weigh 60 pounds at least in the cured state, "lights" from 50 to 60 pounds, while "extreme lights" run down to 25 pounds.

Branded steers are graded as "butts" when the brand is on the rump, as "Coloradoes" when branded along the side, and as "heavy," light" and "extreme light Texas," also side branded, sometimes with several brands due to changing ownership.

Calf hides weigh under 25 pounds. "Kips" weigh from 15 to 25 pounds, and "packer calves" less than 15 pounds. "Slunks" are skins of unborn calves.

Spready steers are used for furniture and automobile leather for the most part, heavy and light natives for harness and belting leather, and extreme light natives for upper shoe leather. Branded steers are used for sole leather.

Country hides are classified as "heavies," weighing 60 pounds up; "buffs," weighing 45 to 60 pounds, "extremes," weighing 25 to 45 pounds; with "kips" and "calfskins" as in packer hides. "Deacons" are calf hides weighing less than 7 pounds. "Fallen hides" are those removed from dead animals, and "glues" are unfit to cure.

Barrett Is Here Next Week

President Charles S. Barrett of the National Farmers' union will arrive in Washington, Sunday, December 3, for two or three weeks in the interest of the organization in this and neighboring states. He will attend a series of Farmers' union meetings throughout Washington and northern Idaho. He will also be present at the annual meeting of the state organization at Spokane, beginning December 12, and will later attend the annual meeting in Oregon. While here he will make a personal investigation of the proposed Columbia basin project in behalf of the National Board of Farm Organizations, of which he is an official. President Barrett was originally scheduled to arrive November 30. The itinerary previously announced for him by President J. O. Adams of the state Farmers' union has been slightly changed to conform to his later arrival.

Trapping the Humble Skunk

The skunk is one of the easiest of the fur-bearing animals to trap. It is not, as a rule, in the least afraid of human signs and is generally inclined to be rather tame and friendly. The skunk seldom makes dens of its own, preferring to use deserted dens of various animals.

Locate den and place trap directly in entrance. When dens are not found, a hole may be dug under an old stump and place the bait, which should consist of tainted meat of any kind, under the stump and set the trap at the entrance. Cover the trap lightly with dry dirt.

Another good method of making a set for skunk is to build up a small shelter of sticks, open on one side only, place the bait in this shelter and set the trap directly in front of the opening.

MARKETING CONTRACT UPHELD.

The Benton county supreme court has handed down a permanent injunction against a member of the Kennewick-Richland Fruit Growers for marketing his fruit crop elsewhere. The court held that the contract was fair and equitable and that, while the marketing agencies could not compel the member to deliver his fruit to it, he is restrained from marketing it elsewhere. This decision is passed upon the decision of the Washington state supreme court and the Washington Cranberry association.

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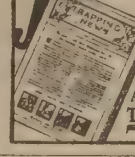
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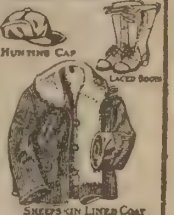
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POULTRY AND RABBITS

Lady Jewel

Holds World's Record for Eggs

Lady Jewel, a single comb White Leghorn owned by H. M. Leathers of Woodland, Cowlitz county, Wash., now holds the world's record for egg production, having recently finished her 365-day record with 335 eggs to her credit. For several weeks before the western Washington egg-laying contest at the western Washington experiment station at Puyallup was completed on October 31 this hen, No. 35, stood above all the others. She beat last year's record of 313 eggs by 22 eggs and was still laying at the close of the contest.

The dam of Lady Jewel traces back to stock which Mr. Leathers secured from Oregon Agricultural college and her sire was a Tancred "Imperial" bird. Her record shows what can be done by careful breeding and proper feeding methods. The 335-egg record was made under conditions that were by no means ideal for the best results, and it was not until April that she began work in earnest. The green feed had been frozen down, but when the lawn clippings and other greens became available in March her production began to climb. From April 2 to August 11 she layed 132 eggs consecutively, all of which were standard eggs and of a uniform size.



Lady Jewel.

The year's lay from this record hen was estimated at a $8.056 valuation, while the 23 eggs from the lowest hen in the contest was valued at 55 1-2 cents.

The new figure is the highest record of the world for an official contest, there being only two hens with records that were better. One was a Buff Orpington in New Jersey, with a semi-official record of 343 eggs, while the other was an Australian bird, a Black Orpington, also semi-official record of 339 eggs. Neither of these records are recognized by the record of performance council. Other records have been reported that have exceeded this amount There are few poultrymen, however, that pay any attention to records not made in any egg-laying contest.

The high pen was also a pen of single comb White Leghorns, but these were owned by Frank E. Gilbert of Vashon. The five birds layed a total of 1421 eggs in the year, which is 36 more than was produced by the high pen last year. D. Tancred of Kent held the pen record with 1384 eggs and also had the winning pen the year previous. The Gilbert birds, however, are of the Tancred strain and had been bred for production.

The contest ended October 31 and the birds were all crated and returned to their owners. Their places are being filled with younger birds that were on the grounds ready to begin a similar contest for the year 1923. Superintendent W. A. Linklater expects to see some records that are at least equal if not better than the ones made this year.

GENERAL ADVERTISING.

Oil Light Beats Electric or Gas

Burns 94% Air

A new oil lamp that gives an amazingly brilliant, soft, white light, even better than gas or electricity, has been tested by the U. S. Government and 35 leading universities and found to be superior to 10 ordinary oil lamps. It burns without odor, smoke or noise—no pumping up, is simple, clean, safe. Burns 94% air and 6% common kerosene (coal oil).

The inventor, W. W. Johnson, 31 N. Fifth St., Portland, Ore., is offering to send a lamp on 10 days' FREE trial, or even to give one FREE to the first user in each locality who will help him introduce it. Write him today for full particulars. Also ask him to explain how you can get the agency, and without experience or money make $250 to $500 per month.—Adv.

Geese Wear and Tear

"They don't cost over 50 cents apiece for feed, but they'll stand you not 1 cent less than $5 apiece if you count your running and the wear and tear on your system. You can't raise them without pasture, and if you didn't have a good-natured husband they would be a sure cause for divorce!"

Mrs. P. M. Ambrose of Chinook, who thus summarized for a group of poultry "tourists" last summer in Pacific county the business of raising geese for market, doesn't particularly mind the "wear and tear"; she has both pasture and a good-natured husband, and she sells the birds at 8 to 13 pounds for $3 to $5.50 each, hence her efforts at supplying the Thanksgiving and Christmas markets with this rare delicacy may be termed eminently successful. She hatches under light Brahma hens six to eight eggs per sitting from 10 adult females and four ganders of both the Toulouse and African varieties, and while she hasn't any very accurate figures on what it costs to raise them, she estimates that a pound of grain per gosling per week will bring them to the stage where they can make practically all of their living from Friend Husband's broad pastures. She begins hatching early in April and feeds the young birds straight corn meal for a day or two, then mixes it with "shorts," using water, not milk, for a moistener. In the drenching rains of that section it is necessary to gather in the young birds to prevent drowning up to about 4 weeks of age, and it is in these almost daily "roundups" that Mrs. Ambrose experiences most of the wear and tear. Strangely enough, also, one-third of the total number she hatched last season were killed by crows, which would descend into the pasture and kill goslings as large as a mature Indian runner duck.

Mrs. Ambrose's flock is shown on the cover page this week as they halted for THE FARMER camera.

Buy From Good Strain

The poultryman who is receiving less than 120 eggs each from his hens as a general average is making no profit from his birds, according to W. D. Buchanan, extension poultry specialist of the state college. Any hen that lays below this amount is a boarder and should be disposed of. It takes approximately 120 eggs to pay all expenses for each individual hen for an entire year. This figure, of course, is based on the average price of feed and the average return for eggs.

After one has paid for feed, taxes, insurance and interest on investment, there is nothing left for labor, but an average of 130 eggs will return a small profit to the owner. It stands to reason, therefore, that if the general average can be raised to 200 to 300 the returns will be much greater.

If one were to buy 1000 day-old chicks at 14 cents each, with no particular strain behind them, and a second thousand costing 25 cents each, or $250 per thousand, with egg-laying strain back of them, they will return a profit of $290 a year more than the first. Each of the 1000 chicks may produce 400 pullets, but even after deducting the extra first cost, the better strain flock will make the increased profit. These figures are based on an average of 140 eggs each for the cheap chicks and 180 eggs each for the more expensive kind.

As for the cockerel, no one can tell by looking at him how many eggs his mother laid. If his mother was a low producer he will likely ruin the average of the flock. While if she was a high producer and he is a good individual he will be likely to increase the average. The surest way is to buy a cockerel from a strain of known record.

Seattle Poultry Show

Seattle is preparing for a northwest poultry show to be held January 3 to 7. It is expected that the following states will have fowl on exhibition: Washington, Oregon, California, British Columbia, Idaho, Montana, Wyoming, North and South Dakota.

Harry H. Collier, director of the American Poultry association for these states, has called a convention of the members of the association to organize a zone for these states. The object of the zone is to encourage the growing of poultry and to get such legislation, both in the state and nation, that will create more experiment stations and pass laws that will help the industry.

Five-Acre Poultry Farm

E. B. Morrill is getting a five-acre poultry farm started in the Southern Heights district of Vashon island. At present Mrs. Morrill is doing most of the work, as she herself put it. She is taking care of 130 White Leghorns, which are a foundation for a commercial poultry flock.

"We intend to raise the best of stock for breeders and will either sell hatching eggs or we may hatch our own chicks," said Mrs. Morrill. "It will be possible to run the farm on a commercial basis next season, as Mr. Morrill will spend all of his time at home instead of working in town, as he has been doing this year. We felt that such a plan was necessary in order to get our farm started the right way."

Mrs. Morrill told how they were getting a few good fruit trees started in order to have something else to sell besides eggs and chicks. There are about 30 trees of Winter Banana apples, since the trees do well, and there is a demand for the fruit. In marketing the Winter Bananas Mrs. Morrill has found the fruit stands to be a good market. A few Grimes Golden and Spitzenburgs are also among the new plantings.

Cause and Effect

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ORCHARD AND GARDEN

That Apple Worm

Has He the Grower on the Run?

By PROFESSOR O. M. MORRIS.

The codling moth broke its former record for the destruction of the apple crop of the northwest in the summer of 1922. It had been preparing for this job for several years and the orchardist gave some help all along the way. He has been increasing the cover crop and the amount of trash and litter material left on the ground each winter.



This seems to be necessary for general improvement of the soil of the orchard, but it has also been good for the apple worms to harbour in during the winter. The trees are growing older and contain a good deal more rough scaley bark each year, thus furnishing additional hiding places for the worm. The winter, while cold, was even and was not destructive to the worms wintering over. The snow laid uniformly over the ground and in every way it was a comfortable winter for the worms.

Birds Are Thinned Out.

The grower has also done his bit to destroy many of the birds that have lived through the winter here, and many have taken special delight in destroying woodpeckers, which have done a good job in keeping the worms from living through under the bark and crevices of apple trees. Altogether, things developed so that when breeding time came the codling moth emerged in great numbers.

The entomolgists tell us that in many years the moths have layed on an average of six eggs or few above this, while last spring they have records of many moths producing as many as 20 eggs. On the whole the abundance of moths and tripling their producing capacity give us a wonderful crop of eggs to begin with.

Caught Unprepared.

The summer temperature arriving so suddenly found quite a good many orchardists rather poorly prepared to meet the sudden onslaught of worms and some spraying was done a little late. Some of it was done poorly because of the increased amount of foliage, increased size of trees and the rate of temperature development placed their spraying work a little behind time. There was not a general complaint about excessive number of worms early in the season.

The summer being warm gave the worms an opportunity to live and grow and to range wide over the foliage of the trees so that it is probable that some lived on foliage some days before entering the fruit. This could be done during the warm weather of the summer. It does not commonly take place in districts that are subject to very cool summer weather. The worm that is several days old before he receives his first dose of poison is not as easily killed as the worm that receives his dose immediately after hatching, and, with the rapid growth of foliage this year, it was possible for lots of these worms to feed on unsprayed foliage.

The set of fruit in orchards was extremely heavy. Thinning was more generally practiced than usual, but a very large proportion of it was done late in the summer, so that, even though wormy apples were pulled off, they were thrown to the ground and the full-grown moths emerged later and it is perfectly possible for careful thinners who are attempting to save all the wormy fruits to miss a good many apples and throw them on the ground, where the worm would live through its normal state. Later in the season, after the promise of a wormy crop became noticeable, spraying was more generally and more vigorously carried on, but for most of the orchardists the work then was too late.

The spraying work done by the orchardists this year was probably as good as, and, in most cases, better than the average in years passed. But it is also true that the orchards of many districts looked better and showed a more heavy foliage than for several years passed and altogether it is doubtful if the trees were quite as well covered as in previous years.

The value of the spray materials used have been questioned repeatedly. There is no reason, however, to believe that the fault lay in the spray materials; generally. No cases have been reported of standard brands of spray material being below the grade of past years when they proved very successful materials.

Good Prospect for 1923 Worm.

Up to date the prospects for next year are splendid from the worms' point of view, and in all probability they have a fair chance of reappearing next year. The winter weather has as yet an opportunity to be distinctly against them, but our orchard conditions generally are in their favor.

The trees are a year older, carry a little more rough bark, and are a little larger and more difficult to spray thoroughly. The cover crop and litter cover on the ground is generally a little heavier. The growers are more determined than ever that the soil must not be vigorously disturbed except at certain periods of the year and the prospect as a whole looks bright for Mr. Worm.

Thorough scraping and cleaning of the trunks and large limbs will be helpful. Careful banding and thorough up-to-date spraying is about all that can be done. The fruit grower must recognize that as his orchard grows older conditions will generally favor the increase and activity of the orchard pests, and it will be more difficult to maintain the former high standards of perfection and quantity of fruit produced.

Orchard Mice

Central Washington to Wage War

By LEO K. COUCH,
United States Biological Survey.

The general practice of alfalfa cover crops in the irrigated orchard districts of central Washington has brought on a menace in the form of field mice. These creatures use the cover crop for shelter and food during the growing season. During the winter months, while the cover crops are dormant, the mice are forced to attack the trees for their existence. This girdling of the bark is in the form of a collar around the base of the tree and underground along the main tap roots. Bitter bark trees, such as peaches and prunes, are not likely to be injured, but apples and pear trees are readily attacked. Trees injured in this way can be saved by bridge-grafting if the girdling is not too far underground. A tree so bridge-grafted can not produce a crop for two years.

A summary has been made of a questionnaire sent out to growers in Chelan and Yakima counties. This questionnaire was sent to determine the damage done last winter and to find what the indications were for the approaching winter.

In Chelan county, where 625 ounces of strychnine were distributed for mice, 184 growers reported only 900 trees were damaged. This damage was reported done on 2053 acres of orchard, with 1286 acres in cover crops.

In Yakima county, where only 131 ounces of strychnine were distributed last winter, 292 growers reported 4598 trees damaged by mice. This damage was on 6884 acres, of which 5053 acres were in cover crop.

From observation of the two counties, the mice were more numerous in Chelan county, but extensive poisoning operations reduced the damage in this county.

The questionnaire, besides finding out the number of trees damaged last winter also determined the threatening attitude of mice this fall. In Yakima county, out of 292 replies, 147 reported mice very active this fall. In Chelan county, out of 184 replies, 64 reported mice activity.

With this information at hand, an extensive campaign has been planned in central Washington by the biological survey in cooperation with the extension service through the county agricultural agents. William Meikle, county agent, will have charge of Chelan county; A. E. Lovett, county agent, in charge of Yakima county. The plans provide for furnishing strychnine and poisoned grain at cost to growers. Demonstrations on proper poisoning methods will be given where needed.

Bridge Grafting Pays

Bridge grafting has saved the Yakima orchardists over $50,000 this year, according to the estimate of County Agent A. E. Lovett. There were 792 growers attending one demonstration of bridge grafting. The reports which have reached the county agent's office, cover 1483 acres, of which 3333 trees had been girdled or partly so. Out of that number the growers reported that 2783 had been bridge grafted and 2705 saved. Thirty-three men placed a value on the trees saved at $10.65 a tree and this estimate was figured in the total.

SHEEP IN THE ORCHARD.

Report comes from Yakima valley that sheep are in demand by the fruit growers for cleaning up the cover crop and vegetation in the orchards. Not only will the cleaning up lessen the fire hazard, but the tramping done by the sheep also destroys the mice nests.

FIGHT NARCOTIC EVIL.

Forty-two fraternal, civic and social welfare organizations have united in a common war against the narcotic evil in Seattle.

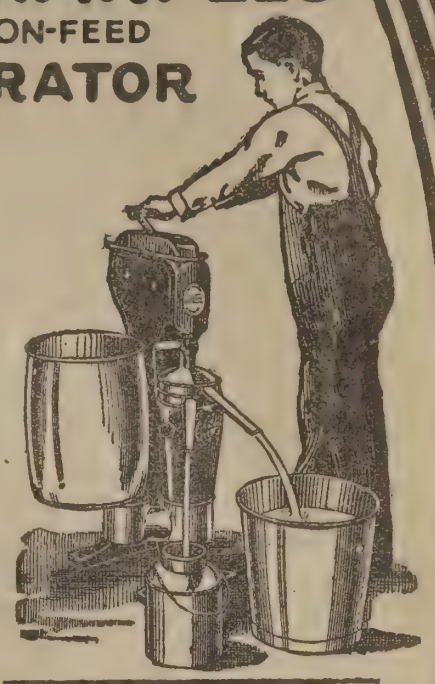
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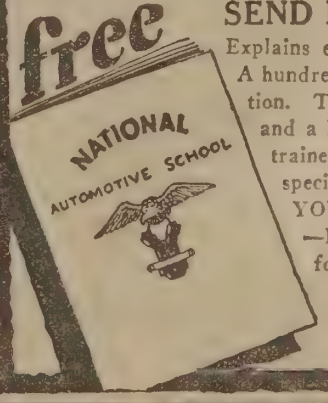
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A LITTLE "WANT AD" FREQUENTLY OFFERS A BIG BARGAIN. MAKE IT A PRACTICE TO READ OUR "WANT ADS"

Standardize Potatoes

(Continued from page three.)

Kingston, Idaho (943); second, Bedford Forrest, Walf Point, Mont. (036); fourth, H. . Bonebright, Chinook, Mont. (807).

Irish Cobbler—First, F. De Witt, Malta, Mont. (954); second, Larsen (887); third, Hessler (883); fourth, Cannon (875).

Early Ohio—First, Cannon (968); second, Haynes (962); third, John E. Huffman, Waverly, Ore. (887); fourth, L. G. Partner, Aberdeen, Idaho (876).

Green Mountain—Third, C. W. Patton, Mica, Wash. (848).

Miscellaneous—First, Banman, on Carmen (974); second, Haynes, on Blue Victor (948); third, Portland Seed Co., on Early Rose (902).

President Cannon's address emphasized the necessity of absolute knowledge of the quality of the seed used. Really good certified seed should command a premium justified by the fact that the yield does not compare with that of the commercial field, he said. Ruthless roguing of the seed patch, with all the loss of tonnage it involves, must be a primary consideration, and quantity of output forever a secondary one. He rather looked toward and hoped for some future board or committee, composed both of commercial and seed potato growers, whose work would justly establish the price relationships of the two industries, correlate them and make for the stability of both.

The "Purebred Sire."

In seed potato growing, as in raising live stock, we must have high-class breeding stock, highly protected, for high-class returns. There are men who never will be successful seed growers, said Mr. Cannon; men who will not buy the "registered sire" potato; who will not be careful to plant late enough to evade the burning season in our climate, and who will hesitate to rogue as ruthlessly, at the expense of size of crop, as production of clean seed demands.

"Of course I know," continued the speaker, "that some years are going to be bad. We have the potato flea beetle and one thing and another, coming up, and we have these Links, Harrisons and others coming around and insisting that this and that is the matter with our potatoes" (the reference was to Dr. G. K. K. Link of Washington, D. C., whose address followed), "but in the end the man who deserves to be in the seed potato game will still be in the game."

Upon Dr. Link's playful response to his sally, Mr. Cannon added that he thought the visit of Dr. Link to this territory and to the potato conference were of considerably more benefit to growers than visits from the potato beetle and the leaf roll.

Discusses Sinister Diseases.

Dr. Link is of the United States bureau of plant industry and was with the potato growers at their conference last year. He alluded to the progress in study of virus potato diseases in the course of the sinlge last year. What were formerly interpreted as various stages in the progress of potato mosaic, he said, are now regarded as possibly manifestations of several different forms of this yield-reducing potato disease. The absolute inadequacy of seed at the bin was convincingly illustrated in Dr. Link's screen talk by slides that showed fine, typy tubers from plants affected with this disease. The baneful effects of mosaic, he said, were not in impairment of the quality of the tubers as potatoes, but in the yield, and in the quality of the tubers as seed. Yield is ingevitably reduced by a disease that cuts down the leaf surface and its power to absorb sunlight, for the leaf is the sugar factory, whose output changes to starch and is stored in the tuber. Consequently the more mosaic, the poorer set. Reduced leaf surface is reduced factory floor space.

Curly dwarf, another virus disease, similarly reduces the yield through leaf condition as well as by causing the plant to die earlier. Leaf roll is even more pernicious in its cutting down of the yield. Symptoms of this disease are the thickening and rolling of the lower leaves, first, their appearance thereafter justifying the name of ,'rabbit ear," sometimes applied to the disease. Leaf roll can be and has been mistaken for injury from drought, said Dr. Link. The trouble is communicable across six and even seven rows of planted potatoes. Virus diseases work quickly and, therefore, one or two inspections of the growing crop are not enough.

No regions are immune from these potato diseases, but seed is more easily kept pure at home by early and watchful roguing than imported free of the diseases, he said. Virus diseases do not, probably, contaminate the succeeding crop through the soil, but through the tuber, whether volunteer or from the bin. So take the tuber with the plant, when roguing, said Dr. Link, and take it early.

Educating the Potato Man.

Professor George Severance of the State College of Washington, speaking on the educational needsofthe potato grower, took issue with the proposition that potato-growing requires a highly specialized academic training. Real education, he said, is a training in the power to think and an establishing of the habit of thought. Habit of thinking is vastly more important to the man than the specific thought content of his school years, he said.

"When I went to college there were few texts in print on the modern principles of agriculture," he said, "and we had to take this material in the form of classroom lectures. Today if I should ask you how many had read, even, all the government bulletins that are available to you on potato culture, let alone those on soils, bacteriology and kindred topics, there would be but a small showing of hands."

General discussion brought out that the absence of the word "potatoes" from the seed law handicaps at present the purchaser of potato seed.

A Pasco grower, developing the idea of "pedigreed stock" in the potato industry, earlier brought out, suggested that certification might be made to require a certain minimum production, thus tending to eliminate the inefficient seed grower.

Planting the Blossom End.

One of the interesting points of the potato conference was the disclosure that, in experiments and farm practices under observation by Professor George Hyslop of Oregon Agricultural college, extremely favorable differences in yield had been obtained in the planting of blossom-end pieces of the potato tuber, in instances where these had been planted separately, from stem end and other arts of the tuber. Less of wilt, greater freedom from disease and better shape had resulted from them.

Professor C. C. Vincent of the University of Idaho, speaking on treatment of seed for rhizoctonia, etc., stressed the value of starting with good, clean seed, treating it and protecting it, instead of bringing in new seed stuff yearly. In this he reflected a sentiment repeatedly expressed throughout the conference—that self-renewed seed, kept clean and vigorous, entails less of risk than seed frequently recruited from new sources. Professor Vincent also dealt with the effect on rhizoctonia of early and late planting, presenting results decidedly in favor of late planting in keeping down this disease. Control measures are as yet in a stage where results are inconclusive. In treating tubers in the sack for rhizoctonia one loses rapidly the strength of the corrosive sublimate (bichloride of mercury). The seed would be better removed and washed before treatment.

What has been learned at the State College of Washington during the year concerning varieties and strains within a variety was discussed by Professor O. M. Morris. Extremely wide results in yield had been obtained from the same variety, planted under like conditions, but obtained from various sources. Striking among the results was his conclusion that a seed stock may go rapidly up or down, from year to year, in its producing possibilities; that the district in which produced has less of influence upon the results obtained from the seed than have the practices of the grower and the proximity to other stocks. The check-up also seemed to show no close relationship of yield with percentage of crop that is off type.

Taking, as illustrative, the yields of 16 plots of Netted Gems, representing as many strains planted under uniform conditions and within a two-day period, he presented yields varying from 13,900 pounds per acre in one case to 3700 pounds in another. Two of Professor Morris' conclusions were that storage vitally affects the powers of performance of the seed, and that in choosing potato seed he would want to know the yield of the crop from which it was obtained.

Results from Montana were brought before the conference by Professor F. M. Harrington of the Montana State college. His verdict was in favor of cutting the tuber into seed pieces averaging an ounce and a half. From larger pieces, he said, more tonnage but less marketable stuff had been obtained. His experience tended to show that the highest-yielding seed gave the highest percentages of No. 1 grade. He, too, had had results with small whole potatoes that out-yielded large cut seed. Professor Harrington cautioned also against too frequent irrigation, citing more advantageous results from infrequent irrigation and "much scratching" of the field.

Must Be Ever Vigilant.

The unusual number of misshapen tubers produced this year was matter of comment by E. R. Bennett of the extension division of the University of Idaho. He pointed out that deep planting, where it obtained this year, had been able to offset a seasonal excess temperature. Growers in the uplands should plant late, even at cost of some reduction in stand, he said. Well sized but whole potatoes produced the greatest number of strong, independent stems, on which depend results. Rigorous roguing of the potato fields is gradually producing cumulative results that must not lapse for a single year, he declared.

It is the harder to build a strong and discriminating market for the potato because of the grocer's acceptance of poor stuff brought him to apply on trade or to avoid necessity of inspection. This results in disgust with and diminished consumption of the potato. The department's recommendations for the growing of seed potatoes this year would include, he said, the following:

Use of only good seed, disease-free and of a high-yielding strain.

Use of whole tubers when expedient, or of two to four ounce pieces.

With the increase in size of seed piece, planting further apart.

Sets of uniform weight, in order that plants may not be dwarfed and overshadowed here and there.

Late planting, for more desirable types, "late" signifying here around the first of July.

Fullest possible knowledge and most relentless roguing on the part of the seed grower.

J. E. Curry, state seed inspector of Washington, presented conclusions from study of various seed-treating solutions. He described the new hot formaldehyde treatment as quite as effective for rhizoctonia as the corrosive sublimate treatment. It is quickly handled, for small seed lots by the plugged barrel methods, for large lots by the vat. Four bushels of seed may be given its two-minute treatment with two pints of formalin added to 30 gallons of water from 118 to 123 degrees in temperature. Treat the tubers before they are cut. Early spring treating of the seed should be followed by its storage in disinfected sacks and bins.

Do Not Grow Culls.

Professor G. R. Hyslop of Oregon Agricultural college discussed also the disposal of the cull and the surplus stock. Some of the surplus may be planted, he said. As for the cull—first, don't grow culls. Culls are made by planting seed pieces too small, by failing to treat the seed, by leaving the diseased plant in the field, by cultivating too late and too closely, watering too heavily, storing improperly—with poor ventilation, excessive moisture or poor frost protection or by cutting in the sun or leaving in the sun the seed pieces.

Second, said Professor Hyslop, don't plant culls; third, don't sell them, to destroy your market for the good stuff you have on hand. One who buys ungraded potatoes for the market buys only at a price that enables him to grade more cheaply than by graded stuff; in other words, at a price at which you get nothing for the culls among them. The cull placed in the hands of a peddler, then goes forth to compete with good potatoes and decrease the consumption of the potato. Why clutter car space and storage and pay freight on the cull? The place for it is where it is produced.

Feed culls, if you have stock, at the rate of 450 pounds cooked or 600 pounds raw to 150 pounds of grain. Add as little water as possible in cooking them and boil until the skin bursts. For the hog, one pound of grain to as many as four of cooked potatoes is a good ration.

COOPERATIVE ASSOCIATION WINS.

The Seattle Milk Shippers' association recently granted an injunction against William Wyatt of Auburn, one of the members who attempted to withhold delivery of his milk in violation to his contract. While the case is similar to others that have come up during the last 18 months, it is the first injunction under the provision of the state marketing act. The shippers regard the decision as another victory for the properly organized cooperative association.

Farmers' Want Ads

HELP WANTED GENERAL 5

500 MORE PERSONS IN NORTHWESTERN states are lawfully entitled to positions with Uncle Sam. Government advises that applications, some positions, now far short of the demand. A remarkable opportunity. Investigate. Address Civil Service dept., Western Institute of Accountancy, Old Nat'l Bank bldg., Spokane, Wash.

AGENTS WANTED 9

SELL TREES AND PLANTS FOR US. STOCK reliable and in good assortment. Contract upon request. Write today. Capital City Nursery company, 426 Oregon bldg., Salem, Ore.

EDUCATIONAL 45

BEHNKE-WALKER BUSINESS COLLEGE of Portland; one of the largest institutions of its kind in America; guarantees a position to every graduate. Enroll now for fall term. A few months training under expert instructors and you are ready to enter business and win. Behnke-Warner graduates are always in demand. Write today for our free success catalogue. Address Behnke-Walker Business College, Fourth, near Morrison, Portland, Ore.

FRESH FOOD PRODUCTS 51-1

SEND 'EM FAMOUS KITTITAS VALLEY alfalfa honey for Christmas. Everything prepaid to 4th zone. 60-lb. can, $7.50; 2, $14.75; 6 5-lb. pails, $4.50; 3 10s, $4.25; 1, $1.70. You send the money, we'll send the honey. Kittitas Valley Apiaries, Ellensburg, Wash.

HONEY BRAND HONEY—CHOICE ALFALfa, sweet clover honey; quality guaranteed. It will please the little "honeys" and the older ones, too. One 60-pound can, $6.50; two for $12.75. Write for prices in pails. Oliver Sires, Wapato, Wash.

POPULAR BRAND HAPPY HOME HONEY—One 60-lb. can, $6.50; two cans, $12.75; six 10-lb. pails, $7.50; comb honey prices on request. H. N. Paul, Mabton, Wash.

EXTRACTED HONEY — ONE 60-LB. CAN, $6.50; two 60-lb. cans, $12.75, collect; three No. 10 pails, prepaid, third zone, $5. Wells D. Rose, Sunnyside, Wash.

FINEST HONEY—60-LB. CAN, $6.50; 2 CANS, $12.75, collect; 10 pounds, $1.70; 5, $1, both postpaid; satisfaction guaranteed. Geo. Bancroft, Hermiston, Ore.

GOLD MEDAL BRAND YAKIMA ALFALFA, sweet clover honey; 60-lb. can, $6.50; two cans, $12.75. C. W. Higgins, Wapato, Wash.

NEW HONEY—ALFALFA AND SWEET CLOver; 1 60-lb. can, $6.50; two, $12.75; discount on large quantities. Ernest Sires, Yakima, Wn.

FRESH FOOD PRODUCTS (Continued) 51-1

HONEY—FINE QUALITY ALFALFA, SWEET clover product; 3 10-lb. pails, prepaid, second zone, $4.25; 60-lb. can, prepaid, second zone, $7.30; two, $12.75, not prepaid. Harry Fisher, Prosser, Wash.

ALFALFA-CLOVER EXTRACTED HONEY fine. Four 10-lb. cans, $4.80; four 5s, $2.60; eight 5s, $5.10. Geo. O. Gould, Buhl, Idaho.

DELICIOUS NEW CLOVER HONEY, 120 pounds, $9.75; 30 pounds, $3.25; won't crystallize. Browne, Box 499, Twin Falls, Idaho.

4 LBS. SALMON BELLIES AND 3 LBS., ABsolutely boneless codfish, delivered by mail, prepaid, $2. Coffin Fish Co., Seattle, Wash.

NICE OREGON PRUNES DIRECT, $7.75 PER hundred. Special 12½-lb. sample bag, prepaid $1.80. Kingwood Orchards, Salem, Ore.

COMB HONEY, FANCY, $4.50; NO. 1, $4. O. B. Roberts, Prosser, Wash.

MERCHANDISE 59

ARMY GOODS—WOOL SOCKS, 25C PAIR, $2.50 dozen; heavy wool socks, 35c pair, $3.50 dozen; O. D. wool breeches, $1.95; perfect grade, $2.75; officers' dress shoes, $4.45; russets, $4.25; O. D. Wool army shirt, $2.95. Write for price list. Walker's Army Store, 501 Trent, Spokane.

MISCELLANEOUS—FOR SALE 60

SASH AND DOORS—O. B. WILLIAMS CO., 1943 First ave. So., Seattle. Chicken house sash, 20" wide by 25" high, 80c; a dozen different sizes in stock for immediate shipment. Skylights for chicken houses, 36"x40"; price, glazed, $2. This is the size recommended by the Western Washington experiment station. We carry them in stock for immediate shipment. Sash and doors for all purposes at lowest prices. All orders receive prompt attention. Our large illustrated catalog No. 35, showing full line of building material and built-in fixtures for the home, free on request. O. B. Williams Co. Established 1899.

MANUFACTURER OF GARDEN TRACTOR now doing business in all parts of the world is offering extensive territory to dealers and agents. This is a sturdy, practical and proven power cultivator for truck farmers, nursery men, florists, home gardeners, suburbanites and small fruit growers. Big profits. Unlimited field. Machinery experience unnecessary. American Farm Machinery Co., 2538 University ave., S. E., Minneapolis, Minn.

SACKS—SECOND-HAND GRAIN AND SPUD, correctly sorted and graded; also pipe, new and second-hand, any size; standard roofing paper at a big saving; pumps, engines, belting, cables, etc. Alaska Junk Co., Inc., S120 Adams st., Spokane, Wash.

HOMESPUN TOBACCO—CHEWING, FIVE pounds, $1.75; 10 pounds, $3; 20 pounds, $5; smoking, 5 pounds, $1.25; 10 pounds, $2; 20 pounds, $3.50. Send no money, pay when received. Cooperative Tobacco Growers, Paducah, Ky.

TO SAWMILL MEN—FOR SALE, ONE AND one-half million feet of timber; yellow pine and fir; more timber near; all goes to same setting; big demand for lumber and boxes. Write or see J. C. Fisher, Conconully, Wash.

WALL BOARD—WRITE FOR SAMPLE OF Washington plaster wall board; won't warp, won't burn. Manufactured by Washington Building Products company, 6851 E. Marginal Way, Seattle, Wash.

HOMESPUN SMOKING TOBACCO, MILD and mellow; 10 lbs., $1.50; 20 lbs., $2.75; delivery guaranteed. We furnish free recipe for preparing. Smoking Tobacco Exchange, Sedalia, Ky.

NATURAL LEAF TOBACCO—CHEWING, 5 pounds, $1.75; 10 pounds, $3; 20 pounds, $5. Smoking, 5 pounds, $1.25; 10 pounds, $2. Pay when received. Tobacco Growers' Union, Paducah, Ky.

CANE MOLASSES FED TO STOCK MAKES more milk, healthier animals, lower feed costs; cheaper than corn. Write Arthur A. Lewis & Co., distributors, S151 Lincoln st., Spokane.

OUR FREE NEW FALL CATALOG OF GROceries and general merchandise will save you big money; a postal card brings it. Write today. Jordan Lawler company, Box 615T, Spokane.

BUY YOUR RUBBER STAMPS NOW. HAVE you good butter, eggs or stock? If so have a rubber stamp made to advertise them. Order now for Harbord. Box 3111, Portland, Ore.

FREEEVERYBODY CAN BUY GROCERIES wholesale. We accept orders of $10 and up. Write for our free list. Save dollars. People's Grocery Company "M," 701 Olive st., Seattle.

ALL WOOL KNITTING YARN FOR SALE, direct from manufacturer, at 95c, $1.35, $1.60 per lb.; postage paid on $5 orders. Free samples. H. A. Bartlett Harmony, Maine.

TOBACCO—SELECT 3-YEAR-OLD KENTUCKY leaf. Pay for tobacco and postage when received. 5 lbs., smoking, $1.25; 5 lbs. chewing, $1.50. Farmers' Union, Hawesville, Ky.

ALMONDS—CALIFORNIA SOFT SHELL, 10 lbs., $3; express charges prepaid; 5 lbs. almonds and 5 lbs., seedless raisins, $2.15, delivered. P. S. Vawter, Arbuckle, Cal.

NATURAL LEAF TOBACCO—CHEWING, 5 lbs., $1.75; 10 lbs., $3; 20 lbs., $5.25; smoking, 5 lbs., $1.25; 10 lbs., $2.25; 20 lbs., $4. Hickory Ridge Farm, Mayfield, Ky.

BUY YOUR ALFALFA HAY AND "NETTED Gem" potatoes direct from grower, cabbage, one cent pound. Samuel Shockley, Outlook, Wn.

EASTERN BROOK TROUT, FISH AND EGGS, fry and fingerlings for sale. Echo Fish Farm, Fortine, Mont.

$1.50 STROPS KEEP YOUR RAZOR IN SHAPE without honing. Paul Lundgren, Port Angeles, Wash.

MISCELLANEOUS—Wanted. 63

EGGS, APPLES, HUCKLEBERRIES—WRITE us, Uncle's Delicious Pies, inc.; capital stock $50,000. 554 Mississippi avenue, Portland.

STOVE REPAIRING 128

WRITE MYER RUBENS, SPOKANE, ABOUT stove repairs, welding broken parts, nickel plating.

PATENTS 150

PATENTS—WRITE TODAY FOR FREE INstruction book and evidence of conception blank. Send sketch or model for examination and opinion; strictly confidential. No delay in my offices; my reply special delivery. Reasonable terms. Personal attention. Clarence O'Brien, registered patent lawyer, 534 Southern building, Washington, D. C.

FUR-BEARING ANIMALS 170

SILVER AND CROSS FOXES FOR SALE. William Rambo, 407 Sprague, Spokane.

PETS—Dogs, Birds, Etc. 171

GOOD SINGERS, BEAUTIFUL COLORS; choice rollers. 634 Front st., Portland.

(Continued on the following page.)

FARMERS' WANT ADS

This is the farmers' "want," "sale" and "exchange" department for small advertisements of farmers, including live stock and poultry.

Advertising rates for ads running 1 to 3 times, 10c per word per insertion, with a special rate to Farmer subscribers, as follows: Ads running 4 to 12 times, 9c per word per insertion; ads running 13 times or more, 8c per word per insertion.

All commercial and land advertising, 10 cents per word each insertion. Open also to nonsubscribers.

In using these columns advertisers must observe: (1) No advertisements will be inserted for less than $1.00. (2) Every word, number and initial, including name and address, must be paid for. (3) New advertisements, changes of copy or cancellations must reach general offices, Spokane, Wash., 10 days in advance of publication date. (4) Cash must accompany order.

Above rates include insertion in The Washington Farmer, The Idaho Farmer and The Oregon Farmer, which constitute the Pacific Northwest Farm Trio, 46 Review building, Spokane, Wash.

PETS—Dogs, Birds, Etc. (Continued) 171

REGISTERED AMERICAN KENNEL CLUB Airedale puppies; large, vigorous kind; best all-around dogs to be found. Only a few choice ones left. Pedigrees and prices on application. Snopeko Kennels, Box 213, American Falls, Idaho.

WHEN YOU WANT A DOG, CANARY, PARrot, rabbits or a pet or pet stock supplies, cages, feeds or remedies, write. We are headquarters in the northwest. Routledge Bird, Pet & Animal Co., 174 Union avenue, North, Portland, Ore.

WHITE COLLIES FOR CHRISTMAS, REAsonable. Urbandale Farm, Oakley, Idaho.

RABBITS and HARES 173

REGISTERED FLEMISH BUCKS, ALSO UTILity New Zealands, cheap. Alsyke Rabbitry, R. 2, East Stanwood, Wash.

POULTRY 174

$2000 FOR FIVE HENS—A RECORD PRICE for record hens. We announce the purchase of F. E. Gilbert's winning pen of White Leghorns at the recent Puyallup egg laying contest. These five birds laid 1421 eggs in 12 months, thus establishing a new world's record. These birds are to be mated with the best cockerel to be obtained and used in building up Queen Quality strain of chicks. We have also contracted with Mr. Gilbert for the eggs from the pen sisters of these wonderful birds. We will have a limited number of chicks and eggs from them for sale this season. The greater part of them will be used for our own use. In addition to the Gilbert birds, we will have many flocks direct from Hollywood and Tancred stock. We also hatch R. I. Red and Barred Rock chicks of exceptional quality. We are now booking orders for early delivery and have sufficient capacity to assure prompt delivery at time promised. Incubators, 15 per cent off. We offer a special discount of 15 per cent on Queen incubators purchased from us during November and December. In addition to the Queen, we carry the Master's incubator, Petaluma electric incubator, Blue Flame brooders, American brooder stove and are agents for the Kresky brooder stove. Write for our new catalog. Queen Hatcher, 87 Sewart st. Seattle, Wash. Ell. 2054.

"HENACRES" BABY CHICKS FOR 1923. IT is time to plan your poultry work for next spring and we suggest that you write for our free illustrated catalog now. The booklet contains lots of information on poultry management, gives our feeding formulas, etc., besides describing our stock. "Henacres" Leghorns have made good all over the northwest, so you take no chances in buying them. Some one in your neighborhood knows us, ask him. We have already sold 40,000 chicks for 1923. "Henacres," Box A, Prosser, Wash.

BABY CHICKS—FRESLAID FARM HUSKies for 1923. Banish hard times with a bunch of our profit-making Leghorn chicks. Time flies. The early buyers are picking the best dates so write now for free instructive catalog. It tells how to make $500 a year from your farm poultry. Satisfied customers made our growth possible. We claim the largest electric incubator in the world. Freshlaid Farm, Colfax, Wash.

BUY YOUR BABY CHICKS FROM THE White hatchery, member of the Sonoma county farm bureau accredited hatcheries. All flocks approved by farm bureau inspector. We handle accredited "A" grade chicks and "AA" grade for the poultryman who wants something better. Write us at once for information, prices, etc. White Hatchery, Petaluma, Cal.

BABY CHICKS—TRAP NESTED NORTHERN grown White Leghorns, noted for great egg production; large eggs and vigor; average 225 eggs; $20 per 100. "Cleared $1400 first year on chicks." "In four months cleared $650 on 267 pullets," that's what they write. See catalog, free. Order early. Highmount Poultry Ranch, Empire bldg., Seattle, Wash.

WILLAMETTE VALLEY BARRED PLYmouth Rocks. Over fifteen hundred young birds in 1922; heavy laying strain, dark and beautifully barred; cock birds and cockerels for sale; only the very best allowed on the Dimick stock farm; bank references. F. C. Waldron, R. F. D. 2, Hubbard, Ore.

WHITE LEGHORN BABY CHIX FOR SUMmer and fall months from stock accredited by Sonoma county farm bureau. We guarantee safe arrival. Write for prices and literature. The Pioneer Hatchery, 422 Sixth street, Petaluma, Cal.

DAY-OLD PULLETS, GUARANTEED S. C. White Leghorn day-old pullets, also day-old broilers; established 1912. Eureka Hatchery, 628 D st., Petaluma, Cal. James K. Hirst, Prop. Refs. gladly furnished.

BABY CHICKS—OREGON'S BEST AT REAsonable prices. Leghorns, R. I. Reds, Anconas, Minorcas, Barred Rocks, White Rocks. Order early. Catalog free. C. N. Needham, Salem, Ore.

POULTRYMEN—USE "SMOKEM" FOR ROUP, colds, diphtheria, canker and chickenpox. Sold under positive money back guarantee. Large can, $2, postpaid. J. G. Bratley, Belt, Mont.

WHITE LEGHORN COCKERELS, PEDIGREED O. A. C. stock, from world record matings. Lady Wonderful line; baby chicks and hatching eggs. Prof. Frank H. Shepherd, Corvallis, Ore.

GET THE BEST PRICES FOR YOUR POULtry, eggs, turkeys, geese, veal and hogs. Write for quotations. Hotchkiss Produce Co., Spokane.

40 QUALITY R. I. RED COCKERELS, $5 and up. Write your wants. Can please you. J. Nonnenmacher, Route 3, Yakima, Wash.

YOUNG GRAY AFRICAN GEESE FOR SALE, $4 each. Light Brahma cockerels, $5 each. Dwight Glassey, Route 2, Albany, Ore.

S. C. BROWN LEGHORNS, COCKERELS, hens, pullets; none better; stock guaranteed. E. H. Rosenkranz, Colfax, Wash.

ANCONAS—CHOICE COCKERELS, HENS AND pullets for breeders. Send for catalogue. Ancona Grove, Walla Walla, Wash.

TWO R. I. WHITE COCKERELS, BLUE RIBbon birds; price, $5 each. R. I. Red cock, $6. Leslie Simmons, Kalama, Wash.

S. C. RED COCKERELS FROM HEAVY LAYing dark red King strain, $3 and up. C. A. Keiser, Waitsburg, Wash.

MAMMOTH LIGHT BRAHMA COCKERELS and pullets. Adam Schafer, Hillyard, Wash. Phone Glen. 3257J.

PUREBRED BLACK MINORCA AND WHITE Wyandotte cockerels. C. McClelland, Boise, Idaho. R. 1.

BABY CHICKS, THE OLD RELIABLE TRAPnested stock, $20 100. Yesterlaid Egg Ranch, Kent, Wash.

1949 COCKERELS, 49 VARIETIES; HATCHING eggs. Free book. Aye Bros., Blair, Neb., Box 14.

SILVER SPANGLED HAMBURG COCKERELS, $3. E. P. Dashiell, Geraldine, Mont.

POULTRY (Continued) 174

CERTIFIED WHITE LEGHORN BABY chicks, hatched in the world's largest electric hatchery, for spring, 1923 delivery. January prices, $4 per 25; $8 per 50; $15 per 100. Special prices, 500 and 1000 lots. Order early chicks now and realize big broiler profits. Choice, free range, high egg-producing breeding flocks inspected by Sonoma county farm bureau. Safe arrival guaranteed. Must Hatch Incubator Co., 445 Seventh st., Petaluma, Cal.

TRAPNESTED CARNATION WHITE LEGhorns; famous for their vigor and winter layers. We specialize on baby chicks, setting eggs and breeding stock. We successfully shipped hundreds of pullets this fall to Honolulu, which shows the demand for Carnation stock. Ernest Raush, Carnation Poultry Farm, Kent, Wash.

WHITE LEGHORN BABY CHICKS FROM egg strains that are making the world look to the Pacific northwest. Vigorous, free range stock. Low price. Order early. Oregon-Corvallis Hatchery, Corvallis, Ore.

BABY CHICKS OF HIGH GRADE ARE EASY to raise if hatched in our Petaluma electric or hot water incubators. Prices reduced. Ask for free literature. Petaluma Electric Incubator Co., Petaluma, Cal.

DOLLARS FOR YOUR EGGS—WE PAY THE top market prices for your eggs and poultry, also turkeys, ducks and geese. Daily cash remittances. McClintock-Trunkey Co., produce department, Spokane.

ANCONA COCKERELS, SAME BREEDING AS my five pullets that laid 1029 eggs, 1921-22 western Washington contest. Booking eggs and chick orders. Catalog on request. Oscar Dunlap, Junction City, Ore.

BABY CHICKS AND HATCHING EGGS—DR. Duganne's trap nested White Leghorns and M. J. McCaleb's Hollywood strain. Write for catalog prices to Mark A. Webster, Corvallis, Ore.

HUSKY BARRED ROCK COCKERELS, heavy laying strain; mates to blue ribbon winner live stock show; commercial, $5 to $10. E. W. Hendricks, Milwaukie, Ore. Route 1.

PACIFIC POULTRYMAN, SEATTLE, WASH., expert writers on practical poultry subject. Special offer, two years, $1. Four months' trial subscription, 25c.

HUNT'S PRIZE AND UTILITY BARRED Rocks; some dandy cockerels, pullets, trios. Write for prices. W. A. Hunt, Lebanon, Ore. Box 503.

SHIP US YOUR POULTRY AND TURKEYS. Ask your neighbor about our fair dealings. Jones & Williams, S101 Division, Spokane.

CHICKS AND EGGS FROM 250-EGG RECORD S. C. White Leghorn hens; free catalog. Orin Belknap, Chinook, Wash.

FOR THE BEST IN SILVER WYANDOTTES and Silver Spangled Hamburgs, write G. G. Wherry, Payette, Idaho.

LARGE PEKING DRAKES FROM 1ST PREmium stock, Washington state fair. Frank Glaspey, Yakima, Wash.

WHITE LEGHORN AND BARRED ROCK cockerels; records, 200 to 311. W. M. Roberts, Walla Walla, Wash.

ROSE COMB BLACK MINORCA COCKERELS, $2.50; pullets, $1.25; hens, $2.25. Mrs. Carley, Carley, Wash.

HALF PRICE FOR SILVER WYANDOTTE cockerels. A. E. Zellmer, Davenport, Wash.

Turkeys.

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PIKE'S PEAK OR BUST

By LEWIS B MILLER

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CHAPTER TWENTY-THREE.

The Rainbow's End and a Pot of Gold.

Late in the day, after resting, three of the party took up their guns and started in quest of game. Half a mile away Cooper succeeded in bringing down a fat elk. Holloway came back for an ax, and in due time the two men returned to camp, carrying an elk on a pole, its legs tied together. The whole party, Frisk among them, feasted on elk meat that night.

The night here was almost cold, but the wandering gold seekers slept comfortably enough by their great campfire. When morning came they felt rested and more hopeful. But the muscles of their legs, and especially the calves of their legs, were very sore. So sore that, had the party followed their inclinations they would have remained in camp for at least another day. However, they had crossed the great snowy range to prospect for gold, and it was important that they do what they could before a shortage of breadstuff drove them back.

But they lingered in camp till rather late. And after getting under way they stopped now and then to rest. While resting they admired the wonderful scenery spread out before them and below them to the west.

The country was still very rough, and the forest, when they entered it, was hard to travel through. Night came on, and the wanderers were still among the mountains. There was plenty of game, and again they had all the fresh meat they wanted. The fact that they were, so far as they knew, the only people in this part of the Rocky mountain wilderness, filled them with something akin to awe when they thought of it.

Next morning they traveled on again. Though descending all the time since crossing the snow cap, they were stil among mountains. To avoid mountain climbing as much as possible they were soon following down a not very large stream. Now they stopped from time to time and washed out a few panfuls of sand. Finding nothing to encourage them, they kept on.

About noon they came to where the stream they were following entered a somewhat larger stream. A mile or two down this they stopped, in some high grass on the creek bank, to eat their dinner. Having plenty of bread and meat cooked, they did not kindle a fire. After eating they stretched themselves out on the grass to rest.

When they had been lying there for perhaps half an hour Jess Holloway sat up. He was near the edge of the bank, and now sat gazing down into the creek. At length he got upon his feet.

"Boys, while all of you are resting, believe I'll step down and try my luck in that creekbed. Might happen to be something down there."

Most of the party were asleep. But Orlando awoke and sat up.

"Guess I'll go with you, Jess."

In a little while the two, each with a pick and pan, were down in the bed of the creek. The stream was rather wide here, and a considerable patch of sand and soil was not covered by water. After digging up enough of that to fill his pan, Jess carried it to the edge of the stream and began to wash.

Presently Orlando, who was still digging, heard the other miner utter a surprised exclamation.

"What's the matter there, Jess?" he called out.

"Matter enough, I'd say! Just step over here and take a peep into this pan!"

Carrying his own panful of dirt, Orlando hurried over to the water's edge. And scarcely had he glanced into Holloway's pan when he exclaimed: "Well, for the land's sake! Who'd have thought it? Struck it rich the first pop, didn't you?"

"What's the matter down there, boys?" Cooper's voice was now heard calling from the bank above.

"Gold's the matter! Just come down and see!" shouted Orlando.

Aroused as much by the excited tones as by the young fellow's words, Cooper, already sitting up, sprang to his feet and started toward the creek bank.

"What! Has somebody struck pay dirt already?" demanded Esau.

"Seems that he has! That's what they say, if I understand 'em," Cooper called back, as he disappeared down the bank.

Now Esau leaped to his feet, and Sanders and Givens, who had been aroused from naps, were close behind him when he started down a sloping place. They found Cooper at the water's edge, gazing into Holloway's pan.

"At least two dollars' worth in there," Cooper was saying.

"Two and a half was my guess," Holloway answered.

After one good look at the contents of Holloway's pan, Orlando had turned and gone to washing the dirt out of his own pan. All waited impatiently for him to get through. And when he had finished they crowded around to note the result.

He had washed out even more gold than was in Jess' pan. Cooper estimated the amount at not less than three dollars.

"Did you dig up that dirt at the same place, Lando?" inquired Sanders.

"No, I didn't. It was several feet from where Jess filled his pan. He got started before I did. And then I hunted around a little, for just the right spot, before I began to dig."

"This whole patch of sand and dirt here seems to be rich, then."

By this time all had forgotten that they had been weary. Everybody was full of suppressed excitement. But their excitement made them quiet rather than noisy.

At once those who had not brought their pans and picks hurried up to the top of the bank, where their packs were, and came back carrying them. And with them and their shovels they were all soon at work, loosening up dirt with their picks, shoveling it into their pans and washing it out.

Not many were the panfuls washed out that did not pay well. Somebody brought down a not very large tin cup, and into that they emptied their gold every time a pan had all the dirt washed out of it.

Eagerly, silently, but with much secret excitement and enthusiasm they worked. Filling their pans, they carried them to the water and there washed till nothing was left but the heavy gold. In time the tin cup was full and some larger vessel had to be found.

Now Orlando climbed the bank to their camp. In order to travel light, they had brought as few vessels of any kind as they could get along with. But in one side of Brindle's pack was a little camp pot. Among their supplies were some beans and peas and corn for hominy, and they had brought the pot mainly to cook those in. It had a wire bail and a close-fitting lid, and was easy to carry. Selecting that as the vessel they could spare best, the young man hurried back with it.

Setting the pot down at a convenient place, he emptied the tin cup of gold into it. Then he caught up his pan and shovel and fell to work again.

Almost in silence the whole party worked, only a word or two being spoken now and then. Sometimes, when a miner had washed out an unsually rich panful of dirt, say fifteen or twenty dollars, he would hold it out for the others to inspect. They would pause for a moment, look into the pan, nod their heads in a gratified way, and turn again to their washing.

Scarcely for a moment did any of them pause in their thrilling work till darkness had made it impossible for them to do any more. Even then they spoke of kindling a fire at the water's edge and trying to continue their mining by firelight. But their decision was that it would be wiser to get a good night's sleep, so as to be ready for the following day.

Now, after pulling the grass till they had cleared off a spot on the bank above, they kindled a little fire there. Grouped around that, they broiled some elk meat on sticks, baked some flapjacks in their frying pan, and made a supper of those. The weather was pleasant down here, and they needed no fire for warmth. Soon all were lying on their blankets, sleeping the sleep of weariness.

But they were up before daylight, had cooked and eaten their breakfast and were ready to go to work, even before they could see. When started, they kept at work silently for hour after hour.

By noon, without taking time to weigh the contents of their pot, they estimated that they had between $1800 and $2000. So excited were they all that they could not think of stopping to cook. They ate cold flapjacks and meat, drank a little milk from their big-mouthed bottle and fell to work again. And they kept at work till night put an end to their labors.

Again they cooked supper around a little campfire. While the others were doing that, Orlando milked Brindle, watered her at the stream and moved her to fresh grass. The grass being abundant here, he kept her all the time at the end of his lariat.

Daylight next morning found the party as excited as ever and every one washing out gold as fast as he could. This morning they found their largest nugget. It weighed more than an ounce and was worth $20 at least

But, just before the toilers paused for dinner the gold-bearing sand began to fail. There had been only a little pocket where gold could lodge, and they had washed all of that out.

But all the rest of the day the six men worked hard, and without stopping for a moment. They washed above and below, as well as at any other place that looked promising. But no more gold could they find. Yet not discouragement but darkness put an end to their useless toil.

Again their revived their little fire and cooked and ate their supper over it. By this time they were almost out of meat. There would be barely enough for breakfast.

Day dawned again, and again found the six partners busy with picks and shovels and pans. And they kept at work till a good while past dinner time. But it was labor to no purpose. They had cleaned up all the gold that could be found in this vicinity.

Finally they suspended their digging and came together, up on the bank, for consultation.

The six had formed themselves in a circle, with the pot containing all their undivided gold as a center.

"Men," exclaimed Orlando, "the old saying was true after all! We've proved it."

"What old sayin'?" demanded Esau.

"Yes, what is it we've proved, Lando?" asked Holloway.

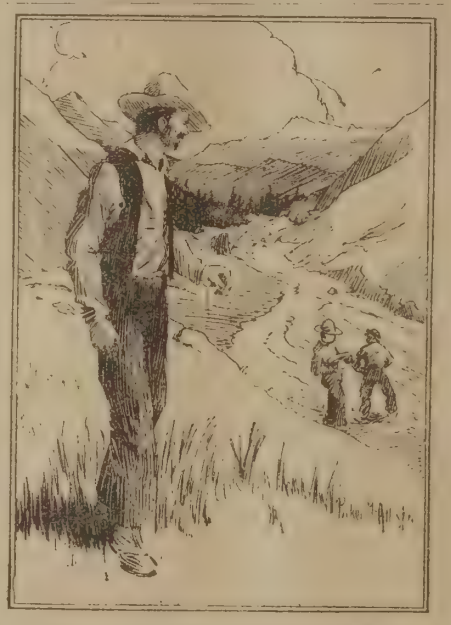
"Why, the old saying we used to hear so often when we were little shavers; that if you went to the end of the rainbow you'd find a pot of gold. We came to the rainbow's end, and there's the pot of gold to show for it."

Cooper laughed, in a rather pleased way. "Well, now I'd clean forgot our rainbow-chasing business. So had we all, I suppose. We talked a lot about it at first, but that grizzly bear and other things must have crowded it out of our heads. And, of course, after the gold excitement struck us here we couldn't think anything but gold. If we actually came to the end of the rainbow, that's quite a—a coincidence. Some fellows would be gumps enough to be superistitious about it."

"We came to the end of the rainbow without a doubt," Jess Hollowoy assured them. "That end of that rainbow dropped down behind the snowy range, I recollect, just back of where a little point of snow ran down below the main snow field. And there's where we crossed."

"And we've been traveling just about the same direction ever since we climbed over the snowy range. I know that by my compass," Sanders told them.

"No use arguing the matter further. We've proved the old saying. And if anybody doubts it we can show 'im our pot of gold," said Orlando.



"What's the matter down there? boys."

"Take it any way you want to, that was a lucky rainbow for us," Givens admitted. "We'd started for the other mountains, I recollect, but the sight of that bow in the clouds put in your heads to go rainbow-chasing. I was opposed to the whole rainbow business. But I'm wonderfully glad now that I wasn't pig-headed about it."

"We're all glad we came, the way things have turned out," Cooper said. "Let's see how glad we are."

Reaching out, he took hold of the pot's bail. After raising and lowering the pot a few times, he went on: "My guest would be 30 pounds. More apt to be more. All of you lift it and make a guess."

Each took his turn. And while some guessed more than Cooper, nobody thought the pot would weigh less.

"Well, it seems pretty safe to say we've got 30 pounds here, pot and gold together," Cooper continued. "Jeff, it's your pot. How much will it weigh, would you say?"

"It's a camp pot, and I bought it because it was thin and light. About three pounds, I'd guess, without the lid. Not more than four at the outside. Three's nearer right, I think.

"If the pot weighs only three pounds, that leaves us 27 pounds of gold in there. At $200 to the pound, we must have about —about $5400."

"Fifty-four hundred dollars! Why, that's $900 apiece!" exclaimed Orlando.

He was thinking that he had considerably more than $100 worth of dust in a buckskin bag—his share of their earnings in the Clear Creek camp. That, added to his one-sixth of what they had taken out here, would leave him more than $1000. Poor all his life—his mother had been a widow well nigh as long as he could remember—such an amount seemed a fortune to him.

"That's not bad for two or three days' digging—not halfway bad," declared Givens.

"Bad! I'd say it isn't bad! It's bully good work, I think," exclaimed Orlando. Then he added, with a grin: "Now I know how old Croesus felt!"

"This is certainly a pretty handsome haul," Sanders remarked. "It would take us clodhoppers many a day to dig 27 pounds of gold out of our farms."

"Wouldn't it, though?" exclaimed Esau, who had worked much as a farm hand. "Now if we can just strike another rich pocket of dirt like that'n!"

At once Cooper spoke: "I'm afraid we're at the end of our row here."

"I know we are," declared Holloway. "A man can't earn his salt digging down there now."

"Looks that way," admitted Sanders. "But we've done well here, and I'm for keeping on. Whether we should work up this creek or down is the question."

"Let's work down a right smart piece; and, then, if we don't strike any more pay dirt we can come back here and work up," suggested Esau.

"That's a good idee," agreed Sanders. "Ought to be more gold where that came from. The main supply must be somewhere upstream."

"And not all the gold that has washed down this creek has lodged here. May be more of it lodged somewhere below," was Jess Holloway's opinion.

And Cooper said: "That's to be seen. But we'll certainly test the matter before we abandon this creek. Lucky thing we're here by ourselves. If somebody don't follow us, we can prospect the whole region round about in peace."

"Wouldn't it stir up a wild hubbub if it was known on the other side of the snowy range how much gold we've washed out here?"

"It would. It shorely would, Jess," answered Esau. "Why, we'd have 10,000 miners here in a little of no time."

Now Cooper added: "Undoubtedly that was a wise idy we hit upon—that of strikoff by ourselves. And we want to work like good fellows, too. No telling when some other bunch of rainbow-chasers will come tagging along behind us."

"Not a doubt but what there'll be others over here to prospect before so very long. So we want to hump ourselves while the country is all ours," Givens told them.

"Stands us in hand to do that very thing," agreed Cooper. "But, first and foremost, we've got to rustle up some meat. Can't have any dinner till we get some, you recollect. We'd better start two of our number out to kill game, while the others keep on working till dinner's ready. Or at least until there's meat to broil."

"Who want's to go?" asked Sanders. "Don't all speak at once! For my part, I'd rather stay here and pan dirt. Somehow this gold digging has cast a spell over me. I don't want to do anything else, or think about anything else."

"Same way with all of us, I'd guess," answered Holloway. "We'd every one rather dig for gold than eat or hunt. If anybody wants a rest from digging, let 'im sing out. Otherwise we may have to pull straws to see who shall go."

Now Givens spoke: "Tell you what, boys. I wouldn't mind a change for a spell. Think I can soon stir up some game. So, if that suits all around, the rest of you can go on digging while I take a little stroll with my gun."

"You may have to take a rather lengthy stroll, Jeff," spoke up Holloway. "For several hours before we stopped here I noticed that we were not seeing any game. For some reason, I don't know what, we'd passed out of the game country."

"I noticed the same thing, and spoke of it to some of you," said Sanders. "Wonder why it was. Plenty of water and grass here."

"I'd say there is plenty of grass here," broke in Orlando. "Brindle hasn't had better grazing since she left Illinois. She'd get fat as butter if we lingered here long. But I recollect noticing we'd left all the game behind. We'd seen so much before I couldn't help wondering at it."

Now Cooper said: "Won't take any big sight of game for our dinner. Safe to say Jeff can knock over some animal or fowl that will make us a mess. So you'd better strike out right away, Jeff, and get back the first minute you can. The rest of us will be busy with our mining pans till you fetch us something for our frying pan."

Straightway Givens armed himself, crossed the little valley and began to climb the mountain slope. At the same time the others, after putting the lid on their pot of gold and setting it aside, fell to digging up dirt again and washing it out.

CHAPTER TWENTY-FOUR.

But scarcely had they got well started when Givens, now puffing and gasping and red in the face, suddenly appeared on the creek bank above. Cooper, with a panful of dirt in his hands, was the first to discover him.

"Why, Jeff! How did you come to get back so soon? What did you kill? I didn't even hear you shoot."

"Shoot—nothing," gasped the hunter. "Mighty glad to—to save my—my own bacon! Fellows, I've got to—to tell you the truth! We've sold our lives—sold 'em for a little stew pot mess of gold. We're no better than—than dead men, every one of us!"

At this startling announcement all the

(Continued on page nineteen.)

FAMILY CIRCLE

ALICE BARLAND
EDITORIAL CONTRIBUTOR

Experience Letters

From Our Family Circle Women

Dear Mrs. Barland: I want to tell the Family Circle how I have made a "drawn in" rug. I took a good, firm gunnysack and hemmed the edges with a narrow hem and sewed the sack on to a frame made of four lath, sewing it on with cord. I marked the design with chalk, the pattern being a black center with red roses. I rolled the sack so as to work the center first, as it is easier that way.

For the black I used old stocking legs and an old woolen skirt; the red was bits of an old wool sweater. After the center was in I made rows of different colored stripes and I think the prettiest was "hit or miss," made of all sorts of odds and ends, new and old, the brighter the better. I colored some rags orange and some red and I had some blue which helped to brighten the stripes. The rags are held on the under side and drawn up.

The hook was made by my husband out of a long, slender spike. He filed off the head and put on a wooden handle, then filed a hook in the other end and I like it better than one I bought long ago.

These rugs are not hard to make and last a long time and use up rags which are good for nothing else and would have to be burned. I have just finished one which cost me just 30 cents.

MRS. HATTIE M'CLURE,
St. Maries, Idaho.

Dear Mrs. Barland: We have a nice little home three miles from Blackfoot, Idaho, and expect to make a living with chickens and small fruit. We have been here but one year, so have hardly got started yet, but expect to put out 1000 strawberry plants this spring and start more raspberries. We already have 2 rows 14 rods long. From those I picked $65 worth of fruit last year at the market price.

I have been a reader of the Circle for some time and have received many helpful hints from it. MRS. A. D. H.
Blackfoot, Idaho.

Dear Mrs. Barland: Some time ago you asked for suggestions for school lunches and I will tell you what I pack into the lunch box for the little girl I have with me. Two bread and butter sandwiches and one meat, often chicken; 1 piece of cake, 1 cup custard and an apple for recess. I make raisin bread quite sweet almost like cake and she likes it made into sandwiches. I always add a bottle of milk.

MRS. W. C. D., Wash.

Dear Mrs. Barland: We formerly lived in Idaho and have taken THE FARMER for a number of years. We live now five miles east on the electric line from the big city of Lincoln, Neb. We have a 5-room house all finished off in city style. It is built on an incline with a basement facing south, warm in winter, cool in summer. We have about 3000 inhabitants in this town of College View. There is a college, a high school, two churches and the ward schools, about 1000 pupils altogether in the schools. We have no pool halls, theaters or movies here. Whoever wants these must go to the city for them.

Our summer has been hot and very dry and grain of all kinds was badly damaged.

I belong to four correspondence circles and all of us look forward to the letters eagerly as they make their rounds. We get much pleasure from them. I agree with the editor that the long winter evenings are almost here now and we can spend them with our pen friends. Let us see which can write the most interesting letters for the Family Circle. This is my first letter and I must not say too much, so I won't be turned down and can come again.

Your Circle friend,
MRS. M. L. M'CABE.

Home Recipes

Chess Pie—One half cup sugar, 1 teaspoon butter, 2 heaping teaspoons flour, yolks of 2 eggs and whites of 1, 1 1-2 cups of sweet milk, 1 teaspoon of vanilla. Cream the butter and sugar and add the flour and eggs beaten separately, then the milk and vanilla; bake as custard pie and use the other 2 whites of egg for meringue.—Mrs. H. H., Oregon.

Wedding Cake—5 pounds of sugar, 50 eggs, 5 pounds flour, 5 pounds butter, 15 pounds raisins, 10 pounds currants, 3 pounds citron, 1 pint strong coffee, 4 ounces nutmeg, 4 ounces mace, 1-4 ounce cloves, 1 ounce cinnamon. This will make 44 or 45 pounds of cake and will keep for 20 years.

A READER OF THE FARMER.

Mince Meat—4 pounds lean beef chopped or put through food chopper, 1 1-2 pounds beef suet chopped fine, 10 pounds apples chopped, 5 pounds seeded raisins, 5 pounds currants, 2 pounds citron, 6 pounds sugar, 5 tablespoons cinnamon, 2 of nutmeg, 2 of cloves, 2 of allspice, 2 tablespoons of salt, 2 quarts of sweet cider or boiled cider. Cook till the apples are done. The beef should be cooked beforehand, but the suet should be cooked only with the other ingredients. This will keep in a cold place for a long time unsealed, but it is better to can it as you would fruit in glass jars. I have used this recipe for many years. A. W. B.

Prune Conserve—Seven pounds of fruit, seeds removed, 5 pounds sugar, 2 oranges and 2 lemons ground through the food chopper, 15 chopped walnuts. Cook 1-2 hour and seal.—Mrs. Archie Buford, Oregon.

Apple whip: Grate one large or two small apples, beat the white of an egg till it stands, then beat into that one cup of sugar and to this add the grated apple and beat it all for 15 minutes, till it looks and tastes like whipped cream. This makes a fine filling for a cake or a dressing over anything where you would use whipped cream. Try it. A. W. B.

Molasses Cake—1 cup sugar, 1-2 cup molasses, scant, 1 level teaspoon soda dissolved in a little warm water, 2 cups of sour or buttermilk, if you do not have it use cold coffee, but if buttermilk is used less shortening is required, 2 teaspoons each of cinnamon and allspice, 1 teaspoon of nutmeg, 1-2 teaspoon of cloves, flour to stiffen. Bake in a moderate oven 45 minutes. Raisins can be added if desired. If used dredge them with some flour before adding. MRS. G. N. J., Idaho.

Johnny cake: One cup flour, one-half cup good yellow corn meal, one-fourth cup sugar or a tablespoon of honey, one-half teaspoon salt, one teaspoon cream of tartar, one-half teaspoon soda crushed fine before measuring, one cup sweet milk, one egg, one tablespoon shortening.

Mix all the dry ingredients together thoroughly, add the milk, into which the egg has been added, well beaten, and the shortening, melted, the last thing.

MISS A. B.

Just Folks

As far as you yourself are concerned, INCOMPETENCY is the brand placed upon everything you buy and upon everything that is given to you.

On the other hand COMPETENCY is the brand upon everything you make and upon everything you find by search.

If you can make a pair of shoes that will give you good service your competency is established as a shoemaker; if you buy a pair of highly finished shoes made in a specialized shoe factory your incompetency is established as far as shoemaking goes.

The most competent person I have known or of whom I have read was the pioneer grandmother. She could supply more of the common wants of life than any of her descendants.

The most competent person today is the housewife who does her own work.

You may say that the expert bookkeeper is a more competent person than the jack-of-all-trades. That depends. If the jack-of-all-trades merely putters and does not accomplish anything definite in supplying the wants of life, then he is an incompetent. But if he can supply many of his wants and those of his family through his own labor, then he is a competent person and his character bears out a broader individuality and he is more of a man than the highest specialist in the land who confines his labors to his specialty.

The man who has acquired the art of walking is a more competent man than he who has never acquired the art of walking because he is carried whither he wishes to go.

A degeneracy has come over our language when we use the word competency in the sense of having a monetary income which will supply the needed wants of a man and his family. There is also a certain degeneracy which has overtaken our highest specialists. While they have ascended the heights and have given invaluable aid to civilized life, just so far as they have confined their attention to that specialism have they lost that wholesome character which marks the competent man or the competent woman.

In fact, it remains that common people may become competent in a larger degree than uncommon people. The mechanic who supplements the routine of his daily life by fixing up things around his home, by cultivating a garden, by milking a cow, or doing some of those things which go to make life more livable, is a far more competent man than he who is able to hire all these things done for him.

At the same time I am ready to admit that the progress of civilization demands the progress of specialism, and yet civilization itself has its drawbacks.

E A S

Christmas Gifts

Inexpensive and Easy to Make

By H. A. LYNAN.

Bean Bags for Christmas Tree.—Some crochet bean bags may be easily made of colored crochet cotton, which can be bought at 5 cents a spool, one spool for each bag; a single stitch worked closely together is very appropriate. After filling the bags may be closed with a crochet needle.

A Book Without Cost.—A pretty Christmas gift may be made by taking the leaves containing a continued story from any magazine. Make covers of pasteboard covered with colored paper and tie in the form of a book, with ribbon bows. This is an especially acceptable gift for an invalid, as it has so little weight and with more durable covers it is very attractive.

A Scrapbook.—Save all the paper slips that come in packages of any description, to make little booklets. These when tied together at the top are fine for pasting in little pictures, poems or columns of jokes. Have a picture pasted on the top.

Any Child Can Make This Gift.—Put some earth or sand in a shallow dish and just cover it with water. Buy rice seed or, better, get a pound of cheap rice at a grocery and pick out the black unhulled seeds. Plant the latter in the mud, and keep the dirt wet. The rice will grow into a plant which closes its leaves at night and opens them in the daylight. Children love to watch the development of such things, and the care required, while not exacting, is enough to make the gift a labor of love.

A Home-made Game.—Get half a dozen cork stoppers and gild them. Into one end of each push the pointed half of a medium-sized sewing needle, so that it will stick out one-half an inch; into the other end stick a short feather, cut arrowhead shape. Try throwing the darts into a soft piece of wood, altering them if necessary, till they are balanced, next make a bull's eye by drawing circles on a soft board and numbering them from 10 in the center to 8 on the outside. Make a chalk mark on the floor, and have the players stand inside that to throw, then proceed exactly as if shooting at a mark, each using three or six continuous shots. Make the game as long as you wish, the highest score in so many shots winning. Boys and girls enjoy these at Christmas time.

An Attractive Bureau Cover.—Make it of dotted Swiss, with dots as large as a dime, two or three inches apart. On the under side make petals of shadow embroidery for each dot, and on the right side work the dot over in yellow. The result will be a scarf of field daisies.

An Autograph Guest Book.—Use a pretty blankbook and decorate it in any individual fashion, have a pencil attached. It will be a very acceptable gift from a girl to her mother. As years go by such a book will become interesting and valuable.

Pretty Baskets at Low Price.—Buy small baskets for 5 or 10 cents. Fill with dainties, such as shelled nuts, figs, dates, raisins and candies. In the larger ones a glass of jelly may be placed, as well as fruit. Tie up with bright ribbons, with a pretty card attached. These baskets make lovely gifts for old people, invalids or children.

For the Christmas Fireside.—This is a most appropriate gift, a bag of pine cones, a part of the supply which many people have already collected for their own use. Make a bag of red material, one yard long. Make a heading of two inches and stitch a spare one inch wide for double drawstrings of grosgrain ribbon or similar material. Fill the bag with cones, draw the strings tight and send it, with warm wishes for a bright Christmas.

From the City.—The city friend who has enjoyed the hospitality of country people in the summer may send for Christmas a most acceptable box filled with little things picked up in the city shops, odds and ends that are never seen in the country. Many may be suitable for table use.

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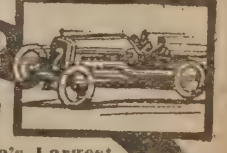
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High Points in News of the Week

The measure proposing a government ship subsidy to assist in placing the American merchant marine in position to adequately compete with foreign ship owners was taken up in the extra session of congress which convened last week. The measure is being bitterly opposed by a considerable number of congressmen and senators. It is likewise being urged vigorously by others. In his official message to the extra session of congress President Harding went on record again strongly favoring the early enactment of this measure. The greater portion of the president's message was given over to argument in favor of its passage. He urged protection of American commerce throughout the world and urged upon congress the necessity of enacting legislation in behalf of agriculture, which he acknowledged to be the greatest victim of deflation following the inflation of the war period.

Friends of the proposed ship subsidy bill point out the fact that foreign shippers are anxious to see it defeated. They declare that foreign shippers realize that if American shipping is built up as this measure proposes it should be their own profits will be reduced. A cablegram from London last week declared that news from America indicating a possible defeat of the ship subsidy measure had caused stock quotations in the various British shipping companies to rise several points.

* * *

Former Premier Clemenceau of France is meeting with both sympathy and opposition in this country on his present visit. Last week he stated that a leading factor in bringing him here was a desire to induce the United States if possible to send an official delegation to the present Near East conference that is meeting in Switzerland for the discussion of plans of settlement between the allies and Turkey. He declared that there was close relationship between the Turkish uprising and the movement on the part of the monarchic element in Germany for a restoration of their power. He declares that Germany can not be trusted and that France is only endeavoring to protect herself and the rest of Europe against future conflict. Those who criticize the former premier declare that he is largely responsible for the distressful condition now existing in Europe in that he virtually forced upon both Germany and the allies the peace treaty following the war, which they declare is impossible of fulfillment.

* * *

President Harding's cabinet last week devoted an entire session to the discussion of ways and means of more effective enforcement of the prohibition laws.

* * *

M. R. Marshall, secretary of the National Wool Growers' association, last week declared that the entire 1922 wool crop had been marketed. He credited better prices and prospects for good prices throughout 1923 to the emergency tariff measure and to the recently enacted permanent tariff bill.

* * *

The United States department of justice has filed suit for the collection of more than $20,000,000 from the contractors who built four of the leading military camps during the war. The suit was based upon alleged fraudulent dealing on the part of the contractors. A considerable number of similar suits are pending and it is estimated by the department of justice that between $70,000,000 and $80,000,000 should be collected from contractors who are alleged to have committeed frauds.

* * *

Officials in a number of states have recently announced their intention of endeavoring to secure legislation against the Ku Klux Klan. New York is one of the states planning legislation of this kind. A proposed bill in that state would require all secret and fraternal societies, including the Ku Klux Klan, to file complete lists of their memberships with the secretary of state.

* * *

The several railroad labor organizations and the American Federation of Labor are consolidating the charges which are being prepared for submission in proposed impeachment proceedings against United States Attorney General Daugherty. The attempt to impeach Mr. Daugherty is based upon his action two months ago in securing an injunction preventing railroad strikers in any way interfering with railroad transportation.

* * *

Closer coordination and reduction in overhead expense are among the objects to be obtained through the proposed consolidation of the Great Northern, the Northern Pacific and the Burlington railroads, according to high officials of these companies who are seeking the consolidation. The hearing for the proposed consolidation will be held by the interstate commerce commission.

* * *

At a conference between President Harding and United States Senator Watson of Indiana last week the problem of aiding the farmer was taken up in detail. Senator Watson told the president that credit would be only palliative and not actually remedial if the producer must continue to produce crops and live stock and sell them at prices little above, if not actually below, cost of production. The senator declared that the spread between the producer and the consumer was unwarrantedly high and that he believed the way to remedy the evil was to enact a measure that would require that all profit all along the line be exposed to public knowledge so that an aroused public opinion would drive extortioners out of business or compel them to sell at reasonable profits.

* * *

A hearing is expected to begin in the lower house of congress December 6 on the Columbia basin bill, which passed the senate just before the recent adjournment. The measure would appropriate $100,000 for a government survey of the proposed project.

* * *

President Harding has decided to continue United States control of coal distribution at least until January 1. The purpose of this federal control is to cause the available supply of coal to be so distributed as to serve industry in general and at the same time permit as much coal as possible to be used as family fuel.

* * *

An effort is being made to have the United States supreme court rule immediately upon the constitutionality of the grain futures act. Enforcement of this act against the Chicago Board of Trade and a few other similar exchanges has been postponed on order of the district court, pending the hearing as to the constitutionality of the act by the supreme court.

* * *

The official bill setting up the constitution of the Irish Free State has been published in England, thus completing the technical process of placing Ireland upon a basis similar to that of Canada with reference to the mother country.

* * *

A movement has been started looking toward the even production and even distribution of coal throughout the entire year as a means of stabilizing the industry and somewhat regulating the cost of fuel.

* * *

Fred H. Bixby of Long Beach, Cal., president of the American National Live Stock association, at an informal hearing last week by members of the house banking committee, urged favorable action on the Capper bill, providing for long-time payments of cattle paper.

* * *

The supreme court of the United States recently upheld the validity of legislation and city ordinances which compel the vaccination of children against diseases as a school entrance requirement.

The decision was handed down in the case of Rosalyn Zucht, a high school girl of San Antonio, Texas, who had sued the health authorities of that city for damages because it barred her from school, following her refusal to submit to vaccination. The case attracted nation-wide attention.

The girl challenged the validity of the city ordinance and carried her appeal to the supreme court. The decision was deemed of importance to thousands of communities which have similar ordinances.

The supreme court denied her claim for damages and declared the ordinance legal.

To Measure Hay in Stack

By E. G. SCHAFER,

I would like to know how many tons there are in a stack of hay 60 feet long, 3 feet above the ground, 14 feet wide and 32 feet over the stack. Mixed timothy and alfalfa settled in stack. N. J. J.

When it is impossible to determine the actual amount of hay in a stack by weight, the amount is sometimes estimated from measurements. A common rule for measuring hay is known as the Frye-Bruhm rule in which the width, length and over measurements are used. The "over" is the distance from the ground on one side over the stack to the ground on the other. The width is subtracted from the over, the result divided by two then multiplied by the width, and the product multiplied by the length. This result will be the approximate number of cubic feet in the stack, and is divided by 512 to obtain the number of tons.

Another rule sometimes used is "width plus over, divided by 4 and squared, then multiplied by the length and divided by 512." A smaller number of cubic feet are required to make a ton in a large stack than a small one, and one that has completely settled weighs heavier for a given volume than a new stack. The character of hay may also be a factor.

The stack for which the measurements were given according to the first rule would have 7560 cubic feet. This figure was obtained by the following rule in this manner:

32 minus 14 divided by 2 times 14 times 60 equals 7560. This amount divided by 512 gives 14.8 tons. The number of cubic feet obtained as the use of the second method is 7935 and was calculated as follows:

14 plus 32 divided by 4 equals 11.5. 11.5 times 11.5 times 60 equals 7935.

This amount divided by 512 gives 15.5 tons. If it is desired to divide the stack in definite quantities more trustworthy results may be secured by dividing it vertically than horizontally.

IS THE HINGE RUSTY?

Don't break a good hinge by using it while rusty. Oil it.

Fruit Shipments Are Far Behind

Only a continuation of the present mild weather will save the apple growers of the Wenatchee district from a further loss from freezing. To date 5700 cars of apples have been shipped out of about 12,700 cars, leaving 7000 cars. There is cold and common storage available for about 6000 cars, including temporary arrangements that have been made. Corresponding conditions are understood to exist in the Yakima valley.

There were left in the Wenatchee district 1000 cars on November 20 and shipments were averaging about 100 cars daily. Even adequate storage would not prevent further loss from deterioration on the part of apples that should be on the market in the east now.

Last year over 10,000 cars of apples had been shipped by November 25, compared with less than 6000 this year. While many cars of all kinds are reported to have been ordered turned over to the Great Northern and other northwestern roads, few of them have been getting through to Wenatchee. About 125 cars daily are being turned over to the Great Northern at Minnesota transfer, but receipts at Wenatchee have been running less than 100. The balance are probably used for loading potatoes or other products on the way out.

There are still about 3000 cars of apples that should be moved east before January 1 in the Wenatchee district in order to market them to the best advantage. About 1000 cars of these will probably never be shipped on account of poor condition. The other 2000 cars will be moved if cars can be obtained, provided the weather does not turn too cold.

It is said that claims for damages are being prepared against the Great Northern by many shippers in the district. Some of these are based on damage to fruit in transit; other are caused by failure to furnish cars for fruit ready for shipment. Shippers are hearing daily from eastern receivers as to apples arriving there in poor condition, and in many cases these apples left Wenatchee in good shape, according to railroad inspection reports.

Refrigerator car trains that usually made the Twin Cities in six days are now taking from 11 to 17 days, which accounts for some damage to fruit in transit.

Farm Business and Markets Outlook

(Continued from page five.)

soft white, November, December, $1.24; January, $1.22; western white, November, December, $1.23; January, $1.21; hard winter, northern spring, November, December, January, $1.16½; western red, November, December, January, $1.12½.

Oats—38-pound naturals, November, December, January, $36.

Corn—No. 2 eastern yellow, shipment November, $34.75; December, $33.25; January, $32.75; No. 3 do November, $33.25; December, $32.75; January, $32.50.

SEATTLE, Nov. 25.—Wheat—Hard white, $1.25; soft white, western white, $1.24; hard red winter, soft red winter, northern spring, $1.20; red, $1.18; Big Bend Bluestem, $1.60.

Yesterday's car receipts: Wheat, 22; hay, 3; flour, 7.

PULLMAN, Wash., Nov. 25.—Red, 94c; white, 97c.

RITZVILLE, Wash., Nov. 25.—Bart, $1.43; red, $1.09; Fife, $1.05.

DAYTON, Wash., Nov. 25.—Club, $1.05; red, $1.02.

DAVENPORT, Wash., Nov. 25.—Bluestem, $1.30; Marquis, $1.06; Gold Coin, $1.06.

WALLA WALLA, Nov. 25.—Bluestem and Bart, $1.07; club, $1.06; Turkey Red, $1.02.

ODESSA, Wash., Nov. 25.—Bluestem and Bart, $1.42; Marquis, $1.10; Turkey Red, $1.04; Jones Fife, $1.04.

Hay and Feed Grain.

PORTLAND, Ore., Nov. 25.—Millfeed—Price f. o. b. mill; Mill run, ton lots, $35; middlings, $47; rolled barley, $41@43; rolled oats, $44; scratch feed, $46 per ton.

Corn—White, $41; cracked, $43 per ton.

Hay—Buying price f. o. b. Portland. Alfalfa, $19@19.50 per ton; cheat, $19@19.50; oats and vetch, $22; clover, $19; valley timothy, $22; eastern Oregon timothy, $23.

SPOKANE, Nov. 25.—Alfalfa, $23 ton; timothy, $26 ton; mixed hay, $24 ton. Wheat—Feed wheat, $44 ton. Oats—$42 per ton; steam rolled, $44. Corn—$42 per ton; cracked corn, $44 ton. Barley—$42; steam rolled, $44. Bran—$33 ton. Bran and shorts—$34 ton. Mill run—$34 ton. Shorts—$36 ton.

General Produce.

PORTLAND, Ore., Nov. 25.—Butter—Cubes, extras, 45c pound; prints, parchment wrapped, box lots, 48c; cartons, 49c. Butterfat, 49c delivered Portland; station buying price, A grade, 46@48c.

Eggs—Buying price: Current receipts loss off, 48c; henneries, 52c dozen. Jobbing prices: Front street, candled ranch, 55@56c; selects, 57@58c; association selects, 60c; association firsts, 58c; association pullets, 45c.

Cheese—Tillamook triplets, price to jobbers, f. o. b. Tillamook, 30c; Young Americas, 31c; longhorns, 31c pound.

Poultry—Hens, 13@23c lb.; springs, 17@20c; ducks, white, 18@20c; geese, 18c; turkeys, live, 27@28c; dressed, choice, 38c.

Veal—Fancy, 12@12½c per pound.

Pork—Fancy, 12½@13c per pound.

SEATTLE, Nov. 25.—Eggs—Select local ranch, white shells, cases included, 50c per dozen; mixed colors, 48c per dozen; pullets, 27c per dozen; cases returned to shippers, 1c less.

Butterfat—F. o. b. Seattle: A grade, 59c per lb.; raw milk, $2.20 per cwt.

Poultry—Hens, 4½ lbs. and up, 23c per lb.; over 3½ and under 4½ lbs., 17c per lb.; 3 to 3½ lbs., 14c per lb.; do dry picked, 2c above live; springs 2 lbs. and heavier, 19c per lb.; broilers, under 2 lbs., 24c per lb.; capons, live, fat, 6 to 10 lbs., 30c per lb.; do dry picked, fancy, 33c per lb.; old roosters, 11c per lb.; Belgian hares, 3½ lbs. and heavier, 10@11c per lb.; geese, fat, live, 19c per lb.; ducks, 3 lbs. and heavier, live, 20c per lb.; turkeys, fat, dry picked, 8 to 15 lbs., 35@40c per lb.; do live, fat, 8 to 15 lbs., 32c per lb.; squabs, large, $4.50 per dozen; pigeons, $2; guineas, $8 per dozen.

SPOKANE, Nov. 25.—Poultry, live weights—Hens, 4 lbs. and over, 17c; light hens, under 4 lbs., 12c; springs, 16c; old roosters, 8c; ducks, 15c; geese, 15c; turkeys, dressed, 38@40c.

Fresh ranch eggs—$10.50 to $12 case, according to quality.

Butterfat—46c a pound.











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"Hey, mister, this cheese sandwich."

"Smatter with it?"

"The gasket is too thin."—Farm Life.

The Kind He Was.

"For a spiritualist, that chap is the most complete joy-killer I ever knew."

'Ah hah! Sort of a pessi-mystic, eh?"—Farm Life.

Get the Money—and Save It.

"Every man ought to save up enough money to buy a farm and get back to the land," shouted the orator with a mission.

"Yes, and then do something else with the money," remarked a sad-faced farmer in the audience.—Orchard and Farm.

Pork Barrel Politics?

"Mrs. Jones, kin Johnny go with us to see Elihu root?"

"Why, I didn't know he was to be in town."

"Whatcha mean, in town! Elihu's our big red hawg!"—Orchard and Farm.

A Queen's English.

Mrs. Stevens had offered liberal wages and privileges, but still the general housework seemed a little undecided about coming. 'Do you do your own stretchin'?" she asked suddenly.

"Do we do our own what?" Mrs. Stevens asked, puzzled.

"Stretchin'," repeated the woman. "Do you put all the food on the table and stretch for it yourself, or do I have to shuffle it around to you?"—Successful Farming.

His Busy Day.

He—You know I love you; will you marry me?

She—But, my dear boy, I refused you only a week ago.

He—Oh, was that you?—Orchard and Farm.

It Belonged to Kitty.

"Oh, mother!" cried youthful Mildred. "I found a little flea on kitty and I caught it!"

"What did you do with it?" asked mother.

"Why, I put it back on kitty again, of course. It was her flea."

What Baby Inherited.

"Ah!" admiringly said the visitor. "The baby is talking at an unusually early age, isn't he?"

"Eh-yah!" replied the gaunt mountaineer. "He took that from me, and the commanding tone in which he does so from his maw."—Country Gentleman.

A Soft Job.

"Yes," remarked Ben Gonnadooit, yawning. "When I was with the railroad company I had the best job I've ever held. I wish I had it now."

"And what was that?"

"I was assistant to the man who taps the wheels of the cars to see if they are all right. I helped him listen."—Orchard and Farm.

Your Health

By Royal S. Copeland, M. D., F. A. C. S.

Perhaps the most common ailment of the human family is imperfect bowel action. Many persons are constipated from earliest life to the end of their careers This is particularly true of those who are engaged in sedentary pursuits.



Dr. Copeland.

The chief reason why office people workers, and practically all indoor workers are constipated is because their muscular tone is below normal.

It must be remembered that the walls of the stomach and intestines are made up largely of muscle tissue. It is unreasonable to expect these abdominal organs to function if the general muscular action is defective.

The surest preventive of constipation is the possession of such general muscular vigor as to insure proper stomach and intestinal activity.

To correct long-standing disability of this sort, first attention should be given the general soundness and robustness of the body. Unless you are whole and hearty, elastic and vigorous in your voluntary muscles, you can not expect the muscles of your heart and digestive organs to show great power.

When you study your body functions and use common sense regarding them, you will have a better time and increase your chance of long life.

As applies to the relief of constipation, this means that you will not trust to castor oil, salts, enemas and the various drugging methods which can not be curative, but which merely drive or force the bowel to discharge its contents. You will seek to improve the general tone of your body. You will live such a life of activity as to build up your physical force.

The first consideration in constipation is the restoration of general muscular vigor. There are a few measures which really assist, and many which give temporary relief, but no cure is to be expected until the muscular tissues of the whole body are normal in tone and quality.

Latest High Class Patterns for the Home

Please order the patterns you desire at least two or three weeks before you wish to use them. Desiring to obtain the latest high-class patterns for its readers, THE FARMER has made arrangements to have them sent direct from the east, and under present mailing conditions it takes about that time for them to reach you.



3714. Girl's coat. Cut in four sizes: 6, 8, 10 and 12 years. A 10-year size will require 2 5-8 yards of 46-inch material. Price 10 cents.

4177. Ladies' dress. Cut in seven sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. A 38-inch size requires 5 5-8 yards of 40-inch material. The width at the foot is 2 1-8 yards. Price 10 cents.

4187. Girl's dress. Cut in four sizes: 6, 8, 10 and 12 years. A 10-year size requires 2 3-4 yards of 44-inch material. Price 10 cents.

3917. Girl's dress. Cut in four sizes: 8, 10, 12 and 14 years. A 12-year size will require three yards of 40-inch material. Price 10 cents.

4181. Misses' dress. Cut in three sizes: 16, 18 and 20 years. An 18-year size requires 4 3-8 yards of 40-inch material. The width at the foot of the skirt is 2 1-8 yards. Price 10 cents.

4193. Ladies' apron. Cut in four sizes: Small, 34-36; medium, 38-40; large, 42-44; extra large, 46-48 inches bust measure. A medium size requires 4 1-2 yards of 36-inch material. Price 10 cents.

3656. Ladies' house dress. Cut in seven sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. A 38-inch size will require five yards of 36-inch material. The width of the skirt at the foot is two yards. Price 10 cents.

3693. Child's rompers. Cut in four sizes: 2, 4, 6 and 8 years. A 4-year size requires 2 1-4 yards of 27-inch material. Price 10 cents.

3820. Junior's dress. Cut in three sizes: 12, 14 and 16 years. A 14-year size requires 3 1-4 yards of 36-inch material. Price 10 cents.

4144. A dainty sack. Cut in four sizes: Small, 34-36; medium, 38-40; large, 42-44; extra large, 46-48 inches bust measure. A medium size requires 1 5-8 yards of 32-inch material. Price 10 cents.

4067. Ladies' under garment. Cut in four sizes: Small, 34-36; medium, 38-40; large, 42-44; extra large, 46-48 inches bust measure. A medium size requires 3 3-8 yards of 27-inch material. Price 10 cents.

4196. A new doll set. Pattern comprising the doll and garments is cut in three sizes: Small, 12 inches; medium, 16 inches; large, 20 inches in length. The doll requires for a medium size one-half yard. The rompers seven-eighths. The suit and hat, 1 1-4 yard of 27-inch material. Price 10 cents.

Fashion Book Notice.

Send 12 cents in silver or stamps for our up-to-date fall and winter 1922-1923 book of fashions, showing color plates and containing 500 designs of ladies', misses' and children's patterns, a concise and comprehensive article on dressmaking, also some points for the needle (illustrating 30 of the various, simple stitches), all valuable hints to the home dressmaker.

Please fill in this order and mail with remittance to:

PATTERN DEPT., PACIFIC NORTHWEST FARM TRIO, Spokane, Wash.

Enclosed find.....cents for which send me the following:

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Pattern .....Size..... Pattern No.....Size.....

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R. F. D..... Box No..... St. No.....

Be sure to give the pattern number and the correct size.

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to improve the body tone and increase the powers of resistance. *If you are troubled with a cough, build up strength — take Scott's Emulsion regularly!*

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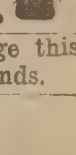
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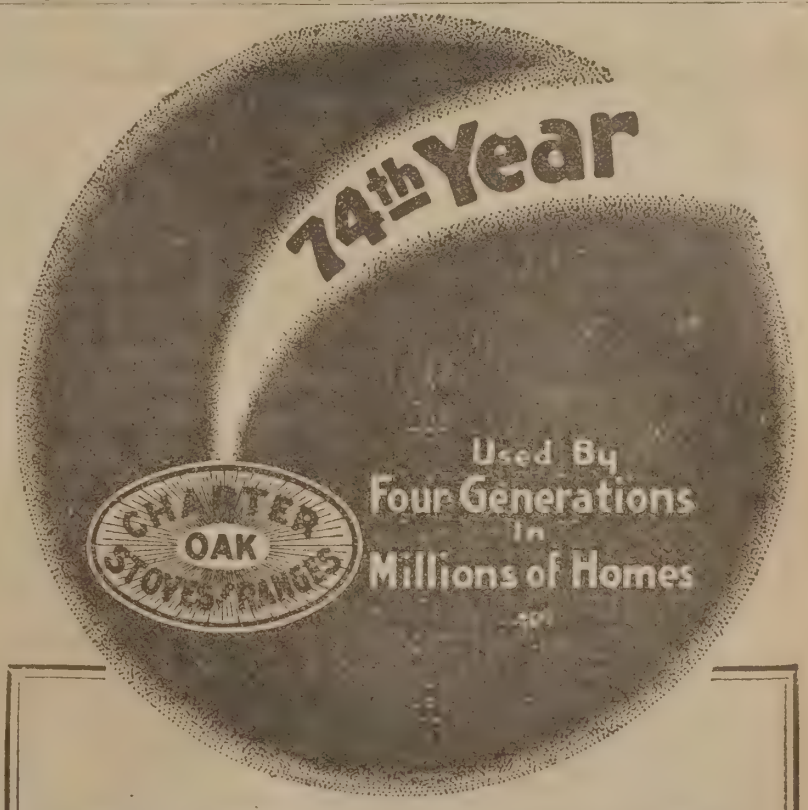
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This is our first letter from Selma Paananen, a west Washington girl. Selma's birthday is October 28. She is 10. At school Selma is in the fourth grade. She has five sisters and one brother.

Nellie Thompson says she attends school two miles from her home with her brothers. She is a fifth grade student. Nellie is 10 years old, is four feet seven and a half inches tall and has blue eyes. She lives near White river in western Washington. Her birthday is March 13.

In a program Halloween Zelma Graham played the part of a fairy. She was dressed in pink crepe with silver tinsel trimmings and big white wings. She had her picture taken in her fairy dress. Zelma belongs to a club called the "Jolly Club." She says they try to live up to the name of their club. Soon they will commence sewing on their Christmas presents. Zelma is a Lincoln county (Wash.) cousin.

"We have fun at school. We have a merry-go-round and a bag swing," writes Sylvester Bear. Sylvester is 9 years old. July 23 is his birthday. Sylvester lives in northern Washington. He has a baby sister three months old with blue eyes and black hair. Baby's name is Vera.

Clarence Bear is 5 years old and he is in the first grade at school. There are three pupils in his class. Clarence has a dog named Fido and three kittens for pets. This is his first letter. Clarence has four sisters and four brothers. His home is in northern Washington, Okanogan county.

A new cousin in Stevens county (Wash.) is Virginia Weldert. Virginia is 9 years old. She did not know anything about the Corner until her friend Viola told her about it. She and Viola ride horseback two and a half miles to school every day. Her birthday is March 10. (Write to us again, Virginia.)

Marjorie Priscilla Cruson is a new cousin who lives on a farm near Case Inlet, in Mason county, Washington. Marjorie has a little colt named June. There are also two horses, three cows and some pigs and geese on the Cruson ranch. Marjorie is 10 years old. Her birthday is May 24.

Winnifred Goodard lives in the country in Thurston county, Washington, near a little town. Her papa owns a sawmill there. Winnifred thinks the Junior Farmer is the nicest paper she ever read. (Tell your cousin to write to Aunt Nellie, Winnifred.)

LETTERS WELCOMED BY AUNT NELLIE.

Among recent letters received by Aunt Nellie are those from cousins whose names follow. A few of these will be published each week in the regular edition of THE FARMER and others will appear from time to time in The Junior Farmer:

Edna Shaw, Ida May Rozelle, Alice Coons, Marjorie Priscilla Cruson, Winifred Goodard, Sylvester Bear, Clarence Bear, Doris Harrel, Selma Paananen, Nellie Thompson, Zelma Graham, Verna Ferch, Leda Ruby Harrel, Kathryne Buckley, Edna Johnson, Leo Kunty, Oscar Kunty, Florence Boner, Herbert Boeck, Jean Lockwood, Marcus Ruth, Alice Pratt, Frances Chudek, Alvin Eshelman, Beatrice Warfield, Ferne Daugherty, Roger Stone, Oren Hyrkas, Marie Kirshner, Edna Van Aalsburg, Pauline Weis, Marion Ruth Hamilton, Amanda Nickel, Albert Barraford, Esther Jeske, Harriet Kruse, Violet May Clark, Sophia Philugrath, Emma Jeske, Orla Kirchner, Calvert P. Baker, Alvena Walter, Clara Hyrkas.

BEDTIME STORIES

By THORNTON W. BURGESS.

DIGGER SHAMES JOHNNY CHUCK.

Johnny Chuck had been in the sulks for days and days and days. He was too cross to be spoken to. No one knew what to make of it, for Johnny Chuck is usually the happiest and best matured little fellow in the world. The fact is Johnny Chuck was jealous. He was jealous of Digger the Badger because Digger could make a hole in the ground faster than he could.

So Johnny Chuck sat on his doorstep and sulked until all his friends and neighbors went out of their way to keep from going by his house. Now, all this time Old Man Badger, who is called Digger, had been so busy in his new home on the Green Meadows that he had not had time to call on Johnny Chuck, and he had not heard a word about the way Johnny Chuck was feeling. Then one day Digger found he had a little time with nothing to do.

"I'll just go call on Johnny Chuck and take him a bundle of tender, young cabbage leaves from Farmer Brown's garden," said he to himself. So he hurried over to Farmer Brown's garden and picked out the niecest, tenderest young cabbage leaves that he could find. He rolled them up in a bundle and tucked them under one arm, and off he started up the Lone Little Path.

When he came in sight of Johnny Chuck's house, Johnny Chuck was sitting on his doorstep looking as if he had lost his last friend. He was so busy thinking mean, jealous thoughts that he did not see his visitor approaching.

"Good afternoon, Johnny Chuck," said Digger as he took his hat off and fanned himself.



"Good afternoon, Johnny Chuck," said Digger as he took off his hat.

Johnny Chuck just grunted, for Digger the Badger was the last one in the world that he wanted to see.

"I haven't forgotten how nice you were to me when I first arrived on the Green Meadows," said Digger. "This afternoon I was going by Farmer Brown's garden and I saw some delicious tender young cabbage. It looked to me just as if it was grown especially for some one I know by the name of Johnny Chuck, so I brought an armful along."

Johnny Chuck felt his mouth begin to water. He could smell that young cabbage, and in spite of himself his little black nose would keep wrinkling. It was hard work, oh, dreadfully hard work, to keep sulky and cross and jealous with the smell of that young cabbage tickling his nose.

"I don't believe I care for young cabbage," said Johnny Chuck, and all the time he knew that he was telling a story.

Digger the Badger looked at Johnny Chuck out of his shrewd little eyes.

"It's a fine afternoon for a walk," said he, "and I must be moving along. I hope you'll come down and see my new house pretty soon, Johnny Chuck."

And with that Digger the Badger put on his hat and started off down the Lone Little Path. Johnny Chuck watched him go, then he looked at the bundle of tender young cabbage left behind, and in spite of himself he smiled, and with that first smile away melted all Johnny Chuck's sulkiness and ill humor.

(Copyrighted by T. W. Burgess.)

Birthday Greetings

THURSDAY, November 30—Edith Bar 11 years old; Cora E. Brown, 8; Fran Dick, 11; Virona Johnson, 11; The Miller, 8; Ward Teel, 9.

FRIDAY, December 1—Josie Perett years old; Anna Bergh, 11.

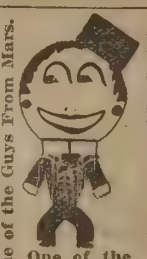
SATURDAY, December 2—Lettie Cha 11 years old; Mildred Meyers, 8; Fran Worth, 10.

SUNDAY, December 3—Velma Mc gomery, 11 years old; Louise Ross, 9.

MONDAY, December 4—Mayme Arn 8 years old; Marjorie Fike, 10; Eu Knight, 11.

TUESDAY, December 5—Rosemary Amburgh, 8 years old.

WEDNESDAY, December 6—Kathl Dearing, 11 years old; Myrtle Dick, 9; A Jensen, 10; Walter Johnson, 11; Se Long, 11.

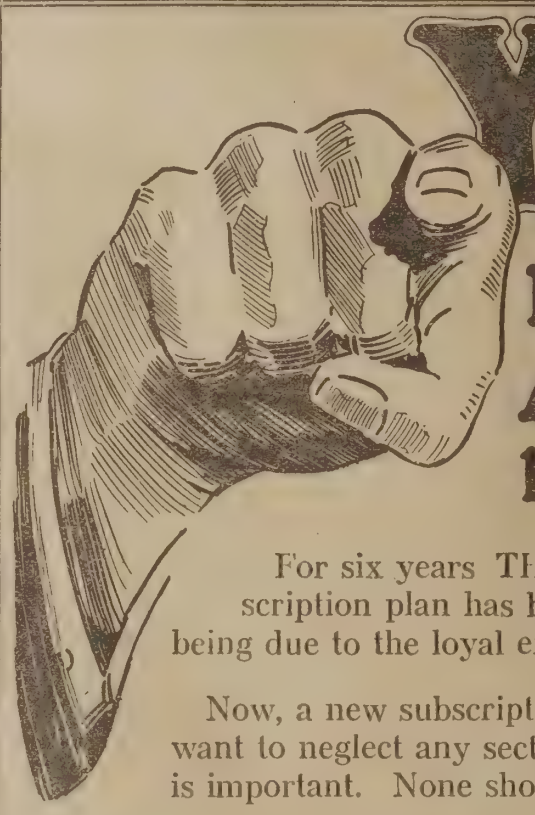


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Please let us hear from you soon.

Nov. 30, 1922.

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If your subscription is already paid in advance, it will be extended from the date to which it is paid.

Pike's Peak or Bust

(Continued from page fourteen.)

miners ceased work and approached the bank.

"What do you mean, Jeff?" demanded Sanders.

"I mean what I say! We're just six corpses! That's all we are!"

"Jeff, you must be out of your head," protested Holloway. "We're pretty lively corpses, seems to me."

"But how long—how long will we be lively? Right over that mountain are 10,000 redskins!"

"Ten thousand You're wild, Jeff! Couldn't be as many as that!" exclaimed Cooper.

"Well, there's a great army of 'em. I didn't count 'em. Never saw such a big camp of red folks before! Thousands and thousands of 'em!"

"You're excited, Jeff," Holloway told him. "Are you sure that what you saw was really Indians?"

"As sure as I am that I'm alive If you doubt it, go up and see for yourself!"

"That's just what I'm expecting to do."

"I'll go with you," announced Cooper.

They started at once, and Orlando accompanied them, all carrying their guns. The three in camp examined their weapons, then dropped down on the grass to rest while they waited.

And not long did they have to wait. In a very brief time the three spies returned

"Jeff was about right, after all," Cooper reported. "Down yonder, two or three miles away, is what appears to be a small river. And in the valley, along the banks of that river, is a big Indian town. At a rough guess, there must be five or six hundred wigwams in it. And it's swarming with wild people."

"Swarming like an ant hill," agreed Holloway. "We could see 'em moving about. How they've failed to discover us all this time is a mystery."

"We've been as still as paterges here since we set in to diggin'," suggested Esau.

"To me the wonder is that they haven't noticed our smoke—our campfire smoke," said Orlando.

"But we've never yet made any smoke. That is, in daylight," Sanders reminded him. "Since we've stopped here all our cooking has been done before day in the morning and after dark at night."

"Right you are, Abe! And that accounts for the fact that—that our scalps are still on our heads,' 'said Holloway.

"And what are we going to do now?" demanded Esau.

"Do! Are you out of your head, man, to ask such a question?" exclaimed Givens, impatiently. "Only one thing we can do! And that's to hustle out of this redskin-poisoned country as fast as we can hoof it! I wouldn't give my life for all the gold in the Rocky mountains! Precious little good gold will do us after we're dead and scalped!"

"That's exactly right," Cooper said. "This is no place for a little party like ours. We can't slide out of this country too quick to please me."

"But who knows? Maybe those Indians are friendly," argued Orlando. He was greatly worried over leaving the only place where he had ever been able to earn much money.

It was Givens that answered: "Anybody that believes they're so all-fired friendly is perfectly welcome to go down there and see. But whoever goes won't find me here when he comes back—if he ever comes back."

"It's well known that all these mountain Indians are dangerous to white people," Sanders told them. "For my part, I'm not going to run any needless risk. Ninety-nine chances out of a hundred we'll never be heard of again if we fall into the hands of those savages."

"That's my guess, every time," said Esau. "We've got to dig out of here before they discover us. If we don't, it's farewell to our scalps. Even if they didn't put an end to us because we're—we're palefaces, they'd be dead certain to tomahawk us for our gold."

"Yes. Plenty of white men would do that," declared Sanders. "That is, if they had a chance, and suspicioned how much we've got."

"Only one question, it seems to me." Esau was speaking. "Must we start now? Or had we better hide here till after dark and then try to slip away?"

"We cain't shake off the dust of this country too quick to please me," spoke out Givens. "Even if I was tired of living myself, the old woman and the little shavers back in Missouri are needing me mighty bad."

"Guess we've all got somebody needing us about now, Jeff," Holloway answered, with a grin. "And the sooner we get on the way to 'em, the better chance we'll have not to keep 'em needing us forever."

At once the whole party began to pack up, silently. And they soon had their few belongings in shape for carrying.

"How are we going to carry our pot of gold?" asked Sanders. "We won't dare take time to divide it now."

"Brindle's been resting and eating while we've been working. No reason we shouldn't stow it away in her pack, where the pot was," the cow's owner answered.

And Cooper added: "Guess she's the ablest one to carry it. But we've got to tie the lid down with buckskin strings, so's the gold won't spill out, even if the pot turns over."

When all precautions had been taken the pot was placed in the bottom of one of those big rawhide pockets, with other things packed on top of it.

"Now, boys, we've got to do some tall tramping before night overtakes us," Cooper told them. "As you all know, we're out of meat, and it won't be safe to shoot off a gun or light a fire till we're many, many miles from that Indian camp."

Promptly they all started, following up the stream. But scarcely had they got in motion when several sharp barks from Frisk caused them to halt suddenly. The dog had his gaze fixed on the top of the near mountain.

Raising their eyes, they saw, between themselves and the sky above the mountain ridge, a lone Indian. And the Indian, standing motionless as a statue, was gazing down at them!

Scarcely had the lone Indian discovered that he had been noticed by the white men, when he was seen to turn and dash furiously away. Still running toward that big encampment, he quickly disappeared.

"Worse and more of it!" exclaimed Jess.

"Now, boys, we've got to travel, and travel hard," Cooper remarked, quietly. "That red spy won't draw a breath till he lets his people know that white men are close by. It's two miles to that wigwam



And the Indian, standing there motionless as a statue was gazing down at them.

town, or maybe two and a half. That gives us four or five miles the start. It will be climbing most of the way, and these mountain Indians are used to that from childhood. They'll have the advantage of us all the time. They may follow us across the snow cap, or they may——"

"I can climb as fast as any redskin!" Esau declared.

"So can I—so can I" exclaimed Givens. "But hadn't we better cut loose from everything—packs, cow, gold and all—and run like good fellows for our lives? My life's worth more to me than everything else on earth!"

"No—no! Let's hang to what we've got!" protested Orlando. "Brindle can march with the best of us. And we can travel nearly as fast with our packs as without 'em."

"Yes, I'm for taking everything with us," Sanders said. "We can outrun the red rascals till dark. After that we'll give 'em the dodge. By morning we'll be so far away they'll have a whole lot of trouble overhauling us."

"We can do that, or try to, Abe," Cooper answered. "But there's not a minute to waste. Let's be on the move. Jess, you're pretty good at finding the way. You'd better take the lead."

(To be continued.)

News for Breeders

HOGS AT EVERETT SHOW.

The attention of The Washington Farmer has been called to omission in the report of two breeds of hogs at the recent live stock show at Everett. In the Duroc-Jerseys all the awards went to A. Turley of Munroe, except first on junior boar pig and first on pen of three junior sow pigs, which went to W. F. Sheets of Alderwood manor. In the O. I. C.'s, A. E. Jewett of Lakewood won first on aged boar and Arthur M. Wade of Marysville was awarded first on aged sow, third on junior sow and first, second and third on junior boars. W. J. Mosier won second on aged sow. In the Chester White class, Ed Hoem of Snohomish won first and second on junior sows.

SAN JUAN'S NEW JERSEY RECORD.

San Juan county reports a new Jersey record for that district with Mistletoe's Melia Ann, a mature cow that produced 11,384 pounds of milk and 706.16 pounds of butterfat in the last year. She is 11 years old and is owned by Shortly Brothers of Orcas. The cow was purchased at the Hewitt sale at Monmouth, Ore., in 1920, for a foundation cow, but her heavy production on two milkings a day warranted her being placed on official test and milked three times a day. She is the dam of Ladd's Little Pauline, a silver and gold medal cow as well as having the medal of merit for producing 941 pounds of butterfat as a 4-year-old. Lad's Lady Ann, another daughter, is a gold medal cow.

Guernseys on Baker View

B. C. and C. M. Vander Griend have named their Guernsey farm, near Lynden, the Baker View farm, since it affords an excellent view of the Cascades mountains, including Mount Baker.

The foundation stock for this herd is largely Golden Secret and May Rose breeding, while a few animals were purchased from such sources as Judge E. L. Brady of Satsop and A. J. Sinnes of Mount Vernon. One of the first shipments of Guernseys received at this farm was five calves from the A. L. Gile herd at Chinook. The entire herd consists of 20 mature cows, which are purebreds, and 10 grade animals that will eventually be replaced by registered heifers.

The senior herd sire on the Vander Griend farm is Lily's King of Pleasant Acres, who is a son of the well-known Rex of Richneck, a Wisconsin animal. Five calves from this bull were shown at the Whatcom county fair at Lynden, winning two firsts and two seconds against heavy competition. The bull was obtained as a calf from the Fruit Brothers farm in Wisconsin.

"We are registering all our young animals under the herd name, Baker View," said Vander Griend, "and we expect to keep all of the old foundation cows in as good condition as possible in order to raise calves that will have individuality and produce similar type. Practically all of the young animals are calves that we have raised ourselves, and we are well satisfied with the winnings they have made each year at the county fairs."

NEW PACIFIC COAST RECORD.

In 305 days, as a senior 4-year-old, Hollywood Lilith Palmyra Abbekirk recently produced 22,245 pounds of milk and 982.94 of butter, thereby establishing a new Pacific coast record in class for both milk and butter and the second highest for milk and butter ever made by any animal of the breed. She holds the highest record ever made in this class by any cow having twin calves, and she exceeded the production of the cow which was world champion when she started test, but in the meantime another performer excelled both. She completes three direct generations of 30-pound cows; five of her seven nearest dams have 30-pound records, and her seven nearest sires all have 30-pound sons. This remarkable producer was bred in Washington, thus adding another to the long list of Holstein prodigies from this state. She is a daughter of Hollywood Lilith Palmyra, in service two years at Hollywood farm.

CHAMPION SADDLE HORSE.

The champion saddle horse Edna May's Choice has been given to the Utah Agricultural college by Ernest R. Woolley. The sire of the animal is the famous May's Choice and Edna May's Choice is declared to hold well up in standard to its sire.

ROGNSTAND BUYS BOAR.

During the Western Royal Stock show A. N. Rognstand of Kendrick, Idaho, purchased from Lester Daly the first prize Duroc Jersey boar pig, Jacob D., to head his purebred herd. The young boar is a fine specimen of the breed.

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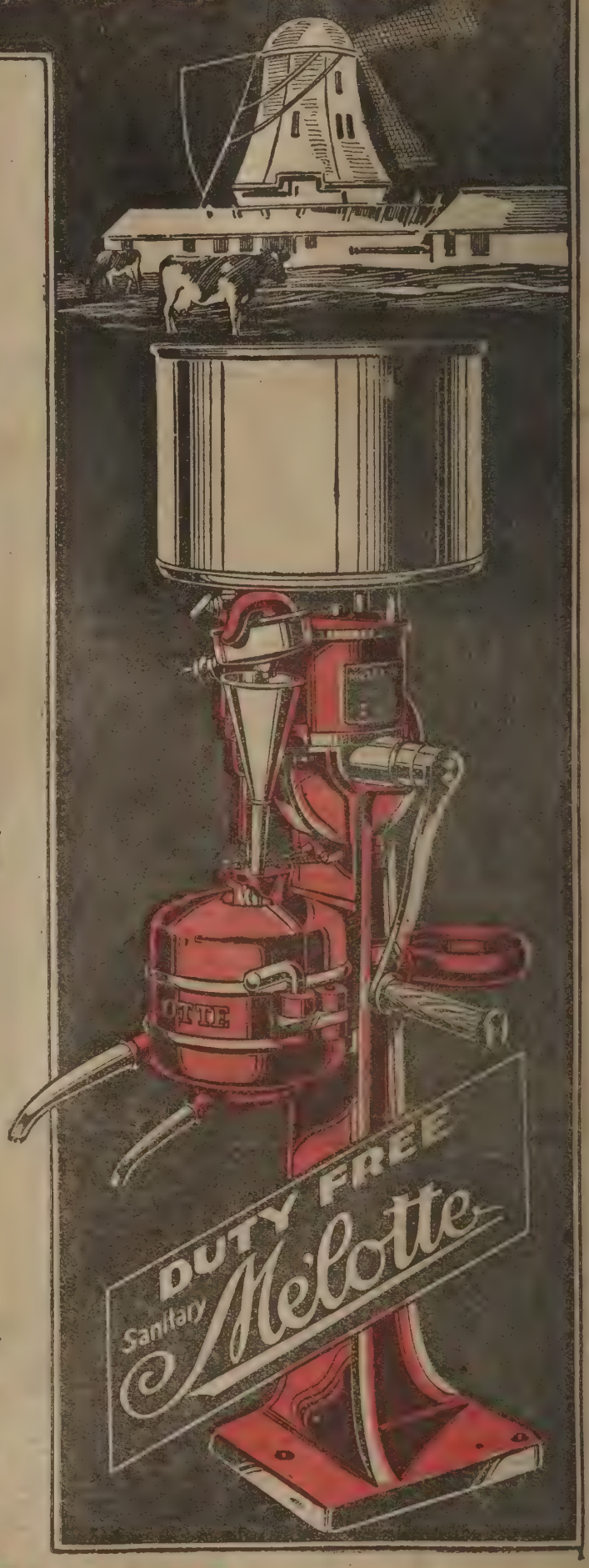
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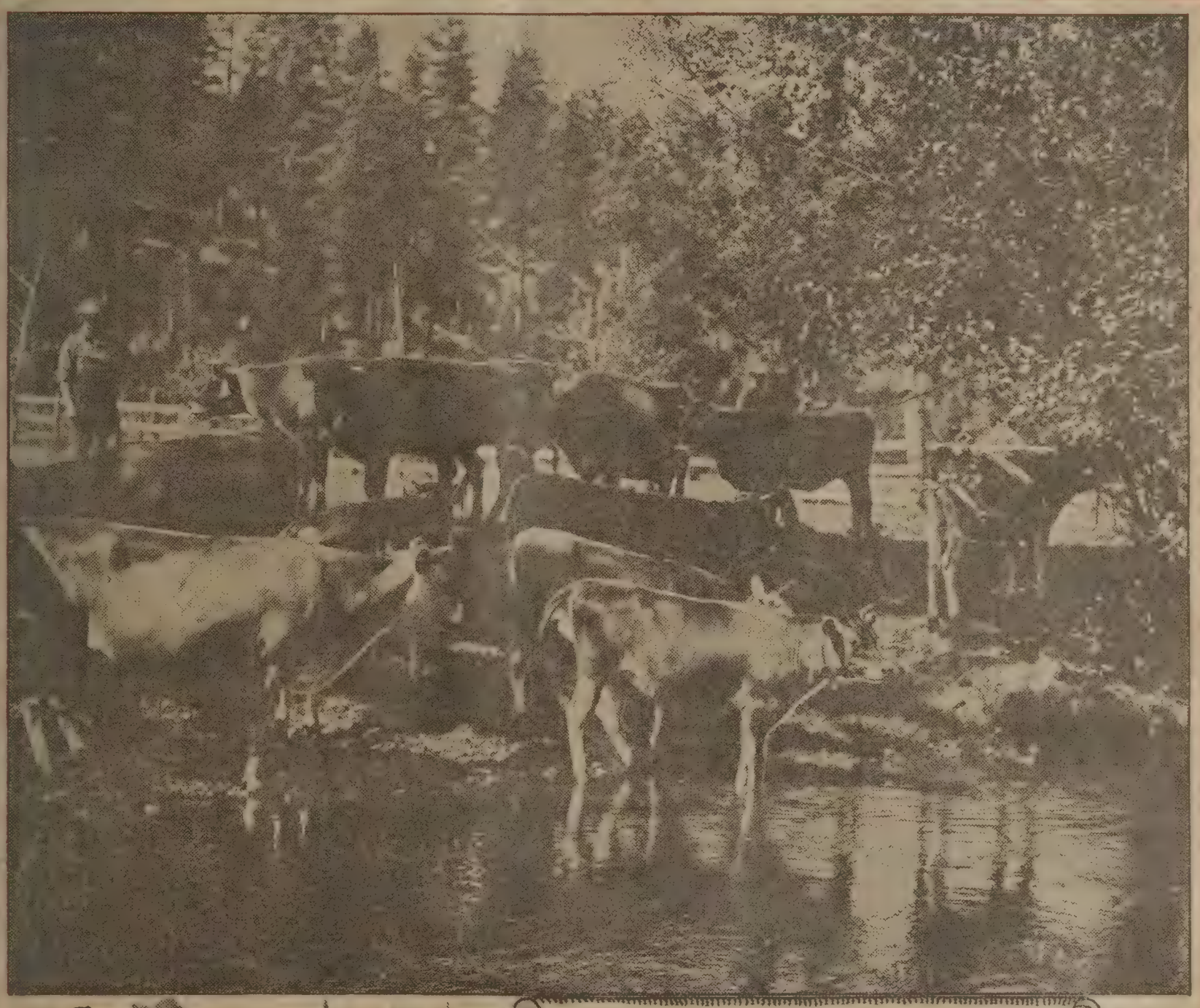
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The Time to Make Good Hams and Bacon Is at Hand—Page 7



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THE WASHINGTON FARMER

SUCCESSOR TO

Vol. 47. No. 23 THE RANCH PACIFIC DAIRYMAN HORN AND HOOF December 7, 1922

For Good Farming, Attractive Country Homes and Happy Country People

Alkali Is a Menace to Irrigated Farm Lands

By F. J. SIEVERS

Head of the Soils Department, State College of Washington

At a conference of agronomists of the several western states held at Berkeley, Cal., recently the question was asked, "What is the outstanding, fundamentally important problem that confronts western agriculture at the present time?" and without exception the first choice was given to soil alkali as it develops on irrigated land. The question was raised whether irrigation agriculture was permanent, or whether the irrigated regions of this country would suffer the same decline in agriculture and civilization as was experienced in Babylonia and Mesopotamia. These nations, which had developed a very well organized form of government and a very high state of civilization in pre-Christian times, a civilization far in advance of anything then known or recorded in history, evidently lost their wealth, power and standing among the nations of the world with the decline in productiveness of their irrigated land. The rise of alkali is held responsible for this decline.

Western irrigated agriculture is still in its infancy, and if alkali problems are already so much in evidence that they become serious, it is time that the causes for this condition and the practices essential for the reclamation of such lands be fully understood.

Salts Go Up or Down.

Arid soils, because of the fact that they have been formed under conditions of limited rainfall, are well supplied with soluble salts upon some of which we depend for the elements essential to plant growth. Under dry farming conditions where precipitation is limited, the distribution of moisture is such that only a small percentage of these salts go into solution at any one time, and consequently they remain distributed through a large volume of soil where their influence is not injurious, but may serve as an asset to crop development instead. The precipitation is never sufficient to cause leaching and the result is that large quantities of these salts accumulate in the soil. With the application of irrigation water to such soil, a considerable quantity of these soluble salts are brought into solution and are caused to be carried either upward or downward by capillarity and gravity.

Where heavy applications of irrigation water are made regularly much of the water will drain through the soil and carry the salts with it. Soils that are sufficiently coarse to permit rapid percolation rarely present any alkali problem, but, since the souble salts so carried away contain much of the essential plant food, the practice of heavy irrigation tends to deplete soil fertility. It must be borne in mind that a limited amount of alkali in a soil is very desirable, because it is synonymous with available plant food. This is borne out by the fact that soils are most productive just before the alkali becomes so strong that it kills plant life, or at least prevents its development.

Type of Soil Important.

Even if alkali should develop on the coarser or sandy soils, reclamation would be comparatively simple because of the ease with which water could be drained through the soil. In finer textured soils where silt and clay are in evidence in large percentages, soluble salts, if anything, are present even in larger amounts under virgin dry land conditions. These soils will not allow irrigation water to pass through them very readily, and consequently it is rarely, if ever, that the water penetrates sufficiently deep to be carried into the drainage systems. This means that nearly all of the water applied to these soils is either used by the plant or is lost through evaporation.

Irrigation farming in this country is still so new that most irrigation farmers gained their early agricultural experience, if they had any, in the humid sections where crops were dependent on rainfall for their water supply, and it was a fact generally understood that good crops could be obtained on all soils in any season provided there was sufficient moisture available. The primary purpose of tillage was to destroy weeds and to develop the soil mulch so necessary to conserve moisture against evaporation. When these same farmers had an opportunity to obtain irrigation water, and that on soil which in its virgin state presented practically no weed problem, they saw no necessity of continuing this intensive system of tillage. When the soil got dry more irrigation was used, and since this was generally available in large amounts before the projects were fully settled up there was no incentive for its economical use.

Capillarity was unchecked and there was a continuous rise of water from the lower levels in the soil to be evaporated at the surface. This upward movement, although slow, is continuous, thus giving the water an opportunity to remain in close contact with the soil particles for a sufficient period to bring into solution large amounts of the soluble salts previously referred to. Those salts are left behind as a crust on the surface after the water evaporates very much the same as in culinary practices the salts in the water used in a teakettle are left behind as a deposit when the water is driven off as steam. Such salts, although readily soluble, are not easily worked back into the soil because irrigation water is generally applied by the furrow or corrugated method and the water, when so applied, while moving downward, does not come into direct contact with the salts. Besides this, water in its downward progress is not entirely dependent on capillarity and, therefore, can and does pass through the open spaces between the soil particles. The more rapid movement thus made possible permits of a less close contact between the water and soil particles than is essential for the upward passage, which is dependent on capillarity only. The result is that the water when moving upward contains more salt in solution than is present while this water is still on its way downward and, therefore, the general tendency is to cause the salts to accumulate on the surface of the ground.

Cultivate After Irrigation.

The method of prevention of these accumulations is to check capillarity. There is only one practical way and that is through cultivation, with the establishment of the resulting soil mulch. A loose layer of soil so developed to a depth of about three inches, when once fairly dry will serve as a check to the upward progress of irrigation water. It is very necessary, therefore, in the case of intertilled crops and wherever tillage is possible, to cultivate just as soon after irrigation as it is sufficiently dry to make it safe to stir the soil without creating an undesirable physical condition. This cultivation should not be influenced by the necessity of weed control. In fact, the cleaner a field is the more essential is this tillage. Soils that have considerable sand in them are not sufficiently plastic and never get so wet but what they may be cultivated at any time, but where the percentage of clay or slit runs high, considerable care must be exercised not to till unless the moisture conditions are just right, or a puddled soil will result.

Alkali may also develop in soils as a result of seepage water. In many of the irrigated valleys, the land naturally divides itself into benches having different elevations above the stream. The lower lands being naturally closest to the stream are, therefore, as a rule, the first to be irrigated. Later when the higher lying areas are put under irrigation there is a tendency for the water, if applied in excess on these higher elevations, to penetrate deeply into the subsoil and drain underground toward the river. Frequently this water from the higher benches in its underground progress toward the drainage system rises to the surface on the lower benches and carries large deposits of salts with it. These salts in time, due to evaporation effects previously discussed, accumulate in sufficient amount to form a pronounced crust. Before any soil treatment should be undertaken for the reclamation of such lands a proper drainage system should be introduced to cut off this seepage water.

In any case an excessive amount of alkali is detrimental to the growth of most agricultural crops. Black alkali, composed largely of sodium carbonate, which is quite caustic, has a very corrosive effect on plant tissues and even in small amounts has a very injurious effect on crop development. Through the use of sulphur or gypsum, however, it may be readily converted into white alkali, a form in which it is less destructive to vegetation. When soils need correcting for white alkali the problem is not as simple. Here the salts must actually be removed, either by leaching them through the soil by means of repeated heavy applications of irrigation water supplemented by the use of gypsum and an effective underground drainage system, or by actually scraping and flushing the salts off the surface. These reclamation practices are so decidedly expensive that they do not justify consideration except under conditions of most intensive agriculture. It is true that small tracts of white alkali have been controlled, at least temporarily, by incorporating in the soil heavy applications of barnyard manure, but this practice can not be recommended for general use.

All present information available to the reclamation of alkali lands is convincing that the work is not only expensive, but that it is a real man's job that requires more time and perseverance than is possessed by many individuals in most farming communities. The only practical solution of this important problem is to prevent its development by checking evaporation through tillage and by cutting off seepage water by means of effective drainage.

Washington's Record Guernsey

A new world record for senior 4-year-old Guernseys and a Pacific coast record for Guernseys of all ages is held by Edna of Mountain View, the beautiful cow shown in the picture, owned by Wallace & Fordyce of Sunnyside, Wash. In the 365 days ended October 31 she produced 16,153.8 pounds of milk and 933.17 pounds of butterfat. This adds another to the remarkable "ordinary farm" records made by northwest cows, for Edna never had more than 15 pounds of grain per day and during the first eight months of the test was milked only three times daily. She was on pasture, but ran in a dry lot, and was fed an average of about 45 pounds of silage daily for only about six months of the year.

The animal was purchased by her present owners at the 1920 Pacific International Guernsey sale, to which she was consigned by L. G. Perry of Wendell, Idaho, along with several others of the same breeding. Wallace & Fordyce paid the top price of the sale for her and secured also her daughter, Molly of Lavaland, and their present herd sire, Chicona Lover Bold, thereby becoming also heaviest buyers of the day. Upon the foundation which was laid there has since been built the Fawndale farm herd of 35 head, which has been a consistent winner for two seasons all over the northwest show circuit. A. L. Wallace, who has charge of the farm, considers the first money he spent for Guernseys the best he ever spent, and Dr. W. G. Fordyce, his partner, now agrees with him, though the latter at first thought $950 quite a price for a starter.

Edna of Mountain View was sired by Judge of Birchwood and her dam is Golden Hero's Queen Lass, with a record of 714 pounds of fat. Edna has a 2-year-old record of 9463 pounds of milk and 562.4 of fat, but until she was well along on the recent test her owners had no thought of her possessing extraordinary ability. She began the test November 1, 1921, was shown to third place in her class at the Pacific International and was later handled the same as the other test animals in the herd. Her second month, when she produced 87.68 pounds of fat, was her best, and last February, when she produced 71 pounds, was her lowest. In her last month she produced 1257 pounds of milk containing 79.21 pounds of fat, an average of over 40 pounds of milk and two and one-half of fat per day, and in her 10th and 12th months she averaged to produce 80 pounds of fat. At the completion of her eighth month she was put on four times milking, and her monthly production for the last four months of the test average three pounds higher than that for the first eight. The record was completed just before she went to Portland, where it was confirmed, and she took her place in the quartet of four world champion cows, one from each of the leading dairy breeds. She also won fourth place in the aged cow class. During the test, she was fed daily about eight pounds of a prepared milk producer, four pounds of oats and two and one-half to three pounds of bran, the ration being changed from time to time as necessity demanded. She would have eaten twice this amount of grain, her owners stated, but they did not care to force her. She had all the alfalfa hay she would eat, averaging about 20 pounds per day. As an evidence of her remarkable persistence, she produced 2.73 pounds of fat in the 48 hours during which she was en route to the Western Royal Stock show at Spokane. The test was most carefully supervised by state college authorities in charge of official testing. for 28 tests were made by 20 different men, three of them from outside the state. The variation was so sight as to be remarkable.

In addition to the daughter of Edna already mentioned Wallace & Fordyce own another, Fawndale Leading Lady, a yearling, by Chicona Lover Bold, and there is still another living in Oregon, Lady Edna of Lavaland. The new champion is bred again to Chicona Lover Bold, to freshen next spring.



Edna of Mountain View, world champion Guernsey.

Resigns as Farm Bureau Head

An unofficial announcement is made at Yakima that W. B. Armstrong, president of the Washington state farm bureau, will tender his resignation to the board of directors with request that it be accepted at the meeting of the board in Yakima December 7. The announcement does not give his reasons for resigning.

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Work for Home Convenience

New equipment is not always required to make home kitchens more convenient and less tiring to work in, as a report to the United States department of agriculture on extension-agent work points out. Much can be done by rearranging the equipment already on hand, such as grouping objects commonly used in the preparation of food, or those used for washing or storing dishes, or articles belonging to the cleaning outfit. In many cases the attention of the housewife is drawn to the need of doing work requiring a good light by a window, or by having a good suspended light at night. One widely adopted improvement is that of giving old floors an easily cleaned surface. A number of simple contrivances can be made at home to lighten the housework, and usually the farmer himself can assist by building shelves, a folding ironing board, dresser, wheel tray and other labor-saving conveniences.

Last year, through demonstrations given by extension workers, over 21,000 families are reported as adopting suggestions regarding home arrangement and management; 7000 kitchens were rearranged, 5000 water systems installed, 3000 washing machines and 4000 steam-pressure cookers purchased, 65,000 homes screened, 4000 septic tanks installed, and 7000 lighting systems placed in farm homes.

We'll Keep the First Mortgage

In his address at Spokane Secretary of Labor Davis said that certain American banking houses have loaned about $5,000,000 or $6,000,000 to European countries. The secretary added that it is quite natural that these bankers want our government to throw off its $11,000,000,000 of assets in order that they may collect their war-time debts in Europe. As matters stand now they have only a second mortgage. "We will give any amount," said Secretary Davis, "to aid the stricken, the hungry, the destitute, but we will not give one cent to keep Europe on a war basis."

Another Better Sires Campaign

George J. Cannon is right. The purebred sire is just as desirable in the production of potatoes as in the production of cattle or hogs. The parent of the potato crop transmits its characteristics to the third and four generation of the offspring just as surely as does the parent of the calf or the pig or the chicken.

Let's clamber onto this pure seed wagon. Why continue to grow scrub potatoes, scrub wheat, scrub radishes and scrub this and that? If we look about we will see that the fellow who is getting the best results in his crops is using good seed. We all want the best, but one of the surest ways not to get it is to plant scrub seed. Figs do not grow on thistles. Neither do good potatoes grow from sick, scrawny, devitalized, nondescript seed.

Deflation of High Freight Rates in the Interior Urgently Needed

Secretary of Commerce Hoover discusses the shortage of railroad cars in his forthcoming report to congress. He says:

"The car shortage also directly affects our farmers, because in every car shortage period a price differential on grains below the Liverpool price (and yet in excess of the railway rates and handling costs) sets in of from 5 to 15 cents per bushel. The losses to live stock growers are very great because of the necessity to feed stock beyond the fattened stages and there are regularly great losses in fruit and vegetables because of the lack of refrigerated cars."

This imparts additional emphasis to the recent decision by the interstate commerce commission in favor of the western wool growers and interior communities. In that case the railroads applied for permission to put in rates that would enable them to take from the ships the transportation of western wool to eastern markets, and further permit them to cut into the business now handled by the ships in the transportation of manufactured and other commodities from Atlantic ports through the Panama canal to Pacific ports.

It seems incredible, but is nevertheless the fact, that the railroads were actually seeking permission from the government to take tonnage away from the ships when the roads are confessedly unable to handle the traffic that already is coming to them.

It is fortunate for our western wool growers and other farm producers, and for the consumers of the broad interior, that the commission forbade the railroads to engage in that wasteful and destructive competition.

The country needs both arms of its transportation service—the railroads and the ships. It needs more efficient service from the railroads. The industries of the Pacific northwest, and the producers and consumers of this region, need increased water service, not diminished. The railroads of this region need more cars and locomotives to pull them, not more tonnage to and at the Pacific coast terminals to increase the congestion from which they are now suffering.

Furthermore, the consumers of the interior have some rights that should be considered. If freight rates are to be lowered anywhere by the railroads they should first be lowered in the interior, where the producers and the consumers have not the benefit of water competition. Fortunately, the ships are giving considerable relief to the producers and consumers west of the Cascade mountains. Ship competition has deflated excessive transportation charges on the Coast. The urgent need now is deflation of high freight rates in the interior.

LOOKING INTO OTHER FARM FIELDS

Switzerland's wheat crop of 1922 is two-thirds of that of last year. The cereal crops as a whole are the poorest in years.

* * *

Strict government control of foods and issuance of wartime food cards is expected momentarily in Germany, according to assistant Commercial Attache Breed, Berlin.

* * *

The Czecho-Slovakia wheat crop is 21 per cent less this year than last, the actual loss being over 8,000,000 bushels; the rye crop is also about 8,000,000 bushels short or 15 per cent less than last year; the barley crop is 10 per cent less. The country, since the war, is gradually going over to a wheat basis, the consumption of wheat increasing while that of rye and corn is declining.

* * *

Utilization of elevator screenings for stock feeding at the Canadian "Head of the Lakes"—Fort William and Port Arthur—has lifted an heretofore discarded by-product to an important factor in Canadian stock raising. During the winter of 1921-22 an experiment was made in using these screenings for sheep feeding, and a sheep rancher brought east a herd of 8000 sheep. After feeding them on screenings throughout the winter, he marketed them with such satisfactory results that his operations during the coming winter will be trebled.

State Farm News

Husking corn is reported as one of the activities on the farms in the lower Yakima valley at present.

* * *

The Washington Growers' Packing corporation of Vancouver, Clarke county, expects to ship 120 carloads of dried prunes this season.

* * *

C. R. Clark of Cashmere is reported to have sold his orchard of six or seven acres to Frank Pollard and his mother, Mrs. F. Pollard, for $8000.

* * *

According to F. Barnard, registrar at the Washington State college, plans are well under way for the erection of two or three group houses. The plans call for three men's houses at a cost of between $20,000 and $30,000.

* * *

A gymnasium and community hall are being built at Usk, adjoining the schoolhouse. It is a one-story building 38x60 feet. The work is being done by volunteer labor. A bell tower and steeple are being built on the Usk church.

* * *

President George H. Black of the Ellensburg state normal school has been appointed on a joint committee to work out a health program for the National Education association and the American Medical association. There are nine on the committee.

* * *

The Wenatchee Big Four Orchard company has obtained a state permit giving it the right to take water from Brook lake, Tule lake, Coffee Pot lake and Long lake, near Stratford, for irrigation. The plans are to reclaim 1000 additional acres of land.

* * *

Charles Brittain of Humptulips, Grays Harbor county, reports harvesting a crop of 16 tons of honey produced by 160 stands of bees. It is mostly from the great fields of fireweed that cover the logged-off land near Humptulips that the bees have gathered this product.

* * *

One thousand beef cattle were driven from Kittitas county through the Ellensburg divide into the Wenas valley, near Yakima, November 23, by a acking concern. This is the largest cattle drive in the valley in 20 years. The animals packed the highway for three miles.

* * *

The advent of wormwood into the farming sections of the Yakima valley is giving some concern. From Naches it is reported to have spread along the road down as far as the main power house, while beyond the power house and toward Yakima there are only isolated clumps of it.

* * *

Word comes from Wenatchee saying that Roy Larson is finishing his work with the bureau of soils in Chelan county. He is planning a series of soil and fertilizer schools for fruit growers in Yakima county. This work will be in cooperation with A. E. Lovett, county agent of Yakima county.

* * *

The apple packing season has ended in the Okanogan district. The Okanogan Growers' union central park warehouse has completed its run of apples and independent growers will have all packed apples delivered in frost-proof warehouses soon. A few growers are holding Winesaps for spring packing.

* * *

The world record pen of White Leghorns that recently completed a year in the western Washington experiment station laying contest at Puyallup was sold by the owner, F. E. Gilbert of Vashon island to Jay Todd of the Queen hatchery, Seattle, for a reported price of $2000. The five birds laid 1421 eggs in 365 days.

* * *

The popular "doddie" has broken into the boys and girls' club column in Kittitas county, where the Congdon & Battles Aberdeen Angus Calf club of 12 members has been organized, with H. W. Roseberg of Cle Elum as leader. County Agent W. L. Davis selected the calves from the herd of J. H. Smithson of Ellensburg.

* * *

The Skagit Poultry association held its annual election of officers in the Mount Vernon Commercial club rooms November 13. It was one of the largest meetings ever held by the association. W. H. North of Burlington was reelected president, William H. Carpenter of Mount Vernon secretary-treasurer and E. W. Walmsley of Pleasant Ridge vice president.

* * *

L. B. Clough, a pioneer prune grower, was elected an honorary life member of the Vancouver Prunarians November 15. He came to Clarke county in 1877, when there were but two prune orchards in the county. Mr. Clough planted the third orchard and built the first drier. He lived here until 1905, when he went to Fairbanks, Alaska. The prune drier was built on what is now the corner of Sixteenth and Main street, near the center of the residence district in Vancouver. Since that time hundreds of driers in all parts of the county have been built and about 6000 acres are now planted to prune orchards.

* * *

The state department of agriculture is fitting up a new display of fruits, vegetables and grains which will soon be on exhibit at the state capitol at Olympia. There will be approximately 50 jars of some of the finest specimens of fruits and vegetables which have been secured from all parts of the state. The grains are being arranged in panels and sheaves as well as artistic designs. There will also be a number of grain varieties in large jars as well as some samples of different soils. There will probably be 100 jars when the exhibit is complete. Mrs. Minnie Wessels of Spokane is arranging the display.

* * *

Mrs. Nina Hubbard Stone of Wide Hollow, in Yakima county, believes that poultry and cream checks materially help out the fruit growing farmers. At least they furnish cash to provide for running expenses while waiting for the apple returns. Mrs. Stone adds: "I know it is a nuisance to have to get up before daylight cold winter mornings to milk—the cream wagon comes around so shockingly early—but my experience, covering a good many years, is that farming isn't easy work at its best. I always did like to work with stock, however, and I don't see how one can have a successful paying property year in and year out without it."

Coming Events of Interest

Dec. 12-13—State farmers' union, Spokane.
Dec. 12-15—State horticultural association, Spokane.
Jan. 3—Northwest Poultry show, Seattle.
Jan. 8—Chelan Poultry show, Wenatchee.
Jan. 22-23—Washington wool growers, Spokane.
Jan. 24-26—National wool growers, Spokane.

FARM BUSINESS AND MARKETS OUTLOOK

Grain prices reached the highest level of the season last week and held the gain fairly well, butter reached the best figures since early in 1921, lambs sold above $15 in Chicago, the wool market was buoyant, hogs had a smart recovery and thus far have held above the money losing level, all finished cattle arriving are showing excellent returns, cotton after a moderate setback started upward again, the hay market began to climb out of the rut and potatoes, which have been in the worst condition of any important farm product this fall, began to show real improvement.

The car shortage is being relieved. The latest statistics, which are for nearly two weeks ago, show a small decline in the number of unfilled orders for cars and a falling off of about 6 per cent in freight car loadings from the peak of the year.

General Business Prospering.

General business and industry are prospering. Steel mills are operating at about 80 per cent of capacity and steel consumption is keeping pace, auto output for November is about the same as in October when a record for the month was attained, building activities are well sustained, and textile mills are using up raw material about as fast as they ever do. In these lines further improvement is not to be expected, but any reaction may be offset by advances in other directions.

Foreign conditions are not worse, apparently, although there is little betterment to record. However, sterling exchange reached a new high level for the year, francs are 13 per cent higher than two weeks ago and Italian lira are near the best level since June.

Proposed government aid to extend the markets for farm products is receiving much attention. Some benefit may be hoped for, although it will be slow in arriving. Facilitation of export trade through extending the powers of the war finance corporation to permit discounting drafts probably on a 90-day basis on sales abroad when indorsed by a reliable foreign importer and the government of the foreign country seems to be the most feasible plan.

Cattle Prices Recover.

The annual exodus of cattle from southwestern pastures was practically over two weeks ago and the movement of western rangers, which severe car shortage in the northwest threatened to prolong, has fallen off unexpectedly in the last few days. Beef consumption is extremely heavy in spite of seasonal competition from other meats so that the lighter run of cattle made possible a recovery of about half of the loss from the season's high point a few weeks ago.

The upturn may revive the courage of weak handed feeders who have been alarmed by the slump in cattle prices and advance in corn and who have been liquidating recently as fast as cars could be had. At best the sailing is not altogether clear for the next 60 days or so, however, since the number of cattle in feedlots constitute a record, and there are many occasional feeders who will relinquish their holdings by midwinter.

Prime steers are extremely scarce, but a big supply of such beef will be available during show week at Chicago. Thereafter, the $13 quotation is apt to be erased.

But little beef has been put in freezers, as holdings of frozen beef on November 1 were only 47,417,000 pounds compared with a five-year average on that date of 141,045,000 pounds. It is reported that a shipment of Argentina beef has been loaded for this country, with more to come if it can be vended profitably.

Demand for feeding cattle has abated, while the supply has been liberal and prices dropped to the lowest of the season. Some are being bought for summer grazing. Good stock cows and heifers are selling at extremely low prices.

Sharp Upturn in Hog Market.

After slumping early last week under the heaviest weekly run at the leading markets since February, 1921, hog prices recovered smartly toward the close when the movement began to abate and buyers for eastern shipment were attracted to the bargain counter. The break was more severe at Chicago than at river markets, due in part to a fire in the hog killing department of the largest packing plant. Prices dropped to a daily average of $7.53 before the market turned.

The November 1 report on storage holdings shows the smallest stock of lard on record on that date and stocks of frozen, pickled and dry salt pork were 12 per cent below the average.

New High in Lamb Market.

Obvious efforts to depress the price of fat lambs have been futile, as the top at Chicago remained slightly under $15 and has finally advanced above that level. Under the circumstances further advances are on the schedule in the next 60 days. Few westerns are coming. Feeders are not quite so eager as they were, although the November movement has held up well.

Horse Market Turns.

The recent buoyant horse market has gone stale again as the holiday season is approaching and buyers are becoming less active, while the most urgent fall demand has been filled. Prices dropped about $10 a head at Chicago on the better grades, while blemished sorts remained a drug on that market.

Wood Trend Abroad Is Upward.

The London wool auction opened last week with merinos quoted 5 per cent lower, fine crossbreds a shade higher and coarse and medium crossbreeds 5 to 10 per cent higher than at the October sale. Australian and South American markets also show strength.

Wheat Remains in Strong Position.

A temporary letup in the demand for wheat caused a relapse in prices early last week, but most of the decline has been regained and the market appears to be in a strong position.

The movement to primaries has not declined in a normal way in the last few weeks, probably due to relief in the car situation, so that receipts are slightly above the average for this time of year, but there is little sign of accumulation. The visible supply at terminals has increased slightly in the last month, but it is the smallest at this season with one exception in 12 years.

Foreign buying was extensive on the recent break, showing that a big latent demand exists. Germany was a heavy buyer in spite of her supposed financial straits and reports were again current of a large German fund in this country for the purchase of foodstuffs. World shipments since the crop year started have not been up to the average expected in view of reduced crops in Europe, which suggests that a larger movement will be necessary later on, at least if foregin finances improve.

Argentina wheat was being offered at low prices until the last few days when the news has been of a different tenor. The surplus from that country may not be so large as generally counted upon. Australia crop prospects have brightened slightly. India is not putting much of her estimated surplus afloat.

West Continues After Corn.

Feeding demand for corn in the west wavers occasionally, but remains broad most of the time with prices above a Chicago basis.

Higher prices for corn are helping the oats market and export sales have increased recently. The excellent demand for poultry feeds together with a small crop is keeping prices of sorghum grains at a high level.

Cash Grain Markets.

The range of cash grain prices for the week ending November 29 was as follows: Chicago—Wheat—No. 2 red, $1.27 3-4@1.28 1-2; No. 2 hard, $1.18@1.21 1-4; No. 3, $1.18@1.20 3-4. Corn—No. 2 mixed, 70 1-2@73 3-4c; No. 3, 70 1-4@73 1-4c; No. 4, 64@72 3-4c; No. 2 yellow, 71 1-4@75c; No. 3, 70 1-4@74c; No. 4, 68 3-4@73 1-4c; No. 2 white, 71@74c; No. 3, 70@73 1-4c. Oats—No. 2 white, 43 3-4@45 3-4c; No. 3, 42 1-4@45c; No. 4, 39@43 1-2c. Rye—85@88 3-4c. Barley—62@74c.

Heavy Clover Seed Movement Is Over.

The movement of clover seed from first hands has been at about the same rate as a year ago and the heavy shipping season is over. Prices are materially higher than last year with seedsmen anxious to buy. Producers now show a disposition to hold.

Chicago, per 100 pounds—Clover, $15@20; timothy, $6@6.75.

Toledo, per bushel—Prime clover, $13.10; prime timothy, $3.40.

Feed Market Unsettled.

The feed market is unsettled with price changes small but advances seem to predominate. Cold weather has caused another spurt in demand, but heavier offerings especially of wheat feeds have largely offset it. Production, particularly of corn feeds, is rather heavy and storage stocks of wheat feeds show a market increase. Stocks of cottonseed cake and meal at mills are light.

Prices per ton (100-pound bags) in carlots—Chicago—Bran, $25.75; standard middlings, $26; flour middlings, $28; cottonseed meal, 36 per cent, $49; 43 per cent, $53; hominy feed, $30; gluten feed, $38.35; old process oil meal, $52.50; tankage, $65.

Small Advances in Hay.

Small advances in hay prices occurred last week. Receipts and country loadings are light in spite of an easier car situation and local demand is fairly good.

Prices per ton in carlots—Chicago—No. 1 timothy, $22@24; No. 2, $21@22; No. 3, $15@17; No. 1 light clover, mixed, $21@22; No. 1 clover, mixed, $20@21; No. 1 alfalfa, $25@27; upland prairie, $20@21; midland prairie, $13@15; rye straw, $14@15; oat and wheat straw, $11@14.

Egg Market Breaks and Recovers.

Sudden expansion in receipts of fresh eggs caused a sharp setback in the market early last week, but part of the loss was regained before the close. No sustained increase in the supply is probable for another month, but prices are about as high as they are likely to go.

Receipts of poultry have not yet expanded in proportion to the reported increase in production and with holiday demand at hand, the market has been fairly firm. Producers are said to be holding back because of dissatisfaction with prices which may mean a flooded market later in the winter.

Another Advance in Butter.

Current receipts of butter at the leading markets in the last three weeks have dropped to the lowest level in a year. Although the market is encountering more opposition right along, it advanced into new high ground with gains ranging from 2 to 3 cents per pound. Production is decreasing as shown by reports to the American Creamery Butter Manufacturers' association and the decline in receipts of about 25 per cent compared with three weeks ago has more than offset the falling off in consumptive demand.

Prices on 92-score fresh butter on November 29 were: Chicago, 54 1-2c; New York, 53 1-2c; Boston, 52c; Philadelphia, 53 1-2c.

Cheese Market Higher.

Advances in country cheese markets were promptly followed by upturns at distributing points with both buyers and sellers showing confidence in values.

Prices on No. 1 American cheese on November 29 were:

Chicago—Twins, 26@26 1-2c; S. Daisies, 27@27 1-2c; D. Daisies, 27@27 1-2c; Young Americas, 27c; Longhorns, 26 1-2@27 1-2c; Square Prints, 27 1-2c.

Fruits and Vegetables.

Although shipments of potatoes from producing sections have fallen off sharply in the last four weeks, arrivals at the principal consuming markets continue heavy, although there has been a moderate falling off in the last 10 days. Winter weather has set in in the principal potato sections and some shipments in boxcars are being damaged. Stored potatoes are not apt to be sold until prices work higher. Some recovery in values seems probable in the next 60 days. Idaho sacked rurals sold at $1.10 per 100 pounds sacked in Chicago and 35 cents f. o. b. shipping points.

Barreled apple sections are shipping less freely while boxed apple sections are increasing. The total movement of all kinds for the season to November 27 are 68,276 cars compared with 66,478 cars to the same date last year. Northwestern extra fancy Jonathans, large to medium, are quoted at $2 to $2.25 per box in Chicago.

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Range of Live Stock Prices, Week Ending Nov. 29

CATTLE.	Chicago.	Spokane.	Portland.	N. S. Lake.
Choice, prime heavy steers (1100 lb. up)	11.75@13.60			
Good heavy steers	9.50@11.75			
Medium heavy steers	6.75@ 9.85			
Common heavy steers	5.00@ 7.25			
Choice, prime light steers (1100 lb. d'n)	11.60@13.35			
Good light steers	9.50@11.75			
Medium light steers	6.65@ 9.05	6.00@ 7.50	6.00@ 7.50	5.75@ 7.00
Common light steers	5.00@ 7.00	3.75@ 6.00	4.00@ 6.00	4.25@ 5.75
Common to choice butcher heifers	4.25@10.75	3.00@ 5.50	3.25@ 6.25	3.25@ 5.00
Common to choice butcher cows	3.60@ 8.00	2.50@ 4.75	2.25@ 5.00	2.50@ 4.50
Bologna and beef bulls	3.50@ 6.50	2.75@ 4.50	3.00@ 4.50	2.00@ 3.50
Canners and cutters, cows and heifers	2.65@ 3.60	1.50@ 2.50	1.50@ 2.25	1.50@ 2.25
Canner steers	3.00@ 3.75	2.00@ 3.00	2.00@ 3.25	2.00@ 3.00
Medium to choice light veals	7.25@ 9.00	7.00@ 8.50	7.50@ 8.50	7.50@ 8.25
Common to choice heavy veals	3.00@ 7.00	5.00@ 7.50	4.00@ 7.00	
Com. to choice feeders (1000 lb. up)	5.25@ 7.65			
Com. to choice feeders (750-1000 lb.	5.25@ 7.65	3.50@ 5.00	4.00@ 5.50	4.50@ 6.00
Common to choice stocker steers	3.75@ 7.65			
Com. to choice stocker cows, heifers	3.00@ 5.25			
HOGS.				
Top of market	8.50	9.50	9.65	7.75
Bulk of sales	7.45@ 8.35	8.00@ 9.00	8.25@ 9.00	7.25@ 7.60
Heavy (250 lb. up)	7.60@ 8.40	8.00@ 9.00	8.25@ 9.00	
Medium (200-250 lb.)	7.60@ 8.40	8.25@ 9.50	8.50@ 9.25	7.25@ 7.50
Light (150-200 lb.)	7.55@ 8.50	8.25@ 9.25	8.50@ 9.65	7.40@ 7.75
Light lights (130-150 lb.)	7.70@ 8.50	8.00@ 9.75	8.50@ 9.65	7.25@ 7.75
Smooth packing sows (250 lb. up)	7.20@ 8.00	7.50@ 8.00	7.50@ 8.00	7.00@ 7.50
Rough packing sows (200 lb. up)	6.85@ 7.70	7.00@ 7.50	6.00@ 7.50	6.00@ 7.00
Medium to choice pigs (130 lb. down)	7.85@ 8.50	8.00@ 8.75	8.25@ 9.65	
Stock pigs		7.75@ 8.75	8.25@ 8.65	7.50@ 8.25
SHEEP AND LAMBS.				
Medium to prime lambs (84 lb. down)	13.00@15.25	9.75@11.00	10.50@12.50	11.00@12.50
Culls and common lambs	9.25@12.75	8.00@10.00	6.75@10.50	9.00@11.00
Medium to prime yearling wethers	9.25@12.50	7.00@ 8.00	8.50@ 9.50	6.00@ 7.00
Medium to prime wethers	6.25@10.25	6.00@ 7.50	7.00@ 8.50	4.50@ 6.50
Medium to choice ewes	4.75@ 8.00	4.00@ 6.50	4.00@ 6.00	4.00@ 5.50
Culls and common ewes	2.75@ 5.25	2.00@ 4.00	2.00@ 4.00	2.00@ 4.00
Feeder lambs	12.25@14.00	9.00@11.00		10.00@10.50

LATEST QUOTATIONS.

The Live Stock Market.

PORTLAND, Dec. 2.—Cattle.—Choice steers, $6.75@7.25; medium to good steers, $6@6.75; fair to medium steers, $5.25@6; common to fair steers, $3.75@5.25; choice heifers, $4.50@5; choice cows and heifers, $4@4.50; medium to good cows and heifers, $3.50@4; common cows, $1.50@2; canners, $1.50@2; bulls, $3@4.50; choice feeders, $5@5.50; fair to good feeders, $4@5; choice dairy calves, $8@8.50; prime light calves, $8@8.50; medium light calves, $7.50@8; heavy calves, $4@7.

Hogs—Prime light, $9@9.50; smooth heavy, 250 to 300 pounds, $8@9; smooth heavy, 300 pounds up, $7.50@8; rough heavy, $6@7.50; fat pigs, $8.50@9; feeder pigs, $8.25@8.75; stags, subject to dockage, $4@6.

Sheep—East-of-mountain lambs, $10.50@12; choice valley lambs, $10.50@12; medium valley lambs, $9.50@10.50; common valley lambs, $8.50@9.50; cull lambs, $6.75@8.50; light yearlings, $9.50@10; heavy yearlings, $9@9.50; light wethers, $7.50@8.50; heavy wethers, $7@7.50; ewes, $2@6.

SPOKANE, Dec. 2.—Cattle—Prime steers, $6.25@7; good to choice steers, $5@6; medium to good steers, $4.50@5; fair to medium steers, $4@4.50; common to fair steers, $3@4; choice cows and heifers, $4.50@5; good to choice cows and heifers, $3@3.75; fair to medium cows and heifers, $2.50@3.50; canners, $1.50@2.50; bulls, $2.75@4.50; light veal calves, $6.50@7.50; heavy veal calves, $4.50@6; stockers and feeders, $3.50@5.

Hogs—Prime mixed, $8@9; medium, $8@8.50; heavies, $5.60@7.85; fat pigs, $7.50@8; stockers and feeders, $7@7.50.

Sheep—Prime lambs, $10.50@11; fair to medium, $9@10; yearlings, $7@8; wethers, $6.50@7.50; mutton ewes, $3@5.75; feeder lambs, $9@11.

The Grain Market.

PORTLAND, Ore., Dec. 2.—Wheat—Hard white, Bluestem, Bart, $1.48; soft white, $1.21; western white, $1.22; northern spring, $1.18; hard winter, $1.16; western red, $1.15.

Grain futures: Wheat—Bluestem and Bart, December, January, $1.48; soft white, December, January, $1.23; hard winter, December, January, $1.16; northern spring, December, January, $1.18; western red, December, January, $1.15.

Oats—Thirty-eight-pound naturals, December, January, $35.50.

Corn—No. 2 yellow shipment, December, January, $32.50; No. 3 eastern yellow, shipment December, $32.50; January, $32.

PULLMAN, Wash., Dec. 2.—Red, 98c; white, $1.01.

(Continued on page twenty.)

A Brood Sow on Every Farm

Northwestern Markets Ship in Hogs and Hog Products

By C. M. HUBBARD, Live Stock Extension Specialist, State College.

The markets of Spokane, Seattle, Tacoma and Portland purchased $5,900,000 worth of corn belt and California hogs in 1921; in 1922 they slaughtered $6,800,000 worth of hogs from these two sections.

Let us look a little closer into the situation and see where the state of Washington stands. According to the 1920 census, Washington had an average of less than one brood sow to the farm, about two-thirds of a brood sow, to be exact. Yakima had three-quarters of a brood sow per farm; Kittitas county had a little less; Lewis and Skagit counties had less than half a sow and Whitman about one a third brood sows per farm.

Were the farmers to carry one brood sow for each of the farms in the state and should they save five pigs to the litter, one-third of the swine shortage would be relieved and our farmers have the opportunity to pocket around $2,000,000 or more which this year went, in the main, to Iowa, Nebraska and Dakota farmers.

Again, in the main, these hogs could be developed on feeds allowed to go to waste. In Adams county brood sows are likely to become too fat for breeding purposes through picking up waste wheat in the fields. There is an enormous amount of waste grain in the Palouse section, much of which might be used in swine production.

In several parts of the West Side an abundance of skim milk obtains. Windfall and cull apples may be utilized in the fruit sections.

Alfalfa pasture, together with a 2 or 3 per cent (two or three pounds of grain per 100 pounds of pig) concentrate ration, makes a reasonably cheap means of growing pork in the irrigated districts.

As the total amount of pork produced in 1622 falls below that of 1921 the question is, how serious will the situation be in 1923? Surely our Washington farmers should look more closely into this serious situation. Let our motto be "A broodsow for every farm in Washington."

Potato and Corn Show

"A brood sow on every farm" was the slogan proposed by C. M. Hubbard, live stock specialist of the Washington State college, in stressing the need for more hogs and other live stock on the farms, at the corn and potato show at Toppenish

The annual "big potato" banquet, given by the Toppenish Commercial club was a great success, there being over 300 in attendance.

The first prize on commercial potatoes went to S. B. Mustard, Powell Butte, Ore., while the first prize for seed potatoes went to T. C. Newington of Clarksfork, Idaho. In the corn display H. C. Davis of Granger took first prize on Yellow Dent corn in the 10-ear lot and in the bushel lot. In the White Dent corn competition T. L. Madaris of Parker made the great sweep on all first prizes.

Other winners in potatoes were: A. E. Skidmore, Colville; R. E. Morris, Granger; Keith Morris, Granger; E. F. Whitaker, Yakima; and in corn, W. F. Nass, Outlook; G. P. Gregg & Son, Mabton; J. F. Schriner, Yakima; C. C. Lang, Toppenish, R. B. Lewis, Yakima; E. H. Burlinger, Buena; Elmer B. Davis, Granger, George Moore, Yakima, and Alex. Sloop, Parker.

A large attendance of farmers crowded the exhibition hall and discussed the merits of the various samples and listened to lectures by specialists from the Washington State college.

May Curtail Chelan County Investigations

By E. H. M'PHERSON.

Both growers and shippers of the Wenatchee district are up in arms against the proposed abolition of the investigational work on the part of the county, the state and the government in this district. In the first place the county commissioners have cut the appropriation for the county soils bureau, which has been conducted for the last four years by Roy Larsen. This is the only bureau of the kind in the country, so far as is known, working along exactly these lines. While Mr. Larsen states that he has practically finished the course of investigation which he started, yet there are other lines of work which should be taken up in the opinion of many horticulturists and pomologists here.

Next came the resignation of County Agent William Meikle, who has served for the last five years. No appropriation has been made to maintain this department for another year.

And the work of the district horticultural inspector has been handicapped, it is charged, by the refusal of the commissioners to allow the expenses incurred during the last saeson.

The authorities have also threatened to abolish the work which has been carried on here for the last four years by United States Pathologist D. F. Fisher in this territory, due to lack of federal appropriation. Mr. Fisher has made valuable discoveries in connection with the San Jose scale, the red spider and the powdery mildew, as well as apple scald. His discovery of the value of lime and sulphur to eliminate the mildew, also his experimnets in connection with oiled paper wraps have been of great benefit to the industry. No appropriation is provided for the continuance of this work by the bill passed by congress at the last session, and his work may be discontinued unless an extraordinary effort is made to secure means for maintaining it.

The Chelan county farm bureau, the Pomona grange and the Wenatchee Valley Traffic association, as well as the Wenatchee Commercial club, have all gone on record as favoring the continuance of some of the above activities. However, the belief is general that some of the county bureaus might be consolidated and conducted more effectively.

Cooperation Saves Money

A saving of $2465 on a total business of $9437 done in cooperative handling of hay, feed and seed through the Thurston county market project leaders and the extension service, was effected in the past year, according to the annual report of County Agent E. B. Stookey. A committee of market project leaders has charge of this business; orders are turned in to the extension office, and when a sufficient number have accumulated they are turned over to the local merchant who handles the business. The secretary of the committee, L. L. Snow of Route 2, Olympia, has taken practically the entire responsibility.

Powder buying in continuation of last year's program, was handled in the same way, and while farmers are doing less clearing this year than last, due to general conditions, powder orders totaled 23,750 pounds, on which the saving is conservatively estimated at $1232. Nearly twice this amount of powder was used last year. Superphosphate in the amount of two cars, containing 35 tons, was bought cooperatively, formation of the pool being assisted by the county agent. Bids were awarded by the marketing committee.

Assistance was given the Northern Pacific cooperative berry growers in forming three locals in Thurston county, and the statistical report shows that one local, the one at Olympia, did a business of $13,468. It is probable that total berry business in the county amounted to two and one-half times that amount.

Cars Come Almost Too Late

Almost too late to be of any service, the railroads are now (December 1) rushing refrigerator cars toward the Wenatchee district, though few of them have arrived as yet, according to THE FARMER'S Wenatchee correspondent. Shipments to date are less than 7000 cars, compared with 11,000 on December 1 last year. There are at least 3000 more cars of apples that should be in the eastern markets or in eastern storage now. Whether weather conditions will permit the continuance of shipments any longer is doubtful. The fear is entertained that hundreds of refrigerator cars will arrive here too late to be loaded with safety and will have to be returned empty.

A further obstacle prevents the movement of apples by the Pacific Fruit Express cars, of which about 30 are arriving here daily for the first time. These must be turned back to the Union Pacific system by the Great Northern at Spokane, and under present rulings these can not be stored in transit this side of Chicago. All other cars have this privilege and unless the interstate commerce commission granted the same right to the Union Pacific on these cars they will be of little use to local shippers who hope to load them to points on the Union Pacific, such as Omaha, St. Louis, Kansas City and other stations further south, but east of Chicago.

Wintering Bees

J. W. Ware, a veteran beekeeper of Puyallup, finds that very little trouble will be had in carrying bees through the winter if all hives are full and have plenty of honey and feed. This, he says, is the best solution of the wintering problem for western Washington, even in case of packing the hives to keep out the dampness. It is also necessary to have a good strong queen in each colony.

A novel system of hive records is used by Mr. Ware. He keeps a small card tacked to each hive and marks down the result of each hive examination. A system of abbreviations is used, such as "I" for a new Italian queen, "Q" for brood queen, "E" for eggs laid in brood cells, etc. By such a system very little time is necessary to mark down the records, and when the next examination is made one knows exactly what condition the hive was in when previously opened.

Big Conventions Next Week

Two important farm conventions will be held in Spokane next week. The annual convention of the Washington and North Idaho Farmers' union will meet December 12 and 13. In addition to the regular business of the organization National President Charles S. Barrett will deliver an address.

The annual convention of the Washington State Horticultural association will be held December 12 to 15, inclusive. This convention will include also the annual grade and pack conference and the Northwest Fruit Growers' conference. An elaborate program has been arranged, including papers on subjects of production and distribution by the leading horticultural authorities of the Pacific northwest and several from other sections and from the United States department of agriculture.

Endorse Columbia Basin Project

Upon recommendation of A. D. Cross of Spokane and A. A. Elmore, formerly of Spokane, the national convention of the farmers' union at Lunchburg, Va., went on record as favoring the development of the proposed Columbia basin project.



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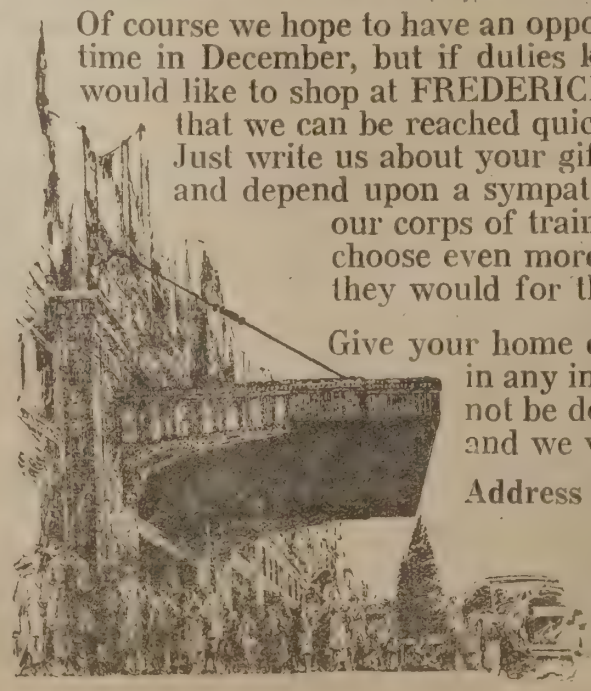
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Hog Butchering Time Will Soon Be Here

By G. J. KOHLER

Choice ham and breakfast bacon can be produced by the farmer for much less than he can buy them; still he buys more and more meat each year.

Some farmers haven't the time, others haven't the patience, and still others haven't the hogs; yet there are some farmers in every community that are passing up a good thing. Country cured hams, bacons and sausage, when properly produced, bring fancier prices and find a readier market than packing house products.

The most profitable hogs to butcher are those about 7 to 10 months of age. They should be healthy, in medium condition and gaining rapidly. If the hog is too fat the meat will not marble well and there is a noticeable loss of flavor.



Hung high for cooling.

When preparhogs for slaughter they should remain unfed for about 24 hours before being killed. Plenty of clean, fresh water will help clear the system of food and will facilitate bleeding. Do not whip or excite hogs before killing because it is sure to result in bruised or improperly bled meat.

After sticking, the hog should be allowed to bleed well. While the animal is bleeding the water temperature in the scalding vat should be brought as near 160 degrees as is possible. Scald and scrape the rear end of the hog first. In case the water temperature is not right it is easier to remove the hair from the hindquarters. In case the hair sticks in places when scraping, cover the spots with a gunnysack and pour hot water on it. A couple of buckets of cold water will wash the carcass after scraping and help to make it firmer.

The entrails should be removed immediately and the inside of the carcass thoroughly washed with cold water. It is better to take out the leaf lard before the carcass is cool. This lessens the danger of the hams and loins spoiling by allowing more rapid cooling. Splitting the carcass along the center of the spine also aids chilling.

A pork carcass should never be cut up until it is cooled. If the butchering is done in the summer, refrigeration must be resorted to. The best temperatures for refrigeration range between 34 and 40 degrees.

Freshly killed meat absorbs odors readily; consequently it is best to hang the carcass in the open air if possible.

The head is cut off about an inch back of the ears. If the cut doesn't happen to strike the atlas joint, twist the head and it will give. The fattest part of the head can be used for lard and the fleshy parts for headcheese or sausage.

Cut off the front feet about an inch above the knee and the hind feet about the same distance above the hock. The feet are usually pickled or jellied. Shoulders should be cut between the fourth and fifth ribs; the latter and the strip of backbone jointed onto them are cut loose from the shoulder.

The ham is removed from the middle by cutting just back of the rise in the backbone. Cut from the flank to the root of the tail at an angle of about 45 degrees. This saves the loin meat which would otherwise be trimmed off and used for sausage.

Remove the ribs from the side, cutting as close to them as possible. Cut the loin and fatback off in one piece by cutting parellel with the back just below the tenderloin muscle on the rear part of the middle. Trim the fat from the loin and leave the latter intact. The rest of the middle is squared up for bacon.

The meaty trimmings from all cuts should be saved to make sausage. All fat except that around the intestines should be rendered for lard. The intesinal, or gut fat, as it is more commonly termed, should be soaked in cold water for a while to remove the odor. It can be rendered by itself later. The other fat strips are cut into fine pieces and put into a large kettle with about a quart of water. A moderate fire and frequent stirrings will keep it from burning. When the cracklings become brown and float the lard [illegible] the lard when it is removed from the fire. Stirring it and make it smooth. [illegible] helps to whiten

Some people complain of their lard getting rancid when they start to use it. If the lard is removed from the container evenly, and not by digging down into the center and leaving a thin coat exposed to the air on the edges of the container, it is less likely to became rancid.

Twenty-four to 36 hours after killing is the proper time to start curing. The meat should be thoroughly cooled but not frozen.

Salt when applied alone to meat causes the juices to dry out and the fibers to become tough. Sugar and molasses soften the fibers and improve the flavor. Saltpeter is used to preserve the natural color of meat. It is less work to preserve meat with a brine and there is less danger from rodents and insects than with the dry cure method.

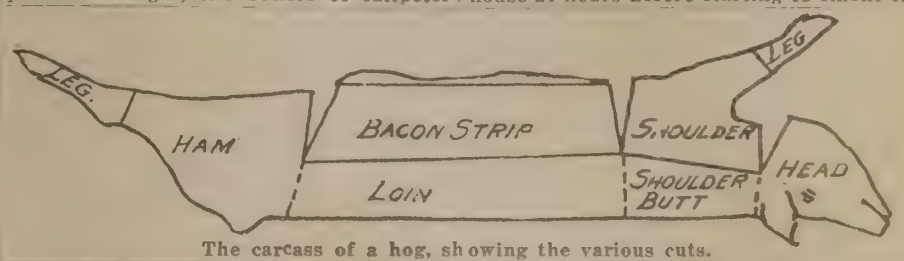
Dry Cure Method.

There are many dry cure methods. Possibly the most common is the use of salt alone, though it is not the most satisfactory. Salt tends to harden the meat fiber and dry the pieces out. One method quoted in a department of agricultural bulletin is the use of five pounds of salt, two pounds of brown sugar and two ounces of saltpeter. This is mixed thoroughly before applying to the meat. After the meat is well cooled rub the mixture of salt, sugar and saltpeter well into it. Let it stand in a cool, dark place for three days. Take out and apply a second coating of the mixture. Let stand for three days again. Treat it once more and pack away for about 10 days. Then remove and pack away into a barrel or box which has about an inch of salt on the bottom. Lay the hams skin side down on this salt, with the shoulders next and the sides next. The meat may remain in this condition for two to four weeks, when it is ready for smoking. Prior to smoking it may be covered with a well rubbed on mixture of black pepper and borax, this latter treatment being to repel insects that may attack it.

A good brine formula is as follows: Eight pounds of salt, two and a half pounds of sugar, two ounces of saltpeter and four gallons of water to every 100 pounds of pork. Allow four days' cure for each pound of weight in a ham or shoulder and three days for each pound in bacon and small pieces. For instances, a 15-pound ham would take 60 days and a 10-pound side of bacon 30 days. It is best to make the brine the day before you use it, so that cooling will be complete. When mixing, place all the ingredients together and boil until they are thoroughly mixed.

When the meat is being placed in the brine put the hams in the bottom, skin side down, shoulders next, and bacon and small pieces on top, skin side up. Change the bottom pieces to the top in five days and again in 10 to 18 days. In case the brine becomes ropy, either reboil it or make a new one. Always wash the meat when changing it from a ropy brine to a clean one.

When the meat has finished curing wash it in tepid water and then dry each piece. Carelessness causes much waste in hanging meat in the smokehouse. Each piece should be hung so that it will not touch any other. The meat will mold and sweat if it comes in contact with anything. Permit the meat to hang in the smokehouse 24 hours before starting to smoke it.



The carcass of a hog, showing the various cuts.

Green hickory or maple wood is the best fuel for smoking meat. Hard woods are always preferable to soft. A bad flavor results from using resinous woods. Smoke with a slow fire and don't get the smokehouse too warm. Forty-eight hours is sufficient smoking if the meat is not to be kept very long.

After the meat is smoked it should be wrapped in heavy paper and placed in muslin sacks. The opening of these sacks should be twisted several times and tied shut tightly, so as to keep out insects and rodents. Painting the sacks with a solution called yellow wash keeps mice and flies and other meat destroyers away.

(Continued on page fifteen.)

Give EVEREADY FLASHLIGHTS this Christmas

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EVEREADY FLASHLIGHTS & BATTERIES

Two Beef Bulls Bring $2100 Each

Five beef cattle sales, besides the two dairy cattle sales, made the fullest week the Pacific International has ever had, in the way of live stock auctions. But it showed that this great show has a mission as a distributing point for live stock, as well as an educative value for those who visit it. While the averages were low, a few high prices were received and those who sold expressed themselves as, under the circumstances, fairly well satisfied.

THE SHORTHORN SALE.

While the bulk of the consignments to the Shorthorn sale at the Pacific International Stock show went low, the sale was characterized by one bull going to the high figure of $2100 and another to $1225. Other bulls sold at fair figures and the average was decidedly higher than for the females, that had no exceptionally high individual to boost the average. It was the Sni-a-Bar farm of Kansas City, Mo., that paid the high price. This farm was instituted by the late W. R. Nelson for the demonstration of improvement of cattle, and it is certainly a tribute to the northwest and to the Day & Rothrock company that a bull from their herd should be one of those selected and so high a price paid. The bull selected was Hercules Conqueror, junior and grand champion of the show. Hercules Ideal, the $1225 bull, was taken by Mountcrest ranch of Hilt, Cal., indicating the high reputation these northwest Shorthorns have. Broughton Brothers of Dayton, Wash., were the runners up on both bulls. The 22 bulls averaged $327.50 each and the 25 females, $168.40, the 47 head averaging $240.87. Colonel A. W. Thompson of Indiana was on the block, with Sandy Keith in the ring, and the sale was under the management of E. A. Lawson, field representative of the American Shorthorn association. The following is a complete list of the animals sold, buyers and prices:

Bulls.

Consigned by Day & Rothrock, Sprague, Wash.:
Hercules Conqueror, born March 10, 1921—Sold to Sni-a-Bar Farm, Kansas City, Mo. $2100
Hercules Ideal, born November 30, 1921—Mountcrest Ranch, Hilt, Cal. $1225
Hercules Radiance, born September 29, 1921—Napier & Wills, Sprague, Wash. $640
Hercules Bandmaster, born October 10, 1921—Methow Valley Live Stock company, Winthrop, Wash. $305
Hercules Statesman, born October 15, 1921—F. P. Mays, Tygh Valley, Ore. $250
Consigned by A. D. Dunn, Wapato, Wash.:
Dunbre Lad, born December 4, 1921—Felzer Bros. & Davidson, Tangent, Ore. $180
White Clipper, born March 1, 1921—Sauter Bros., McMinnville, Ore. $175
Consigned by George Bertrand, Castle Rock, Wash.:
Criterion 2d, born February 23, 1921—O. M. Plummer, Portland, Ore. $150
Criterion 3d, born October 20, 1921—Edson L. Faulke, Gazelle, Cal. $100
Consigned by Oregon Agricultural College, Corvallis, Ore.:
Grande Diamond, born October 24, 1921—B. C. Diamond, White Salmon, Wash. $135
Roan Prince, born November 21, 1921—Edson L. Faulke $125
White Diamond, born November 21, 1921—Edson L. Faulke $95
Consigned by State College of Washington, Pullman, Wash.:
Hercules Rex, born November 2, 1920—F. L. Pope, Merrill, Ore. $325
Village Cup, born September 21, 1921—L. L. Jones, Mitchell, Ore. $200
Consigned by Foothills Farm, Inc., Carlton, Ore.:
Clover Meadow Victor, born January 12, 1920—Broughton Bros., Dayton, Wash. $200
Cloverleaf Choice, born September 20, 1921—L. R. Vincent, Chesaw, Wash. $280
Consigned by John H. Mathison, Wapato, Wash.:
White Forest, born January 15, 1921—Edson L. Faulke $115
Monellas, born January 4, 1922—Edson L. Faulke $100
Consigned by A. H. Tarbell, Warren, Ore.:
White Cup, born September 27, 1917—Rimbol Young, Sumpter, Ore. $150
Consigned by H. R. Richards & Son, The Dalles, Ore.:
Nellie's Master, born June 26, 1921—Albert Campbell, New Meadows, Idaho $140
Consigned by J. W. Fox, Cedonia, Wash.:
Captain, born March 26, 1918—Edson L. Faulke $130
Consigned by G. W. DeLay, Sublimity, Ore.:
Village Baron, born January 5, 1921—Edson L. Faulke $85

Females.

Consigned by Day & Rothrock:
Hercules Victoria 4th, born March 1, 1921—Broughton Bros. $750
Hercules Violet 6th, born October 26, 192.—University of Idaho, Moscow, Idaho $275
Hercules Missie 4th, born September 29, 1921—Joe McDonald & Sons, Fenn, Idaho ..$260
Consigned by A. D. Dunn:
Bonnie Girl, born February 7, 1921—Gale DeLay, Hot Lake, Ore. $250
Dunbro Violet, born October 7, 1921—Broughton Bros. $210
White Lady, born October 4, 1921—Rimbol Young $110
Consigned by George Bertrand:
Bessie Criterion, born September 2, 1921—Harold Holmes, Mabton, Wash. $140
Red Velveteen, born September 10, 1920—Rimbol Young $125
Daisy Criterion, born February 7, 1921—Rimbol Young $95
Consigned by Oregon Agricultural College:
Lady Silverdale, born November 27, 1921—Day & Rothrock $75
Miss Willow Dale 2d, born December 11, 1921—S. C. Gibson, Dakota, Wash. $65
Miss Willow, born December 3, 1921—Gerald Varnum, Mabton, Wash. $75
Dainty Lady 2d, born December 7, 1921—Harold Holmes $95
Consigned by Foothills Farm, Inc.:
Craigalea Coral, born September 3, 1921—Harold Holmes $225
Red Rose B, born May 15, 1921—Gerald Varnum $180
Consigned by A. H. Tarbell:
Red Queen, born January 26, 1921—Rimbol Young $75
Consigned by R. E. Tarbell, Warren, Ore.:
Roseanna, born May 28, 1921—Rimbol Young $70
Consigned by J. W. Fox Jr., Cedonia, Wash.:
Cedonia Belle, born April 3, 1916—John Mathison, Wapato, Wash. $100
Consigned by G. W. DeLay:
Village Maid, born February 2, 1921—Day & Rothrock $195
Village Queen 2d, born May 22, 1921—Rimbol Young $75
Village Mary, born November 15, 1921—Rimbol Young $65
Lady Clay, born November 15, 1921—H. A. Espee, Oysterville, Wash. $65
Consigned by Mountcrest Ranch, Hilt, Cal.:
Victor's Magnolia, born September 15, 1921—Harold Holmes $150
Consigned by Tomson Bros., Dover, Kan.:
Marigold Baroness, born October 8, 1916—Broughton Bros. $625
Consigned by Frank Brown, Carlton, Ore.:
Unnamed heifer, born January 2, 1922—John Mathison $60

HEREFORD CONSIGNMENT SALE.

On Friday, November 10, the annual consignment sale of Herefords was held. Henry Thiessen, who had a sale of his own earlier in the week, and who had two consignments to this sale, was induced to offer his grand champion bull, Rupert's Model 14th. He was rewarded by topping the sale and equalling the high price of $2100, which was the top price of the Shorthorn sale earlier in the week. This great bull was taken by the Alamo Ranch company of Gazelle, Cal. W. D. Duke himself was present from the ranch and was the successful bidder after some hot competitive bidding. Outside of this bull prices ranged low, the average for the 30 bulls being $218.83 and for the females, $119.10. The following is a complete list of animals sold, buyers and prices:

Bulls.

Consigned by Henry Thiessen, Sweet Water, Idaho:
Rupert's Model 14th, born September 10, 1919—Sold to Alamo Ranch company, Gazelle, Cal. $2100
King Rex, born September 8, 1921—H. A. Ten Eyck, Sandy, Ore. $130
Ideal Bonnie, born January 5, 1922—Walter Gover, Halfway, Ore. $105
Consigned by Baldwin Sheep company, Hay Creek, Ore.:
Oregon 24th, born December 6, 1921—C. E. Burgess, Fossil, Ore. $475
Chesney Lad 70th, born March 17, 1918—Alamo Ranch Co. $350
Oregon 3d, born February 20, 1920—Alamo Ranch company $200
Oregon 22d, born January 28, 1921—C. E. Bodine, North Portland, Ore. $130
Consigned by Herbert Chandler, Baker, Ore.:
Prince Debonair, born April 3, 1921—Weatherford Bros., Dayton, Wash. $310
Rupert Debonair, born June 25, 1921—Joe Boyer, The Dalles, Ore. $195
Prince Claude, born October 8, 1921—Preston Ranch company, Jacksonville, Cal. ..$170
Peaceful Prince, born January 3, 1922—George W. Bull, Mabton, Wash. $130
Consigned by Weatherford Bros., Dayton, Wash.:
Don Blanchard 12th, born July 22, 1921—Albert Campbell, New Meadows, Idaho $180
Consigned by A. H. Barnum, Moro, Ore.:
Y Beau Carlos 19th, born April 29, 1921—C. E. Burgess $175
Carlos Donald, born April 20, 1921—Edson L. Foulke, Gazelle, Cal. $145
Consigned by W. G. Hayworth, Corvallis, Ore.:
Happy Fairfax, born February 12, 1919—Edson L. Foulke $145
Monta Fairfax, born July 15, 1921—O. D. Teel, Echo, Ore. $115
March On Fairfax, born July 27, 1921—Edson L. Foulke $105
Waveland Fairfax, born January 20, 1922—Edson L. Foulke $75
Consigned by Herman Nordby, Lewiston, Idaho:
Dan Rupert 7th, born November 12, 1921—Diamond B. Ranch, Lowell, Ore. $250
Blanchard, born May 5, 1917—Edson L. Foulke $105
Dan Rupert 5th, born September 27, 1921—Edson L. Foulke $80
Consigned by Oregon Agricultural College, Corvallis, Ore.:
Beau Debonaire 2d, born November 8, 1921—Walter Gover $85
Beau Rupert, born October 24, 1921—Walter Gover $80
Silky Beau 7th, born October 11, 1921—Walter Gover $80
Consigned by Platt Bros., Genesee, Idaho:
Beau Type 7th, born April 14, 1921—Edson L. Foulke $105
Beau Type 4th, born April 12, 1921—Edson L. Foulke $100
Beau Type 11th, born August 1, 1921—Walter Gover $100
Beau Type, born January 11, 1921—Albert Campbell $90
Beau Type 14th, born September 16, 1921—Edson L. Foulke $80

(Continued on page sixteen.)



Cheapest Way to Clear Land

My new reduced prices on the improved 1923 Model Hercules makes it easy and cheap for you to remove every stump—to clear every acre on your farm as clean as a whistle. No stump or hedge too big or stubborn for the Hercules, all-steel, triple power stump puller. It yanks 'em out in less time and with less effort than any other method. Make big money pulling stumps for your neighbors. Pull stumps for fuel. I make both **horse** and **hand power machines**. Latest, most up-to-the-minute improvements. Send today for catalog and special folder.

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B. A. FULLER, Pres.
Hercules Mfg. Co.
414 29th St.,
Centerville, Iowa

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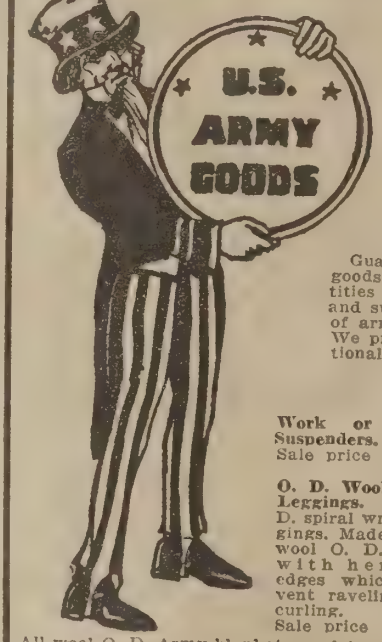


BE COMFORTABLE — Wear the Brooks Appliance, the modern scientific invention which gives rupture sufferers immediate relief. It has no obnoxious springs or pads. Automatic Air Cushions bind and draw together the broken parts. No salves or plasters. Durable. Cheap. Sent on trial to prove its worth. Never on sale in stores as every Appliance is made to order, the proper size and shape of Air Cushion depending on the nature of each case. Beware of imitations. Look for trademark bearing portrait and signature of C. E. Brooks which appears on every Appliance. None other genuine. Full information and booklet sent free in plain, sealed envelope.

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Glance over the bargains on the "Want Ad" page.



PUBLIC SALE OF

SURPLUS WAR SUPPLIES

A gigantic merchandising upheaval that is wrecking high prices. The world's strongest wearing goods, army and navy goods. Thousands and thousands of dollars' worth of surplus war material, commercial merchandise and wearing apparel of all descriptions for men are being sold by us direct to the public at prices that amaze and bewilder the economically inclined people of the western part of the United States. Thousands of people from all walks of life, such as ranchers, miners, fishermen, farmers, mechanics and professional men, are saving money. Why don't you order by mail today—Now. Goods shipped FREE. Act and benefit.

BUY THROUGH MAIL OR DER.

Guaranteed satisfaction or money back if you want it. We are one of the largest mail order army goods concerns in western America. We buy direct from the U. S. war department in tremendous quantities and operate a large chain of stores covering the entire Pacific coast. As we are wholesale jobbers and supply numerous dealers we can offer the readers of this magazine special opportunities in their buying of army goods direct from us. Read the prices quoted below. Order by mail at once from complete stock. We prepay express and postal charges anywhere. Satisfaction assured or your money back. References: National Bank of Tacoma, Tacoma, Washington.

Work or Dress Suspenders. Sale price .. **39c**

O. D. Wool Wrap Leggings. New O. D. spiral wrap leggings. Made of all wool O. D. cloth, with hemmed edges which prevent raveling and curling. Sale price .. **95c**

All wool O. D. Army blankets, reclaimed, good as new, about 3½ pounds **$2.75**
All wool O. D. Army Blankets, new, get yours now ... **$3.45**
Army marching or officers' shoes, solid leather, pair ... **$4.95**
Officers' moleskin coats, good for any weather, bargain ... **$12.95**
Wool nap, 66x80 double plaid blankets, pair **$5.95**
Pure wool O. D. breeches, U. S. issue (brand new), sale price ... **$3.95**
O. D. pure wool long pants, U. S. gov't issue, sizes 29 to 34. Reclaimed. Sale price ... **$2.45**
O. D. pure wool long pants. Same as above. (Brand new). All sizes. Sale price ... **$3.45**
Army Coats. All wool army coats, O. D. serge lined. An exceptionally fine coat for work. Sizes only 34 to 38. Reclaimed. Sale price ... **98c**
O. D. all wool serge lined coat. Brand new. Worth up to $12. Sizes only from 38 to 44. Sale price ... **$1.95**
O. D. cotton army fatigue uniform coat. Sizes 32 to 38. Sale price ... **39c**
Genuine Old Hickory shirts. Just the shirt for farm wear. Sizes 14½ to 17. Special price ... **98c**
U. S. Army wool breeches, reclaimed, but good as new; big bargain; worth $5 ... **$1.95**
U. S. Army khaki breeches, cotton, reclaimed, good as new, first grade, pair **95c**

Blue chambray work shirts, all sizes, each ... **69c**
Khaki, heavy drill or sateen shirts, all sizes ... **$1.39**
U. S. Army trench shovels, handy for house or auto ... **69c**
U. S. Army saddle bags, new, cost government $25 ... **$4.95**
U. S. Army cotton O. D. sox, a pair, 19c, or dozen ... **$2.00**
U. S. Army garrison shoes. Munson last, unlined Army shoes. Goodyear welt. This is the same shoe as was worn by our soldier boys and is conceded to be the best, strongest and most comfortable shoe on the market. Sale price ... **$5.45**
Russet Army shoes. Munson last, Goodyear welt. Deep russet color. Soft toe and uppers. Double soles. Solid counters. Sale price ... **$4.95**
U. S. Army trench shoes. Hob nailed trench shoes. All solid leather. Finest quality for a heavy work shoe. Smooth side of leather on inside of shoe. Sale price ... **$3.45**
U. S. Army solid leather jerkins, new; cost government $10 ... **$4.95**
U. S. Army two-finger mitts, horsehide, worth $1.50 ... **39c**
U. S. Army, Lee reclaimed coveralls, khaki or blue, all sizes ... **$1.49**
U. S. Army reclaimed all-wool O. D. shirts, sizes 12 to 16; cost $6 to make. Each **$1.49**
U. S. Army new O. D. pure wool shirts, world's best; all sizes ... **$2.95**
U. S. Army khaki-wool mackinaws, all sizes ... **$7.45**
Natural color cashmerette sox, linen toes, heels; pair, 23c, dozen ... **$2.50**
Army pillows, reclaimed, like new, each **69c**
Army canvas folding water buckets, holds 3 gallons ... **69c**
Lambsdown union suits, new, extra value **$1.98**
Army reclaimed raincoats, double back ... **$1.98**
Sheep-lined coats. Three-fourth length. Moleskin top. Lined with sheepskin on inside. Dark beaver color collar. Reclaimed, but good as new. Sale price ... **$14.95**
U. S. Navy pea jackets. A wonderful coat made of pure wool Melton cloth. Dark navy blue. Sold to the sailors on board the war ships for about $21. All sizes. Sale price ... **$9.85**
Pure wool O. D. sleeveless sweaters, made of the very best wool yarn. All sizes. Sale price ... **$1.49**
Extra heavy O. D. pure wool, double sleeveless sweater (reversible). Can be worn on either side. Sale price **$2.39**
O. D. heavy jumbo knit (pure wool) sweater, roll collar, no buttons. All sizes. Sale price ... **$5.49**
Fancy pure wool roll collars. Jumbo knit sweaters, no buttons; combination colors: blue and gold, black and orange and other colors. Sale price ... **$5.49**
O. D. and green sleeveless sweaters. All sizes. Sale price ... **98c**
Gray coat sweaters. Roll collars. Sale price ... **$1.29**
Government standard cotton khaki shirts, with two pockets, triple stitch, new ... **98c**
Marine shoes, genuine cordovan leather, good for work or dress, new, guaranteed all leather, worth $8. Our price, pair. Buy 2 or 3 pairs at this price ... **$3.45**
Army heavy, all wool socks, 24-inch length, regular worth, 50c and 75c, now 39c pair. Per dozen ... **$3.75**
Full length 40 or 44-inch all leather calfskin coats, reversible, with overcoat on other side. Two coats in one, easily worth $35 to $50. Our price ... **$17.95**
U. S. Army heavy hobnail or trench waterproof shoe. Strongest shoe ever made for farmers, miners or hard workers: it's unbeatable. All sizes ... **$3.45**
Genuine cowhide leather puttees, one-piece. A good buy at, pair ... **$4.45**
Army roast beef, corn beef and corn beef hash, by the case, cheap.
U. S. Army feed bags. Clean and sanitary feed bags for horses. Used by the government in feeding horses. Sale price ... **$1.45**
Pack sacks. Bushel size. Brand new. With leather shoulder straps, sack made of heavy waterpoor khaki duck. Sale price ... **$1.85**
Horsehide government work gloves. Strong and reliable. Sale price ... **98c**

ORDER BY MAIL.

Write plainly, give name and correct address, and state size and color desired. If you doubt size give us your weight and height.

U. S. ARMY SUPPLY STORE

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We save you shipping charges. All goods shipped FREE. WHOLESALE AND RETAIL.

Do not confuse this big merchandising concern with small army goods dealers. We buy direct from U. S. Government and sell by mail order at our dealers' wholesale prices.

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Make money orders payable to J. B. Robinson. Be sure you give correct sizes. Prices listed above are prepaid to your own town.

Skagit Dairymen Celebrate

Now Own and Operate Plants to Handle All Their Milk

There were at least 2500 people at the Jubilee meeting of the Skagit County Dairymen's association at the association's plant at Burlington November 18. The dairymen invited all farmers and any one else interested in the upbuilding of the dairy industry to come out and enjoy a program which included talks by prominent dairymen, a number of vaudeville acts and a dance. The occasion was the first pay day after the purchase of the federal condensery at Mount Vernon October 1.

Everything was free to all and the large room on the main floor of the building was crowded to capacity. A stage was constructed at one end to accommodate the speakers. J. M. Humphreys, manager of the plant, was the master of ceremonies, who called on W. J. Knutzen of Mount Vernon to make the address of welcome. Pete Omdahl, a breeder of registered Holsteins and a member of the board of directors, told of the rapid development of the dairy industry in the state and warned the breeders not to sell off too many of their best cows to buyers of other states who are anxious to secure the best. "We should make every attempt to develop our own industry first," he said, "before we begin to stock up the herds in our neighboring states with our best blood lines."

Protected by Own Plants.

J. A. Scollard, president of the United Dairy association, outlined the growth of the association in the county and spoke optimistically of the future. He estifated at least 15,000 dairy cows in Skagit county and said there was no reason why the number could not be doubled to the betterment of all agricultural conditions. The question of marketing their product has been solved, due to the close cooperation of the members.

"The fact that the association now owns two large plants eliminates any prospect of the association's not being able to produce any of the products demanded by the market," said Mr. Scollard. "If there is an especially strong demand for cheese and the canned milk market is low, the entire production of whole milk in the county could be turned to the Burlington plant with very little trouble. The reverse could be done in case there was an unusually strong demand for condensed milk, since the plant at Mount Vernon is equipped to handle 150,000 pounds of raw milk per day."

In order to make the purchase, which required a total of $250,000, the members of the association found it necessary to raise $70,000 by the sale of bonds and borrow $120,000 at 7 per cent for five years. Of this amount $60,000 was purchased by farmers and business men of other cities, while the balance of $10,000 went to the local business men of Mount Vernon.

The Federal condensery, together with the association's plant at Burlington, makes one of the largest cooperative manufacturing units in the United States, it is claimed. The plants will have a combined valuation of more than $600,000 and will have a capacity of 350,000 pounds of milk per day.

For the last two years the association has been operating the Federal plant under an option for which they paid $20,000. The earnings of the plant during this period met all expectations and were made possible by a steady supply of the proper volume of milk for the most efficient operation of the condensery.

The association agreed to furnish milk to the plant for the entire period and was to be allowed the use of all brands of milk being manufactured. During this time the organization earned for its members more than $75,000 after paying all expenses plus a profit to the Federal company.

Part of the bonds were sold at a meeting of enthusiastic citizens one evening while the members were contemplating the purchase of the plant. Mr. Scollard was present at many of their meetings.

The method of distribution of the products of the plants is through a central agency which was organized for the special purpose of handling the output. This concern is known as the Consolidated Dairy Products company, and plans to handle only cooperative dairy products.

The history of the association dates back to December, 1916, when the organization plans were completed. It was their purpose to do a general brokerage, factory, commission, forwarding and export business in all kinds of dairy products. The nonprofit cooperative method was to be followed. The plan met with the approval of a large number of dairymen and the organization was completed.

Membership is limited to those who are actually engaged in the dairy business and the corporate powers are vested in a board of five trustees, each of whom must be a stockholder in good standing. A bond issue of $300,000 was floated for the erection of a new building, which was to be large enough to take care of all of the dairymen's milk. The association did not begin to manufacture condensed milk until 1920.

Since the Federal plant has been added to the equipment of the association the members are well fitted to take care fo all of their milk and will also allow for some expansion of membership.

Want Farm Bureau Secretary

The Whitman county farm bureau proposes to have an executive secretary all its own. That was the unanimous decision reached at a meeting of the county farm bureau in Colfax. In other words, President E. J. Doneen was authorized to employ a secretary without financial help from the county or the Washington State college. It is understood that G. S. Burford of Waterville will be the man selected. The new bureau secretary will assume his duties December 1, when the contract with County Agent C. A. Lodge will expire.

Canyon county, in southern Idaho, is employing an executive secretary on the same terms, the farm bureau members entirely financing him.

A number of counties in Washington employ a "secretary" in addition to the county agent, the former acting as a business agent for the bureau.

An important announcement was made at this meeting of the Whitman county farm bureau when President Doneen stated that through the reduction in warehouse handling charges from $1.25 to $1 a ton, the result of work by the bureau, farmers of Whitman county had been saved between $400,000 and $500,000 in the last two years. Figures were presented showing that the saving to members in the purchase of sacks, sack and bundle twine, struchnine and alfalfa seed the last year amounted to $13,775.

Canning Club Champions

Gladys Taylor and Ruth Haydeen of South Bay, Thurston county, state canning club champions of 1921 and runners up for the interstate championship, will go to the Pacific Fruit exposition, November 11 to 19, to give demonstrations of the cold pack method of canning.

The girls, who are students in the Olympia high school, were successively county, district and state canning champions last year and are familiar with every process of canning. They have been five years in club work and on their rapid rise to the championships they won were trained under direction of William H. Dunham, Thurston county club leader.

Poultrymen to Meet

Harry H. Collier, director of the American Poultry association, has issued a call for the members of the American Poultry association of Washington, Oregon, Idaho, Montana, Wyoming, North and South Dakota to meet at Seattle January 4 to 6, 1913, to organize a zone of the American Poultry association. Headquarters of convention, New Richmond hotel.

The Washington State Poultry Breeders will meet at Seattle. Headquarters, New Richmond hotel, January 5, 1923.

The Puget Sound Poultry association will hold its annual show January 3 to 7, 1913, when $240 and the gold and silver medals wil be given in premiums for American Poultry association members who show their fowls.

IN THE LEADING POTATO STATE.

Maine used to be content to grow potatoes and trust to luck to market them. Now they are forming a cooperative potato marketing association.



A Brighter Christmas on the Farm With DELCO-LIGHT

Bring greater happiness into the lives of everybody on the farm by making a Delco-Light Electric Light and Power Plant your family Christmas present.

There isn't anything that would give greater pleasure and comfort. There isn't anything that would so lighten the daily burdens and make every day on the farm happier. And just think how the family will enjoy the cozy rooms flooded with bright, clear, and steady Delco-Light.

Remember, too, Delco-Light will bring a happiness that extends far beyond Christmas day, for Delco-Light will be constantly on hand to provide brilliant, safe light, running water wherever you need it, power to run the separator and tumble the churn, and help in so many other ways.

And the new big price reduction and the time payment plan make it easy for you to get Delco-Light *now*—to place your order *today* to insure delivery in time for Christmas.

Put Delco-Light *in your Home* for Christmas

DELCO-LIGHT COMPANY, DAYTON, OHIO
Subsidiary of General Motors Corporation
Also manufacturers of Delco-Light Water Systems, Delco-Light Washing Machine, and Frigidaire, the Electric Refrigerator.
All products made for 32 and 110 volt Direct or Alternating Current Service

MODERN APPLIANCE CO.
508 First Ave., South Seattle, Wash.

Dependable DELCO-LIGHT
Back to 1917 Prices!

LIVESTOCK AND DAIRY

Dairy Farm Survey

"There are two classes of dairy farms, one on which the herds pay less than the regular wage for labor put on them and the other which returns a better wage to the owner because of better breeding, selection, feeding, management, and more favorable market conditions." This is a conclusion following a survey of a number of dairy farms in western Washington made by R. N. Miller, farm management specialist of the state college extension service.

"On farms where there is a large family, a low labor return is frequently marketed at such a figure as to materially increase the family income," said Mr. Miller. "In such a case each member who helps with the dairy work is working at a lower figure than outside help would cost, but it is doubtful if such labor could be more profitably employed.

"Some herds are returning little more than the value of the manure, while on the other hand there are farmers clearing good money, even in a bad year like this one. In the survey, one farm where there were 27 cows sold butterfat at 50 cents per pound in August, 1922, reported 15 hours' daily labor and allowed 6 per cent interest on money invested, depreciation on herd, buildings, equipment, death risk, taxes, supplies, insurance, feed, pasture and management, allowed 75 cents per cow for manure produced, made 61 cents per hour. By having an exceptional market this farmer was able to make a good profit. The cost per pound of butterfat was 29 cents.

"Another dairyman in the same locality had only an ordinary herd, but made 25 cents an hour with no preferred market. Still another with an exceptional market of 40 cents per pound made 65 cents per hour, while a fourth made only 8 cents per hour.

"Any dairyman who receives the greater part of his income from a dairy herd can well afford to keep feed, production and other records, and to make such estimates as will enable him to determine what he is receiving for the labor in taking care of the cows.

"The number of hours will vary from 100 to as high as 300 per animal during the year. Convenience of buildings, fields, and how well a person can do the work, are among the things that influence the number of hours of labor and the earnings per hour. The most immediate point, of course, is a higher price for the products. That is the easiest to think and wish for, but hardest to get.

"Next in importance is a greater milk yield from each cow. This factor is a more difficult problem and requires more time, but it pays well when once established. A third point and one liable to be overlooked, is greater home conveniences making for easier and better work and the use of more and cheaper home-grown feeds.

"Our records show that even in a trying year like 1922 some dairymen are at least breaking even; some do it by acquiring a better market and selling a superior product. Some by using better cows, cheaper feeds and requiring cheap labor. The feed costs on the lot in the survey amounted to 47 per cent of all costs of producing milk, while labor amounted to 24 per cent of the total cost."

Mr. Miller is carrying on other experiments of this kind and hopes to have figures that will give the dairymen a better idea as to how they may work toward a better net income from their herds.

LIFE PRESERVERS FOR LIVE STOCK

By DR. E. E. WEGNER, W. S. C.

SWINE DISEASES. ARTICLE III.

Tuberculosis.

We hear a great deal about tuberculosis in cattle and a great deal of work has been done to eradicate this disease from the dairy herds, but have you heard anything about this same diseases in swine? Not a great deal has been written about it in this animal, though it is very prevalent. Probably the reason that we hear more about tuberculosis in cattle, and especially the dairy herds, is because the food products from this source is usually eaten in the raw state. Milk, butter, cheese and ice cream may easily be contaminated when the milk is drawn from dairy herds that are diseased, but since we cook the meat food products quite enough to destroy the germs there is actually less danger from the meat than the milk, and the further fact that the children use milk so universally is another reason for guarding it more closely than other food products.

There is too general an opinion that one can tell by the appearance of the animal when tuberculosis is present. This is one of the hardest opinions to overcome. An owner proudly says, "Aren't my animals in fine condition?" meaning that they are sleek and fat and looking well to the eye. That does not mean, however, that they are free from certain contagious diseases. He could assure you very certainly that they were not suffering from hog cholera or certain other acute diseases, but he can not have the assurance that they do not have tuberculosis.

Requires Physical Test.

We do not recognize tuberculosis in the human family until the patient begins to show signs of loss of weight, paleness and a certain listlessness, after which it may be suspected, but not certainly diagnosed. I do not mean that your physician can not diagnose it before that time, but that nothing less than a careful physical examination would reveal it. The same is true of the swine. By the time they begin to show visible symptoms of a wasting disease we might suspect tuberculosis and until that time think that they were in perfect health, and all this time they are spreaders of the disease. All animals affected do not die of tuberculosis. In fact, a small percentage only show visible symptoms, as most of them recover even without treatment, but because there is danger of spreading this disease to other animals and to human beings there is good reason for regarding it as an ailment to be fought by every possible means at our disposal.

How Discover It?

One may ask, "If this disease can not be readily diagnosed how is the breeder to know when it is present?" This is answered that when these animals are sent for slaughter it is easily recognized on postmortem examination and that is the time that the careful owner will take heed when he finds that any of his animals are diseased. I have in mind one herd of hogs that showed 65 per cent diseased on the killing floor and the owner claimed to be unaware that he had any such trouble on his place. This is not a hear-say story from Lapland, either, as these animals were shipped to a Portland

(Continued on page fifteen.)



Prove it —this way

Don't take anyone's word for it that KOW-KARE definitely increases the milk yield. Actual proof is too easy to secure.

Make a simple test — and make it now, so that you may benefit all winter and spring by what it proves. Select a part of your herd — even one cow — and place in her feed morning and evening, for just one week out of the month, a tablespoonful of KOW-KARE. If you keep accurate production records, you will be surprised at the increased yield, and at the surprisingly low cost of the treatment.

The reason is simple. The vigor of the cow's digestive and milk-making organs "runs down" during the winter months when green pasturage is not available. KOW KARE has the medicinal properties to keep these organs toned up and working at summer capacity.

It is just this building-up of the genital and digestive functions that makes KOW KARE so valuable in treating the diseases which originate in these very organs, such as *Abortion, Retained Afterbirth, Barrenness, Scours, Bunches, Milk Fever,* etc. No medicine shelf is complete without this nationally-used cow remedy.

KOW KARE is sold by feed dealers, druggists, general stores; large size $1.25; medium size 65c. If your dealer is not supplied, we will send postpaid. Our valuable book, "*The Home Cow Doctor*," free.

Dairy Association Co., Inc., Lyndonville, Vt.

Distributing Agents — *Write for Catalog and full information* — PORTLAND SEED CO. Portland Oregon

KOW-KARE is supplied by Spokane Seed Co.

Cor. First Ave. and Lincoln, Spokane, Wash.
Dealers in Supplies for Dairy, Poultry, Bees and Orchard. Catalog Free.

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Simply write to your nearest De Laval office, giving the date you purchased the machine, length of service, size, serial number, and a statement regarding the service you have received from it.

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Spokane, Wash.

Glance over the bargains on the "Want Ad" page.

Holsteins and Jerseys Are Sold

Rather low prices, wide distribution of the cattle sold, and heavy buying by the Oregon State hospital at Salem, which thereby laid the foundation of a purebred dairy herd, were features of the 10th annual sale of Holsteins on Friday of Pacific International week at Portland this year. Buyers from the four northwest states of Washington, Oregon, Idaho and Montana participated, Oregon taking the greatest number, naturally, and in addition John B. Irwin of Minneapolis, Minn., one of the foremost eastern breeders, paid John L. Smith of Spokane the compliment of taking home three of his heifers. The average price received for 66 head of all ages and both sexes was $191.55.

Not only was the state hospital the heaviest buyer (its 14 purchases totaling $3655), but it picked some of the finest offerings of the sale, including the highest priced and second highest priced females. Jewel Cornucopia Wayne Boon, a 4-year-old consigned by Thomas Yarr of Chimacum, Wash., with calf by Cascade Korndyke Ormsby Blossom, topped the sale at $500. A 3-year-old bred by Smith but consigned by William McKeown of Gresham, Ore., brought $410 on the bid of the state hospital, which purchased also three others at $300 or better and seven others from $180 to $275. R. B. Goodin of the state board of control signed the sale slips for the hospital. There were no other heavy buyers, though R. H. Tuttle of Walla Walla took five head at $695, sales being distributed among 38 buyers. W. O. Bohart, Brown Swiss breeder of Bozeman, Mont., and Mrs. Minnie Miller, Guernsey breeder of Wendell, Idaho, both exhibitors at the Pacific International, were among the purchasers.

John L. Smith was the heaviest consignor, with 15 head, most of them his own breeding, and three of those sold by William McKeown were bred by the Spokane man also. The youngest consignor was David Nisbet of Chehalis, whose Olympic Greenbank Queen started the 1922 season by winning at the Southwest Washington fair, went through to second place in the club classes at Portland and was sold for $305 to T. J. Owens of Kirkland, Wash.

The full sale list follows:

Females.

Consigned by W. E. Boner, Joseph Ore.—Glendale Canary Colantha, b. Aug. 18, 1914, Ray Bentley, Portland, $105.

Consigned by Buck & Hoem, Snohomish, Wash.—Glenwood De Kol of Parthenea, b. March 21, 1920, R. H. Tuttle, Walla Walla, Wash., $135; Glenwood Pearl Ormsby De Kol, b. April 17, 1917, Oregon State hospital, Salem, Ore., $350; Glenwood Lily Ormsby (Twin), b. Feb. 14, 1922, E. O. Fawcett, Mount Vernon, Wash., $125; Glenwood Rosy Ormsby (Twin), b. Feb. 14, 1922, E. O. Fawcett, $125; Unnamed, b. March 21, 1921, R. H. Tuttle, $120.

Consigned by Hugh Nisbet, Chimacum, Wash.—Princess Adventuress, b. Oct. 17, 1921, Eugene Finley, Jefferson, Ore., $115; Nancy Chimacum Cornucopia, b. April 18, 1918, Oregon State hospital, $175; America Wayne Johnson, b. Jan. 14, 1921, Oregon State hospital, $210; Bonnie Nelson Adventuress, b. Oct. 2, 1921, R. H. Tuttle, $110.

Consigned by Albert Ammeter, Chimacum, Wash.—Violet Veeman Pontiac 3d, b. May 16, 1919, Oregon State hospital, $275; Fanny Wayne Boon, b. March 24, 1915, William Bishop, Chimacum, Wash., $236; Mechthilde Newman Wayne, b. Oct. 7, 1920, William J. Paeth, Estacada, Ore., $110.

Consigned by Thomas Yarr, Chimacum, Wash.—Korndyke Newman Sadie Vale, b. June 2, 1921, C. W. Hartill, Astoria, Ore., $130; Jewel Cornucopia Wayne Boon, b. Aug. 28, 1919, Oregon State hospital, $500.

Consigned by James C. Chamberlain, Ceres, Wash.—Bessie Pearl of Cerealia, b. Feb. 10, 1919, C. C. Murphy, Portland, $130; Valdessa Homestead of Cerealia, b. Sept. 3, 1921, E. M. Maxwell, Newberg, Ore., $105; Beauty Prilly of Cerealia, b. June 22, 1919, Oregon State hospital, $210.

Consigned by F. C. Holibaugh, St. Helens, Ore.—Josephine Ormsby De Kol Veeman, b. Oct. 10, 1920, C. D. Sellwood, Newberg, Ore., $155; Lady Ormsby Corona, b. Sept. 29, 1920, J. H. Wist, Scappoose, $150; Tehee Segis Ormsby Colantha, b. Oct. 5, 1919, E. Van Bastelaere, Portland, $125; Sunnyscroft Jewel, b. Sept. 16, 1920, Paul C. Adams, Warren, Ore., $125.

Consigned by A. H. Reilly, Waukon, Wash.—Ena Pietertje Artis, b. Oct. 6, 1914, T. J. Owens, Kirkland, Wash., $210; Waukona Korndyke Bluebell, b. March 18, 1921, Henry Heg, E. Stanwood, Wash., $105.

Consigned by John L. Smith, Spokane, Wash.—Maggie Fobes Tritomia, b. Aug. 21, 1915, W. O. Bohart, Bozeman, Mont., $175; Castine Lyons Ormsby, b. April 11, 1917, Oregon State hospital, $200; Hazelwood Aaggie Alta Posch, b. Sept. 10, 1921, C. D. Sellwood, $155; Bessie Aaggie Ormsby De Kol, b. Sept. 3, 1916, John Todd, Spokane, Wash., $200; Hazelwood Ormsby Heilo Duchess, b. Sept. 12, 1920, Oregon State hospital, $215; Hazelwood Ormsby Duchess, b. Sept. 23, 1921, John B. Irwin, Minneapolis, Minn., $200; Hazelwood Natsey Heilo 2d, b. Aug. 2 1921, John B. Irwin, $120; Hazelwood Heilo Piebe Homestead, b. March 24, 1921, H. V. Franklin, Portland, $240; Hazelwood Heilo Fobes Tritomia, b. Feb. 12, 1921, J. Luscher & Sons, Fairview, Ore., $145; Hazelwood Pauline Fayne, b. Jan. 14, 1922, A. C. Benson, Carnation, Wash., $110; Hazelwood Heilo Fayne Bessie, b. Aug. 27, 1921, John B. Irwin, $230; Hazelwood Posch Korndyke Girl, b. Oct. 20, 1921, R. H. Tuttle, $105.

Consigned by R. L. Rutter Jr., Ellensburg, Wash.—Lockwillow Zanilda Korndyke, b. July 4, 1919, C. W. Hartill, $105; Lockwillow Hengerveld Orilla, b. Sept. 6, 1917, W. G. Jenks, Rockspur, Ore., $135.

Consigned by J. H. Wist, Scappoose, Ore.—Beauty Josephine Segris, b. Nov. 6, 1917, R. H. Tuttle, $155.

Consigned by J. G. Galvin, Centralia, Wash.—Chimacum Veeman Lutscke Pontiac, b. Sept. 6, 1919, H. C. Whiteside, Olympia, Wash., $180; Riverview Gerben Fellinga, b. April 3, 1920, Minnie W. Miller, Wendell, Idaho, $160; Riverview Pauline Bracelet, b. March 27, 1920, Oregon State hospital, $180; Bonnie Lutscke Lass, b. Nov. 3, 1919, R. H. Tuttle, $180; Chimacum Wayne Johanna Beets 2d, b. Aug. 14, 1919, C. W. Hartill, $180; Substitute, Oregon State hospital, $225.

Consigned by David Nisbet, Chehalis, Wash.—Olympic Greenbank Queen, b. Dec. 20, 1921, T. J. Owens, $305.

Consigned by Tom Nisbet, Chehalis, Wash.—Riverview Queen Ormsby 2d, b. May 15, 1922, H. O. Hamilton, Chehalis, $140.

Consigned by William McKeown, Gresham, Ore.—Lady Douglas Fayne Johanna, b. Aug. 18, 1918, Oregon State hospital, $325; Hazelwood Heilo Ormsby De Kol, b. Feb. 24, 1919, Oregon State hospital, $380; Hazelwood Heilo Aaggie Korndyke, b. March 1, 1919, J. Luscher & Sons, $270; Hazelwood Gerben Heilo Queen, b. March 3, 1919, Oregon State hospital, $410; Lady Annis Cornucopia, b. Nov. 5, 1919, H. Schmidt, Portland, $150; Wapato Lyons Bonheur, b. Jan. 7, 1920, Carl Trachsel, Reedville, Ore., $210; Princess May Korndyke of Steeno, b. May 1, 1915, L. W. Hoffmeister.

Consigned by F. R. Beals, Tillamook, Ore.—Carnation Fayne Segis, Oregon State hospital, $330; Lady Hartog Walker, Dr. W. T. Phy, Hot Lake, Ore., $200; Aaggie Johanna Gerben, Charles J. Lee, Onalaska, Wash., $200.

Bulls.

Consigned by McKeown—Don Carlos Matador, b. Jan. 7, 1922, Jos. G. Beattie, No. Port-

(Continued on page fourteen.)

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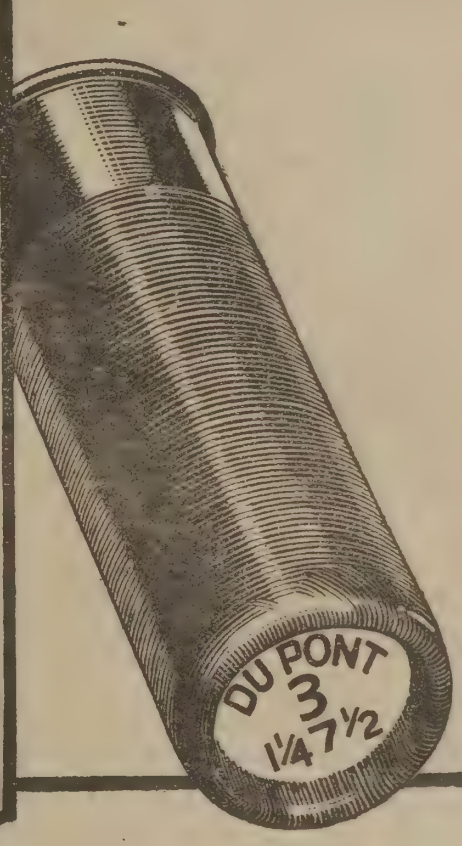
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POULTRY AND RABBITS

The Storrs Contest

By H. W. Baldwin.

Hollywood farm, Hollywood, Wash., won first place with a pen of White Leghorns in the 11th annual egg laying contest recently completed at the Connecticut Agricultural college at Storrs. These birds laid a total of 2218 eggs, or an average of more than 221 eggs for each of the 10 birds in the pen. This is the first time since 1914 that a pen of Leghorns has finished in the lead. Unlike the winners in some contests, this pen lagged behind for a large part of the year, but steady laying in the fall months and a strong spurt during the last three weeks made this the high yen among all contestants. During the last three years the 30 birds entered by Hollywood farm have laid an average of 218 eggs per hen, an enviable record for consistently good laying.

A Barred Plymouth Rock, one of a pen entered by the Ontario Agricultural college at Guelph, Ontario, Canada, was a feature in the contest. During the 52 weeks of the competition she laid 301 eggs, giving her the distinction of being the top bird in the entire contest and the second 300-egg bird ever produced at Connecticut. Frank P. Matteson of Davisville, R. I., won second place with a pen of White Wyandottes. They laid 2167 eggs, or an average of 216 each. The winning pen of Leghorns beat these Wyandottes by only 51 eggs. Third place goes to another breed, a pen of Barred Rocks from Westhampton Beach, L. I., entered by Harry G. Culver. Their record is 2124 eggs.

Until this year the White Leghorns, White Wyandottes and Barred Rocks were tied for first place in the number of contests won, as each had won three out of the 10. This year"s win gives the Leghorns the lead. As in previous contests, there were 100 pens of 10 birds each. These 1000 birds represented three countries and 13 states. Classified by breeds there were 400 White Leghorns, 240 Rhode Island Reds, 160 Barred Rocks, 100 White Wyandottes, 80 White Rocks and 20 Columbian Rocks. Comparing production by classes we find the following:

400 White Leghorns 165.7
240 Rhode Island Reds 156.8
100 White Wyandottes 168.4
260 Plymouth Rocks 162.0

The total production of all birds in the contest was 162,880 eggs, giving each bird an average of over 162 eggs. This is the second best average made in a contest at Connecticut, the highest being 163.4 made in 1916-1917. More than 1,500,000 eggs been laid by the contest birds in the 11 years the contest has been running.

Among the White Leghorns hen No. 672, owned by Hollywood farm, was the highest producer, her record being 277 eggs. C. H. Lane of Southboro, Mass., is the owner of hen No. 599, whose record of 250 eggs places her at the head of the Rhode Island Reds in the contest. In the White Wyandotte class Walter Bradbury of Tottingham, England, entered the high-producing bird. Her record is 277 eggs. Barred Rock hen No. 28, the 300-egg hen, owned by the Ontario Agricultural college, is the top bird in both the Plymouth Rock class and the entire contest.

The contest for 1922-1923 started November 1, with more applications received than could be cared for. A new feature is the use of lights in the pens, this being the first time that lights have been used in any contest. Six new states are represented among the total of 18 states and three counties that have started the 12th annual competition.

Poultry Problems

By W. D. BUCHANAN, Extension Poultry Specialist, Washington State College.

Kindly advise me whether or not bread scraps are good for laying hens or pullets. And if not, why not? G. D.
Arlington, Wash.

Bread scraps are good chicken feed if free from mildew and mold. Whole wheat bread would be better than white bread, because it is richer in protein. But bread alone is not a balanced ration.

MAKE THEM SING.

My 6-months-old pullets are well developed and look well, but they lay only a few eggs, then try to sit. We have no vermin in our coops. We are feeding wheat and cracked corn of equal proportions and egg producer and separator clabbered milk. What will make them lay? W. E. P.
Chehalis, Wash.

Feed your pullets in a clean, deep litter, feeding one-third of the grain for breakfast and two-thirds for afternoon meal. Feed last grain feed at 3:30, giving them all they will eat. Feed green feed after grain, not before. Keep plenty of mash in hopper. Keep birds busy and singing. If they won't sing, give them a piece of pumpkin to start them off. Anything that they like will turn the trick. This should be done in the forenoon.

HOW TO FATTEN TURKEYS.

Will you tell me how to fatten turkeys? What to feed, how much, and do we have to keep them shut up? How long does it take to fatten them? MRS. C. D. S.
Battle Ground, Wash.

Turkeys are usually fattened by beginning with a light feed of wheat, changing this over gradually to corn, and then increase the corn gradually till they are having all they will eat. It is wise, at the same time, to limit their range somewhat. The fattening process should begin about a month before the birds are to be marketed.

HOW TELL THE GANDER?

Please explain how I can tell the difference between a male and a female goose. WM. W.
Bothell, Wash.

The gander is somewhat larger and coarser than the goose, the neck is longer and the head larger. In common geese the gander is slightly lighter in color. Also in mature stock the abdomen of the goose is deeper, almost touching the ground. These differences, however, are so slight as to require very close observation.

TO CULL PULLETS.

Will you tell me the correct way to cull pullets. I have 130, some of which were hatched in April and some in May and June. At what age is it best to determine whether they will make good layers or not? MRS. E. B. S.
Retsil, Wash.

It is difficult to cull pullets if three ages are running together, unless they are marked. Cull out birds that fail to mature in six months. Also take out all long-beaked, loosely-feathered, pale-shanked, knockkneed and sickly birds, especially if they are thin on breast bone. It is not safe to go much beyond this in culling pullets.

POULTRY IN THE ORCHARD.

H. M. Melson of Tieton Drive reports success in keeping poultry in connection with orcharding. This year he says the poultry will bring him more clear money than his orchard. He reports over 500 pullets now in full laying and giving him 75 per cent production.

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ORCHARD AND GARDEN

Orchard Problems

By O. M. MORRIS.

When is the best time to transplant currant and gooseberry bushes? My rhubarb plants wilt and die. The leaves turn yellow. They are in good rich soil and have plenty of water, but not too much.
Kennewick, Wash. J. V. B. M'C.

Gooseberry and currant bushes can be transplanted in your locality any time during the winter or from the time the leaves drop in the fall or before the growth starts in the spring. Best results will probably be obtained by very early spring or late winter planting.

It would require a careful examination of your plants to determine the cause of their death. If you have been using large quantities of manure around the plants it is possible that the plants are being injured by grub worms, which normally live and develop in manure piles or in the soil around manure piles. These insects, however, do not confine their feeding habits in decayed vegetation, but feed on the roots of live plants which they happen to find.

If you would dig up one or two of your plants and carefully examine the root system, you would be able to find the cause of your trouble. If you can not, you could send the plant to the college, where it could be examined by the plant pathologit or the entomologist, and the exact cause of its trouble determined.

Storage of Apples.

I am about to store 700 to 800 boxes of fine apples in cold storage. The cold storage is one for fish (barrelled fish), the only one available. The boxes would be in storage about three months, perhaps longer. Would the apples be tainted with the odor from the fish? Would the presence of ammonia be detrimental to the apples? The storage capacity has one room only, with an air shaft. The other rooms have none, but air can be pumped into the rooms. Would the air pumped into the rooms have an evil effect on the apples?
Kalama, Wash. B. B. B.

Apples absorb odors in storage and if there is a noticeable fish smell about your cold storage rooms it will be noticeable in all probability in your apples if they have been stored there after as much as one or two months. If there is a noticeable ammonia odor in the rooms it will probably result in causing small brownish or blackish specks to appear on the fruits. These will usually be centered around the little cordy dots on the fruits which are the breathing pores. If there is no odor of the fish or ammonia the room will be safe. A slight amount of ventilation is good for fruit storage and will tend to prevent scald. A slight circulation caused by pumping or ventilation drafts tends to equalize your storage conditions and will be good for your fruit rather than harmful. An absolutely dead air is almost sure to result in surface scald appearing on some of the fruits at the Jonathan, Rome Beauty, Monmoth, Black Twig or Arkansas Black. Some other varieties do not scald quite so easily.

HOW KEEP CIDER SWEET?

Could you send me some information as to the best way of preparing cider. Could you tell me how to keep cider sweet for a length of time without spoiling the flavor?
Stevenson, Wash. D. M. N.

There is no satisfactory method of cheaply preparing cider to keep it sweet without modifying slightly the taste of it. It can be preserved by putting in small quantity of benzoate of soda. However, this is not ordinarily recommended from the health point of view. The process of pasteurizing or sterilizing, by heating to the temperature of 160 degrees Fahrenheit for one-half hour, will practically always modify the taste, and, while it does not require a very elaborate equipment, it does require special equipment for satisfactory work.

United States farmers' bulletin 1264 gives the most complete and satisfactory discussion for handling this material. A copy can be obtained from the United States department of agriculture, or by writing to the member of congress from your district.

Transferring Bees

"We often hear the question, what is a box hive? Since it is prohibited by law, it is well that every beekeeper know exactly what is meant by this term," remarked A. B. Slocum, bee specialist of the state college extension service. "Any hive from which the frames can not be removed is a box hive.

"In transferring a colony from a box hive to a frame hive the 21-day method is often used. Place the old brood, or box hive, containing the colonies and their honey supply, beneath a new hive and close the whole entrance, thus causing them to go into the new hive in order to get out. Place a queen excluder between the two hive bodies, and the bees will transfer their brood in the 21 days' time, after which the old hive can be removed.

"Transferring can be done much quicker by means of smoke, by placing the two entrances together and smoking the old hive for 20 minutes."

Cranberries Harvested

"Cranberries make a good crop to market at a time when there is no other crop to sell," replied Fred Neal of Olympia, when asked by a representative of THE FARMER how his small patch compared with the proceeds from the other garden crops. "There were only 25 barrels this year, which is slightly below what the patch should produce, the late spring frosts having an influence on the vines and preventing them from getting an early start.

"This year we were fortunate by getting a mild fall, which permitted us to get all the picking done before any frost occurred to injure the crop. We had abundance of water and could have flooded the patch if it had been necessary. There were few weeds to come through the layer of sand and the summer was ideal for the growth of a good crop of fruit.

"The picking was all done by hand and it took three weeks to get the entire crop out of the field. We had eight pickers who had done this kind of work before. As for getting them to market, we have been selling them all for the local trade and they do not require any special kind of package. Some who have ordered a large quantity will take them in barrels, while others will be sold in boxes. If the crop was to be sold for a more distant market it would be necessary to use a standard crate to ship them in."

Mr. Neal is operating a market garden on the 40 acres that is known as the Redpath farm, two miles east of Olympia. There are about 15 acres of cultivated land on the place and Mr. Neal expects to erect a small greenhouse for growing cabbage and tomato plants.

WAR ON ORCHARD MOUSE.

Of 273 orchards in the Yakima valley, with a total of 7032 acres, there was a loss of 4664 trees last winter because of girdling by orchard mice, according to a report just sent out by the federal bureau of biological survey. Leo K. Couch, inspector in charge of rodent control, has prepared the report, based on a questionnaire, which has also been sent into the Chelan, Kittitas, Okanogan and Benton districts.

THE NORTH SLOPE ORCHARD.

Orchards facing to the north are likely to bloom a little later than those facing the south, and are correspondingly less liable to injury from late spring frost.

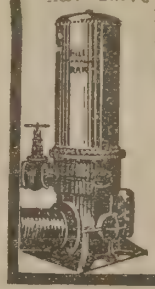
Irrigate!

Without pumping expense with the powerful and efficient

Hill Hydraulic Rams

Built in twelve sizes, 1 inch to 24 inches, to fit ordinary requirements, pumping a few hundred gallons of water per day for home use or millions of gallons per day for irrigation.

If you have running water and can get some head or fall for power, one of these machines may solve your pumping problem. Ask our engineers.

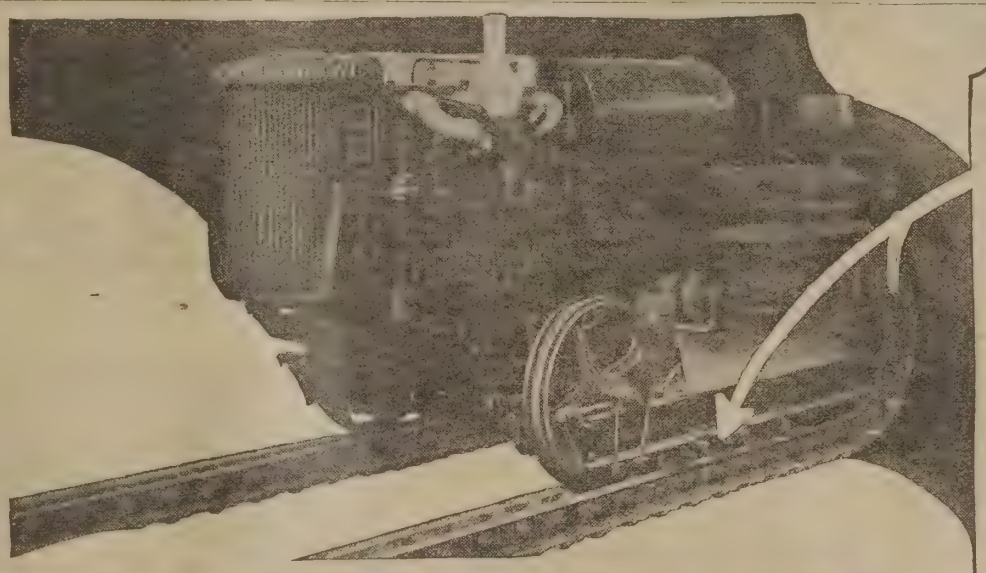


Write for free catalog. R-1, home supply size; R-2 for irrigation.

Seattle Machine Works

W42 Lander St. Seattle, Wash., U. S. A.

Read the "Want Ad" page this week for good offers of all kinds.



TRUCK ROLLERS that LAST!

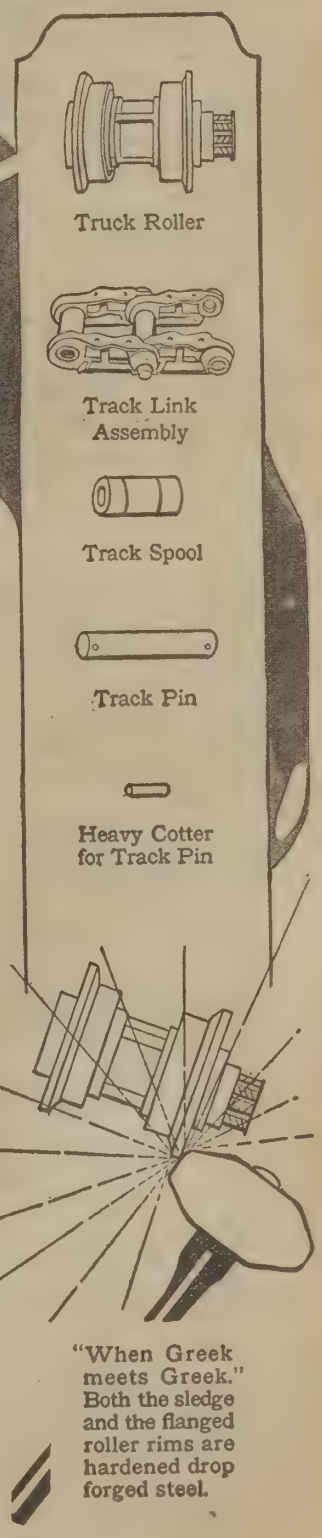
THE DRIVING WHEELS of the most powerful locomotives have forged steel rims.

The Truck Rollers of a track type tractor support the weight of the tractor and the flanges of rollers must withstand severe jars and side strains of side hill work and rough going.

On Best Tractors the flanged rims of truck rollers are drop forgings—nothing less—forged into shape under heavy steam hammers, from heated steel of special analysis. After being forged the rims are annealed, bored and reamed, then turned true on the outside tread. They are next shrunk on accurately machined hubs—being hardened at the same time—hardened to resist battering blows just as are the heads of first-class forged hammers or sledges.

The rollers, complete, are mounted on anti-friction bearings to insure easy running, bearings with seals to retain lubricant and to prevent entrance of sand and ruinous grit.

The truck rollers of Best Tractors run over tracks which are true and straight. Tracks are made from drop forged hardened links which have been accurately machined top and bottom and large hardened spools and pins at each joint contribute to the long life which may be expected from the tracks on Best Tractors.



"When Greek meets Greek." Both the sledge and the flanged roller rims are hardened drop forged steel.

C. L. BEST TRACTOR CO.
SAN LEANDRO, CALIFORNIA

Distributing Warehouses
St. Louis, Mo. 818 North Second St.
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BEST TRACTORS

AT YOUR SERVICE.
DEMPSEY
Hotel and Restaurant
(C. C. DEMPSEY & SONS)
UP TO DATE.
Opposite Union Station, Spokane.

Trappers-Dealers



FOX Wants Your FURS

To get the most cash for your furs—in the quickest time—ship to Fox at once. We need all the ***Skunk, Muskrat, Opossum, Raccoon, Fox, Bear, Beaver, Lynx, Marten*** and ***Mink*** you can ship, and will pay spot cash same day shipment received. Ship now while prices are high.

Highest Market Prices
We Charge No Commission

No deduction for handling. Write for our latest special price list and advance information, free on request, with shipping tags and Trappers Guide. Our high prices, fair and honest gradings prompt returns and fair dealing is proven by our thousands of satisfied shippers everywhere. Don't be satisfied with ordinary prices. Ship direct to Fox. Practically all furs eventually reach the New York Market and we can therefore pay you higher prices by buying direct from you.

Fur buyers—dealers

We cater to fur buyers and dealers. Ship us all your furs — ***send us your own grading. We will match our grading against yours and pay you top prices.*** If desired we will telegraph you our bid as soon as shipment is received. No delay, no misunderstandings. We will hold your shipment separate until we hear from you if our bid is satisfactory. The market conditions now make it necessary that you ship your furs often. Send us your shipment today.



GEO. I. FOX, INC.
161 W. 25th St., Dept. 160, New York, N. Y.

Fur Buyers

When You Buy Furs!

Get our Market Reports with guaranteed FLAT prices! No fancy "wildcat" quotations, but one price on each grade, a price that you can absolutely rely on. Thousands of shippers, produce houses, junk dealers, etc., use our Reports in buying furs.

When You Sell Furs!

Ship to the FEDERAL. We do business with fur buyers, Fur buyers are shrewd, experienced business men who would not have patronized us for years, unless we were keeping them satisfied BY PAYING THE RIGHT PRICES FOR THEIR FURS. Whether you have ten skins or a thousand—you will surely "tie up" with us permanently, after you have tried us once.

Write Today!

Get our Market Report with GUARANTEED FLAT PRICES. Get them every ten days. They are FREE! Your name and address on a postal will bring them regularly.

Federal
FUR & WOOL CO., 327 Federal Fur Bldg.
ST. LOUIS, MO.

MONEY IN FURS
TRAP AND SHIP TO
McMILLAN
Dealers in
FURS
HIDES PELTS WOOL
AND GET HIGHEST PRICES, HONEST GRADING, PROMPT CASH RETURNS, FREE ILLUSTRATED TRAPPERS' GUIDE TO SHIPPERS
Write for Price List
McMILLAN FUR & WOOL CO.
MINNEAPOLIS, MINN.

TRAPPERS' POISON
Goes' Liquid Poison Capsules kill fur animals on spot. Seventeenth season in market. Free circulars when mentioned this paper.
EDMUND GOES, Sta., C., Milwaukee, Wis.

Why pay cash for something when you can trade for it? See the "Want" ads this issue.

Holsteins and Jerseys Are Sold

(Continued from page eleven.)

land, $300; John L. Spofford Matador, b. Feb. 13, 1922, H. W. Cooley, Jefferson, Ore., $120.

Consigned by Smith—Hazelwood Stella Champion, b. Jan. 21, 1922, J. G. Foster, The Dalles, Ore., $235; Hazelwood Sir Bessie Segis, b. March 3, 1922, H. V. Franklin, Portland, $235; Hazelwood Hello Homestead, b. March 30, 1922, R. C. McCroskey, Garfield, Wash., $215.

Consigned by Chamberlain—Valdessa Homestead of Cerealia, b. Sept. 3, 1921, E. M. Maxwell, Newberg, Ore., $105.

THE JERSEY SALE.

With the top price $805 and with most of the animals going at fair values, the Jersey sale must be called a success, though the breeding and conformation of several individuals warranted more than was received. But, taken as a whole, the sale was a success. The beautiful 2-year-old, Ethel May's Surprise, consigned by C. F. Bates of Salem, Ore., is the one referred to that brought the high figure. She is not only a beautiful cow, but is on official test and making a good record. She was taken by J. S. H. Matson of Victoria, B. C., who bid in four head for a total of $1360. Although the prices on the others were low, all are show stock.

Karl Hanneman of Corbett, Ore., secured the grand old cow, Gwendola Rosaire, for $625. While she is almost 10 years old, she is the highest record daughter of Rosaire's Olga Lad and looks good for some years yet. Firwood Poppy, a daughter of Mr. Sorensen's herd sire, with production backing and a sweet individuality, went for $550. Mr. and Mrs. Johnson of Birkenfeld, Ore., were the buyers. Firwood Rosaire, a March calf out of Gwendola Rosaire, brought $500 on a mail bid from Dr. E. S. Ellensen of Chippewa Falls, Wis.

David Spencer, Ltd., of Vancouver, B. C., took Mr. Bates' St. Mawes Golden Beauty at $510, and some good prices were received by every exhibitor. Messrs. Matson, Spencer and Dunville, all of British Columbia, were buyers and helped the sale, paying good prices for what they got. E. A. Rhoten and C. D. Minton were sale managers and Colonel Hughes was on the block, with Colonel Ben Sudtell in the ring.

Females.

Consigned by N. C. Sorensen, Chehalis, Wash.: Gwendola Rosaire, born May 6, 1912—Karl Hanneman, Corbett, Ore. $625
Firwood Poppy, born May 3, 1920—Mr. and Mrs. J. F. Johnson, Berkenfeld, Ore. $550
Firwood Rosaire, born March 22, 1922—Dr. E. E. Ellenson, Chippewa Falls, Wis. $500
Firwood Forest Girl, born March 14, 1918—R. C. Williams, Sherwood, Ore. $425
Firwood Blossom, born July 6, 1920—George Sangster, Victoria, B. C. $300
Firwood Stoke Pogis Queen, born March 4, 1920—T. Cunningham, Castle Rock, Wash. $300
Firwood St. Mawes Chimes, born March 24, 1920—Wm. F. Fischer, Sandy, Ore. $255
Firwood St. Mawes Gwendola, born April 15, 1920—T. Cunningham $300
Firwood St. Mawes Charm, born May 28, 1920—W. T. Pitman Jr., Lake Cushman, Wash. $175

Consigned by C. F. Bates, Salem, Ore.:
Ethel May's Surprise, born January 10, 1920—J. S. H. Matson, Victoria, B. C. $805
St. Mawes Golden Beauty, born August 3, 1919—David Spencer, Ltd., Victoria, B. C. $510
Lass' Fairy Belle, born January, 1921—J. S. H. Matson $235

Consigned by O. P. Dosland, Gray's River, Wash.:
La Creole's Alta, born August 5, 1913—J. E. Thorpe, Rockford, Cal. $500
Miss Pauline Pogis, born May 22, 1919—T. Cunningham $150
Unnamed, born October 11, 1921—W. T. Putnam Jr. $105

Consigned by H. West and L. G. Smith, Scappoose, Ore.—Fussy's Jolly Berna, b. June 3, 1918, T. Cunningham, $365; Fox's Golden Lina Fern, b. April 6, 1015, J. E. Thorpe, $180; Fern's Lady Slipper, b. Aug. 20, 1916, J. E. Thorpe, $180; Princess Verna of S. B. b. Sept. 29, 1921, T. Cunningham, $160; Verna's Combination, b. Nov. 17, 1918, T. Cunningham, $130; Fox's Golden Lina, b. Sept. 26, 1914, George J. Chapman, Pateros, Wash., $120; Lady Bountiful of S. B., b. July 6 1920, T. Cunningham, $115; Chimes Princess of S. B., b. Oct. 18, 1921, Herb Sharp, Orin, Wash., $100; Raleigh's Hope of S. B., b. July 23, 1920, T. Cunningham, $90.

Consigned by Karl Hannemann, Corbett, Ore.—Luckiamute's Fancy, b. Dec. 11, 1913, J. N. Wishon, Portland, Ore., $300.

Consigned by Lewis E. Judson, Salem, Ore.—April King's Pauline, b. March 16, 1921, A. E. Dumville, Sardis, B. C., $225; St. Mawes Pogis Violet, b. Dec. 14, 1920, W. T. Putnam Jr., $175; April King's Buttercup, b. March 23, 1921, J. S. Matson, $160; April King's Ruth, b. March 16, 1921, J. S. H. Matson, $160.

The only bull of the sale, Firwood Rosaires St. Mawes, consigned by Sorenson, Chehalis, Wash., sold for $355.

How to Ship a Fur Bundle

One should not put furs for shipping into a sack that is full of holes; neither tie up the end of a good sack and think you have made a secure bundle, for you have really done just the reverse—you have simply invited some dishonest fellow to help himself to your furs and if he accepts the invitation there is no one to blame but yourself. Remember that a great many different people handle your shipments before they reach the market and if you want people to keep their fingers out of your furs you should make your bundles secure. All bundles of furs (except those sent by parcel post) should be sewed up tight. Parcel post shipments should be properly tied, but do not sew up, as that prevents inspection of contents by the postoffice department.

Mark them plainly with the address of the concern to which you ship them. A request to any fur house will bring you not only advice on how to trap fur bearers, but will bring a supply of tags and shipping instructions as well.

BUY BOOTS AS YOU WOULD TIRES

When you buy tires you're governed by the mileage you can expect. Buy rubber boots the same way. Wear per dollar counts.

Gold Seal boots will outwear ordinary boots. They are crack proof. We use a special process in applying and vulcanizing pure virgin rubber, and fabric. Our red soled "Manure" boot is made to resist the acids and the alkalies of the farm.



This is the one Gold Seal label—it's round and gold colored.

Good stores in the northwest sell Gold Seal boots, and Gold Seal oiled clothing. Look for our label.

We are the original and only
Goodyear Rubber Co.
Portland and San Francisco.

No connection with any other firm using the name "Goodyear."

Goodyear GOLD SEAL BOOTS

Authorized since the 70's to use the name of Charles Goodyear, inventor of vulcanizing.

TRAPPERS! make this Your biggest year!

Ship all your furs to McCullough & Tumbach. Make this the most profitable year you've had. You know our policy:

A Square Deal to Every Shipper

We'll give you honest grading by fur experts. We'll pay top market prices the day we get your furs. No delay. And in the long run we'll make more money for you.

Ship early—ship often—ship every skin to us.

We Keep You Posted

Write for free shipping tags, price lists, and market reports. Write today.

McCullough & Tumbach
136 N. Main St.
St. Louis, Mo.

BIG FOUR CO.



Get The Most Money For Your Raw FURS

Good prices are in prospect for early shipments of raw furs, because stocks are unusually low at this time. Get after them, as soon as the season opens, and ship your skins to Ullmann's where you are sure of honest grading and quick cash returns. We pay the most money, charge no commissions, pay all express charges and refund postage on mail shipments.

Write for price list and shipping tags.

JOSEPH ULLMANN, Inc.
(Established 1854)
Dept. 145 Cor. 5th and Rosabel Sts. St. Paul, Minn.

SHIP TO Percey's
50 YEARS IN OSHKOSH
FOR TOP PRICES

SHIP ALL YOUR FURS
We need all the Muskrat, Skunk, Mink, etc., you can ship us right now. For 50 years Percey's fair treatment and square deal policy insures you full market value for your furs.

Percey's Prices
Percey's Prices are bonafide based on standard grading that insures you the largest returns.

Percey's Graders
Percey's Graders are men of years of experience having the highest reputation among fur shippers.

Percey's Checks
Percey's Check for your furs means the most money for your catch. We pay express and parcel post charges on all shipments where charges do not exceed 10% of the value of the furs.

The Largest Fur House In the Northwest
Percey's
50 YEARS IN OSHKOSH

Buyers—Shippers!
Make sure your name is on our list. We will advise you of every change in market prices and conditions. Send us a postal Today Sure. For fifty years Percey's Price List has been the standard of the northwest.

Rush Your Shipments
Ship to Percey's NOW while prices are high. Honest grading, highest market prices and a square deal to all Fur Shippers for 50 years has made Percey's the Leading Fur House of the northwest.

We cater to dealers' lots and will send a representative on request. Write us TODAY Sure for Price List and Shipping Tags.

Percey's Fur House
261 Main St. Oshkosh, Wisc.

50TH ANNIVERSARY
Percey's
50 YEARS IN OSHKOSH



The *Ingersoll* TREE

Look for it in Store Windows

THERE'S no gift like a watch, nothing used so much, consulted so often, carried so long.

The Ingersoll you give now will be ticking Christmas Greetings next July—next September, and so on through the years to come.

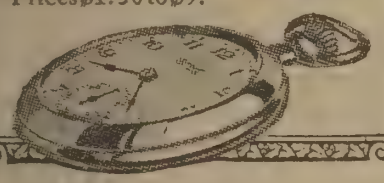
Your dealer can show you Ingersolls to fit every purse and purpose. Sizes for men, women, boys and girls. Radiolite dials that tell time in the dark. Jeweled models in nickel and gold-filled cases.

Prices $1.50 to $9.



INGERSOLL YANKEE $1.50

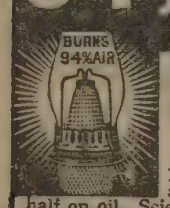
INGERSOLL WATERBURY $4.00



NEW KEROSENE LIGHT BURNS

94% AIR

Beats Gas or Electricity



TEN DAYS' FREE TRIAL

Over 3,000,000 Satisfied Users

Make your home bright and cheerful, saving one-half on oil. Scientific tests prove this wonderful new Aladdin five times as efficient as the best round wick open flame lamps. Sixty candle power pure white light for 50 hours on a gallon of common kerosene. No odor, smoke, noise or pumping up. Won't explode. Guaranteed. Prove to yourself by free trial that Aladdin has no equal as a white light. If not satisfied return at our expense.

Get Yours Free We want one user in each locality to whom customers can be referred. In that way you may get your own without cost. Be the fortunate one to write first for 10 day free trial offer and learn how to get one free.

$1,000 REWARD Will be given to anyone showing us an oil lamp equal to this Aladdin in every way. (Full details of offer given in circular.)

Agents Wanted To demonstrate the Aladdin in territory where oil lamps are used. Experience or capital unnecessary. Many agents average five lamps a day and make $500 a month. Write quick for territory and samples.

THE MANTLE LAMP COMPANY OF AMERICA
364 Aladdin Bldg., 31 N. Fifth St., Portland Ore.

HIDES

We pay the highest market prices for cow, steer and bull hides and calf skins.

SEND FOR OUR SHIPPING TAGS.

North Coast Tanning Co.
BALLARD STATION.
SEATTLE, WASH

Glance over the bargains on the "Want Ad" page.

Life Preservers

(Continued from page ten.)

packing house from an Inland Empire town. This condition is at home, here, now and it is our problem to fight.

I would recommend that when a large percentage become affected the entire herd be slaughtered under government supervision and the premises be thoroughly cleaned and all litter burned and then hogs kept away for several months while heat and light and sunshine disinfect the premises, after which hogs may again be kept in the same quarters. If only a few are diseased and the rest are particularly valuable for breeding purposes one should have a veterinarian run the tuberculin test on the entire herd to detect the diseased ones and these should be slaughtered at once.

Test Several Times.

The healthy ones should be removed to clean new quarters until the old ones are thoroughly cleansed and disinfected. Then another test should be run to pick out any more animals that might have contracted the disease and by repeating this performance a few times a herd and premises can be rendered quite clean again. When, however, tuberculosis has existed on a farm in any species of animals all animals on that farm should be watched closely to detect any evidence in other species. The swine, cattle and the chickens are the most susceptible and should be watched closest.

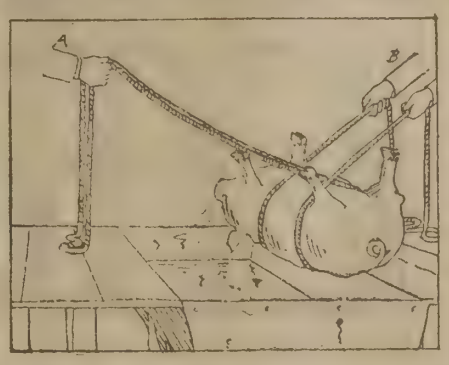
Of course when tuberculosis exists in a few animals on a place there is danger of others getting it, but there is greatest danger when the animals are kept closely confined in small quarters and for that reason it is best to give all animals plenty of room, so any contagious disease will not spread so fast. It is usually not economical to crowd the living quarters of animals.

Hog Butchering Time

(Continued from page seven.)

Yellow wash is composed of: Three pounds of barium sulphate, one ounce of glue, about an ounce of chrome yellow and half a pound of flour. Half fill a pail with water and mix the flour in it. Dissolve the chome yellow in a separate quart of water and add it and the glue to the flour solution. Bring it to a boil and add the barium sulphate slowly, stirring it constantly.

Country sausage always finds a ready market and a good price. It can be made of scraps and trimmings, making its cost to the producer comparatively low. To about 85 or 90 pounds of pork trimmings add 15 pounds of beef. It may be seasoned



Two men can handle a large hog with ease by the method shown here. One stands on each side of the scalding vat with the hog in the rope as shown. As one slowly relaxes his hold the other slowly rolls the carcass into the vat. In like manner it is rolled over and over in the water to insure an even scald. When ready to take out, one man crosses over and lays his ends of the rope down on the platform. The men stand on them as each pulls on one of the other ropes, thus rolling the hog out of the water and up onto the platform for scraping.

as follows: One and a half pounds of salt, one ounce of red pepper, four ounces of black pepper, one ounce of mace and one ounce of sweet marjoram. Cut the meat into small pieces and sprinkle the seasoning over it. Then grind it up and pack it in earthern jars, placing them in a cool place for about 24 hours before it is stuffed into the casings. This allows the seasoning to become better distributed. Country sausage should be smoked till it becomes a dark mahogany color.

CLALLAM COUNTY COWS LEAD.

The Clallam County Cow Testing association has for two months stood at the head of the 10 associations of the kind in the state. It was the same two months that Washington stood at the head of the states in the western division in the monthly average production of butterfat per cow. The county production was 341 pounds per cow for the annual record, while the figure for the state was 200 pounds. Members of the association are making an effort to raise all calves from the best cows in the association.

NO ROOM FOR INDIFFERENCE.

No indifferent live stock man succeeds. Live stock production and marketing is a science.

TRAPPERS!



"You'll get big money quick if you ship to Shubert"
Trapper Bill

for

Big Money-Quick

IF YOU are not getting BIG MONEY for your furs, that's YOUR fault. Wake up! Get "SHUBERT" prices for your furs—and you'll get the *HIGHEST PRICES* the market will stand. We want your furs—all of them—and want 'em quick. We'll make it worth your while to ship to us. Our shippers right in your own neighborhood are reaping a golden harvest. Come on—join this happy crowd! Get in on this big money! Get your share of it—*ship all your furs AT ONCE direct to*

SHUBERT

a house that has been satisfying fur shippers for more than thirty-nine years—a house that will satisfy YOU. Whether you ship only one skin or a large collection you'll get the same square deal.

Highest Prices—You'll be paid the highest price the market will justify—not on one skin or a few skins—but on each and every skin you ship us.

Honest Grading—Every skin you ship us will be graded carefully and correctly by an expert—according to the quality and condition of the fur and size of the skin.

Speedy Returns—You'll get your money in a hurry. We aim to mail check same day furs are received. We have many letters in our files from fur shippers who say "SHUBERT" returns *are the promptest in the world.*

No Risk—You take no risk whatever when you ship your furs to "SHUBERT" under the terms of "THE SHUBERT GUARANTEE," for we've got to satisfy you *and we will.*

Don't delay another minute. Quick action means big money for you. Hurry in a shipment.

TRY "SHUBERT" TODAY

SHIP ALL YOUR FURS DIRECT TO

A. B. SHUBERT, INC.

THE LARGEST HOUSE IN THE WORLD DEALING EXCLUSIVELY IN AMERICAN RAW FURS

25-27 W. AUSTIN AVE. DEPT. 41 CHICAGO, U. S. A.

Ship Furs to FOUKE

—If you have not yet shipped to Fouke split your next shipment fifty-fifty, skin for skin, grade for grade. Send one-half to the house you've been shipping to and the other half to Fouke at once. We believe you'll get about 20% more money for the furs you ship to Fouke. Let the checks tell the story. Fouke grading always makes your fur checks bigger. SHIP NOW!

FOUKE FUR CO. 837 FOUKE BUILDING

Send name and address at once. ST. LOUIS, MO.

GILLESPIE FURS

CHECK SENT SAME DAY FURS ARRIVE

YOUR SHIPMENT HELD SEPARATE

ample time for you to O. K. our grading and remittance. This guarantees you our very HIGHEST TOP MARKET PRICE and all market advances. Reliable price list NOW READY. Write to-day.

GILLESPIE FUR Co 338 Gillespie Bldg. ST. LOUIS, MO.

Write US **FURS** Ship US

WE ARE PAYING TOP PRICE.
PRICE LIST NOW READY.

Hibbard-Stewart Co.
Hibbard Building, Seattle.

Gosh!



FUR PRICES "SKY HIGH"

Boys, you'll certainly be pleased with our prices, particularly on muskrat, skunk, raccoon, etc. Don't sell a skin until you know what we pay. Also, we want to tell you something else important. Your name and address are also important. Send things you'll thank us for. Just ask for Price list and Full Particulars. Costs you nothing. Write today. A postcard will do.

BOLLES & ROGERS, Dept. 35 Omaha, Nebr.

TRAPPERS AND DEALERS

If you want to get the most cash for your RAW FURS Ship them to FRIEND of DENVER

We charge you no commission and save you from $1 to $10 on express or parcel post. Why not be one of our satisfied shippers. Give us a trial shipment and be convinced. FRIEND'S Animal Decoy will increase your catch. We also handle a full line of traps. Write today for full particulars and fur price list and tags, all free for the asking.



Charles Friend & Co. INCORPORATED
RAW FURS 909 to 917 WAZEE ST—DENVER, COLO

Two Beef Bulls Bring $2100 Each

(Continued from page eight.)

Consigned by Washington State College, Pullman, Wash.:
Bonnie Rex, born April 4, 1921—Walter Gover $175

Females.

Consigned by Herbert Chandler:
Salome Generous, born January 3, 1920—Methow Valley Live Stock company, Winthrop, Wash. $235
Princess Debonair, born October 8, 1920—Henry Thiessen $235
Princess Donald 2d, born May 5, 1921—University of Idaho, Moscow, Idaho $145
Princess Armour, born October 4, 1921—Lester Blokland, Island City, Ore. $125
Ethel Rupert, born October 1, 1921—Lester Blokland $125
Consigned by Baldwin Sheep company, Hay Creek, Ore.:
Ruth, born April 22, 1917—Mayro McKinney, Turner, Ore. $210
Eleanor, born February 27, 1918—Walter Gover $200
King's Pomona, born January 22, 1921—C. E. Burgess $160
Gold Dust, born April 29, 1917—Mayro McKinney $155
Consigned by A. H. Barnum, Moro, Ore.:
May Carlos, born March 30, 1921—Joe Boyer $140
Miss Bonnie Lad, born February 24, 1921—Joe Boyer $125
Oro May, born May 1, 1916—Jesse Simonsen, [illegible], Ore. $120
Betty Hesold 2d, born August 21, 1916—Joe Boyer $105
Consigned by Weatherford Bros., Dayton, Wash.:
Ruby Lass, born May 6, 1917—Jesse Simonsen $135
Betty Blanchard 21st, born November 15, 1921—Jesse Simonsen $120
Consigned by Herman Nordby, Lewiston, Idaho:
Evalina Rupert 2d, born September 3, 1921—Diamond B Ranch $80
Miss Perfect Rose, born April 28, 1921—Walter Gover $65
Evalina Rupert 3d, born September 19, 1921—G. Korevaar, Merkill, Wash. $50
Consigned by Oregon Agricultural College, Corvallis, Ore.:
Polly, born October 23, 1921—Walter Gover $75
Lady [illegible], born November 11, 1921—Walter Gover $60
Consigned by Platt Bros.:
Lady Rose 8th, born May 11, 1921—T. H. Pierce, Dufur, Ore. $75
Lady Rose 9th, born December 30, 1920—T. H. Pierce $75
Lady Rose 10th, born January 8, 1921—T. H. Pierce $75
Queen Rose 5th, born September 14, 1921—T. H. Pierce $75
Lady Fairfax born March 15, 1920—T. H. Pierce $75
Shady Girl, born January 20, 1921—T. H. Pierce $75
Consigned by Henry Thiessen:
Miss Rosebud, born September 4, 1921—Frank A. Richards, Silverton, Ore. $100

CHARLES BULL HEREFORD SALE.

The Charles Bull sale of Herefords on Saturday was advertised but little and, held on the last day of the show, proves that interest can be held as long as the show continues. Breeders will not be afraid of Saturday sales hereafter. True, prices were low, but it is a year of low prices. The females were barely in sale condition and were young. Mr. Bull would have liked better prices, but expressed himself as satisfied. The following is a complete list of the animals sold, buyers and prices:

Bulls.

Donald Carlos, born January 10, 1922—Walter Gover, Halfway, Ore. $150
Baby Carlos L., born October 20, 1921—Walter Gover $145
Baby Carlos A., born September 30, 1921—John Wilson, Waterman, Ore. $100

Females.

May Donald 8th and calf, born October 25, 1916—Walter Gover $150
Maude, born April 21, 1918—A. Osborne, Astoria, Ore. $130
May Donald 6th, born November 20, 1916—A. Osborne $130
Belle A., born June 8, 1918—Walter Gover $60
May Generous, born November 11, 1920—Sherman Thun, Blaine, Ore. $85
May D. Generous, born May 22, 1920—Sherman Thun $85
Josie Generous, born September 18, 1920—Sherman Thun $85
Donna Generous, born January 25, 1921—Sherman Thun $85
Belle Carlos, born September 30, 1921—Harold Holmes, Mabton, Wash. $65
Anna Carlos, born August 18, 1921—Rimbol Young, Sumpter, Ore. $60
May D. Carlos, born May 24, 1921—Sherman Thun $70
May Donald Carlos, born January 31, 1922—S. C. Kipling, Haines, Ore. 30

THIESSEN HEREFORD SALE.

On Wednesday of the show (Nov. 8) Henry Thiessen of Sweetwater, Idaho, sold 59 head of Herefords for a total of $9930, or an average of $168.30. Cows sold up to $305, but all bull prices were low. Most of the offerings were in good sale condition and will go out on the ranges for which they were bought and make useful breeding animals. Walter Gover of Halfway, Ore., was the largest buyer, with other range men taking quite a number of the consignments of both sexes. Following is a complete list of animals sold, buyers and prices:

Bulls.

Lord Carlos, born April 30, 1921—Sold to J. E. Smith, St. Paul, Ore. $165
Bonnie Brummel 2d, born January 15, 1922—Walter Gover, Halfway, Ore. $135
Rupert's Model 37th, born February 13, 1921—Henry Zorn, Aurora, Ore. $105
Major, born March 13, 1921—Edson L. Foulke, Gazelle, Cal. $100
Bonnie Donald, born March 17, 1921—Walter Gover $100
Young Bonnie Lad (twin), born March 10, 1921—Walter Gover $100
Rupert's Model 34th, born September 6, 1920—O. M. Plummer, Portland, Ore. $100
Rupert's Model 42d, born February 27, 1921—Walter Gover $90
Rupert's Model 39th, born March 25, 1921—Edson L. Foulke $85
The Beau Carlos, born April 19, 1921—B. M. Smith, Newberg, Ore. $85

Females.

Bonnie Jane, born January 25, 1921—Methow Valley Live Stock company, Winthrop, Wash. $305
Bonnie May, born November 1, 1920—Herbert Chandler, Baker Ore. $235

(Continued on page twenty-three.)

Farmers' Want Ads

HELP WANTED—Male 3

RAILWAY MAIL CLERKS, GOV'T. CLERKS and carriers needed; experience unnecessary. Particulars free. Write Mokane, Dept. B-21, Denver, Col.

HELP WANTED GENERAL 5

500 MORE PERSONS IN NORTHWESTERN states are lawfully entitled to positions with Uncle Sam. Government advises that applications, some positions, now far short of the demand. A remarkable opportunity. Investigate. Address Civil Service dept., Western Institute of Accountancy, Old Nat'l Bank bldg., Spokane, Wash.

AGENTS WANTED 9

$5 TO $15 DAILY EASY, INTRODUCING NEW style guaranteed hosiery; must wear or replaced free. No capital or experience required; just show samples, write orders. Your pay in advance. We deliver and collect. Elegant outfit furnished, all colors and grades, including silks, wool and heathers. Mac-O-Chee Mills Co., Desk 12612, Cincinnati, Ohio.

SELL TREES AND PLANTS FOR US. STOCK reliable and in good assortment. Contract upon request. Write today. Capital City Nursery company, 426 Oregon bldg., Salem, Ore.

SCHOOLS AND COLLEGES 26

EARN $110 TO $250 MONTHLY, EXPENSES paid, as railway traffic inspector; position guaranteed after 3 months' spare time study or money refunded; excellent opportunities. Write for free booklet G-157, Stand. Business Training Inst., Buffalo, N. Y.

EDUCATIONAL 45

BEHNKE-WALKER BUSINESS COLLEGE of Portland; one of the largest institutions of its kind in America; guarantees a position to every graduate. Enroll now for fall term. A few months training under expert instructors and you are ready to enter business and win. Behnke-Warner graduates are always in demand. Write today for our free success catalogue. Address Behnke-Walker Business College, Fourth, near Morrison, Portland, Ore.

FRESH FOOD PRODUCTS 51-1

SEND 'EM FAMOUS KITTITAS VALLEY alfalfa honey for Christmas. Everything prepaid to 4th zone. 60-lb. can, $7.50; 2, $14.75; 6 5-lb. pails, $4.50; 3 10s, $4.25; 1, $1.70. You send the money, we'll send the honey. Kittitas Valley Apiaries, Ellensburg, Wash.

HONEY BRAND HONEY—CHOICE ALFALfa, sweet clover honey; quality guaranteed. It will please the little "honeys" and the older ones, too. One 60-pound can, $6.50; two for $12.75. Write for prices in pails. Oliver Sires, Wapato, Wash.

HONEY—FINE QUALITY ALFALFA, SWEET clover product; 3 10-lb. pails, prepaid, second zone, $4.25; 60-lb. can, prepaid, second zone, $7.30; two, $12.75, not prepaid. Harry Fisher, Prosser, Wash.

POPULAR BRAND HAPPY HOME HONEY—One 60-lb. can, $6.50; two cans, $12 75; six 10-lb. pails, $7.50; comb honey prices on request. H. N. Paul, Mabton, Wash.

EXTRACTED HONEY — ONE 60-LB. CAN, $6.50; two 60-lb. cans, $12.75, collect; three No. 10 pails, prepaid, third zone, $5. Wells D. Rose, Sunnyside, Wash.

FINEST HONEY—60-LB. CAN, $6.50; 2 CANS, $12.75, collect; 10 pounds, $1.70; 5, $1, both postpaid; satisfaction guaranteed. Geo. Bancroft, Hermiston, Ore.

NEW HONEY—ALFALFA AND SWEET CLOver; 1 60-lb. can, $6 50; two, $12.75; discount on large quantities. Ernest Sires, Yakima, Wn.

ALFALFA-CLOVER EXTRACTED HONEY, fine. Four 10-lb. cans, $4.80; four 5s, $2.60; eight 5s, $5.10. Geo. O. Gould. Buhl, Idaho.

DELICIOUS NEW CLOVER HONEY, 120 pounds, $9.75; 30 pounds, $3.25; won't crystallize. Browne, Box 499, Twin Falls, Idaho.

4 LBS. SALMON BELLIES AND 3 LBS., ABsolutely boneless codfish, delivered by mail, prepaid, $2. Coffin Fish Co., Seattle, Wash.

GOLD MEDAL BRAND YAKIMA ALFALFA, sweet clover honey; 60-lb. can, $6.50; two cans, $12.75. C. W. Higgins, Wapato, Wash.

DRIED LOGANBERRIES, TEN POUNDS, PREpaid, $4; sample, 25c. Kingwood Orchards, Salem, Ore.

COMB HONEY, FANCY, $4.50; NO. 1, $4. O. B. Roberts, Prosser, Wash.

MERCHANDISE 59

ARMY GOODS—WOOL SOCKS, 25C PAIR, $2 50 dozen; heavy wool socks, 35c pair, $3.50 dozen; O. D. wool breeches, $1.95; perfect grade, $2.75; officers' dress shoes, $4.45; russets, $4.25; O. D. Wool army shirt, $2.95. Write for price list. Walker's Army Store, 501 Trent, Spokane.

MISCELLANEOUS—FOR SALE 60

SASH AND DOORS—O. B. WILLIAMS CO., 1943 First ave. So., Seattle. Chicken house sash, 20" wide by 25" high, 80c; a dozen different sizes in stock for immediate shipment. Skylights for chicken houses, 36"x40"; price, glazed, $2. This is the size recommended by the Western Washington experiment station. We carry them in stock for immediate shipment. Sash and doors for all purposes at lowest prices. All orders receive prompt attention. Our large illustrated catalog No. 35, showing full line of building material and built-in fixtures for the home, free on request. O. B. Williams Co. Established 1899.

WALL BOARD—WRITE FOR SAMPLE OF Washington plaster wall board; won't warp, won't burn. Manufactured by Washington Building Products company, 6851 E. Marginal Way, Seattle, Wash.

NATURAL LEAF TOBACCO—CHEWING, 5 pounds, $1.75; 10 pounds, $3; 20 pounds, $5. Smoking, 5 pounds, $1.25; 10 pounds, $2. Pay when received. Tobacco Growers' Union, Paducah, Ky.

CANE MOLASSES FED TO STOCK MAKES more milk, healthier animals, lower feed costs; cheaper than corn. Write Arthur A. Lewis & Co., distributors, S151 Lincoln st., Spokane.

OUR FREE NEW FALL CATALOG OF GROceries and general merchandise will save you big money; a postal card brings it. Write today. Jordan Lawler company, Box G15T, Spokane.

MISCELLANEOUS—FOR SALE (Continued) 60

SACKS—SECOND-HAND GRAIN AND SPUD, correctly sorted and graded; also pipe, new and second-hand, any size; standard roofing paper at a big saving; pumps, engines, belting, cables, etc. Alaska Junk Co., Inc., S120 Adams st., Spokane, Wash.

HOMESPUN TOBACCO—CHEWING, FIVE pounds, $1.75; 10 pounds, $3; 20 pounds, $5; smoking, 5 pounds, $1.25; 10 pounds, $2; 20 pounds, $3.50. Send no money, pay when received. Cooperative Tobacco Growers, Paducah, Ky.

FREEEVERYBODY CAN BUY GROCERIES wholesale. We accept orders of $10 and up. Write for our free list. Save dollars. People's Grocery Company "M." 701 Olive st., Seattle.

ALL WOOL KNITTING YARN FOR SALE, direct from manufacturer, at 95c, $1.35, $1.60 per lb.; postage paid on $5 orders. Free samples. H. A. Bartlett Harmony, Maine.

MISCELLANEOUS—FOR SALE (Continued) 60

TOBACCO—SELECT 3-YEAR-OLD KENTUCKY leaf. Pay for tobacco and postage when received. 5 lbs., smoking, $1.25; 5 lbs. chewing, $1.50. Farmers' Union, Hawesville, Ky.

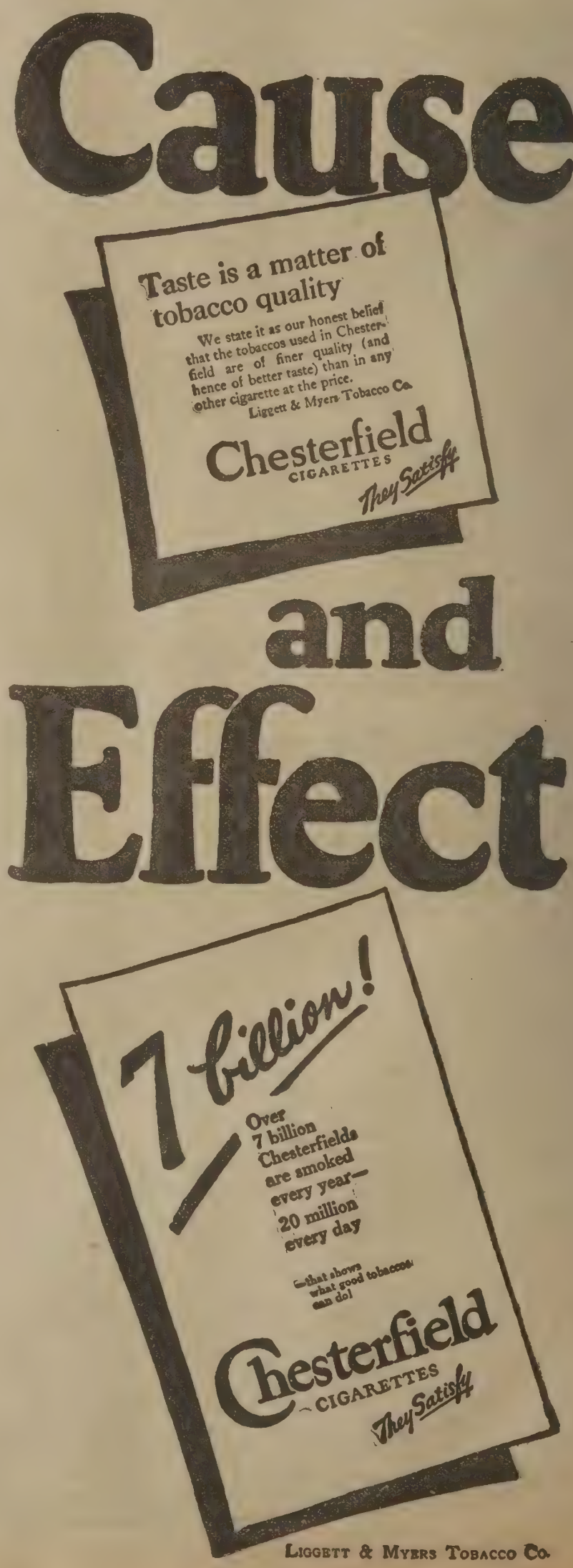
ALMONDS—CALIFORNIA SOFT SHELL, 10 lbs., $3; express charges prepaid; 5 lbs. almonds and 5 lbs., seedless raisins, $2.15, delivered. P. S. Vawter, Arbuckle, Cal.

NATURAL LEAF TOBACCO—CHEWING, 5 lbs., $1.75; 10 lbs., $3; 20 lbs., $5.25; smoking, 5 lbs., $1.25; 10 lbs., $2.25; 20 lbs., $4. Hickory Ridge Farm, Mayfield, Ky.

BUY YOUR ALFALFA HAY AND "NETTED Gem" potatoes direct from grower, cabbage, one cent pound. Samuel Shockley, Outlook, Wn.

$1.50 STROPS KEEP YOUR RAZOR IN SHAPE without honing. Paul Lundgren, Port Angeles, Wash.

(Continued on the following page.)



MISCELLANEOUS. 61

SPLENDID YOUNG REGISTERED PERCHERON stallion for good car or truck. Ed Sellick, Kennewick, Wash.

WANT TO CORRESPOND WITH PEA BUYERS. C. A. Kaehler, Coupeville, Wash.

MISCELLANEOUS—Wanted. 63

EGGS, APPLES, HUCKLEBERRIES—WRITE us, Uncle's Delicious Pies, inc.; capital stock $50,000. 554 Mississippi avenue, Portland.

STOVE REPAIRING 128

WRITE MYER RUBENS, SPOKANE, ABOUT stove repairs, welding broken parts, nickel plating.

PATENTS 150

PATENTS—WRITE TODAY FOR FREE INstruction book and evidence of conception blank. Send sketch or model for examination and opinion; strictly confidential. No delay in my offices; my reply special delivery. Reasonable terms. Personal attention. Clarence O'Brien, registered patent lawyer, 534 Southern building, Washington, D. C.

FUR-BEARING ANIMALS 170

SILVER AND CROSS FOXES FOR SALE. William Rambo, 407 Sprague, Spokane.

PETS—Dogs, Birds, Etc. 171

WHY NOT AN XMAS PRESENT OF AN OREglow purebred white collie for the wife or children? A shepherd without equal, kindly, always happy, wonderfully beautiful, perfect children's companion, noisy but harmless watch dog—the coming of friends announced and intruders driven away; country raised, vigorous stock. Puppies ready for delivery, but will hold for Xmas delivery if desired. Oreglow Farm, Boring, Oregon.

REGISTERED AMERICAN KENNEL CLUB Airedale puppies; large, vigorous kind; best all-around dogs to be found. Only a few choice ones left. Pedigrees and prices on application. Snopeke Kennels. Box 213, American Falls, Idaho.

WHEN YOU WANT A DOG, CANARY, PARrot, rabbits or a pet or pet stock supplies, cages, feeds or remedies, write. We are headquarters in the northwest. Routledge Bird, Pet & Animal Co., 174 Union avenue, North, Portland, Ore.

WHITE COLLIES FOR CHRISTMAS, REAsonable. Urbandale Farm, Oakley, Idaho.

CANARIES, BEAUTIFUL YOUNG SINGERS. $5 up. Belle Rooney, Parma, Idaho.

FOR SALE—IRISH SETTER PUPS. A. E. Crouse, Rosalia, Wash.

POULTRY 174

$2000 FOR FIVE HENS—A RECORD PRICE for record hens. We announce the purchase of F. E. Gilbert's winning pen of White Leghorns at the recent Puyallup egg laying contest. These five birds laid 1421 eggs in 12 months, thus establishing a new world's record. These birds are to be mated with the best cockerel to be obtained and used in building up Queen Quality strain of chicks. We have also contracted with Mr. Gilbert for the eggs from the pen sisters of these wonderful birds. We will have a limited number of chicks and eggs from them for sale this season. The greater part of them will be used for our own use. In addition to the Gilbert birds, we will have many flocks direct from Hollywood and Tancred stock. We also hatch R. I. Red and Barred Rock chicks of exceptional quality. We are now booking orders for early delivery and have sufficient capacity to assure prompt delivery at time promised. Incubators, 15 per cent off. We offer a special discount of 15 per cent on Queen incubators purchased from us during November and December. In addition to the Queen, we carry the Master's incubator, Petaluma electric incubator, Blue Flame brooders, American brooder stove and are agents for the Kresky brooder stove. Write for our new catalog. Queen Hatcher, 87 Sewart st. Seattle, Wash. Ell. 2054.

BABY CHICKS—FRESLAID FARM HUSKies for 1923. Banish hard times with a bunch of our profit-making Leghorn chicks. Time flies. The early buyers are picking the best dates so write now for free instructive catalog. It tells how to make $500 a year from your farm poultry. Satisfied customers made our growth possible. We claim the largest electric incubator in the world. Freshlaid Farm, Colfax, Wash.

BUY YOUR BABY CHICKS FROM THE White hatchery, member of the Sonoma county farm bureau accredited hatcheries. All flocks approved by farm bureau inspector. We handle accredited "A" grade chicks and "AA" grade for the poultryman who wants something better. Write us at once for information, prices, etc. White Hatchery, Petaluma, Cal.

WHITE LEGHORN BABY CHX FOR SUMmer and fall months from stock accredited by Sonoma county farm bureau. We guarantee safe arrival. Write for prices and literature. The Pioneer Hatchery, 422 Sixth street, Petaluma, Cal.

DAY-OLD PULLETS, GUARANTEED S. C. White Leghorn day-old pullets, also day-old broilers; established 1912. Eureka Hatchery, 628 D st., Petaluma, Cal. James K. Hirst, Prop. Refs. gladly furnished.

BABY CHICKS—OREGON'S BEST AT REAsonable prices. Leghorns, R. I. Reds, Anconas, Minorcas, Barred Rocks, White Rocks. Order early. Catalog free. C. N. Needham, Salem, Ore.

POULTRYMEN—USE "SMOKEM" FOR ROUP, colds, diphtheria, canker and chickenpox. Sold under positive money back guarantee. Large can, $2, postpaid. J. G. Bratley, Belt, Mont.

WHITE LEGHORN COCKERELS, PEDIGREED O. A. C. stock, from world record matings. Lady Wonderful line; baby chicks and hatching eggs. Prof. Frank H. Shepherd, Corvallis, Ore.

GET THE BEST PRICES FOR YOUR POULtry, eggs, turkeys, geese, veal and hogs. Write for quotations. Hotchkiss Produce Co., Spokane.

40 QUALITY R. I. RED COCKERELS, $5 and up. Write your wants. Can please you. J. Nonnemacher, Route 3, Yakima, Wash.

S. C. BROWN LEGHORNS, COCKERELS, hens, pullets; none better; stock guaranteed. E. H. Rosenkranz, Colfax, Wash.

ANCONAS—CHOICE COCKERELS, HENS AND pullets for breeders. Send for catalogue. Ancona Grove, Walla Walla, Wash.

MAMMOTH LIGHT BRAHMA COCKERELS and pullets. Adam Schafer, Hillyard, Wash. Phone Glen. 3257J.

PUREBRED BLACK MINORCA AND WHITE Wyandotte cockerels. C. McClelland, Boise, Idaho. R. 1.

1919 COCKERELS, 49 VARIETIES; HATCHING eggs. Free book. Aye Bros., Blair, Neb., Box 14.

SILVER SPANGLED HAMBURG COCKERELS, $3. E. P. Dashiell, Geraldine, Mont.

FARMERS' WANT ADS

This is the farmers' "want," "sale" and "exchange" department for small advertisements of farmers, including live stock and poultry.

Advertising rates for ads running 1 to 3 times, 10c per word per insertion, with a special rate to Farmer subscribers, as follows: Ads running 4 to 12 times, 9c per word per insertion; ads running 13 times or more, 8c per word per insertion.

All commercial and land advertising, 10 cents per word each insertion. Open also to nonsubscribers.

In using these columns advertisers must observe: (1) No advertisements will be inserted for less than $1.00. (2) Every word, number and initial, including name and address, must be paid for. (3) New advertisements, changes of copy or cancellations must reach general office, Spokane, Wash., 10 days in advance of publication date. (4) Cash must accompany order.

Above rates include insertion in The Washington Farmer, The Idaho Farmer and The Oregon Farmer, which constitute the Pacific Northwest Farm Trio, 46 Review building, Spokane, Wash.

POULTRY (Continued) 174

"HENACRES" BABY CHICKS FOR 1923. IT is time to plan your poultry work for next spring and we suggest that you write for our free illustrated catalog now. The booklet contains lots of information on poultry management, gives our feeding formulas, etc., besides describing our stock. "Henacres" Leghorns have made good all over the northwest, so you take no chances in buying them. Some one in your neighborhood knows us, ask him. We have already sold 40,000 chicks for 1923. "Henacres," Box A, Prosser, Wash.

CERTIFIED WHITE LEGHORN BABY chicks, hatched in the world's largest electric hatchery, for spring, 1923 delivery. January prices, $4 per 25; $8 per 50; $15 per 100. Special prices, 500 and 1000 lots. Order early chicks now and realize big broiler profits. Choice, free range, high egg-producing breeding flocks inspected by Sonoma county farm bureau. Safe arrival guaranteed. Must Hatch Incubator Co., 445 Seventh st., Petaluma, Cal.

TRAPNESTED CARNATION WHITE LEGhorns; famous for their vigor and winter layers. We specialize on baby chicks, setting eggs and breeding stock. We successfully shipped hundreds of pullets this fall to Honolulu, which shows the demand for Carnation stock. Ernest Raush, Carnation Poultry Farm, Kent, Wash.

PETALUMA ELECTRIC BROODERS ARE world beaters for raising chicks. No danger of fire, less care, better chicks. They grow faster, and are stronger and more vigorous than by any other plan. Our brooders give them "pep." Send for free literature. Petaluma Electric Incubator Co., Petaluma, Cal.

WILLAMETTE VALLEY BARRED PLYmouth Rocks. Over fifteen hundred young birds in 1922; heavy laying strain, dark and beautifully barred; cock birds and cockerels for sale; only the very best allowed on the Dimick stock farm; bank references. F. C. Waldron, R. F. D. 2, Hubbard, Ore.

LIMITED NUMBER ANCONA CHIX FOR spring delivery from Multnomah strain Sheppard foundation. First young pen Pacific international. High laying ability and exhibition quality. Prices on application. J. Conley, Route 4, Portland, Ore.

BABY CHICKS AND HATCHING EGGS, DR. Duganne's trap nested White Leghorns and J. M. McCaleb's Hollywood strain. Also the best of O. A. C. Barred Plymouth Rock baby chicks. Catalog on request. Mark A. Webster, Corvallis, Ore.

1923 WHITE LEGHORN BABY CHICKS, O. A. C. strain; breeders mated to pedigreed cockerels, backed by 250 to 300 egg records. Our prices are as usual, right; ask for them. Moorhead Poultry Farms, Granger, Wash.

BEST OREGON AGRICULTURAL COLLEGE stock chicks, $16 per 100; $150 per 1000; eggs, $1.25 per setting, $6 per 100; postage prepaid. Strong, healthy chicks guaranteed. Russell Poultry Yards, Corvallis, Ore.

DOLLARS FOR YOUR EGGS—WE PAY THE top market prices for your eggs and poultry, also turkeys, ducks and geese. Daily cash remittances. McClintock-Trunkey Co., produce department, Spokane.

ANCONA COCKERELS, SAME BREEDING AS my five pullets that laid 1029 eggs, 1921-22 western Washington contest. Booking eggs and chick orders. Catalog on request. Oscar Dunlap, Junction City, Ore.

RHODE ISLAND RED CHICKS FROM BRED to lay exhibition quality stock. Hatched from the same matings that produce our own young stock. Booking orders now. C. R. Quinn, Oregon City, Ore., R. 3.

RAU'S QUALITY CHICKS, THE LAYING LEGhorns; none better at any price. Our forty years' experience back of these chicks. Free price list tells it all. Rau's Quality Hatchery, Tacoma, Wash.

HUSKY BARRED ROCK COCKERELS, heavy laying strain; mates to blue ribbon winner live stock show; commercial, $5 to $10. E. W. Hendricks, Milwaukie, Ore. Route 1.

PACIFIC POULTRYMAN, SEATTLE, WASH., expert writers on practical poultry subject. Special offer, two years, $1. Four months' trial subscription, 25c.

HUNT'S PRIZE AND UTILITY BARRED Rocks; some dandy cockerels, pullets, trios. Write for prices. W. A. Hunt, Lebanon, Ore. Box 503.

SHIP US YOUR POULTRY AND TURKEYS. Ask your neighbor about our fair dealings. Jones & Williams, S101 Division, Spokane.

CHICKS AND EGGS FROM 250-EGG RECORD S. C. White Leghorn hens; free catalog. Orin Belknap, Chinook, Wash.

S. C. RED COCKERELS FROM HEAVY LAYing dark red King strain, $3, $5 and $7. C. A. Keiser, Waitsburg, Wash.

FOR THE BEST IN SILVER WYANDOTTES and Silver Spangled Hamburgs, write G. G. Wherry, Payette, Idaho.

LARGE PEKING DRAKES FROM 1ST PREmium stock, Washington state fair. Frank Glaspey, Yakima, Wash.

WHITE LEGHORN AND BARRED ROCK cockerels; records, 200 to 311. W. M. Roberts, Walla Walla, Wash.

ROSE COMB BLACK MINORCA COCKERELS, $2.50; pullets, $1.25; hens, $2.25. Mrs. Carley, Carley, Wash.

O. A. C. BARRED ROCK PULLETS, COCKerels, $1-$3.50. Mrs. Faulconer, Skamania, Wash.

PURE BLOOD TOULOUSE AND CHINA geese. Dr. Nichol, R. 6, Portland.

Turkeys.

GIANT BRONZE TURKEYS FROM MY OREgon state fair and Pacific International winners. Sold on approval. Herbert Stoneberg, Route B, Eugene, Ore.

PUREBRED WHITE HOLLAND TURKEYS; toms, $7.50; hens, $5; exceptionally large, healthy birds. Mrs. A. S. Reams, Wendell, Idaho.

PUREBRED BRONZE TOMS, $9-$12; PULlets, $6. Bertha Gray, Winlock, Wash. R. 2.

FOR SALE—PUREBRED MAMMOTH BRONZE turkeys. S. L. Maltby, Rogerson, Idaho.

POULTRY—Turkeys. (Continued) 174

MAMMOTH BRONZE TURKEYS FROM EASTern blood lines; large boned type, $8 to $20. Mrs. H. D. Moore, R. 1, Box 21, Hubbard, Ore.

GIANT BRONZE TURKEYS—CHICAGO AND Los Angeles first winners. Toms and hens for sale. M. M. Rieman, Planada, Cal.

21 YEARS A SPECIALTY BREEDER OF M. B. turkeys; prize-winning stock. Mrs. Frank Browning, R. 1, Nampa, Idaho.

PUREBRED MAMMOTH BRONZE TURKEYS; toms, $10; hens, $6; sure to please. Mrs. J. W. Wagoner, Caldwell, Idaho.

WELL BRED BRONZE TURKEYS AND White Rock cockerels, Dec. delivery. Roger Campbell, Connell, Wash.

VIGOROUS MAMMOTH BRONZE TURKEYS, unrelated breeding stock. Albert Leach, Caldwell, Idaho, Route 1.

PUREBRED MAMMOTH BRONZE TURKEY toms, $10; hens, $8. Mr. George Roseberry, Riverside, Wash.

PUREBRED MAMMOTH BRONZE TURKEYS, choice from six hundred. Harry Smith, Coupeville, Wash.

CHOICE MAMMOTH BRONZE TURKEY toms, $10; hens, $5. Amelia Reimers, Eagle, Idaho.

MAMMOTH BRONZE TURKEYS FOR SALE. J. N. Morgan, Cosmopolis, Wash.

LIVE STOCK 177

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GENUINE BARGAIN—340 ACRES, NEAR schools, postoffice; steady running sawmill; eight-room house, hot and cold water, electric lights, telephone; large barn, garage, outbuildings, family orchard; twenty acres rich ground, tilled; more easily cleared; great free outrange for stock; necessary farming machinery; fine span black draft horses, 75 Lincoln sheep, 3 cows, 3 yearlings; all for $5000; fifth cash, long time balance; no trade. Owner, J. A. Jenkins, Fernvale, Douglas county, Ore.

BIG LUMBER CO. LAND SALE IN SKAGIT county; 40 acres, $1400; 20 acres, with new house, $1500. Lumber furnished for building. Lots of work for the settler; splendid district, roads, schools and towns. H. C. Peters, 726 3d ave., Seattle.

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122-A. DAIRY RANCH, NEAR BURLEY, IDAho; close in. 160 acres in Jefferson county, Ore.; 100 cult. Address 1011 E. Vernon ave., Los Angeles, Cal.

PIKE'S PEAK OR BUST

By LEWIS B. MILLER

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CHAPTER TWENTY-FIVE.

A Nightlong Flight for Life.

"All right." Holloway grinned. "Risk me to find the shortest, slickest route out of this hornet's nest just now."

Away the whole party marched. One was treading on another's heels Indian file. And in spite of the fact that they were tired, or had been, and had not eaten a bite since daylight, they were traveling at least twice as fast as they had traveled when coming.

Close behind Jess came Givens, and just behind Givens followed Orlando, leading his pack cow. Those farther back saw to it that Brindle did not delay the party's progress.

On they hurried, traveling as nearly as possible the route they had come. The country was very broken, and was gradually rising as they approached the great mountain range. Sometimes they were in woods, and much trouble they had picking their way among the fallen timber. Seldom did they speak, and then only in tones a little louder than a whisper. Those bringing up the rear kept glancing back often, hoping to discover pursuers before the pursuers discovered them.

Well aware that they were fleeing for their lives, nobody wanted to stop and rest. Even Brindle, usually rather lazy, had caught some of the excitement and did not need much urging.

Hour after hour the fugitives hurried on, usually without even a game path to follow in their flight. Since that lone spy had disappeared, not an Indian had been seen. But the fleeing gold seekers did not for a moment doubt that red pursuers were already hot on their trail. All glanced backward from every high point; and they never looked back without noting the height of the sun. They were anxious for night to come down and cover their retreat.

At last, after what seemed many hours, the sun was actually setting behind some mountains far to the west. All the fugitives saw it with no small relief; and their relief was still greater when the red ball had actually disappeared. Just now they were crossing the nearly bare ridge of a mountain spur. By the time they had made their way down the long slope to a stream, dusk was thickening around them.

There they stopped to drink from a mountain-torrent, and to let Brindle drink. After they had crossed the stream, whose banks were overgrown with brush, Cooper called a halt, then said: "Boys, have we got anything at all to eat? If we have, I'm in favor of staying here at least a few minutes. We can eat a snack while we rest and let Brindle rest."

"I have some milk in one of my milk bottles," Orlando replied. "I milked it this morning before daylight. And I'm guessing Brindle's got more by this time. I can milk that if we lie by long enough."

"Only this minute it has occurred to me that I'm carrying two or three pounds of dried buffalo meat," Cooper told them. "My wife put it down in the bottom of my pack, just before I started on this trip. She said, I recollect, that we might come to some place where game would be scarce, and a little dried beef would help out. We've found game so plentiful, I'd even forgot the dried meat. But we'll make a meal of it."

"Your wife is a wise woman. And it's a lucky thing for us you forgot," said Holloway. "We're needing something to eat fearfully bad just now, it seems to me. It's been so long since we ate; and we've been traveling such a horse-killing gait, must confess I'm feeling a litt'e weak in the knees."

"Night's almost here. Why not find a good hidin' place, some'r's along this stream, and take a restin' and breathin' spell?" proposed Esau.

All were willing enough. After following up the stream about 200 yards, they found a grassy opening among some bushes, with the creek bank on one side of it. An advantage of this position was that they couldsee, through an opening in the bushes on the far bank, the mountain over which they had just traveled.

The cow's pack was removed, but not her saddle, and she was allowed to graze. While she was grazing Orlando miked her. Then he divided the milk he already had, giving each man a little more than a half pint. Not knowing when they would dare shoot any game, or kindle a fire to bake any bread, they thought it prudent to save the milk just milked till later. For it was understood that they would have to travel all night long.

They had finished eating what they could find to eat, and all had stretched themselves out on the grass to rest, when Holloway, lying where he could catch a clear view of that mountain behind them, sat up suddenly, with a warning "Sh." There had been little talking; but the warning was to make sure that nobody should speak aloud. Soon he raised his hand and pointed toward the mountain top.

At once every man sat up. And then they quickly crawled to where they could see what Jess was gazing at. What they all saw was startling enough.

A string of Indian warriors, following in one another's tracks apparently, was just coming over the mountain. While it was almost dark down here, daylight lingered longer up there on the mountain top, and they could be seen distinctly. They were not quite on the white men's trail, but were crossing the mountain a little lower down. The Utes—they were supposed to be Utes—had probably been trailing these miners. But by this time daylight had so nearly faded out, even up there, that they could not distinguish the trail longer. So



Warrior after warrior passed over the mountain.

now they were following the general course that the fugitives had been traveling, and they were hoping to discover the white men somehow.

Warrior after warrior came over the mountain, till more than 30 had been counted. And some had crossed, possibly, before they were discovered.

"They're right after us! Anybody can see that!" Esau said, scarcely above a whisper.

"They certainly are after us!" answered Cooper. "And we've got to be wise—as wise as they're cunning, or they'll nab every mother's son of us."

"That last Indian has stopped on top of the mountain," Holloway whispered to his companions. "He seems to be waiting for something or somebody."

Now Sanders answered: "More likely he's thinking we'll be fools enough to start a camp fire; and from that high point he can discover either the smoke, or the light from it."

"If that's what they've got in their red noggins, they're fooling themselves outrageously," Cooper remarked.

"But they're so close onto us! We've got to give 'em the dodge somehow! If we don't they're likely to run us down, even without a light, all that swarm of warriors." said Orlando, in some evident alarm.

"I—I'm guessing that's right," Cooper told his partners. "And we'd better slip out of here just as quietly as we can. I believe we ought to follow right on up the creek."

The others were willing; and they were all soon in motion. Not till they had marched two or three miles, and were supposed to be out of the dangerous vicinity, did they halt for a brief consultation.

Now Cooper spoke: "In daylight, while the redskins could trail us, we traveled a little south of east. Since we started up this creek, we5ve been headed almost south. The Indians will probably expect us to keep on east. That is, if they don't expect us to go into camp. But instead of moving the way they expect us to move, we'd better follow some other course."

"But what—what other course can we travel, John?" demanded Givens. "Whatever we do, we've got to shake the dust of this redskin-poisoned country off of our feet, and that at the earliest minute possible. First thing, we must get back over the snowy range."

"Oh, yes, we'll keep hustling till we're out of here, Jeff. This country is altogether too hot for us. But we can keep on in this direction for a few miles, and then turn toward the snowy range again. We must get across that before we stop long or rest long."

"As good a plan as any, that seems to be," Holloway told them. "Right on up this creek it is, then. And I'm ready to travel."

"Let's go," said Givens.

Very soon the weary, hard-pressed fugitives were on the march again. Knowing that their lives would be in danger, they dared not rest till they had put many miles more behind them.

A few miles farther up the stream they left it and turned almost due east, across a very broken country. Jess Holloway was still leading; and the party was still traveling in a string—one behind another. Every man had his gun in his hands or on his shoulder. And every man had a good-sized pack strapped to his back.

When would the fleeing miners ever forget that awful night? Weary though they were, they pressed forward relentlessly. The farther they traveled, the steeper and rougher and rockier the country became. Fortunately their previous experience in the mountains had toughened them. Climbing this mountainside would have been a laborious task, even in broad daylight. But now, with only the dim starlight to half reveal the way, their hardships were something frightful. Still, not one of the fugitives spoke of stopping. Anything was better than falling into the hands of those merciless red pursuers of theirs.

In selecting his course, Holloway had to be careful to pick out a route that Brindle could follow. As usual, Orlando was leading the cow, while Esau or somebody else came close behind, to keep her from lagging back. Probably because she had been resting for the last two or three days, Brindle was standing the forced march fully as well as any of them—better than most of them.

Not till after hours of climbing, climbing, always climbing, which seemed like ages, did anybody speak of pausing. But at last, when it seemed that endurance could stand the strain no longer, Cooper called to those ahead, though in rather cautious tones: "Boys, suppose we hold up a little while now. Beats any traveling I've ever run up against, this does! It's a man-killing job, going up this mountain side in the dark. Suppose we breathe a spell, and then take a new start."

"Amen to that." Givens was heard to groan out.

All the others were willing, and more than willing, and said so. On coming to a little level spot, they stopped. Without going to the trouble to remove his pack, every man first sat down and then threw himself on it to rest. Before doing any resting himself, Orlando, usual, let down the two parts of the cow's load, so that she could rest as well as the men.

For several minutes all were too weary to do any talking; they reclined on the ground in silence. Even Frisk, the one member of the party not carrying a pack, was tired. He came and stretched himself near Orlando, with his head on his paws.

At last Holloway spoke: "I'mbeginning to shiver. And I was sweating when I dropped down. From the way the air feels here, we must be nearing the snow line."

"We are," Orlando answered. "You can tell that from the size of the trees. Just see how scrubby this timber is getting."

"Yes, and how scatterin' the trees air," added Esau.

For perhaps half an hour, in all, the fleeing miners rested there on the mountain side. And they might have rested longer; but by this time all were so chilled by the night air that they were eager to get in motion again and warm themselves.

They had been traveling due east. But now they changed their course to southeast. Soon they were climbing again. Their leader, Holloway, was guiding himself by frequent glances at the north star.

In the semi-darkness the climbing was still very hard, the mountain being as steep and rugged as ever. But, knowing that there was no other way of escape, all went at their heavy task determinedly. And the higher they climbed the more trouble they found with their breathing. That was because of the rare atmosphere. Soon, on this account, they had to stop every few minutes to rest and breathe.

At first most of the men sat down at every halt. But they soon began to complain that the exertion of rising to their feet tired them as much as they had gained while sitting. After tha tthey merely stood still and rested. Having climbed 30 or 40 yards, slowly, painfully, they would find themselves tired out. But a minute or two of standing motionless would make them feel fresh and vigorous again. And so, by hard degrees, they kept working their way up toward the highest part of the continent—the backbone of the continent.

"Oh, this air—this air!" groaned Givens. "It wasn't made to—to breathe! Anybody can—can tell that!"

"It is rather troublesome stuff to—to get into your lungs," gasped Cooper.

"I don't seem to have much trouble getting it into my lungs," Orlando gasped when I try to breathe it out. Doesn't seem to want to go."

At last—it must have been midnight or a little later—they had climbed to where timber and other vegetation had disappeared. And a light place ahead meant that they were almost at the edge of the snow.

"Boys, what do you say to—to another little breathing spell—before we—we tackle that—that hard job???" panted Givens, when they were only 30 or 40 yards from the snow line.

"I'm very thirsty. I've got to have a drink or eat some snow before I can rest," Holloway said.

"Plenty of little streams trickling down from the edge of that snow, I'd guess," Sanders remarked. "At least there were where we crossed this range before."

(To be continued.)

Bits of Fun FOR Everyone

A Slow Process.

"Does your wife practice economy,"

"Oh, yes; she practices it. But she doesn't seem to learn very fast."—Judge.

Nothing Else.

Mr. Meane—I have nothing but praise for the new minister.

Brown—So I noticed when the plate went around.—Successful Farming.

There's a Difference.

Teacher—Spell "cloth," James.

James—(Silent.)

Teacher—What is your coat made of?"

James—Father's old pants.

In the Agrarian Bloc.

"What has been your previous business experience?"

"As field manager."

"For whom?"

"For Farmer Brown, just outside of town. I managed his field hands for him two summers hand running."—Farm Life.

A Desideratum.

"Have you heard anything about when Zeke Gawner's funeral will take place?" inquired an acquaintance.

"Eh-yah!" replied Gap Johnson of Rumpus Ridge. "His wife 'lows it will come off tomor' at 2 o'clock if a big enough crowd gathers."—Country Gentleman.

The "Green" Hand.

The Boss—"What's the idea of hanging that gate before you have the fence built on either side of it?"

His Nibs—"Why, I thought we'd better put up the gate first so as to get the cattle accustomed to coming through it before we strung the wire!"—Orchard and Farm.

No Night Owl.

Farmer Jones (who has been having labor troubles)—Now, before I take you out of town I want you to understand you'll have to get up in the mornings.

Hay Hand (hopping into the flivver)—Thanks, boss, you're a man to my likin'. Most of the farmers round here expect a man to git up in the night time, before he's had his sleep out.—Country Gentleman.

Modern Arithmetic.

"Willie," said the teacher, "how much is six and four?"

"Eleven," said Willie promptly.

"No. Try again."

"Twelve."

"No."

"Thirteen."

"No, no, you're guessing now. But why couldn't you have guessed ten?"

"Because it don't make ten," said Willie confidently. "Five and five make ten. I remember that."—Successful Farming.

Experienced.

The determined-looking woman alighted from the driver's seat as the victim of her car picked himself up from the dust and began to take stock of his injuries.

"I'm sorry I hit you," she said grudgingly, "but it was your fault. You must have been walking carelessly. I am an experienced driver. I've been driving a car for seven years."

"Well," replied the man as he dusted himself off, "I'm no novice myself. I've been walking for 57 years.—Country Gentleman.

Just Folks

You can rout dread by action.

Worldly wisdom would seem to disguise aggressiveness and display simplicity.

Misfortune creeps into fortune and fortune creeps into misfortune.

Obstinacy saves as well as destroys; probably has saved more times than destroyed.

You will find "enough" among the dozen biggest words of life.

The biggest problems are solved by the simplest rules.

FAMILY CIRCLE

ALICE BARLAND
EDITORIAL CONTRIBUTOR

Experience Letters

From Our Family Circle Women

Dear Mrs. Barland: I wrote you once before, about a year ago, but it seems I don't get time to write often.

We have been married four years and have lived here near Odessa on this ranch all the time. The first year we had a fine crop, but since that we've been going backward on account of poor crops. But we shouldn't complain; we have plenty to eat and wear and the greatest of all blessings, we have health and a happy home. We have a little girl 2 1-2 years old who had scarlet fever last spring, which brought on complications, causing a serious surgical operation, and we feared we would lose her, but she has fully recovered and we are very thankful.

I can all my meats and vegetables as well as my fruits and find it very profitable. My husband gave me a pressure cooker for my birthday and I enjoy using it very much. I do all my canning with it and much of my cooking as well. One can cook a whole meal in it in such a short time.

I can navy beans in tomato sauce with a little salt pork in pint jars, then when we come home from hunting or any place we can warm them and soon have a good hot meal along with canned meat and bread and butter.

I never have a meat bill any more, as we raise all our meat, such as chickens, pigs, turkeys and calves. I used to have a meat bill of $10 to $15 a month. I used to have a grocery bill of $25 to $30 a month and now it seldom ever exceeds $5 a month, and that I pay with our "cream money." We milk three cows and sell the cream, keeping enough for butter and our own use. From these three cows we get from $9 to $12 a month. We have saved a great deal on fuel this year, as my husband brought home ties enough from the railroad track to last for two winters. The Great Northern repaired their tracks and the old ties were given to any one who wished to haul them away.

There are many ways that one can save and I am thankful for these hard times, for I have learned so much since we've been "poor." My husband and I were inclined to be extravagant, our parents being fairly well off, and it never occurred to us to be economical until the last two years; now we study things out together and decide on the most economical and profitable way to do things. We have learned that the cheapest way isn't always the most economical and each new circumstance needs consideration and sometimes we have to think pretty hard.

It isn't easy to deny ourselves so much that we really need, but in the end I think it makes better men and women of us. I often thank God for these hard times and accept them as a blessing, but not always, for sometimes I rebel when I get cross and tired. I do try hard to be cheerful and pleasant, though, for nothing makes home so dear as a kind, sweet mother. Neither my husband nor myself have an own mother, as mine died when I was 8 and his when he was 9 years old and we both had stepmothers. I want to be everything to my baby girl that a mother should be and when I find myself getting cross with her I take myself to task, for I want to leave pleasant memories to my loved ones and I want them to always think of "mother" as kind, good and lovable.

I have written longer than I intended and I want to thank you for all your kind help. I enjoy the Family Circle very much. I am 24 and would enjoy writing to some of the Circle sisters about my age and especially some who live near Milton, Ore., or Walla Walla, Wash.

Washington MRS. J. W.

Family Circle Girls

Dear Mrs. Barland: I am just a school girl, 15 years of age, but I am going to write to you just the same. I read and enjoy the letters in the Circle and have for a long time. I am to graduate from the eighth grade this year. We do not live on a farm, but have a cow and some chickens. I have three sisters, two younger and one older than I, and two brothers younger. I have to care for them occasionally and I like to read the helps on caring for children. I find it very interesting to notice their different likes and dislikes.

My younger sister likes to draw and I sometimes draw a picture of a boy or girl and she will name it and then she wants to draw one and have me name it. This keeps her busy and lets me be working.

My oldest sister is in school and is very bright. Her special pastime is giggling. My two brothers are very mischievous, but can be coaxed into working if I am patient with them. My mother is gone a good deal and I have to manage the best I can.

An old friend gave me a violin and I would love to learn to play it, but I must wait till my brothers and sisters are grown up. It is very hard to wait, but I try to have patience. The letters of the Circle are so cheery that I read them as soon as the good old FARMER gets here.

Would some one tell me the secret of friendship? I have had many friends, but not one that treats me right at all times. I am not popular or anywhere near beautiful, nor even good looking, so maybe that accounts for it. I should so much like to have a girl friend whom I could truly trust. It might seem that I am not true to my girl friends, but I am much more so than they are to me.

Washington. "LONELY."

Dear Mrs. Barland: I am 17 years old and thought I would express my opinion about kissing boys. I think it silly and out of place. If boys and girls can not go together without it they had better stay at home. If there is any kissing done it certainly isn't the girl's place to do it. A girl should have enough self-respect not to allow it and a boy should have enough respect for the girl and himself not to want to make her so common. I hope to hear other girls express themselves on this subject. E. M.

Oregon.

Dear Mrs. Barland: I always read the Circle and find it interesting and helpful and I read "Tinnie's" letter. At first I thought it very ridiculous, but as I thought about it the more serious it grew. Tinnie and I are about the same age. I am 17, with goldish-brown hair, large gray eyes, a fair complexion and just as tall as our beloved Mary Pickford.

As for kissing a young man goodnight or goodby, I think it unladylike, unless one is sure of becoming his wife. I have had lots of experience with young men who lovingly tease for just one kiss, "just one," but, my dear Tinnie, let the young man do the loving and kissing, as in romance they are pictured as doing. A girl can show her love in different ways if she wants to show such regard. Girls, we will have plenty of time to kiss our young men after we are married. An affectionate little hug and a loving look will show that we care and will increase his love for us. So let the young man do the kissing if any is done when we say goodby. Do you agree with me?

Washington. D. G.

Dear Girls: There follow a number of questions asked by different girls. I will answer them according to my best judgment for the benefit of all. When a young man calls upon a girl, along what lines should conversation be conducted and what other way should one entertain him?

It is best in entertaining any one in your home to choose conversation which will be interesting to your guest. You will of course know something of what he is interested in and draw him out to speak of his plans or about things he knows something about.

For instance, if he is a farmer and has stock that he is proud of, give him to

(Continued on the following page.)

POTS AND COOKERS

The "OMAHA" is a real High Pressure Steam Cooker, Canner or Hospital Sterilizer. Stands over 30 pounds of steam. Saves 2/3 the time and fuel. Cooks potatoes in 10 minutes, beans in 30 minutes or toughest meats in 40 minutes. Entire cover removable and STEAM TIGHT. Sold with or without covers. The POTS are made in ONE SOLID PIECE, SEAMLESS and SOLDERLESS with your choice of PURE COPPER or NICKEL inside and outside. Excellent for rendering lard, candy making, etc. Sizes 11 QUARTS to 44 GALLONS. Write today for the "OMAHA" circular of valuable information, description and prices. Dealers and Agents wanted.



LID REMOVED



BOYER & CO. 603 So. 14th St. OMAHA, NEBR.

When answering ads, please don't fail to mention this paper.





Have a Quick-Lite in Your Home this Christmas!

Here's An Economical Gift No Christmas gift will bring greater cheer and happiness than a Coleman Quick-Lite Lamp. And you'll find it such a practical, economical and beautiful gift! It will delight and benefit every member of your family—at a cost of only about a penny a night! Mother, "Dad" and the kiddies will enjoy its wonderful 300 candle power brilliance. Not only at Christmas time, but throughout the coming years, the soft sun-like brilliance will protect your eyes—and keep strong and young the eyes of your loved ones—the children. As an extra gift for "Son" or "Dad"—get a Quick-Lite Lantern!

Use This Lamp 10 Evenings Write today for our Special "10-Day Visit" Plan. This liberal plan puts the Quick-Lite on your table to add immeasurable radiance and cheer to the holiday season. Send the attached Coupon. Simply mention the name of your nearest hardware store or general merchant. Make this Christmas your happiest one. Send Coupon--*Now*

THE COLEMAN LAMP CO.
Desk P. N.-81. Wichita, Kansas.

Two Lights Needed in Every Home!

The Quick-Lite Lamp

—is 300 candle power—20 times brighter than an old-style oil lamp at one-third the cost.

—is easy to keep clean—no wicks to trim, no dirty chimneys to wash, no soot, no smoke, no dripping oil.

—can be used all over the house.

—is economical—gives over 40 hours brilliant service per gallon of fuel used.

—is beautiful—handsomely designed and elegantly finished.

The Quick-Light Lantern

—is built to operate just like the Quick-Lite Lamp—gives same 300 candle power brilliancy.

—is just the thing for night hauling, harvesting, ditching, road grading, camping, fishing, hunting, auto-touring, etc.

—won't blow out in the wildest storm.

THE COLEMAN LAMP CO.,
Desk P. N.-81, Wichita, Kansas.

Without obligation to me, please send me full particulars of your "10-Day Visit" Plan on the Coleman Quick-Lite.

Name.....

Address.....

Coleman Quick-Lite
"The Sunshine of the Night"

High Points in News of the Week

The house of representatives last week passed the ship subsidy bill by a vote of 208 to 184. The measure now goes to the senate, where it is predicted it will have rougher sailing than in the lower house.



The extra session of congress has ended automatically and the regular short session opened Monday noon of this week. Leaders in the fight for the ship subsidy bill will endeavor to secure its passage as early as possible.

The most dramatic feature of the extra session of congress was the filibuster by democratic senators, led by those from the south, against the anti-lynching law that was supported by the republican organization. The filibuster prevented the discussion of any other legislation until the republican leaders were compelled to agree that the anti-lynching bill would not be taken up again during the present congress.

Special interest attaches to a movement launched last week at a conference between President Harding, Secretary of Agriculture Wallace and 12 republican senators, headed by Senator Watson of Indiana. The movement provides for the consolidation into one bill of several approved proposals for financial aid to agriculture. The plan being worked out is said to enable the government, through the federal farm loan bank, to grant financial relief to the small farmer as well as to the large one and much more quickly than has been possible in the past. All 12 of the senators present at the conference pledged their support to the immediate consideration of the measure in congress.

* * *

Former Premier Clemenceau of France is still in the United States, delivering addresses in large eastern cities with a view to converting this country to the French view of the problems of securing permanent peace and reconstruction in Europe. The former premier is anxious to induce the United States to take a hand in European affairs, either through membership in the league of nations or otherwise.

Last week he declared that Germany is even now preparing in a systematic way for a future war for the purpose of crushing France, if not actually of dominating the world. A dispatch from London seemed to corroborate his statement, it being declared that the British government has convincing proof that Germany is now building up great military equipment in Russia and training not only the German people, but the Russian people in the arts of war. It is declared that the German plan is to join with Russia when the opportune time comes, destroy Poland, which lies between these two countries, and then, together, again march westward for the overthrow of France.

Former Premier Clemenceau declares that the so-called German republican government is but a camouflage behind which the same spirit that dominated Germany prior to and during the war is operating. He declares also that the Turkish uprising and its military successes over Greece are due to German inspiration and leadership.

It is becoming apparent that the French government is becoming desperate over its inability to secure the cooperation of its former allies in compelling Germany to live up to the terms of the treaty of peace. What appears to be a fairly authentic but unofficial report says that if France does not obtain satisfaction before January 15 she alone will advance further into Germany for occupation of the Ruhr district as penalty for German failure to live up to the terms of the treaty.

* * *

About 40 members of congress met in Washington last week at the call of Senator La Follette of Wisconsin and formed what is to be known as the "progressive bi-partisan bloc." The reported purpose of this new bloc is to measure all legislation upon the basis of its "progressiveness." Senator La Follette presided over the organization session. Among the speakers were President Gompers of the American Federation of Labor; Governor Blaine of Wisconsin; Senator Norris, republican, of Nebraska; Senator Brookheart, republican, of Iowa; Senator-elect Wheeler, democrat, of Montana; Senator-elect Frazier, nonpartisan-republican, of North Dakota; Representatives Frear, republican, of Wisconsin, and Representative Sinclair, republican, of North Dakota.

* * *

Governor Groesbeck of Michigan last week appointed Mayor James Couzens of Detroit to succeed Senator Newberry as United States senator. Senator Newberry resigned following the election in Michigan, when a democratic senator was elected in Michigan on an anti-Newberry platform. The new senator is a man of much wealth. He was elected mayor of Detroit in 1918 and was reelected last year by the largest majority ever given a Detroit mayor. He has the indorsement of Henry Ford, who was defeated two years ago by Senator Newberry.

* * *

Secretary of War Weeks last week declared that the present authorized strength of the regular army is inadequate and that further reduction would be inexcusable. The present authorized strength is 125,000 men and 12,000 officers.

A Giant Buying Corporation Is Proposed

A news dispatch from Washington, D. C., says:

A vast buying and selling company, with an authorized capital of $100,000,000, to market agricultural products would be created by a bill introduced in the senate by Senator Norris of Nebraska, chairman of the committee on agriculture. Started by a federal appropriation of $100,000,000, the Farmers and Consumers' Financing corporation, as it would be called, would be invested with the broadest of powers, the scope of its operations extending to all foreign nations as well as the United States.

Clothed with the power to issue bonds for five times its capital, the gigantic corporation could store the commodities to wait for higher prices or sell them when times were considered propitious.

Far more comprehensive than his previous bill, which had a large measure of support in the last congress before it was superseded by the Kellogg bill reviving the War Time Finance Corporation, Senator Norris said he believed a favorable report would be made because the agricultural committee had approved a bill very similar to this one.

The real object of the bill is to cut out the thousands of middlemen who take profits on food commodities between the time that they leave the hands of the producer and the time they reach the hands of the consumer.

"More than 40 per cent of the cost of commodities to the consumer goes into the pockets of the middlemen," Senator Norris said. "Under the proposed system the producer could get more money for his commodity, while the consumer could buy it for less. The two suggestions seem contradictory on their face, but they are not."

The secretary of agriculture and two directors, to be appointed by the president, would operate the corporation.

Farm Business and Markets Outlook

(Continued from page five.)

DAVENPORT, Wash., Dec. 1.—Bluestem, $1.30; Marquis, $1.04; Gold Coin, $1.04.

LEWISTON, Idaho, Dec. 2.—Soft white, $1.03; hard winter and northern spring, 98c.

ODESSA, Wash., Dec. 2.—Bluestem and Bart, $1.43; Marquis, $1.10; Turkey red, $1.07; Jones' Fife, $1.04

DAYTON, Wash., Dec. 2.—Club, $1.05; red, $1.

RITZVILLE, Wash., Dec. 2.—Bart, $1.45; red, $1.07; Fife, $1.05.

POMEROY, Wash., Dec. 2.—Turkey red and white hybrid, 98c.

SEATTLE, Wash., Dec. 2.—Wheat—Hard white, $1.25; soft white, $1.23; western white club, $1.22; hard winter, soft red winter, northern spring, $1.18; western red Walla, $1.16; Big Bend Bluestem, $1.60.

Hay and Feed Grain.

PORTLAND, Ore., Dec. 2.—Millfeed—Price f. o. b. mill; mill run, ton lots, $35; middlings, $47; rolled barley, $41@43; rolled oats, $44; scratch feed, $46 per ton.

Corn—White, $41; cracked, $43 per ton.

Hay—Buying price, f. o. b. Portland. Alfalfa, $19@19.50 per ton; cheat, $19@19.50; oats and vetch, $22; clover, $19; valley timothy, $22; eastern Oregon timothy, $23.

SPOKANE, Dec. 2.—Wheat—Feed wheat, $44 ton. Oats—$42 per ton; rolled, $44.. Corn—$42 per ton; cracked corn, $44 ton. Barley—$42 per ton; rolled, $44.. Bran—$33 ton. Bran and shorts—$34 ton. Shorts—$36 ton.

Alfalfa, $23 ton; timothy, $26 ton; mixed hay, $24 ton.

General Produce.

Butter—Cubes, extras, 45c lb.; prints, parchment wrapped, box lots, $48c, cartons, 49c. Butterfat, 49c delivered Portland; station buying price, A grade, 46@48c.

Eggs—Buying price: Current receipts loss off, 45c; henneries, 48c; pullets, 38c. Jobbing prices: Front street, candled ranch, $53c; selects, 55c; association selects, 60c; association firsts, 58c; association pullets, 45c.

Cheese—Tillamook triplets, price to jobbers, f. o. b. Tillamook, 30c; Young Americas, 31c; longhorns, 31c pound.

Poultry—Hens, 13@23c lb.; springs, 17@20c; ducks, white, 18@20c; geese, 18c; turkeys, live, 27@28c; dressed, choice, 35@38c.

SEATTLE, Dec. 2.—Eggs—Select local ranch, white shells, cases included, 48c per dozen; mixed colors, 48c per dozen; pullets, 37c per dozen; cases returned to shippers, 1c less.

Butterfat—F. o. b. Seattle: A grade, 50c per lb.; raw milk, $2.40 per cwt.

Poultry—Hens, 4½ lbs. and up, 23c per lb.; over 3½ and under 4½ lbs., 17c per lb.; 3 to 3½ lbs., 14c per lb.; do dry picked, 2c above live; springs, 2 lbs. and heavier, 19c per lb.; broilers, under 2 lbs., 24c per lb.; capons, live, fat, 6 to 10 lbs., 30c per lb.; do dry picked, fancy, 33c per lb.; old roosters, 11c per lb.; Belgian hares, 3½ lbs. and heavier, 10@11c per lb.; geese, fat, live, 19c per lb.; ducks, 3 lbs. and heavier, live, 20c per lb.; turkeys, fat, nominal.

SPOKANE, Dec. 2.—Poultry, live weight—Hens, 4 lbs. and over, 17c; light hens, under 4 lbs., 12c; springs, 18c; old roosters, 8c; ducks, 15c; geese, 15c; turkeys, dressed, 33@35c.

Fresh ranch eggs—$10.50@12.50 case, according to quality.

Butterfat—48c pound.

If You Could Get
$400 FOR A SHEEPSKIN
Would You Invest in Sheep?
FOX SKINS FROM A PENNSYLVANIA FOX farm brought as high as $400 a pelt in 1922.
2 to 9 foxes to a litter.
They mature in eight months.
Their food costs but little.
They require little space.
Send Today for Illustrated Booklet 117.
THE ALLEGHENY SILVER-BLACK FOX CO.
Warren, Pennsylvania.

Family Circle Girls

(Continued from the preceding page.)

understand you are interested to hear about it. If it is an orchard or poultry or whatever he seems to have an interest in. The people who are considered the best company are those who give the other fellow a chance to voice his opinions. Remember this, girls. Also the people who have the greatest number of friends are those who see good in the greatest number and speak of it, and omit to mention the unlovely traits which most likely are so apparent that no mention of them is needed.

"What should a girl do when a young man wants to dance with her and she is always on the floor dancing with some one else and knows he wants to dance with her?"

I would say it should be up to the young man to settle that question by getting ahead of the other fellow. "Where there is a will there is a way."

"What should a girl say to a young man who asks to take her home and she doesn't wish his company?"

A good way is to arrange with some one else to take you home. Get another girl friend to help you out and a time or two of refusing should make the matter plain to any young man that his company isn't wanted.

"Is it proper for a girl to speak first to a young man when he is angry?"

That depends upon what he is angry about. If you have made him angry in some way where you were rude or to blame and you are sorry, I think it all right for you to speak first. But if he has done some improper thing and is angry because you have resented it, then let him come and apologize before you speak.

"Is it proper for a girl to use rouge at a dance?"

If it is proper to use rouge at any time, why not at a dance? I don't think much of the rouge at any time, but if a girl is very pale I think a little touch of color, just a touch, remember, is not bad. But if a girl is all painted up, as some are, and goes to a dance with it on her face and lays her face on the shoulder of her partner it would be well to carry along a whisk broom hanging at her side to remove the damage done to the young man's coat. Dear girls, be moderate in the use of face powders and, for decency's sake, keep your heads level on your own shoulders and entirely off the shoulders of your dancing partners.

Some will say it is "old-fashioned" not to fall in with all these new ways. Yes, girls, it is, but it is also rather old-fashioned to dress in a modest way. It is somewhat old-fashioned to have family prayers in the morning and evening, but I have a beautiful memory of families, every member gathered around while the father read a chapter or each member read a verse in the Bible, then all knelt while father asked God's blessing on the family and that they might be kept safely and good through the day or the night. They would go out from that circle with words like these in their minds: "Blessed are the pure in heart for they shall see God." "Remember thy creator in the days of thy youth." "A soft answer turneth away wrath, but harsh words stirreth up anger."

These things are old-fashioned and even the words I have quoted come from a very old-fashioned book, but it is the book upon which our government is founded.

We are a great people and have a great country. It has been said that no country ever rises higher than the standard upheld by the womanhood of the country. It is a matter of history that as the standards of morality are lowered the country weakens in power. It is well to read Roman history and think about our responsibilities.

Dear girls, use your own good sense, keep clear-headed and don't be afraid to stand for what you believe to be right, no matter if you stand all alone. But you will not stand alone, for as soon as you make your position known you will find some at least who only needed some one to make a start in the right direction and they will uphold your position. I have but one object, dear girls, and that is to help you. Your friend,

ALICE W. BARLAND.

GOOD THING TO STUDY.

A practical book on simple mechanics would be a valuable thing for the farm family to study during the winter.

Which is Larger the Sun or a Cent

The sun is the largest but you can hold the cent so close to your eye that you'll lose sight of the sun.

Don't let a cheap price or a big can baking powder make you lose sight of quality

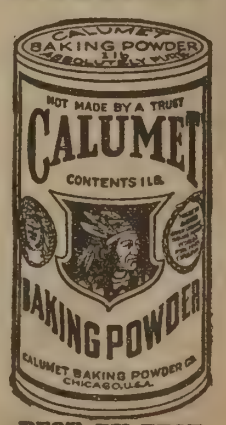
CALUMET

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Is the quality leavener—for real economy in the kitchen, always use Calumet, one trial will convince you.

Its sales are 2½ times as much as that of any other brand.



BEST BY TEST

THE WORLD'S GREATEST BAKING POWDER

Home Recipes

Cherry or fruit pudding: One cup stoned cherries or other fruit. If fresh put one-half cup of sugar over to draw out the juice, to be used for the sauce; one cup sweet milk, two and one-half cups flour, pinch of salt, two tablespoons of melted butter, two teaspoons of baking powder. Steam one hour.

Sauce: One pint of water, butter size of an egg, one cup sugar and the juice saved from the cherries and cook, thickening with a little cornstarch or flour. If canned fruit is used one can save out one-third cup of the juice for the sauce and not quite so much sugar is needed for sweetened fruit.

MISS ALICE BISHOP.
Wisconsin.

DON'T SAY YOU CAN'T! YOU CAN!

No matter how busy you are, you can not afford to work continuously from daylight till dark or longer. Housework is more tiring than field work. It is more tedious. There is less fresh air. Even though your husband be one of those fellows who never get tired; even though he work from 4 a. m. to 9 p. m., don't let your taking of half an hour for complete rest every afternoon hurt your conscience. Take it. Don't say you can't, for you can.

Latest High Class Patterns for the Home

Please order the patterns you desire at least two or three weeks before you wish to use them. Desiring to obtain the latest high-class patterns for its readers, THE FARMER has made arrangements to have them sent direct from the east, and under present mailing conditions it takes about that time for them to reach you.



3766. Lady's House Dress—Cut in seven sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. A 38-inch size will require 6 yards of 36-inch material. The width of the skirt at the foot is about 2 1-2 yards. Price 10 cents.

4009-4173. Lady's Costume—Waist 4009 cut in seven sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. A 38-inch size requires 3 1-8 yards of 32-inch material. Skirt 4173 cut in six sizes: 25, 27, 29, 31, 33 and 35 inches waist measure. Its width at the foot is 2 3-8 yards. Two separate patterns, 10 cents for each pattern.

4186. Girl's Dress—Cut in four sizes: 6, 8, 10 and 12 years. A 10-year size with sleeve requires 4 yards of 32-inch material. Without sleeve 5-8 yard less is required. Price 10 cents.

4167-4049. Lady's Costume—Blouse 4167 cut in seven sizes: 36, 38, 40, 42, 44, 46 and 48 inches bust measure. Skirt 4049 cut in seven sizes: 25, 27, 29, 31, 33, 35 and 37 inches waist measure. The width at the foot is 2 1-8 yards. To make the dress for a medium size will require 6 1-2 yards of one material 40 inches wide. Two separate patterns, 10 cents for each pattern.

4184. Girl's Dress—Cut in four sizes: 8, 10, 12 and 14 years. A 12-year size requires 3 1-2 yards of 44-inch material. Price 10 cents.

4191. Lady's Slip—Cut in four sizes: Small, 34-36; medium, 38-40; large, 42-44; extra large, 46-48 inches bust measure. A medium size requires 3 yards of 36-inch material. Price 10 cents.

4190. Lady's Night Dress—Cut in seven sizes: 36, 38, 40, 42, 44, 46 and 48 inches bust measure. A 38-inch size requires 4 3-4 yards of 36-inch material. Price 10 cents.

4168. Lady's Blouse—Cut in six sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. A 38-inch size requires 3 7-8 yards of 32-inch material. Price 10 cents.

3400. An "Easy to Make" Apron—Cut in four sizes: Small, medium, large and extra large. A medium size will require 2 3-4 yards of 27-inch material. Price 10 cents.

4171. Child's Dress—Cut in four sizes: 1, 2, 4 and 5 years. A 2-year size requires 2 1-4 yards of 32-inch material. Price 10 cents.

3790. Doll's Play Suit—Cut in five sizes for dolls: 16, 18, 20, 22 and 24 inches in length. The suit will require 3-4 yard of 38-inch material for a 24-inch size. Price 10 cents.

2970. A Set of Pleasing Toys for the Nursery—Cut in one size. Either style requires 3-4 yard of 27-inch material. Price 10 cents.

Fashion Book Notice.

Send 12 cents in silver or stamps for our up-to-date fall and winter 1922-1923 book of fashions, showing color plates, and containing 500 designs of ladies', misses' and children's patterns, a concise and comprehensive article on dressmaking, also some points for the needle (illustrating 30 of the various simple stitches), all valuable hints to the home dressmaker.

SPECIAL CHRISTMAS PATTERNS.

So that our readers may secure patterns for making Christmas gifts without having to wait the usual length of time which it takes to get them from the east, The Pacific Northwest Farm Trio has obtained the following special Christmas patterns, which will be carried in stock until after the holidays and can be supplied on short notice:

2300—Set of animals, pig, dog and sheep.
2937—Toy chicken and duck.
2967—Set of toy animals, horse and cow.
2970—Set of toys, "Roly Poly" and cat.
3061—Set of doll's dress, cape and bonnet (five sizes).
3438—Ladies' aprons.
3600—Ladies' kitchen apron and oven cloth.
3770—Set of boudoir caps and slippers (three sizes).
3790—Doll's dress, slip-on style (five sizes).
4144—Ladies' dressing sack (four sizes).
4194—Set of bibs.
4195—Set of bags for shoes and slippers.
4196—Doll, with clown suit, hat and rompers (three sizes).

Please fill in this order and mail with remittance to:
PATTERN DEPT., PACIFIC NORTHWEST FARM TRIO, Spokane, Wash.

Enclosed find.....cents for which send me the following:

Pattern .....Size..... Pattern No.....Size.....

Pattern .....Size..... Pattern No.....Size.....

Name .....

Postoffice..... State.....

R. F. D..... Box No..... St. No.....

Be sure to give the pattern number and the correct size.



Underwear

Warm Durable Comfortable



ON the farm, only knit underwear will give the warmth and wear required, and R. A. Underwear excels all other makes because it will last for two or three seasons if properly laundered—because its generous, fleecy fabric gives full warmth, even in the coldest weather.

The long, wide, curved gusset gives room where room is needed and prevents gaping. The seams will wear as long as the fabric itself.

R. A. Underwear for Children is equal to the women's garments in warmth and wear, and has the special features of fullness in the seat and special button holes which stay buttoned.

You will want R. A. as soon as you see it, so ask the clerk at your store to show you all the R. A. Points of Excellence.

J. C. ROULETTE & SONS
HAGERSTOWN, MD.



GENERAL ADVERTISING.

Color Your Butter

"Dandelion Butter Color" Gives That Golden June Shade and Costs Really Nothing. Read!

Before churning add one-half teaspoonful to each gallon of cream and out of your churn comes butter of Golden June shade to bring you top prices. "Dandelion Butter Color" costs nothing because each ounce used adds ounce of weight to butter. Large bottles cost only 35 cents at drug or grocery stores. Purely vegetable, harmless, meets all State and National food laws. Used for 50 years by all large creameries. Doesn't color the buttermilk. Tasteless.
Wells & Richardson Co., Burlington, Vt.

Read the "Want Ad" page this week for good offers of all kinds.

Give Kodak Enlargements for Christmas Gifts!

and you are sure to give something which no one else can duplicate, as well as something **individual and ALL YOUR OWN.** To encourage the giving of kodak enlargements we make these

SPECIAL XMAS REDUCTIONS
in "ART PROOF ENLARGEMENTS," the **most perfect form of kodak enlargements,** made from your own favorite negatives, 7"x11" size with deckle edge and handsome embossed center panel.

SPECIAL REDUCED PRICES.

Regular	Special
$1.10 black and white art proofs	$ .75
$1.30 Sepia art proofs	.85
$1.60 hand tinted art proofs	1.00

Mail your favorite negatives, pictures will be returned in time for Xmas, and you will be delighted.

Northwestern Photo Supply Co.
(Eastman Kodak Company.)
1415 Fourth Ave., Seattle, Wash.



Doris Irwin tells us what a good time she had Halloween. Teacher gave a party and gave each child a cap of black and orange paper and a Halloween card. They had a fine time playing games and eating candy, orange and black candy beans and another kind of candy and then came a lunch of cocoa and cake. Doris says teacher always gives prizes for good conduct at school and she distributed these at the party. A cat sitting up with a little pumpkin man sitting on his back was the one she gave Doris. Doris lives near the Canadian border in Whatcom county, Washington.

"We live on a farm 14 miles from town," says Catherine Maland of Garfield county, Washington. Catherine is going to send us her picture some time soon. That will be fine, won't it? Catherine had a good time during her vacation in town last summer. She likes her teacher.

We are glad to hear from Violet Miller, who lives in southern Washington. Violet has two sisters and two brothers and she is 10 years old. She says they expect to move to Horse Shoe Bend, perhaps in two years. Her birthday is May 3.

Every Friday night at school Joyce Louise Wise takes part in a spelling match. She had been a winner three times when she wrote to us. Joyce gets her best grades in spelling. She said the northeastern Washington woods were beautiful in their autumn colors of red and yellow. A short time ago their neighbor caught a bear in a trap.

Birthday Greetings

THURSDAY, December 7—Hazel Heimen, 10 years old; Cecelia Hoffman, 11; Vera Roach, 10; Lillie Vinje, 11.

FRIDAY, December 8—Eleanor Black, 11 years old; Glenna Dohrn, 11; Mildred Busley, 10; Myrtle Hutsell, 9; Edna Johnson, 10.

SATURDAY, December 9—Bobby Baumgart, 11 years old; Doris Hale, 9; Donald Naff, 9.

SUNDAY, December 10—Katie Harvey, 11 years old.

MONDAY, December 11—Elsie Bonwell, 11 years old; Bertha Holmes, 8; Helen Pate, 11.

WEDNESDAY, December 13—Miriam Harper, 8 years old; Harvey Ray, 11; Vernon Winterstein, 10; Gerrit J. Polinder, 9.

LETTERS WELCOMED BY AUNT NELLIE.

Among recent letters received by Aunt Nellie are those from cousins whose names follow. A [illegible] will be published each week in the [illegible] edition of THE FARMER and others will appear from time to time in The Junior Farmer:

Ida Moon, Kurt Kallstrom, Joyce L. Johnson, Bertha Brown, Gladys Stone, Marjorie Davidson, Raymond Larsen, Walter Schwalbe, Alice Lovos, Pearl Fletcher, Artie James, Henry Janssen, Emma Webb, Edith Spurgeon, Pearl [illegible] Goldie Richardson, Christian Larsen, [illegible] Cooper, Bessie Warren, Esther Walter, Gladys Beem, Eunice James, Milford Alvin Peterson.

Blanch James, Louise Schninger, Annice James, Marie Wichert, Ione Anderson, Annie Anderson, Mildred Medley, Muriel Hanson, Milford C. Salmons, Iola Jack, Marie Jones, Anna Shaw, Ruby Turner, Della Demmitt, Marion E. Batcheldor, Zelma Graham, Mae Taylor, Ruth Ton, Bessie Cryan, Juanita Pollard, Emily Dowell, Marion Lovelace, Alice Knapp, Emelyn Burke, Johan Van Ry, Minnie Westerman, Lenora Requa.

BEDTIME STORIES

By THORNTON W. BURGESS.

GRANDFATHER FROG LOSES A RACE.

Grandfather Frog and his cousin, Old Mr. Toad, had had a falling out. It all came about by Peter Rabbit's saying that Old Mr. Toad was smarter for his age than Grandfather Frog. The merry little breezes of Old Mother West Wind told Grandfather Frog what Peter Rabbit had said. Now, Grandfather Frog will never admit that he is growing old.

"Pooh!" said he, "my cousin, Old Mr. Toad, lives on the land and I live in the water, but I can travel faster on land than he can."

Of course, the merry little breezes had to run right over and hunt up Old Mr. Toad and tell him what Grandfather Frog had said, and, of course, Old Mr. Toad was indignant, very indignant indeed.

"It is no such thing," said Old Mr. Toad. "My cousin, Grandfather Frog, is growing foolish in his old age."

Away hurried the merry little breezes and told this to Grandfather Frog, and, of course, Grandfather Frog in his turn grew indignant and said some more things about his cousin, Old Mr. Toad. Finally Blacky the crow, who had heard all about the quarrel, proposed that they settle the question once for all by having a race on the green meadows.

That was the funniest race that was ever seen. Grandfather Frog and Old Mr. Toad, each puffed up and swelled out with indignation, stood with their front toes on the edge of a line which Johnny Chuck had drawn. Blacky the crow sat in the top of a butternut tree as judge.

"Are you ready?" asked Blacky the crow.



Such a funny race as it was!

Grandfather Frog and Old Mr. Toad said they were ready.

"Go!" said Blacky.

Off started Grandfather Frog and Old Mr. Toad. Grandfather Frog's legs are longest, and in a few minutes he was ahead of Old Mr. Toad. Such a funny race as it was! All the little meadow and forest people ran along beside the two racers and shouted encouragement.

"Go it, Grandfather Frog, go it!" shouted Billy Mink.

"Hurry up, Old Mr. Toad, hurry up!" shouted Johnny Chuck.

Poor Old Mr. Toad did his best, but in spite of all he could do Grandfather Frog was winning the race. Then Peter Rabbit, out of pure mischief, shouted: "Look out, Mr. Toad, here comes Mr. Blacksnake!"

Mr. Toad heard him. Now, if there is any one thing in all the wide, wide world that frightens Mr. Toad it is the suspicion that Mr. Blacksnake is anywhere near. When he heard Peter Rabbit shout that he forgot all about the race, he forgot everything except that he must get away from Mr. Blacksnake. He just went twice as fast as he was going before, and the first thing he knew he heard a great shout from all the little meadow people and forest folks, for he had crossed the line ahead of Grandfather Frog. And the joke of it all is that he didn't stop then, he just kept on going with funny, funny hops until Peter Rabbit caught up with him and told him it was all a joke.

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(Continued from page Sixteen.)

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PROVES CHAMPION CALIBER.

The picture herewith shows the 2-year-old Shire stallion, Forest Prince, owned by H. W. Merritt of Rosalia. Mr. Merritt purchased this colt a year ago at the



George M. Wilson sale near Rocklyn, Lincoln county. The colt has made excellent development and was this year a consistent winner of champion and grand champion honors on the fair circuit.

WINS THIRD PRIZE.



Herewith is a picture of Evelyn Bush of Outlook, Yakima county, and her club calf, Old Homestead's Catherine. The calf is a Guernsey from one of the cows on the Roy P. Bush farm. She was awarded third place in the open class against strong competition at the Washington State fair at Yakima.

KOLRAIN MARION FINDERNE.

Kolrain Marion Finderne, having on October 28 completed her year with 35,339.7 pounds of milk, containing 1,278.58 pounds of butter, has set a new mark for milk protion, not only for the state of Michigan, but for all the world with the exception of the state of Washington, says the Holstein-Friesian World. Her milk record stands second only to the phenomenal production of Segis Pietertje Prospect, surpassing all other producers to date by a margin of nearly 1000 pounds. She is Michigan state champion over all ages for butterfat as well as for milk and is Michigan's second 30,000-pound cow, as well as the second cow in the state with over 1000 pounds of butterfat, and the second with two-year records above 1000 pounds of butter.

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Lady Stewart of Menie, 17-year-old Ayrshire cow owned by E. A. Van Tassell of Wenatchee, Wash., was the fourth member of a quartet of dairy world champions at the Pacific International. She holds the world record for Ayrshire cows at 16 years of age—14,688 pounds of milk in 300 days, containing 530.5 pounds of fat.

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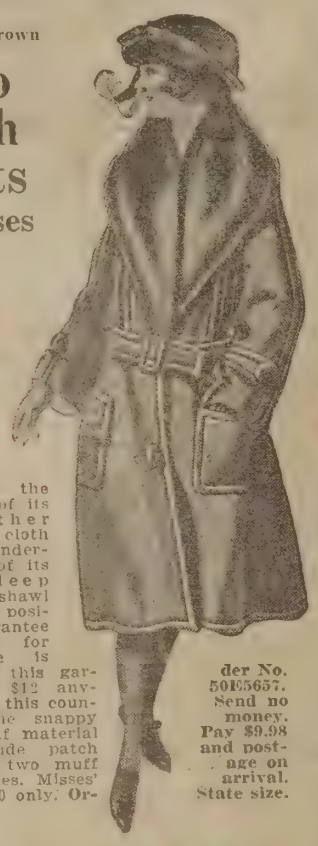
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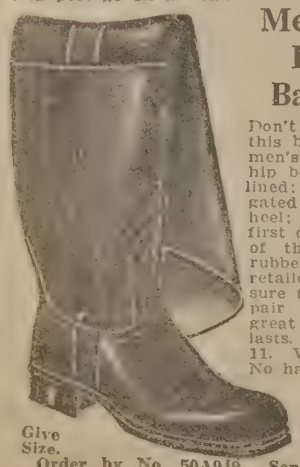
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THE WASHINGTON FARMER

ESTABLISHED 1894

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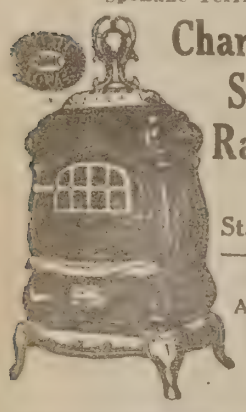
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CHARTER OAK

Ten-Acre Farm

Enough to Keep One Man Busy

R. J. Dowling claims to have one of the oldest loganberry patches in the vicinity of Vashon, King county. While the patch is only one-half acre in size it has been producing for the last 15 years, and is still in fine shape. The crop is located in a slight ravine, which is sometimes flooded during a period of heavy rains. For this reason the dirt is thrown toward the roots when the patch is plowed late in the fall.

"While the patch has received very little fertilizer it produced 117 crates last year," said Mr. Dowling. "I have always tried to keep the patch free from weeds, which necessitates hoeing out the rows by hand. In this way there is less danger from insect pests. There are, however, a few cane borers, but their presence can usually be detected and the cane removed at the time the vines are trailed on the wires.

"Our logans and blackberries are only a side line, since we keep approximately 600 White Leghorn hens the year round as the main enterprise. We also have a few apple trees, consisting of Kings and Baldwins. These, however, are not a paying crop, and we may grub a part of them out to afford more room for kale and pasture for the cows and horses. We have but 10 acres, but there is enough work here to keep one man busy, especially if he spends the greater part of the day looking after the hens."

Says Pests Are Encouraged

To the Editor of The Washington Farmer: As a practical fruit grower whose experience has been nearly equally divided between the continents of Europe and North America, I would like to make a few observations regarding fruit culture in Washington as I have seen it myself in the last few months.

We hear a great deal these days about the large numbers of "wormy" apples this year, but is it not a fact that that which a man soweth that shall he also reap. I mean by that that farmers in the Yakima valley are deliberately cultivating these noxious pests. I visited many orchards during my stay in the vicinity and as may be supposed, they varied considerably. In the Selah district orchards were on the whole in fair condition, but in the lower valley, conditions were appalling. I visited one farm in particular of over 200 acres and after making a very careful study of the way in which the ranch, as a whole, was managed, or mismanaged, I arrived at the conclusion that the owner was not getting more than 40 per cent of the possible returns.

Weeds everywhere and no attempt made to control, or even cut them before picking time. Large tracts, acres in extent given over entirely to noxious weeds, when should have been growing fodder crops for hogs and cattle which are necessary adjuncts to every ranch of this size; irrigation entirely lacking in method, varieties and scrub trees whose fruit was never gathered abounded by the hundreds, trees were white with woolly aphis, acres of apples were never gathered, as they were 100 per cent "wormy," wormy fruit lying on the ground three or four deep, each fruit containing one or more worms soon to emerge and assume the pupa state and of course ascend the near-by trees. Next spring a pretense of fighting this mighty army will be made, with what result we have already described. Lead arsenate is used by the ton, but in the first place it is of inferior quality (sold ready for use), also it is put on in a slovenly manner and at the wrong time.

The owner and his sons had been in the game for years and knew it all, one could not tell them a thing, but, oh! what a mess!

Of course, all growers are not like these, but Washington has too many such farmers and they are certainly no credit to the state. If these men and their pests could live unto themselves it would not be so bad, but unfortunately the innocent have to suffer with the guilty, such is the irony of fate. E. T. LAWRENCE.

Kirkland, Wash.

Need for Better Methods

"There is a need for better preparation of the soil for potato growing in Thurston county, and there seems to be more who are practicing such methods than has been done in the past," remarked T. S. Madden of the South Bay district of Thurston county. "There was a time when we planted our potatoes in the third furrow of the plow, and gave very little attention to them afterward, except an occasional cultivation and digging. Such methods, however, are past, but there is yet a need for better methods and the time will come when we will all grade our potatoes more carefully, and put out the quality that is desired by the consumers.

"If we grade our potatoes and sell only the kind that are most attractive to the buyers we will be better able to keep our money at home, rather than having it go to potato growers of other sections of the state. There is a desire on the part of the local merchants to buy home-grown products, provided they can get a good quality."

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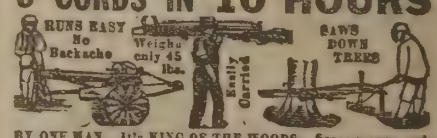
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Mason County Blazes a Trail for Better Poultry

If Accredited Dairy Herds Are Desirable, Why Should Not the Poultry Be Backed by Known and Recorded Production, Health and Vigor?

By RALPH ERSKINE

POULTRYMEN of Washington are determined to build up their industry on a plane as high as that of any state in the Union. They have alreday gone far in this direction, but they are going farther. As evidence, witness the movement now under way, finding its first realization in Mason county in the establishment there of the state's first accredited hatchery.

An accredited hatchery! Well, why not? The accredited dairy herd, that is, a herd certified by state officials to be free from tuberculosis, has long been recognized by the general public and is considered a necessity for the production of high-class stock. Likewise, an accredited hatchery indicates one certified to hatch eggs from high-class foundation stock only. The plan, although new in the northwest, is deemed absolutely essential by experienced hatchery men if the unscrupulous chick dealer is to be competed with successfully.

Where There's a Will.

WHEN a number of representative poultrymen from all parts of the state mentioned the idea of accredited hatcheries last August at the Seattle poultrymen's meeting the majority decided there was no possibility of getting the plan started for the coming season. Hearing of this decision, the Mason county poultrymen were disappointed and decided to take the matter into their own hands and make the plan work, and to do it in time for the 1923 hatching season.

Their threats to take the initiative in this matter fell on laughing ears, and some were heard to remark that Mason county didn't have enough real poultrymen to start anything. But start it they did, and with such earnestness that they will have the honor of operating the first accredited hatchery in the state.

Will Use Only the Best.

THE first step was to secure the assistance of W. D. Buchanan, field specialist of the state college, to inspect the flocks to be used to supply eggs to the main hatching plant. In the meantime they wrote to reputable breeders for prices of the best cockerels from high-producing hens. Mr. Buchanan was asked to give his personal attention to the selection of these birds before the purchases were made. The inspection of the flocks took place November 6 and 7, when 1500 hens were handled. Mr. Buchanan took plenty of time for this work in order to make sure that everything was right and to eliminate any possibility of failure.

This is not a cooperative hatchery plan, but all eggs will be produced under similar conditions and they will all be from selected stock. Each breeder signs an agreement to sell his eggs to Mrs. Martha Jacobs who will operate the hatchery at Shelton, and sell day-old chicks to the members first, then to other poultrymen of the county, and outsiders who desire such stock. The plant will have a capacity of 45,000 eggs for the season.

The aim of the hatchery will be quality rather than quantity, and as a means to this end the 10 breeders have agreed to follow implicitly the rules adopted, which include the selection and care of the hens and the selection of cockerels from trapnested dams.

Views of the Specialist.

Commenting on the possibilities of the new hatchery, Mr. Buchanan spoke very optimistically and encouraged the poultrymen to work for quality above all else, even if they were not to sell a chick to outsiders for the entire first season.

"These hens are not all of equal breeding value, neither are they all 200-egg birds," said Mr. Buchanan, referring to the hens selected. "They are purebred fowls, consisting of many mixed White Leghorn strains, the best that could be found in the county, and the cream of what the ranchers have been buying from many sources for years. They are



possessed of good vigor and stamina, and all weak birds have been carefully culled out. If taken by themselves without special care and mated to any kind of cockerels there would be very little, if any, gain accomplished.

"These selected pens, however, are to be mated to cockerels from trapnest dams of not less than 240-egg records. Seventy-eight of these cockerels were purchased from B. S. Hillier of Whatcom county and were personally selected by Mr. Buchanan. They are big, upstanding birds, with lots of life and ability to transmit their virtues to their daughters.

Breeders Formulate Rules and Regulations.

1. Fowls used for breeding must be in good, healthy condition, as judged by the inspector, and shall be culled according to the standards recommended and demonstrated by the extension service of the state college. All breeders shall then be examined by the inspectors.

2. Females are to be at least 18 months old. Eggs must average 24 ounces per dozen or better, with a minimum weight of 23 ounces

3. Males are to be approved by the inspector as to vigor and shall not be less than eight months old. In addition, males shall have a trapnest pedigree on the side of the dam of 240 eggs or more. The breeding ratio shall be six cockerels per 100 hens, or as nearly this as the size of the flock will permit.

4. No artificial lighting shall be permitted within three months of the breeding season and none shall be permitted during the breeding season prior to 6 a. m. or later than 6 p. m.

5. Breeders shall have the privilege of runs from November first to the end of the breeding season.

6. Eggs are to be delivered within seven days and precautions taken to prevent chilling or overheating. No washed eggs shall be used.

7. Eggs must be uniform in size, color, shape and shell texture.

8. Ample supply of greens must be fed birds used as breeders.

9. Grain must constitute at least 50 per cent of total amount of grain and mash fed. Where birds are fed in houses, litter must be reasonably clean, dry and loose.



This hen did not use a basket to lay her eggs in; neither are these the exact eggs she laid. But in quantity the eggs in the basket represent her year's production—33 pounds. Accredited hatcheries like that planned by Mason county poultry men should tend to make high producers more common and "boarders" less common.

An Important Beginning.

THIS is really the first step toward the first accredited hatchery of the state. It may seem like a small beginning, but it is one of the most important steps ever taken by any county in the state in any line of agriculture. It is not merely the use of purebred sires, but of known high records bred to high-class females, not trapnested, but carefully selected for production and vigor. And the big thing is that in Mason county, outside of a few small farm flocks, there will not be a chicken used of any but the most carefully selectd birds.

"Next year the selection of the females will be a little easier, since no pullets are to be used in this hatchery, and it will be two years before highly improved females can be used in the breeding flock. This year's pullets should show increased egg production and when the best of them are selected for breeders the progress should be rapid.

"H. E. Drew, county agricultural agent, has been the real genius behind the movement from the beginning. He saw the poultrymen of his county losing ground because they were buying stock of uncertain quality from outside sources. He brought the people to see that they could never succeed in that way. He helped them and led them in planning their work, and kept them at it when they showed a disposition to be discouraged. He even located and negotiated the purchase of the cockerels to be used."

Orders Already Received.

AN ineresting feature of this movement is indicated by the fact a county agent of another county in the state looking out for his own poultrymen, offered to take the entire output of the Mason county hatchery, only to be told that they expected to serve themselves first. This is as it should be, but it indicates that there will be no trouble in selling chicks when it is known that they have something back of them.

Whatcom Wants Second One.

Only two accredited hatcheries can be started this year, as the state college does not have the money or the men to supervise the work in the entire state. If others are started the poultrymen or the state, or both, must furnish money to cover cost of inspection and supervision. The poultrymen of Whatcom county, always on the job, and always looking for something better, have bid for the second accredited hatchery in a circle of accredited hatcheries and the poultry specialist has agreed to give them four days for inspection and organization work. The county agent, H. B. Carroll Jr., will assist with the second inspection, and the poultrymen are raising a fund for any additional inspection required.

The names of those who will furnish eggs to the Mason county hatchery are: J. T. Leigel, Shelton; August Engdahl, Shelton; Vearl Bennett, Shelton; Mrs. E. P. McClure, Shelton, H. E. Lopo, Shelton; Clyde Jones, Shelton; E. H. Church, route 1, Shelton; R. D. Haskell, Harstine Island; Alvin Peterson, route 2, Shelton, and L. H. Jacobs, Kamilche.

Pre-Cooling May Enable Washington to Supply East With Fresh Berries

Had you been in Boston last July you would doubtless have been pleasantly surprised to have seen on display fresh Cuthbert raspberries from the Puget sound district of your home state. This car of soft fruit from the Washington Berry Growers' association at Sumner was a trial shipment to ascertain the feasibility of shipping from coast to coast by means of a new pre-cooling method.

The fact that the berries arrived in excellent condition indicated a possible new market for fruit in this section and may have a great tendency to take a big percentage of fresh fruit from the already glutted western market.

Although pre-cooling has been practiced by berry shippers in order to lower the temperature of the fruit before it starts its long journey in refrigerator cars, the distance of shipment has been limited to such points as the Dakotas, Colorado and other markets of the same radius.

As a means of better refrigeration the Washington Berry Growers' association at Sumner has succeeded in pre-cooling their berries before they go into the cars with such perfection that the Boston market was reached last season with remarkable success. But the most encouraging part of the story lies in the news that our fruit reaches such points when their berries are out of season and the trade is finding that we have a berry with a better flavor than their own product.

The first shipment of this kind was made in the 1921 season by the same association, under the direction of F. H. Krugg, the manager. The destination of the car was Chicago, but due to some mistake it was not spotted and examined until two days after its arrival. The condition of the fruit was none the worse for the delay and it was clearly seen that, with the extra two days, the Atlantic coast could easily be reached.

When the 1922 season's crop came on it was in a poorer condition for shipping, due to the extreme short season, which caused an undue softness of the fruit. Nevertheless the shipment was made, with the above result. In an ordinary season it is believed that a large percentage of the crop from the association members can be directed to such points as have never been reached before and thus relieve the local markets.

"Since it is from the fresh fruits that our best prices are received, it is self-evident that we have got to put our crop out to these markets and make them realize that we have a superior product which can be placed before them when their own fruits are past," said Mr. Krugg. "If we don't take advantage of these new markets within the next few years it will only be a question of time when some other berry district will be supplying them.

"We can not afford to sell any of our first-class fruit to the canneries and yet we can not hope to sell it on the local markets because the small growers are already supplying this trade to the detriment of prices. It, therefore, behooves us to create this new market and furnish them with berries each year in order to hold their trade. If we start such a market we should plan to feed it every year in order to hold it.

"The only complaint we have had from the consumers at these points is the fact that our fruit does not have the color that is so pronounced in the fruit grown in their own district. This was due partly to our off season and the difference in varieties. When our berries had once been tried they wanted more of them. One dealer informed us that he could easily use one car of berries a day next year.

"In order to handle these markets to the best advantage the whole district should be under one head and operated as one body," continued Mr. Krugg. "In this way a greater tonnage could be depended on and the prices for local consumption could be better regulated. Such a plan would eliminate any competition between groups and all growers could receive the benefits any new markets secured."

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Let Us Look Before We Leap

We are in cordial accord with the demand of the farm bloc for lower freight rates on agricultural commodities, but we want to be sure that in casting around for a remedy the mistake is not made of changing the law so that the result will be higher rather than lower rates.

It is understood that the farm bloc want to repeal section 15-A of the law. But Senator Cummins of Iowa, who is one of the fathers of railroad regulation, tells the public that repeal of that section would not result in lower freight rates, but would make for higher rates. Senator Cummins' explanation seems reasonable. He says:

> The only new thing in the railroad act of 1920 was the decision to have the rate of return to the railroads fixed on the average value of the carriers within certain large groups, or as a whole. This meant that the interstate commerce commission, in fixing freight rates, would permit a fair return on the carriers thus grouped, as if one company owned the whole system. Previously rates had to be fixed which would afford a fair return to the lines which had the highest costs of cooperation. Inasmuch as the rates in effect now are based upon the average value, it is plain that the repeal of this basis would result in higher and not lower rates.

This seems especially applicable to the Pacific northwest, where the Chicago, Milwaukee & St. Paul road, a high-cost system, is in competition with the Northern Pacific, the Great Northern and the Union Pacific, all low-cost systems. If Senator Cummins' understanding of the law is correct, repeal of section 15-A of the Esch-Cummins law would throw the interstate commerce commission back on the old basis of rate-making. Under the old law that body would be required to approve rates that would permit the Chicago, Milwaukee & St. Paul to earn a fair and reasonable return on its investment. But the same basis of rate-making would have to be given to the other systems, and the result would be that rates high enough to let the Chicago, Milwaukee & St. Paul earn 5 or 6 per cent would permit the other systems of this region to earn anywhere from 10 to 20 per cent.

It is also well to keep in mind the fact that the recent victory won before the interstate commerce commission by the wool growers of the west was based on the Esch-Cummins law, and in all probability if that law had not been enacted the decision would have gone against the wool growers.

It would be strange if the Esch-Cummins law were altogether perfect. In all probability it needs amendment here and there. But the agricultural interests, particularly the farmers of the west, should demand that their representatives in the senate and the house be sure that in tinkering with the law they do not injure the very interests they are desiring to benefit.

Be Fair to the Housewife

A water-supply system is no longer considered a luxury, but rather a necessity and an interest-paying investment. The farmer can no longer afford to do his farm work with the equipment of a hundred years ago, for with modern machines and appliances he can do his work much better and more quickly. Is it right, then, that his partner in business, even though she be willing to do so, should be expected to do her part in the house with the limited equipment of the past? She certainly should not have to carry from the well the water for all household purposes. With but a part of the money expended for farming equipment a water system might be purchased and installed which, at a single stroke, would eliminate one of the greatest burdens of many farm women. With the system in operation, it will be found that not only is much arduous labor saved, but also the work of the home is done much more quickly.

The water used in homes having a complete system of running water averages between 20 and 30 gallons a day per person, while the use in homes where all water must be carried by hand averages but from six to eight gallons daily for each person. Easier work and improved sanitary conditions result from this increased water consumption. The time taken to install a water system is not great; the expense is not excessive; and the work of the installation is such that almost any man can do it himself. Then why is it that on far too many farms water is still carried in by hand—often by the housewife?—A Cornell University Bulletin.

Regional Cooperation

Another step has been taken in the direction of regional cooperation of state agricultural colleges and experiment stations.

The report comes from the yearly conference of the agricultural colleges of the country, this year held at Washington, D. C., that the men representing the four colleges of North and South Dakota, Minnesota and Montana have agreed to cooperate, especially on the questions of finance, grain grading, farm management and general marketing problems.

Regional directors of agriculture could put the punch into these cooperative efforts.

LOOKING INTO OTHER FARM FIELDS

The yield per acre of the wheat crop of Germany is estimated at 18.5 bushels this year instead of 32.4 last year.

* * *

California citrus fruit growers paid railroads a total of nearly $25,000,000 for freight and refrigeration in moving a crop of fruit which brought approximately $96,000,000 for the season ended October 31, 1922.

* * *

As a result of increased commerce between Australia and the mother country, a western Australian syndicate has been formed which will build eight new freight and fruit ships to operate between London and Australia.

* * *

Texas cotton growers expect to be enriched at least $400,000,000 as a result of the high prices now being paid for their product. Texas production is likely to exceed 3,000,000 bales. The prosperity of the planters already has been reflected in increased buying.

* * *

The New South Wales parliament has confined the agreement with the imperial British government and the governments of the Australian commonwealth and the New South Wales, by which 6000 British settlers will be placed on land in the New South Wales commonwealth at a cost of about 6,000,000 pounds, or about $30,000,000. The New South Wales commonwealth and the imperial governments each bear one-third of the cost, the imperial government to provide the $30,000,000 in the first place.

* * *

The 2-cent postage stamp now will carry a 1-cent letter to any postoffice in half a hundred foreign countries, in addition to any one of the more than 50,000 postoffices in the United States and the American possessions overseas. These countries now include Alaska Anguilla, Antigua, Argentina, Bahama islands, Barbuda, Bardos, Bermuda, Bolivia, Bon Ayre, Brazil, British Guiana, British Honduras, British Virgin islands, Canada, canal zone, Colombia, Costa Rica, Cuba, Curacao, Dominica, Dominican republic, Dutch West Indies, Ecuador, England, Grenada, The Grenadines; Guam, Hatti, Hawaii, Honduras, Ireland, Jamaica, Leeward islands, Martinque, Mexico, Montserrat, Nevis, Newfoundland, Nicaraguei, New Zealand, Panama, Peru, Philippines, Porto Rico, Redonda, St. Kitts; Shanghai, China; St. Vincent, St. Lucia, Scotland, Tobago, Tutuilla, Samoa, Trinidad, Virgin islands of United States Western Samoa, Windward islands.

State Farm News

J. C. Scott, president of the Taxpayers' league, reports 23 to 33 per cent reduction in taxes in Walla Walla in two years.

* * *

The latest estimate of Yakima's apple crop is about 10,500 cars, of which 3500 cars have gone to market. This total is 2000 cars less than that of the 1921 crop.

* * *

Superintendent L. M. Dimmitt of the Eatonville public schools, in Pierce county, has arranged to give a "dull season" course in auto and tractor mechanics. It will include shop work or the actual taking down and setting up of the machines and some related theory and science.

* * *

Mr. and Mrs. N. C. Sears of Winlock have bought the S. Strandos farm and will take possession immediately. The farm contains 40 acres and some small buildings which will be torn down to make place for a modern residence, dairy barn and several sheds and outhouses. This place adjoins a 40-acre trast on the wect which is also owned by Mr. and Mrs. Sears.

* * *

The Granger irrigation district, in the Yakima valley, has voted to accept the contract tendered the district by the United States reclamation service. This clears the way for the construction of the distributing system on a new unit of the Sunnyside project. About $225,000 will be spent in conveying water to 1500 acres of land lying east of Granger along Snipe's mountain.

* * *

There is a possibility that there will be no fair at Walla Walla next year. The fair association is $8500 in debt and Secretary Harry Paxton, predicting that no new set of directors would undertake to put on a show under this handicap, suggested that the property be either sold or mortgaged. The call for the annual meeting of the association failed to bring out a quorum of the old board.

* * *

Considerable new land is being cleared in the White Salmon district for the planting of pears next year. The Mount Adams farm, controlling one of the largest chains of orchards, is pulling out practically all of its bearing-apple tree fillers in one of its 40?-acre tracts to make way for commercial pears. This company shipped between 30 and 40 carloads of high grade pears to eastern markets during the fall.

* * *

More than $37,000 worth of fruit by-products were manufactured in various plants in the north central Washington district in 1921-22, according to figures compiled by District Horticultural Inspector Frank C. Nielsen. In excess of 21,000 tons of fruit of various kinds was used. In addition 432 cars of apples were shipped in 1921 to by-products factories outside the district. The average price received for apples was $8 a ton.

* * *

The Chelan county pomona grange has elected the following officers: Master, H. I. Shotwell; overseer, W. W. Mufley; lecturer, Mrs. V. Farmwald; steward, C. O. Zimmerman; chaplain, E. A. Ferrin; treasurer, L. D. Merritt; secretary, C. A. Ferrin; gatekeeper, E. T. Balch; Ceres, Mrs. E. T. Balch; Pomona, Mrs. Bessie Anvil; Flora, Mary Cornell; lady assistant steward, Nolia Compton; member of executive board, Ivan Compton; pianist, Mr. C. P. Butler.

* * *

The Cowlitz pomona grange has elected the following officers: R. H. Mitchell, Woodland, master; E. W. Robinson, Woodland, overseer; Mrs. R. H. Mitchell, lecturer; Mrs. Alice Doble, Carrolls, chaplain; C. Ballhorn, Woodland, steward; Annie Lawyer, Woodland, secretary-treasurer; Ernest Doble, Carrolls, assitant steward; Mrs. J. P. Nicholson, Kalama, lady assistant steward; J. P. Nicholson, gatekeeper; Mrs. F. M. Lane, Pomona; Mrs. E. W. Robinson, Ceres, and Mrs. Hanson, Flora.

* * *

At the closing session of the Grays Harbor county poultry institute, held in Montesano, it was decided to establish a certified chick hatchery for the county. If possible this is to be ready for the 1923 season. It will be along similar lines to the Mason county hatchery, established this year.

It was also decided to establish one or two demonstration brooders and to remodel one old brooder house. Twenty poultrymen agreed to keep exact records of their brooding and thus be able to report their progress.

* * *

A. Z. Smith, a graduate of the state college, has been appointed county agent of Snohomish county, with headquarters in the federal building in Everett. Mr. Smith has been doing extension work in New Mexico for the last five years, and once operated a wheat farm in Whitman county. His appointment succeeds William D. Love, who leaves his work in Snohomish county to take up a position as relief county agent. Mr. Love will work in any county temporarily where there may be a vacancy due to a vacation or leave of absence on the part of the regular county agent.

* * *

Merton C. Lane, assistant United States entomologist, gave an address at Ritzville recently on agriculture and insects. His talk was confined to wire worms. He classified them into two kinds—the true and the false. The former works in March, April and May and feeds upon green sprouts and winters under the frost line. The other kind are larger and feed upon dry grain and follow along the drill rows and are more destructive.

Mr. Lane suggested that the most feasible way of ridding the country of these pests is by clean farming. He said that nature permitted but about one-third of the eggs to hatch and that farmers, by clean farming, could decrease the hatching of the remainder by 50 per cent.

Coming Events of Interest

Dec. 12-15—State horticultural association, Spokane.
Jan. 3—Northwest Poultry show, Seattle.
Jan. 8—Chelan Poultry show, Wenatchee.
Jan. 22-23—Washington wool growers, Spokane.
Jan. 24-26—National wool growers, Spokane.

The Cover Page Picture

There are a great many things that grow to advantage on land that is only partially cleared. This is the philosophy of Charles Meyers, who is shown working on his five-acre farm at Alderwood Manor, near Seattle. Mr. Meyers believes in getting returns from his soil while he is waiting for sufficient capital and sufficient time to clear away the big stumps.

FARM BUSINESS AND MARKETS OUTLOOK

Encouraging developments were not wanting in the business and trade situation last week. Slight easing in the labor situation as a result of cessation of outdoor work was reported, but with a prospect of practically full employment throughout the winter.

The car shortage on November 18 had declined about 12 per cent from the worst period, although car loadings remain the largest on record for this time of year. Mail order houses reported that November sales were 25 to 35 per cent larger than in the same month last year.

In spite of deplorable finances abroad and heavy purchases of grain and provisions, foreign exchanges held up well and sterling reached the highest level since July, 1919. Advances predominated over declines in markets for farm products.

Favorable legislation to provide farm credit and to stimulate exports of farm products began to look more probable.

Roger Babson, another of the business forecasters, has publicly expressed an optimistic view as to the outlook for 1923. Although the readjustment is not complete, Mr. Babson thinks that prospects for 1923 are bright for the following reasons:

Fundamental economic and social conditions have improved and furnish a basis for genuine prosperity.

Money conditions are sounder. Banks have strengthened their position, loans have been paid off and bank reserves are large enough to take care of much greater business expansion than has occurred without strain.

The agricultural situation from the standpoint of profits is the best it has been for three years.

Commodity conditions are favorable since inventories have been reduced, consumers are in position to buy, prices are more stable and fewer business failures are occurring.

The outstanding unfavorable conditions which must be corrected before complete prosperity can be attained as listed by Mr. Babson include surplus factory capacity (resulting from over-expansion during the war), the adverse labor situation and disturbing political and financial conditions abroad.

Farmers owning Liberty bonds will be interested in Babson's view that bonds generally will sell higher prices in 1923 than in 1922.

Cattle Market Weakens Again.

After a temporary upturn as a result of lighter receipts from the range and less pressure from short-fed and warmed-up cattle, the market has turned downward again, especially at Chicago, where the supply has been unusually heavy, due to shippers trying to get a free ride to the International. Steers gained 50 to 75 cents on the rise and cows and heifers nearly half that amount, but part of it has again been lost. Veal calves scored a pronounced upturn of 75 cents to $1.

The market remains in a vulnerable position and excessive runs will be punished. Furthermore, it will be a departure from past experience if the supply of short-feds is not heavy during January so that prices will do remarkably well to retain this level while the pressure is on.

Purchases of stocker and feeder cattle have fallen off about 25 per cent in the last six weeks, but are holding up quite as well as usual at this season. Prices are at practically the lowest point of the season. They are not apt to become cheaper with western range receipts dwindling rapidly.

Hog Market Dragging Again.

Hog prices recovered about 50 to 60 cents early last week, due to temporarily light receipts, but the supply has expanded once more and the market is draggy.

Domestic demand for hog meats and lard has been stimulated by lower prices and exports which have been running behind the corresponding period a year ago rather consistently have reversed the comparison of late.

New High in Lamb Market.

Lamb prices reached $15.50 at Chicago last week, a new high point for the season, as a result of the lightest run at seven markets since July. Eastern shippers were a prominent factor in forcing the advance. As the trend of receipts during December and January normally is downward, an advance to $16 or better will not occasion surprise. Demand for feeder lambs has fallen off about 35 per cent in the last six weeks, but receipts from the range are quite limited and buyers do not find it easy to supply their wants.

Heavy Wool Consumption.

In the first 10 months of 1922 approximately 644,000,000 pounds of wool were consumed by American mills compared with 524,000,000 pounds in the corresponding period of 1921, 526,000,000 pounds two years ago, 502,000,000 pounds three years ago and 656,000,000 pounds in 1918 when orders were a prominent factor.

Mills show resistance to further advances in prices, but values have not sagged. The London auction maintains the opening advance on medium and low cross-breeds, and Geelong, Wellington and South American markets are active and strong. The Texas wools have practically all been sold already, leaving very little wool in the hands of growers in the United States.

Wheat Consumption Above Average.

In the first 22 weeks of the crop years, primary receipts of wheat were 251,526,000 bushels compared with 262,348,000 bushels last year and a 10-year average of 223,440,000 bushels. In that period approximately 137,000,000 bushels were exported, compared with 181,145,000 bushels last year and a 10-year average of 83,246,000 bushels. Domestic distribution amounted to 98,871,000 bushels against 41,501,000 bushels last year and a 10-year average of 83,246,000 bushels. Thus far both domestic consumption and exports have been above the 10-year average and the increase in domestic demand as compared with last year has more than counterbalanced the decline in exports.

The wheat market is in an uncertain state with no definite trend. Primary receipts are holding up well, while the domestic milling demand has become dull, although mills are still grinding at a high rate on old orders.

Private reports show a loss of 8 to 10 per cent in the acreage of wheat and a conditino about 5 per cent below the average. The outlook as a whole is less favorable than last year.

Big rye sales have been made recently. Since the bulk of the big surplus has already been placed the market has a firm tone. The rye acreage also is less than last year and condition is lower, so that the outlook is for a much smaller crop, although there is plenty of time for great improvement.

Corn Disappearing Rapidly.

In the five weeks ending December 2, primary markets received 27,923,000 bushels against 19,938,000 bushels in the same period last year and a 10-year average of 21,767,000 bushels.

In the first 18 weeks of the oats crop year, a total of 101,019,000 bushels disappeared into consumptive channels against 62,811,000 bushels last year and a 10-year average of 139,820,000 bushels. The decline in distribution as compared with the 10-year average has been more than offset by a falling off in primary receipts in this period.

Cash Grain Markets.

The range of cash grain prices for the week ending December 6 was as follows:

Chicago—Wheat—No. 2 red, $1.28 1-2@1.31 1-2; No. 2 hard, $1.18 3-4@1.22. Corn—No. 2 mixed, 69 1-2@74 1-4c; No. 3, 69@72 3-4c; No. 2 yellow, 69 3-4@72 3-4c; No. 3, 68 1-2@73c; No. 2 white, 71@74 1-2c; No. 3, 69 1-4@73 3-4c. Oats—No. 2 white, 42 1-2@46 1-2c; No. 3, 42@45 1-2c; No. 4, 41@43 1-2c. Rye—83 1-2@85 1-2c. Barley—64@75c.

Clover Seed Receipts Heavy.

Receipts of red clover seed at Toledo, the principal market, totaled 8373 bags in November compared with 9825 bags in October and 5766 bags in November, 1921. Receipts of alsike were 458 bags against 1050 bags a year ago. Prices advanced slightly last week.

Chicago, per 100 pounds—Clover, $15@16; timothy, $6@6.75.

Toledo, per bushel—Clover, $13.55; timothy, $3.40.

Strong grain markets and a fair demand are supporting the feed market. Shipments of wheat feeds are rather heavy and offerings are increasing as production is above the average. Stocks of a few feeds are accumulating. Stocks of cottonseed meal and cake at mills are fairly generous, but of linseed meal are light.

Prices per ton (100-pound bags) in carlots—Chicago—Bran, $25.50; standard middlings, $24.50; flour middlings, $28.50; cottonseed meal, 36 per cent, $46.75; 43 per cent, $51; hominy feed, $30; gluten feed, $38.35; old process oil meal, $51.75; tankage, $65.

Hay Practically Steady.

Hay prices were practically steady last week, although alfalfa at Kansas City and prairie hay in the northwest eased slightly.

Prices per ton in carlots—Chicago—No. 1 timothy, $20@22; No. 2, $19@20; No. 3, $14@16; No. 1 light clover mixed, $19@20; No. 1 clover mixed, $18@19; No. 1 alfalfa, $24@26; upland prairie, $18@19; midland prairie, $16@17; rye straw, $13@14; oat and wheat straw, $10@12.

Egg Market Working Lower.

Egg prices recovered part of their loss after the first sharp break of the season, but the market has turned easy again and the trend seems to be downward. Consumptive demand is broad as the apparent disappearance of eggs from the four leading markets during November totaled 1,575,040 cases compared with 1,360,862 cases in the same month of 1921. Storage holdings remain large, although the reductions at the fuor leading markets during November was 29 per cent above the average for that month in the preceding four years.

Butter Prices Near the Top.

Butter prices at Chicago advanced further last week while eastern points held practically steady, putting the former out of line. In general, conditions indicate that further advances of any consequence are unlikely. Argentina butter also is said to be coming in this direction.

In spite of the reported decrease in consumption as a result of high prices, nearly as much butter disappeared from the four leading markets in November as in October. Based on the reserve at the four markets, storage holdings on December 1 in the entire United States wuold be slightly below 50,000,000 pounds, or the smallest ever reported on that date and only two-thirds of the average.

Prices on 92-score fresh butter on December 6 were: Chicago, 55 1-2c; New York, 54c; Boston, 53 1-2c; Philadelphia, 55c.

Cheese Market Higher.

Fllowing an advance of about 1 1-2c on country markets early last week, prices at distributing centers were higher with an active demand in the first two days. Later on, buying was confined mostly to supplying immediate needs and the speculative buying which has been prominent, disappeared. A steady tone is expected in the trade, although the dull period which usually lasts until about January 15 is at hand.

Prices for No. 1 American cheese on December 6 were: Chicago—Flats, 27@27 1-2c; Twins, 26@26 3-4c; S. Daisies, 27@27 1-2c; D. Daisies, 27@27 1-2c; Young Americas, 27@27 1-2c; Longhorns, 27@28c; Square Prints, 27 1-2@28c.

Fruits and Vegetables.

The market for northern white potatoes has been generally steady during the past week. Total shipments from producing sections are running about 4000 cars weekly which is practically normal for this season of the year. Unloads at the leading consuming markets have not fallen off so sharply as the car situation resulted in many delays in transit. During the next month the movemen should decline 25 to 50 per cent further so that some recovery from extremely low prices prevailing seems inevitable. That they will not go lower is quite certain. Sacked rurals, U. S. grade No. 1 are quoted at $1 to $1.10 per 100 pounds.

Apple shipments from producing districts declined about 60 per cent in the last six weeks, but arrivals at consuming markets are still rather heavy and storage stocks are being merchandised. Prices show little change. Extra fancy Northwestern Jonathans, large to medium, are quoted at $2 to $2.25 a box at Chicago.

LATEST QUOTATIONS.

The Live Stock Market.

PORTLAND, Ore., Dec. 9.—Cattle—Choice steers, $6.25@6.75; medium to good steers, $5.75@6.25; fair to medium steers, $5.25@5.75; common to fair steers, $3.75@5.25; choice heifers, $4.50@4.75; medium to good cows and heifers, $3.50@4; common cows, $1.50@2; canners, $1.50@2; bulls, $3@4.25; choice feeders, $5@5.50; fair to good feeders, $4@5; choice dairy calves, $8@8.50; prime light calves, $8@8.50; medium light calves, $7.50@8; heavy calves, $4@7.

Hogs—Prime light, $9@9.25; smooth heavy, 250-300 pounds, $8@9; smooth heavy, 300 pounds up, $7.50@8; rough heavy, $6@7.50; fat pigs, $8.50@9; feeder pigs, $8.50@9; stags, subject to dockage, $4.50@6.

Sheep—East-of-mountain lambs, $10.50@12; choice valley lambs, $10.50@12; medium valley lambs, $9.50@10.50; common valley lambs, $8.50@9.50; cull lambs, 6.75@8.50; light yearlings, $9@9.50; light wethers, $7.50@8.50; heavy wethers, $7@7.50; ewes, $2@6.

SPOKANE, Dec. 9.—Cattle—Prime steers, $6.25@6.75; good to choice steers, $5.75@6.25; medium to good steers, $5@5.75; fair to medium steers, $4.50@5; common to fair steers, $3@4.50; choice cows and heifers, $4.50@5; good to choice cows and heifers, $3.75@4.50; medium to good cows and heifers, $3@3.75; fair to medium cows and heifers, $2.50@3.50; canners, $1@2.50; bulls, $2.75@4; light veal calves, $6.50@7.50; heavy veal calves, $3.50@5.

Hogs—Prime mixed, $9@9.50; medium, $8.50@9.50; heavies, $6@8.50; fat pigs, $8@8.75; stockers and feeders, $7.50@8.

Sheep—Prime lambs, $10.50@11; fair to medium, $9@10; yearlings, $7@8; wethers, $6.50@7.50; mutton ewes, $3@5.75; feeder lambs, $9@11.

The Grain Market.

PORTLAND, Ore., Dec. 9.—Wheat—Hard white, Bluestem, Bart, $1.48; soft white, $1.25; western white, $1.22; northern spring, $1.18; hard winter, western red, $1.16.

Grain futures: Wheat—Bluestem and Bart, December and January, $1.48; soft white, December, $1.25; January, $1.24; western white, December and January, $1.22; hard winter, western red, December and January, $1.16; northern spring, December and January, $1.18.

ODESSA, Wash., Dec. 9.—Bluestem and Bart, $1.43; Marquis, $1.09; Turkey red, $1.06; Jones Fife, $1.02.

LEWISTON, Idaho, Dec. 9.—Wheat—White, $1.03; red, $1.

DAVENPORT, Wash., Dec. 9.—Bluestem, $1.30; Marquis, $1; Gold Coin, $1.

RITZVILLE, Wash., Dec. 9.—Bart, $1.43; red, $1.05; Fife, $1.01.

(Continued on page twenty.)

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Range of Live Stock Prices, Week Ending Dec. 6

CATTLE.	Chicago.	Spokane.	Portland.	N. S. Lake.
Choice, prime heavy steers (1100 lb. up)	11.85@13.60			
Good heavy steers	9.75@12.00			
Medium heavy steers	7.15@10.00			
Common heavy steers	5.35@ 7.35			
Choice, prime light steers (1100 lb. d'n)	11.75@13.50			
Good light steers	9.65@11.85			
Medium light steers	7.00@ 9.85	6.00@ 7.25	6.00@ 7.25	6.00@ 7.00
Common light steers	5.00@ 7.25	3.75@ 6.00	4.00@ 6.00	4.00@ 6.00
Common to choice butcher heifers	4.25@10.75	3.25@ 5.75	3.25@ 5.75	3.00@ 5.00
Common to choice butcher cows	3.35@ 8.10	2.50@ 5.00	2.50@ 5.25	2.75@ 4.50
Bologna and beef bulls	3.50@ 6.60	2.75@ 4.50	2.50@ 4.50	2.00@ 3.50
Canners and cutters, cows and heifers	2.40@ 3.75	1.50@ 2.50	1.50@ 2.50	1.50@ 2.75
Canner steers	3.00@ 3.85	2.00@ 3.00	2.00@ 3.00	2.00@ 3.00
Medium to choice light veals	8.50@10.00	7.00@ 8.50	7.50@ 8.50	7.50@ 8.25
Common to choice heavy veals	3.00@ 7.50	5.00@ 7.00	4.00@ 7.00	
Com. to choice feeders (1000 lb. up)	5.25@ 8.00			
Com. to choice feeders (750-1000 lb.)	5.25@ 8.00	3.50@ 5.00	4.00@ 5.50	5.00@ 6.00
Common to choice stocker steers	4.25@ 8.00			
Com. to choice stocker cows, heifers	3.00@ 5.25			
HOGS.				
Top of market	8.55	8.75	9.50	8.25
Bulk of sales	7.85@ 8.45	8.00@ 8.50	8.00@ 9.25	7.50@ 8.00
Heavy (250 lb. up)	7.90@ 8.40	8.00@ 8.75	8.00@ 9.00	
Medium (200-250 lb.)	8.05@ 8.40	8.00@ 8.75	8.25@ 9.25	7.50@ 8.00
Light (150-200 lb.)	8.00@ 8.50	8.50@ 8.75	8.75@ 9.50	7.50@ 8.25
Light lights (130-150 lb.)	8.00@ 8.50	8.00@ 8.50	8.50@ 9.25	7.50@ 8.25
Smooth packing sows (250 lb. up)	7.40@ 8.10	6.50@ 7.50	7.00@ 8.00	6.50@ 7.00
Rough packing sows (200 lb. up)	7.10@ 7.75	5.60@ 6.50	6.00@ 7.00	6.00@ 6.50
Medium to choice pigs (130 lb. down)	7.90@ 8.60	7.50@ 8.00	8.50@ 9.00	
Stock pigs		7.00@ 7.50	8.25@ 8.75	7.50@ 8.75
SHEEP AND LAMBS.				
Medium to prime lambs (84 lb. down)	13.25@15.50	10.00@11.50	10.00@12.00	11.00@12.50
Culls and common lambs	9.25@13.15	8.50@10.00	6.75@10.00	9.00@11.00
Medium to prime yearling wethers	9.50@13.50	7.00@ 8.00	9.00@10.00	6.50@ 7.50
Medium to prime wethers	6.25@ 9.75	6.00@ 7.50	7.00@ 8.50	5.00@ 6.50
Medium to choice ewes	4.50@ 7.75	4.00@ 5.75	4.00@ 6.00	4.00@ 5.50
Culls and common ewes	2.50@ 5.00	2.00@ 4.00	2.00@ 4.00	2.00@ 4.00
Feeder lambs	12.25@14.50	9.00@11.00		10.00@10.50

Can Businessmen and Farmers Cooperate?

Probably the most significant action of the meeting of the state chamber of commerce at Tacoma last week was the decision of that body to select a committee from its membership to sit with a like committee of the state grange for the study of ways and means of improving farm conditions and general rural life. This action came following a stirring address by Master A. S. Goss of the state grange in which he laid down to the commercial organization a number of fundamentals if the farming industry and that of the state at large is to prosper. President N. B. Coffman of the state chamber announced that he would early appoint the committee with authority to make a thorough study and report back to the organization.

"The chambers of commerce have not worked in harmony with the farmers as they might have done," said Mr. Goss of the grange. "On the contrary, we can cite cases where certain members or whole groups have actually worked against our plans in order to further their own interests. There are cases, on the other hand, where individual farmers have acted dishonestly, but the grange as a body is ready at any time to work with any committee for the purpose of bettering the general condition of every one.

Must Improve Marketing.

"The depressed condition of agriculture is largely due to a lack of just such cooperation as can be had from the different bodies represented here. We have suffered from the losses sustained by inadequate marketing and we feel the need of a nationwide method of regulating markets. Such a plan would avoid many glutted markets and aid in a more equalized distribution of our products. The grange is ready to work 40 years for such an end as it did in helping to establish the rural free delivery system.

"If we can secure the cooperation of the state chambers of commerce and other well established organizations it will not require 40 years to do it. I would suggest that committees be appointed to work out some definite plan, and then all go down the line together and put it across.

"Credit is another important problem that needs attention. In one sense of the word the farmer has been using too much credit. During the war he was getting more and more into debt living off his capital. Agricultural credit is divided into three classes: Capital credit, which is based on land and improvement securities, is fairly well covered by the federal farm loan act. Production credit for the raising of crops is handled in an adequate manner by the banks. Marketing credit is almost entirely lacking. To function safely, credit should be on an automatic basis so that a man could get credit money to market his crops when he needs it and not have to be compelled to dump his wheat or other commodities onto the market when the prices are at the lowest ebb.

"The farmers are also in need of legislation to prohibit the sale or manufacture of butter and milk substitutes and we are ready to cooperate with any organization to help get such a bill through. There have been cases where business men have fought against such bills, saying that it would injure some of the industries.

Real Cooperation Essential.

"We have other suggestions for consideration and we are already working on them in our committees, but quicker action can be had if we can get the help of the business men. If we can succeed in putting agriculture on a business basis, where it will bring a fair return to the farmer, there will be no need to wonder why we are not getting more settlers. This and other minor problems will melt away when we meet the one great issue.

"There is certainly an opportunity for us all to work together for the good of every one and if we go about it in the proper spirit we can surely get results. But if we do attempt such a nuited effort let us endeavor to work for service and not merely for profit."

Eloquent Speeches Inadequate.

In a vigorous address on farm marketing J. A. Scollard, president of the United Dairy Associations of Washington, said that he spoke for 6000 dairymen, all of whom would willingly stand behind any legitimate movement to promote upbuilding of the state, but insisted that the business men of the state should in turn help solve the problems of the dairymen and other farm producers.

"I want to sanction Mr. Gross' statement that the business men of different localities have not always cooperated with the farmers, but in many cases they have worked against them," said Mr. Scollard. "They have made eloquent statements from time to time, but these are of no value unless they practice what they preach. Our first move toward better conditions should be the betterment of the rural situations. When the farmer prospers, other problems tend to solve themselves.

"It should be stated here that the farmer did not make a fortune during the war. Particularly was this true in the dairy districts of western Washington. The greatest number of them lived off of their capital and are still in great need of help of some kind if business conditions are to be improved.

"When the dairymen started to build plants for the manufacture of butter, cheese and condensed milk they began by putting up well equipped plants from which they could put out a high-quality product. This, they believed, was necessary if the organizations were to grow. They have succeeded by means of a united effort and have been able to raise the price paid to the producer. In doing this they also raised the price for the men who would not lift a hand to help in the movement.

"A total business of $11,000,000 was carried on this past year and we have paid for every pound of cream delivered. This is the second year the association has been doing business in the manufacture of dairy products and we have met all opposition from our competitors by keeping our products on the market everywhere.

"Foreign" Competition.

"The worst opposition that we have to fight is the coconut cow. Substitutes are riding on the reputation that has been built up by the dairymen. If the public wants coconut oil, why should they want it put up in the same manner as butter by giving it a milk flavor. Every pound of substitute butter kills the sale of a pound of real butter and the buyer is in reality knocking the dairymen.

"In December, 1921, one substitute dealer sold 193,000 pounds of one brand of substitute butter which, by the way, was made outside of the state. It would have taken 8000 cows to have produced an equal amount of real butter and it destroyed business equal to that of 800 dairy farmers.

"We have attempted to legislate against this business, but we found that some of the representatives from the best dairy counties voted against the bills, saying that they could not afford to kill certain industries in the cities. They overlooked the fact that the dairy industry in their own county represented four or five times the amount of capital of the certain industry mentioned."

Look for Community Benefit.

"One of the greatest evils in our economic system is the fact that the farmer is hit the first of all when depression comes," said W. B. Armstrong, former president of the Washington State Farm Bureau federation. "When the farmer's prosperity is impaired it affects every other industry. We should, therefore, go slow when considering any new move and apply this test: 'Will it benefit the community?'

"A few of us have concluded that we have got to have federal authority or the setting up of machinery which will distribute perishable products properly," he said. "We want machinery for doing for us what the packers claim cooperation is doing for them. But the packers are few, farmers are many. I think a federal body can be set up which could supervise distribution and prevent us from hurting each other. We ship now in the dark as to markets. We despoil each other of huge amounts by glutting markets. I think this state lost last year at least $2,000,000 by unwise marketing.

"This plan presupposes centers of distribution. It provides that no cars can roll to market without orders. Needs will be scientifically determined and filled. If dumping must be done, it would be done on the farm, so transportation would not be unnecessarily strained."

Getting Settlers.

While the meeting was called primarily for the purpose of discussing ways of inducing settlers to come to Washington, it took the form of a rural upbuilding session in view of the necessity of agricultural prosperity as a magnet for settlers. In his message to the meeting President Coffman of the state chamber said in part:

"In the last decade the increase in population of the state of Washington was only 214,000. Of that number 143,000 went to the cities and 71,000, or less than one-half as many, went to the country. During the same period the percentage of increase in population in Pacific coast states was as follows: California, 44.1; Idaho, 32.6; Utah, 20.4; Washington, 18.8, and Oregon, 16.4.

"In taking up consideration of this question of rural upbuilding, land settlement and farm betterment it must be recognized that it is a complex one. The way to its solution is not a plain and open road. There are endless bypaths. When followed to their conclusion many of them will end only in an entanglement of controversy.

Public Welfare at Stake.

"The agricultural problem has reached the stage where it is deeply affecting the general public welfare. The solution of its difficulties must not be left alone to the agricultural interests. There must not be an attitude of antagonism between farmers and those employed in other pursuits. It must be given sympathetic consideration, not only for the farmers' good, but for the general good. Steps looking toward its solution

(Continued on page twelve.)

Goes to the Heart of Farmer's Problem

President Harding's message to congress, delivered on December 8, went to the heart of the farmers' problems when he said that American agriculture "needs more than added credit facilities; that permanent and deserved agricultural good fortune depends on better and cheaper transportation."

Better and fairer credit facilities, better and cheaper transportation—these are the remedies that we have been stressing ever since the federal reserve board made the fatal and foolish mistake of tightening up on farm credits and deflating the prices of farm products at one ruthless puncture, instead of first curtailing credits in nonessential and less essential industries.

President Harding wisely proposes a plan of increased agricultural credits that will be distinct from the federal reserve board. The farmers of the United States are distrustful of the federal reserve board, a fact that seems to have prompted the president to propose as entirely practical a "division in the federal land banks to deal with production credits, with the limitations of time so adjusted to the farm turnover as the federal reserve system provides for the turnover in the manufacturing and mercantile world."

We have been advocating that for years, and the regret now is that it was not sooner adopted.

Another part of the message that is especially sound and constructive is the advice on closer connection of land and water transportation. It is true, as the president says, that the American people have put hundreds of millions of dollars into river and harbor improvements, and it is high time that we were reaping some benefits from that investment of public funds.

So far these improvements of harbors and rivers have benefited only that part of the population living on the waterways. Here in the Pacific northwest they have been positively injurious to that part of our population living away from the waterways, for the railroads have laid higher freight rates on the interior producers and consumers, to compensate them for losses incurred in the cutting of rail rates to meet water competition at the terminals.

The farm problems discussed by President Hardinv are so weighty that we pirnt herewith all that part of his message bearing on agriculture:

The railway strike accentuated the difficulty of the American farmer. The first distress of readjustment came to the farmer, and it will not be a readjustment fit to abide until he is relieved. The distress brought to the farmer does not affect him alone. Agricultural ill fortune is a national ill fortune.

The congress already has taken cognizance of the misfortune which precipitate deflation brought to the American agriculture. Your measures of relief and the reduction of the federal reserve discount rate undoubtedly saved the country from widespread disaster. The very proof of helpfulness already given is the strongest argument for the permanent establishment of widened credits, heretofore temporarily extended through the war finance corporation.

The farm loan bureau, which already has proven its usefulness through the federal land banks, may well have its powers enlarged to provide ample farm production credits as well as enlarged land credits. It is entirely practical to create a division in the federal land banks to deal with production credits, with the limitations of time so adjusted to the farm turnover as the federal reserve system provides for the turnover in the manufacturing and mercantile world. Special provision must be made for live stock production credits and the limit of land loans may be safely enlarged. Various measures are pending before you and the best judgment of congress ought to be expressed in a prompt enactment at the present session.

But American agriculture needs more than added credit facilities. The credits will help to solve the pressing problems growing out of war—inflated land values and the drastic deflation of three years ago, but permanent and deserved agricultural good fortune depends on better and cheaper transportation. Here is an outstanding problem demanding the most rigorous consideration of the congress and the country. * * *

In the last half of the year now closing the railways, broken in carrying capacity because of motive power and rolling stock out of order, though insistently declaring to the contrary, embargoed the farmer's shipments, or denied him cars when fortunate markets were calling. Too frequently transportation failed while perishable products were turning from possible profit to losses counted in tens of millions.

I know of no problem exceeding in importance this one of transportation. We have built 40 per cent of the world's railroad mileage, and yet find it inadequate to our present requirements. When we contemplate the inadequancy of today it is easy to believe that the next few decades will witness the paralysis of our transportation-using social scheme or a complete reorganization on some new basis.

Manifestly, we have need to begin on plans to coordinate all transportation facilities. We should more effectively connect up our rail lines with our carriers by sea. We ought to reap some benefit from the hundreds of millions expended on inland waterways, providing our capacity to utilize as well as expend. We ought to turn the motor truck into a railway feeder and distributor instead of a destroying competitor. * * *

This transportation problem can not be waived aside The demand for lowered costs on farm products and basic materials can not be ignored. Rates horizontally increased to meet increased outlays during the war inflation are not easily reduced. When some very moderate wage reductions were effected last summer there was a 5 per cent horizontal reduction in rates. I sought at that time, in a very informal way, to have the railroad managers go before the interstate commerce commission and agree to a heavier reduction on farm products and coal and other basic commodities and leave unchanged the freight tariffs which a very large portion of the traffic was able to bear. Neither the managers nor the commission saw fit to adopt the suggestion, so we had the horizontal reduction, too slight to be felt by the higher class cargoes and too little to benefit the heavy tonnage calling most loudly for relief.

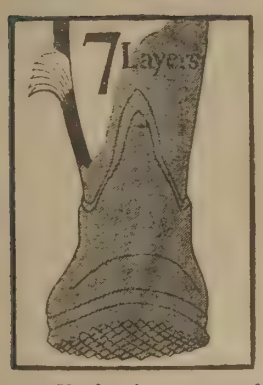
Wins With String of Clydesdales



One of the greatest contests at the recent Pacific International Stock show at Portland was the six-horse hitch. With seven six-horse teams showing, Robert McCroskey of Garfield, Wash., brought the blue ribbon back to Washington. A. C. Ruby of Portland Ore., second and third. George Heyl of Washington, Ills., was judge and it is asserted by horsemen that this is one of the greatest shows of its kind assembled anywhere and that the Chicago International has never had as many as seven entries showing in the six-horse hitch. Mr. McCroskey won second in the four-horse hitch, with Mr. Ruby first, Floyd McKennon third, and seven entries. Mr. McCroskey won second also in the two-horse hitch, with Mr. Ruby first and with nine entries. Mr. McCroskey was the principal Washington exhibitor of horses, with a car of Clydesdales. He won second on aged stallion, first on 3-year-old, first aged mare, first, third and fourth on 4-year-old, first and second on 2-year-old and junior and reserve grand champion mare.

BACK OF THE HEEL—*Eleven layers of heavy duck and highest grade rubber make this one of the strongest points of the whole boot.*





THE ANKLE—*Here's where so many boots sag and crack. The "U. S." Boot has an extra "collar" that runs all the way round the leg, and on top of that is vulcanized a heavy side-stay.*



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The diagrams at the left will show you the details of the finest boot construction experts have yet been able to devise. 75 years of bootmaking experience are behind it.

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You'll find every type of rubber footwear in the big U. S. line. There's the U. S. Walrus, the famous all-rubber overshoe—the U. S. lace Bootee, a rubber workshoe for spring and fall—U. S. Arctics and Rubbers—all styles and sizes for the whole family. Look for the "U. S." trademark—the honor mark of the oldest and largest rubber organization in the world.

United States Rubber Company

Ask for

"U.S." Boots

Trade Mark

LIVESTOCK AND DAIRY

Pig Survey

The United States department of agriculture began its second pig survey the first of this month. The survey made last spring, although covering only 17 states, was considered such a success that it has been decided to make these surveys twice a year hereafter, to cover the entire United States. Through the cooperation of the postoffice department the questionnaires will be distributed by rural mail carriers to 10 farms on each carrier's group. The cards or questionnaires will ask for the following information:

1. Total number of acres in farm.
2. Number of sows which farrowed during first six months of 1922.
3. Number of sows bred or intended to be bred to farrow during first six months of 1923.
4. Number of sows which have farrowed or are due to farrow during last six months of 1922.
5. Number of sows which farrowed during last six months of 1921.
6. Number of hogs which died from hog cholera or other diseases during 1922 to date, exclusive of young pigs which died at birth or shortly thereafter.
7. Number of hogs which died from cholera or other diseases in 1921, exclusive of young pigs which died at birth or died shortly thereafter.
8. Number saved per litter during last six months of 1921.
9. Number saved per litter during first six months of 1922.
10. Number saved per litter this fall to date.

Bran and Shorts

Which is the most economical, to feed potatoes at $15 a ton, mixed with good quantities clover and timothy hay and some ground oats, to dairy cows, or to feed bran and shorts at $30 a ton?

E. F. R.

Potatoes can not be compared with bran and shorts as a cow feed. The former is a succulent feed, high in starch, and the latter is a concentrate containing considerable protein with comparatively little starch (carbohydrate). As a supplement to timothy and clover hay, bran and shorts will produce much better results than potatoes. However, to make the best ration with these feeds I would suggest that all of them be fed as follows: All the hay the cows will clean up; from 15 to 20 pounds per day of potatoes and 1 pound of bran and shorts for each 3 1-2 pounds of milk produced. A little ground oats mixed with the bran will be beneficial.

LIFE PRESERVERS FOR LIVE STOCK

By DR. E. E. WEGNER, W. S. C.

SWINE DISEASES. ARTICLE IV.

Internal Parasites.

It is commonly known that parasites inhabit the digestive tube of most of our domestic animals. In fact, this knowledge is so common that many regard it very lightly and seem to assume that such a condition is quite natural and do not get particularly interested until the animal begins to show visible effects of systemic robbing of vitality by these parasites.

Without doubt the most common internal parasite in swine is the roundworm. The adult is from 8 to 12 inches in length and the size of a small lead pencil in the middle portion, from which it tapers gradually toward either end. They are white or yellowish in color and frequently found in masses in the small intestine, which they fill quite completely, even to the extent that one may wonder how food materials got by the tangled mass.

Until comparatively recently we knew little about the life history of this parasite and then supposed that it lived a direct life, that is, that the eggs were passed by the feces of the host and after they developed to the infectious stage, with a small worm on the inside, they were taken in to the digestive tube by a susceptible animal, where they hatched and attached themselves to the wall of the intestine like their ancestors had done. Investigations of the last few years show that this simple life history is not correct and that this parasite is much more active within the body of the host than was at one time supposed, and that its effects are not confined to the intestine, as we assumed. When the ripe eggs are passed by the host they have to develop outside the body for a time before they become infectious, and under favorable conditions the time required is about 10 to 14 days. The eggs do not develop while the weather is intensely cold, nor during very dry periods of the year, but they wait until their surroundings are most favorable, a moderate temperature and certain amount of moisture, when they develop rapidly. Remember that these eggs do not die while the weather is warm or cold, but simply rest until the circumstances are more favorable for their development.

When they have reached the infectious stage and are given access to the digestive tract through the food or water they pass directly through the stomach to the small intestine, where they lose their shell, and the small worm is freed. At once it penetrates the wall of the small intestine and gets into the blood stream and is carried to the liver, through which it passes. It is picked up again on the other side, where it is taken to the lungs by the blood, and here is where the greatest damage is done. It is stopped by the small vessels in the lungs and the larva penetrates the lung tissue and reaches the windpipe. During its passage through the lungs the small worms do considerable damage as may be seen on the surface of the lungs of infected animals. Numerous small red spots and larger inflammed areas mark the places where the small worms have gone through and later on these may result in ulcers and diseased places, due to the infections that follow.

After the worms reach the windpipe they pass upward to the throat, where they appear to pass downward to the stomach again and to the intestine, where they attach themselves and stay during their adult age.

The amount of damage that these small worms may do is directly proportionate to the number that enter the body. If the numbers are small the damage is not great, but when large numbers pass through the damage to the lungs is very considerable.

(To be continued.)

WHY DOES A HOG SQUEAL?

The answer is simple—he's in trouble. If he is hungry, feed him and he will quit squealing. If he is cold, give him a good bed and he will snore as contently as a well-fed, well-bedded human being.

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ACCEPT NO SUBSTITUTES! Nu-Way name on buckles. Send direct, giving dealer's name if he hasn't them.

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Over 7 billion Chesterfields are smoked every year—20 million every day

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Would You Invest in Cows?

FOX SKINS FROM A PENNSYLVANIA FOX farm brought as high as $400 a pelt in 1922.

2 to 9 foxes to a litter.

They mature in eight months.

Their food costs but little.

They require little space.

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FRUIT TREES budded from bearing orchards: Apple, Pear, Cherry, Peach, Plum, Prune, Apricot, Quince; Grape Vines, Shrubbery, Plants, Raspberries, Blackberries, Dewberries, Logans, Asparagus, Rhubarb, Flowering Shrubs, Roses, Vines; Hedge, Nut and Shade Trees. Carriage paid. Satisfaction guaranteed.

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O. D. shirts, wool, army style, double pockets	$1.95
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Stag shirts, double front and back, in blue and khaki	$1.75
Work shirts, blue and gray, all sizes, cambric	75c

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O. D. wool breeches, good as new	$2.50
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Moleskin, heavy, button bottom	$3.65
Pure wool, long pants, sizes 30 to 36 only	$2.95
Corduroy, heavy pants, special	$3.75

OVERALLS

Heavy grade, bib, all sizes	$1.25
Coats to match	$1.25
Khaki coveralls, suit	$2.50

ARMY SHOES

Work shoes, made for hard wear	$3.45
Dress shoes, russets, Munson last	$4.25
Officers' shoes, with plain toe	$4.45
Army boots, 12-inch, double sole	$6.25
Dress shoes, black or brown, Munson last	$2.95

RUBBERS

1-buckle, cloth top overshoes	$1.95
4-buckle, cloth top overshoes	$3.95
10-inch all-rubber bootee	$3.75
7-inch all-rubber bootee	$3.45
All rubber four-buckle arctic	$4.25
Leather top 8-inch rubbers	$3.95

UNDERWEAR

Heavy wool union suits	$2.25
Extra heavy wool union suits	$2.95
Two-piece underwear, each	95c

ARMY SOCKS

Heavy wool, ribbed top, pair	30c
In dozen pair lots	$3.25
Wool socks, pair	25c
In dozen pair lots	$2.50

GLOVES AND MITTS

Wool lined mitts, pair	95c
Jersey gloves, pair	15c
Heavy canvass gloves, pair	15c
Leather palm canvass	25c

LEATHER LINED VESTS

With leather sleeves	$6.50
Sheep lined	$8.50
Wrap leggins, good as new	65c
Wrap leggins, new	$1.25
Leather leggins, with clip or strap	$3.50

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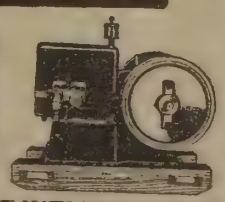
WALKER'S ARMY STORE

W501 TRENT, SPOKANE, WASH.

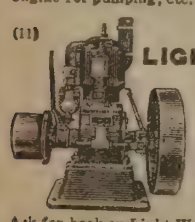
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LIGHT WEIGHT 4 H. P.

For all power jobs up to 6 H. P. Weighs only 190 lbs. May be attached to binder and other machines to save a team. This engine is a necessity on every farm. Improved Throttling Governor insures very steady running and less gasoline used.

Ask for book on Light Weight Engines. If interested in Electric Lighting Plants, write for free book.

CUSHMAN MOTOR WORKS

415 E. Ash Street. Portland, Ore.

In writing advertisers, be sure to say you saw their advertisement in The Washington Farmer.

Holstein Herd
Is Started at Prosser Station

A new Holstein herd is being started at the Prosser irrigation branch of the state college experiment station. R. P. Bean, superintendent of the station, expects to have a herd of from 20 to 25 purebred cows, which will be as many as can be handled conveniently at the station.

Seven new purebred animals have recently been received from the state college. They are from cows in the state college herd and have been sired by the Hulbert bull, a recent donation to the college from J. M. Hulbert of LaConner. The station already has one grade cow, and her grade heifer, which has been kept as a family cow for the herdsmen. The herd will be built up with the increase of this foundation stock. A young herd bull has recently been secured from the Todd herd at Yakima. This animal, Cascade Madcap Violet Fayne, is a son of Sir Korndyke Ormsby Piebe, the animal which Todd recently sold to an eastern breeder. The present plan is to use this sire until his daughters are ready for service, at which time he will be exchanged for one of the herd bulls at the state college.

"We plan to keep a small farm herd," said Mr. Bean, "and sell butterfat. We want enough skimmed milk to feed a bunch of pigs during the entire year. Only enough milk will be used on the farm as is necessary for the two families living there.

"Our present cow shed is a small portable building, which can be moved in sections if necessary. This, however, is used only at the present time, while the herd is small, and will later be used in some of the experimental feeding. We hope, however, to have a larger barn for the dairy herd before many years.

"The addition of this splendid herd to the experiment farm will afford an opportunity to carry on dairy feeding experiments in the future if considered necessary, and it will also be an outlet for some of the roughages produced on the farm. It will also afford an opportunity for exchanging herd sires from the state college as necessity demands. The herd will also serve as a demonstration of what can be done with dairy cattle on irrigated land."

Islands of Thrift

By F. RUINET.

Cathlamet and Puget islands, in the Columbia river, a part of Wahkiakum county, are peopled almost entirely by thrifty, hardworking Scandinavians. They form a rich agricultural producing territory, and in a very few years hence it will have developed immensely. There is a Scandinavian church and a fine schoolhouse on the island. Dikes permit one to travel round the island and bridges are built at convenient places in order to allow the crossing of the numerous sloughs.

It is a glad sight to see so many fine and well-built houses, painted and kept in splendid order. Fine large barns, all painted—not a gate off its hinges—everything is in order.

If the man is not on his farm he is busy repairing his landing stage, which is of no mean order. Planks out of place are readjusted at once—so as one travels from farm to farm he sees the care that is being constantly bestowed on the property. I was surprised to see such skillful attention being given to the land. The women folk and children, too, are a pride unto themselves.

The cattle on these islands are fine beasts—well nurtured and fed and housed. The markets for their produce are in Oregon. They are isolated from Washington, although they belong to this state. Some day a road will be in existence connecting Wahkiakum with its sister counties.

To Develop Beef Calves

The animal husbandry department of the state college recommends the following feed mixture for developing registered beef calves: Whole oats, 60 pounds; rolled wheat, 20 pounds; linseed oil meal, 10 pounds. When preparing calves for show this ration should be fed in a creep while the calves are still sucking, as well as after weaning. In the irrigated sections a pasture of blue grass, timothy and clover is recommended or an alfalfa or sweet clover pasture if in eastern Washington. Clover or natural pasture west of the Cascades is satisfactory.

EASY TO LEARN ABOUT BEES.

"Bees are so easy to raise and there is a wonderful opportunity for this industry in the Puget Sound district," remarked Miss Pearce of the Pearce & Dickenson Bee farm of Woodenville, King county. "There is no excuse for any farmer not having one or two stands of bees to furnish honey for his own table. It is true that every one does not understand the management of bees, but it is such an easy matter to get literature on the subject and learn to give them the best of care, which would take only a small amount of time from his regular work about the farm."

Remington Game Loads —Made to get the Game

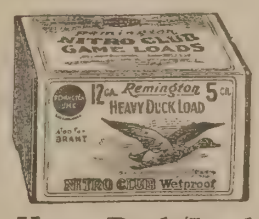
THE next time you buy shells—tell your dealer *what kind of game* you're going after.

He'll give you the new Game Load made specifically for that kind of game. The *right* kind of powder. The *right* amount. The *right* size and weight of shot.

The New Remington Game Loads—produced by Remington to make it easy for you to choose the proper load—and get the game. Furnished exclusively in "Nitro Club" Wetproof shells.



Duck Load
in 12, 16 and 20 gauge. Also for Pheasant



Heavy Duck Load
in 12 and 20 gauge. Also for Brant.



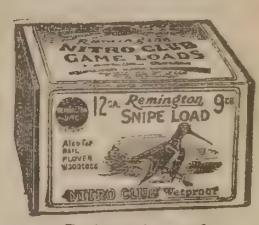
Brant Load
in 12 gauge. Also for Large Ducks.



Goose Load
in 12 gauge. Also for Fox, Turkey and Raccoon.



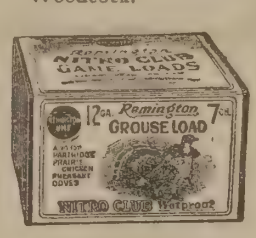
Quail Load
in 12, 16 and 20 gauge. Also for Doves and Woodcock.



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in 12, 16 and 20 gauge. Also for Rabbit, Duck and Crow.



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in 12, 16 and 20 gauge. Also for Partridge, Prairie Chicken, Pheasant and Doves.



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in 12 gauge. Also for Rail, Quail, Plover and Rabbit.



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Trap Load
in 12 gauge.

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POULTRY AND RABBITS

Make the Hens Happy

The winter months are hard on the hens—even harder than the hot weather of midsummer. In summer it is possible to provide greater relief from excessive heat than it is relief from excessive cold and dampness in the winter time.

Chickens need dry quarters. The temperature is not nearly so important, though it stands to reason that excessive cold is harmful.

Many a farm poultry house is built with greater thought for warmth than for dryness. Many of them have floors on the ground or so close to the ground that they become damp if not actually wet from seepage or surface water. Many are built into a hillside, with the result that water from above, especially that which runs off the roof, finds its way under or onto the floor. Many have no floor at all, using the ground only. This is not to be condemned in itself, if a floored scratching place is provided. But if the ground becomes damp it is harmful.

Make the Hen Happy.

Where the house is floored, with the floor built up off the ground several inches or a foot or two, there should be adequate means of ventilation underneath it, so that dampness will not develop. It should not be open underneath at all times to such degree as to permit the floor being continually cold. If you find your hens standing on one foot with the other held up against the body, you may be certain that they are using up vitality combatting cold feet that should be used in the production of eggs. A hen must be happy to produce eggs, and cold feet do not engender cheer.

Dry Litter Important.

Do not let the litter in the scratching floor get damp. It is injurious, not only from the standpoint of the chilliness of it, but from its suitableness for the development of disease. Many poultry ills are traceable to filthy quarters. It is even better to have no litter in the scratching floor than to have a cold, damp, evil-smelling mass. There are few farmers so situated that they can not readily have a plentiful supply of fresh straw for use in the henhouse.

Clean Every Day.

While considering cleanliness, do not forget the dropping board. Droppings contain much moisture, and if allowed to accumulate under the roosts in winter become the source of a damp atmosphere and one anything but cleanly. Dropping boards should be cleaned even more regularly in winter than in summer, but in either case they should be cleaned every day. It is an excellent idea to sprinkle a little fine straw or chaff over them as soon as they are cleaned. This not only makes the roosts more cheerful and inviting for the hens, but makes the cleaning process much simpler. Where the droppings fall directly upon the boards nothing but a scrubbing brush can get them cleaned thoroughly, whereas, with the undercoating of chaff, much greater cleanliness is possible.

Pure Air Is Essential.

After all is said, ventilation is the great source of poultry house cleanliness. If a soggy, ill-smelling vapor strikes you in the face when you open the door in the morning, you may be certain that the ventilation is poor. You may likewise be certain that the energy of your hens is depleted just as your own energy is depleted when you sleep in a room without adequate fresh air.

Your poultry house should be so arranged that a wealth of wholesome air is available without drafts on the birds. Their roosts should be protected on three sides and above and below so that no air currents will strike them. The dropping boards should be tight; there should be no cracks in the walls; the roof should not be open directly above. But the fourth side may well be open to the air with only sufficient protection to keep a storm out.

Use Plenty of Glass.

The winter season is one of little light at best. If the poultry house were built of glass it would not be excessively lighted. But how many farm houses do we see with only one or two little squares of window glass! Make sure that there is light coming into the poultry house from as many directions as possible—certainly from both rear and front. Light and air are the two fundamentals in sanitation, and sanitation is essential to success with hens.

Mate Geese in Fall

"Geese should be mated in the fall, since they require plenty of time and should be ready by the time the breeding season begins," according to Miss Agnes Brenner of of Tacoma, who has had several years' experience with Toulouse geese. October and November are good months to mate them, allowing two geese to one gander if the stock is over 1 year old. If younger they should be mated in pairs.

"In any case, it is essential to select vigorous stock and allow them plenty of range. They will do better with a small feeding of grain and supply an abundance of water. It is not necessary that they have water to swim in.

"Geese begin laying usually in February here on the Coast, and will lay about every 36 hours, or every other day, until they have laid about 15 eggs, then they will want to sit. Break them up and in about three days they will go back and lay another lot of eggs about the same in number as the first lot, and will try sitting again. Break them up again and they will lay some more and after they have laid the next lot of eggs it is well to allow them to sit.

"Any good sitting hen can be used to good advantage for hatching goose eggs and hens make splendid mothers for goslings. A nest made on the ground is most suitable, as they require much moisture. Line the nest well with straw and keep plenty of feed and water before the hen at all times. After the first two weeks it is wise to sprinkle and turn the eggs over every other day. The difficulties arise in getting your goslings out of the shells, but they seldom cause any trouble after once hatched."

GOOD SHELTER ESSENTIAL.

Hens must have good shelter the year around. Protection from storms and dampness must be given in the winter. Protection from excessive heat is absolutely essential to success in the summer time. The latter applies at night as well as in the day time. A hot, stuffy house is fatal to poultry success. Ventilation, both winter and summer, is absolutely essential.

AVOID WATERY RABBIT FEED.

Green vegetation of excessive water content is considered injurious to rabbits, or at least not as valuable as the more solid kinds of green stuff. Cabbage, while considered by many a highly desirable feed for rabbits, is by others considered objectionable because its water content is so high.



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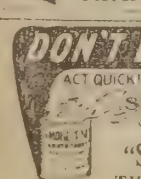


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Film is that viscous coat you feel. It clings to teeth, gets between the teeth and stays. Then it forms the basis of dingy coats which hide the teeth's natural luster.

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Dental science has now found two effective film combatants. Their action is to curdle film and then harmlessly remove it. Years of careful tests have amply proved their efficiency.

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Dental authorities the world over now endorse this method. Leading dentists everywhere are urging its adoption.

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Pepsodent also multiplies the starch digestant in the saliva. That is there to digest starch deposits which may otherwise cling and form acids.

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Big Poultry Farm

L. C. Beals' poultry farm at Vashon has a capacity of 3500 White Leghorn birds. Trap nests are used in all houses and only the eggs from the 250-egg or better hens are used for the setting eggs, which are sent to all parts of the United States.

"Yes, we do hatch part of our eggs and sell a few day-old chicks," said Mr. Beals, "but we have many distant shipments to such points as Honolulu, southern California, states of the middle west and even to towns in Canada. For the longer distance shipments we have to resort to setting eggs because the purchaser can be assured of a high percentage of the eggs hatching and there will be but little, if any, mortality. The greater part of the eggs hatched in the large incubators are sold to near-by buyers or used to replace our own flock.

Identify by Wing Bands.

"As the chicks are taken from their compartments in the incubator they are numbered by means of a wing band placed around one foot until the chick is old enough to have the band fastened onto the wing. This band remains on the bird as a permanent means of identification. By checking back to the number corresponding to the one on the band the bird's sire and dam can be determined, as well as their production record. Pullets are given a brooder house to themselves at the age of 8 weeks and fed a good growing mash to build up a strong constitution.

"It is necessary to trapnest all pullets for one year before breeders can be selected from their number. This is to make sure that each breeder has a record of 250 eggs or better. When placed into the breeding pens they are given plenty of room, large runways with an abundance of green feed and enough cockerels to insure fertility of every egg. There are over 2000 pullets being trapnested this winter."

Selection of Males.

The period of selection of the males, however, is not so long, since they are ready for use at the approximate age of 1 year. When first segregated from the pullets they are placed in individual houses, which hold 60 birds each. There are 12 houses in all, with no fences between, and the birds are given unlimited range in order to insure health, vigor and vitality. They are placed in these houses at about 8 weeks of age, when they are old enough to be taken away from the brooders. Nothing is fed them except the growing mash and some grain, there being plenty of green stuff and insects to complete the ration.

Only the best male birds are placed here, since the poor typed individuals are either fattened for frys or caponized and fattened for winter use on the farm. One of the men working for Mr. Beals has found a good market for capons and fattens a number each year. While there is only a slight increase in the weight, the quality of meat is much better, and there very little more expense in the feeding.

As the breeding stock is selected for the breeding pens they are taken into a building with small compartments and selected for different orders. In most cases the pens are made up before being shipped, and only cockerels selected from stock as good or better than the females. Practically all stock on the Beals farm is of the Tancred strain.

For green feed Mr. Beals grows kale and mangels, the former being preferred, but it is advisable to play safe and have a supply of mangels on hand in case of a severe winter, which might kill off the kale.

The Beals poultry plant requires the help of four men regularly throughout the winter, and from five to six in the spring when the hatching and brooding is in full swing. All the buildings are the Shoup type and all work is done according to methods worked out by the Shoups at the western Washington experiment station at Puyallup.

Boys and Girls Win

One of three solid silver trophy cups presented at the Pacific International by the Institute of American Packers of Chicago for the best carlots of Shorthorn, Hereford and Angus steers was won by the Hercules Beef club (boys and girls) of Ellensburg and Mabton in open competition. This exploit is regarded as one of the most remarkable performed by club youngsters at the big show.

In addition to his other premiums James Coffield of Goldendale won a silver medal bearing the clover leaf emblem of club work offered by the American Institute of Packers of Chicago for the best bred fat Lincoln lamb shown in club classes. He also won first in the yearling and first in club lamb classes, long wool breeds, and fourth on fat lamb, all breeds competing.

Harvey Norris, also of Goldendale, won third on Poland China boar under 6 months and eighth on sow of the same age.

Washington club exhibitors from the Yakima valley dominated the class for fat steers, spayed or martin heifers, all breeds competing, in which $200 in prizes was offered. In the yearling class Harold Holmes of Mabton won first prize of $20 and Fred Schlien of Mabton and Eugene Wilson of Ellensburg were second and third, respectively. Other winnings by Washington exhibitors in this class were William Waldron Jr., Ellensburg, fifth; Nora Waite, Ellensburg, sixth; Walter White, Ellensburg, seventh; Chester Schlien, Mabton, eighth; Meta Bennett, Ellensburg, 10th; Ray Bennett, Ellensburg, 12th; James Gordon, Mabton, 14th.

David Nisbett of Chehalis was the only Washington club boy showing a dairy calf, and he won second in the senior calf class for Holsteins on Olmpic Greenbank Queen, which went to first place under W. A. Moscrip in the open class and brought $305 in the auction sale that followed.

Buying and Selling

H. C. Davis of Granger, in Yakima county, adds his testimony to that of others when he points out that things are badly out of joint when the prices at which the farmers must sell and the prices at which they must buy their supplies are considered. He declares that the farmers can not live when the things he buys cost three times as much as what he raises brings.

"Twelve years ago," said Mr. Davis, "I sold hay at $12.50 a ton and everybody knew I was not making any money. This year I sold at $13. Then I paid $1.25 a day for help and the men did 40 per cent more work than farm help did this summer at $3 a day.

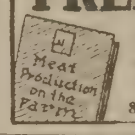
"In 1910 I paid $1.75 a ton for baling, while now I pay $2.50. Then I paid 60 cents and 75 cents a ton for hauling hay to the cars and over dirt roads, not even graveled roads. Now, after being taxed for a concrete highway past my place—a road which is supposed to reduce the cost of hauling—I pay $1 a ton for hauling over the paved road. Taxes then were $2 an acre, while now they are $11."

In support of his contention Mr. Davis quotes from the October issue of the Weather, Crops and Markets, published by the United States department of agriculture, which "shows that taking the prices which obtained in 1913 as a basis, the purchasing power of the farmer's produce in September, 1922, was only 64 per cent of what it was in 1913, while the wholesale price of the commodities which he must buy was 170 per cent of the prices obtained in 1913."

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During the war America could not get Potash, and the use of acid phosphate increased. Central Europe could not get phosphates, and the use of Potash Salts increased. Today plenty of Potash can be had at less than pre-war prices. Now is the right time to restore the balance by using more Potash in the fertilizer formulas than the average amount used before, 5 to 10 per cent.

Crops take from the soil very much more Potash than phosphoric acid. On any soil where Potash has been profitable it is not unreasonable now to use at least as much Potash as phosphoric acid. Ask the fertilizer agent for prices on this kind of goods, and rebuild your soil while Potash is cheap.

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POTASH PAYS

Can Business Men and Farmers Cooperate?

(Continued from page six.)

must be made in concert with a shoulder to shoulder movement. The wholesaler, the retailer, the banker, the laborer and the manufacturer must be brought to realize that they can not long prosper unless agriculture prospers. The national administration and the congress have passed some permanent relief measures, and also provided some temporary ones to tide over conditions of acute distress. All these provisions are based on government aid in extending war-time credit facilities, or in refunding existing debts into long-time mortgage loans. They permit the farmers to borrow more and make terms of repayment easier. They create new and larger burdens. To aid to the increase of borrowings may be justified as an expedient. In the end, when payment is due it may prove calamitous rather than helpful. A farmer can hardly be regarded as getting on by going into debt. The real need is to decrease them. The ultimate objective in a movement for bettering farming conditions must be the insurance of fair and just rewards for thrift and industry.

"There are cures, no doubt, which can be wrought through legislation, but basic causes must be sought for deep down in the social and economic state of the country and of the world. The great war did what wars have always done. It caused vast inflation of credit and overstimulation of human effort. It brought on unbalanced production. It multiplied feverishly undertaken business ventures. Under this artificial stimulus prices mounted and soared. The cost of living doubled and trebled. Money was easy and extravagance multiplied. As resources were marked up to keep pace with rising prices liabilities were created in like proportion. The bubble burst in the summer of 1920. Prices fell precipitately. Resources could be marked down to meet the falling prices, but liabilities expressed in dollars could only be reduced by dollar payment.

Chattel Mortgages Multiply.

"The people of this country have gone mad in the overuse of credit and in borrowing. A decade ago a chattel mortgage was the last resort to secure a debt and a mark of disgrace and ruined credit. Now is it an overestimate to say that half the live stock and farm machinery in Washington are under chattel mortgages?

"The great danger now is the inclination to turn for relief to federal and state aid. Government aid is justifiable if undertaking for the general good, for benefits that will accrue to the whole people, but the extension of government aid to any class or industry tends to destroy the independence of that class and of that industry. It is paternalistic and against true American ideals of government. It fosters bureaucracy and emphasizes class distinctions. It tends to convert helpfulness, independence into dependence, self-reliance into supineness. It is a destroyer of individuality. Farmers should beware of the enticing allurement of federal and state aid and of government price fixing. They are delusions. They may tend to overturn our democratic form of government and substitute for it a bureaucracy.

Demand of Farmer Is Just.

"It is up to the farmers to make a fair fight for their rights and it is the duty of the rest of us to see that they get a square deal.

"The demand of farmers for an equalizing of prices and of opportunity for profits is a just one. The way to their attainment would seem to be in the direction of that which obtains in other lines of employment—cooperation, standing together for mutual help. Business methods on the farm, business methods in marketing. Standardization of methods and of products.

"A weeding out process is going on on the farm. Successful farming now requires expert training and standardized methods of business accounting. These, along with industry and good management and, above all, with cooperation in marketing, point the way, in part at least, to the cure of existing evils. More attention in my judgment must be given to specialization. Hit and miss methods can no longer succeed.

"The specialized farmer is, in fact, a manufacturer. To succeed he must adopt the methods of the manufacturer. He must look to the sale of his one product for his income, and his income must be sufficient to provide everything that is required for overhead and the family support, with satisfactory profits added. The cash outlay of the farmer is now on a par with that of the manufacturer, the merchant and the professional man. His net income for financial success must measure up to that of other callings.

Bees and Huckleberries.

"The field for specialized agriculture in this state can be greatly enlarged. We can well afford to give more careful consideration to such specialized pursuits as bee culture, growing filberts, grapes, cranberries, huckleberries, lettuce, celery and asparagus, as well as to vastly enlarge our already specialized agricultural products.

"Irrigated, reclaimed and cut-over lands carry with them a high pre-production cost. Their profitable utilization calls for intensive specialized production with cooperative marketing. When to these requirements there is added thrift and industry and an attractive social environment the Washington farm home will become attractive, enticing and satisfying, and will multiply."

Among other speakers were several state officers, including Commissioner E. L. French of the state department of agriculture, N. W. Durham of the Columbia basin committee of the Spokane Chamber of Commerce, Whitney L. Boise of the Portland Chamber of Commerce, W. W. Robertson of Yakima, Thomas B. Hill of the Seattle Chamber of Commerce and others.

Officers of the state chamber were elected as follows: N. B. Coffman, Chehalis, reelected president; C. L. Babcock, Olympia, and J. C. Hubbell, Ellensburg, vice president; F. D. Case, Wenatchee, reelected treasurer, and T. J. O'Connor reelected secretary.

Club Members Buy Purebreds

Members of the Hercules Baby Beef club of Mabton, Wash., purchased five purebred Shorthorn females at the Pacific International Shorthorn sale, thus laying the foundation for two more Yakima valley purebred cattle herds of the future. Harold Holmes and Gerald Varnum of Mabton were the enterprizing club members. Gerald purchased Red Rose B. from the Foothills farms, Carlton, Ore., and Miss Willow from the Oregon Agricultural college. Harold purchased Bessie Criterion from George Bertrand of Castle Rock, Wash.; Craigielea Coral from Foothills farms and Dainty Lady 2 from th Oregon Agricultural college.

Winter Work With Bees

"The wise beekeeper gets his spring supplies made up in the fall or winter, so that such details will not have to be looked after when the outside work is more pressing," declared W. L. Cox of Elma, who discussed the "honey harvest" at the bee schools held recently at Seattle and Puyallup. "There is practically no difference in the treatment for comb or extracted honey. In either case a three-inch foundation should be used, even when using the small frame for chunk honey. There is often a good demand for this kind of honey, and the bees like to work on the open frames better than on smaller combs.

"Old combs from which the honey has been extracted is good for placing back in the hive for the bees to refill for their own use.

"Every hive should receive attention during the honey flow and the completed combs removed as they are capped over. All honey, whether comb or extracted, should be stored in a warm, dry place.

"The new queen should be on hand before she is needed, so as not to lose any swams. The best time to requeen in the Puget sound district is in June or July, at the beginning of the honey flow. Some apiarists requeen every two years, but the colonies will be stronger if requeened every year."

OLYMPIC DRAINAGE DISTRICT.

Portland Chamber of Commerce excursionists who visited southwestern Washington in October were given a glimpse of Olympic drainage district No. 2, in which the approximate cost of the work done is $29,500 and the estimated increase in value of the land drained (650 acres) is $60 to $100 per acre. There are 940 acres in the district, which is on the Satsop river, and there is more land in Grays Harbor county subject to improvement by diking and drainage than in any other county of southwestern Washington.

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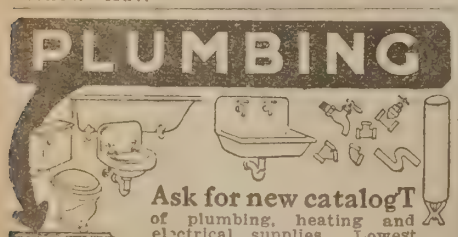
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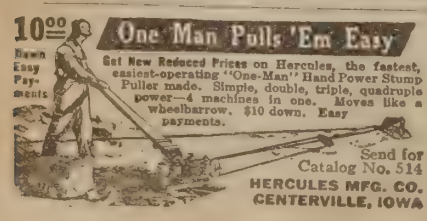
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"Best for the West"

State Farm Bureau

Will Hold Annual Meeting at Walla Walla January 15

In accepting the resignation of W. B. Armstrong as state president of the farm bureau federation, the executive committee at Yakima unanimously passed a resolution "that a vote of thanks and confidence of the executive committee be extended to Mr. Armstrong for the valuable services he has rendered to the state farm bureau federation." Friendly feeling was shown throughout the three-day sessions to the retiring president.

Final sessions of the committee were taken up with plans for opening headquarters at Spokane and for the annual meeting at Walla Walla on January 15. J. D. Balmat, Spokane, and State Secretary W. H. Talley were authorized to select a location in Spokane.

The annual meeting at Walla Walla will be opened with a meeting of the state executive committee, followed by the regular meeting. Arrangements are in charge of Mr. Balmat, Edward Hugill, W. G. Cordiner and Secretary Talley. A motion was unanimously carried that the secretary be instructed to extend an invitation to the state grange and farmers' union to send fraternal delegates to the meeting at Walla Walla.

Elects Officers

Klickitat Livestock Association

The Klickitat County Better Live Stock association has elected officers for 1923 as follows: H. D. Roberls, president; George Garner, vice president; Kenneth Hinshaw, secretary-treasurer. The representative board of directors are George Garner, beef cattle; M. A. Smythe, dairy cattle; H. H. Hartley, sheep; W. D. Morris, swine; Earl Selle, poultry; William Hornibrook, horses, and Kenneth Hinshaw, junior club work.

The junior club is to be consolidated with the men's organization and the coaching and instruction necessary will be handled by a special director of the association. The club members will be admitted without fees, but must live up to a written agreement regarding admittance to the club. Every club boy will be required to take part in at least one program before the association. George Garner offers a registered Shorthorn calf to the best beef club worker. Dr. Hartley offers a registered Hampshire lamb for the champion sheep club work; Kenneth Hinshaw and Earl Selle offer a registered Berkshire pig to the champion pig club worker.

A year's program has been scheduled as follows:

January 8, organization; March 12, special poultry and sheep meeting; May 14, special dairy and beef cattle meeting; May (last week, live stock judging and demonstration tour; July 9, special feed and crop meeting; September 10, special fair meeting; October (third day of fair) annual meeting.

Can Not Ship Wormy Apples

That it is not within the powers of the state department of agriculture to permit the shipment of wormy apples is reiterated in a statement by C. L. Robinson, supervisor of horticulture, in the Monthly News Letter for November. Mr. Robinson says:

"Because a percentage larger than usual of apples have been injured by the codling moth in different parts of the state, applications have been made, over and over again, to the state department of agriculture to permit the shipment and sale of wormy apples. It is pointed out in these applications that there are states where these apples could be sold and bring a much higher price to the shipper than if he sold them to a byproduct plant. Therefore, the department is urged to permit such sales.

"These applicants have a very imperfect comprehension of the powers of the state department of agriculture. The prohibition against the shipment of diseased fruit or that infected with insect pests, is not a matter of departmental regulation. It is a part of the statute law of the state, a law, it may be stated, that was passed at the earnest request of the fruit growers of this state, who desired to maintain the high standard and high reputation of Washington fruit in the markets of other states. The reputation of Washington apples and their assets are of great value to our large fruit growers, and their interests demanded that the standards be maintained."

WINS WILDER PRIZE.

The American Pomological society at its convention recently held at Council Bluffs, Iowa, awarded the Wilder medal to the Rainier apple, according to a letter just received by the Washington Nursery company of Toppenish, Wash.

The Wilder medal is the Nobel prize of the fruit world. It was provided for by a trust fund left in 1886 by the late Marshall P. Wilder, scientist and pomologist, with instructions that it was to be awarded to a new fruit only after exhaustive investigation had produced proof of that fruit's supreme merit.

The Rainier apple originated in the Yakima valley.

To Sell Moleskins

Moles, which cause grief to gardeners by interference with plant roots, are being turned to good use, says a Yakima report. They are being captured and skinned by agents of the biological survey and their skins are being offered for sale by the government. Miss Edna M. Ladwig, county home demonstration agent, has a couple-of the mole skins, one tanned and one untanned. The tanned skins sell for 35 cents each and the untanned for 25 cents. She is taking them with her to the classes in millinery, as three of them make a handsome brim for a hat. They are also used in making collars and cuffs on suits and coats and in trimming dresses. They could be easily fashioned into scarfs or muffs, she says.

The skins are soft and a lovely shade of gray. They appeal to many women who for humanitarian reasons do not care to wear the skins of most animals which are trapped. The moles, having been classified with the pests, owing to their interference with agriculture, will have to go whether one opposes animal slaughter or not.

PAINT THINGS UP A BIT.

Do not paint when it is too cold, but make use of an occasional idle hour by painting up some of the machinery or implements while they are not being used.

Mail-o-Grams

By State College Specialists

Apiculture.

B. A. Slocum, specialist in apiculture, says: To assure straight combs and decrease the number of drones, use full sheets of either heavy or medium brood foundation in the brood frames.

Dairy.

Don G. Magruder, specialist in dairying, says: Use a dairy sire whose near relatives have an average production of at least 500 pounds of butterfat.

Farm Crops.

Leonard Hegnauer, specialist in crops and soils, says: This is a good time to scatter a little sweet clover seed on partially cleared land and on rough hills as an aid to next year's pasturage.

Farm Management.

R. N. Miller, farm management demonstrator, says: Keep exposed surfaces of farm machinery covered with a good paint, grease wearing surfaces and begin repairs, for there will be other work for March.

Home Management.

M. Minerva Lawrence, specialist in home management, says: Take an inventory of the working equipment in your kitchen and dispose of all useless pieces.

Horticulture.

M. D. Armstrong, specialist in horticulture, says: Now is a good time to go over the tools and orchard equipment for the needed repairs.



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Proper Cultivation

Brings Success to Chris Turner

Another successful year has been recorded on the Chris Turner farm on Spanaway prairie, in Pierce county. Mr. Turner reports that in spite of one of the driest seasons ever known in the county he has been able to retain enough moisture for the growth of vegetables and small fruits, all of which have grown equally as well as if grown on some of the lower soils.

None of this land has ever been irrigated, since it is almost impractical, due to the type of soil and absence of a large head of water for this purpose. Mr. Turner, however, feels that cultivation at frequent intervals will prevent excessive evaporation and keep the soil at the right consistency for furnishing plant foods to the crops.

"It is my plan to cultivate just enough to create a good dust mulch and keep the soil in this condition all through the summer," explained Mr. Turner upon being asked how he was able to grow such large vegetables and grain crops. "It is an easy matter with the garden and other cultivated crops, and we plan on stirring the soil about every 10 days. With the grain crops it is different, and it is somewhat harder to regulate the moisture, although practically all of the grain seeded this year came through in excellent condition, although some of it was set back slightly by the dry weather."

One need only to see the large exhibit of vegetables, grains, grasses and fruits, which Mr. Turner arranged at the western Washington fair at Puyallup, to realize that he is getting excellent results from his upland farm.

Some of his best varieties grown on the upland are Iowa Goldmine and King Phillip. Both of these did very well and seemed to yield more than the Minnesota 13, which is commonly grown in western Washington. Brown Squarehead wheat has been found to be one of the best yielding grains. Tall oat and Italian rye grass mixed with red clover is recommended by Mr. Turner for a hay crop on the upland gravelly soils. Sunflowers also do well, are hardy plants and usually mature in good shape before frosts affect them.

For apples Mr. Turner recommends the Waxen, Winter Banana and Wagner. The Anjou and Winter Bartlett pears have been very promising, although other varieties do well. Mr. Turner also has about 30 different kinds of vegetables that produced good crops under his system of farming.

"There are too many of the farmers who have gone too far back into the timber and river valleys to take up their farms," according to Mr. Turner. "This prairie land has been passed up by homeseekers who were looking for a location in the early days." Mr. Turner expects to have one of the neatest farms in the county in a course of time, and two new buildings have been erected this summer to complete the farm plan.

Complete Dress Form Work

Miss E. Belle Alger, clothing specialist of the Washington State college, met the county clothing leaders in Yakima when it was decided to complete the dress form work which has been carried on in the valley for a couple of years. It is estimated by Miss Edna M. Ladwig, county home demonstration agent, that there are at least 1500 dress forms in the county at the present time.

Mrs. W. E. Blair of lower Naches was reelected county clothing leader at a recent meeting and Mrs. Percy Wickersham of Tieton county millinery leader.

Those attending the meeting were Miss Alger, Miss Ladwig, Mrs. A. W. Schwartze of South Nob Hill, Mrs. Rex Rudd of Summitview, Mrs. Will Smith of Mabton, Mrs. H. L. Lumpkin and Mrs. E. V. Rightmire of Cowiche, Mrs. Chester Miller of Fairview, Mrs. W. C. Kennedy and Mrs. W. D. Dodd of Harrah, Mrs. C. K. Sprong of Grandview, Mrs. P. L. Medaris of Parker, Mrs. H. S. Hawn of Wiley City, Mrs. Paul Engman of Selah, Mrs. J. A. Cadwallader of Tieton, Mrs H. G. Cowling of Rimrock, Mrs. George Maltby of Selah, Mrs. J. Stevens of Pomona, Mrs. Blair and Mrs. Wickersham.

Cooking Qualities of Potatoes

An interesting demonstration was put on to show the cooking qualities of three leading varieties of potatoes by Miss Ruth Kennedy, county home demonstration agent of Thurston county. The three varieties were the Burbank, White Star and Netted Gem. The time required for cooking each variety in three different ways was recorded as follows:

Burbank: Boiled, 36 minutes; baked, 1 hour; steamed, 50 minutes. White Star: Boiled, 34 minutes; baked, 1 hour; steamed, 38 minutes. Netted Gem: Boiled, 28 minutes; baked, 1 hour; steamed, 47 minutes. Gold Coin: Boiled, 22 minutes; baked, 45 minutes, and steamed, 35 minutes.

The last variety, the Gold Coin, was the only variety of round white potato shown. The three others are the long white type and are most desired for cooking purposes. The reason was plainly shown by the fact that the round white potato, although baking in a shorter time and proved to be a much more delicious variety for this purpose than any of the others, it did not boil or steam satisfactorily. In both cases it fell apart and cooked down into a mush, thus proving it to be a poor variety for general use in the home. There was very little difference in the time required for cooking the other three varieties, and all three proved to be a very good potato for general use. The difference in time, said Miss Kennedy, can not be taken as authentic for all samples of these varieties, but were merely what was found from this particular trial.

SKAMANIA GRANGE ELECTS.

A. E. Fitzgerald was chosen to head the Skamania county Pomona grange as master for the ensuing year, at the annual meeting November 22. Other principal officers are as follows: Overseer, E. L. Marble; steward, John Butler; chaplain, the Rev. Robert Harbutt; treasurer, O. J. Jansen; secretary, B. C. Loring; gatekeeper, Erick Larsen; Ceres, Lucy Butler; Pomona, Pearl Walker; Flora, Cora Fitzgerald; lady assistant steward, Ella Marble; executive committeeman, William Franzel.

American Foul Brood

American foul brood is one of our worst bee diseases, and is caused by a bacteria which is found in the honey, according to A. B. Slocum, bee specialist of the state college extension service. In cleaning out a diseased hive the old colony is set to one side, and a new hive placed on the old stand. Lay a newspaper in front of the hive and shake all the bees onto it. They will enter the hive and begin working.

All of the infected honey from the old hive can be used for anything except for feeding bees, since the honey is not injurious to humans. There is no germicide yet found that is strong enough to kill the foul brood bacteria, so it is necessary to use fire in cleaning up the old brood combs. There should be frames with foundation combs in the new hive, which prevents the bees from depositing any honey containing germs. They will be compelled to consume it all for the manufacture of wax, with which to build the new combs.

FEWER APPLES SHIPPED.

Reports issued by the United States department of agriculture show that the total shipments of boxed apples up to November 1 this year amount to 15,103 cars, of which the state of Washington alone furnished 8248 cars and the Wenatchee district over 5000 cars. California shipped 2645 cars, Idaho 1414 and Colorado 1160.

Last year at the same date the total boxed apple shipments were 30,069 or practically twice as many, and Washington shipped 14,759 of these.

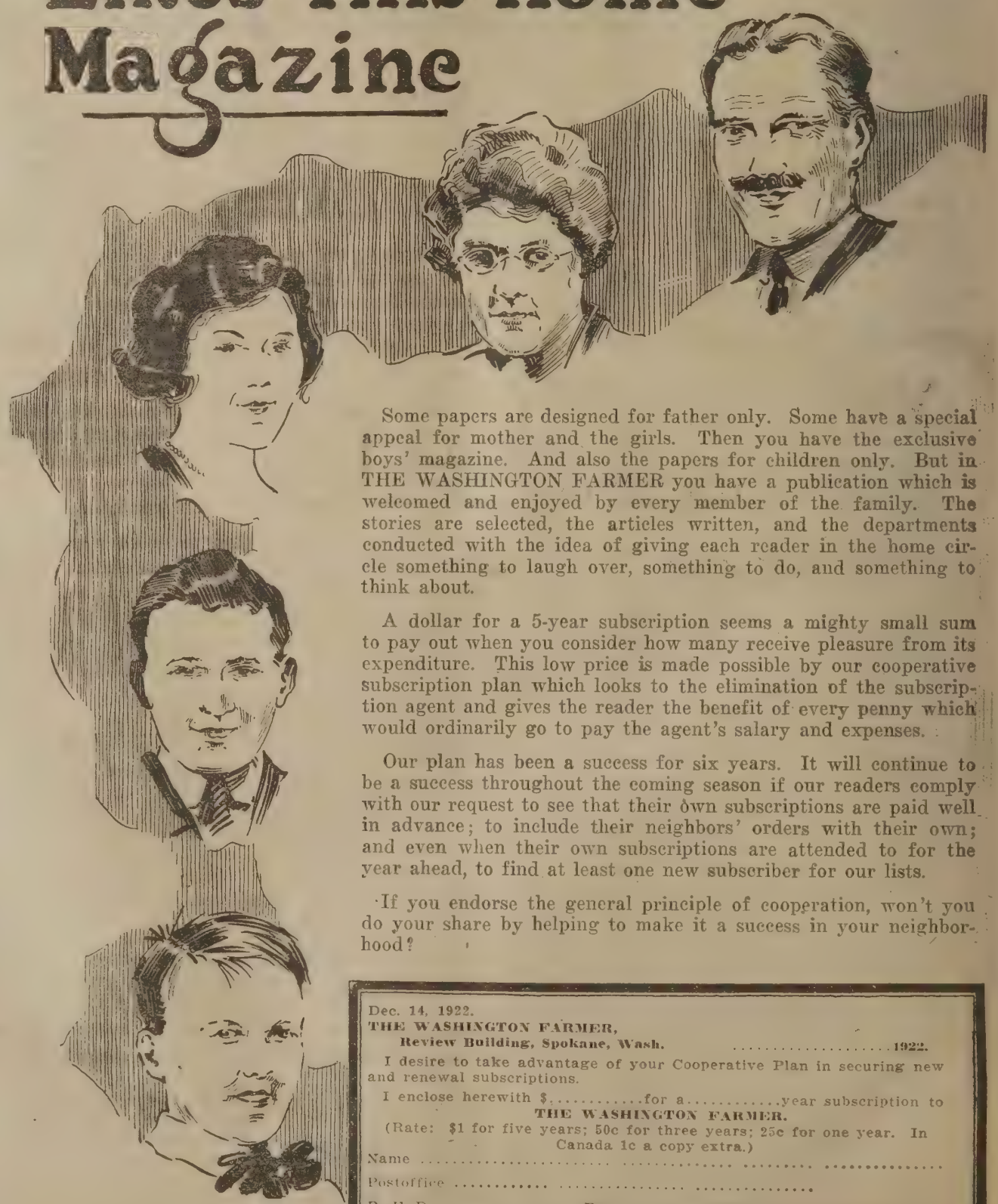
Cherries and Gooseberries

J. A. Campbell of Vashon, King county, finds both sour cherries and English gooseberries profitable crops for their district. Last year the cherries produced exceptionally well and brought a good price on the local market.

"As for the gooseberries, there is very little work in harvesting them, and there is no trouble in disposing of the entire crop at a comparatively better price than for other kinds of berries," according to Mr. Campbell. "The difficulty with the crop is in securing new stock, since very few of the nurseries carry this gooseberry, and it does not reproduce itself as readily as some of the other varieties."

The Campbell farm is only a short distance from the town of Vashon and consists of between four and five acres.

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ORCHARD AND GARDEN

Orchard Problems

By O. M. MORRIS,
Head Department of Horticulture, Washington, D. C.

I planted a fruit tree some time ago and the tree died, but there are several sprouts coming up from the roots. If I should cut off the dead tree would it be sufficient to leave the sprouts growing and would they bear fruit later on?
Vancouver, Wash. M. R.

The sprouts coming up around your apple trees would, if permitted, probably make fruit trees. The probabilities are that they are from below the graft and would be seedling apple trees of very doubtful quality of fruit. You would have also the added disadvantage of a stump rotting in the ground that might develop and destroy the tree a few years later. If you set the trees last year and could select one large sprout and bud it or graft it you might save some time in securing fruit. If your tree was planted last year or the year before, however, it will generally be a saving to take out the stump and set a new tree.

What is the proper way to care for the asparagus bed in the fall? MRS. J. E. W.
Cottage Grove, Ore.

The best method of caring for an asparagus bed in the autumn is to clear the ground of any weeds, litter and trash, give it a slight cultivation, if there is any crust formed, and then mulch the entire bed or particularly the rows if they are set wide apart, with manure from the horse stables or cattle yards. Place this mulch about four inches to six inches deep when it is fresh. It will ordinarily settle down to three inches or a little more in depth and will make a good cover and good fertilizer for your crop next season. If your bed is a small one in the yard, I would mulch the entire bed.

TO REDUCE DISEASE AMONG BEES.

Four years ago Pierce county had more diseased bees than any other county in the state. Now the disease is reduced to 7 per cent, due to the untiring work of the beekeepers and their cooperation with A. B. Slocum, bee specialist of the state college extension service. While 7 per cent of disease is considered clean, the beekeepers expect to reduce the figure to 5 per cent next year. Approximately $500 has been saved in Pierce county alone by ridding each apiary of disease. This, of course, includes the saving of healthy colonies, which would otherwise have been infected and lost.

Berry Post Problem

Berry growers are finding that the berry post problem is of greater importance each year. Good cedar is not only getting scarcer, but the old posts are rotting off at the ground line and breaking off. To avoid such trouble the growers must either use other timber than they are using or must give what we have some sort of treatment that will make it last. Fortunately it is possible to treat timbers so that they will last for more than twice as long as they would without such treatment.

A certain fungi is responsible for the decay and one should not blame it on the chemical action of the soil or the wood itself. Moisture, air and favorable temperature are required for the fungus and our climatic conditions provide the moisture and favorable temperature. The soil is full of air down to a considerable depth and the wood material furnishes the food. The fungi come from the rotting wood in the soil, or the spores get onto wood from the air or from contact with other decaying wood. Wood buried in water or in dry situations will last for hundreds of years, due to the fact that either air or water is not present. In moist soils or in contact with moist soil decay is rapid.

Creosote is one of the best preservatives for this use and, in fact, it is the base for many patented preservatives on the market. Creosote is quite a variable compound obtained from distillation of tar-like substances. Coal tar creosote is the best form to use. The creosote not only poisons the wood against fungus attack, but also to some extent excludes air and moisture.

Posts to be creosoted should be well seasoned. The best form of treatment is dipping. Dip the portion to go into the ground and a few inches above. The creosote should be heated to 220 degrees F. for dipping purposes. The posts are left in this solution for two to six hours.

Willow, alder, maple and other soft woods may be used for fence posts if treated with the creosote method. Such timbers will often outlast other more durable timbers that have not been treated.

The growers of berries should be looking to the future on this particular means of preventing loss of their posts.

The Berry Grower

"For a small berry farm of about 15 acres there should be about five acres of raspberries, both early and late varieties," says L. M. Hatch, a well-known berry grower and orchardist of Alderton, in Pierce county. "It is also advisable to have strawberries because they come early in the season and work well as a combination crop.

"One acre of loganberries will work well in the combination and I would have three acres each of bush and Evergreen blackberries. In this way the grower can have his crop harvested over a longer period of time than by some of the other combinations now in use. In fact, the above varieties will extend the picking season from June first until the first of September.

"Some berry men feel that such crops as asparagus and rhubarb are profitable crops in connection with the small fruits, since both come early and can be out of the way before the main rush of the berry season is on. Both of them need quick action, however, and should not be attempted unless the market in one's own location can be properly taken care of.

"The main point to look for is to get a long harvest season which requires the least amount of hired help. If there is a desire for tree crops, such varieties as sour cherries and pears can be planted in the berry rows with good results, since there is a growing demand for both. As for apples, I would not advise any, since I do not believe they make a good combination with berries."

Disease on Berry Bushes

"A blue or purple appearance of the new berry shoots has been found in the Puyallup valley this last season," said Arthur Frank, plant pathologist of the western Washington experiment station. "In such cases the affected shoots soon died and the growers were much concerned as to just what sort of a disease this was and what might be expected from it.

"This trouble seemed to be caused by a fungus of some kind, but it does not spread through the field. If the affected canes were cut out, no more of the disease appeared. None has since been found in the affected fields.

"A similar disease was common on the blackcap raspberries a few years ago, but it was more virulent than this new trouble with the red raspberries. As a result of the disease on blackcaps they can not be grown largely in this district for any length of time without being affected and the plants killed by the trouble.

"The blue stem on the red raspberries is not that sort of a trouble. It belongs to the type of degeneration diseases, it is believed. This is a type of disease that affects plants year by year, reducing their yield and finally making the plant a worthless individual. This type of disease seems to be present on red raspberries at the present time, particularly the Cuthbert variety. Often a Cuthbert field is found in which there will be a considerable number of plants which do not do well in spite of good care. These are very evidently suffering from some sort of a degeneration trouble.

"Nothing can be done with such plants except to remove from the field and destroy them. No sets should ever be taken from such fields for planting. Sets should be taken only from vigorous growing, high-yielding plants and not from these weak plants. Much of the trouble at the present time is due to the fact that during the times of high prices many fields were planted with any kind of plants. Such plants should not be used for furnishing new fields.

"In this type of degeneration diseases we find such troubles as leaf curl, mosaic, blue stem and others. In western Washington at the present time we have the leaf curl and blue stem. The true mosaic has not yet been found. Further study and experiments with these types of trouble will yield greater information and also methods whereby they may be combatted more effectively."

POISONING ORCHARD MICE.

In keeping pace with the calls for poison Yakima County Agent A. E. Lovett reports mixing over 10,000 pounds of poisoned bait in the campaign against orchard mice. Leo K. Couch of the United States biological survey, who is directing the preparation of the poisoned bait, says that it takes about two pounds of bait an acre and that the best method is to scatter the bait in the runways. These, he said, were readily located by raising up the alfalfa. Placed in this way the poison is protected from birds. Later when rain or snow comes caches of the poison are better

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Potato Culture

Three Main Things to Consider

"The three main points of potato culture are good soil, careful preparation of the seed bed and good seed." This is the formula set down by Guy Taylor of Olympia, when asked to tell something about his secret of success with potatoes.

"We have a sandy loam soil, which is subirrigated. If possible we plant on land that has been in clover. If turned under in the fall the sod will rot well and there will not be so much danger of rhizoctonia. We plow as early as possible in the fall and turn the sod under about three or four inches. In the spring we double disk and harrow and then plow in the opposite direction.

"A planter is very good for planting, but we use a shovel plow, going twice in the row and drop by hand. The field should be harrowed as soon as planted, and again just as the plants are coming through the ground. Deep cultivation should be practiced close to the rows for the first two or three times and then stirring the ground farther out as the plants become older. If the patch is cultivated once a week it keeps the growth more even, and there is less danger of the tubers being odd shapes. By regulating the distances of the plants in the row one can govern the size of the tubers to a certain extent. We generally plant about 200 pounds of seed to the acre, using 12-ounce seed pieces 14 inches in the row.

"We have found," continued Mr. Taylor, "that by applying barnyard manure in lines where the furrows are to be made we can realize about $3 per load for the manure by the increase in yield of the potatoes."

Mr. Taylor stated that it was his belief that Thurston county had some of the best potato land on the Coast, and there is a possibility of its becoming one of the important potato sections in due course of time.

A Result of Good Breeding

Some interesting data which demonstrates the value of the purebred bull comes from Ray West, Guernsey breeder, of Yakima.

Mr. West showed the testing records on two heifers, both from Shorthorn cows, but one was sired by a registered Guernsey bull and the other by a grade Holstein. The heifers are practically the same age. The first produced 8500 pounds of milk that tested 5.65 or 1.86 pounds of butterfat a day. The heifer from the grade Holstein produced 9400 pounds of milk for the year and showed a 3.65 test or a daily butterfat production of 1.25 pounds.

The heifer sired by the registered bull produced a little over a half pound of fat daily over the other and it shows that, although there may be a noticeable difference in the amount of milk given in favor of the poorer cow, the fat content may be much lower in an animal from unknown breeding.

CHELAN COUNTY POULTRY SHOW.

The Chelan County Poultry show will be held in Wenatchee January 8-12. The following officers are in charge of the arrangements: V. L. Garner, president; J. H. Tyrell, secretary; J. H. Gormley, treasurer; I. Van Valkenburg, superintendent of 1923 show.

Farmers' Want Ads

HELP WANTED—Female 1

LADY TO KEEP HOUSE FOR WIDOWER. A good home and fair wages; live on a farm; for particulars write L. B. Emmons, Joseph, Oregon.

HELP WANTED—Male 3

RAILWAY MAIL CLERKS, GOV'T. CLERKS and carriers needed; experience unnecessary. Particulars free. Write Mokane, Dept. B-21, Denver, Col.

HELP WANTED GENERAL 5

ARE YOU SATISFIED? THINGS ARE NOT coming your way. Your present occupation has not turned out as rosy as you first thought it would. You want to make a change but just how you do not know. Well this may interest you. We are an old established manufacturing concern that is expanding and going out after more business. We can use a man or woman of average intelligence, who will fit in with our organization. Must be of good health, steady worker, and have some money. To such a person we have a real opportunity. Manufacturer, care Washington Farmer, Spokane.

500 MORE PERSONS IN NORTHWESTERN states are lawfully entitled to positions with Uncle Sam. A remarkable opportunity. Investigate. Write Civil Service dept., Western Institute of Accountancy, Old Nat'l Bank bldg., Spokane, Wash.

EDUCATIONAL 45

BEHNKE-WALKER BUSINESS COLLEGE of Portland; one of the largest institutions of its kind in America; guarantees a position to every graduate. Enroll now for fall term. A few months training under expert instructors and you are ready to enter business and win. Behnke-Warner graduates are always in demand. Write today for our free success catalogue. Address Behnke-Walker Business College, Fourth, near Morrison, Portland, Ore.

ACCOUNTANTS, AUDITORS 36

C. W. WATERS, INCOME TAX EXPERT, 501 Empire State building, Spokane.

ACCOUNTANTS, AUDITORS (Continued) 36

WE PREPARE INCOME TAX STATEMENTS and do all kinds of bookkeeping and accounting work. J. I. Kinman & Co., Certified Public Accountants, 1209-14 Old Nat. Bank bldg., Spokane.

C. B. McMATH COMPANY, INCOME TAX service. Old National Bank building, Spokane.

FRESH FOOD PRODUCTS 51-1

SEND 'EM FAMOUS KITTITAS VALLEY alfalfa honey for Christmas. Everything prepaid to 4th zone. 60-lb. can, $7.50; 2, $14.75; 6 5-lb. pails, $4.50; 3 10s, $4.25; 1, $1.70. You send the money, we'll send the honey. Kittitas Valley Apiaries, Ellensburg, Wash.

HONEY BRAND HONEY—CHOICE ALFALfa, sweet clover honey; quality guaranteed. It will please the little "honeys" and the older ones, too. One 60-pound can, $6.50; two for $12.75. Write for prices in pails. Oliver Sires, Wapato, Wash.

HONEY—FINE QUALITY ALFALFA, SWEET clover product; 3 10-lb. pails, prepaid, second zone, $4.25; 60-lb. can, prepaid, second zone, $7.30; two, $12.75, not prepaid. Harry Fisher, Prosser, Wash.

POPULAR BRAND HAPPY HOME HONEY—One 60-lb. can, $6.50; two cans, $12.75; six 10-lb. pails, $7.50; comb honey prices on request. H. N. Paul, Mabton, Wash.

EXTRACTED HONEY — ONE 60-LB. CAN, $6.50; two 60-lb. cans, $12.75, collect; three No. 10 pails, prepaid, third zone, $5. Wells D. Rose, Sunnyside, Wash.

FINEST HONEY—60-LB. CAN, $6.50; 2 CANS, $12.75, collect; 10 pounds, $1.70; 5, $1; both postpaid; satisfaction guaranteed. Geo. Bancroft, Hermiston, Ore.

4 LBS. SALMON BELLIES AND 3 LBS. absolutely boneless codfish, delivered by mail, prepaid, $2. Coffin Fish Co., Seattle, Wash.

GOLD MEDAL BRAND YAKIMA ALFALFA, sweet clover honey; 60-lb. can, $6.50; two cans, $12.75. C. W. Higgins, Wapato, Wash.

DELICIOUS CLOVER HONEY, 120 POUNDS, $11; 60 pounds, $5.75; 30 pounds, $3. Kingsbury, Twin Falls, Idaho.

DRIED LOGANBERRIES, TEN POUNDS, PREpaid, $4; sample, 25c. Kingwood Orchards, Salem, Ore.

COMB HONEY, FANCY, $4.50; NO. 1, $4. O. B. Roberts, Prosser, Wash.

MISCELLANEOUS—FOR SALE 60

SASH AND DOORS—O. B. WILLIAMS CO., 1943 First ave. So., Seattle. Chicken house sash, 20" wide by 25" high, 80c; a dozen different sizes in stock for immediate shipment. Skylights for chicken houses, 36"x40"; price, glazed, $2. This is the size recommended by the Western Washington experiment station. We carry them in stock for immediate shipment. Sash and doors for all purposes at lowest prices. All orders receive prompt attention. Our large illustrated catalog No. 35, showing full line of building material and built-in fixtures for the home, free on request. O. B. Williams Co. Established 1899.

HOMESPUN TOBACCO—CHEWING, FIVE pounds, $1.75; 10 pounds, $3; 20 pounds, $5; smoking, 5 pounds, $1.25; 10 pounds, $2; 20 pounds, $3.50. Send no money, pay when received. Cooperative Tobacco Growers, Paducah, Ky.

HOMESPUN TOBACCO—SMOKING, 5 LBS., $1.25; 10 lbs., $2; 20 lbs., $3.50; chewing, 5 lbs., $1.75; 10 lbs., $3. Furnish free recipe for preparing. Send no money. Pay when received, O'Connor Smokehouse, Mayfield, Ky.

PIPE—GET PARTICULARS ON OUR SPEcial flue pipe, 1¼, 1½ and 2 inch. Big saving on it. We also save you on roofing, belting, pumps, engines, cable, etc. Alaska Junk Co., S120 Adams, Spokane, Wash.

WALL BOARD—WRITE FOR SAMPLE OF Washington plaster wall board; won't warp, won't burn. Manufactured by Washington Building Products company, 6851 E. Marginal Way, Seattle, Wash.

NATURAL LEAF TOBACCO—CHEWING, 5 pounds, $1.75; 10 pounds, $3; 20 pounds, $5. Smoking, 5 pounds, $1.25; 10 pounds, $2. Pay when received. Tobacco Growers' Union, Paducah, Ky.

HOME SPUN SMOKING TOBACCO, MILD AND mellow; 10 lbs., $1.75; 20 lbs., $3; delivery guaranteed. We furnish free recipe for preparing. Smoking Tobacco Exchange, Sedalia, Ky.

FREEEVERYBODY CAN BUY GROCERIES wholesale. We accept orders of $10 and up. Write for our free list. Save dollars. People's Grocery Company "M." 701 Olive st., Seattle.

ALL WOOL KNITTING YARN FOR SALE, direct from manufacturer, at 95c, $1.35, $1.60 per lb.; postage paid on $5 orders. Free samples. H. A. Bartlett Harmony, Maine.

TOBACCO—SELECT 3-YEAR-OLD KENTUCKY leaf. Pay for tobacco and postage when received. 5 lbs., smoking, $1.25; 5 lbs. chewing, $1.50. Farmers' Union, Hawesville, Ky.

ALMONDS—CALIFORNIA SOFT SHELL, 10 lbs., $3; express charges prepaid; 5 lbs. almonds and 5 lbs., seedless raisins, $2.15, delivered. P. S. Vawter, Arbuckle, Cal.

BUY YOUR ALFALFA HAY AND "NETTED Gem" potatoes direct from grower, cabbage, one cent pound. Samuel Shockley, Outlook, Wn.

$1.50 STROPS KEEP YOUR RAZOR IN SHAPE without honing. Paul Lundgren, Port Angeles, Wash.

PURE CANE MOLASSES FOR STOCK. LOW prices. Write Lewis & Co., 8151 Lincoln st., Spokane.

MISCELLANEOUS. 61

SPLENDID YOUNG REGISTERED PERCHERon stallion for good car or truck. Ed Sellick, Kennewick, Wash.

MISCELLANEOUS—Wanted. 63

EGGS, APPLES, HUCKLEBERRIES—WRITE us, Uncle's Delicious Pies, inc.; capital stock $50,000. 554 Mississippi avenue, Portland.

STOVE REPAIRING 128

WRITE MYER RUBENS, SPOKANE, ABOUT stove repairs, welding broken parts, nickel plating.

PATENTS 150

PATENTS—WRITE TODAY FOR FREE INstruction book and evidence of conception blank. Send sketch or model for examination and opinion; strictly confidential. No delay in my offices; my reply special delivery. Reasonable terms. Personal attention. Clarence O'Brien, registered patent lawyer, 534 Southern building, Washington, D. C.

FUR-BEARING ANIMALS 170

SILVER AND CROSS FOXES FOR SALE. William Rambo, 407 Sprague, Spokane.

PETS—Dogs, Birds, Etc. 171

WHITE COLLIES FOR CHRISTMAS, REAsonable. Urbandale Farm, Oakley, Idaho.

(Continued on the following page.)

FARMERS' WANT ADS

This is the farmers' "want," "sale" and "exchange" department for small advertisements of farmers, including live stock and poultry.

Advertising rates for ads running 1 to 3 times, 10c per word per insertion, with a special rate to Farmer subscribers, as follows: Ads running 4 to 12 times, 9c per word per insertion; ads running 13 times or more, 8c per word per insertion.

All commercial and land advertising, 10 cents per word each insertion. Open also to nonsubscribers.

In using these columns advertisers must observe: (1) No advertisements will be inserted for less than $1.00. (2) Every word, number and initial, including name and address, must be paid for. (3) New advertisements, changes of copy or cancellations must reach general office, Spokane, Wash., 10 days in advance of publication date. (4) Cash must accompany order.

Above rates include insertion in The Washington Farmer, The Idaho Farmer and The Oregon Farmer, which constitute the Pacific Northwest Farm Trio, 46 Review building, Spokane, Wash.

PETS—Dogs, Birds, Etc. (Continued) 171

WHEN YOU WANT A DOG, CANARY, PARrot, rabbits or a pet or pet stock supplies, cages, feeds or remedies, write. We are headquarters in the northwest. Routledge Bird, Pet & Animal Co., 174 Union avenue, North, Portland, Ore.

REGISTERED AMERICAN KENNEL CLUB Airedale puppies; large, vigorous kind; best all-around dogs to be found. Only a few choice ones left. Pedigrees and prices on application. Snopeke Kennels, Box 213, American Falls, Idaho.

FOR SALE—PEDIGREED AIREDALE PUPS. Photos and price on application. A. G. Lucier, Powell, Wyo.

YOUNG TRAINED FOX HOUNDS FOR SALE. E. L. Beck, Pomeroy, Wash.

POULTRY 174

$2000 FOR FIVE HENS—A RECORD PRICE for record hens. We announce the purchase of F. E. Gilbert's winning pen of White Leghorns at the recent Puyallup egg laying contest. These five birds laid 1421 eggs in 12 months, thus establishing a new world's record. These birds are to be mated with the best cockerel to be obtained and used in building up Queen Quality strain of chicks. We have also contracted with Mr. Gilbert for the eggs from the pen sisters of these wonderful birds. We will have a limited number of chicks and eggs from them for sale this season. The greater part of them will be used for our own use. In addition to the Gilbert birds, we will have many flocks direct from Hollywood and Tancred stock. We also hatch R. I. Red and Barred Rock chicks of exceptional quality. We are now booking orders for early delivery and have sufficient capacity to assure prompt delivery at time promised. Incubators, 15 per cent off. We offer a special discount of 15 per cent on Queen incubators purchased from us during November and December. In addition to the Queen, we carry the Master's incubator, Petaluma electric incubator, Blue Flame brooders, American brooder stove and are agents for the Kresky brooder stove. Write for our new catalog. Queen Hatcher, 87 Sewart st, Seattle, Wash. Ell. 2054.

"HENACRES" BABY CHICKS FOR 1923. IT is time to plan your poultry work for next spring and we suggest that you write for our free illustrated catalog now. The booklet contains lots of information on poultry management, gives our feeding formulas, etc., besides describing our stock. "Henacres" Leghorns have made good all over the northwest, so you take no chances in buying them. Some one in your neighborhood knows us, ask him. We have already sold 40,000 chicks for 1923. "Henacres," Box A, Prosser, Wash.

CERTIFIED WHITE LEGHORN BABY chicks, hatched in the world's largest electric hatchery, for spring, 1923 delivery. January prices, $4 per 25; $8 per 50; $15 per 100. Special prices, 500 and 1000 lots. Order early chicks now and realize big broiler profits. Choice, free range, high egg-producing breeding flocks inspected by Sonoma county farm bureau. Safe arrival guaranteed. Must Hatch Incubator Co., 445 Seventh st., Petaluma, Cal.

EBORALL'S S. C. WHITE LEGHORN BABY chicks, $17 per 100; $160 per thousand. Our twenty-three years of breeding poultry and operating incubators enables us to hatch a strong, vigorous chick that is easy to raise and develops early. We hatch only large white eggs produced on our own farm. Weekly from Jan. 15. Order chicks early. We guarantee satisfaction. Send for circlular. Crystal White Poultry Farm, McMinnville, Ore.

BABY CHICKS—FRESLAID FARM HUSKies for 1923. Ba.ish hard times with a bunch of our profit-making Leghorn chicks. Time flies. The early buyers are picking the best dates so write now for free instructive catalog. It tells how to make $500 a year from your farm poultry. Satisfied customers made our growth possible. We claim the largest electric incubator in the world. Freshlaid Farm, Colfax, Wash.

BUY YOUR BABY CHICKS FROM THE White hatchery, member of the Sonoma county farm bureau accredited hatcheries. All flocks approved by farm bureau inspector. We handle accredited "A" grade chicks and "AA" grade for the poultryman who wants something better. Write us at once for information, prices, etc. White Hatchery, Petaluma, Cal.

TRAPNESTED CARNATION WHITE LEGhorns; famous for their vigor and winter layers. We specialize on baby chicks, setting eggs and breeding stock. We successfully shipped hundreds of pullets this fall to Honolulu, which shows the demand for Carnation stock. Ernest Raush, Carnation Poultry Farm, Kent, Wash.

BABY CHICKS OF BEST QUALITY ARE hatched in our Petayluma electric or hot water incubators. Buy chicks hatched in Petaluma incubators or hatch for yourself. Send for free literature and let us tell you something worth dollars to you. Petaluma Electric Incubator Co., Petaluma, Cal.

S. C. ENGLISH STRAIN ANCONAS; COCKERels, $2.50 to $5 each. Rhode Island Red cockerels, $2.50 to $5 each. Fawn Indian Runner ducks and drakes, $3 each. Toulouse geese, $5.50 each or $10 pair. All from first class prize winning stock. Peerless Poultry Farm, K. Broeder, Sherwood, Ore.

WHITE LEGHORN BABY CHIX FOR SUMmer and fall months from stock accredited by Sonoma county farm bureau. We guarantee safe arrival. Write for prices and literature. The Pioneer Hatchery, 422 Sixth street, Petaluma, Cal.

DAY-OLD PULLETS, GUARANTEED S. C. White Leghorn day-old pullets, also day-old broilers; established 1912. Eureka Hatchery, 628 D st., Petaluma, Cal. James K. Hirst, Prop. Refs. gladly furnished.

AS USUAL, WHITE LEGHORN BABY CHICKS from hens bred for heavy egg production. Pure Tancred strain, $18 per 100; $165 per 1000. D. A. Gillette, R. 4, Yakima, Wash.

GET THE BEST PRICES FOR YOUR POULtry, eggs, turkeys, geese, veal and hogs. Write for quotations. Hotchkiss Produce Co., Spokane.

40 QUALITY R. I. RED COCKERELS, $5 and up. Write your wants. Can please you. J. Nonnenmacher, Route 3, Yakima, Wash.

S. C. BROWN LEGHORNS, COCKERELS, hens, pullets; none better; stock guaranteed. E. H. Rosenkranz, Colfax, Wash.

MAMMOTH LIGHT BRAHMA COCKERELS and pullets. Adam Schafer, Hillyard, Wash. Phone Glen. 3257J.

RHODE ISLAND WHITE COCKERELS, GOOD type; heavy laying strain. Van Lawson, McMinnville, Ore.

PUREBRED BLACK MINORCA AND WHITE Wyandotte cockerels. C. McClelland, Boise, Idaho. R. 1.

1949 COCKERELS, 49 VARIETIES; HATCHING eggs. Free book. Aye Bros., Blair, Neb., Box 4.

SILVER SPANGLED HAMBURG COCKERELS, $3. E. P. Dashiell, Geraldine, Mont.

POULTRY (Continued) 174

BABY CHICKS—OREGON'S BEST AT REAsonable prices. Leghorns, Reds, Anconas, Minorcas, Barred Rocks, White Rocks. We pride ourselves on a long list of satisfied customers. Postal secures free catalog. C. N. Needham, Salem, Ore.

BABY CHICKS AND HATCHING EGGS. DR. Duganne's trap nested White Leghorns and J. M. McCaleb's Hollywood strain. Also the best of O. A. C. Barred Plymouth Rock baby chicks. Catalog on request. Mark A. Webster, Corvallis, Ore.

100 ANCONA 1 AND 2 YEAR OLD HENS, 50 pullets; Sheppard strain. Also a few choice Ancona cockerels and White Wyandotte cockerels, regal strain; all priced to sell. Mrs. Frank Hopkins, Weiser, Idaho.

1923 WHITE LEGHORN BABY CHICKS. O. A. C. strain; breeders mated to pedigreed cockerels, backed by 250 to 300 egg records. Our prices are as usual, right; ask for them. Moorhead Poultry Farms, Granger, Wash.

BEST OREGON AGRICULTURAL COLLEGE stock chicks, $16 per 100; $150 per 1000; eggs, $1.25 per setting, $6 per 100; postage prepaid. Strong, healthy chicks guaranteed. Russell Poultry Yards, Corvallis, Ore.

BABY CHIX, 14½C-50C. EGGS, 4½C-40C; heavy laying White Leghorn strain. Chix and eggs from heavier breeds. Order now for suitable stock and service. Chicoppep Poultry Yards, Roseburg, Ore.

DOLLARS FOR YOUR EGGS—WE PAY THE top market prices for your eggs and poultry, also turkeys, ducks and geese. Daily cash remittances. McClintock-Trunkey Co., produce department, Spokane.

ANCONA COCKERELS, SAME BREEDING AS my five pullets that laid 1029 eggs, 1921-22 western Washington contest. Booking eggs and chick orders. Catalog on request. Oscar Dunlap, Junction City, Ore.

RHODE ISLAND RED CHICKS FROM BRED to lay exhibition quality stock. Hatched from the same matings that produce our own young stock. Booking orders now. C. R. Quinn, Oregon City, Ore., R. 3.

RAU'S QUALITY CHICKS, THE LAYING LEGhorns; none better at any price. Our forty years' experience back of these chicks. Free price list tells it all. Rau's Quality Hatchery, Tacoma, Wash.

PERKINS SUPERIOR WHITE LEGHORN baby chicks, $15 per 100; splendid trap nested laying stock. I have bred Leghorns 15 years. Chas. L. Perkins, 1337 Burrage, Portland, Ore.

HUSKY BARRED ROCK COCKERELS, heavy laying strain; mates to blue ribbon winner live stock show; commercial, $5 to $10. E. W. Hendricks, Milwaukie, Ore., Route 1.

PACIFIC POULTRYMAN, SEATTLE, WASH., expert writers on practical poultry subject. Special offer, two years, $1. Four months' trial subscription, 25c.

HUNT'S PRIZE AND UTILITY BARRED Rocks; some dandy cockerels, pullets, trios. Write for prices. W. A. Hunt, Lebanon, Ore. Box 503.

JERSEY BLACK GIANTS—YOUNG STOCK for sale from pedigreed mating. Write for prices. Mrs. R. J. Chambers, Bovill, Idaho.

SHIP US YOUR POULTRY AND TURKEYS. Ask your neighbor about our fair dealings. Jones & Williams, S101 Division, Spokane.

YOUNG GRAY AFRICAN GEESE FOR SALE, $4 each. Light Brahma cockerels, $5 each. Dwight Glassey, Route 2, Albany, Ore.

CHICKS AND EGGS FROM 250-EGG RECORD S. C. White Leghorn hens; free catalog. Orin Belknap, Chinook, Wash.

S. C. RED COCKERELS FROM HEAVY LAYing dark red King strain, $3, $5 and $7. C. A. Keiser, Waitsburg, Wash.

FOR THE BEST IN SILVER WYANDOTTES and Silver Spangled Hamburgs, write G. G. Wherry, Payette, Idaho.

WHITE LEGHORN AND BARRED ROCK cockerels; records, 200 to 311. W. M. Roberts, Walla Walla, Wash.

ROSE COMB BLACK MINORCA COCKERELS, $2.50; pullets, $1.25; hens, $2.25. Mrs. Carley, Carley, Wash.

O. A. C. BARRED ROCK PULLETS, COCKerels, $1-$3.50. Mrs. Faulconer, Skamania, Wash.

WHITE ORPINGTON COCKERELS, $3 AND $5. Fred Bilyeu, Lamont, Wash.

PURE BLOOD TOULOUSE AND CHINA geese. Dr. Nichol, R. 6, Portland.

DARK CORNISH COCKERELS, $5 EACH. Jesse Kilts, Ashwood, Ore.

MAMMOTH TOULOUSE GEESE. W. D. Good, Mt. Vernon, Wash.

Turkeys.

GIANT BRONZE TURKEYS FROM MY OREgon state fair and Pacific International winners. Sold on approval. Herbert Stoneberg, Route B, Eugene, Ore.

PURE MAMMOTH BRONZE TURKEYS. UNrelated stock. Pure Toulouse geese, choice breeding stock a specialty. Mrs. F. Crane, Hagerman, Idaho.

MAMMOTH BRONZE TURKEYS FROM EASTern blood lines; large boned type, $8 to $20. Mrs. H. D. Moore, R. 1, Box 21, Hubbard, Ore.

GIANT BRONZE TURKEYS—CHICAGO AND Los Angeles first winners. Toms and hens for sale. M. M. Rieman, Planada, Cal.

21 YEARS A SPECIALTY BREEDER OF M. B. turkeys; prize-winning stock. Mrs. Frank Browning, R. 1, Nampa, Idaho.

WELL BRED BRONZE TURKEYS AND White Rock cockerels, Dec. delivery. Roger Campbell, Connell, Wash.

PRIZE WINNING MAMMOTH BRONZE turkeys; toms, $10; hens, $6.50. Urtons farm, Genou, Mont.

VIGOROUS MAMMOTH BRONZE TURKEYS, unrelated breeding stock. Albert Leach, Caldwell, Idaho, Route 1.

PUREBRED BRONZE TOMS, $9-$12; PULlets, $6. Bertha Gray, Winlock, Wash. R. 2.

FOR SALE—PUREBRED MAMMOTH BRONZE turkeys. S. L. Maltby, Rogerson, Idaho.

POULTRY—Turkeys. (Continued) 174

PUREBRED MAMMOTH BRONZE TURKEY toms, $10; hens, $8. Mr. George Roseberry, Riverside, Wash.

PUREBRED MAMMOTH BRONZE TURKEYS, choice from six hundred. Harry Smith, Coupeville, Wash.

BOURBON RED TURKEYS; EXTRA GOOD stock. Mrs. Kate Heideman, Malo, Wash.

MAMMOTH BRONZE TURKEYS FOR SALE. J. N. Morgan, Cosmopolis, Wash.

LIVE STOCK 177

WE GUARANTEE TO PAY THE HIGHEST market prices for your poultry, dressed turkeys, geese, ducks, chickens and live stock. Owing to the constant changes in the market we are unable to quote prices in this paper from week to week. We will furnish tags and prices when you are ready to ship. Write us what you have to sell. Prompt returns. John Lewis & Co., Spokane, Wash.

BAILEYWAY GUERNSEYS; EXCEPTIONALLY fine bull, 10 months old, with the best of blood and backing. Write for price and pedigree. F. D. Bailey, Corvallis, Ore.

DUROC BARGAINS WEANED PIGS, $10. Also 3-month-old pigs, $15. Also bred sows, Jan. farrow; best pedigree; registered free. Shadeland Farms, Amity, Ore.

WE PAY TOP PRICES FOR YOUR LIVE OR dressed veal, hogs and poultry. Your check by return mail. Shipping tags on request. M. & J. Packing Co., Spokane.

GUERNSEY BULL FOR SALE—ROSE'S FERN Ridge King, 57700; four-year-old; dam's record 10,922 lbs. milk, 522 lbs. butterfat. John F. Johnson, Azwell, Wash.

MAMMOTH GIANT POLAND CHINA BOAR, two years old; also splendid boar five months old, for sale cheap. Address B. F. Bird, Box 594, Nampa, Idaho.

SPOTTED POLAND CHINAS; GRAND CHAMpion herd. Largest herd in the west. Stock of all ages; prices reasonable. B. S. Brown, Lingle, Wyo.

BARGAIN—BIG BONED, BIG TYPE REGistered Poland China boar, 20 months old, $45. Tom T. Homme, Harrison, Idaho.

CHOICE, PUREBRED, BROWN SWISS COWS, heifers and bull calves. G. W. White & Son, Meridian, Idaho.

CHESTER WHITE BOARS OF SERVICEable age; registered stock. C. I. Ballard, Rickreall, Ore.

SHETLAND PONIES FOR CHILDREN'S Christmas presents. Harry Bowers, Moscow, Idaho.

REGISTERED SHORTHORN BULL, 3 YEARS old; color, red. W. J. Neylon, Tenino, Wash.

HARNESS and SADDLERY 189

SEND FOR FREE HARNESS AND SADDLE catalog today; cut out the middleman, buy direct from the manufacturer. Lowest prices in the west; satisfaction guaranteed. Established 1881. Write Pierce Harness Co., Dept. T. Spokane, Wash.

HAY FOR SALE 200

CHOICE ALFALFA HAY, GREEN AND leafy; the kind that dairymen like to feed. Timothy and wheat hay for horses. Write for delivered prices. J. F. Jacobson, Kennewick, Wash.

ALFALFA HAY, GUARANTEED QUALITY; prompt shipment; buy direct and save money. Prices upon application. Ernest T. Freepons, Walla Walla, Wash.

MONEY TO LOAN—Real Estate 234

MORTGAGE LOANS—FARM PROPERTY; NO commission. Oregon Mortgage Co., Paulsen bldg., Spokane.

JOB PRINTING 372

BEST PARCHMENT BUTTER WRAPPERS, 8x11, neatly printed, 100, 60c; additional hundred, 40c. Home Specialty Co., Middleton, Idaho.

TANNING 425

ANY KIND OF HIDE TANNED WITH HAIR on, or for leather. Mohr, 321 Sprague, Spokane.

TANNERS AND LEATHER DEALERS—BALZ Leather company, San Francisco, Cal.

TAXIDERMISTS 426

WE MOUNT ANYTHING FROM A FLEA to elephant. Mohr, 321 Sprague, Spokane.

FURRIERS 429

FURS TO ORDER, REPAIRED, REMODeled and for sale. Mohr, 321 Sprague, Spokane.

HIDES, PELTS AND WOOL 430

HIDES—WE BUY HIDES OF ALL KINDS. Write for prices and tags. Hibbard-Stewart Co., Hibbard bldg., Seattle.

FURS—WE BUY FURS AND PELTS. WRITE for prices and tags. Hibbard-Stewart Co., Hibbard bldg., Seattle.

MATERNITY HOMES 497

MATERNITY HOSPITAL; STRICTLY PRIvate; doctor in attendance; prices reasonable. Mrs. Elizabeth Peel, matron, W1324 Broadway, Spokane.

BUILDING MATERIAL 588

FIX BROKEN PLASTER WALLS WITH PERfection plaster wallboard; nailed on like lumber; takes calcimine or paint; sample and booklet from Western Wallboard Co., Seattle, Wash.

POULTRY SASH, 8X10, 4 LIGHT, 65C; ROOFing, skylights. Compare our prices. Save money. Send for price list. Tacoma Sash & Door, Tacoma, Wash.

NURSERY STOCK 621

RASPBERRY SNELL HAS IT—THE WONderful new La France red raspberry; best and largest of them all; many of them are one inch in diameter; will stand up perfect for shipment to Chicago and New York. Secure your plants now from Ralph L. Snell, Mountain View, Cal.

WRITE FOR PREPAID PRICES ON NURSERY stock; especially apple trees; can save you money. Lawson Nursery, Gates, Ore.

NURSERY STOCK. (Continued.) 621

PRUNES—LEIGHTON ITALIAN EXCELS ALL other varieties for profit; 40 per cent larger than Italian; 25 per cent more sugar; tests 40 per cent dried. General line of other stock. Lafayette Nursery Co., Lafayette, Ore.

NURSERY STOCK, ITALIAN PRUNE TREES and trees of all kinds. Berries and small fruits of all varieties. Buy direct and save 50 per cent. Brooks Nursery, Lafayette, Ore.

BEST VARIETIES FOR THE WEST; HANDsome 48-page descriptive catalogue free. Routledge Seed & Floral Co., 145 Second st., Portland, Ore.

STRAWBERRY PLANTS, $4.50 1000; GOLD Dollar, New Oregon Trebler. Otto Watzig, Myrtle Creek, Ore.

STRAWBERRY PLANTS, $5 1000; NINE VArieties. Briggs Fruit Ranch, Olympia, Wash.

FARM LANDS FOR SALE 651

1000 ACRES STOCK AND DAIRY FARM; IN Snohomish county, Wash.; all fenced; well watered by river, creeks and springs; on paved highway, ½ mile to P. O., railway station and store; 3-hour stage and train service. Silt loam soil, is growing large and small fruits, vegetables and crops; improved with 2 houses, garage, 5 barns, 3 sheds, 2 granaries, 6 other outbuildings, complete farm equipment; electric light plant, modern sewage system; hot water heating system; pure water. A modern, income-producing country estate, second to none; in a climatically attractive district. For sale as a whole. Priced at $100 an acre. Write for complete detailed information. Carter, MacDonald & Miller, 208 Columbia st., Seattle, Wash.

PAYING FARMS AT LOW COST—160-ACRE farms, improved or unimproved; 30 to 160 acres irrigable land on each parcel; near Lethbridge, in sunny southern Alberta; can be bought for $15 to $40 an acre. No need for pioneering. Well settled country, good roads, railways, schools, telephones; agreeable social conditions; fertile land; success of irrigation farming here already demonstrated; irrigation system being constructed under government supervision; water available in 1923. Write for information concerning crops grown and description and location of farms to the province of Alberta, Irrigation Council, 12 Provincial building, Lethbridge.

FOR SALE—ON THE COQUILLE RIVER, Coos county, Ore.: a ranch of 500 acres, located on the Roosevelt highway, which will be completed in 1924, through ranch; 130 acres of river bottom land, 100 acres of which is under plow and ditched; 160 acres of upland pasture and suitable for raising hay; 100 acres of timber land and all the land on ranch is fertile and productive; bungalow house, barn, modern, size 72x80 ft. This is a very choice location and a fine ranch. We are in the mercantile business and wish to sell to have more working capital. For prices and terms address Sweet Bros., Langlois, Ore.

160-ACRE ALFALFA, FRUIT FARM; ALL tillable; horses and equipment, logging outfit included if taken immediately; schools, stores and churches; good markets; well irrigated, level, loamy tillage; producing big crops alfalfa; 20-cow spring-watered pasture, estimated 200,000 ft. timber, mi. sawmill; 100 apple trees, pears, plums, cherries, grapes and berries; good warm house with cellar, overlooking river and distant timbered mountains; ample water, substantial barn. To settle affairs $4250 takes all; less than half cash, and the rest easy.—A. J. Hayward, R. R. No. 1, Salmon Arm, B. C., Can.

FRUIT RANCH, NEAR R. R. TOWN; 5½ acres bearing orchard; about 10 acres near beautiful Okanogan lake; schools, stores, churches; fine fishing, hunting; fertile, loamy tillage; pasture; 5½ acres Spies, Newtons, McIntosh Reds, Baxters, Kings, Baldwins; pears, plums, cherries, peaches; pleasantly located house, magnificent view; barn, poultry house. Owner has other interests; $2600 takes all; less than half down. G. Y. L. Crossley, West Summerland, B. C., Canada.

EXTRAORDINARY OPPORTUNITY—MY 50-acre dairy, alfalfa and fruit farm, on famous Marcus Daly estate, Bitter Root valley, Mont., 8-room modern farm home, excellent buildings, bearing orchard; 30 acres alfalfa, abundant water rights. Price and terms exceptionally favorable. $1500 cash will handle. Immediate possession. Owner, Box 8, Hamilton, Mont.

BIG LUMBER CO. LAND SALE IN SKAGIT county; 40 acres, $1400; 20 acres, with new house, $1500. Lumber furnished for building. Lots of work for the settler; splendid district, roads, schools and towns. H. O. Peters, 726 3d ave., Seattle.

FINEST IRRIGATED BERRY AND DAIRY land in western Washington; 5 and 10 acre tracts or upwards; $50 acre, on easy terms; $10 cash, and $2.50 per month; free booklet. Thos. G. Mortland, Sequim, Wash.

FOR SALE—GOOD 100-ACRE GRAIN AND dairy farm; 6 miles from Mount Vernon; splendid opportunity. A. J. Lawson, Blanchard, Wash., or Wm. Gustafson, Mount Vernon.

SELL YOUR PROPERTY QUICKLY FOR cash; no matter where located. Particulars free. Real Estate Salesman company, 501 Brownell, Lincoln, Neb.

FOR SALE—50-ACRE BEARING ORCHARD, prunes and pears; on highway, near Chico. Easy subdivision. A good home. Levi H. Maxwell, Chico, Cal.

FOR SALE—STOCK OR DAIRY RANCH. Open range; best water right. Write Clara Wagner, Hornbrook, Cal.

FARM LANDS—Wanted 654

OWNERS OF FARMS AND RANCHES FOR sale at real bargain prices, should write us. We have cash buyers. Central Land Bureau, New Franklin, Mo.

FARMS WANTED—SELL YOURS QUICKLY for cash, no matter where. Particulars free. R. A. McNown, 310 Wilkinson bldg., Omaha, Neb.

WANT TO HEAR FROM OWNER HAVING farm for sale. Give particulars and lowest price. John J. Black, Chippewa Falls, Wis.

WANTED—TO HEAR FROM OWNER OF land for sale. O. K. Hawley, Baldwin, Wis.

IRRIGATED LANDS—For Sale 663

WE OWN 1000 ACRES WESTERN WASHINGton choice irrigated land, and sell in tracts of 5 acres upward; $100 or more down, balance 10 years. $40 per acre, unimproved, to $350 per acre for land in highest state of cultivation. Ideal location and climate for poultry, berries, dairying. Write for information, Washington Colonization company, Sequim, Wash.

CALIFORNIA IRRIGATED LANDS. JUST placed on market; best opportunity ever; to six crops yearly; easy terms. Write at once, box 186, College Station, Pullman, Wash.

FOR SALE OR EXCHANGE 702

POULTRY RANCH FOR SALE OR EXchange—40 acres, 2100 hens, 4500 brooder capacity; complete equipment; running water, good schools, paved highway. For particulars write Walt & Son, Enumclaw, Wash.

PIKE'S PEAK OR BUST

By LEWIS B MILLER

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PMC

CHAPTER TWENTY-SIX.

Lost on the Great Snow Roof.

Now, before resting, they moved up a little nearer. There they found a small pool of the ice water, and all of them drank, using a tin cup.

"Better not gulp down too much of this frosty stuff before you rest," Cooper cautioned them. "This raw air soon makes a fellow shiver. It'll be worse when you've got ice-cold air around you and ice-cold water inside of you."

After quenching their thirst, all found a dry patch of ground and dropped down on it, most of them without a word. And they rested as long as the sharp cold here would allow them. After that they got up, slowly, painfully, stiffly, adjusted their packs as well as they could and moved toward that crooked white line.

"Here comes the toughest job of all, I'm guessing," said Givens. "Skating in the dark isn't any soft snap, even down where you can get your breath. It'll be something awful up here, 've no doubt."

"Not much wind here now. And that's one thing to be thankful for," Sanders remarked.

Soon the party were climbing up the ice field. It was so rough as to make hard climbing, but the climbing would have been far harder if the ice had been smoother, on account of slipping.

At length the climbers ceased to climb, and found themselves on the comparatively level top. Here the traveling was easier, and the little party of hard-driven adventurers, by keeping the polar star on their left, had at first no trouble in steering their course across the snow cap. Indeed, the start was so easy that not one of them suspected how much trouble and how many hardships awaited them on that great, frozen field.

Fortunately the white surface of the hard snow reflected the starlight, and the six weary fugitives could see better up here than anywhere since night had overtaken them. While the frozen snow, or ice, was very rough in places, tramping over it was easier than picking a route through gloomy woods, crowded with rocks and brush and fallen trees.

"We thought it was cold crossing this big snow bank when the sun was shining. But to me it feels 10 times colder now," Jess Holloway said, shiveringly. "I'm going to stop and put on my blanket. One of 'em, if not both."

"Guess we're all feeling the need of a blanket or two just now," answered Sanders. "Certainly I am. That little gust sweeps along every now and then cuts my face like a knife, and seems to pass right through my thin clothes."

"Don't it, though?" exclaimed Givens. "Must be down to zero up here on top of this big iceberg."

At once a brief halt was called, till each man could take a blanket from his pack and fasten it around his shoulders. Then they moved on as before, following a due-east course. Early September though it was, they seemed to themselves, nearly three miles up in the air, to be in mid-winter.

"Boys, when we once get this snow cap between us and that pack of red wolves I'm hoping we'll be out of danger," Cooper said, encouragingly.

And Sanders answered: "Yes. To me it seems rather probable that that war party trailing us will abandon the chase when they find that we've escaped over the Great Divide."

"The good Lord grant they may!" exclaimed Givens, fervently. "Just know I'll be past traveling by the time we struggle across this frozen backbone."

"Don't give up till we get down into the timber and in a warmer climate, Jeff," said Holloway. "I'm feeling hungry again and we'll need a good fire and a square meal before we can rest or sleep."

"Lucky for us we're not having another snowstorm," Orlando remarked. "With a clear sky like this we can find our way across easily enough. We don't need any compass but that north star. If it was pitch dark, though, we couldn't see either the sky or our compass, and we'd have an awful time."

"Awful time wouldn't be any name for it," spoke out Esau. "That snowstorm nearly blinded us in daylight, I recollect well enough. In the night the darkness would be so thick we'd have to cut it with our knives."

"Not too late for us to run afoul of a snowstorm up here yet," Cooper warned them. "I've no doubt it can snow here in the dark just as well as in daylight. That snow flurry we got into was moving, and they can move just as well by night as by day, snowstorms can."

"Better if anything, I'd guess," added Orlando. "I can easily imagine that the storms are worse up here in the night-time, when there's no sunshine to thaw them out. Let's hope, though, that we can make it across this bleak region before a snow quall swoops down on us."

Others echoed the wish. But, before they had gone much farther, Holloway was heard to exclaim: "Looks to me like I see something black ahead yonder!"

All the party stared in that direction. But they kept tramping, their boots crunching the hard snow loudly as they moved over the frozen surface.

"And my eyes tell me the same story," Givens presently spoke out. "Fact is, I seem to see a great wall of blackness ahead. Not so very far ahead, either."

By this time others could make out the same wall of blackness, rising threateningly to bar their way.

"Guess we're heading toward another cloud, and maybe another snowstorm," remarked Sanders. "And if we do run into anything of that kind we'll have a time getting out of it! You mark my word if we don't!"

Now Cooper spoke: "Easy to see that that's just what it is. Wonder if we couldn't circle round it somehow."

"Not much chance to circle. Esau was speaking. "That black wall stretches as fur north as I can see and as fur south as I can see. No show to dodge the thing. Our only hope is to plunge right into it and then march straight on across."

"Straight on across if we can!" exclaimed Holloway, in doubtful tones.

"Yes, if we can—if we only can," commented Sanders. "World of uncertainty about that, though."

And Holloway added: "We can't well go round the cloud on its outside. But, ten chances to one, we'll go round when we get inside of it."

"Well now, I wonder if we will," said Cooper.

As the fleeing gold seekers neared the cloud it seemed to them to grow blacker. And it appeared to be hanging not many yards above the snowfield. When they had tramped on into its shadow they found the cloud so thick that not a trace of the starlight could sift through it.

Scarcely had the fugitive miners found themselves in utter darkness when they called a halt. Now, guided by their voices only, they grouped themselves together for a consultation.

"Only way I know, boys, is to dive ahead straight as ever we can, and try to break through this floating darkness," Cooper told them.

"May be only a few hundred yards through it," suggested Holloway, hopefully.

"And it may be a few miles through," grumbled Givens.

"A few hundred yards or a few miles, we've got to break through somehow or some other how," Sanders reminded them.

"Exactly right, Abe. And the sooner we get on the march again the sooner we'll see clear sky," said Holloway.

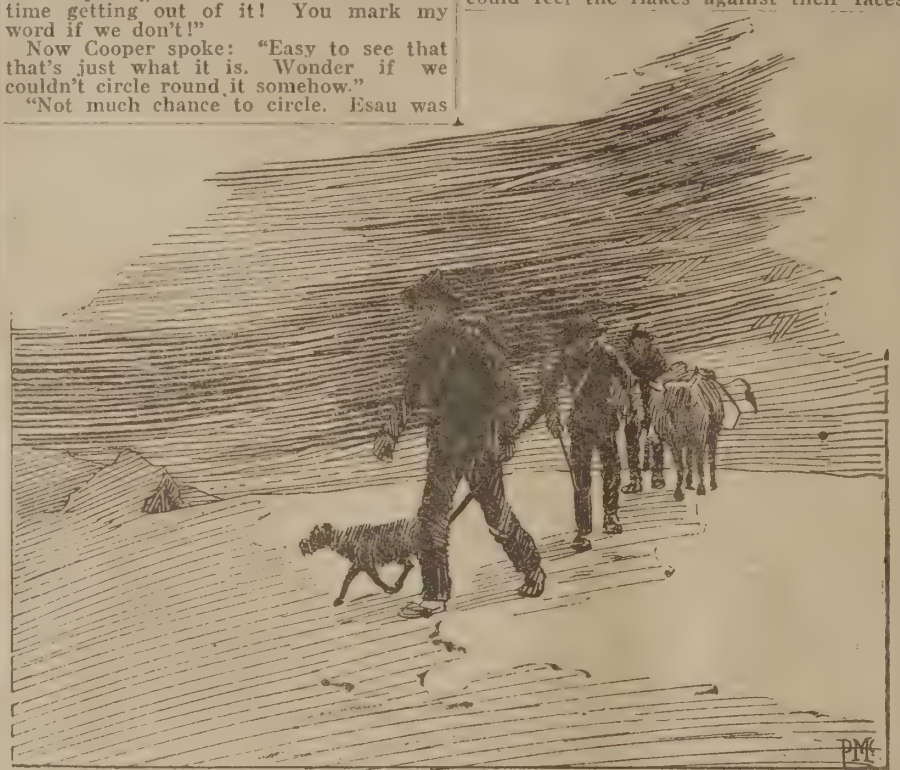
Esau added: "And we'll freeze stiff if we stand still long."

Again they moved on. Now they knew they had entered a snowstom, because they could feel the flakes against their faces. There was little or no wind, and they inferred that the cloud over them was not moving. Except when somebody spoke they had only the creaking of their boots and of Brindle's hoofs in the frozen snow to guide them.

"One good thing about all this blackness, boys, Jess Holloway presently called to his followers.

"If there's anything good about it, I can't see what!" declared Givens, impatiently.

"Nobody is expected to see anything here. It's midnight in Egypt," Orlando said.



Not one of them suspected how much trouble awaited them.

"But there is," persisted Holloway. "We're safe from redskins now. They haven't a chance in the world to find us under this blanket of blackness."

"No. No more likely to find us than we are to find ourselves, I'm thinkin'," spoke out Esau.

"Find us! I'd say they can't!" Sanders exclaimed. "They couldn't find us in a million years likethis! They could pass within a foot of us and never discover us. I mean if we kept still. Never was a better hiding place than we've run into, on this miles-high roof of the continent."

After several minutes of making their way over the invisible whiteness under them and through the frozen blackness around them, Cooper called another halt: "Boys, this is about the most hopeless thing in the way of traveling that I've ever blundered in to. I've no more idy what direction we've been moving than if I was blind and deaf."

"It's a safe guess that we're not traveling in any one direction," was Holloway's opinion.

"And even if we are, it's not in the direction we want to go," added Sanders.

Now Esau spoke: "In cases like this, people are almost dead shore to travel in circles, I've often heard tell."

"If we're doing that, we may never get out of this black storm on the Rockies' roof," said Givens.

It was Cooper that answered. "We may not get out till day breaks. But the minute we can read our compasses we'll strike the right course. Not much that we can do, though, without a light."

"If we're not getting anywhere, what's the use of struggling round and round? We might as well sit down somewhere and rest our weary legs, I suppose," Holloway was speaking. "If we keep on in the wrong direction we may find ourselves back at the west edge of this mountain top."

"So say I," spoke up Givens. "I'm ready to drop anyhow. If we're just tramping and trudging our poor legs off without going anywhere, common gumption says sit down and sit there till we can see how to find ourselves."

The others agreed that traveling through this black snowstorm was worse than doing nothing. So each took off his pack and, after wrapping himself up as well as he could, sat down on it to wait for day. Orlando, after first relieving Brindle of her burden, covered her with his horse blanket, as he always did in bad weather. After that he, too, enveloped himself in his blankets and sat on his pack.

There was now some wind, and they had all turned their backs to it. Snow was still falling, thick and fast, as they could tell when they put out a hand and found their blankets covered with it. Also there was about six inches of loose snow under their feet.

"Looks to me like we might shape our course by the wind," Esau presently suggested. "Right smart breeze up here, I notice."

Cooper answered: "Trouble with that is, every guest that comes sweeping along is from some new direction."

"So I've noticed." It was Holloway's voice. "Even since we've been sitting here it has struck me on at least two opposite sides. I've had to keep turning to keep my back to it."

"Wind's no guide up here, halfway between earth and heaven," Sanders remarked. "Down on the earth, when there's a snowstorm on, it's a safe guess that the wind is from the north or northwest. But up here among the clouds, and about the first of September at that, who can tell anything about the wind or by the wind."

For several minutes now the whole party kept silence. Every man's head was enveloped in his blanket. And most of them, in spite of their blankets, were beginning to shiver.

"This is certainly darkness for you!" Holloway finally exclaimed, perhaps because the silence was becoming oppressive.

"A'int it, though!" Givens' voice said that. "I never saw anythihg that would beat it but once. That was 10 years ago—10 years ago last spring. Three of us were taking a raft down the Mississippi from White river, in Arkansas to New Orleans. A tropical storm broke on us and lasted for days. Owing to the fact that we didn't have any sweeps to steer with, we couldn't get the raft to land. That last night on the swinging, rocking old log pile was something horrible—something beyond words to describe. Not if I live a thousand years could I ever forget it. The raft finaly split itself wide open against a big tree—the river was very high—and two of us were swept through a crevasse—through a break in the levee. All the rest of the night, soaked to the skin, we floated and paddled about in that black forest. Just before daybreak we discovered a light, and finally reached high ground and a plantation. But that was the most frightful night I ever will pass through, I hope. This reminds me of it, though."

Again silence followed. More than once Frisk, crowded up against Esau's legs, could be heard to whine uneasily. Perhaps he was getting cold. Or he may only have been troubled at the strange surroundings. Esau threw the corners of his blanket over the faithful fellow. Once, too, the usually patient Brindle lifted up her strong voice and bawled loudly, drearily.

(To be continued.)

Bits of Fun FOR Everyone

Good All Winter.

Tramp—I've eaten nothing but snowballs for three days, mum.

Lady—You poor man! What would you have done had it been summer time?—Boston Transcript.

Food Essential to Health.

"You are not in politics for your health, I presume?"

"In a way I am," replied the chronic office seeker. "Experts say if a person doesn't eat regularly his health is apt to be poor."—Birmingham Age-Herald.

Too Heavy a Job.

Young Husband—Did you make those biscuits, my dear?

His wife—Yes, darling.

Her Husband—Well, I'd rather you would not make any more, sweetheart.

His wife—Why not, my love?

Her Husband—Because, angel mine, you are too light for such heavy work.—Selected.

And the Boy Was Fired.

"I can't keep the visitors from coming up," said the office boy dejectedy to the editor. "When I say you're out they don't believe me. They say they must see you."

"Well," said the editor, "just tell them that's what they all say. I don't care if you sass them. I must have quietness."

That afternoon there called at the office a lady. She wanted to see the editor, and the boy assured her that it was impossible.

"But I must see him!" she protested. "I'm his wife."

"That's what they all say," replied the boy.—Exchange.

Grasp the Opportunity.

Mother—Tommy always eats more pie when we have friends at dinner.

Visitor—Why is that, Tommy?

Tommy—Cos we don't have no pie no other time.—New York Evening Mail.

The Latest Thing in Food.

Patron (crossly)—Say, writer, what are these black specks in my cereal?

Waiter (after a close inspection)—Dunno, sir, unless it's some of them vitamines every one is talking about now.—Life.

"A Fool There Was."

Charlie—But I asked you, dearest, to keep our engagement a secret for the present.

Claire—I couldn't help it. That hateful Ella said the reason I wasn't married was because no fool had proposed to me, so I told her you had.—Exchange.

In Gratitude.

The Guest—I suppose your husband is very fond of yachting?

The Owner's Wife—Well, no; he ain't really. Sometimes it makes him awful sick, but he made his money outa canned salmon durin' the war an' he feels he kinda owes it to the sea.—Life.

FAMILY CIRCLE

ALICE BARLAND
EDITORIAL CONTRIBUTOR

Experience Letters

From Our Family Circle Women

Dear Mrs. Barland: I have been a reader of THE FARMER for a long time, but have never written, as I don't like to write very well, but feel I should help out a little on the page.

I have two babies, a boy of 4 and a girl of 3 years. We own our home and are pretty busy fixing it up. I am fond of reading and never fail to read the Family Circle.

I will give a few helps that I have never seen published in your paper:

Rhubarb juice applied to rust spots and then held over the spout of a teakettle of boiling water will remove the spots. Lemon juice and salt will also remove rust if applied and held over steam, same as rhubarb. It will also remove the rust if placed in the hot sun instead of being held over steam.

Muriatic acid will remove rust from any cloth without affecting the color. But be sure to have the cloth moist when you apply the acid and when it turns the spot light colored wash the acid out at once, as it will eat a hole in the goods. I have removed rust stains that have been in goods for years with this acid and I know it will not affect the color of the cloth.

To remove scorch from clothes when ironing, dampen a cloth in peroxide of hydrogen, lay it over the scorched place and run a hot iron over. I have used this method with success on both white and colored clothes.

When you set away a dish of beet pickles add a little grated horseradish and it will keep them from molding. MRS. Z. W.
Oregon.

(There are other recipes in this good letter which will appear next spring, as they are now out of season. Let me say here that this letter came several months ago and it, like others, has had to wait its turn. There are mony others which have to wait, but you may be sure, dear women, all letters are appreciated and if you watch you will find all or parts of your letters which are of general interest. Some recipes are duplicates and it would be a waste of space to repeat them, so you will take no offense, I am sure, if you don't always find your own.—Alice W. Barland.)

Dear Mrs. Barland: I have been a subscriber to THE FARMER for four years and expect to be a subscriber as long as I live if the paper is still being published.

I am writing on the subject of schools as an education is what I have always felt the need of very keenly.

I have two boys, ages 12 and 4; my 12-year-old boy rides 5 3-5 miles to school, has no drinking water while in school and no barn nor shelter for his horse. I have a neighbor who has five children of school age and her two younger ones go very little, as it is so far and so cold. We are entitled to transportation for our children and they are surely entitled to drinking water.

Salt Rising Bread

Dear Mrs. Barland: I saw a request for salt-rising bread. I have made this bread for a number of years with good success and, in fact, have taken the blue ribbon several times.

Salt-rising bread: In the morning put a tablespoonful of corn meal in a glass and scald a cup of milk and pour it over the meal, stirring well. Set this "start" on the warming oven and keep it warm all day and at night put it over the teakettle of hot water and cover well, but do not allow to scald. In the morning this should be light and foamy. I use a glass so I can see the air bubbles through it.

Before breakfast, if the "start" is light, mix a batter in a five-pound lard pail until about half full and beat in the "starter" well. Keep warm until the pail is nearly full; have your flour warmed in the bread pan. I use about three sievefuls. In the center of the pan scald about a pint of flour with hot water, beat up a good, stiff batter with warm milk or water, along with the scalded flour, then put in the light batter, beating well. Do not make more batter than your flour will knead stiff. Salt and set back on the warming oven to rise. When good and light knead loaves and put into pans, making the loaves small, and when light bake as other bread.

Keeping each process warm, not hot, free from drafts from start to finish, will insure good bread. I usually have mine out of the oven before noon. MRS. E. E. J.
Forest Grove.

Household Helps

By MRS. C. B. SMITH.

A three-burner oil stove stored in an old shed on this farm accumulated a coat of rust the owner despaired of ever removing. Taking a neighbor's advice, she gave the entire surface an application of melted lard, allowing it to stay on for a day or two. After a thorough rubbing with a kerosene cloth she gave the stove a soap and water bath. Much of the old enamel came off with the rust, but a fresh coat of stove enamel made it look like a new oil stove.

Touch up the worn off spots of nickel plating on the kitchen range with aluminum paint for metal. A unique suggestion for those who are tired of keeping the stove blackened is to give it a coat of aluminum paint once a year.

A glaring patch of new material on a faded garment is unsightly, to say the least. In discarding worn out garments such as denim overalls, khaki trousers or everyday shirts, save the good parts for mending articles of similar material.

Much time and extra labor will be saved during the canning season if the empty fruit jars are inverted after washing and drying and placed in strawboard grocery boxes of suitable size with good covers to prevent the dust from entering. These may be stored in any convenient place where they will be out of the way. One box containing all the lids makes it handy to find what is needed at any time there is canning to do.

VINEGAR PIE.

A request is received for a recipe for vinegar pie. The following was submitted by one of our readers and published in THE FARMER some time ago.

Vinegar pie: One egg, one heaping tablespoon of flour, one teacup sugar; beat well together and add one tablespoon of sharp vinegar, teacup cold water, flavor with nutmeg and bake in bottom crust.

Home Recipes

Mexican Con Carne—1 lb. chili beans, 1 qt. tomatoes, 2 large onions, 1-2 lb. beef, 1-6 lb. suet, 1 sweet pepper, 1 cup soup stock, salt, pepper and chili powder.

Soak beans over night, in morning boil till tender, run the pepper through the food chopper and add with all other ingredients and cook till tender and serve hot.—Mrs. V. R. Fisher, Idaho.

Boiled Sweet Apples—Cut in halves and remove cores, but do not pare. Place a layer in the bottom of the pan skin side down and fill up the pan promiscuously, add a cup of water or preferably about a quart of maple sirup, in that case use no sugar. Boil until tender. I pile them to one side till I can reach the bottom layer and remove that first then with another layer from the pile and allow that layer to cook till dark and rich like the first. Continue till all have been cooked at the bottom of the pan in the sirup and the result will justify the effort.—Mrs. E. M. Anderson, N. Y.

Sauer Kraut—Use 3 lbs. of salt to each 100 lbs. of shredded cabbage. Remove outside leaves and the hard core and shred the rest finely. Line the bottom and sides of the keg or jar as you fill in. Put in a 3-inch layer of cabbage then sprinkle 4 or 5 tablespoons ofsalt, repeat till cask is full pounding it down hard as you fill. The salt will extract the juice of the cabbage and this brine should rise about the slaw. Weight down and keep brine over the cabbage. Keep in a cool dry place for three weeks or four, when it will be ready for use.

Can Some One Tell?

Will some one tell how to remove grass stains from a lavender voile dress without taking out the color? EFFIE.

Please give me some good breakfast dishes and other meals as well.
MISS A. F.

How do you make chocolate sirup suitable for milk shake? MRS. F. B.

Can some one tell how to make fig bars like those we buy at the stores?
MRS. W. C. D.

WANTED: A MACHINE.

If there's a gas engine in the farmyard there should be a washing machine in the washroom. If water is piped to the horse trough it should be piped to the house. In fact, regardless of the condition of affairs in the farmyard, there should be modern labor saving conveniences in the house. Labor savers are nothing more or less than life savers.

IT MEANS CLEANLINESS.

Where water is carried from the well or spring to the house, not more than one-fifth as much is used per person in the family as where there is a plentiful supply of running water in the house. The result is much more convenience, comfort, cleanliness and health where the water is handy.

HOT AND COLD WATER.

It does not cost a fortune to have running water in the house if one goes at it properly. But, oh, what a blessing it is.



High Points in News of the Week

In his message to the new congress last week President Harding declared that the four-power treaty governing international relationships on the Pacific ocean was an absolute guarantee of peace for at least the 10 years of its duration as now standing. He suggested that the main principle embodied in the four-power treaty should operate with equal effectiveness in other parts of the world where guarantees of peace were needed.

This suggestion has already resulted in speculation in many quarters as to the possibilities of a five-power treaty between the United States, England, France, Italy and Belgium designed to guarantee the peace of Europe.

While former Premier Clemenceau of France has not committeed himself openly to such proposal, it is reported that he is heartily in favor of such move. He openly states that his purpose in visiting the United States, which he has been touring for the last month, is to induce, if possible, the United States to exercise an active influence in behalf of the reconstruction and future peace of Europe. He expressed himself as greatly pleased over the references to international affairs in the message of President Harding to congress. He last week had a personal conference with President Harding, other members of the governmental staff at Washington and former President Wilson.

* * *

The premiers of England, France, Belgium and Italy are meeting in London at the present time in a further endeavor to agree upon their relationship as allies in their endeavor to secure the fulfillment of the peace treaty by Germany. The meeting is reported to be a critical one. Premier Poincare of France, has officially announced that unless the allies as a group bring Germany to terms prior to January 15 France will alone further invade German territory with a view to compelling reparations.

* * *

In his message to congress last week President Harding urges the extension of farm credit and an enlargement of the powers of the farm loan bank. Other important recommendations in his message were as follows: That a conference be called to adopt federal and state policies for the uniform administration of prohibition laws throughout the entire country. That steps be taken to coordinate all forms of transportation, even the point of merging separate railroad lines into system, with a view to greater transportation efficiency; that a constitutional amendment restricting tax-free securities be adopted; that a constitutional amendment giving congress authority over child labor be adopted; that more stringent immigration laws be enacted; that the railway labor board be abolished and its duty taken over by a division of the interstate commerce commission with power to enforce its decisions.

* * *

A bill was introduced in congress last week which would, if enacted, create within the department of agriculture the office of superintendent of grain and appropriate a considerable sum of money of which the government through this office could buy wheat with a view to regulating the open market.

* * *

A farm credit measure was introduced into both houses of congress last week providing for the establishment by the government of a $60,000,000 fund to be divided equally as capital among the 12 farm loan banks, of which the Spokane bank, serving Washington, Oregon, Idaho and Montana, is one. At the present time these banks have government capital of only $12.000.000. The security given for loans taken by individual farmers is used as the basis of bond issues for raising more money, thus making the $60,000,000 original capital the basis for a large fund as loans are made. Under the proposed law loans would be made to farmers on personal credit for short terms as well as upon real estate for long terms, as under the present farm loan bank law.

* * *

The prohibition forces in congress last week won a signal victory when an attempt was made to strike out of the federal treasury supply bill an appropriation of $9,000,000 for the enforcement of prohibition laws was overwhelmingly defeated.

* * *

The new Irish Free State, as a dominion government similar to that of Canada in its relationship of Great Britain, became a reality last week. Timothy Healy of Dublin was sworn in officially as govenor general.

* * *

The new so-called progressive bloc in congress received its first formal opposition last week when its proposal that the Constitution be amended to provide for the direct election of the president was condemned by the president. The progressive bloc succeeded in securing the approval of this proposal by the agricultural committee of tne house of representatives. At the present time the president is elected by an electoral college made up of electors from the several states. Under this system it is possible, as had occurred many times in the past, for a president to be elected by less than a majority of the people at large.

* * *

A Civil war pension bill has been passed by congress and is now in the hands of the president, with practical assurance of receiving his approval. It provides that every G. A. R. veteran shall receive a pension of $72 per month and that every widow of a Civil war veteran shall receive $50 a month. There are now about 194,000 Civil war veterans and 272,000 widows on the pension roll.

* * *

Announcement was made last week that the salary of President Henry Suzzalo of the University of Washington had been raised by the board of regents from $12,000 to $18,000 a year. This is said to be the highest salary of any college or university president on the Pacific coast.

* * *

President C. S. Barrett of the National Farmers' union is in the Pacific northwest in the interest of that organization and of the Columbia basin irrigation project. He will be in the west until shortly before Christmas, attending the meetings of the Washington and Northern Idaho Farmers' union in Spokane this week and of the Oregon union in Lebanon next week.

* * *

Little has been accomplished in the senate so far on the proposed ship subsidy bill, which was passed by the lower house of congress two weeks ago. A proposal has been made that the subsidy be made subject at any time to the action of congress. President Harding, who recommended the adoption of the measure, is opposed to this amendment on the ground that he would rather have no subsidy at all than a half-hearted one.

* * *

The city of Astoria, Ore., near the mouth of the Columbia river, last week suffered a fire that destroyed the greater part of the business district, wiping out about 24 blocks. The origin of the fire is not known at this writing.

* * *

Senator Gooding of Idaho last week introduced a bill in congress which would amend the interstate commerce act so as to prohibit the railroads from charging more for a short haul than for a long haul. The measure was designed by Senator Gooding to prevent discrimination against the intermountain territory in favor of Coast territory, as has been done in the past.

* * *

George C. Jewett, general manager of the Northwest Wheat Growers, Associated, has proposed a farm credit system to take the place of the war finance corporation when the latter ceases to function July 1 next year. His proposal was indorsed by a conference of wheat growers' organizations at Minneapolis last week. It would provide for the establishment of 20 regional banks, similar to the federal land banks, with an approximate capital of $5,000,000 in the form of a revolving fund. The same cooperative convention indorsed the establishment of a national sales agency for cooperative wheat growers' associations wherever located, including those of Washington, Oregon, Idaho, Montana, North Dakota, Kansas, Nebraska, Colorado, Oklahoma and Texas.

* * *

Word comes from Washington that Secretary of Agriculture Wallace, in charge of the enforcement of all packer control laws, is strongly opposed to the proposed merger of the Armour and Morris packer interests. On the other hand, it is stated that Attorney General Daugherty, who would conduct any prosecution of the packers at the request of the department of agriculture, not only sees no legal objection to the merger, but favors it. This would indicate that President Harding will have to make the final decision.

* * *

The West Coast Lumbermen's association announces that all previous records for the production, sale and shipment of lumber in the Pacific northwest will be broken this year.

* * *

General Pershing, who led the American expeditionary forces in Europe during the war, last week in a public addresss severely criticized so-called radicals and the Ku Klux Klan.

* * *

Senator-elect Copeland of New York has officially announced that he will work with the anti-prohibition element in congress.

Ship Wool Direct to Boston

Yakima wool growers are anticipating considerable advantage from the recent ruling of the interstate commerce commission in giving Yakima the same freight rate as Seattle or Portland to Atlantic points. According to H. Stanley Coffin, one of the largest shippers of lambs and wool, if there is no hitch in the commissions ruling, he says he will ship his wool direct from Yakima and he believes other wool growers will do the same. Yakima claims that this would make of that city a leading warehouse, brokerage and shipping center for all the wool raised in that vicinity. Secretary Soots of the Yakima Commercial club, says half of the wool of the northwest is produced in the Yakima valley and it has averaged for several years more than 2,000,000 pounds anuually. This is one of the topics likely to come before the January meeting of the wool growers' association in Spokane, according to J. F. Sears, manager of the Wool Growers' Finance corporation.

The Christmas Gift

By MRS. E. M. ANDERSON.

In many instances a little forethought would save a lot of unnecessary work for ourselves and insure greater satisfaction to our friends, and nowhere is this more true than in the preparation of Christmas gifts. To be sure, it simplified the process very materially to buy in dozen lots, but, unfortunately, one's friends are not likely to have exactly the same tastes and the choice of one probably would not suit the other 11 at all.

I know a busy farm woman who prized above all her other gifts last year a big and well-made gingham apron, "because," she said, "it was just what I needed and I hadn't time to make it." My city friend, who teaches all the year, probably wouldn't wear such an apron once in six months, but neither would my farm friend have much use for the fancy bags and other articles in which the city girl delights. By the way, one must consider the individual, too, it isn't safe to assume that all farm women like one class of things and all city women another. I know one farm woman who probably never in her life used a bit of face powder, yet she treasures almost reverently the daintiest of silk vanity cases—equipped with powderpuff, mirror, etc.—a Christmas gift of several years ago. While it would soon become monotonous to give the same kind of gift to the same friend every year, it pays well to keep in mind the special preference of each. For several years I have given canned fruit to a few elderly relatives who haven't much fruit of their own—especially an old aunt whose girlhood was spent on our farm and who particularly enjoys fruit from the old place.

If one is fortunate enough to have a foreign friend who does fancy work for sale, nothing makes a more acceptable gift than the real hand-made, imported handkerchiefs, collar and cuff sets, scarfs and lingerie, with their exquisite fine needle work. I have a little friend in the West Indies who makes all kinds of fancy work and who needs so badly to sell it that, in using it for gifts, one is not only delighting one's friends, but doing a good deed to suffering humanity as well.

Any one with a sweet tooth will enjoy a box of chocolates or assorted bonbons and if these are home-made, so much the better. The first Christmas after my

Farm Business and Markets Outlook

(Continued from page five.)

DAYTON, Wash., Dec. 9.—Wheat—Club, $1.05; red, $1.01.

POMEROY, Wash., Dec. 9.—Turkey red and white hybrid, $1.

SEATTLE, Dec. 9.—Wheat—Hard white, $1.25; soft white, western white, $1.24; hard red winter, soft red winter, $1.20; northern spring, western red, $1.19; Big Bend Bluestem, $1.63.

Hay and Feed Grain.

PORTLAND, Ore., Dec. 9.—Millfeed—Price f. o. b. mill; millrun, ton lots, $35; middlings, $47; rolled barley, $41@43; rolled oats, $44; scratch feed, $46 per ton.

Corn—White, $41; cracked, $43 per ton.

Hay—Buying prices, f. o. b. Portland. Alfalfa, $19@19.50 per ton; cheat, $19@19.50; oats and vetch, $22; clover, $19; valley timothy, $22; eastern Oregon timothy, $23.

SPOKANE, Dec. 9.—Wheat—Feed wheat, $44 ton.

Oats—$42 per ton; rolled, $44.

Corn—$42 per ton; cracked corn, $44 ton.

Barley, $42 per ton; rolled, $44.

Bran—$33 ton.

Bran and Shorts—$34 ton.

Shorts—$35 ton.

Alfalfa, $24 ton; timothy, $26 ton; mixed hay, $24 ton.

General Produce.

PORTLAND, Ore., Dec. 9.—Butter—Cubes, extras, 45c lb.; prints, parchment wrapped, box lots, 48c; cartons, 49c. Butterfat, 49c delivery Portland; station buying price, A grade, 46@48c.

Eggs—Jobbing prices: Front street, candled ranch, 50@52c; selects, 53@55c; association selects, 55c; association firsts, 53c; association pullets, 45c.

Cheese—Tillamook triplets, price to jobbers, f. o. b. Tillamook, 30c; Young Americas, 31c; longhorns, 31c pound.

Poultry—Hens, 14@22c; springs, 17@20c; ducks, white, 18@20c; geese, 18c; turkeys, live, 27@28c; dressed, choice, 35@38c.

Veal—Fancy, 12½c per pound.

Pork—Fancy, 13c per pound.

SEATTLE, Dec. 9.—Eggs—Select local ranch, white shells, cases included, 46c per dozen; mixed colors, 43@44c per dozen; pullets, 35c per dozen; cases returned to shippers, 1c less.

Butterfat—F. o. b. Seattle: A grade, 50c per lb.; raw milk, $2.40 per cwt.

Poultry—Hens, 4½ lbs. and up, 22c per lb.; over 3½ and under 4½ lbs., 16c per lb.; 3 to 3½ lbs., 12c per lb.; do dry picked, 2c above live; springs, 2 lbs. and heavier, 18c per lb.; broilers, under 2 lbs., 24c per lb.; capons, live, fat, 6 to 10 lbs., 30c per lb.; do dry picked, fancy, 33c per lb.; old roosters, 11c per lb.; Belgian hares, 3½ lb. and heavier, 10@11c per lb.; geese, fat, live, 20c per lb.; do fancy dressed, 23c per lb.; ducks, 3 lbs. and heavier, 20c per lb.; do fancy dressed, 23c per lb.; turkeys, fat, dry picked, 8 to 15 lbs., nominal; do live, fat, 8 to 15 lbs., nominal.

SPOKANE, Dec. 9.—Poultry, live weight—Hens, 4 lbs. and over, 15c; light hens, under 4 lbs., 12c; springs, 14c; old roosters, 8c; ducks, 15c; geese, 15c; turkeys, dressed, 33@35c.

Fresh ranch eggs—$10.50@12.50 case, according to quality.

Butterfat—48c pound.



husband died a city chum sent me a lovely box of chocolates, and how I did appreciate her thoughtfulness in remembering that I had no one else to buy them for me then. My little daughter is getting old enough now, but she was a baby at the time.

City people usually enjoy something that savors of country life, especially woodsy things, and, if they live in a distant state, anything that doesn't grow in their own section will be particularly welcome. The latter fact applies equally well to country people.

Any fruit grower should be able to make up attractive boxes or cartons of winter apples to delight the heart of any friend who had no fruit, and a good cook has at her command endless Christmas cheer in the shape of boxes of assorted cakes or cookies, a frosted layer cake or a nice pie.

It isn't so much the gift, in itself, as it it its adaptability to the recipient thereof that really constitutes right or wrong giving and proves delightful or disappointing.

Latest High Class Patterns for the Home

Please order the patterns you desire at least two or three weeks before you wish to use them. Desiring to obtain the latest high-class patterns for its readers, THE FARMER has made arrangements to have them sent direct from the east, and under present mailing conditions it takes about that time for them to reach you.



4055. Junior dress. Cut in three sizes: 12, 14 and 16 years. A 14-year size requires four yards of 32-inch material. The width of the skirt at the foot is 2 1-4 yards. Price 10 cents.

3814. Girl's dress. Cut in four sizes: 6, 8, 10 and 12 years. A 10-year size will require 2 1-4 yards of 27-inch material for the guimpe and 3 1-4 yards for the dress. Price 10 cents.

4178. Ladies' dress. Cut in seven sizes: 36, 38, 40, 42, 44 46 and 48 inches bust measure. A 38-inch size requires 3 5-8 yards of 54-inch material. The width of the dress at the foot is 2 3-4 yards. Price 10 cents.

4172-4174. A stylish street costume. Coat 4172, cut in seven sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. It will require 3 1-2 yards of 44-inch material for a 38-inch size. Skirt 4174, cut in seven sizes: 25, 27, 29, 31, 33, 35 and 37 inches waist measure. The width at the foot is 2 5-8 yards. To make this style for a 31-inch size will require 3 3-8 yards of 44-inch material. Two separate patterns, 10 cents for each pattern.

4022. Ladies' apron. Cut in four sizes: Small, medium, large and extra large. A medium size requires 2 3-4 yards of 40-inch material. Price 10 cents.

3965. Misses' dress. Cut in three sizes: 16, 18 and 20 years. An 18-year size requires 7 7-8 yards of 36-inch material. The width at the foot is about two yards. Price 10 cents.

4180. Ladies' apron dress. Cut in four sizes: Small, 34-36; medium, 38-40; large, 42-44; extra large, 46-48 inches bust measure. A medium size requires 4 5-8 yards of 32-inch material. The width of the skirt at the foot is 2 1-4 yards. Price 10 cents.

4188. Girl's dress. Cut in four sizes: 4, 6, 8 and 10 years. A 6-year size requires three yards of 32-inch material. Price 10 cents.

4183. Ladies' bloomers. Cut in four sizes: Small, 27-29; medium, 31-33; large, 35-37, and extra large, 39-41 inches waist measure. A medium size requires 1 7-8 yards of 36-inch material. Price 10 cents.

3997. Girl's dress. Cut in four sizes: 8, 10, 12 and 14 years. A 10-year size requires 5 1-4 yards of 32-inch material. Price 10 cents.

3438. Two dainty aprons. Cut in one size: Medium. No. 1 will require seven-eighths yard of 36-inch material, and No. 2 will require 1 1-4 yards. Price 10 cents.

3770. A dainty boudoir set. Cut in three sizes: Small, medium and large. The cap No. 1 will require three-fourths yard of 27-inch material. No. 2 will require five-eighths yard. One pair of slippers will require three-eighths yard for a medium size. Price 10 cents.

Fashion Book Notice.

Send 12 cents in silver or stamps for our up-to-date fall and winter 1922-1923 book of fashions, showing color plates and containing 500 designs of ladies', misses' and children's patterns, a concise and comprehensive article on dressmaking, also some points for the needle (illustrating 30 of the various, simple stitches) all valuable hints to the home dressmaker

SPECIAL CHRISTMAS PATTERNS.

So that our readers may secure patterns for making Christmas gifts without having to wait the usual length of time which it takes to get them from the east, The Pacific Northwest Farm Trio has obtained the following special Christmas patterns, which will be carried in stock until after the holidays and can be supplied on short notice:

2300—Set of animals, pig, dog and sheep.
2937—Toy chicken and duck.
2967—Set of toy animals, horse and cow.
2970—Set of toys, "Roly Poly" and cat.
3061—Set of doll's dress, cape and bonnet (five sizes).
3438—Ladies' aprons.
3600—Ladies' kitchen apron and oven cloth.
3770—Set of boudoir caps and slippers (three sizes).
3790—Doll's dress, slip-on style (five sizes).
4144—Ladies' dressing sack (four sizes).
4194—Set of bibs.
4195—Set of bags for shoes and slippers.
4196—Doll, with clown suit, hat and rompers (three sizes).

Please fill in this order and mail with remittance to:
PATTERN DEPT., PACIFIC NORTHWEST FARM TRIO, Spokane, Wash.

Enclosed find.....cents for which send me the following:

Pattern .....Size..... Pattern No.....Size.....

Pattern .....Size..... Pattern No.....Size.....

Name .....

Postoffice..... State.....

R. F. D..... Box No..... St. No.....

Be sure to give the pattern number and the correct size.



She Knows

how to use left-over bread and make the farm hands like it

LOTS of bread was used on her table, but lots of it also was left over. She used to throw away a lot.

But now she knows what to do with it, for one day she found a recipe which told her how to use raisins in bread pudding.

It made "a new dish" of it. Men who didn't like plain "bread pudding" were delighted with the raisins and became enthusiasts.

Raisin Bread Pudding.

Three-fourths cup Sun-Maid Seeded Raisins, 2 eggs, ½ teaspoon salt, butter size of an egg, ½ cup sugar, cinnamon to taste, ½ large loaf of stale bread, 2 bananas or apples.

Soak the stale bread over night in water. When time to make the pudding press as much water as possible from the bread so that the bread is about the same consistency as dough, then take a fork and get all lumps out. Do not leave the crust if it can not be mashed to the same consistency as the bread. Add well beaten eggs, salt and stir. Add raisins mixed with the butter. Put into dish in layers, covering each layer with sliced bananas, sugar and cinnamon. Bake in slow oven until brown. Serve with whipped cream.

All measurements for this recipe are level.



Blue package (seeded) best for pie and bread

Now she never wastes a slice of bread. She even has to bake bread especially to make this pudding.

Try the recipe and see how good it is—with

Sun-Maid Raisins

Hear your men folks call for more, and how they compliment you. Try it now.

Be sure you get Sun-Maids—the finest raisins grown.

Your retailer should sell you Sun-Maid Seeded Raisins (in 15-oz. blue packages), the best bread-pudding raisins, for not more than 20c.

Insist on Sun-Maids, the kind you know are good.

Mail coupon for free book of tested Sun-Maid recipes.

SUN-MAID RAISIN GROWERS
Membership 13,000
Dept. B-3112, Fresno, Calif.

CUT THIS OUT AND SEND IT.

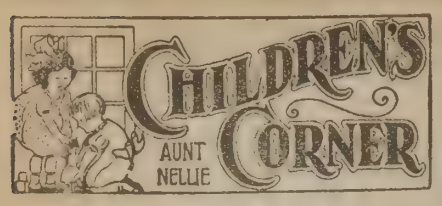
Sun-Maid Raisin Growers
Dept. B-3112, Fresno, Cal.

Please send me copy of your free book, "Recipes With Raisins."

Name.....

Street.....

City.....State.....



Allie Brunink tells us about her baby brother, who is about 7 months old now. She says he is a happy little fellow. One night his mother put him on the floor and he crept. Allie has a doll, too, and it goes to sleep. Allie is in the fourth grade at school and is 9 years old. The Brunink home is in northwestern Washington.

From Asotin county, Washington, comes a letter from Leslie Smyth, telling us about his two sisters, Kathleen and Eunice, and himself. The Smyth children have three pets, a kitten they call Sister, a dog named Keeno and Buster, the pony. They like to have their mother read to them during the winter evenings. Leslie and Eunice walk two miles and a half to school. They are both in the second grade. Leslie is 9. His birthday is August 24.

Alma Abrahamson is visiting with her aunt and uncle in Skagit county, Washington, this winter and going to school. Her real home is in Canada. Alma's birthday is July 10. She is 10. She says her uncle has three cows, two pigs and a calf.

Victoria Wedam, 11 years old, likes spelling the best of all her studies at school. Her other subjects are arithmetic, reading, geography, hygiene, grammar and history. Victoria is a fifth grade student and she has two classmates, Hazel and Grace. The next time Victoria writes to us we will get her picture. The picture is not developed yet. It is still in the camera. (Thank you, Victoria, we shall look for it.) Two horses went in the oven white and came out brown. Name them. Two loaves of bread. Victoria's birthday is December 14.

October 1 Emrose Corbin had a birthday party and received a number of nice presents. Among them were two boxes of stationery, a box of paints, two small dolls and three handkerchiefs. Emrose is 9. Her home is in central Washington, Chelan county. (We can not print stories that are not original, Emrose, but Aunt Nellie would appreciate receiving a story of your own composition.)

Gilbert Gord is one of our new cousins and we are glad to welcome him to the Corner. Gilbert is 7 years old, lives in Thurston county, Washington, and has one sister and four brothers. He is sure he and his sister will have a good time reading The Junior Farmer this winter. He is in the first grade at school.

Here we have a letter from a cousin who signs her name as Frances. "My teacher is reading 'Billy Whiskers' to us. It is a funny book. I like to go to school. Today papa is filling our silo. It is fun to watch him." Frances' home is in Yakima valley, southern Washington. (Next time tell us what your last name is, Frances.)

"I am a little girl 7 years old," says Eileen Cromer of Spokane county, Washington. "My birthday is April 24. I have a Shetland pony, two rabbits and five kittens for pets. I also have a little brother."

Hilmie Manson, who is 11 years old, is in the sixth grade at school and her teacher's name is Miss Jebsen. Her little sister, Pauline, too little to write, sends love to all the cousins. Hilmie lives near Grays Bay, in southwestern Washington.

We are glad to get another letter from Isabel Pettichord of eastern Washington. The stories and letters in The Junior Farmer interest her very much and she found her own letter in the last issue. Kathleen and Marjorie Welton are Isabel's friends. Isabel has one brother and two sisters. Little brother just started to school this term.

A nice letter comes to us from Louise Evans, a Whitman county (Wash.) cousin. Louise is a fifth grade pupil this year at school. She has a good teacher. At her home they have had plenty of blackberries.

Irene Fleming lives on a farm in eastern Washington, with her parents and two little sisters. She says, "We like animals." The pets at the Fleming home are three kittens and a dog. The Flemings like to read THE FARMER.

Roloff Hubert, a cousin in Yakima county, Washington, writes that he has two miles and a half to go to school. Roloff likes school. He is in the third grade. His dog is dead.

During his vacation Carl Sieveke had a fine time. When his father did not need the horses Carl and his brother rode horseback. He also had a nice visit with two aunts and his grandpa, who came to see them from California. He says one of his aunts rode horseback. Carl was 9 August 31, 1922. He is in the fourth grade and likes school pretty well. There are three other pupils in his class and 13 in the school. He says he has a good teacher. Carl's home is near the Idaho boundary line in eastern Washington. Every Sunday he goes to Sunday school.

Alice Herndon has not missed a day since school started; neither has she been absent. She hopes to get through the year with a record like that. Alice and her sister are in the same room now, but sister is in the fifth grade and Alice is in the sixth. They walk a mile every morning and then wait by the road until the school truck comes along and takes them to school. The schoolhouse is red brick and is three stories high. Alice is a King county (Wash.) cousin.

Birthday Greetings

FRIDAY, December 15—Irene Clark, 11 years old; Evelyn Cleman, 11; Marine Jackson, 11; Ward Rukgaber, 11; Esther Thieman, 10.

SATURDAY, December 16—Anna Belcher, 7 years old.

SUNDAY, December 17—Elsie Anderson, 10 years old; Alma Matsen, 11.

MONDAY, December 18—Robert Franz, 8 years old; Marie Groom, 9; Myrtle Lauritzen, 11.

TUESDAY, December 19—Reta Houghton, 8 years old; Wilber Van Leuven, 9; D. O. Wright, 11.

WEDNESDAY, December 20—Idella Bernice Johnson, 9 years old; Beulah Warren, 11.

LETTERS WELCOMED BY AUNT NELLIE.

Among recent letters received by Aunt Nellie are those from cousins whose names follow. A few of these will be published each week in the regular edition of THE FARMER and others will appear from time to time in The Junior Farmer:

Joyce Meredith McDonald, Wayne Brittain, Kathleen Mary Stuhr, Alice Buntain, Ora Schafer, Kiamota Anderson, Mildred Gerber, Hazel V. Schafer, Vivian Domerude, Anna Van Derschelden, Clara Breitmeir, Irene Waranka, Clara Peterson, Molly McCormack, Bertha Van Derschelden, Leola Webb, Rachel Hoffman, Fern Ricketts, Alice Brown, Cecilia E. Stuhr, Ellouise E. Gilbert.

BEDTIME STORIES

By THORNTON W. BURGESS.

GRANDFATHER FROG HAS A GROUCH.

Grandfather Frog sat on his big green lilypad in the Smiling Pool. Grandfather Frog was out of sorts. In fact, he had the very worst kind of a grouch. Now, a grouch is a very bad thing to have; it makes every one uncomfortable, and no one likes to come anywhere near one who is grouchy.

So Grandfather Frog sat on his big green lilypad and couldn't see that jolly, round red Mr. Sun was smiling, nor that the Merry Little Breezes were playing in the meadow grass, nor could he hear the birds singing, or the bees humming. In fact, he was so grouchy that he let three foolish green flies go right past his nose, and what do you think it was all about? Why, it was just because his cousin, old Mr. Toad, had beat him in a race the day before.

It had been a funny race, the funniest race that the Green Meadows had ever seen. Grandfather Frog's legs are longer



Old Mr. Toad said nothing. He just grinned and grinned.

than those of his cousin, Old Mr. Toad, and Grandfather Frog had been so sure that he would win that race that even now it was hard work for him to believe that he had lost. The reason that he had lost was because Peter Rabbit had hopped up behind Old Mr. Toad and shouted in his ear that Mr. Blacksnake was coming. Now, there is nothing in the world that so frightens Old Mr. Toad as the thought that Mr. Blacksnake is somewhere near, and when he heard Peter shout that he hopped so fast he passed Grandfather Frog and won the race.

Of course, all the little meadow people teased Grandfather Frog almost to death. They teased him so much that Grandfather Frog quite lost his temper, and this is the reason that he sat on his big green lilypad and was so grouchy that even the Merry Little Breezes kept away from the Smiling Pool.

"It wasn't fair, it wasn't fair at all," grumbled Grandfather Frog to himself. "I can beat Old Mr. Toad every day in the week, and he knows it."

Just then he saw his cousin, Old Mr. Toad, coming down to the edge of the Smiling Pool. Grandfather Frog shook his fist. Yes, sir, he actually shook his fist at his cousin, Old Mr. Toad. And when Old Mr. Toad just grinned at him Grandfather Frog hopped up and shook both fists. Old Mr. Toad said nothing, he just grinned and grinned. The more he grinned the angrier Grandfather Frog became.

"I'll race you again right now," shouted Grandfather Frog.

Now Peter Rabbit had come down to the edge of the Smiling Pool without being seen, and when he heard Grandfather Frog say that, Peter just stole around behind Old Mr. Toad and shouted, just as he had the day before, "Here comes Mr. Blacksnake"

Off started Mr. Toad, just as he had the day before, without turning to see what was behind him. Grandfather Frog watched him go, and then all of a sudden Grandfather Frog opened his big mouth just as wide as he could and began to laugh.

"Ha, ha, ha! Ho, ho, ho! He, he, he!" shouted Grandfather Frog, and held on to his sides. You see, he had just realized for the first time what a joke it all was, and it tickled him so that he nearly split his sides laughing.

And that was the end of Grandfather Frog's grouch.

(Copyrighted by T. W. Burgess.)

Your Health

By Royal S. Copeland, M. D., F. A. C. S.

I know a doctor who said he would live to be 90 by observing certain rules. The other day he died, 90 years of age.



Dr. Copeland.

It is said the doctor did not formulate these rules until he was long past threescore years and ten. Perhaps he would have lived another score of years had he started earlier to demonstrate his faith in his method.

It is the desire of each of us to hang on just as long as possible. It is not uncommon to hear some one say, "I don't care to live to be old," but I never saw a man die who would not have given much to linger longer in this beautiful world.

As an abstract proposition, dying isn't much more than a great adventure, but as a definite, inescapable and immediate experience, it is dreaded by the best of men. Therefore, we study with interest, if not with enthusiasm, every formula having in it the hope of extended life.

The rules proposed by the doctor are the following:

Do not eat too much.

Do not drink too much, especially of intoxicants.

Do not work too hard or too many hours.

Do not work too little; better to work for nothing than be idle.

Do work that is for the common good; all other is destructive.

Take just what sleep experience proves right.

Use recreation not for its own sake, but for new vigor.

Do not always be in a hurry.

Dress first for comfort; then for style.

Avoid worry; it enfeebles mind and body.

Shun all trespassers against the plain physiology of your existence.

And thus lay the surest foundation for life of the spirit here and hereafter.

Those are good rules. One could not go far astray who lived in harmony with them.

They indicate a simplicity in eating and living which is essential to health and happiness. The more complex the life and the more multiplied the dishes at the table, the shorter will be the career.

While many of these rules are those commonly given, there are others not so much discussed. Hurry, striving after extreme style in dress, enfeebling the mind by the overworking of worry, the joy of work rather than of idleness, the transgression of laws of the body—in each of these suggestions is a whole sermon of health and long life.

Of late we have read of many 100th birthdays. They will become more common. It is humanly possible to plan a life which, barring accident, may run a century.

Read these rules and take your place in the procession of centenarians.

A good old Friend

Remember the good old-fashioned mustard plaster grandma used to pin around your neck when you had a cold or a sore throat?

It did the work, but my how it burned and blistered!

Musterole breaks up colds in a hurry, but it does its work more gently,—without the blister. Rubbed over the throat or chest it penetrates the skin with a tingling warmth that brings relief at once.

Made from pure oil of mustard, it is a clean, white ointment good for all the little household ills.

Keep the little white jar of Musterole on your bathroom shelf and bring it out at the first sign of tonsillitis, croup, neuritis, rheumatism or a cold.

Sold by druggists everywhere, in jars and tubes, 35c and 65c; hospital size, $3.

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LOST If you can't locate a thing, it might as well be lost. Maybe the very thing you want is offered on our "Want Ad" page in this issue.

Northwest Ayrshires in List

Wenatchee Ayrshire farm in Washington, Earlcrest Stock farm in Oregon, and the agricultural colleges of both states figure prominently in the Ayrshire Breeders' association summary of high producing cows on official test during August. This is known as the "Ayrshire 50-pound fat list." There are 162 cows of all ages from all parts of the country on it, and, while only 10 of them are from Washington and Oregon, 4 of the 10 head their respective classes, and other animals from the northwest rank well up. E. W. Van Tassell owns two of the class leaders and Oregon Agricultural college two.

The junior 4-year-old list is headed by Oregon Robinetta, owned by O. A. C., which produced 66.72 pounds, and contains also the name of Ester Marea, the property of Earlcrest, which made 54.73. The requirement for this class is 45 pouds. Queechie's Robin Hood of Wenatchee heads the list of 11 junior 3-year-olds that produced 40 pounds or more and Lady Scott of Wenatchee that of 24 senior 2-year-olds producing 37.5 pounds or more. The former made 70.09 pounds, 11 more than her nearest competitor, a Maine cow, and the latter 58.5. Both are owned by Van Tassell, as are Queechie of Wenatchee (49.47 pounds), one of 10 senior 3-year-olds that made 42.5 or more, and Stewart Girl of Wenatchee 2d (49.49 pounds), that was fifth in the junior 3-year-old list. The 23 junior 2-year-olds that produced 35 pounds or more are led by Oregon Panetta J., owned by O. A. C. and producing 52.9 pounds, and the same institution owns Robin Hood's College Douglass, one of 64 mature cows making 50 pounds or more. She produced 55.63. In the same group is Willowmoor Ila, 51.19 pounds, and among leading senior 4-year-olds is Chinook Peter Pan Bessie, 55.31 pounds. Both are owned by Washington State college.

PLEASED WITH HERD SIRE.

"I believe I have the best sire in this fellow that I ever owned," said George O. Swales of Johnson, Wash., referring to the boar whose picture is shown herewith. He is Great I Am 1st, and is now in the aged boar class, though he was but a senior pig when this picture was taken. Mr. Swales bought him in the middle west in September, 1921, and showed him at the Lewiston fair and at the Western



Royal and Pacific International that season. He was junior champion at both the big shows and grand champion at Lewiston. Mr. Swales has not been on the show circuit this season, but a considerable number of this boar's pigs have been shown by Earl Harper and Frank P. Busch of Johnson and have captured a liberal share of prizes. Mr. Swales is immensely pleased with this sire, not only because of his proved show qualities, but because of the quality of the pigs that he has already sired.

WANT HOLSTEIN FIELD MAN.

A high-class Pacific northwest Holstein field man, to cover the three states of Washington, Oregon and Idaho and possibly British Columbia, will be at work by January 1, 1923, if plans mature which were discussed at a Portland stock show week conference between W. A. Moscrip of St. Elmo, Minn., chairman of the national Holstein Breeders' association committee on extension, other breed leaders from the east, and breeders of the three states concerned. At present the national association turns back to breeders of the respective states 50 cents of the amount paid for each transfer of a registered Holstein within that state, to be used for extension purposes. It proposes, provided northwestern breeders will renounce their claim to this money, to put with it enough more to pay the salary and expenses of an extension specialist who would devote all of his time to promoting the breed's interests in the territory. The urgent need of employing such an agent was generally recognized at the conference, and it is understood that sentiment among exhibitors at the Pacific International was practically unanimous for adoption of the proposal.

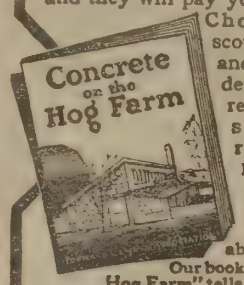
BUY CALF FOR COLLEGE.

A heifer calf sired by Khedive Kitchener of Soquim Prairie, junior champion Guernsey bull at the 1922 Pacific International, was purchased from Ben H. Ridgway of Sequim, Wash., by 1921 short course students and presented to Washington State college. On this small foundation is expected to grow a state herd of purebred Guernseys.

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Free Book on Sanitary Improvements Shows How to Prevent Loss from Disease and get larger Profits

Healthy hogs are the real money hogs. And they don't just "happen." Healthy hogs are the result of healthy surroundings. Treat your hogs right and they will pay you more.



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Two with official tests, two on test. All good records. St. Mawes and Gertie's Lad breeding. Priced to sell.

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High Producing Jerseys Young bull, out of dam with 626 lbs. fat as Jr. 4 Two others, dams soon silver medals. Priced for quick sale.

JOHN KOPPLIN, Gaston, Ore.

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of 25 Head of Purebred Percheron, Belgian and Shire Horses, at Horses' Home, Twin Falls,

Tuesday, December 19, 1 o'Clock

including imported herd sire Koccyx, champion Percheron stallion of the northwest for three years, stood second at Chicago International first year he was imported; Major Wayne, 115660, grand champion Twin Falls County fair, 1921, and at Southeast Idaho fair, 1922; Carmon and Delma, undefeated grand champion Percheron mares of the northwest horse shows; grand champion Queen Elderwood, 143908, 5 years old, weighs ton, and three other Percheron mares, yearling stallion, 4 Shire mares; 2 Belgian purebred mares, 4 yearling colts.

Time to November, 1923, at 10%; 5% off for cash. Those from distance, please bring bank references.

Twin Falls South Side Horse Breeders' Association

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PRIZE WINNING DUROC-JERSEY HOGS

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NAMPA, IDAHO, FRIDAY, DECEMBER 22.

This sale will consist of 45 bred sows and gilts sired by and bred to grand champion boars of the northwest of the last three years. For catalogues address E. J. Fjeldsted, Blackfoot, Idaho, either of the auctioneers of The Idaho Farmer, Boise, Idaho. All mail bids should be sent to E. J. Fjeldsted, care Bert M. Miller, Nampa, Idaho.

Sale will be held at Wilson's sale pavilion, Nampa, beginning at 1 o'clock sharp.

COLS. E. O. WALTER, Filer, and BERT M. WILSON, Nampa, Idaho, Auctioneers.
G. HARVEY MOORE, Nampa, Clerk. E. J. FJELDSTED, Sales Manager.

Great Young Jersey Bull

Gold and Silver Medal Breeding

Ready for service. Dam, a gold and silver medal cow and granddaughter of the medal of merit bull, Holger. Sire, the new silver medal bull, Poppy's St. Mawes Prince, with sire and grandsire both gold medal bulls. Other bull calves by same sire, all at strictly bargain prices.

CLYDE E. ROBERTSON. Forest Grove, Ore.

Gold Medal Guaranteed Richly Bred JERSEY BULL

Dam, Noble's Fern Helena, now on test, making over 70 lbs. per month. Will guarantee her to win gold medal or refund half purchase price. Bull's sire, Pogis 99th of Hood Farm 48th, whose two nearest dams average 871 pounds fat. Another, equally well bred, both priced for quick sale.

BEHRMANN FARM, Forest Grove, Ore.

Jersey--Gold and Silver Medal Sire

Ashnook Farm offers a few heifers and young bulls, sired by the gold and silver medal sire, Silver Chimes, of S. B., sire of ex-world champion heifer, Silver Chimes Gwendola, and 20 register of merit daughters, and more qualifying.

DEL PERKINS, Carlton, Ore.

Guernsey Bull Calf dropped May 30, 1922. Dam's A. R. record, milk 9820 lbs.; butter fat, 503.82 lbs., at 2 years, 2 months. Accredited herd. Farmers' price.

W. A. CARLSON, R. D. 3. Estacada, Ore.

GUERNSEYS Four excellently bred May Rose young sires for sale. Ages from two weeks to ten months. Priced to sell.

NOBLES BROS. Bow, Wash.

Milking Shorthorns Cows and young bulls by Peerless Knight, by Beau of Glenside, carrying 93¾ per cent of champion milch cow, Rose of Glenside.

J. E. DANILLS, Murphy, Ore.

The Big Wonder Herd

of big type Poland Chinas, offers a few choice boars, ready for service; sired by such boars as the 1200-lb. Giant Buster and Saint Peter, a great son of Peter Pan. Satisfaction guaranteed on all orders.

E. O. LOE, Silverton, Ore.

Big Type Poland China Young sows and gilts, bred for March and April farrowing; bred to Royal Checkers, Fashion Archdale and Designer models. Priced to move.

B. F. KAMMERZELL & SONS, ROUTE 5, Colfax, Wash.

Big Buster Polands Real bargains in August pigs. Eight sows have farrowed 80 pigs and are raising 66. Write for prices and breeding.

FRED D. ENTERMILLE, Baker, Ore.

Thousand Springs Farm Durocs

Three March boars, sired by Sensation Island King, a worthy son of Great Orion Sensation and their dams were sired by Wonder Sensation. Their sire was first prize Jr. yearling at Western Royal, second prize at Pacific International, and headed first prize aged herd. They were prize winners where shown. Priced to sell as low as $40, satisfaction guaranteed. Open and bred gilts same breeding, at a right price.

MAX M. MOREHOUSE, Mgr., Wendell, Ida.

RICHARDS CHAMPION DUROCS

We have 200 spring and fall pigs, the best we ever raised, all sired by our grand champion herd boars and out of Big Type sows. 50 boars now ready for service, 100 gilts now being bred for spring farrow. These pigs priced cheap to sell. Satisfaction guaranteed.

RICHARDS LIVE STOCK COMPANY, VIRGINIA, IDAHO.

Duroc Bred Gilts

for March litters. All daughters of Red King Giant, 1922 grand champion of the northwest. The get of this great boar made a clean sweep of the Pacific International, he and 4 of his get winning 5 of the 6 purple ribbons.

Vitality and uniformity wins.

These gilts all bred to a son of "Pathmaster."

H. C. COMPTON, Boring, Ore.

Ioka Farm Durocs 2 spring boars ready for service. Sensation strain. 4 choice bred gilts, guaranteed safe in pig. Shipped on approval, priced right.

A. N. DOERFLER, Silverton, Ore.

DUROCS Fall pigs of both sexes. Sensation breeding. A few extra gilts by Virginia Peacock, either bred or open. Large litters and right type.

CLEAVER & CROUTER, Prairie City, Ore.

Cornell's Duroc sows were undefeated on show circuit. Choice lot of bred gilts priced to sell. Satisfaction guaranteed.

S. D. CORNELL, Grandview, Wash.

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V. R. FISHER, Oxford (Bannock Co.), Idaho.

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No matter how carefully selected your stock may be—no matter how good the housing and care you give them—sooner or later you will "dig down" to this rock-bottom fact: feed is the nub and the rub of the situation.

Even the big poultry operators who have been mixing their own feeds and have switched to SURELAY will tell you it's the "cheapest" feed in the long run—cheapest because it nets *more* egg-money in return for the feed-money it costs.

These seasoned poultrymen realize—as you must—that a hen uses more energy in converting poor feed into money than she does in converting good feed into money. And, at that, how little is the difference in cost between good feed and poor feed! But look at the difference in the egg-sheet when you're through!

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THE WASHINGTON FARMER

ESTABLISHED 1894 SPOKANE. SEATTLE.



Almost Ready to Start

Orchardists Discuss Problems at Annual Convention—Page 3.

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Douglas County
Still on the Map Agriculturally

It has been the habit in some quarters to exaggerate the effects of the drought in the Big Bend country. There have been those, including bankers, farmers and business men, who have given currency to the report that 80 per cent of the wheat land in Douglas county, amounting, it is alleged, to about 146,000 acres, would remain unseeded this season.

The state department of agriculture explains that this was the estimate based on a survey made two months ago by a man representing commercial organizations interested in the future of the drought stricken areas and that probably the figures for Douglas county were based on the amount of land formerly in cultivation and that the 80 per cent had reference to the spring wheat land that would remain unseeded.

In answer to all this the county agent in Douglas county, F. H. Zentner, makes the following statement:

"There has been seeded in Douglas county fully 120,000 acres of fall wheat, and there remains unseeded not to exceed 40,000 acres, which, however, has practically all been prepared for spring seeding. A letter has been received from Congressman J. Stanley Webster stating that he will use every effort to secure the passage of the seed loan bill, which will enable wheat farmers in this state to secure federal loans for the purpose of purchasing seed, similar to what the government has been doing in Montana and other states. If this bill goes through it will be possible to seed practically every acre of land in the county suitable for growing wheat.

"Douglas county wheat prospects are the best ever known. The fall wheat made a good stand and is now covered with a mantle of snow that promises to last all winter. The largest percentage of fall wheat in the history of the county has been seeded, the largest percentage of summer fallow in the history of the county has been seeded, and Douglas county has a larger percentage of summer fallow sown to fall wheat than any other county in the state. While it is true that a small acreage of land formerly seeded to wheat in the county has been abandoned, the land remaining is in better shape than ever before and 75 per cent or it has already been seeded to wheat that is new in better condition at the beginning of winter than ever before. General prospects are more favorable than at any previous time during the past six years."

New Company
Organized to Operate Canneries

The recent organization of the Pacific Consolidation company has just been announced as the new concern which is taking over the old Puyallup. The new company has an authorized capital of $3,000,000, most of which comes from Oregon and Washington men while some of the stock is held by California people. It is to act as a holding company for these canneries and will probably take in other Pacific coast interests.

The canneries were operated by the Pacific Northwest Canning company last season, which company leased the plants and will operate them next season under the same management. The new company, however, intends to keep the plants in operation in the future and will also manufacture jams under the already well advertised brands.

The results of the last season have been exceptional and are due largely to the constructive policy carried out by the members of the company. There was also an unusually good growing season last year and the growers gave some splendid cooperation. The canneries put out the largest pack in the history of the valley, paid the members cash for their berries, marketed the entire year's output and employed nearly 600 factory hands in the two plants during the rush season.

"We want to encourage the growers to look into our problems and learn more about what we need in order to put out a product that will take well with the consumers," said Mr. Pfeiffer, sales manager of the company. "The growers are beginning to see that they must pay more attention to the problems of the canneries and not get prices that are so high they will kill their own business."

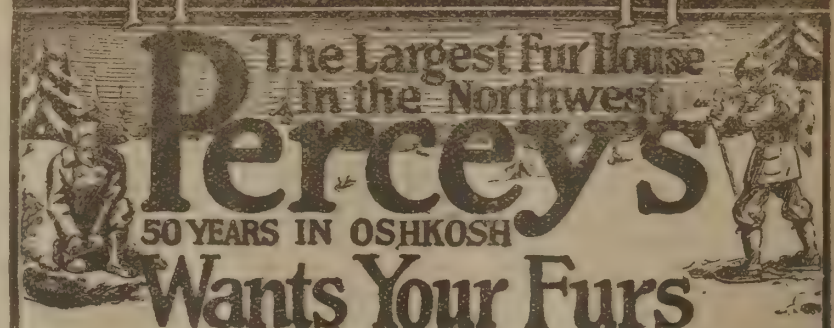
The officers of the new company are as follows: W. G. Allen, president; G. H. Bradt, first vice president; W. J. Vary, second vice president; A. F. Pfeiffer, sales manager; G. W. Haney, assistant secretary-treasurer.

WASHOUGAL DRAINAGE PROJECT.

The Washougal drainage project was assured recently when the Clarke county commissioners decided to establish the diking district. A vote on the proposal was taken among the property owners who attended the hearing and all but one favored the reclamation.

The project is the second largest ever attempted in Clark county. Two thousand acres are to be reclaimed at an estimated cost of $119,000.

Trappers-Fur Shippers



The Largest Fur House In the Northwest

Percey's

50 YEARS IN OSHKOSH

Wants Your Furs

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Howard Steps Down from Farm Bureau Presidency

National Convention Raps Ship Subsidy; Bradfute of Ohio Is Elected President; Howard May Become Member of Reserve Bank Board

After serving as president since the formation of the American Farm Bureau federation, three years ago, James R. Howard of Clemons, Iowa, last week declined to accept nomination for a fourth term. The annual convention of the federation at Chicago thereupon elected unanimously Oscar E. Bradfute of Xenia, Ohio, as president. Mr. Bradfute has been vice president of the organization and a leader in its activities since its formation. W. H. Walker of Willows, Cal., was elected vice president to succeed Bradfute.

May Go on Reserve Board.

In connection with Mr. Howard's refusal to stand for reelection as president of the farm bureau federation, the following press dispatch from Washington, D. C., apparently confirming rumors that have been more or less current, is significant:

"J. R. Howard of Clemons, Iowa, ex-president of the American Farm Bureau federation, is slated for appointment within the next few days as the 'dirt farmer' on the federal reserve board, according to information reaching representatives of agricultural associations here.

"It was asserted that President Harding had made up his mind to appoint Mr. Howard and that the nomination might be expected to reach the senate this week."

Several months ago, the publicity department of the American Farm Bureau federation announced the organization's approval of the proposed ship subsidy bill, which was then in course of preparation and which is now before congress for early action. President Howard, at the same time, expressed himself, as head of the organization, as favoring the enactment of the subsidy bill. "While the American Farm Bureau federation is opposed to any subsidy in principle," said the farm bureau statement at that time, "we realize the necessity for development of the American merchant marine as a naval auxilliary and agent in the development of foreign trade. We approve it temporarily, until our flag can be established on the high seas, and no longer."

In this connection the action of last week's national farm bureau convention in condemning the ship subsidy bill is especially interesting. The resolution of condemnation in part follows:

"Inasmuch as it has been the general policy of this country to subsidize railroads by land grants and granting of special privileges, manufacturers by a protective tariff, and as it is now proposed by those in charge of our general policy to subsidize our shipping interests by payment to them of a bonus—for all of which the consumer must foot the bill, we emphatically protest against the continuance of a policy which has become confiscatory instead of protective."

Deplores Factional Politics.

In declining to accept renomination as president of the bureau, President Howard is reported to have condemned politics in the organization. A Chicago report quotes him as saying that political manoeuvering had hampered the work of the organization for the last two years and that politics had been a large cause in the failure of the executive committee to cooperate with the president; that it was a shame that wire-pulling and factional caucauses had kept many of the delegates busy when the time should have been devoted to convention business.

In relinquishing the position of president of the farm bureau federation and bespeaking for his successor the loyal support of members and officials, Mr. Howard said he considered the presidency of the federation second in importance from the farmers' viewpoint only to that of the United States.

Wants Tariff Improved.

The federation declared war on the Fordney-McCumber tariff act and asked for an immediate investigation of tariff rates on all imports bought by farmers and an immediate reduction of such rates to such lower levels as shall only equal the differences in the cost of production here and abroad

Lifting of the present 3 per cent immigration law to admit qualified aliens for the relief of a "continuing shortage of farm and industrial labor" was among the other recommendations made.

Several resolutions adopted by the convention are summarized as follows:

1—Repair and addition of new railroad equipment sufficient to prevent another car shortage.

2—Further reduction of freight rates "until they shall be brought into proper working relation to the purchasing power of farm crops."

3—Development of a well-rounded transportation system by both state and national governments, through highway improvements and the opening of waterways, including the Great Lakes-St. Lawrence channel.

4—Greater freedom for "the private initiative" of railroads.

5—Amendment of the transportation act to permit railroads to share in periods of depression and prosperity, instead of receiving a fixed return.

6—Limiting the power of the interstate commerce commission and restoration to the various states of control over intrastate traffic and rates.

7—Appointment of a public commission to study the national transportation problem.

A resolution was adopted urging the senate to enact the Voight bill, prohibiting interstate commerce milk substitutes. The truth in fabrics bill was also approved.

Legislation was asked requiring federal reserve banks to pay member banks "the customary rates of interest consistent with good banking on all deposits."

Orchardists Dislike Too Much Federal Supervision of Grades and Packs

The Washington State Horticultural association and the Northwest Grade and Pack conference in session at Spokane, went on record December 14 with a resolution that the state's representatives in the national congress be instructed that the association would look with disfavor upon any legislation to further weaken the state's powers in the shaping and administering of horticultural grading rules. The resolution read:

"Resolved, That as this association has found the present inspection contract of cooperation with the United States department of agriculture and the state department of agriculture in the inspection and certification of fruit and vegetables offered for market satisfactory and helpful the members of congress be informed that we look with disfavor upon the enactment of any law that will change this contract or weaken the power of the state in such contract or inspection and standardization work, and ask also that a bill be enacted that will permit the issuance of federal certificates upon state grades as per present contract."

The action was taken following an address by Edward L. French, state director of agriculture, before the state horticulturists and the Northwest Grade and Pack conference. Authority over matters which Mr. French deemed within the province of the state's control had recently been conferred on the federal bureaus through a rider on an appropriations bill, he said, notwithstanding that legislation especially designed to transfer such powers to the federal government had failed of enactment. The temporarily enjoyed bureaucratic authority will expire with the end of the fiscal year covered by the appropriations, but there is a movement, said Mr. French, looking toward the reconferring of those powers upon the federal government.

State Ready to Cooperate.

"In other words, the state is willing really to cooperate with the federal department of agriculture in all of this service of inspecting fruit at the points of shipment, a service which my department has been rendering for years and which the federal authorities are now just commencing to undertake," said Mr. French. "But I do not think it is to the interests of the fruit industry of this state for the federal inspection service to assume the position that it is to become paramount, to have authority over the state service and to devise and impose new regulations, or to override the decisions of the local men in every dispute that comes up. You may think it fanciful that I should anticipate the possibility of such demands being made by this federal inspection service, but the fact is that just this is precisely what has happened in the grain inspection service, into which the federal authority was extended, ostensibly in cooperation with the state, long after the state had established its service, and wherein now recently appointed civil service clerks can, at will, override the rulings of state employees who have been grading and inspecting grain for years, and in instances work a very substantial injury to the grain growers and grain dealers of this state through the exercise of the authority thus claimed.

Sees Too Many Bureaus.

"I could go into details to show you where the federal government with multiplying bureaus is not only taking from the people sacred rights, at a cost many times greater than that at which the same service can be performed at home by state, county or local committees, but is positively stifling industries in so doing.

"The Constitution given us by our forefathers at so great a cost intended government of the people and by the people. The number of government bureaus, out of the reach of the voters and taxpayers, has no place in our system, nor should they be taken too seriously by the American people."

Federal Man Speaks.

Sherman Wells of the federal bureau of markets being unable to attend the conference, F. S. Kinsey, charged with supervising for the federal department the certification of Washington and Oregon shipments, presented the federal bureau's aims in its inspecting and standardizing activities. It was not the desire of the federal bureau, he said, to bind the individual state by one hard and fast set of grading rules, but to stabilize from year to year the grades in force within the state and to effect uniformity for the three northwestern states of such grades. This he represented as in the interests of shipper, market official and the bureau. Eighteen states, he said, are now cooperating with the federal government in the work of shipping point inspection, and in few others are there state provisions for such inspection. In states not having such provision for inspection the service is performed seasonally or at intervals by federal inspectors called in at the request of the shippers.

Other Resolutions.

The resolutions of the conference included (1) the aforementioned one addressed to the state's representatives in congress; (2) one favoring such laws and regulations as may best prevent the recurrence of losses which fruit growers have suffered in the past through railway and coal strikes; (3) a resolution urging continuance of the federal appropriation for the work of D. F. Fisher of the United States department of agriculture upon orchard problems at Wenatchee.

The recommendations of the legislative committee were voted upon separately. One asked for an appropriation for the state experiment station work of the state college, apportioned separately from other state college funds, in view of the fact that increased enrollment had made necessary the use for purposes of instruction of those funds originally meant for experiment. This was adopted. The second, a proposal to petition for a 40-mill tax limit on assessed property values, or a 2 per cent limit on full values, was tabled.

Resolutions were passed also in appreciation of the state director of agriculture's and the supervisor of horticulture's work in the interests of the horticultural industry.

Omit Unnecessary Grade Conferences.

The grade and pack conference that followed the meeting of the horticultural association was not largely nor enthusiastically attended. By a vote of about three to one the delegates decided to dispense with the annual conferences on the ground that many of them were unnecessary. Hereafter conferences will be held only when petitioned for by orchardists owning an aggregate of 25 per cent of the bearing trees within the conference.

"This is not abolishing the conference," said one grower, "but abolishing its unnecessary sessions."

A change in the state law will be necessary to provide for the new terms of convening of a grade and pack meeting, and a committee was duly appointed to petition the legislature to effect the necessary modification. The new plan was advocated as being to the interest of the packer and making for economy in inspection of the fruit crop, as well as affecting a saving of time to those attending the annual sessions of the horticultural association, the grade and pack conference usually being allowed an extra day's session.

Grades Slightly Changed.

The grade and pack conference adopted for the 1923 season, and apparently for an indefinite period unless a conference next year is petitioned for as above provided, the same grade and pack rules as have been in effect during the last season with one exception. The change is that no stings whatever shall be allowed in the fancy grade of the red-cheeked, or blush, and the green and yellow varieties.

The conference also went on record as desiring the horticultural division of the state department of agriculture to prepare an official definition of a sting, and to make it so stringent as to rule out every sting which, including the inflamed surroundings, shall be one-eighth inch or more in diameter.

Potato Grades Later.

At the end of the last afternoon's session of the conference prospects for a representative attendance at the scheduled potato grade conference in the evening were so poor that State Horticultural Supervisor C. L. Robinson entertained a motion to adjourn, which was adopted. A potato grades conference will be called for some ensuing date, and possibly for convention at some other point. A Yakima delegate present declared that there would be strong effort made to attract the potato grades conference to that city or valley.

The New Officers.

Officers newly elected are: President, Colonel Paul Weyrauch, Walla Walla; first vice president, R. T. Reed of Bellevue, King county; second vice president, M. L. Dean, Wenatchee. J. L. Dumas and Professor O. M. Morris will succeed themselves as directors. The secretary-treasurer appointed by the board for the year was C. L. Robinson of Olympia.

Colonel Weyrauch, newly elected president, set before the convention the plan upon which auxiliary county or local organizations may be effected. Ten members of the state organization may constitute a nucleus of membership empowered to appoint a chairman for such an auxiliary association. Said chairman will upon their application be at once appointed a vice president of the state body. Any papers read before the sessions of the state horticultural association will be available in copies to the auxiliary branches for reading and discussion at their local or county sessions. It is through such suborganizations that membership in the state organization is made most effectual, it was set forth.

Recognize Excellence of Fruit.

It is seven years since the American Pomological society has deemed it fitting to award for a plate exhibit of apples a medal such as it conferred upon Washington apples this year. The exhibit was one selected from the fruit at the recent show in Seattle. Plates of six each of Washington's 35 leading varieties were prepared by J. L. Dumas of Dayton and Reed of Bellvue and sent to the annual conference of the society. The verdict was inscribed on the medal and constitutes, in the words of Mr. Dumas, who told the convention of it, "the opinion of the highest horticultural authority in the United States," as to the superior excellence of Washington's apples.

The horticultural conference included an elaborate program of addresses by horticultural authorities and scientists, as well as practical orchardists throughout the district.

Injury to the apple crop by codling moth this year was declared by C. L. Robinson of the state horticultural inspection service to have affected at least 5 per cent of the crop. Indications are of a heavy worm infestation next year. This must be made a community problem, in Mr. Robinson's judgment. Where orchard pest district organization had been previously effected under Mr. Darlington an extremely low percentage of wormy fruit had been the result at the season's end. Mr. Robinson will cooperate with growers in regions desiring to organize districts, furnishing them with the provisions of the Colorado local improvement districts law, which has valuable suggestions. It was advised that districts be organized to cover, individually, very small areas, perhaps not more than 1800 acres, and that the requirements as to protective measures on the part of every grower within the district be absolute. Smallness of the districts would render the enforced measures closely applicable to the needs of the district. Regional variations in season greatly affect the conditions of proper spray application, etc., it was pointed out in discussion.

Must Have Power.

Pest control requires police authority behind control measures, declared Secre-

(Continued on page six.)

There are some great pieces of farm credit legislation on the bill at Washington, D. C. Turn to page 16 of this issue and read a digest of this vital subject.

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Tidings of Joy to All People

AND it came to pass in those days that there went out a decree from Caesar Augustus that all the world should be taxed. And all went to be taxed, every one into his own city. And Joseph also went up from Galilee, out of the city of Nazareth, into Judea, unto the city of David, which is called Bethlehem, to be taxed with Mary, his espoused wife, being great with child. And so it was, that, while they were there, the days were accomplished that she should be delivered. And she brought forth her firstborn son, and wrapped him in swaddling clothes and laid him in a manger, because there was no room for them in the inn.

And there were in the same country shepherds abiding in the field, keeping watch over their flock by night. And lo, the angel of the Lord came upon them, and the glory of the Lord shone round about them and they were sore afraid. And the angel said unto them, Fear not, for behold, I bring unto you good tidings of great joy, which shall be to all people. For unto you is born this day in the city of David a Saviour, which is Christ the Lord. And this shall be a sign unto you: Ye shall find the babe wrapped in swaddling clothes, lying in a manger.

And suddenly there was with the angel a multitude of the heavenly host praising God and saying: Glory to God in the highest, and on earth peace, good will toward men.

Hoover Hits Nail on the Head

Herbert Hoover is secretary of commerce, but his annual report to congress discusses farm problems as well as commercial problems. Mr. Hoover's interest in agriculture is not surprising, for, while he is not the secretary of agriculture, he was food administrator during the war and his duties in that office and his experience as director of American relief agencies in the starving regions of Europe gave him a grasp and understanding of world agriculture.

Mr. Hoover tells congress and the country that inequalities continue in the price levels of farm products and other commodities, and between wage-earners and farmers.

"Some relief," he said, "could be given to the farmer by readjustment of railway rates in such a fashion as to impose larger burdens upon high priced commodities and lower rates on primary produce. A greater relief would be given if he were provided with adequate transportation. Further relief would be given by the provision of an adequate credit system to meet his needs of loans for periods in excess of federal reserve facilities and at nearer the commercial rates of interest."

In these few words Mr. Hoover says more that is to the point, constructive and workable than most of the senators and representatives who have been orating on this question have said in their long and wearisome speeches. The farmers need adequate transportation, and they need a revised basis of rate making which, as Mr. Hoover says, should lower freight rates on "primary produce," like grain, live stock, hay, potatoes, fruits and other bulky farm produce.

That is the need of American agriculture in general, but it is the special need of the farmers of the Pacific coast and intermountain states, who are remote from the large markets, and, therefore, are grievously burdened by high rates.

It is cause for regret that Mr. Hoover is not endowed with greater powers. There are moments when we almost wish that he could be given as free a hand in working out the solution of our farm and transportation problems as he had when he was the country's food administrator in wartime.

Protect Your Good Seed

It is a great mistake to plant newly acquired seed potatoes beside your own carefully guarded and rogued seed stock. Likewise it is just as dangerous to plant clean seed alongside the field of commercial potatoes, for diseases of many kinds are likely to manifest themselves in the unrogued commercial field. When one has secured or developed clean seed stock it should be guarded as zealously from infection as the successful orchardist would guard his fruit against codling moth or the live stock man his cattle against blackleg.

More Silos

Silos are a growing factor in dairying. For example, there are now 38 wooden hoop silos in one (King) county, all of which have been built during the last five years. County Agent Nystrom reports that four of these have been put up within a year.

LOOKING INTO OTHER FARM FIELDS

Porto Rico shipped 412,644 boxes of grape fruit to the United States in 1920.

* * *

The Virginia peanut crop is turning out short in quantity but of good quality, but mostly of the small sizes. Jumbos will be scarce.

* * *

New Zealand declares a decrease of over 1,000,000 sheep this year as compared with 1921 figures. This is attributed to the growth of dairying in districts hitherto devoted to sheep runs.

* * *

Beef, mutton, and pork have risen over 100 per cent in Guernsey in 60 days, while slaughter house fees have risen 200 per cent. Meat which formerly sold for 18 marks per kilo is today bringing 260 marks is the report.

* * *

The western New York onion season has been delayed by excessive moisture during the growing period. Some fields were ruined. Shipments have been only 1200 cars, compared with about 2000 last year, and sales at loading points have brought returns far below those of 1921.

* * *

Up to the end of September a total of 134,839 barrels of apples was shipped through Halifax, Nova Scotia, to the markets of the United kingdom. This is a record start, and double the shipments for the same period a year ago, when only 69,249 barrels, were shipped.

* * *

There are 3000 commercial orchards in the Okanogan valley, British Columbia, bearing approximately 1,000,000 trees, according to the latest statistics. It is estimated that 3172 carloads of apples and 4105 cars of all kinds of fruit will be exported from the Okanogan district this year.

* * *

The output of beet sugar for 1921 showed an increase in volume, but a decrease in value, as compared to 1919, according to figures compiled by the census bureau. In 1921 production totaled 1,018,700 tons, valued at $127,103,000, while that of 1919 was given as 721,900 tons, of a value of $138,000,000.

* * *

Charles E. Gunnels has resigned as treasurer and director of organization for the American Farm Bureau federation, to become national extension director for the American Institute of Agriculture, Chicago, the market training organization of which George Livington is director. J. R. Howard is chairman of the advisory council.

* * *

Japanese imports from Germany have been increasing and are now greater in volume than before the war. For the year ended May, 1922, Japanese imports from Germany amounted to over $40,000,000, an increase of $11,000,000 over the 1913 import. The main items of import from Germany are: Strings, ropes and materials therefor; dyestuffs, paints and colors; metals and manufactures of metal; clocks, watches and scientific instruments; chemicals and explosives. But small amounts of a large number of other classifications are also imported.

State Farm News

For the first 10 months of this year Tacoma has exported nearly $10,000,000 worth of flour, as well as 102,910 tons of wheat.

* * *

Apple packing at the C. M. Kopp warehouse at Yakima was finished December 9. More than 50,000 boxes of fruit have been turned out.

* * *

Yakima officials claim that the county takes the fourth place in the state in the matter of automobiles operated. Yakima county owners contributed a total of $217,195 to the state in motor license fees during the past 12 months.

* * *

The King's lake fish hatchery at Newport is completing gathering the largest number of eastern brook trout spawn in the history of the hatchery. One million five hundred and sixty thousand eggs have been taken so far this season.

* * *

J. H. Kineth & Son of Coupeville, Island county, recently purchased six head of Hampshire ewes from the A. J. Flemming herd of Sunnyside, Wash. The Kineth farm now has Guernsey cattle, Hampshire hogs and Hampshire sheep all of which are purebred animals.

* * *

Frank Starkey of Benton county is shipping 2000 white Leghorn pullets about six months old to the government experimental stations at Honolulu, Hawaii. The shipment is routed by fast express to San Francisro, where the birds will be put aboard a steamer for their destination.

* * *

The Snohomish creamery, owned by J. W. Sutherland and G. A. Sutherland, has been sold to Fred H. Anderson of Bothell and Mr. Henry of Seattle. Mr. Anderson was formerly of the Homestead dairy in Everett and Mr. Henry has been in the dairy business in Seattle. J. W. Sutherland will continue in the poultry business.

* * *

A crop of field corn was planted on a sheep feeding lot at the Prosser irrigation branch of the state college experiment station. The yield was between 60 and 70 bushels to the acre, but the best results was noticed in the growth of the stalks, which grew to a height of 12 feet or more. All of the manure had been taken off of the lot before the land was plowed in the spring.

* * *

Alfalfa sod of 1910 seeding has been plowed four inches deep at the Prosser irrigation branch of the experimental station. The ground will be given a top dressing of sheep and cow manure and plowed again in early spring before planting to corn. The spring plowing will be deeper, but the alfalfa crowns will be put deep enough to miss the cultivator.

* * *

Timber on 400 acres of the state capitol grant near Oakville, in Grays Harbor county, has been sold by the state capitol committee to the National Lumber and Manufacturing company of Hoquiam for $66,298.25, the appraised value. Timber on the tract cruised 23,268,000 board feet. Fir brought $3 a thousand, cedar $2.75, spruce $2 and hemlock $1.

* * *

The Dayton Commercial club has elected the following officers:

Roy R. Cahill, president; J. W. Jessee, treasurer; D. A. Nichols, Edward Davis and W. H. Younger, house committee, Fred Norris, E. A. Holmes and Grover Israel, entertainment committee. A secretary will be named later by the officers.

* * *

R. S. Brown, manager of the Yakima branch of the Washington Cooperative Egg and Poultry association, says at least half of the laying hens of the county will be signed up with the association by January 1. He estimates there are about 125,000 laying hens in that district. Mr. Brown says it will be necessary for the association to have at least the product of 50,000 hens to be self-supporting.

* * *

Captain A. W. Reed, a veteran Willapa harbor pilot and shipping man, has purchased the South Bend cannery plant from Theodore Myers. The property includes 325 feet of valuable waterfront property. On it are two large buildings and considerable dock space. Captain Reed will turn one building into a marine and auto repair shop. Part of the dock will be cut away and a marine ways will be installed. The other building will probably be used as a warehouse.

* * *

E. R. Wells, owner and manager of Henacres ranch at Prosser, received an order recently for 10,000 baby chicks, $1900 cash accompanying the order.

Henacres produces a special strain of White Leghorn fowl, which are widely known as Henacres Leghorns. Orders for 60,000 baby chicks have already been recorded for 1923 delivery, and an output of 175,000 is expected for the season. This will mean an increase of 50 per cent over the output of 123,000 for the year 1922.

* * *

The Grays Harbor Beekeepers' association has a busy program before it for the coming year. It is planned to make a survey of beekeeping conditions in the county in 1923; to conduct a campaign which will reduce bee diseases by 50 per cent; to reduce box hives 50 per cent; to introduce 1000 queens to colonies, replacing common stock as a means of eliminating foul brood; to organize at least one more boys' and girls' bee club before December, 1923, and to augment the one already functioning at Elma.

* * *

The department of conservation and development now expects to establish a new record in the development of the Wolf creek project in the Methow country, Okanogan county, according to a report from Olympia. While only 1000 acres are to be brought under water, the project presented the problem of constructing a storage basin, building and lining flumes, preparing the ground for water and getting under way. It is expected crops will be harvested next year from 50 per cent of the land affected, though construction work was not started until October of this year.

Coming Events of Interest

Jan. 3—Northwest Poultry show, Seattle.
Jan. 8—Chelan Poultry show, Wenatchee.
Jan. 15—State farm bureau meeting, Walla Walla.
Jan. 22-23—Washington wool growers, Spokane.
Jan. 22-26—Inland Poultry show, Spokane.
Jan. 24-26—National wool growers, Spokane.

FARM BUSINESS AND MARKETS OUTLOOK

A PERIOD of rapid price inflation before winter is over is predicted by the Brookmire Economic Service, another of the business forecasting agencies. The signs upon which this conclusion is based, in substance, are as follows:

The basic symptoms, such as speculative activity, physical volume of goods entering the domestic market, the ratio of imports to exports, turn over of bank deposits, commercial paper rates and foreign money rates indicate a further price rise.

High wages in the coal mining industry seem certain to continue for at least another year which means that coal, an important factor in manufacturing and transportation costs, will remain high.

Wages of workers in the building industry and railroad industry which are entirely out of line with those in other industries are not apt to be disturbed until the next period of business contraction.

Already wages have been advanced by the U. S. Steel corporation and some of the independent steel companies and their lead is likely to be followed by employers in other lines.

Strikes during the summer left a low inventory of goods and the new tariff bill will prevent a rush of foreign goods to make up the deficit.

These factors are most potent in the case of manufactured goods, but if inflation occurs, farm products will be affected. With high wages, food and wool and cotton clothing will be bought in maximum amounts at prices higher than would be paid if wages were lower. To some extent, of course, higher prices for things farmers must buy will offset advances on their own products.

Cattle Market Holding Well:

Cattle prices in the last few days recovered the losses of the preceding week and gained additional ground. Receipts around the market circuit were about 5 per cent above the average for this season of the year, but there is little or no accumulation of beef in spite of competition from other meats. Receipts of westerns and Canadians are falling off steadily, helping the market for cows and heifers and lower grades of beef steers, as well as raising the price of stockers and feeders. A flood of cutters and canners was reported at a number of markets, marking the last stages of pre-winter clean-up and prices were sharply lower.

The price range is narrowing due mostly to fewer common steers and to greater demand for lower grades of beef. The bulk of steers at Chicago is bringing $8.50 to $10.25. Choice cattle are still selling above $13, one isolated load bringing $14 during the week. Most of the long-fed cattle are in and the Christmas demand will soon be appeased. On the other hand, there will be fewer common cattle in another month or two.

Eastern Shippers After Hogs:

Shipping demand mostly to the east is now taking about 25 per cent of the hogs at Chicago and is becoming prominent at other midwestern markets. As a rule, it becomes still heavier after the first of the year.

Prices are holding above $8 at Chicago as hogs are cutting profitably, but little accumulation of product has occurred as yet and domestic consumption and export demand are keen.

The movement to market will be at flood tide in the next six weeks. The low point in that period may be the lowest figure until next winter. Bottom may already have been touched. In any case, no pronounced decline from the prevailing level is in prospect.

Lamb Receipts Below Normal:

Receipts of sheep and lambs at the seven leading markets in the last five weeks have been approximately 1,022,000 head, compared with an average of 1,227,000 head in the corresponding period of the eight preceding years. Prices are holding with the Chicago top again at $15.60, and feeders up to $15. Holiday demand is a factor as well as the light runs.

Clipped lambs are numerous, but unless shorn early in the season they are seriously penalized as packers want the wool.

Wool Market Quiet:

The domestic wool market is quiet with only limited transactions between manufacturers and dealers. Manufacturers have moderate stocks, but with the 1923 clip four or five months away and the opening of the heavy weight manufacturing season shortly after the first of the year, the situation does not favor lower prices. More interest is being shown in medium and coarse wools than in fine wools. The London auction continues with merinos 5 to 10 per cent lower than in October, and crossbreds 15 to 20 per cent higher. Some American buying is reported. Declines of 5 to 10 per cent on merinos occurred at Brisbane, Australia, last week, but crossbreds were steady to 10 per cent higher than in November.

Wheat at Season's High Point:

Wheat prices advanced last week to the highest point since the new crop began to move. The upturn bears some of the ear marks of speculative activity based on prospects of government assistance in the exporting of wheat through the extension of foreign credits. Tangible foundations for the rise were not wanting, however.

World statistics upon wheat, based on potential requiements are bullish. The International Institute of Agriculture estimates that the supply for export in exporting countries including carryover and new crop surpluses was 947,000,000 bushels. The requirements of importing countries for the year ending August 1, 1923, if they are to maintain the same apparent consumption as in the previous year, would be 923,000,000 bushels leaving a surplus of 24,000,000 bushels at the end of the European crop year. Actual takings by these countries in the last four months have not been at the rate suggested by the foregoing figure nor is such a quantity apt to be taken, especially at the world price level which such a volume of purchases would bring about. On the other hand, the normal carryover in exporting countries at the end of the European crop year is about 150,000,000 bushels more than would be left as shown above were importing countries able to buy the full amount they need.

Neither in the United States nor Canada is there pressure of supply.

Higher prices next spring appear quite logical based on conditions now known. How the market will perform in the meantime depends on the workings of speculative energy, the attitude of Argentine growers, the continuation of rapid domestic disappearance, the possible extension of foreign credits, and the improvement of foreight financial conditions.

Wheat Helps Corn Market:

The corn market has been aided by the advance in wheat, but has not shown equal strength.

Oats prices advanced last week to the highest point since March, 1921, because of improved demand, the strength in other grains and realizaion that oats were intrinsically cheap.

Cash Grain Markets.

The range of cash grain prices for the week, ending December 13, was:

Chicago: Wheat—No. 2 hard, $1.21@1.25. Corn—No. 2 mixed, 71 3-4@74 3-4c; No. 3, 69 1-2@73 1-2c; No. 4, 68 1-4@74c. No. 2 yellow, 72@75 1-2c; No. 3, 71@74c; No. 4, 68 1-2@74 1-2c; No. 2 white, 72 1-4@75 1-2c; No. 3, 72@74c; No. 4, 68@73 1-2c. Oats—No. 2 white, 45@48 1-4c; No. 3, 23@46 1-4c; No. 4, 42@44 1-2c. Rye—87 1-4@91c. Barley—63@75c.

Seed Prices Maintained:

Timothy and clover seed prices have been well maintained recently. Most of the surplus, especially of timothy, has already been sold by growers and the remainder is in strong hands and is being held for higher prices later on.

Chicago, per 100 pounds—Clover, $16.20; timothy, $6@6.75.

Toledo, per bushel—Prime clover, $13.85; timothy, $3.41.

Feed markets have weakened, especially for high protein meals. Demand from consuming sections is not brisk, owing to mild weather and to a less profitable ratio of feed prices to prices of live stock and live stock products. Offerings of most feeds are liberal with shipments in transit quoted below deferred deliveries.

Prices Per Ton (100-Pound Bags) in Car Lots:

Chicago—Bran, $21.10; standard middlings, $24.50; flour middlings, $28.50; cottonseed meal, 36 per cent, $46.50; 43 per cent, $51; hominy feed, $30; gluten feed, $38.25; old process oil meal, $52.50; tankage, $65.

Heavier country loadings of hay and increased receipts as a result of a better car situation have caused an easier hay market. No pronounced decline is probable.

Prices Per Ton in Carlots:

Chicago—No. 1 timothy, $20@22; No. 2, $19@20; No. 3, $14@16; No. 1 light clover mixed, $19@20; No. 1 clover mixed, $18@19; No. 1 alfalfa, $24@26; upland prairie, $18@19; midland prairie, $13@15; rye straw, $12@13; oat and wheat straw, $10@13.

Egg Market Holds Up:

Egg prices were well maintained last week as the demand is broad, owing to the holiday season. Storage holdings on December 1, according to the preliminary report, were 3,258,000 cases, which is a smaller total than in 1919, but compares with a five-year average of 2,517,000 cases.

Poultry prices are holding fairly well as receipts are not exceptionally heavy and consumptive demand is excellent. Storage holdings increased less than usual during November.

Setback in Butter Market:

Butter prices at the leading markets advanced early last week because of reduced pressure from foreign butter but weakened sharply at the close because of a sudden increase in current receipts. The latter is hardly a result of an increase in production so that the weakness may not persist.

Purchases of foreign butter were much smaller than at first reported and an advance in the Danish butter market, together with higher Danish exchange, is likely to check further sales from that quarter for the time being at least. A little Canadian butter is coming to New York and Chicago right along, but pressure from New Zealand butter which is most apt to be a serious factory, has not been noticeable recently.

If pressure from foreign butter does not develop, the market should retain a fairly strong position.

Prices on 91 score fresh butter on December 13, were: Chicago, 53c; New York, 54 1-2c; Boston, 54c; Philadelphia, 55 1-2c.

Cheese Quiet, but Firm:

The cheese market has been quiet, but prices were steady to firm. Quotations at country points advanced during the week. Wisconsin production is running ahead of last year. Cold storage holdings in the entire United States on December 1 were about as expected, totalling 37,183,000 pounds, compared with a five-year average of 47,455,000 pounds.

Prices on No. 1 American cheese on December 13 were: Chicago—Flats, 27@27 1-2c; Twins, 26 1-2@27c; Daisies, 27@27 1-2c; D. Daisies, 27@27 1-2c; Young Americas, 27@27 1-2c; Longhorns, 27@28c; Square Prints, 27 1-2@28c.

Fruits and Vegetables:

Potato prices were practically steady last week, although some weakness was evident at shipping points. Total shipments from producing districts are declining, but are up to the average for this season of the year. Unloads at consuming markets have not declined so much and are rather heavy. Technically, the market appears to be getting in shape for a moderate advance. Idaho sacked Russets U. S. grade No. 1 were quoted at Chicago at $1.20 to $1.25 per 100 pounds sacked. Sacked Rurals and Pearls at Colorado shipping points were quoted at 30 to 35 cents per 100 pounds in wagonloads cash to growers.

Apple markets were weak for barrelled stock in the last few days, but steady on boxed apples. Shipments are of approximately average size. Northwestern extra fancy Jonathans, large sizes, are quoted mostly around $2.25 per box at Chicago, Delicious at $3, Rome Beauties at $2.50, and Spitzenburgs at $2.75.

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Range of Live Stock Prices, Week Ending Dec. 13

CATTLE.	Chicago.	Spokane.	Portland.	N. S. Lake.
Choice, prime heavy steers (1100 lb. up)	12.00@13.60			
Good heavy steers	9.85@12.00			
Medium heavy steers	7.35@10.15			
Common heavy steers	5.75@ 7.30			
Choice, prime light steers (1100 lb. d'n)	11.85@13.50			
Good light steers	9.75@11.85			
Medium light steers	7.25@10.00	6.00@ 6.75	6.75@ 6.75	5.75@ 6.50
Common light steers	5.50@ 7.50	4.00@ 6.00	4.00@ 6.00	4.25@ 6.00
Common to choice butcher heifers	4.25@11.15	3.25@ 5.50	3.00@ 5.25	3.00@ 5.00
Common to choice butcher cows	3.25@ 8.25	2.50@ 4.75	2.50@ 4.50	2.50@ 4.50
Bologna and beef bulls	3.40@ 6.60	2.75@ 4.00	3.00@ 4.25	2.00@ 3.50
Canners and cutters, cows and heifers	2.40@ 3.35	1.00@ 2.50	1.50@ 2.50	1.50@ 2.25
Canner steers	3.00@ 3.85	2.00@ 3.25	2.00@ 3.00	2.25@ 3.25
Medium to choice light veals	8.25@10.00	6.00@ 7.50	7.50@ 8.50	7.00@ 7.25
Common to choice heavy veals	3.00@ 7.50	4.50@ 6.00	4.00@ 7.00	
Com. to choice feeders (1000 lb. up)	5.35@ 8.00			
Com. to choice feeders (750-1000 lb.)	5.35@ 8.00	3.50@ 5.00	4.00@ 5.50	4.50@ 5.75
Common to choice stocker steers	4.35@ 8.00			
Com. to choice stocker cows, heifers	3.00@ 5.25			
HOGS.				
Top of market	8.55	9.75	9.25	9.00
Bulk of sales	7.85@ 8.50	8.75@ 9.35	8.50@ 9.00	8.25@ 8.75
Heavy (250 lb. up)	7.90@ 8.40	8.50@ 9.25	8.25@ 9.00	8.00@ 8.50
Medium (200-250 lb.)	8.05@ 8.40	8.75@ 9.50	8.50@ 9.00	8.25@ 9.00
Light (150-200 lb.)	8.00@ 8.50	8.75@ 9.75	9.00@ 9.25	8.50@ 9.00
Light lights (130-150 lb.)	8.00@ 8.50	8.50@ 9.50	8.75@ 9.25	8.25@ 8.75
Smooth packing sows (250 lb. up)	7.40@ 8.05	7.75@ 8.25	6.75@ 7.50	
Rough packing sows (200 lb. up)	7.15@ 7.75	7.25@ 7.75	6.00@ 7.00	
Medium to choice pigs (130 lb. down)	7.90@ 8.50	7.50@ 8.75	8.50@ 9.00	7.50@ 8.50
Stock pigs		7.00@ 8.00	8.50@ 9.00	7.50@ 8.25
SHEEP AND LAMBS				
Medium to prime lambs (84 lb. down)	13.15@15.60	9.50@11.00	10.50@12.00	11.25@12.50
Culls and common lambs	9.25@13.00	7.00@ 9.50	6.75@10.50	9.00@11.25
Medium to prime yearling wethers	9.50@13.50	7.00@ 8.00	7.50@ 9.50	7.00@ 7.50
Medium to prime wethers	6.25@ 9.75	6.00@ 7.50	7.00@ 8.50	5.00@ 6.50
Medium to choice ewes	4.75@ 7.75	3.50@ 5.75	3.75@ 6.00	4.00@ 5.50
Culls and common ewes	2.50@ 5.00	2.00@ 3.50	2.00@ 4.00	2.50@ 4.00
Feeder lambs	12.50@14.75	9.00@11.00		10.00@10.50

The Live Stock Market.

PORTLAND, Ore., Dec. 16.—Cattle—Choice steers, $7.50@8.25; medium to good steers, 6.75@7.50; fair to medium steers, $5.75@6.75; common to fair steers, $4.25@5.75; choice heifers, $4.50@5; choice cows, heifers, $4.50@5; medium to good cows and heifers, $4@4.50; fair to medium cows and heifers, $3.50@4; common cows, $2.50@3.50; canners, $1.50@2.50; bulls, $3@4.25; choice feeders, $5@5.50; fair to good feeders, $4@5; choice dairy calves, $8@8.50; prime light calves, $8@8.50; medium calves, $7.50@8; heavy calves, $4@7.

Hogs—Prime light, $9@9.50; smooth heavy, 250-300 pounds, $8@9; smooth heavy, 300 pounds up, $7.50@8; fat pigs, $8.50@9; feeder pigs, $8.50@9; stags, subject to dockage, $4.50@6.

Sheep—East-of-mountain lambs, $10.50@12; choice valley lambs, $10.50@12; medium valley lambs, $9.50@10.50; common valley lambs, $8.50@9.50; cull lambs, $6.75@8.50; light yearlings, $9.50@10; heavy yearlings, $9@9.50; light wethers, $7.50@8.50; heavy wethers, $7@7.50; ewes, $2@6.

SPOKANE, Dec. 16.—Cattle—Prime steers, $7@7.50; good to choice steers, $7.50@7; medium to good steers, $5.75@6.50; fair to medium steers, $5@5.75; common to fair steers, $3.50@5; choice cows and heifers, $4.50@5; good to choice cows, heifers, $3.75@4.50; medium to good cows and heifers, $5@3.75; fair to medium cows and heifers, $2.50@3.50; canners, $1@2.50; bulls, $2.75@4; light veal calves, $6.50@7.50; heavy veal calves, $4.50@6; stockers and feeders, $4@5.50.

Hogs—Prime mixed, $9@9.65; medium, $8.50@9; heavies, $6@8.65; fat pigs, $6@8.50; stockers and feeders, $7.50@8.25.

Sheep—Prime lambs, $10.50@11; fair to medium, $9@10; yearlings, $7@8; wethers, $6.50@7.50; mutton ewes, $3@5.75; feeder lambs, $3@11.

The Grain Market.

PORTLAND, Ore., Dec. 16.—Wheat—Hard

(Continued on page sixteen.)

State Farmers' Union Holds Busy Session

The annual meeting of the Farmers' Union of Washington and Northern Idaho, held in Spokane December 12 and 13, was featured by the presence of Charles S. Barrett, national president, who attended several sessions of the convention and delivered a two-hour address to an open meeting on the second day.

Mr. Barrett's address was largely inspirational. He declared that never in the history of the farmers' union had there been from coast to coast a corps of officers so uniformly heart an dsoul in the work of the organization. He urged continued loyalty on the part of the members and on the part of officers to the long-established and fundamental principles upon which the organization is founded. He likewise praised the grange as a sister order, naming the grange and the farmers' union as the two outstanding farm organizations in America today.

Mr. Barrett reiterated his criticism of the farm bureau as outlined in his address at the National Farmers' union convention in Kentucky late in November and published in The Washington Farmer a few weeks ago. He declared that the farm bureau was not a bona fide farmers' organization in that its organization was inspired and directed by interests other than agriculture and that dirt farmers were not now in control. He declared that the ultimate failure of the farm bureau movement, which he predicted, would be the greatest disappointment in the history of the farming people of this country.

President J. Q. Adams, state president, in his message to the convention expressed sentiments similar to those of Mr. Barrett. He criticized the farm bureau not only on the ground that it was fostered by non-agricultural business, but on the ground that it had endeavored to monopolize the state college extension service and build up a membership on the supposition that one must belong to the bureau in order to secure the services of the extension workers.

President Adams was reelected to serve a second term and Secretary A. D. Cross was reelected to the position which he has held for many years. New members of the executive committee were elected as follows: Almer McCurtain of Davenport, R. H. McMillan, Sandpoint, Idaho, and A. C. Moore of Walla Walla. The two holdover members of the executive committee are H. J. Herman of Genesee, Idaho, and E. D. Knight of Wapato, Wash.

Adopt Many Resolutions.

A large number of resolutions were acted on by the convention. Among the propositions indorsed were the following:

The enactment of a stringent budget law to govern the activities of county officials.

The performance of work by municipal organizations at wages and prices for material no greater than those paid by private contractors.

Extension of the consolidated election law to apply to all counties in the state.

The repeal of the ½-mill tax levy for capital buildings and the like levy for the reclamation revolving fund.

The further combination of various departments of government in the state to prevent unnecessary duplication and to effect reduction in expenditures.

The making of a survey of the state school system with a view to revising the methods of school finance by legislation.

Consideration by the state legislature of means whereby farmers in drought-stricken portions of the state may be aided in securing seed for the growing of a 1923 crop of grain.

The indorsement of the Columbia basin irrigation project and the best efforts of northwestern senators and congressmen in its behalf.

The reenactment of the excess profits tax law repealed last year by congress.

The awarding by the government to Henry Ford of a contract to develop the Muscle Shoals nitrate plants in Alabama in accordance with the offer previously made by Mr. Ford.

The immediate repeal of the Esch-Cummins railroad law, which the resolutions committee interpreted as "guaranteeing the railroads a dividend on watered stock."

The collection by this government of all debts owed it by foreign nations.

The defeat in congress of the ship subsidy measure now before the senate.

The enactment of some form of an income tax law in this state to require those having incomes from intangible property to bear a more just share of government expense.

The prohibition of the issuance of tax-exempt securities.

The levying of a 3-cent per gallon tax on gasoline and other liquid fuels for gas-propelled vehicles other than those used in farm power.

Permission to counties to adopt the commission form of government when the people thereof desire to do so.

Attack Big Salary.

The recent increase of the salary of President Suzzallo of the University of Washington from $12,000 to $18,000 a year was roundly denounced by the convention. It was declared that this increase in salary was not in keeping with the present statewide demand for reduced expenditures in public institutions.

Further development of cooperative, or pool, buying of such supplies needed by the farmers as twine, sacks, fuel and farm machinery was recommended and favored by the convention. The pooling of credits and possibly the creation of a farmers' union credit association was a subject that also entered into the discussions.

In addition to President Barrett of the National Farmers' union President A. C. Shumway of Milton, Ore., of the Oregon union was present and addressed the convention, as did also State Master A. S. Goss of the Washington grange.

Committees that worked during the convention were as follows:

Resolutions and state taxation—J. M. Reid, chairman, Pullman; Halger Jurgenson, Wilbur; J. H. Smith, Ephrata; Fred Hungate, Pomeroy; O. S. Gossard, Toppenish.

Finance and organization—C. W. Booth, Nez Perce, Idaho; H. E. Kendal, Oakesdale; E. T. Taylor, Coeur d'Alene; A. C. Whisler, Spokane; C. J. Holmes, Sandpoint, Idaho.

Marketing and warehousing—R. E. Darling, Tacoma; L. P. Teat, Reubens, Idaho; Charles Wagner, Post Falls, Idaho; M. E. Jolly, Coulee; A. C. Rhinhart, Hartline; Arthur Cox, Colfax; Ben Finke, Craigmont, Idaho.

Orchardists Dislike Supervision

(Continued from page three.)

tary Dean. Experiment stations possess no power to enforce protective measures. There must be concerted action on the part of the orchardists themselves if they would protect their orchards from invasion by pest.

Tribute was paid to the late Barney (Don W.) Sugrue of Cashmere, a former president of the organization and a resident for years of the Wenatchee valley. Mr. Morris commended the fearlessness, frankness and optimism of Mr. Sugrue.

David Boteford of Portland spoke on the value of advertising. "But the minute you allow the quality and standards of your product to drop," he said, "your advertising trademark or firm name becomes a little warning to divert trade from your product. Advertising must be backed by quality in the goods."

Inadequate space renders it impossible to present fully any of the addresses delivered at the convention. Many are omitted entirely from this week's reports, but much of the information contained in them will appear from time to time in the future.

SKAGIT SEED CROP.

Members of the Seed Growers' association report more than 400,000 pounds of clean seed, the product for 1922 of about 100 Skagit valley farmers. This represents a value of $100,000 or more. Of the total amount, 184,000 pounds is beet seed and 108,000 pounds is cabbage seed.

Exclusive of contracts for spinach acreage, which will not be made until spring, the Skagit Valley Seed Growers' association has already contracted with individual members for 939 acres to be devoted to seed culture in 1923. This is a considerable increase over seed acreage for previous years.

YAKIMA APPLES IN STORAGE.

There are reported to be more than 4,000,000 boxes of apples in storage in the Yakima valley, as against about half that number last year.

STANDARD LOADS of DU PONT SHOTGUN POWDERS

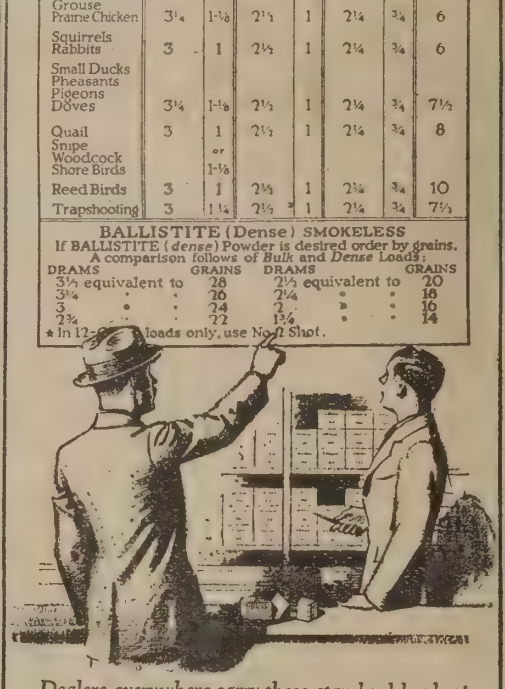
DUPONT (Bulk) SMOKELESS

Kind of Game	12 GAUGE DRAMS	12 GAUGE OZ SHOT	16 GAUGE DRAMS	16 GAUGE OZ SHOT	20 GAUGE DRAMS	20 GAUGE OZ SHOT	SHOT SIZES ALL GAUGES
Turkey Geese	3½	1-⅛	2¾	1	2½	⅞	* 2 & 4
Brant Large Ducks	3¼	1-⅛	2¼	1	2½	⅞	4 in light 0 over decoys
Medium Ducks Grouse Prame Chicken	3¼	1-⅛	2½	1	2¼	¾	6
Squirrels Rabbits	3	1	2½	1	2¼	¾	6
Small Ducks Pheasants Pigeons Doves	3¼	1-⅛	2½	1	2¼	¾	7½
Quail Snipe Woodcock Shore Birds	3	1 or 1-⅛	2½	1	2¼	¾	8
Reed Birds	3	1	2½	1	2¼	¾	10
Trapshooting	3	1⅛	2½	1	2¼	¾	7½

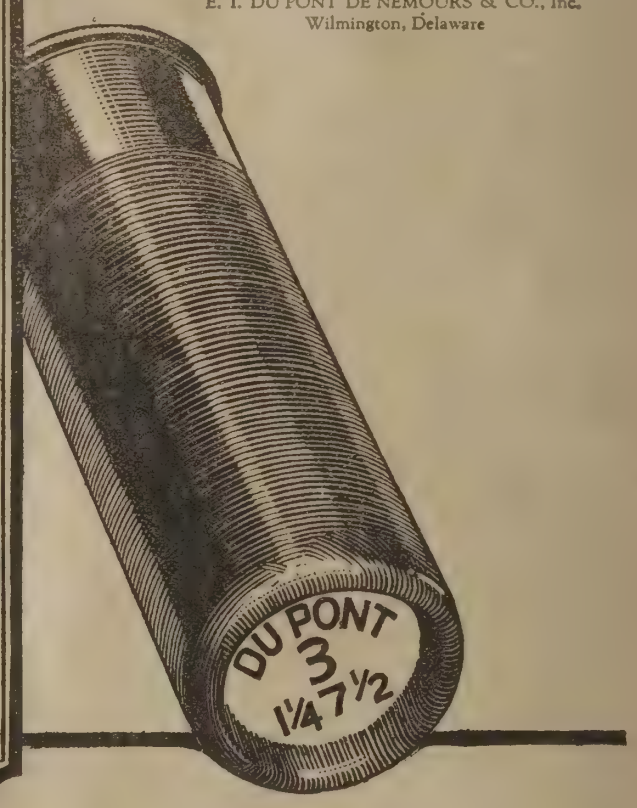
BALLISTITE (Dense) SMOKELESS
If BALLISTITE (*dense*) Powder is desired order by grains.
A comparison follows of *Bulk* and *Dense* Loads:

DRAMS	GRAINS	DRAMS	GRAINS
3½ equivalent to	28	2½ equivalent to	20
3¼ " "	26	2¼ " "	18
3 " "	24	2 " "	16
2¾ " "	22	1¾ " "	14

* In 12-gauge loads only, use No. 2 Shot.



Dealers everywhere carry these standard loads of du Pont Powders, because they have found that a great majority of their customers demand them.



Du Pont makes powder—not shells. Du Pont Powders are loaded in every brand of shell. The name "DU PONT" or "BALLISTITE", printed on the carton and the top shot wad, tells you what powder you are shooting. Specify the powder when you buy the shell.

E. I. DU PONT DE NEMOURS & CO., Inc.
Wilmington, Delaware

We do not feel it necessary to "sell" any man on the quality of du Pont Powders. We do wish to point out that, to get du Pont safety, accuracy and reliability, you must find the name Du Pont or Ballistite on the top shot wad.

SHOOT DU PONT POWDERS

DU PONT

Pigs Make Profit on Small Farm

"It is hard to beat the brood sow when it comes to the economical clearing of logged-off land," remarked G. W. Bradshaw of Sumner, who has a small herd of Duroc Jerseys on his farm in the Mountain View district. "But it is my belief that when a farmer is raising hogs the animals should be purebred. It is actually cheaper to feed a registered animal, and then there is always the chance to sell one or two of each litter to the neighbors as feeders.

"Even for feeders, the purebreds will bring a better price because they fatten in less time than will the average scrub. In many cases the buyer takes a greater pride in his animals if they are from registered stock and he will often keep the gilts for brood sows instead of fattening them.

When the feeding can be done on uncleared land the pigs will tear up much of the ground and destroy the weeds. When they get older they will tear up the wild shrubs and loosen the smaller stumps. Even the rotted logs will be broken up in an effort to get fern roots and other morsels. It is impossible for bad weeds to get a start when hogs are running in the lot and they will fertilize the land at the same time.

"It is not essential to have an expensive house for hogs in this climate. I have had good results with 'A' houses eight feet square and have them open on the opposite side from the winds. Rails along the sides are a saving at farrowing time to keep the sow from crushing the pigs. I find that it pays to be with the sow when she farrows, even if one has to sit up half of the night. I have saved many good pigs by being on hand.

"I believe in keeping a sow in good flesh when she is carrying pigs. A sow should gain weight from the time she is bred until farrowing time. Give her plenty of exercise at this period. Put her in a new lot and let her root. It always pays to feed a balanced ration so that the sow is supplied with all the minerals she needs. There are many mixed rations that are excellent and it is better to use them as they come than to feed merely mill run or any other grain that is easy to get. During cold weather I like to mix about 30 pounds of alfalfa meal with each 100 pounds of grain, soaking the meal in water over night to soften it."

Mr. Bradshaw has two brood sows and a boar, the latter coming from the Kissick herd near Tacoma. The animal traces back to Orion Top Colonel on the sire's side. He has a well arched back and is strong on the feet, being a typical Duroc Jersey. The oldest brood sow is Middledale Golden Lass, a 4-year-old sow from the Middledale farms at Cresswell, Ore. The younger animal is one of her pigs and is now a 3-year-old.

Both of the brood sows had fall litters this year, one having 14 and the other 9 pigs. A few of the sow pigs have been sold and the rest will be fattened for the market if not sold before that time. As a general rule there is a ready sale for the gilts for breeders and most of the spring pigs are sold for this purpose or for fattening.

"We always get a premium above the general market price because the meat is a good quality," continued Mr. Bradshaw. "We give the animals a good fattening ration and in the winter they get alfalfa meal to replace what green feed they get in the summer.

"One of the last hogs we butchered was fed at a cost of $8, which did not include labor. The value of the pig at weaning time was about $8, making a total cost of $16. When we butchered and dressed the carcass it weighed 210 pounds, or better than $30, which gave us a good profit above feed costs. This is proof that it pays to fatten hogs on the small farm, even if one does have to buy all feeds.

"It does not pay to feed a hog after it has reached the age of 6 months," continued Mr. Bradshaw. "It is no trouble to get them to weigh between 150 and 200 pounds at this age and that is the best size for the butchers. Last year we had eight hogs that averaged 159 pounds at 5 months of age. We cleared over $175 on the lot."

The two boys, George and Rowland, do all the feeding and other work that is necessary in the daily routine, while Mr. Bradshaw works at Sumner during the day. There is no need of his being at home except at nights because the boys are well versed in the art of hog raising and can even look after the sow at farrowing time. And in such cases Mr. Bradshaw makes a practice of sitting up with the sow during the night, while the boys assume the responsibility after breakfast.

FILE IT PROPERLY.

Use a coarse file to sharpen a very dull edge, but finish with a fine one.

A Record Crop

Peas, 20,234 Pounds to the Acre

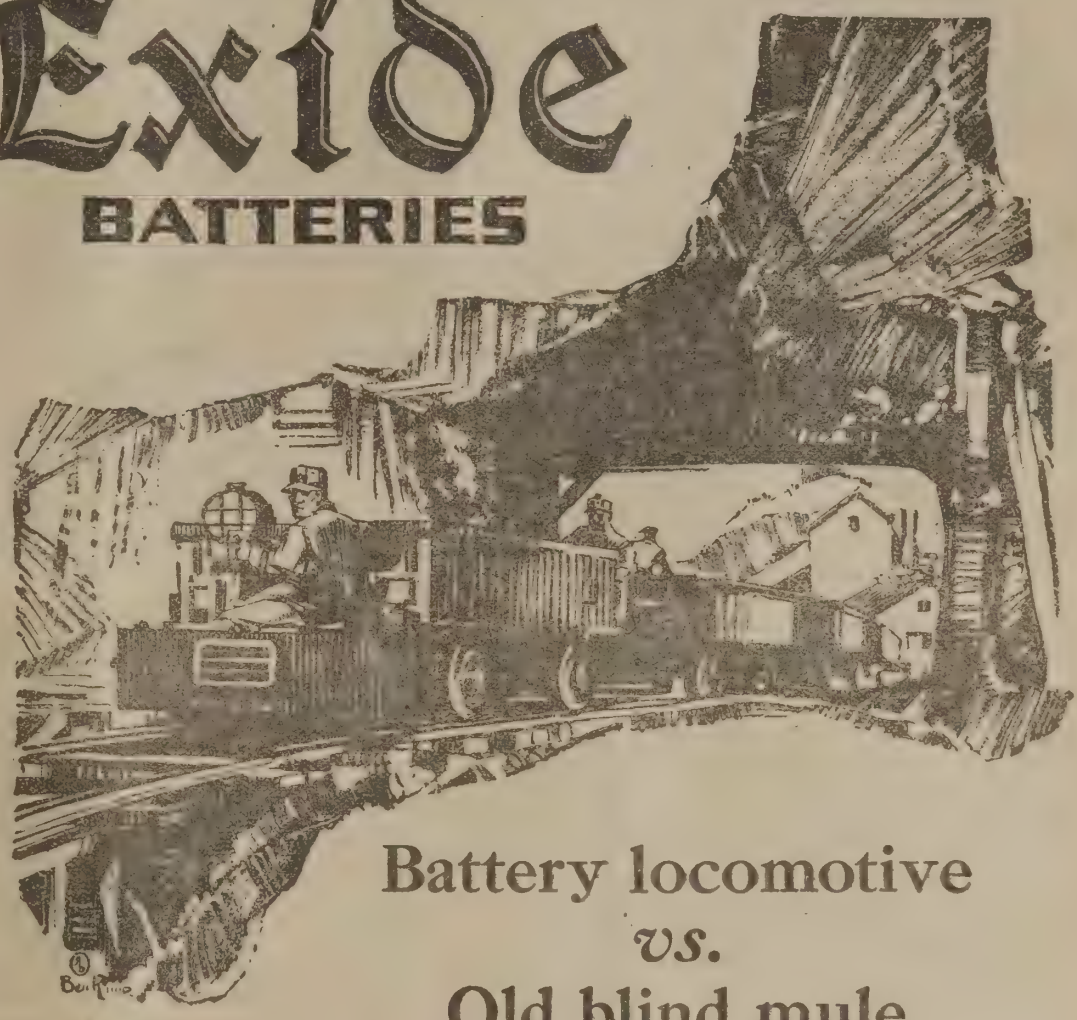
Speaking of world records for the state of Washington, we now have another in the form of garden pea production in Kitsap county. H. B. Creel of Seabeck had a row 216 feet long planted to two varieties of peas. They grew to a height of 10 feet and produced 302 pounds of peas, which was at the rate of 20,234 pounds to the acre, or over 10 tons.

Mr. Creel wrote to the western Washington experiment station to learn if there was any record in the country that was greater than this and found that the nearest to it was made by a New York farmer, who produced 18,000 pounds to the acre. Mr. Creel's record beats this by over a ton. The varieties were the Teddy Roosevelt and the Quite Content, both being a variety of the telephone pea.

The crop was planted in rows three feet apart and cultivated frequently during the summer. In order to support the vines it was necessary to use six-foot wire netting, but some of the vines could have used more wire if it had been higher and Mr. Creel expects to use 12-foot wire next year.

The soil was a sandy loam with a clay subsoil and on a hillside. The entire patch where the peas were planted was under irrigation from a number of sidehill springs that are on the farm. Mr. Creel has 40 acres in all and raises a large variety of vegetables and fruits and believes in having all products of as high quality as it is possible to maintain.

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LIVESTOCK AND DAIRY

Keep Pigs Growing

In an exhibit entitled "Pork production," shown by the United States department of agriculture at the International Live Stock exposition, Chicago, the department gave the essential points for raising swine economically.

Good breeding stock, proper mating and careful feeding of the brood sows are all important, but a point in hog raising that should receive more attention, because it is often neglected, is the necessity of keeping the young pigs growing continuously from the moment of birth to maturity.

Even before the pigs are weaned they should have access to grain in self-feeders as a supplement to the sow's milk. As soon as they are weaned the pigs should be kept on full feed, either by self-feeder or by hand. Proper feeds and exercise furnished to vigorous pigs of proper type result in hogs of market weight at about 8 months of age.

"The profitable pig is the one that never stops growing from farrowing to market" is a good slogan for every hog raiser.

Apples and Pumpkin Seeds

By A. B. NYSTROM.

Is it true that apples are harmful to milch cows? I have been told that it will shorten the milk flow. Also, do seeds in squash or pumpkins do the same?

J. E. H.

Apples contain a little over 16 pounds of digestible dry matter in 100 pounds. Nearly all of this is carbohydrates, and the nutritive ratio is 1 to 40. From these figures it can be seen that if apples constitute a large part of the ration the cow is pretty sure to dry up because she is not getting sufficient total nutrients and not nearly enough protein.

However, if the usual feed of clover or alfalfa hay is provided and also a grain ration containing considerable protein, there would be distinct advantage in adding apples to the ration, even as much as 50 pounds per day. The succulent properties of the apples will keep the cow in better condition and also increase the milk flow.

As regards the feeding of pumpkin seeds I can answer you best by quoting from Henry and Morrison's "Feeds and Feeding,". "The tradition among farmers that pumpkin seeds increase the kidney excretion tend to dry up cows and hence should be removed before feeding, has no good foundation. The seeds contain much nutriment and should not be wasted."

Dairy Instructors Elect

W. M. Regan of the dairy department of the University of California was elected president of the Western Dairy Instructors' association at its annual meeting in Portland during the week of the Pacific International. H. W. Atkinson of the University of Idaho was made vice president and E. V. Ellington of Washington State college secretary-treasurer. The association is sponsor of the dairy and dairy products judging contests each year at the stock show.

Matters of common interest to dairy instructors in the west were discussed at the conference, which was favored with talks by J. B. Fitch, head of the dairy department at Kansas State Agricultural college, and by O. M. Hundiker, formerly head of the dairy department at Purdue now with a creamery company in Tacoma.

Difficult Churning

By A. B. NYSTROM.

Will you please tell me what to do for a cow when it takes three hours to churn her cream? When fresh last June I could churn in 20 minutes. This is her second calf.

R. E. D.

The causes of difficult churning are as follows: Advanced lactation, improper ration, sweet and thin cream, low churning temperature, insufficient agitation.

In the first place it must be understood that in the churning process the butter "comes" because the fat globules stick together during the agitation of the cream until the fat particles are large enough to permit the draining of the buttermilk. Obviously any condition that will lessen the adhesive properties of the individual fat globules or prevent them from striking each other during churning will have the effect of causing difficult churning.

As a general rule the cream from cows far advanced in their lactation periods does not churn as easily as that from fresh cows. The reason being that fresh cows produce large, soft fat globules and cows nearly dry produce small, rather hard, fat globules.

Cows fed on dry feeds not properly balanced will produce a hard fat; a combination of feeds such as grass hay, ground barley and mill run will be sure to produce hard fat globules that will not churn easily under ordinary conditions. On the other hand a ration of clover hay, ground oats, mill run, linseed oil meal and corn silage will produce a soft fat almost regardless of the stage of lactation.

Sour cream churns easier than sweet cream. When sour the cream is less viscous and splashes more easily than when sweet; hence the fat globules strike each other more often and churning is easier with the sour cream. The same difference is noted between creams of high and low fat content. Cream from 25 to 35 per cent fat churns much easier than that which tests below 25 per cent.

An accurate thermometer is a necessity in churning. Cream should be churned at a temperature that will cause the butter to come in about 40 minutes. The exact temperature required will cause slow churning and hard butter while high temperatures cause quick churning and soft butter. During the winter months a temperature around 62 degrees F. is about right for normal cream. In the case of abnormal cream the adjusting of the churning temperature will usually solve the problem of difficult churning.

Briefly stated the points to observe to solve the problem of difficult churning are as follows:

1. Cream from cows recently fresh usually churns without difficulty.
2. Feed the cream by holding at 70 degrees F. for about 10 hours and then cool to 60 about 4 hours before churning.
4. Don't fill the churn over one-third full and make sure there is complete agitation during churning.
5. The churning temperature must be raised or lowered until the butter comes in 40 minutes.

Japan Looks to More Cattle

If Japan takes to cattle raising there should be an opening for the breeders of the Pacific northwest.

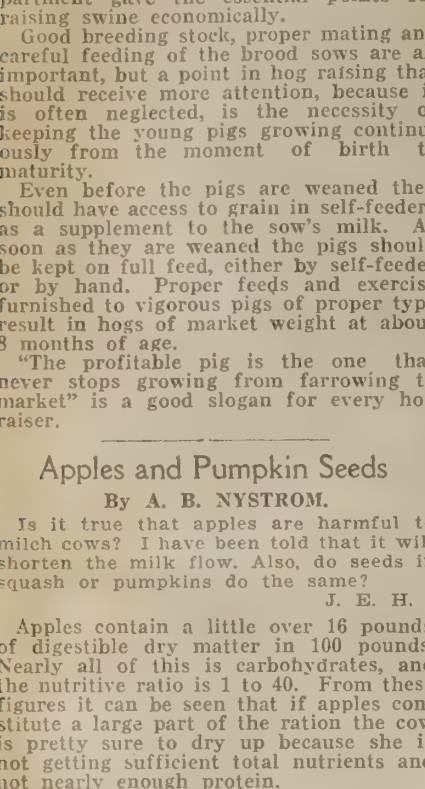
A correspondent of the Associated Press, writing from Tokyo, November 4, says:

Having more than 7,000,000 acres of arable land, a temperature compared with that of the American northwest and everything nature could supply for a cattle raising country, the Hokkaido, Japan's northern island, last year had 180,000 head of horses, 32,000 head of oxen, 136,000 hogs, 1800 sheep and 556,000 fowls. While a good profit heretofore has been made from horse raising, authorities believe cattle raising, now that the Japan are eating more meat, would be even more profitable.

It is proposed to bring 3,500,000 acres of this land under cultivation and turn approximately 2,200,000 acres into pasturage. It is estimated that on this there could be raised 540,000 head of cattle, 300,000 horses, 3,000,000 sheep and 300,000 hogs.

DRAIN THE HOG PEN.

Build the hog pen on a little elevation so that water can not stand in it. It is hard enough at best to keep a pen fit for a hog.



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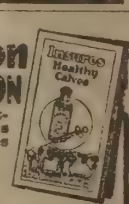
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Guide to Feeding

Balanced Ration Not Definitely Recommended for Whole Herd

By A. B. NYSTROM.

Please make up a ration from the following feeds: Mill run at $32 per ton, corn meal at $42, coconut meal at $38, dried brewers' grains at $28, ground oats at $48 and ground barley at $46. For roughage I have choice clover and timothy hay or alfalfa, first cutting. I have mangels for succulence. Also mention how much salt to feed to the average cow daily. My cows are all Holsteins and give on an average three gallons of milk daily. I would also like to know what kind of mineral to feed and how much to each cow. The cows are in a run-down condition. T. T.
Kent, Wash.

With the exception of the timothy hay, mangels and the corn meal, these feeds are all rich in protein and unless you are careful you are apt to get a ration that is too narrow, having too much protein. However, since a balanced ration should never be considered as a definite recommendation for the whole herd, but rather as a guide to feeding, it becomes an easy matter to get a good basal ration for the herd using the feeds you have mentioned.

If you feed to each cow daily:

15 lbs. alfalfa hay	@20. ton	15.0c
50 lbs. mangels	@ 6. ton	15.0c
1 lb. dried brewers' grains	@28. ton	1.4c
1 lb. mill run	@32. ton	1.6c
4 lbs. corn meal	@42. ton	2.1c

you would have a ration with a nutritive ratio of 1 to 5.1 and at a cost of 35 cents per day. This will do as a starter. Now by watching the individual cows you will seet that some will consume 50 pounds of mangels, but will eat more than 15 pounds of hay. These must have some more corn meal or ground barley. Others will not eat all the hay you give them, but will call for more mangels. These need not have a change in the grain ration, since the basal ration is rather narrow to start with, but they should have all the mangels they will clean up. If the mangels cost more than the price indicated, or if there is not enough on hand to feed as heavily as suggested and last through the winter or until other succulence is available, it will be well to decrease the allowance to 40 pounds per day. But in so doing it will be necessary to add another pound of corn meal to the ration.

If clover and timothy hay is used in place of the alfalfa the grain ration should be changed to:

Three pounds dried brewers' grains,
Two pounds mill run,
One pound corn meal.

In all cases the individual cows should be watched closely. The highest milk producers will need more high protein feeds, and the low milk producers less of the protein feeds. If it is noticed that certain cows are losing in flesh it will be necessary to add more corn meal. As soon as the barley falls to $4 per ton less than corn meal, then ground barley should be used in preference to corn. Otherwise use the corn meal.

Cows should have about three-fourths to one ounce of salt daily. One-half of this may well be mixed with the feed, but it is not wise to mix with the feed all the salt the cow requires, as it is easy to overfeed on salt. A box of salt in the yard where the cows can have access to it is the bet way to supply a part of the salt requirement.

Any ration containing alfalfa hay, which is high in lime, and mill run, which is high in phosphorous, is not likely to be deficient in mineral matter. It is more likely that your cows have not been fed enough of the common feeds—or they may have been getting too much protein as compared with the carbohydrates and that is the reason they are "run down."

If a deficiency in the mineral content of the ration is known to exist, some dairymen have obtained good results by feeding quantities of ground bone or bone ash, to furnish phosphorus, and ground lime stone and wood ashes to furnish lime. These should be placed in a separate box and not mixed with the feed.

Hogs on Barley Stubble

Fifteen acres of corn have been hogged off on the Lewis & Huxtable farm near Union Gap, Yakima county. There were 200 spring pigs kept on this farm during the summer for the purpose of harvesting the corn crop. The pigs had access to alfalfa pasture during the summer, but also had the range of barley stubble, which they cleaned up thoroughly.

Mr. Lewis reports that the hogs do a very clean job. After the hogs have eaten all the grain, cattle and sheep will be turned into the field to consume the large part of the stover, which the hogs did not eat.

In addition to the spring pigs just fattened, the partners have over 300 fall pigs, which were farrowed during August. They will be carried over winter on late alfalfa pasture, and a supplement of corn and other grain.

LOOKING BACKWARD.

Don't you wish you had repaired that roof before the rainy season began?



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Now, the pasture field and range must give way
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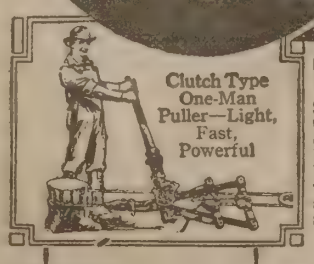
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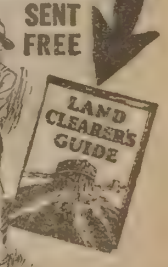
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POULTRY AND RABBITS

Must Feed Hens Well

You can not work a hen to death, but you can starve her. And many a farm hen is sworn at and branded as a no-good when the caretaker is all to blame for underfeeding her.

Everywhere the gospel of "make-'em-scratch-for-it" is being preached, and rightly so. But "it" must be there to scratch for and find or you will find yourself scratching in the nest for eggs and finding none. This scratch-for-it idea may be carried too far, though it is as sound doctrine as the golden rule.

The farm hen that gets off the roost at the first peep of day and begins to scratch for food is usually listed as a good men to have. Likewise, she that scratches until black night drives her unwillingly to bed is booked as a high producer. But how many hens get up early and stay up late because they can not find enough food to satisfy the demands of their bodies? Thousands of them.

Underfeeding is as bad as overfeeding. The undernourished hen is as sure to produce few eggs as is the overfed and fat one. On the specialized poultry farm there is perhaps little danger of letting the hens go hungry, for such farms are conducted along lines of scientific feeding. The poultryman knows how much and what kinds of feeds to give. But on the farm where the poultry flock is a side issue and poultry care is not made a matter of conscientious study there is danger of poor feeding—too much or too little or just enough improperly balanced.

The farm flock should be handled by the caretaker. Feel of the hens. You can tell whether they are in good physical condition or not. You can tell if they are thin-fleshed; you can tell if they are fat. Look at their combs; look at their eyes. Watch them as they go about their daily rustling. Listen to their singing if they sing or to their complaining if they complain. You can tell, and, having told, you can remedy the condition if something is wrong. If you find scantily filled crops when you feel of the birds on the roost at night you may safely make yourself a bet that they are undernourished. The crop should be well filled with good, solid food at night. It should be empty in the morning.

Do not make the mistake of giving the hens all the feed they can gobble down when they come from their perches in the morning. Give them just enough to break their hunger without destroying their ambition to get a little more. Keep them active all day looking for feed, but not starving if they do not find it in ample quantities. Work out the feeding schedule so that their cravings will be satisfied, but not satiated when night sends them to the roosts.

Under these conditions the late to bed and the early to rise hen is the one that produces eggs, for her activity indicates the vigor that is essential to success in any line.

Get Ready for Spring

These winter evenings are a good time to do a little figuring. Next spring when we want hatching eggs, an incubator to hatch them in and a warm place for the baby chicks to start their feathers in is a bad time.

If one wants a high percentage of hatch from one's eggs, it is necessary that the cock or cockerel be placed with the hens some little time before the eggs are selected. Therefore, now is the time to make sure that the right male bird will be available for mating along in February or early March.

If one plans to use the hens rather than the incubator, now is none too early to plan the hatching quarters and get the hatching nests ready. There is more time to do it properly now than there will be the day you desire to set the hen.

If you want to use an incubator you should not delay another week in making a study of the kinds and their methods of operation. Order it in plenty of time and become as familiar as possible with its construction and the rules for its successful use.

Possibly you want to make your own brooder. You can do it with reasonable success if you have a little mechanical and carpentry skill. If so, get it ready while there is time to spend on the details of it. If you would rather buy one, why wait until the eggs are set or until some of them are pipped?

Some parts of the country are covered with two feet of snow and the thermometer says zero or lower. Looks like baby chick time never would come. But it will, and the successful poultryman, even though he or she be in charge of a farm flock of only 50, is the one who gets properly ready weeks ahead. He who waits until the last week goes without adequate equipment and the penalty is semi-success or failure.

When the Frost Goes, Look Out

Winter's freeze may nip a few combs and otherwise injure the poultry flock, but it lends a hand in helping the farm poultryman keep his roosting quarters sanitary—that is, a little sanitary. Frozen droppings under the roosts are not unpardonable, but when the frost goes, look out! If one has been careless during the cold weather and allowed the droppings to accumulate on the board he must watch for the first thaw-up and get busy. A tremendously filthy and unsanitary condition will develop within a day after the temperature rises. The house will become soggy and ill-smelling. The hens will get their feet polluted and will in turn mark the eggs with their feet and render them nearly unsaleable.

Of course, it is always the best plan to clean the droppings board every day. It is little more trouble and the results more than pay for the extra effort. A little chaff or fine straw sprinkled on the boards immediately after cleaning will help greatly the next morning and result in a better job of cleaning. This material may be taken from the litter on the scratching floor, and it improves rather than injures the fertilizing quality of the droppings by adding its measure of humus to the soil onto which it goes.

AVOID RABBIT DISEASES.

Rabbit diseases, like those of poultry, are due in a large measure to careless provision for them and insanitary condition in their housing. Just as the hens in the laying flock give best results in clean, bright, dry, sanitary quarters, so will the rabbits and hares thrive in this kind of housing.

GROW CARROTS FOR RABBITS.

Rabbits, as a rule, are fond of carrots, and this root is a valuable feed for them.

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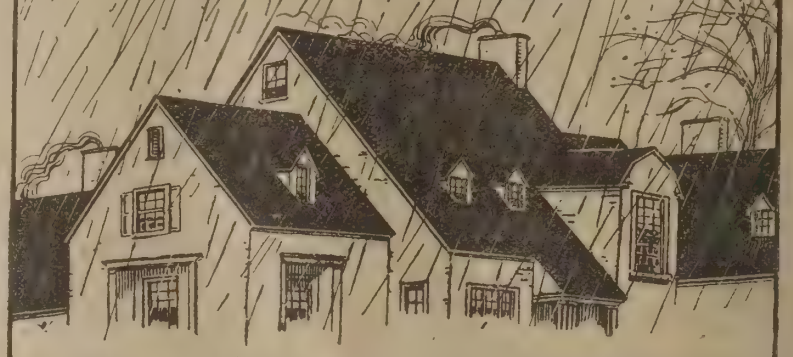


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There is an unfailing supply of water which is administered under the direction of the Canadian Government. The water is free, the only charge being a fee of $1.25 per acre for the maintenance of the system and the delivery of the water. Irrigation here is NOT expensive. Crops are assured.

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ORCHARD AND GARDEN

Banding Apple Trees

The old custom of banding apple trees for codling moth control has by no means gone out of use. J. Howard Wright, manager of the Wright Fruit company in Yakima county, Wash., had 3000 trees banded the past season and from the number of worms he has been able to catch and kill, he is positive he has greatly helped in the control of the moth the next season. Checking over the results, he finds that 30,000 worms were destroyed in this final handling of the bands for the season. To band the trees and catch the worms Mr. Wright regards as an effective way of lessening the infestation the following season. As Mr. Wright explains the habits of the worms, the majority of them leave the apple before it drops to the ground and they crawl down the tree to hide under the band. The worm preferably secrets itself on wood and the trunks of the trees are the customary places for it to prepare itself for the winter. Wherever any bark has separated from the trunk, as where there has been frost injury in recent years, the worm is quite likely to be found, and such places often harbor a lot of them.

Mr. Wright had his bands especially made and a four-penny finishing nail is used to fasten them to the trees. Before putting the bands on, however, the trunks of the trees are scraped bare of loose bark, so as not to afford a harboring place for the worms, hence they are likely to seek shelter under the band.

Avoid Too-Close Planting

"There is a growing demand for sour cherries, both for canning and for fancy trade," said E. D. Hunter, county horticultural inspector of Skagit county. "The trees require good soil and drainage, the best results being obtained from sandy loams which have a slight slope.

"In planting an orchard it is better to use 2-year-old trees. The hole should be large enough to accommodate all roots without crowding and if there is a hardpan it should be broken up by blasting. It is much better, however, to avoid any soils where the subsoil is heavy or impregnable.

"Many new orchards are planted too close. It is far better to have the trees too far apart than too close. They should never be set less than 25 feet each way.

"The young trees should be headed low, and it is best to cut out middle limbs to give the tree an open center. Pruning should be studied carefully. Cut out all branches that are apt to create a weak crotch and permit the tree to break when heavy with fruit. The heading should be continued for the first four or five years in order to produce a strong trunk, after that thinning only should be done to take out limbs that rub or those that have been broken. The trees should begin to bear at the age of 4 years.

As for varieties, I would recommend the Mountmorenci if the large type tree can be secured. The Early Richmond is also a good cherry and, like the Mountmorenci, it has a light red fruit. The English Morella is a darker cherry and sometimes is almost black. It is not grown as extensively, however, as either of the other varieties mentioned.

"While sour cherries are self-fertile, they have been found to pollinize the sweet cherries when the two types are planted in the same proximity. For this reason some growers are planting the two varieties in the same orchard and are obtaining excellent results."

Grapes Bring Good Returns

R. S. Huff of Sumner has a small patch of grapes on some sidehill land which bring him a good return each year. There are a number of varieties, but the best paying grapes are the Island Belle and Niagara. There is a good market for both of these varieties and they produce a fair crop every year.

Mr. Huff believes that a small patch of grapes pays better than the same amount of land planted to an orchard. They can be raised on hilly land where other crops would be hard to handle, and they will do well without much fertilizer. In order to get best returns from the cuttings the vines are pruned late in the winter and the cuttings set out in the spots where it is desired to have them grow. A number of cuttings are placed in each hill, and the best one saved to produce the vine. This plan allows for loss and also gets away from the necessity of transplanting which causes a setback and necessitates extra labor.

CODLING MOTH LOSS, $756,000.

Ravages of the codling moth cost Yakima growers $756,000 this season, estimates W. L. Close, district horticultural inspector, who figures the loss at 1000 carloads of apples worth $1 per box f. o. b. With the estimate he furnishes a program for preventing a repetition of the loss next season. It includes removal and destruction of all culls, burning of scrapings from rough bark and crotches, digging up the ground for a distance of three or four feet from the base of the tree, and pruning with a view to effective spraying.

Orchard Needs Bees

"Sour cherries pay so much better than apples or pears that we are taking out what apples we have left and will replant the field with Montmorenci cherries," remarked S. J. Harmeling of Vashon, King county, when asked his opinion as the best varieties of apples for commercial use. "We already have six acres of our orchard planted to sour cherries and half of that amount is in bearing. The variety does well in this climate, but it is a good plan to set out an occasional tree of Richmonds for pollinizers.

"For best results, one should have an abundance of bees, since you can not expect perfect pollinization without them. If an orchardist can have his own bees he is more certain there will be enough to do the work, but there are some that can depend on their neighbors' colonies with a good degree of success."

Mr. Harmeling told how he preferred the dwarf trees on the side hills because they are easier to pick and the rows can be cultivated much easier. Last year the pickers found it was easier to pick 400 pounds of fruit from the dwarf trees than 200 pounds from the standard trees. The price for picking was 2 cents per pound for the standard orchard and 1 cent with the dwarfs. All of the pickers preferred the latter, since they could earn more per day.

As for the pears, the Comice was mentioned as the best paying variety since it yields best and seems to be the most in demand. The Bosc was also highly recommended for commercial use and is one of the best bearing varieties that can be grown for the local market. There is also a good demand for the fruit.

One of the orchards was planted to pears, both Anjous and Comice while sour cherries were planted between the rows as fillers. When it became evident that the price for the cherries was better than for the pears and the cherries made comparatively better yield it was decided to leave the cherries and take out all of the pears. The cherry trees at the age of 4 years produced an average of 25 pounds each.

"As for fertilier, we have found nothing better than a good crop of vetch," concluded Mr. Harmeling. Barnyard manure is one of the best forms of manure, but it is impossible to get it in amounts sufficient enough to apply to the orchard. Even if we could get it, the cost would be prohibitive. By planting a crop of spring vetch in the fall and let it grow all winter to be turned under in the spring. Such a practice adds much humus to the soil as well as nitrogen for which the plant is noted.

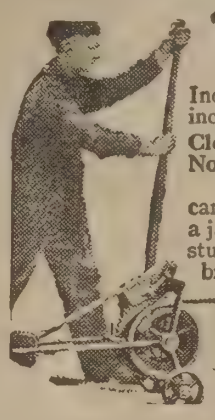
"We prefer the purple vetch for fall seeding with wheat as a hay crop because it makes a rapid growth in the spring and it adds to the quality of the wheat for hay. It is not as good for a cover crop as the spring variety with the yellow blossom.

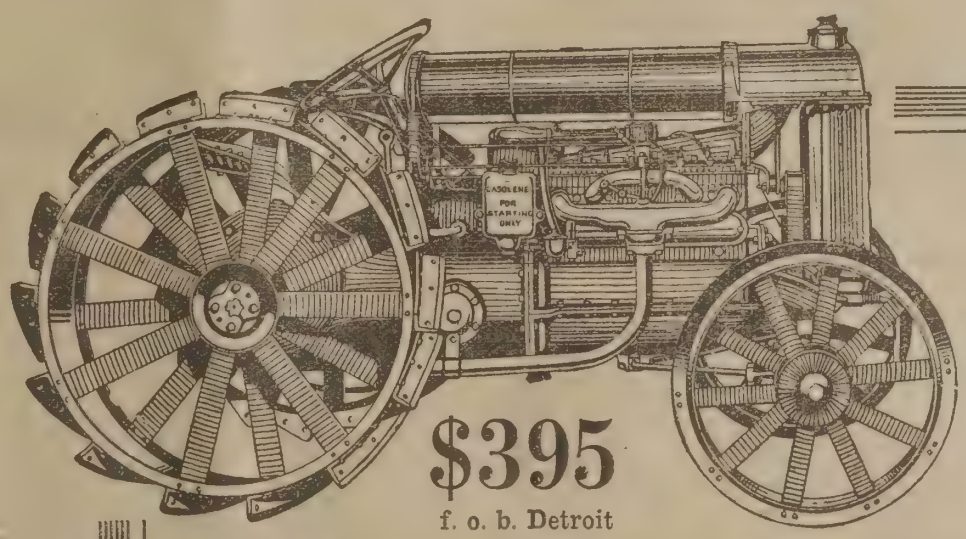
U. S. APPLE CROP.

The government's estimate of the 1922 apple crop of the United States was 31,901,000 barrels, as against 21,204,000 barrels in 1921. The 1922 crop is given as 68.5 per cent of a full crop, the average for a 10-year period being 57.3 per cent. As to the quality of the crop, that is given as 79.1 per cent, as against a 10-year average of 80.0 per cent.

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Nutrition Work

Carried on Among School Children

A novel plan of carrying on nutrition work among the school children of the state is being started by Mary E. Sutherland, nutrition specialist of the state college extension service. When the children are weighed they are given a yellow card, upon which the weight may be recorded each mouth, as well as the figures which indicate what their weight should be if they were normal. In addition each child is given a card to indicate the class in which the child stands. A white card indicates that the bearer is up to average weight; blue card that the holder is less than 7 per cent below average, while a red card indicates that the student is more than 7 per cent under weight and should do everything possible to bring his weight back to normal.

A number of county home demonstration agents in the state are taking up this system. A number of schools in King county have already taken up the work, according to Miss Edna Walker, county home demonstration agent, and many others have expressed their desire to start the plan as soon as arrangements can be made to do so.

More Potatoes in the Diet

There is estimated to be approximately 53,000,000 bushels of surplus potatoes in the United States this year and a campaign is under way to have consumers eat more potatoes in their diet. Dean E. C. Johnson of the state college is one of the eat-more-potatoe advocates. "Careful grading of the crop will help in the marketing preblem," said Dean Johnson,' "as it will not lower the price below what it is already. The unmarketable grades can be fed to stock. When potatoes are boiled and fed to hogs they will replace corn at the rate of about four pounds of potatoes to one pound of corn," he said. "A ration for a 100-pound pig would be two or two and a half pounds of corn or other grain and eight or nine pounds of potatoes a day, properly supplemented by half-pound tankage or its equivalent. Potatoes may be fed to dairy cows if well washed and cut in small plieces. They should be fed not more than 25 pounds a day, after milking, not before. They take the place of root crops or silage, but not grain, so the farmer who is feeding for milk production should feed grain in addition."

Berries, Chickens and Cows

Dan Jacobson of Puyallup has one of the best small berry patches of raspberries in the valley, according to his figures from the season's crop. From three-quarters of an acre of berries there were over 400 crates for the second year of bearing. The varieties were Cuthbert, Antwerp and Marlborough.

The field was fertilized with a combination of henhouse litter and stable manure. The patch was well taken care of and the canes grew to a good size. There is now an excellent growth of new canes for the next year's crop and the prospects for a similar crop next year are good.

There are but four acres on the Jackson farm and it has 1000 White Leghorn hens and two cows. Kale and mangels are grown to supply green feed for the chickens and cows and there is more than enough manure for the crops on the farm.

Farmers' Want Ads

HELP WANTED—Male 3

500 MORE PERSONS IN NORTHWESTERN states are lawfully entitled to positions with Uncle Sam. A remarkable opportunity. Investigate. Write Civil Service dept., 1212 Old Nat'l Bank bldg., Spokane, Wash.

WANTED — SALESMAN WHO CAN SELL high-grade, dependable nursery stock: several counties in Oregon, Wash., Idaho and Montana now open for assignment. Our selling contract will interest you. Address Albany Nurseries, Inc., Albany, Ore.

MEN WANTED—TRUCK DRIVING, AUTO repairing, battery ignition, vulcanizing, and welding. Write for big free catalog and special plan. Hemphill Auto & Engineering school, 304 E. Pike and Melrose, Seattle, Wash.

RAILWAY MAIL CLERKS, GOV'T. CLERKS and carriers needed; experience unnecessary. Particulars free. Write Mokane, Dept. B-21, Denver, Col.

AGENTS WANTED 9

AGENTS—C. T. A. PRICES REDUCED again. Suits, $18; made to order; any size or style. Orders easy to get. Big profits. Sample outfit free. Write Chicago Tailors Ass'n, world's largest tailors, Dept. 225, Station C, Chicago.

SALESMEN WANTED 12

OIL OR COAL?—"THE BURNING QUESTION," interesting information about residence oil burners FREE. Your territory may be open. Big demand. E. L. Miller Mfg. Co., 49 West Third, Kansas City, Mo.

EDUCATIONAL 45

BEHNKE-WALKER BUSINESS COLLEGE of Portland; one of the largest institutions of its kind in America; guarantees a position to every graduate. Enroll now for fall term. A few months training under expert instructors and you are ready to enter business and win. Behnke-Warner graduates are always in demand. Write today for our free success catalogue. Address Behnke-Walker Business College, Fourth, near Morrison, Portland, Ore.

ACCOUNTANTS, AUDITORS 36

WE PREPARE INCOME TAX STATEMENTS and do all kinds of bookkeeping and accounting work. J. I. Kinman & Co., Certified Public Accountants, 1209-14 Old Nat. Bank bldg., Spokane.

EASTERN AUDITING COMPANY—INCOME tax service, accountants, systematizers, auditors. 317 Kuhn bldg., Spokane.

C. B. McMATH COMPANY, INCOME TAX service. Old National Bank building, Spokane.

FRESH FOOD PRODUCTS 51-1

FOR SALE—OREGON PRUNES FROM RED Hill orchard (guaranteed) 40-50s, at 11c per lb.; 50-60s at 9c; 60-70s at 8c; processed and packed in 25-lb. boxes (28 lbs. gross); or in 100-lb. bags, in original condition, 1c less per lb.; loganberries packed in 12-lb. boxes. 30c lb. (15 lbs. gross). Cash must accompany each order. Edw. Dencer, grower and packer, R. 3, Box 158, Salem, Ore.

SEND 'EM FAMOUS KITTITAS VALLEY ALfalfa honey for Christmas. Everything prepaid to 4th zone. 60-lb. can, $7.50; 2, $14.75; 6 5-lb. pails, $4.50; 3 10s, $4.25; 1, $1.70. You send the money, we'll send the honey. Kittitas Valley Apiaries, Ellensburg, Wash.

HONEY—FINE QUALITY ALFALFA, SWEET clover product; 3 10-lb. pails, prepaid, second zone, $4.25; 60-lb. can, prepaid, second zone, $7.30; two, $12.75, not prepaid. Harry Fisher, Prosser, Wash.

"HONEY BRAND" HONEY—PURE, LIGHT, good flavored alfalfa-sweet clover honey. One 60-lb. can, $6.75; two 60s, $13.25. Price in pails on request. Oliver Sires, Wapato, Wash.

POPULAR BRAND HAPPY HOME HONEY—One 60-lb. can, $6.50; two cans, $12.75; six 10-lb. pails, $7.50; comb honey prices on request. H. N. Paul, Mabton, Wash.

EXTRACTED HONEY — ONE 60-LB. CAN, $6.50; two 60-lb. cans, $12.75, collect; three No. 10 pails, prepaid, third zone, $5. Wells D. Rose, Sunnyside, Wash.

FINEST HONEY—60-LB. CAN, $6.50; 2 CANS, $12.75, collect; 10 pounds, $1.70; 5, $1, both postpaid; satisfaction guaranteed. Geo. Bancroft, Hermiston, Ore.

4 LBS. SALMON BELLIES AND 3 LBS., ABsolutely boneless codfish, delivered by mail, prepaid, $2. Coffin Fish Co., Seattle, Wash.

GOLD MEDAL BRAND YAKIMA ALFALFA, sweet clover honey; 60-lb. can, $6.50; two cans, $12.75. C. W. Higgins, Wapato, Wash.

DELICIOUS CLOVER HONEY, 120 POUNDS, $11; 60 pounds, $5.75; 30 pounds, $3. Illingsbury, Twin Falls, Idaho.

DRIED LOGANBERRIES, TEN POUNDS, PREpaid, $4; sample, 25c. Kingwood Orchards, Salem, Ore.

COMB HONEY, FANCY, $4.50; NO. 1, $4. O. B. Roberts, Prosser, Wash.

MERCHANDISE 59

ARMY GOODS SPECIALS THIS WEEK—O. D. wool breeches, $1.95; wrap leggings, 45c; O. D. regulation army shirts, new, $2.95; O. D. wool shirts, $1.95; wool knitted heavy union suits, $2.25; bib overalls, $1.25; genuine army shoe, Munson last, $4.25; real army work shoe, $3.45; wool socks, 25c pair, $2.50 dozen; heavy wool socks, 30c pair, $3.25 dozen; pure wool long army pants, new, $2.95; one buckle, cloth top overshoes, $1.95; four buckle, $3.95; eight-inch all rubber shoes, $3.75; six-inch, $3.45; leather lined vests, leather sleeves, $6.50. Write for catalog. Walker's Army Store, Department T, 501 Trent, Spokane, Wash.

MISCELLANEOUS—FOR SALE 60

SASH AND DOORS—O. B. WILLIAMS CO., 1943 First ave. So., Seattle. Chicken house sash, 20" wide by 25" high, 80c; a dozen different sizes in stock for immediate shipment. Skylights for chicken houses, 36"x40"; price, glazed, $2. This is the size recommended by the Western Washington experiment station. We carry them in stock for immediate shipment. Sash and doors for all purposes at lowest prices. All orders receive prompt attention. Our large illustrated catalog No. 35, showing full line of building material and built-in fixtures for the home, free on request. O. B. Williams Co. Established 1899.

HOMESPUN TOBACCO—CHEWING, FIVE pounds, $1.75; 10 pounds, $3; 20 pounds, $5; smoking, 5 pounds, $1.25; 10 pounds, $2; 20 pounds, $3.50. Send no money, pay when received. Cooperative Tobacco Growers, Paducah, Ky.

HOMESPUN TOBACCO—SMOKING, 5 LBS., $1.25; 10 lbs., $2; 20 lbs., $3.50; chewing, 5 lbs., $1.75; 10 lbs., $3. Furnish free recipe for preparing. Send no money. Pay when received. O'Connor Smokehouse, Mayfield, Ky.

PIPE—GET PARTICULARS ON OUR SPEcial flue pipe, 1¼, 1½ and 2 inch. Big saving on it. We also save you on roofing, belting, pumps, engines, cable, etc. Alaska Junk Co., 8120 Adams, Spokane, Wash.

WALL BOARD—WRITE FOR SAMPLE OF Washington plaster wall board; won't warp, won't burn. Manufactured by Washington Building Products company, 6851 E. Marginal Way, Seattle, Wash.

NATURAL LEAF TOBACCO—CHEWING, 5 pounds, $1.75; 10 pounds, $3; 20 pounds, $5. Smoking, 5 pounds, $1.25; 10 pounds, $2. Pay when received. Tobacco Growers' Union, Paducah, Ky.

WOOL BATTS, MATTRESSES, BLANKETS, Indian robes and cloth, for cash or exchange for fleece wool; custom carding. Perfection Batt & Mattress Co., Stayton, Ore.

NATURAL LEAF TOBACCO—CHEWING, 5 lbs., $1.75; 10 lbs., $3; 20 lbs., $5.25; smoking, 5 lbs., $1.25; 10 lbs., $2.25; 20 lbs., $4. Hickory Ridge Farms, Mayfield, Ky.

HOME SPUN SMOKING TOBACCO, MILD AND mellow; 10 lbs., $1.75; 20 lbs., $3; delivery guaranteed. We furnish free recipe for preparing. Smoking Tobacco Exchange, Sedalia, Ky.

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TOBACCO—SELECT 3-YEAR-OLD KENTUCKY leaf. Pay for tobacco and postage when received. 5 lbs., smoking, $1.25; 5 lbs. chewing, $1.50. Farmers' Union, Hawesville, Ky.

BUY YOUR ALFALFA HAY AND "NETTED Gem" potatoes direct from grower, cabbage, one cent pound. Samuel Shockley, Outlook, Wn.

PURE CANE MOLASSES FOR STOCK. LOW prices. Write Lewis & Co., S151 Lincoln st., Spokane.

MISCELLANEOUS. 61

SPLENDID YOUNG REGISTERED PERCHERon stallion for good car or truck. Ed Sellick, Kennewick, Wash.

MISCELLANEOUS—Wanted. 63

EGGS, APPLES, HUCKLEBERRIES—WRITE us. Uncle's Delicious Pies, inc.; capital stock $50,000. 554 Mississippi avenue, Portland.

STOVE REPAIRING 128

WRITE MYER RUBENS, SPOKANE, ABOUT stove repairs, welding broken parts, nickel plating.

PATENTS 150

PATENTS—WRITE TODAY FOR FREE INstruction book and evidence of conception blank. Send sketch or model for examination and opinion; strictly confidential. No delay in my offices; my reply special delivery. Reasonable terms. Personal attention. Clarence O'Brien, registered patent lawyer, 534 Southern building, Washington, D. C.

FUR-BEARING ANIMALS 170

SILVER AND CROSS FOXES FOR SALE. William Rambo, 407 Sprague, Spokane.

PETS—Dogs, Birds, Etc. 171

WHITE COLLIES FOR CHRISTMAS, REAsonable, Urbandale Farm, Oakley, Idaho.

PETS—Dogs, Birds, Etc. (Continued) 171

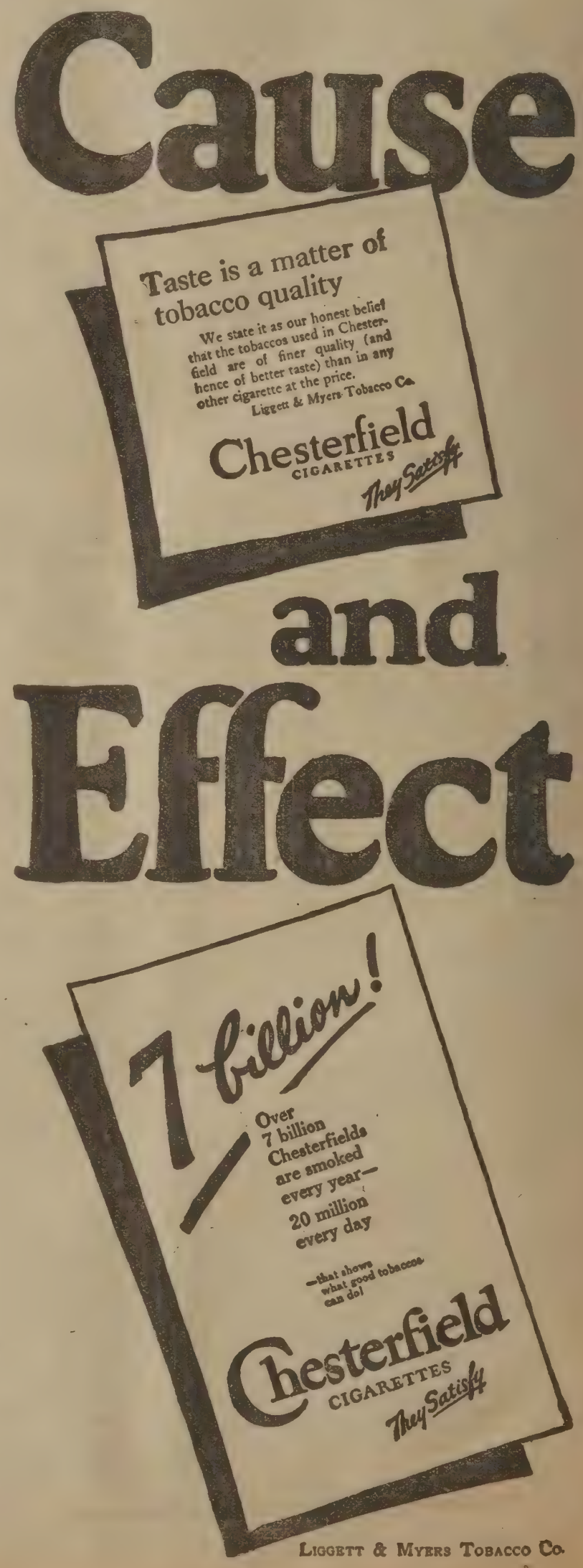
REGISTERED AMERICAN KENNEL CLUB Airedale puppies; large, vigorous kind; best all-around dogs to be found. Only a few choice ones left. Pedigrees and prices on application. Snopeke Kennels, Box 213, American Falls, Idaho.

WHEN YOU WANT A DOG, CANARY, PARrot, rabbits or a pet or pet stock supplies, cages, feeds or remedies, write. We are headquarters in the northwest. Routledge Bird, Pet & Animal Co., 174 Union avenue, North, Portland, Ore.

FOR SALE—PEDIGREED AIREDALE PUPS. Photos and price on application. A. G. Lucier, Powell, Wyo.

FOR SALE—TRAINED AND UNTRAINED fox hounds, puppies. Hugh Morrison, Route 8, Spokane, Wash.

(Continued on the following page.)



PETS—Dogs, Birds, Etc. (Continued) 171

REGISTERED AIREDALE HUNTING BITCH. Beautiful white collie puppies, working strain. Purple ribbon bred stock. Cermer Kennels, Pasco, Wash.

YOUNG TRAINED FOX HOUNDS FOR SALE. E. L. Beck, Pomeroy, Wash.

POULTRY 174

CERTIFIED WHITE LEGHORN BABY chicks, hatched in the world's largest electric hatchery, for spring, 1923 delivery. January prices, $4 per 25; $8 per 50; $15 per 100. Special prices, 500 and 1000 lots. Order early chicks now and realize big broiler profits. Choice, free range, high egg-producing breeding flocks inspected by Sonoma county farm bureau. Safe arrival guaranteed. Must Hatch Incubator Co., 445 Seventh st., Petaluma, Cal.

EBORALL'S S. C. WHITE LEGHORN BABY chicks, $17 per 100; $160 per thousand. Our twenty-three years of breeding poultry and operating incubators enables us to hatch a strong, vigorous chick that is easy to raise and develops early. We hatch only large white eggs produced on our own farm. Weekly from Jan. 15. Order chicks early. We guarantee satisfaction. Send for circular. Crystal White Poultry Farm, McMinnville, Ore.

BABY CHICKS—FRESLAID FARM HUSKies for 1923. Banish hard times with a bunch of our profit-making Leghorn chicks. Time flies. The early buyers are picking the best dates so write now for free instructive catalog. It tells how to make $500 a year from your farm poultry. Satisfied customers made our growth possible. We claim the largest electric incubator in the world. Freshlaid Farm, Colfax, Wash.

WHITE LEGHORN BABY CHIX—THE KIND you all want; chix with vim, vigor and vitality; 20 years' breeding and hatching mean you can get none better, very few as good. Your guarantee is "the oldest established hatchery" in the northwest produces them, and we certainly know how. $15 per 100; $14.50 by 500; $14 by 1000; good delivery guaranteed. Lakeside Poultry Farm, Roy, Wash.

WHITE LEGHORN BABY CHICKS AND eggs from pure O. A. C. stock; acknowledged everywhere as the world's greatest laying strain. Our hens all trap nested without lights and on free range. Breeders selected for egg production, vitality and standard requirements. Prices reasonable. Write for circular. Corvallis Poultry Farm, Box 304, Corvallis, Ore.

BUY YOUR BABY CHICKS FROM THE White hatchery, member of the Sonoma county farm bureau accredited hatcheries. All flocks approved by farm bureau inspector. We handle accredited "A" grade chicks and "AA" grade for the poultryman who wants something better. Write us at once for information, prices, etc. White Hatchery, Petaluma, Cal.

TRAPNESTED CARNATION WHITE LEGhorns; famous for their vigor and winter layers. We specialize on baby chicks, setting eggs and breeding stock. We successfully shipped hundreds of pullets this fall to Honolulu, which shows the demand for Carnation stock. Ernest Raush, Carnation Poultry Farm, Kent, Wash.

S. C. ENGLISH STRAIN ANCONAS; COCKERels, $2.50 to $5 each. Rhode Island Red cockerels, $2.50 to $5 each. Fawn Indian Runner ducks and drakes, $3 each. Toulouse geese, $5.50 each or $10 pair. All from first class prize winning stock. Peerless Poultry Farm, K. Broeder, Sherwood, Ore.

START A POULTRY HATCHERY—YOU CAN make big profits operating a hatchery under the Elec-Chic cooperative plan. We furnish equipment on easy terms and help you sell all your chicks. Poultry Equipment Co., Burbank, Cal.

MY BUFF LEGHORNS LEAD THEM ALL for laying and exhibition; backed by 10 years successful breeding. Money makers the year around. Stock for sale. Now booking orders for eggs and chicks. R. Stromquist, Beaverton, Ore.

LIMITED NUMBER ANCONA CHIX FOR spring delivery from Multnomah strain Sheppard foundation. First young pen Pacific international. High laying ability and exhibition quality. Prices on application. J. Conley, Route 4, Portland, Ore.

WHITE LEGHORN BABY CHIX FOR SUMmer and fall months from stock accredited by Sonoma county farm bureau. We guarantee safe arrival. Write for prices and literature. The Pioneer Hatchery, 422 Sixth street, Petaluma, Cal.

DAY-OLD PULLETS, GUARANTEED S. C. White Leghorn day-old pullets, also day-old broilers; established 1912. Eureka Hatchery, 628 D st., Petaluma, Cal. James K. Hirst, Prop. Refs. gladly furnished.

SINGLE COMB RHODE ISLAND RED AND White Leghorn cockerels, bred from prize-winning stock. You can not make a mistake by ordering one of these birds. $5. F. E. Mohr, Orchard Ave., Washington.

DANIEL'S WHITE ROCKS AND SINGLE Comb White Leghorns; trap nested continually. Chix, eggs, stock. Catalog free. Ideal Poultry Yards, Hoquiam, Wash.

AS USUAL, WHITE LEGHORN BABY CHICKS from hens bred for heavy egg production. Pure Tancred strain, $18 per 100; $165 per 1000. D. A. Gillette, R. 4, Yakima, Wash.

GET THE BEST PRICES FOR YOUR POULtry, eggs, turkeys, geese, veal and hogs. Write for quotations. Hotchkiss Produce Co., Spokane.

40 QUALITY R. I. RED COCKERELS, $5 and up. Write your wants. Can please you. J. Nonnenmacher, Route 3, Yakima, Wash.

S. C. BROWN LEGHORNS, COCKERELS, hens, pullets; none better; stock guaranteed. E. H. Rosenkranz, Colfax, Wash.

FOR SALE—ANCONA COCKERELS, $3 AND $5 each. Address George W. Former, Weiser, Idaho.

MAMMOTH LIGHT BRAHMA COCKERELS and pullets. Adam Schafer, Hillyard, Wash. Phone Glen. 3257J.

RHODE ISLAND WHITE COCKERELS, GOOD type; heavy laying strain. Van Lawson, McMinnville, Ore.

PUREBRED BLACK MINORCA AND WHITE Wyandotte cockerels. C. McClelland, Boise, Idaho. R. 1.

1949 COCKERELS, 49 VARIETIES; HATCHING eggs. Free book. Aye Bros., Blair, Neb., Box 14.

SINGLE COMB RHODE ISLAND REDS; EXcellent cockerels and pullets for sale. Dr. E. T. Biwer, Boise, Idaho.

MY CHOICE ANCONA COCKERELS, BEAUtiful birds, $5. B. S. Prather, Woodburn, Ore. R. 3.

FINE SINGLE AND ROSE COMB COCKERELS of excellent layers. Black Minorcas $2 to $3. H. E. Scholz, Menlo, Pacific county, Wash.

SINGLE COMB RHODE ISLAND WHITE cockerels, $2.50. H. Squire, Wilbur, Wash.

SILVER SPANGLED HAMBURG COCKERELS, $3. E. P. Dashiell, Geraldine, Mont.

FARMERS' WANT ADS

This is the farmers' "want," "sale" and "exchange" department for small advertisements of farmers, including live stock and poultry.

Advertising rates for ads running 1 to 3 times, 10c per word per insertion, with a special rate to Farmer subscribers, as follows: Ads running 4 to 12 times, 9c per word per insertion; ads running 13 times or more, 8c per word per insertion.

All commercial and land advertising, 10 cents per word each insertion. Open also to nonsubscribers.

In using these columns advertisers must observe: (1) No advertisements will be inserted for less than $1.00. (2) Every word, number and initial, including name and address, must be paid for. (3) New advertisements, changes of copy or cancellations must reach general office, Spokane, Wash., 10 days in advance of publication date. (4) Cash must accompany order.

Above rates include insertion in The Washington Farmer, The Idaho Farmer and The Oregon Farmer, which constitute the Pacific Northwest Farm Trio, 46 Review building, Spokane, Wash.

POULTRY (Continued) 174

$2000 FOR FIVE HENS—A RECORD PRICE for record hens. We announce the purchase of F. E. Gilbert's winning pen of White Leghorns at the recent Puyallup egg laying contest. These five birds laid 1421 eggs in 12 months, thus establishing a new world's record. These birds are to be mated with the best cockerel to be obtained and used in building up Queen Quality strain of chicks. We have also contracted with Mr. Gilbert for the eggs from the pen sisters of these wonderful birds. We will have a limited number of chicks and eggs from them for sale this season. The greater part of them will be used for our own use. In addition to the Gilbert birds, we will have many flocks direct from Hollywood and Tancred stock. We also hatch R. I. Red and Barred Rock chicks of exceptional quality. We are now booking orders for early delivery and have sufficient capacity to assure prompt delivery at time promised. Incubators, 15 per cent off. We offer a special discount of 15 per cent on Queen incubators purchased from us during November and December. In addition to the Queen, we carry the Master's incubator, Petaluma electric incubator, Blue Flame brooders, American brooder stove and are agents for the Kresky brooder stove. Write for our new catalog. Queen Hatchery, 87 Sewart st. Seattle Wash. Ell. 2054.

"HENACRES" BABY CHICKS FOR 1923. IT is time to plan your poultry work for next spring and we suggest that you write for our free illustrated catalog now. The booklet contains lots of information on poultry management, gives our feeding formulas, etc., besides describing our stock. "Henacres" Leghorns have made good all over the northwest, so you take no chances in buying them. Some one in your neighborhood knows us, ask him. We have already sold 40,000 chicks for 1923. "Henacres," Box A, Prosser, Wash.

BABY CHICKS—OREGON'S BEST AT REAsonable prices. Leghorns, Reds, Anconas, Minorcas, Barred Rocks, White Rocks. We pride ourselves on a long list of satisfied customers. Postal secures free catalog. C. N. Needham, Salem, Ore.

BABY CHICKS AND HATCHING EGGS. DR. Duganne's trap nested White Leghorns and J. M. McCaleb's Hollywood strain. Also the best of O. A. C. Barred Plymouth Rock baby chicks. Catalog on request. Mark A. Webster, Corvallis, Ore.

1923 WHITE LEGHORN BABY CHICKS. O. A. C. strain; breeders mated to pedigreed cockerels, backed by 250 to 300 egg records. Our prices are as usual, right; ask for them. Moorhead Poultry Farms, Granger, Wash.

BEST OREGON AGRICULTURAL COLLEGE stock chicks, $16 per 100; $150 per 1000; eggs, $1.25 per setting, $6 per 100; postage prepaid. Strong, healthy chicks guaranteed. Russell Poultry Yards, Corvallis, Ore.

BABY CHIX, 14½C-50C. EGGS, 4½C-40C; heavy laying White Leghorn strain. Chix and eggs from heavier breeds. Order now for suitable stock and service. Chicoppep Poultry Yards, Roseburg, Ore.

DOLLARS FOR YOUR EGGS—WE PAY THE top market prices for your eggs and poultry, also turkeys, ducks and geese. Daily cash remittances. McClintock-Trunkey Co., produce department, Spokane.

ANCONA COCKERELS, SAME BREEDING AS my five pullets that laid 1029 eggs, 1921-22 western Washington contest. Booking eggs and chick orders. Catalog on request. Oscar Dunlap, Junction City, Ore.

RHODE ISLAND RED CHICKS FROM BRED to lay exhibition quality stock. Hatched from the same matings that produce our own young stock. Booking orders now. C. R. Quinn, Oregon City, Ore., R. 3.

RAU'S QUALITY CHICKS, THE LAYING LEGhorns; none better at any price. Our forty years' experience back of these chicks. Free price list tells it all. Rau's Quality Hatchery, Tacoma, Wash.

PERKINS SUPERIOR WHITE LEGHORN baby chicks, $15 per 100; splendid trap nested laying stock. I have bred Leghorns 15 years. Chas. L. Perkins, 1337 Burrage, Portland, Ore.

HUSKY BARRED ROCK COCKERELS, heavy laying strain; mates to blue ribbon winner live stock show; commercial, $5 to $10. E. W. Hendricks, Milwaukie, Ore. Route 1.

PACIFIC POULTRYMAN, SEATTLE, WASH., expert writers on practical poultry subject. Special offer, two years, $1. Four months' trial subscription, 25c.

HUNT'S PRIZE AND UTILITY BARRED Rocks; some dandy cockerels, pullets, trios. Write for prices. W. A. Hunt, Lebanon, Ore. Box 503.

JERSEY BLACK GIANTS—YOUNG STOCK for sale from pedigreed mating. Write for prices. Mrs. R. J. Chambers, Bovill, Idaho.

SHIP US YOUR POULTRY AND TURKEYS. Ask your neighbor about our fair dealings. Jones & Williams, S101 Division, Spokane.

CHICKS AND EGGS FROM 250-EGG RECORD S. C. White Leghorn hens; free catalog. Orin Belknap, Chinook, Wash.

S. C. RED COCKERELS FROM HEAVY LAYing dark red King strain, $3, $5 and $7. C. A. Keiser, Waitsburg, Wash.

FOR THE BEST IN SILVER WYANDOTTES and Silver Spangled Hamburgs, write G. G. Wherry, Payette, Idaho.

WHITE LEGHORN AND BARRED ROCK cockerels; records, 200 to 311. W. M. Roberts, Walla Walla, Wash.

ROSE COMB BLACK MINORCA COCKERELS, $2.50; pullets, $1.25; hens, $2.25. Mrs. Carley, Carley, Wash.

O. A. C. BARRED ROCK PULLETS, COCKerels, $1-$3.50. Mrs. Faulconer, Skamania, Wash.

WHITE ORPINGTON COCKERELS, $3 AND $5. Fred Bilyeu, Lamont, Wash.

PURE BLOOD TOULOUSE AND CHINA geese. Dr. Nichol, R. 6, Portland.

DARK CORNISH COCKERELS, $5 EACH. Jesse Kilts, Ashwood, Ore.

MAMMOTH TOULOUSE GEESE. W. D. Good, Mt. Vernon, Wash.

POULTRY (Continued) 174
Turkeys.

GIANT BRONZE TURKEYS FROM MY OREgon state fair and Pacific International winners. Sold on approval. Herbert Stoneberg, Route B, Eugene, Ore.

PURE MAMMOTH BRONZE TURKEYS, UNrelated stock. Pure Toulouse geese, choice breeding stock a specialty. Mrs. F. Crane, Hagerman, Idaho.

MAMMOTH BRONZE TURKEYS FROM EASTern blood lines; large boned type, $8 to $20. Mrs. H. D. Moore, R. 1, Box 21, Hubbard, Ore.

GIANT BRONZE TURKEYS—CHICAGO AND Los Angeles first winners. Toms and hens for sale. M. M. Rieman, Planada, Cal.

21 YEARS A SPECIALTY BREEDER OF M. B. turkeys; prize-winning stock. Mrs. Frank Browning, R. 1, Nampa, Idaho.

PRIZE WINNING MAMMOTH BRONZE turkeys; toms, $10; hens, $6.50. Urtons farm, Genou, Mont.

VIGOROUS MAMMOTH BRONZE TURKEYS, unrelated breeding stock. Albert Leach, Caldwell, Idaho, Route 1.

PUREBRED MAMMOTH BRONZE TURKEYS, choice from six hundred. Harry Smith, Coupeville, Wash.

CHOICE MAMMOTH BRONZE TURKEY toms, $10; hens, $5. Amelia Reimers, Eagle, Idaho.

PUREBRED BRONZE TOMS, $9-$12; PULlets, $6. Bertha Gray, Winlock, Wash. R. 2.

BOURBON RED TURKEYS; EXTRA GOOD stock. Mrs. Kate Heideman, Malo, Wash.

FOR SALE—PUREBRED MAMMOTH BRONZE turkeys. S. L. Maltby, Rogerson, Idaho.

MAMMOTH BRONZE TURKEYS FOR SALE. J. N. Morgan, Cosmopolis, Wash.

LIVE STOCK 177

WE GUARANTEE TO PAY THE HIGHEST market prices for your poultry, dressed turkeys, geese, ducks, chickens and live stock. Owing to the constant changes in the market we are unable to quote prices in this paper from week to week. We will furnish tags and prices when you are ready to ship. Write us what you have to sell. Prompt returns. John Lewis & Co., Spokane, Wash.

FOR SALE—OUR ENTIRE HERD OF HEREfords, including registered bull of excellent breeding; cows, with calves at side, and 2-year-old heifers. Round Prairie Ranch, Round Prairie, Ore.

DUROC BARGAINS WEANED PIGS, $10. Also 3-month-old pigs, $15. Also bred sows. Jan. farrow; best pedigree; registered free. Shadeland Farms, Amity, Ore.

SPOTTED POLAND CHINAS, BRED GILTS and spring boars; gilts to farrow from April first on. Kind that suits. Henry Mitchell & Son, Joseph, Ore.

WE PAY TOP PRICES FOR YOUR LIVE OR dressed veal, hogs and poultry. Your check by return mail. Shipping tags on request. M. & J. Packing Co., Spokane.

GUERNSEY BULL FOR SALE—ROSE'S FERN Ridge King, 57700; four-year-old; dam's record 10,922 lbs. milk, 522 lbs. butterfat. John F. Johnson, Azwell, Wash.

BARGAIN—BIG BONED, BIG TYPE REGistered Poland China boar, 20 months old, $45. Tom T. Homme, Harrison, Idaho.

CHOICE, PUREBRED, BROWN SWISS COWS, heifers and bull calves. G. W. White & Son, Meridian, Idaho.

REGISTERED O. I. C. SWINE, ALL AGES. Write us your wants. Arthur W. Wade, Marysville, Wash.

REGISTERED SHORTHORN BULL, 3 YEARS old; color, red. W. J. Neylon, Tenino, Wash.

HARNESS and SADDLERY 189

SEND FOR FREE HARNESS AND SADDLE catalog today; cut out the middleman, buy direct from the manufacturer. Lowest prices in the west; satisfaction guaranteed, Established 1881. Write Pierce Harness Co., Dept. T, Spokane, Wash.

HAY FOR SALE 200

CHOICE ALFALFA HAY, GREEN AND leafy; the kind that dairymen like to feed. Timothy and wheat hay for horses. Write for delivered prices. J. F. Jacobson, Kennewick, Wash.

ALFALFA HAY, GUARANTEED QUALITY; prompt shipment; buy direct and save money. Prices upon application. Ernest T. Freepons, Walla Walla, Wash.

JOB PRINTING 372

BEST PARCHMENT BUTTER WRAPPERS, 8x11, neatly printed, 100, 60c; additional hundred, 40c. Home Specialty Co., Middleton, Idaho.

WEDDING ANNOUNCEMENTS AND INVItations, butter wrappers, letter heads and envelopes. Union Printing Co., Spokane, Wash.

CLEANING, DYEING, ETC. 420

PALACE CLEANING WORKS. QUALITY and service. 85 Monroe, Spokane.

TANNING 425

ANY KIND OF HIDE TANNED WITH HAIR on, or for leather. Mohr, 321 Sprague, Spokane.

TANNERS AND LEATHER DEALERS—BALZ Leather company, San Francisco, Cal.

TAXIDERMISTS 426

WE MOUNT ANYTHING FROM A FLEA to elephant. Mohr, 321 Sprague, Spokane.

FURRIERS 429

FURS TO ORDER, REPAIRED, REMODeled and for sale. Mohr, 321 Sprague, Spokane.

HIDES, PELTS AND WOOL 430

HIDES—WE BUY HIDES OF ALL KINDS. Write for prices and tags. Hibbard-Stewart Co., Hibbard bldg., Seattle.

FURS—WE BUY FURS AND PELTS. WRITE for prices and tags. Hibbard-Stewart Co., Hibbard bldg., Seattle.

DENTISTS. 468

DR. EDWARD PITTWOOD, DENTISTRY, 503 Hyde bldg., Spokane.

MATERNITY HOMES 497

MATERNITY HOSPITAL; STRICTLY PRIvate; doctor in attendance; prices reasonable. Mrs. Elizabeth Peel, matron, W1324 Broadway, Spokane.

BUSINESS OPPORTUNITIES 516

OWNER WILL TRADE GARAGE BUILDING, free of encumbrance, for farm. Price $4000. Al Clark, E1825 Empire ave., Spokane.

BUILDING MATERIAL 588

POULTRY SASH, 8X10, 4 LIGHT, 65C; ROOFing, skylights. Compare our prices. Save money. Send for price list. Tacoma Sash & Door, Tacoma, Wash.

TO PATCH A HOLE OR BUILD A HOME use Perfection Plaster wallboard. Easily handled with hammer and saw; fireproof, waterproof. Western Wallboard Co., Seattle, Wash.

SEEDS 620

VALLEY COUNTY TIMOTHY-ALSIKE, 11C; 1922 grown, mixed, recleaned; timothy, 8c. M. Meador, Norwood, Idaho.

NURSERY STOCK 621

PRUNES—LEIGHTON ITALIAN EXCELS ALL other varieties for profit; 40 per cent larger than Italian; 25 per cent more sugar; tests 40 per cent dried. General line of other stock. Lafayette Nursery Co., Lafayette, Ore.

NURSERY STOCK, ITALIAN PRUNE TREES and trees of all kinds. Berries and small fruits of all varieties. Buy direct and save 50 per cent. Brooks Nursery, Lafayette, Ore.

BEST VARIETIES FOR THE WEST; HANDsome 48-page descriptive catalogue free. Routledge Seed & Floral Co., 145 Second st., Portland, Ore.

WRITE FOR PREPAID PRICES ON NURSERY stock; especially apple trees; can save you money. Lawson Nursery, Gates, Ore.

STRAWBERRY PLANTS, $5 1000; NINE VArieties. Briggs Fruit Ranch, Olympia, Wash.

FARM LANDS FOR SALE 651

PAYING FARMS AT LOW COST—160-ACRE farms, improved or unimproved; 30 to 160 acres irrigable land on each parcel; near Lethbridge, in sunny southern Alberta; can be bought for $15 to $40 an acre. No need for pioneering. Well settled country, good roads, railways, schools, telephones; agreeable social conditions; fertile land; success of irrigation farming here already demonstrated; irrigation system being constructed under government supervision; water available in 1923. Write for information concerning crops grown and description and location of farms to the province of Alberta, Irrigation Council, 12 Provincial building, Lethbridge.

160-ACRE EQUIPPED FARM OVERLOOKING Gulf of Georgia. Just the sort of farm home you would want; near fine R. R. town, prosperous neighbors, healthful surroundings; city markets; productive tillage, spring watered pasture, valuable woodland; about 50 fruit trees; good 4-room house, overlooking gulf; running spring water, fireplace; large barn; widower called to England. $6400 gets it, hogs, tools, etc. included; part cash; immediate possession. Eric G. Kingwell, Box 1190, Victoria, B. C.

BIG LUMBER CO. LAND SALE IN SKAGIT county; 40 acres, $1400; 20 acres, with new house, $1500. Lumber furnished for building. Lots of work for the settler; splendid district, roads, schools and towns. H. O. Peters, 726 3d ave., Seattle.

80-ACRE FARM; PAVED AUTO ROAD; 1½ miles Burlington, Skagit county; half acre loganberries, etc.; root crops, asparagus; machine tilled fields. For particulars write owner. P. O. Box 324, Mt. Vernon, Wash.

FINEST IRRIGATED BERRY AND DAIRY land in western Washington; 5 and 10 acre tracts or upwards; $50 acre, on easy terms; $10 cash, and $2.50 per month; free booklet. Thos. G. Mortland, Sequim, Wash.

FOR SALE—GOOD 100-ACRE GRAIN AND dairy farm; 6 miles from Mount Vernon; splendid opportunity. A. J. Lawson, Blanchard, Wash., or Wm. Gustafson, Mount Vernon.

SELL YOUR PROPERTY QUICKLY FOR cash; no matter where located. Particulars free. Real Estate Salesman company, 501 Brownell, Lincoln, Neb.

FOR SALE—50-ACRE BEARING ORCHARD, prunes and pears; on highway, near Chico. Easy subdivision. A good home. Levi H. Maxwell, Chico, Cal.

FOR SALE—STOCK OR DAIRY RANCH. Open range; best water right. Write Clara Wagner, Hornbrook, Cal.

FARM LANDS—Wanted 654

OWNERS OF FARMS AND RANCHES FOR sale at real bargain prices, should write us. We have cash buyers. Central Land Bureau, New Franklin, Mo.

HAVE INQUIRIES FOR NORTHWESTERN farms, spring delivery. Get free particulars of sales method. R. McNown, 310 Wilkinson bldg., Omaha, Neb.

FARM LANDS FOR RENT 657

SINISSIPPI FARM FOR RENT—1200 ACRES of fine irrigated land, in famous Bitter Root valley of Montana; new six-room house, bath, furnace, large barn and other buildings and full equipment of machinery; 50 head of cattle, 10 horses and 600 swine; 96 hog houses; ranch is ideal for hog raising and cattle; will be rented, fully equipped as above, on extremely advantageous terms to a practical and reliable man. Write for details. J. M. Hineline, Freeport, Ill.

IRRIGATED LANDS—For Sale 663

WE OWN 1000 ACRES WESTERN WASHINGton choice irrigated land, and sell in tracts of 5 acres upward; $100 or more down, balance 10 years. $40 per acre, unimproved, to $350 per acre for land in highest state of cultivation. Ideal location and climate for poultry, berries, dairying. Write for information, Washington Colonization company, Sequim, Wash.

IRRIGATED LAND, ON CROP PAYMENT; well improved; buy direct from owner. Box 675, Twin Falls, Idaho.

FOR SALE OR EXCHANGE 702

POULTRY RANCH FOR SALE OR EXchange—40 acres, 2100 hens, 4500 brooder capacity; complete equipment; running water, good schools, paved highway. For particulars write Walt & Son, Enumclaw, Wash.

TO EXCHANGE—Real Estate 705

WILL EXCHANGE FOR IMPROVED PROPerty, all or part of 240 acres level land; agricultural district, suburban to Vancouver and New Westminster, B. C.; city water; great future value. Owner, J. D. Westenhaver, Astoria, Ore.

PIKE'S PEAK OR BUST

By LEWIS B. MILLER

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CHAPTER TWENTY-SEVEN.

Over the Ice Caps at Dawn.

"Exactly the way I feel about it, old cow!" exclaimed Holloway. "Here we are in midwinter! But only a few miles from us there's grass a plenty and warm weather to spare. But we can't get to it. No, we can't get to it just yet. It's something for men to worry about and for cows to bawl about. But I'm hungry again. Can anybody rustle up anything at all to eat."

"I've got some scraps of dried buffalo meat. Enough to give each man a few bites," Cooper replied.

"And I've a bottle of milk," said Orlando.

"Then let's have a cold snack," urged Givens. "We'll never need it worse, I hope."

The meat was soon distributed, and Orlando poured some milk into each man's cup. When those were disposed of all declared that they felt better.

"Pity we haven't something for Brindle. This has been a hard fight on pack cows as well as on pack men," Sanders remarked.

"More than a gallon of shelled corn in one of her rawhide pockets, you recollect," Orlando told them. "I mean the corn we brought along to parch in case we ran out of breadstuff."

"Give her at least half of it," ordered Cooper. "She didn't have any supper, you know."

After getting out the little bag of grain the cow's owner, groping about, kicked and brushed the loose snow away till he found hard ice, on which he poured the corn. Brindle could be heard licking it up and munching it greedily.

Another silence followed, broken at length by Esau's muffled voice, coming from under his blanket: "What time do you reckon it is?"

"My guess would be 2 o'clock," replied Sanders.

"If that's right we've got more than three hours to shiver here yet before daylight comes to our rescue," growled Givens. "From the way I'm feeling I'll be froze as stiff as a poker before that time."

"Maybe we'll not have to wait so long, Jeff," suggested Sanders. "This cloud may drift away from over heads soon and give us a glimpse of some stars to steer by."

"Bet a dollar I'll be past moving long, long before this snowstorm slides on! If feeling counts for anything, my feet are already a part of this ice cap."

"So's mine," declared Esau. "Don't see how I can stand this settin' still much longer. Guess, though, I'll try to grin and bear it for a spell."

"With me it's either bounce up and traipse on or sit still and freeze to death!" declared Givens, in emphatic tones.

"I'm feeling about the same way, Jeff," Holloway assured him. "I don't care to freeze to death any time, and especially not in September. People wouldn't believe it."

"But if we only wander about and never get anywhere, seems to me we'd better sit still and tough it out as long as we can," urged Sanders, who, from the first, had had his feet on part of his blanket.

"For my part, I've just got to do something right away!" Cooper's voice exclaimed. And the noise his boots made meant that he had sprung to his feet. "I'm bound to do some tramping, no matter in what direction, or my feet will break when I go to walk on 'em. Even if we don't do anything but straggle about we may stray out from under this cloud. After that we'll see a star or two and know which way's which."

"But in this awful darkness we're likely to lose some of us," objected Sanders.

"Is more or less danger of that," Cooper admitted. "We need something to guide us through this pitchy black. Wonder what we can use. If any of you feel able to sing, strike up a lively tune. Then everybody keep within earshot of the singing."

"For my part, I need all the breath I've got to travel with," declared Givens. "This rarified air ain't any too easy for me to breathe, anyhow."

"I know something that will beat singing out of sight," Orlando assured them. And he at once began to grope for Brindle's pack. When he had taken out the cowbell and made it ring, all agreed that that would be the best thing they could find to keep them together.

"Let's hope it won't guide the redskins to us," Givens said.

And Cooper answered: "It's not halfway sure that the Utes have followed us up onto this snow cap. And if they have they're probably at least a few miles north of here. Even if they happened to be closer, the noise of the bell won't carry far in this storm, I imagine."

"Frisk will give us warnin' in good time if any redskin comes sneakin' around," Esau assured his invisible fellow travelers. "Even if they got nigh, they'd have hard work shootin' us in the dark. Fact is, I don't see how they'd set about doin' anything much to us."

"I'm afraid they could do a lot to us if they found us—the cunning rascals!" Cooper said. "But we'll hope they're not near enough to hear the bell. Anyhow, we'll have to take the risk."

"I don't see any other way," Sanders told them.

When the bell collar had been buckled around Brindle's neck and Orlando had rolled up her blanket and stowed it away he put on her pack. Then they all took up their own packs and buckled on, and the little procession started.

"Jess, guess we'll let you lead the way again. You've proved yourself a pretty good pathfinder so far tonight," Cooper's voice said that.

Holloway laughed. "Maybe so while I could see a few winks. But we're all blind as bats, and one leader is as safe as another. Usually I have a pretty good sense of direction. But we've been tramping a considerable while since we could see, and I don't claim to know anything. I'm going to start out on what seems to me a due-east course. But it's just as apt to be due west, or north, or south."

Now Sanders said: "All we ask of you, Jess, is that you strike out on some one course and stick to that. Even if that course is due west, it will lead us out from under this cloud sooner or later. And when we get out we'll try to stay out. But if you go to leading us in circles, we're apt to wander in these clouds and thick darkness till daylight comes."

"Easy enough to tell me to follow a straight line, Abe. But the experience of all people who have been lost in the dark proves that it's well nigh impossible to do that. There's something that pulls a man in a circle, no matter how hard he tries to go straight."

"Seems to me we could manage to strike a light long enough to catch a glimpse of a compass," Orlando suggested.

And Holloway said: "It would be a little hard to make a blaze, now that we've used up all of our matches. Even if we got one glimpse at a compass, that wouldn't do much good. We'd have to strike a light every few minutes. So here goes to do the best we can in the dark!"

On they straggled now, the whole invisible party. So intense was the blackness that, as far as the present was concerned, they could all just as well have been stone-blind. Both Jess and Orlando had hold of Brindle's rope, Jess in the lead and Orlando farther back. The others came on behind, guided through the black snowstorm by the ringing of the cow's bell.

Now they all moved on without speaking. Once, a short time later, a slight change occurred. Something, probably a strong gust of wind, broke open the cloud overhead, and let a little starlight down. While the light lasted the lost wanderers could catch dim views of one another.

But soon that cloud crack shut together and the blackness swallowed them up again.

Hour after hour—or so at least it seemed to them—the little party of lost gold seekers trudged through the snowstorm and that pitchy darkness. In what direction or directions they were moving they did not know. Owing to the roughness of the snow field they had to advance slowly, cautiously, in the dark, like so many blind people. Either this snowstorm was a very extensive one, or they were moving in circles. Doubtless they were circling. While they would have been delighted to escape from under the cloud once more, the main purpose of their tramping just now was to warm themselves—to keep from freezing.

Now and then they paused for a little while, to rest and breathe. The rarified air of the mountain top made that necessary. But they did not sit down; and each halt was for only two or three minutes. Soon they would be moving on again, guided by Brindle's bell through the blackest snowstorm they had ever been in.

At last, when it seemed that all the wanderers must either sit down to rest and freeze, or drop down from weariness, Given made a discovery: "Fellows, either my poor eyes are playing pranks with me, or yonder's a light spot! Can any of you see it?"

The light was so very faint as to be scarcely discernable, but it was no illusion, and they were all soon gazing toward it. The spot was to the right of their present course and Jess, turning, led them all in that direction.

"We'll mighty quick find out what's there—whether a lantern or a lightning bug!" he called back, gaily. Jess was about the only member of the party still able to joke.

After dragging their tired feet for a few minutes toward the light the travelers found themselves emerging from the storm and passing out from under the cloud. The visible spot they had discovered proved to be the moon, which, little more than a crescent, was just rising. Now they shook the snow off their blankets and took heart.

"At last! Thank the good Lord!" exclaimed Givens, fervently, when the stragglers were under a clear sky and twinkling stars once more. Now they could plainly see that wall of blackness behind them. "We didn't break out of that big splotch of midnight a minute too soon for me! I'm just about petered out—ready to flop down in my tracks. Another mile or two, and you boys would have had to tote me or leave me."

"Spunk up! Spunk up there, Jeff! Don't go to flopping like—like a dishrag!" called back Holloway.

And Sanders added: "Yes, we've got enough to tote our own heavy feet, without toting any longlegs like you!"

"We must push ahead till we're off of this snow cap and a few miles down the mountain," Cooper told his fellow-stragglers. "No wood to make a fire up here, and nothing but a floor of ice to sit on and rest on. And besides——"

"Yes, and no grass for faithful old Brindle, that's been with us in all our wanderings, and——" Sanders was saying.

"And done as much hard travelin' and steep climbin' as any of us tonight," added Esau.

"And toted a ten times bigger pack," Givens mentioned.

"To say nothing of her milk that we've drunk tonight." Cooper was speaking. "Without that to brace us up I'm of the opinion some of us would have collapsed before we straggled out of that black snowstorm. Yes, we've certainly got to look out for Lando's old Brindle.

Now, quickening their gait a little, the weary-footed wanderers trudged on, painfully, straight toward the rising moon. There was half a mile more of ice and snow, and day was breaking when the straggling procession passed from the ice cap to bare earth and rock. Scarcely had they left the snow wastes behind them when the air began to grow warmer.

And it grew still warmer when the sun came up brilliantly. Though more than one of the party declared they would have to stop and rest, they kept dragging themselves along. So nearly exhausted were they that most of them had forgotten the Indians they were fleeing from. But Orlando, on seeing a clump of weeds, pulled a handful and stuffed it into Brindle's bell.

"We don't need that ding-dongling any more. And who knows who might hear it?" he remarked, after the bell ceased to ring. Then he turned and moved on down the mountain.

"That's right, Lando boy. Just as well be cautious as not," said Esau.

And Cooper added: "Good idy. That string of red trailers we spied at dusk last night are used to climbing, and they may be used to crossing the snow cap. When it got too dark for them to track us last night they may have posted right off to this side."

"And if—if they did, they're over here now. Yes, over here somewheres this blessed minute, the whole big bunch of 'em, waitin' for us to show up," suggested Esau.

"That may be. To be sure it could be," Sanders answered. "But, for my part, I'm going to hope we've run off and left those varmints on the other side of this big jumping-off place."

"All right to hope that, Abe, provided we don't count on it too strong," remarked Cooper. "The hard fact is, though, that we may run across some of 'em or all of 'em at any minute, and have to battle for our lives. We don't want to forget that. All right to hope for the best, provided at the same time we're ready for the worst."

In spite of their great weariness, the whole party stumbled and toiled slowly down the mountainside till they were among woods. Here they began to see signs of life—larger life. Ever since leaving the ice they had been seeing conies and bushy-tailed ground squirrels. Now Cooper, leaving his fellow-wanderers, straggled off to one side till out of sight. A little later the report of his rifle was heard, and he returned carrying a pheasant.

Not very much farther down the party came to a bench of the mountain, where they found a grassy opening and a big, boldly-flowing spring. Here they went into camp, glad of a chance to rest at last.

After laying off their own packs, unsaddling the cow and turning her loose to graze, the whole party threw themselves down on the ground or on their blankets to rest. The sun and the air were warm, and nobody was any longer troubled with cold.

So nearly exhausted were they all that it was not till they had been resting more than an hour that they could summon energy enough to get up, gather a little wood and strike fire. After that some of them made up batter and cooked flapjacks, and each broiled for himself a piece of the pheasant. Half starved as they were, there was not half enough. But they made it do for a breakfast.

After eating, and drinking from the spring, they all threw themselves down on the grass to rest and sleep. In spite of the known danger from redskins, Frisk was left to do all the watching for the party. And Brindle, without either hobbles or bell, was turned loose to shift for herself.

Not till an hour or two past noon did any of them awake. Then Cooper sat up and gazed around for a few minutes. On the grass by the little stream lay Brindle, stretched at full length in the warm sunshine. Having satisfied her hunger, she was resting and sleeping. Frisk was also stretched out and asleep.

"Boys, I'm thinking we'd better bundle up and get down the mountain a few miles further before night overtakes us. For one thing, we want to locate some big game if we can, to fill up our hollow stomachs. We can find a better camping place down there, I think. And the farther we travel in that direction the less likely those red wolves will be to trail us down."

One by one the men awoke, rubbed their heavy eyes, gaped, stretched and then gazed around stupidly while they felt of their sore legs or feet. When they were fully awake and Cooper had repeated his advice, they all agreed that that was doubtless the wisest thing to do under the

(Continued on page eighteen.)

Bits of Fun for Everyone

Me, Too, Neighbor.

Jack—I notice you got up and gave the lady your seat in the street car the other day.

Fred—Since childhood I have respected a woman with a strap in her hand.—Exchange.

Wants to Keep His Customers.

"Will you love'n honor?"

"Uh-huh."

"Lady, are you all set?"

"S'nuff! He's your'n. Ten bucks. If you need my service again, I make special discount to old customers."—The Railroad Telegrapher.

The Universal Number.

Uncle Jack wished to talk to Mary's father at his office. He could not find the telephone directory, and so appealed to 3-year-old Mary for information regarding the telephone number: "Mary, what does mother ask for when she talks to daddy at the office?" he inquired.

Mary was wise for her days. "Money," she lisped.—Sheffield Telegraph.

A Question of Terms.

Isaac Blumstein had a toothache. A friend recommended a dentist. So Isaac went to his office. But on the door he read: First visit, $5. Subsequent visits, $2. This was pretty tough for Isaac. He thought a minute very hard and then he opened the door and walked in with a chirrupy:

"Good morning, doctor! Here I am again."—Exchange.

Economy.

Motorist—"I have not paid a cent for repairs on that machine during all the 10 months that I've had it."

Prospective Buyer—"So the man who repaired it told me."—Exchange.

Breaking the News Softly.

Brown always did possess a soft heart. This is how he wrote: "Dear Mrs. Harrison: Your husband can not come home today, because his bathing suit was washed away. P. S.—Your husband was inside it."—Exchange.

Why He Didn't Marry.

"Why have I never married?" The confirmed bachelor repeated a leading question. "Well, once upon a time in a crowd I trod on a lady's gown. She turned, furiously, beginning: 'You clumsy brute!' Then she smiled sweetly, and said: 'Oh, I beg your pardon. I thought you were my husband.' "—Pittsburgh Chronicle Telegraph.

A Cork Needed.

The train came to a stop at the edge of town beside the glue factory, and the odor was most obnoxious. A dainty young miss took a bottle of lavender salts from her handbag and sniffed vigorously. In a minute or two the old gentleman behind her looked up from his paper, sniffed suspiciously at the air a time or two and tapped her on the shoulder.

"You'll have to cork up that bottle, lady," he said." I can't stand that awful smell any longer."—Successful Farming.

FAMILY CIRCLE

ALICE BARLAND
EDITORIAL CONTRIBUTOR

Family Circle Girls

Dear Family Circle Girls: I have many letters from you and some do not give me names and some do not give addresses, but ask a lot of questions. You must give both if you want the best service and if you don't some of you will have no attention as I shall only answer questions of interest to a great number in the paper. I will never print your names, so you need not fear. Address me always in care of THE FARMER.

It is proper to thank a young man pleasantly for any courtesy like helping you on with your coat and such attentions, but it's customary for the man to thank a lady for a dance and a smile and a slight bow is sufficient acknowledgment.

I have many inquiries as to how to overcome bashfulness. It is something many young people are afflicted with and it makes them awkward and feel unhappy.

Bashfulness comes from self-consciousness, so the best way to overcome it is to try to forget one's self. As a means to that end I would suggest that every care be taken to have one's dress as neat and becoming as possible. Be free from any fears that a pin has loosened and that your clothing is out of place. Have every button fast and your hair as becomingly dressed as you can.

Next remember that we are all "just folks," all of us American citizens and a part of this great republic. Remember that character is always the real test of a man or woman, and if you are living your life day by day and trying to do your best you are of just as much account as any one else.

Think of these things by yourselves and then when you are out in company try to forget yourself as much as you can and watch for the good things in the people about you. If there is some one who doesn't seem to be having a good time seek him or her out and try to increase the pleasure. Should there be an old person in the company, some old aunt or uncle or grandmother, pay them attention. They are so often ignored and do feel left out and lonely. This will take your mind off yourself. Find out what interests those you meet and draw them out and then be a good listener. Never mind if you have things you want to say, cultivate the happy art of listening. Nothing will help you more to being considered a good fellow. Try it. When you meet a stranger and begin to feel that bashfulness coming over you force yourself to look the person quietly and calmly, but steadily, in the face for a few seconds and sort of get hold of yourself. Learn to look courteously at a person without anything like a stare.

Remember all the time that you are just yourself and have your place in the world and try to do yourself justice. A little practice will begin to tell and you will begin to have what we call poise. This will apply to boys as well as girls for boys, too, are afflicted with bashfulness.

"Should a girl accept money from a man friend?"

No, she never should, under any circumstances. No girl should place herself under obligation to a man friend. She should have too much pride and independence. It is an accepted custom that good taste forbids the acceptance of anything from men friends by women except books, flowers and candy. After an engagement one can accept other gifts. I am sure you girls want to know what it considered proper and in good taste.

"Is it wrong to powder and paint?"

The way very many of the girls are using powder and paint I think it is decidedly wrong and certainly in very poor taste. I see them every day, young girls not more than 14 and 15, with lips painted, eyebrows penciled and faces one general smear of red and white paint and powder. Oh, if they could know what they look like I am sure they would run home and get it off. I can not understand how a mother can permit a girl to appear in public fixed up to look as only poor outcast street girls and women used to look a few years ago.

Oh, girls! Don't be afraid of being old-fashioned, keep your skin clean, sleep eight or nine hours every night, take care of your health and your complexion will take care of itself. Use just a dust of powder.—A. W. Barland.

Dear Mrs. Barland: I notice in your reply to "Billie's" letter you ask the girls their opinion about dancing. I can not express myself very clearly on the subject, but I think it is all right. Of course I'm rather young, only about 17, but I think if one is careful about the places she goes to dance everything will be all right and one can have a great deal of fun and still retain one's good name and character. Some think these are jeopardized if not ruined by dancing.

Dancing is surely much better than petting parties and questionable car rides and I think dancing more fun than they could be. I have been going with the same boy for about a year and I like him because he is different from the others. He isn't "a good-goody," but he is different and has given up smoking at my request.

I am in high school and am trying to decide what to take up. I like to write and have been told I have a talent for writing. I also like elocution, but as yet have had no training in either.

Is bobbed hair really bad taste? Mine has been bobbed for nine months and I do like it this way as it is becoming, my friends say, and is so easy to take care of. It is rather curly and I hate to think of letting it grow out. I hope I haven't taken too much of your time. "Bobbee," Ore.

"Bobbee," enjoy your hair the way it is till you are tired of it. Since bobbed hair has become so common that girls do not look conspicuous that way I wouldn't call it bad taste. But as I said before it is only a fad and all of you will be going back to hair pins before long. —A. W. B.

DOING DOUBLE SERVICE.

"Johnny, rearrange the letters h-t-o-l-c so as to make a word meaning something that we could not get along without," said the teacher. Johnny thought and thought, and finally gave it up. Teacher undertook to help him.

"What is your coat made out of, Johnny,"

"Dad's old pants," he replied.

Nightfall on the Farm

By JULIA M. MARTIN.

While breathless millions flutter by,
So gay on lightly proffered arm,
We'll closer, dear ones, draw the ties
Of precious kinship on the farm.
We'll softly sing the mellow songs
That sweeter grow with age's test.
Too rich our hearts for melodies
That tinkle from the shallow breast.

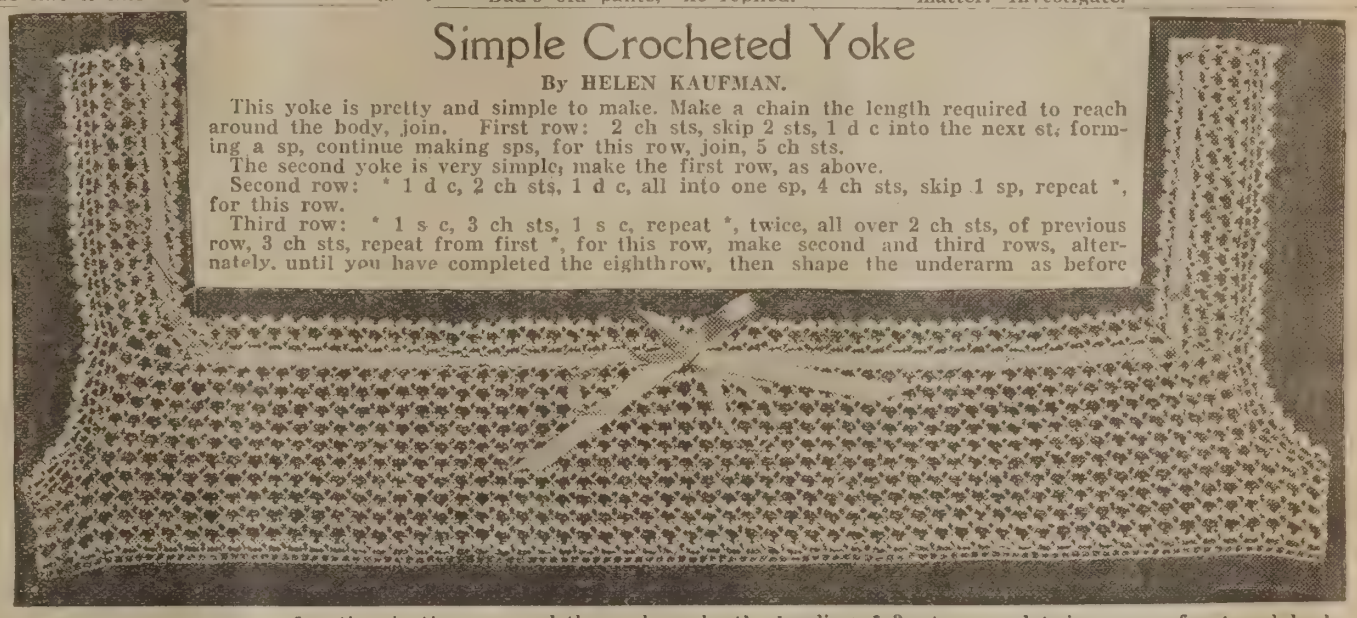
While restlessly they burn the road,
Or fearing pause for thought they dance,
We'll sip, tonight, the finer smiles
Unknown to flitting favor's glance.
While transiently so gay they go
To flee a shuddcrous morrow's leer,
We'll celebrate unselfish love
And guard our kinship doubly dear.

TWO INCHES TOO LOW.

Is the sink in the kitchen too low, too high or just right? That is an important matter. Investigate.

Simple Crocheted Yoke

By HELEN KAUFMAN.



This yoke is pretty and simple to make. Make a chain the length required to reach around the body, join. First row: 2 ch sts, skip 2 sts, 1 d c into the next st, forming a sp, continue making sps, for this row, join, 5 ch sts.

The second yoke is very simple, make the first row, as above.

Second row: * 1 d c, 2 ch sts, 1 d c, all into one sp, 4 ch sts, skip 1 sp, repeat *, for this row.

Third row: * 1 s c, 3 ch sts, 1 s c, repeat *, twice, all over 2 ch sts, of previous row, 3 ch sts, repeat from first *, for this row, make second and third rows, alternately, until you have completed the eighth row, then shape the underarm as before and continue the pattern for the depth desired, finishing with the second row, break thread. Repeat for the back. Make the shoulder straps separately of second and third rows, repeat twice and sew to the front and back.

Around the neck, make the beading, * 3 d c over 2 ch sts, catching them together on the 3d st, as before, 3 ch sts, repeat *, around front, back and straps, then make second and third rows, once around the straps and twice across front and back.

Repeat first, second and third rows around the armholes.

The yoke may be made any size, according to the first ch and any depth desired.

Home Recipes

A Remedy for Burns—Cover the burn with sweet cream, all you can put on, then over this put talcum powder and wrap up. This has been used for a bad burn and there was no blister. Use thick cream and more than once if necessary.—Mrs. E. A. H., Oregon.

To corn beef: To 100 pounds of beef use four pounds salt: boil the brine well and cover the meat and let stand 36 hours. Remove meat from the brine and let dry over night or 10 or 12 hours. Make a new brine, using five pounds of salt to 100 pounds of meat, one pound of brown sugar, one-fourth ounce of saltpeter, one-half ounce black pepper. Boil these ingredients with the brine and pour over the meat, careful to keep the meat well covered. Should a slimy substance form, the meat should be taken out and cleansed as before and this same brine boiled and skimmed as long as any substance rises to the top. Put the meat back into the barrel and keep covered by a weight over the top. MRS. J. W. OSBORN.

Cake Dressing or Pudding Sauce.

Two cups brown sugar, one cup boiling water, pinch of salt, one teaspoon butter, two tablespoons cornstarch, one-half teaspoon lemon extract, unless for fruit cake or pudding, then use vanilla. Put this on stove in saucepan and cook till thick. Use as cake filling or as a pudding sauce. (If for the latter it is better hot).

Iodine can be removed from clothing by rubbing the spots with glycerine, allow to stand two hours then pour very hot water over the spots and wash garment in medium hot water and rinse well. —Mrs. L. S. H., Idaho.

Prune cake: One cup sugar, two cups flour, one teaspoon soda, one teaspoon cinnamon, one-half teaspoon cloves, same of nutmeg, one egg, one and one-half cups of prunes, one-half cup butter or thick cream, a little salt, and bake in a slow oven. MRS. W. H. T.

To can chicken: Kill the fowl and draw at once; wash carefully and cool thoroughly. Cut into convenient sections if you wish to can with the bones in. Scald in boiling water and dip at once into cold water. Pack immediately into glass jars, fill with boiling water, add a level teaspoon of salt to each quart, put caps and rubbers on cans, but not tight, and sterilize for three hours after water begins to boil. This can be done in a common wash boiler with a wooden frame placed in the bottom.—United States Bulletin.

Advance Announcement of

FREDERICK & NELSON'S

48th Semi-Annual Furniture Sale

HERETOFORE Frederick & Nelson's Semi-Annual Sales of Furniture have been held in January and July of each year. Beginning next year, these Sales will be held, instead, in February and August.

It is, therefore, thought proper to call the public's attention at this time to the fact that the next Semi-Annual Sale — the forty-eighth successive event—will begin **Thursday, February First, 1923.**

FREDERICK & NELSON
Fifth Avenue and Pine Street.
SEATTLE.

Farm Credits Take Limelight

Big Propositions Are Pending at the National Capital

Legislation to give the agricultural producers a fairer and better credit system is assured of enactment at an early date. The only question at this time is the extent of the reform and its methods. Numerous bills are now before the senate's banking and agricultural committees, but the representatives of the great farm organizations and members of the agricultural bloc have not settled down to a definite program of legislation.

A bill introduced in the senate by Lenroot of Wisconsin, and in the house by Anderson of Minnesota, embraces principles acceptable to the Harding administration. It would make the 12 federal land banks the agency through which better credits would be extended to farmers. It increases the capital of each of the federal land banks from $1,000,000 to $5,000,000, a total of $60,000,000 capitalization, as against $12,000,000 at present. A farm credit department is created as an annex to the federal land banks, and the bill gives them larger powers of lending, while at the same time putting them into the business of making direct short-term loans to farmers.

It also proposes a number of amendments to the federal reserve act. One would impose a limitation upon the profits of the federal reserve banks.

"These changes," said Senator Lenroot, "have been approved by the secretary of agriculture, members of the farm loan board and also, I understand, by the treasury department."

It is said that this bill is acceptable to Senator Capper, head of the farm bloc. It is reported from Washington, however, that republican insurgents, assured of democratic aid, are threatening to oppose the Lenroot-Anderson bill as inadequate to meet the needs of agriculture.

At this writing it looks as if the attitude of the farm bloc toward the Lenroot-Anderson bill will be largely determined by the attitude of other senators and the administration toward the bill of Senator Norris of Nebraska to establish a $100,000,000 government corporation to finance sales of agricultural products. The general feeling is that the Lenroot-Anderson bill is a good measure in the right direction, but not adequate to the urgent needs of the farmers, and the Norris bill is regarded as a supplemental measure intended to round out the demands of the aggressive farm leaders.

The senate agricultural committee last week ordered a favorable report on the Norris bill. It has not yet been given the administration's approval and Eugene Meyer, director of the war finance corporation, told the senate banking committee he was opposed to it.

The Norris bill proposes a permanent government corporation to deal in agricultural products. It would be composed of three members, appointed by the president, and would have power to issue $500,000,000 in tax-exempt bonds. Its $100,000,000 capital would be subscribed entirely by the government and it would have authority to operate government ships and buy, sell, lease and operate elevators.

Representatives of large cooperative marketing associations were before the banking committee last week, and a sharp difference of opinion developed between Aaron Sapiro, attorney of a number of California cooperative associations, and George B. Jewett, representing the Northwest Wheat Growers, Associated. Mr. Sapiro advocated an elaboration of the federal reserve board and the placing of farm financing in its hands, with an independent organization for assistance. He would make use of existing banks for getting loans to farmers, and he favored state action instead of national in the provision of loans on growing crops.

"We do not object to this plan, but we are certain it does not go far enough to be of much benefit to our western farmers," said Mr. Jewett. "Our country banks need and will welcome federal assistance in financing agricultural producers. They are not in shape, in many sections, to care for their patrons without some help. American farmers are inclined to look with doubt on any proposal to place the agricultural credit work in the hands of the federal reserve board. They feel that it is a commercial and industrial banking institution and that agriculture is an important and large enough industry to have its own agency. The plan for state action to provide growing crop credits is impractical. We need credit now and next spring, not 10 years from now. In many states constitutional amendment would be necessary before such action could be taken. In others initiative measures would have to go before the voters. In the meantime more and more American farmers would be forced from their lands, until by the time the credit organizations were ready to function there would be mighty few farmers for them to extend credit to."

Cooperative marketing of farm crops received assurances of support from members of administrative, executive and congressional branches of the government at the first national council of farmers' cooperative marketing association.

Secretary of Commerce Hoover, Eugene Meyer Jr., managing director of the war finance corporation, and Ralph C. Miller, member of the federal reserve board, told delegates that commodity associations had done more toward restoring financial stability in the United States than any other factor, and Senator Capper of Kansas, leader of the senate farm bloc, declared the prospects were growing better daily for action on rural credits legislation. Permanent organization of the national council of farmers' cooperative marketing associations was authorized in the closing session.

Creation of a farm credits department in federal land banks with capital sufficient to issue farm credit to the maximum of $600,000,000 was another project indorsed by the conference.

The interstate commerce commission was requested by the conference to institute hearings to open up the whole question of revision of freight rates, with a view to possible lessening of the burdens borne by shippers of primary commodities.

Among the bills to be taken up by the senate banking committee is one by Senator Borah, to limit the profits of joint stock land banks to six per cent.

A one-third reduction in freight rates on agricultural products was proposed in a bill introduced by Senator Gooding of Idaho.

The present congress will expire on March 4, next. Undoubtedly it will enact remedial credit legislation, but whether it will be able or willing, in the brief time between now and March, to work out the railroad problem and give the farmers relief in reduced freight rates is doubtful. Leaders of the agricultural groups in the house and senate are particularly anxious that there should be some solution of the railroad problem that would bring lowered freight rates, but Chairman Cummins of the senate interstate commerce committee said that comprehensive legislation along the lines recommended by Mr. Harding could not be had at this session.

THE FARMER is glad to report this encouraging manifestation at the national capital of an aroused and deepened interest in the welfare of the American farmers. There seems to be unity of opinion that the farmer has not had a square deal in the past, and the proposed relief is along the lines that we have been urging for many, many months—better and fairer credit facilities for the farmer, better and cheaper transportation service. We are confident that if congress and the administration will handle these problems with fairness and wisdom, agriculture will be assured of real and enduring relief, and that from the resulting prosperity of the farmers all elements of our population, including the workers and business men in the cities, will enjoy a reflected benefit and prosperity.

The real and the fair test of the measures that are to be enacted at Washington is: First, will they benefit agriculture? and, second, will they benefit the nation as a whole? All that the fair-minded farmers of this country want is a square deal; they are not asking legislation that would benefit them to the injury of the rest of the American people.

High Points in News of the Week

The possibility of the United States calling an international economic conference to be held in this country similar to the manner in which the conference for the limitation of armaments was called, is being discussed in Washington, D. C. The inability of Europe to solve her financial and reconstruction problems, together with insistence from across the sea that this country take part in her troubles, has led to the possibility. Speculation has also arisen as to the likelihood that France and England will ask this country to arbitrate between them as to how much reparations Germany shall pay and when.

The conference between the premiers of France, Italy, England and Belgium last week failed to reach an agreement. In fact, agreement appeared far from probable. France continues her determination that unless agreement is reached before January 15 her army shall invade the Ruhr district of Germany and take charge of it as penalty for failure of Germany to meet the terms of the peace treaty.

* * *

While the United States government shows no inclination to cancel any of the war debts of foreign countries, there is reported to be a likelihood that some interest payments may not be insisted upon.

* * *

Trial of a large number of coal miners in the Herrin, Ill., district, is now under way. The men are charged with murder in connection with the massacre of a number of strike breakers several months ago. Feeling is running high at Herrin, and it is reported that an organization of law-abiding citizens has been effected to guarantee the safety of those who testify against the defendants. One organization is declared to have gone on record as determined to take 10 lives for every witness who may be slain as a result of testimony adverse to the alleged murderers.

* * *

John Wanamaker, former postmaster general and known the world over as a great American, died in his home in Philadelphia last week.

* * *

Steps were taken at a fruit convention in Sacramento, Cal., last week looking toward improved transportation service during the shipping seasons in the future. The convention was attended by representatives from nearly all the Pacific slope states. A transportation committee was appointed to endeavor to secure guarantees of adequate car service next season.

* * *

Reports from various nations that attended the disarmament conference in Washington last year indicate a general compliance with the plans for reducing naval armaments. On the part of the United States and Japan, suspension of building programs constitutes the chief compliance with the treaty. England reports the destruction of a few minor war vessels.

* * *

The highest total wheat yield in Canada since 1915 is the estimate of the 1922 crop just issued by the dominion bureau of statistics. The estimate places the total wheat harvest at 319,425,000 bushels. Last year's final estimate of total yield was 300,858,100 bushels. The total yield of oats for 1922 was 513,033,000 bushels and has only once been exceeded.

Farm Business and Markets Outlook

(Continued from page five.)

white, Bluestem, Bart, $1.50; soft white, western white, $1.25.

Grain futures: Wheat—Bluestem and Bart, December, January, February, $1.50; soft white, western white, December, January, February, $1.25.

Oats—No. 2, 36-pound naturals, December, January, February, $35; 38-pound naturals, December, February, $37; January, $37.50.

Corn—No. 2 eastern yellow shipment, December, $34; January, February, $33.50; No. 3 do January, February, $32.50.

SEATTLE, Wash., Dec. 16.—Wheat—Hard white, soft white, $1.25; white club, $1.25; hard red winter, soft red winter, northern spring, $1.21; eastern red Walla, $1.20; Big Bend Bluestem, $1.62.

Yesterday's car receipts: Wheat, 29; corn, 5; rye, 1; hay, 20; flour, 4; oats, 1.

ODESSA, Wash., Dec. 16.—Bluestem and Bart, $1.45; Marquis, $1.09; Turkey red, $1.08; Jones Fife, $1.04.

PULLMAN, Wash., Dec. 16.—Red, $1.02; white, $1.05.

RITZVILLE, Wash., Dec. 16.—Bart, $1.46; red, $1.08; Fife, $1.01.

WALLA WALLA, Dec. 16.—Bluestem and Bart, $1.08; club, $1.07; Turkey red, $1.03.

DAVENPORT, Wash., Dec. 16.—Bluestem, $1.30; Marquis, $1; Gold Coin, $1.

DAYTON, Wash., Dec. 16.—Club, $1.07; red, $1.02.

LEWISTON, Idaho, Dec. 16.—Red, $1; white, $1.04@1.05.

Hay and Feed Grain.

PORTLAND, Dec. 16.—Millfeed—Price f. o. b. mill; millrun, ton lots, $35; middlings, $47; rolled barley, $41@43; rolled oats, $44; scratch feed, $46 per ton.

Corn—White, $41; cracked, $43 per ton.

Hay—Buying prices, f. o. b. Portland; Alfalfa, $20@21 per ton; cheat, $20; oats and vetch, $22; clover, $20; valley timothy, $22; eastern Oregon timothy, $23.

SPOKANE, Dec. 16.—Wheat—Feed wheat, $44. Oats, $42 per ton; rolled, $44. Corn, $42 per ton; cracked corn, $44 ton. Barley, $42 per ton; rolled, $44. Bran, $33 ton. Bran and shorts, $34 ton. Shorts, $36 ton.

Alfalfa, $24 ton; timothy, $26 ton; mixed hay, $24 ton.

General Produce.

PORTLAND, Dec. 16.—Butter—Cubes, extras, 46@47c pound; prints, parchment wrapped, box lots, 51c; cartons, 52c. Butterfat, 53c delivered Portland; 50c station buying price.

Eggs—Buying prices: Henneries, 47c; mixed colors, 45c; pullets, 40@42c. Selling prices: Front street, candled ranch, 53c; selects, 55c; pullets, 45c; association selects, 55c; association firsts, 53c; association pullets, 45c.

Cheese—Tillamook triplets, price to jobbers, f. o. b. Tillamook, 30c; Young America, 31c; longhorns, 31c pound.

Poultry—Hens, 14@22c; springs, 17@20c; ducks, white, 18@20c; geese, 18c; turkeys, alive, 27@28c; dressed, choice, 35@38c.

Veal—Fancy, 12½c per pound.

Pork—Fancy, 13c per pound.

SPOKANE, Dec. 16.—Poultry, live weight—Hens, 4 lbs. and over, 15c; light hens, under 4 lbs., 10c; springs, 14c; old roosters, 8c; ducks, 15c; geese, 15c.

Fresh Ranch Eggs—$10.50@12.50 case, according to quality.

Butterfat—51c pound.

SEATTLE, Dec. 16.—Eggs—Select local ranch, white shells, cases included, 44@46c per doz.; mixed colors, 42c per doz.; pullets, 35c to 36c per doz.; cases returned to shippers, 1c less.

Butterfat—F. o. b. Seattle: A grade, 54c per lb.; raw milk, $2.50 per cwt.

Poultry—Hens, 4½ lbs. and up, 22c per lb.; over 3½ and under 4½ lbs., 16c per lb.; 3 to 3½ lbs., 18c per lb.; do dry picked, 2c above live; springs, 2 lbs. and heavier, 18c per lb.; broilers, under 2 lbs., 24c per lb.; capons, live, fat, 6 to 10 lbs., 28c per lb.; do dry picked, fancy, 32c per lb.; old roosters, 11c per lb.; Belgian hares, 3½ lbs. and heavier, 10c per lb.; geese, fat, live, 17@19c per lb.; do fancy dressed, 20c per lb.; ducks, 3 lbs. and heavier, 18c per lb.; do fancy dressed, 20c per lb.; turkeys, fat, dry picked, 8 to 14 lbs., 34c to 35c per lb.; do live, fat, 8 to 15 lbs., 30c per lb.; squabs, large, $4 dozen; pigeons, $2; guineas, $7 per doz.

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PERFECTION PLASTER WALLBOARD

When you've decided that plaster wallboard is the one economical material to use for walls and ceilings because it's so easy to use, because it's fireproof, soundproof, waterproof and permanent—remember too, that

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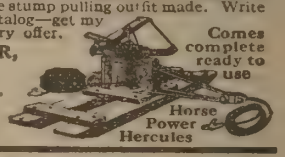
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Just Folks

The common things of life may be the most interesting after all.

This morning at home I took up the daily paper and I do not think there was an article or item in it that struck my fancy more than a cablegram sent by the Associated Press from Lausanne, Switzerland, where the big diplomats are gathered in the Near Eastern conference.

This item sent over the world by cable tells how Mussolini, who is called Italy's cyclonic premier, and who has been making old school diplomacy gasp, made it startingly plain that he had not forgotten the day when he was a butcher's boy. Having gone to the railway station to say goodby to Premier Poincare of France he was returning by automobile to his hotel, when he suddenly stopped the car before a butcher's shop run by an Italian. He darted in and wrung the hand of the astounded propfietor, exclaiming: "I hope you have not forgotten me; you know I worked for you 15 years ago."

Later, walking to the office, I passed the president of the leading bank in town. He was screening coal ashes. He pointed with considerable pride that he had saved a tubful of good coal out of two tubfuls of ashes. Of course, there was no urge of poverty that made him do this, but like every red-blooded American, he enjoyed doing chores out in the open, and, what is more, he made of thrift a high accomplishment, regarding preventable waste as the token of vulgarity.

Before reaching the office a girl in her later teens, in commonplace dress, stopped me to ask about the location of a certain street in the city. She had taken the wrong street car and it had left her where she was lost. I was not familiar with the street named, and asked another man who came along. While we were trying to locate the street the county superintendent of schools came along and joined in the common effort to give an intelligent answer to the young woman. Finally, the county superintendent said: "I have my car here and am going with my wife to Cheney, and if you like will take you over the bridge and locate the street you desire."

A few blocks farther in my walk I passed a nice, little brick shop on the busy corner of the street. It had just been put up under the elevated railroad track. It had been built for "Happy Jack," who is blind and who had been living and peddling papers, gum, peanuts, etc., from a miserable little shack, a few feet away. I had learned that the business men of the street had a fondness for the cheerful bravery with which Happy Jack was meeting the fortunes of life, and wishing to do away with his ill-favored shop, had prevailed upon the railroad company to permit them to put up a fine-looking one-story brick building, with a little living room for Happy Jack in the rear and a good little shop in front.

I reached the office, more than ever convinced that the world was not so very bad a place to live in after all.

E.A.S.

Latest High Class Patterns for the Home

Please order the patterns you desire at least two or three weeks before you wish to use them. Desiring to obtain the latest high-class patterns for its readers, THE FARMER has made arrangements to have them sent direct from the east, and under present mailing conditions it takes about that time for them to reach you.



3858. Junior's Dress—Cut in three sizes: 12, 14 and 16 years. A 14-year size will require 3 yards of 38-inch material. Price 10 cents.

3976-4226. Ladies' Costume—Waist 3976 cut in six sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. Skirt 4226 cut in seven sizes: 25, 27, 29, 31, 35 and 37 inches waist measure. The width of the skirt at the foot is 3 1-8 yards. To make this dress for a medium size, of one material, will require 5 1-4 yards of 40-inch material. Two separate patterns, 10 cents for each pattern.

4216. Lady's Day Dress—Cut in seven sizes: 36, 38, 40, 42, 44 46 and 48 inches bust measure. A 38-inch size requires 3 3-4 yards of 54-inch material. The width of the dress at the foot is 2 1-4 yards. Price 10 cents.

3469. Dress for Breakfast or Service—Cut in four sizes: Small, 32-34; medium, 36-38; large, 40-42; and extra large, 44-46 inches bust measure. The width of the skirt at the foot is 2 yards. It will require 7 3-8 yards of 27-inch material for a medium size. Price 10 cents.

4082. Lady's Dress—Cut in seven sizes: 36, 38, 40, 42, 44, 46 and 48 inches bust measure. To make the dress for a 38-inch size requires 6 yards of one material 32 inches wide. As illustrated, it will take 2 1-2 yards of plain material for sleeves and front, and 3 3-4 yards of striped material. The width of the skirt at the foot is 2 1-4 yards, with plaits extended. Price 10 cents.

3868. Lady's Apron—Cut in four sizes: Small, medium, large and extra large. A medium size requires 2 1-2 yards of 36-inch material. Price 10 cents.

4208. Girl's Dress—Cut in four sizes: 6, 8, 10 and 12 years. A 10-year size requires 2 3-4 yards of 32-inch material. Price 10 cents.

4207 Girl's Dress—Cut in four sizes: 6, 8, 10 and 12 years. A 10-year size requires 3 1-2 yards of 32-inch material. Price 10 cents.

4220. Boy's Trousers and Knickers—Cut in five sizes: 6, 8, 10, 12 and 14 years. An 8-year size requires 1 yard of 54-inch material for either style. Price 10 cents.

4223. Boy's Blouse—Cut in five sizes: 6, 8, 10, 12 and 14 years. A 12-year size requires 2 7-8 yards of 32-inch material. Price 10 cents.

4222. Girl's Costume—Cut in six sizes: 4, 6, 8, 10, 12 and 14 years. A 12-year size requires 2 1-2 yards of 27-inch material. Price 10 cents.

4045. Lady's Negligee and Cap—Cut in four sizes: Small, 34-36; medium, 38-40; large, 42-44; extra large, 46-48 inches bust measure. A medium size requires 2 5-8 yards of 32-inch material. The cap alone requires 1-2 yard. Price 10 cents.

Fashion Book Notice.

Send 12 cents in silver or stamps for our up-to-date fall and winter 1922-1923 book of fashions.

SPECIAL CHRISTMAS PATTERNS.

So that our readers may secure patterns for making Christmas gifts without having to wait the usual length of time which it takes to get them from the east, The Pacific Northwest Farm Trio has obtained the following special Christmas patterns, which will be carried in stock until after the holidays and can be supplied on short notice:

2300—Set of animals, pig, dog and sheep.
2937—Toy chicken and duck.
2967—Set of toy animals, horse and cow.
2970—Set of toys, "Roly Poly" and cat.
3061—Set of doll's dress, cape and bonnet (five sizes).
3438—Ladies' aprons.
3600—Ladies' kitchen apron and oven cloth.
3770—Set of boudoir caps and slippers (three sizes).
3790—Doll's dress, slip-on style (five sizes).
4144—Ladies' dressing sacque (four sizes).
4194—Set of bibs.
4195—Set of bags for shoes and slippers.
4196—Doll, with clown suit, hat and rompers (three sizes).

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Be sure to give the pattern number and the correct size.

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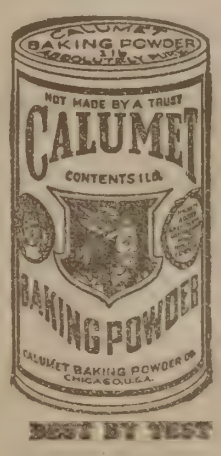
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contains a small amount of white-of-egg. This makes it possible for representatives of the company to test it frequently for leavening strength—right on the dealer's counter. Nothing but absolutely fresh stock is permitted to remain on the dealers' shelves. It must always be up to the high Calumet standard.

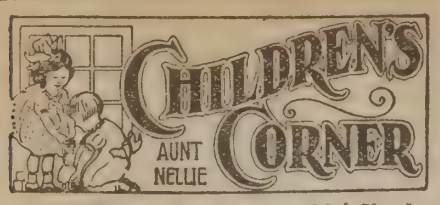


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THE WORLD'S GREATEST BAKING POWDER



Sylvia Wilson is 10 years old. She has a white rabbit and two baby bunnies for pets. The Wilsons raised 150 young chickens on their ranch in Spokane county, Wash, this year Sylvia says 12 children attended school where she goes She has a very nice teacher

Birthday Greetings

FRIDAY, December 22—Archie Moe, 11 years old.

SATURDAY, December 23—Ella Ray, 10 years old.

SUNDAY, December 24—Bill Cettla, 10 years old; Erick Cettla, 10; James Sheahan, 11.

MONDAY, December 25—Dorothy Barry; Ethel Hinderbrandt, 7 years old.

TUESDAY, December 26—Margaret Taylor, 11 years old; Pauline Brandt, 11; Beryl McCarthy, 10.

WEDNESDAY, December 27 — Doris Jones, 10 years old; Marie Wichert, 10.

BEDTIME STORIES

By THORNTON W. BURGESS.

JOHNNIE LOSES HIS TEMPER.

Nowhere on all the green meadow or in the green forest is there a better-natured little chap than Johnny Chuck. He is so good-natured that Reddy Fox used to sneer at him and say that Johnny didn't fight because he was a coward and didn't dare. But Reddy Fox doesn't say that now. My, my, I guess not! You see, it happened this way:

Johnny Chuck had been growing. He was stout and he was strong. But Reddy Fox hadn't noticed this. He thought of Johnny Chuck only as the timid little chap who first made his home under the apple tree and was almost afraid of his own shadow.

So one day when Johnny Chuck lost his temper Reddy Fox was treated to the greatest surprise of his life, and ever since then he has had the greatest respect for Johnny Chuck. Johnny was out for a morning walk. He was strolling down the lone little path without a care in the world. when he heard a thin, little voice squeaking pitifully over behind a clump of tall meadow grass. "Don't. Oh, please don't!" begged the voice.

"I'm going to eat you up when I get through having some fun with you," replied a gruff voice. Johnny Chuck recognized it at once.

Johnny stole softly up behind the clump of tall meadow grass and peeped through. What he saw made his blood boil. His eyes snapped and he doubled up his fists. There was Reddy Fox knocking poor little Danny Meadow Mouse about. Danny's clothes were torn, his face was scratched, and he was so frightened that he had lost the little bit of voice that he did have. Reddy Fox was enjoying himself. There was no doubt of that. He would let Danny Meadow Mouse run a little way, just far enough for Danny to think that perhaps he had really escaped. Then Reddy would pounce on him.



There was Reddy Fox knocking poor little Danny Meadow Mouse about.

Something snapped inside of Johnny Chuck. He forgot that he had ever been afraid of Reddy Fox. He forgot that Reddy was much bigger than he. He forgot everything but rage. He landed on Reddy Fox like a whirlwind. He took Reddy so by surprise that Reddy was knocked clear off his feet.

"Coward!" roared Johnny Chuck. "Why don't you take some one your own size."

They tell about that fight on the green meadows even now. At first Reddy Fox, forgetting that Johnny Chuck had grown, thought that he would soon teach Johnny not to meddle in other folk's affairs. But he soon found that he had got more than he had bargained for. Then his one thought was to get away. But Johnny Chuck wouldn't let hi mgo. My, how those stout little feet of Johnny's made strong by digging in the hard earth, did hurt! Reddy's beautiful red coat was soon in tatters. His tail was a sight. When finally he broke away he was a sorry spectacle. He sneaked off to the laughing brook to clean himself up, for he did not dare to go home looking so.

"Hurrah for Johnny Chuck!" shouted all the little meadow people, who had gathered to watch the great fight.

"That's nothing," said Johnny Chuck, who had recovered his temper and now felt rather ashamed. Then he put his hands in his pockets and strolled over to the house of Danny Meadow Mouse.

Pike's Peak or Bust

(Continued from page fourteen.)

circumstances. So they saddled and packed the cow, strapped on their own packs, shouldered their guns and were soon making their slow way down the mountain.

When they had traveled a few miles, Holloway, still leading the party, was heard to say: "I believe we've struck our old trail—the trail we followed on our way over. Seems to me I recollect that big boulder."

A mile or two farther down, when the travelers came to a great rock rising 20 or 30 feet, Holloway exclaimed: "Now don't you see? There's Grizzly Bear rock—the rock we'd camped by when we had the scrimmage with that big varmint."

"Looks for all the world like the same rock to me," spoke out Orlando. "But I wouldn't be dead sure till I see the other side."

When at the east wall of the great rock they found the same grassy glade, the same tiny spring flowing from under the rock, and the dead ashes of an old campfire.

Now Givens exclaimed: "Very identical spot! Right here it's camp again! And let's stay here till we're all well rested and well fed, if it takes a week of Sundays. We've had a hard race for our lives and now we're entitled to pick our teeth and take things easy for a while."

"If we camp here again we're likely to have another fracas with that bear," Sanders suggested.

"Fracas or what not, bear or what not, I'm in for camping," Cooper declared. "And whatever comes, varmint or redskin, we'll have it out with 'em. For my part, I'm weary of this hotfooting it. Six able-bodied men, every man with a rifle and a six-shooter—42 shots in all—ought to give a good account of themselves in a battle."

"And this rock wall will be a bully thing to back up against," was Holloway's remark.

All were both willing and glad to stop, and they lost no time in making camp. Their fire they kindled where their first fire had been. While some were doing that and collecting wood for fuel, the others took up their rifles and set forth in quest of meat for supper and breakfast.

(To be continued.)

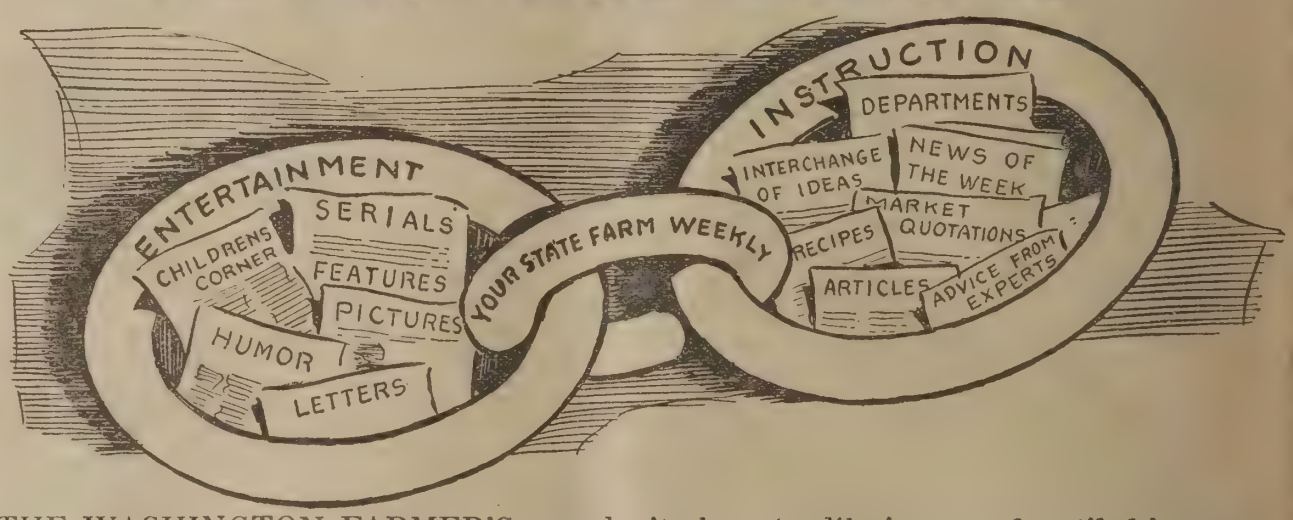
LETTERS WELCOMED BY AUNT NELLIE.

Among recent letters received by Aunt Nellie are those from cousins whose names follow. A few of these will be published each week in the regular edition of THE FARMER and others will appear from time to time in the Junior Farmer:

Hazel Durland, Ruth Cox, Otto William Dahl, George Lovos, Evelyn Cleman, Edward Schaefer, Eileen Warren, Elizabeth Virginia Howell, Mildred Pendleton, Bennie Kirkman, Doris Harrel, Harry Campbell, Alice Swanson, Esther Kiehn, Helen Miller, Leda Ruby Harrell, Nelda Jackson, Marie Thomas, Sigrien Agnes Runolfson, Grace Hill, Charles Grinnell, Alice Allen, Eugene Burton, Winnifred Parker.

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In your neighborhood will you please act for us in giving our cooperative plan a real boost?

Dec. 21, 1922.

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News for Breeders

NEW GUERNSEY CHAMPIONS.

Announcement of two new northwest Guernsey championships is contained in advanced register records approved by the American Guernsey Cattle club the last two weeks in October, which include five made in the Pacific northwest, three of them in Oregon and two in Washington. V. H. Harwood of Astoria, Ore., put a junior 2-year-old record of 619.90 pounds of butterfat on Imp. Lady Beauty of Ore Hill; W. O. Reith of Astoria one of 541.15 pounds on Adaline of Ore Hill, a mature cow, and Clyde Ringo of Mulino, Ore., one of 528.46 pounds on Mixter Golden Dean, a 6-year-old. The first is a new class G record for Oregon and has previously been announced in THE FARMER. The second is a new class AA record for Oregon and displaces that of 535.84 pounds of butterfat held for some time by Modele's Jolly Lass, owned by A. I. and J. Hughes of Oregon City.

On Melita of Chicona, a senior 2-year-old, A. L. Gile of Chicona put a record of 424.60, and on Effie of Hope Farm, a mature cow, S. P. Davis of Olga, Wash., put a record of 698.49 pounds.

HEAD THREE STATE HOLSTEIN HERDS.

Two sons and a grandson of Matador Segis Walker, the Carnation herd sire, headed the three state Holstein herds at the Pacific International this fall; the veteran grand champion, Matador Segis Walker 6th, led the winning Washington herd, and three other animals in it were shown by "Mat's" owners. They included May Walker Skylark, first prize 4-year-old and reserve champion; Carnation Matador Queen, second prize 4-year-old, and Sylvia Segis, first prize junior yearling heifer. John L. Smith had three in the herd: Hazelwood Heilor Butter King, first prize junior yearling bull and grand champion in 1921; Hazelwood Bessie Pauline Heilo, first prize senior yearling and junior champion heifer, and Hazelwood Sir Bessie Segis, first prize junior bull calf and junior champion. David Nisbet's club heifer, Olympic Greenbank Queen, first prize senior heifer calf, and two prize winners owned, respectively, by William Bishop and by Western State hospital, completed the group.

WINS GRAND CHAMPIONSHIP.

J. I. Hutchin of Lynden, a Holstein breeder and general farmer, had two typy females that he knew were good producers as well as good individuals and was persuaded to take one of them to the county fair at Lynden. Nettie Wayne De Kol, the older of the two, took first in her class and was made grand champion of the Holsteins. Mr. Hutchin has already made plans for coming out next year with a larger herd.

The herd was started in 1909, when Mr. Hutchin bought three head, a cow in milk, a heifer and a bull, from William Bishop and began to breed up the herd. He had exceptionally good luck and got only four bull calves out of the first 17 calves from the grade and registered cows. The percentage of heifers has been heavy for the last year and Mr. Hutchin is raising all of the promising heifers for milch cows.

A FIGURE LEFT OUT.

In the recent report of the Guernsey sale of Dr. P. W. Willis of Redmond, Wash., a typographical error made The Washington Farmer say that W. O. Peterson of Renton, King county, bought Sammamish Roxie for $10. Mr. Peterson paid 41 times $10 for this good old cow, which was a stablemate of the late world record Guernsey, Sammamish Topsy. Mr. Peterson is building up one of the good Guernsey herds of the state. He has had a registered bull in his herd for two years and now owns Topsy's Robin Hood, one of the good bulls produced on the Dr. Willis, Orchard Hill, farm.

MAY WALKER SKYLARK DIES.

Carnation stock farms report the loss of May Walker Skylark, the prize 4-year-old female and reserve champion at the Pacific International Live Stock exposition at Portland. The animal died shortly after returning from the Portland trip, death being due to trouble in calving.

DON'T SWEAR AT HIM.

No matter if the hog does root up his pasture or root his way out of the pen, don't get excited and swear at him. He's a hog, and has a nose especially designed for rooting.

THE AVERAGE IS LOW.

The average milk production per dairy cow in the United States is considerably below 4000 a year, or less than 500 gallons. The world record cow produced 37,000 pounds, or over 4500 gallons.

SELLS THREE JERSEYS.

C. E. Starr of Mud Bay, Thurston county, reports the sale of three registered Jersey heifers to J. H. Taylor of Montesano.

OIL MAKES EASY GOING.

A little oil smooths out many a rough place on the farm.



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GOMBAULT'S CAUSTIC BALSAM does the work better than firing. Hair positively grows back natural color.

A reliable remedy for Curb, Splint, Sweeny, Capped Hock, Strained Tendons, Founder, Windpuffs, Skin Diseases, Thrush, Spavin, Ringbone, Throat or Bronchial Troubles. Will not scar or blemish. Supercedes all firing and cautery.

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DETROIT, MICH.

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Breeders' Dept.

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Silver Fox Ranches Make Big Profits.

Finest Quality Imported Prince Edward Island Stock.



All Pedigreed and Registered. Fully Guaranteed.

Full Particulars free. Write today.
United States Silver Fox Farms Corp.
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Brown Swiss Stock Farm

Breeders of Brown Swiss cattle, the farmers' dairy cow. Young stock for sale.
THEO BRUGGER, Route 3. Gresham, Ore.

Holstein Bulls sired by son of world record cow. from dams sired by brother to Segis Pietertje Prospect. Prices low.
H. R. BOOMER, Payette, Idaho.

Guernsey breeding stock. Buy your foundation stock from herd continually doing advanced registry testing. Prices reasonable. Everything sold under a guarantee.
FOSHAY FARM, Hubbard, Ore.
O. & M. L. VOGET.

Attention, Swine Growers!

200 Head of Duroc Bred Sows

will be sold in the Boise valley sale circuit. This consignment will be the best sows ever driven before the public in the northwest.

THESE SALES WILL START JANUARY 22.

R. Shutwell and Wagner & Son, Boise and Meridian, January 22.
J. G. Lupton and D. W. Blanksma and Preer Blanksma, Nampa, January 23.
Johnson & Shambaugh, Notus, January 24.
C. H. Kirkpatrick, Parma, Idaho, January 25.
Payette Duroc Farm, Payette, Idaho, January 26.
Address these men for catalogues, now ready for distribution.
The railroad and interurban connections from one of these sales to the next one, are the very best. Come and spend five days with us.

Guernsey Bulls

If you need a Guernsey bull write me at once. My calves are sired by May Rose bulls selected from the best herds in the east. The dams are of Ledyard Bay breeding with good advanced register records from 400 to 600 lbs. of fat back of them for several generations. Prices reasonable. Herd federal accredited. Twenty years a breeder.

OTTO W. POST
Ensenore, N. Y.

Fircrest Farm Guernseys Guernsey group for $750. Two heifers, under one year, and bull calf (not related).
DR. A. MacRAE SMITH, Bellingham, Wash.

Guernsey Bull Calf dropped May 30, 1922. Dam's A. R. record, milk 9820 lbs.; butter fat, 503.32 lbs., at 2 years, 2 months. Accredited herd. Farmers' price.
W. A. CARLSON, R. D. 3. Estacada, Ore.

GUERNSEYS Four excellently bred May Rose young sires for sale. Ages from two weeks to ten months. Priced to sell.
NOBLES BROS. Bow, Wash.

Earlcrest Ayrshires Win

at 1922 Pacific International Live Stock exposition.
First and senior champion bull.
First on mature cow.
First on cow with mature advanced registry record.
Five second awards.
Three third awards.
A few animals of both sexes for sale.
EARLCREST STOCK FARM.
EAGLE CREEK, ORE.

Ayrshires Wanted

On account of inquiries received during the Pacific International stock show, all Ayrshire breeders in Oregon, Washington and Idaho are requested to at once list all animals for sale. Car lots may thus be furnished and sales increased.
NORTHWEST AYRSHIRE BREEDERS' ASSOCIATION.
J. U. SMITH, Secy., Newburg, Ore.

Northwood Herd of Milking Shorthorns

The general farmer's cattle are the kind that will produce milk and beef. Milking Shorthorns fill this requirement. We want to place out bull calves where they will improve the herd. We are pricing our calves within the farmer's means. Will give terms on satisfactory references. We solicit your inquiries.
NORTHWOOD FARMS.
Redmond, Washington.

Quality Ridge Angus

15 head of bulls, 20 head of heifers and young cows for sale at farmers' prices. Our herd carries some of the best blood of the breed.
Tuberculin tested.
Prompt reply to your inquiry.
J. A. HARRIS & SONS, Eden, Idaho.

Oreglow Jerseys

April bull calf, show record, dam and sire's dam long distance cows of the breed, priced right. Write for particulars.
OREGLOW FARM, Boring, Ore.
D. BROOKS HOGAN, OWNER.

Four Jersey Cows

Two with official tests, two on test. All good records, St. Mawes and Gertie's Lad breeding. Priced to sell.
G. W. LAWSON, McMinnville, Ore.

Allendale Jersey Farm offers bull dropped Mar. 29, '22. Outstanding individual. Golden Glow, Chief and Majesty cross. Price, registered, $100.
A. A. BINBY. Freewater, Ore.

When answering advertisements don't fail to mention this paper.

Fourth Gold Medal Jersey Bull

now in use in my herd. No other herd ever had so many. Young stock for sale.
ED CARY, Carlton, Ore.

Maple Ridge Farm offers for sale richly bred young bull ready for service; 3 nearest dams of sire average 841 lbs. fat; dam is R. of M. daughter of St. Mawes Noble. Bargain. Terms.
J. C. BROWN & SONS, Shedd, Ore.

St. Mawes Jerseys 4 St. Mawes heifers from 6 months to 18 also bull 6 mo. old, by son of St. Mawes Lad and R. of M. dam. Priced from $150 to $325.
SHADILANE FARM, North Powder, Ore.

Jersey Bulls at Bargain Prices

Send today for our special sale list of registered Jersey bulls from R. of M. dams. Easy terms, liberal credit.
WARREN GRAY, Box T. Jefferson, Ore.

Thousand Springs Farm Durocs

Three March boars, sired by Sensation Island King, a worthy son of Great Orion Sensation and their dams were sired by Wonder Sensation. Their sire was first prize Jr. yearling at Western Royal, second prize at Pacific International, and headed first prize aged herd. They were prize winners where shown. Priced to sell as low as $40, satisfaction guaranteed. Open and bred gilts same breeding, at a right price.
MAX M. MOREHOUSE, Mgr., Wendell, Ida.

RICHARDS CHAMPION DUROCS

We have 200 spring and fall pigs, the best we ever raised, all sired by our grand champion herd boars and out of Big Type sows. 50 boars now ready for service, 100 gilts now being bred for spring farrow. These pigs priced cheap to sell. Satisfaction guaranteed.
RICHARDS LIVE STOCK COMPANY.
VIRGINIA, IDAHO.

Durocs at Bargain Prices

Spring boars and gilts, Great Wonder breeding. Gilts bred to Sensation boar. Some of them state fair prize winners; all good individuals. Priced for quick sale.
J. E. FINNICUM, Dayton, Ore.

Cornell's Duroc sows were undefeated on show circuit. Choice lot of bred gilts priced to sell. Satisfaction guaranteed.
S. D. CORNELL, Grandview, Wash.

Aviator and Pathfinder Durocs

Choice spring gilts, bred to Oregon Aviator; also September boars. Have won wherever shown.
M. AVERHOFF. Albany, Ore.

The Big Wonder Herd

of big type Poland Chinas, offers a few choice boars, ready for service; sired by such boars as the 1200-lb. Giant Buster and Saint Peter, a great son of Peter Pan. Satisfaction guaranteed on all orders.
E. O. LOE, Silverton, Ore.

Poland Chinas Last chance to buy top fall pigs, either sex, at $15 to $25. All registered. 110 to pick from. Write at once.
FRED D. ENTERMILLE, Baker, Ore.

River Banks Berkshires

Long, smooth, deep, grand champion kind. Strong in the blood of most popular families of nation.
RIVER BANKS FARMS, Grants Pass, Ore.
CLYDE E. NILES, MGR.

Riverby Orchard Berkshires

Oldest established Berkshire herd in the northwest. Young pigs and bred sows for sale. Address
D. C. BUNN, Prosser, Wash.

Choice Berkshires

Few choice boars and gilts for sale; sired by Festline's Rus, junior champion Portland show.
PEARL WOOD. Gervais, Ore.

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Goodrich "Hi-Press" Boots and Shoes with the Red Line 'round the Top—

Goodrich "Straight-Line" Rubbers in all styles, for all the family.

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Best in the Long Run

THE WASHINGTON FARMER

ESTABLISHED 1894

SPOKANE. SEATTLE.



THE Pacific northwest is becoming firmly established on the map of the live stock production industry. It is not an uncommon thing for animals from this territory to invade the great shows and bring back championships. Herewith is the picture of one that did it. The animal is Panama 110th, aged Hereford bull in the show herd of A. B. Cook of Townsend, Mont. He was senior and grand champion at the recent Chicago International Live Stock exposition.

We Should Standardize Wheat and Eliminate Inferior Varieties—Page 3

Grange Campaign

Pushed in State of Washington

F. E. Waters of Grangeville, Idaho, who is deputy of the Idaho-Washington grange, recently organized a subordinate grange at Covada, in Ferry county, Wash., at which there were 26 charter members. G. B. Hass was made president, Mrs. Marie Hass lecturer and E. E. Jones secretary.

"Between now and February 1," said Mr. Waters, "I expect to organize in eastern Washington, starting in at Walla Walla county and finishing up at Ellensburg, Kittitas county. I will then go over to the Coast, where I will spend the balance of the winter."

That the grange warehouses are meeting with success in every section of the state is evidenced by the fact that there have been but two failures since they were started, Mr. Waters said. The first one, which was organized four years ago at Kent, King county, has done a wonderful business. These grange warehouses in eastern Washington, which are located at Malo, Ferry county; Meyers Falls, Colville, Newport, Impach and Pullman, are regular grocery and general stores, some of them even handling farm machinery and a small stock of hardware. At the present there are 60 of them in the state, all doing well. Most of these stores send their accounts to the head warehouse in Seattle and at that place all bookkeeping and accounting is done for them.

"The grange is going to put on an intensive campaign for organization," said Mr. Waters, "and we are looking for a good revival of grange work this winter."

The moral effect that the grange has upon isolated communities is well demonstrated in Ferry county, where a local was recently organized. "Its establishment there was nothing short of a godsend," Mr. Waters said, "for these people are 40 miles from the nearest town and they have to cross the Columbia river in order to get there. It is a wonderful thing socically for the women, men and even the children (for, as you know, any one attaining the age of 14 can join) get together and spend a profitable evening. They now have a good lecturer and at each meeting put on a splendid program."

The grange is said to be the first secret organization in existence in the world which admitted women into its ranks the same as men, and the grange has been outstanding in its fight for equal rights for women in every state where woman suffrage has come up.

Farm Credit Steps

What seems to be a backfire movement against the demands of the farm bloc in congress for better and fairer marketing credits on agricultural products was started at Washington last week, when the federal reserve board promulgated a new ruling. Officials declare that this decision, which makes agricultural paper eligible for rediscount for six months, instead of three, "should be of material assistance to cooperative marketing associations in financing the orderly marketing of crops." Acceptances of six months have been asked for by many agricultural organizations and the longer period is believed by officials more nearly to accord with the turnover period required by the farmer to market crops for whose production he has borrowed money. The new ruling requires that the acceptance shall be secured by warehouse receipts covering the products against which the acceptances are drawn.

Another development in this connection was the introduction by Senator Norbeck of South Dakota of a revised farm credits bill. It expands his former measure and would make the farm loan system the vehicle for extension of agricultural credits.

Since our last number we have fuller information about the Norris bill, which is now before the senate by a unanimous approving vote from the committee on agriculture. This bill would create a vast buying and selling agency for agricultural products, and is designed to cut out the profits of the middleman. As previously explained, this measure calls for the establishment of a government buying and selling agency for agricultural products, with extensive powers as to operating elevators and warehouses, and invested with authority to make advances for assisting export transactions. The capital stock of this government corporation is to be $100,000,000 and tax-exempt bonds for five times the capital may be issued. One provision of the bill is that the corporation, to obtain reduced rates for export shipment, may use without charge any of the shipping board's vessels not in operation. The real intent is to make this corporation the middleman, the committee stated. In further explanation of the bill the committee report says:

"Authority exists in the bill for the sale of products on time. It is believed that this corporation, especially in foreign lands, can sell the surplus products of the farmers of America on time, taking security that will be ample and then upon the basis of the security so taken issue its bonds and repeat the operation until its bonds so issued equal five times the amount of its paid-in capital.

"The committee believes that the bill provides the necessary machinery by which the sale of these surplus products in America to foreign countries can be properly financed and the situation, both in America and Europe, greatly reduced. We also believe that the corporation will be able to very greatly decrease the cost of living on food products in America, and, at the same time, provide for the sale of farm products at an enhanced price."

At this writing, Saturday, the senate is still deadlocked in a wrangle between the supporters of the Norris bill and the advocates of the administration shipping bill. Each side wants its measure taken up immediately and given right of way for debate, and the result of the deadlock so far has been to prevent consideration of either bill.

GIVE THE SOWS EXERCISE.

C. M. Hubbard, specialist in live stock, says: Have the hog pen in one corner of the lot, the hay rack in another and the trough in still another, so the breeding sows may get sufficient exercise.

Heg Bros. Dispose of Holsteins

Holstein breeders of the state will be interested in the complete dispersal sale of the Dr. E. E. Heg & Sons herd at East Stanwood, Snohomish county, December 6. The disposal of the animals was necessary largely because of the death of Dr. Heg, early in October and the decision of the two sons to dissolve

Most of the animals went to breeders of Snohomish and Skagit counties, many of which were near the Heg farm. Kenneth Hodges purchased eight head for his herd near Everett and some went to breeders at Mt. Vernon.

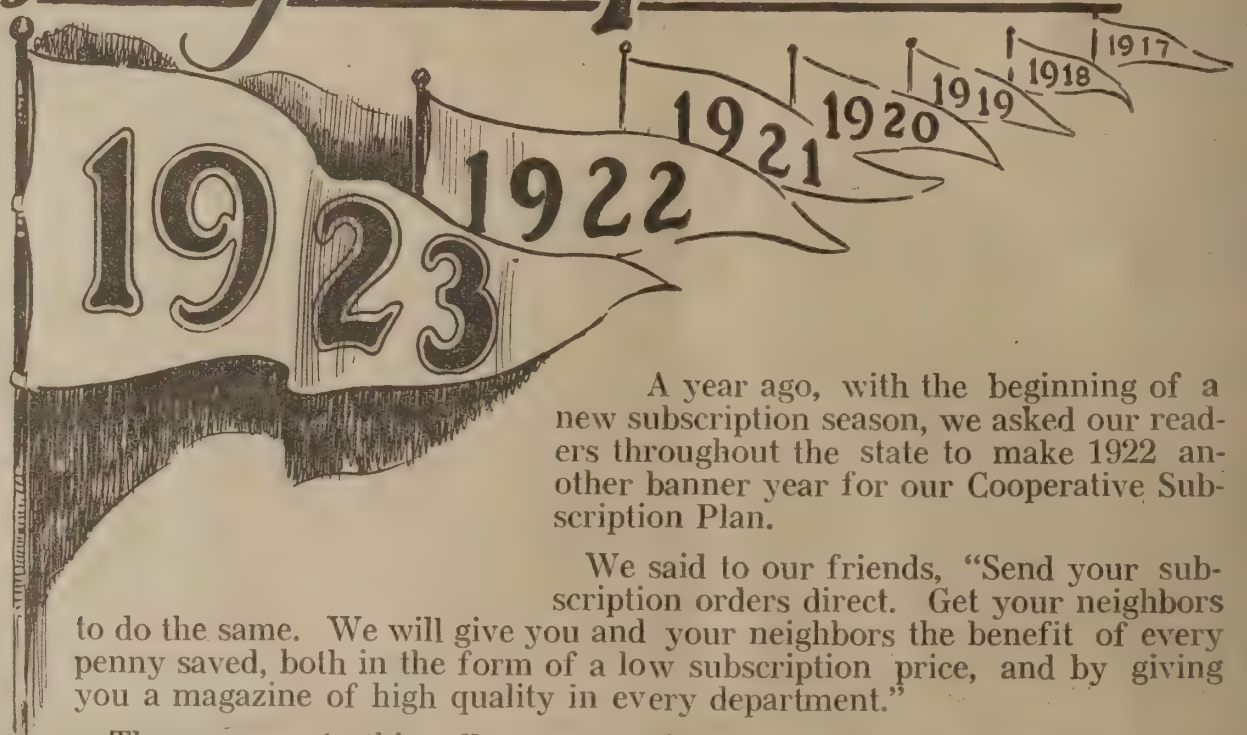
George A. Gue of Yakima cried the sale and C. E. Payne of Tacoma worked the ring.

A list of the animals and their purchasers follows:

Males—Tyee Madcap Johanna, Kenneth Hodges, Everett, Wash., $210; Tyee Madcap Ormsby, Charles E. Taylor, Monroe, Wash., $180; Tyee Sir Hiske Ormsby, W. T. Fisher, Mt. Vernon, $125.

Females—Tyee Hiske Fayne, Ed Hoem, Snohomish, $400; Illustrites 2d Cornu, H. L. Thurmond, Eeast Stanwood, $130; Tyee Betsy Canary, Kenneth Hodges, Everett, $155; Cascade Gretchen, W. T. Fisher, Mt. Vernon, $120; Tyee Peggy Fayne, Kenneth Hodges, $360; Tyee May Fayne, Micle Kingland, Silvana, $185; Tyee Patricia Fayne, Dr. H. K. Stockwell, Monroe, $335; Tyee Molly Fayne, Edward Iverson, Stanwood, $100; Tyee Zella Fayne, Selmer L. Ose, McMurray, $155; Tyee Canary Johanna, Kenneth Hodges, Everett, $175; Tyee Mellie Fayne, Charles E. Taylor, Monroe, $255; Tyee Hiske Johanna, Noble Lee, Mt. Vernon, $220; Tyee Cornucopia Fayne, Carl Satra, East Stanwood, $190; Sheridan Zozo Johanna, Jake F. Jamisen, $390; Tyee Lassie Fayne, Culborn Bros., Mt. Vernon, $150; Tyee Illustrites Ormsby, Charles Nelson, Mt. Vernon, $145; Tyee Ruth Johanna, E. C. Gruthner, Stanawood, $150; Tillacum Fayne Newman, $150, and Tyee Bessie Ormsby, Kenneth Hodges, $125; Tyee Fayne Johanna, John Ellingsen, East Stanwood, $210; Tyee Pietj Ormsby, Kenneth Hodges, $75; Tyee De Pauline Fayne, Carl Satra, East Stanwood, $200; Tyee Cornucopia Ormsby, J. F. Jamisen, $150; Tyee Hiske Fayne Johanna, John Ellingsen, East Stanwood, $280; Tyee Fayne Illustrites, $150; and Tyee Patricia Ormsby, Kenneth Hodges, $190.

Make 1923 Another Banner Year for Cooperation—



A year ago, with the beginning of a new subscription season, we asked our readers throughout the state to make 1922 another banner year for our Cooperative Subscription Plan.

We said to our friends, "Send your subscription orders direct. Get your neighbors to do the same. We will give you and your neighbors the benefit of every penny saved, both in the form of a low subscription price, and by giving you a magazine of high quality in every department."

The response to this call was heard in every nook and corner of Washington; and consequently our farmers' cooperative plan has been a big winner in 1922 just as it was in previous years.

Looking forward to 1923, we are confident that our plan will gather new laurels. We believe that during the months ahead the friends of cooperation will continue their loyal support of our subscription plan, realizing that it means a better, bigger state farm magazine at a price within the reach of all. So we repeat: "Instead of waiting for a notification, mail in your order at least 60 days in advance of the address label on your paper. If you own subscription is paid up ahead, let your friends and neighbors know about our plan. Include their orders with your own. By all pulling together, we can and will make 1923 another banner year for cooperation."

Dec. 28, 1922.

THE WASHINGTON FARMER,
Review Building, Spokane, Wash.

.....1922.

I desire to take advantage of your Cooperative Plan in securing new and renewal subscriptions.

I enclose herewith $.....for a.....year subscription to

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If your subscription is already paid in advance, it will be extended from the date to which it is paid.

Are We Growing Too Many Varieties of Wheat?

Elimination of Inferior Kinds Would Make Grain Farming More Profitable

By E. G. SCHAFER, Head Farm Crops Department, State College

The 54,423,000-bushel wheat crop of the state of Washington for 1921 consisted of 20 or more varieties, 13 of which produced more than 1,000,000 bushels each.

By more certain knowledge concerning the adaptation of varieties, the use of the superior ones may be extended and those which are inferior eliminated.

The extensive use of particular varieties in certain parts of the state is an indication of their suitability.

It is expected that the accompanying tables, showing the results of a recent survey will supply information concerning adaptation of varieties and show persons in need of seed of certain varieties where such seed can likely be found.

The survey which was made for 1921 shows that hybrid 128, which is a winter variety, leads all others, and that its total production was 10,065,000 bushels. This amount is 28.2 per cent of the winter wheat and 18.5 per cent of winter and spring wheat combined.

Turkey and Fortyfold, two other winter varieties, came second and third, there being 7,966,000 bushels of Turkey and 6,657,000 bushels of fortyfold.

Of the spring varieties Bluestem produced 5,778,000 bushels, Bart 5,340,000 bushels and Marquis 3,948,000 bushels.

These six varieties produced a total of 39,754,000 bushels, which is 73.0 per cent of the entire wheat crop.

Hybrid 128 is the leading wheat variety in Whitman, Walla Walla, Garfield and Columbia counties and is produced in larger quantities than any other winter variety in Lincoln county. Turkey ranks first in Douglas, Asotin, Franklin and Benton and is the most important winter variety in Adams and Kittitas counties. Hybrid 128 is grown extensively in much of the area in which Turkey predominates, while Turkey is frequently second in importance in the counties in which hybrid 128 ranks first.

Fortyfold leads both winter and spring varieties in Spokane, Klickitat, Yakima and Stevens counties. Jones' Fife is distributed quite widely in areas of light rainfall and is the leading winter wheat in Grant and Okanogan counties. Red Russian predominates in several counties west of the Cascade mountains. By far the greatest amount of this variety, however, is produced in Whitman county. Triplet is grown most extensively in Columbia, Whitman, Walla Walla and Spokane counties.

Bluestem is distributed more widely than any other variety and is grown in all counties given in the tables. It is the most extensively grown of all wheats in Lincoln county and is the leading spring wheat in Douglas, Garfield, Ferry, Okanogan and Stevens counties. Bart is commonly grown as a spring variety in areas where Turkey is grown as a winter variety. It ranks first in Adams and Grant counties, where spring varieties predominate and leads other spring varieties in Franklin and Klickitat counties.

Marquis is first in spring varieties in Spokane and Whitman counties, but does not take first place among all wheat varieties in any county of the state.

Bart is generally the most extensively grown of any of the spring varieties in areas of light rainfall.

Bluestem occupies a similar place in areas of moderate rainfall, while Marquis takes a somewhat intermediate position.

Jenkin and Dicklow are the two main spring varieties grown under irrigation. Jenkin is also grown quite extensively without irrigation in Whitman, Walla Walla and Columbia counties near the mountains.

The 1921 survey was made by means of a questionnaire sent to wheat growers of the state, information secured from county agents and grain dealers and data obtained from the bureau of agricultural economics of the United States department of agriculture. The questionnaire contained a request for the variety name, number of acres and acre yield of each variety. It was answered by 519 persons distributed widely over the wheat-growing areas of the state. The growers reporting produced a total of 3,337,188 bushels, or 6.1 per cent of the entire crop. The total amount of each variety in each county was determined by multiplying the percentage of the variety in question (computed from all the reports received) by the total production of the county, as given by the department of agriculture.

The information furnished by county agents and grain dealers was based largely upon the character of wheat entering commercial channels, but also in part upon the county agents' knowledge of grain production in the county. The estimated total yield of each variety for each county was obtained in essentially the same manner as that from the individual farmers. The results given in the tables are the averages of those secured from the 519 farmers and the county agents and grain dealers. The proportion of winter to spring varieties given in the tables does not correspond in every case with that given by the United States department of agriculture, since the separation of spring and winter wheat in the estimated yield of the United States department of agriculture is based upon time of planting, while the division of spring and winter varieties for this survey is made according to their habit of growth and winter hardiness.

It will be recognized that most of the varieties recorded in table 1 are commonly planted only in the fall and those of table 2 are commonly planted in the spring. Hybrid 123, hybrid 143, Coppei and hybrid 63 will head out when planted in the spring and are sometimes spring planted. They are fairly hardy, behave much as true winter varieties when fall planted, are most commonly grown from fall planting and are, therefore, given with the winter varieties.

Among the spring varieties Jenkin is occasionally planted in the fall, but is not sufficiently hardy to be considered a safe variety for fall planting. All varieties given in table 2 will head out and mature in an average season if spring planted. Counties producing less than 50,000 bushels are not included in the tables. The column of "Other varieties" includes varieties of minor importance, certain ones not widely distributed, and varieties for which no name was given. It includes 268,000 bushels of Martin (known also as Martin Amber), 129,420 of Red Allen, 113,323 of Little Club and smaller quantities of other varieties.

A similar survey was made for 1918 and 1919 and reported in the Washington agricultural experiment station bulletin 159 During this period the average production for the state was 32,815,019 bushels. The total of all winter varieties for this two-year period was 14,763,860 bushels and the total of the spring grown varieties was 18,051,159 bushels. The ratio of each variety to the total crop for the two surveys, as well as the expected gain or loss in 1921, is given in the following tabulation (the gain or loss is based upon the 1918-1919 variety distribution and the 1921 winter to spring ratio):

Variety.	1918-1919 Pct.	1921 Pct.	Gain or Loss Pct.
Winter.			
Hybrid 128	11.6	18.5	1.7
Turkey	7.5	14.6	3.7
Fortyfold	9.0	12.2	* .9
Jones Fife	3.1	6.0	1.5
Red Russian	6.2	3.4	*5.6
Triplet		3.0	3.0
Hybrid 123	1.8	2.8	.2
Coppei		2.1	2.1
Hybrid 143	3.4	2.0	*3.0
Hybrid 63	2.4	.8	*2.7
Total	44.9	65.4	
Spring.			
Bluestem	17.2	10.6	.2
Bart	16.6	9.8	* .2
Marquis	10.4	7.3	1.0
Jenkin	9.2	4.7	* .9
Dicklow	1.6	.9	* .1
Total	55.0	33.3	

* Loss.

The total wheat production of the state for 1921 exceeded the average of 1918 and 1919 by 21,607,981 bushels, and the proportion of winter to spring varieties, as well as the percent of different varieties is not constant from year to year.

This tabulation shows a great increase in winter wheat with a corresponding decrease in spring wheat in 1921 as compared with the former record of 1918 and 1919. The variation from year to year in spring and winter wheat makes it difficult to determine what varieties are actually becoming more popular and which are being discontinued as time goes on. A closer analysis of the percentages, however, shows that there is great unrest in the state in the choice of winter varieties, but considerable stability in the choice of spring wheats.

The greatest comparative increase has been in Turkey. Triplet and Coppei have entered the field as new varieties and hybrid 128 and Jones Fife have increased nearly 1,000,000 bushels each beyond what would have been expected, due to the increase of winter varieties. Red Russian, hybrid 143 and hybrid 63, on the other hand, are decreasing rapidly, and if this decline continues for three years more they will become as little grown as the Red Chaff and Little Club of 20 years ago. Marquis shows a distinct gain, while Jenkin shows a pronounced loss. This is the more striking on the part of Jenkin because it is often used as a winter wheat, and to that extent should have shown an increase, due to the more favorable seasonal conditions for winter wheat in 1921.

Table I.—Giving bushels harvested in each county in 1921 of the varieties of winter wheat grown in Washington.

County.	Hybrid 128.	Turkey.	Fortyfold.	Jones Fife.	Red Russian.	Triplet.	Hybrid 123.	Coppei.	Hybrid 143.	Hybrid 63.	Total.
Adams	240,000	902,000	20,000	788,000	.....	.....	.....	.....	.....	41,000	1,991,000
Asotin	.....	627,000	333,000	.....	.....	28,000	.....	.....	.....	.....	988,000
Benton	.....	321,000	29,000	196,000	18,000	.....	.....	.....	18,000	.....	582,000
Chelan	.....	18,000	.....	37,000	.....	.....	.....	.....	.....	.....	55,000
Clallam	.....	.....	.....	.....	98,000	.....	.....	.....	.....	.....	98,000
Clarke	6,000	.....	.....	.....	81,000	.....	.....	.....	.....	.....	87,000
Columbia	996,000	220,000	.....	.....	.....	686,000	.....	.....	136,000	.....	2,038,000
Douglas	311,000	1,841,000	1,000	264,000	.....	5,000	.....	.....	.....	.....	2,422,000
Ferry	12,000	12,000	.....	23,000	.....	.....	.....	.....	.....	.....	47,000
Franklin	240,000	583,000	.....	274,000	.....	21,000	.....	.....	.....	27,000	1,145,000
Garfield	1,029,000	667,000	.....	.....	.....	73,000	.....	.....	54,000	51,000	1,874,000
Grant	209,000	232,000	30,000	334,000	.....	11,000	.....	.....	.....	11,000	827,000
Island	.....	.....	.....	.....	182,000	.....	.....	.....	.....	.....	182,000
Kittitas	6,000	64,000	.....	3,000	.....	.....	.....	.....	.....	.....	73,000
Klickitat	134,000	300,000	621,000	22,000	186,000	7,000	95,000	.....	15,000	4,000	1,384,000
Lewis	7,000	.....	44,000	.....	22,000	.....	.....	.....	.....	.....	73,000
Lincoln	734,000	382,000	648,000	129,000	.....	4,000	.....	.....	38,000	.....	1,935,000
Okanogan	47,000	158,000	.....	264,000	.....	.....	.....	.....	.....	.....	469,000
San Juan	.....	.....	.....	.....	78,000	.....	.....	.....	.....	.....	78,000
Skagit	.....	.....	.....	.....	52,000	.....	.....	.....	.....	.....	52,000
Spokane	65,000	275,000	2,191,000	292,000	63,000	115,000	.....	.....	.....	.....	3,001,000
Stevens	26,000	19,000	225,000	59,000	1,000	.....	.....	.....	.....	.....	330,000
Walla Walla	3,539,000	890,000	23,000	.....	.....	185,000	.....	.....	381,000	321,000	5,339,000
Whatcom	.....	.....	.....	.....	25,000	.....	.....	.....	.....	.....	25,000
Whitman	2,464,000	433,000	2,028,000	482,000	1,032,000	513,000	1,425,000	1,154,000	456,000	.....	9,987,000
Yakima	.....	22,000	464,000	103,000	.....	.....	.....	.....	.....	.....	589,000
Total	10,065,000	7,966,000	6,657,000	3,270,000	1,838,000	1,648,000	1,520,000	1,154,000	1,098,000	455,000	35,671,000
Per cent crop	18.5	14.6	12.2	6.0	3.4	3.0	2.8	2.1	2.0	.8	65.5

Table II.—Giving bushels harvested in each county in 1921 of varieties of spring wheat grown in Washington; also other varieties of minor importance, as well as total of all varieties.

County.	Bluestem.	Bart.	Marquis.	Jenkin.	Dicklow.	Total Spring.	Other Kinds	Ttl. Winter and spg.
Adams	87,000	1,915,000	72,000	.....	.....	2,074,000	4,000	4,069,000
Asotin	55,000	.....	56,000	.....	.....	111,000	28,000	1,127,000
Benton	18,000	91,000	9,000	18,000	.....	136,000	.....	718,000
Chelan	6,000	.....	2,000	.....	.....	8,000	11,000	74,000
Clallam	5,000	.....	.....	.....	.....	5,000	.....	103,000
Clarke	8,000	.....	.....	.....	.....	8,000	16,000	111,000
Columbia	84,000	28,000	28,000	618,000	.....	758,000	2,000	2,798,000
Douglas	673,000	497,000	411,000	.....	.....	1,581,000	81,000	4,084,000
Ferry	15,000	8,000	8,000	.....	.....	31,000	.....	78,000
Franklin	7,000	216,000	7,000	.....	.....	230,000	.....	1,375,000
Garfield	68,000	20,000	41,000	30,000	.....	159,000	1,000	2,034,000
Grant	112,000	518,000	53,000	.....	.....	683,000	8,000	1,518,000
Island	2,000	.....	.....	.....	.....	2,000	2,000	186,000
Kittitas	50,000	69,000	44,000	46,000	307,000	516,000	54,000	643,000
Klickitat	22,000	39,000	10,000	.....	.....	71,000	37,000	1,492,000
Lewis	21,000	.....	27,000	.....	.....	48,000	22,000	143,000
Lincoln	2,490,000	667,000	1,423,000	.....	.....	4,580,000	1,000	6,516,000
Okanogan	276,000	92,000	98,000	.....	.....	466,000	.....	935,000
San Juan	2,000	.....	.....	.....	.....	2,000	2,000	82,000
Skagit	10,000	.....	.....	.....	.....	10,000	10,000	72,000
Spokane	218,000	317,000	384,000	53,000	.....	972,000	3,000	3,976,000
Stevens	127,000	.....	24,000	.....	.....	151,000	.....	481,000
Walla Walla	204,000	33,000	33,000	829,000	148,000	1,247,000	6,000	6,592,000
Whatcom	30,000	.....	10,000	.....	.....	40,000	10,000	75,000
Whitman	1,075,000	515,000	1,165,000	602,000	.....	3,357,000	359,000	13,703,000
Yakima	113,000	315,000	43,000	363,000	14,000	848,000	1,000	1,438,000
Total	5,778,000	5,340,000	3,948,000	2,559,000	469,000	18,094,000	658,000	54,423,000
Per cent crop	10.6	9.8	7.3	4.7	.9	33.2	1.2	100.

Farm Bureau Will Answer Charges

Readers of THE FARMER will remember that the following telegram was sent November 15 to James R. Howard, then president of the American farm bureau:

"THE FARMER is publishing President Charles S. Barrett's address to annual convention of National Farmers' union and is also publishing an abstract of Secretary A. C. Davis' statement regarding farm bureau. We believe farmers are entitled to know what great farm organizations are doing and saying: Shall be glad to receive from you statement for publication regarding the questions involved."

A reply to this telegram was received from Samuel R. Guard, director of the department of information of the American Farm Bureau federation, who said:

"Your telegram to President Howard requesting statement for publication is referred to me for reply. If you will send me a copy of your issues containing Mr. Barrett's statement it is possible that we may accept your kindly proferred opportunity to set forth the farm bureau point of view."

The above letter of Mr. Guard was dated November 25. Waiting nearly a month, December 20, the following telegram was sent to Mr. Guard: "Kindly wire night letter whether or not and when we may expect statement of farm bureau viewpoint relative charges made by Barrett of farmers' union. Charges repeated by Barrett at Washington state meeting last week. Bureau members appeal to us for official reply. Anxious to give official statement early as possible."

December 24 the following telegram, dated at Chicago December 23, was received from Mr. Guard: "Will send official statement regarding Barrett charges next week."

As will be seen the earnest purpose of THE FARMER has been to give our readers the statements by those who have authority to speak regarding this matter.

A variety survey should be made for the 1922 wheat crop. This can be done in a splendid manner with the cooperation of the readers of The Washington Farmer. All wheat growers are urged to fill out the following blank form for their 1922 wheat crop and return it to The Washington Farmer, Review Building, Spokane, Washington, as early as possible. Space is provided in the blank form for three varieties, so that a full report may be given if more than one variety is grown.

Name .....

Postoffice..... County.....

Give variety name, number of bushels and number of acres of each variety of wheat grown on your farm in 1922.

Variety .....No. Bushels..... No. Acres.....

Variety.....No. Bushels..... No. Acres.....

Variety.....No. Bushels..... No. Acres.....

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Problem Is Not to Center but to Scatter Population

Interstate Commerce Commissioner J. B. Campbell came to his home town, Spokane, on official business last week and incidentally addressed the Spokane Merchants' association at its annual dinner. Newspaper reports of his speech say that he "turned farmer," urging the members to establish a closer relationship with agriculture and cooperate with farmers as the exponents of "the only basic industry."

The fact is that Mr. Campbell did not "turn farmer" for this occasion. While he is professionally a lawyer, he was a sure enough practical farmer when he was appointed to the commission. He had put his life's savings into farm property—an irrigated orchard tract in the Spokane valley and a general farm on the Little Spokane river. President Harding had promised the farm organizations that his next appointment to the commission would be a farmer or one satisfactory to the farming interests, and when farm organizations recommended Mr. Campbell his appointment followed.

In his Spokane speech Commissioner Campbell opened the basic part of his address with a reference to agriculture, declaring that there is no other industry that "creates any wealth that did not exist before."

"I warn you," he continued, "that the development of the United States is fraught with great danger unless there is prosperity for agriculture. Agriculture, as the one basic industry, could not exist without efficient transportation."

He spoke of the teeming millions of the eastern states, and pointed out that 96 per cent of all that is eaten in eastern cities is produced west of Pittsburgh. "Millions of people," he declared, "have no conception of the economies of the nation."

In view of the fact that many farm leaders and farmers are considering the repeal of the Esch-Cummins railroad law, Commissioner Campbell's views on that legislation will be of interest.

There never was, he said, a more constructive piece of legislation enacted than this, I believe. It is not perfect, because it is man-made, but the authors of the bill are as eminently versed on the subject as any men I know. But the law is based on public service and the general welfare. And I tell you it contains no more a guarantee of 6 per cent to the railways than there was a guarantee in the supreme court decision that no regulatory body can fix a rate that would confiscate property of a railroad. All the law says and all the commission has interpreted the law to mean is that the roads are entitled to 6 per cent if they can make it by fair and just rates.

Turning again to the farmer, Commissioner Campbell said:

The interest of the farmer is not in combining with the agitator, but in closely connecting up with the business man, and there is no service that you business men can give that would be greater than helping the farmer to get storage and other facilities. Storage should be supplied at home, because it would save freight rates to the farmer and save him interest on his money until he is ready to move his crops.

Our problem today is not to center, but to scatter population. One of our great troubles is to get the roads out from the cities and to take less time to move a car a mile. I don't agree with the latest report of Secretary Wallace that production must be cut. I believe that we should instead establish a higher standard of living, more capable distribution and prevent starvation running rampant anywhere in the world. By such means—humane means—will the red menace be stamped out.

When Commissioner Campbell says that "our problem today is not to center, but to scatter population," it is hoped that he expresses the opinion of the rest of the commission. Take Iowa, for illustration—one of the great agricultural states of the Union, but without a single large city. But Iowa has the compensating advantage of a number of small cities and good, prosperous towns. That helps rural development and means a better social life for the farmers. It means, too, a short haul for the farmer's product to local cities and towns, with a minimum of freight rates and the delivery, in fact, of a considerable part of the production directly by the producer to the consumer.

That is a wholesome state of affairs that we should like to see more nearly approximated out here in the Pacific northwest. There is too much congestion of population now at cities like Seattle, Portland, Tacoma and Spokane, and it would be better for the public, as Commissioner Campbell said, if we had a distribution of people.

As for Commissioner Campbell's judgment on the Esch-Cummins law, all that we can say at this time is that his views are entitled to respectful consideration. We are convinced of his sincerity and his earnest desire to help the farmers, and that spirit, plus the obvious fact that he has better sources of information and better means of observation than many who are urging the indiscriminate repeal of the law, should cause us to be careful about hasty expressions of judgment.

Let the Tap Root Do the Work

Sheep sorrel is not much good as a subsoiler. Most of us know what sheep sorrel is—one of the most contemptible weeds that grows. Its roots spread out under the surface of the ground and every few inches send up new shoots to send out more roots to send up more shoots and so on ad infinitum. Sheep sorrel is useless as a forage crop. It is just no good, that's all.

But here's another "weed" that is different. We call it sweet clover. It is a curious plant. It wants to know what is down in the depths of the earth and sends a strong root right down to find out. That is the tap root. It is the original subsoiler. It acts more slowly, but is as effective as dynamite. It has another good point. It leaves vegetable matter down there in the subsoil to be converted into humus and plant food. It opens up the way for air to circulate and for moisture to go down. And not only that, but its stems and leaves are high-class feed for cattle, sheep, hogs and so on.

If we are going to grow a "weed," let's grow one that is some good.

LOOKING INTO OTHER FARM FIELDS

A large spinach crop is being planted in southwestern Texas this fall.

* * *

A successful experiment has been made in growing sweet potatoes near Hamilton, Ontario, Canada.

* * *

Fourteen hundred head of cattle, the first of probably as many as 70,000, are being driven from the drought-stricken ranges of the southwest to northern Mexico pasture lands. Forty thousand head of cattle will be shipped or driven to the Santa Barbara ranch, owned by William Randolph Hearst, which is west of the Coralitos ranch, where the first 1400 head are consigned. The two ranches have a total pasturage of about 1,500,000 acres, but both already are partially stocked.

* * *

The cider press has come into its own again in Washington county, says the New York World. On hundreds of old farms presses have been taken from attics and storerooms, or new ones have been bought or made, and cider from Grimes Golden, Delicious, Pippins or Jonathans is constantly on tap. Many farmers are making and marketing from 200 to 500 gallons a day. Large quantities are sold for the making of cider vinegar, but many gallons are being bottled by thrifty housewives for winter use. Cider is selling for an average price of 25 cents per gallon, except when bought in barrel lots.

State Farm News

The farm bureau met at Prosser December 6 in the commercial club rooms with County Secretary Lampson and the newly elected state secretary, W. H. Talley. The principal object of the meeting was to formulate plans for a membership drive after the last of the year.

* * *

Organization of the newly elected commissioners of the port of Olympia, created at the November election, was completed recently, with Fred W. Stocking of Olympia as chairman and Perry F. Knight of Bucoda as secretary. George F. Yantis of Olympia was chosen counsel for the commission.

* * *

The Arcadia Valley Packing company of Deer Park has finished the season's pack of apples. A total of 238 cars have been loaded and shipped, and apples in storage will fill approximately 100 cars more. The total shipment this year will run about 50 cars more than last season. A considerable number of cars have been sent to Europe.

* * *

Warning to dairymen that more care must be exercised by them in the handling of milk is issued by F. O. Steward, state dairy inspector stationed in Yakima. Mr. Steward has found that many of the farmers are not complying with the requirement to cool off the milk to 60 degrees immediately and that it is often coming into Yakima warm.

* * *

A contract has been let for construction of a men's dormitory and central heating plant at Whitman college. O. D. Keen of Walla Walla was given the general contract for $61,720; G. H. Sutherland & Co., Walla Walla, the heating contract for $5900 and the Nepage McKenney company, Portland, Ore., the wiring contract for $2763. The plumbing contract will be let later.

* * *

Karl B. Musser, who formerly was dairy extension specialist in this state, and who left here to take a position as field man for the American Guernsey Cattle club in the east, corresponding to that held by E. L. Westover on the Pacific coast, has been made associate secretary of the national organization. On November 15 also, on account of the illness of William H. Caldwell, secretary and treasurer, Musser was made acting treasurer.

* * *

At a recent meeting of Trout Lake grange, near Goldendale, the following officers were elected for the coming year: Master, C. E. Hall; overseer, Mrs. Amanda Pearson; lecturer, Professor Ralph Brown; steward, F. S. Inman, assistant steward, Carl Pearson; chaplain, the Rev. E. A. Reed; treasurer, William Coate; secretary, Orin Pearson; gatekeeper, Albert Elmer; graces, Misses Eliff, Brown and Cozmoskie; lady assistant steward, Maud Pearson.

* * *

Washington State college will be asked to pay $25,200 toward the construction of the proposed sewage disposal system, says a Pullman report. This sum, or two-fifths of the cost of $63,000, was fixed by the council by resolution as the proportionate share of the new system to be borne by the college. The resolution requests early action by the college officials in appropriating the sum to enable the council to proceed with the construction of the sewage disposal system in 1923.

* * *

The lower Yakima valley peach pool has mailed final remittances to the members of the pool, the remittances being 1 cent a box, making 41 cents a box to the growers. The pool operated on a margin of 2 cents a box, 1 cent a box for loading and 1 cent for general expense, according to F. E. Thompson, chairman of the pool committee. There were 297,000 boxes in the pool and the membership included growers having from 15 boxes up to 52,000. The pool committee had 135,000 boxes between them.

* * *

Tuberculin testing in Jefferson county has been done during the last year by the county veterinarian, who tested as long as the money lasted. He never was able to reach more than two-thirds of the cattle, however, nor has accredited herd work been urged there. Several have signed up for the latter and upon the recent abolishment of the county veterinarian's office by the county court County Agent H. B. Howell determined to make an active campaign this winter for a countywide "t. b." test.

* * *

Beet contracts for next year are being circulated now by the Utah-Idaho Sugar company as a result of the successful season just completed at Toppenish. Ordinarily the company has waited until spring to make contracts for beets with the growers, but it was decided this year that to sign up earlier would prove more advantageous to growers and the factory.

Paul Kirker, agriculturist for the factory, is of the opinion that the company will sign up a much larger acreage this year than in former years. Beets have yielded well this year, generally speaking.

The guaranteed price of $6 a ton has been paid the growers, with the prospect of additional payments later, depending on the advance in the base price of sugar.

* * *

The Grays Harbor Pig company recently purchased an 80-acre farm east of Montesano and leased 380 acres, on which they placed 115 brood sows and seven boars as a foundation for their stock. They now have 350 purebred pigs.

It is the plan of the company to erect buildings on the 80-acre tract they have bought and to use the land they have leased for pasture. Water will be piped from a small lake on the higher portion of the tract. The fences and the first of the buildings are now being put in. The first unit of the farrowing house, now under construction will be 200 feet long.

There are six breeds of swine represented in the foundation stock. These are Duroc-Jerseys, Berkshires, Hampshires, Poland Chinas, Tamworths and O. I. C.s. From this it is the hope of the company, according to J. H. Kelly, manager, to build up the swine industry in Grays Harbor county to the point where it will not only supply the county with pork, but also provide some for export.

Coming Events of Interest

Jan. 3—Northwest Poultry show, Seattle.
Jan. 8—Chelan Poultry show, Wenatchee.
Jan. 15—State farm bureau meeting, Walla Walla.
Jan. 22-23—Washington wool growers, Spokane.
Jan. 22-26—Inland Poultry show, Spokane.
Jan. 24-26—National wool growers, Spokane.

FARM BUSINESS AND MARKETS OUTLOOK

The "outlook in the foretop," so far as farmers were concerned, continues to improve.

The bill providing more satisfactory production and marketing credits for farmers has made progress and the prospects of some form of government credit to foreign countries through the war finance corporation to facilitate exports of farm products are said in some quarters to be fairly bright. The latter measure is virtually a forced attempt to restore prosperity to farmers for the sake of the benefit which such prosperity would bring to the rest of the country.

The debts of allied countries to each other and to the United States, and the question of reparation payments by Germany are bones of contention abroad, but the issue must be settled before long and it is logical to believe that the settlement will result in improvement in foreign financial and political conditions as soon as the uncertainty is removed.

Exchange rates on nearly all the principal countries advanced because of financial and political developments. In the case of sterling, which rose to $4.69, the highest mark since the government props were removed from under it in March, 1919, the extreme advance to within 4 per cent of par was not fully understood. Dutch exchange also is practically at par while Swiss and Swedish moneys are at a premium. Gains were made in Italian and French exchange and even in German marks.

Domestic conditions continued favorable to higher prices for farm products.

Employment and industrial activity are well maintained. The most astute students of banking state that further development of present banking trends, such as growth of loans, broadening of discount operations with federal reserve banks, expansion in deposits and bank note issues may easily lead to "inflation."

Commodities in which speculative activity has free play responded during the week to the foregoing influences. Wheat reached the highest point since the end of last May, oats highest since the spring of 1921, corn the highest since the fall of 1920 and cotton recovered a good deal of its loss since late November.

Cattle Feeders Making Money.

Shortfeds continue to be the dominant variety in the steer market with the bulk of sales at $8 to $9.50 at Chicago. In spite of high original cost and the advance in the corn market, most of the steers being cashed have made a little money. Prices declined 25 cents to $1 last week on most of those selling above $8.50 at Chicago and better grades of butcher stock declined 50 to 75 cents recently, but the market has turned upward again. Sales above $10.50 are rare, but prime steers can still be quoted at $13.

In the last four weeks seven leading markets have received 983,000 head compared with 702,000 last year. The eight-year average is 988,000 head so that the supply has not been above normal. During this period prices have gained slightly, showing the strength of consumptive demand.

The department of agriculture estimates that the number of cattle on feed on December 1 in the 11 cornbelt states was 27 per cent larger than on December 1, 1922. The six states west of the Mississippi river show an average increase of 30 per cent while the five states east of the river only increased 20 per cent.

Hog Market Absorbs Big Run.

Receipts of hogs at the 11 leading markets in the first half of December were the heaviest for that period with three exceptions since 1905. Spring pigs are reaching market finish rapidly and average weights are the heaviest at this season in 10 years at least, while the advance in corn is stimulating producers to cut loose.

Prices have lost their recent bloom as a result of the continued heavy run, which likewise depressed values of hog products. They show resistance at the $8 level at Chicago, however, and a tendency to turn about face which indicates that further declines will not be extensive.

According to the department of agriculture the number of lambs on feed on December 1 this year was approximately 20 per cent more than last year. The corn belt has about 10 pe rcent more, Nebraska showing an increase of 25 per cent and the largest numerical increase of any state in this section. In the states comprising the western irrigated section the estimated increase is 25 per cent. The increase in Idaho is 15 per cent. In the four months, August 1 to December 1, total shipments of feeder lambs from 67 public markets were 2,768,000 head compared with 2,201,000 head last year and a six-year average of 3,301,000 head.

According to this report a rather heavy January supply is to be expected and the market may ease off slightly, especially if holiday demand has been much of a supporting factor.

Holiday Air in Horse Market.

Horse markets are far from brisk as buyers are few, a situation which usually prevails during the holidays.

Wool Quiet but Firm.

The wool market is quiet as most of the staple has left first hands, but since manufacturers and dealers have smaller stocks than usual and domestic consumption continues at a high rate, prices are holding firm. British and Australian auctions show much the same situation as a week ago with fine merinos lower and crossbreds higher than in November.

The Boston market is quoted as follows:

Wisconsin, Missouri and average New England—One-half blood, 47@48c; 3-8 blood, 48@50c; 1-4 blood, 46@47c.

Scoured basis—Territory—Fine staple, choice, $1.38@1.42; 1-2 blood combing, $1.25@1.30; 3-8 blood combing, 93c@$1.03; 1-4 blood combing, 88@92c.

Oregon—Eastern No. 1 staple, $1.30@1.33; fine and fine medium combing, $1.20@1.25; eastern clothing, $1.15@1.20; valley No. 1, $1.15@1.20.

Final Crop Estimate.

The final estimate of the winter wheat crop as issued by the department of agriculture shows an increase of 44,000,000 bushels over the preliminary report with a total crop of both winter and spring of 856,211,000 bushels. The average wheat crop in the five years, 1916 to 1920, was 799,083,000 bushels.

The corn crop was placed at 2,890,712,000 bushels against a revised yield of 3,068,569,000 bushels in 1921.

The oats crop was estimated at 1,215,496,000 bushels, against a revised yield of 1,078,341,000 bushels last year and a five-year average of 1,413,000,000 bushels.

Barley was placed at 186,110,000 bushels, against 154,946,000 bushels last year and a five-year average of 197,447,000 bushels.

The flax crop was estimated at 12,238,000 bushels, an increase of 50 per cent over last year's crop of 8,029,000 bushels.

The combined values of all the important farm crops in each of the last few years based on farm prices on December 1 were as follows:

1922	$7,572,890,000	1919	$13,820,515,000
1921	5,729,912,000	1918	12,595,901,000
1920	9,125,620,000	1917	11,595,185,000

The area planted to winter wheat in the United States is estimated by the department of agriculture at 46,069,000 acres, or 3.2 per cent less than the revised acreage for 921. The rye acreage is estimated at 5,508,000 acres compared with 6,210,000 acres planted last year, a decrease of 11.3 per cent.

The condition of the new wheat crop on December 1 was 79.5, the third lowest on record, comparing with 76 last year and a 10-year average of 87.9 per cent. The indicated crop for the entire country is 700,000,000 bushels compared with 586,000,000 bushels harvested this year.

Wheat Disappearing Rapidly.

Wheat prices advanced into new high ground for the season last week, but the market acted a little topheavy at the close. Prospects of favorable legislation was the most evident cause, although the continued rapid disappearance of the cereal furnished a solid foundation.

Since August 1 world shipments of wheat have been 256,699,000 bushels compared with 247,433,000 bushels in the same period last year.

World exports have not shown the increase anticipated in view of the known reduction in the European crop as the home grown crop was consumed early and substitutes are being used.

Corn Movement Starting.

The van of the winter corn movement is starting and prices are not advancing so readily, but consumption in all sections is enormous so that a big setback is unlikely. Receipts of oats are holding up better than usual, but demand is excellent, stocks are disappearing and prices are buoyant.

Cash Grain Markets.

The range of cash grain prices for the week ending December 20 was as follows:

Chicago—Wheat—No. 2 red, $1.37; No. 3, $1.32 1-4@1.35; No. 2 hard, $1.27@1.29; No. 3, $1.27 3-4@1.28.

Corn—No. 2 mixed, 72 3-4@76 3-4c; No. 3, 73 1-2@76c; No. 4, 72 1-2@73 1-2c; No. 2 yellow, 75 3-4@77 1-4c. No. 3, 73 1-2@76 1-4c; No. 4, 72@75 1-2c; No. 2 white, 75 3-4@77 1-4c; No. 3, 73 1-2@76 1-2c.

Oats—No. 2 white, 46 1-4@48 1-4c; No. 3, 44 1-4@46 1-4c; No. 4, 42 1-4@45 1-2c.

Rye—92 1-2c.

Barley—62@72c.

Clover Seed Highest of Season.

Clover seed prices reached the highest point of the season last week. Demand from distributors has broadened and the movement from the country is light. Timothy seed has held at about the same level for several weeks.

Chicago, per 100 pounds—Clover, $16@20; timothy, $6@6.75.

Toledo, per bushel—Clover, $13.45; timothy, $3.50@3.55.

Strength in coarse grains has helped the market for byproduct feeds.

Prices per ton (100-pound bags) in carlots—Chicago—Bran, $27.50; standard middlings, $27.50; flour middlings, $29; cottonseed meal, 36 per cent, $46.50; 43 per cent, $51; hominy feed, $30; gluten feed, $39.35; old process oil meal, $62.75; tankage, $65.

Hay Market Easy.

The hay market is unchanged to slightly lower at the principal markets.

Prices per ton in carlots—Chicago—No. 1 timothy, $20@22; No. 2, $19@20; No. 3, $14@16; No. 1 light clover mixed, $19@20; No. 1 clover mixed, $18@19; No. 1 to choice alfalfa, $24@26; upland prairie, $18@19; midland prairie, $13@15; rye straw, $13@14; oat and wheat straw, $10@13.

Egg Prices Holding.

Statistically the egg market is growing stronger. Prices are holding fairly well, but receipts of fresh eggs invariably increase in January, especially from the south, so that a downward trend may show up at any time.

Poultry prices are 25 per cent lower than three months ago, but have not reached the extreme low prices expected early in the season. Storage holdings are piling up rapidly, but are 20 per cent smaller than last year at this time.

Butter Market Holding.

Butter prices are holding fairly steady. Two cargoes containing 3433 casks of Danish butter arrived at New York during the week, in addition to more or less Canadian butter. Its influence was to check upturns rather than cause a decline. The Danish market at present is too high to favor imports.

Prices on 92-score fresh butter on December 20 were: Chicago, 53c; New York, 55c; Boston, 54 1-2c; Philadelphia, 56c.

Cheese Market Remains Firm.

Although purchases of cheese are being held down to quantities sufficient for immediate needs as is customary at this season of the year, the market remains firm.

Prices on No. 1 American cheese on December 20 were: Chicago—Flats, 27@27 1-2c; Twins, 26 1-2@27c; S. Daisies, 27@27 1-2c; D. Daisies, 27@27 1-2c; Young Americas, 27@27 1-2c; Longhorns, 27@28c; Square Prints, 27 1-2@28c.

Fruits and Vegetables.

The potato crop was increased in the government's final report to 451,185,000 bushels, making it the largest crop on record compared with 361,659,000 bushels last year and an average of 373,417,000 bushels in the five years, 1916 to 1920.

The expected advance in the potato market began to show up last week. Sacked rurals are quoted at $1.15 per 100 pounds sacked at Chicago. Russets are $1.15 to $1.25 at Chicago and $1.25 at Kansas City.

The apple crop estimate was changed but little in the final returns. The commercial crop was placed at 31,090,000 barrels against 21,557,000 barrels last year and an average of 26,779,000 barrels in the five-year period. Total shipments of apples for the season to December 18 were 76,093 cars compared with 71,870 cars a year ago. Extra fancy large to very large Jonathans are quoted at $2.25 to $2.50 per box at Chicago; Delicious of the same grade at $3 to $3.25; Rome Beauties, $2.50 to $2.75.

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Range of Live Stock Prices, Week Ending Dec. 20

	Chicago.	Spokane.	Portland.	N. S. Lake.
CATTLE.				
Choice, prime heavy steers (1100 lb. up)	11.40@13.50			
Good heavy steers	9.50@11.85			
Medium heavy steers	7.50@9.85			
Common heavy steers	5.75@7.65			
Choice, prime light steers (1100 lb. d'n)	1.25@13.50			
Good light steers	9.40@11.75			
Medium light steers	7.50@9.50	6.00@7.25	6.25@8.25	6.25@7.00
Common light steers	5.50@7.60	4.00@6.00	4.25@6.25	4.50@6.25
Common to choice butcher heifers	4.25@11.00	3.00@5.75	3.25@5.50	3.25@5.00
Common to choice butcher cows	3.35@8.25	2.50@4.75	2.50@4.75	2.75@4.50
Bologna and beef bulls	3.40@6.50	2.75@4.00	3.00@4.25	2.00@3.50
Canners and cutters, cows and heifers	2.40@3.60	1.00@2.50	1.50@2.50	1.50@3.00
Canner steers	3.00@4.60	2.00@3.00	2.00@3.00	2.00@3.00
Medium to choice light veals	8.50@10.00	6.50@7.50	7.50@8.50	7.00@7.25
Common to choice heavy veals	3.00@7.50	4.50@6.00	4.00@7.00	
Com. to choice feeders (1000 lb. up)	5.35@8.00			
Com. to choice feeders (750-1000 lb.)	5.35@8.00	4.00@5.50	4.00@5.50	4.50@5.75
Common to choice stocker steers	4.25@8.90			
Com. to choice stocker cows and heifers	3.00@5.50			
HOGS.				
Top of market	8.35	9.75	9.50	8.00
Bulk of sales	7.85@8.25	9.00@9.65	8.50@9.00	7.25@8.00
Heavy (250 lb. up)	7.95@8.25	9.25@9.75	8.50@9.25	
Medium (200-250 lb.)	8.00@8.35	9.25@9.75	8.50@9.25	7.25@8.00
Light (150-200 lb.)	8.00@8.35	9.25@9.75	9.00@9.50	7.50@8.00
Light lights (130-150 lb.)	8.00@8.35	8.50@9.50	8.75@9.25	7.50@8.00
Smooth packing sows (250 lb. up)	7.45@7.85	7.00@7.50	7.50@8.00	6.50@7.00
Rough packing sows (200 lb. up)	7.25@7.65	6.25@7.00	7.00@7.50	6.00@6.75
Medium to choice pigs (130 lb. down)	7.90@8.35	8.25@9.00	8.50@9.00	
Stock pigs		7.50@8.25	8.50@9.00	7.50@8.25
SHEEP AND LAMBS.				
Medium to prime lambs (84 lb. down)	12.75@15.00	10.00@11.00	9.50@12.00	10.00@12.50
Culls and common lambs	9.00@13.00	8.00@10.00	6.75@9.50	6.00@10.00
Medium to prime yearling wethers	9.00@13.25	7.00@8.00	9.00@10.00	6.50@7.50
Medium to prime wethers	6.25@9.75	6.00@7.50	7.00@8.50	5.00@6.50
Medium to choice ewes	4.75@7.75	3.75@5.75	4.00@6.00	4.00@5.50
Culls and common ewes	2.50@5.00	2.00@4.00	2.00@4.00	
Feeder lambs	12.75@15.00	9.00@11.00		10.00@10.50

LATEST QUOTATIONS.

The Live Stock Market.

PORTLAND, Ore., Dec. 23.—Cattle—Choice steers, $7.25@8; medium to good steers, $6.25@7.25; fair to medium steers, $5.50@6.25; common to fat steers, $4@5.50; choice heifers, $5@5.25; choice cows and heifers, $4.50@5; medium to good cows and heifers, $4@4.50; fair to medium cows and heifers, $3.50@4; common cows, $2.50@3.50; canners, $1.50@2.50; bulls, $3@4.25; choice feeders, $5@5.50; fair to good feeders, $4@5; choice dairy calves, $8@8.50; prime light calves, $8@8.50; medium light calves, $7.50@8; heavy calves, $4@7.50.

Hogs—Prime light, $9.25@9.50; smooth heavy, 250-300 pounds, $8@9; smooth heavy, 300 pounds up, $7.50@8; rough heavy, $6@7.50; fat pigs, $8.50@9; feeder pigs, $8@8.50; stags, subject to dockage, $4.50@6.

Sheep—East-of-mountain lambs, $10.50@12.50; common valley lambs, $8.50@9.50; cull lambs, 6.75@8.50; light yearlings, $9.50@10; heavy yearlings, $9@9.50; light wethers, $7.50@8.30; heavy wethers, $7@7.50; ewes, $2@7.

SPOKANE, Dec. 23.—Cattle—Prime steers, $7@7.50; good to choice steers, $6.50@7; medium to good steers, $6.75@6.50; fair to medium steers, $5@5.75; common to fair steers, $3.50@5; choice cows and heifers, $5@5.50; good to choice cows and heifers, $4.25@5; medium to good cows and heifers, $3.50@4.25; fair to medium cows and heifers, $2.75@3.50; canners, $1@2.50; bulls, $3@4; light veal calves, $7@8.50; heavy veal calves, $4.50@6; stockers and feeders, $4@4.50.

Hogs—Prime mixed, $9@9.25; medium, $8.50@9; heavies, $6@8.65; fat pigs, $8@8.50;

(Continued on page twelve.)

LIVESTOCK AND DAIRY

Dairymen Improve Equipment

Silos and Barns Go Up Under Guidance of College Men

By LINCOLN LOUNSBURY, Agricultural Extension Editor, State College of Washington.

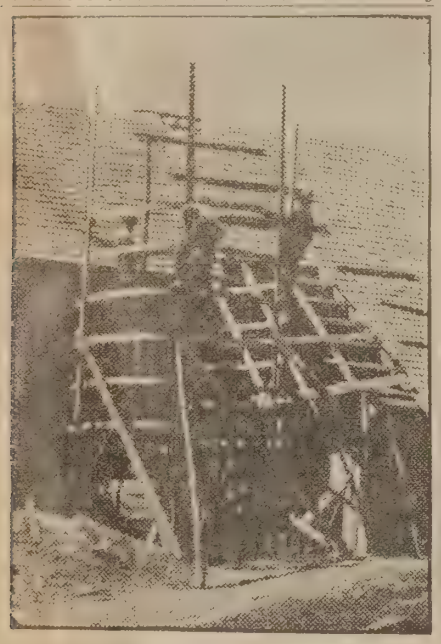
The spirit of the good old barn raising day has returned under the guise of a silo building demonstration. Fred Henspeter, whose farm is situated in the Birch Bay community, near Blaine, wanted to build a silo. He did not question but what a silo was the proper equipment to have on his dairy farm, for scattered on all sides of him were prosperous farms with silos pointing their cylindrical shaped bodies toward better dairy methods.

Just what type of a silo to build and how much it would cost were the problems facing Mr. Henspeter. After a consultation with County Agent Harry B. Carroll the wooden hoop kind was chosen because of its low cost and durability. In building a wooden hoop silo no specially manufactured lumber is necessary, but stock lumber may be obtained from the local mill.

A day was set for the silo building demonstration, as in the former years the barn raising day was announced. Friends and neighbors gathered from near by and work began. It is customary for the hoops to be made before time, and in this matter R. M. Turner of the extension service showed the farmer how to construct one of the hoops and the frame work, after which he finished the balance.

It Took Two Days.

At the end of the second day's work a 10x27-foot wooden hoop silo had become a part of Mr. Henspeter's dairy equipment at a cost to him of $203.35. A summary



Erecting a wooden hoop silo.

of the material used and the cost follows: The silo required 1580 feet of 1-2x3 3-4-inch second grade flooring, costing $63. Three gallons of paint were required to cover the building, at a cost of $4.35. Wooden hoops were made of 3-8x4-inch batting, laid four-ply, which took 1700 lineal feet, costing $8. Eight dollars was spent for nails and anchor irons, while the foundation, made of concrete in the form of a seven-foot pit, cost $25. The roof and chute were made of shiplap, with roofing paper covering the top. Cost of labor on the entire job came to $80.

Forty-four Are Built.

This was only one demonstration conducted by a county agent, but 44 such silos, ranging from 10x26 to 10x34 feet in size, were constructed under the direction of the dairy specialist of the extension service during the last year. These silos were built in the 15 counties of Benton, Douglas, Grays Harbor, Kitsap, King, Lewis, Mason, Pend Oreille, Pierce, Snohomish, Stevens, Thurston, Wahkiakum, Walla Walla and Whatcom.

Another feature of the extension work over the state was the furnishing of plans and specifications for the building of seven modern dairy barns, which were built in the four counties of Cowlitz, King, Skagit and Thurston.

One of these modern barns was completed by W. J. Adiar of Tolt at a cost of $2100. This barn houses 24 head of cows and eight calves. Three box stalls were provided and the barn loft has space enough to store 84 tons of hay. The barn is one of the few up-to-date ones in that section of King county.

"Too much stress can not be placed on having good equipment for the dairy cow," says Don G. Magruder, extension dairy specialist. "One of the most important points in a suhressful dairy business is the care of the animals. The building of the 44 silos will without doubt mean a profit of $200 to the dairyman who added one to his equipment this year. This saving will be made in yeárs to come by the fine type of food which good silage makes for the dairy cow.

"Many farmers fail in the dairy business, and especially where purebred stock is used, because they have insuffi-



A modern dairy barn built under the direction of a county agent.

cient equipment to give them the proper care. The high-producing purebred cow requires better equipment than the scrub or grade."

Many Cows Are Tested.

Another phase of the dairy ertension work was the cooperation by the county agents with the state department of agriculture in securing dairymen to test 40,064 head of dairy cows for tuberculosis. This work was conducted in 21 counties. In the elimination of disease, assistance was also given 30 dairymen in the control of abortion.

Work with the junior farmer is one of the important phases of the extension program. There were 320 boy and girl dairy club members located in the counties of Benton, Clallam, Clarke, Cowlitz, Grays Harbor, King, Kitsap, Kittitas, Klickitat, Lewis, Pacific, Pend Oreille, Pierce, San Juan, Snohomish, Spokane, Thurston, Wahkaikum, Walla Walla, Whatcom and Yakima during the year.

These coming farmers were assisted in purchasing calves or cows and learning how to care for them properly. The 179 boys and girls reporting in this work made a profit of $6,714.52 from an invsetment of $33,321.55 for the year, or an average of $37.51 per member.

LIFE PRESERVERS FOR LIVE STOCK

By DR. E. E. WEGNER, W. S. C.

SWINE DISEASES, ARTICLE V.

Internal Parasites (Continued From a Previous Issue).

The symptoms that the pigs show as a result of the worm's migration through the lungs are those of a more or less serious lung disturbance evidenced by coughing and sometimes panting and "thumping." These symptoms are most severe in animals that are less than 4 months old, as after that age the parasites do not affect them much.

There seems to be no question now but that a great many of the weak, runty pigs that refuse to thrive are the victims of the roundworms and that many of the cases of lung trouble that has been diognosed as pneumonia in the pigs of the past were the effects of the migration of the small worms when present in great numbers.

The use of drugs to kill the worms that are in the intestines causes them to expel the worms in great numbers and to contaminate the yards and hog lots to a greater extent than at present, and this makes it more dangerous for the young pigs that may be kept in these old lots. It is of doubtful value, therefore, to give the medicines unless other measures are adopted to reduce the danger to the young pigs from the old contaminated lots and houses. But if the sows that are about ready to farrow were given worm remedies and cleaned out as thoroughly as possible and then washed with soap and water until all the dirt was off the skin and then were taken to clean farrowing places, a litter of uncontaminated pigs could be grown. The pigs, however, must be taken from the farrowing place to a clean open field and kept there for at least four months, when it is quite safe to return them to the group houses. It is wise to move the pigs onto new ground and to plow up the old pens and put the ground in crop to keep the pigs away from the worm eggs, as by such a course it is possible to greatly reduce the amount of infection in the herd.

Prevent Rather Than Cure.

The above practice of keeping the pigs away from the old hog lots is advisable from the viewpoint of other diseases and it has been proven that there is less loss from other diseases when this practice has been followed, since it is known that the old hog lots are alive with contaminating bacteria that have for generations been infecting the old hog quarters. The important feature in this whole discussion is the same one that is gaining prominence in many other fields of medicine, that is, prevention is worth so much more than the cure and its application is simpler and more effective.

Certain worm remedies are quite efficient, but they will never solve the worm problem. Only sanitation can do that. Some remedies that have proven quite efficient are: Santonin, eight grains, and calomel, five grains, for each 100 pounds live weight of the animal, given after the pig has been fasted for 24 hours.. Or two ounces castor oil, followed by one dram of oil of chenopodium for each 100 pounds weight of animal, with the doses varied according to the weight of the animal.

While I have indicated above that after the age of 4 months there is little danger form the worms, it may not be quite right to make such an unqualified statement, but after that age the danger is very much reduced and the animals are not likely to suffer severely, though it is well to protect them by having the hog pens on as clean ground as possible, and, since the worm eggs are very hard to kill, it is desirable to be very careful with the farrowing houses to see that they are disinfected well. A solution of boiling lie water is the safest disinfectant to use, as the lie takes the dirt off very readily and the boiling water will kill the eggs. Antiseptics are not very serviceable in combatting worms, as the worm eggs are too hard to kill and will live for months in a 2 per cent solution of formaldehyde. They withstand equally well other antiseptics.

The whole problem has had to be reversed and instead of keeping the worms away from the hogs we have had to try to keep the hogs away from the worms and in this later movement we have been somewhat successful, we believe.

COWS NEED MUCH WATER.

Since milk is at least 85 per cent water, the cow must have plenty of water to drink. It should be clean and fresh, not only because that kind is more healthful, but because it induces her to drink more of it.

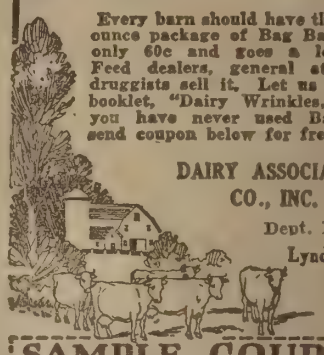


Don't Dally With Injured Udders

BESIDES the danger of serious permanent results, hurts or sores on the udder and teats seriously check the milk yield. The full milking comes from the cows with soft, silky udders, and smooth healthy teats.

Bag Balm, the great penetrating ointment, assures udder health. Quickly heals cuts, scratches, chaps, bruises and Caked Bag. Very valuable in treating Bunches and Cow Pox.

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Glance over the bargains on the "Want Ad" page.

POULTRY AND RABBITS

Poultry Problems

By R. E. WALDO,

I would like to know if potatoes are a good feed for chickens, and if they are good, which is the best way to feed them, cooked or raw? If fed raw do they act as a green food? What vegetables are best for green feeds? I can not buy mash here. Will you give me a good formula that I can mix myself? MRS. J. E. W.

Chickens will eat potatoes readily if they are boiled and mixed into a mash with bran. However, they should be fed sparingly, for too many will cloy the system and spoil the appetite. Raw potatoes may be fed to chickens as a succulent feed, but it is hard to induce the birds to eat them.

The best available vegetable for green feed is cabbage. Other green feeds are kale, lettuce, clover, alfalfa (green and dry), lawn slippings, tender weeds and green barley cut short.

An egg mash is as follows: Mix equal parts of bran, shorts, corn meal, ground oats and meatmeal.

WATTLES TURN PALE.

My chickens and turkeys begin to get light in weight and their combs and wattles turn pale. On opening several I have found their livers large and soft and with hard white lumps on them and the intestine. Will it be safe to raise fowls on the same ground next year after killing these off? Will it be safe to raise turkeys next year from young ones raised this year on this ground? Is a house fit to put more fowls in after it is thoroughly cleaned and disinfected a week?

MRS. G. L.

The disease your chickens are affected with may be tuberculosis. However, the details are hardly sufficient to enable me to form an opinion.

If you raise fowls on the same ground next year it will be well to heavily lime the yards, plow and sow them to some crop. If your turkeys, which were raised on this ground this year, do not show similar symptoms next year I see no reason why they should not be used as breeders. The main point is to have vigorous, healthy breeding stock. If the house was thoroughly cleaned and disinfected with a good commercial stock dip it should be safe for occupancy as soon as dried out.

HOW TO TELL GANDER.

Please tell me how to tell the male goose from the female. G. A. B.

The gander (male) may be distinguished from the goose (female) in the following manner: The male is a little larger than the female and his cry is shrill while that of the female is harsh; the neck is a little longer and a little thinner in the male; the cheeks (between the eye and jaw) are less prominent but the posterior part of the upper mandible, which is generally of orange color, up to the skull, is more prominent than in the female.

NASAL ROUP.

Some of my turkeys have swollen places under their eyes, between the eye and nostrils. The nostrils get stuffed with a white looking stuff. After they have had this a while they seem to get blind in the eye that is afflicted. They eat well and do not sem to be sick any other way. I feed wheat and corn and have been feeding heavy to fatten them. Will they be fit for breeding purposes? What is the trouble and a remedy?

MRS. F. E. M.

Your turkeys no doubt have what is known as nasal roup or contagious catarrh.

If possible, isolate all sick birds from the healthy flock. Disinfect the yards and houses with a strong solution of some commercial stock dip. A 5 per cent solution of carbolic acid is good also. Burn or bury deep all birds that die. Place one 7.3 grain mercury bichloride tablet in a gallon of water in a nonmetal container. Do not use this treatment more than 10 days at a time. Kill all sick birds that continue to get worse.

If your turkeys get well and are in good condition as to flesh and vigor by the breeding season, I see no reason why they could not be used as breeders.

May Be Tuberculosis

By W. D. BUCHANAN.
Specialist, Washington State College.

Would you please tell me what is wrong with my chickens? I have lost a number of hens. Upon examination I find their livers enlarged, with white spots all over them and also their intestines. They get lame in one leg and have a yellowish dropping.

MRS. W. D.

If you have accurately described the condition of your hens I would say that they are dying with tuberculosis. If so, there is nothing can be done for them except to kill and burn them. If, in addition to the symptoms which you describe, the hens are light and thin on the breastbone, there is no doubt that this is the trouble. If your flock is small I would advise you to kill and burn all sickly birds and market all apparently well birds. Clean and thoroughly disinfect all poultry houses, scrape all filth from the ground immediately around the houses, give the soil a good coat of air-slaked lime or quick lime if you can get it finely ground. Then stay out of the chicken business for a year, or start new flock in new houses on new ground.

May Be Tumor

By W. T. JOHNSON, Veterinarian Western Washington Experiment Station.

Upon killing one of my 5-month-old roosters I found the intestines surrounded with brown water and a large, round growth that seemed to be hard in places and full of the brown water. This seemed to grow to the back. The liver and other intestines looked healthy and all right. The flesh was tightly drawn over the bones. Can you tell me what it was? The chickens have free range with plenty of green feed. They also are fed cracked wheat and corn, also sour milk.

MRS. N. M. O.

The condition which you found in this rooster is very likely a tumor with cyst formation associated with it. This is a condition which we find only occasionally, since it is not due to infection. I would suggest that you pay no particular attention to this trouble, as I think you will find it will not cause you any further losses.

POULTRY FARMS UP TO DATE.

Three Camas county farmers now are carrying on demonstration work in poultry management, feeding, housing and general care, in cooperation with the university extension service.

GET READY FOR HATCHING TIME.

W. D. Buchanan, specialist in poultry, says: Increase the ventilation in the incubator room and see that incubators of the hot water type are not allowed to freeze. The details will help the spring hatch.

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Strong, vigorous and full of "pep" are hatched in our PETALUMA ELECTRIC and HOT WATER INCUBATORS. They are easier to raise because healthier and hardier. Petaluma incubators make bigger hatches of larger and better chicks than any other incubators in the world. Petaluma electric and hot water brooders are world beaters for raising chicks. They grow faster, stronger and more vigorous than by any other plan. Our brooders give them "pep." Write for FREE Booklet A5. Petaluma Electric Incubator Co. Petaluma, Cal.



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It's a shame to waste your time and eggs hatching weak, wobbly chicks in cheap incubators, when everyone knows that

Queen Incubators

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A good incubator is the start to profitable poultry production—it's the cheapest thing you can buy.

One dealer who has sold Queen machines for 9 years says: "I can get hundreds of testimonials of stronger chicks and almost perfect hatches with the Queen."

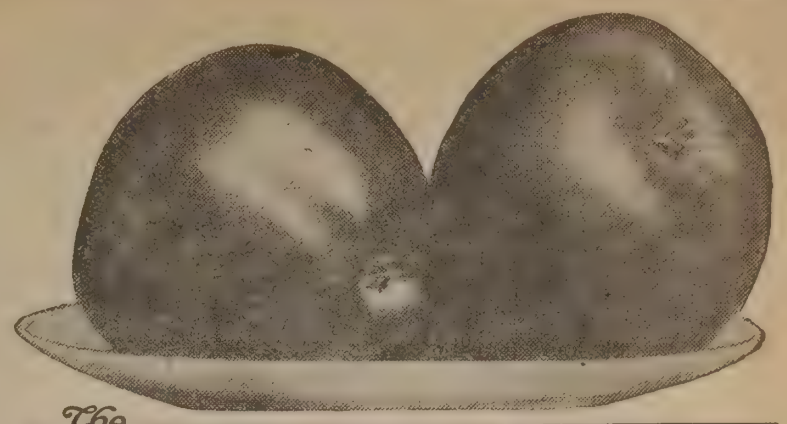
You, too, will hatch better chicks with a Queen Incubator and raise more of them with the Queen Brooder. Ask about the remarkable Queen Brooder Stove. If your dealer doesn't sell Queens, write us. Catalog free. (54)

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Why pay cash for something when you can trade for it? See the "Want" ads this issue.



The Rainier Apple

The Apple to Plant for Profit

Awarded Wilder Silver Medal 1922 American Pomological Society

In our sincere judgment this is the finest dessert apple thus far developed. It has all the mild qualities of the Delicious, which commends it to the taste of those who cannot eat the more acid apples, and, in addition, it has a decidedly spicy flavor, will keep firm in ordinary storage for weeks without becoming mealy, and in cold storage the RAINIER keeps perfectly for a year.

UNCLE SAM'S VERDICT—"The keeping qualities of the RAINIER APPLE are unsurpassed by those of any other variety of the Pacific Northwest that has yet come to the attention of the U. S. Deparment of Agriculture. Its ability to retain its firmness, brightness and quality with almost no decay or skin blemish, places it above even the Arkansas Black, Winesap and Yellow Newtown. In 32 degrees Fahr. cold storage it keeps in prime condition into May or later, and instances are known where large numbers of boxes have been held in excellent condition into September of the following year."—Bulletin No. 587, United States Department of Agriculture, Page 28.

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—Send us your name and address and we will mail you one FREE.

We offer first class RAINIER trees for spring planting. Also other standard apples, peaches, pears, plums, prunes, apricots, etc., small fruits, shade trees, shrubbery and roses.

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NEW POULTRY BOOK
By GEO. H. LEE

Mr. Lee is author of a score of books on poultry, having a distribution of more than TWENTY MILLION copies. He considers as best of all, his latest book "POULTRY TROUBLES"

There are climatic troubles; seasonal troubles; neighborhood troubles; epidemic, accident, vermin, housing and feeding troubles—their PREVENTION and TREATMENT all told in the plain, easily understood, common-sense way for which Mr. Lee's writings are famous.

It's worth reading. A copy may be had FREE from any dealer handling Lee's Lice Killer and Germozone, or from FREE

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ACT QUICK! SAVE THEIR LIVES BY USING
SMOKE-EM
"Smoke Em"
THE GUARANTEED ROUP CURE.
A scientific DRUGLESS CURE for roup, colds, canker, diptheria and chicken-pox.

A discovery of the world's best known home of registered Holsteins, Berkshires and Leghorn chickens. After losing thousands of dollars worth of our trap-nested birds from roup, we were determined to discover a cure. Since discovering and using "SMOKE EM," for three years we have not lost a chicken from roup. SOLD UNDER A MONEY-BACK GUARANTEE. Thousands of testimonials. You owe it to yourself and to your poultry to write or wire us today for our large catalog fully describing this wonderful roup cure. The price is low. Dealers, we have a good proposition to offer you. THE H. M. SPARR BREEDING ESTATE, Dept. 57 F, Thurmont, Maryland.

Hatches 99% Easy
With Porter SOFT-HEAT

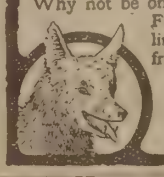


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Porter Incubator Co., Box 422 Blair, Neb.

American Poultry Journal
Oldest, Largest and Best
4 MONTHS' TRIAL 25 cts.
1 Yr. 75c 2 YEARS $1 5 Yrs. $2
Averages over 100 pages per issue—tells how to feed, house and breed; how to secure high egg production; how to hatch and rear poultry successfully. Established 1874. Only 25c for 4 mos. Stamps accepted.
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The department editors of this paper are anxious to be of service to you. Do not fail to write to us if they can be of help to you.

ORCHARD AND GARDEN

Mushroom Fungus

Attacks Evergreen Blackberries

The mushroom rot fungus is causing trouble with the Evergreen blackberries in western Washington, according to Arthur Frank, plant pathologist of the western Washington experiment station at Puyallup. This fungus ordinarily works in old stumps, old wood such as berry posts, telephone poles and other wood that must remain in the ground from year to year.

When an old log or stump, or where branches of old wood are in the ground and the roots of a living plant come near it, the fungus is prone to attack the living plant and become a parasite upon it. The presence of the fungus can be told both by the effects of the parts of the plant above ground and by finding the fungus itself on the parts of the plant below ground. The pest attacks, besides the Evergreen, almost any kind of fruit bush or tree, being common on the raspberry, loganberry, cherry, apple, pear, etc., and is sometimes found on potatoes when they are planted on newly-cleared land.

When the disease attacks a plant early in the fall there is a distinct coloration of the foliage which is left and any new canes may be poor and straggly, the whole plant showing an unthrifty condition. By digging up the plant and carefully searching, the fungus itself may be found. This appears as purplish red or black strands which look much like roots, but are not. These entwine about the roots or the crown and fasten to them. This rhizomorph, as it is called, is simply a mass of the threads of the fungus with the black covering upon it. The strands where the rhizomorph fastens to the bark grow out and enter through the bark and can be seen white just under the bark. These strands cause the wood to decay and the part attached to die.

Plants that are found to be affected should be dug out and burned. The earth from beneath and around the plant for a distance of about two feet must be taken out and destroyed. If any of this dirt is scattered it will spread the fungus. Pick out from the dirt about the hole any of the strands that can be seen. Replace with clean dirt from some other part of the field in which the trouble is not growing and replant.

There is no treatment known of the earth or the plants that will prevent the growth of this fungus.

YORK GETS BACK INTO THE GAME.

George W. York, for many years in the bee and honey publishing business, but for several years lately a dairyman, beekeeper and dealer, has yielded to the never-ending urge of the publishing profession and gone back into the game. Mr. York is well known among bee keepers of the northwest and of the United States as a whole. For years he was editor of the American Bee Journal. During recent years he has written for other publications, notably THE FARMER, on bee and honey subjects. Now, however, he has taken over Bees and Honey, which is nearing the end of its fourth year, and will publish it monthly in Spokane, Wash., under the name of York's Bees and Honey. This publication begins its fourth volume January 1.

GENERAL ADVERTISING.

New Lamp Burns 94% Air

Beats Electric or Gas

A new oil lamp that gives an amazingly brilliant, soft, white light, even better than gas or electricity, has been tested by the U. S. Government and 35 leading universities and found to be superior to 10 ordinary oil lamps. It burns without odor, smoke or noise—no pumping up, is simple, clean, safe. Burns 94% air and 6% common kerosene (coal-oil).

The inventor, W. W. Johnson, 31 N. Fifth St., Portland, Ore., is offering to send a lamp on 10 days' FREE trial, or even to give one FREE to the first user in each locality who will help him introduce it. Write him today for full particulars. Also ask him to explain how you can get the agency, and without experience or money make $250 to $500 per month.—Adv.

SILOS TANKS—LUMBER

Write for our new book "Making Silage" and learn the truth about silos and silage.

NATIONAL TANK & PIPE COMPANY 154 Col. Blvd., Portland, Ore.



First Crop Berries

A crop of Texas blackberries on the Cogswell & Sellers fruit farm at Monroe produced 10 1-2 tons of berries last year. The patch consisted of only 2 1-2 acres and the vines were producing their first crop. This blackberry comes at a time when there is no other fruit in season, when the raspberry crop has been harvested and just before the regular crop comes on. The fruit is larger and sweeter than any of the other varieties of blackberries, and it has taken well on the general markets and at the canneries.

There are 10 acres of all kinds of small fruits on this farm as well as a commercial flock of White Leghorns. The hen house litter is used on practically all the berry crops and some very good crops have been recorded. Last year a production of 3 1-2 tons of rhubarb was harvested from a small patch 35 yards square. One stock is said to have measured four feet in length. The patch is in its second year of bearing.

"We keep an account book and put down everything bought or sold from the farm," said Mr. Cogswell, "in fact we can tell exactly what we sold for any season during the last five years. We feel that this pays, since we can almost tell exactly where we are and estimate about what it will cost us to operate during the next season.

"Although we have some henhouse litter, there are some fields upon which we depend on cover crops to furnish the humus and fertility. Such a practice does not hinder cultivation of the following crop if the cover crop is turned under early enough and disced in well.

"We make it a plan to study all the bulletins that we can get hold of, both on fruit growing and poultry production. We get the bimonthly bulletin from the experiment station and keep it on file for future references. We also make use of other bulletins from different sources and find it a valuable source of information."

Cherries and Gooseberries

Cherries promise to be one of the most promising fruit crops on the J. W. Peterson farm near Edgewood. He has put out 30 young Montmorency trees, which are now two years old, and are making an excellent growth. There were a few cherries on the trees last year, and it is probable that a light crop will be harvested next season. In addition, Mr. Peterson has 200 Oregon Champion gooseberries, which will also be raised as a cannery crop. The crop needs very little attention aside from cultivation, as compared to other heavy crops, and there is always a demand for gooseberries as a fresh crop as well as for canning.

Although Mr. Peterson's farm is on the upland, he has been very successful in withholding the moisture during the summer months by thorough cultivation. The entire field is treated with barnyard manure in the spring before the land is plowed.

Keep the Bees Warm

"If bees are kept warm they will not need so much feed during the winter," is the assertion made by W. L. Cox of Elma, who has tried out several methods of packing the hives. "One of the best and cheapest methods of packing is to use tar-paper tacked to the outside and making a cover of the same material to fit over the top as a waterproof protection. There are some that advocate packing the top super with moss to keep out the cold, but I have not found this absolutely necessary. If moss is used it should be dry. Clover chaff could be used in its place."

Snohomish Beekeepers

A number of beekeepers of Snohomish county met recently at Everett and organized the Snohomish County Bee association, with the assistance of A. B. Slocum, bee specialist of the state college. There were but 12 members to start with, but the association expects to have 50 before this time next year. A live program has been arranged for next year and there are hopes for some boys and girls' clubs. Officers of the new organization are: Phillip Hingston, president; A. J. Cogswell, vice president, and C. H. Junge, secretary-treasurer.

HAS NEVER BEEN BEATEN.

Some 16-year-old Clarigeau pear trees in the C. E. Fitzgerald orchard at Ferndale produced 23 boxes of pears to the tree. Pears from this tree have taken first prize for best box of pears for five years, fact, have never been beaten, according to exhibits being open to the world, and, in Mr. Fitzgerald.

LET WINTER KILL THE PESTS.

Winter will destroy many of the garden pests if you will but plow or spade up the soil this winter. Many pests spend the winter in the soil in one form or another. Expose them to old King Boreas.

A TREMENDOUS CROP.

The potato crop of the world is about 5,000,000,000 bushels, of which the United States produces less than one-tenth.

Farmers' Want Ads

HELP WANTED—Male 3

500 MORE PERSONS IN NORTHWESTERN states are lawfully entitled to positions with Uncle Sam. A remarkable opportunity. Investigate. Write Civil Service dept., 1212 Old Nat'l Bank bldg., Spokane, Wash.

MEN WANTED—TRUCK DRIVING, AUTO repairing, battery ignition, vulcanizing, and welding. Write for big free catalog and special plan. Hemphill Auto & Engineering school, 304 E. Pike and Melrose, Seattle, Wash.

HELP WANTED GENERAL 5

A GOVERNMENT JOB IS FOR LIFE; $95 TO $195 monthly. Spare time study will fit you for railway mail or postoffice clerk, stenographer, and other positions. Some examinations next month. Western Correspondence School, 501 Empire State bldg., Spokane, Wash.

SITUATIONS WANTED—MALE 21

EXPERIENCED FARMER, SINGLE, WANTS permanent job on ranch as working foreman, now or spring; understands irrigation; all kinds of farming and live stock raising; good references. Address 235, Idaho Farmer, Boise.

ACCOUNTANTS, AUDITORS 36

WE PREPARE INCOME TAX STATEMENTS and do all kinds of bookkeeping and accounting work. J. I. Kinman & Co., Certified Public Accountants, 1209-14 Old Nat. Bank bldg., Spokane.

C. B. McMATH COMPANY, INCOME TAX service. Old National Bank building, Spokane.

C. W. WATERS, INCOME TAX EXPERT, 501 Empire State building, Spokane.

EDUCATIONAL 45

BEHNKE-WALKER BUSINESS COLLEGE of Portland; one of the largest institutions of its kind in America; guarantees a position to every graduate. Enroll now for fall term. A few months training under expert instructors and you are ready to enter business and win. Behnke-Warner graduates are always in demand. Write today for our free success catalogue. Address Behnke-Walker Business College, Fourth, near Morrison, Portland, Ore.

FRESH FOOD PRODUCTS 51-1

SEND 'EM FAMOUS KITTITAS VALLEY ALfalfa honey for Christmas. Everything prepaid to 4th zone. 60-lb. can, $7.50; 2, $14.75; 6 5-lb. pails, $4.50; 3 10s, $4.25; 1, $1.70. You send the money, we'll send the honey. Kittitas Valley Apiaries, Ellensburg, Wash.

HONEY—FINE QUALITY ALFALFA, SWEET clover product; 3 10-lb. pails, prepaid, second zone, $4.25; 60-lb. can, prepaid, second zone, $7.30; two, $12.75, not prepaid. Harry Fisher, Prosser, Wash.

"HONEY BRAND" HONEY—PURE, LIGHT, good flavored alfalfa-sweet clover honey. One 60-lb. can, $6.75; two 60s, $13.25. Price in pails on request. Oliver Sires, Wapato, Wash.

POPULAR BRAND HAPPY HOME HONEY—One 60-lb. can, $6.50; two cans, $12.75; six 10-lb. pails, $7.50; comb honey prices on request. H. N. Paul, Mabton, Wash.

EXTRACTED HONEY — ONE 60-LB. CAN, $6.50; two 60-lb. cans, $12.75, collect; three No. 10 pails, prepaid, third zone, $5. Wells D. Rose, Sunnyside, Wash.

FINEST HONEY—60-LB. CAN, $6.50; 2 CANS, $12.75, collect; 10 pounds, $1.70; 5, $1, both postpaid; satisfaction guaranteed. Geo. Bancroft, Hermiston, Ore.

4 LBS. SALMON BELLIES AND 3 LBS., ABsolutely boneless codfish, delivered by mail, prepaid, $2. Coffin Fish Co., Seattle, Wash.

GOLD MEDAL BRAND YAKIMA ALFALFA, sweet clover honey; 60-lb. can, $6.50; two cans, $12.75. C. W. Higgins, Wapato, Wash.

DELICIOUS CLOVER HONEY, 120 POUNDS, $11; 60 pounds, $5.75; 30 pounds, $3. Kingsbury, Twin Falls, Idaho.

DRIED LOGANBERRIES, TEN POUNDS, PREpaid, $4; sample, 25c. Kingwood Orchards, Salem, Ore.

COMB HONEY, FANCY, $4.50; NO. 1, $4. O. B. Roberts, Prosser, Wash.

MERCHANDISE 59

ARMY GOODS SPECIALS THIS WEEK—O. D. wool breeches, $1.95; wrap leggings, 45c; O. D. regulation army shirts, new, $2.95; O. D. wool shirts, $1.95; wool knitted heavy union suits, $2.25; bib overalls, $1.25; genuine army shoe, Munson last, $4.25; real army work shoe, $3.45; wool socks, 25c pair, $2.50 dozen; heavy wool socks, 30c pair, $3.25 dozen; pure wool long army pants, new, $2.95; one buckle, cloth top overshoes, $1.95; four buckle, $3.95; eight-inch all rubber shoes, $3.75; six-inch, $3.45; leather lined vests, leather sleeves, $6.50. Write for catalog. Walker's Army Store, Department T, 501 Trent, Spokane, Wash.

NEW OVERCOATS, FUR, ASTRAKHAN AND hair collars for cold weather; double-breasted, quilted and plush lined; must sell these coats at $20 each, or less than ½ price. Money returned if not satisfied. State size. Commercial Linen Company, 117 3d ave. South, Seattle, Wash.

MISCELLANEOUS—FOR SALE 60

SAMPLE FREE OF "YORK'S BEES AND Honey," 16 large page monthly; $1 year. All about western bee keeping. George W. York, editor, Spokane.

PURE CANE MOLASSES FOR STOCK. LOW prices. Write Lewis & Co., 3151 Lincoln st., Spokane.

MISCELLANEOUS—FOR SALE (Continued) 60

SASH AND DOORS—O. B. WILLIAMS CO., 1943 First ave. So., Seattle. Chicken house sash, 20" wide by 25" high, 80c; a dozen different sizes in stock for immediate shipment. Skylights for chicken houses, 36"x40"; price, glazed, $2. This is the size recommended by the Western Washington experiment station. We carry them in stock for immediate shipment. Sash and doors for all purposes at lowest prices. All orders receive prompt attention. Our large illustrated catalog No. 35, showing full line of building material and built-in fixtures for the home, free on request. O. B. Williams Co. Established 1899.

HOMESPUN TOBACCO—CHEWING, FIVE pounds, $1.75; 10 pounds, $3; 20 pounds, $5; smoking, 5 pounds, $1.25; 10 pounds, $2; 20 pounds, $3.50. Send no money, pay when received. Cooperative Tobacco Growers. Paducah, Ky.

HOMESPUN TOBACCO—SMOKING, 5 LBS., $1.25; 10 lbs., $2; 20 lbs., $3.50; chewing, 5 lbs., $1.75; 10 lbs., $3. Furnish free recipe for preparing. Send no money. Pay when received. O'Connor Smokehouse, Mayfield, Ky.

PIPE—GET PARTICULARS ON OUR SPECial flue pipe, 1¼, 1½ and 2 inch. Big saving on it. We also save you on roofing, belting, pumps, engines, cable, etc. Alaska Junk Co., S120 Adams, Spokane, Wash.

WALL BOARD—WRITE FOR SAMPLE OF Washington plaster wall board; won't warp, won't burn. Manufactured by Washington Building Products company, 6851 E. Marginal Way, Seattle, Wash.

NATURAL LEAF TOBACCO—CHEWING, 5 lbs., $1.75; 10 lbs., $3; 20 lbs., $5.25; smoking, 5 lbs., $1.25; 10 lbs., $2.25; 20 lbs., $4. Hickory Ridge Farms, Mayfield, Ky.

HOME SPUN SMOKING TOBACCO. MILD AND mellow; 10 lbs., $1.75; 20 lbs., $3; delivery guaranteed. We furnish free recipe for preparing. Smoking Tobacco Exchange, Sedalia, Ky.

FREEEVERYBODY CAN BUY GROCERIES wholesale. We accept orders of $10 and up. Write for our free list. Save dollars. People's Grocery Company "M." 701 Olive st., Seattle.

BUY YOUR ALFALFA HAY AND "NETTED Gem" potatoes direct from grower, cabbage, one cent pound. Samuel Shockley, Outlook, Wn.

OUR SPECIALTY—PRINTING FOR RANCHers; inexpensive. Robinson Printing Company, Spokane.

MISCELLANEOUS—Wanted. 63

EGGS, APPLES, HUCKLEBERRIES—WRITE us. Uncle's Delicious Pies, inc.; capital stock $50,000. 554 Mississippi avenue, Portland.

WANTED—BILLPOSTERS, EVERY TOWN. Write Box 582, Prosser, Wash.

STOVE REPAIRING 128

WRITE MYER RUBENS, SPOKANE, ABOUT stove repairs, welding broken parts, nickel plating.

PATENTS 150

PATENTS—WRITE TODAY FOR FREE INstruction book and evidence of conception blank. Send sketch or model for examination and opinion; strictly confidential. No delay in my offices; my reply special delivery. Reasonable terms. Personal attention. Clarence O'Brien, registered patent lawyer, 534 Southern building, Washington, D. C.

FUR-BEARING ANIMALS 170

SILVER AND CROSS FOXES FOR SALE. William Rambo, 407 Sprague, Spokane.

PETS—Dogs, Birds, Etc. 171

REGISTERED AMERICAN KENNEL CLUB Airedale puppies; large, vigorous kind; best all-around dogs to be found. Only a few choice ones left. Pedigrees and prices on application. Snopeke Kennels. Box 213, American Falls, Idaho.

WHEN YOU WANT A DOG, CANARY, PARrot, rabbits or a pet or pet stock supplies, cages, feeds or remedies, write. We are headquarters in the northwest. Routledge Bird, Pet & Animal Co., 274 Union avenue, North, Portland, Ore.

REGISTERED AIREDALE HUNTING BITCH. Beautiful white collie puppies, working strain. Purple ribbon bred stock. Cermer Kennels, Pasco, Wash.

FOR SALE—PEDIGREED AIREDALE PUPS. Photos and price on application. A. G. Lucier, Powell, Wyo.

FOR SALE—TRAINED AND UNTRAINED fox hounds, puppies. Hugh Morrison, Route 8, Spokane, Wash.

COLLIE-SHEPHERD DOG FOR SALE. REAsonable. Fred Schneider, Albany, Ore.

WHITE COLLIE PUPPIES AND BRED MATrons, Urbandale Farm, Oakley, Idaho.

YOUNG TRAINED FOX HOUNDS FOR SALE. E. L. Beck, Pomeroy, Wash.

RABBITS and HARES 173

RABBIT MAGAZINE, 10C. HARVEY NORRIS, Goldendale, Wash.

POULTRY 174

EBORALL'S S. C. WHITE LEGHORN BABY chicks, $17 per 100; $160 per thousand. Our twenty-three years of breeding poultry and operating incubators enables us to hatch a strong, vigorous chick that is easy to raise and develops early. We hatch only large white eggs produced on our own farm. Weekly from Jan. 15. Order chicks early. We guarantee satisfaction. Send for circular. Crystal White Poultry Farm, McMinnville, Ore.

BABY CHICKS—FRESLAID FARM HUSKies for 1923. Banish hard times with a bunch of our profit-making Leghorn chicks. Time flies. The early buyers are picking the best dates so write now for free instructive catalog. It tells how to make $500 a year from your farm poultry. Satisfied customers made our growth possible. We claim the largest electric incubator in the world. Freshlaid Farm, Colfax, Wash.

WHITE LEGHORN BABY CHIX—THE KIND you all want; chix with vim, vigor and vitality; 20 years' breeding and hatching mean you can get none better, very few as good. Your guarantee is "the oldest established hatchery" in the northwest produces them, and we certainly know how. $15 per 100; $14.50 by 500; $14 by 1000; good delivery guaranteed. Lakeside Poultry Farm, Roy, Wash.

WHITE LEGHORN BABY CHICKS AND eggs from pure O. A. C. stock; acknowledged everywhere as the world's greatest laying strain. Our hens all trap nested without lights and on free range. Breeders selected for egg production, vitality and standard requirements. Prices reasonable. Write for circular. Corvallis Poultry Farm, Box 304, Corvallis, Ore.

ANCONA COCKERELS, HENS, PULLETS AND day-old chicks. Send for catalogue. Ancona Grove, Walla Walla, Wash.

PUREBRED SILVER LACED WYANDOTTE cockerels, $4 each. Vida Heliker, Ione, Ore.

(Continued on the following page.)

FARMERS' WANT ADS

This is the farmers' "want," "sale" and "exchange" department for small advertisements of farmers, including live stock and poultry.

Advertising rates for ads running 1 to 3 times, 10c per word per insertion, with a special rate to Farmer subscribers, as follows: Ads running 4 to 12 times, 9c per word per insertion; ads running 13 times or more, 8c per word per insertion.

All commercial and land advertising, 10 cents per word each insertion. Open also to nonsubscribers.

In using these columns advertisers must observe: (1) No advertisements will be inserted for less than $1.00. (2) Every word, number and initial, including name and address, must be paid for. (3) New advertisements, changes of copy or cancellations must reach general office, Spokane, Wash., 10 days in advance of publication date. (4) Cash must accompany order.

Above rates include insertion in The Washington Farmer, The Idaho Farmer and The Oregon Farmer, which constitute the Pacific Northwest Farm Trio, 46 Review building, Spokane, Wash.

POULTRY (Continued) 174

"HENACRES" BABY CHICKS FOR 1923. IT is time to plan your poultry work for next spring and we suggest that you write for our free illustrated catalog now. The booklet contains lots of information on poultry management, gives our feeding formulas, etc., besides describing our stock. "Henacres" Leghorns have made good all over the northwest, so you take no chances in buying them. Some one in your neighborhood knows us, ask him. We have already sold 40,000 chicks for 1923. "Henacres," Box A. Prosser, Wash.

SINGLE COMB WHITE LEGHORNS—A pamphlet in condensed form eliminating all theories. Practical knowledge gained in years of experience with poultry, and as superintendent of the Alderwood Manor Demonstration Farm, the largest farm of its kind in the world. Contents: Brooding and care of baby chicks; feeding and care of the commercial flock; detail plans of trap nests and force roost. Important general information. Postpaid, 50c. F. C. McClane, Alderwood Manor, Wash.

OFFICIALLY CERTIFIED WHITE LEGHORN baby chicks; hatched in the world's largest electric hatchery. Choice free range, high egg producing breeding flocks, inspected and accredited by the Sonoma county farm bureau. Write for prices, literature and booking dates for spring delivery. Safe arrival guaranteed. Established in 1898. A quarter of a century of constructive and efficient service to the poultry industry. Must Hatch Incubator Co., 445 Seventh st., Petaluma, Cal.

BUY YOUR BABY CHICKS FROM THE White hatchery, member of the Sonoma county farm bureau accredited hatcheries. All flocks approved by farm bureau inspector. We handle accredited "A" grade chicks and "AA" grade for the poultryman who wants something better. Write us at once for information, prices, etc. White Hatchery, Petaluma, Cal.

TRAPNESTED CARNATION WHITE LEGhorns, famous for their vigor and winter layers. We specialize on baby chicks, setting eggs and breeding stock. We successfully shipped hundreds of pullets this fall to Honolulu, which shows the demand for Carnation stock. Ernest Raush, Carnation Poultry Farm, Kent, Wash.

S. C. ENGLISH STRAIN ANCONAS; COCKERels, $2.50 to $5 each. Rhode Island Red cockerels, $2.50 to $5 each. Fawn Indian Runner drakes and drakes, $3 each. Toulouse geese, $5.50 each or $10 pair. All from first class prize winning stock. Peerless Poultry Farm, K. Brooder, Sherwood Ore.

WHITE LEGHORNS; TRAP NESTED 18 CONsecutive years; actual production record of every female; high production, pedigreed males. No pullet matings. Equal in value anything in west. Eggs, chicks, cockerels at bottom prices. Send for catalog. Fred F. Hughes & Son, Hillsboro, Ore.

MR. FARMER!—IMPROVE YOUR FLOCKS with a purebred Regal-Dorcas White Wyandotte cockerel; high egg record dams; guaranteed to please. Get acquainted sale, $5. Write for mating list, prices baby chix. A. F. Bolton, Albany, Ore.

START A POULTRY HATCHERY—YOU CAN make big profits operating a hatchery under the Elec-Chic cooperative plan. We furnish equipment on easy terms and help you sell all your chicks. Poultry Equipment Co., Burbank, Cal.

MY BUFF LEGHORNS LEAD THEM ALL for laying and exhibition; backed by 10 years successful breeding. Money makers the year around. Stock for sale. Now booking orders for eggs and chicks. R. Stromquist, Beaverton, Ore.

WHITE LEGHORN BABY CHIX FOR SUMmer and fall months from stock accredited by Sonoma county farm bureau. We guarantee safe arrival. Write for prices and literature. The Pioneer Hatchery, 422 Sixth street, Petaluma, Cal.

SINGLE COMB RHODE ISLAND RED AND White Leghorn cockerels, bred from prize-winning stock. You can not make mistake by ordering one of these birds. $5. F. E. Mohr, Orchard Ave., Spokane, Washington.

DOLLARS FOR YOUR EGGS—WE PAY THE top market prices for your eggs and poultry. Daily cash remittances. McClintock-Trunkey Co., produce department, Spokane.

DANIEL'S WHITE ROCKS AND SINGLE Comb White Leghorns; trap nested continually. Chix, eggs, stock. Catalog free. Ideal Poultry Yards, Hoquiam, Wash.

AS USUAL, WHITE LEGHORN BABY CHICKS from hens bred for heavy egg production. Pure Tancred strain, $18 per 100; $165 per 1000. D. A. Gillette, R. 4, Yakima, Wash.

CHICKS AND EGGS FROM WHITE LEGhorns; 180-220, 220-240, 240-260 egg record; Tancred males. Free catalog. Orin Belknap, Chinook, Wash.

BABY CHICKS, O. A. C. STRAIN WHITE Leghorns; pedigreed sire, dams, trap nest records 270 to 300. Frank H. Shepherd, dept. B, Corvallis, Ore.

GET THE BEST PRICES FOR YOUR POULtry, eggs, turkeys, geese, veal and hogs. Write for quotations. Hotchkiss Produce Co., Spokane.

JERSEY BLACK GIANTS—YOUNG STOCK for sale from pedigreed mating. Write for prices. Mrs. R. J. Chambers, Bovill, Idaho.

FINE SINGLE AND ROSE COMB COCKERELS of excellent layers. Black Minorcas $2 to $3. H. E. Scholz, Menlo, Pacific county, Wash.

40 QUALITY R. I. RED COCKERELS, $5 and up. Write your wants. Can please you. J. Nonnenmacher, Route 3, Yakima, Wash.

ACME QUALITY LEGHORN CHICKS INSURES laying flock. Free catalog telling why. Acme Poultry Farm, Cottage Grove, Ore.

S. C. BROWN LEGHORNS, COCKERELS, hens, pullets; none better; stock guaranteed. E. H. Rosenkranz, Colfax, Wash.

SINGLE COMB RHODE ISLAND REDS; EXcellent cockerels and pullets for sale. Dr. E. T. Biwer, Boise, Idaho.

RHODE ISLAND WHITE COCKERELS, GOOD type; heavy laying strain. Van Lawson, McMinnville, Ore.

PUREBRED BLACK MINORCA AND WHITE Wyandotte cockerels. C. McClelland, Boise, Idaho. R. 1.

MY CHOICE ANCONA COCKERELS, BEAUtiful birds, $5. B. S. Prather, Woodburn, Ore. R. 3.

FOR SALE—ANCONA COCKERELS, $3 AND $5 each. Address George W. Fonner, Weiser, Idaho.

O. A. C. BARRED ROCK PULLETS, COCKerels, $1-$3.50. Mrs. Faulconer, Skamania, Wash.

249 COCKERELS, 49 VARIETIES; HATCHING eggs. Free book. Aye Bros., Blair, Neb., Box 14.

WHITE WYANDOTTE PULLETS, BEAUTIES, $25 dozen. Harvey Norris, Goldendale, Wash.

SINGLE COMB RHODE ISLAND WHITE cockerels, $2.50. H. Squire, Walker, Wash.

$2000 FOR FIVE HENS—A RECORD PRICE for record hens. We announce the purchase of F. E. Gilbert's winning pen of White Leghorns at the recent Puyallup egg laying contest. These five birds laid 1421 eggs in 12 months, thus establishing a new world's record. These birds are to be mated with the best cockerel to be obtained and used in building up Queen Quality strain of chicks. We have also contracted with Mr. Gilbert for the eggs from the pen sisters of these wonderful birds. We will have a limited number of chicks and eggs from them for sale this season. The greater part of them will be used for our own use. In addition to the Gilbert birds, we will have many flocks direct from Hollywood and Tancred stock. We also hatch R. I. Red and Barred Rock chicks of exceptional quality. We are now booking orders for early delivery and have sufficient capacity to assure prompt delivery at time promised. Incubators, 15 per cent off. We offer a special discount of 15 per cent on Queen incubators purchased from us during November and December. In addition to the Queen, we carry the Master's incubator. Petaluma electric incubator, Blue Flame brooders, American brooder stove and are agents for the Kresky brooder stove. Write for our new catalog. Queen Hatchery, 87 Sewart st. Seattle Wash. Ell. 2054.

BABY CHICKS—OREGON'S BEST AT REAsonable prices. Leghorns, Reds, Anconas, Minorcas, Barred Rocks, White Rocks. We pride ourselves on a long list of satisfied customers. Postal secures free catalog. C. N. Needham, Salem, Ore.

BABY CHICKS AND HATCHING EGGS. DR. Duganne's trap nested White Leghorns and J. M. McCalcb's Hollywood strain. Also the best of O. A. C. Barred Plymouth Rock baby chicks. Catalog on request. Mark A. Webster, Corvallis, Ore.

1923 WHITE LEGHORN BABY CHICKS. O. A. C. strain; breeders mated to pedigreed cockerels, backed by 250 to 300 egg records. Our prices are as usual, right; ask for them. Moorhead Poultry Farms, Granger, Wash.

BEST OREGON AGRICULTURAL COLLEGE stock chicks, $16 per 100; $150 per 1000; eggs, $1.25 per setting, $6 per 100; postage prepaid. Strong, healthy chicks guaranteed. Russell Poultry Yards, Corvallis, Ore.

BABY CHIX, 14½C-50C. EGGS, 4½C-40C; heavy laying White Leghorn strain. Chix and eggs from heavier breeds. Order now for suitable stock and service. Chicoppep Poultry Yards, Roseburg, Ore.

DAY-OLD PULLETS, GUARANTEED S. C. White Leghorn day-old pullets, also day-old broilers; established 1912. Eureka Hatchery, 628 D st., Petaluma, Cal. James K. Hirst, Prop. Refs. gladly furnished.

ANCONA COCKERELS, SAME BREEDING AS my five pullets that laid 1029 eggs, 1921-22 western Washington contest. Booking eggs and chick orders. Catalog on request. Oscar Dunlap, Junction City, Ore.

RHODE ISLAND RED CHICKS FROM BRED to lay exhibition quality stock. Hatched from the same matings that produce our own young stock. Booking orders now. C. R. Quinn, Oregon City, Ore., R. 3.

RAU'S QUALITY CHICKS. THE LAYING LEGhorns; none better at any price. Our forty years' experience back of these chicks. Free price list tells it all. Rau's Quality Hatchery, Tacoma, Wash.

PERKINS SUPERIOR WHITE LEGHORN baby chicks, $15 per 100; splendid trap nested laying stock. I have bred Leghorns 15 years. Chas. L. Perkins, 1337 Burrage, Portland, Ore.

BRED-TU-LAY BARRED ROCKS, PARKS strain; trap nested heavy winter layers; hatching eggs, cockerels. Hi-Quality Poultry Ranch, Yelm, Wash.

PACIFIC POULTRYMAN, SEATTLE, WASH., expert writers on practical poultry subject. Special offer, two years, $1. Four months' trial subscription, 25c.

HUNT'S PRIZE AND UTILITY BARRED Rocks; some dandy cockerels, pullets, trios. Write for prices. W. A. Hunt, Lebanon, Ore. Box 503.

SHIP US YOUR POULTRY AND TURKEYS. Ask your neighbor about our fair dealings. Jones & Williams, S101 Division, Spokane.

INCUBATOR, CANDEE HOT WATER; 600-egg; A1 condition; used one season, price $1.50. C. E. Grieser, Filer, Idaho.

FOR THE BEST IN SILVER WYANDOTTES and Silver Spangled Hamburgs, write G. G. Wherry, Payette, Idaho.

WHITE LEGHORN AND BARRED ROCK cockerels; records, 200 to 311. W. M. Roberts, Walla Walla, Wash.

ROSE COMB BLACK MINORCA COCKERELS, $2.50; pullets, $1.25; hens, $2.25. Mrs. Carley, Carley, Wash.

PUREBRED S. C. RHODE ISLAND RED cockerels, $4 each. Mrs. J. Weimar, Clem, Ore.

WHITE ORPINGTON COCKERELS, $3 AND $5. Fred Bilyeu, Lamont, Wash.

PURE BLOOD TOULOUSE AND CHINA geese. Dr. Nichol, R. 6, Portland.

DARK CORNISH COCKERELS, $5 EACH. Jesse Kilts, Ashwood, Ore.

MAMMOTH TOULOUSE GEESE. W. D. Good, Mt. Vernon, Wash.

Turkeys.

MAMMOTH BRONZE TURKEYS FROM EASTern blood lines; large boned type, $8 to $20. Mrs. H. D. Moore, R. 1, Box 21, Hubbard, Ore.

FOR SALE—STOCK FROM MY PRIZE-WINning White Holland turkeys. Hens, $5; toms, $8. Jess L. York, Milton, Ore. Box 0125.

GIANT BRONZE TURKEYS—CHICAGO AND Los Angeles first winners. Toms and hens for sale. M. M. Rieman, Planada, Cal.

CHOICE TOMS AND HENS, ALSO EGGS. Send for catalogue. Mammoth Bronze Turkey Farm, Walla Walla, Wash.

21 YEARS A SPECIALTY BREEDER OF M. B. turkeys; prize-winning stock. Mrs Frank Browning, R. 1, Nampa, Idaho.

PUREBRED BOURBON RED TURKEY TOMS, $7; hens, $5. Chas. Thurman, Sunnyside, Wn.

POULTRY—Turkeys. (Continued) 174

GIANT BRONZE TURKEYS FROM MY OREgon state fair and Pacific International winners. Sold on approval. Herbert Stoneberg, Route B, Eugene, Ore.

PURE MAMMOTH BRONZE TURKEYS. UNrelated stock. Pure Toulouse geese, choice breeding stock a specialty. Mrs. F. Crane, Hagerman, Idaho.

VIGOROUS MAMMOTH BRONZE TURKEYS, unrelated breeding stock. Albert Leach, Caldwell, Idaho, Route 1.

PUREBRED MAMMOTH BRONZE TURKEYS, choice from six hundred. Harry Smith, Coupeville, Wash.

CHOICE MAMMOTH BRONZE TURKEY toms, $10; hens, $5. Amelia Reimers, Eagle, Idaho.

PUREBRED BRONZE TOMS, $9-$12; PULlets, $6. Bertha Gray, Winlock, Wash. R. 2.

FOR SALE—PUREBRED MAMMOTH BRONZE turkeys. S. L. Maltby, Rogerson, Idaho.

MAMMOTH BRONZE TURKEYS FOR SALE. J. N. Morgan, Cosmopolis, Wash.

LIVE STOCK 177

WE GUARANTEE TO PAY THE HIGHEST market prices for your poultry and live stock. Veal market growing stronger. Owing to the constant changes in the market we are unable to quote prices in this paper from week to week. We will furnish tags and prices when you are ready to ship. Write us what you have to sell. Prompt returns. John Lewis & Co., Spokane, Wn.

FOR SALE—OUR ENTIRE HERD OF HEREfords, including registered bull of excellent breeding; cows, with calves at side, and 2-year-old heifers. Round Prairie Ranch, Round Prairie, Ore.

WE PAY TOP PRICES FOR YOUR LIVE OR dressed veal, hogs and poultry. Your check by return mail. Shipping tags on request. M. & J. Packing Co., Spokane.

FOR SALE—PURE AND GRADE ANGLO-NUbian milch goats, fresh in spring; buck and doe kids. Prices right. William Anderson, Southworth, Wash.

SPOTTED POLAND CHINAS, BRED GILTS and spring boars; gilts to farrow from April first on. Kind that suits. Henry Mitchell & Son, Joseph, Ore.

BARGAIN—BIG BONED, BIG TYPE REGistered Poland China boar, 20 months old, $45. Tom T. Homme, Harrison, Idaho.

PUREBRED JERSEYS, LARGE AS HOLsteins; bulls and heifers for sale. Ford Jersey Dairy, Vancouver, Wash.

CHOICE, PUREBRED, BROWN SWISS COWS, heifers and bull calves. G. W. White & Son, Meridian, Idaho.

REGISTERED O. I. C. SWINE, ALL AGES. Write us your wants. Arthur W. Wade, Marysville, Wash.

REGISTERED O. I. C. PIGS, PAPERS FURnished. H. J. Claffey, Box 158, Polson, Mont.

TAKEN UP—SMALL BROWN HORSE, 8 years old. Mrs. Alberta Gray, Elk, Wash.

HARNESS and SADDLERY 189

SEND FOR FREE HARNESS AND SADDLE catalog today; cut out the middleman, buy direct from the manufacturer. Lowest prices in the west; satisfaction guaranteed. Established 1881. Write Pierce Harness Co., Dept. T. Spokane, Wash.

HAY FOR SALE 200

CHOICE ALFALFA HAY, GREEN AND leafy; the kind that dairymen like to feed. Timothy and wheat hay for horses. Write for delivered prices. J. F. Jacobson, Kennewick, Wash.

ALFALFA HAY, GUARANTEED QUALITY; prompt shipment; buy direct and save money. Prices upon application. Ernest T. Freepons, Walla Walla, Wash.

MONEY TO LOAN—Real Estate 234

MORTGAGE LOANS—FARM PROPERTY; NO commission. Oregon Mortgage Co., Paulsen bldg., Spokane.

JOB PRINTING 372

NAME YOUR FARM—STATIONERY, 100 sheets and 100 envelopes, $1.25. We print butter wrappers. Star Printing House, W723 2d, Spokane.

BEST PARCHMENT BUTTER WRAPPERS, 8x11, neatly printed, 100, 60c; additional hundred, 40c. Home Specialty Co., Middleton, Idaho.

WEDDING ANNOUNCEMENTS AND INVItations, butter wrappers, letter heads and envelopes. Union Printing Co., Spokane, Wash.

ART PRINTING COMPANY, BUTTER WRAPpers, announcements. S116 Lincoln, Spokane.

CLEANING, DYEING, ETC. 420

PALACE CLEANING WORKS. QUALITY and service. S5 Monroe, Spokane.

TANNING 425

ANY KIND OF HIDE TANNED WITH HAIR on, or for leather. Mohr, 321 Sprague, Spokane.

TANNERS AND LEATHER DEALERS—BALZ Leather company, San Francisco, Cal.

TAXIDERMISTS 426

WE MOUNT ANYTHING FROM A FLEA to elephant. Mohr, 321 Sprague, Spokane.

FURRIERS 429

FURS TO ORDER, REPAIRED, REMODeled and for sale. Mohr, 321 Sprague, Spokane.

HIDES, PELTS AND WOOL 430

HIDES—WE BUY HIDES OF ALL KINDS. Write for prices and tags. Hibbard-Stewart Co., Hibbard bldg., Seattle.

FURS—WE BUY FURS AND PELTS. WRITE for prices and tags. Hibbard-Stewart Co., Hibbard bldg., Seattle.

MATERNITY HOMES 497

MATERNITY HOSPITAL; STRICTLY PRIvate; doctor in attendance; prices reasonable. Mrs. Elizabeth Peel, matron, W1324 Broadway, Spokane.

DENTISTS. 468

DR. EDWARD PITTWOOD, DENTISTRY, 503 Hyde bldg., Spokane.

PERSONAL 537

BACHELOR FARMER WISHES TO CORREspond with lady interested in farm life, 25 to 38; object, matrimony; give description in first letter. Box 231, St. Maries, Idaho.

BUILDING MATERIAL 588

TURNS PLASTERING INTO PLAY—PERFECtion plaster wallboard can be nailed on just like lumber, and makes a perfect plaster job. Western Wallboard Co., Seattle, Wash.

POULTRY SASH, 8X10, 4 LIGHT, 65C; ROOFing, skylights. Compare our prices. Save money. Send for price list. Tacoma Sash & Door, Tacoma, Wash.

NURSERY STOCK 621

PRUNES—LEIGHTON ITALIAN EXCELS ALL other varieties for profit; 40 per cent larger than Italian; 25 per cent more sugar; tests 40 per cent dried. General line of other stock. Lafayette Nursery Co., Lafayette, Ore.

NURSERY STOCK, ITALIAN PRUNE TREES and trees of all kinds. Berries and small fruits of all varieties. Buy direct and save 50 per cent. Brooks Nursery, Lafayette, Ore.

BEST VARIETIES FOR THE WEST; HANDsome 48-page descriptive catalogue free. Routledge Seed & Floral Co., 145 Second st., Portland, Ore.

WRITE FOR PREPAID PRICES ON NURSERY stock; especially apple trees; can save you money. Lawson Nursery, Gates, Ore.

STRAWBERRY PLANTS, $5 1000; NINE VArieties. Briggs Fruit Ranch, Olympia, Wash.

FARM LANDS FOR SALE 651

63 ACRES, ON COLUMBIA RIVER HIGHWAY, twenty minutes' drive from Portland; practically all cultivated and well improved; wonderful buy and real investment; city water and lights soon available; this property will soon be in demand for subdivision. Priced low for immediate sale; must have $10,000 cash payment. 96 acres, southern Oregon fruit and alfalfa ranch; all cultivated; modern nine-room house, steam heat, big barn, four-room bungalow and other outbuildings; beautiful place; might consider exchange for good wheat ranch or city income property. Have several other farms, all descriptions, including some first-class Canadian properties for sale or exchange. Arch. T. Penwarden, farm land specialist, 800 Lewis building, Portland, Ore.

1000 ACRES STOCK AND DAIRY FARM; IN Snohomish county, Wash.; all fenced; well watered by river, creeks and springs; on paved highway; ½ mile to P. O., railway station and store; 3-hour stage and train service. Silt loam soil, is growing large and small fruits, vegetables, and crops; improved with 2 houses, garage, 5 barns, 3 sheds, 2 granaries, 6 other outbuildings, complete farm equipment; electric light plant, modern sewage system; hot water heating system; pure water. A modern, income-producing country estate, second to none; in a climatically attractive district. For sale as a whole. Priced at $100 an acre. Write for complete detailed information. Carter, MacDonald & Miller, 208 Columbia st., Seattle, Wash.

PAYING FARMS AT LOW COST—160-ACRE farms, improved or unimproved; 30 to 160 acres irrigable land on each parcel; near Lethbridge, in sunny southern Alberta; can be bought for $15 to $40 an acre. No need for pioneering. Well settled country, good roads, railways, schools, telephones; agreeable social conditions; fertile land; success of irrigation farming here already demonstrated; irrigation system being constructed under government supervision; water available in 1923. Write for information concerning crops grown and description and location of farms to the province of Alberta, Irrigation Council, P2 Provincial building, Lethbridge.

BIG LUMBER CO. LAND SALE IN SKAGIT county; 40 acres, $1400; 20 acres, with new house, $1500. Lumber furnished for building. Lots of work for the settler; splendid district, roads, schools and towns. H. C. Peters, 726 3d ave., Seattle.

FINEST IRRIGATED BERRY AND DAIRY land in western Washington; 5 and 10 acre tracts or upwards; $50 acre, on easy terms; $10 cash, and $2.50 per month; free booklet. Thos. G. Mortland, Sequim, Wash.

FOR SALE OR PART TRADE—480 ACRES, IN Moosejaw district, the wheat belt of Saskatchewan; all broken; 113 summer fallow; all fenced; fair buildings. C. Nygaard, 563 Athabaska, E. Moosejaw, Sask.

SELL YOUR PROPERTY QUICKLY FOR cash; no matter where located. Particulars free. Real Estate Salesman company, 501 Brownell, Lincoln, Neb.

FOR SALE—20-ACRE FARM ON BRIDGE ISLand; two miles from Nyssa, Ore. Good turkey farm; plenty range. P. O. Box 242, Nyssa, Oregon.

FOR SALE—STOCK OR DAIRY RANCH. Open range; best water right. Write Clara Wagner, Hornbrook, Cal.

FARM LANDS—Wanted 654

OWNERS OF FARMS AND RANCHES FOR sale at real bargain prices, should write us. We have cash buyers. Central Land Bureau, New Franklin, Mo.

FARMS WANTED—SELL YOURS QUICKLY for cash, no matter where. Particulars free. R. A. McNown, 310 Wilkinson bldg., Omaha, Neb.

WANT TO HEAR FROM OWNER HAVING farm for sale. Give particulars nnd lowest price. John J. Black, Chippewa Falls, Wis.

IRRIGATED LANDS—For Sale 663

WE OWN 1000 ACRES WESTERN WASHINGton choice irrigated land, and sell in tracts of 5 acres upward; $100 or more down, balance 10 years. $40 per acre, unimproved, to $350 per acre for land in highest state of cultivation. Ideal location and climate for poultry, berries, dairying. Write for information, Washington Colonization company, Sequim, Wash.

IRRIGATED FORTY, IN YAKIMA VALLEY; well improved. Price $8000; $3000 cash. Write Alfred W. Jensen, Mabton, Wash.

FOR SALE OR EXCHANGE 702

FOR SALE OR EXCHANGE—54 ACRES, IRRIgated land; Southern Idaho; all cultivable; good rich loam soil; good buildings; family orchard; 1½ miles to town and high school; stock ranch preferable exchange. Walter Taylor, R. 1, Rupert, Idaho.

122-A. DAIRY RANCH, NEAR BURLEY, IDAho; close in, 160 acres in Jefferson county, Ore.; 100 cult. Address 1011 E. Vernon ave., Los Angeles, Cal.

TO EXCHANGE—Real Estate 705

WILL EXCHANGE FOR IMPROVED PROPerty, all or part of 240 acres level land; agricultural district, suburban to Vancouver and New Westminster, B. C.; city water; great future value. Owner, J. D. Westenhaver, Astoria, Ore.

PIKE'S PEAK OR BUST

By LEWIS B MILLER

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CHAPTER TWENTY-SEVEN (Continued).

Before the hunters had been out long, those waiting at camp began to hear reports of guns. When the party returned at dusk they brought no large game except one deer. Cooper had killed that. But each of the others was carrying some. One had a rabbit, another some phesants, and the third three squirrels, the black, or brown, squirrels found in these mountains.

On this game the whole party feasted well. They were still weary, and not long after supper they were in their blankets and asleep by their campfire. All but one. Not knowing what had become of those trailing Utes, the white men did not think it prudent for all to sleep at once.

Orlando had the first watch. When his period was up he went to sleep, but not till after he had called out Jeff Givens. And so they kept on, one man watching and five men sleeping, till morning dawned. But the night had passed peacefully enough.

"I'm guessing we shook off our red pursuers in that black snowstorm," Sanders remarked, while the party were at breakfast. "Of course they couldn't track us in the dark. And all that falling snow we groped our way through must have covered our trail so that even a bloodhound couldn't nose it out."

"Chances air the redskin gang turned back when they struck the snow cap," was Esau's opinion.

"I'm rather of the same opinion," agreed Cooper. "Still, as you've heard me say before, it's little short of recklessness to take that for granted. They may have struck back toward home when they came to the snow. Or they may be on this side of the range, trying to pick up our trail or spy out our camp. It's folly to feel safe when we may be surrounded by danger."

The night had been chilly, almost raw. But when the sun rose above the forest, the air soon became pleasant. Now, while most of the party remained at camp to guard it and rest, two of their number, Holloway and Cooper, set out together in quest of more game. They were not seen again till long past noon. But, when they did return they had killed plenty of meat. They were carrying an elk on a pole, and after that they went back and brought a mountain shep to camp. On those the whole party feasted royally at supper time.

Again, during another night, the six adventurers took turns at standing guard from bedtime till dawn. But when this second night, too, had passed without disturbance, they dismissed their previous fears as groundless. There seemed no reason to believe that the Utes had followed them across the Great Divide.

Still the party remained in camp at the foot of that mighty rock. After their frightful exertions, all felt the need of a good rest. And there was an overabundance of game here for themselves and Frisk, and an abundance of grass for Brindle. So they lingered day after day.

Part of this delay was due to indecision as to what to do next. Naturally, for many reasons, all would have been glad to return to where they had unearthed that pot of gold. But, with thousands of hostile redskins so close by, such a thing was out of the question. Indeed, after their narrow escape and flight for life, not one of them had, just now at least, any serious thought of crossing the Great Divide again.

"But there's just as apt to be gold east of the snowy range as west of it," Cooper told his partners one night, as they all sat by their campfire. "So, to my way of thinking, we can just as well do some prospecting on this side."

"And in the neighborhood of this camp is as good a place to prospect as any, it seems to me," Givens said. "We're just as apt to strike pay dirt here as anywhere else I know of."

On that point all the party were of the same opinion. Next morning, leaving two of their number to guard the camp, the other four wandered out with picks and shovels and pans and guns, to see what they could find. Late in the afternoon they returned, one of them carrying a beaver he had shot. They ahd discovered a beaver dam, and had used their pans in many places along a stream, but without washing out more than a slight trace of gold—the "color of gold" they called it.

Next morning five of them went prospecting, only one man remaining to guard the camp. But no worth-while discoveries were made. On the third morning Sanders was left in charge of the camp, all the others setting off on a hunt for gold. The prospectors soon divided, two going in one direction and three in another.

They were carrying no dinner, and about 2 o'clock the party of three, having found nothing to encourage them, returned to camp for something to eat. To their surprise, they found the camp deserted.

"Well now, what has become of Abe, I wonder!" Cooper exclaimed. "This is no way to guard a camp with a pot of gold in it!"

"Oh, he's somewhere close by. You can be sure of that," answered Orlando.

CHAPTER TWENTY-EIGHT.

"Yes, he'll be showing up in a few minutes, I'd guess," was Holloway's opinion. "I only wish he'd had some grub cooked and waiting. A fellow never feels much like cooking after he's been tramping over this rough, wild country most of the day."

Weary, the three prospectors threw themselves on the grass to rest and talk over their experiences. They were also waiting for Sanders to return and bake some bread.

But half an hour passed, and still the vanished campkeeper had not appeared.

"Well, to me this looks—is beginning to look a little bit strange," Cooper finally said. "What can have become of that man?" He glanced toward the packsaddle, and those two rawhide pockets leaning against it.

Interpreting that glance, Orlando sprang up from where he was lying and hurried to the saddle. First he looked into one of the big pockets and then into the other. After that the two spectators were surprised to see him hastily taking all the things out of one pocket.

"What's up now, Lando? What are you rummaging for?" called out Holloway.

At first the young fellow did not answer. But soon he ceased searching, straightened up and turned a dismayed face toward the two men.

"Why, the—the pot—our pot of gold! It's gone!" The concluding words were almost gasped out.

"Oh, I reckon not! You must be mistaken, Lando," Cooper assured him. "In fact, you're bound to be mistaken."

"Hope I am. Don't see how I can be, though. But I'll look again."

At once the others sprang up and joined him, and all three took part in the search. When it was ended, they had to admit that the pot—that precious pot of theirs which meant so much to them—was nowhere in the camp. Now they stood staring at one another, blank dismay, mingled with amazement, written on their faces.

While the three men were standing thus, Jeff Givens and Esau Haggerty entered the camp. Seeing that something was wrong, they made haste to join the others.

"Our pot's gone! Our pot of gold!" Orlando blurted out, while the newcomers were still approaching.

"Oh, you must be mistaken!" exclaimed Esau. "Where—where's Abe Sanders?"

"That we don't know. And that's the strangest part of it," Cooper replied. "When we got back to camp he was gone. Nearly an hour we waited for 'im; and then something put it into Lando's head to step over and look for our treasure pot. Since then ke've all searched high and low for it, but only to convince ourselves that that pot is not in this camp."

"Then what do you think has gone with it? Do you suspicion something crooked about the way it walked off?" demanded Givens.

"We don't know what to think, Jeff. Haven't had time to do much thinking, in fact. But to me everything looks—is beginning to look very, very suspicious."

"Oh now, I don't believe there's anything crooked about Abe. That cain't be true,' declared Esau, with some warmth.

"I don't like to believe such a thing of our partner. But what else is there to believe? We left him to look after the camp, and now we've come back to find him missing and the pot of gold missing. What can we think of but that the two left camp together."

Not till they had made another and more thorough search, all of them joining in, did Sanders' five partners admit they had been robbed, and that the man they had left to guard their camp must have been the robber.

"Gold—yaller gold, is a mighty temptin thing to most men," Esau observed. "And of course, five or six thousand dollars is ever so much bigger than one-sixth of five or six thousand dollars. But who—who under the canopy would ha' believed that Abe Sanders was that kind of a rogue?"

At first, after the five gold seekers had assured themselves that their sixth partner and their pot of gold were both missing, and had doubtless left camp together, there were surprise and dismay, and even consternation, among them. Later, when they had had time to reflect on all that the loss meant to them, and on how their confidence had been betrayed, most of them became angry.

After reflecting, however, Holloway was disposed to hold a different opinion: "Boys, I can't believe that of Abe. The fellow has always seemed to me as honest as the day is long. I don't half-way believe he'd up and play that kind of a dirty, devilish trick on his own partners."

"But the gold is gone, and the man we left to guard it is gone. How can you explain the matter except by saying that the two left camp together, Jess?" demanded Cooper, a trifle impatiently.

"Well, I can think of a way it might be. Sanders might have found it necessary to leave the camp for some reason. And, for fear the gold would be stolen while he was gone, he might have taken the pot out of the pack and hid it somewhere. In the grass or among the bushes, or under a rock or a log, maybe. That's what I'd have done in his place."

Cooper considered. "Yes, such a thing could have been, I suppose. And you may be sure I'd far rather believe that than something worse. But, if what you suggest really happened, why hasn't Sanders returned to camp before now?"

"Not knowing what took him away, of course I can't say just what keeps him from coming back."

"Well, I'm pretty sure I know. I hate to believe I've had a partner that would play us such a scaly trick. But to me the evidence is too strong—too strong to be doubted. While we're standing here jawing about the matter, our gold pot and our brass partner are both making for Denver as fast as a pair of guilty legs can pack 'em."

"Seems to me we ought to learn something by looking about us," Orlando was now prompted to suggest. "Not once have we thought to see whether Sanders' pack is missing."

"Why should he take his own pack when he could just as well sneak off with what he wanted from all the packs?" burst out Givens, hotly.

It soon developed that Holloway's pack was missing, though most of his things had been left. At this the angry gold seekers began to talk of what would happen when their treacherous partner should be captured.

"Now, boys, first thing on docket, we must get on that scoundrel's trail," Cooper told his partners.

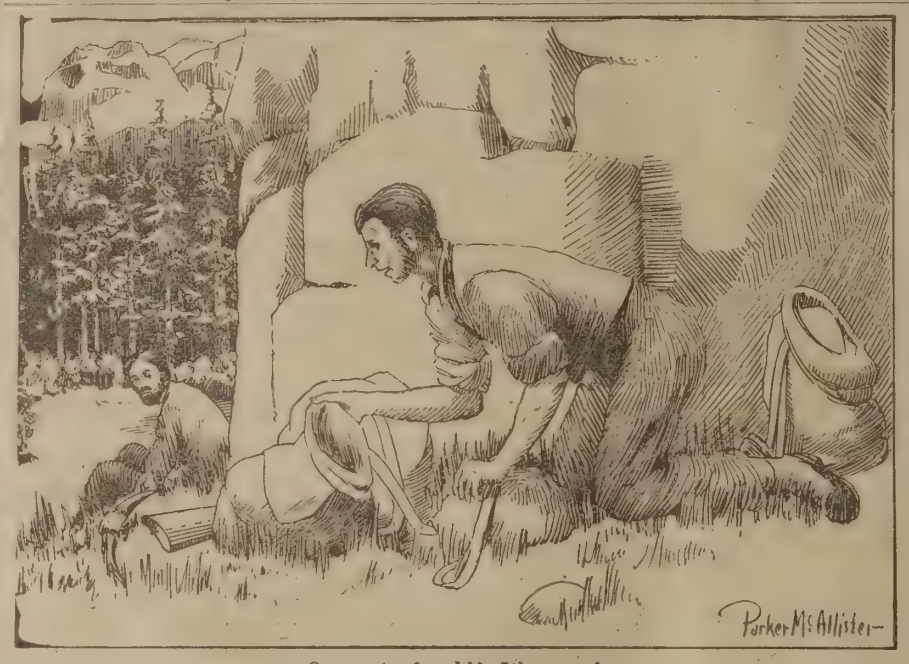
But Holloway said: "That will be hard, after all the tramping we've done around here. And trailing is slow work, even at best. Abe has struck out for Denver, or somewhere in that direction, I'm guessing. Gold's no better than stones out here in this wilderness. When a man gets a lot of that stuff he makes a bee line for some place where he can spend it."

"Of course he'll do that sooner or later, Jess," Cooper answered. "But Sanders is nobody's fool. Unless he's taken final leave of his senses he knows we'll soon be after him. And we can travel faster than he can with all those other things and that 30-pound pot besides. So, in my opinion, he's more apt to strike off into the mountains and hide somewhere till we've worn ourselves out hunting for 'em. After that he'll make for civilization, with his ill-gotten gold and his rotten conscience. The very fact that he carried so much of our flour with 'im seems to me to indicate that he has in mind to say in hiding for a while."

Now Givens spoke: "It looks that way. But I've heard that a man with something crooked on his conscience can't hide away by himself. His conscience gives him so much trouble that he cain't bear to be left alone with it."

"I'm guessin' that ain't a thousand miles from right," remarked Esau. Cooper answered: "Of course a guilty conscience is wretched company. But a fellow who got his own consent to be a thief and a traitor can stand a lot. I still think we'd better make an effort to pick up that rogue's trail before we try to follow 'im. We want

(Continued on page fourteen.)



Our pot of gold! It's gone!

Bits of Fun for Everyone

Enough to Do Some Good.

It was the morning of the new pastor's first sermon, and he was most anxious to make a good impression. As he was rather a vain young man he turned to the old verger and whispered: "Could you get me a glass? A small one will do." The verger hurriedly departed, but soon returned with something under his coat. "I know what it is to be nervous," he said kindly. "I've brought you a whole bottle." The pastor blushed and gasped, for he was not a drinking man. "Bu—but——" he began. "Ssh!" said the verger. "I'd never have got it if I hadn't said it was for you."—The Argonaut (San Francisco).

The First Row.

The editor and his bride went to a summer resort to spend their honeymoon. As soon as they arrived they took a boat and went up the shore and back. The following morning the bride's mother got a postcard which read. "Arrived safely. Grand row before supper."

She read it and sighed. "My!" she muttered. "I don't think they'd begin to quarrel so soon."—Exchange.

Whom Did He Pluck.

Millionaire (speaking to a body of students)—"All my success, all my tremendous financial prestige I owe to one thing alone—pluck, pluck, pluck."

Student—"But how are we to find the right people to pluck?"—Dinuba (Cal.) Sentinel.

A Slight Error.

Flattenflat has arrived home late from the office, and his wife was not the sort of woman to let a thing like that pass unnoticed.

"Why didn't you catch the 7:30 train home tonight, Herbert." she demanded.

"Well, you see, dear," replied Herbert, "I asked a porter from which latform my train started, and he said if I turned to the left I'd be right."

"Well, didn't you?"

"Unfortunately, no, my dear!" replied her husband. "A little mistake on my part. I turned to the right, and was left."—Exchange.

Persisted in His Art.

In a southern city a Shakespeare club occasionally gives performances notable for the local prominence of the actors. In one play a social celebrity had only four words to say, "The queen has swooned." As he stepped forward his friends applauded vociferously. Bowing his thanks, he said, in a loud voice, "The swoon has queened."

There was a roar of laughter, but he waited patiently, and made another attempt:

"The sween has quooned."

Again the walls trembled, but the ambitious amateur refused to surrender. In final desperation he roared, "The quoon has sweened."—Copper's Farmer.

Couldn't Hear the Conversation.

Some time ago I took an old colored man to the picture show for the first time. When he came out I said:

"Well, uncle, did you enjoy the picture?"

"Oh, yes," he said. "the picture was all right, but the piano made so much noise I couldn't hear a word they said."—Charlotte Observer.

FAMILY CIRCLE

ALICE BARLAND
EDITORIAL CONTRIBUTOR

Dear Family Circle: Another new year is before us and again we are permitted to clear off the slate and start over again. I like all these new times, like new days and weeks, months, and especially new years. Don't you?

It gives us a chance to try again and all of us, old and young, need new chances, I think, for, try as we will, we make mistakes.

I have said in other messages to you that I consider thinking a very profitable occupation, so let us sit down together and do a little thinking in preparation of the year ahead of us.

Let us think back a little, just long enough to recall some of our mistakes, and look at them just long enough to see why we made them, so as to avoid making them again. But let us not waste time in idle regrets.

Here are a few things we can resolve to do:

Be slow to criticize and swift to praise, remembering our own shortcomings.

Be ready to enter into the emotions of our friends and dear ones. If they are happy rejoice with them, and if sad be ready with our sympathy.

This is one of the new commandments which Jesus gave from the Mount of Olives: "Rejoice with those who do rejoice and weep with those who weep."

Let us cultivate patience during this coming year. It is so easy to lose our patience and speak the hasty words which we really do not mean, but which stir up contention. Let us consider well the worth-while things and take time to decide whether the offense we are scolding about is really meant to be one, or is it because we have allowed our nerves to become raw and we are making much out of little.

And let us have an ideal toward which to work. What is an ideal? The dictionary says it is "Something existing in the imagination only, conforming to a standard of perfection."

I contend that most failures are traceable to a lack of imagination, or, in other words, to a lack of an ideal. One can have ideals about the small and common affairs of life, such as sweeping the floor and washing dishes. And if one sets a high standard to work up to in small things which are of daily occurrence, the habit will form unconsciously of doing one's best in everything performed.

Let us take the humble task of washing dishes which occurs three times daily in every home in the land. Surely if there is any poetry or pleasure to be found in the task we should find it, and there surely is.

Washing dishes can be a work of art or it can be, and too often is, a very greasy, messy, hateful job. Since it must be done, why not make it a delight.

To begin at the beginning, the very beginning, bring to your mind a picture of the completed task. See all those pots and pans, sticky and greasy, and all the dishes the same way, all clean and shining and in their proper places. See them in imagination that way, then set about to make the picture real.

To start, have a great plenty of very hot water, soap or soap powder, a good clean, soft dishcloth and nice, white ,clean dishtowels. And, whatever else you go without, have two good-sized dishpans and a roomy place to work on. Take from the table all food and the dishes which do not have to be washed every time, leaving nothing but the soiled dishes. Next, with a very limber knife or, better yet, a spatula, which you can buy at a 10-cent store, scrape all the plates and other dishes which need it and stack them according to size. Set them on the table or shelf where they are to be washed, in the order in which they should be washed, that is, the glasses first hand, then the silver, then cups and saucers and so on according to the soiled condition; a third pan is a help and into this I put a folded cloth and as I wash I rinse the dishes in the second pan of very hot water, then turn them in the third pan and very often by the time all are washed those in the third pan are only needing a touch of the dishtowel.

As you wipe stack them as you will put them away on the shelves, and before you know it you will have a row of shining dishes where all the mess was a short time ago. If you get into the spirit of this working toward an ideal, dear friends, you will soon find there is more joy in the drudgery than you dreamed there could be.

Apply this to all other tasks and see if you do not find a new joy in life. I chose this humble bit of household drudgery because whatever else one can pass by, the dishwashing must be done.

Perhaps this will seem a strange New Year message, but if I can in some way get to you what a valuable thing an ideal is I shall have accomplished what I have endeavored to do.

I wish for you a happy and prosperous year. I hope not a day will pass that shall not bring its joy.

"Count that day lost whose low descending sun
Looks not upon some worthy action done."

Sincerely your friend,
ALICE W. BARLAND.

Family Circle Girls

Dear Mrs. Barland: I have been reading the letters from the Family Circle girls and enjoy them very much. There is one class of girls who never write and I would very much like to hear from them. They are the ones who work out at common housework. Why should girls who do this kind of work receive the least pay and why should they be looked down upon or be considered beneath girls who do public work? I know they are, for I am 26 years old and have worked in a number of different places and I know whereof I speak.

There is much more satisfaction in working a certain number of hours at some special work and then being free to go or do whatever one likes. This is much pleasanter than to have to work from the time one gets up in the morning until she goes to bed at night, without one minute to call her own. I think every girl doing housework in a private home

(Continued on page thirteen.)

An Allover Lace Doily



By JEANETTE BELL.

Each crochet worker has her preference of the size thread she likes to use. In making this allover lace doily any size thread may be used. Naturally the size thread will govern the size of the finished piece. The model was made of No. 30 cordonnet crochet cotton. Finer or coarser threads could be selected. Make 5 ch sts, join, forming a circle.

First row: 10 s c into circle.

Second row: * 1 s c into first st, 2 s c into next st, repeat * (all the s c are made by taking up the back half of each st only; this will not be repeated again, but will be understood).

Third row: * 1 s c into each of first 2 sts, 2 s c into next st, repeat *, for this row.

Fourth row: * 1 s c into each of first 3 sts, 2 s c into next st, repeat *, for this row.

Fifth row: 1 s c into each st.

Sixth row: * 1 s c into first st, 2 s c into next st, repeat *.

Seventh row: * 1 s c into each of first 2 sts, 2 s c into next st.

Eighth row: 1 s c into each st.

Ninth row: * 1 d c, 2 ch sts, skip 1 st, repeat *, for this row.

Tenth row: * 1 s c into each st, repeat *, 5 times, increasing as needed to make the work lie flat, the larger the circle the less extra stitches are needed to produce the curved line.

Sixteenth row: 2 ch sts, 1 d c, * 3 ch sts, skip 2 sts, 1 s c, 3 ch sts, skip 2 sts, 3 d c, repeat *, for this row.

Seventeenth row: 2 s c, * 5 ch sts, 1 s c into each d c, repeat *.

Eighteenth row: * 1 s c into each st, repeat *, 5 times.

Twenty-fourth row: * 1 d c, 2 ch sts, skip 2 sts, repeat *.

Twenty-fifth row: * 1 s c into each st, repeat *, twice, increasing as needed to make the work lie flat.

Twenty-eighth row: * 2 s c, 3 ch sts, skip 3 sts, 4 d c, into next st, 3 ch sts, skip 3 sts, repeat *.

Twenty-ninth row: * 1 s c over each d c, 7 ch sts, repeat *.

Thirtieth row: * 2 s c over center 2 s c of previous row, 4 ch sts, 4 d c into center st of ch of previous row, 4 ch sts, repeat *.

Thirty-first row: * 4 s c into d c, 9 ch sts, repeat *.

Thirty-second row: * 2 s c, 5 ch sts, 4 d c into center ch st of previous row, 5 ch sts, repeat *.

Thirty-third row: * 4 s c, 8 ch sts, repeat *.

Thirty-fourth row: * 1 s c into each st, repeat *, twice, increasing as needed.

Thirty-seventh row: * 1 d c, 2 ch sts, skip 1 st, repeat *.

Thirty-eighth row: * 1 s c into each st, repeat *, for the next row.

Fortieth row: * 1 s c, 1 ch st, repeat *, 5 times, 15 d c, 1 ch st, repeat from first star, *, for this row.

Forty-first row: * 1 s c, 1 ch st, over each ch st, making 6 s c, 3 ch sts, skip 3 d c, 2 d c, 2 ch sts, 2 d c all between next d c, skip 3 d c, 3 t c, 3 ch sts, 3 t c, all between the next d c, skip 3 d c, 2 d c, 2 ch sts, 2 d c, all between next d c, 3 ch sts, repeat *.

Forty-second row: * 1 s c, 1 ch st, over each ch st of previous row, making 5 s c, 3 ch sts, 2 d c, 2 ch sts, 2 d c, all over 2 ch sts of previous row, 3 t c, 3 ch sts, 1 t c, 2 ch sts, 1 t c, 3 ch sts, 3 t c, all over ch between t c of previous row, 2 d c, 2 ch sts, 2 d c, 3 ch sts, repeat *, for this row.

Forty-third row: * 1 s c, 1 ch st over each ch st, making 4 s c, 3 ch sts, 2 d c, 2 ch sts, 2 d c over 2 ch sts, 3 t c, 3 ch sts, 3 t c, over 3 ch sts, 2 ch sts, 3 t c over 2 ch sts, 2 ch sts, 3 t c, 3 ch sts, 3 t c over 3 ch sts, 2 d c, 2 ch sts, 2 d c, 3 ch sts, repeat *.

Forty-fourth row: * 1 s c, 1 ch st over each ch st, making 3 s c, 4 ch sts, 2 d c, 2 ch sts, 2 d c, 3 t c, 3 ch sts, 3 t c, over 3 ch sts, ** 3 ch sts, 3 t c, repeat **, 3 times, all over 3 ch sts, 2 d c, 2 ch sts, 2 d c, 4 ch sts, repeat *.

Forty-fifth row: * 1 s c 1 ch st, 1 s c, 4 ch sts, ** 1 s c, 3 ch sts, skip 2 sts, repeat **, around the scallop, 4 ch sts, repeat *.

Forty-sixth row: * 1 s c, 5 ch sts, ** 1 s c over ch of previous row, 4 ch sts, repeat **, for each ch, repeat *, completing the doily.

To make a set of these doilies, for the smaller size start the scallops after the 25th row.

For a larger doily repeat from 28th to 36th row, once or twice as desired, making a wider band of s c between the rows of open work.

If your thread is very fine increase the number of rows of s c, forming each solid band to make the size desired.



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High Points in News of the Week

One of the important questions now before the officials of this country is whether or not the United States shall call an international conference to consider economic problems, especially the financial situation throughout the world. The proposal has both friends and foes. An interesting development in the program is a wide split between Senators Borah of Idaho and Johnson of California. The former is strong for the conference. The latter declares that it would mean the dumping into the lap of America of the financial woes of Europe.

David Lawrence, Washington correspondent on political subjects, last week declared that the policy of this country was not changing with reference to Europe, but that it was merely developing. He intimated that there was a broadening of the policy along lines that would permit this country to lend a hand in solving Europe's problems, but not permit America to get legally entangled. He declared that President Harding was opposed to the use of the words "isolated" and "aloof" in refering to America's position with reference to world problems. There are, however, those who would have this country join absolutely in the league of nations or any other international body designed to solve unitedly the world's problems. There are others who would take a halfway course. There are others who would keep America entirely "aloof" and "isolated" from all European affairs. The controversy is a gripping one.

* * *

The peace conference in Lausanne, Switzerland, where representatives of the leading European powers and Turkey are trying to solve the Near East problems is, at this writing, anything but successful. Turkey is standing firm for privileges and concessions that none of the allied nations are willing to grant. Freedom of the Dardanelles and the Bosphorus to the commerce and the peoples of all nations is a question involved. It is generally understood that Germany and Russia are standing back of Turkey in her demands. The peace conference adjourned from Saturday until Tuesday for the observation of Christmas.

* * *

The United States congress adjourned ate last week for a four-day recess for Christmas.

The most interesting development in congress during the last week was perhaps the attempt of a strong contingent of senators to delay action on the ship subsidy bill and take action on the rural credits legislation that is now being considered, a digest of which appeared in last week's issue of THE FARMER. An effort was made to secure enactment of the Norris bill creating a $100,000,000 corporation under government control for the regulation of buying and selling of staple commodities.

* * *

United States Senator Jones of Washington announced last week that he was going to propose an amendment to the Constitution providing that children born in this country of alien parents no longer automatically become citizens. It is said that the proposed amendment is intended primarily to meet the Japanese situation. Japanese children born in this country now are United States citizens, notwithstanding the fact that their parents can not become citizens.

* * *

The premiers of France, England, Belgium and Italy will meet in Paris January 2 to take up again the problem of German reparations. It is reported likely that they will ask the United States to take a hand in the matter. France is understood to be opposed to the United States being given power, charging that this country would be too lenient with Germany. France has gone on record that unless settlement is made before January 15 she will alone march into the Ruhr district and occupy it as a penalty for nonpayment of reparations by Germany.

* * *

The cost of living among wage earners' families in the United States on November 15, 1922, was 58.4 per cent higher than in July, 1914, according to the results of an investigation of conditions the country over, announced by the national industrial conference board.

There was an increase of 1.3 points, or 8-10 of 1 per cent, between October 15 and November 15, brought about by continued increases in food, clothing and coal prices and higher rents.

Between July, 1920, when the peak in the cost of living was reached, and November, 1922, the cost of living decreased 46.1 points, or 22.5 per cent, the report said.

* * *

The Ford Motor company has announced a plan to build a $6,000,000 plant near Detroit for the building and assembling of automobiles. The creation of employment for men is declared to be one of Mr. Ford's objects.

* * *

The American Federation of Labor declares that 150,000 railroad shopmen are still on a strike and that the strike is effective on all but 65,000 miles of the country's total railroad mileage of 260,000.

Freight Reductions

We are pleased to report that the transcontinental railroads, in order to meet water competition at the Pacific coast terminals, have declared a purpose to make sweeping freight rate reductions on many commodities shipped from the east and middle west to the Pacific coast and Rocky mountain territory. These rates, as explained by C. O. Bergan, traffic manager of the Spokane Merchants' association, "are voluntarily proposed by the carriers as the result of the decision of the interstate commerce commission of November 11. They mean material reductions to us, probably 25 per cent, and should mean material cuts in prices."

We are confident that our readers in territory west of the Cascade mountains will rejoice that these rate reductions are to benefit all the consumers and producers of the Pacific northwest—the farmers of the interior as well as the farmers on the west slope of the mountains.

The railroads had first proposed to make reductions only to the Pacific coast terminals and to leave the rate structure to the interior at the existing high and burdensome level. But a great organization, known as the Intermediate Rate association, extending from the Canadian line to the Mexican border and taking in all the territory east of the Cascade mountains, to the eastern slope of the Rocky mountains, went before the interstate commerce commission and protested against that regional injustice. We were glad to support that demand for fair dealing, insisting that the farmers and other consumers of the interior were just as much entitled to rate reductions as their friends and neighbors on the west slope of the mountains.

The interstate commerce commission sustained that just view of the case and told the railroads that if they wanted to meet water competition they must make the reductions apply to the interior as well as to the Coast terminals.

In this connection an important fact should be kept in mind—this decision and this victory were won under the Esch-Cummins railroad law. We agree that that measure is not perfect, because it was the work of man, and no work of man is perfect. But it did lay down certain rules of square dealing, as between the railroads and the people and the railroads and different communities, that should be preserved. This victory could not have been won under the old law—a fact made clear by the decision of the commission. If the Esch-Cummins law is to be reconstructed it should be amended with an intelligent understanding of these distinctions.

Wenatchee Apples

Only 58 Per Cent Crop Shipped

By E. H. M'PHERSON.

With the apple shipping season practically closed by the extreme cold weather, shippers and growers of the Wenatchee district are taking stock of the situation in order to ascertain how great their loss will be and how much they can save from the wreck.

About 25 Pacific Fruit Express cars daily have been loaded and shipped recently over the Union Pacific from Spokane. This constitutes the entire movement, except about a dozen cars on the average that go to Seattle for export shipment or to go into storage. The Great Northern has placed an embargo on all shipment over its line east of Spokane.

Total shipment of apples out of the district up to December 16 were about 7500 cars and there are 5750 cars still left. In other words, 58 per cent of the crop has been shipped, while last year at the same time 82 per cent of the crop had rolled up to the same date.

Of this 5750 cars about 2500 should be moved out before the middle of January in order to get into the market at a seasonable time. It is manifestly impossible to do this; in fact, from 1500 to 2000 of them will probably be lost through depreciation and decay.

An example of what railroad competition will accomplish is found in the case of Neppel and Wheeler, neighboring stations in the Moses lake section. The Northern Pacific passes through Neppel and the Milwaukee has a station at Wheeler. If one road does not furnish cars growers can haul their fruit by truck to the other station, only a few miles distant. As a result the last of the 210 cars grown in the near-by orchards was shipped on December 12. Other stations in the district still have over 40 per cent of their crop on hand, being compelled to depend upon one railroad without competition.

The Neppel case is being strongly worked up by advocates of the Wenatchee Southern railroad and will be used in the hearing before the interstate commerce commission held in Washington, D. C., January 10. The Great Northern has furnished many strong arguments in favor of granting a certificate to the Wenatchee Southern during the last season, but Neppel is the most striking one of all.

While the Great Northern has placed an embargo on apple shipment, the Milwaukee is sending regular fruit trains from Spokane to Minneapolis and Chicago, operated on a six-day schedule to the latter city. The two roads run through similar country and only a few miles away from each other.

It is now possible to make a fairly accurate estimate of the loss to the district through the car shortage. Fully 2500 cars of apples will never be shipped at all, and these are worth to the growers $2,000,000. In addition to this a loss, fully $1,000,000, has been sustained through deterioration in quality of apples shipped, but arriving in bad condition. It is safe to assume that another $1,000,000 will be added before the season is over on apples now on the way or in storage. Fears are expressed that the later varieties will suffer a further loss of $1,000,000 before they reach the market.

Farm Business and Markets Outlook

(Continued from page five.)

stockers and feeders, $7.50@8.25.

Sheep—Prime lambs, $10.50@11; fair to medium, $9@10; yearlings, $7@8; wethers, $6.50@7.50; mutton ewes, $3@5.75; feeder lambs, $9@11.

The Grain Market.

PORTLAND, Ore., Dec. 22.—Wheat—Hard white, Bluestem, Bart, $1.50; soft white, $1.25; western white, $1.24.

Grain futures—Wheat—Bluestem and Bart, December, February, $1.50; January, $1.49; soft white, December, January, February, $1.25; western white, December, January, $1.24; hard winter, January, February, $1.19; northern spring, January, February, $1.20; western red, January, February, $1.16.

Oats—No. 2, 36-pound natural, December, January, February, $35; 38-pound naturals, December, January, Febrary, $37.

Corn—No. 2 eastern yellow shipment, December, $32.50; January, February, $33; No. 3 eastern yellow shipment, December, January, February, $32.

SEATTLE, Dec. 22.—No grain market. Yesterday's car receipts: Wheat, 10; corn, 11; hay, 7; flour, 4. ¼ ¼ ¼ ¼ ¼ ¼ ¼

PULLMAN, Wash., Dec. 22.—Red, 98c; white, $1.02.

DAVENPORT, Wash., Dec. 23.—Bluestem, $1.37; Marquis, $1.05; Gold Coin, $1.05.

LEWISTON, Idaho, Dec. 23.—Red, $1; white, No. 1, $1.06.

WALLA WALLA, Dec. 23.—Bluestem and Bart, $1.07; Club, $1.06; Turkey Red, $1.01.

ODESSA, Wash., Dec. 23.—Bluestem and Bart, $1.46; Marquis, $1.10; Turkey Red, $1.03; Jones Fife, $1.05.

RITZVILLE, Wash., Dec. 23.—Bart, $1.46; Red, $1.08; Fife, $1.02.

POMEROY, Wash., Dec. 23.—Turkey Red and White Hybrid, $1.02.

Hay and Feed Grain.

PORTLAND, Ore., Dec. 23.—Millfeed—Price f. o. b. mill; millrun, ton lots, $35; middlings, $47; rolled barley, $42@44; rolled oats, $45; scratch feed, $49 per ton.

Corn—White, $42; cracked, $44 per ton.

Hay—Buying prices, f. o. b. Portland: Alfalfa, $21@22 per ton; cheat, $20; oats and vetch, $22; clover, $20; valley timothy, $23; eastern Oregon timothy, $24.

SPOKANE, Dec. 23.—Wheat—Feed wheat, $44 ton.

Oats—$42 per ton; rolled, $44.

Corn—$42 per ton; cracked corn, $44 ton.

Barley—$42 per ton; rolled, $44.

Bran—$33 ton.

Bran and Shorts—$34 ton.

Shorts—$36 ton.

Alfalfa, $24 ton; timothy, $28 ton; mixed hay, $24 ton.

General Produce.

PORTLAND, Ore., Dec. 23.—Butter—Cubes, extras, 47@48c lb; prints, parchment wrapped, box lots, 51c; cartons, 52c. Butterfat, 53c delivered Portland; 50c station buying price.

Eggs—Buying prices: Henneries, 40c; current receipts, 36c. Selling prices: Front street, candled ranch, 45c; selects, 49c; pullets, 40c; association selects, 50c; association firsts, 47c; association pullets, 45c.

Cheese—Tillamook triplets, price to jobbers, f. o. b. Tillamook, 30c; Young America, 31c; longhorns, 31c pound.

Poultry—Hens, 14@22c; springs, 17@20c; ducks, white, 18@20c; geese, 18c; turkeys, alive, 25c; dressed, choice, 31c.

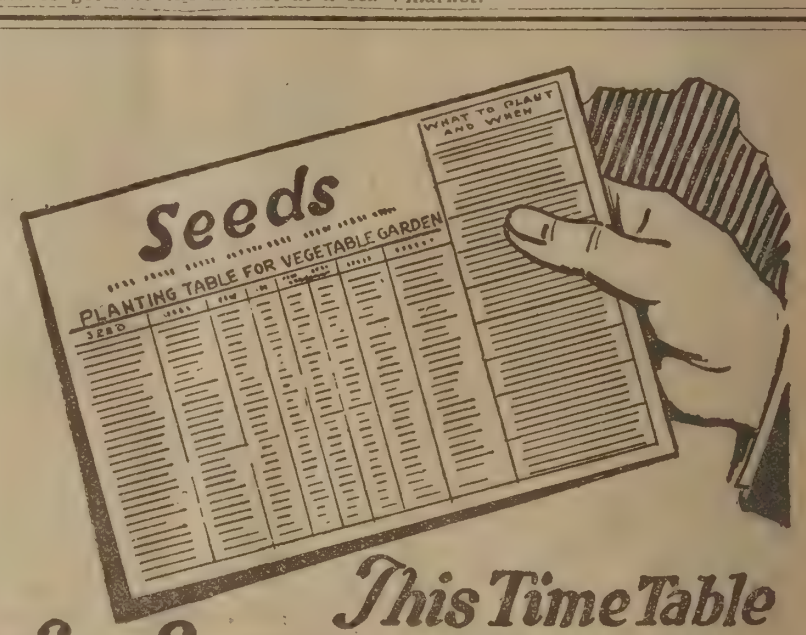
Veal—Fancy, 12½c per pound.

Pork—Fancy, 12½c per pound.

SPOKANE, Dec. 23.—Poultry, live weight—Hens, 4 lbs. and over, 15c; light hens, under 4 lbs., 10c; springs, 14c; old roosters, 8c; ducks, 15c; geese, 15c.

Fresh ranch eggs—$12@13.50 case, according to quality.

Butterfat—51c lb.



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Just Folks

The Germans are not all brutes nor are Americans all angels. The Irish have their virtues and the English have their faults. The same line of thought applies to nations in general as well as to families in particular.

Perhaps the Rt. Rev. Herman Page, bishop of the Spokane diocese, announced a fundamental when he said that as long as babies are born there will be quarreling in the world.

Dreams of the millenium are not to be abandoned, but something is to be done right now and here in trying to quiet the quarrels among grown-up babies.

Bishop Page made a very practical suggestion when he added:

"But we can, in a measure, solve the problem by right living. It is the only solution. By right living I mean loving our fellows. Love means making concessions, doing the things we don't want to do in order to make some one else happy. We must train our children with that in view."

William Rhodin was in Portland the other day and told of his experience while a German prisoner during the war. In the Argonne he fell with a shell wound through his right leg and bad injuries to his back. First aid treatment was given him on the field but during the fortunes of the battle he was left wounded and almost dying. He was picked up by the German hospital service, taken to a hospital, his wounds dressed, but his leg was amputated, which he thinks might have been saved. He said he had about all of the company payroll on him, several thousand French francs, a lot of English money, almost $500 in United States money and a valuable gold watch. When he got out of the hospital all of this was returned to him. Reading of this I was tempted to think of these things.

Bickering, quarreling, backbiting and all that sort of thing comes pretty easy at times and there are times when it is downright hard work to avoid the temptation. Fighting with one's self is a real fight; is a full man's job and the sooner we are reconciled to it the better off we will be and the better off will our neighbors be. E. A. S.

Family Circle Girls

(Continued from page eleven.)

should have one day off every week if she desires it.

I like housework and would like to do it under right conditions, but I believe the time will come when it will be impossible to get domestic help if things don't change.

I think M. P. is right about the kissing question. Kissing is considered unsanitary, so isn't that reason enough for not allowing it? "DISCONTENTED."

Dear Mrs. Barland: I read "Billy's" letter in a recent number of THE FARMER and also M. P.'s. I never have written before, but I can't keep still any longer. I think Billy is just right. I would like to know her, as she is the kind of girl who can have a good time and still be a good girl.

I don't think M. P. ever went with a boy or she wouldn't talk the way she does. As for a girl not knowing when the right boy comes along if she kisses all the boys she goes out with, I think there is nothing to worry about, as I believe she will know the right one when he comes. If M. P. had ever kissed a boy she would know that a girl doesn't think she is in love with a boy just because she kisses him.

Like "Billy," I have kissed a good many boys and expect to kiss more and still expect to know the right one when he comes. M. P. says a boy is just playing with a girl's affections when he kisses her and will forget her for the next pretty girl that comes along. I wonder if a girl isn't the same way?

I think dancing is just great and I go to nearly every one in the country around here. Unlike some girls who never tell their mothers anything, I tell mine everything; we are regular "pals" and I haven't a secret from her.

I am 5 feet 2 inches tall and weigh 135 pounds. I have golden hair, which is bobbed, a fair complexion and no freckles. I have worn my dress short, but now that the style calls for longer ones I am making them longer. I think paint and powder are all right and I use both, but not to an extreme.

Don't think I can't do anything but paint and powder, for I do all the cooking and baking and all the house work at home because of my mother's ill health. I also play the piano and am teaching several pupils. I crochet, tat and do all of my plain sewing and I am only 18 years old.

We live on a large farm, but I have never milked or done outside work because my parents think a girl shouldn't do a man's work. "PEGGY."

Latest High Class Patterns for the Home

Please order the patterns you desire at least two or three weeks before you wish to use them. Desiring to obtain the latest high-class patterns for its readers, THE FARMER has made arrangements to have them sent direct from the east, and under present mailing conditions it takes about that time for them to reach you.



3882. Lady's House Dress—Cut in seven sizes: 36, 38, 40, 42, 44, 46 and 48 inches bust measure. A 38-inch size requires 5 yards of 36-inch material. The width at the foot is about 2 yards. Price 10 cents.

4057. Girl's Dress—Cut in four sizes: 8, 10, 12 and 14 years. A 10-year size requires 4 yards of 32-inch material. Price 10 cents.

4213. Lady's Apron—Cut in four sizes: Small, medium, large and extra large. A medium size requires 3 3-8 yards of 36-inch material. Price 10 cents.

4200. Child's Dress—Cut in five sizes: 1, 2, 3, 4 and 5 years. A 4-year size requires 2 5-8 yards of 32-inch material. Price 10 cents.

4204. Girl's Dress. Cut in four sizes: 4, 6, 8 and 10 years. A 6-year size requires 3 yards of 36-inch material. Price 10 cents.

4217. Lady's Dress—Cut in seven sizes: 36, 38, 40, 42, 44, 46 and 48 inches bust measure. A 38-inch size requires 3 7-8 yards of 54-inch material. The width at the foot is 3 1-8 yards (with plaits extended). Price 10 cents.

4202. Junior's Dress—Cut in three sizes: 12, 14 and 16 years. A 14-year size requires 2 1-2 yards of 54-inch material. Price 10 cents.

3913. Lady's Dress—Cut in six sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. A 38-inch size requires 4 3-4 yards of 44-inch material. The width at the foot is about 2 yards. Price 10 cents.

4219. Misses' Dress—Cut in three sizes: 16, 18 and 20 years. An 18-year size requires 3 1-4 yards of 54-inch material. The width at the foot without lapped part of front is 2 1-4 yards. Price 10 cents.

2937. Set of Toys—Cut in one size. It will require 5-8 yard of 24-inch material for either toy. Price 10 cents.

3956-4221. Girl's Blouse and Knickers—Blouse 3956 cut in seven sizes: 4, 6, 8, 10, 12, 14 and 16 years. Knickers 4221 cut in five sizes: 8, 10, 12, 14 and 16 years. To make the costume for a 14-year size will require 5 yards of 32-inch material. Two separate patterns, 10 cents for each pattern.

3739. A Pretty Negligee—Cut in four sizes: Small, 34-36; medium, 38-40; large, 42-44; extra large, 46-48 inches bust measure. A medium size will require 5 5-8 yards of 36-inch material. For sacque length 4 7-8 yards will be required. Price 10 cents.

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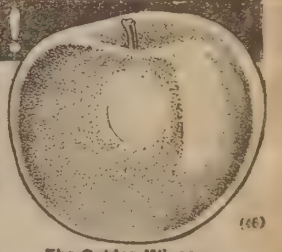
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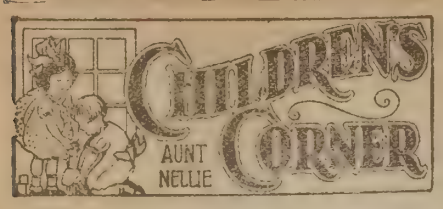
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A nice letter comes to us from Leda Ruby Harrel, a cousin who is 10 years old. Leda lives in northern Washington. She is in the third grade at school.

Florence Boner is the only child in the Boner home near Snoqualmie falls, western Washington. Peanuts, a little dog, is a lively playmate and then Florence has a cat and three kittens to pet. She goes two and a half miles to school and has a fine teacher. She says she likes to go to school.

This is what we hear from Edna Johnson of Snohomish county, Washington. "We live on a 20-acre farm and we have six cows and two heifers. We had a very nice garden this year with many pumpkins in it for Halloween. We had so much fun Halloween. I have a pet cat and a little pig. I had three kittens, but two died." December 8 is Edna's birthday. She will be 10 years old then.

Kathryne Buckley's home is on a stock farm in northern Okanogan county (Wash.) near the Canadian line. She says she often goes with her father to look for cattle on the range and rides her own pony. Her pony's name is Shorty. Kathryne will be 10 years old February 17, 1923. The schoolhouse is only a quarter of a mile from Kathryne's home. She is in the fourth grade.

Verna Ferch writes to tell us about her new dolly who walks, talks and goes to sleep. Verna bought her with money she earned picking strawberries last summer. Dolly says "mamma" and sometimes she just says "ma." Verna would much rather have her dolly say "mamma," but brother thinks it is great fun when she doesn't, and when he gets a chance he makes her say "ma." Verna lives near the ocean in Grays Harbor county, Washington.

Birthday Greetings

THURSDAY, December 28—Opal Bridges, 9 years old; Bertha Osborn, 9; Zelma Vandecar, 11.

FRIDAY, December 29—Lola Adams, 10 years old; Aili Kynsie, 8; Leona Maurer, 10. Eunice James, 7.

SATURDAY, December 30—Lucille Jackson, 10 years old; Frieda Klippert, 10; Doris Munson, 9; Sigrun Agnes Runolfson, 10; Harriet E. Russell, 11.

SUNDAY, December 31—Evelyn Lorraine Cronawert, 10 years old; Anna Schrenk, 11; Nelle May Shephard, 8; Eula Turner, 11; Caroline Wesch, 8; Esther Williams, 11; Anna Bergh, 11.

MONDAY, January 1—Elsie Crabb, 11 years old; Muriel Daugherty, 7; James Miller, 8; Maude Warfield, 10; Ernest Verner Wicklund, 11.

TUESDAY, January 2—Matilda Anderson, 9 years old. Margaret Reid, 9.

WEDNESDAY, January 3—Mildred Sherrod, 11 years old.

LETTERS WELCOMED BY AUNT NELLIE.

Among recent letters received by Aunt Nellie are those from cousins whose names follow. A few of these will be published each week in the regular edition of THE FARMER and others will appear from time to time in The Junior Farmer:

Johnnie Haveland, Senvi Naranen, Audrey Weeks, Lester Glover, Thelma Lucile Nelson, Matt Naranen, Marie Clark, Rosa Schlien, Georgia Ellen Penney, Emma Jones, Elsie Stark, Esther Thiemenz, Ellen Peterson, Helen Ulrich, Bessie Smathry, Clara Bernice Smith, Martha Moorehouse, Lempi Lakko, Lester Haveland.

BEDTIME STORIES

By THORNTON W. BURGESS.

DANNY MEADOW MOUSE WORRIES.

Danny Meadow Mouse sat on his doorstep with his chin in his hands, and it was very plain to see that Danny had something on his mind. He had only a nod for Jimmy Skunk, and even Peter Rabbit could get no more than a grumpy "Good morning." It wasn't that he had been caught napping the day before by Reddy Fox and nearly made an end of. No, it wasn't that. Danny had learned his lesson and Reddy would never catch him again. It wasn't that he was all alone with no one to play with. Danny was rather glad that he was alone. The fact is, Danny Meadow Mouse was worried.

Now, worry is one of the worst things in the world, and it didn't seem as if there was anything that Danny Meadow Mouse need worry about. But you know it is is all that ailed Danny Meadow Mouse that the easiest thing in the world to find something to worry over and make yourself uncomfortable about. And when you make yourself uncomfortable you are almost sure to make every one around you equally uncomfortable. It was so with Danny Meadow Mouse. Striped Chipmunk had twice called him "Cross Patch" that morning, and Johnny Chuck, who had fought Reddy Fox for him the day before, had called him "Grumpy." And what do you think was the matter with Danny Meadow Mouse? Why, he was worrying because his tail was short. Yes, sir, that bright morning.

You know some people let their looks make them miserable. They worry because they are homely or freckled, or short or tall, or thin or stout, all of which is very foolish. And Danny Meadow



Danny at once became conscious of his own stubby tail.

Mouse was just foolish in worrying because his tail was short.

It was short! It certainly was all of that! Danny had never realized how short until he chanced to meet his cousin, Whitefoot, who lives in the green forest. He was very elegantly dressed, but the most imposing thing about him was his long, slim, beautiful tail. Danny had at once become conscious of his own stubby little tail, and he had hardly had pride enough to hold his head up, as became an honest meadow mouse. And ever since he had been thinking and thinking and wondering how his family came to have such short tails. Then he grew envious and began to wish and wish that he could have a long tail like his cousin, Whitefoot. He was so busy wishing that he had a long tail that he quite forgot to take care of the tail he did have, and he pretty nearly lost it and his life with it. Old Whitetail the marsh hawk had spied Danny sitting there moping on his doorstep, and had come sailing over the tops of the meadow grasses so softly that he had all but caught Danny. If it hadn't been for one of the merry little breezes, Danny would have been caught. And all because he was envious. It's a bad, bad habit, and Danny Meadow Mouse has learned better now.

Pike's Peak or Bust

(Continued from page ten.)

to know for certain which way he's heading."

"How'd we better go about that, Mr. Cooper?" Orlando wanted to know.

"I'm of the opinion we ought to do as a good trailing hound does when he loses the scent. We can circle."

"Circle! How circle?" Esau inquired.

"Why, we'd better go out two or three hundred yards from camp and make a complete circle, or circuit, with our camp for a center. If we look close enough we're likely to find some place where he's passed. When we once get his course we can soon decide on our next step."

"But we've all been passin' in and out. I don't see how we can discover a lone man's trail," objected Esau.

"Neither do I," Holloway said.

"I know it won't be easy. But I'd like to give the matter a fair trial," continued Cooper. I've heard that every criminal leaves some trace that can be discovered if a determined effort is made to discover it. It's a part of that eternal law, 'Be sure your sin will find you out.' Let's try, anyhow."

"I'm willing. And let's be quick about it. Night will soon be on us," answered Holloway, promptly.

The others agreed. Now the five men went about 300 yards from the camp, then spread out and began to move slowly around. And as they moved their eyes searched the ground.

In most places there was a deep litter of pine needles. That would make trailing very difficult, at least for people unaccustomed to trailing. But here and there were bare spots, and it was in some of those that the party hoped to learn something.

Slowly, carefully, the five men moved, but without discovering anything till they has passed almost wholly around the camp. Then, in a little patch of sand washed down by rainwater Orlando made a discovery that brought him to a sudden halt.

What he saw was the marks made by two bootheels, where they had slid through the sand.

"Now how came anybody to make those?" he asked himself, though the words were spoken aloud.

"Found somethin' there, Lando?" called out Esau.

"B'lieve I have. Step over here a minute and see what you make of this."

Esau was soon standing with his hands on his knees, gazing down at the marks. "Even if some of us passed along here I cain't recollect anything that caused us to slide our heels like that," he said.

But now Jess Holloway, who had come up behind the two already there, made another discovery.

"What's this here by the side of the heel marks? Yes, and on the other side, too?"

The other men looked. Then all raised their eyes and stared at one another.

"Moccasin tracks!" gasped Orlando.

"Right you are! Moccasin tracks and nothing else," Jess answered. Then he called to Cooper and Givens: "Come over here, you two! We'll show you something!"

"Now what does this mean?" demanded Orlando, as he began to study the tracks again.

"It means—it must mean that we've had visitors," replied Esau.

"Yes, and visitors that wore moccasins—redskins!" said Jess.

Presently the whole party of five were gathered around that little patch of sand, studying its suspicious signs. But all were careful not to step on the sand themselves.

Now Cooper spoke: "Men, to me these signs seem to tell a new story. And it's a story I'm glad to read for some reasons, and sorry to read for others. Instead of being a scoundrel, as we supposed, our missing partner seems to be a prisoner. He's been captured by the Indians. These tracks can only mean that an Indian had 'im by each arm, and they were marching 'im away through the woods. Here's for some reason, he held back, and his captors forced 'im along."

"My guess is that he r'ared back a-purpose in this sandy place, so's to make a plain trail," Esau suggested. "Abe's a purty knowin' feller."

"He is," Cooper agreed. "And he might have done—yes, ten chances to one he did do that very thing."

"I'm wondering how the Utes captured him," Orlando was speaking. "Wasn't any sign of a struggle in camp that I could see."

"Maybe they threatened to shoot 'im, and he didn't dare struggle," was Holloway's surmise.

"With the information we've picked up here, let's hurry back to camp and see what can be discovvered there," proposed Cooper. "If redskins have visited us they must have left us a fe wsigns somewheres."

CHAPTER TWENTY-NINE.

Sanders Rescued From His Captors.

The whole party were soon in camp, looking over every foot of ground. There had been much tramping here; but, in some dead ashes, where nobody commonly walked, they discovered one very dis-



The thongs binding the captive were quickly slashed.

tinct moccasin track, wth parts of two or three similar tracks close by.

"No doubt about it now. Some of those redskins that trailed us have been here," Cooper told his companions, after examining the footprints. "And that means that our vanished partner is both an honest man and a captive."

"First part of that's bully good news," declared Esau.

"The best news we could have received," said Cooper. "Why, do you know, it actually hurt my feelings to think I'd been working and eating and sleeping with a thief? Now—now I know better."

"But Abe Sanders is undoubtedly a captive in the hands of the Utes. Not much good news in that," Holloway reminded them.

Cooper answered: "No, that's bad news—terrible news. But—but it's better than the other. Better that what we believed at first. I'd rather be a captive any day in the year than a thief—a scoundrel that would rob his own partners. But I'm

(Continued on page sixteen.)

Learn by Doing

Each of the 17 members of the Pierce county bee clubs started out last spring with a new hive of bees purchased with their own money, bought the needed equipment, and carried the work through the summer, making a total net profit of $497. This, of course, included only the honey and increase of the original swarm. One club was at Alder and the other at Edgewood.

When the club members first began their work there were few that knew anything about taking care of bees, but trusted that part to their club leader, J. W. Peterson. As the season progressed the boys met at the homes of different members where they were shown some of the seasonal problems of beekeeping. Each meeting was at a different home and since there was a meeting every week, it was not long until every member's bees had been gone over by the leader and the boys as well.

By the time the honey flow was over each member was well versed in the subject of honey production and one boy gave a bee demonstration at the Western Washington fair at Puyallup. The entire club gathered some of their best products and made up an exhibit which compared favorably with those arranged by the experienced beekeepers of the county. After the display had been taken home there came a request that it be sent to the Land Products show at Portland.

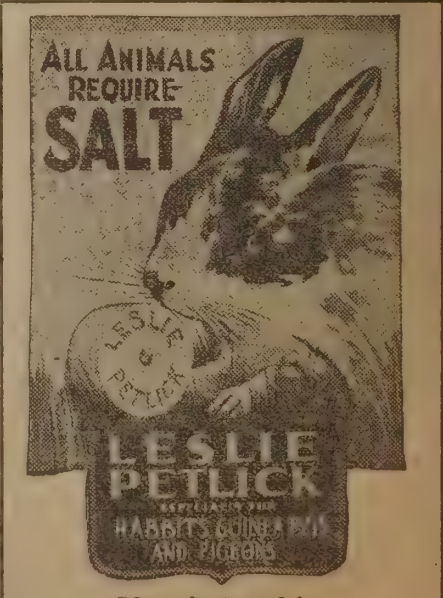
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Two Breeds

o Improve Quality of the Milk

"I have no intentions of mixing the two reeds of cattle, but I plan on keeping bout 20 good Holsteins and the same umber of Guernseys in order to produce good quality of milk for retail trade," id Fred Nelson of Renton Junction, King unty, when asked by a representative of HE FARMER why he kept the two reeds. "I have found that the customers ke milk that is well colored and it is sy to produce this with a few Guernseys the herd. The Holsteins, however, are e best breed for producing the quantity f milk and I believe in keeping all of y best milkers in order to keep up the pply."

At present the Nelson herd is made up rgely of Holsteins, but Mr. Nelson exressed himself as being anxious to inease the number of Guernseys as soon s possible. The herd bull is a junior -year-old animal from the Milky Way rm at Sumas. He shows a splendid conrmation and is a good typed animal. Mr. elson has raised 21 heifer calves sired y this bull since bringing him to the rm. The young heifers are taken from e herd as soon as they are old enough to asture and kept at Mr. Nelson's 320-acre rm near Roy, Pierce county. This place part pasture and part meadow, and a an is employed to look after the stock nd feed them through the winter. As any as 60 head have been kept at this lace, part of which were taken to the elson herd as they were about to freshen. Ir. Nelson plans on securing at least 10 ew cows from this place every year.

"We usually raise our own hay here on he home place," said Mr. Nelson, "and e very seldom have to buy more than a arload of alfalfa in early spring. This ear, however, we did not put up as much ay and will have to buy more. We have 5 acres of land for both hay and pasture. ight acres of this is used for growing orn for the silo. It grows well on this ottom land, and we plan on feeding ilage from November until May every ear.

"Before we had a silo we used to feed angels exclusively and the cows did well n them, but we like the silage much betr and feel that it does not take as much me as the growing and harvesting of the ame acreage of mangels. As a general ule our corn grows from 20 to 22 tons f silage to the acre, but one year we had n exceptional crop which produced 35 ons. It was a white Dent corn and we ept some of it for seed, but we lost it ne year from a bad frost and never have een able to get the same kind since."

Mr. Nelson told how he kept his pasture n the best shape by plowing it up occaionally and reseeding for a hay crop. He entioned Italian rye grass as a very good ddition to any hay or pasture crop. It omes up early and produces a luxuriant rowth and is well liked by the animals.

A WINNER OF JERSEY MEDALS.

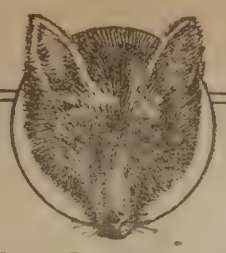
The Jersey cow, Double St. Mawes, wned by David McLeod, Bellinghom, Vash., has taken her place among the great cows of the breed. Double St. Mawes was senior and grand champion at he Whatcom county fair, at Lynden, last all, where she gained the admiration of ll who saw her. She won two silver medls and one gold medal before she was ive years old. Her first official test was s a senior yearling, her fat production hat lactation being 515.58 pounds, with n average test of 6.3 per cent. She carried her calf 216 days. Her second test vas for 305 days, and she carried a calf 30 days of the time. The medal requirement is 155 days. Her average test was .43, and her fat production 683.53, which vas the world record for age and also for ll ages in the 305-day division of the A. J. C. C. Register of Merit of work. During her test Double St. Mawes ran most of the time on pasture. She was milked three times a day four months and he balance of the time only twice a day. Her record was completed early last summer. Within the last few weeks an Oregon cow, Lulu Flossie of Ashburn 2d, owned by J. M. Dickson & Son, has displaced her for both records, with 698.32 pounds of fat, but it does not alter the fact that Double St. Mawes is one of the great cows of the Jersey breed in the northwest. She has a place in the Jersey "hall of fame," as an ex-world record cow. Her sire, St. Mawes of Edendade, has a double infusion of the blood of the two great gold medal bulls, St. Mawes and Rosaire's Olga Lad.

A GREAT DUROC JERSEY.

In a recent issue of THE FARMER there appeared a picture of Great I Am 1st and an item of comment on his qualities. The writer failed to note, however, that this boar was a Duroc Jersey. George O. Swales of Johnson, Whitman county, who owns him, considers him the best herd sire he has eer used. He is an animal of outstanding qualities and great vigor, both of which he stamps on his litters.

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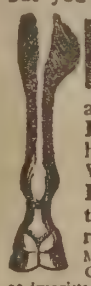
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Payette Duroc Farm, Payette, Idaho, January 26.
Address these men for catalogues, now ready for distribution.
The railroad and interurban connections from one of these sales to the next one, are the very best. Come and spend five days with us.

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Idaho Sensation is sired by Great Orion Sensation, the world's twice Grand Champion Duroc boar.
If you are in the market for real seed stock, this is your chance.
REMEMBER THE DATE, JANUARY 17, 1923.
For Catalog write W. H. RAMBO, Owner, Buhl, Idaho.
COL. E. O. WALTERS, Auctioneer, Filer, Idaho.
E. J. FJELDSTED, Fieldman, Blackfoot, Idaho.
Following this sale there will be three other Duroc Jersey hog sales in Twin Falls county at places and dates as follows:
Twin Falls county Club Boys, at Twin Falls, January 18; Armes & McMaster, Twin Falls, January 19; Filer High School Boys, at Filer, January 20. Attend all of these sales.

GUERNSEYS
We will sell 3 yearling Guernsey bulls, best Island and May Rose blood lines, from A. R. dams, with average of 630 lbs. butter fat. Also 4 yearling Guernsey heifers, 2 from A. R. dams; one dam on test, May Rose breeding; good type. Three were winners at Pacific International.
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Young bull, dropped March 11, 1922, from mature cow. Nearly white; good individual. Sire, a grandson of the great Sir Johanna Ruth Fayne. Dam's official record as senior yearling, 14,831.8 lbs milk, 611 lbs. butter. Very cheap to move at once. Younger calves of both sexes. Accredited herd.
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Vitality and uniformity wins.
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Spring boars and gilts, Great Wonder breeding. Gilts bred to Sensation boar. Some of them state fair prize winners; all good individuals. Priced for quick sale.
J. E. FINNICUM, Dayton, Ore.

Cornell's Duroc sows were undefeated on show circuit. Choice lot of bred gilts priced to sell. Satisfaction guaranteed.
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Choice spring gilts, bred to Oregon Aviator; also September boars. Have won wherever shown.
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Pike's Peak or Bust

(Continued from page fourteen.)

afraid—very much afraid poor Abe has allowed himself to get into a bad scrape."

"Yes, a dreadful scrape," declared Jess. "If the two Utes have kept 'im on the jump, as they're likely to do, they must be well up toward the snow line with 'im by this time."

"And they'll have 'im on yon side of the snow cap before we can overhaul 'em," commented Esau.

"Not much doubt of that," admitted Cooper.

Now all the five gathered themselves in a group, in order to agree upon some plan of action.

"What puzzles me is how the Utes happened to do so little damage in our camp," Orlando presently remarked. "From what I've heard and read of Indians, I would have expected them to destroy everything they couldn't carry off."

"Is something a little strange about the way they left things alone," Givens answered. "They not only left most of our camp plunder untouched, but they didn't even disturb old Brindle. Left her grazing right where she was when you started out this morning, didn't they, Lando?"

"Not at the same place. But Sanders had probably moved her to fresh grass before the Utes came."

"That is a little puzzling," Cooper confessed. "But no use trying to figure that out now. More important matters to attend to, and that the first minute possible. Main question at present is: What can we do first to rescue poor Abe Sanders?"

"Only one thing we can do, seems to me like," Esau was speaking. "And that is to set out forthwith and try to come up with the red savages before they can drag their prisoner acrosst the snow cap. Wasn't many of 'em, jedgin' from their tracks."

"May have been others farther away, that didn't make any tracks," Orlando suggested. "That was only a little patch of sand, you recollect."

It was Cooper that answered: "Yes. We can't make out from those signs just how many Utes were in the band that captured Abe. But we'll hope there are not many. Only thing I see to do is to get on their trail as soon as ever we can. Now bobs up another question: How many of us had better go and how many stay to guard the camp?"

"Won't do to leave jest one man here," was Esau's opinion. "We've tried that, and it didn't pan out—not worth a cent."

"But if two stay here, that leaves only three men to follow the redskins' trail," Holloway reminded them.

"Well," said Cooper, thoughtfully, "we've lost our most valuable possession already—our treasure pot. So my opinion is that we'll have to leave the camp to take care of itself for a while. I know that's not a wise thing to do, out here in this wilderness. But it's the only way we can hope to rescue our captive partner."

"Not a doubt of that," said Holloway. "And the sooner we strike their trail the better. Night's not far off."

All agreed to that plan. After a hasty meal, of whatever they could cook in a few minutes, they provided themselves with plenty of ammunition, examined their weapons, and were off to the rescue.

First they hurried to where they had discovered those tracks in the sand. There they took up the trail and tried to follow it.

And they found that they could follow it. Far faster, too, than they had even dreamed of doing. It was fortunate that they had tried to trail Sanders and his captors. For the trail did not lead toward the mountains, as they had fully expected, it turned south. They followed it as fast as possible.

Now it was plain that Sanders, every time he came to loose soil, had held back or done something to make a more distinct trail.

"Abe's got his wits about 'im, and he's doing his level best to make his trail so plain we can't miss it," Cooper said. "And we must—we must do our level best for him."

"That we must!" declared Esau.

And Givens said: "Yes, we must certainly do our utmost to rescue the poor fellow. But if the Utes ever get 'im across the snowy range and into that big town of theirs, it will be out of the question for us to do anything for 'im."

"There you've said it," Esau agreed. "If they don't put 'im to death after they get 'im over there, it would take the whole United States army to skeer 'em into turnin' 'im loose. Our little bunch couldn't make a start at it. We'd only git our scalps lifted for tryin'."

"And even if a whole army went after 'im, they'd be pretty sure to find the poor fellow dead and scalped," Cooper said.

All this time the pursuers had been hurrying on, following the trail as fast as they could pick it up. At length, on coming to a place where there was much loose sand, the trailers gained some information that gave them great relief. And that was that there were only three in the party dragging off Sanders; the two who had him by the arms and one other. In the way two pairs of moccasin tracks kept on each side of the boot tracks, it seemed plain that two of the captors were still forcing their captive along between them. The third man, it was soon learned, was carrying that pot of gold. At one place the pursuers could make out the plain print of the pot's bottom in the loose soil. And it was close by two moccasin tracks.

"Don't you see what was the matter?" said Cooper. "The pot's wire bail was cutting the redskin's hand; and here he set it down to rest his hand."

"Or maybe that 30 pounds made his arm tired, and he set it down so as to change hands," surmised Orlando. "I can see the red rogue setting it down, and then glancing back to learn if anybody was trailing him. Wonder how long it has been since they passed here."

"Ever so much longer than I wish it had been," was Cooper's reply. "We've got to hustle, boys! Yes, we've got to move fast, or it will be everlastingly too late."

On the party hurried, increasing their speed as much as they dared, to keep from losing the trail. All the time they were expecting the trail to turn west, toward the great mountain range. But it was still leading southward.

Not till the sun had disappeared behind the mountain did the pursuing party make their most surprising discovery.

While the five men were searching for that elusive trail in a very difficult place, they heard a peculiar noise. It was somewhere in the woods ahead, and sounded much like a frog's croaking. However, they could tell that it was not a frog. Suspicious of those strange sounds, the whole party stood staring ahead and listening.

After the noises had been repeated several times, the five men whispered together for a minute or two, then started forward to investigate. Instead of following the trail, they moved round and approached the suspicious spot from one side. And they approached cautiously, every man with a thumb on the hammer of his gun and a finger on the trigger.

The noises, which were still being made, were coming from among a rather large thicket of pine bushes. Not till the men were actually among the bushes could they make out from what particular spot the noises came. And what they saw amazed them exceedingly.

There, tied fast to the trunk of a pine tree, they saw—their missing partner!

For a few moments all stood staring at him. Then, of one accord, they rushed upon him.

Sanders was fastened with his back to the big, rough tree trunk. In addition to the buckskin strings holding his hands and feet, another string, tied tightly in his mouth, kept in some grass that his mouth had been stuffed with. Hence the only sounds he could utter were harsh, croaking, inarticulate noises.

Out came several knives, hunting knives and pocketknives, and the thongs binding the captive were quickly slashed. The moment the buckskin had been taken from his mouth, Sanders spit out his gag of grass with much disgust.

"How long have you been trussed up here like this, Abe?" asked Cooper.

The released captive spit out some more leaves and grass, examined the cord marks on his wrists, and then said: "About—about two hours, I'd guess. Though it seemed more like two weeks. Worst scrape I ever blundered into!"

"How did the redskins come to tie you up here, instead of taking you on to their town?" Orlando wanted to know. "That's what we all decided they'd do with you—drag you on."

"Redskins! I haven't seen any redskins!"

"You haven't! Then who—who in the world captured you?"

"Why, white men, of course. That is, they're white on the outside, but black as a crow inside. They're a set of black-hearted scoundrels—blacklegs—that's what they are! Of course, though, I knew that before."

"But they wore moccasins, all three of them," said Jess.

"To be sure. But that only proves that they'd tramped these mountains till they'd worn their boots out. Then it was either make moccasins or go barefooted. They spoke of robbing me of my boots. For some reason they didn't though."

"Well now, that explains something," Cooper said. "We found moccasin tracks in camp; and we couldn't understand why the supposed Indians had left things in such good shape. One would naturally expect a bunch of redskins to destroy all that they couldn't carry off."

"No telling what those three rogues would have done after they got the drop on me and made me a prisoner. That is, if nothing had happened. They began to go through our things, but after the first peep into that pot of gold, they were so delighted and excited that they didn't seem to care much about anything else."

"You've no idy who the scoundrels are, or how they came to be out here, have you, Abe?" asked Cooper.

"No idee who they are? Of course I have—a very distinct idee. Fact is, I know 'em too well."

"Know 'em too well! Who—who are they?" demanded Givens.

"Why, it's that tough Jeeters gang, of course."

Same fellows that murdered Mason and robbed 'im!" Orlando almost gasped.

Cooper drew a long breath, mostly of relief. "Well now, this simplifies matters for us, boys," he said. "With Abe in the hands of redskins and being dragged away across the snow cap, things looked wellnight hopeless to me. For the life of me, I couldn't think of any way to rescue 'im. We didn't —I don't believe one of us thought about our gold then. But with our stolen partner free and that pot of dust somewhat in the vicinity, I feel more hopeful—ten times more hopeful."

"So do I—so do I," declared Holloway. "And we're bound—yes, we're just naturally bound to get that dust away from that bunch of cutthroats!"

"But how? How'll we go about it, Jess?" demanded Givens.

"Yes, that's—that's what I'd like to know," said Esau.

"That's what we've got to find out," Cooper was speaking. "But—but we're going to hunt those high-handed, red-handed rogues down! And when we find 'em—when we once run onto 'em——"

"When we once run onto 'em, right there we leave 'em! declared Givens.

"But that will take time," Cooper reminded them. "First thing for us is to get back to camp. There we can talk things over and lay our plans."

Night was coming down when the six men found themselves at the foot of their big rock again. There they soon had a great camp fire burning. While others were cooking supper, Orlando went and milked Brindle. Then he watered her at the spring, and moved her to fresh grass. Not till the whole party were eating supper around the fire did they begin to discuss the best means of recovering their lost treasure pot.

(To be continued.)

THE KITCHEN AND THE BARN.

Is the equipment in the kitchen as modern and serviceable as that in the barn?



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